Full wwPDB EM Validation Report ⓘ

Nov 29, 2022 – 02:21 AM JST

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

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

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

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

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

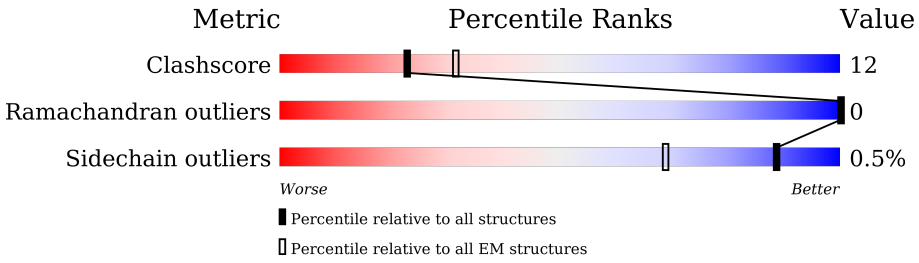
EMDB validation analysis	:	0.0.1.dev43
MolProbity	:	4.02b-467
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ	:	1.9.9
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.31.3

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 3.80 Å.

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



Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	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	41% 62% 19% 19%
1	B	4966	41% 62% 19% 19%
1	C	4966	41% 61% 20% 19%
1	D	4966	41% 62% 20% 19%
2	G	176	28% 39% 22% • 39%
2	H	176	28% 39% 21% • 39%
2	I	176	28% 39% 22% • 39%
2	J	176	28% 39% 22% • 39%

2 Entry composition (i)

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

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

- Molecule 1 is a protein called Ryanodine receptor 2.

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

There are 4 discrepancies between the modelled and reference sequences:

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

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

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

There are 276 discrepancies between the modelled and reference sequences:

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

Continued on next page...

Continued from previous page...

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

Continued on next page...

Continued from previous page...

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

Continued on next page...

Continued from previous page...

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

Continued on next page...

Continued from previous page...

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

Continued on next page...

Continued from previous page...

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

Continued on next page...

Continued from previous page...

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

Continued on next page...

Continued from previous page...

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

- Molecule 3 is ZINC ION (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).

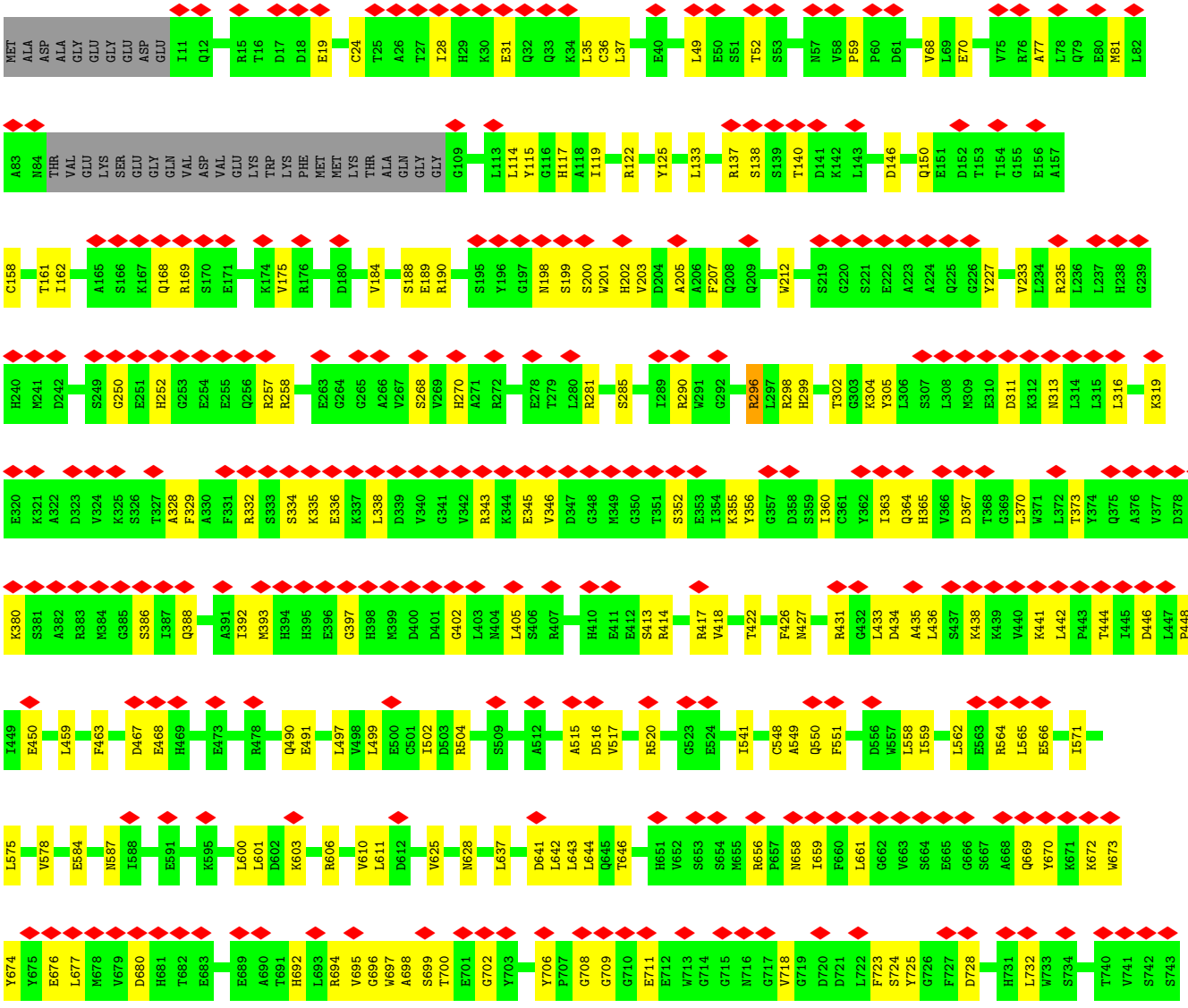
Mol	Chain	Residues	Atoms	AltConf
4	A	1	Total Ca 1 1	0
4	B	1	Total Ca 1 1	0
4	C	1	Total Ca 1 1	0
4	D	1	Total Ca 1 1	0

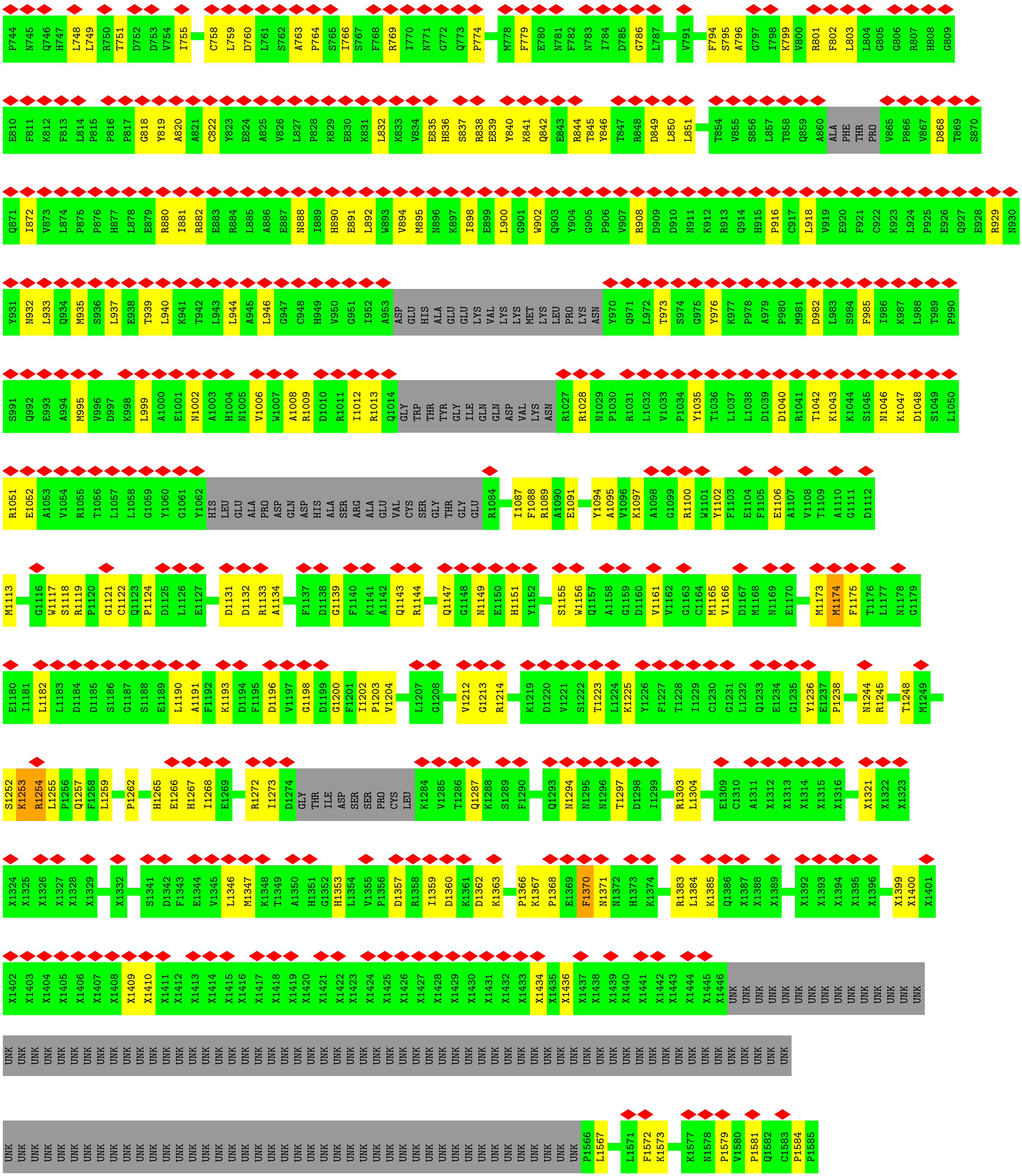
3 Residue-property plots (i)

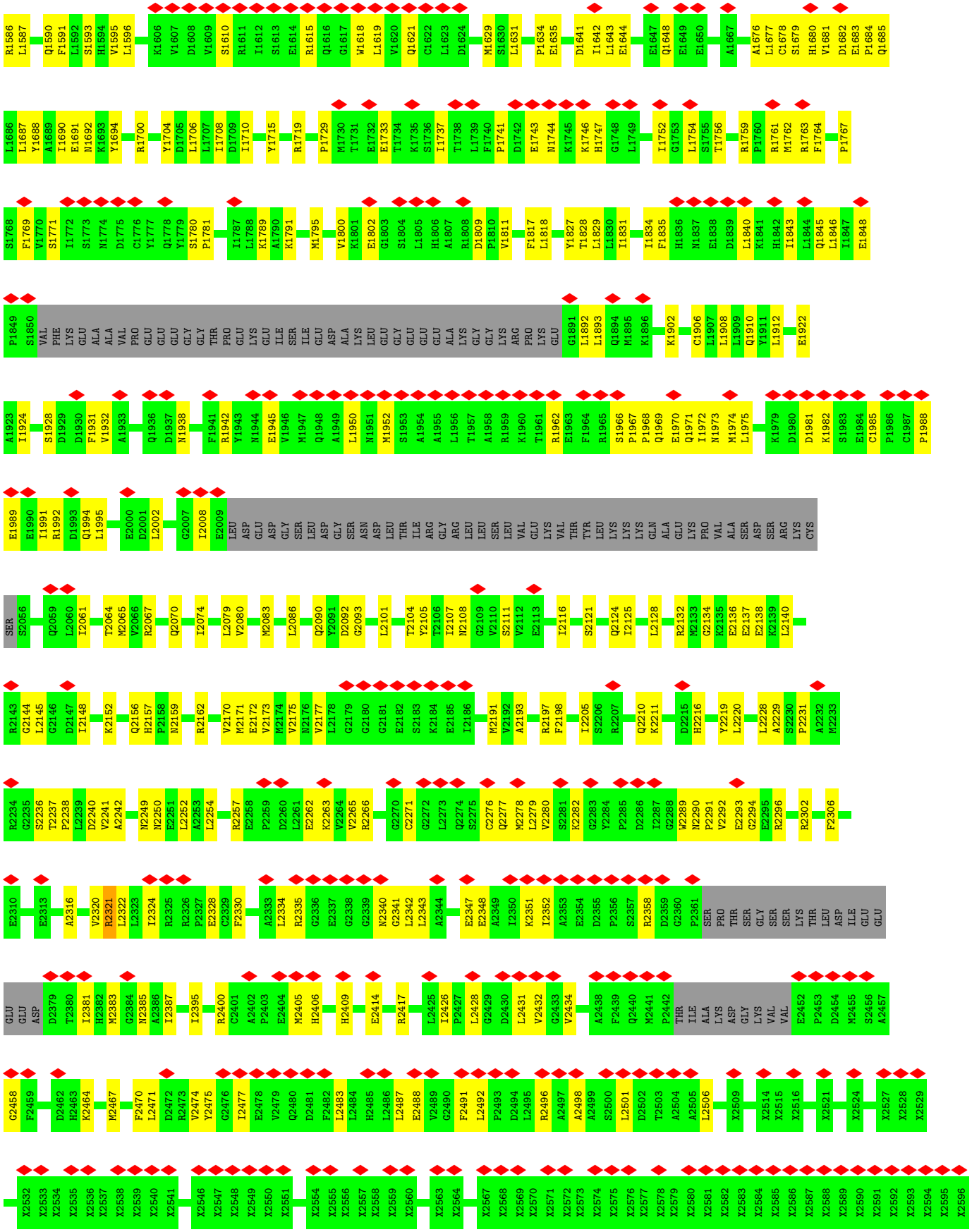
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion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

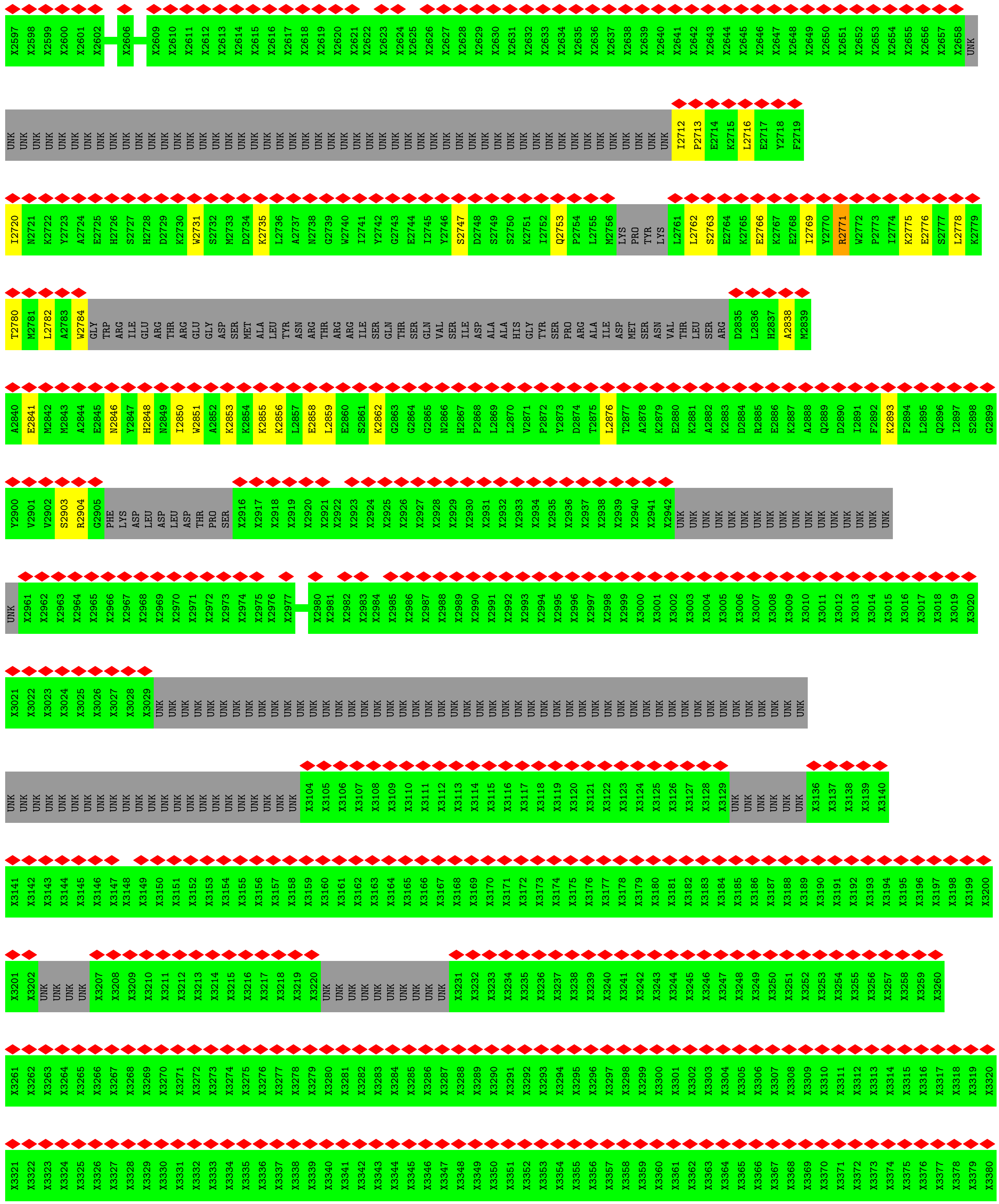
- Molecule 1: Ryanodine receptor 2

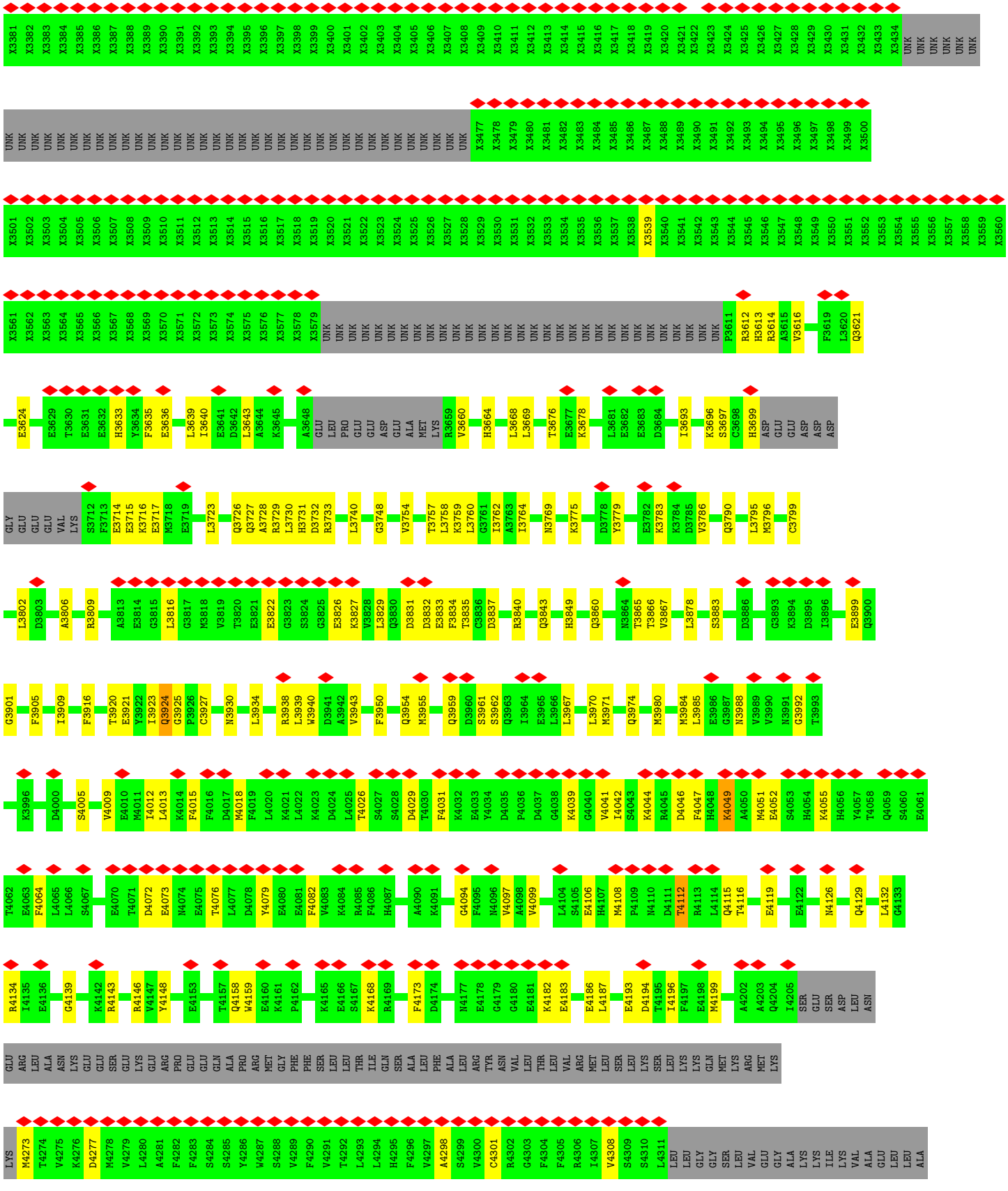
Chain A:

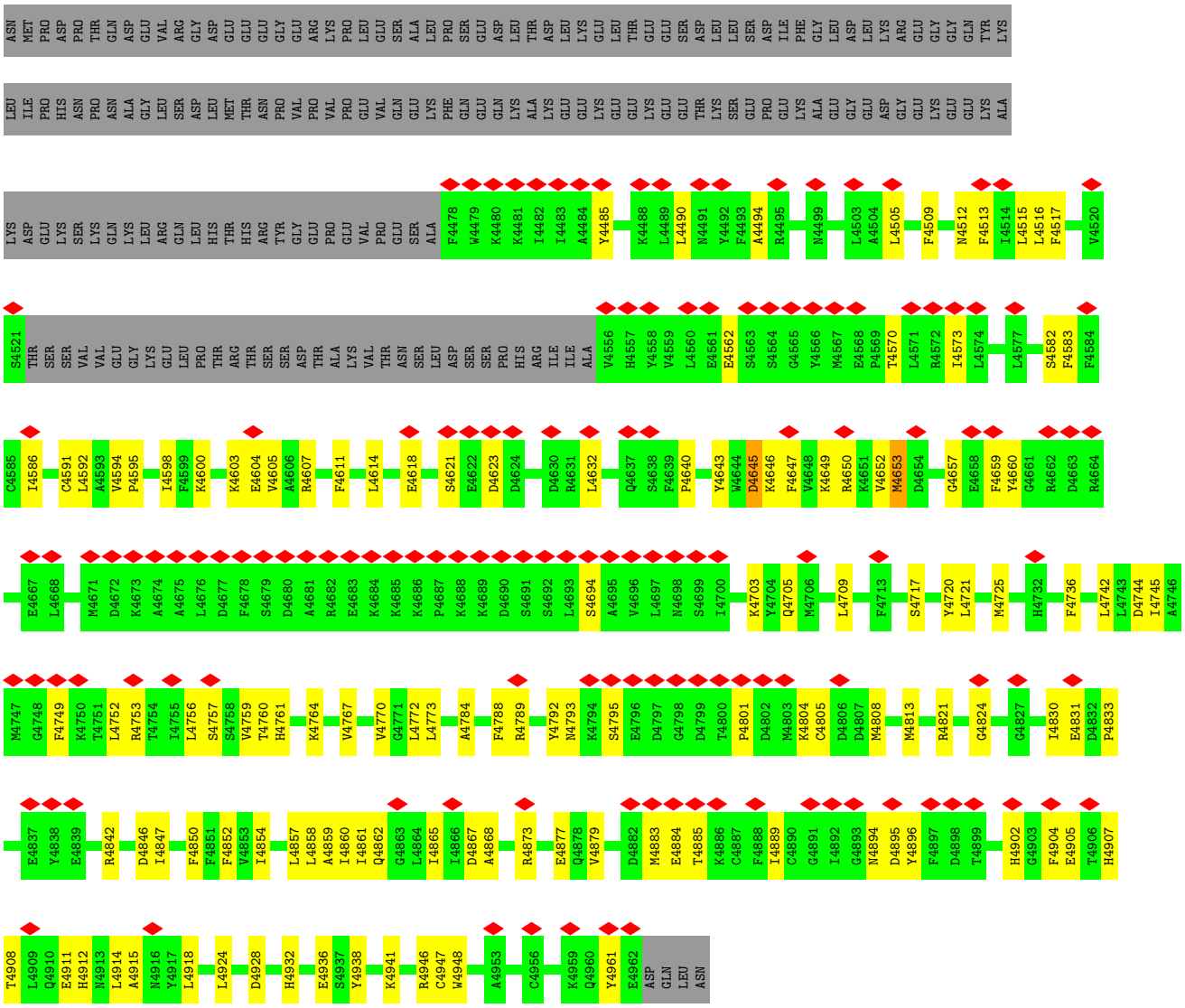



P744 N745 Q746 H747 L748 L749 R750 T751 D752 D753 V754 I755 C758 L759 D760 L761 S762 A763 P764 S765 I766 S767 F768 R769 I770 N771 G772 Q773 P774 M778 F779 E780 N781 F782 N783 I784 D785 G786 L787 V791 F794 S795 A796 G797 I798 K799 V800 R801 F802 L803 L804 G805 G806 R807 H808 G809
E810 F811 K812 F813 L814 P815 P816 P817 G818 Y819 A820 A821 C822 Y823 E824 A825 V826 L827 P828 K829 E830 K831 L832 K833 V834 E835 H836 S837 R838 E839 Y840 K841 Q842 E843 R844 T845 Y846 T847 R848 D849 L850 L851 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 D1010 R1011 I1012 R1013 Q1014 GLY TRP THR TYR GLY ILE GLN GLN ASP VAL LYS ASN R1027 R1028 N1029 P1030 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 I1087 F1088 R1089 A1090 E1091 Y1094 A1095 V1096 K1097 A1098 G1099 R1100 W1101 Y1102 F1103 E1104 F1105 E1106 A1107 V1108 T1109 A1110 G1111 D1112
M1113 G1116 W1117 S1118 R1119 P1120 G1121 C1122 Q1123 P1124 D1125 L1126 E1127 D1131 D1132 R1133 A1134 F1137 D1138 G1139 F1140 K1141 A1142 Q1143 R1144 Q1147 G1148 N1149 E1150 H1151 Y1152 S1155 W1156 Q1157 A1158 G1159 D1160 V1161 V1162 G1163 C1164 M1165 V1166 D1167 M1168 N1169 E1170 M1173 M1174 F1175 T1176 L1177 N1178 G1179
E1180 I1181 L1182 L1183 D1184 D1185 S1186 G1187 S1188 E1189 L1190 A1191 F1192 K1193 D1194 F1195 D1196 V1197 G1198 D1199 G1200 F1201 I1202 P1203 V1204 L1207 G1208 V1212 G1213 R1214 K1219 D1220 V1221 S1222 T1223 L1224 K1225 Y1226 F1227 T1228 I1229 C1230 G1231 L1232 Q1233 E1234 G1235 Y1236 E1237 P1238 N1244 R1245 T1248 M1249
S1252 K1253 R1254 L1255 P1256 Q1257 F1258 L1259 P1262 H1265 E1266 H1267 I1268 E1269 R1272 I1273 D1274 GLY THR ILE ASP SER SER PRO CYS LEU K1284 V1285 T1286 Q1287 K1288 S1289 F1290 Q1293 N1294 N1295 N1296 T1297 D1298 I1299 R1303 L1304 E1309 C1310 A1311 X1312 X1313 X1314 X1315 X1316 X1321 X1322 X1323
X1324 X1325 X1326 X1327 X1328 X1329 X1332 S1341 D1342 F1343 E1344 V1345 L1346 M1347 K1348 T1349 A1350 H1351 G1352 H1353 L1354 V1355 P1356 D1357 R1358 I1359 D1360 K1361 D1362 K1363 P1366 K1367 P1368 E1369 F1370 N1371 N1372 H1373 K1374 R1383 L1384 K1385 Q1386 X1387 X1388 X1389 X1392 X1393 X1394 X1395 X1396 X1399 X1400 X1401
X1402 X1403 X1404 X1405 X1406 X1407 X1408 X1409 X1410 X1411 X1412 X1413 X1414 X1415 X1416 X1417 X1418 X1419 X1420 X1421 X1422 X1423 X1424 X1425 X1426 X1427 X1428 X1429 X1430 X1431 X1432 X1433 X1434 X1435 X1436 X1437 X1438 X1439 X1440 X1441 X1442 X1443 X1444 X1445 X1446 UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK
UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK
UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK P1566 L1567 L1571 F1572 K1573 K1577 N1578 P1579 V1580 P1581 Q1582 C1583 P1584 P1585


R1586 L1587 Q1590 F1591 L1592 S1593 H1594 V1595 L1596 K1606 V1607 D1608 V1609 S1610 R1611 I1612 S1613 E1614 R1615 Q1616 G1617 W1618 L1619 V1620 Q1621 C1622 L1623 D1624 M1629 S1630 L1631 P1634 E1635 D1641 I1642 L1643 E1644 E1647 Q1648 E1649 E1650 A1667 A1676 L1677 C1678 S1679 H1680 V1681 D1682 E1683 P1684 Q1685
L1686 L1687 Y1688 A1689 I1690 E1691 N1692 K1693 Y1694 R1700 Y1704 D1705 L1706 L1707 I1708 D1709 I1710 Y1715 R1719 P1729 M1730 T1731 E1732 E1733 T1734 K1735 S1736 I1737 T1738 L1739 F1740 P1741 D1742 E1743 N1744 K1745 K1746 H1747 G1748 L1749 I1752 G1753 L1754 S1755 T1756 R1759 P1760 R1761 M1762 R1763 F1764 P1767
S1768 F1769 V1770 S1771 I1772 S1773 N1774 D1775 C1776 Y1777 Q1778 Y1779 S1780 P1781 I1787 L1788 K1789 A1790 K1791 M1795 V1800 K1801 E1802 G1803 S1804 L1805 H1806 A1807 R1808 D1809 P1810 V1811 F1817 L1818 Y1827 T1828 L1829 L1830 I1831 I1834 F1835 H1836 N1837 E1838 D1839 L1840 K1841 H1842 I1843 L1844 Q1845 L1846 T1847 E1848
P1849 S1850 VAL PHE LYS GLU ALA ALA VAL PRO GLU GLU GLU GLY GLY THR PRO GLU LYS GLU ILE SER ILE GLU GLU ASP ALA LYS LEU GLU GLY GLU GLU GLU ALA LYS GLY GLY LYS ARG PRO LYS GLU G1891 L1892 L1893 Q1894 M1895 K1896 K1902 C1906 L1907 L1908 L1909 Q1910 Y1911 L1912 E1922
A1923 I1924 S1928 D1929 D1930 F1931 V1932 A1933 Q1936 D1937 N1938 F1941 R1942 Y1943 N1944 E1945 V1946 M1947 Q1948 A1949 L1950 N1951 M1952 S1953 A1954 A1955 L1956 T1957 A1958 R1959 K1960 T1961 R1962 E1963 F1964 R1965 S1966 P1967 P1968 Q1969 E1970 Q1971 I1972 N1973 M1974 L1975 K1979 D1980 D1981 K1982 S1983 E1984 C1985 P1986 C1987 P1988
E1989 E1990 I1991 R1992 D1993 Q1994 L1995 E2000 D2001 L2002 G2007 I2008 E2009 LEU ASP GLU ASP GLY SER LEU ASP GLY SER ASN ASP LEU THR ILE ARG GLY ARG LEU LEU SER LEU VAL GLU LYS VAL THR TYR LEU LYS LYS LYS GLN ALA GLU LYS PRO VAL ALA SER ASP SER ARG LYS CYS
SER S2056 Q2059 L2060 I2061 T2064 M2065 V2066 R2067 Q2070 I2074 L2079 V2080 M2083 L2086 Q2090 Y2091 D2092 G2093 L2101 T2104 Y2105 T2106 I2107 N2108 G2109 V2110 S2111 V2112 E2113 I2116 S2121 Q2124 I2125 L2128 R2132 M2133 G2134 K2135 E2136 E2137 E2138 K2139 L2140
R2143 G2144 L2145 G2146 D2147 I2148 K2152 Q2156 H2157 P2158 N2159 R2162 V2170 M2171 E2172 V2173 M2174 V2175 N2176 V2177 L2178 G2179 G2180 G2181 E2182 S2183 K2184 E2185 I2186 M2191 V2192 A2193 R2197 F2198 I2205 S2206 R2207 Q2210 K2211 D2215 H2216 Y2219 L2220 L2228 A2229 S2230 P2231 A2232 M2233
R2234 G2235 S2236 T2237 P2238 L2239 D2240 V2241 A2242 N2249 N2250 E2251 L2252 A2253 L2254 R2257 E2258 P2259 D2260 L2261 E2262 K2263 V2264 V2265 R2266 G2270 C2271 G2272 L2273 Q2274 S2275 C2276 Q2277 M2278 L2279 V2280 S2281 K2282 G2283 Y2284 P2285 D2286 I2287 G2288 W2289 N2290 P2291 V2292 E2293 G2294 E2295 R2296 R2302 F2306
E2310 E2313 A2316 V2320 R2321 L2322 L2323 I2324 R2325 R2326 P2327 E2328 C2329 F2330 A2333 L2334 R2335 G2336 E2337 G2338 G2339 N2340 G2341 L2342 L2343 A2344 E2347 E2348 A2349 I2350 K2351 I2352 A2353 E2354 D2355 P2356 S2357 R2358 D2359 G2360 P2361 SER PRO THR SER GLY SER SER LYS THR LEU ASP ILE GLU GLU
GLU GLU ASP D2379 T2380 I2381 H2382 M2383 G2384 N2385 A2386 I2387 I2395 R2400 C2401 A2402 P2403 E2404 M2405 H2406 H2409 E2414 R2417 L2425 I2426 P2427 L2428 G2429 D2430 L2431 V2432 G2433 V2434 A2438 F2439 Q2440 M2441 P2442 THR ILE ALA LYS ASP GLY LYS VAL VAL E2452 P2453 D2454 M2455 S2456 A2457
G2458 F2459 D2462 H2463 K2464 M2467 F2470 L2471 D2472 R2473 V2474 Y2475 G2476 I2477 E2478 V2479 Q2480 D2481 F2482 L2483 L2484 H2485 L2486 L2487 E2488 V2489 Q2490 F2491 L2492 P2493 D2494 L2495 R2496 A2497 A2498 A2499 S2500 L2501 D2502 T2503 A2504 A2505 L2506 X2509 X2514 X2515 X2516 X2521 X2524 X2527 X2528 X2529
X2532 X2533 X2534 X2535 X2536 X2537 X2538 X2539 X2540 X2541 X2546 X2547 X2548 X2549 X2550 X2551 X2554 X2555 X2556 X2557 X2558 X2559 X2560 X2563 X2564 X2567 X2568 X2569 X2570 X2571 X2572 X2573 X2574 X2575 X2576 X2577 X2578 X2579 X2580 X2581 X2582 X2583 X2584 X2585 X2586 X2587 X2588 X2589 X2590 X2591 X2592 X2593 X2594 X2595 X2596

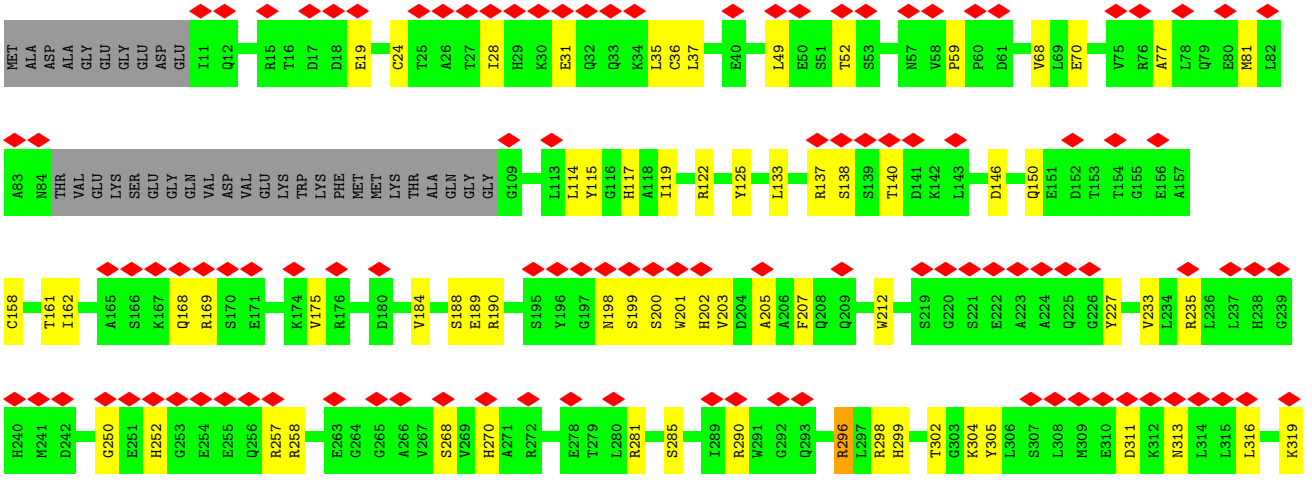

X2597 X2598 X2599 X2600 X2601 X2602 X2606 X2609 X2610 X2611 X2612 X2613 X2614 X2615 X2616 X2617 X2618 X2619 X2620 X2621 X2622 X2623 X2624 X2625 X2626 X2627 X2628 X2629 X2630 X2631 X2632 X2633 X2634 X2635 X2636 X2637 X2638 X2639 X2640 X2641 X2642 X2643 X2644 X2645 X2646 X2647 X2648 X2649 X2650 X2651 X2652 X2653 X2654 X2655 X2656 X2657 X2658 UNK
UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK I2712 P2713 E2714 K2715 L2716 E2717 Y2718 F2719
I2720 N2721 K2722 Y2723 A2724 E2725 H2726 S2727 H2728 D2729 K2730 W2731 S2732 M2733 D2734 K2735 L2736 A2737 N2738 G2739 W2740 I2741 Y2742 G2743 E2744 I2745 Y2746 S2747 D2748 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 X2929 X2930 X2931 X2932 X2933 X2934 X2935 X2936 X2937 X2938 X2939 X2940 X2941 X2942 UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK
UNK X2961 X2962 X2963 X2964 X2965 X2966 X2967 X2968 X2969 X2970 X2971 X2972 X2973 X2974 X2975 X2976 X2977 X2980 X2981 X2982 X2983 X2984 X2985 X2986 X2987 X2988 X2989 X2990 X2991 X2992 X2993 X2994 X2995 X2996 X2997 X2998 X2999 X3000 X3001 X3002 X3003 X3004 X3005 X3006 X3007 X3008 X3009 X3010 X3011 X3012 X3013 X3014 X3015 X3016 X3017 X3018 X3019 X3020
X3021 X3022 X3023 X3024 X3025 X3026 X3027 X3028 X3029 UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK
UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK X3104 X3105 X3106 X3107 X3108 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 X3207 X3208 X3209 X3210 X3211 X3212 X3213 X3214 X3215 X3216 X3217 X3218 X3219 X3220 UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK X3231 X3232 X3233 X3234 X3235 X3236 X3237 X3238 X3239 X3240 X3241 X3242 X3243 X3244 X3245 X3246 X3247 X3248 X3249 X3250 X3251 X3252 X3253 X3254 X3255 X3256 X3257 X3258 X3259 X3260
X3261 X3262 X3263 X3264 X3265 X3266 X3267 X3268 X3269 X3270 X3271 X3272 X3273 X3274 X3275 X3276 X3277 X3278 X3279 X3280 X3281 X3282 X3283 X3284 X3285 X3286 X3287 X3288 X3289 X3290 X3291 X3292 X3293 X3294 X3295 X3296 X3297 X3298 X3299 X3300 X3301 X3302 X3303 X3304 X3305 X3306 X3307 X3308 X3309 X3310 X3311 X3312 X3313 X3314 X3315 X3316 X3317 X3318 X3319 X3320
X3321 X3322 X3323 X3324 X3325 X3326 X3327 X3328 X3329 X3330 X3331 X3332 X3333 X3334 X3335 X3336 X3337 X3338 X3339 X3340 X3341 X3342 X3343 X3344 X3345 X3346 X3347 X3348 X3349 X3350 X3351 X3352 X3353 X3354 X3355 X3356 X3357 X3358 X3359 X3360 X3361 X3362 X3363 X3364 X3365 X3366 X3367 X3368 X3369 X3370 X3371 X3372 X3373 X3374 X3375 X3376 X3377 X3378 X3379 X3380

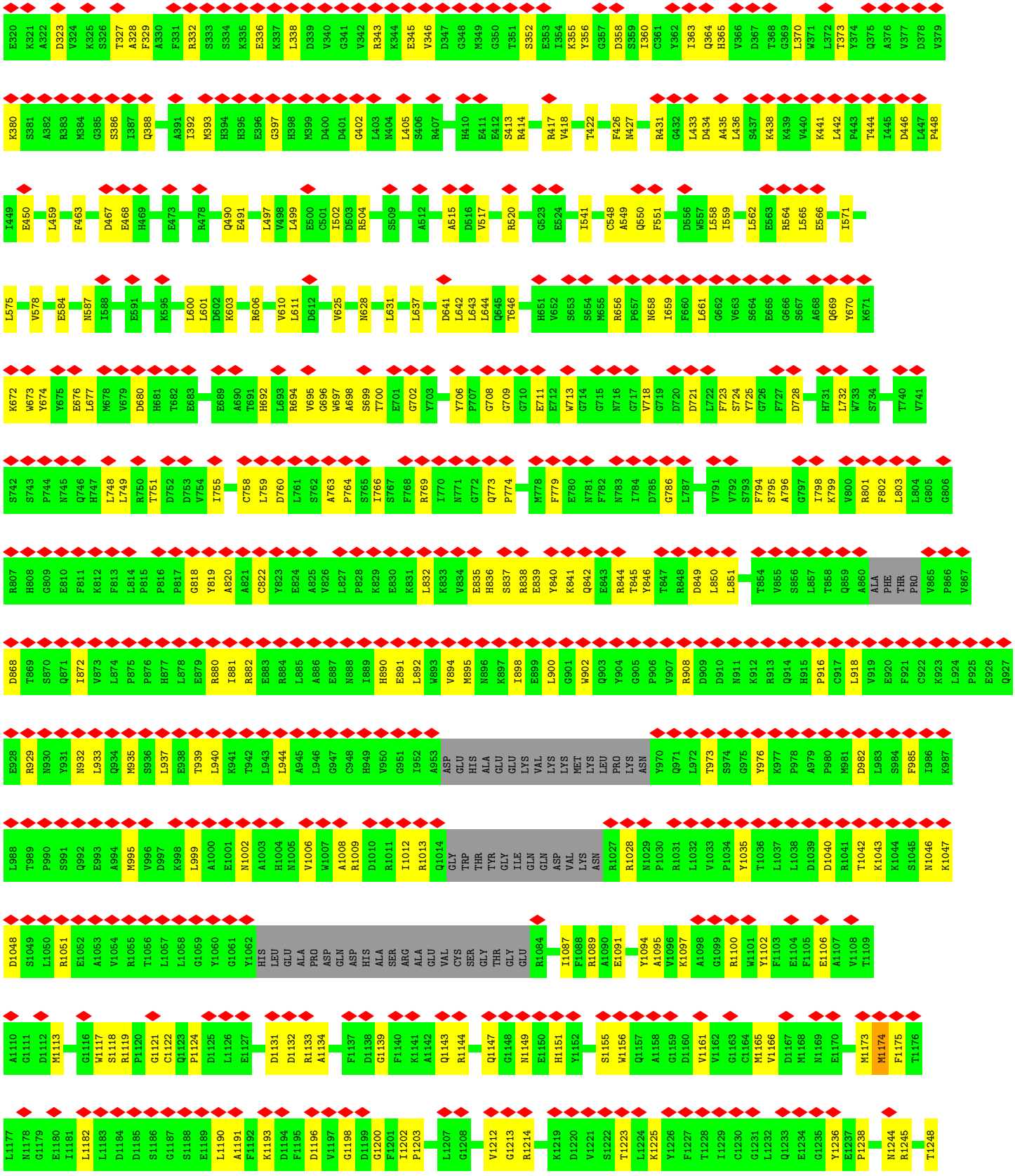

X3381 X3382 X3383 X3384 X3385 X3386 X3387 X3388 X3389 X3390 X3391 X3392 X3393 X3394 X3395 X3396 X3397 X3398 X3399 X3400 X3401 X3402 X3403 X3404 X3405 X3406 X3407 X3408 X3409 X3410 X3411 X3412 X3413 X3414 X3415 X3416 X3417 X3418 X3419 X3420 X3421 X3422 X3423 X3424 X3425 X3426 X3427 X3428 X3429 X3430 X3431 X3432 X3433 X3434 UNK UNK UNK UNK
UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK X3477 X3478 X3479 X3480 X3481 X3482 X3483 X3484 X3485 X3486 X3487 X3488 X3489 X3490 X3491 X3492 X3493 X3494 X3495 X3496 X3497 X3498 X3499 X3500
X3501 X3502 X3503 X3504 X3505 X3506 X3507 X3508 X3509 X3510 X3511 X3512 X3513 X3514 X3515 X3516 X3517 X3518 X3519 X3520 X3521 X3522 X3523 X3524 X3525 X3526 X3527 X3528 X3529 X3530 X3531 X3532 X3533 X3534 X3535 X3536 X3537 X3538 X3539 X3540 X3541 X3542 X3543 X3544 X3545 X3546 X3547 X3548 X3549 X3550 X3551 X3552 X3553 X3554 X3555 X3556 X3557 X3558 X3559 X3560
X3561 X3562 X3563 X3564 X3565 X3566 X3567 X3568 X3569 X3570 X3571 X3572 X3573 X3574 X3575 X3576 X3577 X3578 X3579 UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK

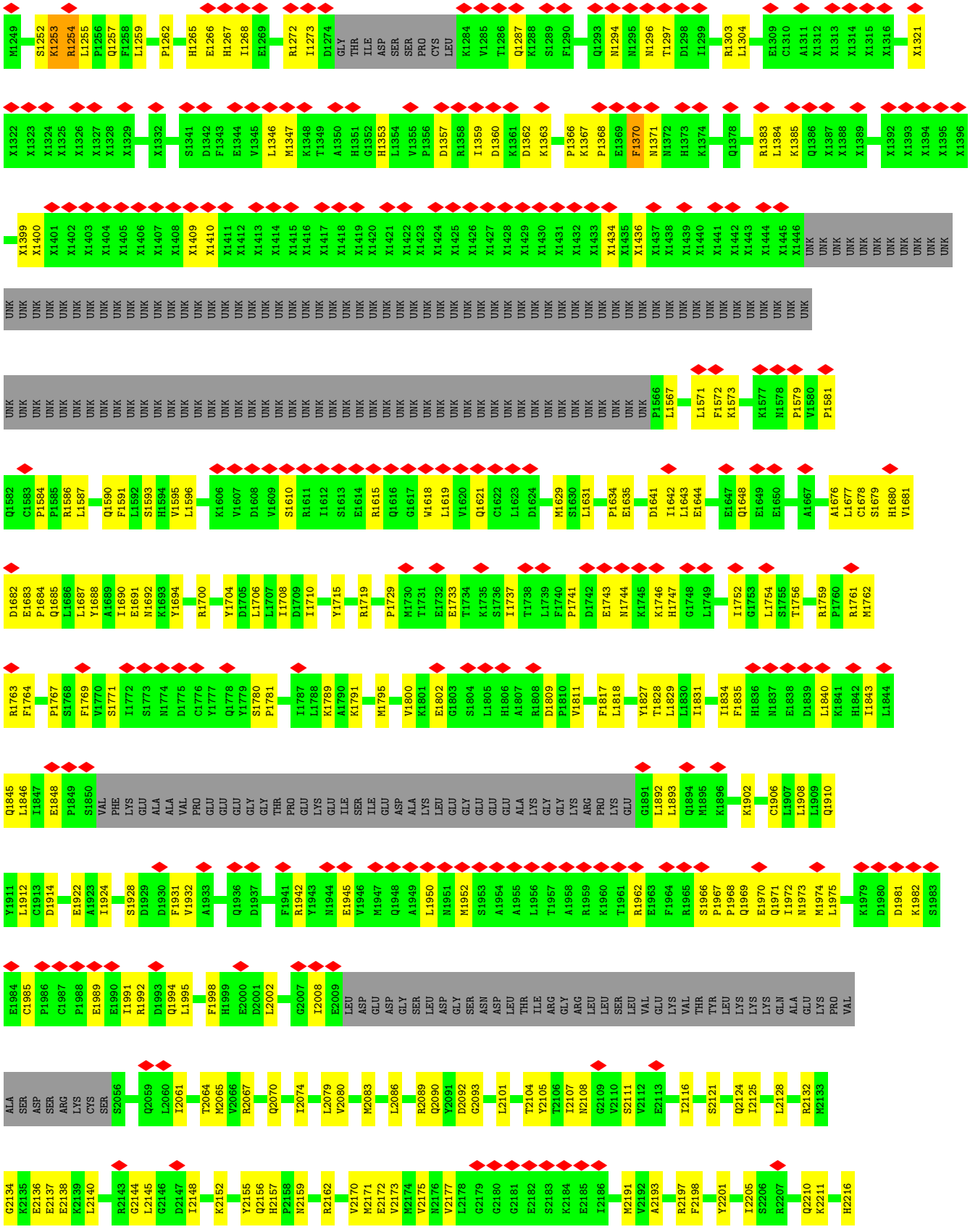


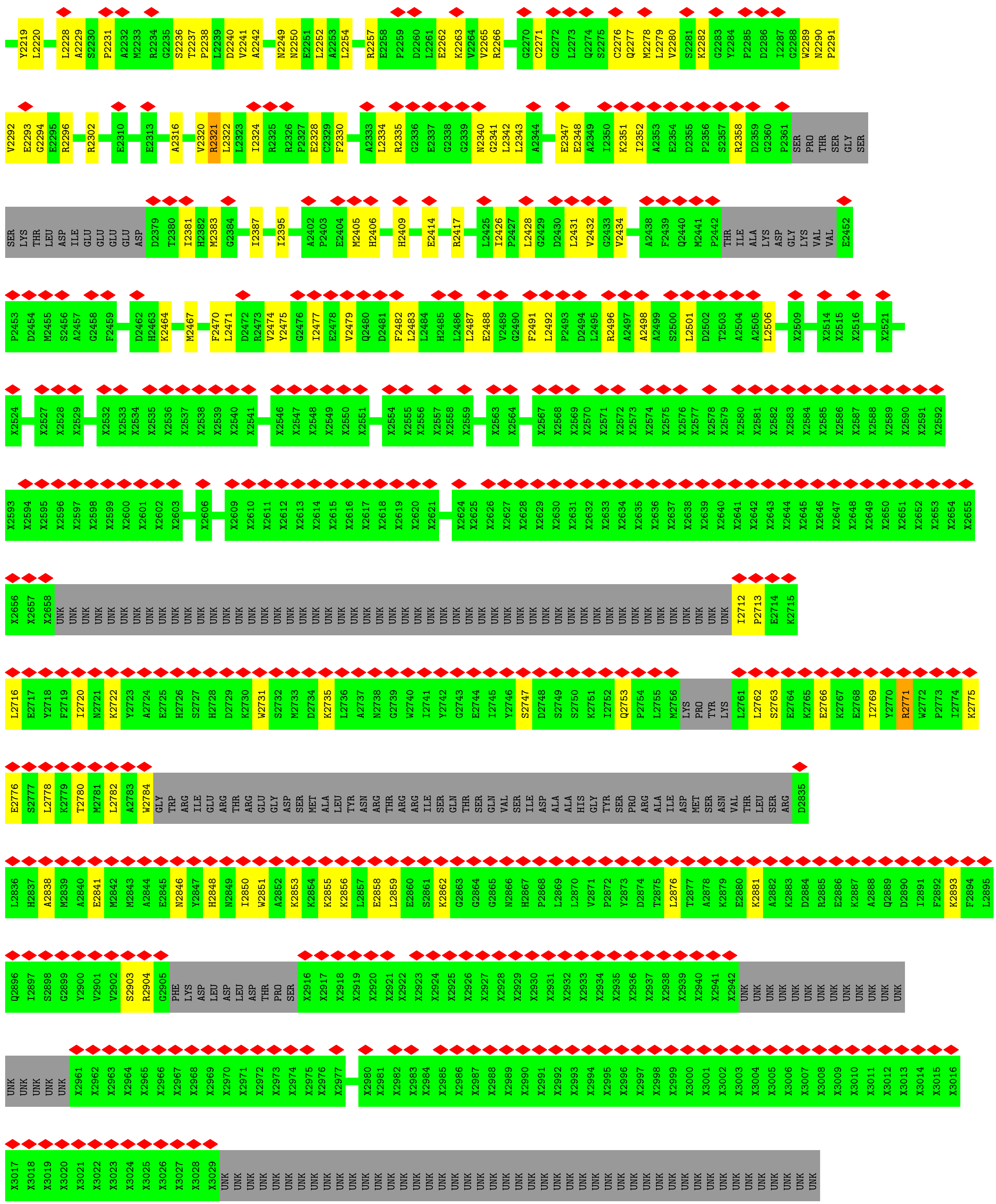
• Molecule 1: Ryanodine receptor 2

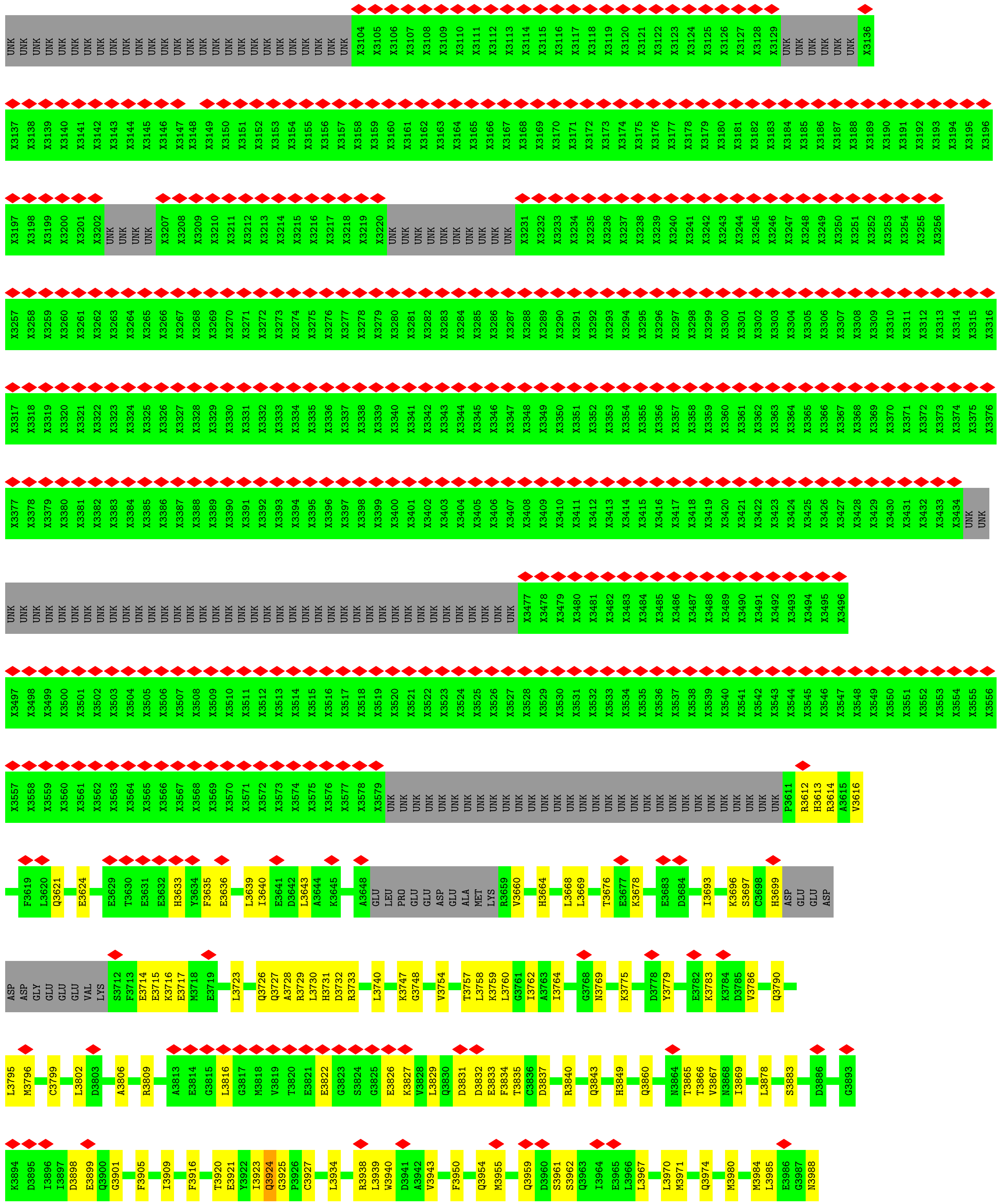
Chain B:

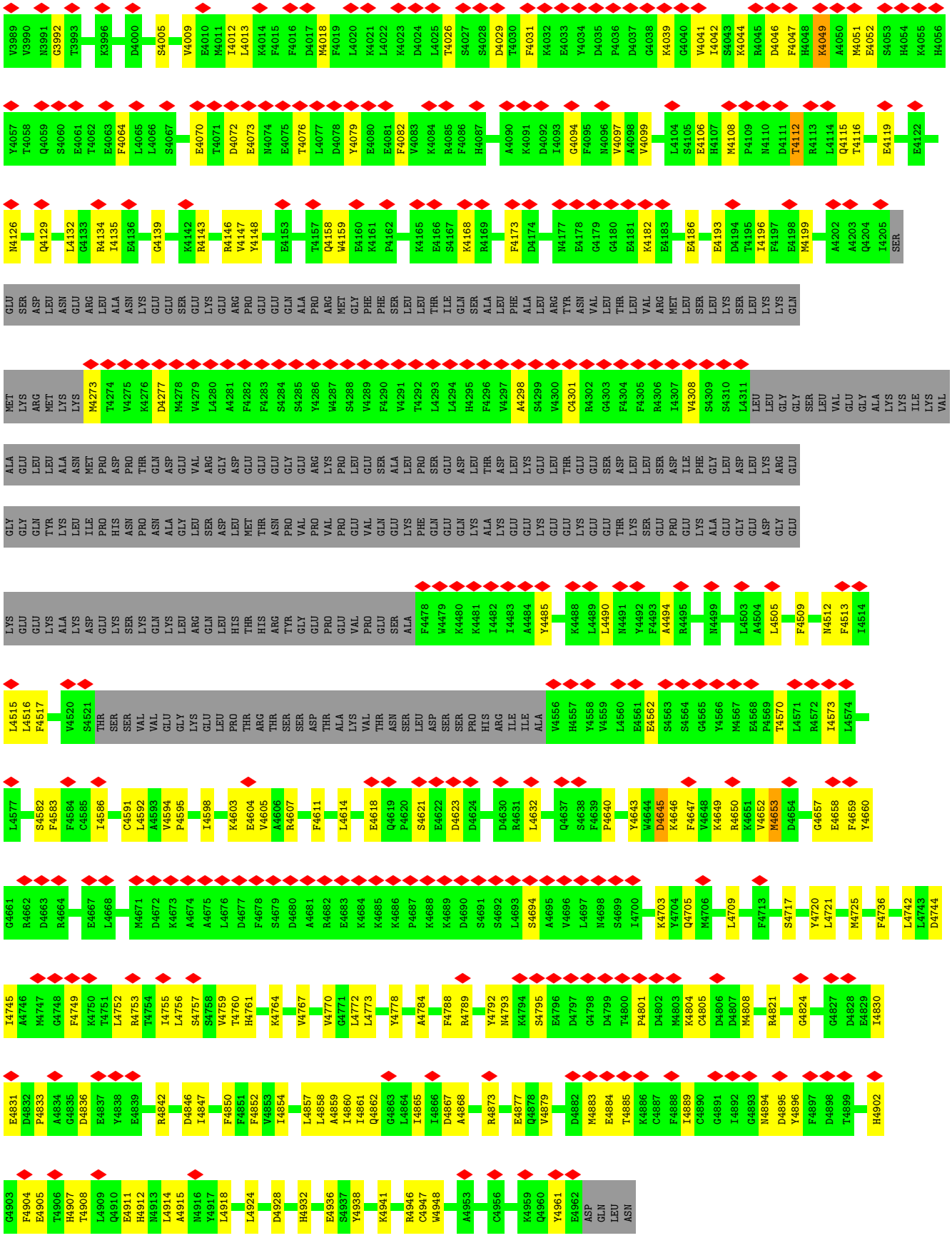



E320 K321 A322 D323 V324 K325 S326 T327 A328 F329 A330 F331 R332 S333 S334 K335 E336 K337 L338 D339 V340 G341 V342 R343 K344 E345 V346 D347 G348 M349 G350 T351 S352 E353 I354 K355 Y356 G357 D358 S359 I360 C361 Y362 I363 Q364 H365 V366 D367 T368 G369 L370 W371 L372 T373 Y374 Q375 A376 V377 D378 V379
K380 S381 A382 R383 M384 G385 S386 I387 Q388 A391 T392 M393 H394 H395 E396 G397 H398 M399 D400 D401 G402 L403 N404 L405 S406 B407 H410 E411 E412 S413 R414 R417 V418 T422 F426 N427 R431 G432 L433 D434 A435 L436 S437 K438 K439 V440 K441 L442 P443 T444 I445 D446 L447 P448
I449 E450 L459 F463 D467 E468 H469 E473 R478 Q490 E491 L497 V498 L499 E500 C501 I502 D503 R504 S509 A512 A515 D516 V517 R520 G523 E524 I541 C548 A549 Q550 F551 D556 W557 L558 I559 L562 E563 R564 L565 E566 I571
L575 V578 E584 N587 I588 E591 K595 L600 L601 D602 K603 R606 V610 L611 D612 V625 N628 L631 L637 D641 L642 L643 L644 Q645 T646 H651 V652 S653 S654 M655 R656 P657 N658 I659 F660 L661 G662 V663 S664 E665 G666 S667 A668 Q669 Y670 K671
K672 W673 Y674 Y675 E676 L677 M678 V679 D680 H681 T682 E683 E689 A690 T691 H692 L693 R694 V695 G696 W697 A698 S699 T700 E701 G702 Y703 Y706 P707 G708 G709 G710 E711 E712 W713 G714 G715 N716 G717 V718 G719 D720 D721 L722 F723 S724 Y725 G726 F727 D728 H731 L732 W733 S734 T740 V741
S742 S743 P744 N745 Q746 H747 L748 L749 R750 T751 D752 D753 V754 I755 C758 L759 D760 L761 S762 A763 P764 S765 I766 S767 F768 R769 I770 N771 G772 Q773 P774 W778 F779 E780 N781 F782 N783 I784 D785 G786 L787 V791 V792 S793 F794 S795 A796 G797 I798 K799 V800 R801 F802 L803 L804 G805 G806
R807 H808 G809 E810 F811 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 E839 Y840 K841 Q842 E843 R844 T845 Y846 T847 R848 D849 L850 L851 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 D1010 R1011 I1012 R1013 Q1014 GLY TRP THR TYR GLY ILE GLN GLN ASP VAL LYS ASN R1027 R1028 N1029 P1030 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 I1087 F1088 R1089 A1090 E1091 Y1094 A1095 V1096 K1097 A1098 G1099 R1100 W1101 Y1102 F1103 E1104 F1105 E1106 A1107 V1108 T1109
A1110 G1111 D1112 M1113 G1116 W1117 S1118 R1119 P1120 G1121 C1122 Q1123 P1124 D1125 L1126 E1127 D1131 D1132 R1133 A1134 F1137 D1138 G1139 F1140 K1141 A1142 Q1143 R1144 Q1147 G1148 N1149 E1150 H1151 Y1152 S1155 W1156 Q1157 A1158 G1159 D1160 V1161 V1162 G1163 C1164 M1165 V1166 D1167 M1168 N1169 E1170 M1173 M1174 F1175 T1176
L1177 N1178 G1179 E1180 I1181 L1182 L1183 D1184 D1185 S1186 G1187 S1188 E1189 L1190 A1191 F1192 K1193 D1194 F1195 D1196 V1197 G1198 D1199 G1200 F1201 I1202 P1203 L1207 G1208 V1212 G1213 R1214 K1219 D1220 V1221 S1222 T1223 L1224 K1225 Y1226 F1227 T1228 I1229 C1230 G1231 L1232 Q1233 E1234 G1235 Y1236 E1237 P1238 N1244 R1245 T1248


M1249 S1252 K1253 R1254 L1255 P1256 Q1257 F1258 L1259 P1262 H1265 E1266 H1267 I1268 E1269 R1272 I1273 D1274 GLY THR ILE ASP SER SER PRO CYS LEU K1284 V1285 T1286 Q1287 K1288 S1289 F1290 Q1293 N1294 N1295 N1296 T1297 D1298 I1299 R1303 L1304 E1309 C1310 A1311 X1312 X1313 X1314 X1315 X1316 X1321
X1322 X1323 X1324 X1325 X1326 X1327 X1328 X1329 X1332 S1341 D1342 F1343 E1344 V1345 L1346 M1347 K1348 T1349 A1350 H1351 G1352 H1353 L1354 V1355 P1356 D1357 R1358 I1359 D1360 K1361 D1362 K1363 P1366 K1367 P1368 E1369 F1370 N1371 N1372 H1373 K1374 Q1378 R1383 L1384 K1385 Q1386 X1387 X1388 X1389 X1392 X1393 X1394 X1395 X1396
X1399 X1400 X1401 X1402 X1403 X1404 X1405 X1406 X1407 X1408 X1409 X1410 X1411 X1412 X1413 X1414 X1415 X1416 X1417 X1418 X1419 X1420 X1421 X1422 X1423 X1424 X1425 X1426 X1427 X1428 X1429 X1430 X1431 X1432 X1433 X1434 X1435 X1436 X1437 X1438 X1439 X1440 X1441 X1442 X1443 X1444 X1445 X1446 UNK
UNK
P1566 L1567 L1571 F1572 K1573 K1577 N1578 P1579 V1580 P1581
Q1582 C1583 P1584 P1585 R1586 L1587 Q1590 F1591 L1592 S1593 H1594 V1595 L1596 K1606 V1607 D1608 V1609 S1610 R1611 I1612 S1613 E1614 R1615 Q1616 G1617 W1618 L1619 V1620 Q1621 C1622 L1623 D1624 M1629 S1630 L1631 P1634 E1635 D1641 I1642 L1643 E1644 E1647 Q1648 E1649 E1650 A1667 A1676 L1677 C1678 S1679 H1680 V1681
D1682 E1683 P1684 Q1685 L1686 L1687 Y1688 A1689 I1690 E1691 N1692 K1693 Y1694 R1700 Y1704 D1705 L1706 L1707 I1708 D1709 I1710 Y1715 R1719 P1729 M1730 T1731 E1732 E1733 T1734 K1735 S1736 I1737 T1738 L1739 F1740 P1741 D1742 E1743 N1744 K1745 K1746 H1747 G1748 L1749 I1752 G1753 L1754 S1755 T1756 R1759 P1760 R1761 M1762
R1763 F1764 P1767 S1768 F1769 V1770 S1771 I1772 S1773 N1774 D1775 C1776 Y1777 Q1778 Y1779 S1780 P1781 I1787 L1788 K1789 A1790 K1791 M1795 V1800 K1801 E1802 G1803 S1804 L1805 H1806 A1807 R1808 D1809 P1810 V1811 F1817 L1818 Y1827 T1828 L1829 L1830 I1831 I1834 F1835 H1836 N1837 E1838 D1839 L1840 K1841 H1842 I1843 L1844
Q1845 L1846 I1847 E1848 P1849 S1850 VAL PHE LYS GLU GLU ALA ALA VAL PRO GLU GLU GLU GLY GLY THR PRO GLU LYS GLU ILE SER ILE GLU ASP ALA LEU GLU GLY GLU GLU GLU ALA LYS GLY GLY LYS ARG PRO LYS GLU G1891 L1892 L1893 Q1894 M1895 K1896 K1902 C1906 L1907 L1908 L1909 Q1910
Y1911 L1912 C1913 D1914 E1922 A1923 I1924 S1928 D1929 D1930 F1931 V1932 A1933 Q1936 D1937 F1941 R1942 Y1943 N1944 E1945 V1946 M1947 Q1948 A1949 L1950 N1951 M1952 S1953 A1954 A1955 L1956 T1957 A1958 R1959 K1960 T1961 R1962 E1963 F1964 R1965 S1966 P1967 P1968 Q1969 E1970 Q1971 I1972 N1973 M1974 L1975 K1979 D1980 D1981 K1982 S1983
E1984 C1985 P1986 C1987 P1988 E1989 E1990 I1991 R1992 D1993 Q1994 L1995 F1998 H1999 E2000 D2001 L2002 G2007 I2008 E2009 LEU ASP GLU ASP GLY SER LEU ASP GLY SER ASN ASP LEU THR ILE ARG GLY ARG LEU LEU SER LEU VAL GLU LYS VAL THR TYR LEU LYS LYS LYS GLN ALA GLU LYS PRO VAL
ALA SER ASP SER ARG LYS CYS SER S2056 Q2059 L2060 I2061 T2064 M2065 V2066 R2067 Q2070 I2074 L2079 V2080 M2083 L2086 R2089 Q2090 Y2091 D2092 G2093 L2101 T2104 Y2105 T2106 I2107 N2108 G2109 V2110 S2111 V2112 E2113 I2116 S2121 Q2124 I2125 L2128 R2132 M2133
G2134 K2135 E2136 E2137 E2138 K2139 L2140 R2143 G2144 L2145 G2146 D2147 I2148 K2152 Y2155 Q2156 H2157 P2158 N2159 R2162 V2170 M2171 E2172 V2173 M2174 V2175 N2176 V2177 L2178 G2179 G2180 G2181 E2182 S2183 K2184 E2185 I2186 M2191 V2192 A2193 R2197 F2198 Y2201 I2205 S2206 R2207 Q2210 K2211 H2216

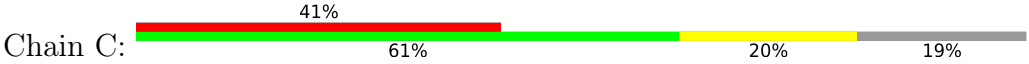

Y2219 L2220 L2228 A2229 S2230 P2231 A2232 M2233 R2234 G2235 S2236 T2237 P2238 L2239 D2240 V2241 A2242 N2249 N2250 E2251 L2252 A2253 L2254 R2257 E2258 P2259 D2260 L2261 E2262 K2263 V2264 V2265 R2266 G2270 C2271 G2272 L2273 Q2274 S2275 C2276 Q2277 M2278 L2279 V2280 S2281 K2282 G2283 Y2284 P2285 D2286 I2287 G2288 W2289 N2290 P2291
V2292 E2293 G2294 E2295 R2296 R2302 E2310 E2313 A2316 V2320 R2321 L2322 L2323 I2324 R2325 R2326 P2327 E2328 C2329 F2330 A2333 L2334 R2335 G2336 E2337 G2338 G2339 N2340 G2341 L2342 L2343 A2344 E2347 E2348 A2349 I2350 K2351 I2352 A2353 E2354 D2355 P2356 S2357 R2358 D2359 G2360 P2361 SER PRO THR SER GLY SER
SER LYS THR LEU ASP ILE GLU GLU GLU GLU ASP D2379 T2380 I2381 H2382 M2383 G2384 I2387 I2395 A2402 P2403 E2404 M2405 H2406 H2409 E2414 R2417 L2425 I2426 P2427 L2428 G2429 D2430 L2431 V2432 G2433 V2434 A2438 F2439 Q2440 M2441 P2442 THR ILE ALA LYS ASP GLY LYS VAL VAL E2452
P2453 D2454 M2455 S2456 A2457 G2458 F2459 D2462 H2463 K2464 M2467 F2470 L2471 D2472 R2473 V2474 Y2475 G2476 I2477 E2478 V2479 Q2480 D2481 F2482 L2483 L2484 H2485 L2486 L2487 E2488 V2489 G2490 F2491 L2492 P2493 D2494 L2495 R2496 A2497 A2498 A2499 S2500 L2501 D2502 T2503 A2504 A2505 L2506 X2509 X2514 X2515 X2516 X2521
X2524 X2527 X2528 X2529 X2532 X2533 X2534 X2535 X2536 X2537 X2538 X2539 X2540 X2541 X2546 X2547 X2548 X2549 X2550 X2551 X2554 X2555 X2556 X2557 X2558 X2559 X2563 X2564 X2567 X2568 X2569 X2570 X2571 X2572 X2573 X2574 X2575 X2576 X2577 X2578 X2579 X2580 X2581 X2582 X2583 X2584 X2585 X2586 X2587 X2588 X2589 X2590 X2591 X2592
X2593 X2594 X2595 X2596 X2597 X2598 X2599 X2600 X2601 X2602 X2603 X2606 X2609 X2610 X2611 X2612 X2613 X2614 X2615 X2616 X2617 X2618 X2619 X2620 X2621 X2624 X2625 X2626 X2627 X2628 X2629 X2630 X2631 X2632 X2633 X2634 X2635 X2636 X2637 X2638 X2639 X2640 X2641 X2642 X2643 X2644 X2645 X2646 X2647 X2648 X2649 X2650 X2651 X2652 X2653 X2654 X2655
X2656 X2657 X2658 UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK I2712 P2713 E2714 K2715
L2716 E2717 Y2718 F2719 I2720 N2721 K2722 Y2723 A2724 E2725 H2726 S2727 H2728 D2729 K2730 W2731 S2732 M2733 D2734 K2735 L2736 A2737 N2738 G2739 W2740 I2741 Y2742 G2743 E2744 I2745 Y2746 S2747 D2748 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 X2929 X2930 X2931 X2932 X2933 X2934 X2935 X2936 X2937 X2938 X2939 X2940 X2941 X2942 UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK
UNK UNK UNK UNK UNK X2961 X2962 X2963 X2964 X2965 X2966 X2967 X2968 X2969 X2970 X2971 X2972 X2973 X2974 X2975 X2976 X2977 X2980 X2981 X2982 X2983 X2984 X2985 X2986 X2987 X2988 X2989 X2990 X2991 X2992 X2993 X2994 X2995 X2996 X2997 X2998 X2999 X3000 X3001 X3002 X3003 X3004 X3005 X3006 X3007 X3008 X3009 X3010 X3011 X3012 X3013 X3014 X3015 X3016
X3017 X3018 X3019 X3020 X3021 X3022 X3023 X3024 X3025 X3026 X3027 X3028 X3029 UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK

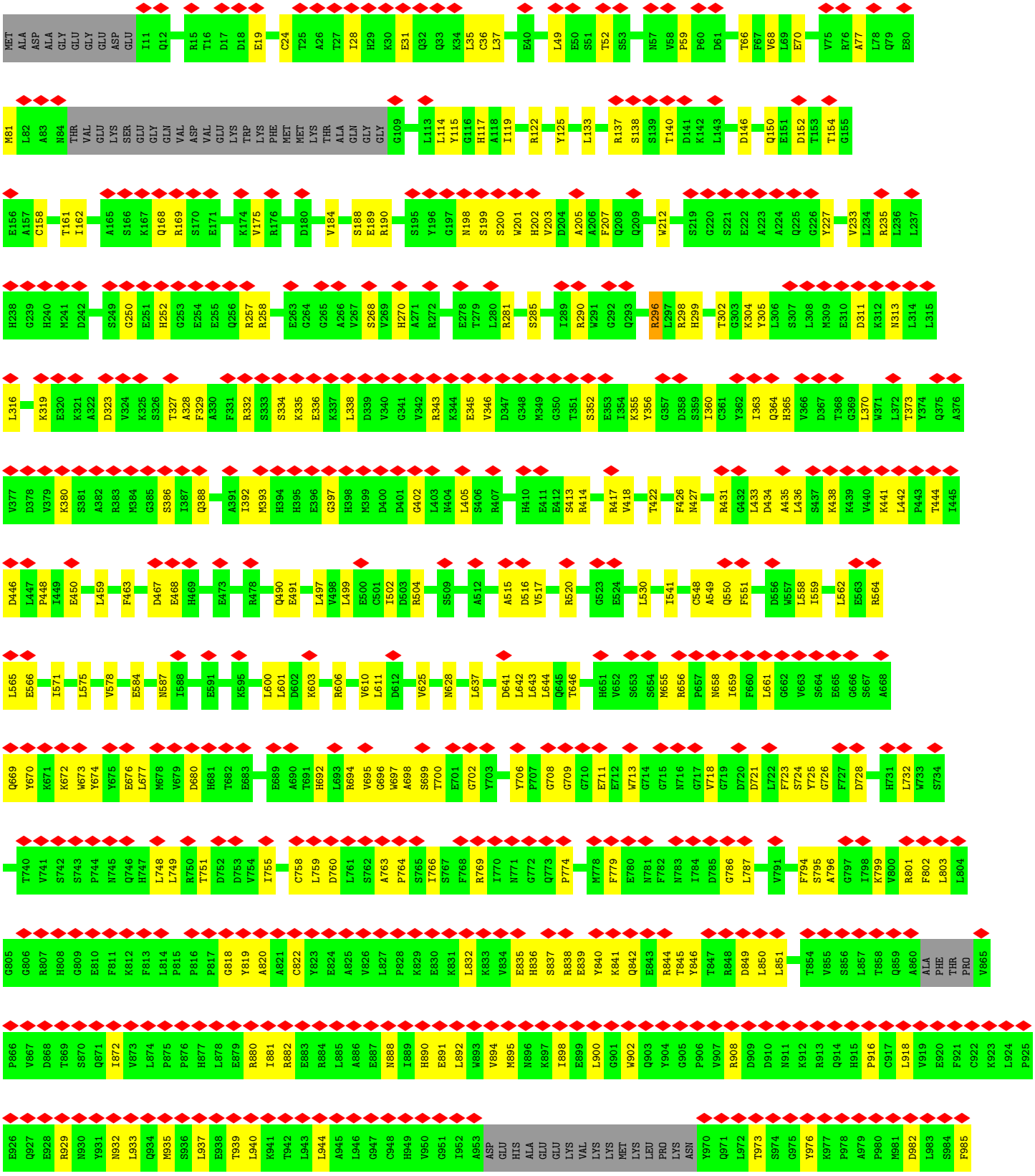

UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK X3104 X3105 X3106 X3107 X3108 X3109 X3110 X3111 X3112 X3113 X3114 X3115 X3116 X3117 X3118 X3119 X3120 X3121 X3122 X3123 X3124 X3125 X3126 X3127 X3128 X3129 UNK UNK UNK UNK UNK UNK X3136
X3137 X3138 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 X3207 X3208 X3209 X3210 X3211 X3212 X3213 X3214 X3215 X3216 X3217 X3218 X3219 X3220 UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK X3231 X3232 X3233 X3234 X3235 X3236 X3237 X3238 X3239 X3240 X3241 X3242 X3243 X3244 X3245 X3246 X3247 X3248 X3249 X3250 X3251 X3252 X3253 X3254 X3255 X3256
X3257 X3258 X3259 X3260 X3261 X3262 X3263 X3264 X3265 X3266 X3267 X3268 X3269 X3270 X3271 X3272 X3273 X3274 X3275 X3276 X3277 X3278 X3279 X3280 X3281 X3282 X3283 X3284 X3285 X3286 X3287 X3288 X3289 X3290 X3291 X3292 X3293 X3294 X3295 X3296 X3297 X3298 X3299 X3300 X3301 X3302 X3303 X3304 X3305 X3306 X3307 X3308 X3309 X3310 X3311 X3312 X3313 X3314 X3315 X3316
X3317 X3318 X3319 X3320 X3321 X3322 X3323 X3324 X3325 X3326 X3327 X3328 X3329 X3330 X3331 X3332 X3333 X3334 X3335 X3336 X3337 X3338 X3339 X3340 X3341 X3342 X3343 X3344 X3345 X3346 X3347 X3348 X3349 X3350 X3351 X3352 X3353 X3354 X3355 X3356 X3357 X3358 X3359 X3360 X3361 X3362 X3363 X3364 X3365 X3366 X3367 X3368 X3369 X3370 X3371 X3372 X3373 X3374 X3375 X3376
X3377 X3378 X3379 X3380 X3381 X3382 X3383 X3384 X3385 X3386 X3387 X3388 X3389 X3390 X3391 X3392 X3393 X3394 X3395 X3396 X3397 X3398 X3399 X3400 X3401 X3402 X3403 X3404 X3405 X3406 X3407 X3408 X3409 X3410 X3411 X3412 X3413 X3414 X3415 X3416 X3417 X3418 X3419 X3420 X3421 X3422 X3423 X3424 X3425 X3426 X3427 X3428 X3429 X3430 X3431 X3432 X3433 X3434 UNK UNK
UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK X3477 X3478 X3479 X3480 X3481 X3482 X3483 X3484 X3485 X3486 X3487 X3488 X3489 X3490 X3491 X3492 X3493 X3494 X3495 X3496
X3497 X3498 X3499 X3500 X3501 X3502 X3503 X3504 X3505 X3506 X3507 X3508 X3509 X3510 X3511 X3512 X3513 X3514 X3515 X3516 X3517 X3518 X3519 X3520 X3521 X3522 X3523 X3524 X3525 X3526 X3527 X3528 X3529 X3530 X3531 X3532 X3533 X3534 X3535 X3536 X3537 X3538 X3539 X3540 X3541 X3542 X3543 X3544 X3545 X3546 X3547 X3548 X3549 X3550 X3551 X3552 X3553 X3554 X3555 X3556
X3557 X3558 X3559 X3560 X3561 X3562 X3563 X3564 X3565 X3566 X3567 X3568 X3569 X3570 X3571 X3572 X3573 X3574 X3575 X3576 X3577 X3578 X3579 UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK P3611 R3612 H3613 R3614 A3615 V3616
F3619 L3620 Q3621 E3624 E3629 T3630 E3631 E3632 H3633 Y3634 F3635 E3636 L3639 I3640 E3641 D3642 L3643 A3644 K3645 A3648 GLU LEU PRO GLU GLU ASP GLU ALA MET LYS R3659 V3660 H3664 L3668 L3669 T3676 E3677 K3678 E3683 D3684 I3693 K3696 S3697 C3698 H3699 ASP GLU GLU ASP
ASP ASP GLY GLU GLU GLU VAL LYS S3712 F3713 E3714 E3715 K3716 E3717 M3718 E3719 L3723 Q3726 Q3727 A3728 R3729 L3730 H3731 D3732 R3733 L3740 K3747 G3748 V3754 T3757 L3758 K3759 L3760 G3761 I3762 A3763 I3764 G3768 N3769 K3775 D3778 Y3779 E3782 K3783 K3784 D3785 V3786 Q3790
L3795 M3796 C3799 L3802 D3803 A3806 R3809 A3813 E3814 G3815 L3816 G3817 M3818 V3819 T3820 E3821 E3822 G3823 S3824 G3825 E3826 K3827 V3828 L3829 Q3830 D3831 D3832 E3833 F3834 T3835 C3836 D3837 R3840 Q3843 H3849 Q3860 N3864 T3865 T3866 V3867 N3868 I3869 L3878 S3883 D3886 G3893
K3894 D3895 I3896 I3897 D3898 E3899 Q3900 G3901 F3905 I3909 F3916 T3920 E3921 Y3922 I3923 Q3924 G3925 P3926 C3927 L3934 R3938 L3939 W3940 D3941 A3942 V3943 F3950 Q3954 M3955 Q3959 D3960 S3961 S3962 Q3963 I3964 E3965 L3966 L3967 L3970 M3971 Q3974 M3980 M3984 L3985 E3986 G3987 N3988

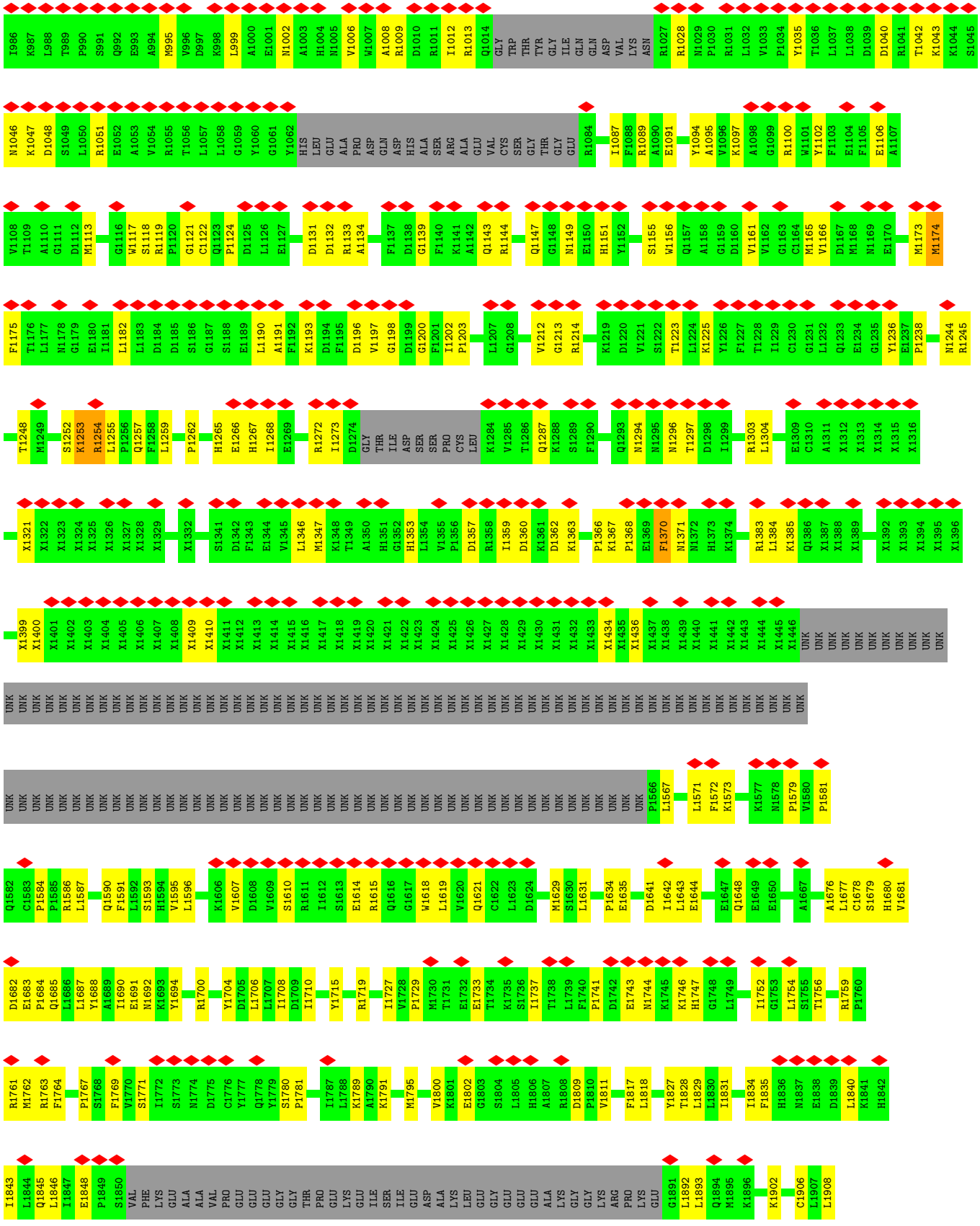


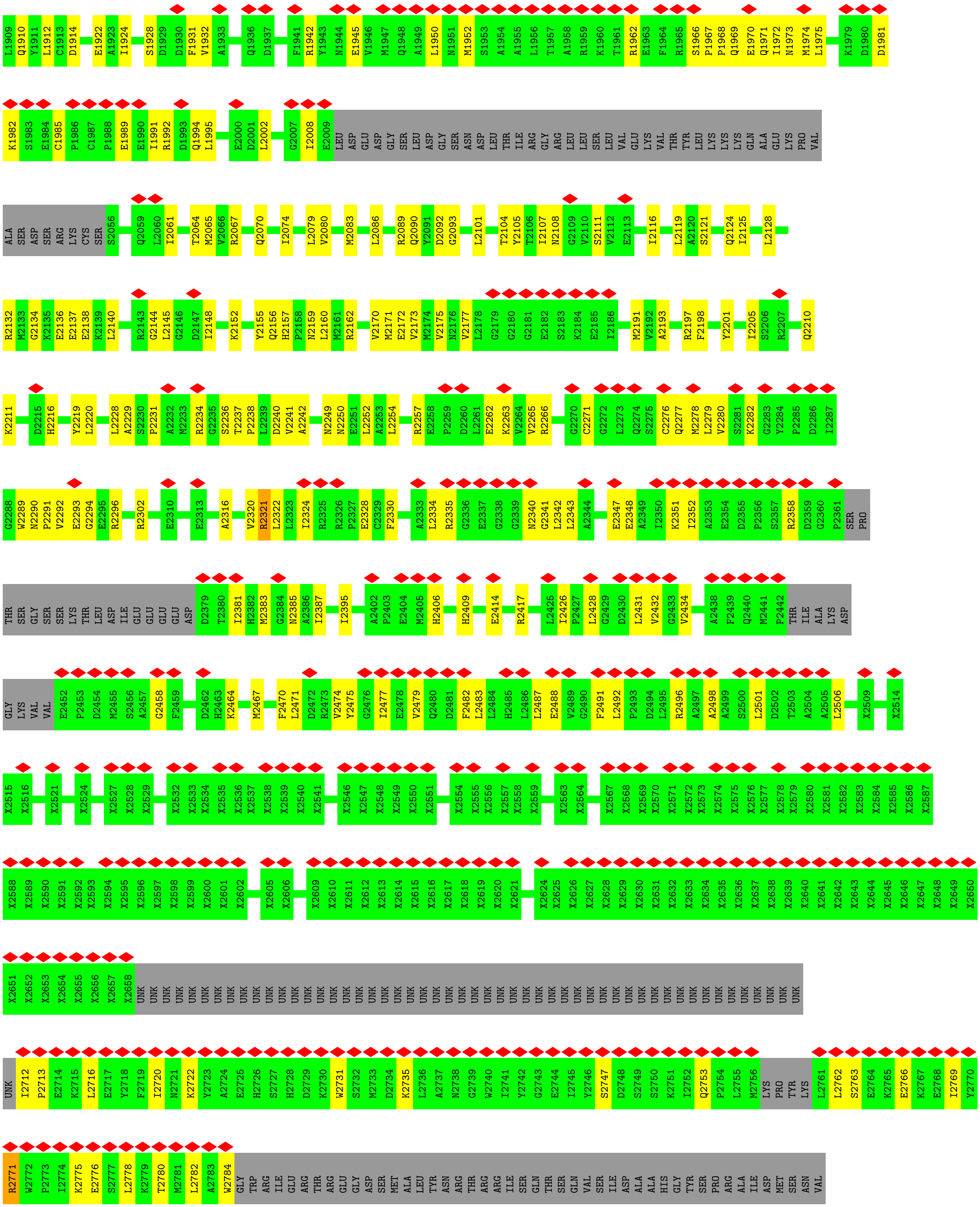
• Molecule 1: Ryanodine receptor 2

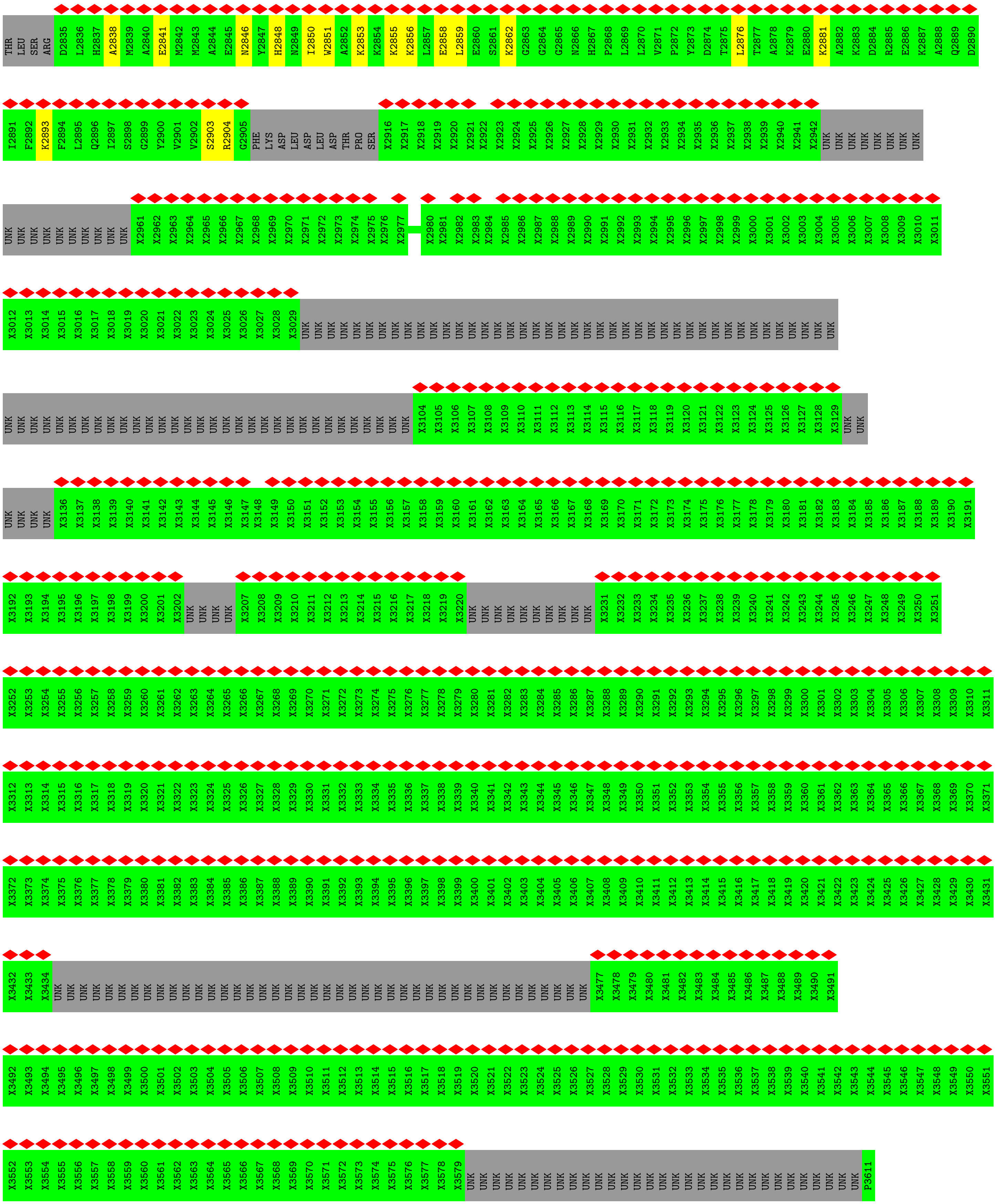
Chain C:

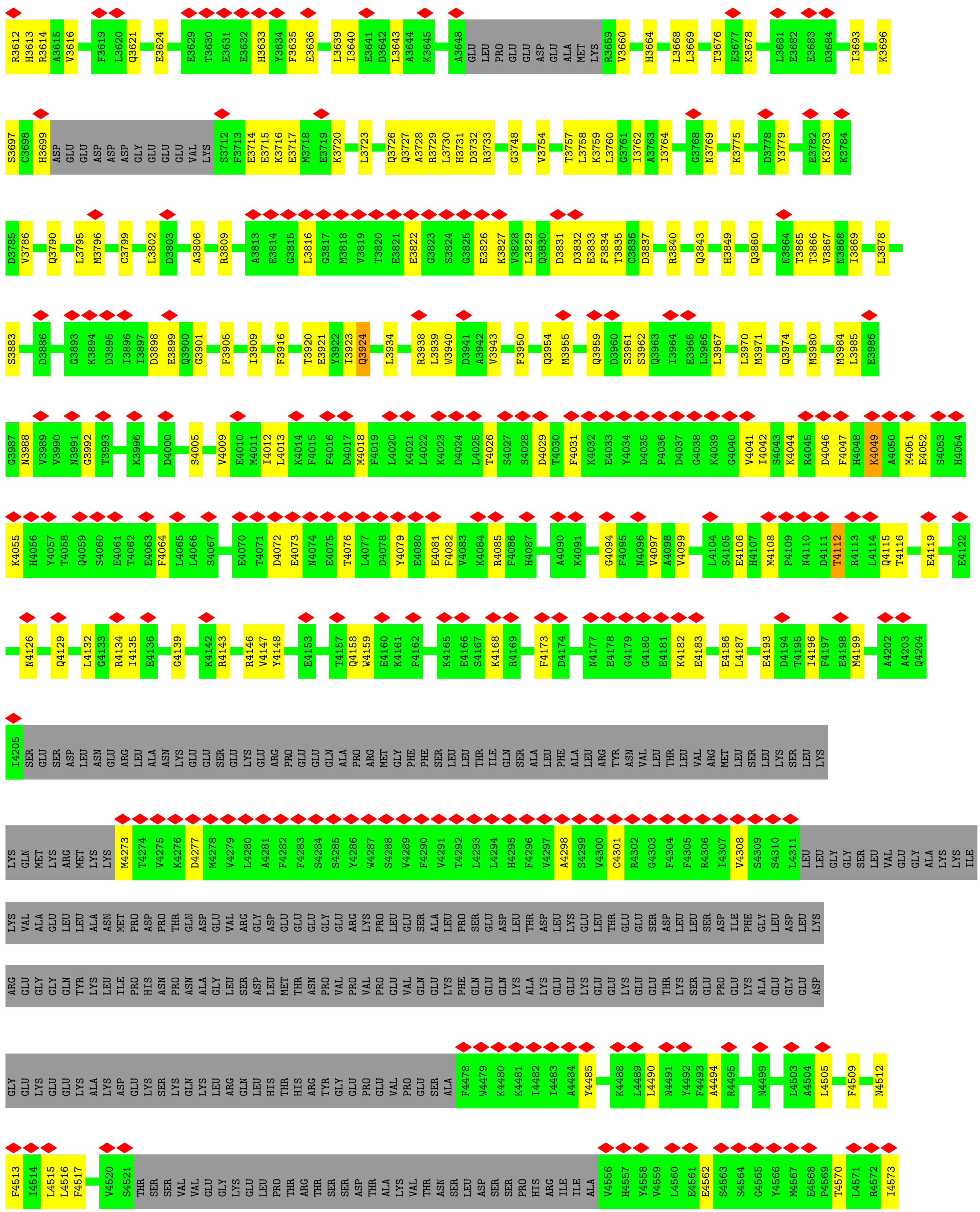


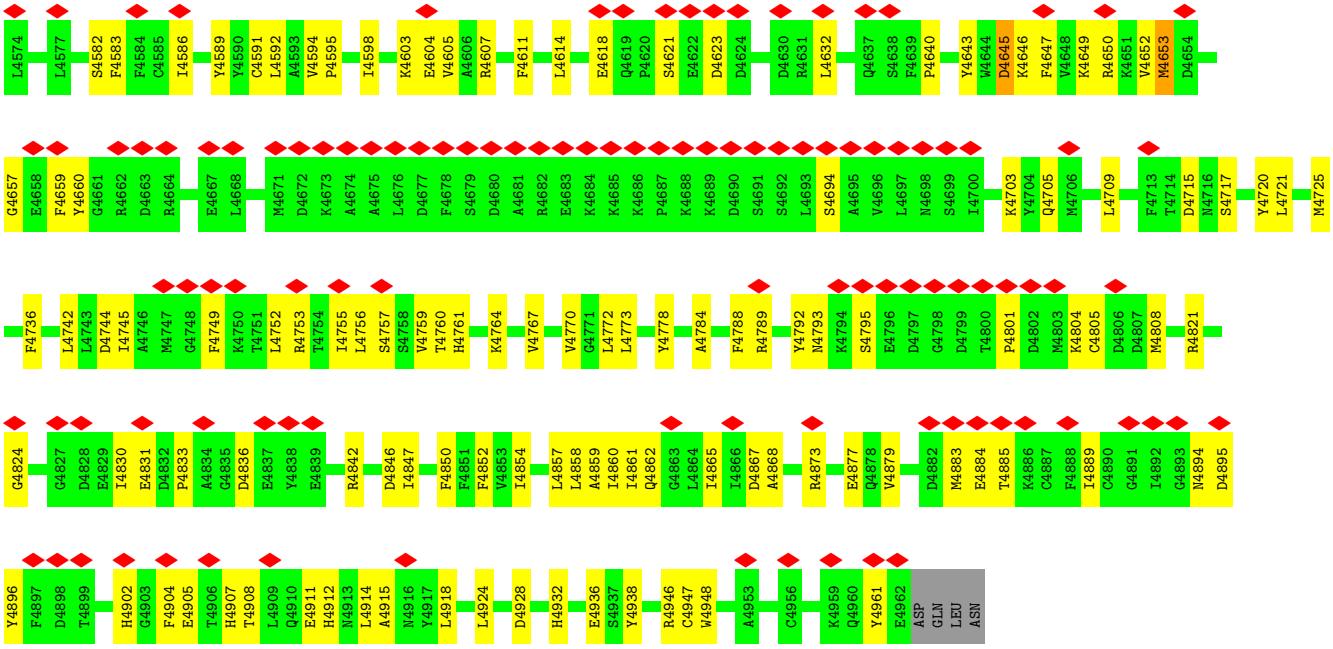



I986 K987 L988 T989 P990 S991 Q992 E993 A994 M995 V996 D997 K998 L999 A1000 E1001 N1002 A1003 H1004 N1005 V1006 W1007 A1008 R1009 D1010 R1011 I1012 R1013 Q1014 GLY TRP THR TYR GLY ILE GLN GLN ASP VAL LYS ASN R1027 R1028 N1029 P1030 R1031 L1032 V1033 P1034 Y1035 T1036 L1037 L1038 D1039 D1040 R1041 T1042 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 I1087 F1088 R1089 A1090 E1091 Y1094 A1095 Y1096 K1097 A1098 G1099 R1100 W1101 Y1102 F1103 E1104 F1105 E1106 A1107
V1108 T1109 A1110 G1111 D1112 M1113 G1116 W1117 S1118 R1119 P1120 G1121 C1122 Q1123 P1124 D1125 L1126 E1127 D1131 D1132 R1133 A1134 F1137 D1138 G1139 F1140 K1141 A1142 Q1143 R1144 Q1147 G1148 N1149 E1150 H1151 Y1152 S1155 W1156 Q1157 A1158 C1159 D1160 V1161 V1162 G1163 C1164 M1165 V1166 D1167 M1168 N1169 E1170 M1173 M1174
F1175 T1176 L1177 N1178 G1179 E1180 I1181 L1182 L1183 D1184 D1185 S1186 G1187 S1188 E1189 L1190 A1191 F1192 K1193 D1194 F1195 D1196 V1197 G1198 D1199 G1200 F1201 I1202 P1203 L1207 G1208 V1212 G1213 R1214 K1219 D1220 V1221 S1222 T1223 L1224 K1225 Y1226 F1227 T1228 I1229 C1230 G1231 L1232 Q1233 E1234 G1235 Y1236 E1237 P1238 N1244 R1245
T1248 M1249 S1252 K1253 R1254 L1255 P1256 Q1257 F1258 L1259 P1262 H1265 E1266 H1267 I1268 E1269 R1272 I1273 D1274 GLY THR ILE ASP SER SER PRO CYS LEU K1284 V1285 T1286 Q1287 K1288 S1289 F1290 Q1293 N1294 N1295 N1296 T1297 D1298 I1299 R1303 L1304 E1309 C1310 A1311 X1312 X1313 X1314 X1315 X1316
X1321 X1322 X1323 X1324 X1325 X1326 X1327 X1328 X1329 X1332 S1341 D1342 F1343 E1344 V1345 L1346 M1347 K1348 T1349 A1350 H1351 G1352 H1353 L1354 V1355 P1356 D1357 R1358 I1359 D1360 K1361 D1362 K1363 P1366 K1367 P1368 E1369 F1370 N1371 N1372 H1373 K1374 R1383 L1384 K1385 Q1386 X1387 X1388 X1389 X1392 X1393 X1394 X1395 X1396
X1399 X1400 X1401 X1402 X1403 X1404 X1405 X1406 X1407 X1408 X1409 X1410 X1411 X1412 X1413 X1414 X1415 X1416 X1417 X1418 X1419 X1420 X1421 X1422 X1423 X1424 X1425 X1426 X1427 X1428 X1429 X1430 X1431 X1432 X1433 X1434 X1435 X1436 X1437 X1438 X1439 X1440 X1441 X1442 X1443 X1444 X1445 X1446 UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK
UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK


L1909 Q1910 Y1911 L1912 C1913 D1914 E1922 A1923 I1924 S1928 D1929 D1930 F1931 V1932 A1933 Q1936 D1937 F1941 R1942 Y1943 N1944 E1945 V1946 M1947 Q1948 A1949 L1950 N1951 M1952 S1953 A1954 A1955 L1956 T1957 A1958 R1959 K1960 T1961 R1962 E1963 F1964 R1965 S1966 P1967 P1968 Q1969 E1970 Q1971 I1972 N1973 M1974 L1975 K1979 D1980 D1981
K1982 S1983 E1984 C1985 P1986 C1987 P1988 E1989 E1990 I1991 R1992 D1993 Q1994 L1995 E2000 D2001 L2002 G2007 I2008 E2009 LEU ASP GLU ASP GLY SER LEU ASP GLY SER ASN ASP LEU THR ILE ARG GLY ARG LEU LEU SER LEU VAL GLU LYS VAL THR TYR LEU LYS LYS LYS GLN ALA GLU LYS PRO VAL
ALA SER ASP SER ARG LYS CYS SER S2056 Q2059 L2060 I2061 T2064 M2065 V2066 R2067 Q2070 I2074 L2079 V2080 M2083 L2086 R2089 Q2090 Y2091 D2092 G2093 L2101 T2104 Y2105 T2106 I2107 N2108 G2109 V2110 S2111 V2112 E2113 I2116 L2119 A2120 S2121 Q2124 I2125 L2128
R2132 M2133 G2134 K2135 E2136 E2137 E2138 K2139 L2140 R2143 G2144 L2145 G2146 D2147 I2148 K2152 Y2155 Q2156 H2157 P2158 N2159 L2160 M2161 R2162 V2170 M2171 E2172 V2173 M2174 V2175 N2176 V2177 L2178 G2179 G2180 G2181 E2182 S2183 K2184 E2185 I2186 M2191 V2192 A2193 R2197 F2198 Y2201 I2205 S2206 R2207 Q2210
K2211 D2215 H2216 Y2219 L2220 L2228 A2229 S2230 P2231 A2232 M2233 R2234 G2235 S2236 T2237 P2238 L2239 D2240 V2241 A2242 N2249 N2250 E2251 L2252 A2253 L2254 R2257 E2258 P2259 D2260 L2261 E2262 K2263 V2264 V2265 R2266 G2270 C2271 G2272 L2273 Q2274 S2275 C2276 Q2277 M2278 L2279 V2280 S2281 K2282 G2283 Y2284 P2285 D2286 I2287
G2288 W2289 N2290 P2291 V2292 E2293 G2294 E2295 R2296 R2302 E2310 E2313 A2316 V2320 R2321 L2322 L2323 I2324 R2325 R2326 P2327 E2328 C2329 F2330 A2333 L2334 R2335 G2336 E2337 G2338 G2339 N2340 G2341 L2342 L2343 A2344 E2347 E2348 A2349 I2350 K2351 I2352 A2353 E2354 D2355 P2356 S2357 R2358 D2359 G2360 P2361 SER PRO
THR SER GLY SER SER LYS THR LEU ASP ILE GLU GLU GLU GLU ASP D2379 T2380 I2381 H2382 M2383 G2384 N2385 A2386 I2387 I2395 A2402 P2403 E2404 M2405 H2406 H2409 E2414 R2417 L2425 I2426 P2427 L2428 G2429 D2430 L2431 V2432 G2433 V2434 A2438 F2439 Q2440 M2441 P2442 THR ILE ALA LYS ASP
GLY LYS VAL VAL E2452 P2453 D2454 M2455 S2456 A2457 G2458 F2459 D2462 H2463 K2464 M2467 F2470 L2471 D2472 R2473 V2474 Y2475 G2476 I2477 E2478 V2479 Q2480 D2481 F2482 L2483 L2484 H2485 L2486 L2487 E2488 V2489 G2490 F2491 L2492 P2493 D2494 L2495 R2496 A2497 A2498 A2499 S2500 L2501 D2502 T2503 A2504 A2505 L2506 X2509 X2514
X2515 X2516 X2521 X2524 X2527 X2528 X2529 X2532 X2533 X2534 X2535 X2536 X2537 X2538 X2539 X2540 X2541 X2546 X2547 X2548 X2549 X2550 X2551 X2554 X2555 X2556 X2557 X2558 X2559 X2563 X2564 X2567 X2568 X2569 X2570 X2571 X2572 X2573 X2574 X2575 X2576 X2577 X2578 X2579 X2580 X2581 X2582 X2583 X2584 X2585 X2586 X2587
X2588 X2589 X2590 X2591 X2592 X2593 X2594 X2595 X2596 X2597 X2598 X2599 X2600 X2601 X2602 X2605 X2606 X2609 X2610 X2611 X2612 X2613 X2614 X2615 X2616 X2617 X2618 X2619 X2620 X2621 X2624 X2625 X2626 X2627 X2628 X2629 X2630 X2631 X2632 X2633 X2634 X2635 X2636 X2637 X2638 X2639 X2640 X2641 X2642 X2643 X2644 X2645 X2646 X2647 X2648 X2649 X2650
X2651 X2652 X2653 X2654 X2655 X2656 X2657 X2658 UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK
UNK I2712 P2713 E2714 K2715 L2716 E2717 Y2718 F2719 I2720 N2721 K2722 Y2723 A2724 E2725 H2726 S2727 H2728 D2729 K2730 W2731 S2732 M2733 D2734 K2735 L2736 A2737 N2738 G2739 W2740 I2741 Y2742 G2743 E2744 I2745 Y2746 S2747 D2748 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

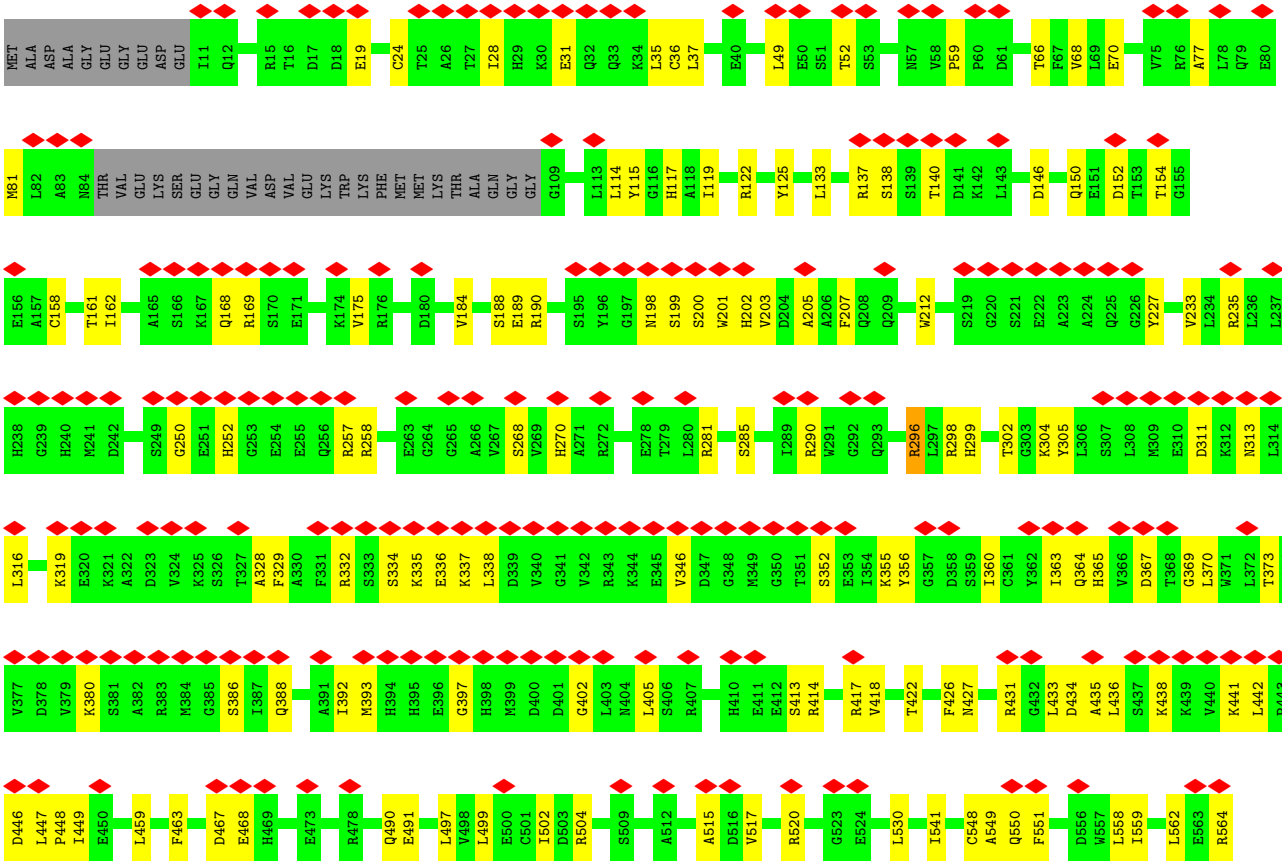

THR LEU SER ARG D2835 L2836 H2837 A2838 M2839 A2840 E2841 M2842 M2843 A2844 E2845 N2846 Y2847 H2848 N2849 I2850 W2851 A2852 K2853 K2854 K2855 K2856 L2857 E2858 L2859 E2860 S2861 K2862 G2863 G2864 G2865 N2866 H2867 P2868 L2869 L2870 V2871 P2872 Y2873 D2874 T2875 L2876 T2877 A2878 K2879 E2880 K2881 A2882 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 X2929 X2930 X2931 X2932 X2933 X2934 X2935 X2936 X2937 X2938 X2939 X2940 X2941 X2942 UNK UNK UNK UNK UNK UNK UNK UNK
UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK X2961 X2962 X2963 X2964 X2965 X2966 X2967 X2968 X2969 X2970 X2971 X2972 X2973 X2974 X2975 X2976 X2977 X2980 X2981 X2982 X2983 X2984 X2985 X2986 X2987 X2988 X2989 X2990 X2991 X2992 X2993 X2994 X2995 X2996 X2997 X2998 X2999 X3000 X3001 X3002 X3003 X3004 X3005 X3006 X3007 X3008 X3009 X3010 X3011
X3012 X3013 X3014 X3015 X3016 X3017 X3018 X3019 X3020 X3021 X3022 X3023 X3024 X3025 X3026 X3027 X3028 X3029 UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK
UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK X3104 X3105 X3106 X3107 X3108 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 X3207 X3208 X3209 X3210 X3211 X3212 X3213 X3214 X3215 X3216 X3217 X3218 X3219 X3220 UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK X3231 X3232 X3233 X3234 X3235 X3236 X3237 X3238 X3239 X3240 X3241 X3242 X3243 X3244 X3245 X3246 X3247 X3248 X3249 X3250 X3251
X3252 X3253 X3254 X3255 X3256 X3257 X3258 X3259 X3260 X3261 X3262 X3263 X3264 X3265 X3266 X3267 X3268 X3269 X3270 X3271 X3272 X3273 X3274 X3275 X3276 X3277 X3278 X3279 X3280 X3281 X3282 X3283 X3284 X3285 X3286 X3287 X3288 X3289 X3290 X3291 X3292 X3293 X3294 X3295 X3296 X3297 X3298 X3299 X3300 X3301 X3302 X3303 X3304 X3305 X3306 X3307 X3308 X3309 X3310 X3311
X3312 X3313 X3314 X3315 X3316 X3317 X3318 X3319 X3320 X3321 X3322 X3323 X3324 X3325 X3326 X3327 X3328 X3329 X3330 X3331 X3332 X3333 X3334 X3335 X3336 X3337 X3338 X3339 X3340 X3341 X3342 X3343 X3344 X3345 X3346 X3347 X3348 X3349 X3350 X3351 X3352 X3353 X3354 X3355 X3356 X3357 X3358 X3359 X3360 X3361 X3362 X3363 X3364 X3365 X3366 X3367 X3368 X3369 X3370 X3371
X3372 X3373 X3374 X3375 X3376 X3377 X3378 X3379 X3380 X3381 X3382 X3383 X3384 X3385 X3386 X3387 X3388 X3389 X3390 X3391 X3392 X3393 X3394 X3395 X3396 X3397 X3398 X3399 X3400 X3401 X3402 X3403 X3404 X3405 X3406 X3407 X3408 X3409 X3410 X3411 X3412 X3413 X3414 X3415 X3416 X3417 X3418 X3419 X3420 X3421 X3422 X3423 X3424 X3425 X3426 X3427 X3428 X3429 X3430 X3431
X3432 X3433 X3434 UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK X3477 X3478 X3479 X3480 X3481 X3482 X3483 X3484 X3485 X3486 X3487 X3488 X3489 X3490 X3491
X3492 X3493 X3494 X3495 X3496 X3497 X3498 X3499 X3500 X3501 X3502 X3503 X3504 X3505 X3506 X3507 X3508 X3509 X3510 X3511 X3512 X3513 X3514 X3515 X3516 X3517 X3518 X3519 X3520 X3521 X3522 X3523 X3524 X3525 X3526 X3527 X3528 X3529 X3530 X3531 X3532 X3533 X3534 X3535 X3536 X3537 X3538 X3539 X3540 X3541 X3542 X3543 X3544 X3545 X3546 X3547 X3548 X3549 X3550 X3551
X3552 X3553 X3554 X3555 X3556 X3557 X3558 X3559 X3560 X3561 X3562 X3563 X3564 X3565 X3566 X3567 X3568 X3569 X3570 X3571 X3572 X3573 X3574 X3575 X3576 X3577 X3578 X3579 UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK P3611

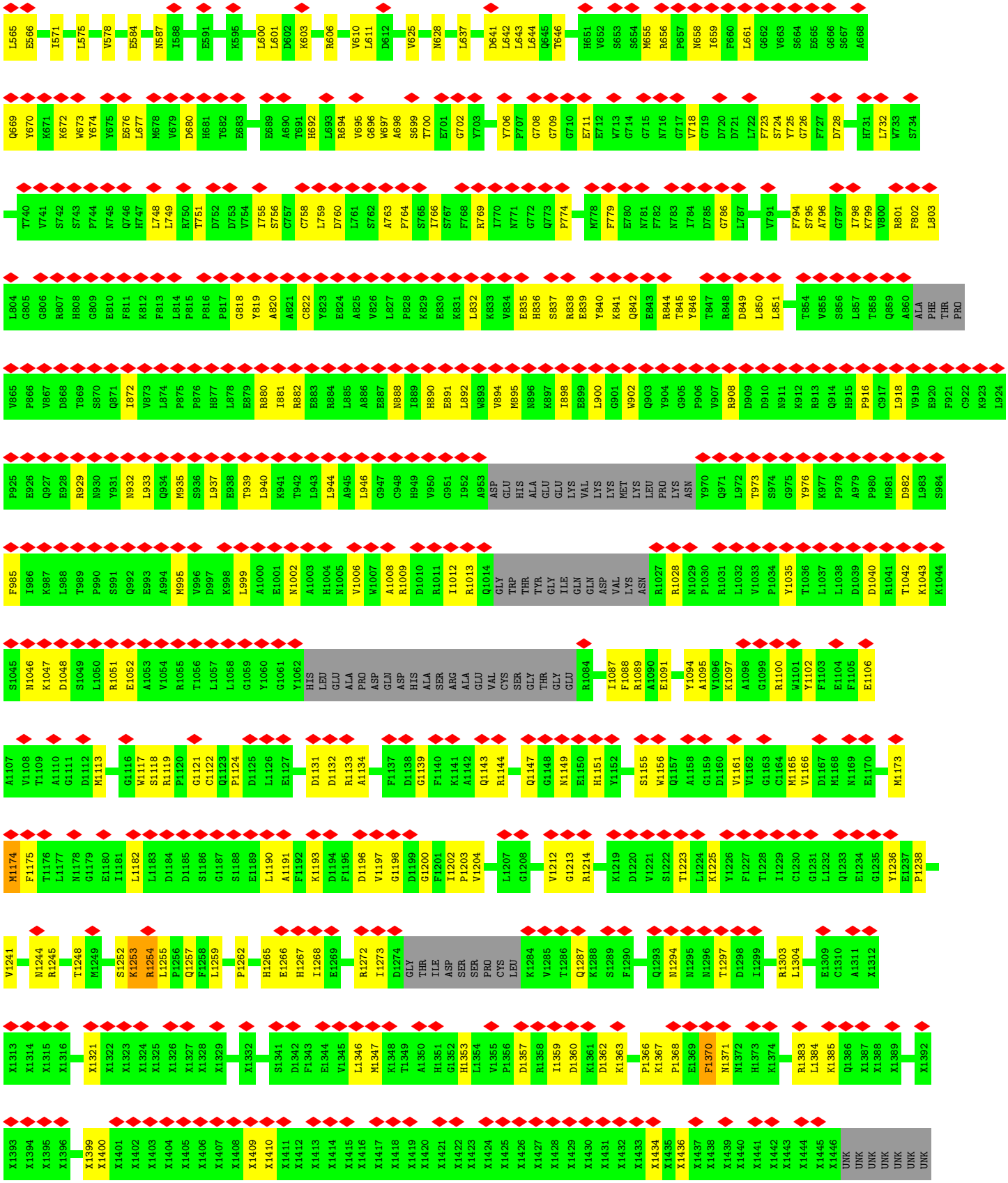

R3612 H3613 R3614 A3615 V3616 F3619 L3620 Q3621 E3624 E3629 T3630 E3631 E3632 H3633 Y3634 F3635 E3636 L3639 I3640 E3641 D3642 L3643 A3644 K3645 A3648 GLU LEU PRO GLU GLU ASP GLU ALA MET LYS R3659 V3660 H3664 L3668 L3669 T3676 E3677 K3678 L3681 E3682 E3683 D3684 I3693 K3696
S3697 C3698 H3699 ASP GLU GLU ASP ASP ASP GLY GLU GLU GLU VAL LYS S3712 F3713 E3714 E3715 K3716 E3717 M3718 E3719 K3720 L3723 Q3726 Q3727 A3728 R3729 L3730 H3731 D3732 R3733 G3748 V3754 T3757 L3758 K3759 L3760 G3761 I3762 A3763 I3764 G3768 N3769 K3775 D3778 Y3779 E3782 K3783 K3784
D3785 V3786 Q3790 L3795 M3796 C3799 L3802 D3803 A3806 R3809 A3813 E3814 G3815 L3816 G3817 M3818 V3819 T3820 E3821 E3822 G3823 S3824 G3825 E3826 K3827 V3828 L3829 Q3830 D3831 D3832 E3833 F3834 T3835 C3836 D3837 R3840 Q3843 H3849 Q3860 N3864 T3865 T3866 V3867 N3868 I3869 L3878
S3883 D3886 G3893 K3894 D3895 I3896 I3897 D3898 E3899 Q3900 G3901 F3905 I3909 F3916 T3920 E3921 Y3922 I3923 Q3924 L3934 R3938 L3939 W3940 D3941 A3942 V3943 F3950 Q3954 M3955 Q3959 D3960 S3961 S3962 Q3963 I3964 E3965 L3966 L3967 L3970 M3971 Q3974 M3980 M3984 L3985 E3986
G3987 N3988 V3989 V3990 N3991 G3992 T3993 K3996 D4000 S4005 V4009 E4010 M4011 I4012 L4013 K4014 F4015 F4016 D4017 M4018 F4019 L4020 K4021 L4022 K4023 D4024 L4025 T4026 S4027 S4028 D4029 T4030 F4031 K4032 E4033 Y4034 D4035 P4036 D4037 G4038 K4039 G4040 V4041 I4042 S4043 K4044 R4045 D4046 F4047 H4048 K4049 A4050 M4051 E4052 S4053 H4054
K4055 H4056 Y4057 T4058 Q4059 S4060 E4061 T4062 E4063 F4064 L4065 L4066 S4067 E4070 T4071 D4072 E4073 N4074 E4075 T4076 L4077 D4078 Y4079 E4080 E4081 F4082 V4083 K4084 R4085 F4086 H4087 A4090 K4091 G4094 F4095 N4096 V4097 A4098 V4099 L4104 S4105 E4106 H4107 M4108 P4109 N4110 D4111 T4112 R4113 L4114 Q4115 T4116 E4119 E4122
N4126 Q4129 L4132 G4133 R4134 I4135 E4136 G4139 K4142 R4143 R4146 V4147 Y4148 E4153 T4157 Q4158 W4159 E4160 K4161 P4162 K4165 E4166 S4167 K4168 R4169 F4173 D4174 N4177 E4178 G4179 G4180 E4181 K4182 E4183 E4186 L4187 E4193 D4194 T4195 I4196 F4197 E4198 M4199 A4202 A4203 Q4204
I4205 SER GLU SER ASP LEU ASN GLU ARG LEU ALA ASN LYS GLU GLU SER GLU LYS GLU ARG PRO GLU GLU GLN ALA PRO ARG MET GLY PHE PHE SER LEU LEU THR ILE GLN SER ALA LEU PHE ALA LEU ARG TYR ASN VAL LEU THR LEU VAL ARG MET LEU SER LEU LYS SER LEU LYS
LYS GLN MET LYS ARG MET LYS LYS M4273 T4274 V4275 K4276 D4277 M4278 V4279 L4280 A4281 F4282 F4283 S4284 S4285 Y4286 W4287 S4288 V4289 F4290 V4291 T4292 L4293 L4294 H4295 F4296 V4297 A4298 S4299 V4300 C4301 R4302 G4303 F4304 F4305 R4306 I4307 V4308 S4309 S4310 L4311 LEU LEU GLY GLY SER LEU VAL GLU GLY ALA LYS LYS ILE
LYS VAL ALA GLU LEU LEU ALA ASN MET PRO ASP PRO THR GLN ASP GLU VAL ARG GLY ASP GLU GLU GLU GLY GLU ARG LYS PRO LEU GLU SER ALA LEU PRO SER GLU ASP LEU THR ASP LEU LYS GLU LEU THR GLU GLU SER ASP LEU LEU SER ASP ILE PHE GLY LEU ASP LEU LYS
ARG GLU GLY GLY GLN TYR LYS LEU ILE PRO HIS ASN PRO ASN ALA GLY LEU SER ASP LEU MET THR ASN PRO VAL PRO VAL PRO GLU VAL GLN GLU LYS PHE GLN GLU GLN LYS ALA LYS GLU GLU LYS GLU GLU LYS GLU GLU THR LYS SER GLU PRO GLU LYS ALA GLU GLY GLU ASP
GLY GLU LYS GLU GLU LYS ALA LYS ASP GLU LYS SER LYS GLN LYS LEU ARG GLN LEU HIS THR HIS ARG TYR GLY GLU PRO GLU VAL PRO GLU SER ALA F4478 W4479 K4480 K4481 I4482 I4483 A4484 Y4485 K4488 L4489 L4490 N4491 Y4492 F4493 A4494 R4495 N4499 L4503 A4504 L4505 F4509 N4512
F4513 I4514 L4515 L4516 F4517 V4520 S4521 THR SER SER VAL VAL GLU GLY LYS GLU LEU PRO THR ARG THR SER SER ASP THR ALA LYS VAL THR ASN SER LEU ASP SER SER PRO HIS ARG ILE ILE ALA V4556 H4557 Y4558 V4559 L4560 E4561 E4562 S4563 S4564 G4565 Y4566 M4567 E4568 P4569 T4570 L4571 R4572 I4573

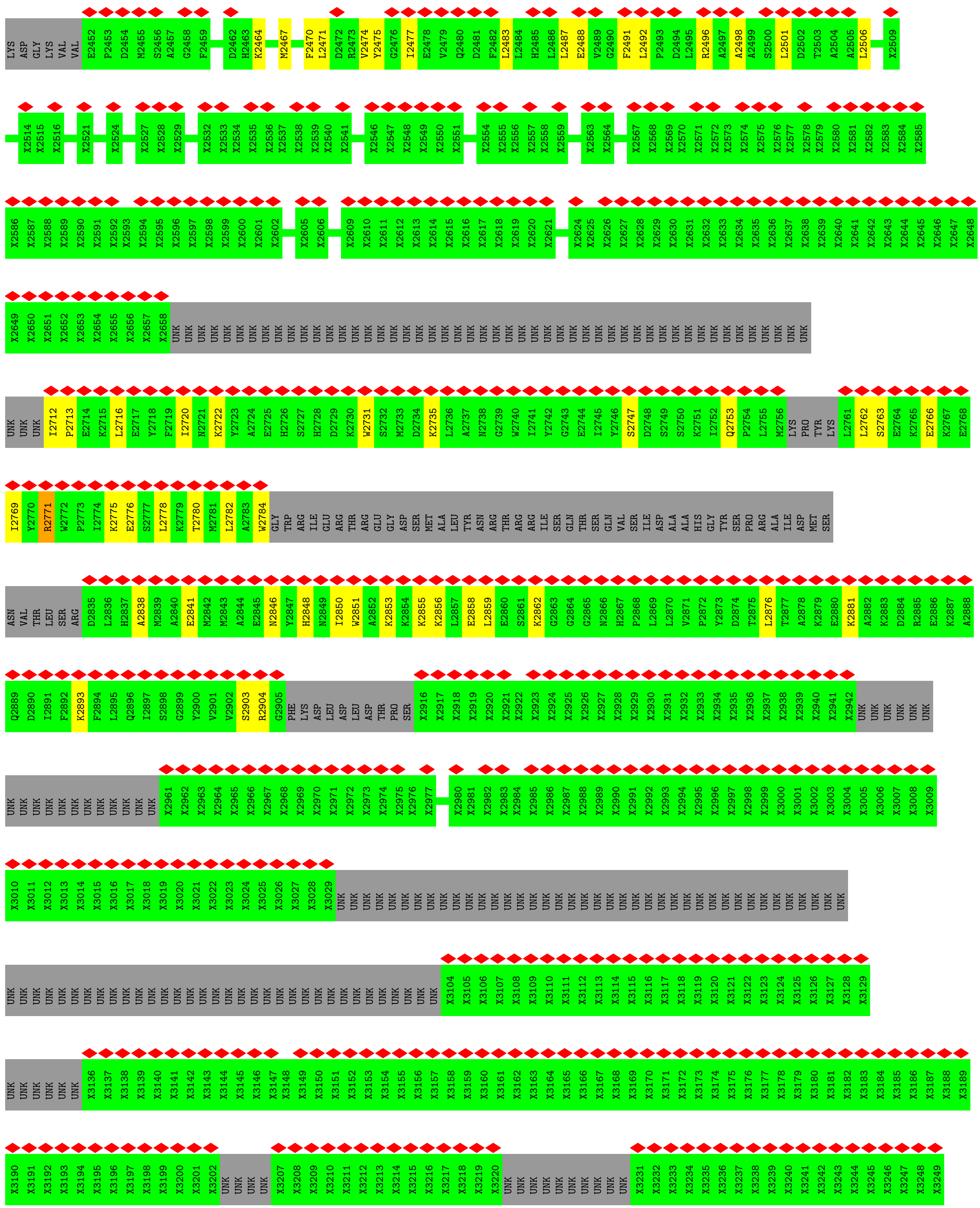


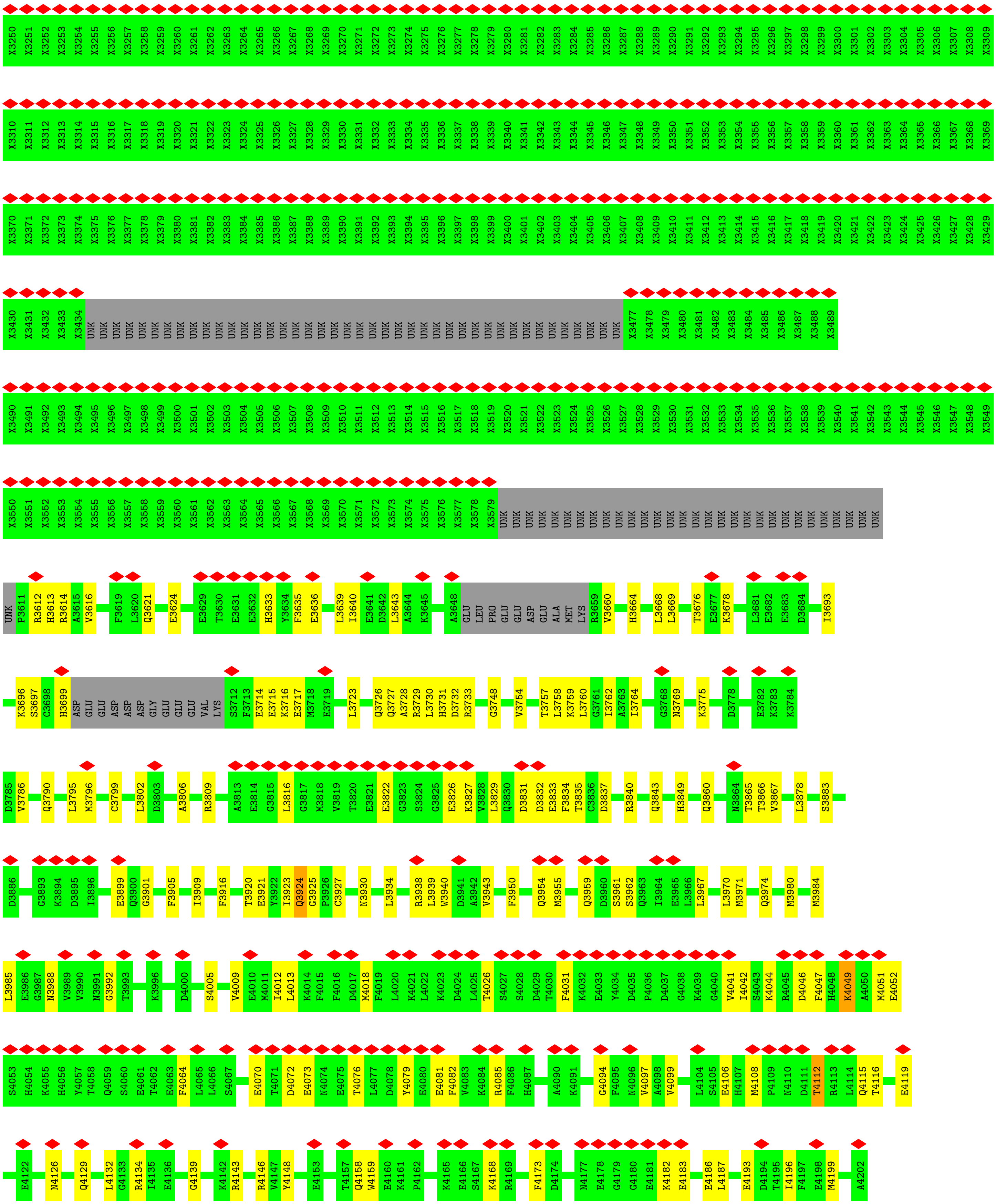
• Molecule 1: Ryanodine receptor 2

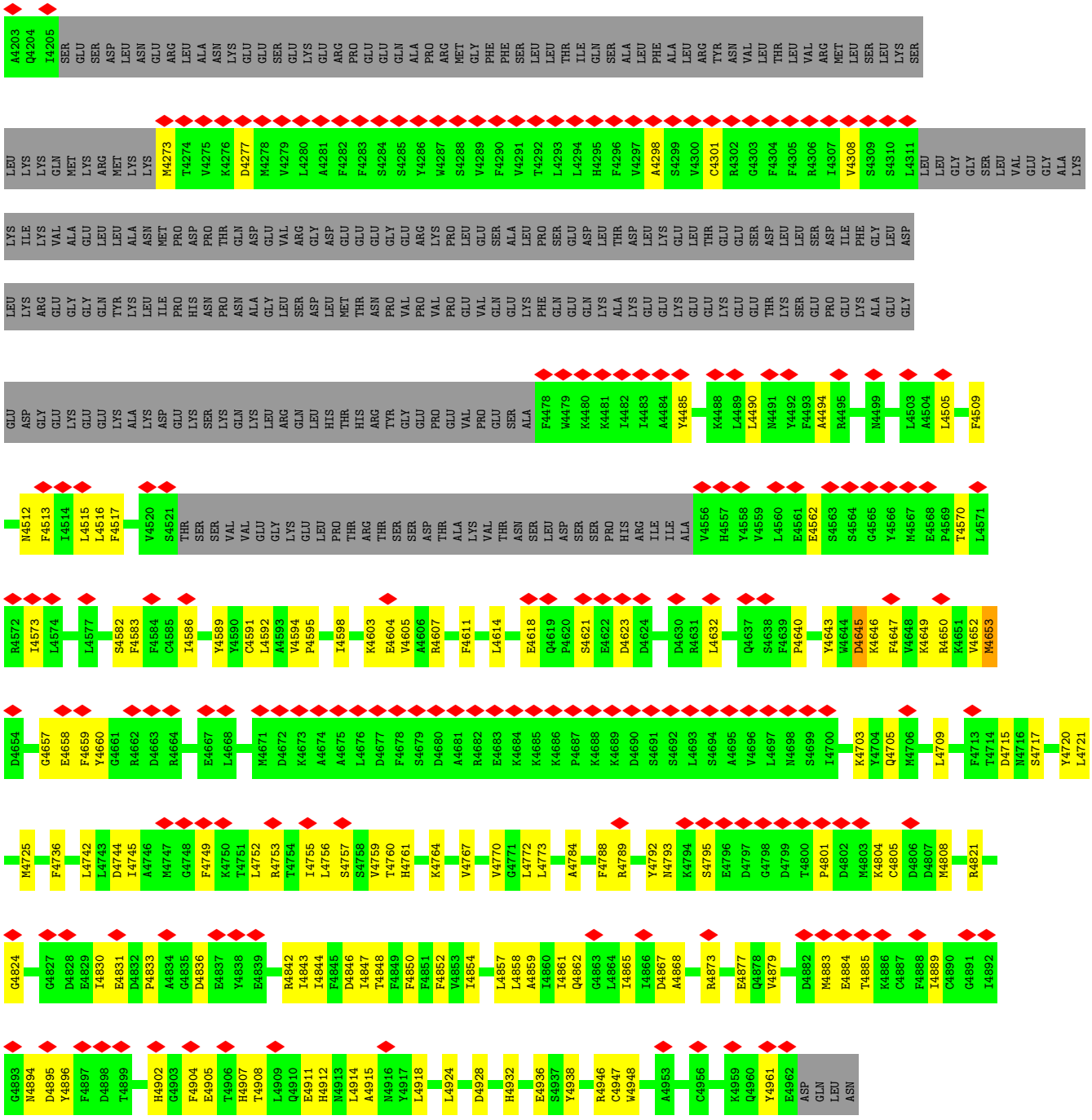
Chain D:




L565 E566 I571 L575 V578 E584 N587 I588 E591 K595 L600 L601 D602 K603 R606 V610 L611 D612 V625 N628 L637 D641 L642 L643 L644 Q645 T646 H651 V652 S653 S654 M655 R656 P657 N658 I659 F660 L661 G662 V663 S664 E665 G666 S667 A668
Q669 Y670 K671 K672 W673 Y674 Y675 E676 L677 W678 V679 D680 H681 T682 E683 E689 A690 T691 H692 L693 R694 V695 G696 W697 A698 S699 T700 E701 G702 Y703 Y706 P707 G708 G709 G710 E711 E712 W713 G714 G715 N716 G717 V718 G719 D720 D721 L722 F723 S724 Y725 G726 F727 D728 H731 L732 W733 S734
T740 V741 S742 S743 P744 N745 Q746 H747 L748 L749 R750 T751 D752 D753 V754 I755 S756 G757 C758 L759 D760 L761 G762 A763 P764 S765 I766 S767 F768 R769 I770 N771 G772 Q773 P774 M778 F779 E780 N781 F782 N783 I784 D785 G786 L787 V791 F794 S795 A796 G797 I798 K799 W800 R801 F802 L803
L804 G805 G806 R807 H808 G809 E810 F811 K812 F813 L814 P815 P816 P817 G818 Y819 A820 A821 C822 Y823 E824 A825 V826 W827 P828 K829 E830 K831 L832 K833 V834 E835 H836 S837 R838 E839 Y840 K841 Q842 E843 R844 T845 Y846 T847 R848 D849 L850 L851 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 D1010 R1011 I1012 R1013 Q1014 GLY TRP THR TYR GLY ILE GLN GLN ASP VAL LYS ASN R1027 R1028 N1029 P1030 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 I1087 F1088 R1089 A1090 E1091 Y1094 A1095 V1096 K1097 A1098 G1099 R1100 W1101 Y1102 F1103 E1104 F1105 E1106
A1107 V1108 T1109 A1110 G1111 D1112 M1113 G1116 W1117 S1118 R1119 P1120 G1121 C1122 Q1123 P1124 D1125 L1126 E1127 D1131 D1132 R1133 A1134 F1137 D1138 G1139 F1140 K1141 A1142 Q1143 R1144 Q1147 G1148 N1149 E1150 H1151 Y1152 S1155 W1156 Q1157 A1158 G1159 D1160 V1161 V1162 G1163 C1164 M1165 V1166 D1167 M1168 N1169 E1170 M1173
M1174 F1175 T1176 L1177 N1178 G1179 E1180 I1181 L1182 L1183 D1184 D1185 S1186 G1187 S1188 E1189 L1190 A1191 F1192 K1193 D1194 F1195 D1196 V1197 G1198 D1199 G1200 F1201 I1202 P1203 V1204 L1207 G1208 V1212 G1213 R1214 K1219 D1220 V1221 S1222 T1223 L1224 K1225 Y1226 F1227 T1228 I1229 C1230 G1231 L1232 Q1233 E1234 G1235 Y1236 E1237 P1238
V1241 N1244 R1245 T1248 M1249 S1252 K1253 R1254 L1255 P1256 Q1257 F1258 L1259 P1262 H1265 E1266 H1267 I1268 E1269 R1272 I1273 D1274 GLY THR ILE ASP SER PRO CYS LEU K1284 V1285 T1286 Q1287 K1288 S1289 F1290 Q1293 N1294 N1295 N1296 T1297 D1298 I1299 R1303 L1304 E1309 C1310 A1311 X1312
X1313 X1314 X1315 X1316 X1321 X1322 X1323 X1324 X1325 X1326 X1327 X1328 X1329 X1332 S1341 D1342 F1343 E1344 V1345 L1346 M1347 K1348 T1349 A1350 H1351 G1352 H1353 L1354 V1355 P1356 D1357 R1358 I1359 D1360 K1361 D1362 K1363 P1366 K1367 P1368 E1369 F1370 N1371 N1372 H1373 K1374 R1383 L1384 K1385 Q1386 X1387 X1388 X1389 X1392
X1393 X1394 X1395 X1396 X1399 X1400 X1401 X1402 X1403 X1404 X1405 X1406 X1407 X1408 X1409 X1410 X1411 X1412 X1413 X1414 X1415 X1416 X1417 X1418 X1419 X1420 X1421 X1422 X1423 X1424 X1425 X1426 X1427 X1428 X1429 X1430 X1431 X1432 X1433 X1434 X1435 X1436 X1437 X1438 X1439 X1440 X1441 X1442 X1443 X1444 X1445 X1446 UNK UNK UNK UNK UNK UNK

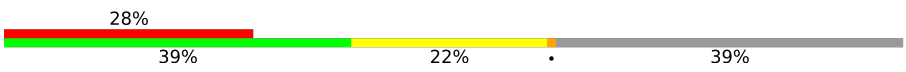

LYS ASP GLY LYS VAL VAL E2452 P2453 D2454 M2455 S2456 A2457 G2458 F2459 D2462 H2463 K2464 M2467 F2470 L2471 D2472 R2473 V2474 Y2475 G2476 I2477 E2478 V2479 Q2480 D2481 F2482 L2483 L2484 H2485 L2486 L2487 E2488 V2489 G2490 F2491 L2492 P2493 D2494 L2495 R2496 A2497 A2498 A2499 S2500 L2501 D2502 T2503 A2504 A2505 L2506 X2509
X2514 X2515 X2516 X2521 X2524 X2527 X2528 X2529 X2532 X2533 X2534 X2535 X2536 X2537 X2538 X2539 X2540 X2541 X2546 X2547 X2548 X2549 X2550 X2551 X2554 X2555 X2556 X2557 X2558 X2559 X2563 X2564 X2567 X2568 X2569 X2570 X2571 X2572 X2573 X2574 X2575 X2576 X2577 X2578 X2579 X2580 X2581 X2582 X2583 X2584 X2585
X2586 X2587 X2588 X2589 X2590 X2591 X2592 X2593 X2594 X2595 X2596 X2597 X2598 X2599 X2600 X2601 X2602 X2605 X2606 X2609 X2610 X2611 X2612 X2613 X2614 X2615 X2616 X2617 X2618 X2619 X2620 X2621 X2624 X2625 X2626 X2627 X2628 X2629 X2630 X2631 X2632 X2633 X2634 X2635 X2636 X2637 X2638 X2639 X2640 X2641 X2642 X2643 X2644 X2645 X2646 X2647 X2648
X2649 X2650 X2651 X2652 X2653 X2654 X2655 X2656 X2657 X2658 UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK
UNK UNK UNK I2712 P2713 E2714 K2715 L2716 E2717 Y2718 F2719 I2720 N2721 K2722 Y2723 A2724 E2725 H2726 S2727 H2728 D2729 K2730 W2731 S2732 M2733 D2734 K2735 L2736 A2737 N2738 G2739 W2740 I2741 Y2742 G2743 E2744 I2745 Y2746 S2747 D2748 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 X2929 X2930 X2931 X2932 X2933 X2934 X2935 X2936 X2937 X2938 X2939 X2940 X2941 X2942 UNK UNK UNK UNK UNK UNK
UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK X2961 X2962 X2963 X2964 X2965 X2966 X2967 X2968 X2969 X2970 X2971 X2972 X2973 X2974 X2975 X2976 X2977 X2980 X2981 X2982 X2983 X2984 X2985 X2986 X2987 X2988 X2989 X2990 X2991 X2992 X2993 X2994 X2995 X2996 X2997 X2998 X2999 X3000 X3001 X3002 X3003 X3004 X3005 X3006 X3007 X3008 X3009
X3010 X3011 X3012 X3013 X3014 X3015 X3016 X3017 X3018 X3019 X3020 X3021 X3022 X3023 X3024 X3025 X3026 X3027 X3028 X3029 UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK
UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK X3104 X3105 X3106 X3107 X3108 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 X3207 X3208 X3209 X3210 X3211 X3212 X3213 X3214 X3215 X3216 X3217 X3218 X3219 X3220 UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK X3231 X3232 X3233 X3234 X3235 X3236 X3237 X3238 X3239 X3240 X3241 X3242 X3243 X3244 X3245 X3246 X3247 X3248 X3249

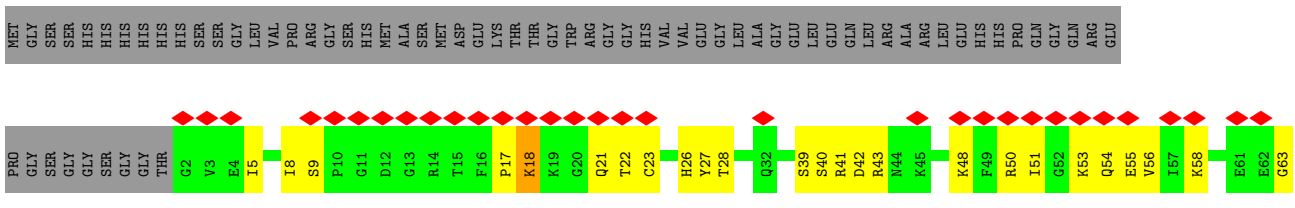

X3250 X3251 X3252 X3253 X3254 X3255 X3256 X3257 X3258 X3259 X3260 X3261 X3262 X3263 X3264 X3265 X3266 X3267 X3268 X3269 X3270 X3271 X3272 X3273 X3274 X3275 X3276 X3277 X3278 X3279 X3280 X3281 X3282 X3283 X3284 X3285 X3286 X3287 X3288 X3289 X3290 X3291 X3292 X3293 X3294 X3295 X3296 X3297 X3298 X3299 X3300 X3301 X3302 X3303 X3304 X3305 X3306 X3307 X3308 X3309
X3310 X3311 X3312 X3313 X3314 X3315 X3316 X3317 X3318 X3319 X3320 X3321 X3322 X3323 X3324 X3325 X3326 X3327 X3328 X3329 X3330 X3331 X3332 X3333 X3334 X3335 X3336 X3337 X3338 X3339 X3340 X3341 X3342 X3343 X3344 X3345 X3346 X3347 X3348 X3349 X3350 X3351 X3352 X3353 X3354 X3355 X3356 X3357 X3358 X3359 X3360 X3361 X3362 X3363 X3364 X3365 X3366 X3367 X3368 X3369
X3370 X3371 X3372 X3373 X3374 X3375 X3376 X3377 X3378 X3379 X3380 X3381 X3382 X3383 X3384 X3385 X3386 X3387 X3388 X3389 X3390 X3391 X3392 X3393 X3394 X3395 X3396 X3397 X3398 X3399 X3400 X3401 X3402 X3403 X3404 X3405 X3406 X3407 X3408 X3409 X3410 X3411 X3412 X3413 X3414 X3415 X3416 X3417 X3418 X3419 X3420 X3421 X3422 X3423 X3424 X3425 X3426 X3427 X3428 X3429
X3430 X3431 X3432 X3433 X3434 UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK X3477 X3478 X3479 X3480 X3481 X3482 X3483 X3484 X3485 X3486 X3487 X3488 X3489
X3490 X3491 X3492 X3493 X3494 X3495 X3496 X3497 X3498 X3499 X3500 X3501 X3502 X3503 X3504 X3505 X3506 X3507 X3508 X3509 X3510 X3511 X3512 X3513 X3514 X3515 X3516 X3517 X3518 X3519 X3520 X3521 X3522 X3523 X3524 X3525 X3526 X3527 X3528 X3529 X3530 X3531 X3532 X3533 X3534 X3535 X3536 X3537 X3538 X3539 X3540 X3541 X3542 X3543 X3544 X3545 X3546 X3547 X3548 X3549
X3550 X3551 X3552 X3553 X3554 X3555 X3556 X3557 X3558 X3559 X3560 X3561 X3562 X3563 X3564 X3565 X3566 X3567 X3568 X3569 X3570 X3571 X3572 X3573 X3574 X3575 X3576 X3577 X3578 X3579 UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK
UNK P3611 R3612 H3613 R3614 A3615 V3616 F3619 L3620 Q3621 E3624 E3629 T3630 E3631 E3632 H3633 Y3634 F3635 E3636 L3639 I3640 E3641 D3642 L3643 A3644 K3645 A3648 GLU LEU PRO GLU GLU ASP GLU ALA MET LYS R3659 V3660 H3664 L3668 L3669 T3676 E3677 K3678 L3681 E3682 E3683 D3684 I3693
K3696 S3697 C3698 H3699 ASP GLU GLU ASP ASP ASP GLY GLU GLU GLU VAL LYS S3712 F3713 E3714 E3715 K3716 E3717 M3718 E3719 L3723 Q3726 Q3727 A3728 R3729 L3730 H3731 D3732 R3733 G3748 V3754 T3757 L3758 K3759 L3760 G3761 I3762 A3763 I3764 G3768 N3769 K3775 D3778 E3782 K3783 K3784
D3785 V3786 Q3790 L3795 M3796 C3799 L3802 D3803 A3806 R3809 A3813 E3814 G3815 L3816 G3817 M3818 V3819 T3820 E3821 E3822 G3823 S3824 G3825 E3826 K3827 V3828 L3829 Q3830 D3831 D3832 E3833 F3834 T3835 C3836 D3837 R3840 Q3843 H3849 Q3860 N3864 T3865 T3866 V3867 L3878 S3883
D3886 G3893 K3894 D3895 I3896 E3899 Q3900 G3901 F3905 I3909 F3916 T3920 E3921 Y3922 I3923 Q3924 G3925 P3926 C3927 N3930 L3934 R3938 L3939 W3940 D3941 A3942 V3943 F3950 Q3954 M3955 Q3959 D3960 S3961 S3962 Q3963 I3964 E3965 L3966 L3967 L3970 M3971 Q3974 M3980 M3984
L3985 E3986 G3987 N3988 V3989 V3990 N3991 G3992 T3993 K3996 D4000 S4005 V4009 E4010 M4011 I4012 L4013 K4014 F4015 F4016 D4017 M4018 F4019 L4020 K4021 L4022 K4023 D4024 L4025 T4026 S4027 S4028 D4029 T4030 F4031 K4032 E4033 Y4034 D4035 P4036 D4037 G4038 K4039 G4040 V4041 I4042 S4043 K4044 R4045 D4046 F4047 H4048 K4049 A4050 M4051 E4052
S4053 H4054 K4055 H4056 Y4057 T4058 Q4059 S4060 E4061 T4062 E4063 F4064 L4065 L4066 S4067 E4070 T4071 D4072 E4073 N4074 E4075 T4076 L4077 D4078 Y4079 E4080 E4081 F4082 V4083 K4084 R4085 F4086 H4087 A4090 K4091 G4094 F4095 N4096 V4097 A4098 V4099 L4104 S4105 E4106 H4107 M4108 P4109 N4110 D4111 T4112 R4113 L4114 Q4115 T4116 E4119
E4122 N4126 Q4129 L4132 G4133 R4134 I4135 E4136 G4139 K4142 R4143 R4146 V4147 Y4148 E4153 T4157 Q4158 W4159 E4160 K4161 P4162 K4165 E4166 S4167 K4168 R4169 F4173 D4174 N4177 E4178 G4179 G4180 E4181 K4182 E4183 E4186 L4187 E4193 D4194 T4195 I4196 F4197 E4198 M4199 A4202

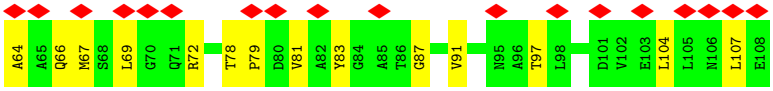


• Molecule 2: Peptidyl-prolyl cis-trans isomerase FKBP1B

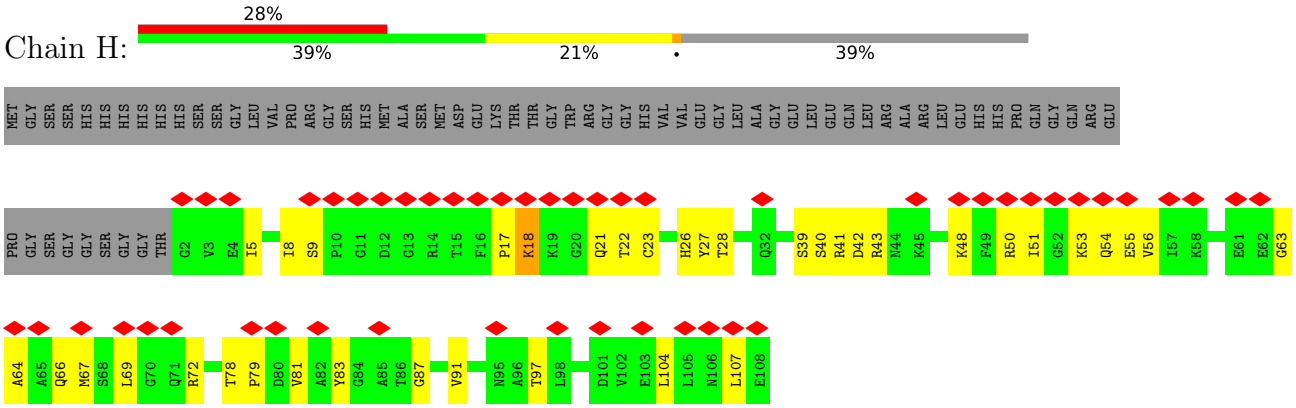
Chain G:



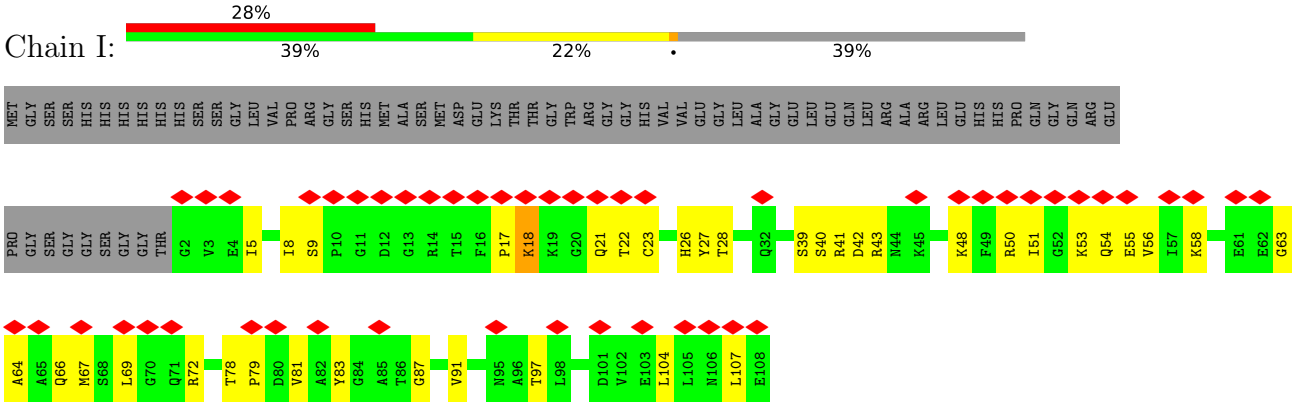




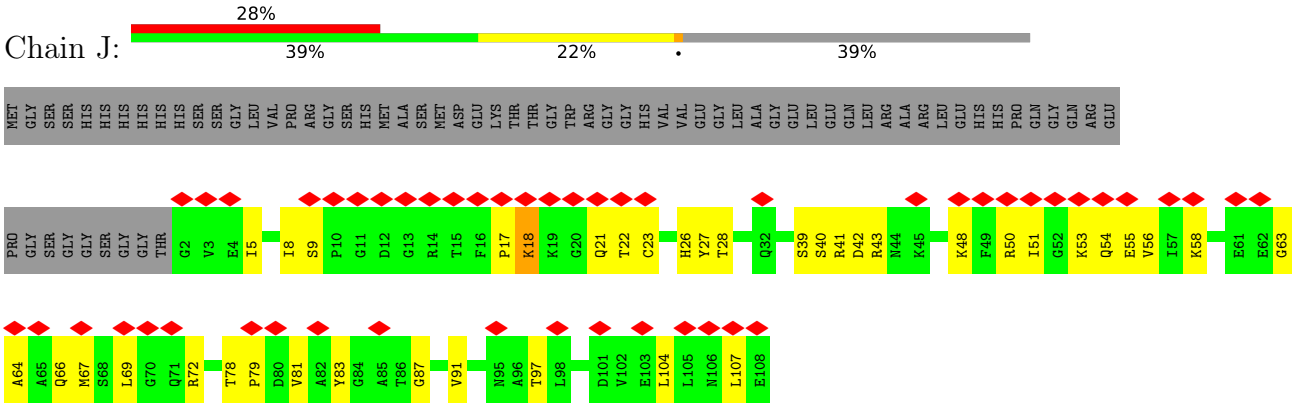
• Molecule 2: Peptidyl-prolyl cis-trans isomerase FKBP1B



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



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



4 Experimental information (i)

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

5 Model quality

5.1 Standard geometry

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

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$\|Z\|$ >5	RMSZ	#$\|Z\|$ >5
1	A	0.26	0/26891	0.52	3/36312 (0.0%)
1	B	0.27	0/26891	0.52	3/36312 (0.0%)
1	C	0.26	0/26891	0.52	3/36312 (0.0%)
1	D	0.26	0/26891	0.52	3/36312 (0.0%)
2	G	0.27	0/835	0.59	0/1123
2	H	0.27	0/835	0.59	0/1123
2	I	0.27	0/835	0.59	0/1123
2	J	0.27	0/835	0.59	0/1123
All	All	0.27	0/110904	0.52	12/149740 (0.0%)

There are no bond length outliers.

All (12) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	C	4653	MET	CA-CB-CG	5.61	122.83	113.30
1	D	4653	MET	CA-CB-CG	5.60	122.81	113.30
1	A	4653	MET	CA-CB-CG	5.58	122.80	113.30
1	B	4653	MET	CA-CB-CG	5.57	122.76	113.30
1	B	4645	ASP	CB-CG-OD1	5.24	123.02	118.30
1	C	1174	MET	CA-CB-CG	5.22	122.17	113.30
1	C	4645	ASP	CB-CG-OD1	5.21	122.99	118.30
1	A	4645	ASP	CB-CG-OD1	5.20	122.98	118.30
1	B	1174	MET	CA-CB-CG	5.18	122.11	113.30
1	D	1174	MET	CA-CB-CG	5.18	122.11	113.30
1	A	1174	MET	CA-CB-CG	5.18	122.11	113.30
1	D	4645	ASP	CB-CG-OD1	5.16	122.94	118.30

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	30067	0	26705	711	0
1	B	30067	0	26706	715	0
1	C	30067	0	26705	720	0
1	D	30067	0	26705	719	0
2	G	819	0	821	29	0
2	H	819	0	821	28	0
2	I	819	0	821	31	0
2	J	819	0	821	28	0
3	A	1	0	0	0	0
3	B	1	0	0	0	0
3	C	1	0	0	0	0
3	D	1	0	0	0	0
4	A	1	0	0	0	0
4	B	1	0	0	0	0
4	C	1	0	0	0	0
4	D	1	0	0	0	0
All	All	123552	0	110105	2918	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 12.

All (2918) 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:2276:CYS:HB2	1:A:2279:LEU:HD23	1.55	0.88
1:B:1811:VAL:H	1:B:1818:LEU:HD12	1.38	0.88
1:A:4517:PHE:HB3	1:A:4562:GLU:HG3	1.56	0.88
1:C:1811:VAL:H	1:C:1818:LEU:HD12	1.39	0.88
1:B:4517:PHE:HB3	1:B:4562:GLU:HG3	1.56	0.88
1:D:2276:CYS:HB2	1:D:2279:LEU:HD23	1.55	0.87
1:A:1811:VAL:H	1:A:1818:LEU:HD12	1.38	0.87
1:C:4517:PHE:HB3	1:C:4562:GLU:HG3	1.56	0.87
1:D:1811:VAL:H	1:D:1818:LEU:HD12	1.38	0.86
1:D:4517:PHE:HB3	1:D:4562:GLU:HG3	1.56	0.86
1:B:2276:CYS:HB2	1:B:2279:LEU:HD23	1.55	0.86

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2276:CYS:HB2	1:C:2279:LEU:HD23	1.55	0.86
1:C:642:LEU:HD12	1:C:643:LEU:HA	1.60	0.84
1:D:642:LEU:HD12	1:D:643:LEU:HA	1.61	0.83
1:B:642:LEU:HD12	1:B:643:LEU:HA	1.60	0.83
2:J:69:LEU:HA	2:J:104:LEU:HD22	1.61	0.82
1:A:642:LEU:HD12	1:A:643:LEU:HA	1.60	0.82
1:C:3934:LEU:HD12	1:C:3939:LEU:HD22	1.62	0.82
1:D:3934:LEU:HD12	1:D:3939:LEU:HD22	1.62	0.81
1:A:3934:LEU:HD12	1:A:3939:LEU:HD22	1.63	0.81
2:I:69:LEU:HA	2:I:104:LEU:HD22	1.61	0.81
2:G:69:LEU:HA	2:G:104:LEU:HD22	1.61	0.81
1:B:3934:LEU:HD12	1:B:3939:LEU:HD22	1.63	0.81
2:H:69:LEU:HA	2:H:104:LEU:HD22	1.61	0.81
1:B:4042:ILE:HG22	1:B:4044:LYS:H	1.46	0.80
1:A:4042:ILE:HG22	1:A:4044:LYS:H	1.46	0.80
1:D:2406:HIS:HA	1:D:2409:HIS:HB3	1.64	0.80
1:B:2406:HIS:HA	1:B:2409:HIS:HB3	1.64	0.80
1:C:2406:HIS:HA	1:C:2409:HIS:HB3	1.63	0.80
1:C:373:THR:HG22	1:C:397:GLY:HA2	1.64	0.80
1:D:709:GLY:O	1:D:1255:LEU:HD11	1.81	0.80
1:C:802:PHE:HB2	1:C:1618:TRP:HB2	1.64	0.80
1:A:802:PHE:HB2	1:A:1618:TRP:HB2	1.64	0.79
1:C:709:GLY:O	1:C:1255:LEU:HD11	1.81	0.79
1:B:373:THR:HG22	1:B:397:GLY:HA2	1.64	0.79
1:D:802:PHE:HB2	1:D:1618:TRP:HB2	1.64	0.79
1:A:373:THR:HG22	1:A:397:GLY:HA2	1.64	0.79
1:A:709:GLY:O	1:A:1255:LEU:HD11	1.81	0.79
1:B:802:PHE:HB2	1:B:1618:TRP:HB2	1.64	0.79
1:D:373:THR:HG22	1:D:397:GLY:HA2	1.64	0.79
1:A:4650:ARG:HA	1:A:4653:MET:SD	2.23	0.79
1:B:709:GLY:O	1:B:1255:LEU:HD11	1.81	0.79
1:B:4650:ARG:HA	1:B:4653:MET:SD	2.23	0.79
1:C:4650:ARG:HA	1:C:4653:MET:SD	2.23	0.79
1:D:4650:ARG:HA	1:D:4653:MET:SD	2.23	0.79
1:A:2406:HIS:HA	1:A:2409:HIS:HB3	1.64	0.78
1:C:4042:ILE:HG22	1:C:4044:LYS:H	1.46	0.78
1:D:4042:ILE:HG22	1:D:4044:LYS:H	1.46	0.78
1:A:1800:VAL:HG21	1:A:1846:LEU:HD11	1.65	0.78
1:C:1800:VAL:HG21	1:C:1846:LEU:HD11	1.65	0.78
1:B:1800:VAL:HG21	1:B:1846:LEU:HD11	1.65	0.78
1:D:1800:VAL:HG21	1:D:1846:LEU:HD11	1.65	0.77

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1254:ARG:HB3	1:A:1254:ARG:HH11	1.50	0.76
1:D:1254:ARG:HB3	1:D:1254:ARG:HH11	1.50	0.76
1:D:1684:PRO:HD3	2:J:42:ASP:HB2	1.68	0.76
2:J:23:CYS:HB2	2:J:51:ILE:HD11	1.67	0.76
1:B:1684:PRO:HD3	2:H:42:ASP:HB2	1.68	0.76
2:I:23:CYS:HB2	2:I:51:ILE:HD11	1.67	0.76
1:A:1684:PRO:HD3	2:G:42:ASP:HB2	1.68	0.76
1:C:1262:PRO:HG2	1:C:1265:HIS:HB2	1.67	0.76
1:C:1254:ARG:HB3	1:C:1254:ARG:HH11	1.50	0.76
1:D:1262:PRO:HG2	1:D:1265:HIS:HB2	1.67	0.75
1:C:1684:PRO:HD3	2:I:42:ASP:HB2	1.68	0.75
1:C:4042:ILE:HG21	1:C:4047:PHE:HB2	1.68	0.75
1:B:4833:PRO:HB3	1:B:4842:ARG:HD3	1.69	0.75
1:D:1259:LEU:HD11	1:D:1596:LEU:HD21	1.68	0.75
1:A:4042:ILE:HG21	1:A:4047:PHE:HB2	1.68	0.75
1:B:1117:TRP:CD1	1:B:1203:PRO:HA	2.22	0.75
2:H:23:CYS:HB2	2:H:51:ILE:HD11	1.67	0.75
1:C:1254:ARG:HB3	1:C:1254:ARG:NH1	2.01	0.75
1:C:4833:PRO:HB3	1:C:4842:ARG:HD3	1.68	0.75
1:A:1681:VAL:HG23	1:A:1682:ASP:H	1.52	0.74
1:B:1254:ARG:NH1	1:B:1254:ARG:HB3	2.01	0.74
1:B:1259:LEU:HD11	1:B:1596:LEU:HD21	1.68	0.74
1:A:1117:TRP:CD1	1:A:1203:PRO:HA	2.22	0.74
1:D:1681:VAL:HG23	1:D:1682:ASP:H	1.52	0.74
1:A:1254:ARG:HB3	1:A:1254:ARG:NH1	2.01	0.74
2:G:23:CYS:HB2	2:G:51:ILE:HD11	1.67	0.74
1:C:3727:GLN:OE1	1:C:3769:ASN:ND2	2.21	0.74
1:D:1254:ARG:HB3	1:D:1254:ARG:NH1	2.01	0.74
1:B:4042:ILE:HG21	1:B:4047:PHE:HB2	1.68	0.74
1:C:1117:TRP:CD1	1:C:1203:PRO:HA	2.22	0.74
1:D:1117:TRP:CD1	1:D:1203:PRO:HA	2.22	0.74
1:B:1262:PRO:HG2	1:B:1265:HIS:HB2	1.67	0.74
1:A:3727:GLN:OE1	1:A:3769:ASN:ND2	2.20	0.74
1:D:2713:PRO:HD3	1:D:2782:LEU:HD11	1.70	0.74
1:D:4042:ILE:HG21	1:D:4047:PHE:HB2	1.68	0.74
1:A:4833:PRO:HB3	1:A:4842:ARG:HD3	1.69	0.74
1:B:3843:GLN:HG3	1:B:3921:GLU:HG3	1.70	0.74
1:A:1262:PRO:HG2	1:A:1265:HIS:HB2	1.67	0.73
1:C:3843:GLN:HG3	1:C:3921:GLU:HG3	1.70	0.73
1:B:1254:ARG:HB3	1:B:1254:ARG:HH11	1.50	0.73
1:C:1681:VAL:HG23	1:C:1682:ASP:H	1.52	0.73

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1681:VAL:HG23	1:B:1682:ASP:H	1.52	0.73
1:D:3843:GLN:HG3	1:D:3921:GLU:HG3	1.70	0.73
1:A:1259:LEU:HD11	1:A:1596:LEU:HD21	1.68	0.73
1:A:2713:PRO:HD3	1:A:2782:LEU:HD11	1.70	0.73
1:A:1610:SER:HB3	1:A:1619:LEU:HB3	1.70	0.73
1:A:3843:GLN:HG3	1:A:3921:GLU:HG3	1.70	0.72
1:D:4833:PRO:HB3	1:D:4842:ARG:HD3	1.69	0.72
1:C:1741:PRO:HB3	1:C:1746:LYS:HE3	1.71	0.72
1:C:1610:SER:HB3	1:C:1619:LEU:HB3	1.71	0.72
1:A:1741:PRO:HB3	1:A:1746:LYS:HE3	1.71	0.72
1:C:1259:LEU:HD11	1:C:1596:LEU:HD21	1.68	0.72
1:A:1744:ASN:HD21	1:A:1746:LYS:HE2	1.54	0.72
1:B:562:LEU:HD21	1:B:600:LEU:HD22	1.72	0.72
1:B:3727:GLN:OE1	1:B:3769:ASN:ND2	2.20	0.72
1:D:1741:PRO:HB3	1:D:1746:LYS:HE3	1.71	0.72
1:D:1744:ASN:HD21	1:D:1746:LYS:HE2	1.55	0.72
1:B:1741:PRO:HB3	1:B:1746:LYS:HE3	1.71	0.72
1:B:2713:PRO:HD3	1:B:2782:LEU:HD11	1.70	0.72
1:C:562:LEU:HD21	1:C:600:LEU:HD22	1.72	0.72
1:C:2220:LEU:HD11	1:C:2242:ALA:HB2	1.71	0.72
1:D:2220:LEU:HD11	1:D:2242:ALA:HB2	1.71	0.72
1:D:3727:GLN:OE1	1:D:3769:ASN:ND2	2.20	0.72
1:C:839:GLU:HG2	1:C:840:TYR:H	1.55	0.72
1:A:562:LEU:HD21	1:A:600:LEU:HD22	1.72	0.72
1:B:2352:ILE:HD12	1:B:2358:ARG:HG2	1.72	0.72
1:D:839:GLU:HG2	1:D:840:TYR:H	1.55	0.72
1:B:711:GLU:HA	1:B:1255:LEU:HD12	1.72	0.71
1:C:2713:PRO:HD3	1:C:2782:LEU:HD11	1.70	0.71
1:A:2352:ILE:HD12	1:A:2358:ARG:HG2	1.72	0.71
1:B:1610:SER:HB3	1:B:1619:LEU:HB3	1.70	0.71
1:A:839:GLU:HG2	1:A:840:TYR:H	1.55	0.71
1:C:1744:ASN:HD21	1:C:1746:LYS:HE2	1.54	0.71
1:B:188:SER:HB2	1:B:190:ARG:HH11	1.56	0.71
1:D:1610:SER:HB3	1:D:1619:LEU:HB3	1.71	0.71
1:A:973:THR:OG1	1:A:976:TYR:O	2.07	0.71
1:B:2080:VAL:HA	1:B:2083:MET:HE2	1.72	0.71
1:D:562:LEU:HD21	1:D:600:LEU:HD22	1.72	0.71
1:A:4854:ILE:HA	1:A:4858:LEU:HD23	1.73	0.71
1:C:1265:HIS:HD2	1:C:1268:ILE:HB	1.55	0.71
1:C:188:SER:HB2	1:C:190:ARG:HH11	1.56	0.71
1:A:2159:ASN:OD1	1:A:2162:ARG:NH2	2.24	0.71

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2159:ASN:OD1	1:B:2162:ARG:NH2	2.24	0.71
1:D:188:SER:HB2	1:D:190:ARG:HH11	1.56	0.71
1:A:711:GLU:HA	1:A:1255:LEU:HD12	1.73	0.70
1:B:2220:LEU:HD11	1:B:2242:ALA:HB2	1.71	0.70
1:C:4603:LYS:HD2	1:C:4607:ARG:NH1	2.06	0.70
1:D:2352:ILE:HD12	1:D:2358:ARG:HG2	1.72	0.70
1:B:233:VAL:HG21	1:B:413:SER:HB3	1.73	0.70
1:D:711:GLU:HA	1:D:1255:LEU:HD12	1.73	0.70
1:D:973:THR:OG1	1:D:976:TYR:O	2.07	0.70
1:D:1989:GLU:HG2	1:D:1992:ARG:HD3	1.74	0.70
1:D:2159:ASN:OD1	1:D:2162:ARG:NH2	2.24	0.70
1:A:1265:HIS:HD2	1:A:1268:ILE:HB	1.55	0.70
1:C:2352:ILE:HD12	1:C:2358:ARG:HG2	1.72	0.70
1:D:4854:ILE:HA	1:D:4858:LEU:HD23	1.73	0.70
1:A:3639:LEU:HD23	1:A:3693:ILE:HG21	1.74	0.70
1:B:370:LEU:HB2	1:B:393:MET:HG2	1.74	0.70
1:B:1744:ASN:HD21	1:B:1746:LYS:HE2	1.54	0.70
1:C:370:LEU:HB2	1:C:393:MET:HG2	1.74	0.70
1:C:711:GLU:HA	1:C:1255:LEU:HD12	1.73	0.70
1:C:2159:ASN:OD1	1:C:2162:ARG:NH2	2.24	0.70
1:A:2220:LEU:HD11	1:A:2242:ALA:HB2	1.71	0.70
1:B:839:GLU:HG2	1:B:840:TYR:H	1.55	0.70
1:B:1265:HIS:HD2	1:B:1268:ILE:HB	1.55	0.70
1:C:233:VAL:HG21	1:C:413:SER:HB3	1.73	0.70
1:C:3639:LEU:HD23	1:C:3693:ILE:HG21	1.74	0.70
1:C:4772:LEU:HD22	1:D:4752:LEU:HD21	1.74	0.70
1:D:370:LEU:HB2	1:D:393:MET:HG2	1.74	0.70
1:D:4603:LYS:HD2	1:D:4607:ARG:NH1	2.06	0.70
1:D:233:VAL:HG21	1:D:413:SER:HB3	1.73	0.70
1:A:370:LEU:HB2	1:A:393:MET:HG2	1.74	0.70
1:B:4854:ILE:HA	1:B:4858:LEU:HD23	1.73	0.70
1:C:1254:ARG:HH11	1:C:1254:ARG:CB	2.05	0.70
1:C:3955:MET:O	1:C:3959:GLN:NE2	2.25	0.70
1:A:1989:GLU:HG2	1:A:1992:ARG:HD3	1.73	0.69
1:B:3639:LEU:HD23	1:B:3693:ILE:HG21	1.74	0.69
1:D:1254:ARG:HH11	1:D:1254:ARG:CB	2.05	0.69
1:D:3639:LEU:HD23	1:D:3693:ILE:HG21	1.74	0.69
1:A:233:VAL:HG21	1:A:413:SER:HB3	1.73	0.69
1:B:973:THR:OG1	1:B:976:TYR:O	2.07	0.69
1:C:973:THR:OG1	1:C:976:TYR:O	2.07	0.69
1:A:1829:LEU:HB3	1:A:1834:ILE:HD11	1.74	0.69

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:4854:ILE:HA	1:C:4858:LEU:HD23	1.73	0.69
1:D:1265:HIS:HD2	1:D:1268:ILE:HB	1.55	0.69
1:D:2080:VAL:HA	1:D:2083:MET:HE2	1.74	0.69
1:B:4603:LYS:HD2	1:B:4607:ARG:NH1	2.06	0.69
1:C:1989:GLU:HG2	1:C:1992:ARG:HD3	1.73	0.69
1:A:3955:MET:O	1:A:3959:GLN:NE2	2.25	0.69
1:A:4603:LYS:HD2	1:A:4607:ARG:NH1	2.06	0.69
1:C:150:GLN:HE21	1:C:158:CYS:HB3	1.58	0.69
1:D:1829:LEU:HB3	1:D:1834:ILE:HD11	1.74	0.69
1:A:188:SER:HB2	1:A:190:ARG:HH11	1.56	0.69
1:B:3955:MET:O	1:B:3959:GLN:NE2	2.25	0.69
1:B:150:GLN:HE21	1:B:158:CYS:HB3	1.58	0.69
1:D:3955:MET:O	1:D:3959:GLN:NE2	2.25	0.69
1:A:298:ARG:HH12	1:A:319:LYS:HD3	1.58	0.69
1:C:4784:ALA:HA	1:C:4788:PHE:HD2	1.58	0.68
1:B:880:ARG:HG3	1:B:881:ILE:HD12	1.75	0.68
1:B:1989:GLU:HG2	1:B:1992:ARG:HD3	1.73	0.68
1:A:1117:TRP:HD1	1:A:1203:PRO:HA	1.57	0.68
1:B:1254:ARG:HH11	1:B:1254:ARG:CB	2.05	0.68
1:B:1829:LEU:HB3	1:B:1834:ILE:HD11	1.74	0.68
1:C:298:ARG:HH12	1:C:319:LYS:HD3	1.58	0.68
1:B:1117:TRP:HD1	1:B:1203:PRO:HA	1.57	0.68
1:D:150:GLN:HE21	1:D:158:CYS:HB3	1.58	0.68
1:D:1117:TRP:HD1	1:D:1203:PRO:HA	1.57	0.68
1:A:1254:ARG:HH11	1:A:1254:ARG:CB	2.05	0.68
2:J:26:HIS:CD2	2:J:41:ARG:HG2	2.29	0.68
1:A:2080:VAL:HA	1:A:2083:MET:HE2	1.74	0.68
1:B:4772:LEU:HD22	1:C:4752:LEU:HD21	1.75	0.68
1:A:520:ARG:NH1	1:A:520:ARG:HA	2.09	0.68
1:A:2092:ASP:OD1	1:A:2093:GLY:N	2.27	0.68
1:A:3822:GLU:HG2	1:A:3827:LYS:HE2	1.76	0.68
1:A:3924:GLN:HA	1:A:3924:GLN:HE21	1.59	0.68
1:B:1303:ARG:NH2	1:B:1590:GLN:OE1	2.27	0.68
1:B:4784:ALA:HA	1:B:4788:PHE:HD2	1.58	0.68
1:C:2092:ASP:OD1	1:C:2093:GLY:N	2.27	0.68
1:C:3924:GLN:HA	1:C:3924:GLN:HE21	1.59	0.68
1:D:520:ARG:NH1	1:D:520:ARG:HA	2.09	0.68
1:D:1303:ARG:NH2	1:D:1590:GLN:OE1	2.27	0.68
1:A:4784:ALA:HA	1:A:4788:PHE:HD2	1.58	0.68
1:B:2092:ASP:OD1	1:B:2093:GLY:N	2.27	0.68
1:B:2340:ASN:OD1	1:B:2341:GLY:N	2.26	0.68

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1303:ARG:NH2	1:C:1590:GLN:OE1	2.27	0.68
1:D:4784:ALA:HA	1:D:4788:PHE:HD2	1.58	0.68
1:A:150:GLN:HE21	1:A:158:CYS:HB3	1.58	0.68
1:B:3924:GLN:HE21	1:B:3924:GLN:HA	1.59	0.68
1:D:3822:GLU:HG2	1:D:3827:LYS:HE2	1.76	0.68
1:A:1303:ARG:NH2	1:A:1590:GLN:OE1	2.27	0.67
2:G:26:HIS:CD2	2:G:41:ARG:HG2	2.29	0.67
1:C:694:ARG:HG2	1:C:728:ASP:HB3	1.77	0.67
2:H:26:HIS:CD2	2:H:41:ARG:HG2	2.29	0.67
1:C:1829:LEU:HB3	1:C:1834:ILE:HD11	1.75	0.67
2:I:26:HIS:CD2	2:I:41:ARG:HG2	2.29	0.67
1:C:520:ARG:NH1	1:C:520:ARG:HA	2.09	0.67
1:C:880:ARG:HG3	1:C:881:ILE:HD12	1.75	0.67
1:A:880:ARG:HG3	1:A:881:ILE:HD12	1.75	0.67
1:D:298:ARG:HH12	1:D:319:LYS:HD3	1.58	0.67
1:D:35:LEU:HD13	1:D:49:LEU:HD13	1.76	0.67
1:D:3924:GLN:HA	1:D:3924:GLN:HE21	1.59	0.67
1:B:520:ARG:HA	1:B:520:ARG:NH1	2.09	0.67
1:B:694:ARG:HG2	1:B:728:ASP:HB3	1.77	0.67
1:C:1117:TRP:HD1	1:C:1203:PRO:HA	1.57	0.67
1:D:2092:ASP:OD1	1:D:2093:GLY:N	2.27	0.67
1:B:3822:GLU:HG2	1:B:3827:LYS:HE2	1.76	0.67
1:C:2340:ASN:OD1	1:C:2341:GLY:N	2.26	0.66
1:D:694:ARG:HG2	1:D:728:ASP:HB3	1.77	0.66
1:C:3822:GLU:HG2	1:C:3827:LYS:HE2	1.76	0.66
1:D:880:ARG:HG3	1:D:881:ILE:HD12	1.75	0.66
1:B:298:ARG:HH12	1:B:319:LYS:HD3	1.58	0.66
1:C:2080:VAL:HA	1:C:2083:MET:HE2	1.76	0.66
1:C:35:LEU:HD13	1:C:49:LEU:HD13	1.76	0.66
1:A:35:LEU:HD13	1:A:49:LEU:HD13	1.76	0.66
1:B:4009:VAL:O	1:B:4013:LEU:HG	1.96	0.66
1:C:4009:VAL:O	1:C:4013:LEU:HG	1.96	0.66
1:A:760:ASP:HB3	1:A:764:PRO:HG2	1.78	0.66
1:B:760:ASP:HB3	1:B:764:PRO:HG2	1.78	0.66
1:A:1106:GLU:HB3	1:A:1214:ARG:HB2	1.77	0.66
1:B:1144:ARG:NH1	1:B:1191:ALA:O	2.29	0.66
1:D:4009:VAL:O	1:D:4013:LEU:HG	1.96	0.66
1:A:2340:ASN:OD1	1:A:2341:GLY:N	2.26	0.66
1:A:4146:ARG:HH12	1:A:4911:GLU:HG3	1.61	0.66
1:B:35:LEU:HD13	1:B:49:LEU:HD13	1.76	0.66
1:C:1106:GLU:HB3	1:C:1214:ARG:HB2	1.77	0.66

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1144:ARG:NH1	1:C:1191:ALA:O	2.29	0.66
1:A:4009:VAL:O	1:A:4013:LEU:HG	1.96	0.65
1:A:694:ARG:HG2	1:A:728:ASP:HB3	1.77	0.65
1:D:198:ASN:OD1	1:D:199:SER:N	2.29	0.65
1:D:1144:ARG:NH1	1:D:1191:ALA:O	2.29	0.65
1:D:760:ASP:HB3	1:D:764:PRO:HG2	1.78	0.65
1:A:1266:GLU:O	1:A:1267:HIS:ND1	2.30	0.65
1:C:760:ASP:HB3	1:C:764:PRO:HG2	1.78	0.65
1:D:1106:GLU:HB3	1:D:1214:ARG:HB2	1.77	0.65
1:A:4772:LEU:HD22	1:B:4752:LEU:HD21	1.78	0.65
1:A:520:ARG:HA	1:A:520:ARG:HH11	1.62	0.65
1:A:198:ASN:OD1	1:A:199:SER:N	2.29	0.65
1:A:1144:ARG:NH1	1:A:1191:ALA:O	2.29	0.65
1:B:851:LEU:HB3	1:B:1212:VAL:HG12	1.79	0.65
1:D:520:ARG:HA	1:D:520:ARG:HH11	1.62	0.65
1:A:4752:LEU:HD21	1:D:4772:LEU:HD22	1.79	0.65
1:C:851:LEU:HB3	1:C:1212:VAL:HG12	1.79	0.65
1:C:1266:GLU:O	1:C:1267:HIS:ND1	2.30	0.65
1:A:851:LEU:HB3	1:A:1212:VAL:HG12	1.79	0.65
1:D:2340:ASN:OD1	1:D:2341:GLY:N	2.26	0.65
1:C:4146:ARG:HH12	1:C:4911:GLU:HG3	1.61	0.64
1:D:851:LEU:HB3	1:D:1212:VAL:HG12	1.79	0.64
1:B:1932:VAL:HG21	1:B:3616:VAL:HA	1.80	0.64
1:B:4885:THR:HA	1:B:4894:ASN:HB2	1.79	0.64
1:B:1106:GLU:HB3	1:B:1214:ARG:HB2	1.77	0.64
1:C:1091:GLU:HB2	1:C:1094:TYR:HD2	1.62	0.64
1:D:1266:GLU:O	1:D:1267:HIS:ND1	2.30	0.64
1:A:4072:ASP:O	1:A:4073:GLU:HG3	1.98	0.64
1:C:1932:VAL:HG21	1:C:3616:VAL:HA	1.79	0.64
1:C:4824:GLY:O	1:D:4821:ARG:NH1	2.30	0.64
1:A:1091:GLU:HB2	1:A:1094:TYR:HD2	1.62	0.64
1:B:299:HIS:HD2	1:B:302:THR:H	1.46	0.64
1:B:1266:GLU:O	1:B:1267:HIS:ND1	2.30	0.64
1:B:4824:GLY:O	1:C:4821:ARG:NH1	2.31	0.64
1:D:1924:ILE:HD11	1:D:2002:LEU:HD22	1.79	0.64
1:A:299:HIS:HD2	1:A:302:THR:H	1.46	0.64
1:C:1924:ILE:HD11	1:C:2002:LEU:HD22	1.79	0.64
1:D:4146:ARG:HH12	1:D:4911:GLU:HG3	1.62	0.64
1:D:759:LEU:HD13	1:D:766:ILE:HG12	1.80	0.64
1:D:4168:LYS:HE3	1:D:4914:LEU:HD12	1.80	0.64
1:C:603:LYS:HG2	1:C:1573:LYS:HZ1	1.63	0.63

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:4168:LYS:HE3	1:C:4914:LEU:HD12	1.80	0.63
1:D:4072:ASP:O	1:D:4073:GLU:HG3	1.98	0.63
1:D:2145:LEU:HD23	1:D:2148:ILE:HD11	1.81	0.63
1:A:1932:VAL:HG21	1:A:3616:VAL:HA	1.79	0.63
1:A:4821:ARG:NH1	1:D:4824:GLY:O	2.31	0.63
1:B:4072:ASP:O	1:B:4073:GLU:HG3	1.98	0.63
1:B:4146:ARG:HH12	1:B:4911:GLU:HG3	1.61	0.63
1:B:1924:ILE:HD11	1:B:2002:LEU:HD22	1.79	0.63
1:B:198:ASN:OD1	1:B:199:SER:N	2.29	0.63
1:B:520:ARG:HA	1:B:520:ARG:HH11	1.62	0.63
1:A:1924:ILE:HD11	1:A:2002:LEU:HD22	1.79	0.63
1:A:4885:THR:HA	1:A:4894:ASN:HB2	1.79	0.63
1:B:2145:LEU:HD23	1:B:2148:ILE:HD11	1.81	0.63
1:C:198:ASN:OD1	1:C:199:SER:N	2.29	0.63
1:A:2145:LEU:HD23	1:A:2148:ILE:HD11	1.81	0.63
1:B:1091:GLU:HB2	1:B:1094:TYR:HD2	1.62	0.63
1:C:520:ARG:HA	1:C:520:ARG:HH11	1.62	0.63
1:C:759:LEU:HD13	1:C:766:ILE:HG12	1.80	0.63
1:C:4885:THR:HA	1:C:4894:ASN:HB2	1.79	0.63
1:D:1257:GLN:HA	1:D:1384:LEU:HD22	1.80	0.63
1:A:709:GLY:O	1:A:1255:LEU:CD1	2.47	0.63
1:B:759:LEU:HD13	1:B:766:ILE:HG12	1.80	0.63
1:C:2145:LEU:HD23	1:C:2148:ILE:HD11	1.81	0.63
1:C:4072:ASP:O	1:C:4073:GLU:HG3	1.98	0.63
1:D:1932:VAL:HG21	1:D:3616:VAL:HA	1.79	0.63
1:A:1091:GLU:HB2	1:A:1094:TYR:CD2	2.34	0.63
1:C:2107:ILE:HG13	1:C:2108:ASN:H	1.64	0.63
1:C:2290:ASN:HD22	1:C:2291:PRO:HD2	1.64	0.63
1:D:1091:GLU:HB2	1:D:1094:TYR:HD2	1.62	0.63
1:D:4885:THR:HA	1:D:4894:ASN:HB2	1.79	0.63
1:A:759:LEU:HD13	1:A:766:ILE:HG12	1.80	0.62
1:A:4168:LYS:HE3	1:A:4914:LEU:HD12	1.80	0.62
1:B:19:GLU:OE1	1:B:19:GLU:N	2.32	0.62
1:D:2290:ASN:HD22	1:D:2291:PRO:HD2	1.64	0.62
1:C:1257:GLN:HA	1:C:1384:LEU:HD22	1.80	0.62
1:A:19:GLU:N	1:A:19:GLU:OE1	2.32	0.62
1:B:1257:GLN:HA	1:B:1384:LEU:HD22	1.80	0.62
1:D:603:LYS:HG2	1:D:1573:LYS:HZ1	1.64	0.62
1:A:2107:ILE:HG13	1:A:2108:ASN:H	1.64	0.62
1:B:4168:LYS:HE3	1:B:4914:LEU:HD12	1.80	0.62
1:D:1682:ASP:OD2	1:D:1684:PRO:HD2	2.00	0.62

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3633:HIS:HD2	1:A:3635:PHE:HD1	1.48	0.62
1:B:709:GLY:O	1:B:1255:LEU:CD1	2.47	0.62
1:B:3899:GLU:OE1	1:B:3899:GLU:N	2.31	0.62
1:C:19:GLU:OE1	1:C:19:GLU:N	2.32	0.62
1:C:1682:ASP:OD2	1:C:1684:PRO:HD2	2.00	0.62
2:J:28:THR:HA	2:J:39:SER:HA	1.82	0.62
1:B:1091:GLU:HB2	1:B:1094:TYR:CD2	2.34	0.62
1:D:1091:GLU:HB2	1:D:1094:TYR:CD2	2.34	0.62
1:A:1143:GLN:OE1	1:A:1149:ASN:ND2	2.32	0.62
1:A:1257:GLN:HA	1:A:1384:LEU:HD22	1.80	0.62
1:C:709:GLY:O	1:C:1255:LEU:CD1	2.47	0.62
1:A:4808:MET:HG2	1:B:4516:LEU:HA	1.81	0.62
1:B:2107:ILE:HG13	1:B:2108:ASN:H	1.64	0.62
1:C:299:HIS:HD2	1:C:302:THR:H	1.46	0.62
1:D:137:ARG:NH1	1:D:200:SER:OG	2.33	0.62
1:A:1097:LYS:NZ	1:A:1198:GLY:O	2.33	0.62
1:B:137:ARG:NH1	1:B:200:SER:OG	2.33	0.62
1:B:2431:LEU:HB3	1:B:2471:LEU:HD21	1.82	0.62
1:C:3899:GLU:OE1	1:C:3899:GLU:N	2.31	0.62
1:D:3633:HIS:HD2	1:D:3635:PHE:HD1	1.48	0.62
1:A:2197:ARG:HB3	1:A:2236:SER:OG	2.00	0.61
1:A:2431:LEU:HB3	1:A:2471:LEU:HD21	1.82	0.61
1:A:3899:GLU:OE1	1:A:3899:GLU:N	2.31	0.61
2:G:28:THR:HA	2:G:39:SER:HA	1.82	0.61
1:D:2107:ILE:HG13	1:D:2108:ASN:H	1.64	0.61
1:D:2431:LEU:HB3	1:D:2471:LEU:HD21	1.82	0.61
1:A:2290:ASN:HD22	1:A:2291:PRO:HD2	1.64	0.61
1:C:1091:GLU:HB2	1:C:1094:TYR:CD2	2.34	0.61
1:C:2197:ARG:HB3	1:C:2236:SER:OG	2.01	0.61
1:D:299:HIS:HD2	1:D:302:THR:H	1.46	0.61
1:D:709:GLY:O	1:D:1255:LEU:CD1	2.47	0.61
1:D:2197:ARG:HB3	1:D:2236:SER:OG	2.01	0.61
1:A:1733:GLU:HG3	1:A:1754:LEU:HD21	1.82	0.61
1:A:1682:ASP:OD2	1:A:1684:PRO:HD2	2.00	0.61
1:D:19:GLU:OE1	1:D:19:GLU:N	2.32	0.61
1:A:137:ARG:NH1	1:A:200:SER:OG	2.33	0.61
1:A:2228:LEU:HD21	1:A:2237:THR:HG21	1.83	0.61
1:B:1682:ASP:OD2	1:B:1684:PRO:HD2	2.00	0.61
1:B:3633:HIS:HD2	1:B:3635:PHE:HD1	1.48	0.61
1:C:137:ARG:NH1	1:C:200:SER:OG	2.33	0.61
1:C:1097:LYS:NZ	1:C:1198:GLY:O	2.33	0.61

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2470:PHE:O	1:C:2474:VAL:HG12	2.01	0.61
1:D:1684:PRO:HA	1:D:1687:LEU:HD12	1.82	0.61
1:A:59:PRO:HB3	1:A:296:ARG:HH12	1.66	0.61
1:C:2431:LEU:HB3	1:C:2471:LEU:HD21	1.82	0.61
2:I:28:THR:HA	2:I:39:SER:HA	1.81	0.61
1:B:59:PRO:HB3	1:B:296:ARG:HH12	1.66	0.61
1:B:1097:LYS:NZ	1:B:1198:GLY:O	2.33	0.61
1:B:1902:LYS:HG3	1:B:2079:LEU:HD11	1.82	0.61
1:C:1733:GLU:HG3	1:C:1754:LEU:HD21	1.82	0.61
1:D:386:SER:HB3	1:D:388:GLN:HE22	1.66	0.61
1:D:606:ARG:NH2	1:D:1635:GLU:OE1	2.30	0.61
1:D:2229:ALA:HA	1:D:2292:VAL:HG11	1.83	0.61
1:B:1139:GLY:O	1:B:1155:SER:OG	2.16	0.61
1:B:1684:PRO:HA	1:B:1687:LEU:HD12	1.82	0.61
1:B:2197:ARG:HB3	1:B:2236:SER:OG	2.01	0.61
1:B:2290:ASN:HD22	1:B:2291:PRO:HD2	1.64	0.61
1:C:2228:LEU:HD21	1:C:2237:THR:HG21	1.83	0.61
1:D:2470:PHE:O	1:D:2474:VAL:HG12	2.01	0.61
1:B:235:ARG:NH1	1:B:268:SER:O	2.34	0.61
1:C:646:THR:OG1	1:C:1685:GLN:NE2	2.33	0.61
1:D:1143:GLN:OE1	1:D:1149:ASN:ND2	2.32	0.61
1:A:603:LYS:HG2	1:A:1573:LYS:HZ1	1.66	0.60
1:A:2470:PHE:O	1:A:2474:VAL:HG12	2.01	0.60
1:B:1733:GLU:HG3	1:B:1754:LEU:HD21	1.82	0.60
1:B:4049:LYS:HA	1:B:4052:GLU:HG2	1.83	0.60
1:A:119:ILE:HD13	1:A:162:ILE:HD11	1.84	0.60
1:B:2470:PHE:O	1:B:2474:VAL:HG12	2.01	0.60
2:H:28:THR:HA	2:H:39:SER:HA	1.81	0.60
1:C:1902:LYS:HG3	1:C:2079:LEU:HD11	1.82	0.60
1:D:3728:ALA:HA	1:D:3731:HIS:CE1	2.36	0.60
1:D:3759:LYS:NZ	1:D:3837:ASP:OD2	2.34	0.60
1:D:4049:LYS:HA	1:D:4052:GLU:HG2	1.83	0.60
1:C:3633:HIS:HD2	1:C:3635:PHE:HD1	1.48	0.60
1:A:4824:GLY:O	1:B:4821:ARG:NH1	2.34	0.60
1:C:933:LEU:O	1:C:937:LEU:HG	2.01	0.60
1:C:3728:ALA:HA	1:C:3731:HIS:CE1	2.36	0.60
1:D:119:ILE:HD13	1:D:162:ILE:HD11	1.84	0.60
1:D:933:LEU:O	1:D:937:LEU:HG	2.01	0.60
1:A:933:LEU:O	1:A:937:LEU:HG	2.01	0.60
1:C:1761:ARG:HE	1:C:2116:ILE:HG21	1.67	0.60
1:C:2229:ALA:HA	1:C:2292:VAL:HG11	1.83	0.60

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1733:GLU:HG3	1:D:1754:LEU:HD21	1.82	0.60
1:D:1761:ARG:HH12	1:D:1763:ARG:HH12	1.50	0.60
1:B:646:THR:OG1	1:B:1685:GLN:NE2	2.33	0.60
1:D:1006:VAL:HG13	1:D:1009:ARG:HH21	1.67	0.60
1:A:1684:PRO:HA	1:A:1687:LEU:HD12	1.82	0.60
1:A:1761:ARG:HH12	1:A:1763:ARG:HH12	1.50	0.60
1:A:3728:ALA:HA	1:A:3731:HIS:CE1	2.36	0.60
1:A:3759:LYS:NZ	1:A:3837:ASP:OD2	2.34	0.60
1:A:4049:LYS:HA	1:A:4052:GLU:HG2	1.83	0.60
1:B:2228:LEU:HD21	1:B:2237:THR:HG21	1.83	0.60
1:C:59:PRO:HB3	1:C:296:ARG:HH12	1.66	0.60
1:D:59:PRO:HB3	1:D:296:ARG:HH12	1.66	0.60
1:A:1761:ARG:HE	1:A:2116:ILE:HG21	1.67	0.60
1:D:235:ARG:NH1	1:D:268:SER:O	2.34	0.60
1:D:1097:LYS:NZ	1:D:1198:GLY:O	2.33	0.60
1:D:1359:ILE:HG13	1:D:1360:ASP:H	1.67	0.60
1:D:1902:LYS:HG3	1:D:2079:LEU:HD11	1.82	0.60
1:D:4883:MET:SD	1:D:4884:GLU:HG2	2.42	0.60
1:A:1902:LYS:HG3	1:A:2079:LEU:HD11	1.82	0.60
1:C:235:ARG:NH1	1:C:268:SER:O	2.34	0.60
1:A:4883:MET:SD	1:A:4884:GLU:HG2	2.42	0.60
1:B:386:SER:HB3	1:B:388:GLN:HE22	1.66	0.60
1:B:2229:ALA:HA	1:B:2292:VAL:HG11	1.83	0.60
1:B:3728:ALA:HA	1:B:3731:HIS:CE1	2.36	0.60
2:H:50:ARG:HE	2:H:53:LYS:HG3	1.67	0.60
1:C:386:SER:HB3	1:C:388:GLN:HE22	1.66	0.60
1:C:4049:LYS:HA	1:C:4052:GLU:HG2	1.84	0.60
1:A:1006:VAL:HG13	1:A:1009:ARG:HH21	1.67	0.59
1:A:2229:ALA:HA	1:A:2292:VAL:HG11	1.83	0.59
1:C:676:GLU:HB2	1:C:803:LEU:HB2	1.84	0.59
1:C:1006:VAL:HG13	1:C:1009:ARG:HH21	1.67	0.59
1:C:1359:ILE:HG13	1:C:1360:ASP:H	1.67	0.59
1:D:1761:ARG:HE	1:D:2116:ILE:HG21	1.67	0.59
1:D:2228:LEU:HD21	1:D:2237:THR:HG21	1.83	0.59
1:A:235:ARG:NH1	1:A:268:SER:O	2.34	0.59
1:B:1761:ARG:HE	1:B:2116:ILE:HG21	1.67	0.59
1:C:1684:PRO:HA	1:C:1687:LEU:HD12	1.83	0.59
1:D:646:THR:OG1	1:D:1685:GLN:NE2	2.33	0.59
1:A:386:SER:HB3	1:A:388:GLN:HE22	1.66	0.59
1:B:119:ILE:HD13	1:B:162:ILE:HD11	1.84	0.59
1:B:601:LEU:HG	1:B:642:LEU:HD21	1.84	0.59

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1048:ASP:HA	1:C:1051:ARG:HD2	1.84	0.59
1:B:2240:ASP:OD1	1:B:2296:ARG:NH2	2.36	0.59
1:C:4883:MET:SD	1:C:4884:GLU:HG2	2.42	0.59
1:A:125:TYR:OH	1:A:414:ARG:HA	2.03	0.59
1:A:606:ARG:NH2	1:A:1635:GLU:OE1	2.30	0.59
1:A:1048:ASP:HA	1:A:1051:ARG:HD2	1.84	0.59
1:B:3633:HIS:HD2	1:B:3635:PHE:CD1	2.21	0.59
1:B:4883:MET:SD	1:B:4884:GLU:HG2	2.42	0.59
1:C:3831:ASP:HB3	1:C:3834:PHE:HB3	1.84	0.59
1:B:603:LYS:HG2	1:B:1573:LYS:HZ1	1.68	0.59
1:B:1682:ASP:HB3	1:B:1685:GLN:HB3	1.85	0.59
1:C:125:TYR:OH	1:C:414:ARG:HA	2.03	0.59
2:I:50:ARG:HE	2:I:53:LYS:HG3	1.67	0.59
1:D:3899:GLU:OE1	1:D:3899:GLU:N	2.30	0.59
1:A:646:THR:OG1	1:A:1685:GLN:NE2	2.33	0.59
2:G:50:ARG:HE	2:G:53:LYS:HG3	1.67	0.59
1:B:125:TYR:OH	1:B:414:ARG:HA	2.02	0.59
1:B:933:LEU:O	1:B:937:LEU:HG	2.01	0.59
1:B:1761:ARG:HH12	1:B:1763:ARG:HH12	1.50	0.59
1:D:3831:ASP:HB3	1:D:3834:PHE:HB3	1.84	0.59
1:C:119:ILE:HD13	1:C:162:ILE:HD11	1.84	0.59
1:C:3633:HIS:HD2	1:C:3635:PHE:CD1	2.21	0.59
1:D:601:LEU:HG	1:D:642:LEU:HD21	1.84	0.59
1:D:1048:ASP:HA	1:D:1051:ARG:HD2	1.84	0.59
1:A:1359:ILE:HG13	1:A:1360:ASP:H	1.67	0.59
1:B:1006:VAL:HG13	1:B:1009:ARG:HH21	1.67	0.59
1:B:3636:GLU:HG2	1:B:3696:LYS:HE3	1.84	0.59
1:C:4873:ARG:O	1:C:4877:GLU:HG2	2.03	0.59
1:D:676:GLU:HB2	1:D:803:LEU:HB2	1.85	0.59
1:B:838:ARG:H	1:B:841:LYS:HZ3	1.51	0.59
1:B:1048:ASP:HA	1:B:1051:ARG:HD2	1.84	0.59
1:B:1143:GLN:OE1	1:B:1149:ASN:ND2	2.32	0.59
1:C:601:LEU:HG	1:C:642:LEU:HD21	1.84	0.59
1:A:329:PHE:HB3	1:A:363:ILE:HD11	1.85	0.58
1:A:1682:ASP:HB3	1:A:1685:GLN:HB3	1.85	0.58
1:B:1359:ILE:HG13	1:B:1360:ASP:H	1.67	0.58
1:A:601:LEU:HG	1:A:642:LEU:HD21	1.84	0.58
1:A:2240:ASP:OD1	1:A:2296:ARG:NH2	2.36	0.58
1:A:3831:ASP:HB3	1:A:3834:PHE:HB3	1.84	0.58
1:A:4186:GLU:HG3	1:A:4948:TRP:CZ3	2.38	0.58
1:B:329:PHE:HB3	1:B:363:ILE:HD11	1.85	0.58

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4186:GLU:HG3	1:B:4948:TRP:CZ3	2.38	0.58
1:C:844:ARG:HE	1:C:845:THR:H	1.52	0.58
1:C:2240:ASP:OD1	1:C:2296:ARG:NH2	2.36	0.58
1:C:3636:GLU:HG2	1:C:3696:LYS:HE3	1.84	0.58
1:C:4018:MET:HE1	1:C:4064:PHE:HB3	1.84	0.58
1:A:3633:HIS:HD2	1:A:3635:PHE:CD1	2.21	0.58
2:G:79:PRO:HD3	2:G:97:THR:HG22	1.85	0.58
1:B:676:GLU:HB2	1:B:803:LEU:HB2	1.84	0.58
1:C:1682:ASP:HB3	1:C:1685:GLN:HB3	1.85	0.58
1:A:2747:SER:O	1:A:2753:GLN:NE2	2.36	0.58
1:A:4873:ARG:O	1:A:4877:GLU:HG2	2.03	0.58
1:B:844:ARG:HE	1:B:845:THR:H	1.51	0.58
1:B:3759:LYS:NZ	1:B:3837:ASP:OD2	2.34	0.58
1:B:4873:ARG:O	1:B:4877:GLU:HG2	2.03	0.58
1:D:329:PHE:HB3	1:D:363:ILE:HD11	1.85	0.58
1:A:3636:GLU:HG2	1:A:3696:LYS:HE3	1.84	0.58
1:A:4134:ARG:HG2	1:A:4146:ARG:HH11	1.68	0.58
1:C:1761:ARG:NH1	1:C:1761:ARG:HB2	2.19	0.58
1:C:3759:LYS:NZ	1:C:3837:ASP:OD2	2.35	0.58
1:C:2747:SER:O	1:C:2753:GLN:NE2	2.36	0.58
1:D:1273:ILE:HD11	1:D:1287:GLN:HB3	1.86	0.58
1:D:4139:GLY:HA2	1:D:4938:TYR:CE2	2.39	0.58
1:D:4186:GLU:HG3	1:D:4948:TRP:CZ3	2.38	0.58
1:A:4139:GLY:HA2	1:A:4938:TYR:CE2	2.39	0.58
1:B:1273:ILE:HD11	1:B:1287:GLN:HB3	1.86	0.58
1:B:4134:ARG:HG2	1:B:4146:ARG:HH11	1.68	0.58
1:C:606:ARG:NH2	1:C:1635:GLU:OE1	2.30	0.58
1:C:1273:ILE:HD11	1:C:1287:GLN:HB3	1.86	0.58
1:D:1139:GLY:O	1:D:1155:SER:OG	2.15	0.58
1:D:1682:ASP:HB3	1:D:1685:GLN:HB3	1.85	0.58
1:A:844:ARG:HE	1:A:845:THR:H	1.51	0.58
1:C:1040:ASP:HA	1:C:1043:LYS:HG3	1.86	0.58
1:C:1143:GLN:OE1	1:C:1149:ASN:ND2	2.32	0.58
1:D:3633:HIS:HD2	1:D:3635:PHE:CD1	2.21	0.58
1:A:676:GLU:HB2	1:A:803:LEU:HB2	1.85	0.58
1:A:2101:LEU:O	1:A:2104:THR:HG22	2.04	0.58
1:A:4196:ILE:HG23	1:A:4918:LEU:HD12	1.86	0.58
1:D:125:TYR:OH	1:D:414:ARG:HA	2.03	0.58
1:D:1761:ARG:NH1	1:D:1761:ARG:HB2	2.19	0.58
1:D:4196:ILE:HG23	1:D:4918:LEU:HD12	1.86	0.58
2:J:79:PRO:HD3	2:J:97:THR:HG22	1.85	0.58

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:79:PRO:HD3	2:H:97:THR:HG22	1.85	0.57
1:C:908:ARG:HG2	1:C:916:PRO:HG3	1.86	0.57
1:C:4186:GLU:HG3	1:C:4948:TRP:CZ3	2.38	0.57
2:I:79:PRO:HD3	2:I:97:THR:HG22	1.85	0.57
1:D:908:ARG:HG2	1:D:916:PRO:HG3	1.86	0.57
1:D:2134:GLY:H	1:D:2137:GLU:HB2	1.69	0.57
2:J:50:ARG:HE	2:J:53:LYS:HG3	1.67	0.57
1:A:1273:ILE:HD11	1:A:1287:GLN:HB3	1.86	0.57
1:A:1761:ARG:NH1	1:A:1761:ARG:HB2	2.19	0.57
1:A:4889:ILE:HD13	1:A:4912:HIS:HB3	1.86	0.57
1:B:1761:ARG:HB2	1:B:1761:ARG:NH1	2.19	0.57
1:B:1840:LEU:HA	1:B:1843:ILE:HG12	1.86	0.57
1:B:4889:ILE:HD13	1:B:4912:HIS:HB3	1.86	0.57
1:C:4139:GLY:HA2	1:C:4938:TYR:CE2	2.39	0.57
1:D:3636:GLU:HG2	1:D:3696:LYS:HE3	1.84	0.57
1:D:4018:MET:HE1	1:D:4064:PHE:HB3	1.86	0.57
1:A:1009:ARG:O	1:A:1013:ARG:NH1	2.38	0.57
1:A:1840:LEU:HA	1:A:1843:ILE:HG12	1.86	0.57
1:A:2134:GLY:H	1:A:2137:GLU:HB2	1.70	0.57
1:A:2210:GLN:OE1	1:A:2249:ASN:ND2	2.37	0.57
1:A:4018:MET:HE1	1:A:4064:PHE:HB3	1.86	0.57
1:B:2210:GLN:OE1	1:B:2249:ASN:ND2	2.37	0.57
1:C:1761:ARG:HH12	1:C:1763:ARG:HH12	1.50	0.57
1:D:2210:GLN:OE1	1:D:2249:ASN:ND2	2.37	0.57
1:A:748:LEU:HD12	1:A:749:LEU:H	1.69	0.57
1:A:2488:GLU:HA	1:A:2492:LEU:HD12	1.85	0.57
1:C:748:LEU:HD12	1:C:749:LEU:H	1.69	0.57
1:C:2488:GLU:HA	1:C:2492:LEU:HD12	1.85	0.57
1:D:844:ARG:HE	1:D:845:THR:H	1.51	0.57
1:D:4852:PHE:O	1:D:4857:LEU:HD23	2.04	0.57
1:D:4873:ARG:O	1:D:4877:GLU:HG2	2.03	0.57
1:A:1272:ARG:NH2	1:A:1584:PRO:O	2.38	0.57
1:B:748:LEU:HD12	1:B:749:LEU:H	1.69	0.57
1:B:3729:ARG:O	1:B:3733:ARG:NH1	2.38	0.57
1:B:4885:THR:O	1:B:4894:ASN:N	2.38	0.57
1:C:329:PHE:HB3	1:C:363:ILE:HD11	1.85	0.57
1:C:4889:ILE:HD13	1:C:4912:HIS:HB3	1.86	0.57
1:D:1040:ASP:HA	1:D:1043:LYS:HG3	1.86	0.57
1:D:4134:ARG:HG2	1:D:4146:ARG:HH11	1.68	0.57
1:B:1244:ASN:ND2	1:B:1802:GLU:OE2	2.37	0.57
1:B:1677:LEU:HA	1:B:1680:HIS:HB2	1.87	0.57

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2134:GLY:H	1:B:2137:GLU:HB2	1.70	0.57
1:B:3831:ASP:HB3	1:B:3834:PHE:HB3	1.84	0.57
1:C:1244:ASN:ND2	1:C:1802:GLU:OE2	2.37	0.57
1:C:1297:THR:OG1	1:C:1346:LEU:O	2.18	0.57
1:C:2101:LEU:O	1:C:2104:THR:HG22	2.04	0.57
1:C:4907:HIS:HA	1:C:4911:GLU:OE1	2.05	0.57
1:D:2240:ASP:OD1	1:D:2296:ARG:NH2	2.36	0.57
1:D:4042:ILE:H	1:D:4076:THR:HG23	1.69	0.57
1:A:1244:ASN:ND2	1:A:1802:GLU:OE2	2.37	0.57
1:B:799:LYS:HG2	1:B:1621:GLN:HE22	1.70	0.57
1:B:1009:ARG:O	1:B:1013:ARG:NH1	2.38	0.57
1:B:2101:LEU:O	1:B:2104:THR:HG22	2.04	0.57
1:C:799:LYS:HG2	1:C:1621:GLN:HE22	1.70	0.57
1:C:1259:LEU:HD13	1:C:1593:SER:HB3	1.87	0.57
1:D:1009:ARG:O	1:D:1013:ARG:NH1	2.38	0.57
1:D:1719:ARG:NH2	1:D:1759:ARG:HE	2.03	0.57
1:D:1840:LEU:HA	1:D:1843:ILE:HG12	1.86	0.57
1:C:4808:MET:HG2	1:D:4516:LEU:HA	1.86	0.57
1:D:748:LEU:HD12	1:D:749:LEU:H	1.69	0.57
1:A:1040:ASP:HA	1:A:1043:LYS:HG3	1.86	0.57
1:A:2426:ILE:HG21	1:A:2470:PHE:CE2	2.40	0.57
1:B:2426:ILE:HG21	1:B:2470:PHE:CE2	2.40	0.57
1:C:4134:ARG:HG2	1:C:4146:ARG:HH11	1.68	0.57
1:D:1259:LEU:HD13	1:D:1593:SER:HB3	1.87	0.57
1:D:2101:LEU:O	1:D:2104:THR:HG22	2.04	0.57
1:D:2488:GLU:HA	1:D:2492:LEU:HD12	1.85	0.57
1:B:1297:THR:OG1	1:B:1346:LEU:O	2.18	0.57
1:C:1009:ARG:O	1:C:1013:ARG:NH1	2.38	0.57
1:C:3754:VAL:HA	1:C:3757:THR:HG22	1.87	0.57
1:C:4196:ILE:HG23	1:C:4918:LEU:HD12	1.86	0.57
1:D:4907:HIS:HA	1:D:4911:GLU:OE1	2.05	0.57
1:A:28:ILE:O	1:A:31:GLU:HG3	2.05	0.56
1:A:1094:TYR:OH	1:A:1809:ASP:OD2	2.16	0.56
1:A:1267:HIS:HB2	1:A:1294:ASN:HB2	1.87	0.56
1:A:4902:HIS:CD2	1:D:4182:LYS:HA	2.40	0.56
1:B:2488:GLU:HA	1:B:2492:LEU:HD12	1.85	0.56
1:B:4852:PHE:O	1:B:4857:LEU:HD23	2.04	0.56
1:C:838:ARG:H	1:C:841:LYS:HZ3	1.53	0.56
1:C:2067:ARG:HA	1:C:2070:GLN:HG2	1.87	0.56
1:D:2426:ILE:HG21	1:D:2470:PHE:CE2	2.40	0.56
1:D:4885:THR:O	1:D:4894:ASN:N	2.38	0.56

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4885:THR:O	1:A:4894:ASN:N	2.38	0.56
1:B:28:ILE:O	1:B:31:GLU:HG3	2.05	0.56
1:B:908:ARG:HG2	1:B:916:PRO:HG3	1.86	0.56
1:B:1113:MET:HB2	1:B:1156:TRP:HZ2	1.70	0.56
1:B:2330:PHE:O	1:B:2335:ARG:NE	2.38	0.56
1:B:4139:GLY:HA2	1:B:4938:TYR:CE2	2.39	0.56
1:B:4196:ILE:HG23	1:B:4918:LEU:HD12	1.86	0.56
1:C:1719:ARG:NH2	1:C:1759:ARG:HE	2.03	0.56
1:C:1827:TYR:CZ	1:C:1831:ILE:HD11	2.41	0.56
1:A:1113:MET:HB2	1:A:1156:TRP:HZ2	1.70	0.56
1:A:1677:LEU:HA	1:A:1680:HIS:HB2	1.87	0.56
1:B:844:ARG:HE	1:B:845:THR:HG22	1.71	0.56
1:B:1040:ASP:HA	1:B:1043:LYS:HG3	1.86	0.56
1:B:1267:HIS:HB2	1:B:1294:ASN:HB2	1.87	0.56
1:B:4808:MET:HG2	1:C:4516:LEU:HA	1.86	0.56
1:B:4907:HIS:HA	1:B:4911:GLU:OE1	2.05	0.56
1:C:1008:ALA:O	1:C:1012:ILE:HG23	2.06	0.56
1:C:2210:GLN:OE1	1:C:2249:ASN:ND2	2.37	0.56
1:C:4852:PHE:O	1:C:4857:LEU:HD23	2.04	0.56
1:C:4885:THR:O	1:C:4894:ASN:N	2.38	0.56
1:D:1113:MET:HB2	1:D:1156:TRP:HZ2	1.70	0.56
1:D:1244:ASN:ND2	1:D:1802:GLU:OE2	2.37	0.56
1:D:1267:HIS:HB2	1:D:1294:ASN:HB2	1.87	0.56
1:D:3754:VAL:HA	1:D:3757:THR:HG22	1.88	0.56
1:D:4889:ILE:HD13	1:D:4912:HIS:HB3	1.86	0.56
1:A:125:TYR:OH	1:A:417:ARG:HB3	2.05	0.56
1:A:799:LYS:HG2	1:A:1621:GLN:HE22	1.70	0.56
1:A:908:ARG:HG2	1:A:916:PRO:HG3	1.86	0.56
1:A:1008:ALA:O	1:A:1012:ILE:HG23	2.06	0.56
1:A:1719:ARG:NH2	1:A:1759:ARG:HE	2.03	0.56
1:A:4852:PHE:O	1:A:4857:LEU:HD23	2.04	0.56
1:B:4186:GLU:HG3	1:B:4948:TRP:HZ3	1.71	0.56
1:C:1267:HIS:HB2	1:C:1294:ASN:HB2	1.87	0.56
1:C:2426:ILE:HG21	1:C:2470:PHE:CE2	2.40	0.56
1:D:1008:ALA:O	1:D:1012:ILE:HG23	2.06	0.56
1:D:1272:ARG:NH2	1:D:1584:PRO:O	2.38	0.56
1:D:1827:TYR:CZ	1:D:1831:ILE:HD11	2.41	0.56
1:D:2330:PHE:O	1:D:2335:ARG:NE	2.38	0.56
1:A:3729:ARG:O	1:A:3733:ARG:NH1	2.38	0.56
1:B:3754:VAL:HA	1:B:3757:THR:HG22	1.87	0.56
1:C:1113:MET:HB2	1:C:1156:TRP:HZ2	1.70	0.56

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:844:ARG:HE	1:A:845:THR:HG22	1.71	0.56
1:A:2067:ARG:HA	1:A:2070:GLN:HG2	1.87	0.56
1:A:4042:ILE:H	1:A:4076:THR:HG23	1.69	0.56
1:B:1715:TYR:CZ	1:B:1762:MET:HB3	2.41	0.56
1:B:2067:ARG:HA	1:B:2070:GLN:HG2	1.87	0.56
1:C:356:TYR:HA	1:C:405:LEU:HB2	1.88	0.56
1:C:844:ARG:HE	1:C:845:THR:HG22	1.71	0.56
1:D:290:ARG:NH1	1:D:346:VAL:HG21	2.21	0.56
1:D:799:LYS:HG2	1:D:1621:GLN:HE22	1.70	0.56
1:B:1827:TYR:CZ	1:B:1831:ILE:HD11	2.41	0.56
1:C:1840:LEU:HA	1:C:1843:ILE:HG12	1.86	0.56
1:B:125:TYR:OH	1:B:417:ARG:HB3	2.05	0.56
1:C:258:ARG:NH1	1:C:316:LEU:O	2.39	0.56
1:C:1272:ARG:NH2	1:C:1584:PRO:O	2.38	0.56
1:D:2271:CYS:SG	1:D:2293:GLU:HB2	2.46	0.56
1:A:1715:TYR:CZ	1:A:1762:MET:HB3	2.41	0.56
1:B:1259:LEU:HD13	1:B:1593:SER:HB3	1.87	0.56
1:C:2134:GLY:H	1:C:2137:GLU:HB2	1.69	0.56
1:D:28:ILE:O	1:D:31:GLU:HG3	2.05	0.56
1:D:3729:ARG:O	1:D:3733:ARG:NH1	2.38	0.56
1:A:2271:CYS:SG	1:A:2293:GLU:HB2	2.46	0.56
1:B:290:ARG:NH1	1:B:346:VAL:HG21	2.21	0.56
1:B:356:TYR:HA	1:B:405:LEU:HB2	1.88	0.56
1:B:4018:MET:HE1	1:B:4064:PHE:HB3	1.87	0.56
1:C:1715:TYR:CZ	1:C:1762:MET:HB3	2.41	0.56
1:C:3731:HIS:O	1:C:3775:LYS:NZ	2.39	0.56
1:C:4042:ILE:H	1:C:4076:THR:HG23	1.69	0.56
1:C:4186:GLU:HG3	1:C:4948:TRP:HZ3	1.71	0.56
1:D:844:ARG:HE	1:D:845:THR:HG22	1.71	0.56
1:A:3754:VAL:HA	1:A:3757:THR:HG22	1.88	0.55
1:A:4846:ASP:OD1	1:A:4847:ILE:N	2.39	0.55
2:G:50:ARG:N	2:G:55:GLU:OE2	2.39	0.55
1:B:258:ARG:NH1	1:B:316:LEU:O	2.39	0.55
1:B:4042:ILE:H	1:B:4076:THR:HG23	1.69	0.55
1:C:1677:LEU:HA	1:C:1680:HIS:HB2	1.87	0.55
1:C:2271:CYS:SG	1:C:2293:GLU:HB2	2.46	0.55
1:D:125:TYR:OH	1:D:417:ARG:HB3	2.05	0.55
1:D:258:ARG:NH1	1:D:316:LEU:O	2.39	0.55
1:D:2067:ARG:HA	1:D:2070:GLN:HG2	1.87	0.55
1:A:290:ARG:NH1	1:A:346:VAL:HG21	2.21	0.55
1:A:4907:HIS:HA	1:A:4911:GLU:OE1	2.05	0.55

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:28:ILE:O	1:C:31:GLU:HG3	2.05	0.55
1:C:3729:ARG:O	1:C:3733:ARG:NH1	2.38	0.55
1:D:70:GLU:OE2	1:D:122:ARG:NE	2.33	0.55
1:D:625:VAL:HG23	1:D:628:ASN:HB2	1.88	0.55
1:D:1835:PHE:O	1:D:1840:LEU:HG	2.07	0.55
1:A:2330:PHE:O	1:A:2335:ARG:NE	2.38	0.55
1:A:4801:PRO:HB2	1:A:4804:LYS:HD2	1.89	0.55
1:B:4193:GLU:CD	1:B:4607:ARG:HH22	2.09	0.55
1:C:77:ALA:O	1:C:81:MET:HG2	2.06	0.55
1:C:2330:PHE:O	1:C:2335:ARG:NE	2.38	0.55
1:A:1259:LEU:HD13	1:A:1593:SER:HB3	1.87	0.55
1:C:290:ARG:NH1	1:C:346:VAL:HG21	2.21	0.55
1:D:77:ALA:O	1:D:81:MET:HG2	2.06	0.55
1:D:2747:SER:O	1:D:2753:GLN:NE2	2.36	0.55
1:A:4193:GLU:CD	1:A:4607:ARG:HH22	2.09	0.55
1:B:2271:CYS:SG	1:B:2293:GLU:HB2	2.46	0.55
1:B:2747:SER:O	1:B:2753:GLN:NE2	2.36	0.55
2:H:50:ARG:N	2:H:55:GLU:OE2	2.40	0.55
1:C:4193:GLU:CD	1:C:4607:ARG:HH22	2.09	0.55
1:A:1297:THR:OG1	1:A:1346:LEU:O	2.18	0.55
1:A:1641:ASP:OD1	1:A:1641:ASP:N	2.40	0.55
1:A:1827:TYR:CZ	1:A:1831:ILE:HD11	2.41	0.55
1:B:706:TYR:OH	1:B:851:LEU:HD11	2.07	0.55
1:C:3699:HIS:HB2	1:C:3723:LEU:HD12	1.89	0.55
1:D:1677:LEU:HA	1:D:1680:HIS:HB2	1.87	0.55
1:A:4186:GLU:HG3	1:A:4948:TRP:HZ3	1.71	0.55
2:I:50:ARG:N	2:I:55:GLU:OE2	2.39	0.55
1:D:4193:GLU:CD	1:D:4607:ARG:HH22	2.09	0.55
1:B:1008:ALA:O	1:B:1012:ILE:HG23	2.06	0.55
1:B:1835:PHE:O	1:B:1840:LEU:HG	2.07	0.55
1:B:4846:ASP:OD1	1:B:4847:ILE:N	2.39	0.55
1:C:125:TYR:OH	1:C:417:ARG:HB3	2.05	0.55
1:C:706:TYR:OH	1:C:851:LEU:HD11	2.07	0.55
1:C:1835:PHE:O	1:C:1840:LEU:HG	2.07	0.55
1:C:2498:ALA:O	1:C:2501:LEU:HD23	2.07	0.55
1:D:356:TYR:HA	1:D:405:LEU:HB2	1.88	0.55
1:D:1715:TYR:CZ	1:D:1762:MET:HB3	2.41	0.55
1:D:4846:ASP:OD1	1:D:4847:ILE:N	2.39	0.55
1:A:1835:PHE:O	1:A:1840:LEU:HG	2.07	0.55
1:B:1719:ARG:NH2	1:B:1759:ARG:HE	2.03	0.55
1:B:2263:LYS:HG2	1:B:2266:ARG:HH21	1.72	0.55

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:625:VAL:HG23	1:C:628:ASN:HB2	1.88	0.55
1:C:3613:HIS:HA	1:C:3616:VAL:HG12	1.89	0.55
1:C:4846:ASP:OD1	1:C:4847:ILE:N	2.39	0.55
1:D:4801:PRO:HB2	1:D:4804:LYS:HD2	1.89	0.55
1:A:258:ARG:NH1	1:A:316:LEU:O	2.39	0.55
1:A:2474:VAL:HG13	1:A:2475:TYR:CD2	2.42	0.55
1:B:1119:ARG:NH2	1:B:1196:ASP:O	2.35	0.55
1:B:3699:HIS:HB2	1:B:3723:LEU:HD12	1.89	0.55
1:C:2263:LYS:HG2	1:C:2266:ARG:HH21	1.72	0.55
1:C:2474:VAL:HG13	1:C:2475:TYR:CD2	2.42	0.55
1:D:706:TYR:OH	1:D:851:LEU:HD11	2.07	0.55
1:A:427:ASN:HB3	1:A:431:ARG:NH1	2.22	0.54
1:A:77:ALA:O	1:A:81:MET:HG2	2.06	0.54
1:A:644:LEU:H	1:A:644:LEU:HD12	1.73	0.54
1:B:606:ARG:NH2	1:B:1635:GLU:OE1	2.30	0.54
1:C:70:GLU:OE2	1:C:122:ARG:NE	2.34	0.54
1:A:299:HIS:CD2	1:A:302:THR:HG23	2.43	0.54
1:A:356:TYR:HA	1:A:405:LEU:HB2	1.88	0.54
1:A:702:GLY:O	1:A:786:GLY:HA2	2.07	0.54
1:A:3920:THR:HG22	1:A:3980:MET:HA	1.90	0.54
1:B:427:ASN:HB3	1:B:431:ARG:NH1	2.22	0.54
1:B:1972:ILE:HA	1:B:1975:LEU:HG	1.89	0.54
1:D:427:ASN:HB3	1:D:431:ARG:NH1	2.23	0.54
1:D:2080:VAL:HG13	1:D:3669:LEU:HD22	1.90	0.54
1:D:2498:ALA:O	1:D:2501:LEU:HD23	2.07	0.54
1:D:4026:THR:O	1:D:4031:PHE:HB3	2.08	0.54
1:A:114:LEU:HB2	1:A:117:HIS:CD2	2.43	0.54
1:A:2080:VAL:HG13	1:A:3669:LEU:HD22	1.90	0.54
1:B:299:HIS:CD2	1:B:302:THR:HG23	2.43	0.54
1:B:3731:HIS:O	1:B:3775:LYS:NZ	2.39	0.54
1:C:680:ASP:O	1:C:751:THR:OG1	2.26	0.54
1:C:702:GLY:O	1:C:786:GLY:HA2	2.07	0.54
1:C:2506:LEU:HD23	1:C:2506:LEU:H	1.73	0.54
1:C:4047:PHE:O	1:C:4051:MET:HG3	2.08	0.54
1:D:114:LEU:HB2	1:D:117:HIS:CD2	2.43	0.54
1:D:644:LEU:H	1:D:644:LEU:HD12	1.73	0.54
1:D:1124:PRO:HD2	1:D:1595:VAL:HG23	1.89	0.54
1:D:1845:GLN:HA	1:D:1848:GLU:HG2	1.89	0.54
1:D:2152:LYS:HG3	1:D:2156:GLN:HE22	1.72	0.54
1:D:2291:PRO:HB3	1:D:2387:ILE:HD13	1.89	0.54
1:D:4186:GLU:HG3	1:D:4948:TRP:HZ3	1.71	0.54

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1119:ARG:NH2	1:A:1196:ASP:O	2.35	0.54
1:A:2506:LEU:HD23	1:A:2506:LEU:H	1.73	0.54
1:A:3613:HIS:HA	1:A:3616:VAL:HG12	1.89	0.54
1:B:77:ALA:O	1:B:81:MET:HG2	2.06	0.54
1:B:644:LEU:H	1:B:644:LEU:HD12	1.73	0.54
1:B:1769:PHE:O	2:H:83:TYR:OH	2.26	0.54
1:B:2474:VAL:HG13	1:B:2475:TYR:CD2	2.42	0.54
1:B:2498:ALA:O	1:B:2501:LEU:HD23	2.07	0.54
1:B:4182:LYS:HA	1:C:4902:HIS:CD2	2.42	0.54
1:C:299:HIS:CD2	1:C:302:THR:HG23	2.43	0.54
1:C:2080:VAL:HG13	1:C:3669:LEU:HD22	1.90	0.54
1:C:2291:PRO:HB3	1:C:2387:ILE:HD13	1.89	0.54
1:D:3731:HIS:O	1:D:3775:LYS:NZ	2.39	0.54
1:D:3920:THR:HG22	1:D:3980:MET:HA	1.90	0.54
1:A:426:PHE:HB3	1:A:497:LEU:HD21	1.90	0.54
1:A:625:VAL:HG23	1:A:628:ASN:HB2	1.88	0.54
1:A:2263:LYS:HG2	1:A:2266:ARG:HH21	1.72	0.54
1:A:4026:THR:O	1:A:4031:PHE:HB3	2.08	0.54
1:B:3730:LEU:HD11	1:B:3764:ILE:HD11	1.90	0.54
1:B:4801:PRO:HB2	1:B:4804:LYS:HD2	1.89	0.54
1:C:114:LEU:HB2	1:C:117:HIS:CD2	2.43	0.54
1:C:3920:THR:HG22	1:C:3980:MET:HA	1.90	0.54
1:D:677:LEU:HD12	1:D:695:VAL:HG21	1.90	0.54
1:D:2474:VAL:HG13	1:D:2475:TYR:CD2	2.42	0.54
1:A:677:LEU:HD12	1:A:695:VAL:HG21	1.90	0.54
1:A:2498:ALA:O	1:A:2501:LEU:HD23	2.07	0.54
1:B:1124:PRO:HD2	1:B:1595:VAL:HG23	1.89	0.54
1:B:1845:GLN:HA	1:B:1848:GLU:HG2	1.89	0.54
1:B:2231:PRO:HD3	1:B:2381:ILE:HD11	1.89	0.54
1:B:3613:HIS:HA	1:B:3616:VAL:HG12	1.89	0.54
1:B:4026:THR:O	1:B:4031:PHE:HB3	2.08	0.54
1:B:4047:PHE:O	1:B:4051:MET:HG3	2.08	0.54
1:D:2124:GLN:HE22	1:D:2140:LEU:HB3	1.73	0.54
1:D:4632:LEU:HB2	1:D:4703:LYS:HE2	1.90	0.54
1:A:2152:LYS:HG3	1:A:2156:GLN:HE22	1.73	0.54
1:A:3730:LEU:HD11	1:A:3764:ILE:HD11	1.90	0.54
1:A:4186:GLU:OE1	1:A:4186:GLU:N	2.40	0.54
1:B:70:GLU:OE2	1:B:122:ARG:NE	2.33	0.54
1:B:1272:ARG:NH2	1:B:1584:PRO:O	2.38	0.54
1:B:2506:LEU:HD23	1:B:2506:LEU:H	1.73	0.54
1:B:4632:LEU:HB2	1:B:4703:LYS:HE2	1.90	0.54

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1691:GLU:HG2	1:C:1791:LYS:HE2	1.90	0.54
1:C:4570:THR:HA	1:C:4573:ILE:HG12	1.89	0.54
1:D:2506:LEU:HD23	1:D:2506:LEU:H	1.73	0.54
1:D:4570:THR:HA	1:D:4573:ILE:HG12	1.89	0.54
1:A:1972:ILE:HA	1:A:1975:LEU:HG	1.89	0.54
1:A:2172:GLU:HA	1:A:2175:VAL:HG12	1.90	0.54
1:A:4632:LEU:HB2	1:A:4703:LYS:HE2	1.90	0.54
1:B:426:PHE:HB3	1:B:497:LEU:HD21	1.90	0.54
1:B:702:GLY:O	1:B:786:GLY:HA2	2.07	0.54
1:C:1124:PRO:HD2	1:C:1595:VAL:HG23	1.89	0.54
1:C:2172:GLU:HA	1:C:2175:VAL:HG12	1.90	0.54
1:C:4026:THR:O	1:C:4031:PHE:HB3	2.08	0.54
1:C:4182:LYS:HA	1:D:4902:HIS:CD2	2.42	0.54
1:D:702:GLY:O	1:D:786:GLY:HA2	2.07	0.54
1:D:1769:PHE:O	2:J:83:TYR:OH	2.26	0.54
1:D:3699:HIS:HB2	1:D:3723:LEU:HD12	1.89	0.54
1:A:706:TYR:OH	1:A:851:LEU:HD11	2.07	0.54
1:A:2231:PRO:HD3	1:A:2381:ILE:HD11	1.89	0.54
1:A:3731:HIS:O	1:A:3775:LYS:NZ	2.39	0.54
1:B:935:MET:O	1:B:939:THR:HG23	2.08	0.54
1:B:1641:ASP:N	1:B:1641:ASP:OD1	2.40	0.54
1:B:1691:GLU:HG2	1:B:1791:LYS:HE2	1.90	0.54
1:B:2291:PRO:HB3	1:B:2387:ILE:HD13	1.89	0.54
1:B:4570:THR:HA	1:B:4573:ILE:HG12	1.89	0.54
1:C:725:TYR:HB3	1:C:779:PHE:CD2	2.43	0.54
1:C:935:MET:O	1:C:939:THR:HG23	2.09	0.54
1:C:4632:LEU:HB2	1:C:4703:LYS:HE2	1.90	0.54
1:A:2008:ILE:HG13	1:A:3633:HIS:ND1	2.23	0.53
1:B:601:LEU:HB2	1:B:610:VAL:HG11	1.90	0.53
1:C:2124:GLN:HE22	1:C:2140:LEU:HB3	1.73	0.53
1:C:4792:TYR:HE1	1:C:4830:ILE:HD13	1.73	0.53
1:D:725:TYR:HB3	1:D:779:PHE:CD2	2.43	0.53
1:D:1347:MET:SD	1:D:1371:ASN:HB3	2.49	0.53
1:D:1641:ASP:OD1	1:D:1641:ASP:N	2.40	0.53
1:D:2263:LYS:HG2	1:D:2266:ARG:HH21	1.72	0.53
2:J:50:ARG:N	2:J:55:GLU:OE2	2.39	0.53
1:A:1124:PRO:HD2	1:A:1595:VAL:HG23	1.89	0.53
1:A:4902:HIS:CD2	1:D:4182:LYS:HD2	2.43	0.53
1:C:601:LEU:HB2	1:C:610:VAL:HG11	1.90	0.53
1:C:718:VAL:HG23	1:C:724:SER:HB3	1.90	0.53
1:C:1845:GLN:HA	1:C:1848:GLU:HG2	1.89	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3730:LEU:HD11	1:C:3764:ILE:HD11	1.90	0.53
1:C:4767:VAL:HA	1:C:4770:VAL:HG22	1.90	0.53
1:D:1094:TYR:OH	1:D:1809:ASP:OD2	2.16	0.53
1:D:1691:GLU:HG2	1:D:1791:LYS:HE2	1.90	0.53
1:D:2172:GLU:HA	1:D:2175:VAL:HG12	1.90	0.53
1:D:3613:HIS:HA	1:D:3616:VAL:HG12	1.89	0.53
1:A:718:VAL:HG23	1:A:724:SER:HB3	1.90	0.53
1:A:1122:CYS:HA	1:A:1133:ARG:HD3	1.91	0.53
1:A:1845:GLN:HA	1:A:1848:GLU:HG2	1.89	0.53
1:B:625:VAL:HG23	1:B:628:ASN:HB2	1.89	0.53
1:B:725:TYR:HB3	1:B:779:PHE:CD2	2.43	0.53
1:B:1353:HIS:CE1	1:B:1367:LYS:HB3	2.44	0.53
1:B:2080:VAL:HG13	1:B:3669:LEU:HD22	1.90	0.53
1:B:3920:THR:HG22	1:B:3980:MET:HA	1.90	0.53
1:C:1769:PHE:O	2:I:83:TYR:OH	2.26	0.53
1:C:2231:PRO:HD3	1:C:2381:ILE:HD11	1.89	0.53
1:D:37:LEU:HD13	1:D:203:VAL:HG21	1.90	0.53
1:D:299:HIS:CD2	1:D:302:THR:HG23	2.43	0.53
1:A:601:LEU:HB2	1:A:610:VAL:HG11	1.90	0.53
1:B:677:LEU:HD12	1:B:695:VAL:HG21	1.90	0.53
1:B:1643:LEU:HD21	1:B:1692:ASN:ND2	2.24	0.53
1:B:2172:GLU:HA	1:B:2175:VAL:HG12	1.90	0.53
1:B:4186:GLU:OE1	1:B:4186:GLU:N	2.40	0.53
1:B:4792:TYR:HE1	1:B:4830:ILE:HD13	1.73	0.53
1:C:427:ASN:HB3	1:C:431:ARG:NH1	2.22	0.53
1:C:1972:ILE:HA	1:C:1975:LEU:HG	1.89	0.53
1:C:4801:PRO:HB2	1:C:4804:LYS:HD2	1.89	0.53
1:D:2231:PRO:HD3	1:D:2381:ILE:HD11	1.89	0.53
1:A:935:MET:O	1:A:939:THR:HG23	2.09	0.53
1:A:1347:MET:SD	1:A:1371:ASN:HB3	2.49	0.53
1:A:2124:GLN:HE22	1:A:2140:LEU:HB3	1.73	0.53
1:A:2291:PRO:HB3	1:A:2387:ILE:HD13	1.89	0.53
1:A:3699:HIS:HB2	1:A:3723:LEU:HD12	1.89	0.53
1:C:1122:CYS:HA	1:C:1133:ARG:HD3	1.91	0.53
1:C:1353:HIS:CE1	1:C:1367:LYS:HB3	2.44	0.53
1:C:2171:MET:HG2	1:C:2216:HIS:CD2	2.44	0.53
1:D:1643:LEU:HD21	1:D:1692:ASN:ND2	2.24	0.53
1:A:725:TYR:HB3	1:A:779:PHE:CD2	2.43	0.53
1:A:1121:GLY:O	1:A:1133:ARG:NH1	2.42	0.53
1:A:4047:PHE:O	1:A:4051:MET:HG3	2.08	0.53
1:A:4182:LYS:HA	1:B:4902:HIS:CD2	2.44	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1122:CYS:HA	1:B:1133:ARG:HD3	1.90	0.53
1:B:2008:ILE:HG13	1:B:3633:HIS:ND1	2.23	0.53
1:C:426:PHE:HB3	1:C:497:LEU:HD21	1.90	0.53
1:C:2152:LYS:HG3	1:C:2156:GLN:HE22	1.73	0.53
1:D:1165:MET:HB3	1:D:1236:TYR:CD2	2.44	0.53
1:D:2008:ILE:HG13	1:D:3633:HIS:ND1	2.23	0.53
1:A:836:HIS:HE2	1:A:842:GLN:HG2	1.74	0.53
1:A:1165:MET:HB3	1:A:1236:TYR:CD2	2.44	0.53
1:A:1174:MET:HE2	1:A:1190:LEU:HA	1.91	0.53
1:A:1769:PHE:O	2:G:83:TYR:OH	2.26	0.53
1:B:114:LEU:HB2	1:B:117:HIS:CD2	2.43	0.53
1:B:2171:MET:HG2	1:B:2216:HIS:CD2	2.44	0.53
1:B:2763:SER:H	1:B:2766:GLU:HB2	1.74	0.53
1:B:4767:VAL:HA	1:B:4770:VAL:HG22	1.90	0.53
2:H:26:HIS:NE2	2:H:41:ARG:HG2	2.24	0.53
1:C:252:HIS:O	1:C:257:ARG:NH1	2.42	0.53
1:D:2171:MET:HG2	1:D:2216:HIS:CD2	2.44	0.53
1:D:4047:PHE:O	1:D:4051:MET:HG3	2.08	0.53
1:A:1691:GLU:HG2	1:A:1791:LYS:HE2	1.90	0.53
1:A:4570:THR:HA	1:A:4573:ILE:HG12	1.89	0.53
1:A:4792:TYR:HE1	1:A:4830:ILE:HD13	1.73	0.53
1:B:252:HIS:O	1:B:257:ARG:NH1	2.42	0.53
1:B:490:GLN:NE2	1:B:550:GLN:HG2	2.24	0.53
1:C:836:HIS:HE2	1:C:842:GLN:HG2	1.74	0.53
1:C:1121:GLY:O	1:C:1133:ARG:NH1	2.42	0.53
1:C:1165:MET:HB3	1:C:1236:TYR:CD2	2.44	0.53
1:D:426:PHE:HB3	1:D:497:LEU:HD21	1.90	0.53
1:A:252:HIS:O	1:A:257:ARG:NH1	2.42	0.53
1:A:672:LYS:HB3	1:A:819:TYR:HA	1.91	0.53
1:A:4767:VAL:HA	1:A:4770:VAL:HG22	1.90	0.53
1:B:672:LYS:HB3	1:B:819:TYR:HA	1.91	0.53
1:B:840:TYR:CE2	1:B:850:LEU:HA	2.44	0.53
1:B:2152:LYS:HG3	1:B:2156:GLN:HE22	1.72	0.53
1:C:1139:GLY:O	1:C:1155:SER:OG	2.15	0.53
2:I:42:ASP:OD1	2:I:42:ASP:N	2.42	0.53
1:D:373:THR:OG1	1:D:392:ILE:O	2.21	0.53
1:D:1042:THR:O	1:D:1046:ASN:ND2	2.42	0.53
1:D:4792:TYR:HE1	1:D:4830:ILE:HD13	1.73	0.53
1:B:2124:GLN:HE22	1:B:2140:LEU:HB3	1.73	0.53
1:C:490:GLN:NE2	1:C:550:GLN:HG2	2.24	0.53
1:C:677:LEU:HD12	1:C:695:VAL:HG21	1.90	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:672:LYS:HB3	1:D:819:TYR:HA	1.91	0.53
1:D:1121:GLY:O	1:D:1133:ARG:NH1	2.42	0.53
1:D:1353:HIS:CE1	1:D:1367:LYS:HB3	2.44	0.53
1:D:1972:ILE:HA	1:D:1975:LEU:HG	1.89	0.53
1:D:3730:LEU:HD11	1:D:3764:ILE:HD11	1.90	0.53
1:A:490:GLN:NE2	1:A:550:GLN:HG2	2.24	0.52
1:A:1139:GLY:O	1:A:1155:SER:OG	2.15	0.52
1:A:2171:MET:HG2	1:A:2216:HIS:CD2	2.44	0.52
2:G:42:ASP:OD1	2:G:42:ASP:N	2.42	0.52
1:B:836:HIS:HE2	1:B:842:GLN:HG2	1.74	0.52
1:B:1165:MET:HB3	1:B:1236:TYR:CD2	2.44	0.52
1:C:644:LEU:HD12	1:C:644:LEU:H	1.73	0.52
1:C:1641:ASP:N	1:C:1641:ASP:OD1	2.40	0.52
1:D:601:LEU:HB2	1:D:610:VAL:HG11	1.90	0.52
1:D:1122:CYS:HA	1:D:1133:ARG:HD3	1.90	0.52
1:A:680:ASP:O	1:A:751:THR:OG1	2.26	0.52
1:A:1042:THR:O	1:A:1046:ASN:ND2	2.42	0.52
1:B:168:GLN:NE2	1:B:169:ARG:HG3	2.25	0.52
1:B:1359:ILE:HG13	1:B:1360:ASP:N	2.24	0.52
1:B:1791:LYS:NZ	1:B:1795:MET:SD	2.79	0.52
2:H:42:ASP:N	2:H:42:ASP:OD1	2.42	0.52
1:C:763:ALA:HB3	1:C:764:PRO:HD3	1.91	0.52
1:C:840:TYR:CE2	1:C:850:LEU:HA	2.44	0.52
2:I:26:HIS:NE2	2:I:41:ARG:HG2	2.24	0.52
1:D:490:GLN:NE2	1:D:550:GLN:HG2	2.24	0.52
1:D:1366:PRO:O	1:D:1368:PRO:HD3	2.09	0.52
1:D:2716:LEU:O	1:D:2720:ILE:HG12	2.10	0.52
1:A:70:GLU:OE2	1:A:122:ARG:NE	2.33	0.52
1:A:168:GLN:NE2	1:A:169:ARG:HG3	2.25	0.52
1:A:840:TYR:CE2	1:A:850:LEU:HA	2.44	0.52
1:A:2254:LEU:O	1:A:3809:ARG:HD3	2.10	0.52
1:A:2716:LEU:O	1:A:2720:ILE:HG12	2.10	0.52
1:B:37:LEU:HD13	1:B:203:VAL:HG21	1.90	0.52
1:B:763:ALA:HB3	1:B:764:PRO:HD3	1.91	0.52
1:B:1972:ILE:HD12	1:B:1975:LEU:HD11	1.91	0.52
1:C:1166:VAL:HG22	1:C:1173:MET:HG2	1.92	0.52
1:C:1366:PRO:O	1:C:1368:PRO:HD3	2.09	0.52
1:C:2716:LEU:O	1:C:2720:ILE:HG12	2.10	0.52
1:D:718:VAL:HG23	1:D:724:SER:HB3	1.90	0.52
1:D:836:HIS:HE2	1:D:842:GLN:HG2	1.74	0.52
1:D:935:MET:O	1:D:939:THR:HG23	2.09	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3961:SER:OG	1:D:3962:SER:N	2.42	0.52
1:A:1213:GLY:O	1:A:1214:ARG:HG2	2.10	0.52
2:G:26:HIS:NE2	2:G:41:ARG:HG2	2.24	0.52
1:C:677:LEU:HD23	1:C:802:PHE:HA	1.91	0.52
1:C:1347:MET:SD	1:C:1371:ASN:HB3	2.49	0.52
1:C:2254:LEU:O	1:C:3809:ARG:HD3	2.10	0.52
1:C:3961:SER:OG	1:C:3962:SER:N	2.42	0.52
1:D:763:ALA:HB3	1:D:764:PRO:HD3	1.92	0.52
1:A:1643:LEU:HD21	1:A:1692:ASN:ND2	2.24	0.52
1:A:1972:ILE:HD12	1:A:1975:LEU:HD11	1.91	0.52
1:D:252:HIS:O	1:D:257:ARG:NH1	2.42	0.52
1:A:763:ALA:HB3	1:A:764:PRO:HD3	1.91	0.52
1:A:1353:HIS:CE1	1:A:1367:LYS:HB3	2.44	0.52
1:B:1121:GLY:O	1:B:1133:ARG:NH1	2.42	0.52
1:B:2716:LEU:O	1:B:2720:ILE:HG12	2.10	0.52
1:B:3961:SER:OG	1:B:3962:SER:N	2.42	0.52
1:C:168:GLN:NE2	1:C:169:ARG:HG3	2.25	0.52
1:D:840:TYR:CE2	1:D:850:LEU:HA	2.44	0.52
1:A:37:LEU:HD13	1:A:203:VAL:HG21	1.90	0.52
1:A:1359:ILE:HG13	1:A:1360:ASP:N	2.25	0.52
1:A:2763:SER:H	1:A:2766:GLU:HB2	1.74	0.52
1:B:718:VAL:HG23	1:B:724:SER:HB3	1.90	0.52
1:B:1190:LEU:HD21	1:B:1193:LYS:HB3	1.92	0.52
1:B:1347:MET:SD	1:B:1371:ASN:HB3	2.49	0.52
1:B:2136:GLU:O	1:B:2140:LEU:HG	2.10	0.52
1:B:2254:LEU:O	1:B:3809:ARG:HD3	2.10	0.52
1:C:3796:MET:HA	1:C:3799:CYS:SG	2.50	0.52
1:D:677:LEU:HD23	1:D:802:PHE:HA	1.91	0.52
1:D:1166:VAL:HG22	1:D:1173:MET:HG2	1.92	0.52
1:D:1761:ARG:HH12	1:D:1763:ARG:NH1	2.08	0.52
1:A:3796:MET:HA	1:A:3799:CYS:SG	2.50	0.52
1:B:427:ASN:HB3	1:B:431:ARG:HH12	1.75	0.52
1:B:4621:SER:OG	1:B:4623:ASP:OD1	2.19	0.52
1:C:37:LEU:HD13	1:C:203:VAL:HG21	1.90	0.52
1:D:168:GLN:NE2	1:D:169:ARG:HG3	2.25	0.52
1:D:1213:GLY:O	1:D:1214:ARG:HG2	2.10	0.52
1:A:427:ASN:HB3	1:A:431:ARG:HH12	1.75	0.52
1:A:2136:GLU:O	1:A:2140:LEU:HG	2.10	0.52
1:B:637:LEU:HD12	1:B:637:LEU:O	2.10	0.52
1:B:2328:GLU:O	1:B:2335:ARG:NH2	2.43	0.52
1:C:1213:GLY:O	1:C:1214:ARG:HG2	2.10	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2008:ILE:HG13	1:C:3633:HIS:ND1	2.23	0.52
1:C:2136:GLU:O	1:C:2140:LEU:HG	2.10	0.52
1:D:611:LEU:HD11	1:D:643:LEU:HD21	1.92	0.52
1:D:4767:VAL:HA	1:D:4770:VAL:HG22	1.90	0.52
1:A:611:LEU:HD11	1:A:643:LEU:HD21	1.92	0.52
1:B:1042:THR:O	1:B:1046:ASN:ND2	2.42	0.52
1:C:515:ALA:HB1	1:C:520:ARG:NH1	2.25	0.52
1:C:1400:UNK:O	1:C:1409:UNK:N	2.43	0.52
1:C:1643:LEU:HD21	1:C:1692:ASN:ND2	2.24	0.52
1:C:1972:ILE:HD12	1:C:1975:LEU:HD11	1.91	0.52
1:C:1985:CYS:SG	1:C:1992:ARG:HD2	2.50	0.52
1:D:427:ASN:HB3	1:D:431:ARG:HH12	1.75	0.52
1:D:2763:SER:H	1:D:2766:GLU:HB2	1.74	0.52
1:D:3786:VAL:HG11	1:D:3865:THR:HG23	1.92	0.52
1:D:3796:MET:HA	1:D:3799:CYS:SG	2.50	0.52
2:J:26:HIS:NE2	2:J:41:ARG:HG2	2.24	0.52
1:A:1400:UNK:O	1:A:1409:UNK:N	2.43	0.51
1:A:2197:ARG:HB3	1:A:2236:SER:HG	1.75	0.51
1:A:3961:SER:OG	1:A:3962:SER:N	2.42	0.51
1:A:4792:TYR:HD2	1:A:4805:CYS:HB3	1.76	0.51
1:B:1366:PRO:O	1:B:1368:PRO:HD3	2.09	0.51
1:B:1761:ARG:HH12	1:B:1763:ARG:NH1	2.08	0.51
1:B:1985:CYS:SG	1:B:1992:ARG:HD2	2.50	0.51
1:B:3822:GLU:HB2	1:B:3826:GLU:HA	1.92	0.51
1:B:4115:GLN:O	1:B:4119:GLU:HG2	2.10	0.51
1:C:1042:THR:O	1:C:1046:ASN:ND2	2.42	0.51
1:C:2108:ASN:HD21	1:C:2111:SER:HB3	1.75	0.51
1:C:4830:ILE:HG22	1:C:4831:GLU:H	1.75	0.51
1:C:4895:ASP:OD1	1:C:4896:TYR:N	2.44	0.51
1:D:2136:GLU:O	1:D:2140:LEU:HG	2.10	0.51
1:A:441:LYS:HG2	1:A:442:LEU:HD23	1.92	0.51
1:A:3786:VAL:HG11	1:A:3865:THR:HG23	1.92	0.51
1:B:680:ASP:O	1:B:751:THR:OG1	2.26	0.51
1:B:1166:VAL:HG22	1:B:1173:MET:HG2	1.92	0.51
1:C:672:LYS:HB3	1:C:819:TYR:HA	1.91	0.51
1:D:1683:GLU:HB3	1:D:1684:PRO:HD3	1.92	0.51
1:A:1366:PRO:O	1:A:1368:PRO:HD3	2.09	0.51
1:A:2108:ASN:HD21	1:A:2111:SER:HB3	1.75	0.51
1:B:3786:VAL:HG11	1:B:3865:THR:HG23	1.93	0.51
1:C:637:LEU:HD12	1:C:637:LEU:O	2.10	0.51
1:C:1761:ARG:HH12	1:C:1763:ARG:NH1	2.08	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3822:GLU:HB2	1:C:3826:GLU:HA	1.93	0.51
1:D:698:ALA:HA	1:D:724:SER:HA	1.92	0.51
1:D:1190:LEU:HD21	1:D:1193:LYS:HB3	1.92	0.51
1:D:1985:CYS:SG	1:D:1992:ARG:HD2	2.50	0.51
2:G:104:LEU:HD11	2:G:107:LEU:HD12	1.93	0.51
1:B:1683:GLU:HB3	1:B:1684:PRO:HD3	1.92	0.51
1:B:2211:LYS:HD2	1:B:2252:LEU:HD11	1.93	0.51
1:B:3796:MET:HA	1:B:3799:CYS:SG	2.50	0.51
2:H:104:LEU:HD11	2:H:107:LEU:HD12	1.93	0.51
1:C:1683:GLU:HB3	1:C:1684:PRO:HD3	1.92	0.51
1:C:2211:LYS:HD2	1:C:2252:LEU:HD11	1.93	0.51
1:D:1972:ILE:HD12	1:D:1975:LEU:HD11	1.91	0.51
2:J:104:LEU:HD11	2:J:107:LEU:HD12	1.93	0.51
1:A:677:LEU:HD23	1:A:802:PHE:HA	1.91	0.51
1:A:1683:GLU:HB3	1:A:1684:PRO:HD3	1.92	0.51
1:A:4516:LEU:HA	1:D:4808:MET:HG2	1.92	0.51
1:A:4895:ASP:OD1	1:A:4896:TYR:N	2.44	0.51
1:B:677:LEU:HD23	1:B:802:PHE:HA	1.91	0.51
1:B:4583:PHE:O	1:B:4586:ILE:HG22	2.11	0.51
1:C:2763:SER:H	1:C:2766:GLU:HB2	1.74	0.51
1:C:4830:ILE:HG22	1:C:4831:GLU:N	2.26	0.51
1:D:641:ASP:OD1	1:D:642:LEU:N	2.44	0.51
1:D:2254:LEU:O	1:D:3809:ARG:HD3	2.10	0.51
1:D:4792:TYR:HD2	1:D:4805:CYS:HB3	1.76	0.51
1:A:3664:HIS:O	1:A:3668:LEU:HD23	2.10	0.51
1:B:3664:HIS:O	1:B:3668:LEU:HD23	2.10	0.51
1:B:4830:ILE:HG22	1:B:4831:GLU:H	1.75	0.51
1:C:1131:ASP:HB3	1:C:1133:ARG:HG2	1.93	0.51
1:C:1811:VAL:N	1:C:1818:LEU:HD12	2.18	0.51
1:C:4115:GLN:O	1:C:4119:GLU:HG2	2.10	0.51
1:D:515:ALA:HB1	1:D:520:ARG:NH1	2.25	0.51
1:D:1297:THR:OG1	1:D:1346:LEU:O	2.18	0.51
1:D:3860:GLN:NE2	1:D:3867:VAL:H	2.08	0.51
1:D:4583:PHE:O	1:D:4586:ILE:HG22	2.11	0.51
2:J:22:THR:HB	2:J:48:LYS:HE3	1.93	0.51
1:A:36:CYS:HB2	1:A:52:THR:HG23	1.93	0.51
1:A:637:LEU:HD12	1:A:637:LEU:O	2.10	0.51
1:A:4830:ILE:HG22	1:A:4831:GLU:H	1.75	0.51
1:B:1400:UNK:O	1:B:1409:UNK:N	2.43	0.51
1:B:2064:THR:HG22	1:B:2067:ARG:HH12	1.76	0.51
1:B:3924:GLN:HA	1:B:3924:GLN:NE2	2.26	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:611:LEU:HD11	1:C:643:LEU:HD21	1.92	0.51
1:C:1119:ARG:NH2	1:C:1196:ASP:O	2.35	0.51
1:C:1190:LEU:HD21	1:C:1193:LYS:HB3	1.92	0.51
1:C:1708:ILE:HD12	1:C:1828:THR:HG21	1.93	0.51
1:C:3664:HIS:O	1:C:3668:LEU:HD23	2.10	0.51
1:C:4792:TYR:HD2	1:C:4805:CYS:HB3	1.76	0.51
1:D:2064:THR:HG22	1:D:2067:ARG:HH12	1.76	0.51
1:D:4186:GLU:OE1	1:D:4186:GLU:N	2.40	0.51
1:A:1985:CYS:SG	1:A:1992:ARG:HD2	2.50	0.51
1:A:4583:PHE:O	1:A:4586:ILE:HG22	2.11	0.51
1:A:4862:GLN:OE1	1:D:4859:ALA:HB2	2.11	0.51
1:B:515:ALA:HB1	1:B:520:ARG:NH1	2.25	0.51
1:C:441:LYS:HG2	1:C:442:LEU:HD23	1.92	0.51
1:C:3786:VAL:HG11	1:C:3865:THR:HG23	1.93	0.51
1:D:4830:ILE:HG22	1:D:4831:GLU:H	1.75	0.51
1:A:892:LEU:HA	1:A:895:MET:HB2	1.93	0.51
1:A:1708:ILE:HD12	1:A:1828:THR:HG21	1.93	0.51
1:A:2107:ILE:HG13	1:A:2108:ASN:N	2.26	0.51
1:A:4830:ILE:HG22	1:A:4831:GLU:N	2.26	0.51
1:B:1213:GLY:O	1:B:1214:ARG:HG2	2.10	0.51
1:B:1893:LEU:O	1:B:2067:ARG:NH2	2.44	0.51
1:B:4182:LYS:HD2	1:C:4902:HIS:CD2	2.46	0.51
1:C:641:ASP:OD1	1:C:642:LEU:N	2.44	0.51
1:C:2395:ILE:HG21	1:C:2467:MET:SD	2.51	0.51
2:I:22:THR:HB	2:I:48:LYS:HE3	1.93	0.51
1:D:1131:ASP:HB3	1:D:1133:ARG:HG2	1.93	0.51
1:D:1174:MET:HE2	1:D:1190:LEU:HA	1.93	0.51
1:D:1359:ILE:HG13	1:D:1360:ASP:N	2.24	0.51
1:D:1400:UNK:O	1:D:1409:UNK:N	2.43	0.51
1:A:1166:VAL:HG22	1:A:1173:MET:HG2	1.92	0.51
1:A:1761:ARG:HH12	1:A:1763:ARG:NH1	2.08	0.51
1:A:2211:LYS:HD2	1:A:2252:LEU:HD11	1.93	0.51
1:B:442:LEU:HG	1:B:444:THR:HG22	1.93	0.51
1:B:3860:GLN:NE2	1:B:3867:VAL:H	2.08	0.51
1:B:3916:PHE:O	1:B:3920:THR:HG23	2.11	0.51
2:H:22:THR:HB	2:H:48:LYS:HE3	1.93	0.51
1:C:36:CYS:HB2	1:C:52:THR:HG23	1.93	0.51
1:C:442:LEU:HG	1:C:444:THR:HG22	1.93	0.51
1:C:1359:ILE:HG13	1:C:1360:ASP:N	2.24	0.51
1:C:1893:LEU:O	1:C:2067:ARG:NH2	2.44	0.51
1:C:3860:GLN:NE2	1:C:3867:VAL:H	2.08	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:4182:LYS:HD2	1:D:4902:HIS:CD2	2.46	0.51
2:I:104:LEU:HD11	2:I:107:LEU:HD12	1.93	0.51
1:D:2108:ASN:HD21	1:D:2111:SER:HB3	1.75	0.51
1:D:2211:LYS:HD2	1:D:2252:LEU:HD11	1.93	0.51
1:D:4115:GLN:O	1:D:4119:GLU:HG2	2.10	0.51
1:D:4830:ILE:HG22	1:D:4831:GLU:N	2.26	0.51
1:A:1190:LEU:HD21	1:A:1193:LYS:HB3	1.92	0.50
1:A:3639:LEU:O	1:A:3643:LEU:HB2	2.11	0.50
1:A:4182:LYS:HD2	1:B:4902:HIS:CD2	2.46	0.50
1:B:2395:ILE:HG21	1:B:2467:MET:SD	2.51	0.50
1:B:3762:ILE:HD12	1:B:3840:ARG:HG3	1.93	0.50
1:B:4792:TYR:HD2	1:B:4805:CYS:HB3	1.76	0.50
1:B:4895:ASP:OD1	1:B:4896:TYR:N	2.44	0.50
1:C:281:ARG:O	1:C:285:SER:OG	2.29	0.50
1:C:2107:ILE:HG13	1:C:2108:ASN:N	2.26	0.50
1:A:1893:LEU:O	1:A:2067:ARG:NH2	2.44	0.50
1:A:3924:GLN:HA	1:A:3924:GLN:NE2	2.26	0.50
1:A:4046:ASP:OD1	1:A:4046:ASP:N	2.44	0.50
1:B:611:LEU:HD11	1:B:643:LEU:HD21	1.92	0.50
1:B:641:ASP:OD1	1:B:642:LEU:N	2.44	0.50
1:B:1761:ARG:HB2	1:B:1761:ARG:HH11	1.76	0.50
1:C:1761:ARG:HB2	1:C:1761:ARG:HH11	1.76	0.50
1:D:3916:PHE:O	1:D:3920:THR:HG23	2.11	0.50
2:J:42:ASP:OD1	2:J:42:ASP:N	2.42	0.50
1:A:4115:GLN:O	1:A:4119:GLU:HG2	2.10	0.50
1:B:36:CYS:HB2	1:B:52:THR:HG23	1.93	0.50
1:B:2277:GLN:HA	1:B:2280:VAL:HG12	1.94	0.50
1:C:2328:GLU:O	1:C:2335:ARG:NH2	2.43	0.50
1:D:637:LEU:HD12	1:D:637:LEU:O	2.10	0.50
1:D:3822:GLU:HB2	1:D:3826:GLU:HA	1.93	0.50
1:A:2395:ILE:HG21	1:A:2467:MET:SD	2.51	0.50
1:A:3860:GLN:NE2	1:A:3867:VAL:H	2.08	0.50
1:B:698:ALA:HA	1:B:724:SER:HA	1.92	0.50
1:B:732:LEU:HB3	1:B:779:PHE:CZ	2.47	0.50
1:B:1131:ASP:HB3	1:B:1133:ARG:HG2	1.93	0.50
1:B:2108:ASN:HD21	1:B:2111:SER:HB3	1.75	0.50
1:B:3639:LEU:O	1:B:3643:LEU:HB2	2.11	0.50
1:B:4830:ILE:HG22	1:B:4831:GLU:N	2.26	0.50
1:C:427:ASN:HB3	1:C:431:ARG:HH12	1.75	0.50
1:C:892:LEU:HA	1:C:895:MET:HB2	1.93	0.50
1:C:1174:MET:HE2	1:C:1190:LEU:HA	1.93	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1567:LEU:HD22	1:C:1581:PRO:HB3	1.93	0.50
1:C:2320:VAL:O	1:C:2324:ILE:HG12	2.12	0.50
1:C:3916:PHE:O	1:C:3920:THR:HG23	2.11	0.50
1:C:4041:VAL:HG23	1:C:4076:THR:HG21	1.94	0.50
1:C:4186:GLU:OE1	1:C:4186:GLU:N	2.40	0.50
1:C:4947:CYS:SG	1:C:4948:TRP:N	2.85	0.50
1:D:36:CYS:HB2	1:D:52:THR:HG23	1.93	0.50
1:D:1893:LEU:O	1:D:2067:ARG:NH2	2.44	0.50
1:D:2107:ILE:HG13	1:D:2108:ASN:N	2.26	0.50
1:D:4867:ASP:OD1	1:D:4868:ALA:N	2.45	0.50
1:D:4947:CYS:SG	1:D:4948:TRP:N	2.85	0.50
1:A:698:ALA:HA	1:A:724:SER:HA	1.92	0.50
1:A:2265:VAL:HG21	1:A:2322:LEU:HB3	1.93	0.50
2:G:22:THR:HB	2:G:48:LYS:HE3	1.93	0.50
1:B:2289:TRP:CZ2	1:B:2387:ILE:HD12	2.47	0.50
1:C:698:ALA:HA	1:C:724:SER:HA	1.93	0.50
1:C:2289:TRP:CZ2	1:C:2387:ILE:HD12	2.47	0.50
1:C:4583:PHE:O	1:C:4586:ILE:HG22	2.11	0.50
1:D:441:LYS:HG2	1:D:442:LEU:HD23	1.92	0.50
1:D:2265:VAL:HG21	1:D:2322:LEU:HB3	1.93	0.50
1:D:2289:TRP:CZ2	1:D:2387:ILE:HD12	2.47	0.50
1:D:3664:HIS:O	1:D:3668:LEU:HD23	2.10	0.50
1:D:4621:SER:OG	1:D:4623:ASP:OD1	2.20	0.50
1:D:4895:ASP:OD1	1:D:4896:TYR:N	2.44	0.50
1:A:435:ALA:HA	1:A:438:LYS:HE3	1.93	0.50
1:A:732:LEU:HB3	1:A:779:PHE:CZ	2.47	0.50
1:A:1131:ASP:HB3	1:A:1133:ARG:HG2	1.93	0.50
1:A:2289:TRP:CZ2	1:A:2387:ILE:HD12	2.47	0.50
1:A:3822:GLU:HB2	1:A:3826:GLU:HA	1.93	0.50
1:C:3639:LEU:O	1:C:3643:LEU:HB2	2.12	0.50
1:D:281:ARG:O	1:D:285:SER:OG	2.29	0.50
1:D:1708:ILE:HD12	1:D:1828:THR:HG21	1.93	0.50
1:D:1761:ARG:HB2	1:D:1761:ARG:HH11	1.77	0.50
1:D:3924:GLN:HA	1:D:3924:GLN:NE2	2.25	0.50
1:A:1981:ASP:OD1	1:A:1982:LYS:N	2.45	0.50
1:A:2064:THR:HG22	1:A:2067:ARG:HH12	1.76	0.50
1:B:1615:ARG:HD3	1:B:1615:ARG:N	2.27	0.50
1:B:4308:VAL:HG12	1:B:4485:TYR:HE1	1.77	0.50
1:C:1359:ILE:HG23	1:C:1363:LYS:NZ	2.27	0.50
1:C:2277:GLN:HA	1:C:2280:VAL:HG12	1.94	0.50
1:C:4517:PHE:HB3	1:C:4562:GLU:CG	2.37	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:4867:ASP:OD1	1:C:4868:ALA:N	2.45	0.50
1:D:2328:GLU:O	1:D:2335:ARG:NH2	2.43	0.50
1:D:4594:VAL:O	1:D:4598:ILE:HG13	2.12	0.50
1:B:441:LYS:HG2	1:B:442:LEU:HD23	1.92	0.50
1:B:4947:CYS:SG	1:B:4948:TRP:N	2.85	0.50
1:C:732:LEU:HB3	1:C:779:PHE:CZ	2.47	0.50
1:C:2265:VAL:HG21	1:C:2322:LEU:HB3	1.93	0.50
1:D:2320:VAL:O	1:D:2324:ILE:HG12	2.12	0.50
1:A:515:ALA:HB1	1:A:520:ARG:NH1	2.25	0.50
1:A:1362:ASP:OD1	1:A:1362:ASP:N	2.45	0.50
1:A:2320:VAL:O	1:A:2324:ILE:HG12	2.12	0.50
1:A:4005:SER:O	1:A:4009:VAL:HG12	2.12	0.50
1:B:1811:VAL:N	1:B:1818:LEU:HD12	2.18	0.50
1:B:2320:VAL:O	1:B:2324:ILE:HG12	2.12	0.50
1:B:4005:SER:O	1:B:4009:VAL:HG12	2.12	0.50
1:B:4928:ASP:O	1:B:4932:HIS:NE2	2.45	0.50
1:C:3762:ILE:HD12	1:C:3840:ARG:HG3	1.93	0.50
1:D:1704:TYR:O	1:D:1708:ILE:HG12	2.12	0.50
1:D:3639:LEU:O	1:D:3643:LEU:HB2	2.11	0.50
1:D:4041:VAL:HG23	1:D:4076:THR:HG21	1.94	0.50
1:D:4308:VAL:HG12	1:D:4485:TYR:HE1	1.77	0.50
1:A:1117:TRP:CZ3	1:A:1166:VAL:HB	2.47	0.49
1:A:1567:LEU:HD22	1:A:1581:PRO:HB3	1.93	0.49
1:A:2328:GLU:O	1:A:2335:ARG:NH2	2.43	0.49
1:B:892:LEU:HA	1:B:895:MET:HB2	1.93	0.49
1:B:2107:ILE:HG13	1:B:2108:ASN:N	2.26	0.49
1:C:890:HIS:O	1:C:894:VAL:HG23	2.12	0.49
1:C:1043:LYS:HE3	1:C:1047:LYS:NZ	2.27	0.49
1:D:1359:ILE:HG23	1:D:1363:LYS:NZ	2.27	0.49
1:D:1981:ASP:OD1	1:D:1982:LYS:N	2.45	0.49
1:A:298:ARG:NH1	1:A:319:LYS:HD3	2.26	0.49
1:A:1615:ARG:N	1:A:1615:ARG:HD3	2.27	0.49
1:B:190:ARG:HG2	1:B:207:PHE:CE1	2.47	0.49
1:B:3954:GLN:NE2	1:B:3974:GLN:OE1	2.46	0.49
1:C:1704:TYR:O	1:C:1708:ILE:HG12	2.12	0.49
1:C:2064:THR:HG22	1:C:2067:ARG:HH12	1.76	0.49
1:D:2395:ILE:HG21	1:D:2467:MET:SD	2.51	0.49
1:D:2848:HIS:NE2	1:D:2876:LEU:HD21	2.27	0.49
1:D:4861:ILE:O	1:D:4865:ILE:HG12	2.13	0.49
1:A:641:ASP:OD1	1:A:642:LEU:N	2.44	0.49
1:A:890:HIS:O	1:A:894:VAL:HG23	2.12	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3762:ILE:HD12	1:A:3840:ARG:HG3	1.93	0.49
1:A:3860:GLN:HE22	1:A:3867:VAL:H	1.61	0.49
1:B:890:HIS:O	1:B:894:VAL:HG23	2.12	0.49
1:C:1981:ASP:OD1	1:C:1982:LYS:N	2.45	0.49
1:C:3860:GLN:HE22	1:C:3867:VAL:H	1.61	0.49
1:C:4861:ILE:O	1:C:4865:ILE:HG12	2.13	0.49
1:D:732:LEU:HB3	1:D:779:PHE:CZ	2.47	0.49
1:D:1043:LYS:HE3	1:D:1047:LYS:NZ	2.28	0.49
1:D:2175:VAL:HG23	1:D:2219:TYR:OH	2.12	0.49
1:A:442:LEU:HG	1:A:444:THR:HG22	1.93	0.49
1:A:929:ARG:HG2	1:A:933:LEU:HG	1.95	0.49
1:A:1132:ASP:OD1	1:A:1147:GLN:NE2	2.45	0.49
1:A:3916:PHE:O	1:A:3920:THR:HG23	2.11	0.49
1:A:3954:GLN:NE2	1:A:3974:GLN:OE1	2.46	0.49
1:A:4594:VAL:O	1:A:4598:ILE:HG13	2.12	0.49
1:B:435:ALA:HA	1:B:438:LYS:HE3	1.94	0.49
1:B:1095:ALA:HB1	1:B:1200:GLY:HA3	1.95	0.49
1:B:1117:TRP:CZ3	1:B:1166:VAL:HB	2.47	0.49
1:B:1132:ASP:OD1	1:B:1147:GLN:NE2	2.46	0.49
1:B:1950:LEU:HD21	1:B:1952:MET:HG2	1.95	0.49
1:B:4792:TYR:CD2	1:B:4805:CYS:HB3	2.48	0.49
1:B:4867:ASP:OD1	1:B:4868:ALA:N	2.45	0.49
1:C:190:ARG:HG2	1:C:207:PHE:CE1	2.47	0.49
1:C:433:LEU:HD11	1:C:504:ARG:HD3	1.94	0.49
1:C:674:TYR:N	1:C:820:ALA:O	2.46	0.49
1:C:1950:LEU:HD21	1:C:1952:MET:HG2	1.95	0.49
1:C:4594:VAL:O	1:C:4598:ILE:HG13	2.12	0.49
1:D:442:LEU:HG	1:D:444:THR:HG22	1.93	0.49
1:D:1095:ALA:HB1	1:D:1200:GLY:HA3	1.95	0.49
1:D:1950:LEU:HD21	1:D:1952:MET:HG2	1.95	0.49
1:A:674:TYR:N	1:A:820:ALA:O	2.46	0.49
1:A:1678:CYS:SG	1:A:1679:SER:N	2.86	0.49
1:A:1704:TYR:O	1:A:1708:ILE:HG12	2.12	0.49
1:A:2175:VAL:HG23	1:A:2219:TYR:OH	2.12	0.49
1:A:2277:GLN:HA	1:A:2280:VAL:HG12	1.93	0.49
1:A:4041:VAL:HG23	1:A:4076:THR:HG21	1.94	0.49
1:A:4947:CYS:SG	1:A:4948:TRP:N	2.85	0.49
1:B:227:TYR:HA	1:B:355:LYS:HA	1.93	0.49
1:B:4041:VAL:HG23	1:B:4076:THR:HG21	1.94	0.49
1:C:995:MET:HE2	1:C:999:LEU:HG	1.94	0.49
1:C:1615:ARG:HD3	1:C:1615:ARG:N	2.27	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:4005:SER:O	1:C:4009:VAL:HG12	2.12	0.49
1:C:4046:ASP:OD1	1:C:4046:ASP:N	2.44	0.49
1:D:417:ARG:HG2	1:D:417:ARG:HH11	1.78	0.49
1:D:433:LEU:HD11	1:D:504:ARG:HD3	1.94	0.49
1:A:227:TYR:HA	1:A:355:LYS:HA	1.93	0.49
1:A:433:LEU:HD11	1:A:504:ARG:HD3	1.94	0.49
1:A:1190:LEU:HD11	1:A:1193:LYS:HB3	1.95	0.49
1:A:2487:LEU:HD12	1:A:2491:PHE:HB2	1.94	0.49
1:A:2848:HIS:NE2	1:A:2876:LEU:HD21	2.27	0.49
1:B:59:PRO:HG2	1:B:319:LYS:HD2	1.94	0.49
1:B:281:ARG:O	1:B:285:SER:OG	2.29	0.49
1:B:674:TYR:N	1:B:820:ALA:O	2.46	0.49
1:B:1704:TYR:O	1:B:1708:ILE:HG12	2.12	0.49
1:B:1708:ILE:HD12	1:B:1828:THR:HG21	1.93	0.49
1:B:2265:VAL:HG21	1:B:2322:LEU:HB3	1.93	0.49
1:C:929:ARG:HG2	1:C:933:LEU:HG	1.95	0.49
1:D:427:ASN:HB3	1:D:431:ARG:NH2	2.28	0.49
1:D:799:LYS:HG2	1:D:1621:GLN:NE2	2.28	0.49
1:D:4005:SER:O	1:D:4009:VAL:HG12	2.12	0.49
1:A:427:ASN:HB3	1:A:431:ARG:NH2	2.28	0.49
1:A:1095:ALA:HB1	1:A:1200:GLY:HA3	1.95	0.49
1:A:1950:LEU:HD21	1:A:1952:MET:HG2	1.95	0.49
1:B:433:LEU:HD11	1:B:504:ARG:HD3	1.94	0.49
1:B:1043:LYS:HE3	1:B:1047:LYS:NZ	2.28	0.49
1:B:1245:ARG:NH2	1:B:1809:ASP:OD1	2.46	0.49
1:B:2848:HIS:NE2	1:B:2876:LEU:HD21	2.27	0.49
1:B:3988:ASN:O	1:B:4143:ARG:NH2	2.46	0.49
1:C:1095:ALA:HB1	1:C:1200:GLY:HA3	1.95	0.49
1:C:2713:PRO:HG2	1:C:2716:LEU:HD12	1.95	0.49
1:C:2848:HIS:NE2	1:C:2876:LEU:HD21	2.27	0.49
1:C:2903:SER:OG	1:C:2904:ARG:N	2.46	0.49
1:C:3954:GLN:NE2	1:C:3974:GLN:OE1	2.46	0.49
1:C:3988:ASN:O	1:C:4143:ARG:NH2	2.46	0.49
1:D:1615:ARG:N	1:D:1615:ARG:HD3	2.27	0.49
1:D:2277:GLN:HA	1:D:2280:VAL:HG12	1.94	0.49
1:D:2903:SER:OG	1:D:2904:ARG:N	2.46	0.49
1:D:3762:ILE:HD12	1:D:3840:ARG:HG3	1.93	0.49
1:A:190:ARG:HG2	1:A:207:PHE:CE1	2.47	0.49
1:A:3988:ASN:O	1:A:4143:ARG:NH2	2.46	0.49
1:B:1629:MET:HE3	1:B:1685:GLN:HE21	1.78	0.49
1:B:1991:ILE:HA	1:B:1994:GLN:HG2	1.95	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2175:VAL:HG23	1:C:2219:TYR:OH	2.12	0.49
1:C:4308:VAL:HG12	1:C:4485:TYR:HE1	1.77	0.49
1:D:190:ARG:HG2	1:D:207:PHE:CE1	2.47	0.49
1:D:227:TYR:HA	1:D:355:LYS:HA	1.93	0.49
1:D:674:TYR:HD2	1:D:758:CYS:SG	2.36	0.49
1:D:1362:ASP:OD1	1:D:1362:ASP:N	2.46	0.49
1:D:1942:ARG:O	1:D:1945:GLU:HG3	2.13	0.49
1:D:2173:VAL:O	1:D:2177:VAL:HG23	2.12	0.49
1:D:3860:GLN:HE22	1:D:3867:VAL:H	1.61	0.49
1:D:3954:GLN:NE2	1:D:3974:GLN:OE1	2.46	0.49
1:A:1043:LYS:HE3	1:A:1047:LYS:NZ	2.27	0.49
1:A:2065:MET:HE1	1:A:2083:MET:CB	2.43	0.49
1:B:929:ARG:HG2	1:B:933:LEU:HG	1.95	0.49
1:B:995:MET:HE2	1:B:999:LEU:HG	1.95	0.49
1:B:1567:LEU:HD22	1:B:1581:PRO:HB3	1.93	0.49
1:B:1687:LEU:HA	1:B:1690:ILE:HG12	1.94	0.49
1:B:2487:LEU:HD12	1:B:2491:PHE:HB2	1.94	0.49
1:B:4046:ASP:N	1:B:4046:ASP:OD1	2.44	0.49
1:C:1100:ARG:HB3	1:C:1236:TYR:CD2	2.48	0.49
1:C:1245:ARG:NH2	1:C:1809:ASP:OD1	2.46	0.49
1:C:1687:LEU:HA	1:C:1690:ILE:HG12	1.94	0.49
1:D:892:LEU:HA	1:D:895:MET:HB2	1.93	0.49
1:D:1100:ARG:HB3	1:D:1236:TYR:CD2	2.48	0.49
1:D:1119:ARG:NH2	1:D:1196:ASP:O	2.35	0.49
1:D:4928:ASP:O	1:D:4932:HIS:NE2	2.45	0.49
1:A:373:THR:OG1	1:A:392:ILE:O	2.21	0.49
1:A:708:GLY:H	1:A:723:PHE:HD2	1.60	0.49
1:A:1223:THR:O	1:A:1225:LYS:HD3	2.13	0.49
1:A:1399:UNK:HA	1:A:1410:UNK:HA	1.95	0.49
1:A:2713:PRO:HG2	1:A:2716:LEU:HD12	1.95	0.49
1:A:4106:GLU:OE1	1:A:4148:TYR:OH	2.31	0.49
1:A:4308:VAL:HG12	1:A:4485:TYR:HE1	1.77	0.49
1:B:1223:THR:O	1:B:1225:LYS:HD3	2.13	0.49
1:B:1966:SER:OG	1:B:1966:SER:O	2.31	0.49
1:B:3860:GLN:HE22	1:B:3867:VAL:H	1.61	0.49
1:B:3940:TRP:HA	1:B:3943:VAL:HG12	1.95	0.49
1:C:227:TYR:HA	1:C:355:LYS:HA	1.93	0.49
1:C:894:VAL:HG13	1:C:918:LEU:HD22	1.95	0.49
1:C:1002:ASN:O	1:C:1006:VAL:HG23	2.13	0.49
1:C:3940:TRP:HA	1:C:3943:VAL:HG12	1.95	0.49
1:D:674:TYR:N	1:D:820:ALA:O	2.46	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:929:ARG:HG2	1:D:933:LEU:HG	1.95	0.49
1:D:1132:ASP:OD1	1:D:1147:GLN:NE2	2.46	0.49
1:D:1567:LEU:HD22	1:D:1581:PRO:HB3	1.93	0.49
1:D:2197:ARG:HB3	1:D:2236:SER:HG	1.78	0.49
1:D:2487:LEU:HD12	1:D:2491:PHE:HB2	1.95	0.49
1:A:417:ARG:HG2	1:A:417:ARG:HH11	1.78	0.48
1:A:1245:ARG:NH2	1:A:1809:ASP:OD1	2.46	0.48
1:A:1359:ILE:HG23	1:A:1363:LYS:NZ	2.27	0.48
1:A:1754:LEU:HG	1:A:1756:THR:HG23	1.95	0.48
1:A:1991:ILE:HA	1:A:1994:GLN:HG2	1.95	0.48
1:A:4928:ASP:O	1:A:4932:HIS:NE2	2.45	0.48
1:B:1981:ASP:OD1	1:B:1982:LYS:N	2.45	0.48
1:B:2713:PRO:HG2	1:B:2716:LEU:HD12	1.95	0.48
1:B:4594:VAL:O	1:B:4598:ILE:HG13	2.12	0.48
1:C:59:PRO:HG2	1:C:319:LYS:HD2	1.94	0.48
1:C:708:GLY:H	1:C:723:PHE:HD2	1.60	0.48
1:C:1942:ARG:O	1:C:1945:GLU:HG3	2.13	0.48
1:D:708:GLY:H	1:D:723:PHE:HD2	1.60	0.48
1:D:890:HIS:O	1:D:894:VAL:HG23	2.12	0.48
1:D:894:VAL:HG13	1:D:918:LEU:HD22	1.95	0.48
1:D:1245:ARG:NH2	1:D:1809:ASP:OD1	2.46	0.48
1:A:674:TYR:HD2	1:A:758:CYS:SG	2.36	0.48
1:A:1791:LYS:NZ	1:A:1795:MET:SD	2.79	0.48
1:A:2173:VAL:O	1:A:2177:VAL:HG23	2.12	0.48
1:A:4158:GLN:HB3	1:A:4199:MET:HG2	1.95	0.48
1:A:4515:LEU:HD11	1:A:4736:PHE:CE1	2.48	0.48
1:A:4867:ASP:OD1	1:A:4868:ALA:N	2.45	0.48
1:B:427:ASN:HB3	1:B:431:ARG:NH2	2.28	0.48
1:B:699:SER:OG	1:B:700:THR:N	2.46	0.48
1:B:1002:ASN:O	1:B:1006:VAL:HG23	2.13	0.48
1:B:1362:ASP:N	1:B:1362:ASP:OD1	2.45	0.48
1:B:2173:VAL:O	1:B:2177:VAL:HG23	2.12	0.48
1:C:4928:ASP:O	1:C:4932:HIS:NE2	2.45	0.48
1:D:1687:LEU:HA	1:D:1690:ILE:HG12	1.94	0.48
1:D:1928:SER:OG	1:D:3616:VAL:HG23	2.13	0.48
1:A:699:SER:OG	1:A:700:THR:N	2.46	0.48
1:A:1100:ARG:HB3	1:A:1236:TYR:CD2	2.48	0.48
1:A:4861:ILE:O	1:A:4865:ILE:HG12	2.13	0.48
1:B:1253:LYS:HE2	1:B:1253:LYS:HB2	1.63	0.48
1:C:435:ALA:HA	1:C:438:LYS:HE3	1.94	0.48
1:C:700:THR:HG1	1:C:787:LEU:H	1.60	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1223:THR:O	1:C:1225:LYS:HD3	2.13	0.48
1:C:2173:VAL:O	1:C:2177:VAL:HG23	2.12	0.48
1:C:4106:GLU:OE1	1:C:4148:TYR:OH	2.31	0.48
1:D:298:ARG:NH1	1:D:319:LYS:HD3	2.26	0.48
1:D:1190:LEU:HD11	1:D:1193:LYS:HB3	1.95	0.48
1:D:1399:UNK:HA	1:D:1410:UNK:HA	1.95	0.48
1:D:3988:ASN:O	1:D:4143:ARG:NH2	2.46	0.48
1:A:281:ARG:O	1:A:285:SER:OG	2.29	0.48
1:B:417:ARG:HG2	1:B:417:ARG:HH11	1.78	0.48
1:B:1175:PHE:HB2	1:B:1182:LEU:HD22	1.96	0.48
1:B:1359:ILE:HG23	1:B:1363:LYS:NZ	2.27	0.48
1:B:1678:CYS:SG	1:B:1679:SER:N	2.86	0.48
1:B:4158:GLN:HB3	1:B:4199:MET:HG2	1.95	0.48
1:C:427:ASN:HB3	1:C:431:ARG:NH2	2.28	0.48
1:C:674:TYR:HD2	1:C:758:CYS:SG	2.36	0.48
1:C:845:THR:OG1	1:C:846:TYR:N	2.46	0.48
1:C:1754:LEU:HG	1:C:1756:THR:HG23	1.96	0.48
1:C:2487:LEU:HD12	1:C:2491:PHE:HB2	1.94	0.48
1:D:1117:TRP:CZ3	1:D:1166:VAL:HB	2.47	0.48
1:D:3660:VAL:HG13	1:D:3664:HIS:ND1	2.28	0.48
1:D:3758:LEU:O	1:D:3762:ILE:HG12	2.14	0.48
1:A:304:LYS:HB2	1:A:316:LEU:HD12	1.96	0.48
1:A:1942:ARG:O	1:A:1945:GLU:HG3	2.13	0.48
1:A:2903:SER:OG	1:A:2904:ARG:N	2.46	0.48
1:A:3660:VAL:HG13	1:A:3664:HIS:ND1	2.28	0.48
1:B:298:ARG:NH1	1:B:319:LYS:HD3	2.26	0.48
1:B:1928:SER:OG	1:B:3616:VAL:HG23	2.13	0.48
1:B:2175:VAL:HG23	1:B:2219:TYR:OH	2.12	0.48
1:B:3758:LEU:O	1:B:3762:ILE:HG12	2.14	0.48
1:B:4658:GLU:O	1:C:4055:LYS:NZ	2.40	0.48
1:C:304:LYS:HB2	1:C:316:LEU:HD12	1.96	0.48
1:C:799:LYS:HG2	1:C:1621:GLN:NE2	2.28	0.48
1:C:1362:ASP:N	1:C:1362:ASP:OD1	2.45	0.48
1:C:4792:TYR:CD2	1:C:4805:CYS:HB3	2.48	0.48
1:D:304:LYS:HB2	1:D:316:LEU:HD12	1.96	0.48
1:D:680:ASP:O	1:D:751:THR:OG1	2.26	0.48
1:A:799:LYS:HG2	1:A:1621:GLN:NE2	2.28	0.48
1:A:1928:SER:OG	1:A:3616:VAL:HG23	2.13	0.48
1:A:4792:TYR:CD2	1:A:4805:CYS:HB3	2.48	0.48
2:G:83:TYR:HB3	2:G:87:GLY:HA2	1.96	0.48
1:B:313:ASN:HD21	1:B:392:ILE:HA	1.79	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:799:LYS:HG2	1:B:1621:GLN:NE2	2.28	0.48
1:B:2766:GLU:HA	1:B:2769:ILE:HG23	1.95	0.48
1:B:4861:ILE:O	1:B:4865:ILE:HG12	2.13	0.48
1:C:1132:ASP:OD1	1:C:1147:GLN:NE2	2.46	0.48
1:C:1678:CYS:SG	1:C:1679:SER:N	2.86	0.48
1:C:1928:SER:OG	1:C:3616:VAL:HG23	2.13	0.48
1:C:4515:LEU:HD11	1:C:4736:PHE:CE1	2.48	0.48
1:D:59:PRO:HG2	1:D:319:LYS:HD2	1.94	0.48
1:D:298:ARG:NH1	1:D:305:TYR:OH	2.46	0.48
1:D:435:ALA:HA	1:D:438:LYS:HE3	1.94	0.48
1:D:845:THR:OG1	1:D:846:TYR:N	2.46	0.48
1:D:1643:LEU:HD21	1:D:1692:ASN:HD21	1.79	0.48
1:D:1678:CYS:SG	1:D:1679:SER:N	2.86	0.48
1:D:1681:VAL:O	1:D:1682:ASP:HB2	2.14	0.48
1:D:1791:LYS:NZ	1:D:1795:MET:SD	2.79	0.48
1:D:3967:LEU:O	1:D:3971:MET:HG2	2.14	0.48
1:B:298:ARG:NH1	1:B:305:TYR:OH	2.46	0.48
1:B:304:LYS:HB2	1:B:316:LEU:HD12	1.96	0.48
1:B:2903:SER:OG	1:B:2904:ARG:N	2.46	0.48
1:B:3660:VAL:HG13	1:B:3664:HIS:ND1	2.28	0.48
1:C:417:ARG:HG2	1:C:417:ARG:HH11	1.78	0.48
1:C:1117:TRP:CZ3	1:C:1166:VAL:HB	2.47	0.48
1:C:1265:HIS:CD2	1:C:1268:ILE:HB	2.44	0.48
1:C:1399:UNK:HA	1:C:1410:UNK:HA	1.95	0.48
1:C:1643:LEU:HD21	1:C:1692:ASN:HD21	1.79	0.48
1:C:4158:GLN:HB3	1:C:4199:MET:HG2	1.95	0.48
1:A:1761:ARG:HB2	1:A:1761:ARG:HH11	1.76	0.48
1:A:4924:LEU:HD21	1:A:4936:GLU:HB3	1.96	0.48
1:B:1190:LEU:HD11	1:B:1193:LYS:HB3	1.95	0.48
1:B:2426:ILE:HG21	1:B:2470:PHE:HE2	1.78	0.48
1:C:1321:UNK:HA	1:C:1436:UNK:HA	1.96	0.48
1:C:4029:ASP:OD1	1:C:4029:ASP:N	2.47	0.48
1:D:2713:PRO:HG2	1:D:2716:LEU:HD12	1.95	0.48
1:D:4515:LEU:HD11	1:D:4736:PHE:CE1	2.48	0.48
1:D:4792:TYR:CD2	1:D:4805:CYS:HB3	2.48	0.48
1:D:4858:LEU:O	1:D:4862:GLN:HG2	2.14	0.48
1:A:1687:LEU:HA	1:A:1690:ILE:HG12	1.94	0.48
1:A:2766:GLU:HA	1:A:2769:ILE:HG23	1.95	0.48
1:B:845:THR:OG1	1:B:846:TYR:N	2.46	0.48
1:C:699:SER:OG	1:C:700:THR:N	2.46	0.48
1:C:1962:ARG:HB3	1:C:1974:MET:HE1	1.96	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3660:VAL:HG13	1:C:3664:HIS:ND1	2.28	0.48
1:C:3924:GLN:HA	1:C:3924:GLN:NE2	2.26	0.48
1:D:711:GLU:HA	1:D:1255:LEU:CD1	2.43	0.48
1:D:1629:MET:HE3	1:D:1685:GLN:HE21	1.79	0.48
1:A:692:HIS:HB3	1:A:795:SER:HB3	1.96	0.48
1:A:1002:ASN:O	1:A:1006:VAL:HG23	2.13	0.48
1:A:1966:SER:O	1:A:1966:SER:OG	2.31	0.48
1:A:2138:GLU:HG3	1:A:2191:MET:HB2	1.96	0.48
1:A:3905:PHE:O	1:A:3909:ILE:HG12	2.14	0.48
1:B:59:PRO:HB3	1:B:296:ARG:NH1	2.29	0.48
1:B:692:HIS:HB3	1:B:795:SER:HB3	1.96	0.48
1:C:1991:ILE:HA	1:C:1994:GLN:HG2	1.95	0.48
1:C:2138:GLU:HG3	1:C:2191:MET:HB2	1.96	0.48
1:D:1223:THR:O	1:D:1225:LYS:HD3	2.13	0.48
1:D:1962:ARG:HB3	1:D:1974:MET:HE1	1.96	0.48
1:D:1966:SER:O	1:D:1966:SER:OG	2.31	0.48
1:D:3940:TRP:HA	1:D:3943:VAL:HG12	1.95	0.48
1:A:548:CYS:HA	1:A:551:PHE:CE1	2.49	0.47
1:A:1175:PHE:HB2	1:A:1182:LEU:HD22	1.96	0.47
1:A:1643:LEU:HD21	1:A:1692:ASN:HD21	1.79	0.47
1:A:1681:VAL:O	1:A:1682:ASP:HB2	2.14	0.47
1:A:2766:GLU:O	1:A:2769:ILE:HG12	2.14	0.47
1:A:3967:LEU:O	1:A:3971:MET:HG2	2.14	0.47
1:B:150:GLN:NE2	1:B:158:CYS:HB3	2.28	0.47
1:B:1942:ARG:O	1:B:1945:GLU:HG3	2.13	0.47
1:B:2138:GLU:HG3	1:B:2191:MET:HB2	1.96	0.47
1:B:2838:ALA:O	1:B:2841:GLU:HG3	2.14	0.47
1:B:3905:PHE:O	1:B:3909:ILE:HG12	2.14	0.47
1:C:270:HIS:NE2	1:C:491:GLU:HB3	2.29	0.47
1:C:298:ARG:NH1	1:C:305:TYR:OH	2.46	0.47
1:C:1190:LEU:HD11	1:C:1193:LYS:HB3	1.95	0.47
1:C:1966:SER:O	1:C:1966:SER:OG	2.31	0.47
1:C:2838:ALA:O	1:C:2841:GLU:HG3	2.14	0.47
1:C:4632:LEU:HD23	1:C:4632:LEU:H	1.79	0.47
1:C:4858:LEU:O	1:C:4862:GLN:HG2	2.14	0.47
2:I:26:HIS:HD2	2:I:41:ARG:NH1	2.12	0.47
1:A:59:PRO:HG2	1:A:319:LYS:HD2	1.94	0.47
1:A:150:GLN:NE2	1:A:158:CYS:HB3	2.28	0.47
1:A:894:VAL:HG13	1:A:918:LEU:HD22	1.95	0.47
1:A:3940:TRP:HA	1:A:3943:VAL:HG12	1.95	0.47
1:A:4808:MET:CG	1:B:4516:LEU:HA	2.44	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:270:HIS:NE2	1:B:491:GLU:HB3	2.29	0.47
1:B:708:GLY:H	1:B:723:PHE:HD2	1.60	0.47
1:C:548:CYS:HA	1:C:551:PHE:CE1	2.49	0.47
1:C:692:HIS:HB3	1:C:795:SER:HB3	1.96	0.47
1:C:2766:GLU:O	1:C:2769:ILE:HG12	2.14	0.47
1:D:1002:ASN:O	1:D:1006:VAL:HG23	2.13	0.47
1:D:2766:GLU:HA	1:D:2769:ILE:HG23	1.95	0.47
1:D:2838:ALA:O	1:D:2841:GLU:HG3	2.14	0.47
1:D:4046:ASP:OD1	1:D:4046:ASP:N	2.44	0.47
2:J:83:TYR:HB3	2:J:87:GLY:HA2	1.96	0.47
1:A:313:ASN:HD21	1:A:392:ILE:HA	1.79	0.47
1:B:1321:UNK:HA	1:B:1436:UNK:HA	1.96	0.47
1:C:711:GLU:HA	1:C:1255:LEU:CD1	2.43	0.47
1:C:2342:LEU:HB3	1:C:2434:VAL:HG21	1.97	0.47
1:C:2766:GLU:HA	1:C:2769:ILE:HG23	1.95	0.47
1:C:3758:LEU:O	1:C:3762:ILE:HG12	2.14	0.47
1:C:3905:PHE:O	1:C:3909:ILE:HG12	2.14	0.47
1:D:59:PRO:HB3	1:D:296:ARG:NH1	2.29	0.47
1:D:699:SER:OG	1:D:700:THR:N	2.46	0.47
1:D:1991:ILE:HA	1:D:1994:GLN:HG2	1.95	0.47
1:D:4924:LEU:HD21	1:D:4936:GLU:HB3	1.96	0.47
1:A:2426:ILE:HG21	1:A:2470:PHE:HE2	1.78	0.47
1:A:3758:LEU:O	1:A:3762:ILE:HG12	2.14	0.47
1:B:548:CYS:HA	1:B:551:PHE:CE1	2.49	0.47
1:B:1754:LEU:HG	1:B:1756:THR:HG23	1.96	0.47
1:B:2731:TRP:CE2	1:B:2762:LEU:HD12	2.49	0.47
1:C:1681:VAL:O	1:C:1682:ASP:HB2	2.14	0.47
1:C:2426:ILE:HG21	1:C:2470:PHE:HE2	1.78	0.47
1:C:3714:GLU:OE2	1:C:4646:LYS:HB2	2.15	0.47
1:D:3832:ASP:OD1	1:D:3833:GLU:N	2.47	0.47
1:D:4158:GLN:HB3	1:D:4199:MET:HG2	1.95	0.47
1:A:760:ASP:OD2	1:A:764:PRO:HD2	2.15	0.47
2:G:26:HIS:HD2	2:G:41:ARG:NH1	2.11	0.47
1:B:674:TYR:HD2	1:B:758:CYS:SG	2.36	0.47
1:B:1643:LEU:HD21	1:B:1692:ASN:HD21	1.79	0.47
1:B:2771:ARG:HH22	1:B:2775:LYS:HD2	1.80	0.47
1:B:3748:GLY:HA2	1:B:3795:LEU:HG	1.97	0.47
1:B:4079:TYR:HA	1:B:4082:PHE:HB3	1.96	0.47
2:H:83:TYR:HB3	2:H:87:GLY:HA2	1.96	0.47
1:C:2238:PRO:HA	1:C:2241:VAL:HG12	1.96	0.47
1:C:3967:LEU:O	1:C:3971:MET:HG2	2.14	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1321:UNK:HA	1:D:1436:UNK:HA	1.96	0.47
1:D:2065:MET:HE1	1:D:2083:MET:CB	2.45	0.47
1:D:2343:LEU:HD23	1:D:2434:VAL:HG23	1.97	0.47
1:D:3714:GLU:OE2	1:D:4646:LYS:HB2	2.15	0.47
1:A:298:ARG:NH1	1:A:305:TYR:OH	2.46	0.47
1:A:2238:PRO:HA	1:A:2241:VAL:HG12	1.96	0.47
1:A:4079:TYR:HA	1:A:4082:PHE:HB3	1.96	0.47
1:B:133:LEU:N	1:B:146:ASP:O	2.47	0.47
1:B:1681:VAL:O	1:B:1682:ASP:HB2	2.14	0.47
1:C:59:PRO:HB3	1:C:296:ARG:NH1	2.29	0.47
1:C:133:LEU:N	1:C:146:ASP:O	2.47	0.47
1:C:150:GLN:NE2	1:C:158:CYS:HB3	2.28	0.47
1:C:1175:PHE:HB2	1:C:1182:LEU:HD22	1.96	0.47
1:D:4106:GLU:OE1	1:D:4148:TYR:OH	2.31	0.47
2:J:26:HIS:HD2	2:J:41:ARG:NH1	2.11	0.47
1:A:133:LEU:N	1:A:146:ASP:O	2.47	0.47
1:A:2262:GLU:O	1:A:2266:ARG:NE	2.48	0.47
1:A:4632:LEU:H	1:A:4632:LEU:HD23	1.79	0.47
1:B:587:ASN:HA	1:B:2132:ARG:HH12	1.80	0.47
1:B:894:VAL:HG13	1:B:918:LEU:HD22	1.95	0.47
1:B:1399:UNK:HA	1:B:1410:UNK:HA	1.96	0.47
1:B:1767:PRO:HG3	1:B:1781:PRO:HB3	1.97	0.47
1:B:2766:GLU:O	1:B:2769:ILE:HG12	2.14	0.47
1:B:4106:GLU:OE1	1:B:4148:TYR:OH	2.31	0.47
2:H:78:THR:HB	2:H:81:VAL:HG22	1.96	0.47
1:C:760:ASP:OD2	1:C:764:PRO:HD2	2.15	0.47
1:C:2778:LEU:O	1:C:2782:LEU:HG	2.15	0.47
2:I:83:TYR:HB3	2:I:87:GLY:HA2	1.96	0.47
1:D:137:ARG:CZ	1:D:202:HIS:HB2	2.45	0.47
1:D:548:CYS:HA	1:D:551:PHE:CE1	2.49	0.47
1:D:692:HIS:HB3	1:D:795:SER:HB3	1.96	0.47
1:D:1754:LEU:HG	1:D:1756:THR:HG23	1.96	0.47
1:D:2771:ARG:HH22	1:D:2775:LYS:HD2	1.80	0.47
1:D:3905:PHE:O	1:D:3909:ILE:HG12	2.14	0.47
1:A:59:PRO:HB3	1:A:296:ARG:NH1	2.29	0.47
1:A:2343:LEU:HD23	1:A:2434:VAL:HG23	1.97	0.47
1:A:3748:GLY:HA2	1:A:3795:LEU:HG	1.97	0.47
1:B:1962:ARG:HB3	1:B:1974:MET:HE1	1.97	0.47
2:H:26:HIS:HD2	2:H:41:ARG:NH1	2.12	0.47
1:C:2343:LEU:HD23	1:C:2434:VAL:HG23	1.97	0.47
1:C:2731:TRP:CE2	1:C:2762:LEU:HD12	2.49	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:4182:LYS:HD3	1:D:4905:GLU:OE2	2.15	0.47
2:I:54:GLN:N	2:I:54:GLN:OE1	2.48	0.47
1:D:2138:GLU:HG3	1:D:2191:MET:HB2	1.96	0.47
1:D:2205:ILE:HG13	1:D:2205:ILE:O	2.15	0.47
1:D:2731:TRP:CE2	1:D:2762:LEU:HD12	2.49	0.47
1:D:3717:GLU:HG2	1:D:4647:PHE:CE2	2.50	0.47
1:A:1118:SER:HA	1:A:1134:ALA:HA	1.97	0.47
1:A:2771:ARG:HH22	1:A:2775:LYS:HD2	1.80	0.47
1:B:1118:SER:HA	1:B:1134:ALA:HA	1.97	0.47
1:B:1908:LEU:O	1:B:1912:LEU:HD23	2.15	0.47
1:B:4515:LEU:HD11	1:B:4736:PHE:CE1	2.48	0.47
1:B:4836:ASP:OD2	1:D:4273:MET:N	2.48	0.47
1:B:4858:LEU:O	1:B:4862:GLN:HG2	2.14	0.47
1:C:587:ASN:HA	1:C:2132:ARG:HH12	1.80	0.47
1:C:1767:PRO:HG3	1:C:1781:PRO:HB3	1.97	0.47
1:C:2205:ILE:HG13	1:C:2205:ILE:O	2.15	0.47
1:C:2771:ARG:HH22	1:C:2775:LYS:HD2	1.80	0.47
2:I:78:THR:HB	2:I:81:VAL:HG22	1.96	0.47
1:D:587:ASN:HA	1:D:2132:ARG:HH12	1.80	0.47
1:D:760:ASP:OD2	1:D:764:PRO:HD2	2.15	0.47
1:D:2238:PRO:HA	1:D:2241:VAL:HG12	1.96	0.47
1:D:2342:LEU:HB3	1:D:2434:VAL:HG21	1.97	0.47
1:D:2778:LEU:O	1:D:2782:LEU:HG	2.15	0.47
1:A:587:ASN:HA	1:A:2132:ARG:HH12	1.80	0.47
1:A:758:CYS:SG	1:A:769:ARG:NH1	2.81	0.47
1:A:1631:LEU:HD11	1:A:1642:ILE:HD12	1.96	0.47
1:A:1743:GLU:CD	1:A:1744:ASN:HD22	2.19	0.47
1:A:1962:ARG:HB3	1:A:1974:MET:HE1	1.97	0.47
1:A:3714:GLU:OE2	1:A:4646:LYS:HB2	2.15	0.47
1:A:3832:ASP:OD1	1:A:3833:GLU:N	2.47	0.47
2:G:78:THR:HB	2:G:81:VAL:HG22	1.96	0.47
1:B:1631:LEU:HD11	1:B:1642:ILE:HD12	1.97	0.47
1:B:3714:GLU:OE2	1:B:4646:LYS:HB2	2.15	0.47
2:H:54:GLN:OE1	2:H:54:GLN:N	2.48	0.47
1:C:313:ASN:HD21	1:C:392:ILE:HA	1.79	0.47
1:C:637:LEU:HD11	1:C:1680:HIS:ND1	2.30	0.47
1:C:4094:GLY:HA2	1:C:4097:VAL:HG22	1.97	0.47
1:D:313:ASN:HD21	1:D:392:ILE:HA	1.79	0.47
1:D:1811:VAL:N	1:D:1818:LEU:HD12	2.18	0.47
1:D:2766:GLU:O	1:D:2769:ILE:HG12	2.14	0.47
1:D:4632:LEU:HD23	1:D:4632:LEU:H	1.79	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:250:GLY:HA2	1:A:257:ARG:HH11	1.81	0.46
1:A:270:HIS:NE2	1:A:491:GLU:HB3	2.29	0.46
1:A:380:LYS:HD2	1:A:380:LYS:HA	1.76	0.46
2:G:54:GLN:OE1	2:G:54:GLN:N	2.48	0.46
1:B:711:GLU:HA	1:B:1255:LEU:CD1	2.43	0.46
1:B:3717:GLU:HG2	1:B:4647:PHE:CE2	2.50	0.46
1:B:3967:LEU:O	1:B:3971:MET:HG2	2.14	0.46
1:C:1908:LEU:O	1:C:1912:LEU:HD23	2.15	0.46
1:D:270:HIS:NE2	1:D:491:GLU:HB3	2.29	0.46
1:D:1175:PHE:HB2	1:D:1182:LEU:HD22	1.96	0.46
1:D:2426:ILE:HG21	1:D:2470:PHE:HE2	1.78	0.46
1:D:4193:GLU:OE2	1:D:4607:ARG:NH2	2.47	0.46
2:J:78:THR:HB	2:J:81:VAL:HG22	1.96	0.46
1:A:1321:UNK:HA	1:A:1436:UNK:HA	1.96	0.46
1:A:1908:LEU:O	1:A:1912:LEU:HD23	2.15	0.46
1:B:1255:LEU:CD2	1:B:1384:LEU:HB2	2.46	0.46
1:B:2778:LEU:O	1:B:2782:LEU:HG	2.15	0.46
1:B:4517:PHE:HB3	1:B:4562:GLU:CG	2.37	0.46
1:C:298:ARG:NH1	1:C:319:LYS:HD3	2.26	0.46
1:C:3832:ASP:OD1	1:C:3833:GLU:N	2.47	0.46
1:C:4924:LEU:HD21	1:C:4936:GLU:HB3	1.96	0.46
1:D:1908:LEU:O	1:D:1912:LEU:HD23	2.15	0.46
1:D:4914:LEU:O	1:D:4918:LEU:HD23	2.16	0.46
2:J:54:GLN:OE1	2:J:54:GLN:N	2.48	0.46
1:A:137:ARG:CZ	1:A:202:HIS:HB2	2.45	0.46
1:A:1752:ILE:HD11	1:A:1840:LEU:HB2	1.98	0.46
1:B:760:ASP:OD2	1:B:764:PRO:HD2	2.15	0.46
1:B:1100:ARG:HB3	1:B:1236:TYR:CD2	2.48	0.46
1:B:1743:GLU:CD	1:B:1744:ASN:HD22	2.19	0.46
1:B:2205:ILE:O	1:B:2205:ILE:HG13	2.15	0.46
1:B:2238:PRO:HA	1:B:2241:VAL:HG12	1.96	0.46
1:B:3832:ASP:OD1	1:B:3833:GLU:N	2.47	0.46
1:B:4632:LEU:HD23	1:B:4632:LEU:H	1.79	0.46
1:C:1089:ARG:HD2	1:C:1202:ILE:HD12	1.98	0.46
1:C:1743:GLU:CD	1:C:1744:ASN:HD22	2.19	0.46
1:C:3717:GLU:HG2	1:C:4647:PHE:CE2	2.50	0.46
1:C:4621:SER:OG	1:C:4623:ASP:OD1	2.19	0.46
1:D:1118:SER:HA	1:D:1134:ALA:HA	1.97	0.46
1:D:1631:LEU:HD11	1:D:1642:ILE:HD12	1.96	0.46
1:D:1743:GLU:CD	1:D:1744:ASN:HD22	2.19	0.46
1:A:2731:TRP:CE2	1:A:2762:LEU:HD12	2.49	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1752:ILE:HD11	1:B:1840:LEU:HB2	1.98	0.46
1:B:2074:ILE:HG21	1:B:2079:LEU:HD22	1.98	0.46
1:B:4094:GLY:HA2	1:B:4097:VAL:HG22	1.97	0.46
1:B:4182:LYS:HD3	1:C:4905:GLU:OE2	2.15	0.46
1:C:1118:SER:HA	1:C:1134:ALA:HA	1.97	0.46
1:C:1255:LEU:CD2	1:C:1384:LEU:HB2	2.46	0.46
1:C:1631:LEU:HD11	1:C:1642:ILE:HD12	1.96	0.46
1:D:337:LYS:NZ	1:D:369:GLY:O	2.38	0.46
1:D:1767:PRO:HG3	1:D:1781:PRO:HB3	1.97	0.46
1:D:2074:ILE:HG21	1:D:2079:LEU:HD22	1.98	0.46
1:D:4009:VAL:HA	1:D:4012:ILE:HG22	1.98	0.46
1:A:696:GLY:HA3	1:A:725:TYR:O	2.16	0.46
1:A:1800:VAL:HG12	1:A:1892:LEU:HD13	1.98	0.46
1:A:4858:LEU:O	1:A:4862:GLN:HG2	2.14	0.46
1:B:370:LEU:CB	1:B:393:MET:HG2	2.45	0.46
1:B:1089:ARG:HD2	1:B:1202:ILE:HD12	1.98	0.46
1:B:2156:GLN:O	1:B:3614:ARG:NH2	2.49	0.46
1:B:2342:LEU:HB3	1:B:2434:VAL:HG21	1.97	0.46
1:C:1035:TYR:OH	1:C:1046:ASN:HB2	2.16	0.46
2:I:58:LYS:HB2	2:I:58:LYS:HE2	1.77	0.46
1:D:250:GLY:HA2	1:D:257:ARG:HH11	1.81	0.46
1:D:1253:LYS:HE2	1:D:1253:LYS:HB2	1.63	0.46
1:D:2784:TRP:HH2	1:D:2846:ASN:HB2	1.81	0.46
1:A:882:ARG:HD2	1:A:937:LEU:HD23	1.98	0.46
1:A:2205:ILE:HG13	1:A:2205:ILE:O	2.15	0.46
1:A:2778:LEU:O	1:A:2782:LEU:HG	2.15	0.46
1:A:3717:GLU:HG2	1:A:4647:PHE:CE2	2.50	0.46
1:B:882:ARG:HD2	1:B:937:LEU:HD23	1.98	0.46
1:C:137:ARG:CZ	1:C:202:HIS:HB2	2.45	0.46
1:C:2074:ILE:HG21	1:C:2079:LEU:HD22	1.98	0.46
1:C:4193:GLU:OE2	1:C:4607:ARG:NH2	2.47	0.46
1:D:882:ARG:HD2	1:D:937:LEU:HD23	1.98	0.46
1:A:711:GLU:HA	1:A:1255:LEU:CD1	2.43	0.46
1:A:1035:TYR:OH	1:A:1046:ASN:HB2	2.16	0.46
1:A:1143:GLN:HG2	1:A:1151:HIS:HA	1.98	0.46
1:A:2784:TRP:HH2	1:A:2846:ASN:HB2	1.81	0.46
1:A:4029:ASP:OD1	1:A:4029:ASP:N	2.47	0.46
1:A:4193:GLU:OE2	1:A:4607:ARG:NH2	2.47	0.46
1:A:4517:PHE:HB3	1:A:4562:GLU:CG	2.37	0.46
1:B:137:ARG:CZ	1:B:202:HIS:HB2	2.45	0.46
1:B:2191:MET:HE3	1:B:2191:MET:O	2.15	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:4914:LEU:O	1:C:4918:LEU:HD23	2.16	0.46
1:D:1035:TYR:OH	1:D:1046:ASN:HB2	2.16	0.46
1:D:1752:ILE:HD11	1:D:1840:LEU:HB2	1.98	0.46
1:D:2348:GLU:HA	1:D:2351:LYS:HE3	1.98	0.46
1:A:1767:PRO:HG3	1:A:1781:PRO:HB3	1.97	0.46
1:A:2074:ILE:HG21	1:A:2079:LEU:HD22	1.98	0.46
1:A:4757:SER:O	1:A:4761:HIS:HB2	2.16	0.46
1:B:1265:HIS:CD2	1:B:1268:ILE:HB	2.44	0.46
1:B:2343:LEU:HD23	1:B:2434:VAL:HG23	1.97	0.46
1:B:4029:ASP:OD1	1:B:4029:ASP:N	2.47	0.46
1:B:4273:MET:N	1:D:4836:ASP:OD2	2.48	0.46
1:C:882:ARG:HD2	1:C:937:LEU:HD23	1.98	0.46
1:C:1752:ILE:HD11	1:C:1840:LEU:HB2	1.98	0.46
1:C:1800:VAL:HG12	1:C:1892:LEU:HD13	1.98	0.46
1:C:2197:ARG:HB3	1:C:2236:SER:HG	1.80	0.46
1:D:499:LEU:HD23	1:D:502:ILE:HD11	1.97	0.46
1:D:1800:VAL:HG12	1:D:1892:LEU:HD13	1.98	0.46
1:D:4757:SER:O	1:D:4761:HIS:HB2	2.16	0.46
1:A:637:LEU:HD11	1:A:1680:HIS:ND1	2.30	0.46
1:A:2342:LEU:HB3	1:A:2434:VAL:HG21	1.96	0.46
1:A:4298:ALA:HA	1:A:4301:CYS:SG	2.56	0.46
1:A:4905:GLU:OE2	1:D:4182:LYS:HD3	2.15	0.46
1:B:4808:MET:CG	1:C:4516:LEU:HA	2.46	0.46
1:C:732:LEU:HB3	1:C:779:PHE:CE1	2.51	0.46
1:C:2156:GLN:O	1:C:3614:ARG:NH2	2.49	0.46
1:C:4079:TYR:HA	1:C:4082:PHE:HB3	1.96	0.46
1:C:4298:ALA:HA	1:C:4301:CYS:SG	2.56	0.46
1:C:4757:SER:O	1:C:4761:HIS:HB2	2.16	0.46
1:D:637:LEU:HD11	1:D:1680:HIS:ND1	2.31	0.46
1:D:1910:GLN:HG2	1:D:2086:LEU:HD13	1.98	0.46
1:D:2156:GLN:O	1:D:3614:ARG:NH2	2.49	0.46
1:D:4079:TYR:HA	1:D:4082:PHE:HB3	1.96	0.46
1:A:995:MET:HE2	1:A:999:LEU:HG	1.98	0.46
1:A:1255:LEU:CD2	1:A:1384:LEU:HB2	2.46	0.46
1:A:1265:HIS:CD2	1:A:1268:ILE:HB	2.44	0.46
1:A:2838:ALA:O	1:A:2841:GLU:HG3	2.14	0.46
1:A:4094:GLY:HA2	1:A:4097:VAL:HG22	1.97	0.46
2:G:17:PRO:HG2	2:G:64:ALA:O	2.16	0.46
1:B:250:GLY:HA2	1:B:257:ARG:HH11	1.80	0.46
1:B:758:CYS:SG	1:B:769:ARG:NH1	2.81	0.46
1:B:1357:ASP:HB3	1:B:1363:LYS:CE	2.47	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4298:ALA:HA	1:B:4301:CYS:SG	2.56	0.46
1:B:4757:SER:O	1:B:4761:HIS:HB2	2.16	0.46
2:H:17:PRO:HG2	2:H:64:ALA:O	2.17	0.46
1:C:328:ALA:O	1:C:365:HIS:ND1	2.49	0.46
1:C:1910:GLN:HG2	1:C:2086:LEU:HD13	1.98	0.46
1:C:3748:GLY:HA2	1:C:3795:LEU:HG	1.97	0.46
1:C:4009:VAL:HA	1:C:4012:ILE:HG22	1.98	0.46
1:C:4717:SER:O	1:C:4721:LEU:HD23	2.16	0.46
1:D:328:ALA:O	1:D:365:HIS:ND1	2.49	0.46
1:A:1089:ARG:HD2	1:A:1202:ILE:HD12	1.98	0.45
1:A:1383:ARG:NH2	1:A:1385:LYS:HB2	2.32	0.45
1:A:1629:MET:CE	1:A:1685:GLN:HE21	2.29	0.45
1:B:380:LYS:HD2	1:B:380:LYS:HA	1.76	0.45
1:B:732:LEU:HB3	1:B:779:PHE:CE1	2.51	0.45
1:B:3786:VAL:HG12	1:B:3790:GLN:HG3	1.98	0.45
1:B:4914:LEU:O	1:B:4918:LEU:HD23	2.16	0.45
1:C:2065:MET:HE1	1:C:2083:MET:CB	2.45	0.45
1:C:2262:GLU:O	1:C:2266:ARG:NE	2.48	0.45
1:C:4808:MET:CG	1:D:4516:LEU:HA	2.46	0.45
1:D:732:LEU:HB3	1:D:779:PHE:CE1	2.51	0.45
1:D:1089:ARG:HD2	1:D:1202:ILE:HD12	1.98	0.45
1:D:3748:GLY:HA2	1:D:3795:LEU:HG	1.97	0.45
1:A:3640:ILE:HD12	1:A:3697:SER:HB3	1.98	0.45
1:A:4717:SER:O	1:A:4721:LEU:HD23	2.16	0.45
1:B:1035:TYR:OH	1:B:1046:ASN:HB2	2.16	0.45
1:B:1174:MET:HE2	1:B:1190:LEU:HA	1.99	0.45
1:B:1629:MET:CE	1:B:1685:GLN:HE21	2.29	0.45
1:B:1910:GLN:HG2	1:B:2086:LEU:HD13	1.98	0.45
1:C:380:LYS:HA	1:C:380:LYS:HD2	1.76	0.45
1:C:696:GLY:HA3	1:C:725:TYR:O	2.16	0.45
1:C:1682:ASP:CG	1:C:1684:PRO:HD2	2.37	0.45
1:C:2784:TRP:HH2	1:C:2846:ASN:HB2	1.81	0.45
1:C:3760:LEU:O	1:C:3764:ILE:HG12	2.17	0.45
1:D:133:LEU:N	1:D:146:ASP:O	2.47	0.45
1:D:1255:LEU:CD2	1:D:1384:LEU:HB2	2.46	0.45
1:D:3715:GLU:OE2	1:D:3716:LYS:NZ	2.49	0.45
1:D:4298:ALA:HA	1:D:4301:CYS:SG	2.56	0.45
1:A:732:LEU:HB3	1:A:779:PHE:CE1	2.51	0.45
1:A:4694:SER:O	1:A:4694:SER:OG	2.33	0.45
1:B:499:LEU:HD23	1:B:502:ILE:HD11	1.97	0.45
1:B:696:GLY:HA3	1:B:725:TYR:O	2.16	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2784:TRP:HH2	1:B:2846:ASN:HB2	1.81	0.45
1:B:4009:VAL:HA	1:B:4012:ILE:HG22	1.98	0.45
1:C:1715:TYR:OH	1:C:1719:ARG:NH1	2.47	0.45
1:C:2191:MET:O	1:C:2191:MET:HE3	2.16	0.45
1:D:2262:GLU:O	1:D:2266:ARG:NE	2.48	0.45
1:A:845:THR:OG1	1:A:846:TYR:N	2.46	0.45
1:A:1253:LYS:HE2	1:A:1253:LYS:HB2	1.63	0.45
1:A:1811:VAL:N	1:A:1818:LEU:HD12	2.18	0.45
1:A:2191:MET:O	1:A:2191:MET:HE3	2.15	0.45
1:A:3786:VAL:HG12	1:A:3790:GLN:HG3	1.98	0.45
1:A:3992:GLY:N	1:A:4108:MET:HE1	2.32	0.45
1:B:637:LEU:HD11	1:B:1680:HIS:ND1	2.30	0.45
1:B:1143:GLN:HG2	1:B:1151:HIS:HA	1.98	0.45
1:B:3640:ILE:HD12	1:B:3697:SER:HB3	1.98	0.45
1:B:3992:GLY:N	1:B:4108:MET:HE1	2.32	0.45
1:B:4273:MET:HG3	1:B:4277:ASP:OD2	2.16	0.45
1:C:4611:PHE:CZ	1:C:4946:ARG:HG3	2.52	0.45
1:D:150:GLN:NE2	1:D:158:CYS:HB3	2.28	0.45
1:D:1087:ILE:HD12	1:D:1124:PRO:HA	1.99	0.45
1:D:1245:ARG:NH1	1:D:1809:ASP:O	2.46	0.45
1:D:2414:GLU:OE2	1:D:2417:ARG:NH2	2.50	0.45
1:A:1910:GLN:HG2	1:A:2086:LEU:HD13	1.98	0.45
1:A:2156:GLN:O	1:A:3614:ARG:NH2	2.49	0.45
1:A:4611:PHE:CZ	1:A:4946:ARG:HG3	2.52	0.45
1:A:4914:LEU:O	1:A:4918:LEU:HD23	2.16	0.45
1:B:336:GLU:HG3	1:B:338:LEU:HD22	1.98	0.45
1:B:559:ILE:HD11	1:B:575:LEU:HD13	1.99	0.45
1:B:1094:TYR:OH	1:B:1809:ASP:OD2	2.16	0.45
1:B:1629:MET:HG2	1:B:1688:TYR:CE2	2.52	0.45
1:B:1800:VAL:HG12	1:B:1892:LEU:HD13	1.98	0.45
1:B:2065:MET:HE1	1:B:2083:MET:CB	2.47	0.45
1:C:250:GLY:HA2	1:C:257:ARG:HH11	1.81	0.45
1:C:499:LEU:HD23	1:C:502:ILE:HD11	1.97	0.45
1:C:4112:THR:HA	1:C:4115:GLN:HB2	1.99	0.45
2:I:18:LYS:HG3	2:I:21:GLN:OE1	2.17	0.45
2:J:17:PRO:HG2	2:J:64:ALA:O	2.16	0.45
1:A:499:LEU:HD23	1:A:502:ILE:HD11	1.97	0.45
1:A:1370:PHE:N	1:A:1370:PHE:CD1	2.85	0.45
1:A:1729:PRO:HD2	1:A:1756:THR:O	2.17	0.45
1:A:1744:ASN:ND2	1:A:1746:LYS:HE2	2.27	0.45
1:A:2414:GLU:OE2	1:A:2417:ARG:NH2	2.50	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3760:LEU:O	1:A:3764:ILE:HG12	2.17	0.45
1:B:872:ILE:HD13	1:B:944:LEU:HD22	1.99	0.45
1:B:1682:ASP:CG	1:B:1684:PRO:HD2	2.37	0.45
1:B:2282:LYS:HA	1:B:2282:LYS:HD2	1.86	0.45
1:B:4717:SER:O	1:B:4721:LEU:HD23	2.16	0.45
1:C:2853:LYS:HA	1:C:2856:LYS:HG2	1.99	0.45
1:C:4859:ALA:HB2	1:D:4862:GLN:OE1	2.17	0.45
1:D:433:LEU:HD12	1:D:434:ASP:N	2.32	0.45
1:D:3760:LEU:O	1:D:3764:ILE:HG12	2.17	0.45
1:D:4094:GLY:HA2	1:D:4097:VAL:HG22	1.97	0.45
1:A:328:ALA:O	1:A:365:HIS:ND1	2.49	0.45
1:A:1166:VAL:CG2	1:A:1173:MET:HG2	2.47	0.45
1:A:1682:ASP:CG	1:A:1684:PRO:HD2	2.37	0.45
1:B:328:ALA:O	1:B:365:HIS:ND1	2.49	0.45
1:B:433:LEU:HD12	1:B:434:ASP:N	2.32	0.45
1:B:1729:PRO:HD2	1:B:1756:THR:O	2.17	0.45
1:B:1737:ILE:HD11	1:B:1922:GLU:HB3	1.98	0.45
1:B:2105:TYR:HE1	1:B:2157:HIS:ND1	2.15	0.45
1:B:2414:GLU:OE2	1:B:2417:ARG:NH2	2.50	0.45
1:B:4099:VAL:HB	1:B:4132:LEU:HD21	1.99	0.45
1:B:4611:PHE:CZ	1:B:4946:ARG:HG3	2.52	0.45
1:B:4924:LEU:HD21	1:B:4936:GLU:HB3	1.96	0.45
1:C:1087:ILE:HD12	1:C:1124:PRO:HA	1.99	0.45
1:C:3715:GLU:OE2	1:C:3716:LYS:NZ	2.49	0.45
1:D:872:ILE:HD13	1:D:944:LEU:HD22	1.99	0.45
1:D:1629:MET:CE	1:D:1685:GLN:HE21	2.29	0.45
1:D:2191:MET:O	1:D:2191:MET:HE3	2.16	0.45
1:D:3726:GLN:HG2	1:D:3729:ARG:NH2	2.32	0.45
1:D:4273:MET:HG3	1:D:4277:ASP:OD2	2.17	0.45
1:A:427:ASN:HB3	1:A:431:ARG:HH22	1.82	0.45
1:A:677:LEU:N	1:A:755:ILE:O	2.50	0.45
1:A:872:ILE:HD13	1:A:944:LEU:HD22	1.99	0.45
1:A:1629:MET:HG2	1:A:1688:TYR:CE2	2.52	0.45
1:A:3726:GLN:HG2	1:A:3729:ARG:NH2	2.32	0.45
1:B:1245:ARG:NH1	1:B:1809:ASP:O	2.46	0.45
1:C:872:ILE:HD13	1:C:944:LEU:HD22	1.99	0.45
1:C:1124:PRO:HB2	1:C:1252:SER:OG	2.17	0.45
1:C:1357:ASP:HB3	1:C:1363:LYS:CE	2.46	0.45
1:C:1629:MET:CE	1:C:1685:GLN:HE21	2.29	0.45
1:C:2155:TYR:HE1	1:C:2201:TYR:HH	1.61	0.45
1:C:2348:GLU:HA	1:C:2351:LYS:HE3	1.98	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2428:LEU:O	1:C:2432:VAL:HG23	2.16	0.45
1:D:838:ARG:H	1:D:841:LYS:NZ	2.15	0.45
1:D:1383:ARG:NH2	1:D:1385:LYS:HB2	2.32	0.45
1:D:1729:PRO:HD2	1:D:1756:THR:O	2.17	0.45
1:D:3786:VAL:HG12	1:D:3790:GLN:HG3	1.98	0.45
1:D:4717:SER:O	1:D:4721:LEU:HD23	2.16	0.45
1:A:838:ARG:H	1:A:841:LYS:NZ	2.15	0.45
1:A:1245:ARG:NH1	1:A:1809:ASP:O	2.46	0.45
1:A:1737:ILE:HD11	1:A:1922:GLU:HB3	1.98	0.45
1:A:1942:ARG:HA	1:A:1945:GLU:HG3	1.99	0.45
1:A:2254:LEU:O	1:A:3809:ARG:NH1	2.50	0.45
1:A:2428:LEU:O	1:A:2432:VAL:HG23	2.17	0.45
1:A:3676:THR:OG1	1:A:3678:LYS:NZ	2.50	0.45
1:A:4009:VAL:HA	1:A:4012:ILE:HG22	1.98	0.45
1:B:1165:MET:HB3	1:B:1236:TYR:CE2	2.52	0.45
1:B:1383:ARG:NH2	1:B:1385:LYS:HB2	2.32	0.45
1:B:2170:VAL:HG21	1:B:2198:PHE:CD2	2.52	0.45
1:B:2197:ARG:HB3	1:B:2236:SER:HG	1.80	0.45
1:B:2348:GLU:HA	1:B:2351:LYS:HE3	1.98	0.45
1:B:3760:LEU:O	1:B:3764:ILE:HG12	2.17	0.45
1:B:4193:GLU:OE2	1:B:4607:ARG:NH2	2.47	0.45
1:C:1931:PHE:CE1	1:C:1995:LEU:HB2	2.52	0.45
1:C:1967:PRO:HD2	1:C:1970:GLU:OE2	2.17	0.45
1:C:2257:ARG:HH21	1:C:3806:ALA:HB1	1.82	0.45
1:D:427:ASN:HB3	1:D:431:ARG:HH22	1.82	0.45
1:D:995:MET:HE2	1:D:999:LEU:HG	1.98	0.45
1:D:1166:VAL:CG2	1:D:1173:MET:HG2	2.47	0.45
1:D:1368:PRO:HD2	1:D:1434:UNK:C	2.47	0.45
1:D:1967:PRO:HD2	1:D:1970:GLU:OE2	2.17	0.45
1:D:2257:ARG:HH21	1:D:3806:ALA:HB1	1.82	0.45
1:D:3802:LEU:HD23	1:D:3829:LEU:HD13	1.99	0.45
1:D:3992:GLY:N	1:D:4108:MET:HE1	2.31	0.45
1:A:1117:TRP:HZ3	1:A:1166:VAL:HB	1.82	0.45
1:A:2105:TYR:HE1	1:A:2157:HIS:ND1	2.15	0.45
1:B:1166:VAL:CG2	1:B:1173:MET:HG2	2.47	0.45
1:B:3676:THR:OG1	1:B:3678:LYS:NZ	2.50	0.45
2:H:18:LYS:HG3	2:H:21:GLN:OE1	2.17	0.45
1:C:559:ILE:HD11	1:C:575:LEU:HD13	1.99	0.45
1:C:1791:LYS:NZ	1:C:1795:MET:SD	2.79	0.45
1:C:2414:GLU:OE2	1:C:2417:ARG:NH2	2.50	0.45
1:C:3640:ILE:HD12	1:C:3697:SER:HB3	1.98	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3802:LEU:HD23	1:C:3829:LEU:HD13	1.99	0.45
1:C:4273:MET:HG3	1:C:4277:ASP:OD2	2.16	0.45
1:D:1143:GLN:HG2	1:D:1151:HIS:HA	1.98	0.45
1:D:1357:ASP:HB3	1:D:1363:LYS:CE	2.46	0.45
1:D:1737:ILE:HD11	1:D:1922:GLU:HB3	1.98	0.45
2:J:18:LYS:HG3	2:J:21:GLN:OE1	2.17	0.45
1:A:370:LEU:CB	1:A:393:MET:HG2	2.45	0.44
1:A:661:LEU:HD13	1:A:673:TRP:CD1	2.52	0.44
1:A:1644:GLU:OE1	1:A:1648:GLN:NE2	2.50	0.44
1:A:2170:VAL:HG21	1:A:2198:PHE:CD2	2.52	0.44
1:A:3901:GLY:O	1:A:3905:PHE:HD2	2.00	0.44
1:B:1942:ARG:HA	1:B:1945:GLU:HG3	1.99	0.44
1:B:2428:LEU:O	1:B:2432:VAL:HG23	2.16	0.44
1:C:323:ASP:O	1:C:327:THR:OG1	2.30	0.44
1:C:1143:GLN:HG2	1:C:1151:HIS:HA	1.98	0.44
1:C:1253:LYS:HB2	1:C:1253:LYS:HE2	1.63	0.44
1:C:1644:GLU:OE1	1:C:1648:GLN:NE2	2.50	0.44
1:D:115:TYR:CE2	1:D:175:VAL:HG22	2.52	0.44
1:D:587:ASN:HA	1:D:2132:ARG:NH1	2.32	0.44
1:D:696:GLY:HA3	1:D:725:TYR:O	2.16	0.44
1:D:1370:PHE:N	1:D:1370:PHE:CD1	2.85	0.44
1:D:2853:LYS:HA	1:D:2856:LYS:HG2	1.99	0.44
1:D:2858:GLU:O	1:D:2862:LYS:HG2	2.18	0.44
1:D:3676:THR:OG1	1:D:3678:LYS:NZ	2.50	0.44
1:D:4643:TYR:HD2	1:D:4645:ASP:OD1	2.00	0.44
1:A:587:ASN:HA	1:A:2132:ARG:NH1	2.32	0.44
1:A:837:SER:H	1:A:841:LYS:HZ1	1.64	0.44
1:A:1165:MET:HB3	1:A:1236:TYR:CE2	2.52	0.44
1:A:1931:PHE:CE1	1:A:1995:LEU:HB2	2.52	0.44
1:A:3715:GLU:OE2	1:A:3716:LYS:NZ	2.49	0.44
1:A:4643:TYR:HD2	1:A:4645:ASP:OD1	2.00	0.44
1:A:4859:ALA:HB2	1:B:4862:GLN:OE1	2.18	0.44
2:G:18:LYS:HG3	2:G:21:GLN:OE1	2.17	0.44
2:G:39:SER:O	2:G:43:ARG:NH1	2.51	0.44
1:B:427:ASN:HB3	1:B:431:ARG:HH22	1.82	0.44
1:B:2061:ILE:O	1:B:2065:MET:HG2	2.18	0.44
1:B:2262:GLU:O	1:B:2266:ARG:NE	2.48	0.44
1:B:2348:GLU:O	1:B:2352:ILE:HG12	2.17	0.44
1:B:3898:ASP:OD1	1:B:3898:ASP:N	2.45	0.44
1:B:4759:VAL:HG13	1:B:4760:THR:HG23	1.99	0.44
1:C:436:LEU:HD21	1:C:517:VAL:HG12	2.00	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1629:MET:HG2	1:C:1688:TYR:CE2	2.52	0.44
1:C:3676:THR:OG1	1:C:3678:LYS:NZ	2.50	0.44
1:C:3786:VAL:HG12	1:C:3790:GLN:HG3	1.98	0.44
1:C:4759:VAL:HG13	1:C:4760:THR:HG23	1.99	0.44
1:D:1124:PRO:HB2	1:D:1252:SER:OG	2.17	0.44
1:D:2290:ASN:HD22	1:D:2291:PRO:CD	2.30	0.44
1:A:2061:ILE:O	1:A:2065:MET:HG2	2.18	0.44
1:A:2321:ARG:NH2	1:D:189:GLU:OE2	2.49	0.44
1:B:35:LEU:HB3	1:B:49:LEU:HD22	1.99	0.44
1:B:1124:PRO:HB2	1:B:1252:SER:OG	2.17	0.44
1:B:2254:LEU:O	1:B:3809:ARG:NH1	2.50	0.44
1:B:2858:GLU:O	1:B:2862:LYS:HG2	2.17	0.44
1:B:4112:THR:HA	1:B:4115:GLN:HB2	1.99	0.44
1:B:4643:TYR:HD2	1:B:4645:ASP:OD1	2.00	0.44
2:H:39:SER:O	2:H:43:ARG:NH1	2.51	0.44
1:C:1572:PHE:HZ	1:C:1587:LEU:HD11	1.83	0.44
1:C:4643:TYR:HD2	1:C:4645:ASP:OD1	2.00	0.44
1:D:336:GLU:HG3	1:D:338:LEU:HD22	1.98	0.44
1:D:1682:ASP:CG	1:D:1684:PRO:HD2	2.37	0.44
1:D:1931:PHE:CE1	1:D:1995:LEU:HB2	2.52	0.44
1:D:2061:ILE:O	1:D:2065:MET:HG2	2.18	0.44
1:D:2254:LEU:O	1:D:3809:ARG:NH1	2.50	0.44
1:A:115:TYR:CE2	1:A:175:VAL:HG22	2.52	0.44
1:A:882:ARG:HG2	1:A:940:LEU:HD22	2.00	0.44
1:A:1087:ILE:HD12	1:A:1124:PRO:HA	1.99	0.44
1:A:4759:VAL:HG13	1:A:4760:THR:HG23	1.99	0.44
2:G:67:MET:CE	2:G:104:LEU:HB2	2.48	0.44
1:B:549:ALA:HA	1:B:584:GLU:OE2	2.18	0.44
1:B:1370:PHE:N	1:B:1370:PHE:CD1	2.85	0.44
1:B:1572:PHE:HZ	1:B:1587:LEU:HD11	1.83	0.44
1:B:3802:LEU:HD23	1:B:3829:LEU:HD13	1.99	0.44
1:B:4512:ASN:HD22	1:B:4742:LEU:HD21	1.83	0.44
1:C:587:ASN:HA	1:C:2132:ARG:NH1	2.32	0.44
1:C:661:LEU:HD13	1:C:673:TRP:CD1	2.52	0.44
1:C:670:TYR:HE2	1:C:818:GLY:O	2.00	0.44
1:C:838:ARG:H	1:C:841:LYS:NZ	2.15	0.44
1:C:1368:PRO:HD2	1:C:1434:UNK:C	2.47	0.44
1:C:2121:SER:O	1:C:2125:ILE:HG12	2.18	0.44
2:I:17:PRO:HG2	2:I:64:ALA:O	2.17	0.44
1:D:190:ARG:HD3	1:D:205:ALA:O	2.18	0.44
1:D:549:ALA:HA	1:D:584:GLU:OE2	2.18	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1165:MET:HB3	1:D:1236:TYR:CE2	2.52	0.44
1:D:1629:MET:HG2	1:D:1688:TYR:CE2	2.52	0.44
1:D:3640:ILE:HD12	1:D:3697:SER:HB3	1.98	0.44
1:D:3732:ASP:HA	1:D:3775:LYS:HZ1	1.83	0.44
1:D:4512:ASN:HD22	1:D:4742:LEU:HD21	1.83	0.44
1:D:4517:PHE:HB3	1:D:4562:GLU:CG	2.37	0.44
1:A:433:LEU:HD12	1:A:434:ASP:N	2.32	0.44
1:A:1357:ASP:HB3	1:A:1363:LYS:CE	2.47	0.44
1:A:2858:GLU:O	1:A:2862:LYS:HG2	2.18	0.44
1:A:3802:LEU:HD23	1:A:3829:LEU:HD13	1.99	0.44
1:A:4099:VAL:HB	1:A:4132:LEU:HD21	1.99	0.44
1:A:4512:ASN:HD22	1:A:4742:LEU:HD21	1.83	0.44
2:G:67:MET:HE3	2:G:104:LEU:HB2	1.98	0.44
1:B:115:TYR:CE2	1:B:175:VAL:HG22	2.52	0.44
1:B:311:ASP:OD1	1:B:311:ASP:N	2.51	0.44
1:B:661:LEU:HD13	1:B:673:TRP:CD1	2.52	0.44
1:B:670:TYR:HE2	1:B:818:GLY:O	2.00	0.44
1:B:1967:PRO:HD2	1:B:1970:GLU:OE2	2.17	0.44
1:B:2257:ARG:HH21	1:B:3806:ALA:HB1	1.82	0.44
1:B:4859:ALA:HB2	1:C:4862:GLN:OE1	2.17	0.44
1:C:311:ASP:OD1	1:C:311:ASP:N	2.51	0.44
1:C:336:GLU:HG3	1:C:338:LEU:HD22	1.98	0.44
1:C:2061:ILE:O	1:C:2065:MET:HG2	2.18	0.44
2:I:39:SER:O	2:I:43:ARG:NH1	2.51	0.44
1:D:1572:PHE:HZ	1:D:1587:LEU:HD11	1.83	0.44
1:D:1789:LYS:HB2	1:D:1835:PHE:HE1	1.83	0.44
1:D:2105:TYR:HE1	1:D:2157:HIS:ND1	2.15	0.44
1:A:670:TYR:HE2	1:A:818:GLY:O	2.00	0.44
1:A:1255:LEU:HD22	1:A:1384:LEU:HB2	2.00	0.44
1:A:1368:PRO:HD2	1:A:1434:UNK:C	2.47	0.44
1:A:2271:CYS:SG	1:A:2294:GLY:N	2.91	0.44
1:A:2348:GLU:HA	1:A:2351:LYS:HE3	1.98	0.44
1:A:2348:GLU:O	1:A:2352:ILE:HG12	2.17	0.44
1:A:3732:ASP:HA	1:A:3775:LYS:HZ1	1.83	0.44
1:A:4273:MET:HG3	1:A:4277:ASP:OD2	2.16	0.44
1:A:4789:ARG:NH2	1:A:4805:CYS:O	2.51	0.44
1:B:1644:GLU:OE1	1:B:1648:GLN:NE2	2.50	0.44
1:B:3621:GLN:O	1:B:3624:GLU:HG3	2.18	0.44
1:B:3715:GLU:OE2	1:B:3716:LYS:NZ	2.49	0.44
1:C:549:ALA:HA	1:C:584:GLU:OE2	2.18	0.44
1:C:1383:ARG:NH2	1:C:1385:LYS:HB2	2.32	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2105:TYR:HE1	1:C:2157:HIS:ND1	2.15	0.44
1:C:2335:ARG:O	1:C:2335:ARG:HG3	2.18	0.44
1:C:2348:GLU:O	1:C:2352:ILE:HG12	2.17	0.44
1:C:2712:ILE:HD13	1:C:2775:LYS:HE2	2.00	0.44
1:C:3901:GLY:O	1:C:3905:PHE:HD2	2.01	0.44
1:C:4099:VAL:HB	1:C:4132:LEU:HD21	1.99	0.44
1:D:641:ASP:O	1:D:1634:PRO:HG2	2.18	0.44
1:D:839:GLU:HG2	1:D:840:TYR:N	2.29	0.44
1:D:1097:LYS:HZ2	1:D:1197:VAL:HG22	1.83	0.44
1:D:1370:PHE:N	1:D:1370:PHE:HD1	2.16	0.44
1:D:4611:PHE:CZ	1:D:4946:ARG:HG3	2.52	0.44
1:A:311:ASP:N	1:A:311:ASP:OD1	2.51	0.44
1:A:641:ASP:O	1:A:1634:PRO:HG2	2.18	0.44
1:A:1967:PRO:HD2	1:A:1970:GLU:OE2	2.17	0.44
1:A:2121:SER:O	1:A:2125:ILE:HG12	2.18	0.44
1:A:2335:ARG:O	1:A:2335:ARG:HG3	2.18	0.44
1:A:2343:LEU:O	1:A:2347:GLU:HG2	2.18	0.44
1:A:3621:GLN:O	1:A:3624:GLU:HG3	2.18	0.44
1:B:587:ASN:HA	1:B:2132:ARG:NH1	2.32	0.44
1:B:769:ARG:HA	1:B:774:PRO:HA	1.99	0.44
1:B:839:GLU:HG2	1:B:840:TYR:N	2.29	0.44
1:B:4143:ARG:NH1	1:B:4961:TYR:OH	2.51	0.44
1:C:115:TYR:CE2	1:C:175:VAL:HG22	2.52	0.44
1:C:433:LEU:HD12	1:C:434:ASP:N	2.32	0.44
1:C:1165:MET:HB3	1:C:1236:TYR:CE2	2.52	0.44
1:C:1729:PRO:HD2	1:C:1756:THR:O	2.17	0.44
1:C:1737:ILE:HD11	1:C:1922:GLU:HB3	1.98	0.44
1:C:1744:ASN:ND2	1:C:1746:LYS:HE2	2.27	0.44
1:C:1747:HIS:O	1:C:1747:HIS:ND1	2.51	0.44
1:C:1942:ARG:HA	1:C:1945:GLU:HG3	1.98	0.44
1:C:3992:GLY:N	1:C:4108:MET:HE1	2.33	0.44
1:C:4694:SER:O	1:C:4694:SER:OG	2.33	0.44
1:D:670:TYR:HE2	1:D:818:GLY:O	2.00	0.44
1:D:882:ARG:HG2	1:D:940:LEU:HD22	2.00	0.44
1:D:3901:GLY:O	1:D:3905:PHE:HD2	2.00	0.44
1:A:336:GLU:HG3	1:A:338:LEU:HD22	1.98	0.44
1:A:436:LEU:HD21	1:A:517:VAL:HG12	2.00	0.44
1:A:1629:MET:HE3	1:A:1685:GLN:HE21	1.82	0.44
1:A:2712:ILE:HD13	1:A:2775:LYS:HE2	2.00	0.44
1:A:4112:THR:HA	1:A:4115:GLN:HB2	1.99	0.44
1:B:1087:ILE:HD12	1:B:1124:PRO:HA	1.99	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1117:TRP:HZ3	1:B:1166:VAL:HB	1.82	0.44
1:B:1255:LEU:HD22	1:B:1384:LEU:HB2	2.00	0.44
1:B:1931:PHE:CE1	1:B:1995:LEU:HB2	2.52	0.44
1:B:3730:LEU:HD11	1:B:3764:ILE:CD1	2.48	0.44
1:B:3732:ASP:HA	1:B:3775:LYS:HZ1	1.83	0.44
1:C:35:LEU:HB3	1:C:49:LEU:HD22	1.99	0.44
1:C:659:ILE:HG13	1:C:822:CYS:HB3	2.00	0.44
1:C:769:ARG:HA	1:C:774:PRO:HA	1.99	0.44
1:C:1643:LEU:HD22	1:C:1694:TYR:O	2.18	0.44
1:C:2856:LYS:HA	1:C:2859:LEU:HG	2.00	0.44
1:D:559:ILE:HD11	1:D:575:LEU:HD13	1.99	0.44
1:D:758:CYS:SG	1:D:769:ARG:NH1	2.81	0.44
1:D:4126:ASN:HA	1:D:4129:GLN:HG2	2.00	0.44
1:A:541:ILE:HG22	1:A:541:ILE:O	2.18	0.44
1:A:2853:LYS:HA	1:A:2856:LYS:HG2	1.99	0.44
1:A:4653:MET:O	1:A:4657:GLY:N	2.51	0.44
1:B:436:LEU:HD21	1:B:517:VAL:HG12	2.00	0.44
1:C:677:LEU:CD1	1:C:695:VAL:HG21	2.48	0.44
1:C:2858:GLU:O	1:C:2862:LYS:HG2	2.18	0.44
1:D:661:LEU:HD13	1:D:673:TRP:CD1	2.52	0.44
1:D:1644:GLU:OE1	1:D:1648:GLN:NE2	2.50	0.44
1:D:2170:VAL:HG21	1:D:2198:PHE:CD2	2.52	0.44
1:D:2348:GLU:O	1:D:2352:ILE:HG12	2.17	0.44
1:A:559:ILE:HD11	1:A:575:LEU:HD13	1.99	0.43
1:A:1124:PRO:HB2	1:A:1252:SER:OG	2.17	0.43
1:A:1789:LYS:HB2	1:A:1835:PHE:HE1	1.83	0.43
1:B:659:ILE:HG13	1:B:822:CYS:HB3	2.00	0.43
1:C:758:CYS:SG	1:C:769:ARG:NH1	2.81	0.43
1:C:1370:PHE:N	1:C:1370:PHE:CD1	2.85	0.43
1:C:4143:ARG:NH1	1:C:4961:TYR:OH	2.51	0.43
2:I:28:THR:O	2:I:28:THR:OG1	2.35	0.43
1:D:1117:TRP:HZ3	1:D:1166:VAL:HB	1.82	0.43
1:D:4112:THR:HA	1:D:4115:GLN:HB2	1.99	0.43
1:A:446:ASP:O	1:A:448:PRO:HD3	2.18	0.43
1:A:1370:PHE:N	1:A:1370:PHE:HD1	2.16	0.43
1:A:1572:PHE:HZ	1:A:1587:LEU:HD11	1.83	0.43
2:G:27:TYR:O	2:G:40:SER:N	2.45	0.43
1:B:900:LEU:HD23	1:B:902:TRP:HE1	1.84	0.43
1:B:1370:PHE:N	1:B:1370:PHE:HD1	2.16	0.43
1:B:2271:CYS:SG	1:B:2294:GLY:N	2.91	0.43
1:B:3726:GLN:HG2	1:B:3729:ARG:NH2	2.32	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3796:MET:HE1	1:B:3869:ILE:HG23	2.01	0.43
1:B:4773:LEU:HD12	1:B:4857:LEU:HB3	2.00	0.43
1:C:1091:GLU:HG2	1:C:1248:THR:OG1	2.18	0.43
1:C:1370:PHE:N	1:C:1370:PHE:HD1	2.16	0.43
1:C:4512:ASN:HD22	1:C:4742:LEU:HD21	1.83	0.43
1:C:4773:LEU:HD12	1:C:4857:LEU:HB3	2.00	0.43
1:C:4789:ARG:NH2	1:C:4805:CYS:O	2.51	0.43
1:D:541:ILE:O	1:D:541:ILE:HG22	2.18	0.43
1:D:1942:ARG:HA	1:D:1945:GLU:HG3	1.99	0.43
1:D:2856:LYS:HA	1:D:2859:LEU:HG	2.00	0.43
1:D:4182:LYS:HA	1:D:4182:LYS:HD2	1.85	0.43
1:D:4789:ARG:NH2	1:D:4805:CYS:O	2.51	0.43
1:A:190:ARG:HD3	1:A:205:ALA:O	2.18	0.43
1:A:418:VAL:O	1:A:422:THR:HG22	2.19	0.43
1:A:656:ARG:NH2	1:A:835:GLU:OE2	2.52	0.43
1:A:2257:ARG:HH21	1:A:3806:ALA:HB1	1.82	0.43
1:A:3612:ARG:O	1:A:3612:ARG:NH1	2.51	0.43
1:B:323:ASP:O	1:B:327:THR:OG1	2.30	0.43
1:B:882:ARG:HG2	1:B:940:LEU:HD22	2.00	0.43
1:B:1368:PRO:HD2	1:B:1434:UNK:C	2.47	0.43
1:B:2121:SER:O	1:B:2125:ILE:HG12	2.18	0.43
1:C:418:VAL:O	1:C:422:THR:HG22	2.19	0.43
1:C:882:ARG:HG2	1:C:940:LEU:HD22	2.00	0.43
1:C:1681:VAL:HG23	1:C:1682:ASP:N	2.28	0.43
1:C:1970:GLU:HA	1:C:1973:ASN:HB2	2.00	0.43
1:C:4614:LEU:HA	1:C:4618:GLU:HG3	2.00	0.43
1:D:558:LEU:HG	1:D:571:ILE:HG23	2.01	0.43
1:D:1691:GLU:HG2	1:D:1791:LYS:CE	2.48	0.43
1:D:1715:TYR:OH	1:D:1719:ARG:NH1	2.47	0.43
1:D:1968:PRO:HA	1:D:1971:GLN:HB3	2.00	0.43
1:D:2121:SER:O	1:D:2125:ILE:HG12	2.18	0.43
1:D:2343:LEU:O	1:D:2347:GLU:HG2	2.18	0.43
1:D:2428:LEU:O	1:D:2432:VAL:HG23	2.17	0.43
1:A:4143:ARG:NH1	1:A:4961:TYR:OH	2.51	0.43
1:B:1744:ASN:ND2	1:B:1746:LYS:HE2	2.27	0.43
1:B:1970:GLU:HA	1:B:1973:ASN:HB2	2.00	0.43
1:B:2722:LYS:HD2	1:B:2722:LYS:HA	1.88	0.43
1:B:2853:LYS:HA	1:B:2856:LYS:HG2	1.99	0.43
1:C:641:ASP:O	1:C:1634:PRO:HG2	2.18	0.43
1:C:1914:ASP:OD1	1:C:2089:ARG:NH2	2.48	0.43
1:C:4889:ILE:HD11	1:C:4914:LEU:HD23	2.00	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1970:GLU:HA	1:D:1973:ASN:HB2	2.00	0.43
1:D:4640:PRO:HG2	1:D:4646:LYS:HA	2.00	0.43
1:D:4789:ARG:NE	1:D:4805:CYS:SG	2.87	0.43
1:A:360:ILE:HG23	1:A:402:GLY:HA2	2.00	0.43
1:A:4640:PRO:HG2	1:A:4646:LYS:HA	2.00	0.43
1:A:4793:ASN:O	1:A:4795:SER:N	2.49	0.43
1:B:575:LEU:HA	1:B:578:VAL:HG12	2.01	0.43
1:B:3954:GLN:OE1	1:B:4012:ILE:HG13	2.19	0.43
1:B:4764:LYS:O	1:B:4767:VAL:HG22	2.19	0.43
1:B:4789:ARG:NH2	1:B:4805:CYS:O	2.51	0.43
1:B:4850:PHE:CD1	1:B:4854:ILE:HD11	2.54	0.43
1:C:446:ASP:O	1:C:448:PRO:HD3	2.18	0.43
1:C:1166:VAL:CG2	1:C:1173:MET:HG2	2.47	0.43
1:C:1968:PRO:HA	1:C:1971:GLN:HB3	2.00	0.43
1:C:2170:VAL:HG21	1:C:2198:PHE:CD2	2.52	0.43
1:C:2271:CYS:SG	1:C:2294:GLY:N	2.91	0.43
1:C:2282:LYS:HA	1:C:2282:LYS:HD2	1.86	0.43
1:C:2776:GLU:O	1:C:2780:THR:HG23	2.19	0.43
1:C:3726:GLN:HG2	1:C:3729:ARG:NH2	2.32	0.43
1:D:837:SER:H	1:D:841:LYS:HZ1	1.64	0.43
1:D:3621:GLN:O	1:D:3624:GLU:HG3	2.18	0.43
1:A:35:LEU:HB3	1:A:49:LEU:HD22	1.99	0.43
1:A:900:LEU:HD23	1:A:902:TRP:HE1	1.83	0.43
1:A:1091:GLU:HG2	1:A:1248:THR:OG1	2.18	0.43
1:A:1970:GLU:HA	1:A:1973:ASN:HB2	2.01	0.43
1:A:2290:ASN:HD22	1:A:2291:PRO:CD	2.30	0.43
1:A:3925:GLY:O	1:A:3927:CYS:N	2.51	0.43
1:A:3974:GLN:NE2	1:A:4012:ILE:HD11	2.34	0.43
1:B:541:ILE:O	1:B:541:ILE:HG22	2.18	0.43
1:B:1091:GLU:HG2	1:B:1248:THR:OG1	2.18	0.43
1:C:49:LEU:HD12	1:C:201:TRP:HB3	2.00	0.43
1:C:190:ARG:HD3	1:C:205:ALA:O	2.18	0.43
1:C:4789:ARG:NE	1:C:4805:CYS:SG	2.87	0.43
1:D:1091:GLU:HG2	1:D:1248:THR:OG1	2.18	0.43
1:D:1744:ASN:ND2	1:D:1746:LYS:HE2	2.27	0.43
1:D:2271:CYS:SG	1:D:2294:GLY:N	2.91	0.43
1:D:2712:ILE:HD13	1:D:2775:LYS:HE2	2.00	0.43
1:D:4759:VAL:HG13	1:D:4760:THR:HG23	1.99	0.43
2:J:67:MET:CE	2:J:104:LEU:HB2	2.48	0.43
1:A:549:ALA:HA	1:A:584:GLU:OE2	2.18	0.43
1:A:603:LYS:O	1:A:1586:ARG:HG3	2.19	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2385:ASN:ND2	1:A:2458:GLY:O	2.48	0.43
2:G:58:LYS:HB2	2:G:58:LYS:HE2	1.77	0.43
1:B:49:LEU:HD12	1:B:201:TRP:HB3	2.00	0.43
1:B:360:ILE:HG23	1:B:402:GLY:HA2	2.00	0.43
1:B:656:ARG:NH2	1:B:835:GLU:OE2	2.52	0.43
1:B:695:VAL:HG11	1:B:755:ILE:HD12	2.01	0.43
1:B:1643:LEU:HD22	1:B:1694:TYR:O	2.18	0.43
1:B:1691:GLU:HG2	1:B:1791:LYS:CE	2.48	0.43
1:B:4126:ASN:HA	1:B:4129:GLN:HG2	2.00	0.43
1:B:4653:MET:O	1:B:4657:GLY:N	2.51	0.43
2:H:67:MET:CE	2:H:104:LEU:HB2	2.48	0.43
1:C:2343:LEU:O	1:C:2347:GLU:HG2	2.18	0.43
1:C:3730:LEU:HD11	1:C:3764:ILE:CD1	2.48	0.43
1:C:3732:ASP:HA	1:C:3775:LYS:HZ1	1.83	0.43
1:C:3860:GLN:NE2	1:C:3866:THR:HA	2.34	0.43
1:C:4850:PHE:CD1	1:C:4854:ILE:HD11	2.54	0.43
1:D:3730:LEU:HD11	1:D:3764:ILE:CD1	2.48	0.43
1:D:4099:VAL:HB	1:D:4132:LEU:HD21	1.99	0.43
1:D:4764:LYS:O	1:D:4767:VAL:HG22	2.19	0.43
2:J:27:TYR:O	2:J:40:SER:N	2.45	0.43
2:J:58:LYS:HE2	2:J:58:LYS:HB2	1.77	0.43
1:A:575:LEU:HA	1:A:578:VAL:HG12	2.01	0.43
1:A:1643:LEU:HD22	1:A:1694:TYR:O	2.18	0.43
1:B:641:ASP:O	1:B:1634:PRO:HG2	2.18	0.43
1:B:3974:GLN:NE2	1:B:4012:ILE:HD11	2.34	0.43
1:C:427:ASN:HB3	1:C:431:ARG:CZ	2.49	0.43
1:C:575:LEU:HA	1:C:578:VAL:HG12	2.01	0.43
1:C:656:ARG:NH2	1:C:835:GLU:OE2	2.52	0.43
1:C:695:VAL:HG11	1:C:755:ILE:HD12	2.01	0.43
1:C:697:TRP:HB2	1:C:766:ILE:HD13	2.01	0.43
1:C:900:LEU:HD23	1:C:902:TRP:HE1	1.84	0.43
1:C:1117:TRP:HZ3	1:C:1166:VAL:HB	1.82	0.43
1:C:1255:LEU:HD22	1:C:1384:LEU:HD12	2.00	0.43
1:C:4640:PRO:HG2	1:C:4646:LYS:HA	2.00	0.43
1:C:4649:LYS:HA	1:C:4652:VAL:HG12	2.01	0.43
2:I:67:MET:CE	2:I:104:LEU:HB2	2.48	0.43
1:D:1255:LEU:HD22	1:D:1384:LEU:HB2	2.00	0.43
1:D:1643:LEU:HD22	1:D:1694:TYR:O	2.18	0.43
1:D:3860:GLN:NE2	1:D:3866:THR:HA	2.34	0.43
1:D:3950:PHE:CD1	1:D:3970:LEU:HD21	2.54	0.43
2:J:39:SER:O	2:J:43:ARG:NH1	2.51	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:769:ARG:HA	1:A:774:PRO:HA	1.99	0.43
1:A:3730:LEU:HD11	1:A:3764:ILE:CD1	2.48	0.43
1:A:4182:LYS:HD3	1:B:4905:GLU:OE2	2.18	0.43
1:A:4889:ILE:HD11	1:A:4914:LEU:HD23	2.00	0.43
1:B:1747:HIS:O	1:B:1747:HIS:ND1	2.51	0.43
1:B:2155:TYR:HE1	1:B:2201:TYR:HH	1.64	0.43
1:B:2712:ILE:HD13	1:B:2775:LYS:HE2	2.00	0.43
1:B:3860:GLN:NE2	1:B:3866:THR:HA	2.34	0.43
1:B:4582:SER:C	1:B:4725:MET:HE1	2.39	0.43
1:B:4659:PHE:HD2	1:B:4660:TYR:CE1	2.37	0.43
1:C:360:ILE:HG23	1:C:402:GLY:HA2	2.00	0.43
1:C:558:LEU:HG	1:C:571:ILE:HG23	2.01	0.43
1:C:1255:LEU:HD22	1:C:1384:LEU:HB2	2.00	0.43
1:C:1789:LYS:HB2	1:C:1835:PHE:HE1	1.83	0.43
1:C:4653:MET:O	1:C:4657:GLY:N	2.51	0.43
1:D:311:ASP:N	1:D:311:ASP:OD1	2.51	0.43
1:D:677:LEU:CD1	1:D:695:VAL:HG21	2.48	0.43
1:D:695:VAL:HG11	1:D:755:ILE:HD12	2.01	0.43
1:D:900:LEU:HD23	1:D:902:TRP:HE1	1.83	0.43
1:D:1255:LEU:HD22	1:D:1384:LEU:HD12	2.00	0.43
1:D:2335:ARG:O	1:D:2335:ARG:HG3	2.18	0.43
1:D:4044:LYS:HE2	1:D:4044:LYS:HB3	1.91	0.43
1:D:4143:ARG:NH1	1:D:4961:TYR:OH	2.51	0.43
1:D:4614:LEU:HA	1:D:4618:GLU:HG3	2.00	0.43
1:A:4126:ASN:HA	1:A:4129:GLN:HG2	2.00	0.43
1:A:4773:LEU:HD12	1:A:4857:LEU:HB3	2.00	0.43
1:B:190:ARG:HD3	1:B:205:ALA:O	2.18	0.43
1:B:603:LYS:O	1:B:1586:ARG:HG3	2.19	0.43
1:B:2335:ARG:O	1:B:2335:ARG:HG3	2.18	0.43
1:B:4793:ASN:O	1:B:4795:SER:N	2.49	0.43
1:C:541:ILE:HG22	1:C:541:ILE:O	2.18	0.43
1:C:2234:ARG:HA	1:C:2234:ARG:HD2	1.87	0.43
1:C:3954:GLN:OE1	1:C:4012:ILE:HG13	2.19	0.43
1:D:659:ILE:HG13	1:D:822:CYS:HB3	2.00	0.43
1:D:769:ARG:HA	1:D:774:PRO:HA	1.99	0.43
1:D:4850:PHE:CD1	1:D:4854:ILE:HD11	2.54	0.43
1:D:4889:ILE:HD11	1:D:4914:LEU:HD23	2.00	0.43
1:A:1255:LEU:HD22	1:A:1384:LEU:HD12	2.00	0.42
1:A:1906:CYS:O	1:A:1910:GLN:HG3	2.19	0.42
1:A:2065:MET:HE1	1:A:2083:MET:HB3	2.01	0.42
1:A:2776:GLU:O	1:A:2780:THR:HG23	2.19	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2856:LYS:HA	1:A:2859:LEU:HG	2.00	0.42
1:A:4850:PHE:CD1	1:A:4854:ILE:HD11	2.54	0.42
1:B:446:ASP:O	1:B:448:PRO:HD3	2.18	0.42
1:B:677:LEU:CD1	1:B:695:VAL:HG21	2.48	0.42
1:B:1706:LEU:O	1:B:1710:ILE:HG13	2.19	0.42
1:B:2343:LEU:O	1:B:2347:GLU:HG2	2.18	0.42
1:B:2776:GLU:O	1:B:2780:THR:HG23	2.19	0.42
1:B:4614:LEU:HA	1:B:4618:GLU:HG3	2.00	0.42
1:C:189:GLU:OE2	1:D:2321:ARG:NH2	2.52	0.42
1:C:427:ASN:HB3	1:C:431:ARG:HH22	1.82	0.42
1:C:839:GLU:HG2	1:C:840:TYR:N	2.29	0.42
1:C:3621:GLN:O	1:C:3624:GLU:HG3	2.18	0.42
1:C:4116:THR:HA	1:C:4119:GLU:HG2	2.01	0.42
1:D:446:ASP:O	1:D:448:PRO:HD3	2.18	0.42
1:D:530:LEU:HD23	1:D:530:LEU:HA	1.87	0.42
1:D:603:LYS:O	1:D:1586:ARG:HG3	2.19	0.42
1:D:669:GLN:HB3	1:D:673:TRP:HZ2	1.84	0.42
1:D:2383:MET:O	1:D:2387:ILE:HG12	2.19	0.42
1:D:4773:LEU:HD12	1:D:4857:LEU:HB3	2.00	0.42
1:A:49:LEU:HD12	1:A:201:TRP:HB3	2.00	0.42
1:A:677:LEU:CD1	1:A:695:VAL:HG21	2.48	0.42
1:A:4494:ALA:HB1	1:A:4592:LEU:HD13	2.01	0.42
1:B:798:ILE:HD12	1:B:798:ILE:HA	1.92	0.42
1:B:1906:CYS:O	1:B:1910:GLN:HG3	2.20	0.42
1:B:4649:LYS:HA	1:B:4652:VAL:HG12	2.01	0.42
1:B:4889:ILE:HD11	1:B:4914:LEU:HD23	2.00	0.42
1:C:1906:CYS:O	1:C:1910:GLN:HG3	2.19	0.42
1:C:2477:ILE:HG21	1:C:2483:LEU:HD13	2.01	0.42
1:C:3950:PHE:CD1	1:C:3970:LEU:HD21	2.54	0.42
1:C:4126:ASN:HA	1:C:4129:GLN:HG2	2.00	0.42
1:C:4659:PHE:HD2	1:C:4660:TYR:CE1	2.37	0.42
1:D:49:LEU:HD12	1:D:201:TRP:HB3	2.00	0.42
1:D:418:VAL:O	1:D:422:THR:HG22	2.19	0.42
1:D:1771:SER:HA	2:J:56:VAL:HA	2.02	0.42
1:D:4649:LYS:HA	1:D:4652:VAL:HG12	2.01	0.42
1:A:1102:TYR:O	1:A:1238:PRO:HA	2.20	0.42
1:A:2383:MET:O	1:A:2387:ILE:HG12	2.19	0.42
1:A:4614:LEU:HA	1:A:4618:GLU:HG3	2.00	0.42
1:B:418:VAL:O	1:B:422:THR:HG22	2.19	0.42
1:B:427:ASN:HB3	1:B:431:ARG:CZ	2.49	0.42
1:B:838:ARG:H	1:B:841:LYS:NZ	2.15	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1700:ARG:NH1	1:B:1817:PHE:O	2.53	0.42
1:B:2856:LYS:HA	1:B:2859:LEU:HG	2.00	0.42
1:B:3901:GLY:O	1:B:3905:PHE:HD2	2.01	0.42
1:B:4494:ALA:HB1	1:B:4592:LEU:HD13	2.02	0.42
1:B:4694:SER:O	1:B:4694:SER:OG	2.33	0.42
1:C:669:GLN:HB3	1:C:673:TRP:HZ2	1.84	0.42
1:C:2128:LEU:HD11	1:C:2140:LEU:HB2	2.01	0.42
1:C:4582:SER:C	1:C:4725:MET:HE1	2.40	0.42
1:C:4764:LYS:O	1:C:4767:VAL:HG22	2.19	0.42
1:D:35:LEU:HB3	1:D:49:LEU:HD22	1.99	0.42
1:D:370:LEU:CB	1:D:393:MET:HG2	2.45	0.42
1:D:436:LEU:HD21	1:D:517:VAL:HG12	2.00	0.42
1:D:697:TRP:HB2	1:D:766:ILE:HD13	2.01	0.42
1:D:1906:CYS:O	1:D:1910:GLN:HG3	2.19	0.42
1:D:4582:SER:C	1:D:4725:MET:HE1	2.40	0.42
1:A:946:LEU:HD23	1:A:946:LEU:HA	1.90	0.42
1:A:1968:PRO:HA	1:A:1971:GLN:HB3	2.00	0.42
1:A:3878:LEU:HD21	1:A:3938:ARG:HH21	1.85	0.42
1:A:3954:GLN:OE1	1:A:4012:ILE:HG13	2.19	0.42
1:A:4659:PHE:HD2	1:A:4660:TYR:CE1	2.37	0.42
1:A:4764:LYS:O	1:A:4767:VAL:HG22	2.19	0.42
1:B:697:TRP:HB2	1:B:766:ILE:HD13	2.01	0.42
1:B:773:GLN:H	1:B:773:GLN:HG2	1.70	0.42
1:B:1789:LYS:HB2	1:B:1835:PHE:HE1	1.83	0.42
1:B:2850:ILE:HG13	1:B:2851:TRP:N	2.35	0.42
1:B:4753:ARG:HH11	1:B:4756:LEU:HD22	1.85	0.42
1:C:24:CYS:HB3	1:C:212:TRP:CE3	2.55	0.42
1:C:1706:LEU:O	1:C:1710:ILE:HG13	2.19	0.42
1:C:2850:ILE:HG13	1:C:2851:TRP:N	2.34	0.42
1:C:3727:GLN:C	1:C:3731:HIS:HD1	2.23	0.42
1:C:3796:MET:HE1	1:C:3869:ILE:HG23	2.01	0.42
1:D:427:ASN:HB3	1:D:431:ARG:CZ	2.49	0.42
1:D:575:LEU:HA	1:D:578:VAL:HG12	2.01	0.42
1:D:656:ARG:NH2	1:D:835:GLU:OE2	2.52	0.42
1:D:1747:HIS:O	1:D:1747:HIS:ND1	2.51	0.42
1:D:3612:ARG:NH1	1:D:3612:ARG:O	2.51	0.42
1:D:3878:LEU:HD21	1:D:3938:ARG:HH21	1.85	0.42
1:D:3925:GLY:O	1:D:3927:CYS:N	2.51	0.42
1:D:3954:GLN:OE1	1:D:4012:ILE:HG13	2.19	0.42
1:D:4494:ALA:HB1	1:D:4592:LEU:HD13	2.01	0.42
1:D:4589:TYR:OH	1:D:4715:ASP:OD2	2.36	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:4653:MET:O	1:D:4657:GLY:N	2.51	0.42
1:D:4844:ILE:O	1:D:4848:THR:OG1	2.25	0.42
1:A:695:VAL:HG11	1:A:755:ILE:HD12	2.01	0.42
2:G:8:ILE:HD12	2:G:72:ARG:HG2	2.02	0.42
1:B:1771:SER:HA	2:H:56:VAL:HA	2.02	0.42
1:B:2128:LEU:HD11	1:B:2140:LEU:HB2	2.01	0.42
1:B:3950:PHE:CD1	1:B:3970:LEU:HD21	2.54	0.42
1:B:4116:THR:HA	1:B:4119:GLU:HG2	2.01	0.42
1:B:4778:TYR:OH	1:C:4515:LEU:HD23	2.20	0.42
1:C:603:LYS:O	1:C:1586:ARG:HG3	2.19	0.42
1:C:2254:LEU:O	1:C:3809:ARG:NH1	2.50	0.42
1:C:3720:LYS:HE3	1:C:3720:LYS:HB2	1.87	0.42
1:C:3898:ASP:OD1	1:C:3898:ASP:N	2.45	0.42
1:C:4494:ALA:HB1	1:C:4592:LEU:HD13	2.01	0.42
1:C:4778:TYR:OH	1:D:4515:LEU:HD23	2.19	0.42
1:D:24:CYS:HB3	1:D:212:TRP:CE3	2.55	0.42
1:D:360:ILE:HG23	1:D:402:GLY:HA2	2.00	0.42
1:D:3974:GLN:NE2	1:D:4012:ILE:HD11	2.34	0.42
1:A:659:ILE:HG13	1:A:822:CYS:HB3	2.00	0.42
1:A:1591:PHE:CZ	1:A:1593:SER:HB2	2.55	0.42
1:A:1706:LEU:O	1:A:1710:ILE:HG13	2.19	0.42
1:A:1715:TYR:OH	1:A:1719:ARG:NH1	2.47	0.42
1:A:3950:PHE:CD1	1:A:3970:LEU:HD21	2.54	0.42
1:A:4753:ARG:HH11	1:A:4756:LEU:HD22	1.85	0.42
1:B:868:ASP:OD1	1:B:868:ASP:N	2.53	0.42
1:B:1715:TYR:OH	1:B:1719:ARG:NH1	2.47	0.42
1:B:2492:LEU:O	1:B:2496:ARG:HG3	2.19	0.42
1:B:4159:TRP:NE1	1:B:4915:ALA:HB2	2.35	0.42
1:C:1102:TYR:O	1:C:1238:PRO:HA	2.20	0.42
1:C:2492:LEU:O	1:C:2496:ARG:HG3	2.19	0.42
1:C:2722:LYS:HD2	1:C:2722:LYS:HA	1.88	0.42
1:D:447:LEU:HD23	1:D:447:LEU:HA	1.93	0.42
1:D:2492:LEU:O	1:D:2496:ARG:HG3	2.19	0.42
1:A:558:LEU:HG	1:A:571:ILE:HG23	2.01	0.42
1:A:2477:ILE:HG21	1:A:2483:LEU:HD13	2.01	0.42
1:B:250:GLY:HA2	1:B:257:ARG:HD3	2.02	0.42
1:B:1968:PRO:HA	1:B:1971:GLN:HB3	2.00	0.42
1:C:2144:GLY:O	1:C:2148:ILE:HG12	2.20	0.42
1:D:137:ARG:NH1	1:D:138:SER:OG	2.53	0.42
1:D:1102:TYR:O	1:D:1238:PRO:HA	2.20	0.42
1:D:1700:ARG:NH1	1:D:1817:PHE:O	2.53	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2316:ALA:O	1:A:2320:VAL:HG23	2.20	0.42
1:A:3860:GLN:NE2	1:A:3866:THR:HA	2.34	0.42
1:A:4273:MET:N	1:C:4836:ASP:OD2	2.53	0.42
1:A:4513:PHE:O	1:A:4516:LEU:HB2	2.20	0.42
1:B:558:LEU:HG	1:B:571:ILE:HG23	2.01	0.42
1:B:1100:ARG:HB3	1:B:1236:TYR:CG	2.55	0.42
1:B:2334:LEU:HA	1:B:2341:GLY:HA2	2.02	0.42
1:B:3727:GLN:C	1:B:3731:HIS:HD1	2.23	0.42
1:B:4173:PHE:CD1	1:B:4879:VAL:HG21	2.55	0.42
2:H:8:ILE:HD12	2:H:72:ARG:HG2	2.02	0.42
1:C:692:HIS:O	1:C:794:PHE:HA	2.20	0.42
1:C:1106:GLU:HG2	1:C:1161:VAL:HG12	2.02	0.42
1:C:1691:GLU:HG2	1:C:1791:LYS:CE	2.48	0.42
1:C:2278:MET:O	1:C:2282:LYS:HG2	2.20	0.42
1:C:3802:LEU:HB2	1:C:3883:SER:OG	2.20	0.42
1:C:4159:TRP:NE1	1:C:4915:ALA:HB2	2.35	0.42
1:C:4490:LEU:HG	1:C:4591:CYS:SG	2.60	0.42
1:C:4793:ASN:O	1:C:4795:SER:N	2.49	0.42
1:D:692:HIS:O	1:D:794:PHE:HA	2.20	0.42
1:D:2776:GLU:O	1:D:2780:THR:HG23	2.19	0.42
1:D:2850:ILE:HG13	1:D:2851:TRP:N	2.35	0.42
1:A:137:ARG:NH1	1:A:138:SER:OG	2.53	0.42
1:A:189:GLU:OE2	1:B:2321:ARG:NH2	2.51	0.42
1:A:669:GLN:HB3	1:A:673:TRP:HZ2	1.84	0.42
1:A:1254:ARG:NH1	1:A:1254:ARG:CB	2.73	0.42
1:A:1691:GLU:HG2	1:A:1791:LYS:CE	2.48	0.42
1:A:1771:SER:HA	2:G:56:VAL:HA	2.02	0.42
1:A:2334:LEU:HA	1:A:2341:GLY:HA2	2.02	0.42
1:A:2850:ILE:HG13	1:A:2851:TRP:N	2.34	0.42
1:A:3802:LEU:HB2	1:A:3883:SER:OG	2.20	0.42
1:A:4116:THR:HA	1:A:4119:GLU:HG2	2.01	0.42
1:A:4159:TRP:NE1	1:A:4915:ALA:HB2	2.35	0.42
1:B:189:GLU:OE2	1:C:2321:ARG:NH2	2.52	0.42
1:B:459:LEU:HG	1:B:463:PHE:HE2	1.85	0.42
1:B:894:VAL:O	1:B:898:ILE:HG13	2.20	0.42
1:B:1106:GLU:HG2	1:B:1161:VAL:HG12	2.02	0.42
1:B:1294:ASN:ND2	1:B:1296:ASN:OD1	2.52	0.42
1:B:2250:ASN:OD1	1:B:3816:LEU:HD12	2.20	0.42
1:B:4640:PRO:HG2	1:B:4646:LYS:HA	2.00	0.42
1:B:4941:LYS:HE2	1:B:4941:LYS:HB3	1.90	0.42
1:C:801:ARG:NH1	1:C:1614:GLU:OE2	2.48	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:929:ARG:HA	1:C:932:ASN:HD21	1.85	0.42
1:C:1679:SER:HB3	1:C:1769:PHE:CE2	2.55	0.42
1:C:1700:ARG:NH1	1:C:1817:PHE:O	2.53	0.42
1:C:3878:LEU:HD21	1:C:3938:ARG:HH21	1.85	0.42
1:C:4594:VAL:N	1:C:4595:PRO:HD2	2.35	0.42
1:D:19:GLU:HG3	1:D:68:VAL:HG22	2.02	0.42
1:D:982:ASP:OD2	1:D:985:PHE:HB2	2.20	0.42
1:D:2086:LEU:O	1:D:2090:GLN:HG2	2.20	0.42
1:A:24:CYS:HB3	1:A:212:TRP:CE3	2.55	0.42
1:A:427:ASN:HB3	1:A:431:ARG:CZ	2.49	0.42
1:A:837:SER:N	1:A:841:LYS:HZ1	2.17	0.42
1:A:1100:ARG:HB3	1:A:1236:TYR:CG	2.55	0.42
1:A:1679:SER:HB3	1:A:1769:PHE:CE2	2.55	0.42
1:A:2492:LEU:O	1:A:2496:ARG:HG3	2.19	0.42
1:A:4594:VAL:N	1:A:4595:PRO:HD2	2.35	0.42
1:B:19:GLU:HG3	1:B:68:VAL:HG22	2.02	0.42
1:B:467:ASP:OD1	1:B:468:GLU:N	2.53	0.42
1:B:669:GLN:HB3	1:B:673:TRP:HZ2	1.84	0.42
1:B:1255:LEU:HD22	1:B:1384:LEU:HD12	2.00	0.42
1:B:2144:GLY:O	1:B:2148:ILE:HG12	2.20	0.42
1:B:2477:ILE:HG21	1:B:2483:LEU:HD13	2.01	0.42
1:C:161:THR:HG23	1:C:184:VAL:HB	2.02	0.42
1:C:250:GLY:HA2	1:C:257:ARG:HD3	2.02	0.42
1:C:677:LEU:N	1:C:755:ILE:O	2.50	0.42
1:C:1100:ARG:HB3	1:C:1236:TYR:CG	2.55	0.42
1:C:1100:ARG:HB2	1:C:1236:TYR:HA	2.02	0.42
1:C:2383:MET:O	1:C:2387:ILE:HG12	2.20	0.42
1:C:3974:GLN:NE2	1:C:4012:ILE:HD11	2.34	0.42
1:D:1591:PHE:CZ	1:D:1593:SER:HB2	2.55	0.42
1:D:1679:SER:HB3	1:D:1769:PHE:CE2	2.55	0.42
1:D:2722:LYS:HD2	1:D:2722:LYS:HA	1.88	0.42
1:D:4513:PHE:O	1:D:4516:LEU:HB2	2.20	0.42
1:A:250:GLY:HA2	1:A:257:ARG:HD3	2.02	0.41
1:A:459:LEU:HG	1:A:463:PHE:HE2	1.85	0.41
1:A:982:ASP:OD2	1:A:985:PHE:HB2	2.20	0.41
1:A:1700:ARG:NH1	1:A:1817:PHE:O	2.53	0.41
1:A:2128:LEU:HD11	1:A:2140:LEU:HB2	2.01	0.41
1:A:3985:LEU:HD22	1:A:3988:ASN:ND2	2.35	0.41
1:A:4055:LYS:NZ	1:D:4658:GLU:O	2.40	0.41
1:A:4813:MET:SD	1:D:4843:ILE:HD11	2.60	0.41
1:B:24:CYS:HB3	1:B:212:TRP:CE3	2.55	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:677:LEU:N	1:B:755:ILE:O	2.50	0.41
1:B:1100:ARG:HB2	1:B:1236:TYR:HA	2.02	0.41
1:B:1591:PHE:CZ	1:B:1593:SER:HB2	2.55	0.41
1:B:2316:ALA:O	1:B:2320:VAL:HG23	2.20	0.41
1:B:3612:ARG:O	1:B:3612:ARG:NH1	2.51	0.41
1:B:3878:LEU:HD21	1:B:3938:ARG:HH21	1.85	0.41
1:B:4490:LEU:HG	1:B:4591:CYS:SG	2.60	0.41
1:C:137:ARG:NH1	1:C:138:SER:OG	2.53	0.41
1:C:516:ASP:OD1	1:C:516:ASP:N	2.53	0.41
1:C:894:VAL:O	1:C:898:ILE:HG13	2.20	0.41
1:C:3664:HIS:HD2	1:C:3733:ARG:O	2.03	0.41
1:C:4173:PHE:CD1	1:C:4879:VAL:HG21	2.55	0.41
1:C:4753:ARG:HH11	1:C:4756:LEU:HD22	1.85	0.41
1:D:459:LEU:HG	1:D:463:PHE:HE2	1.85	0.41
1:D:801:ARG:NH1	1:D:1619:LEU:HB2	2.35	0.41
1:D:837:SER:N	1:D:841:LYS:HZ1	2.17	0.41
1:D:1789:LYS:HB2	1:D:1835:PHE:CE1	2.55	0.41
1:D:4159:TRP:NE1	1:D:4915:ALA:HB2	2.35	0.41
1:D:4173:PHE:CD1	1:D:4879:VAL:HG21	2.55	0.41
1:A:227:TYR:CD2	1:A:352:SER:HB2	2.55	0.41
1:A:692:HIS:O	1:A:794:PHE:HA	2.20	0.41
1:A:894:VAL:O	1:A:898:ILE:HG13	2.20	0.41
1:A:900:LEU:HD23	1:A:902:TRP:NE1	2.36	0.41
1:A:2250:ASN:OD1	1:A:3816:LEU:HD12	2.20	0.41
1:A:4173:PHE:CD1	1:A:4879:VAL:HG21	2.55	0.41
1:A:4649:LYS:HA	1:A:4652:VAL:HG12	2.01	0.41
1:B:138:SER:HB3	1:B:140:THR:HG22	2.03	0.41
1:B:358:ASP:OD1	1:B:358:ASP:N	2.46	0.41
1:B:3802:LEU:HB2	1:B:3883:SER:OG	2.20	0.41
1:C:1629:MET:HE3	1:C:1685:GLN:HE21	1.85	0.41
1:D:658:ASN:HB2	1:D:832:LEU:HD12	2.03	0.41
1:D:2144:GLY:O	1:D:2148:ILE:HG12	2.20	0.41
1:A:795:SER:OG	1:A:796:ALA:N	2.54	0.41
1:A:2086:LEU:O	1:A:2090:GLN:HG2	2.20	0.41
1:B:450:GLU:H	1:B:450:GLU:CD	2.24	0.41
1:B:658:ASN:HB2	1:B:832:LEU:HD12	2.03	0.41
1:B:929:ARG:HA	1:B:932:ASN:HD21	1.85	0.41
1:B:2290:ASN:HD22	1:B:2291:PRO:CD	2.30	0.41
1:B:2383:MET:O	1:B:2387:ILE:HG12	2.19	0.41
1:C:564:ARG:O	1:C:565:LEU:HB3	2.21	0.41
1:C:795:SER:OG	1:C:796:ALA:N	2.54	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1571:LEU:HD23	1:C:1571:LEU:HA	1.87	0.41
1:C:2086:LEU:O	1:C:2090:GLN:HG2	2.20	0.41
1:C:2250:ASN:OD1	1:C:3816:LEU:HD12	2.20	0.41
1:C:4505:LEU:HD22	1:C:4749:PHE:CE2	2.55	0.41
1:C:4513:PHE:O	1:C:4516:LEU:HB2	2.20	0.41
1:D:250:GLY:HA2	1:D:257:ARG:HD3	2.02	0.41
1:D:894:VAL:O	1:D:898:ILE:HG13	2.20	0.41
1:D:900:LEU:HD23	1:D:902:TRP:NE1	2.36	0.41
1:D:2316:ALA:O	1:D:2320:VAL:HG23	2.20	0.41
1:D:4659:PHE:HD2	1:D:4660:TYR:CE1	2.37	0.41
1:D:4753:ARG:HH11	1:D:4756:LEU:HD22	1.85	0.41
1:A:3923:ILE:HD12	1:A:3984:MET:HG2	2.03	0.41
1:A:4604:GLU:HG3	1:A:4605:VAL:N	2.36	0.41
1:A:4941:LYS:HE2	1:A:4941:LYS:HB3	1.90	0.41
1:B:373:THR:OG1	1:B:392:ILE:O	2.21	0.41
1:B:721:ASP:OD1	1:B:724:SER:HB2	2.21	0.41
1:B:982:ASP:OD2	1:B:985:PHE:HB2	2.20	0.41
1:B:1567:LEU:HD11	1:B:1579:PRO:C	2.41	0.41
1:B:1764:PHE:HD1	1:B:1780:SER:HB2	1.86	0.41
1:B:2086:LEU:O	1:B:2090:GLN:HG2	2.20	0.41
1:B:2278:MET:O	1:B:2282:LYS:HG2	2.20	0.41
1:B:3925:GLY:O	1:B:3927:CYS:N	2.51	0.41
1:B:4009:VAL:O	1:B:4012:ILE:HG22	2.20	0.41
1:B:4505:LEU:HD22	1:B:4749:PHE:CE2	2.55	0.41
1:C:370:LEU:CB	1:C:393:MET:HG2	2.45	0.41
1:C:459:LEU:HG	1:C:463:PHE:HE2	1.85	0.41
1:C:530:LEU:HD23	1:C:530:LEU:HA	1.86	0.41
1:C:1969:GLN:O	1:C:1972:ILE:HG22	2.21	0.41
1:C:4042:ILE:CG2	1:C:4047:PHE:HB2	2.46	0.41
2:I:43:ARG:H	2:I:43:ARG:HG2	1.71	0.41
1:D:4009:VAL:O	1:D:4012:ILE:HG22	2.20	0.41
1:D:4116:THR:HA	1:D:4119:GLU:HG2	2.01	0.41
1:D:4490:LEU:HG	1:D:4591:CYS:SG	2.60	0.41
1:D:4594:VAL:N	1:D:4595:PRO:HD2	2.35	0.41
1:A:467:ASP:OD1	1:A:468:GLU:N	2.53	0.41
1:A:516:ASP:OD1	1:A:516:ASP:N	2.53	0.41
1:A:697:TRP:HB2	1:A:766:ILE:HD13	2.01	0.41
1:A:801:ARG:NH1	1:A:1619:LEU:HB2	2.35	0.41
1:A:929:ARG:HA	1:A:932:ASN:HD21	1.85	0.41
1:A:1969:GLN:O	1:A:1972:ILE:HG22	2.21	0.41
1:A:2278:MET:O	1:A:2282:LYS:HG2	2.20	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4039:LYS:HB2	1:A:4039:LYS:HE2	1.88	0.41
1:A:4582:SER:C	1:A:4725:MET:HE1	2.40	0.41
1:A:4720:TYR:OH	1:A:4744:ASP:HA	2.21	0.41
1:B:161:THR:HG23	1:B:184:VAL:HB	2.02	0.41
1:B:332:ARG:NH1	1:B:364:GLN:OE1	2.54	0.41
1:B:564:ARG:O	1:B:565:LEU:HB3	2.20	0.41
1:B:692:HIS:O	1:B:794:PHE:HA	2.20	0.41
1:B:1969:GLN:O	1:B:1972:ILE:HG22	2.21	0.41
1:B:4509:PHE:HZ	1:B:4745:ILE:HD12	1.86	0.41
1:B:4513:PHE:O	1:B:4516:LEU:HB2	2.20	0.41
1:C:655:MET:HE2	1:C:1607:VAL:HG11	2.02	0.41
1:C:1294:ASN:ND2	1:C:1296:ASN:OD1	2.52	0.41
1:C:2193:ALA:HA	1:C:2236:SER:HB3	2.03	0.41
1:C:3923:ILE:HD12	1:C:3984:MET:HG2	2.03	0.41
1:C:4604:GLU:HG3	1:C:4605:VAL:N	2.36	0.41
1:C:4860:ILE:HD13	1:D:4755:ILE:CG2	2.50	0.41
2:I:63:GLY:O	2:I:66:GLN:HG3	2.20	0.41
1:D:4070:GLU:OE1	1:D:4070:GLU:N	2.51	0.41
1:A:161:THR:HG23	1:A:184:VAL:HB	2.02	0.41
1:A:4621:SER:OG	1:A:4623:ASP:OD1	2.19	0.41
1:B:137:ARG:NH1	1:B:138:SER:OG	2.53	0.41
1:B:801:ARG:NH1	1:B:1619:LEU:HB2	2.35	0.41
1:B:1571:LEU:HD23	1:B:1571:LEU:HA	1.87	0.41
1:B:3664:HIS:HD2	1:B:3733:ARG:O	2.03	0.41
1:C:837:SER:HB3	1:C:841:LYS:NZ	2.35	0.41
1:C:900:LEU:HD23	1:C:902:TRP:NE1	2.36	0.41
1:C:1676:ALA:HB1	1:C:1680:HIS:CE1	2.56	0.41
1:C:3985:LEU:HD22	1:C:3988:ASN:ND2	2.35	0.41
1:C:4720:TYR:OH	1:C:4744:ASP:HA	2.21	0.41
1:D:467:ASP:OD1	1:D:468:GLU:N	2.53	0.41
1:D:1706:LEU:O	1:D:1710:ILE:HG13	2.19	0.41
2:J:8:ILE:HD12	2:J:72:ARG:HG2	2.02	0.41
1:A:1681:VAL:HG23	1:A:1682:ASP:N	2.28	0.41
1:A:2144:GLY:O	1:A:2148:ILE:HG12	2.20	0.41
1:A:3539:UNK:HA	1:D:1241:VAL:HG21	2.01	0.41
1:B:343:ARG:HH21	1:B:345:GLU:H	1.69	0.41
1:B:3923:ILE:HD12	1:B:3984:MET:HG2	2.03	0.41
1:B:4720:TYR:OH	1:B:4744:ASP:HA	2.21	0.41
2:H:27:TYR:O	2:H:40:SER:N	2.45	0.41
2:H:28:THR:O	2:H:28:THR:OG1	2.35	0.41
1:C:152:ASP:OD2	1:C:154:THR:OG1	2.39	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:450:GLU:H	1:C:450:GLU:CD	2.24	0.41
1:C:801:ARG:NH1	1:C:1619:LEU:HB2	2.35	0.41
1:C:982:ASP:OD2	1:C:985:PHE:HB2	2.20	0.41
1:C:1303:ARG:HG2	1:C:1304:LEU:N	2.36	0.41
1:C:2479:VAL:HB	1:C:2482:PHE:HB3	2.03	0.41
1:C:3799:CYS:HB3	1:C:3835:THR:OG1	2.21	0.41
1:C:4182:LYS:HA	1:C:4182:LYS:HD2	1.85	0.41
1:D:161:THR:HG23	1:D:184:VAL:HB	2.02	0.41
1:D:655:MET:HE2	1:D:1607:VAL:HG11	2.03	0.41
1:D:795:SER:OG	1:D:796:ALA:N	2.54	0.41
1:D:1764:PHE:HD1	1:D:1780:SER:HB2	1.86	0.41
1:D:2278:MET:O	1:D:2282:LYS:HG2	2.20	0.41
1:D:4505:LEU:HD22	1:D:4749:PHE:CE2	2.55	0.41
1:D:4720:TYR:OH	1:D:4744:ASP:HA	2.21	0.41
2:J:63:GLY:O	2:J:66:GLN:HG3	2.20	0.41
1:A:138:SER:HB3	1:A:140:THR:HG22	2.03	0.41
1:A:564:ARG:HD2	1:A:566:GLU:OE2	2.21	0.41
1:A:658:ASN:HB2	1:A:832:LEU:HD12	2.03	0.41
1:A:837:SER:HB3	1:A:841:LYS:NZ	2.35	0.41
1:A:868:ASP:OD1	1:A:868:ASP:N	2.53	0.41
1:A:1676:ALA:HB1	1:A:1680:HIS:CE1	2.56	0.41
1:A:2193:ALA:HA	1:A:2236:SER:HB3	2.03	0.41
1:B:2479:VAL:HB	1:B:2482:PHE:HB3	2.03	0.41
1:B:3740:LEU:HD23	1:B:3740:LEU:HA	1.94	0.41
1:B:4604:GLU:HG3	1:B:4605:VAL:N	2.36	0.41
2:H:5:ILE:HG12	2:H:66:GLN:HE21	1.86	0.41
1:C:19:GLU:HG3	1:C:68:VAL:HG22	2.02	0.41
1:C:658:ASN:HB2	1:C:832:LEU:HD12	2.03	0.41
1:C:1771:SER:HA	2:I:56:VAL:HA	2.02	0.41
1:C:3849:HIS:HE1	1:C:3924:GLN:HG3	1.86	0.41
1:D:332:ARG:NH1	1:D:364:GLN:OE1	2.54	0.41
1:D:380:LYS:HD2	1:D:380:LYS:HA	1.76	0.41
1:D:696:GLY:HA3	1:D:726:GLY:HA2	2.03	0.41
1:D:1676:ALA:HB1	1:D:1680:HIS:CE1	2.56	0.41
1:D:2193:ALA:HA	1:D:2236:SER:HB3	2.03	0.41
1:D:2876:LEU:HB2	1:D:2881:LYS:HE3	2.03	0.41
1:D:3923:ILE:HD12	1:D:3984:MET:HG2	2.03	0.41
1:D:4604:GLU:HG3	1:D:4605:VAL:N	2.36	0.41
1:A:19:GLU:HG3	1:A:68:VAL:HG22	2.02	0.41
1:A:365:HIS:CD2	1:A:367:ASP:HB3	2.56	0.41
1:A:849:ASP:HA	1:A:1213:GLY:O	2.21	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1719:ARG:CZ	1:A:1759:ARG:HE	2.34	0.41
1:A:1747:HIS:O	1:A:1747:HIS:ND1	2.51	0.41
1:A:2405:MET:C	1:A:2406:HIS:HD1	2.24	0.41
1:A:3664:HIS:HD2	1:A:3733:ARG:O	2.03	0.41
1:A:3930:ASN:O	1:A:3934:LEU:HD23	2.21	0.41
1:A:4490:LEU:HG	1:A:4591:CYS:SG	2.60	0.41
1:A:4505:LEU:HD22	1:A:4749:PHE:CE2	2.55	0.41
1:A:4860:ILE:HD13	1:B:4755:ILE:CG2	2.51	0.41
2:G:63:GLY:O	2:G:66:GLN:HG3	2.20	0.41
1:B:603:LYS:HA	1:B:1573:LYS:HZ1	1.86	0.41
1:B:795:SER:OG	1:B:796:ALA:N	2.54	0.41
1:B:837:SER:HB3	1:B:841:LYS:NZ	2.35	0.41
1:B:1102:TYR:O	1:B:1238:PRO:HA	2.20	0.41
1:B:1254:ARG:NH1	1:B:1254:ARG:CB	2.73	0.41
1:B:1303:ARG:HG2	1:B:1304:LEU:N	2.36	0.41
1:B:1681:VAL:HG23	1:B:1682:ASP:N	2.28	0.41
1:B:2193:ALA:HA	1:B:2236:SER:HB3	2.03	0.41
1:B:2405:MET:C	1:B:2406:HIS:HD1	2.24	0.41
1:B:3985:LEU:HD22	1:B:3988:ASN:ND2	2.35	0.41
1:B:4705:GLN:O	1:B:4709:LEU:HD23	2.21	0.41
1:B:4860:ILE:HD13	1:C:4755:ILE:CG2	2.50	0.41
2:H:63:GLY:O	2:H:66:GLN:HG3	2.20	0.41
1:C:138:SER:HB3	1:C:140:THR:HG22	2.02	0.41
1:C:227:TYR:CD2	1:C:352:SER:HB2	2.55	0.41
1:C:343:ARG:HH21	1:C:345:GLU:H	1.69	0.41
1:C:721:ASP:OD1	1:C:724:SER:HB2	2.21	0.41
1:C:1097:LYS:HZ2	1:C:1197:VAL:HG22	1.86	0.41
1:C:1591:PHE:CZ	1:C:1593:SER:HB2	2.55	0.41
1:C:2316:ALA:O	1:C:2320:VAL:HG23	2.20	0.41
1:C:2328:GLU:HA	1:C:2335:ARG:CZ	2.51	0.41
1:C:2876:LEU:HB2	1:C:2881:LYS:HE3	2.03	0.41
1:C:4904:PHE:O	1:C:4908:THR:HG23	2.21	0.41
1:D:138:SER:HB3	1:D:140:THR:HG22	2.03	0.41
1:D:334:SER:OG	1:D:335:LYS:N	2.54	0.41
1:D:677:LEU:N	1:D:755:ILE:O	2.50	0.41
1:D:798:ILE:HD12	1:D:798:ILE:HA	1.92	0.41
1:D:1100:ARG:HB3	1:D:1236:TYR:CG	2.55	0.41
1:D:1303:ARG:HG2	1:D:1304:LEU:N	2.36	0.41
1:D:2128:LEU:HD11	1:D:2140:LEU:HB2	2.01	0.41
1:D:2250:ASN:OD1	1:D:3816:LEU:HD12	2.20	0.41
1:D:2328:GLU:HA	1:D:2335:ARG:CZ	2.51	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2405:MET:C	1:D:2406:HIS:HD1	2.24	0.41
1:D:3664:HIS:HD2	1:D:3733:ARG:O	2.03	0.41
1:D:3849:HIS:HE1	1:D:3924:GLN:HG3	1.86	0.41
1:D:3985:LEU:HD22	1:D:3988:ASN:ND2	2.35	0.41
1:D:4793:ASN:O	1:D:4795:SER:N	2.49	0.41
1:D:4904:PHE:O	1:D:4908:THR:HG23	2.21	0.41
1:A:1359:ILE:HG23	1:A:1363:LYS:HZ2	1.85	0.41
1:A:1764:PHE:HD1	1:A:1780:SER:HB2	1.86	0.41
1:A:1789:LYS:HB2	1:A:1835:PHE:CE1	2.55	0.41
1:A:2762:LEU:HD23	1:A:2762:LEU:HA	1.93	0.41
1:A:4009:VAL:O	1:A:4012:ILE:HG22	2.20	0.41
1:A:4904:PHE:O	1:A:4908:THR:HG23	2.21	0.41
1:B:1676:ALA:HB1	1:B:1680:HIS:CE1	2.56	0.41
1:B:1761:ARG:HH11	1:B:1761:ARG:CB	2.34	0.41
1:C:564:ARG:HD2	1:C:566:GLU:OE2	2.21	0.41
1:C:849:ASP:HA	1:C:1213:GLY:O	2.21	0.41
1:C:1359:ILE:HG23	1:C:1363:LYS:HZ3	1.85	0.41
1:C:1764:PHE:HD1	1:C:1780:SER:HB2	1.86	0.41
1:C:1789:LYS:HB2	1:C:1835:PHE:CE1	2.55	0.41
1:C:1970:GLU:O	1:C:1974:MET:HG2	2.21	0.41
1:C:2334:LEU:HA	1:C:2341:GLY:HA2	2.02	0.41
1:C:4183:GLU:O	1:C:4187:LEU:HG	2.21	0.41
2:I:5:ILE:HG12	2:I:66:GLN:HE21	1.86	0.41
2:I:8:ILE:HD12	2:I:72:ARG:HG2	2.02	0.41
1:D:365:HIS:CD2	1:D:367:ASP:HB3	2.56	0.41
1:D:849:ASP:HA	1:D:1213:GLY:O	2.21	0.41
1:D:888:ASN:HA	1:D:891:GLU:HG2	2.02	0.41
1:D:1571:LEU:HD23	1:D:1571:LEU:HA	1.87	0.41
1:D:1969:GLN:O	1:D:1972:ILE:HG22	2.21	0.41
1:D:2477:ILE:HG21	1:D:2483:LEU:HD13	2.01	0.41
1:D:3727:GLN:C	1:D:3731:HIS:HD1	2.23	0.41
1:D:3799:CYS:HB3	1:D:3835:THR:OG1	2.21	0.41
1:D:3802:LEU:HB2	1:D:3883:SER:OG	2.20	0.41
1:D:4183:GLU:O	1:D:4187:LEU:HG	2.21	0.41
1:D:4509:PHE:HZ	1:D:4745:ILE:HD12	1.86	0.41
1:A:332:ARG:NH1	1:A:364:GLN:OE1	2.54	0.40
1:A:450:GLU:H	1:A:450:GLU:CD	2.24	0.40
1:A:851:LEU:CB	1:A:1212:VAL:HG12	2.50	0.40
1:A:1035:TYR:CE2	1:A:1043:LYS:HD2	2.57	0.40
1:A:1088:PHE:O	1:A:1204:VAL:HA	2.21	0.40
1:A:1100:ARG:HB2	1:A:1236:TYR:HA	2.02	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1106:GLU:HG2	1:A:1161:VAL:HG12	2.02	0.40
1:A:3740:LEU:HD23	1:A:3740:LEU:HA	1.94	0.40
1:A:4126:ASN:O	1:A:4129:GLN:HG2	2.22	0.40
1:B:1680:HIS:NE2	2:H:91:VAL:HG22	2.36	0.40
1:B:1914:ASP:OD1	1:B:2089:ARG:NH2	2.48	0.40
1:B:1924:ILE:HD13	1:B:1998:PHE:CE2	2.56	0.40
1:B:2328:GLU:HA	1:B:2335:ARG:CZ	2.51	0.40
1:C:1680:HIS:NE2	2:I:91:VAL:HG22	2.36	0.40
1:C:1761:ARG:HH11	1:C:1761:ARG:CB	2.34	0.40
1:C:2290:ASN:HD22	1:C:2291:PRO:CD	2.31	0.40
1:C:3779:TYR:CE1	1:C:3783:LYS:HD2	2.56	0.40
1:C:4009:VAL:O	1:C:4012:ILE:HG22	2.20	0.40
1:C:4509:PHE:HZ	1:C:4745:ILE:HD12	1.86	0.40
1:C:4589:TYR:OH	1:C:4715:ASP:OD2	2.36	0.40
1:D:152:ASP:OD2	1:D:154:THR:OG1	2.39	0.40
1:D:227:TYR:CD2	1:D:352:SER:HB2	2.56	0.40
1:D:313:ASN:ND2	1:D:392:ILE:HA	2.36	0.40
1:A:564:ARG:O	1:A:565:LEU:HB3	2.21	0.40
1:A:888:ASN:HA	1:A:891:GLU:HG2	2.02	0.40
1:A:1680:HIS:NE2	2:G:91:VAL:HG22	2.36	0.40
1:A:2306:PHE:CD1	1:A:2400:ARG:HB3	2.57	0.40
1:A:3727:GLN:C	1:A:3731:HIS:HD1	2.23	0.40
1:A:3779:TYR:CE1	1:A:3783:LYS:HD2	2.56	0.40
1:A:4705:GLN:O	1:A:4709:LEU:HD23	2.21	0.40
1:B:891:GLU:HG3	1:B:892:LEU:HD12	2.03	0.40
1:B:1679:SER:HB3	1:B:1769:PHE:CE2	2.55	0.40
1:B:3747:LYS:HE3	1:B:3747:LYS:HB3	1.93	0.40
1:B:3799:CYS:HB3	1:B:3835:THR:OG1	2.21	0.40
1:B:4126:ASN:O	1:B:4129:GLN:HG2	2.22	0.40
1:B:4594:VAL:N	1:B:4595:PRO:HD2	2.35	0.40
1:B:4924:LEU:HD23	1:B:4924:LEU:HA	1.87	0.40
1:C:19:GLU:HB3	1:C:66:THR:CG2	2.52	0.40
1:C:332:ARG:NH1	1:C:364:GLN:OE1	2.54	0.40
1:C:1567:LEU:HD11	1:C:1579:PRO:C	2.41	0.40
1:C:4705:GLN:O	1:C:4709:LEU:HD23	2.21	0.40
1:D:449:ILE:HD13	1:D:449:ILE:HA	1.95	0.40
1:D:676:GLU:HA	1:D:756:SER:HA	2.03	0.40
1:D:839:GLU:CG	1:D:840:TYR:H	2.30	0.40
1:D:929:ARG:HA	1:D:932:ASN:HD21	1.85	0.40
1:D:1035:TYR:CE2	1:D:1043:LYS:HD2	2.57	0.40
1:D:2334:LEU:HA	1:D:2341:GLY:HA2	2.02	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2763:SER:N	1:D:2766:GLU:HB2	2.36	0.40
1:D:2855:LYS:HE3	1:D:2859:LEU:HD23	2.03	0.40
1:D:4705:GLN:O	1:D:4709:LEU:HD23	2.21	0.40
1:A:313:ASN:ND2	1:A:392:ILE:HA	2.36	0.40
1:A:892:LEU:HD22	1:A:1052:GLU:HG2	2.03	0.40
1:A:1303:ARG:HG2	1:A:1304:LEU:N	2.36	0.40
1:A:1567:LEU:HD11	1:A:1579:PRO:C	2.41	0.40
1:A:2763:SER:N	1:A:2766:GLU:HB2	2.36	0.40
1:A:4509:PHE:HZ	1:A:4745:ILE:HD12	1.86	0.40
2:G:5:ILE:HG12	2:G:66:GLN:HE21	1.86	0.40
1:B:564:ARG:HD2	1:B:566:GLU:OE2	2.21	0.40
1:B:631:LEU:HD23	1:B:631:LEU:HA	1.92	0.40
1:B:713:TRP:NE1	1:B:841:LYS:HG2	2.37	0.40
1:B:900:LEU:HD23	1:B:902:TRP:NE1	2.36	0.40
1:B:1719:ARG:CZ	1:B:1759:ARG:HE	2.34	0.40
1:B:2876:LEU:HB2	1:B:2881:LYS:HE3	2.03	0.40
1:B:4070:GLU:OE1	1:B:4070:GLU:N	2.51	0.40
1:C:696:GLY:HA3	1:C:726:GLY:HA2	2.03	0.40
1:C:1245:ARG:NH1	1:C:1809:ASP:O	2.46	0.40
1:C:2348:GLU:HA	1:C:2351:LYS:HG2	2.03	0.40
1:C:2385:ASN:ND2	1:C:2458:GLY:O	2.48	0.40
1:C:2762:LEU:HD23	1:C:2762:LEU:HA	1.93	0.40
1:C:3612:ARG:O	1:C:3612:ARG:NH1	2.51	0.40
1:C:4081:GLU:HG3	1:C:4085:ARG:HE	1.87	0.40
1:C:4135:ILE:O	1:C:4147:VAL:HG12	2.22	0.40
2:I:27:TYR:O	2:I:40:SER:N	2.45	0.40
1:D:19:GLU:HB3	1:D:66:THR:CG2	2.52	0.40
1:D:892:LEU:HD22	1:D:1052:GLU:HG2	2.03	0.40
1:D:1106:GLU:HG2	1:D:1161:VAL:HG12	2.02	0.40
1:D:2065:MET:HE1	1:D:2083:MET:HB3	2.02	0.40
1:D:2155:TYR:HE1	1:D:2201:TYR:HH	1.69	0.40
1:D:2282:LYS:HA	1:D:2282:LYS:HD2	1.86	0.40
1:D:4081:GLU:HG3	1:D:4085:ARG:HE	1.87	0.40
1:A:343:ARG:HH21	1:A:345:GLU:H	1.69	0.40
1:A:2348:GLU:HA	1:A:2351:LYS:HG2	2.03	0.40
1:A:3849:HIS:HE1	1:A:3924:GLN:HG3	1.86	0.40
1:A:3954:GLN:HB3	1:A:4015:PHE:CE2	2.57	0.40
1:A:4789:ARG:NE	1:A:4805:CYS:SG	2.87	0.40
1:B:227:TYR:CD2	1:B:352:SER:HB2	2.55	0.40
1:B:2855:LYS:HE3	1:B:2859:LEU:HD23	2.04	0.40
1:B:4039:LYS:HB2	1:B:4039:LYS:HE2	1.88	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4135:ILE:O	1:B:4147:VAL:HG12	2.22	0.40
1:B:4904:PHE:O	1:B:4908:THR:HG23	2.21	0.40
1:C:467:ASP:OD1	1:C:468:GLU:N	2.53	0.40
1:C:713:TRP:NE1	1:C:841:LYS:HG2	2.37	0.40
1:C:1727:ILE:HD12	1:C:2119:LEU:HD11	2.04	0.40
1:C:2105:TYR:CG	1:C:2160:LEU:HD13	2.57	0.40
1:D:564:ARG:O	1:D:565:LEU:HB3	2.21	0.40
1:D:564:ARG:HD2	1:D:566:GLU:OE2	2.21	0.40
1:D:837:SER:HB3	1:D:841:LYS:NZ	2.35	0.40
1:D:946:LEU:HD23	1:D:946:LEU:HA	1.91	0.40
1:D:1719:ARG:CZ	1:D:1759:ARG:HE	2.34	0.40
1:D:1970:GLU:O	1:D:1974:MET:HG2	2.21	0.40
1:D:2105:TYR:CG	1:D:2160:LEU:HD13	2.57	0.40
1:D:2289:TRP:CH2	1:D:2387:ILE:HD12	2.57	0.40
1:D:3930:ASN:O	1:D:3934:LEU:HD23	2.21	0.40
2:J:5:ILE:HG12	2:J:66:GLN:HE21	1.86	0.40
1:A:334:SER:OG	1:A:335:LYS:N	2.54	0.40
1:A:1938:ASN:ND2	1:A:1988:PRO:HB3	2.36	0.40
1:A:1970:GLU:O	1:A:1974:MET:HG2	2.21	0.40
1:A:2855:LYS:HE3	1:A:2859:LEU:HD23	2.04	0.40
1:A:3799:CYS:HB3	1:A:3835:THR:OG1	2.21	0.40
1:A:4183:GLU:O	1:A:4187:LEU:HG	2.21	0.40
1:A:4194:ASP:OD2	1:A:4600:LYS:NZ	2.47	0.40
1:B:849:ASP:HA	1:B:1213:GLY:O	2.21	0.40
1:B:1035:TYR:CE2	1:B:1043:LYS:HD2	2.57	0.40
1:B:3779:TYR:CE1	1:B:3783:LYS:HD2	2.56	0.40
1:B:3849:HIS:HE1	1:B:3924:GLN:HG3	1.86	0.40
1:C:334:SER:OG	1:C:335:LYS:N	2.54	0.40
1:C:888:ASN:HA	1:C:891:GLU:HG2	2.02	0.40
1:C:2855:LYS:HE3	1:C:2859:LEU:HD23	2.04	0.40
2:I:104:LEU:HD21	2:I:107:LEU:HB2	2.04	0.40
1:D:1088:PHE:O	1:D:1204:VAL:HA	2.21	0.40
1:D:1680:HIS:NE2	2:J:91:VAL:HG22	2.36	0.40
1:D:1730:MET:SD	1:D:2106:THR:OG1	2.77	0.40
1:D:1924:ILE:HD13	1:D:1998:PHE:CE2	2.56	0.40
1:D:2306:PHE:CD1	1:D:2400:ARG:HB3	2.57	0.40
1:D:2352:ILE:HG23	1:D:2358:ARG:HB3	2.04	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

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

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

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

There are no Ramachandran outliers to report.

5.3.2 Protein sidechains (i)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	2861/3386 (84%)	2847 (100%)	14 (0%)	88	94
1	B	2861/3386 (84%)	2847 (100%)	14 (0%)	88	94
1	C	2861/3386 (84%)	2847 (100%)	14 (0%)	88	94
1	D	2861/3386 (84%)	2847 (100%)	14 (0%)	88	94
2	G	88/140 (63%)	86 (98%)	2 (2%)	50	72
2	H	88/140 (63%)	86 (98%)	2 (2%)	50	72

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
2	I	88/140 (63%)	86 (98%)	2 (2%)	50 72
2	J	88/140 (63%)	86 (98%)	2 (2%)	50 72
All	All	11796/14104 (84%)	11732 (100%)	64 (0%)	89 94

All (64) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	296	ARG
1	A	1028	ARG
1	A	1253	LYS
1	A	1254	ARG
1	A	1370	PHE
1	A	2302	ARG
1	A	2321	ARG
1	A	2464	LYS
1	A	2735	LYS
1	A	2771	ARG
1	A	2893	LYS
1	A	3924	GLN
1	A	4049	LYS
1	A	4112	THR
2	G	9	SER
2	G	18	LYS
1	B	296	ARG
1	B	1028	ARG
1	B	1253	LYS
1	B	1254	ARG
1	B	1370	PHE
1	B	2302	ARG
1	B	2321	ARG
1	B	2464	LYS
1	B	2735	LYS
1	B	2771	ARG
1	B	2893	LYS
1	B	3924	GLN
1	B	4049	LYS
1	B	4112	THR
2	H	9	SER
2	H	18	LYS
1	C	296	ARG
1	C	1028	ARG

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	C	1253	LYS
1	C	1254	ARG
1	C	1370	PHE
1	C	2302	ARG
1	C	2321	ARG
1	C	2464	LYS
1	C	2735	LYS
1	C	2771	ARG
1	C	2893	LYS
1	C	3924	GLN
1	C	4049	LYS
1	C	4112	THR
2	I	9	SER
2	I	18	LYS
1	D	296	ARG
1	D	1028	ARG
1	D	1253	LYS
1	D	1254	ARG
1	D	1370	PHE
1	D	2302	ARG
1	D	2321	ARG
1	D	2464	LYS
1	D	2735	LYS
1	D	2771	ARG
1	D	2893	LYS
1	D	3924	GLN
1	D	4049	LYS
1	D	4112	THR
2	J	9	SER
2	J	18	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (60) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	150	GLN
1	A	1002	ASN
1	A	1046	ASN
1	A	1265	HIS
1	A	1287	GLN
1	A	1621	GLN
1	A	1685	GLN
1	A	1744	ASN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	3633	HIS
1	A	3860	GLN
1	A	3924	GLN
1	A	3954	GLN
1	A	3974	GLN
2	G	26	HIS
1	B	150	GLN
1	B	299	HIS
1	B	1002	ASN
1	B	1046	ASN
1	B	1265	HIS
1	B	1287	GLN
1	B	1621	GLN
1	B	1685	GLN
1	B	1744	ASN
1	B	2156	GLN
1	B	3633	HIS
1	B	3860	GLN
1	B	3924	GLN
1	B	3954	GLN
1	B	3974	GLN
2	H	26	HIS
1	C	150	GLN
1	C	299	HIS
1	C	1002	ASN
1	C	1046	ASN
1	C	1265	HIS
1	C	1287	GLN
1	C	1621	GLN
1	C	1685	GLN
1	C	1744	ASN
1	C	3633	HIS
1	C	3860	GLN
1	C	3924	GLN
1	C	3954	GLN
1	C	3974	GLN
2	I	26	HIS
1	D	150	GLN
1	D	299	HIS
1	D	1002	ASN
1	D	1046	ASN
1	D	1265	HIS

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	D	1287	GLN
1	D	1621	GLN
1	D	1685	GLN
1	D	1744	ASN
1	D	3633	HIS
1	D	3860	GLN
1	D	3924	GLN
1	D	3954	GLN
1	D	3974	GLN
2	J	26	HIS

5.3.3 RNA

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates

There are no 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

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

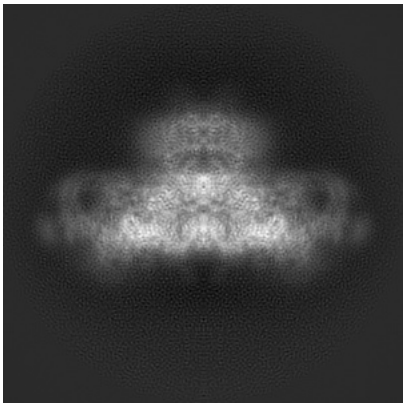
6 Map visualisation

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

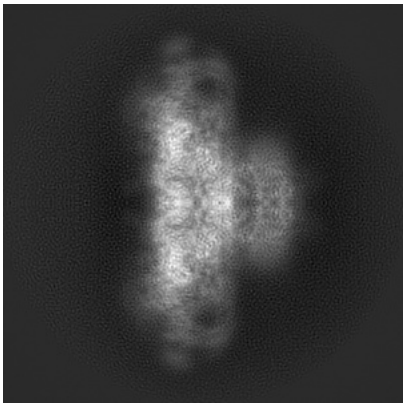
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections

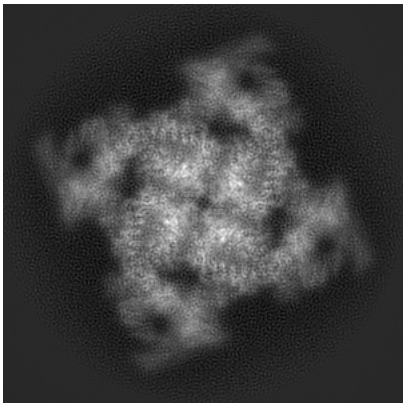
6.1.1 Primary map



X



Y

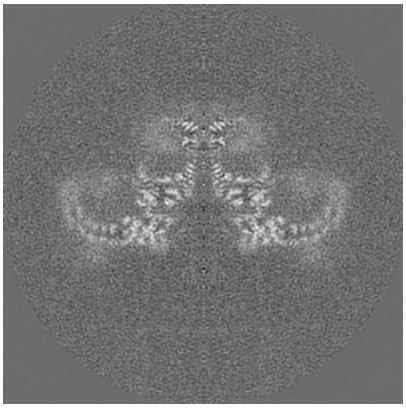


Z

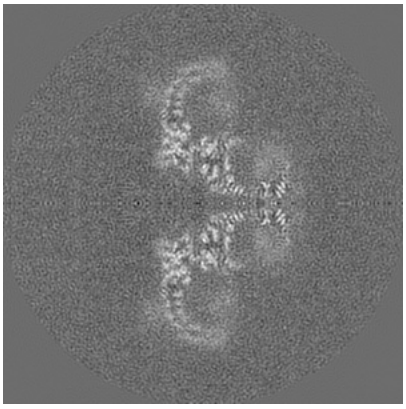
The images above show the map projected in three orthogonal directions.

6.2 Central slices

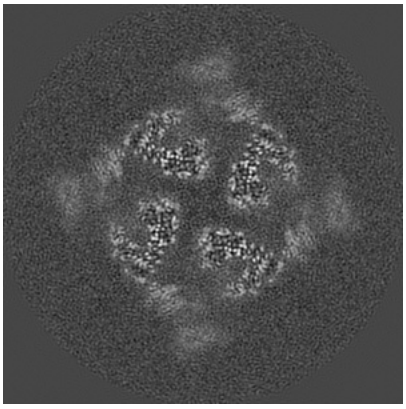
6.2.1 Primary map



X Index: 160



Y Index: 160

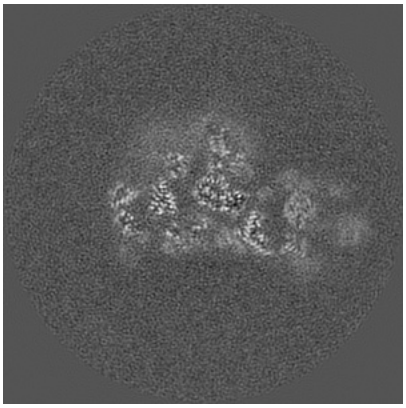


Z Index: 160

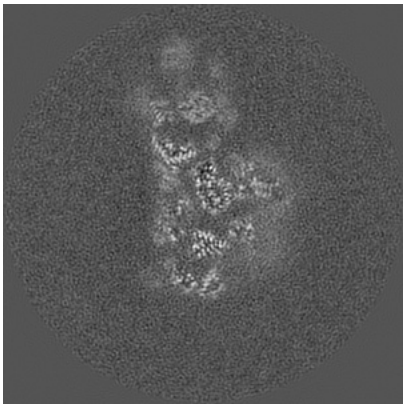
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

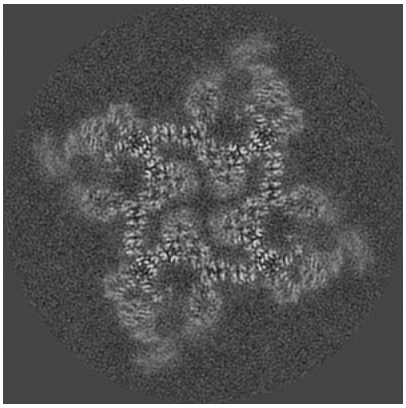
6.3.1 Primary map



X Index: 189



Y Index: 131



Z Index: 136

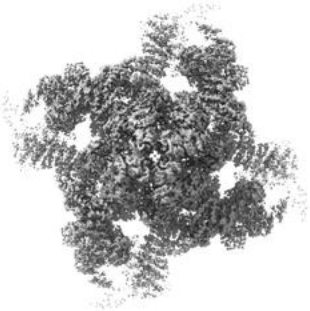
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal 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 0.034. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

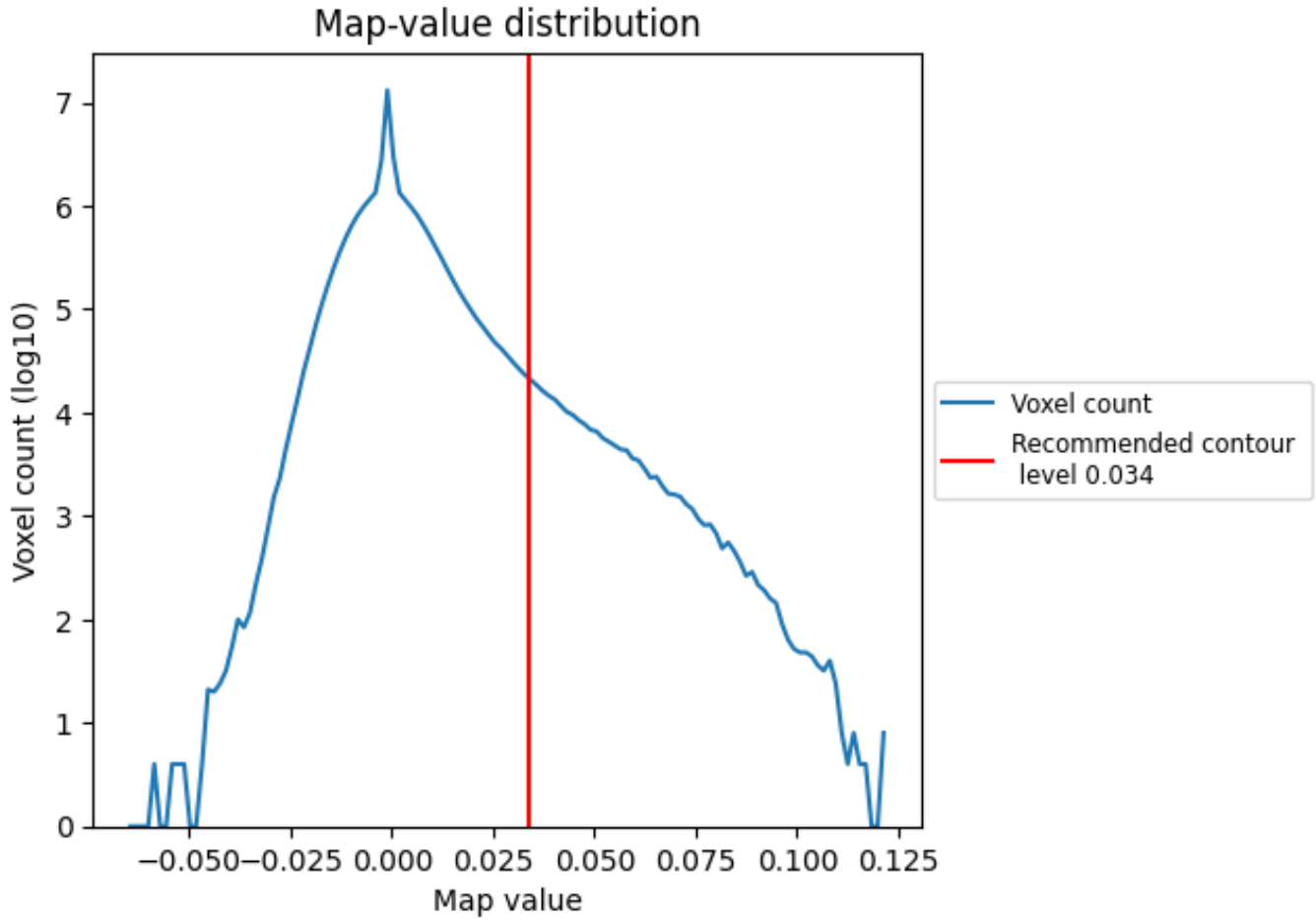
6.5 Mask visualisation (i)

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

7 Map analysis

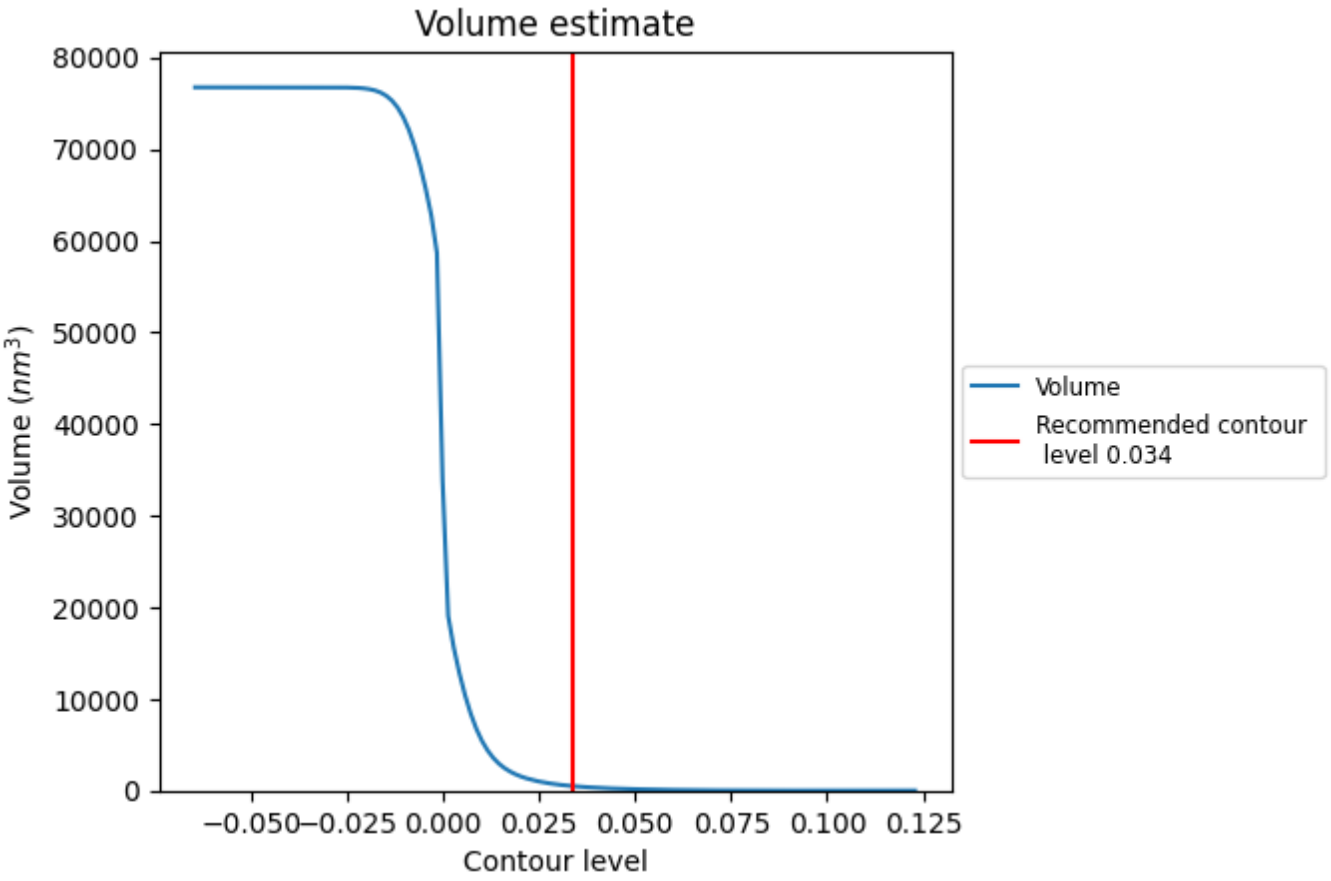
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

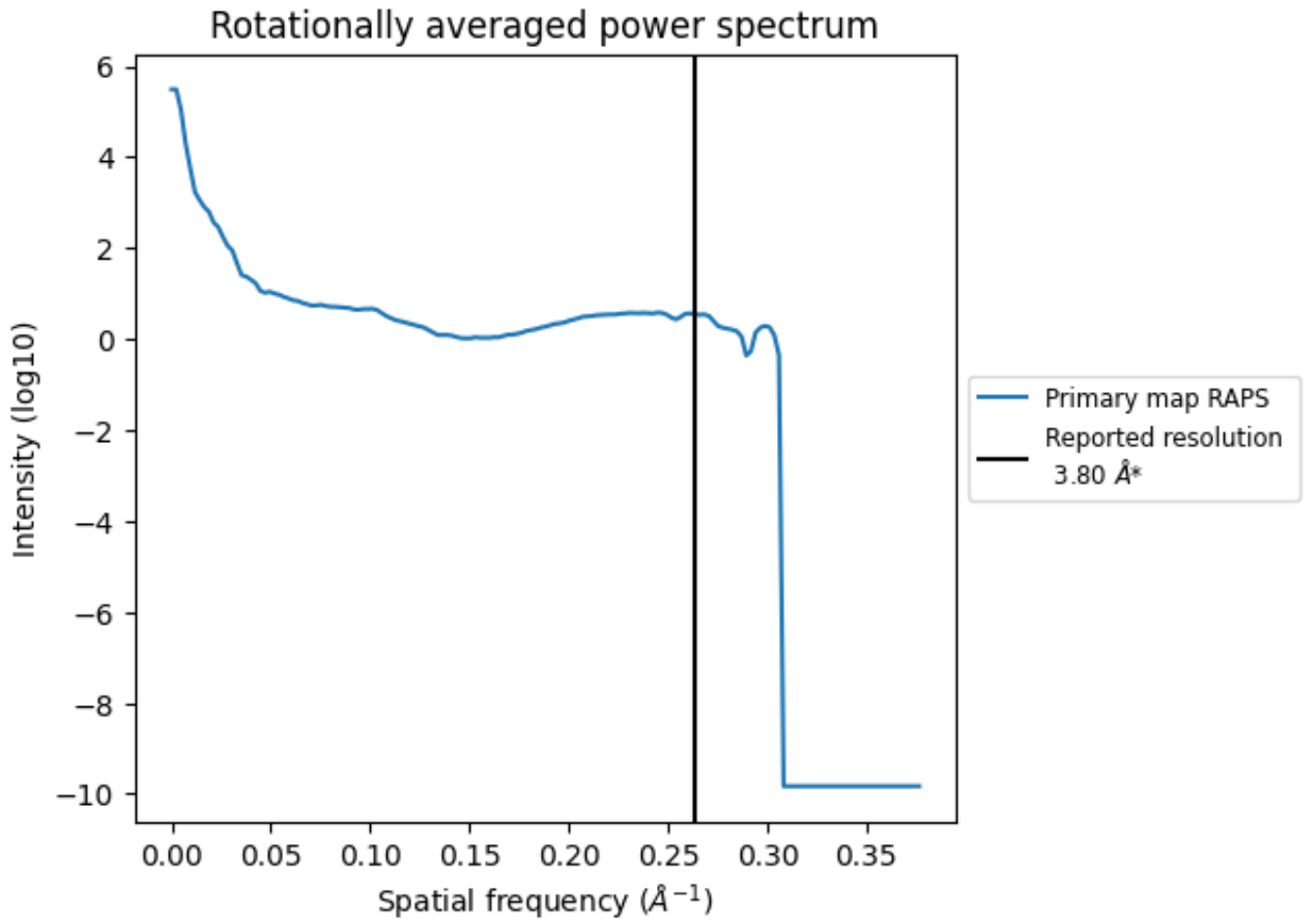
7.2 Volume estimate



The volume at the recommended contour level is 478 nm^3; this corresponds to an approximate mass of 432 kDa.

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

7.3 Rotationally averaged power spectrum (i)



*Reported resolution corresponds to spatial frequency of 0.263 Å^{-1}

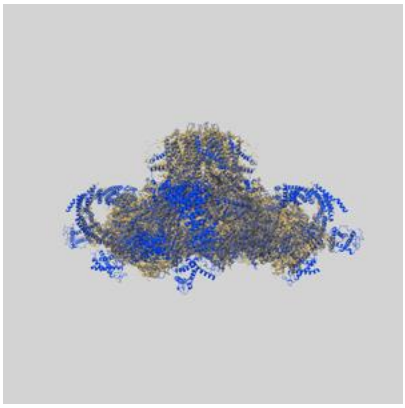
8 Fourier-Shell correlation

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

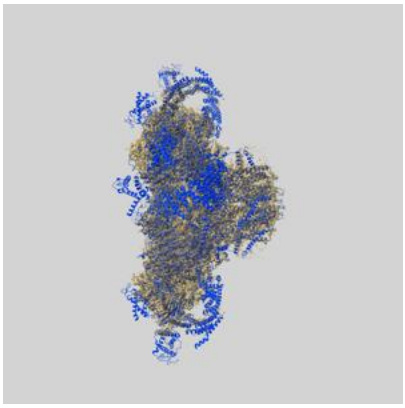
9 Map-model fit

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

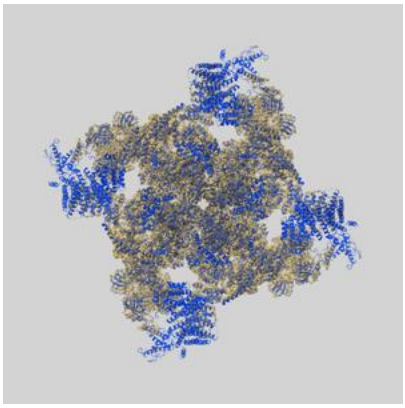
9.1 Map-model overlay



X



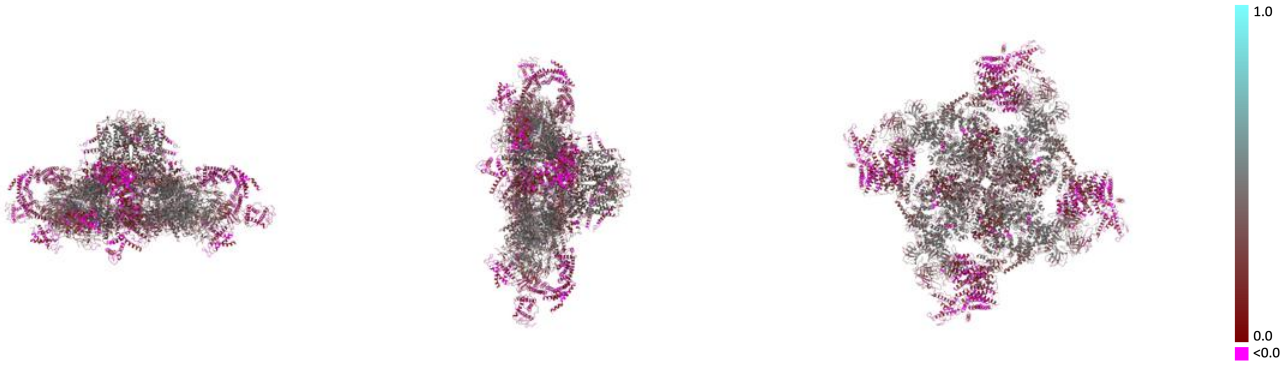
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.034 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

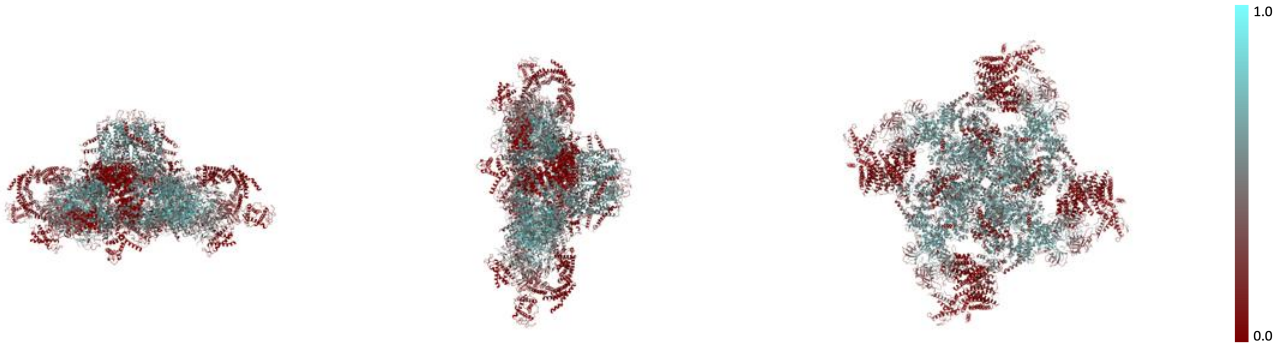
9.2 Q-score mapped to coordinate model (i)



X Y Z

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

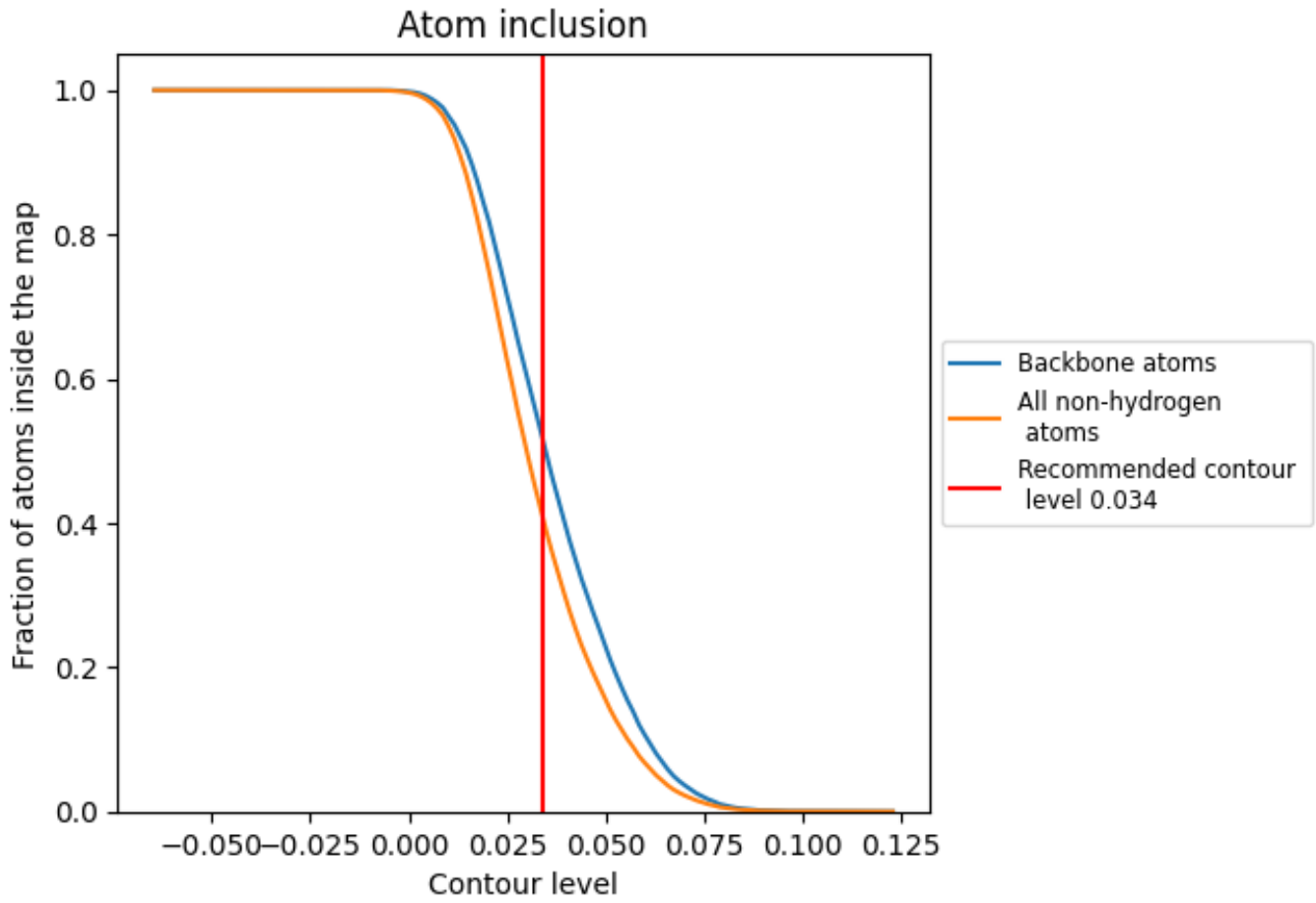
9.3 Atom inclusion mapped to coordinate model (i)



X Y Z

The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.034).

9.4 Atom inclusion (i)



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

9.5 Map-model fit summary

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

Chain	Atom inclusion	Q-score
All	0.4073	0.2990
A	0.4075	0.2980
B	0.4067	0.2980
C	0.4071	0.2970
D	0.4071	0.2980
G	0.4164	0.3720
H	0.4176	0.3690
I	0.4151	0.3670
J	0.4164	0.3690