Full wwPDB EM Validation Report ⓘ

Jun 11, 2024 – 08:06 PM JST

PDB ID	:	7VMR
EMDB ID	:	EMD-32036
Title	:	Structure of recombinant RyR2 mutant K4593A (EGTA dataset)
Authors	:	Kobayashi, T.; Tsutsumi, A.; Kurebayashi, N.; Kodama, M.; Kikkawa, M.; Murayama, T.; Ogawa, H.
Deposited on	:	2021-10-09
Resolution	:	3.30 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:

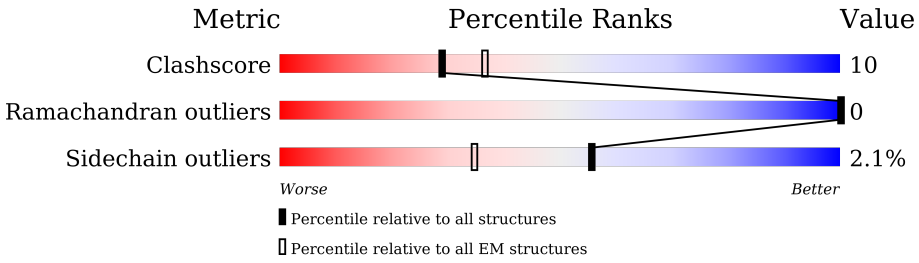
EMDB validation analysis	:	0.0.1.dev92
MolProbity	:	4.02b-467
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.36.2

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 3.30 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	34% 64% 16% · 19%
1	B	4966	35% 64% 16% · 19%
1	C	4966	35% 65% 16% · 19%
1	D	4966	35% 64% 16% · 19%
2	G	176	19% 41% 18% · 39%
2	H	176	19% 40% 19% · 39%
2	I	176	18% 38% 21% · 39%
2	J	176	18% 42% 17% · 39%

2 Entry composition (i)

There are 3 unique types of molecules in this entry. The entry contains 123548 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).

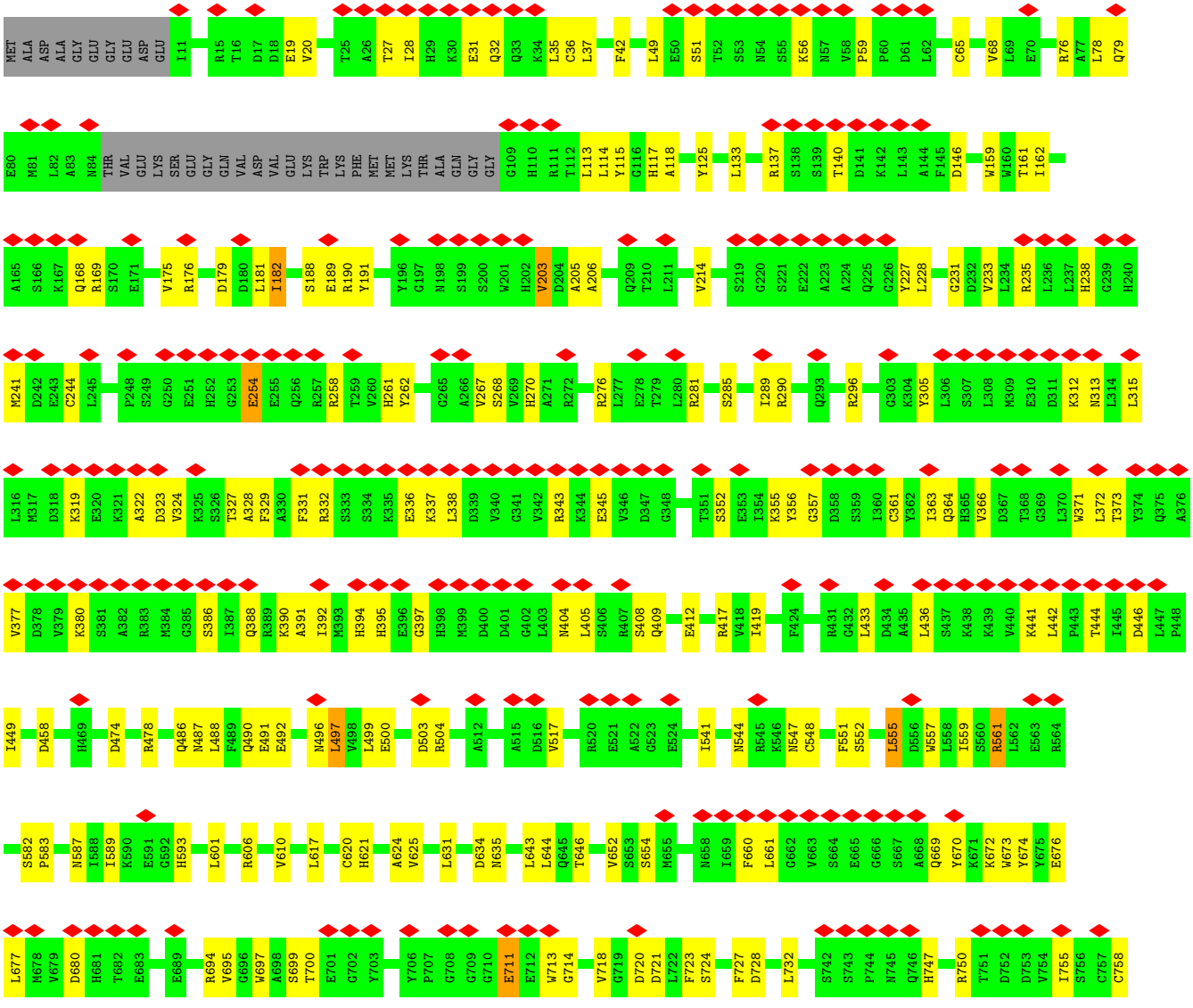
Mol	Chain	Residues	Atoms	AltConf
3	A	1	Total Zn 1 1	0
3	B	1	Total Zn 1 1	0
3	C	1	Total Zn 1 1	0
3	D	1	Total Zn 1 1	0

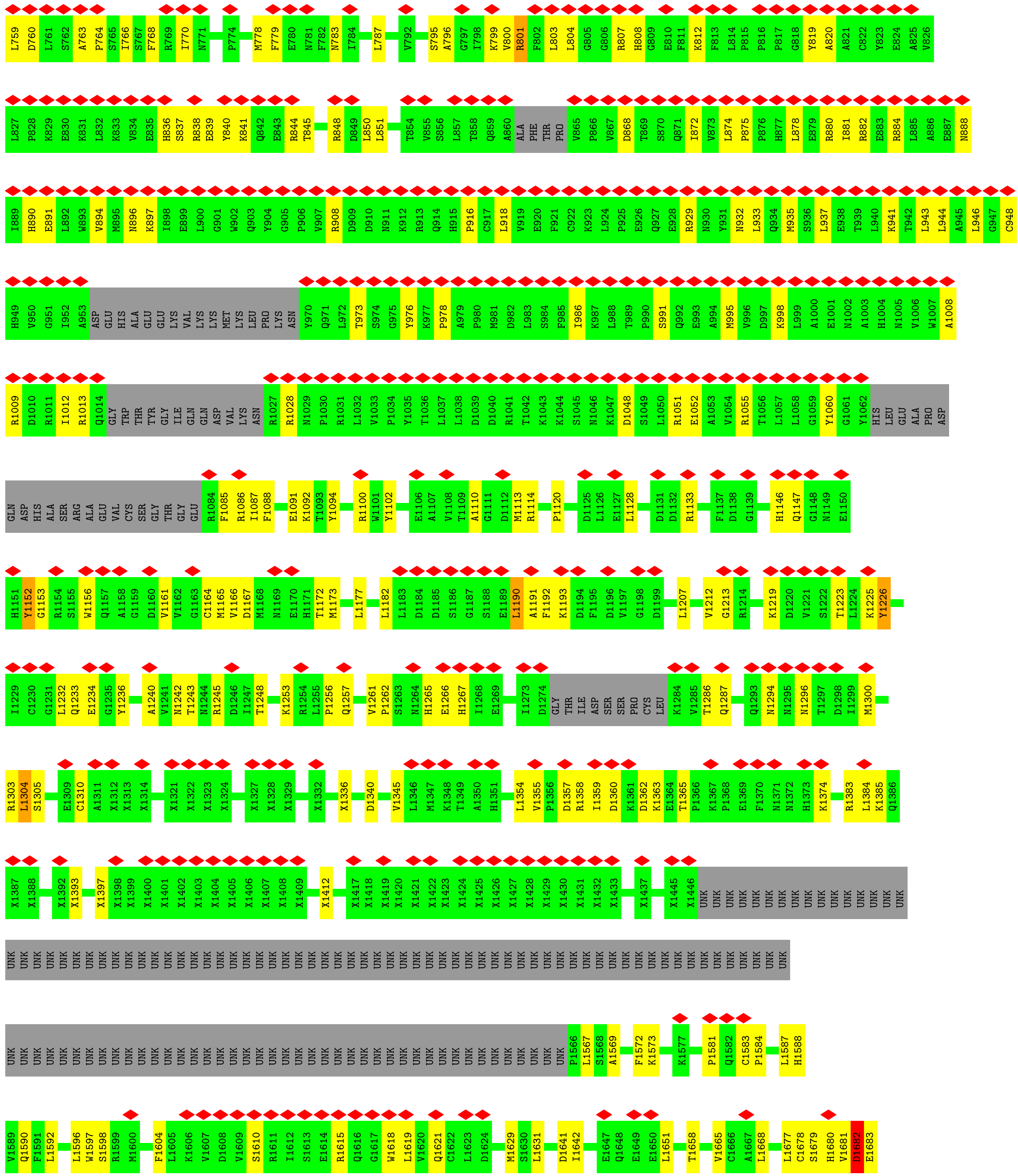
3 Residue-property plots (i)

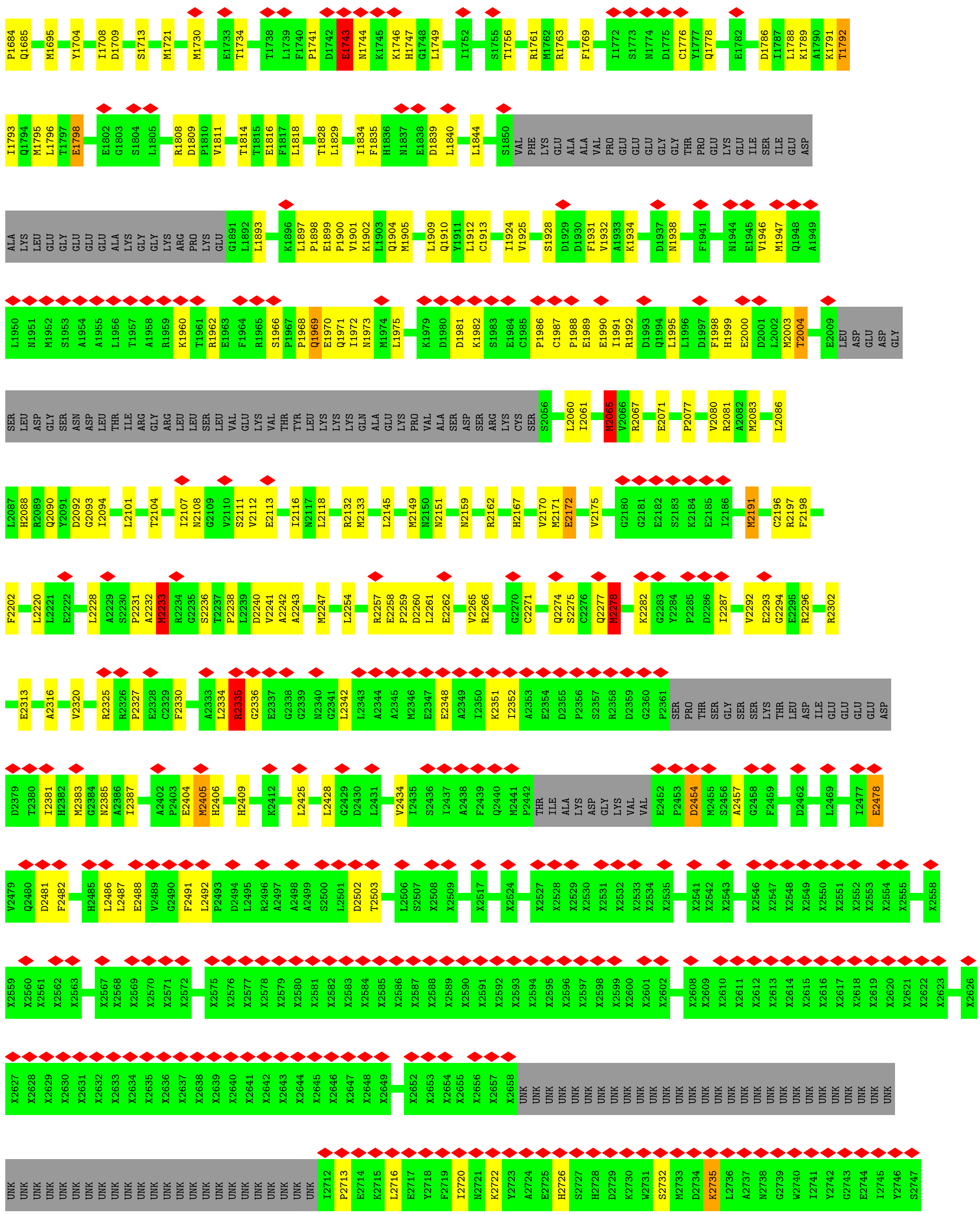
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion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

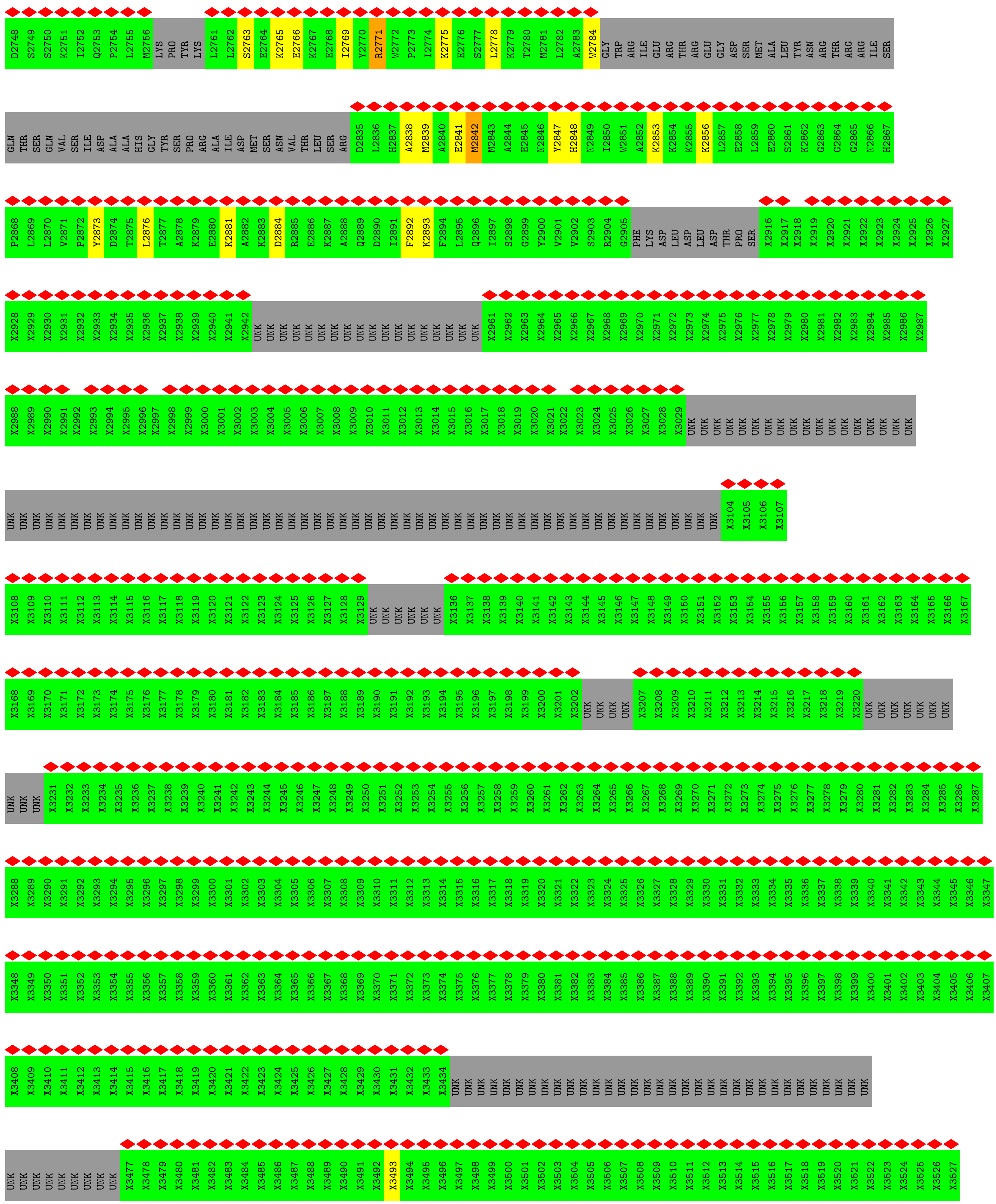
- Molecule 1: Ryanodine receptor 2

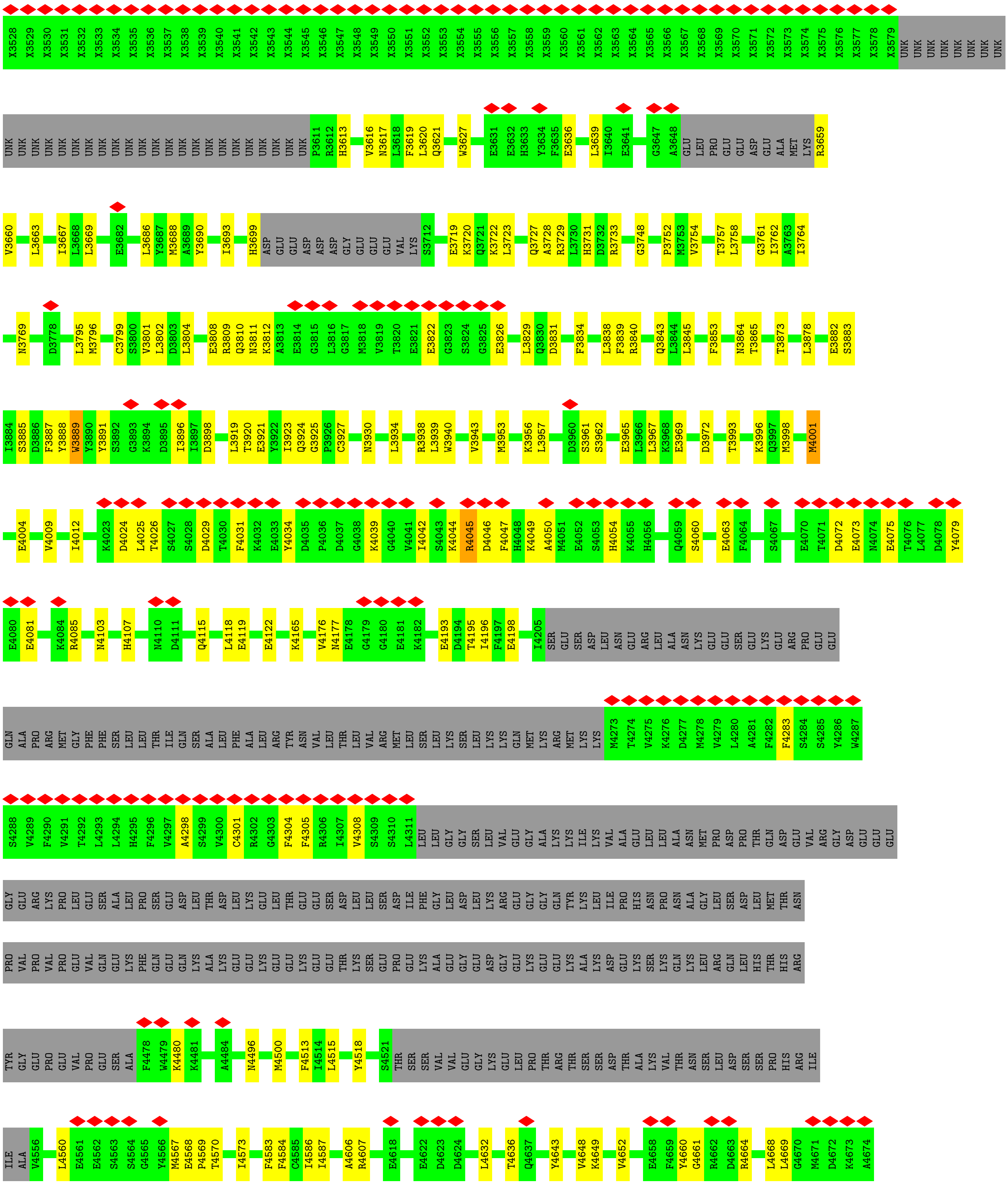
Chain A:

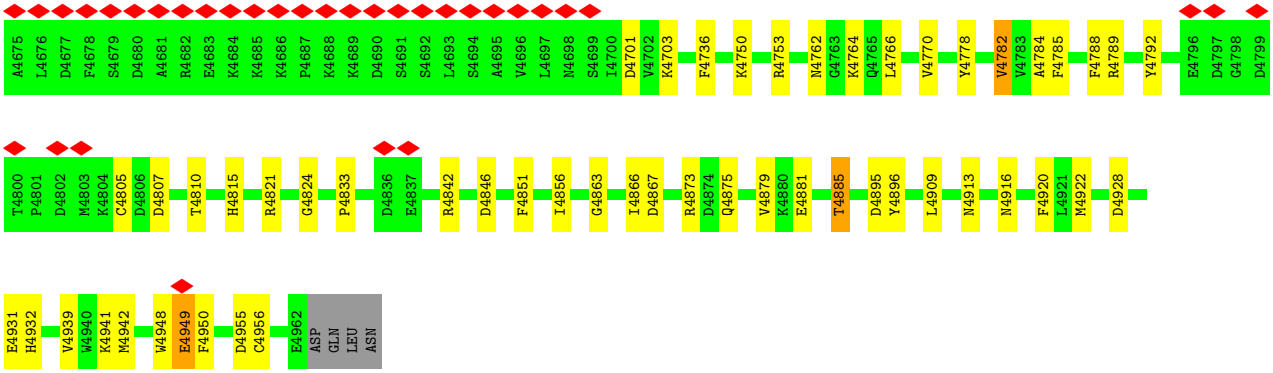



L759 D760 L761 S762 A763 P764 S765 I766 S767 F768 R769 I770 N771 P774 M778 F779 E780 N781 F782 N783 I784 L787 V792 S795 A796 G797 I798 K799 V800 R801 F802 L803 L804 G805 G806 R807 H808 G809 E810 F811 K812 F813 L814 P815 P816 P817 G818 Y819 A820 A821 C822 Y823 E824 A825 V826
L827 P828 K829 E830 K831 L832 K833 V834 E835 H836 S837 R838 E839 Y840 K841 Q842 E843 R844 T845 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 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 F1085 R1086 I1087 F1088 E1091 K1092 T1093 Y1094 R1100 W1101 Y1102 E1106 A1107 V1108 T1109 A1110 G1111 D1112 M1113 R1114 P1120 D1125 L1126 E1127 L1128 D1131 D1132 R1133 F1137 D1138 G1139 H1146 Q1147 G1148 N1149 E1150
H1151 Y1152 G1153 R1154 S1155 W1156 Q1157 A1158 G1159 D1160 V1161 V1162 G1163 C1164 M1165 V1166 D1167 M1168 N1169 E1170 H1171 T1172 M1173 L1177 L1182 L1183 D1184 D1185 S1186 G1187 S1188 E1189 L1190 A1191 F1192 K1193 D1194 F1195 D1196 V1197 G1198 D1199 L1207 V1212 G1213 R1214 K1219 D1220 V1221 S1222 T1223 L1224 K1225 Y1226
I1229 C1230 G1231 L1232 Q1233 E1234 G1235 Y1236 A1240 V1241 N1242 T1243 N1244 R1245 D1246 I1247 T1248 K1253 R1254 L1255 P1256 Q1257 V1261 P1262 S1263 N1264 H1265 E1266 H1267 I1268 E1269 I1273 D1274 GLY THR ILE ASP SER SER PRO CYS LEU K1284 V1285 T1286 Q1287 Q1293 N1294 N1295 N1296 T1297 D1298 I1299 M1300
R1303 L1304 S1305 E1309 C1310 A1311 X1312 X1313 X1314 X1321 X1322 X1323 X1324 X1327 X1328 X1329 X1332 X1336 D1340 V1345 L1346 M1347 K1348 T1349 A1350 H1351 L1354 V1355 P1356 D1357 R1358 I1359 D1360 K1361 D1362 K1363 E1364 T1365 P1366 K1367 P1368 E1369 F1370 N1371 N1372 H1373 K1374 R1383 L1384 K1385 Q1386
X1387 X1388 X1392 X1393 X1397 X1398 X1399 X1400 X1401 X1402 X1403 X1404 X1405 X1406 X1407 X1408 X1409 X1412 X1417 X1418 X1419 X1420 X1421 X1422 X1423 X1424 X1425 X1426 X1427 X1428 X1429 X1430 X1431 X1432 X1433 X1437 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 S1568 A1569 F1572 K1573 K1577 P1581 Q1582 C1583 P1584 L1587 H1588
V1589 Q1590 F1591 L1592 L1596 W1597 S1598 R1599 M1600 F1604 L1605 K1606 V1607 D1608 V1609 S1610 R1611 I1612 S1613 E1614 R1615 Q1616 G1617 W1618 L1619 V1620 Q1621 C1622 L1623 D1624 M1629 S1630 L1631 D1641 I1642 E1647 Q1648 E1649 E1650 L1651 T1658 V1665 C1666 A1667 L1668 L1677 C1678 S1679 H1680 V1681 D1682 E1683


P1684 Q1685 M1695 Y1704 I1708 D1709 S1713 M1721 M1730 E1733 T1734 T1738 L1739 F1740 P1741 D1742 E1743 N1744 K1745 K1746 H1747 G1748 L1749 I1752 S1755 T1756 R1761 M1762 R1763 F1769 I1772 S1773 N1774 D1775 C1776 Y1777 Q1778 E1782 D1786 I1787 L1788 K1789 A1790 K1791 T1792
I1793 Q1794 M1795 L1796 T1797 E1798 E1802 G1803 S1804 L1805 R1808 D1809 P1810 V1811 T1814 T1815 E1816 F1817 L1818 T1828 L1829 I1834 F1835 H1836 N1837 E1838 D1839 L1840 L1844 S1850 VAL PHE LYS GLU ALA ALA VAL PRO GLU GLU GLU GLY GLY THR PRO GLU LYS GLU ILE SER ILE GLU ASP
ALA LYS LEU GLU GLY GLU GLU GLU ALA LYS GLY GLY LYS ARG PRO LYS GLU G1891 L1892 L1893 K1896 L1897 P1898 E1899 P1900 V1901 K1902 L1903 Q1904 M1905 L1909 Q1910 Y1911 L1912 C1913 I1924 V1925 S1928 D1929 D1930 F1931 V1932 A1933 K1934 D1937 N1938 F1941 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 L1996 D1997 F1998 H1999 E2000 D2001 L2002 M2003 T2004 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 L2060 I2061 M2065 V2066 R2067 E2071 P2077 V2080 R2081 A2082 M2083 L2086
L2087 H2088 R2089 Q2090 Y2091 D2092 G2093 I2094 L2101 T2104 I2107 N2108 G2109 V2110 S2111 V2112 E2113 I2116 N2117 L2118 R2132 M2133 L2145 M2149 N2150 N2151 N2159 R2162 H2167 V2170 M2171 E2172 V2175 G2180 G2181 E2182 S2183 K2184 E2185 I2186 M2191 C2196 R2197 F2198
F2202 L2220 L2221 E2222 L2228 A2229 S2230 P2231 A2232 M2233 R2234 G2235 S2236 T2237 P2238 L2239 D2240 V2241 A2242 A2243 M2247 L2254 R2257 E2258 P2259 D2260 L2261 E2262 V2265 R2266 G2270 C2271 Q2274 S2275 C2276 Q2277 M2278 K2282 G2283 Y2284 P2285 D2286 I2287 V2292 E2293 G2294 E2295 R2296 R2302
E2313 A2316 V2320 R2325 R2326 P2327 E2328 C2329 F2330 A2333 L2334 R2335 G2336 E2337 G2338 G2339 N2340 G2341 L2342 L2343 A2344 A2345 M2346 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 A2402 P2403 E2404 M2405 H2406 H2409 K2412 L2425 L2428 G2429 D2430 L2431 V2434 I2435 S2436 I2437 A2438 F2439 Q2440 M2441 P2442 THR ILE ALA LYS ASP GLY LYS VAL VAL E2452 P2453 D2454 M2455 S2456 A2457 G2458 F2459 D2462 L2469 I2477 E2478
V2479 Q2480 D2481 F2482 H2485 L2486 L2487 E2488 V2489 G2490 F2491 L2492 P2493 D2494 L2495 R2496 A2497 A2498 A2499 S2500 L2501 D2502 T2503 L2506 S2507 X2508 X2509 X2517 X2524 X2527 X2528 X2529 X2530 X2531 X2532 X2533 X2534 X2535 X2541 X2542 X2543 X2546 X2547 X2548 X2549 X2550 X2551 X2552 X2553 X2554 X2555 X2558
X2559 X2560 X2561 X2562 X2563 X2567 X2568 X2569 X2570 X2571 X2572 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 X2608 X2609 X2610 X2611 X2612 X2613 X2614 X2615 X2616 X2617 X2618 X2619 X2620 X2621 X2622 X2623 X2626
X2627 X2628 X2629 X2630 X2631 X2632 X2633 X2634 X2635 X2636 X2637 X2638 X2639 X2640 X2641 X2642 X2643 X2644 X2645 X2646 X2647 X2648 X2649 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

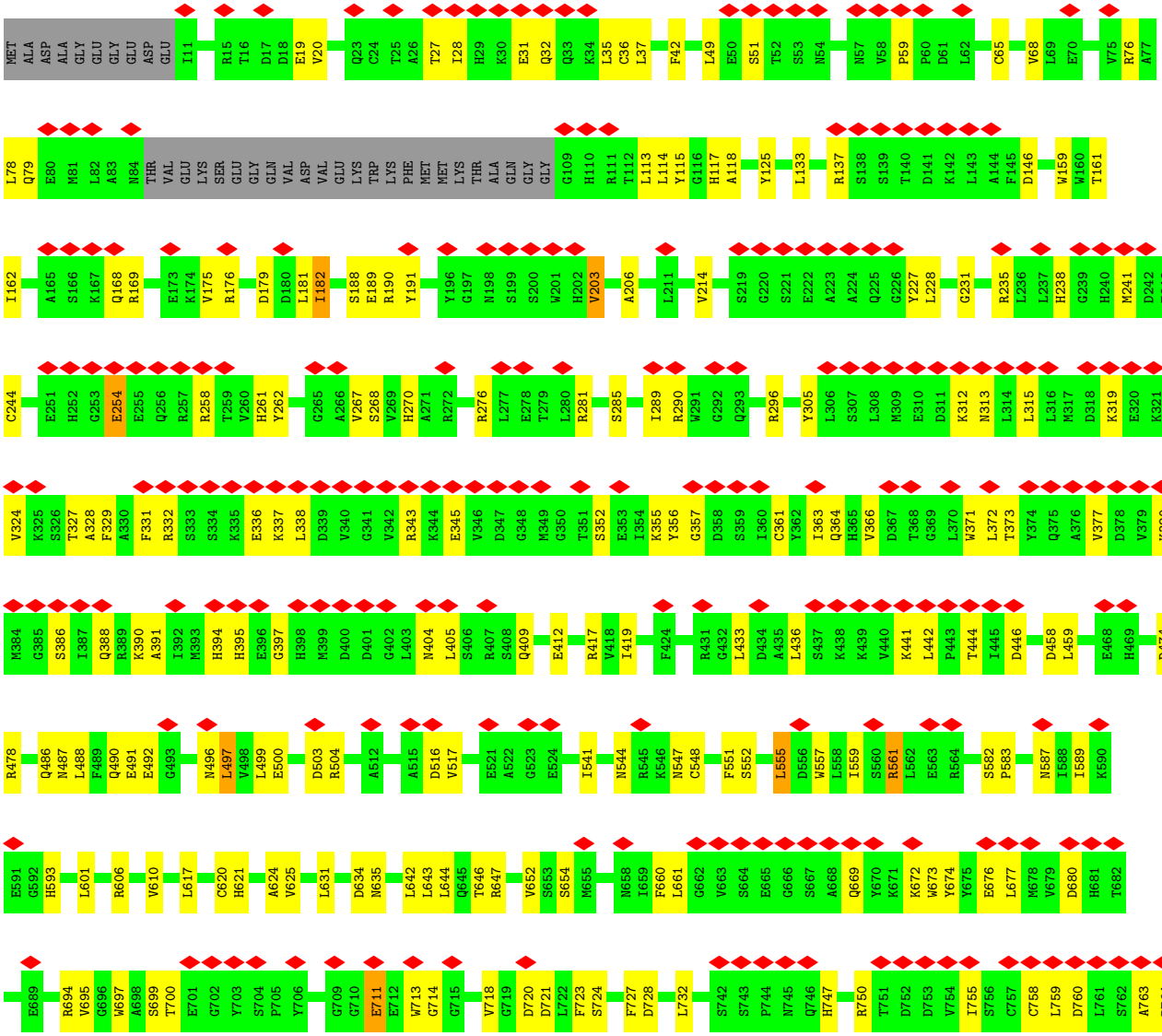

D2748 S2749 S2750 K2751 I2752 Q2753 P2754 L2755 M2756 LYS PRO TYR LYS L2761 L2762 S2763 E2764 K2765 E2766 K2767 E2768 I2769 Y2770 R2771 W2772 P2773 I2774 K2775 E2776 S2777 L2778 K2779 T2780 M2781 L2782 A2783 W2784 GLY TRP ARG ILE GLU ARG THR ARG GLU GLY ASP SER MET ALA LEU TYR ASN ARG THR ARG ARG ILE 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 X2978 X2979 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

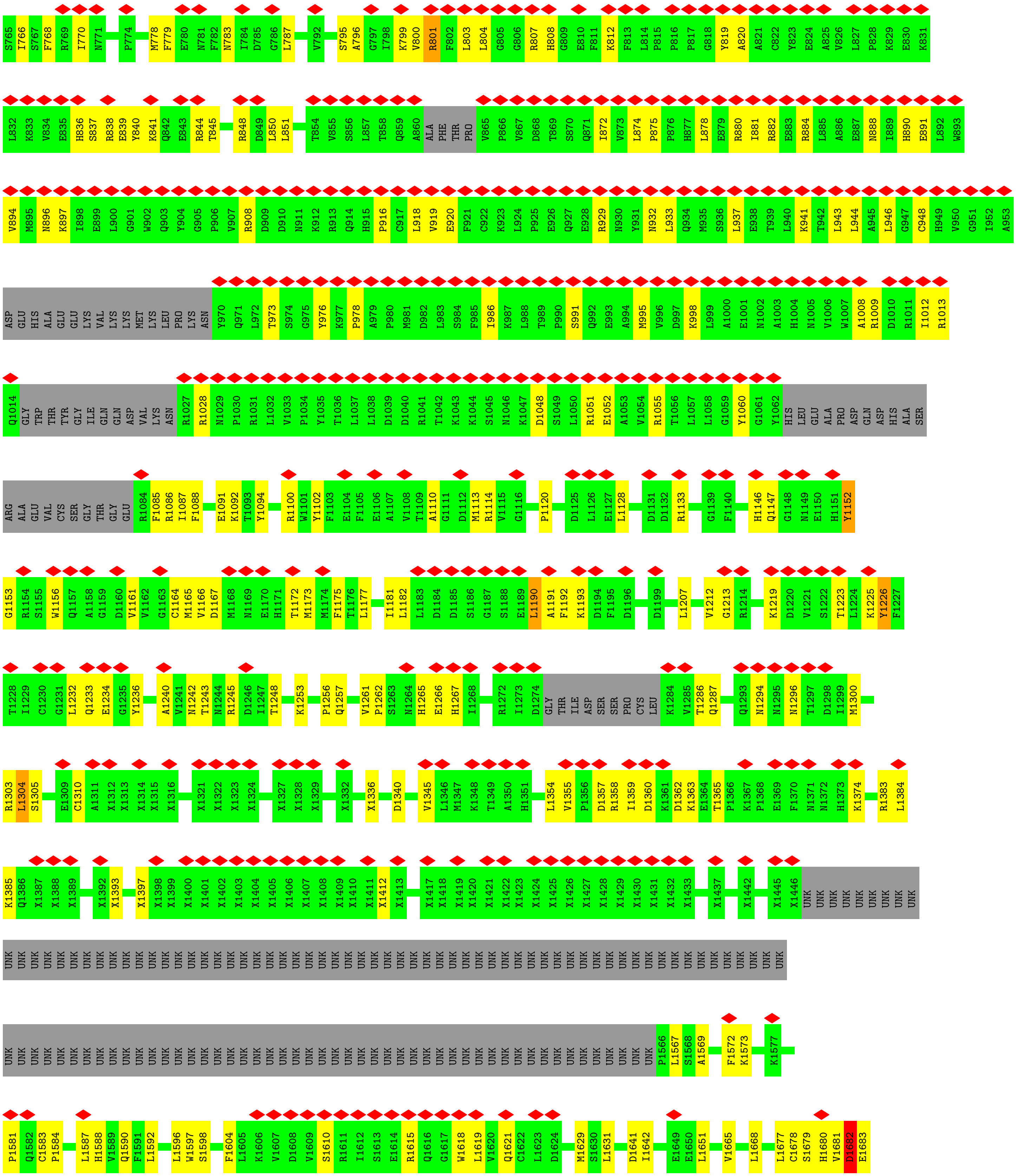

X3528 X3529 X3530 X3531 X3532 X3533 X3534 X3535 X3536 X3537 X3538 X3539 X3540 X3541 X3542 X3543 X3544 X3545 X3546 X3547 X3548 X3549 X3550 X3551 X3552 X3553 X3554 X3555 X3556 X3557 X3558 X3559 X3560 X3561 X3562 X3563 X3564 X3565 X3566 X3567 X3568 X3569 X3570 X3571 X3572 X3573 X3574 X3575 X3576 X3577 X3578 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 P3611 R3612 H3613 V3616 N3617 L3618 F3619 L3620 Q3621 W3627 E3631 E3632 H3633 Y3634 F3635 E3636 L3639 I3640 E3641 G3647 A3648 GLU LEU PRO GLU GLU ASP GLU ALA MET LYS R3659
V3660 L3663 I3667 L3668 L3669 E3682 L3686 Y3687 M3688 A3689 Y3690 I3693 H3699 ASP GLU GLU ASP ASP ASP GLY GLU GLU GLU VAL LYS S3712 E3719 K3720 Q3721 K3722 L3723 Q3727 A3728 R3729 L3730 H3731 D3732 R3733 G3748 P3752 M3753 V3754 T3757 L3758 G3761 I3762 A3763 I3764
N3769 D3778 L3795 M3796 C3799 S3800 V3801 L3802 D3803 L3804 E3808 R3809 Q3810 N3811 K3812 A3813 E3814 G3815 L3816 G3817 M3818 V3819 T3820 E3821 E3822 G3823 S3824 G3825 E3826 L3829 Q3830 D3831 F3834 L3838 F3839 R3840 Q3843 L3844 L3845 F3853 N3864 T3865 T3873 L3878 E3882 S3883
I3884 S3885 D3886 F3887 Y3888 W3889 Y3890 Y3891 S3892 G3893 K3894 D3895 I3896 I3897 D3898 L3919 T3920 E3921 Y3922 I3923 Q3924 G3925 P3926 C3927 N3930 L3934 R3938 L3939 W3940 V3943 M3953 K3956 L3957 D3960 S3961 S3962 E3965 L3966 L3967 K3968 E3969 D3972 T3993 K3996 Q3997 M3998 M4001
E4004 V4009 I4012 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 Q4059 S4060 E4063 F4064 S4067 E4070 T4071 D4072 E4073 N4074 E4075 T4076 L4077 D4078 Y4079
E4080 E4081 K4084 R4085 N4103 H4107 N4110 D4111 Q4115 L4118 E4119 E4122 K4165 V4176 N4177 E4178 G4179 G4180 E4181 K4182 E4193 D4194 T4195 I4196 F4197 E4198 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 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 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 THR ASN
PRO VAL PRO VAL PRO GLU VAL GLN 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 A4484 N4496 M4500 F4513 I4514 L4515 Y4518 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 L4560 E4561 E4562 S4563 S4564 G4565 Y4566 M4567 E4568 P4569 T4570 I4573 F4583 F4584 C4585 I4586 I4587 A4606 R4607 E4618 E4622 D4623 D4624 L4632 T4636 Q4637 Y4643 V4648 K4649 V4652 E4658 F4659 Y4660 G4661 R4662 D4663 R4664 L4668 L4669 G4670 M4671 D4672 K4673 A4674

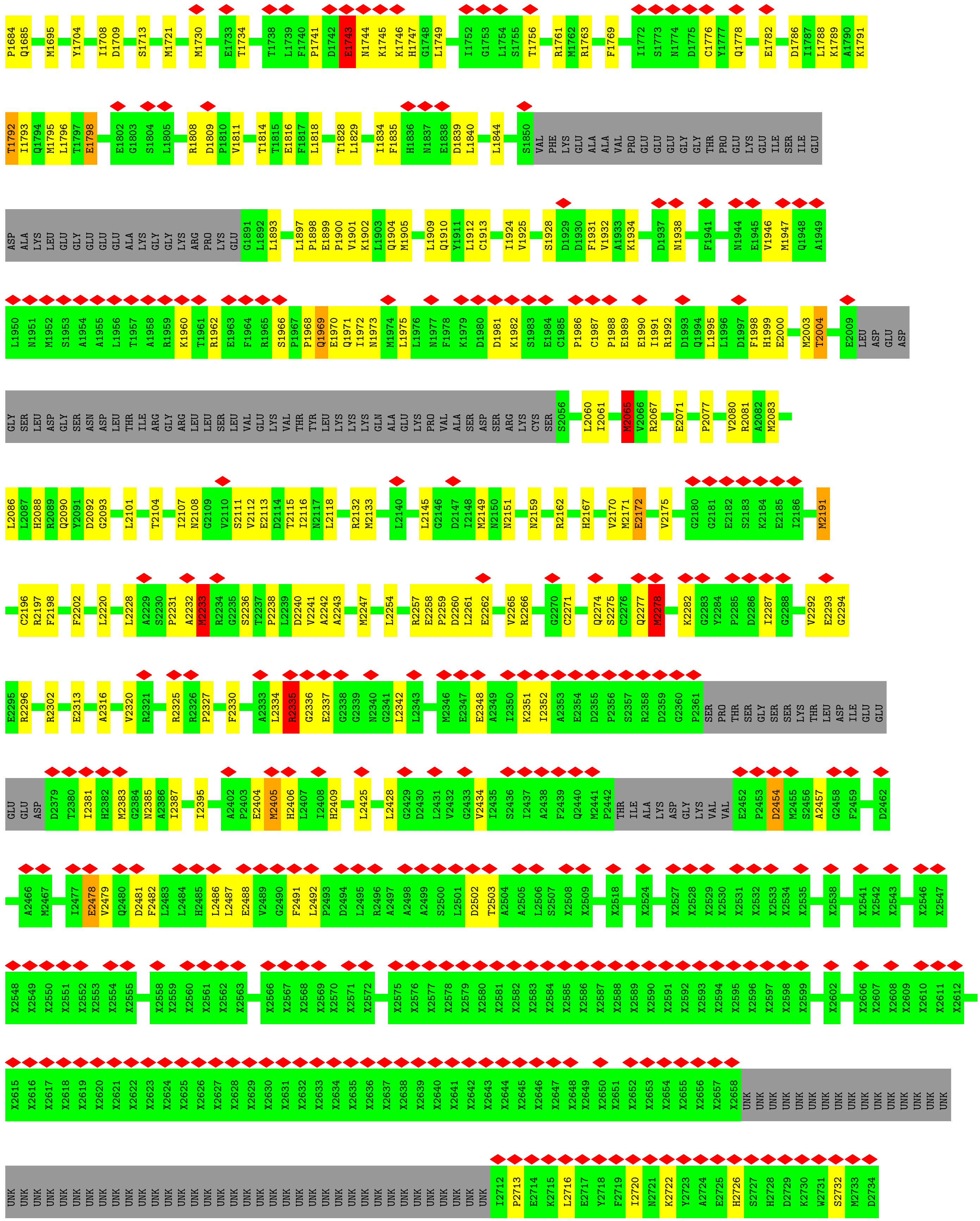


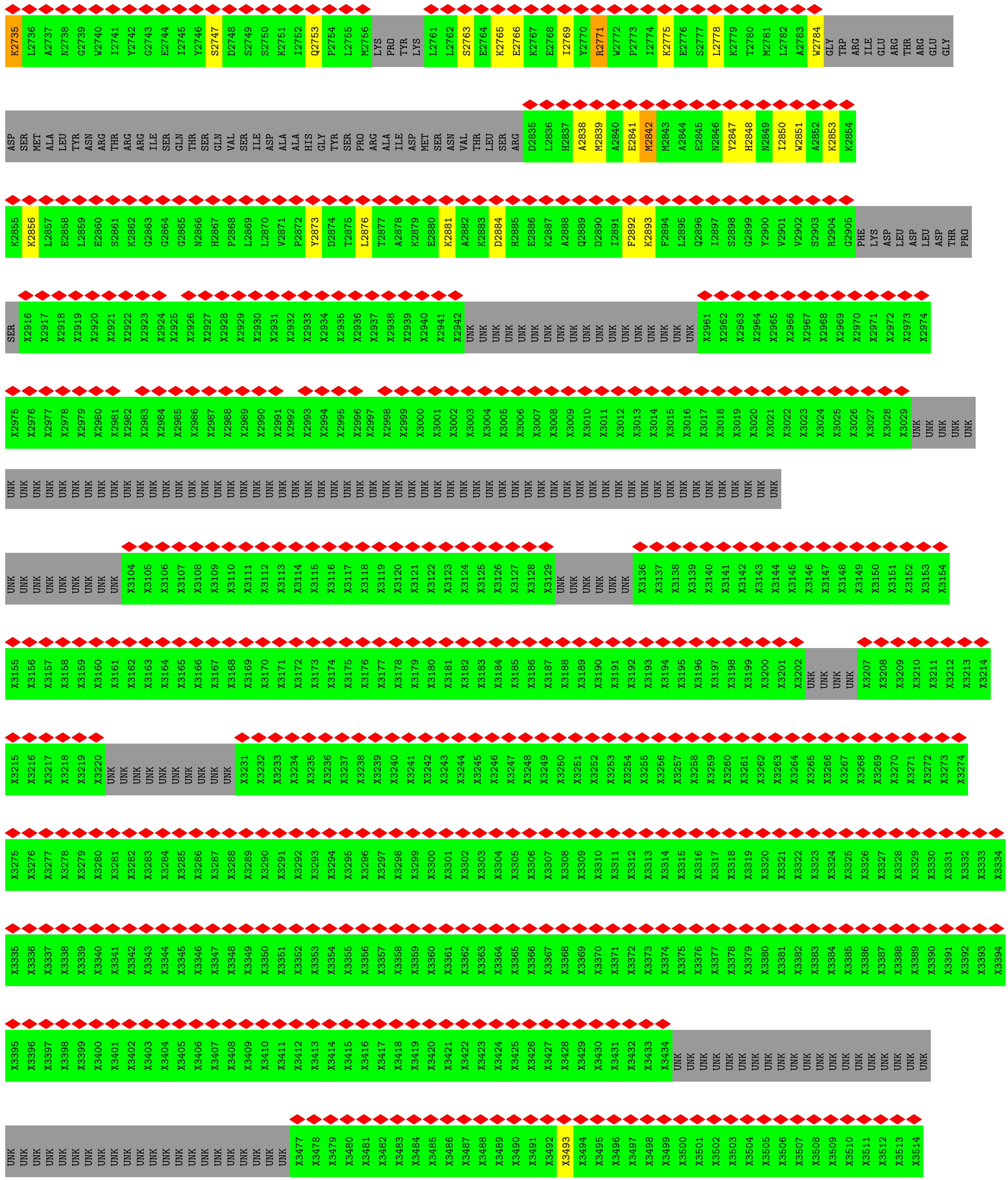
• Molecule 1: Ryanodine receptor 2

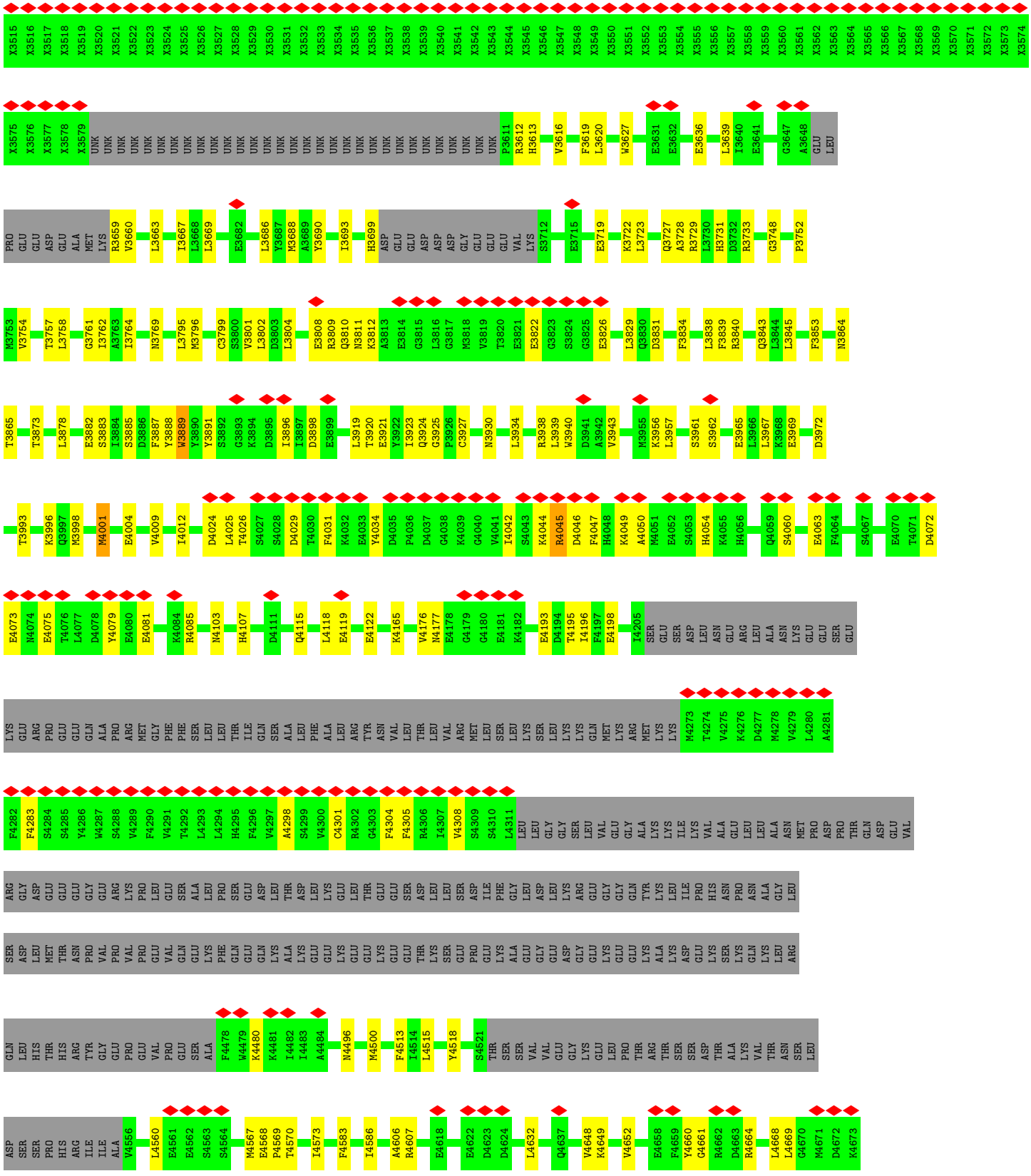
Chain B:

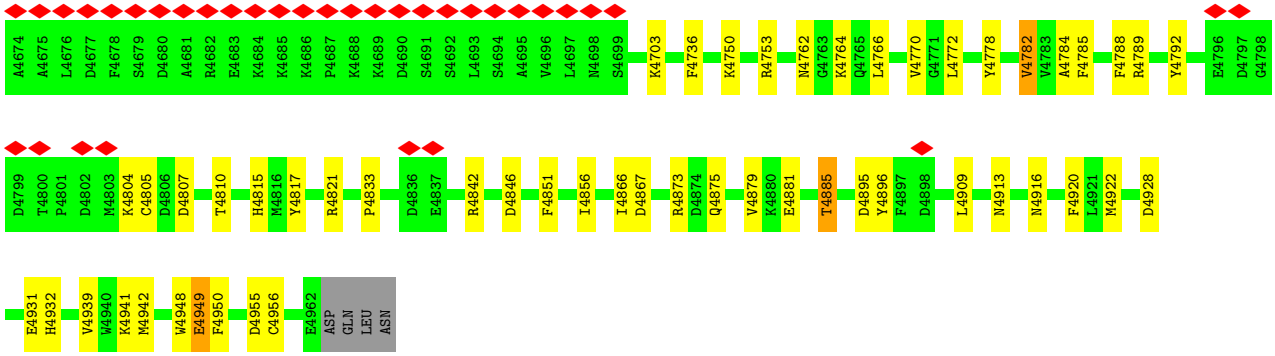



S765 I766 S767 F768 R769 I770 N771 P774 M778 F779 E780 N781 F782 N783 I784 D785 G786 L787 V792 S795 A796 G797 I798 K799 V800 R801 F802 L803 L804 G805 G806 R807 H808 G809 E810 F811 K812 F813 L814 P815 P816 P817 G818 Y819 A820 A821 C822 Y823 E824 A825 V826 L827 P828 K829 E830 K831
L832 K833 V834 E835 H836 S837 R838 E839 Y840 K841 Q842 E843 R844 T845 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 F1085 R1086 I1087 F1088 E1091 K1092 T1093 Y1094 R1100 W1101 Y1102 F1103 E1104 F1105 E1106 A1107 V1108 T1109 A1110 G1111 D1112 M1113 R1114 V1115 G1116 P1120 D1125 L1126 E1127 L1128 D1131 D1132 R1133 G1139 F1140 H1146 Q1147 G1148 N1149 E1150 H1151 Y1152
G1153 R1154 S1155 W1156 Q1157 A1158 G1159 D1160 V1161 V1162 G1163 C1164 M1165 V1166 D1167 M1168 N1169 E1170 H1171 T1172 M1173 M1174 F1175 T1176 L1177 I1181 L1182 L1183 D1184 D1185 S1186 G1187 S1188 E1189 L1190 A1191 F1192 K1193 D1194 F1195 D1196 D1199 L1207 V1212 G1213 R1214 K1219 D1220 V1221 S1222 T1223 L1224 K1225 Y1226 F1227
T1228 I1229 C1230 G1231 L1232 Q1233 E1234 G1235 Y1236 A1240 V1241 N1242 T1243 N1244 R1245 D1246 I1247 T1248 K1253 P1256 Q1257 V1261 P1262 S1263 N1264 H1265 E1266 H1267 I1268 R1272 I1273 D1274 GLY THR ILE ASP SER SER PRO CYS LEU K1284 V1285 T1286 Q1287 Q1293 N1294 N1295 N1296 T1297 D1298 I1299 M1300
R1303 L1304 S1305 E1309 C1310 A1311 X1312 X1313 X1314 X1315 X1316 X1321 X1322 X1323 X1324 X1327 X1328 X1329 X1332 X1336 D1340 V1345 L1346 M1347 K1348 T1349 A1350 H1351 L1354 V1355 P1356 D1357 R1358 I1359 D1360 K1361 D1362 K1363 E1364 T1365 P1366 K1367 P1368 E1369 F1370 N1371 N1372 H1373 K1374 R1383 L1384
K1385 Q1386 X1387 X1388 X1389 X1392 X1393 X1397 X1398 X1399 X1400 X1401 X1402 X1403 X1404 X1405 X1406 X1407 X1408 X1409 X1410 X1411 X1412 X1413 X1417 X1418 X1419 X1420 X1421 X1422 X1423 X1424 X1425 X1426 X1427 X1428 X1429 X1430 X1431 X1432 X1433 X1437 X1442 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 S1568 A1569 F1572 K1573 K1577
P1581 Q1582 C1583 P1584 L1587 H1588 V1589 Q1590 F1591 L1592 L1596 W1597 S1598 F1604 L1605 K1606 V1607 D1608 V1609 S1610 R1611 I1612 S1613 E1614 R1615 Q1616 G1617 W1618 L1619 V1620 Q1621 C1622 L1623 D1624 M1629 S1630 L1631 D1641 I1642 E1649 E1650 L1651 V1665 L1668 L1677 C1678 S1679 H1680 V1681 D1682 E1683


P1684 Q1685 M1695 Y1704 I1708 D1709 S1713 M1721 M1730 E1733 T1734 T1738 L1739 F1740 P1741 D1742 E1743 N1744 K1745 K1746 H1747 G1748 L1749 I1752 G1753 L1754 S1755 T1756 R1761 M1762 R1763 F1769 I1772 S1773 N1774 D1775 C1776 Y1777 Q1778 E1782 D1786 I1787 L1788 K1789 A1790 K1791
T1792 I1793 Q1794 M1795 L1796 T1797 E1798 E1802 G1803 S1804 L1805 R1808 D1809 P1810 V1811 T1814 T1815 E1816 F1817 L1818 T1828 L1829 I1834 F1835 H1836 N1837 E1838 D1839 L1840 L1844 S1850 VAL PHE LYS GLU ALA ALA VAL PRO GLU GLU GLU GLY THR PRO GLU LYS GLU ILE SER ILE GLU
ASP ALA LYS LEU GLU GLY GLU GLU GLU ALA LYS GLY GLY LYS ARG PRO LYS GLU G1891 L1892 L1893 L1897 P1898 E1899 P1900 V1901 K1902 L1903 Q1904 M1905 L1909 Q1910 Y1911 L1912 C1913 I1924 V1925 S1928 D1929 D1930 F1931 V1932 A1933 K1934 D1937 N1938 F1941 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 L1976 N1977 F1978 K1979 D1980 D1981 K1982 S1983 E1984 C1985 P1986 C1987 P1988 E1989 E1990 I1991 R1992 D1993 Q1994 L1995 L1996 D1997 F1998 H1999 E2000 M2003 T2004 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 L2060 I2061 M2065 V2066 R2067 E2071 P2077 V2080 R2081 A2082 M2083
L2086 L2087 H2088 R2089 Q2090 Y2091 D2092 G2093 L2101 T2104 I2107 N2108 G2109 V2110 S2111 V2112 E2113 D2114 T2115 I2116 N2117 L2118 R2132 M2133 L2140 L2145 G2146 D2147 I2148 M2149 N2150 N2151 N2159 R2162 H2167 V2170 M2171 E2172 V2175 G2180 G2181 E2182 S2183 K2184 E2185 I2186 M2191
C2196 R2197 F2198 F2202 L2220 L2228 A2229 S2230 P2231 A2232 M2233 R2234 G2235 S2236 T2237 P2238 L2239 D2240 V2241 A2242 A2243 M2247 L2254 R2257 E2258 P2259 D2260 L2261 E2262 V2265 R2266 G2270 C2271 Q2274 S2275 C2276 Q2277 M2278 K2282 G2283 Y2284 P2285 D2286 I2287 G2288 V2292 E2293 G2294
E2295 R2296 R2302 E2313 A2316 V2320 R2321 R2325 R2326 P2327 F2330 A2333 L2334 R2335 G2336 E2337 G2338 G2339 N2340 G2341 L2342 L2343 M2346 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 L2407 I2408 H2409 L2425 L2428 G2429 D2430 L2431 V2432 G2433 V2434 I2435 S2436 I2437 A2438 F2439 Q2440 M2441 P2442 THR ILE ALA LYS ASP GLY LYS VAL VAL E2452 P2453 D2454 M2455 S2456 A2457 G2458 F2459 D2462
A2466 M2467 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 S2507 X2508 X2509 X2518 X2524 X2527 X2528 X2529 X2530 X2531 X2532 X2533 X2534 X2535 X2538 X2541 X2542 X2543 X2546 X2547
X2548 X2549 X2550 X2551 X2552 X2553 X2554 X2555 X2558 X2559 X2560 X2561 X2562 X2563 X2566 X2567 X2568 X2569 X2570 X2571 X2572 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 X2602 X2606 X2607 X2608 X2609 X2610 X2611 X2612
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

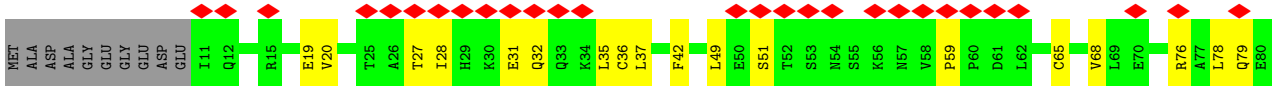

K2735 L2736 A2737 N2738 G2739 W2740 I2741 Y2742 G2743 E2744 I2745 Y2746 S2747 D2748 S2749 S2750 K2751 I2752 Q2753 P2754 L2755 M2756 LYS PRO TYR LYS L2761 L2762 S2763 E2764 K2765 E2766 K2767 E2768 I2769 Y2770 R2771 W2772 P2773 I2774 K2775 E2776 S2777 L2778 K2779 T2780 M2781 L2782 A2783 W2784 GLY TRP ARG 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 X2978 X2979 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

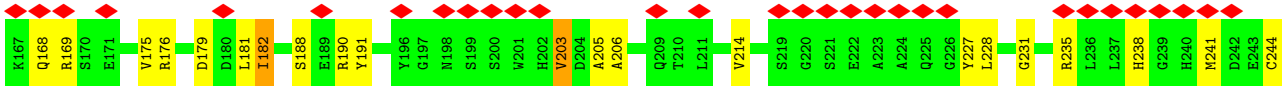


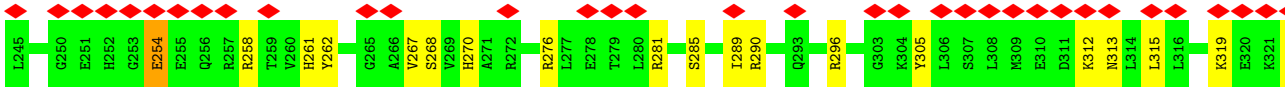


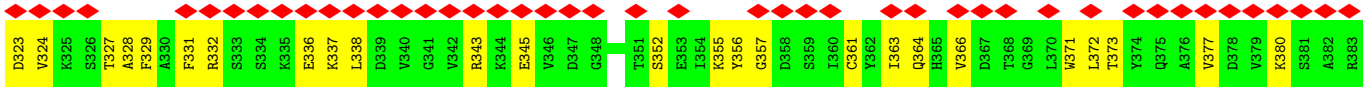
• Molecule 1: Ryanodine receptor 2

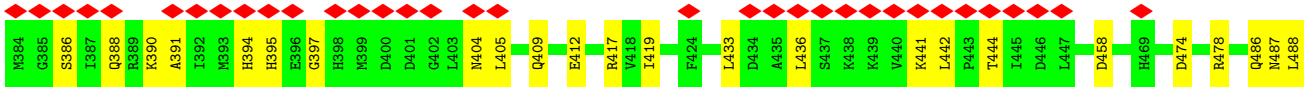
Chain C:

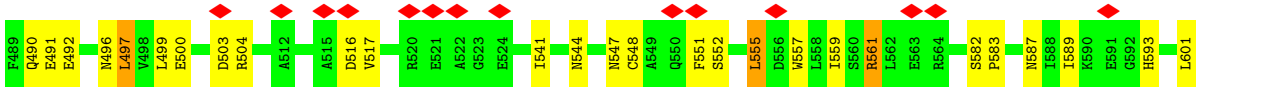


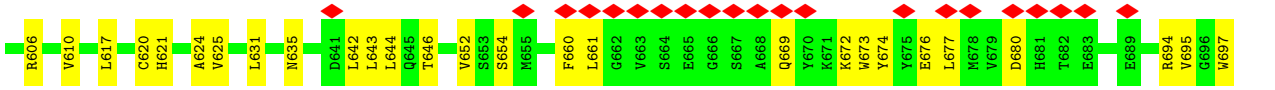


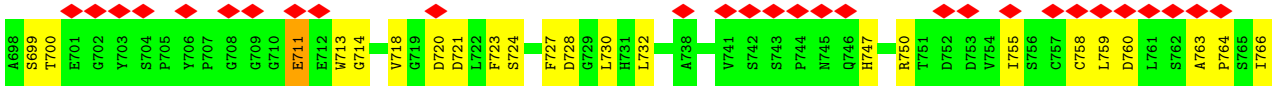


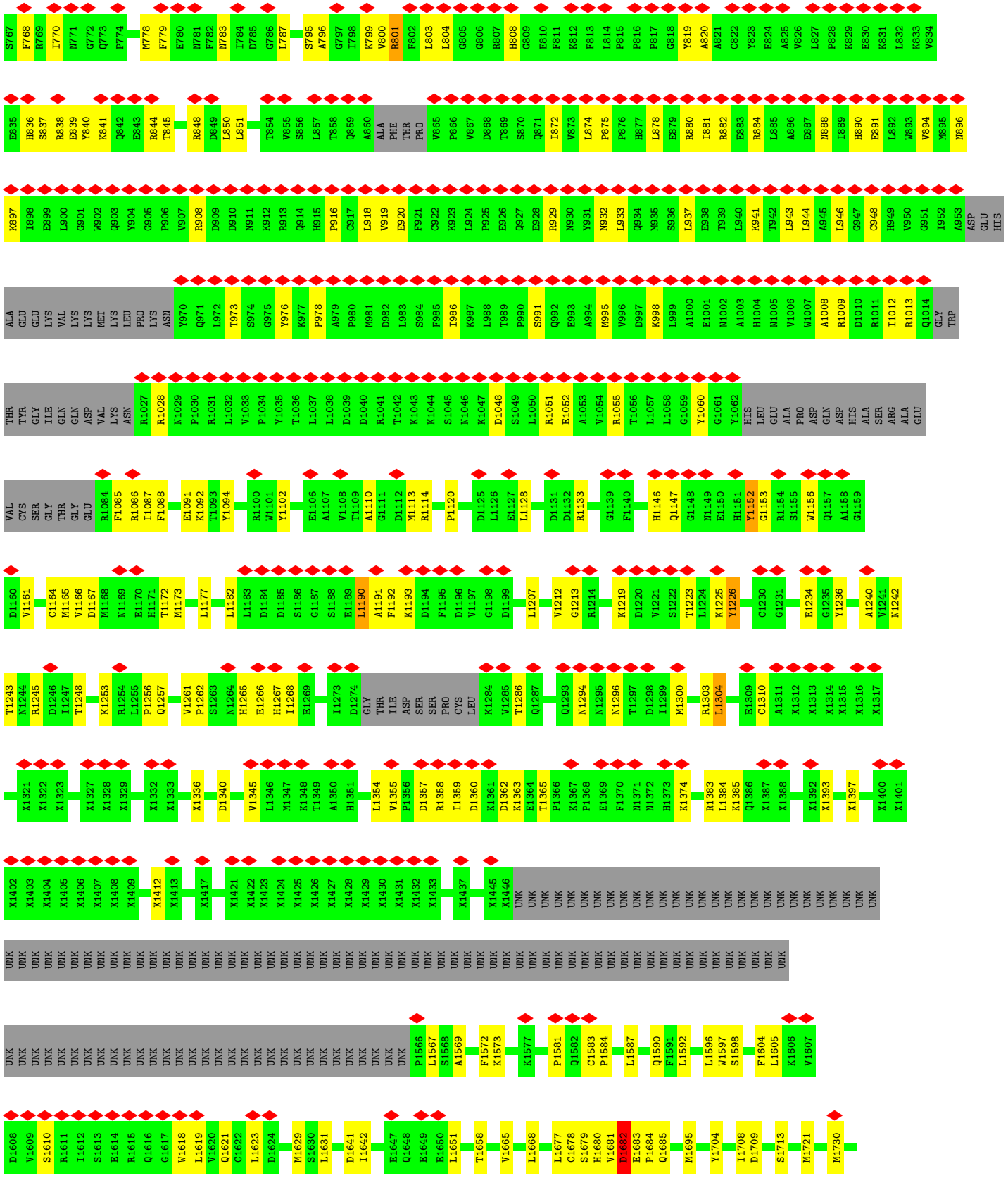


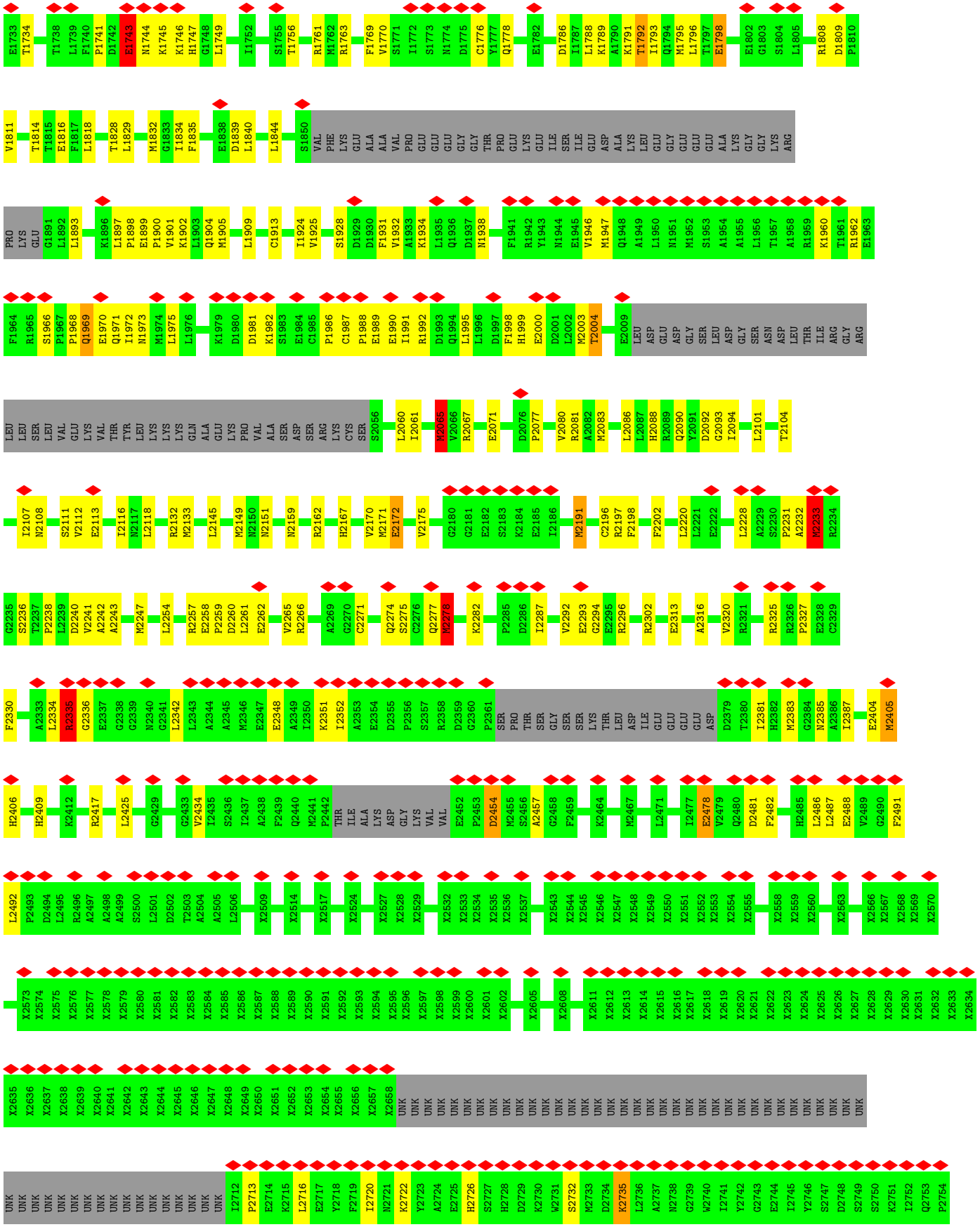











E1733 T1734 T1738 L1739 F1740 P1741 D1742 E1743 N1744 K1745 K1746 H1747 G1748 L1749 I1752 S1755 T1756 R1761 M1762 R1763 F1769 V1770 S1771 I1772 S1773 N1774 D1775 C1776 Y1777 Q1778 E1782 D1786 I1787 L1788 K1789 A1790 K1791 T1792 I1793 Q1794 M1795 L1796 T1797 E1798 E1802 G1803 S1804 L1805 R1808 D1809 P1810
V1811 T1814 T1815 E1816 F1817 L1818 T1828 L1829 M1832 G1833 I1834 F1835 E1838 D1839 L1840 L1844 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 K1896 L1897 P1898 E1899 P1900 V1901 K1902 L1903 Q1904 M1905 L1909 C1913 I1924 V1925 S1928 D1929 D1930 F1931 V1932 A1933 K1934 L1935 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 L1976 K1979 D1980 D1981 K1982 S1983 E1984 C1985 P1986 C1987 P1988 E1989 E1990 I1991 R1992 D1993 Q1994 L1995 L1996 D1997 F1998 H1999 E2000 D2001 L2002 M2003 T2004 E2009 LEU ASP GLU 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 L2060 I2061 M2065 V2066 R2067 E2071 D2076 P2077 V2080 R2081 A2082 M2083 L2086 L2087 H2088 R2089 Q2090 Y2091 D2092 G2093 I2094 L2101 T2104
I2107 N2108 S2111 V2112 E2113 I2116 N2117 L2118 R2132 M2133 L2145 M2149 N2150 N2151 N2159 R2162 H2167 V2170 M2171 E2172 V2175 G2180 G2181 E2182 S2183 K2184 E2185 I2186 M2191 C2196 R2197 F2198 F2202 L2220 L2221 E2222 L2228 A2229 S2230 P2231 A2232 M2233 R2234
G2235 S2236 T2237 P2238 L2239 D2240 V2241 A2242 A2243 M2247 L2254 R2257 E2258 P2259 D2260 L2261 E2262 V2265 R2266 A2269 G2270 C2271 Q2274 S2275 C2276 Q2277 M2278 K2282 P2285 D2286 I2287 V2292 E2293 G2294 E2295 R2296 R2302 E2313 A2316 V2320 R2321 R2325 R2326 P2327 E2328 C2329
F2330 A2333 L2334 R2335 G2336 E2337 G2338 G2339 N2340 G2341 L2342 L2343 A2344 A2345 M2346 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 E2404 M2405
H2406 H2409 K2412 R2417 L2425 G2429 G2433 V2434 I2435 S2436 I2437 A2438 F2439 Q2440 M2441 P2442 THR ILE ALA LYS ASP GLY LYS VAL VAL E2452 P2453 D2454 M2455 S2456 A2457 G2458 F2459 K2464 M2467 L2471 I2477 E2478 V2479 Q2480 D2481 F2482 H2485 L2486 L2487 E2488 V2489 G2490 F2491
L2492 P2493 D2494 L2495 R2496 A2497 A2498 A2499 S2500 L2501 D2502 T2503 A2504 A2505 L2506 X2509 X2514 X2517 X2524 X2527 X2528 X2529 X2532 X2533 X2534 X2535 X2536 X2537 X2543 X2544 X2545 X2546 X2547 X2548 X2549 X2550 X2551 X2552 X2553 X2554 X2555 X2558 X2559 X2560 X2563 X2566 X2567 X2568 X2569 X2570
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 X2608 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 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 X2978 X2979 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

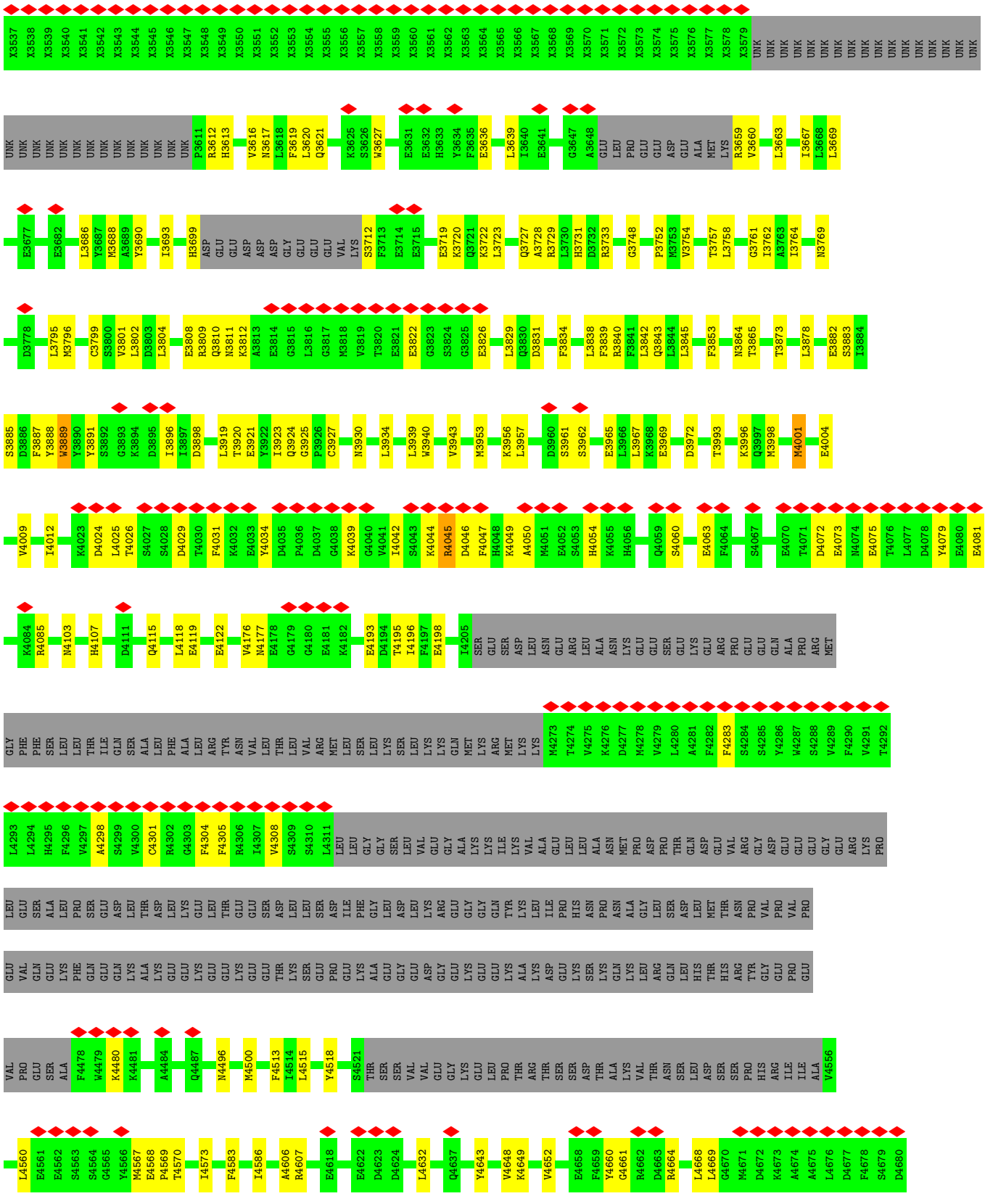
X3237 X3238 X3239 X3240 X3241 X3242 X3243 X3244 X3245 X3246 X3247 X3248 X3249 X3250 X3251 X3252 X3253 X3254 X3255 X3256 X3257 X3258 X3259 X3260 X3261 X3262 X3263 X3264 X3265 X3266 X3267 X3268 X3269 X3270 X3271 X3272 X3273 X3274 X3275 X3276 X3277 X3278 X3279 X3280 X3281 X3282 X3283 X3284 X3285 X3286 X3287 X3288 X3289 X3290 X3291 X3292 X3293 X3294 X3295 X3296

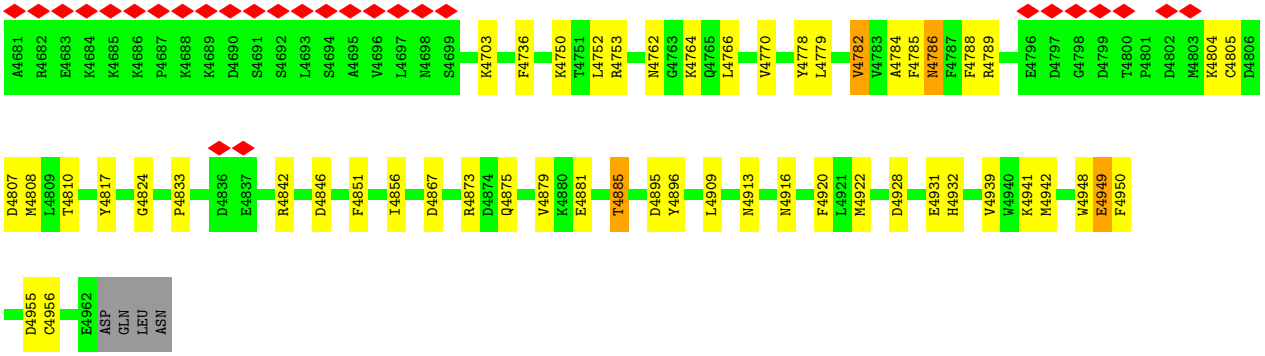
X3297 X3298 X3299 X3300 X3301 X3302 X3303 X3304 X3305 X3306 X3307 X3308 X3309 X3310 X3311 X3312 X3313 X3314 X3315 X3316 X3317 X3318 X3319 X3320 X3321 X3322 X3323 X3324 X3325 X3326 X3327 X3328 X3329 X3330 X3331 X3332 X3333 X3334 X3335 X3336 X3337 X3338 X3339 X3340 X3341 X3342 X3343 X3344 X3345 X3346 X3347 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

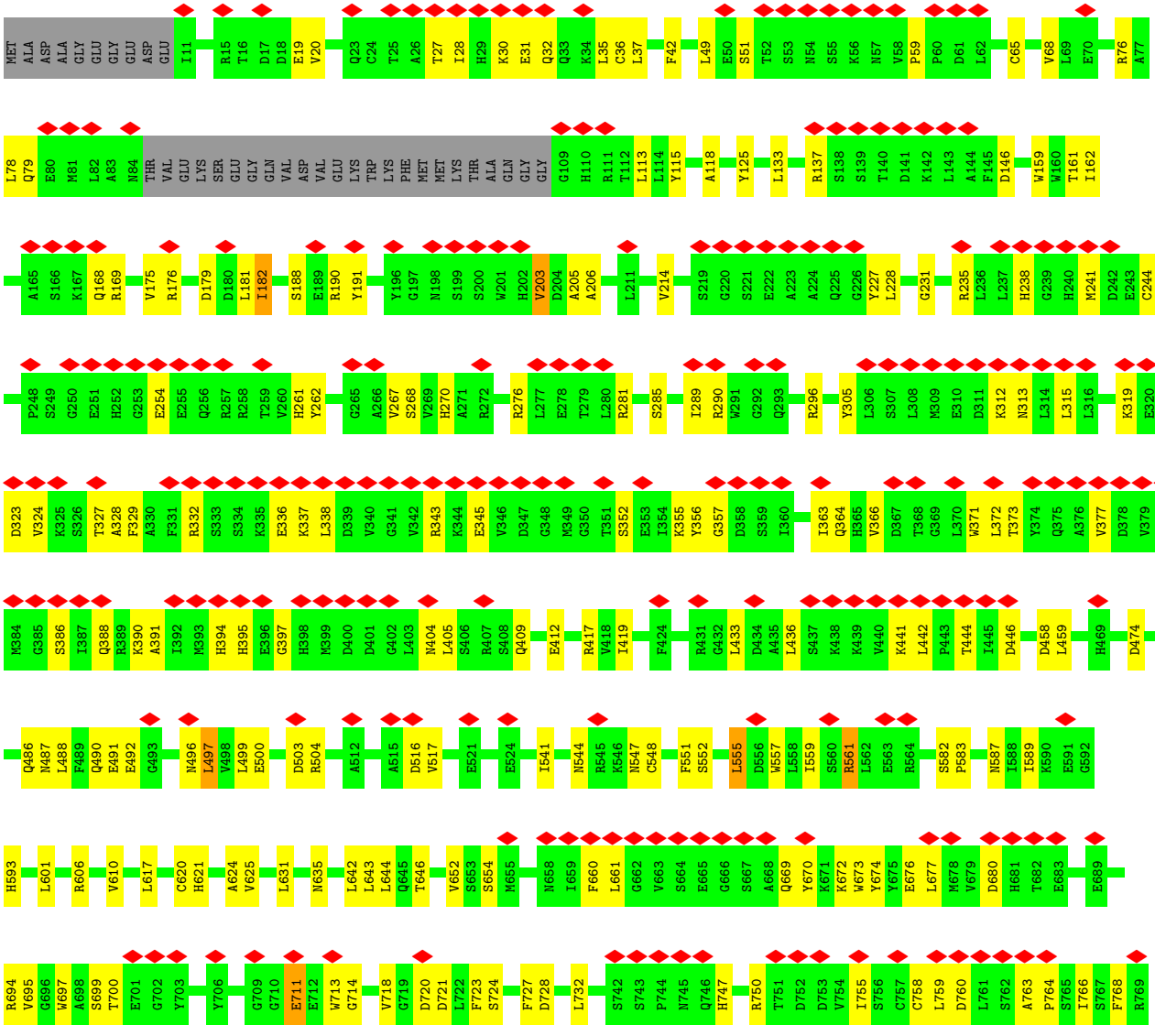
X3477 X3478 X3479 X3480 X3481 X3482 X3483 X3484 X3485 X3486 X3487 X3488 X3489 X3490 X3491 X3492 X3493 X3494 X3495 X3496 X3497 X3498 X3499 X3500 X3501 X3502 X3503 X3504 X3505 X3506 X3507 X3508 X3509 X3510 X3511 X3512 X3513 X3514 X3515 X3516 X3517 X3518 X3519 X3520 X3521 X3522 X3523 X3524 X3525 X3526 X3527 X3528 X3529 X3530 X3531 X3532 X3533 X3534 X3535 X3536

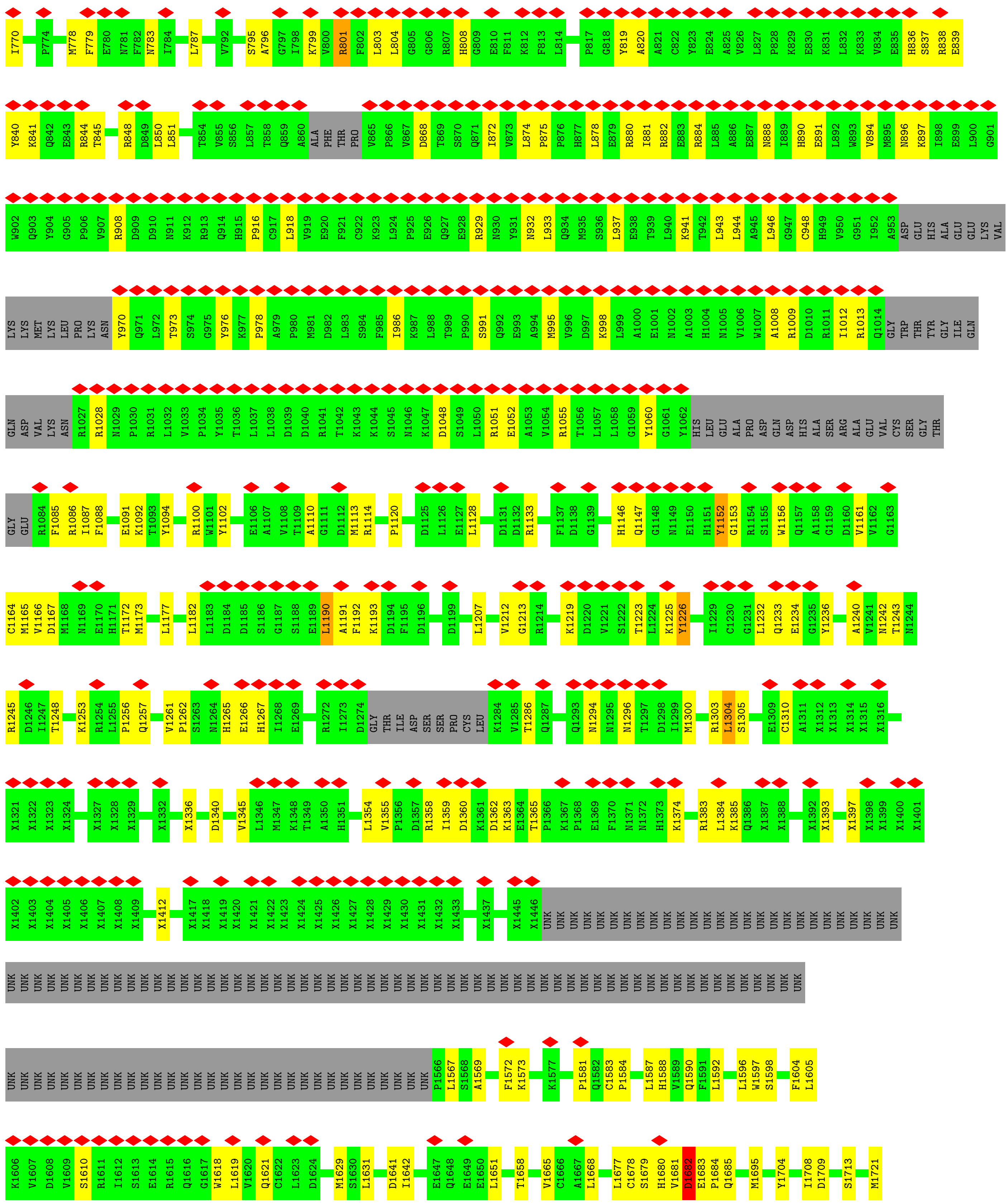

X3537 X3538 X3539 X3540 X3541 X3542 X3543 X3544 X3545 X3546 X3547 X3548 X3549 X3550 X3551 X3552 X3553 X3554 X3555 X3556 X3557 X3558 X3559 X3560 X3561 X3562 X3563 X3564 X3565 X3566 X3567 X3568 X3569 X3570 X3571 X3572 X3573 X3574 X3575 X3576 X3577 X3578 X3579 UNK
UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK P3611 R3612 H3613 V3616 N3617 L3618 F3619 L3620 Q3621 K3625 S3626 W3627 E3631 E3632 H3633 Y3634 F3635 E3636 L3639 T3640 E3641 G3647 A3648 GLU LEU PRO GLU GLU ASP GLU ALA MET LYS R3659 V3660 L3663 I3667 L3668 L3669
E3677 E3682 L3686 Y3687 M3688 A3689 Y3690 I3693 H3699 ASP GLU GLU ASP ASP ASP GLY GLU GLU GLU VAL LYS S3712 F3713 E3714 E3715 E3719 K3720 Q3721 K3722 L3723 Q3727 A3728 R3729 L3730 H3731 D3732 R3733 G3748 P3752 M3753 V3754 T3757 L3758 G3761 I3762 A3763 I3764 N3769
D3778 L3795 M3796 C3799 S3800 V3801 L3802 D3803 L3804 E3808 R3809 Q3810 N3811 K3812 A3813 E3814 G3815 L3816 G3817 M3818 V3819 T3820 E3821 E3822 G3823 S3824 G3825 E3826 L3829 Q3830 D3831 F3834 L3838 F3839 R3840 F3841 L3842 Q3843 L3844 L3845 F3853 N3864 T3865 T3873 L3878 E3882 S3883 I3884
S3885 D3886 F3887 Y3888 W3889 Y3890 Y3891 S3892 G3893 K3894 D3895 I3896 I3897 D3898 L3919 T3920 E3921 Y3922 I3923 Q3924 G3925 P3926 C3927 N3930 L3934 L3939 W3940 V3943 M3953 K3956 L3957 D3960 S3961 S3962 E3965 L3966 L3967 K3968 E3969 D3972 T3993 K3996 Q3997 M3998 M4001 E4004
V4009 I4012 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 Q4059 S4060 E4063 P4064 S4067 E4070 T4071 D4072 E4073 N4074 E4075 T4076 L4077 D4078 Y4079 E4080 E4081
K4084 R4085 N4103 H4107 D4111 Q4115 L4118 E4119 E4122 V4176 N4177 E4178 G4179 G4180 E4181 K4182 E4193 D4194 T4195 I4196 F4197 E4198 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 LEU THR ILE GLN SER ALA LEU PHE ALA LEU ARG TYR ASN VAL LEU 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 GLY GLU ARG LYS PRO
LEU GLU SER ALA LEU PRO SER GLU GLU ASP LEU THR ASP LEU LYS GLU LEU THR GLU GLU SER ASP LEU LEU SER LEU SER ASP ILE PHE GLY LEU ASP LEU LYS ARG GLU GLY GLN TYR LYS LEU ILE PRO HIS ASN PRO ASN 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 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 A4484 Q4487 N4496 N4500 F4513 I4514 L4515 Y4518 S4521 THR SER SER VAL VAL GLU GLY LYS GLU LEU PRO THR ARG THR SER SER ASP THR ALA LYS VAL THR ASN SER LEU ASP SER PRO HIS ARG ILE ILE ALA Y4556
L4560 E4561 E4562 S4563 S4564 G4565 Y4566 M4567 E4568 P4569 T4570 I4573 F4583 I4586 A4606 R4607 E4618 E4622 D4623 D4624 L4632 Q4637 Y4643 V4648 K4649 V4652 E4658 F4659 Y4660 G4661 R4662 D4663 R4664 L4668 L4669 G4670 M4671 D4672 K4673 A4674 A4675 L4676 D4677 F4678 S4679 D4680

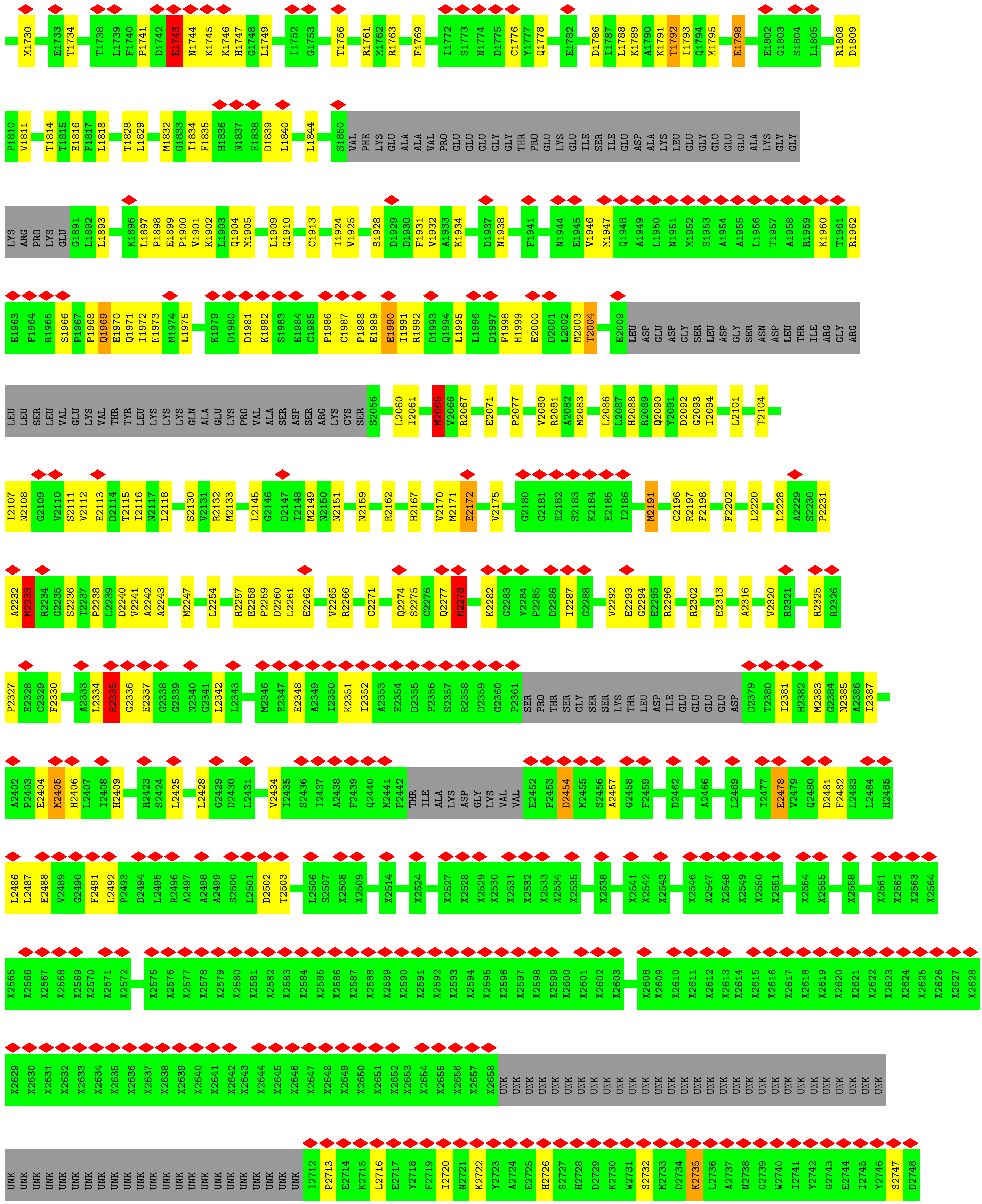


• Molecule 1: Ryanodine receptor 2

Chain D:




I770 P774 M778 F779 E780 N781 F782 N783 I784 L787 V792 S795 A796 G797 I798 K799 V800 R801 F802 L803 L804 G805 G806 R807 H808 G809 E810 F811 K812 F813 L814 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 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 F1085 R1086 I1087 F1088 E1091 K1092 T1093 Y1094 R1100 W1101 Y1102 E1106 A1107 V1108 T1109 A1110 G1111 D1112 M1113 R1114 P1120 D1125 L1126 E1127 L1128 D1131 D1132 R1133 F1137 D1138 G1139 H1146 Q1147 G1148 N1149 E1150 H1151 Y1152 G1153 R1154 S1155 W1156 Q1157 A1158 G1159 D1160 V1161 V1162 G1163
C1164 M1165 V1166 D1167 M1168 N1169 E1170 H1171 T1172 M1173 L1177 L1182 L1183 D1184 D1185 S1186 G1187 S1188 E1189 L1190 A1191 F1192 K1193 D1194 F1195 D1196 D1199 L1207 V1212 G1213 R1214 K1219 D1220 V1221 S1222 T1223 L1224 K1225 Y1226 I1229 C1230 G1231 L1232 Q1233 E1234 G1235 Y1236 A1240 V1241 N1242 T1243 N1244
R1245 D1246 I1247 T1248 K1253 R1254 L1255 P1256 Q1257 V1261 P1262 S1263 N1264 H1265 E1266 H1267 I1268 E1269 R1272 I1273 D1274 GLY THR ILE ASP SER SER PRO CYS LEU K1284 V1285 T1286 Q1287 Q1293 N1294 N1295 N1296 T1297 D1298 I1299 M1300 R1303 L1304 S1305 E1309 C1310 A1311 X1312 X1313 X1314 X1315 X1316
X1321 X1322 X1323 X1324 X1327 X1328 X1329 X1332 X1336 D1340 V1345 L1346 M1347 K1348 T1349 A1350 H1351 L1354 V1355 P1356 D1357 R1358 I1359 D1360 K1361 D1362 K1363 E1364 T1365 P1366 K1367 P1368 E1369 F1370 N1371 N1372 H1373 K1374 R1383 L1384 K1385 Q1386 X1387 X1388 X1392 X1393 X1397 X1398 X1399 X1400 X1401
X1402 X1403 X1404 X1405 X1406 X1407 X1408 X1409 X1412 X1417 X1418 X1419 X1420 X1421 X1422 X1423 X1424 X1425 X1426 X1427 X1428 X1429 X1430 X1431 X1432 X1433 X1437 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 S1568 A1569 F1572 K1573 K1577 P1581 Q1582 C1583 P1584 L1587 H1588 V1589 Q1590 F1591 L1592 L1596 W1597 S1598 F1604 L1605
K1606 V1607 D1608 V1609 S1610 R1611 I1612 S1613 E1614 R1615 Q1616 G1617 W1618 L1619 V1620 Q1621 C1622 L1623 D1624 M1629 S1630 L1631 D1641 I1642 E1647 Q1648 E1649 E1650 L1651 T1658 V1665 C1666 A1667 L1668 L1677 C1678 S1679 H1680 V1681 D1682 E1683 P1684 Q1685 M1695 Y1704 I1708 D1709 S1713 M1721


M1730 E1733 T1734 T1738 L1739 F1740 P1741 D1742 E1743 N1744 K1745 K1746 H1747 G1748 L1749 I1752 G1753 T1756 R1761 M1762 R1763 F1769 I1772 S1773 N1774 D1775 C1776 Y1777 Q1778 E1782 D1786 I1787 L1788 K1789 A1790 K1791 T1792 I1793 Q1794 M1795 E1798 E1802 G1803 S1804 L1805 R1808 D1809
P1810 V1811 T1814 T1815 E1816 F1817 L1818 T1828 L1829 M1832 G1833 I1834 F1835 H1836 N1837 E1838 D1839 L1840 L1844 S1850 VAL PHE LYS GLU ALA ALA VAL PRO GLU GLU GLU GLY GLY THR PRO GLU LYS GLU ILE SER ILE GLU ASP ALA LYS LEU GLU GLY GLU GLU GLU ALA LYS GLY GLY
LYS ARG PRO LYS GLU G1891 L1892 L1893 K1896 L1897 P1898 E1899 P1900 V1901 K1902 L1903 Q1904 M1905 L1909 Q1910 C1913 I1924 V1925 S1928 D1929 D1930 F1931 V1932 A1933 K1934 D1937 N1938 F1941 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 L1996 D1997 F1998 H1999 E2000 D2001 L2002 M2003 T2004 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 GLN ALA GLU LYS PRO VAL ALA SER ASP SER ARG LYS CYS SER S2056 L2060 I2061 M2065 V2066 R2067 E2071 P2077 V2080 R2081 A2082 M2083 L2086 L2087 H2088 R2089 Q2090 Y2091 D2092 G2093 I2094 L2101 T2104
I2107 N2108 G2109 V2110 S2111 V2112 E2113 D2114 T2115 I2116 N2117 L2118 S2130 V2131 R2132 M2133 L2145 G2146 D2147 I2148 M2149 N2150 N2151 N2159 R2162 H2167 V2170 M2171 E2172 V2175 G2180 G2181 E2182 S2183 K2184 E2185 I2186 M2191 C2196 R2197 F2198 F2202 L2220 L2228 A2229 S2230 P2231
A2232 M2233 R2234 G2235 S2236 T2237 P2238 L2239 D2240 V2241 A2242 A2243 M2247 L2254 R2257 E2258 P2259 D2260 L2261 E2262 V2265 R2266 C2271 Q2274 S2275 C2276 Q2277 M2278 K2282 G2283 Y2284 P2285 D2286 I2287 G2288 V2292 E2293 G2294 E2295 R2296 R2302 E2313 A2316 V2320 R2321 R2325 R2326
P2327 E2328 C2329 F2330 A2333 L2334 R2335 G2336 E2337 G2338 G2339 N2340 G2341 L2342 L2343 M2346 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 ASP D2379 T2380 I2381 H2382 M2383 G2384 N2385 A2386 I2387
A2402 P2403 E2404 M2405 H2406 L2407 I2408 H2409 R2423 S2424 L2425 L2428 G2429 D2430 L2431 V2434 I2435 S2436 I2437 A2438 F2439 Q2440 M2441 P2442 THR ILE ALA LYS ASP GLY LYS VAL VAL E2452 P2453 D2454 M2455 S2456 A2457 G2458 F2459 D2462 A2466 L2469 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 L2506 S2507 X2508 X2509 X2514 X2524 X2527 X2528 X2529 X2530 X2531 X2532 X2533 X2534 X2535 X2538 X2541 X2542 X2543 X2546 X2547 X2548 X2549 X2550 X2551 X2554 X2555 X2558 X2561 X2562 X2563 X2564
X2565 X2566 X2567 X2568 X2569 X2570 X2571 X2572 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 X2608 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 X2978 X2979 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

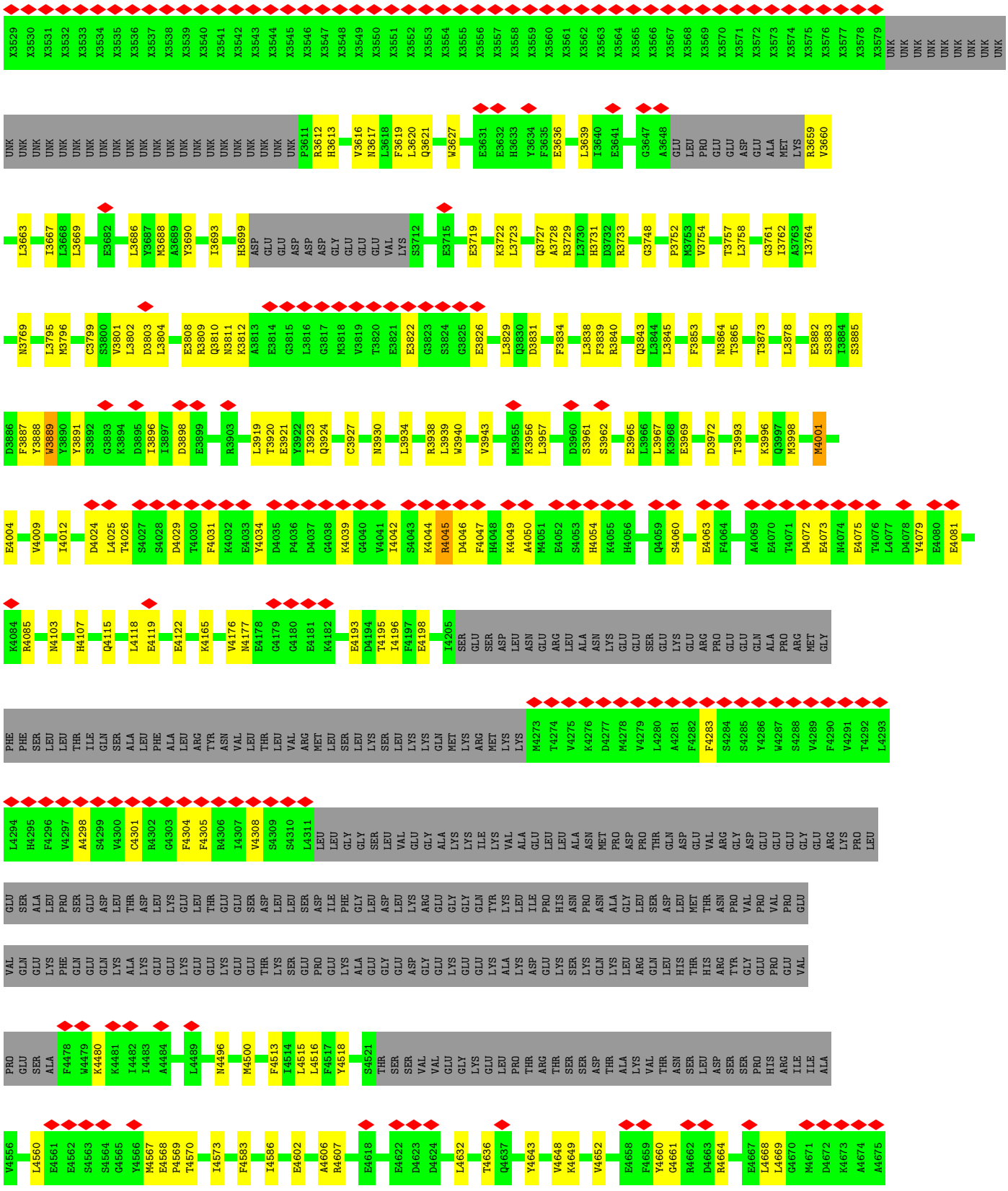
UNK UNK X3231 X3232 X3233 X3234 X3235 X3236 X3237 X3238 X3239 X3240 X3241 X3242 X3243 X3244 X3245 X3246 X3247 X3248 X3249 X3250 X3251 X3252 X3253 X3254 X3255 X3256 X3257 X3258 X3259 X3260 X3261 X3262 X3263 X3264 X3265 X3266 X3267 X3268 X3269 X3270 X3271 X3272 X3273 X3274 X3275 X3276 X3277 X3278 X3279 X3280 X3281 X3282 X3283 X3284 X3285 X3286 X3287 X3288

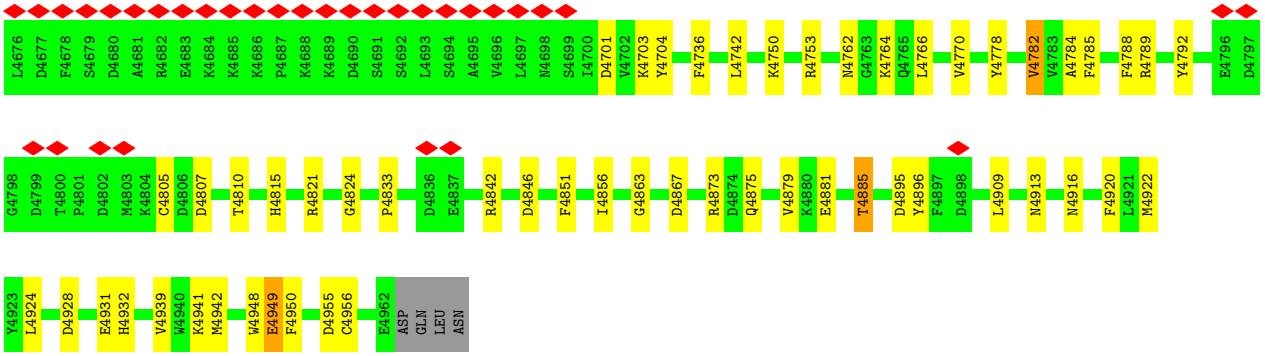
X3289 X3290 X3291 X3292 X3293 X3294 X3295 X3296 X3297 X3298 X3299 X3300 X3301 X3302 X3303 X3304 X3305 X3306 X3307 X3308 X3309 X3310 X3311 X3312 X3313 X3314 X3315 X3316 X3317 X3318 X3319 X3320 X3321 X3322 X3323 X3324 X3325 X3326 X3327 X3328 X3329 X3330 X3331 X3332 X3333 X3334 X3335 X3336 X3337 X3338 X3339 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

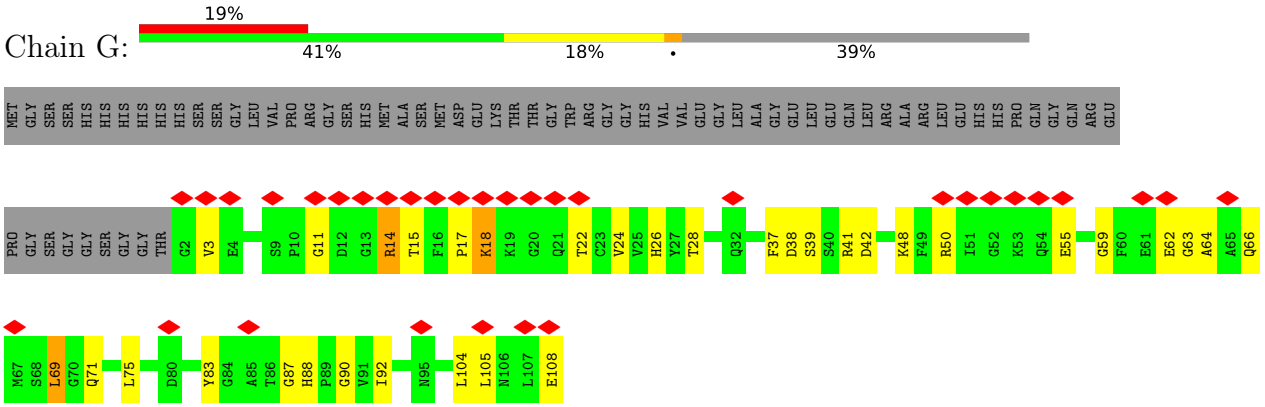
X3409 X3410 X3411 X3412 X3413 X3414 X3415 X3416 X3417 X3418 X3419 X3420 X3421 X3422 X3423 X3424 X3425 X3426 X3427 X3428 X3429 X3430 X3431 X3432 X3433 X3434 UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK

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

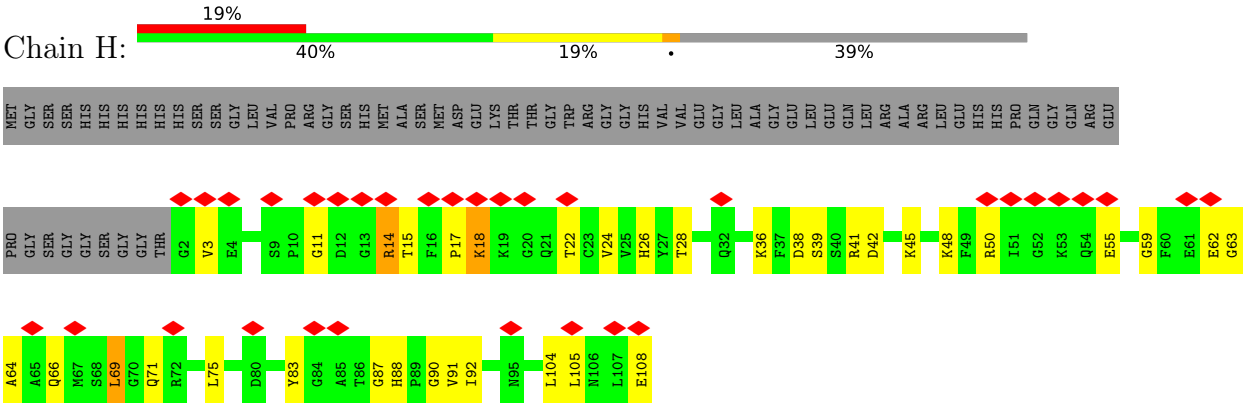




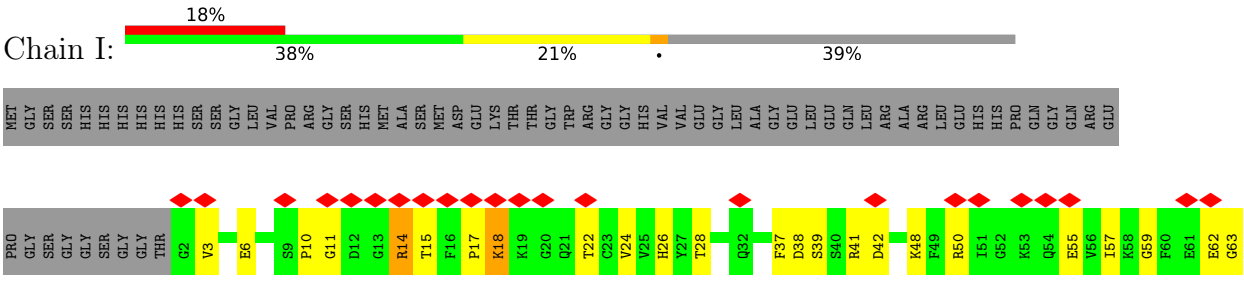
• Molecule 2: Peptidyl-prolyl cis-trans isomerase FKBP1B

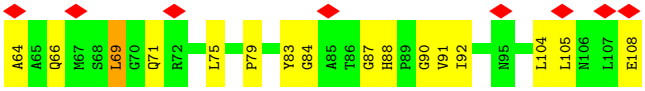


• Molecule 2: Peptidyl-prolyl cis-trans isomerase FKBP1B

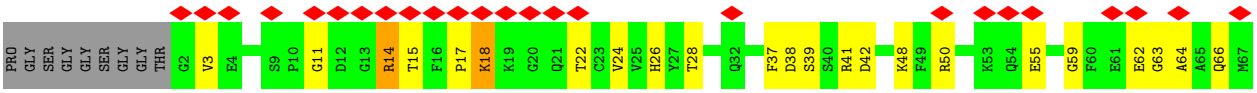


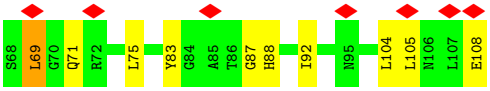
• Molecule 2: Peptidyl-prolyl cis-trans isomerase FKBP1B





• 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	68394	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	60	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	0.192	Depositor
Minimum map value	-0.093	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.008	Depositor
Recommended contour level	0.032	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

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	9/36312 (0.0%)
1	B	0.26	0/26891	0.52	9/36312 (0.0%)
1	C	0.26	0/26891	0.52	9/36312 (0.0%)
1	D	0.26	0/26891	0.52	9/36312 (0.0%)
2	G	0.27	0/835	0.57	0/1123
2	H	0.27	0/835	0.57	0/1123
2	I	0.27	0/835	0.57	0/1123
2	J	0.27	0/835	0.57	0/1123
All	All	0.26	0/110904	0.52	36/149740 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	0	1
1	B	0	1
1	C	0	1
1	D	0	1
All	All	0	4

There are no bond length outliers.

All (36) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	2233	MET	CB-CG-SD	9.46	140.78	112.40
1	D	2233	MET	CB-CG-SD	9.46	140.78	112.40
1	C	2233	MET	CB-CG-SD	9.45	140.76	112.40
1	B	2233	MET	CB-CG-SD	9.45	140.75	112.40

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	B	2233	MET	CA-CB-CG	9.14	128.83	113.30
1	A	2233	MET	CA-CB-CG	9.14	128.83	113.30
1	C	2233	MET	CA-CB-CG	9.13	128.82	113.30
1	D	2233	MET	CA-CB-CG	9.12	128.81	113.30
1	C	2478	GLU	CA-CB-CG	6.95	128.70	113.40
1	A	2478	GLU	CA-CB-CG	6.92	128.63	113.40
1	B	2478	GLU	CA-CB-CG	6.92	128.63	113.40
1	D	2478	GLU	CA-CB-CG	6.91	128.61	113.40
1	A	1743	GLU	CA-CB-CG	6.89	128.56	113.40
1	D	1743	GLU	CA-CB-CG	6.87	128.51	113.40
1	C	1743	GLU	CA-CB-CG	6.86	128.50	113.40
1	B	1743	GLU	CA-CB-CG	6.85	128.48	113.40
1	D	1743	GLU	CB-CA-C	5.64	121.69	110.40
1	B	1743	GLU	CB-CA-C	5.64	121.68	110.40
1	C	1743	GLU	CB-CA-C	5.64	121.67	110.40
1	A	1743	GLU	CB-CA-C	5.61	121.62	110.40
1	D	1682	ASP	N-CA-CB	5.26	120.07	110.60
1	B	1682	ASP	N-CA-CB	5.25	120.05	110.60
1	C	1682	ASP	N-CA-CB	5.25	120.05	110.60
1	A	1682	ASP	N-CA-CB	5.24	120.03	110.60
1	A	2278	MET	CB-CG-SD	5.17	127.92	112.40
1	C	2278	MET	CB-CG-SD	5.17	127.91	112.40
1	D	2278	MET	CB-CG-SD	5.15	127.86	112.40
1	B	2278	MET	CB-CG-SD	5.14	127.83	112.40
1	D	2065	MET	CB-CG-SD	5.07	127.60	112.40
1	B	2065	MET	CB-CG-SD	5.06	127.59	112.40
1	A	2065	MET	CB-CG-SD	5.06	127.58	112.40
1	C	2065	MET	CB-CG-SD	5.06	127.58	112.40
1	D	2335	ARG	CB-CA-C	5.04	120.48	110.40
1	A	2335	ARG	CB-CA-C	5.04	120.47	110.40
1	C	2335	ARG	CB-CA-C	5.03	120.46	110.40
1	B	2335	ARG	CB-CA-C	5.00	120.41	110.40

There are no chirality outliers.

All (4) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	2172	GLU	Peptide
1	B	2172	GLU	Peptide
1	C	2172	GLU	Peptide
1	D	2172	GLU	Peptide

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	26708	587	0
1	B	30067	0	26708	594	0
1	C	30067	0	26708	595	0
1	D	30067	0	26708	584	0
2	G	819	0	821	27	0
2	H	819	0	821	29	0
2	I	819	0	821	35	0
2	J	819	0	821	26	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
All	All	123548	0	110116	2409	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 10.

All (2409) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3845:LEU:HB3	1:B:3853:PHE:HE2	1.40	0.87
1:C:3845:LEU:HB3	1:C:3853:PHE:HE2	1.40	0.87
1:A:3845:LEU:HB3	1:A:3853:PHE:HE2	1.40	0.86
1:D:3845:LEU:HB3	1:D:3853:PHE:HE2	1.40	0.85
1:D:2327:PRO:HB2	1:D:2335:ARG:HD3	1.60	0.84
1:C:2327:PRO:HB2	1:C:2335:ARG:HD3	1.60	0.84
1:A:2327:PRO:HB2	1:A:2335:ARG:HD3	1.60	0.83
1:B:2327:PRO:HB2	1:B:2335:ARG:HD3	1.60	0.83
1:C:1913:CYS:SG	1:C:2090:GLN:NE2	2.53	0.82
2:I:26:HIS:HB2	2:I:105:LEU:HD11	1.61	0.82
1:A:1913:CYS:SG	1:A:2090:GLN:NE2	2.53	0.82
1:D:1913:CYS:SG	1:D:2090:GLN:NE2	2.53	0.81
2:J:26:HIS:HB2	2:J:105:LEU:HD11	1.61	0.81
1:D:1682:ASP:HB3	1:D:1684:PRO:HD2	1.62	0.81
2:G:26:HIS:HB2	2:G:105:LEU:HD11	1.61	0.80

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:26:HIS:HB2	2:H:105:LEU:HD11	1.61	0.80
1:C:1682:ASP:HB3	1:C:1684:PRO:HD2	1.62	0.80
1:B:1913:CYS:SG	1:B:2090:GLN:NE2	2.53	0.80
1:A:1682:ASP:HB3	1:A:1684:PRO:HD2	1.62	0.80
1:B:1682:ASP:HB3	1:B:1684:PRO:HD2	1.62	0.80
1:C:4833:PRO:HB3	1:C:4842:ARG:HD3	1.64	0.80
1:D:4833:PRO:HB3	1:D:4842:ARG:HD3	1.64	0.79
1:B:4833:PRO:HB3	1:B:4842:ARG:HD3	1.64	0.78
1:B:4042:ILE:HG22	1:B:4044:LYS:H	1.49	0.78
1:D:1262:PRO:HG2	1:D:1265:HIS:HB2	1.66	0.78
1:A:4833:PRO:HB3	1:A:4842:ARG:HD3	1.64	0.78
1:D:4042:ILE:HG22	1:D:4044:LYS:H	1.49	0.78
1:B:1233:GLN:HG2	1:C:3493:UNK:HA	1.64	0.77
1:B:1684:PRO:HD3	2:H:42:ASP:HB3	1.67	0.77
1:A:1743:GLU:OE1	1:A:1744:ASN:N	2.18	0.77
1:B:1262:PRO:HG2	1:B:1265:HIS:HB2	1.66	0.77
1:A:1262:PRO:HG2	1:A:1265:HIS:HB2	1.66	0.77
1:A:3889:TRP:HE3	1:D:76:ARG:HH12	1.32	0.77
1:A:3493:UNK:HA	1:D:1233:GLN:HG2	1.67	0.77
1:A:4042:ILE:HG22	1:A:4044:LYS:H	1.49	0.77
1:C:4042:ILE:HG22	1:C:4044:LYS:H	1.49	0.77
1:C:1743:GLU:OE1	1:C:1744:ASN:N	2.18	0.76
2:I:69:LEU:HA	2:I:104:LEU:HD22	1.67	0.76
1:D:1743:GLU:OE1	1:D:1744:ASN:N	2.18	0.76
1:B:4867:ASP:OD1	1:C:4873:ARG:NH1	2.18	0.76
2:G:69:LEU:HA	2:G:104:LEU:HD22	1.67	0.76
1:C:1262:PRO:HG2	1:C:1265:HIS:HB2	1.66	0.76
1:A:76:ARG:NH2	1:B:3889:TRP:O	2.18	0.76
1:B:1743:GLU:OE1	1:B:1744:ASN:N	2.18	0.75
2:H:69:LEU:HA	2:H:104:LEU:HD22	1.67	0.75
1:B:162:ILE:HD11	1:B:181:LEU:HD22	1.69	0.75
2:J:69:LEU:HA	2:J:104:LEU:HD22	1.67	0.74
1:A:162:ILE:HD11	1:A:181:LEU:HD22	1.69	0.74
1:A:4824:GLY:O	1:B:4821:ARG:NH1	2.20	0.74
1:D:486:GLN:HB3	1:D:544:ASN:HD21	1.52	0.74
1:A:486:GLN:HB3	1:A:544:ASN:HD21	1.52	0.74
1:C:162:ILE:HD11	1:C:181:LEU:HD22	1.69	0.74
1:A:1681:VAL:HG23	1:A:1682:ASP:H	1.53	0.73
1:B:1681:VAL:HG23	1:B:1682:ASP:H	1.53	0.73
1:B:3934:LEU:HD12	1:B:3939:LEU:HD22	1.70	0.73
1:D:3934:LEU:HD12	1:D:3939:LEU:HD22	1.71	0.73

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:486:GLN:HB3	1:C:544:ASN:HD21	1.52	0.73
1:B:76:ARG:HH12	1:C:3889:TRP:HE3	1.37	0.73
1:C:3934:LEU:HD12	1:C:3939:LEU:HD22	1.71	0.73
1:D:162:ILE:HD11	1:D:181:LEU:HD22	1.69	0.73
1:A:3934:LEU:HD12	1:A:3939:LEU:HD22	1.70	0.72
1:A:4046:ASP:HA	1:A:4049:LYS:HG2	1.72	0.72
1:B:486:GLN:HB3	1:B:544:ASN:HD21	1.52	0.72
1:B:4046:ASP:HA	1:B:4049:LYS:HG2	1.72	0.72
1:A:1741:PRO:HB3	1:A:1746:LYS:HE3	1.72	0.72
1:C:1681:VAL:HG23	1:C:1682:ASP:H	1.53	0.72
1:D:1681:VAL:HG23	1:D:1682:ASP:H	1.53	0.72
1:A:1286:THR:HG1	1:A:1583:CYS:HG	1.35	0.72
1:D:3843:GLN:HG3	1:D:3921:GLU:HG3	1.72	0.72
1:A:76:ARG:NH1	1:B:3889:TRP:HB3	2.03	0.72
1:D:1741:PRO:HB3	1:D:1746:LYS:HE3	1.71	0.72
1:C:3843:GLN:HG3	1:C:3921:GLU:HG3	1.72	0.72
1:D:4046:ASP:HA	1:D:4049:LYS:HG2	1.72	0.72
1:C:4046:ASP:HA	1:C:4049:LYS:HG2	1.72	0.71
1:A:1177:LEU:HB2	1:A:1182:LEU:HD11	1.72	0.71
1:B:1177:LEU:HB2	1:B:1182:LEU:HD11	1.72	0.71
1:A:3889:TRP:O	1:D:76:ARG:NH2	2.24	0.70
1:A:4863:GLY:HA2	1:B:4866:ILE:HG12	1.72	0.70
1:A:3843:GLN:HG3	1:A:3921:GLU:HG3	1.72	0.70
1:B:1741:PRO:HB3	1:B:1746:LYS:HE3	1.71	0.70
1:B:3843:GLN:HG3	1:B:3921:GLU:HG3	1.72	0.70
1:C:1741:PRO:HB3	1:C:1746:LYS:HE3	1.71	0.70
1:D:1286:THR:HG1	1:D:1583:CYS:HG	1.38	0.70
1:B:1791:LYS:O	1:B:1795:MET:HG3	1.92	0.70
1:C:1177:LEU:HB2	1:C:1182:LEU:HD11	1.72	0.70
1:D:1177:LEU:HB2	1:D:1182:LEU:HD11	1.72	0.69
1:A:4867:ASP:OD1	1:B:4873:ARG:NH1	2.25	0.69
1:C:1791:LYS:O	1:C:1795:MET:HG3	1.92	0.69
1:C:2258:GLU:HG2	1:C:2261:LEU:HB2	1.74	0.69
1:D:4480:LYS:H	1:D:4480:LYS:HD2	1.57	0.69
1:A:1791:LYS:O	1:A:1795:MET:HG3	1.92	0.69
1:A:973:THR:OG1	1:A:976:TYR:O	2.10	0.69
1:A:4480:LYS:H	1:A:4480:LYS:HD2	1.58	0.69
1:B:4480:LYS:HD2	1:B:4480:LYS:H	1.58	0.69
1:A:3889:TRP:HE3	1:D:76:ARG:NH1	1.91	0.69
1:B:1573:LYS:HE2	1:B:1584:PRO:HG2	1.75	0.69
1:A:2258:GLU:HG2	1:A:2261:LEU:HB2	1.74	0.68

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:76:ARG:HH12	1:B:3889:TRP:HE3	1.41	0.68
1:A:1573:LYS:HE2	1:A:1584:PRO:HG2	1.75	0.68
1:D:660:PHE:HB3	1:D:787:LEU:HD23	1.76	0.68
1:D:1791:LYS:O	1:D:1795:MET:HG3	1.92	0.68
1:D:2275:SER:OG	1:D:2287:ILE:O	2.12	0.68
1:D:2258:GLU:HG2	1:D:2261:LEU:HB2	1.74	0.68
1:B:844:ARG:HE	1:B:845:THR:H	1.40	0.68
1:B:189:GLU:OE1	1:C:2417:ARG:HD3	1.93	0.68
1:A:660:PHE:HB3	1:A:787:LEU:HD23	1.76	0.68
1:C:373:THR:HG22	1:C:397:GLY:HA2	1.76	0.68
1:D:1573:LYS:HE2	1:D:1584:PRO:HG2	1.75	0.68
1:A:844:ARG:HE	1:A:845:THR:H	1.40	0.67
1:B:2258:GLU:HG2	1:B:2261:LEU:HB2	1.74	0.67
1:C:76:ARG:HH12	1:D:3889:TRP:HE3	1.42	0.67
1:C:660:PHE:HB3	1:C:787:LEU:HD23	1.76	0.67
1:B:76:ARG:NH1	1:C:3889:TRP:HE3	1.92	0.67
1:C:1190:LEU:HD22	1:C:1193:LYS:HE3	1.76	0.67
1:C:4480:LYS:H	1:C:4480:LYS:HD2	1.57	0.67
1:D:1190:LEU:HD22	1:D:1193:LYS:HE3	1.76	0.67
1:A:2275:SER:OG	1:A:2287:ILE:O	2.12	0.67
1:C:844:ARG:HE	1:C:845:THR:H	1.40	0.67
1:C:1573:LYS:HE2	1:C:1584:PRO:HG2	1.75	0.67
1:A:1932:VAL:HG21	1:A:3616:VAL:HA	1.76	0.67
1:B:373:THR:HG22	1:B:397:GLY:HA2	1.76	0.67
1:D:373:THR:HG22	1:D:397:GLY:HA2	1.76	0.67
1:B:660:PHE:HB3	1:B:787:LEU:HD23	1.76	0.66
1:B:2275:SER:OG	1:B:2287:ILE:O	2.12	0.66
1:D:973:THR:OG1	1:D:976:TYR:O	2.10	0.66
1:A:373:THR:HG22	1:A:397:GLY:HA2	1.76	0.66
1:D:844:ARG:HE	1:D:845:THR:H	1.40	0.66
1:D:1932:VAL:HG21	1:D:3616:VAL:HA	1.76	0.66
1:A:2107:ILE:HG13	1:A:2108:ASN:H	1.60	0.66
1:B:76:ARG:NH2	1:C:3889:TRP:O	2.28	0.66
1:C:1286:THR:HG1	1:C:1583:CYS:HG	1.42	0.66
1:C:2275:SER:OG	1:C:2287:ILE:O	2.12	0.66
2:H:22:THR:HG22	2:H:108:GLU:HB3	1.78	0.66
1:A:1610:SER:HB3	1:A:1619:LEU:HB3	1.78	0.66
2:G:22:THR:HG22	2:G:108:GLU:HB3	1.78	0.66
1:C:2000:GLU:O	1:C:2004:THR:HG22	1.95	0.66
1:A:1190:LEU:HD22	1:A:1193:LYS:HE3	1.76	0.66
1:B:973:THR:OG1	1:B:976:TYR:O	2.10	0.66

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1359:ILE:HG13	1:C:1360:ASP:H	1.61	0.66
1:D:2107:ILE:HG13	1:D:2108:ASN:H	1.60	0.66
1:B:1190:LEU:HD22	1:B:1193:LYS:HE3	1.76	0.65
1:D:2092:ASP:OD1	1:D:2093:GLY:N	2.30	0.65
1:A:2000:GLU:O	1:A:2004:THR:HG22	1.95	0.65
1:C:844:ARG:O	1:C:848:ARG:NH2	2.29	0.65
1:D:3639:LEU:HD23	1:D:3693:ILE:HG21	1.79	0.65
1:B:1932:VAL:HG21	1:B:3616:VAL:HA	1.76	0.65
1:B:1989:GLU:HA	1:B:1992:ARG:HD3	1.79	0.65
1:C:1345:VAL:HG21	1:C:1374:LYS:HE2	1.78	0.65
1:C:1610:SER:HB3	1:C:1619:LEU:HB3	1.78	0.65
1:C:3639:LEU:HD23	1:C:3693:ILE:HG21	1.79	0.65
1:D:1610:SER:HB3	1:D:1619:LEU:HB3	1.78	0.65
1:B:1610:SER:HB3	1:B:1619:LEU:HB3	1.78	0.65
1:B:3639:LEU:HD23	1:B:3693:ILE:HG21	1.79	0.65
1:C:290:ARG:HH12	1:C:343:ARG:HG2	1.61	0.65
1:D:844:ARG:O	1:D:848:ARG:NH2	2.29	0.65
1:A:838:ARG:H	1:A:841:LYS:HZ1	1.44	0.65
1:D:290:ARG:HH12	1:D:343:ARG:HG2	1.61	0.65
1:D:1345:VAL:HG21	1:D:1374:LYS:HE2	1.78	0.65
1:B:1359:ILE:HG13	1:B:1360:ASP:H	1.61	0.65
1:B:2000:GLU:O	1:B:2004:THR:HG22	1.95	0.65
1:B:2092:ASP:OD1	1:B:2093:GLY:N	2.30	0.65
1:B:2107:ILE:HG13	1:B:2108:ASN:H	1.60	0.65
1:B:3727:GLN:OE1	1:B:3769:ASN:ND2	2.30	0.65
1:C:1932:VAL:HG21	1:C:3616:VAL:HA	1.76	0.65
1:D:620:CYS:SG	1:D:621:HIS:N	2.70	0.65
1:D:2784:TRP:HE3	1:D:2842:MET:HE2	1.62	0.65
1:A:620:CYS:SG	1:A:621:HIS:N	2.70	0.65
1:A:3727:GLN:OE1	1:A:3769:ASN:ND2	2.30	0.65
1:D:3727:GLN:OE1	1:D:3769:ASN:ND2	2.30	0.65
1:B:2316:ALA:O	1:B:2320:VAL:HG23	1.97	0.65
1:C:2092:ASP:OD1	1:C:2093:GLY:N	2.30	0.65
2:I:22:THR:HG22	2:I:108:GLU:HB3	1.78	0.65
1:D:2000:GLU:O	1:D:2004:THR:HG22	1.95	0.65
1:A:3639:LEU:HD23	1:A:3693:ILE:HG21	1.79	0.65
1:C:544:ASN:ND2	1:C:547:ASN:OD1	2.30	0.65
1:D:3831:ASP:HB3	1:D:3834:PHE:HB3	1.78	0.65
1:A:844:ARG:O	1:A:848:ARG:NH2	2.29	0.64
1:A:2316:ALA:O	1:A:2320:VAL:HG23	1.97	0.64
1:B:191:TYR:HE2	1:C:2325:ARG:CZ	2.11	0.64

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1999:HIS:CG	1:B:3627:TRP:HE1	2.16	0.64
1:C:3727:GLN:OE1	1:C:3769:ASN:ND2	2.30	0.64
1:D:2316:ALA:O	1:D:2320:VAL:HG23	1.97	0.64
1:A:2092:ASP:OD1	1:A:2093:GLY:N	2.30	0.64
1:B:544:ASN:ND2	1:B:547:ASN:OD1	2.30	0.64
1:A:290:ARG:HH12	1:A:343:ARG:HG2	1.61	0.64
1:A:674:TYR:HD2	1:A:758:CYS:HG	1.44	0.64
1:A:1989:GLU:HA	1:A:1992:ARG:HD3	1.79	0.64
1:A:1999:HIS:CG	1:A:3627:TRP:HE1	2.16	0.64
1:C:1999:HIS:CG	1:C:3627:TRP:HE1	2.16	0.64
1:C:2107:ILE:HG13	1:C:2108:ASN:H	1.60	0.64
1:B:357:GLY:O	1:B:404:ASN:ND2	2.28	0.64
1:B:844:ARG:O	1:B:848:ARG:NH2	2.29	0.64
1:C:620:CYS:SG	1:C:621:HIS:N	2.70	0.64
1:C:1989:GLU:HA	1:C:1992:ARG:HD3	1.79	0.64
1:D:1999:HIS:CG	1:D:3627:TRP:HE1	2.16	0.64
1:A:3831:ASP:HB3	1:A:3834:PHE:HB3	1.78	0.64
1:B:290:ARG:HH12	1:B:343:ARG:HG2	1.61	0.64
1:B:4942:MET:HE2	1:B:4950:PHE:HB3	1.80	0.64
1:B:1345:VAL:HG21	1:B:1374:LYS:HE2	1.78	0.64
1:B:2784:TRP:HE3	1:B:2842:MET:HE2	1.63	0.64
1:C:76:ARG:NH2	1:D:3889:TRP:O	2.31	0.64
1:A:544:ASN:ND2	1:A:547:ASN:OD1	2.30	0.64
1:A:1359:ILE:HG13	1:A:1360:ASP:H	1.61	0.64
1:A:4821:ARG:NH1	1:D:4824:GLY:O	2.30	0.64
1:B:4570:THR:HA	1:B:4573:ILE:HG12	1.79	0.64
1:D:544:ASN:ND2	1:D:547:ASN:OD1	2.30	0.64
1:D:1359:ILE:HG13	1:D:1360:ASP:H	1.61	0.64
2:J:22:THR:HG22	2:J:108:GLU:HB3	1.78	0.64
1:B:3845:LEU:HB3	1:B:3853:PHE:CE2	2.30	0.63
1:C:3831:ASP:HB3	1:C:3834:PHE:HB3	1.78	0.63
1:C:4570:THR:HA	1:C:4573:ILE:HG12	1.79	0.63
1:A:4570:THR:HA	1:A:4573:ILE:HG12	1.79	0.63
1:B:620:CYS:SG	1:B:621:HIS:N	2.70	0.63
1:D:419:ILE:HG21	1:D:492:GLU:HG3	1.80	0.63
1:D:1009:ARG:O	1:D:1013:ARG:NH1	2.32	0.63
1:D:1989:GLU:HA	1:D:1992:ARG:HD3	1.79	0.63
1:B:1708:ILE:HD12	1:B:1828:THR:HG21	1.80	0.63
1:C:1009:ARG:O	1:C:1013:ARG:NH1	2.32	0.63
1:C:2316:ALA:O	1:C:2320:VAL:HG23	1.97	0.63
1:A:1345:VAL:HG21	1:A:1374:LYS:HE2	1.78	0.63

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:419:ILE:HG21	1:B:492:GLU:HG3	1.80	0.63
1:B:3831:ASP:HB3	1:B:3834:PHE:HB3	1.78	0.63
1:D:1708:ILE:HD12	1:D:1828:THR:HG21	1.80	0.63
1:C:973:THR:OG1	1:C:976:TYR:O	2.10	0.63
1:D:4570:THR:HA	1:D:4573:ILE:HG12	1.79	0.63
1:A:4632:LEU:HB2	1:A:4703:LYS:HE2	1.81	0.63
1:D:1102:TYR:HB2	1:D:1165:MET:HG2	1.81	0.63
1:A:182:ILE:HD11	1:A:191:TYR:CE1	2.34	0.62
1:C:4632:LEU:HB2	1:C:4703:LYS:HE2	1.82	0.62
1:D:182:ILE:HD11	1:D:191:TYR:CE1	2.34	0.62
1:D:4568:GLU:HG2	1:D:4569:PRO:HD3	1.81	0.62
1:B:2838:ALA:O	1:B:2841:GLU:HG3	2.00	0.62
1:C:880:ARG:HG3	1:C:881:ILE:HD12	1.81	0.62
1:A:1102:TYR:HB2	1:A:1165:MET:HG2	1.81	0.62
1:B:2067:ARG:O	1:B:2071:GLU:HG2	1.99	0.62
1:C:419:ILE:HG21	1:C:492:GLU:HG3	1.80	0.62
1:C:2067:ARG:O	1:C:2071:GLU:HG2	2.00	0.62
1:D:305:TYR:HE1	1:D:319:LYS:HG2	1.65	0.62
1:D:880:ARG:HG3	1:D:881:ILE:HD12	1.81	0.62
1:A:419:ILE:HG21	1:A:492:GLU:HG3	1.80	0.62
1:A:4568:GLU:HG2	1:A:4569:PRO:HD3	1.81	0.62
1:B:182:ILE:HD11	1:B:191:TYR:CE1	2.34	0.62
1:B:2232:ALA:HB3	1:B:2233:MET:HE2	1.80	0.62
1:D:355:LYS:HE3	1:D:356:TYR:H	1.65	0.62
1:D:1359:ILE:HG12	1:D:1363:LYS:HD2	1.82	0.62
1:D:4632:LEU:HB2	1:D:4703:LYS:HE2	1.81	0.62
1:A:490:GLN:HB2	1:A:547:ASN:HD21	1.65	0.62
1:B:1009:ARG:O	1:B:1013:ARG:NH1	2.31	0.62
1:D:2838:ALA:O	1:D:2841:GLU:HG3	2.00	0.62
1:A:3993:THR:HA	1:A:3996:LYS:HE2	1.81	0.62
1:C:182:ILE:HD11	1:C:191:TYR:CE1	2.34	0.62
1:A:1359:ILE:HG12	1:A:1363:LYS:HD2	1.82	0.62
1:A:3754:VAL:HA	1:A:3757:THR:HG22	1.82	0.62
1:B:908:ARG:HG2	1:B:916:PRO:HG3	1.82	0.62
1:B:4632:LEU:HB2	1:B:4703:LYS:HE2	1.81	0.62
1:C:908:ARG:HG2	1:C:916:PRO:HG3	1.82	0.62
1:C:1359:ILE:HG12	1:C:1363:LYS:HD2	1.82	0.62
1:C:3845:LEU:HB3	1:C:3853:PHE:CE2	2.30	0.62
1:D:1383:ARG:HH11	1:D:1385:LYS:HB2	1.64	0.62
1:C:1708:ILE:HD12	1:C:1828:THR:HG21	1.81	0.62
1:C:2784:TRP:HE3	1:C:2842:MET:HE2	1.64	0.62

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:188:SER:HB2	1:D:190:ARG:HH11	1.65	0.62
1:D:3754:VAL:HA	1:D:3757:THR:HG22	1.82	0.62
1:A:1383:ARG:HH11	1:A:1385:LYS:HB2	1.64	0.62
1:B:1359:ILE:HG12	1:B:1363:LYS:HD2	1.82	0.62
1:D:908:ARG:HG2	1:D:916:PRO:HG3	1.82	0.62
1:A:908:ARG:HG2	1:A:916:PRO:HG3	1.82	0.61
1:A:1009:ARG:O	1:A:1013:ARG:NH1	2.31	0.61
1:B:490:GLN:OE1	1:B:547:ASN:ND2	2.33	0.61
1:B:2348:GLU:O	1:B:2352:ILE:HG12	2.00	0.61
1:C:2838:ALA:O	1:C:2841:GLU:HG3	2.00	0.61
1:C:2348:GLU:O	1:C:2352:ILE:HG12	2.00	0.61
1:C:4942:MET:HE2	1:C:4950:PHE:HB3	1.81	0.61
1:A:305:TYR:HE1	1:A:319:LYS:HG2	1.65	0.61
1:A:355:LYS:HE3	1:A:356:TYR:H	1.65	0.61
1:C:305:TYR:HE1	1:C:319:LYS:HG2	1.65	0.61
1:C:1383:ARG:HH11	1:C:1385:LYS:HB2	1.64	0.61
1:C:3754:VAL:HA	1:C:3757:THR:HG22	1.82	0.61
1:D:3845:LEU:HB3	1:D:3853:PHE:CE2	2.30	0.61
1:A:2348:GLU:O	1:A:2352:ILE:HG12	2.00	0.61
1:B:880:ARG:HG3	1:B:881:ILE:HD12	1.81	0.61
1:B:2159:ASN:OD1	1:B:2162:ARG:NH2	2.33	0.61
1:B:3754:VAL:HA	1:B:3757:THR:HG22	1.82	0.61
1:C:355:LYS:HE3	1:C:356:TYR:H	1.65	0.61
1:C:3993:THR:HA	1:C:3996:LYS:HE2	1.81	0.61
1:A:1708:ILE:HD12	1:A:1828:THR:HG21	1.80	0.61
1:A:3845:LEU:HB3	1:A:3853:PHE:CE2	2.30	0.61
1:B:490:GLN:HB2	1:B:547:ASN:HD21	1.65	0.61
1:C:674:TYR:HD2	1:C:758:CYS:HG	1.47	0.61
1:A:490:GLN:OE1	1:A:547:ASN:ND2	2.33	0.61
1:B:188:SER:HB2	1:B:190:ARG:HH11	1.65	0.61
1:B:3993:THR:HA	1:B:3996:LYS:HE2	1.81	0.61
1:B:4568:GLU:HG2	1:B:4569:PRO:HD3	1.81	0.61
1:C:188:SER:HB2	1:C:190:ARG:HH11	1.65	0.61
1:C:2159:ASN:OD1	1:C:2162:ARG:NH2	2.33	0.61
1:D:3993:THR:HA	1:D:3996:LYS:HE2	1.81	0.61
2:J:26:HIS:NE2	2:J:41:ARG:HG2	2.16	0.61
1:A:2838:ALA:O	1:A:2841:GLU:HG3	2.00	0.61
1:B:4949:GLU:OE1	1:B:4949:GLU:N	2.29	0.61
1:A:2067:ARG:O	1:A:2071:GLU:HG2	2.00	0.61
1:B:1383:ARG:HH11	1:B:1385:LYS:HB2	1.64	0.61
1:D:2335:ARG:HE	1:D:2336:GLY:N	1.99	0.61

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2233:MET:N	1:A:2233:MET:HE2	2.16	0.61
1:B:305:TYR:HE1	1:B:319:LYS:HG2	1.65	0.61
1:C:377:VAL:HG21	1:C:390:LYS:HG2	1.83	0.61
1:C:1102:TYR:HB2	1:C:1165:MET:HG2	1.81	0.61
1:D:490:GLN:OE1	1:D:547:ASN:ND2	2.33	0.61
1:B:355:LYS:HE3	1:B:356:TYR:H	1.65	0.61
1:B:377:VAL:HG21	1:B:390:LYS:HG2	1.83	0.61
1:C:2335:ARG:HE	1:C:2335:ARG:C	2.04	0.61
2:I:26:HIS:NE2	2:I:41:ARG:HG2	2.16	0.61
1:A:377:VAL:HG21	1:A:390:LYS:HG2	1.83	0.60
1:D:490:GLN:HB2	1:D:547:ASN:HD21	1.65	0.60
1:D:2067:ARG:O	1:D:2071:GLU:HG2	2.00	0.60
1:D:4305:PHE:HA	1:D:4308:VAL:HG22	1.83	0.60
1:A:188:SER:HB2	1:A:190:ARG:HH11	1.65	0.60
1:A:880:ARG:HG3	1:A:881:ILE:HD12	1.81	0.60
1:B:1102:TYR:HB2	1:B:1165:MET:HG2	1.81	0.60
1:B:2335:ARG:HE	1:B:2335:ARG:C	2.04	0.60
1:D:2335:ARG:HE	1:D:2335:ARG:C	2.04	0.60
1:A:2335:ARG:C	1:A:2335:ARG:HE	2.04	0.60
2:G:22:THR:HB	2:G:50:ARG:HG2	1.84	0.60
1:B:1225:LYS:HB3	1:B:1226:TYR:CD2	2.36	0.60
1:D:357:GLY:O	1:D:404:ASN:ND2	2.28	0.60
1:D:377:VAL:HG21	1:D:390:LYS:HG2	1.83	0.60
1:D:1383:ARG:NH1	1:D:1385:LYS:O	2.34	0.60
1:D:2348:GLU:O	1:D:2352:ILE:HG12	2.00	0.60
1:A:2159:ASN:OD1	1:A:2162:ARG:NH2	2.33	0.60
1:A:2335:ARG:HE	1:A:2336:GLY:N	1.99	0.60
1:A:4305:PHE:HA	1:A:4308:VAL:HG22	1.83	0.60
2:H:22:THR:HB	2:H:50:ARG:HG2	1.83	0.60
1:C:1383:ARG:NH1	1:C:1385:LYS:O	2.34	0.60
1:C:3659:ARG:HG3	1:C:3660:VAL:H	1.66	0.60
1:D:2159:ASN:OD1	1:D:2162:ARG:NH2	2.33	0.60
1:B:2335:ARG:HE	1:B:2336:GLY:N	1.99	0.60
1:C:4568:GLU:HG2	1:C:4569:PRO:HD3	1.81	0.60
1:D:760:ASP:HB3	1:D:764:PRO:HG2	1.83	0.60
1:B:1383:ARG:NH1	1:B:1385:LYS:O	2.34	0.60
1:C:1769:PHE:O	2:I:83:TYR:OH	2.11	0.60
2:J:22:THR:HB	2:J:50:ARG:HG2	1.83	0.60
1:A:4949:GLU:OE1	1:A:4949:GLU:N	2.29	0.60
2:G:26:HIS:NE2	2:G:41:ARG:HG2	2.16	0.60
1:B:2838:ALA:O	1:B:2842:MET:HG3	2.01	0.60

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1788:LEU:O	1:D:1792:THR:OG1	2.20	0.60
1:D:2838:ALA:O	1:D:2842:MET:HG3	2.01	0.60
1:B:2108:ASN:HD21	1:B:2111:SER:HB3	1.67	0.60
1:C:490:GLN:OE1	1:C:547:ASN:ND2	2.33	0.60
1:C:587:ASN:OD1	1:C:2132:ARG:NH1	2.35	0.60
1:A:747:HIS:CG	1:A:750:ARG:HH12	2.20	0.60
1:B:3659:ARG:HG3	1:B:3660:VAL:H	1.66	0.60
1:B:3891:TYR:O	1:B:3956:LYS:NZ	2.26	0.60
1:C:2838:ALA:O	1:C:2842:MET:HG3	2.01	0.60
1:A:1233:GLN:HG2	1:B:3493:UNK:HA	1.83	0.60
1:A:2838:ALA:O	1:A:2842:MET:HG3	2.01	0.60
2:H:26:HIS:NE2	2:H:41:ARG:HG2	2.16	0.60
1:C:4196:ILE:HG23	1:C:4922:MET:HE2	1.83	0.60
1:D:587:ASN:OD1	1:D:2132:ARG:NH1	2.35	0.60
1:D:1223:THR:O	1:D:1225:LYS:HD3	2.02	0.60
1:A:1225:LYS:HB3	1:A:1226:TYR:CD2	2.36	0.59
1:B:587:ASN:OD1	1:B:2132:ARG:NH1	2.35	0.59
1:C:2335:ARG:HE	1:C:2336:GLY:N	1.99	0.59
1:A:1383:ARG:NH1	1:A:1385:LYS:O	2.34	0.59
1:C:2108:ASN:HD21	1:C:2111:SER:HB3	1.67	0.59
1:D:3659:ARG:HG3	1:D:3660:VAL:H	1.66	0.59
1:A:76:ARG:O	1:A:79:GLN:HG2	2.03	0.59
1:A:1223:THR:O	1:A:1225:LYS:HD3	2.02	0.59
1:A:1788:LEU:O	1:A:1792:THR:OG1	2.20	0.59
1:B:760:ASP:HB3	1:B:764:PRO:HG2	1.83	0.59
1:C:1225:LYS:HB3	1:C:1226:TYR:CD2	2.36	0.59
1:C:409:GLN:N	1:C:412:GLU:OE2	2.35	0.59
1:A:875:PRO:O	1:A:882:ARG:NH2	2.35	0.59
1:A:2220:LEU:HD11	1:A:2242:ALA:HB2	1.84	0.59
1:A:3998:MET:O	1:A:4001:MET:HG3	2.03	0.59
1:B:4305:PHE:HA	1:B:4308:VAL:HG22	1.83	0.59
1:C:760:ASP:HB3	1:C:764:PRO:HG2	1.83	0.59
1:D:1225:LYS:HB3	1:D:1226:TYR:CD2	2.36	0.59
1:D:1286:THR:OG1	1:D:1583:CYS:SG	2.58	0.59
1:A:2081:ARG:HG3	1:A:3686:LEU:HD22	1.85	0.59
1:A:4842:ARG:NH1	1:A:4846:ASP:OD2	2.36	0.59
1:B:1788:LEU:O	1:B:1792:THR:OG1	2.20	0.59
1:C:76:ARG:O	1:C:79:GLN:HG2	2.03	0.59
2:I:22:THR:HB	2:I:50:ARG:HG2	1.84	0.59
1:D:747:HIS:CG	1:D:750:ARG:HH12	2.20	0.59
1:D:4942:MET:HE2	1:D:4950:PHE:HB3	1.85	0.59

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:694:ARG:HG2	1:A:728:ASP:HB3	1.84	0.59
1:A:3659:ARG:HG3	1:A:3660:VAL:H	1.66	0.59
1:B:1223:THR:O	1:B:1225:LYS:HD3	2.02	0.59
1:B:3998:MET:O	1:B:4001:MET:HG3	2.03	0.59
1:C:490:GLN:HB2	1:C:547:ASN:HD21	1.65	0.59
1:C:875:PRO:O	1:C:882:ARG:NH2	2.35	0.59
1:C:4001:MET:HA	1:C:4004:GLU:HG2	1.85	0.59
1:D:838:ARG:H	1:D:841:LYS:HZ1	1.48	0.59
1:D:3998:MET:O	1:D:4001:MET:HG3	2.03	0.59
1:C:3891:TYR:O	1:C:3956:LYS:NZ	2.26	0.59
1:B:1286:THR:HG1	1:B:1583:CYS:HG	1.46	0.59
1:B:2081:ARG:HG3	1:B:3686:LEU:HD22	1.85	0.59
1:B:4001:MET:HA	1:B:4004:GLU:HG2	1.85	0.59
1:C:1223:THR:O	1:C:1225:LYS:HD3	2.02	0.59
1:A:587:ASN:OD1	1:A:2132:ARG:NH1	2.35	0.59
1:B:2220:LEU:HD11	1:B:2242:ALA:HB2	1.84	0.59
1:B:4842:ARG:NH1	1:B:4846:ASP:OD2	2.36	0.59
1:C:1788:LEU:O	1:C:1792:THR:OG1	2.20	0.59
1:C:3998:MET:O	1:C:4001:MET:HG3	2.03	0.59
1:C:4305:PHE:HA	1:C:4308:VAL:HG22	1.84	0.59
1:D:933:LEU:O	1:D:937:LEU:HG	2.03	0.59
1:D:2108:ASN:HD21	1:D:2111:SER:HB3	1.67	0.59
1:D:4842:ARG:NH1	1:D:4846:ASP:OD2	2.36	0.59
1:B:3810:GLN:NE2	1:B:3826:GLU:OE1	2.35	0.58
1:D:3810:GLN:NE2	1:D:3826:GLU:OE1	2.35	0.58
1:A:20:VAL:HB	1:A:214:VAL:HG13	1.85	0.58
1:A:2108:ASN:HD21	1:A:2111:SER:HB3	1.67	0.58
1:B:933:LEU:O	1:B:937:LEU:HG	2.03	0.58
1:C:20:VAL:HB	1:C:214:VAL:HG13	1.86	0.58
1:D:76:ARG:O	1:D:79:GLN:HG2	2.03	0.58
1:D:2220:LEU:HD11	1:D:2242:ALA:HB2	1.84	0.58
1:A:76:ARG:NH1	1:B:3889:TRP:HE3	2.01	0.58
1:A:760:ASP:HB3	1:A:764:PRO:HG2	1.83	0.58
1:B:76:ARG:O	1:B:79:GLN:HG2	2.03	0.58
1:B:747:HIS:CG	1:B:750:ARG:HH12	2.20	0.58
1:C:747:HIS:CG	1:C:750:ARG:HH12	2.20	0.58
1:C:2716:LEU:O	1:C:2720:ILE:HG12	2.04	0.58
1:D:694:ARG:HG2	1:D:728:ASP:HB3	1.84	0.58
1:A:436:LEU:HD21	1:A:517:VAL:HG12	1.86	0.58
1:A:2716:LEU:O	1:A:2720:ILE:HG12	2.04	0.58
1:B:2716:LEU:O	1:B:2720:ILE:HG12	2.04	0.58

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:4842:ARG:NH1	1:C:4846:ASP:OD2	2.36	0.58
1:A:933:LEU:O	1:A:937:LEU:HG	2.03	0.58
1:B:235:ARG:NH1	1:B:268:SER:O	2.37	0.58
1:B:694:ARG:HG2	1:B:728:ASP:HB3	1.84	0.58
1:C:235:ARG:NH1	1:C:268:SER:O	2.37	0.58
1:C:694:ARG:HG2	1:C:728:ASP:HB3	1.84	0.58
1:D:20:VAL:HB	1:D:214:VAL:HG13	1.85	0.58
1:D:2716:LEU:O	1:D:2720:ILE:HG12	2.04	0.58
1:C:750:ARG:HH21	2:I:10:PRO:HD3	1.69	0.58
1:D:674:TYR:HD2	1:D:758:CYS:HG	1.52	0.58
1:D:2081:ARG:HG3	1:D:3686:LEU:HD22	1.85	0.58
1:B:409:GLN:N	1:B:412:GLU:OE2	2.35	0.58
1:C:2220:LEU:HD11	1:C:2242:ALA:HB2	1.84	0.58
1:D:875:PRO:O	1:D:882:ARG:NH2	2.35	0.58
1:A:235:ARG:NH1	1:A:268:SER:O	2.37	0.58
1:A:1245:ARG:NH1	1:A:1809:ASP:O	2.33	0.58
1:C:2112:VAL:O	1:C:2116:ILE:HG13	2.04	0.58
1:C:2848:HIS:CE1	1:C:2876:LEU:HD21	2.39	0.58
1:B:20:VAL:HB	1:B:214:VAL:HG13	1.85	0.58
1:D:4949:GLU:OE1	1:D:4949:GLU:N	2.29	0.58
1:A:357:GLY:O	1:A:404:ASN:ND2	2.28	0.57
1:A:363:ILE:HG22	1:A:372:LEU:HD23	1.86	0.57
1:A:409:GLN:N	1:A:412:GLU:OE2	2.35	0.57
1:B:436:LEU:HD21	1:B:517:VAL:HG12	1.86	0.57
1:B:674:TYR:HD2	1:B:758:CYS:HG	1.52	0.57
1:B:875:PRO:O	1:B:882:ARG:NH2	2.35	0.57
1:B:2112:VAL:O	1:B:2116:ILE:HG13	2.04	0.57
1:B:2228:LEU:HD22	1:B:2296:ARG:HG3	1.86	0.57
1:C:363:ILE:HG22	1:C:372:LEU:HD23	1.86	0.57
1:D:4001:MET:HA	1:D:4004:GLU:HG2	1.85	0.57
1:C:933:LEU:O	1:C:937:LEU:HG	2.03	0.57
1:C:2081:ARG:HG3	1:C:3686:LEU:HD22	1.85	0.57
1:C:2228:LEU:HD22	1:C:2296:ARG:HG3	1.86	0.57
1:C:3810:GLN:NE2	1:C:3826:GLU:OE1	2.35	0.57
1:C:4649:LYS:NZ	1:C:4669:LEU:O	2.37	0.57
1:D:235:ARG:NH1	1:D:268:SER:O	2.37	0.57
1:A:4001:MET:HA	1:A:4004:GLU:HG2	1.85	0.57
1:B:2848:HIS:CE1	1:B:2876:LEU:HD21	2.39	0.57
1:C:838:ARG:H	1:C:841:LYS:HZ1	1.52	0.57
1:D:363:ILE:HG22	1:D:372:LEU:HD23	1.86	0.57
1:D:2233:MET:N	1:D:2233:MET:HE2	2.20	0.57

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:J:83:TYR:HB3	2:J:87:GLY:HA2	1.86	0.57
1:D:2848:HIS:CE1	1:D:2876:LEU:HD21	2.39	0.57
1:A:2784:TRP:HE3	1:A:2842:MET:HE2	1.69	0.57
1:B:929:ARG:HA	1:B:932:ASN:HD21	1.70	0.57
1:A:4649:LYS:NZ	1:A:4669:LEU:O	2.37	0.57
1:A:4660:TYR:HB3	1:A:4664:ARG:HH12	1.70	0.57
1:C:140:THR:O	1:D:2337:GLU:HG3	2.04	0.57
2:I:83:TYR:HB3	2:I:87:GLY:HA2	1.86	0.57
1:A:896:ASN:OD1	1:A:897:LYS:N	2.38	0.57
1:A:2848:HIS:CE1	1:A:2876:LEU:HD21	2.39	0.57
1:D:436:LEU:HD21	1:D:517:VAL:HG12	1.86	0.57
1:A:227:TYR:CD2	1:A:352:SER:HB3	2.40	0.57
1:C:1286:THR:OG1	1:C:1583:CYS:SG	2.58	0.57
1:C:2763:SER:H	1:C:2766:GLU:HB2	1.70	0.57
1:A:2228:LEU:HD22	1:A:2296:ARG:HG3	1.86	0.57
1:B:363:ILE:HG22	1:B:372:LEU:HD23	1.86	0.57
1:B:672:LYS:HB3	1:B:819:TYR:HA	1.87	0.57
1:B:4196:ILE:HG23	1:B:4922:MET:HE2	1.87	0.57
1:D:227:TYR:CD2	1:D:352:SER:HB3	2.40	0.57
1:D:4660:TYR:HB3	1:D:4664:ARG:HH12	1.70	0.57
1:A:4196:ILE:HG23	1:A:4922:MET:HE2	1.86	0.56
1:B:4649:LYS:NZ	1:B:4669:LEU:O	2.37	0.56
1:D:2228:LEU:HD22	1:D:2296:ARG:HG3	1.86	0.56
1:A:1829:LEU:HB3	1:A:1834:ILE:HD11	1.87	0.56
1:C:436:LEU:HD21	1:C:517:VAL:HG12	1.86	0.56
1:A:1048:ASP:HA	1:A:1051:ARG:HD2	1.87	0.56
1:A:2112:VAL:O	1:A:2116:ILE:HG13	2.04	0.56
1:B:1829:LEU:HB3	1:B:1834:ILE:HD11	1.87	0.56
1:B:4660:TYR:HB3	1:B:4664:ARG:HH12	1.70	0.56
1:C:227:TYR:CD2	1:C:352:SER:HB3	2.40	0.56
1:C:896:ASN:OD1	1:C:897:LYS:N	2.38	0.56
1:C:1829:LEU:HB3	1:C:1834:ILE:HD11	1.87	0.56
1:C:2232:ALA:HB3	1:C:2233:MET:HE2	1.86	0.56
1:D:59:PRO:HD3	1:D:322:ALA:HB3	1.87	0.56
1:D:896:ASN:OD1	1:D:897:LYS:N	2.38	0.56
1:D:1684:PRO:HD3	2:J:42:ASP:HB3	1.87	0.56
1:D:4649:LYS:NZ	1:D:4669:LEU:O	2.37	0.56
1:B:227:TYR:CD2	1:B:352:SER:HB3	2.40	0.56
1:B:4778:TYR:O	1:B:4782:VAL:HG12	2.06	0.56
2:H:83:TYR:HB3	2:H:87:GLY:HA2	1.86	0.56
1:D:929:ARG:HA	1:D:932:ASN:HD21	1.70	0.56

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2112:VAL:O	1:D:2116:ILE:HG13	2.04	0.56
1:A:672:LYS:HB3	1:A:819:TYR:HA	1.87	0.56
2:G:83:TYR:HB3	2:G:87:GLY:HA2	1.86	0.56
1:B:2763:SER:H	1:B:2766:GLU:HB2	1.70	0.56
1:A:59:PRO:HD3	1:A:322:ALA:HB3	1.87	0.56
1:A:677:LEU:HD23	1:A:755:ILE:HD11	1.87	0.56
1:A:4567:MET:HA	1:A:4570:THR:HG22	1.88	0.56
1:B:1048:ASP:HA	1:B:1051:ARG:HD2	1.87	0.56
1:B:2335:ARG:HH21	1:B:2336:GLY:HA2	1.71	0.56
1:B:2488:GLU:HA	1:B:2492:LEU:HD12	1.88	0.56
1:C:672:LYS:HB3	1:C:819:TYR:HA	1.87	0.56
1:C:2488:GLU:HA	1:C:2492:LEU:HD12	1.88	0.56
1:D:4196:ILE:HG23	1:D:4922:MET:HE2	1.87	0.56
1:A:2488:GLU:HA	1:A:2492:LEU:HD12	1.88	0.56
1:A:4942:MET:HE2	1:A:4950:PHE:HB3	1.88	0.56
1:B:36:CYS:SG	1:B:37:LEU:N	2.79	0.56
1:C:36:CYS:SG	1:C:37:LEU:N	2.79	0.56
1:C:357:GLY:O	1:C:404:ASN:ND2	2.28	0.56
1:C:1048:ASP:HA	1:C:1051:ARG:HD2	1.87	0.56
1:D:36:CYS:SG	1:D:37:LEU:N	2.79	0.56
1:B:896:ASN:OD1	1:B:897:LYS:N	2.38	0.56
1:B:4567:MET:HA	1:B:4570:THR:HG22	1.88	0.56
1:C:1928:SER:HG	1:C:3619:PHE:HD2	1.54	0.56
1:D:1048:ASP:HA	1:D:1051:ARG:HD2	1.87	0.56
1:D:2335:ARG:HH21	1:D:2336:GLY:HA2	1.71	0.56
1:A:36:CYS:SG	1:A:37:LEU:N	2.79	0.56
1:A:929:ARG:HA	1:A:932:ASN:HD21	1.70	0.56
1:C:433:LEU:HD11	1:C:504:ARG:HD3	1.88	0.56
1:C:677:LEU:HD23	1:C:755:ILE:HD11	1.87	0.56
1:C:4660:TYR:HB3	1:C:4664:ARG:HH12	1.70	0.56
1:A:3810:GLN:NE2	1:A:3826:GLU:OE1	2.35	0.56
1:B:677:LEU:HD23	1:B:755:ILE:HD11	1.87	0.56
1:B:4784:ALA:HA	1:B:4788:PHE:HD2	1.71	0.56
1:C:4778:TYR:O	1:C:4782:VAL:HG12	2.06	0.56
1:C:4808:MET:HG2	1:D:4516:LEU:HA	1.87	0.55
1:A:2763:SER:H	1:A:2766:GLU:HB2	1.70	0.55
1:B:433:LEU:HD11	1:B:504:ARG:HD3	1.88	0.55
1:A:991:SER:O	1:A:995:MET:HG2	2.06	0.55
1:A:3891:TYR:O	1:A:3956:LYS:NZ	2.26	0.55
1:A:4784:ALA:HA	1:A:4788:PHE:HD2	1.71	0.55
1:B:59:PRO:HD3	1:B:322:ALA:HB3	1.87	0.55

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	1.70	0.55
1:D:1829:LEU:HB3	1:D:1834:ILE:HD11	1.87	0.55
1:D:2488:GLU:HA	1:D:2492:LEU:HD12	1.88	0.55
1:D:2763:SER:H	1:D:2766:GLU:HB2	1.70	0.55
1:A:799:LYS:HG2	1:A:1621:GLN:HE22	1.72	0.55
1:A:1152:TYR:HE2	1:A:1191:ALA:HA	1.71	0.55
1:B:3728:ALA:HA	1:B:3731:HIS:ND1	2.22	0.55
1:C:59:PRO:HD3	1:C:322:ALA:HB3	1.87	0.55
1:D:409:GLN:N	1:D:412:GLU:OE2	2.35	0.55
1:D:991:SER:O	1:D:995:MET:HG2	2.06	0.55
1:A:2335:ARG:HH21	1:A:2336:GLY:HA2	1.71	0.55
1:A:4881:GLU:O	1:A:4885:THR:HG23	2.07	0.55
1:C:76:ARG:NH1	1:D:3889:TRP:HB3	2.22	0.55
1:C:76:ARG:NH1	1:D:3889:TRP:HE3	2.04	0.55
2:I:22:THR:HA	2:I:50:ARG:HA	1.89	0.55
1:D:672:LYS:HB3	1:D:819:TYR:HA	1.87	0.55
1:D:4567:MET:HA	1:D:4570:THR:HG22	1.88	0.55
1:A:1795:MET:HA	1:A:1798:GLU:OE2	2.07	0.55
1:B:1152:TYR:HE2	1:B:1191:ALA:HA	1.71	0.55
1:B:1972:ILE:HD12	1:B:1975:LEU:HD11	1.89	0.55
1:C:2107:ILE:HG13	1:C:2108:ASN:N	2.22	0.55
1:C:4948:TRP:HD1	1:C:4950:PHE:CE1	2.24	0.55
2:J:50:ARG:N	2:J:55:GLU:OE2	2.40	0.55
1:C:1972:ILE:HD12	1:C:1975:LEU:HD11	1.89	0.55
1:C:2335:ARG:HH21	1:C:2336:GLY:HA2	1.71	0.55
1:D:799:LYS:HG2	1:D:1621:GLN:HE22	1.72	0.55
1:D:2107:ILE:HG13	1:D:2108:ASN:N	2.21	0.55
1:D:3728:ALA:HA	1:D:3731:HIS:ND1	2.22	0.55
1:A:1928:SER:HG	1:A:3619:PHE:HD2	1.55	0.55
1:A:4948:TRP:HD1	1:A:4950:PHE:CE1	2.24	0.55
1:B:168:GLN:HG3	1:B:169:ARG:HG3	1.89	0.55
1:B:2342:LEU:HB3	1:B:2434:VAL:HG21	1.89	0.55
1:B:4948:TRP:HD1	1:B:4950:PHE:CE1	2.24	0.55
1:C:991:SER:O	1:C:995:MET:HG2	2.06	0.55
1:D:747:HIS:HE1	1:D:770:ILE:HD11	1.72	0.55
1:D:1928:SER:HG	1:D:3619:PHE:HD2	1.55	0.55
2:J:22:THR:HA	2:J:50:ARG:HA	1.88	0.55
1:A:433:LEU:HD11	1:A:504:ARG:HD3	1.88	0.55
1:A:747:HIS:HE1	1:A:770:ILE:HD11	1.72	0.55
2:I:50:ARG:N	2:I:55:GLU:OE2	2.40	0.55
1:D:4948:TRP:HD1	1:D:4950:PHE:CE1	2.24	0.55

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3728:ALA:HA	1:A:3731:HIS:ND1	2.22	0.54
1:B:1795:MET:HA	1:B:1798:GLU:OE2	2.07	0.54
1:B:2254:LEU:O	1:B:3809:ARG:HD3	2.08	0.54
1:C:3728:ALA:HA	1:C:3731:HIS:ND1	2.22	0.54
1:C:4784:ALA:HA	1:C:4788:PHE:HD2	1.71	0.54
1:D:2232:ALA:HB3	1:D:2233:MET:HE2	1.89	0.54
1:A:168:GLN:HG3	1:A:169:ARG:HG3	1.89	0.54
1:A:2287:ILE:HD12	1:A:2383:MET:HE2	1.89	0.54
1:A:4778:TYR:O	1:A:4782:VAL:HG12	2.06	0.54
1:B:991:SER:O	1:B:995:MET:HG2	2.06	0.54
1:B:4496:ASN:O	1:B:4500:MET:HG2	2.07	0.54
1:C:27:THR:HG22	1:C:32:GLN:HG3	1.89	0.54
1:D:433:LEU:HD11	1:D:504:ARG:HD3	1.88	0.54
1:D:4784:ALA:HA	1:D:4788:PHE:HD2	1.71	0.54
1:C:1811:VAL:HB	1:C:1818:LEU:HD13	1.90	0.54
1:D:1253:LYS:HD2	1:D:1596:LEU:HB3	1.90	0.54
1:D:4881:GLU:O	1:D:4885:THR:HG23	2.07	0.54
1:A:1934:LYS:HE3	1:A:1991:ILE:HG22	1.90	0.54
2:G:50:ARG:N	2:G:55:GLU:OE2	2.40	0.54
1:B:838:ARG:H	1:B:841:LYS:HZ1	1.54	0.54
1:B:2107:ILE:HG13	1:B:2108:ASN:N	2.21	0.54
1:C:1266:GLU:O	1:C:1267:HIS:ND1	2.41	0.54
1:C:4567:MET:HA	1:C:4570:THR:HG22	1.88	0.54
1:D:2061:ILE:O	1:D:2065:MET:HG2	2.08	0.54
1:A:2254:LEU:O	1:A:3809:ARG:HD3	2.08	0.54
1:A:3889:TRP:HB3	1:D:76:ARG:NH1	2.22	0.54
1:B:27:THR:HG22	1:B:32:GLN:HG3	1.89	0.54
1:B:699:SER:OG	1:B:700:THR:N	2.41	0.54
1:B:1266:GLU:O	1:B:1267:HIS:ND1	2.41	0.54
1:B:1934:LYS:HE3	1:B:1991:ILE:HG22	1.90	0.54
1:B:4881:GLU:O	1:B:4885:THR:HG23	2.07	0.54
1:C:168:GLN:HG3	1:C:169:ARG:HG3	1.89	0.54
1:C:799:LYS:HG2	1:C:1621:GLN:HE22	1.72	0.54
1:D:677:LEU:HD23	1:D:755:ILE:HD11	1.87	0.54
1:D:718:VAL:HG23	1:D:724:SER:HB2	1.90	0.54
1:D:2348:GLU:HA	1:D:2351:LYS:HD3	1.90	0.54
1:D:4895:ASP:OD1	1:D:4896:TYR:N	2.41	0.54
1:A:732:LEU:HB3	1:A:779:PHE:CZ	2.43	0.54
1:A:1972:ILE:HD12	1:A:1975:LEU:HD11	1.89	0.54
1:B:1811:VAL:HB	1:B:1818:LEU:HD13	1.89	0.54
2:H:24:VAL:HG12	2:H:105:LEU:HD13	1.90	0.54

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:699:SER:OG	1:C:700:THR:N	2.41	0.54
1:C:747:HIS:HE1	1:C:770:ILE:HD11	1.72	0.54
1:C:1152:TYR:HE2	1:C:1191:ALA:HA	1.71	0.54
1:C:2342:LEU:HB3	1:C:2434:VAL:HG21	1.89	0.54
2:I:24:VAL:HG12	2:I:105:LEU:HD13	1.90	0.54
1:A:2061:ILE:O	1:A:2065:MET:HG2	2.08	0.54
1:A:2342:LEU:HB3	1:A:2434:VAL:HG21	1.89	0.54
1:B:747:HIS:HE1	1:B:770:ILE:HD11	1.72	0.54
1:B:2061:ILE:O	1:B:2065:MET:HG2	2.08	0.54
1:B:4948:TRP:HD1	1:B:4950:PHE:HE1	1.55	0.54
1:C:1567:LEU:HD22	1:C:1581:PRO:HB3	1.90	0.54
1:D:1225:LYS:HB3	1:D:1226:TYR:HD2	1.73	0.54
1:A:2107:ILE:HG13	1:A:2108:ASN:N	2.21	0.54
1:A:4928:ASP:O	1:A:4932:HIS:NE2	2.41	0.54
2:G:22:THR:HA	2:G:50:ARG:HA	1.89	0.54
1:C:1225:LYS:HB3	1:C:1226:TYR:HD2	1.73	0.54
1:C:4895:ASP:OD1	1:C:4896:TYR:N	2.41	0.54
1:C:4928:ASP:O	1:C:4932:HIS:NE2	2.41	0.54
1:D:2254:LEU:O	1:D:3809:ARG:HD3	2.08	0.54
1:D:4778:TYR:O	1:D:4782:VAL:HG12	2.06	0.54
1:D:4928:ASP:O	1:D:4932:HIS:NE2	2.41	0.54
1:A:2335:ARG:NH2	1:A:2336:GLY:HA2	2.23	0.54
1:A:4873:ARG:NH1	1:D:4867:ASP:OD1	2.41	0.54
1:B:1286:THR:OG1	1:B:1583:CYS:SG	2.58	0.54
1:C:1253:LYS:HD2	1:C:1596:LEU:HB3	1.90	0.54
1:C:4881:GLU:O	1:C:4885:THR:HG23	2.07	0.54
1:D:168:GLN:HG3	1:D:169:ARG:HG3	1.89	0.54
1:D:732:LEU:HB3	1:D:779:PHE:CZ	2.43	0.54
1:D:1152:TYR:HE2	1:D:1191:ALA:HA	1.71	0.54
1:D:1266:GLU:O	1:D:1267:HIS:ND1	2.41	0.54
1:D:2287:ILE:HD12	1:D:2383:MET:HE2	1.89	0.54
1:D:3920:THR:O	1:D:3924:GLN:HB2	2.08	0.54
2:J:24:VAL:HG12	2:J:105:LEU:HD13	1.90	0.54
1:A:2348:GLU:HA	1:A:2351:LYS:HD3	1.90	0.54
2:G:24:VAL:HG12	2:G:105:LEU:HD13	1.90	0.54
1:B:189:GLU:OE2	1:C:2417:ARG:NH1	2.40	0.54
1:B:711:GLU:HA	1:B:711:GLU:OE2	2.08	0.54
1:C:1795:MET:HA	1:C:1798:GLU:OE2	2.07	0.54
1:D:1795:MET:HA	1:D:1798:GLU:OE2	2.07	0.54
1:D:4496:ASN:O	1:D:4500:MET:HG2	2.07	0.54
1:A:1266:GLU:O	1:A:1267:HIS:ND1	2.41	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1898:PRO:O	1:A:1902:LYS:HG2	2.08	0.53
1:A:4496:ASN:O	1:A:4500:MET:HG2	2.07	0.53
1:C:115:TYR:CZ	1:C:175:VAL:HG22	2.44	0.53
1:C:1683:GLU:HB3	2:I:42:ASP:HB3	1.90	0.53
1:C:4496:ASN:O	1:C:4500:MET:HG2	2.07	0.53
1:D:1972:ILE:HD12	1:D:1975:LEU:HD11	1.89	0.53
1:D:4948:TRP:HD1	1:D:4950:PHE:HE1	1.55	0.53
1:A:1567:LEU:HD22	1:A:1581:PRO:HB3	1.90	0.53
1:B:799:LYS:HG2	1:B:1621:GLN:HE22	1.72	0.53
1:B:1567:LEU:HD22	1:B:1581:PRO:HB3	1.90	0.53
1:B:1898:PRO:O	1:B:1902:LYS:HG2	2.08	0.53
1:B:4895:ASP:OD1	1:B:4896:TYR:N	2.41	0.53
1:C:676:GLU:HB2	1:C:803:LEU:HB2	1.91	0.53
1:C:2254:LEU:O	1:C:3809:ARG:HD3	2.08	0.53
1:C:2287:ILE:HD12	1:C:2383:MET:HE2	1.89	0.53
1:C:2335:ARG:NH2	1:C:2336:GLY:HA2	2.23	0.53
1:C:4949:GLU:OE1	1:C:4949:GLU:N	2.29	0.53
1:D:557:TRP:HE1	1:D:561:ARG:HH21	1.56	0.53
2:J:14:ARG:HG2	2:J:15:THR:HG23	1.91	0.53
1:A:2233:MET:HE2	1:A:2233:MET:H	1.73	0.53
1:A:3920:THR:O	1:A:3924:GLN:HB2	2.08	0.53
1:A:4895:ASP:OD1	1:A:4896:TYR:N	2.41	0.53
1:B:718:VAL:HG23	1:B:724:SER:HB2	1.90	0.53
1:B:2287:ILE:HD12	1:B:2383:MET:HE2	1.89	0.53
1:B:4928:ASP:O	1:B:4932:HIS:NE2	2.41	0.53
2:H:14:ARG:HG2	2:H:15:THR:HG23	1.90	0.53
1:C:732:LEU:HB3	1:C:779:PHE:CZ	2.43	0.53
1:D:115:TYR:CZ	1:D:175:VAL:HG22	2.43	0.53
1:D:1567:LEU:HD22	1:D:1581:PRO:HB3	1.90	0.53
1:D:1811:VAL:HB	1:D:1818:LEU:HD13	1.90	0.53
1:D:2342:LEU:HB3	1:D:2434:VAL:HG21	1.89	0.53
1:A:115:TYR:CZ	1:A:175:VAL:HG22	2.44	0.53
1:A:711:GLU:HA	1:A:711:GLU:OE2	2.08	0.53
2:H:50:ARG:N	2:H:55:GLU:OE2	2.40	0.53
1:C:711:GLU:HA	1:C:711:GLU:OE2	2.08	0.53
1:C:1934:LYS:HE3	1:C:1991:ILE:HG22	1.90	0.53
1:C:2061:ILE:O	1:C:2065:MET:HG2	2.08	0.53
1:C:2348:GLU:HA	1:C:2351:LYS:HD3	1.90	0.53
1:C:3920:THR:O	1:C:3924:GLN:HB2	2.08	0.53
1:D:1232:LEU:HB3	1:D:1233:GLN:NE2	2.24	0.53
1:A:1225:LYS:HB3	1:A:1226:TYR:HD2	1.73	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1232:LEU:HB3	1:A:1233:GLN:NE2	2.24	0.53
1:B:2335:ARG:NH2	1:B:2336:GLY:HA2	2.23	0.53
1:C:1898:PRO:O	1:C:1902:LYS:HG2	2.08	0.53
2:I:14:ARG:HG2	2:I:15:THR:HG23	1.91	0.53
1:D:699:SER:OG	1:D:700:THR:N	2.41	0.53
1:D:1898:PRO:O	1:D:1902:LYS:HG2	2.08	0.53
1:B:732:LEU:HB3	1:B:779:PHE:CZ	2.43	0.53
1:B:1253:LYS:HB3	1:B:1598:SER:HB2	1.91	0.53
1:B:3920:THR:O	1:B:3924:GLN:HB2	2.08	0.53
1:C:1253:LYS:HB3	1:C:1598:SER:HB2	1.91	0.53
1:C:2233:MET:HE2	1:C:2233:MET:N	2.24	0.53
1:C:4193:GLU:CD	1:C:4607:ARG:HH22	2.12	0.53
1:A:281:ARG:O	1:A:285:SER:OG	2.27	0.53
1:A:557:TRP:HE1	1:A:561:ARG:HH21	1.56	0.53
1:A:4948:TRP:HD1	1:A:4950:PHE:HE1	1.55	0.53
2:G:14:ARG:HG2	2:G:15:THR:HG23	1.90	0.53
1:B:1747:HIS:O	1:B:1747:HIS:ND1	2.39	0.53
1:C:182:ILE:HD11	1:C:191:TYR:HE1	1.74	0.53
1:D:1934:LYS:HE3	1:D:1991:ILE:HG22	1.90	0.53
1:D:2720:ILE:HD11	1:D:2778:LEU:HD22	1.91	0.53
1:A:1811:VAL:HB	1:A:1818:LEU:HD13	1.89	0.53
1:A:3729:ARG:O	1:A:3733:ARG:NH1	2.42	0.53
1:B:115:TYR:CZ	1:B:175:VAL:HG22	2.43	0.53
1:B:755:ILE:HG22	1:B:770:ILE:HD12	1.91	0.53
1:B:1253:LYS:HD2	1:B:1596:LEU:HB3	1.89	0.53
1:B:2348:GLU:HA	1:B:2351:LYS:HD3	1.90	0.53
2:H:22:THR:HA	2:H:50:ARG:HA	1.89	0.53
1:C:718:VAL:HG23	1:C:724:SER:HB2	1.90	0.53
1:C:1294:ASN:ND2	1:C:1296:ASN:OD1	2.38	0.53
1:C:1770:VAL:O	2:I:57:ILE:HG23	2.08	0.53
1:D:943:LEU:HD11	1:D:948:CYS:HB3	1.91	0.53
1:A:677:LEU:HD22	1:A:695:VAL:HG21	1.91	0.53
1:A:1253:LYS:HB3	1:A:1598:SER:HB2	1.91	0.53
1:A:1253:LYS:HD2	1:A:1596:LEU:HB3	1.89	0.53
1:A:2406:HIS:HA	1:A:2409:HIS:HB3	1.91	0.53
1:B:557:TRP:HE1	1:B:561:ARG:HH21	1.56	0.53
1:C:943:LEU:HD11	1:C:948:CYS:HB3	1.91	0.53
1:C:2101:LEU:O	1:C:2104:THR:HG22	2.09	0.53
1:D:27:THR:HG22	1:D:32:GLN:HG3	1.89	0.53
1:B:182:ILE:HD11	1:B:191:TYR:HE1	1.74	0.53
1:B:1397:UNK:HA	1:B:1412:UNK:HA	1.91	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4009:VAL:HA	1:B:4012:ILE:HG12	1.91	0.53
1:C:755:ILE:HG22	1:C:770:ILE:HD12	1.91	0.53
1:C:2406:HIS:HA	1:C:2409:HIS:HB3	1.91	0.53
1:D:711:GLU:HA	1:D:711:GLU:OE2	2.08	0.53
1:D:727:PHE:HB2	1:D:768:PHE:CE1	2.44	0.53
1:D:1397:UNK:HA	1:D:1412:UNK:HA	1.91	0.53
1:D:3957:LEU:HB2	1:D:3967:LEU:HD13	1.91	0.53
1:A:27:THR:HG22	1:A:32:GLN:HG3	1.89	0.52
1:A:727:PHE:HB2	1:A:768:PHE:CE1	2.44	0.52
1:B:676:GLU:HB2	1:B:803:LEU:HB2	1.91	0.52
1:B:1734:THR:HA	1:B:1756:THR:HG21	1.91	0.52
1:C:1680:HIS:NE2	2:I:90:GLY:O	2.42	0.52
1:D:676:GLU:HB2	1:D:803:LEU:HB2	1.91	0.52
1:D:2406:HIS:HA	1:D:2409:HIS:HB3	1.91	0.52
1:D:4193:GLU:CD	1:D:4607:ARG:HH22	2.12	0.52
1:A:718:VAL:HG23	1:A:724:SER:HB2	1.90	0.52
1:A:1734:THR:HA	1:A:1756:THR:HG21	1.91	0.52
1:B:601:LEU:HB2	1:B:610:VAL:HG11	1.91	0.52
1:B:2080:VAL:HG13	1:B:3669:LEU:HD22	1.92	0.52
1:B:2254:LEU:HD22	1:B:3809:ARG:HG3	1.92	0.52
1:C:4081:GLU:O	1:C:4085:ARG:HG2	2.10	0.52
1:C:4948:TRP:HD1	1:C:4950:PHE:HE1	1.55	0.52
1:D:601:LEU:HB2	1:D:610:VAL:HG11	1.91	0.52
1:D:2335:ARG:NH2	1:D:2336:GLY:HA2	2.23	0.52
1:D:4081:GLU:O	1:D:4085:ARG:HG2	2.10	0.52
1:C:191:TYR:N	1:C:206:ALA:O	2.35	0.52
1:D:2080:VAL:HG13	1:D:3669:LEU:HD22	1.92	0.52
1:A:1397:UNK:HA	1:A:1412:UNK:HA	1.91	0.52
1:B:113:LEU:HD21	1:B:162:ILE:HD13	1.91	0.52
1:B:1219:LYS:HE3	1:B:1240:ALA:O	2.10	0.52
1:B:2406:HIS:HA	1:B:2409:HIS:HB3	1.91	0.52
1:C:557:TRP:HE1	1:C:561:ARG:HH21	1.56	0.52
1:C:677:LEU:HD22	1:C:695:VAL:HG21	1.91	0.52
1:C:1397:UNK:HA	1:C:1412:UNK:HA	1.91	0.52
1:D:4042:ILE:HG21	1:D:4047:PHE:HB2	1.92	0.52
1:A:699:SER:OG	1:A:700:THR:N	2.41	0.52
1:A:3957:LEU:HB2	1:A:3967:LEU:HD13	1.91	0.52
1:A:4009:VAL:HA	1:A:4012:ILE:HG12	1.91	0.52
1:B:727:PHE:HB2	1:B:768:PHE:CE1	2.44	0.52
1:B:1232:LEU:HB3	1:B:1233:GLN:NE2	2.24	0.52
1:B:1925:VAL:HG22	1:B:3620:LEU:HD11	1.92	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:113:LEU:HD21	1:C:162:ILE:HD13	1.91	0.52
1:C:1734:THR:HA	1:C:1756:THR:HG21	1.92	0.52
1:B:2313:GLU:OE1	1:B:3812:LYS:NZ	2.40	0.52
1:C:1925:VAL:HG22	1:C:3620:LEU:HD11	1.92	0.52
1:D:1219:LYS:HE3	1:D:1240:ALA:O	2.10	0.52
1:D:1734:THR:HA	1:D:1756:THR:HG21	1.91	0.52
1:A:676:GLU:HB2	1:A:803:LEU:HB2	1.91	0.52
1:A:1969:GLN:HA	1:A:1969:GLN:OE1	2.10	0.52
1:A:2101:LEU:O	1:A:2104:THR:HG22	2.09	0.52
1:B:1969:GLN:OE1	1:B:1969:GLN:HA	2.10	0.52
1:C:281:ARG:O	1:C:285:SER:OG	2.27	0.52
1:C:2254:LEU:HD22	1:C:3809:ARG:HG3	1.92	0.52
1:C:2720:ILE:HD11	1:C:2778:LEU:HD22	1.91	0.52
1:D:1253:LYS:HB3	1:D:1598:SER:HB2	1.91	0.52
1:A:2080:VAL:HG13	1:A:3669:LEU:HD22	1.92	0.52
1:B:1928:SER:HG	1:B:3619:PHE:HD2	1.58	0.52
1:B:2101:LEU:O	1:B:2104:THR:HG22	2.09	0.52
1:C:2080:VAL:HG13	1:C:3669:LEU:HD22	1.92	0.52
1:C:3729:ARG:O	1:C:3733:ARG:NH1	2.42	0.52
1:C:4042:ILE:HG21	1:C:4047:PHE:HB2	1.92	0.52
1:D:677:LEU:HD22	1:D:695:VAL:HG21	1.91	0.52
1:D:1294:ASN:ND2	1:D:1296:ASN:OD1	2.38	0.52
1:D:1925:VAL:HG22	1:D:3620:LEU:HD11	1.92	0.52
1:D:2101:LEU:O	1:D:2104:THR:HG22	2.09	0.52
1:A:1962:ARG:O	1:A:1966:SER:OG	2.28	0.52
1:A:2713:PRO:HG2	1:A:2716:LEU:HD12	1.91	0.52
1:B:669:GLN:HB3	1:B:673:TRP:HZ2	1.75	0.52
1:C:727:PHE:HB2	1:C:768:PHE:CE1	2.44	0.52
1:C:1962:ARG:O	1:C:1966:SER:OG	2.28	0.52
1:C:3957:LEU:HB2	1:C:3967:LEU:HD13	1.91	0.52
1:C:4009:VAL:HA	1:C:4012:ILE:HG12	1.91	0.52
1:D:113:LEU:HD21	1:D:162:ILE:HD13	1.91	0.52
1:D:386:SER:HB3	1:D:388:GLN:HE22	1.75	0.52
1:D:3729:ARG:O	1:D:3733:ARG:NH1	2.42	0.52
1:D:3891:TYR:O	1:D:3956:LYS:NZ	2.26	0.52
1:A:1294:ASN:ND2	1:A:1296:ASN:OD1	2.38	0.52
1:A:2254:LEU:HD22	1:A:3809:ARG:HG3	1.92	0.52
1:B:1962:ARG:O	1:B:1966:SER:OG	2.28	0.52
1:B:2720:ILE:HD11	1:B:2778:LEU:HD22	1.91	0.52
1:B:3729:ARG:O	1:B:3733:ARG:NH1	2.42	0.52
1:C:1219:LYS:HE3	1:C:1240:ALA:O	2.10	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2713:PRO:HG2	1:C:2716:LEU:HD12	1.91	0.52
1:A:601:LEU:HB2	1:A:610:VAL:HG11	1.91	0.51
1:A:4081:GLU:O	1:A:4085:ARG:HG2	2.10	0.51
1:B:4193:GLU:CD	1:B:4607:ARG:HH22	2.12	0.51
1:C:669:GLN:HB3	1:C:673:TRP:HZ2	1.75	0.51
1:D:1969:GLN:HA	1:D:1969:GLN:OE1	2.10	0.51
1:D:2713:PRO:HG2	1:D:2716:LEU:HD12	1.91	0.51
1:A:113:LEU:HD21	1:A:162:ILE:HD13	1.91	0.51
1:A:386:SER:HB3	1:A:388:GLN:HE22	1.75	0.51
1:A:644:LEU:HD13	1:A:1631:LEU:HD23	1.93	0.51
1:A:1219:LYS:HE3	1:A:1240:ALA:O	2.10	0.51
1:B:943:LEU:HD11	1:B:948:CYS:HB3	1.91	0.51
1:B:1294:ASN:ND2	1:B:1296:ASN:OD1	2.38	0.51
1:B:2713:PRO:HG2	1:B:2716:LEU:HD12	1.91	0.51
1:B:4118:LEU:O	1:B:4122:GLU:HG2	2.11	0.51
1:D:755:ILE:HG22	1:D:770:ILE:HD12	1.91	0.51
1:A:755:ILE:HG22	1:A:770:ILE:HD12	1.91	0.51
1:A:943:LEU:HD11	1:A:948:CYS:HB3	1.91	0.51
1:A:4103:ASN:OD1	1:A:4107:HIS:ND1	2.38	0.51
1:A:4863:GLY:CA	1:B:4866:ILE:HG12	2.40	0.51
1:B:1972:ILE:HA	1:B:1975:LEU:HG	1.92	0.51
1:B:3957:LEU:HB2	1:B:3967:LEU:HD13	1.91	0.51
1:C:587:ASN:HA	1:C:2132:ARG:HH12	1.76	0.51
1:C:4118:LEU:O	1:C:4122:GLU:HG2	2.11	0.51
1:D:587:ASN:HA	1:D:2132:ARG:HH12	1.76	0.51
1:D:4118:LEU:O	1:D:4122:GLU:HG2	2.11	0.51
1:A:587:ASN:HA	1:A:2132:ARG:HH12	1.76	0.51
1:A:1925:VAL:HG22	1:A:3620:LEU:HD11	1.92	0.51
1:A:4193:GLU:CD	1:A:4607:ARG:HH22	2.12	0.51
1:B:587:ASN:HA	1:B:2132:ARG:HH12	1.76	0.51
1:B:644:LEU:HD13	1:B:1631:LEU:HD23	1.93	0.51
1:C:386:SER:HB3	1:C:388:GLN:HE22	1.75	0.51
1:C:4115:GLN:O	1:C:4119:GLU:HG2	2.11	0.51
1:C:4867:ASP:OD1	1:D:4873:ARG:NH1	2.44	0.51
1:D:474:ASP:O	1:D:478:ARG:HG2	2.11	0.51
1:D:763:ALA:HB3	1:D:764:PRO:HD3	1.92	0.51
1:A:766:ILE:HG22	1:A:768:PHE:CE2	2.46	0.51
1:A:2313:GLU:OE1	1:A:3812:LYS:NZ	2.40	0.51
1:B:763:ALA:HB3	1:B:764:PRO:HD3	1.92	0.51
1:B:4042:ILE:HG21	1:B:4047:PHE:HB2	1.92	0.51
1:C:644:LEU:HD13	1:C:1631:LEU:HD23	1.93	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:4103:ASN:OD1	1:C:4107:HIS:ND1	2.38	0.51
1:D:644:LEU:HD13	1:D:1631:LEU:HD23	1.93	0.51
1:D:1986:PRO:HB2	1:D:1988:PRO:HD2	1.93	0.51
1:A:669:GLN:HB3	1:A:673:TRP:HZ2	1.75	0.51
1:B:677:LEU:HD22	1:B:695:VAL:HG21	1.91	0.51
1:B:1052:GLU:HA	1:B:1055:ARG:HB2	1.92	0.51
1:B:1789:LYS:HB2	1:B:1835:PHE:CE1	2.46	0.51
1:B:1986:PRO:HB2	1:B:1988:PRO:HD2	1.93	0.51
1:C:1052:GLU:HA	1:C:1055:ARG:HB2	1.92	0.51
1:D:669:GLN:HB3	1:D:673:TRP:HZ2	1.75	0.51
1:A:1253:LYS:NZ	1:A:1597:TRP:O	2.44	0.51
1:A:1999:HIS:O	1:A:2003:MET:HG2	2.11	0.51
1:A:4118:LEU:O	1:A:4122:GLU:HG2	2.11	0.51
1:B:4081:GLU:O	1:B:4085:ARG:HG2	2.10	0.51
1:C:763:ALA:HB3	1:C:764:PRO:HD3	1.92	0.51
1:C:1704:TYR:O	1:C:1708:ILE:HG12	2.10	0.51
1:C:1986:PRO:HB2	1:C:1988:PRO:HD2	1.93	0.51
1:D:182:ILE:HD11	1:D:191:TYR:HE1	1.74	0.51
1:D:281:ARG:O	1:D:285:SER:OG	2.27	0.51
1:D:4115:GLN:O	1:D:4119:GLU:HG2	2.11	0.51
1:A:4042:ILE:HG21	1:A:4047:PHE:HB2	1.92	0.51
1:B:191:TYR:N	1:B:206:ALA:O	2.35	0.51
1:C:601:LEU:HB2	1:C:610:VAL:HG11	1.91	0.51
1:D:486:GLN:CB	1:D:544:ASN:HD21	2.24	0.51
1:D:2254:LEU:HD22	1:D:3809:ARG:HG3	1.91	0.51
1:A:228:LEU:HD22	1:A:289:ILE:HB	1.93	0.51
1:A:442:LEU:HG	1:A:444:THR:HG22	1.93	0.51
1:A:497:LEU:O	1:A:500:GLU:HG2	2.11	0.51
1:A:3801:VAL:HG13	1:A:3883:SER:HB2	1.93	0.51
1:A:4115:GLN:O	1:A:4119:GLU:HG2	2.11	0.51
1:B:228:LEU:HD22	1:B:289:ILE:HB	1.93	0.51
1:B:766:ILE:HG22	1:B:768:PHE:CE2	2.46	0.51
1:B:1704:TYR:O	1:B:1708:ILE:HG12	2.10	0.51
1:B:3801:VAL:HG13	1:B:3883:SER:HB2	1.93	0.51
2:I:28:THR:HA	2:I:39:SER:HA	1.93	0.51
1:D:1789:LYS:HB2	1:D:1835:PHE:CE1	2.46	0.51
1:A:1704:TYR:O	1:A:1708:ILE:HG12	2.10	0.50
1:B:386:SER:HB3	1:B:388:GLN:HE22	1.75	0.50
1:B:497:LEU:O	1:B:500:GLU:HG2	2.11	0.50
1:B:1225:LYS:HB3	1:B:1226:TYR:HD2	1.73	0.50
1:B:1999:HIS:O	1:B:2003:MET:HG2	2.11	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:228:LEU:HD22	1:C:289:ILE:HB	1.93	0.50
1:C:474:ASP:O	1:C:478:ARG:HG2	2.11	0.50
1:C:1665:VAL:HG23	1:C:1677:LEU:HD11	1.93	0.50
1:C:1789:LYS:HB2	1:C:1835:PHE:CE1	2.46	0.50
1:C:1969:GLN:OE1	1:C:1969:GLN:HA	2.10	0.50
1:C:1999:HIS:O	1:C:2003:MET:HG2	2.11	0.50
1:D:497:LEU:O	1:D:500:GLU:HG2	2.11	0.50
1:D:766:ILE:HG22	1:D:768:PHE:CE2	2.46	0.50
1:D:1999:HIS:O	1:D:2003:MET:HG2	2.11	0.50
1:D:3801:VAL:HG13	1:D:3883:SER:HB2	1.93	0.50
1:D:4009:VAL:HA	1:D:4012:ILE:HG12	1.91	0.50
1:A:1789:LYS:HB2	1:A:1835:PHE:HE1	1.76	0.50
1:A:2720:ILE:HD11	1:A:2778:LEU:HD22	1.91	0.50
1:B:1253:LYS:NZ	1:B:1597:TRP:O	2.44	0.50
1:C:1253:LYS:NZ	1:C:1597:TRP:O	2.44	0.50
1:D:890:HIS:O	1:D:894:VAL:HG23	2.11	0.50
1:D:1704:TYR:O	1:D:1708:ILE:HG12	2.10	0.50
1:D:1749:LEU:HD13	1:D:1844:LEU:HD12	1.93	0.50
1:B:474:ASP:O	1:B:478:ARG:HG2	2.11	0.50
1:B:1665:VAL:HG23	1:B:1677:LEU:HD11	1.93	0.50
1:B:4851:PHE:O	1:B:4856:ILE:HG12	2.12	0.50
2:H:24:VAL:HG22	2:H:48:LYS:HG2	1.93	0.50
1:C:497:LEU:O	1:C:500:GLU:HG2	2.11	0.50
1:C:890:HIS:O	1:C:894:VAL:HG23	2.11	0.50
1:C:1245:ARG:NH1	1:C:1809:ASP:O	2.33	0.50
1:C:1972:ILE:HA	1:C:1975:LEU:HG	1.92	0.50
1:A:1789:LYS:HB2	1:A:1835:PHE:CE1	2.46	0.50
1:C:442:LEU:HG	1:C:444:THR:HG22	1.93	0.50
1:C:4851:PHE:O	1:C:4856:ILE:HG12	2.12	0.50
1:D:1303:ARG:N	1:D:1590:GLN:O	2.35	0.50
1:D:1629:MET:HG3	1:D:1642:ILE:HB	1.94	0.50
2:J:28:THR:HA	2:J:39:SER:HA	1.93	0.50
1:A:182:ILE:HD11	1:A:191:TYR:HE1	1.74	0.50
1:A:1986:PRO:HB2	1:A:1988:PRO:HD2	1.93	0.50
1:B:2086:LEU:O	1:B:2090:GLN:HG2	2.12	0.50
1:C:766:ILE:HG22	1:C:768:PHE:CE2	2.46	0.50
1:D:191:TYR:N	1:D:206:ALA:O	2.35	0.50
1:D:1962:ARG:O	1:D:1966:SER:OG	2.28	0.50
1:A:474:ASP:O	1:A:478:ARG:HG2	2.11	0.50
1:A:2232:ALA:HB3	1:A:2233:MET:HE2	1.92	0.50
1:B:837:SER:H	1:B:841:LYS:HZ2	1.60	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1938:ASN:ND2	1:B:1988:PRO:HB3	2.27	0.50
1:B:4115:GLN:O	1:B:4119:GLU:HG2	2.11	0.50
1:B:4283:PHE:HB2	1:B:4513:PHE:CE1	2.47	0.50
1:D:1665:VAL:HG23	1:D:1677:LEU:HD11	1.93	0.50
1:A:763:ALA:HB3	1:A:764:PRO:HD3	1.92	0.50
1:A:1665:VAL:HG23	1:A:1677:LEU:HD11	1.93	0.50
2:G:24:VAL:HG22	2:G:48:LYS:HG2	1.93	0.50
1:B:4772:LEU:HD13	1:C:4752:LEU:HD21	1.94	0.50
1:D:228:LEU:HD22	1:D:289:ILE:HB	1.93	0.50
1:D:1091:GLU:HB3	1:D:1094:TYR:HD2	1.77	0.50
1:D:1245:ARG:NH1	1:D:1809:ASP:O	2.33	0.50
1:D:1972:ILE:HA	1:D:1975:LEU:HG	1.92	0.50
1:A:1052:GLU:HA	1:A:1055:ARG:HB2	1.92	0.50
1:A:1972:ILE:HA	1:A:1975:LEU:HG	1.92	0.50
1:A:2271:CYS:SG	1:A:2294:GLY:N	2.85	0.50
1:B:634:ASP:HA	2:H:90:GLY:HA2	1.94	0.50
2:H:28:THR:HA	2:H:39:SER:HA	1.93	0.50
2:I:88:HIS:H	2:I:92:ILE:HB	1.77	0.50
1:D:2086:LEU:O	1:D:2090:GLN:HG2	2.12	0.50
1:A:1629:MET:HG3	1:A:1642:ILE:HB	1.94	0.50
1:A:4851:PHE:O	1:A:4856:ILE:HG12	2.12	0.50
2:G:88:HIS:H	2:G:92:ILE:HB	1.77	0.50
1:B:1789:LYS:HB2	1:B:1835:PHE:HE1	1.76	0.50
1:C:1226:TYR:CD2	1:C:1226:TYR:N	2.80	0.50
1:C:1789:LYS:HB2	1:C:1835:PHE:HE1	1.76	0.50
1:C:2258:GLU:N	1:C:2259:PRO:HD2	2.27	0.50
1:D:654:SER:HB2	1:D:837:SER:HB2	1.94	0.50
1:D:674:TYR:N	1:D:820:ALA:O	2.45	0.50
1:D:1789:LYS:HB2	1:D:1835:PHE:HE1	1.76	0.50
2:J:11:GLY:HA3	2:J:71:GLN:HB2	1.94	0.50
1:A:747:HIS:CE1	1:A:770:ILE:HD11	2.47	0.49
1:A:4283:PHE:HB2	1:A:4513:PHE:CE1	2.47	0.49
1:B:1245:ARG:NH1	1:B:1809:ASP:O	2.33	0.49
1:B:2258:GLU:N	1:B:2259:PRO:HD2	2.27	0.49
1:C:1749:LEU:HD13	1:C:1844:LEU:HD12	1.93	0.49
1:C:2086:LEU:O	1:C:2090:GLN:HG2	2.12	0.49
1:C:4283:PHE:HB2	1:C:4513:PHE:CE1	2.47	0.49
1:D:2233:MET:HE2	1:D:2233:MET:H	1.77	0.49
1:D:4851:PHE:O	1:D:4856:ILE:HG12	2.12	0.49
1:A:3636:GLU:HG3	1:A:3693:ILE:HG23	1.94	0.49
1:B:176:ARG:N	1:B:179:ASP:OD2	2.42	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:674:TYR:N	1:B:820:ALA:O	2.45	0.49
1:C:674:TYR:N	1:C:820:ALA:O	2.45	0.49
1:C:1938:ASN:ND2	1:C:1988:PRO:HB3	2.27	0.49
1:D:442:LEU:HG	1:D:444:THR:HG22	1.93	0.49
1:D:1052:GLU:HA	1:D:1055:ARG:HB2	1.92	0.49
1:D:1253:LYS:NZ	1:D:1597:TRP:O	2.44	0.49
1:D:2258:GLU:N	1:D:2259:PRO:HD2	2.27	0.49
1:D:2271:CYS:SG	1:D:2294:GLY:N	2.85	0.49
1:A:4668:LEU:HD12	1:A:4669:LEU:HD12	1.95	0.49
1:B:890:HIS:O	1:B:894:VAL:HG23	2.11	0.49
1:B:1682:ASP:HB2	1:B:1685:GLN:HG2	1.94	0.49
2:H:88:HIS:H	2:H:92:ILE:HB	1.77	0.49
1:C:1165:MET:HB3	1:C:1236:TYR:CE2	2.47	0.49
1:C:1629:MET:HG3	1:C:1642:ILE:HB	1.94	0.49
1:C:2231:PRO:HD3	1:C:2381:ILE:HD11	1.95	0.49
1:C:2271:CYS:SG	1:C:2294:GLY:N	2.85	0.49
1:C:3801:VAL:HG13	1:C:3883:SER:HB2	1.93	0.49
2:I:11:GLY:HA3	2:I:71:GLN:HB2	1.94	0.49
1:D:1226:TYR:CD2	1:D:1226:TYR:N	2.80	0.49
1:D:4044:LYS:HB2	1:D:4075:GLU:HG2	1.95	0.49
1:D:4283:PHE:HB2	1:D:4513:PHE:CE1	2.47	0.49
1:A:2258:GLU:N	1:A:2259:PRO:HD2	2.27	0.49
1:A:4029:ASP:OD2	1:A:4054:HIS:NE2	2.43	0.49
2:H:62:GLU:O	2:H:66:GLN:HG3	2.12	0.49
2:J:24:VAL:HG22	2:J:48:LYS:HG2	1.93	0.49
2:J:62:GLU:O	2:J:66:GLN:HG3	2.12	0.49
1:B:125:TYR:OH	1:B:417:ARG:HB3	2.13	0.49
1:B:654:SER:HB2	1:B:837:SER:HB2	1.94	0.49
1:B:747:HIS:CE1	1:B:770:ILE:HD11	2.47	0.49
1:C:799:LYS:HG2	1:C:1621:GLN:NE2	2.28	0.49
1:D:1114:ARG:HB2	1:D:1128:LEU:HD23	1.95	0.49
1:D:2313:GLU:OE1	1:D:3812:LYS:NZ	2.40	0.49
1:D:4668:LEU:HD12	1:D:4669:LEU:HD12	1.95	0.49
1:A:76:ARG:HH12	1:B:3889:TRP:HB3	1.74	0.49
1:A:1165:MET:HB3	1:A:1236:TYR:CE2	2.47	0.49
1:A:1226:TYR:CD2	1:A:1226:TYR:N	2.80	0.49
1:A:1749:LEU:HD13	1:A:1844:LEU:HD12	1.93	0.49
1:A:2086:LEU:O	1:A:2090:GLN:HG2	2.12	0.49
1:A:3961:SER:OG	1:A:3962:SER:N	2.45	0.49
1:B:442:LEU:HG	1:B:444:THR:HG22	1.93	0.49
1:B:799:LYS:HG2	1:B:1621:GLN:NE2	2.28	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1629:MET:HG3	1:B:1642:ILE:HB	1.94	0.49
2:H:11:GLY:HA3	2:H:71:GLN:HB2	1.94	0.49
1:C:1303:ARG:N	1:C:1590:GLN:O	2.35	0.49
1:C:1747:HIS:O	1:C:1747:HIS:ND1	2.39	0.49
1:C:2262:GLU:O	1:C:2266:ARG:HG3	2.13	0.49
2:I:24:VAL:HG22	2:I:48:LYS:HG2	1.93	0.49
1:D:323:ASP:O	1:D:327:THR:OG1	2.26	0.49
1:D:2262:GLU:O	1:D:2266:ARG:HG3	2.13	0.49
2:J:88:HIS:H	2:J:92:ILE:HB	1.77	0.49
1:A:313:ASN:ND2	1:A:391:ALA:O	2.46	0.49
1:B:647:ARG:HE	2:H:36:LYS:HE2	1.77	0.49
1:B:1114:ARG:HB2	1:B:1128:LEU:HD23	1.95	0.49
1:B:2171:MET:O	1:B:2175:VAL:HG23	2.13	0.49
1:B:2231:PRO:HD3	1:B:2381:ILE:HD11	1.95	0.49
1:C:1091:GLU:HB3	1:C:1094:TYR:HD2	1.77	0.49
1:C:1114:ARG:HB2	1:C:1128:LEU:HD23	1.95	0.49
1:C:1362:ASP:N	1:C:1362:ASP:OD1	2.46	0.49
2:I:62:GLU:O	2:I:66:GLN:HG3	2.12	0.49
1:D:125:TYR:OH	1:D:417:ARG:HB3	2.13	0.49
1:D:1165:MET:HB3	1:D:1236:TYR:CE2	2.47	0.49
1:D:1362:ASP:OD1	1:D:1362:ASP:N	2.46	0.49
1:A:674:TYR:N	1:A:820:ALA:O	2.45	0.49
1:A:1091:GLU:HB3	1:A:1094:TYR:HD2	1.77	0.49
1:A:1114:ARG:HB2	1:A:1128:LEU:HD23	1.95	0.49
1:A:1683:GLU:HB3	2:G:42:ASP:HB3	1.95	0.49
2:G:11:GLY:HA3	2:G:71:GLN:HB2	1.94	0.49
1:C:747:HIS:CE1	1:C:770:ILE:HD11	2.47	0.49
1:D:3636:GLU:HG3	1:D:3693:ILE:HG23	1.94	0.49
1:A:654:SER:HB2	1:A:837:SER:HB2	1.94	0.49
1:A:1166:VAL:HG22	1:A:1173:MET:SD	2.53	0.49
2:G:28:THR:HA	2:G:39:SER:HA	1.93	0.49
1:B:1165:MET:HB3	1:B:1236:TYR:CE2	2.47	0.49
1:B:1226:TYR:CD2	1:B:1226:TYR:N	2.80	0.49
1:B:2271:CYS:SG	1:B:2294:GLY:N	2.85	0.49
1:B:4103:ASN:OD1	1:B:4107:HIS:ND1	2.38	0.49
1:C:191:TYR:HE2	1:D:2325:ARG:CZ	2.26	0.49
1:C:1359:ILE:HG13	1:C:1360:ASP:N	2.28	0.49
1:C:3961:SER:OG	1:C:3962:SER:N	2.45	0.49
1:C:4044:LYS:HB2	1:C:4075:GLU:HG2	1.94	0.49
1:A:332:ARG:NH1	1:A:364:GLN:OE1	2.46	0.49
1:A:2171:MET:O	1:A:2175:VAL:HG23	2.13	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4044:LYS:HB2	1:A:4075:GLU:HG2	1.94	0.49
1:B:1091:GLU:HB3	1:B:1094:TYR:HD2	1.77	0.49
1:B:1166:VAL:HG22	1:B:1173:MET:SD	2.53	0.49
1:C:313:ASN:ND2	1:C:391:ALA:O	2.46	0.49
1:C:654:SER:HB2	1:C:837:SER:HB2	1.94	0.49
1:C:1968:PRO:HA	1:C:1971:GLN:HB3	1.95	0.49
1:D:313:ASN:ND2	1:D:391:ALA:O	2.46	0.49
1:D:799:LYS:HG2	1:D:1621:GLN:NE2	2.28	0.49
2:J:17:PRO:HG2	2:J:64:ALA:O	2.13	0.49
1:A:890:HIS:O	1:A:894:VAL:HG23	2.11	0.48
1:A:3965:GLU:O	1:A:3969:GLU:HG2	2.13	0.48
2:G:62:GLU:O	2:G:66:GLN:HG3	2.12	0.48
1:B:313:ASN:ND2	1:B:391:ALA:O	2.46	0.48
1:B:844:ARG:HE	1:B:845:THR:HG22	1.78	0.48
1:B:1358:ARG:NH2	1:B:1359:ILE:O	2.46	0.48
1:B:1359:ILE:HG13	1:B:1360:ASP:N	2.28	0.48
1:B:2196:CYS:HB2	1:B:2236:SER:HB3	1.95	0.48
1:B:3965:GLU:O	1:B:3969:GLU:HG2	2.13	0.48
2:H:17:PRO:HG2	2:H:64:ALA:O	2.13	0.48
1:C:2487:LEU:HA	1:C:2491:PHE:HB2	1.94	0.48
1:C:4913:ASN:HB3	1:C:4916:ASN:HB2	1.95	0.48
1:B:296:ARG:HH21	1:B:324:VAL:HG12	1.78	0.48
1:B:2262:GLU:O	1:B:2266:ARG:HG3	2.13	0.48
1:B:4668:LEU:HD12	1:B:4669:LEU:HD12	1.95	0.48
1:C:1682:ASP:HB2	1:C:1685:GLN:HG2	1.94	0.48
1:C:2170:VAL:HG21	1:C:2198:PHE:CD2	2.48	0.48
1:C:4668:LEU:HD12	1:C:4669:LEU:HD12	1.95	0.48
1:D:446:ASP:OD1	1:D:446:ASP:N	2.45	0.48
1:D:1358:ARG:NH2	1:D:1359:ILE:O	2.46	0.48
1:A:125:TYR:OH	1:A:417:ARG:HB3	2.13	0.48
1:A:296:ARG:HH21	1:A:324:VAL:HG12	1.78	0.48
1:A:2262:GLU:O	1:A:2266:ARG:HG3	2.13	0.48
1:B:1749:LEU:HD13	1:B:1844:LEU:HD12	1.93	0.48
1:C:125:TYR:OH	1:C:417:ARG:HB3	2.13	0.48
1:C:1166:VAL:HG22	1:C:1173:MET:SD	2.53	0.48
1:C:2197:ARG:HB3	1:C:2236:SER:OG	2.14	0.48
1:C:4024:ASP:OD1	1:C:4025:LEU:N	2.47	0.48
1:D:332:ARG:NH1	1:D:364:GLN:OE1	2.46	0.48
1:D:747:HIS:CE1	1:D:770:ILE:HD11	2.47	0.48
1:D:2231:PRO:HD3	1:D:2381:ILE:HD11	1.95	0.48
1:A:191:TYR:N	1:A:206:ALA:O	2.35	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2170:VAL:HG21	1:A:2198:PHE:CD2	2.48	0.48
1:C:176:ARG:N	1:C:179:ASP:OD2	2.42	0.48
1:C:1358:ARG:NH2	1:C:1359:ILE:O	2.46	0.48
1:C:2196:CYS:HB2	1:C:2236:SER:HB3	1.96	0.48
1:D:1682:ASP:HB2	1:D:1685:GLN:HG2	1.94	0.48
1:A:2197:ARG:HB3	1:A:2236:SER:OG	2.14	0.48
1:A:2487:LEU:HA	1:A:2491:PHE:HB2	1.94	0.48
2:G:17:PRO:HG2	2:G:64:ALA:O	2.13	0.48
1:B:4661:GLY:H	1:B:4664:ARG:NH1	2.12	0.48
1:C:2171:MET:O	1:C:2175:VAL:HG23	2.13	0.48
1:C:3636:GLU:HG3	1:C:3693:ILE:HG23	1.94	0.48
1:C:3965:GLU:O	1:C:3969:GLU:HG2	2.13	0.48
2:I:17:PRO:HG2	2:I:64:ALA:O	2.13	0.48
1:D:231:GLY:O	1:D:276:ARG:NH1	2.47	0.48
1:D:3961:SER:OG	1:D:3962:SER:N	2.45	0.48
1:D:4661:GLY:H	1:D:4664:ARG:NH1	2.12	0.48
1:D:4913:ASN:HB3	1:D:4916:ASN:HB2	1.95	0.48
1:A:844:ARG:HE	1:A:845:THR:HG22	1.78	0.48
1:A:1966:SER:OG	1:A:1966:SER:O	2.32	0.48
1:A:2196:CYS:HB2	1:A:2236:SER:HB3	1.96	0.48
1:B:3636:GLU:HG3	1:B:3693:ILE:HG23	1.94	0.48
1:B:4044:LYS:HB2	1:B:4075:GLU:HG2	1.94	0.48
2:H:18:LYS:HB2	2:H:18:LYS:NZ	2.29	0.48
1:C:759:LEU:HD13	1:C:766:ILE:HG12	1.95	0.48
1:D:394:HIS:ND1	1:D:395:HIS:N	2.62	0.48
1:D:2191:MET:HE2	1:D:2191:MET:O	2.14	0.48
1:D:2197:ARG:HB3	1:D:2236:SER:OG	2.13	0.48
1:A:1362:ASP:OD1	1:A:1362:ASP:N	2.46	0.48
1:A:4024:ASP:OD1	1:A:4025:LEU:N	2.47	0.48
1:B:231:GLY:O	1:B:276:ARG:NH1	2.47	0.48
1:B:2170:VAL:HG21	1:B:2198:PHE:CD2	2.48	0.48
1:B:2191:MET:HE2	1:B:2191:MET:O	2.13	0.48
1:D:844:ARG:HE	1:D:845:THR:HG22	1.78	0.48
1:D:1166:VAL:HG22	1:D:1173:MET:SD	2.53	0.48
1:D:1359:ILE:HG13	1:D:1360:ASP:N	2.28	0.48
1:D:1931:PHE:CE2	1:D:1995:LEU:HB2	2.49	0.48
1:A:140:THR:O	1:B:2337:GLU:HG3	2.12	0.48
1:A:169:ARG:HH12	1:A:176:ARG:HE	1.62	0.48
1:A:231:GLY:O	1:A:276:ARG:NH1	2.47	0.48
1:A:799:LYS:HG2	1:A:1621:GLN:NE2	2.28	0.48
1:A:3688:MET:SD	1:A:3752:PRO:HB2	2.54	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4304:PHE:O	1:A:4308:VAL:HG13	2.14	0.48
1:B:332:ARG:NH1	1:B:364:GLN:OE1	2.46	0.48
1:B:486:GLN:HB3	1:B:544:ASN:ND2	2.26	0.48
1:B:2197:ARG:HB3	1:B:2236:SER:OG	2.14	0.48
1:B:2487:LEU:HA	1:B:2491:PHE:HB2	1.94	0.48
1:C:231:GLY:O	1:C:276:ARG:NH1	2.47	0.48
1:C:631:LEU:O	1:C:635:ASN:HB2	2.14	0.48
1:D:2257:ARG:HB3	1:D:2259:PRO:HD2	1.96	0.48
1:D:4304:PHE:O	1:D:4308:VAL:HG13	2.14	0.48
1:A:1682:ASP:HB2	1:A:1685:GLN:HG2	1.94	0.48
2:G:18:LYS:HB2	2:G:18:LYS:NZ	2.29	0.48
1:B:1677:LEU:HA	1:B:1680:HIS:HB2	1.96	0.48
1:C:1226:TYR:HD2	1:C:1226:TYR:N	2.12	0.48
1:C:1931:PHE:CE2	1:C:1995:LEU:HB2	2.49	0.48
1:C:3919:LEU:HD22	1:C:3934:LEU:HD11	1.96	0.48
2:J:18:LYS:HB2	2:J:18:LYS:NZ	2.29	0.48
1:A:1359:ILE:HG13	1:A:1360:ASP:N	2.28	0.48
1:A:1931:PHE:CE2	1:A:1995:LEU:HB2	2.49	0.48
1:A:2191:MET:HE2	1:A:2191:MET:O	2.14	0.48
1:A:2231:PRO:HD3	1:A:2381:ILE:HD11	1.95	0.48
1:B:3961:SER:OG	1:B:3962:SER:N	2.45	0.48
1:D:2170:VAL:HG21	1:D:2198:PHE:CD2	2.48	0.48
1:A:851:LEU:HB3	1:A:1212:VAL:HG12	1.96	0.47
1:A:875:PRO:HD2	1:A:882:ARG:HH12	1.79	0.47
1:A:1968:PRO:HA	1:A:1971:GLN:HB3	1.95	0.47
1:B:394:HIS:ND1	1:B:395:HIS:N	2.62	0.47
1:B:875:PRO:HD2	1:B:882:ARG:HH12	1.79	0.47
1:B:4913:ASN:HB3	1:B:4916:ASN:HB2	1.95	0.47
1:C:323:ASP:O	1:C:327:THR:OG1	2.26	0.47
1:C:332:ARG:NH1	1:C:364:GLN:OE1	2.46	0.47
2:I:3:VAL:HG11	2:I:59:GLY:HA2	1.96	0.47
1:D:1677:LEU:HA	1:D:1680:HIS:HB2	1.96	0.47
1:D:2487:LEU:HA	1:D:2491:PHE:HB2	1.94	0.47
1:D:3613:HIS:HA	1:D:3616:VAL:HG12	1.96	0.47
1:A:394:HIS:ND1	1:A:395:HIS:N	2.62	0.47
1:A:1156:TRP:HB3	1:A:1177:LEU:HD11	1.95	0.47
1:A:1257:GLN:HA	1:A:1384:LEU:HD22	1.95	0.47
1:A:4661:GLY:H	1:A:4664:ARG:NH1	2.12	0.47
1:B:631:LEU:O	1:B:635:ASN:HB2	2.14	0.47
1:B:759:LEU:HD13	1:B:766:ILE:HG12	1.95	0.47
1:B:1362:ASP:N	1:B:1362:ASP:OD1	2.46	0.47

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	2.55	0.47
1:C:296:ARG:HH21	1:C:324:VAL:HG12	1.78	0.47
1:C:851:LEU:HB3	1:C:1212:VAL:HG12	1.96	0.47
1:C:1677:LEU:HA	1:C:1680:HIS:HB2	1.96	0.47
1:C:2191:MET:HE2	1:C:2191:MET:O	2.14	0.47
1:D:169:ARG:HH12	1:D:176:ARG:HE	1.62	0.47
1:D:801:ARG:HA	1:D:1618:TRP:O	2.14	0.47
1:D:1968:PRO:HA	1:D:1971:GLN:HB3	1.95	0.47
1:D:3919:LEU:HD22	1:D:3934:LEU:HD11	1.96	0.47
1:D:4024:ASP:OD1	1:D:4025:LEU:N	2.47	0.47
1:A:631:LEU:O	1:A:635:ASN:HB2	2.14	0.47
1:A:801:ARG:HA	1:A:1618:TRP:O	2.14	0.47
1:A:1358:ARG:NH2	1:A:1359:ILE:O	2.46	0.47
1:A:1677:LEU:HA	1:A:1680:HIS:HB2	1.96	0.47
1:A:4044:LYS:O	1:A:4045:ARG:NH1	2.48	0.47
1:B:851:LEU:HB3	1:B:1212:VAL:HG12	1.96	0.47
1:B:3688:MET:SD	1:B:3752:PRO:HB2	2.54	0.47
1:B:4304:PHE:O	1:B:4308:VAL:HG13	2.14	0.47
1:C:837:SER:H	1:C:841:LYS:HZ2	1.61	0.47
1:D:4298:ALA:HA	1:D:4301:CYS:SG	2.55	0.47
1:A:4298:ALA:HA	1:A:4301:CYS:SG	2.55	0.47
1:B:1226:TYR:HD2	1:B:1226:TYR:N	2.12	0.47
1:B:1257:GLN:HA	1:B:1384:LEU:HD22	1.95	0.47
1:B:2132:ARG:HG2	1:B:2133:MET:H	1.80	0.47
1:B:2278:MET:O	1:B:2282:LYS:HG2	2.15	0.47
1:B:3919:LEU:HD22	1:B:3934:LEU:HD11	1.96	0.47
1:B:4024:ASP:OD1	1:B:4025:LEU:N	2.47	0.47
2:H:3:VAL:HG11	2:H:59:GLY:HA2	1.96	0.47
1:C:1156:TRP:HB3	1:C:1177:LEU:HD11	1.95	0.47
1:C:4298:ALA:HA	1:C:4301:CYS:SG	2.55	0.47
1:D:227:TYR:HD2	1:D:352:SER:HB3	1.80	0.47
1:D:486:GLN:HB3	1:D:544:ASN:ND2	2.26	0.47
1:D:631:LEU:O	1:D:635:ASN:HB2	2.14	0.47
1:D:1156:TRP:HB3	1:D:1177:LEU:HD11	1.95	0.47
1:D:1226:TYR:HD2	1:D:1226:TYR:N	2.12	0.47
1:D:1960:LYS:HD3	1:D:1960:LYS:HA	1.60	0.47
1:D:2196:CYS:HB2	1:D:2236:SER:HB3	1.96	0.47
1:A:589:ILE:HG13	1:A:617:LEU:HD21	1.97	0.47
1:A:2405:MET:HG3	1:A:2405:MET:O	2.14	0.47
1:A:2716:LEU:HD22	1:A:2778:LEU:HD21	1.97	0.47
1:A:4177:ASN:HD21	1:A:4875:GLN:HB3	1.79	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4913:ASN:HB3	1:A:4916:ASN:HB2	1.95	0.47
1:B:1156:TRP:HB3	1:B:1177:LEU:HD11	1.95	0.47
1:B:1968:PRO:HA	1:B:1971:GLN:HB3	1.95	0.47
1:C:2132:ARG:HG2	1:C:2133:MET:H	1.80	0.47
1:D:2765:LYS:O	1:D:2769:ILE:HG23	2.15	0.47
1:D:3688:MET:SD	1:D:3752:PRO:HB2	2.54	0.47
1:D:3965:GLU:O	1:D:3969:GLU:HG2	2.13	0.47
1:A:759:LEU:HD13	1:A:766:ILE:HG12	1.95	0.47
1:A:2257:ARG:HB3	1:A:2259:PRO:HD2	1.96	0.47
1:A:2278:MET:O	1:A:2282:LYS:HG2	2.14	0.47
1:A:3613:HIS:HA	1:A:3616:VAL:HG12	1.96	0.47
1:B:281:ARG:O	1:B:285:SER:OG	2.27	0.47
1:B:2257:ARG:HB3	1:B:2259:PRO:HD2	1.96	0.47
1:B:2716:LEU:HD22	1:B:2778:LEU:HD21	1.97	0.47
1:B:4177:ASN:HD21	1:B:4875:GLN:HB3	1.79	0.47
1:C:270:HIS:CD2	1:C:491:GLU:HG3	2.49	0.47
1:C:766:ILE:HG22	1:C:768:PHE:HE2	1.80	0.47
1:C:844:ARG:HE	1:C:845:THR:HG22	1.78	0.47
1:C:4661:GLY:H	1:C:4664:ARG:NH1	2.12	0.47
1:D:759:LEU:HD13	1:D:766:ILE:HG12	1.95	0.47
1:D:3940:TRP:HA	1:D:3943:VAL:HG22	1.97	0.47
1:D:4792:TYR:HH	1:D:4815:HIS:HE2	1.61	0.47
1:A:270:HIS:CD2	1:A:491:GLU:HG3	2.49	0.47
1:A:1226:TYR:HD2	1:A:1226:TYR:N	2.12	0.47
1:A:3919:LEU:HD22	1:A:3934:LEU:HD11	1.96	0.47
1:B:270:HIS:CD2	1:B:491:GLU:HG3	2.49	0.47
1:B:589:ILE:HG13	1:B:617:LEU:HD21	1.97	0.47
1:B:747:HIS:HB2	1:B:750:ARG:HH22	1.80	0.47
1:B:874:LEU:HD11	1:B:941:LYS:HD3	1.97	0.47
1:B:1931:PHE:CE2	1:B:1995:LEU:HB2	2.49	0.47
1:B:2765:LYS:O	1:B:2769:ILE:HG23	2.15	0.47
1:B:4029:ASP:OD2	1:B:4054:HIS:NE2	2.43	0.47
1:B:4044:LYS:O	1:B:4045:ARG:NH1	2.48	0.47
1:C:169:ARG:HH12	1:C:176:ARG:HE	1.62	0.47
1:C:839:GLU:HG2	1:C:840:TYR:CD1	2.50	0.47
1:C:875:PRO:HD2	1:C:882:ARG:HH12	1.79	0.47
1:C:2257:ARG:HB3	1:C:2259:PRO:HD2	1.96	0.47
1:C:2716:LEU:HD22	1:C:2778:LEU:HD21	1.97	0.47
1:C:4304:PHE:O	1:C:4308:VAL:HG13	2.14	0.47
1:D:296:ARG:HH21	1:D:324:VAL:HG12	1.78	0.47
1:D:2171:MET:O	1:D:2175:VAL:HG23	2.13	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2385:ASN:HD22	1:D:2457:ALA:C	2.18	0.47
1:D:4029:ASP:OD2	1:D:4054:HIS:NE2	2.43	0.47
1:B:721:ASP:OD1	1:B:721:ASP:N	2.48	0.47
1:B:4045:ARG:CZ	1:B:4045:ARG:HA	2.45	0.47
1:C:394:HIS:ND1	1:C:395:HIS:N	2.62	0.47
1:C:486:GLN:HB3	1:C:544:ASN:ND2	2.26	0.47
1:C:1966:SER:OG	1:C:1966:SER:O	2.32	0.47
1:C:4044:LYS:O	1:C:4045:ARG:NH1	2.48	0.47
1:D:874:LEU:HD11	1:D:941:LYS:HD3	1.97	0.47
1:D:1683:GLU:HB3	2:J:42:ASP:HB3	1.96	0.47
1:D:2405:MET:O	1:D:2405:MET:HG3	2.14	0.47
1:D:2716:LEU:HD22	1:D:2778:LEU:HD21	1.97	0.47
2:G:38:ASP:OD1	2:G:39:SER:N	2.48	0.47
1:B:336:GLU:HG3	1:B:338:LEU:HD22	1.97	0.47
1:B:801:ARG:HA	1:B:1618:TRP:O	2.14	0.47
1:B:2261:LEU:O	1:B:2265:VAL:HG23	2.15	0.47
1:C:227:TYR:HD2	1:C:352:SER:HB3	1.79	0.47
1:C:589:ILE:HG13	1:C:617:LEU:HD21	1.97	0.47
1:C:801:ARG:HA	1:C:1618:TRP:O	2.14	0.47
1:C:1173:MET:HB3	1:C:1191:ALA:HB3	1.97	0.47
2:I:18:LYS:NZ	2:I:18:LYS:HB2	2.29	0.47
1:D:851:LEU:HB3	1:D:1212:VAL:HG12	1.96	0.47
1:A:850:LEU:HD23	1:A:1213:GLY:O	2.15	0.47
1:B:169:ARG:HH12	1:B:176:ARG:HE	1.62	0.47
1:B:1173:MET:HB3	1:B:1191:ALA:HB3	1.97	0.47
1:B:1173:MET:HB2	1:B:1192:PHE:H	1.80	0.47
1:C:2278:MET:O	1:C:2282:LYS:HG2	2.14	0.47
1:D:270:HIS:CD2	1:D:491:GLU:HG3	2.49	0.47
1:D:721:ASP:N	1:D:721:ASP:OD1	2.48	0.47
1:D:2261:LEU:O	1:D:2265:VAL:HG23	2.15	0.47
1:D:3822:GLU:HB3	1:D:3826:GLU:HA	1.98	0.47
1:D:4029:ASP:OD1	1:D:4029:ASP:N	2.48	0.47
1:B:1966:SER:OG	1:B:1966:SER:O	2.32	0.46
1:B:4750:LYS:HA	1:B:4753:ARG:HG2	1.97	0.46
1:C:721:ASP:OD1	1:C:721:ASP:N	2.48	0.46
1:C:750:ARG:NH2	2:I:10:PRO:HD3	2.29	0.46
1:C:4045:ARG:HA	1:C:4045:ARG:CZ	2.45	0.46
1:D:839:GLU:HG2	1:D:840:TYR:CD1	2.50	0.46
1:D:1747:HIS:O	1:D:1747:HIS:ND1	2.39	0.46
2:J:3:VAL:HG11	2:J:59:GLY:HA2	1.96	0.46
1:A:2132:ARG:HG2	1:A:2133:MET:H	1.80	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2385:ASN:HD22	1:A:2457:ALA:C	2.18	0.46
1:A:4045:ARG:CZ	1:A:4045:ARG:HA	2.45	0.46
1:A:4606:ALA:HB1	1:A:4648:VAL:HG21	1.97	0.46
1:A:4909:LEU:O	1:A:4913:ASN:ND2	2.49	0.46
1:B:766:ILE:HG22	1:B:768:PHE:HE2	1.80	0.46
1:B:2405:MET:HG3	1:B:2405:MET:O	2.14	0.46
1:C:336:GLU:HG3	1:C:338:LEU:HD22	1.97	0.46
1:C:747:HIS:HB2	1:C:750:ARG:HH22	1.80	0.46
1:C:2405:MET:HG3	1:C:2405:MET:O	2.14	0.46
1:C:4177:ASN:HD21	1:C:4875:GLN:HB3	1.79	0.46
1:D:723:PHE:HE2	1:D:1385:LYS:HE2	1.79	0.46
1:D:1256:PRO:HG2	1:D:1592:LEU:HD21	1.97	0.46
1:D:4177:ASN:HD21	1:D:4875:GLN:HB3	1.79	0.46
1:A:176:ARG:N	1:A:179:ASP:OD2	2.42	0.46
1:A:1008:ALA:O	1:A:1012:ILE:HG23	2.15	0.46
2:G:3:VAL:HG11	2:G:59:GLY:HA2	1.96	0.46
1:B:2240:ASP:OD1	1:B:2296:ARG:NH2	2.49	0.46
1:B:4941:LYS:HE3	1:B:4941:LYS:HB3	1.75	0.46
1:C:1173:MET:HB2	1:C:1192:PHE:H	1.80	0.46
1:C:1257:GLN:HA	1:C:1384:LEU:HD22	1.95	0.46
1:C:2240:ASP:OD1	1:C:2296:ARG:NH2	2.49	0.46
1:C:2765:LYS:O	1:C:2769:ILE:HG23	2.15	0.46
1:C:3822:GLU:HB3	1:C:3826:GLU:HA	1.98	0.46
1:D:875:PRO:HD2	1:D:882:ARG:HH12	1.79	0.46
1:D:1257:GLN:HA	1:D:1384:LEU:HD22	1.95	0.46
1:D:4750:LYS:HA	1:D:4753:ARG:HG2	1.97	0.46
1:A:336:GLU:HG3	1:A:338:LEU:HD22	1.97	0.46
1:A:747:HIS:HB2	1:A:750:ARG:HH22	1.80	0.46
1:A:1684:PRO:HD3	2:G:42:ASP:HB3	1.96	0.46
1:A:2765:LYS:O	1:A:2769:ILE:HG23	2.15	0.46
1:A:4866:ILE:HG12	1:D:4863:GLY:HA2	1.98	0.46
1:B:839:GLU:HG2	1:B:840:TYR:CD1	2.50	0.46
1:B:1008:ALA:O	1:B:1012:ILE:HG23	2.15	0.46
1:B:2238:PRO:HA	1:B:2241:VAL:HG12	1.98	0.46
1:B:3762:ILE:HD12	1:B:3840:ARG:HG3	1.98	0.46
1:B:4785:PHE:HA	1:B:4789:ARG:HH21	1.81	0.46
1:C:723:PHE:HE2	1:C:1385:LYS:HE2	1.80	0.46
1:C:1256:PRO:HG2	1:C:1592:LEU:HD21	1.97	0.46
1:C:2385:ASN:HD22	1:C:2457:ALA:C	2.18	0.46
1:D:336:GLU:HG3	1:D:338:LEU:HD22	1.98	0.46
1:D:850:LEU:HD23	1:D:1213:GLY:O	2.15	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:4044:LYS:O	1:D:4045:ARG:NH1	2.48	0.46
1:A:227:TYR:HD2	1:A:352:SER:HB3	1.80	0.46
1:A:1747:HIS:O	1:A:1747:HIS:ND1	2.39	0.46
1:A:2839:MET:HB3	1:A:2892:PHE:CZ	2.51	0.46
1:B:323:ASP:O	1:B:327:THR:OG1	2.26	0.46
1:B:2271:CYS:SG	1:B:2293:GLU:HB2	2.56	0.46
1:B:2839:MET:HB3	1:B:2892:PHE:CZ	2.51	0.46
1:B:3719:GLU:HA	1:B:3722:LYS:HG2	1.98	0.46
1:B:3822:GLU:HB3	1:B:3826:GLU:HA	1.98	0.46
1:C:2118:LEU:HB2	1:C:2151:ASN:HD21	1.80	0.46
1:C:2261:LEU:O	1:C:2265:VAL:HG23	2.15	0.46
1:C:3613:HIS:HA	1:C:3616:VAL:HG12	1.96	0.46
1:C:3688:MET:SD	1:C:3752:PRO:HB2	2.54	0.46
1:C:3940:TRP:HA	1:C:3943:VAL:HG22	1.97	0.46
1:D:713:TRP:HE1	1:D:1604:PHE:HD1	1.64	0.46
1:A:486:GLN:HB3	1:A:544:ASN:ND2	2.26	0.46
1:A:2240:ASP:OD1	1:A:2296:ARG:NH2	2.49	0.46
1:A:3762:ILE:HD12	1:A:3840:ARG:HG3	1.98	0.46
1:A:4762:ASN:O	1:A:4764:LYS:N	2.49	0.46
1:B:3613:HIS:HA	1:B:3616:VAL:HG12	1.96	0.46
1:B:4606:ALA:HB1	1:B:4648:VAL:HG21	1.97	0.46
1:C:850:LEU:HD23	1:C:1213:GLY:O	2.15	0.46
1:C:874:LEU:HD11	1:C:941:LYS:HD3	1.97	0.46
1:C:4648:VAL:O	1:C:4652:VAL:HG12	2.16	0.46
1:C:4941:LYS:HE3	1:C:4941:LYS:HB3	1.75	0.46
1:D:589:ILE:HG13	1:D:617:LEU:HD21	1.97	0.46
1:D:1900:PRO:O	1:D:1904:GLN:HG2	2.16	0.46
1:D:2132:ARG:HG2	1:D:2133:MET:H	1.80	0.46
1:D:2853:LYS:HA	1:D:2856:LYS:HG2	1.98	0.46
1:A:884:ARG:HB3	1:A:1060:TYR:HE2	1.81	0.46
1:A:1357:ASP:OD1	1:A:1358:ARG:N	2.44	0.46
1:A:2065:MET:SD	1:A:2086:LEU:HD23	2.56	0.46
1:A:2853:LYS:HA	1:A:2856:LYS:HG2	1.98	0.46
1:B:380:LYS:HD2	1:B:380:LYS:HA	1.75	0.46
1:B:644:LEU:HD11	1:B:1651:LEU:HD22	1.98	0.46
1:C:713:TRP:HE1	1:C:1604:PHE:HD1	1.64	0.46
1:C:1900:PRO:O	1:C:1904:GLN:HG2	2.16	0.46
2:I:38:ASP:OD1	2:I:39:SER:N	2.48	0.46
1:D:238:HIS:HB2	1:D:241:MET:HB2	1.98	0.46
1:D:2088:HIS:HB2	1:D:3690:TYR:CE1	2.51	0.46
1:D:2240:ASP:OD1	1:D:2296:ARG:NH2	2.49	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2278:MET:O	1:D:2282:LYS:HG2	2.15	0.46
1:D:3762:ILE:HD12	1:D:3840:ARG:HG3	1.98	0.46
1:D:4606:ALA:HB1	1:D:4648:VAL:HG21	1.97	0.46
1:D:4909:LEU:O	1:D:4913:ASN:ND2	2.49	0.46
1:A:238:HIS:HB2	1:A:241:MET:HB2	1.98	0.46
1:A:446:ASP:OD1	1:A:446:ASP:N	2.45	0.46
1:A:766:ILE:HG22	1:A:768:PHE:HE2	1.80	0.46
1:A:839:GLU:HG2	1:A:840:TYR:CD1	2.50	0.46
1:A:1219:LYS:HE2	1:A:1219:LYS:HA	1.98	0.46
1:B:343:ARG:HH21	1:B:345:GLU:H	1.64	0.46
1:B:486:GLN:CB	1:B:544:ASN:HD21	2.24	0.46
1:B:2118:LEU:HB2	1:B:2151:ASN:HD21	1.80	0.46
1:B:4648:VAL:O	1:B:4652:VAL:HG12	2.16	0.46
1:C:169:ARG:HH22	1:C:176:ARG:HH21	1.64	0.46
1:C:4060:SER:O	1:C:4063:GLU:HG2	2.16	0.46
1:D:4045:ARG:CZ	1:D:4045:ARG:HA	2.45	0.46
1:D:4060:SER:O	1:D:4063:GLU:HG2	2.16	0.46
1:A:343:ARG:HH21	1:A:345:GLU:H	1.64	0.46
1:B:2385:ASN:HD22	1:B:2457:ALA:C	2.18	0.46
1:B:3940:TRP:HA	1:B:3943:VAL:HG22	1.97	0.46
1:C:644:LEU:HD11	1:C:1651:LEU:HD22	1.98	0.46
1:C:3748:GLY:HA2	1:C:3795:LEU:HG	1.98	0.46
1:D:1008:ALA:O	1:D:1012:ILE:HG23	2.15	0.46
1:D:2454:ASP:OD1	1:D:2454:ASP:N	2.49	0.46
1:A:1679:SER:HB2	2:G:37:PHE:O	2.16	0.46
1:A:1900:PRO:O	1:A:1904:GLN:HG2	2.16	0.46
1:A:3748:GLY:HA2	1:A:3795:LEU:HG	1.98	0.46
1:A:3822:GLU:HB3	1:A:3826:GLU:HA	1.98	0.46
1:A:4785:PHE:HA	1:A:4789:ARG:HH21	1.81	0.46
1:B:2853:LYS:HA	1:B:2856:LYS:HG2	1.98	0.46
1:B:3898:ASP:OD1	1:B:3898:ASP:N	2.49	0.46
1:B:4762:ASN:O	1:B:4764:LYS:N	2.49	0.46
1:B:4909:LEU:O	1:B:4913:ASN:ND2	2.49	0.46
1:C:1357:ASP:OD1	1:C:1358:ARG:N	2.44	0.46
1:C:3762:ILE:HD12	1:C:3840:ARG:HG3	1.97	0.46
1:C:4785:PHE:HA	1:C:4789:ARG:HH21	1.81	0.46
1:C:4808:MET:CG	1:D:4516:LEU:HA	2.46	0.46
1:D:1092:LYS:HG2	1:D:1120:PRO:HB3	1.98	0.46
1:D:1641:ASP:OD1	1:D:1642:ILE:N	2.49	0.46
1:D:1679:SER:HB3	1:D:1769:PHE:CE2	2.51	0.46
1:D:2065:MET:SD	1:D:2086:LEU:HD23	2.56	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2271:CYS:SG	1:D:2293:GLU:HB2	2.56	0.46
1:D:3719:GLU:HA	1:D:3722:LYS:HG2	1.98	0.46
1:D:3796:MET:HG2	1:D:3838:LEU:HD21	1.98	0.46
1:D:4762:ASN:O	1:D:4764:LYS:N	2.49	0.46
1:A:323:ASP:O	1:A:327:THR:OG1	2.26	0.45
1:A:874:LEU:HD11	1:A:941:LYS:HD3	1.97	0.45
1:A:1092:LYS:HG2	1:A:1120:PRO:HB3	1.98	0.45
1:A:2088:HIS:HB2	1:A:3690:TYR:CE1	2.51	0.45
1:B:227:TYR:HD2	1:B:352:SER:HB3	1.79	0.45
1:B:850:LEU:HD23	1:B:1213:GLY:O	2.15	0.45
1:B:1147:GLN:O	1:B:1147:GLN:HG2	2.17	0.45
1:B:4060:SER:O	1:B:4063:GLU:HG2	2.16	0.45
1:C:884:ARG:HB3	1:C:1060:TYR:HE2	1.81	0.45
1:C:2853:LYS:HA	1:C:2856:LYS:HG2	1.98	0.45
1:C:4606:ALA:HB1	1:C:4648:VAL:HG21	1.97	0.45
1:D:118:ALA:HA	1:D:161:THR:HA	1.98	0.45
1:D:343:ARG:HH21	1:D:345:GLU:H	1.64	0.45
1:D:884:ARG:HB3	1:D:1060:TYR:HE2	1.81	0.45
1:D:1173:MET:HB3	1:D:1191:ALA:HB3	1.97	0.45
1:A:2220:LEU:CD1	1:A:2242:ALA:HB2	2.46	0.45
1:A:3719:GLU:HA	1:A:3722:LYS:HG2	1.98	0.45
1:B:697:TRP:HB2	1:B:766:ILE:HD13	1.98	0.45
1:B:713:TRP:HE1	1:B:1604:PHE:HD1	1.64	0.45
1:B:723:PHE:HE2	1:B:1385:LYS:HE2	1.80	0.45
1:B:1776:CYS:SG	1:B:1778:GLN:HB3	2.57	0.45
1:B:4500:MET:HE2	1:B:4500:MET:HB2	1.72	0.45
1:C:1641:ASP:OD1	1:C:1642:ILE:N	2.50	0.45
1:C:1679:SER:HB3	1:C:1769:PHE:CE2	2.51	0.45
1:C:2065:MET:SD	1:C:2086:LEU:HD23	2.56	0.45
1:D:747:HIS:HB2	1:D:750:ARG:HH22	1.80	0.45
1:D:1681:VAL:HB	1:D:1685:GLN:NE2	2.31	0.45
1:D:2118:LEU:HB2	1:D:2151:ASN:HD21	1.80	0.45
1:D:2839:MET:HB3	1:D:2892:PHE:CZ	2.51	0.45
1:D:4583:PHE:O	1:D:4586:ILE:HG22	2.17	0.45
2:J:38:ASP:OD1	2:J:39:SER:N	2.48	0.45
1:A:783:ASN:ND2	1:A:1393:UNK:O	2.42	0.45
1:A:1147:GLN:O	1:A:1147:GLN:HG2	2.17	0.45
1:A:2238:PRO:HA	1:A:2241:VAL:HG12	1.98	0.45
1:A:2454:ASP:N	1:A:2454:ASP:OD1	2.49	0.45
1:A:2722:LYS:O	1:A:2726:HIS:ND1	2.50	0.45
1:A:4060:SER:O	1:A:4063:GLU:HG2	2.16	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4750:LYS:HA	1:A:4753:ARG:HG2	1.97	0.45
1:B:267:VAL:HA	1:B:270:HIS:ND1	2.32	0.45
1:B:552:SER:O	1:B:555:LEU:HD12	2.16	0.45
1:B:2722:LYS:O	1:B:2726:HIS:ND1	2.50	0.45
1:B:4029:ASP:OD1	1:B:4029:ASP:N	2.48	0.45
1:C:343:ARG:HH21	1:C:345:GLU:H	1.64	0.45
1:C:1008:ALA:O	1:C:1012:ILE:HG23	2.15	0.45
1:C:1092:LYS:HG2	1:C:1120:PRO:HB3	1.98	0.45
1:C:1681:VAL:HB	1:C:1685:GLN:NE2	2.31	0.45
1:C:1776:CYS:SG	1:C:1778:GLN:HB3	2.57	0.45
1:C:2454:ASP:N	1:C:2454:ASP:OD1	2.49	0.45
1:C:4750:LYS:HA	1:C:4753:ARG:HG2	1.97	0.45
1:C:4909:LEU:O	1:C:4913:ASN:ND2	2.49	0.45
1:D:267:VAL:HA	1:D:270:HIS:ND1	2.32	0.45
1:D:839:GLU:HG2	1:D:840:TYR:H	1.82	0.45
1:D:2722:LYS:O	1:D:2726:HIS:ND1	2.50	0.45
1:D:3795:LEU:HD22	1:D:3834:PHE:HZ	1.82	0.45
1:A:891:GLU:HB2	1:A:978:PRO:HB3	1.98	0.45
1:A:1173:MET:HB3	1:A:1191:ALA:HB3	1.97	0.45
1:A:1641:ASP:OD1	1:A:1642:ILE:N	2.49	0.45
1:A:1681:VAL:HB	1:A:1685:GLN:NE2	2.31	0.45
1:A:2118:LEU:HB2	1:A:2151:ASN:HD21	1.80	0.45
1:A:2261:LEU:O	1:A:2265:VAL:HG23	2.15	0.45
1:A:3940:TRP:HA	1:A:3943:VAL:HG22	1.97	0.45
1:B:169:ARG:HH22	1:B:176:ARG:HH21	1.64	0.45
1:B:839:GLU:HG2	1:B:840:TYR:H	1.82	0.45
1:B:4026:THR:O	1:B:4031:PHE:HB3	2.16	0.45
1:C:723:PHE:CE2	1:C:1385:LYS:HE2	2.52	0.45
1:C:1147:GLN:HG2	1:C:1147:GLN:O	2.16	0.45
1:C:1219:LYS:HE2	1:C:1219:LYS:HA	1.98	0.45
1:C:2088:HIS:HB2	1:C:3690:TYR:CE1	2.51	0.45
1:C:2722:LYS:O	1:C:2726:HIS:ND1	2.50	0.45
1:C:2839:MET:HB3	1:C:2892:PHE:CZ	2.51	0.45
1:C:3719:GLU:HA	1:C:3722:LYS:HG2	1.98	0.45
1:D:328:ALA:HB3	1:D:366:VAL:HG11	1.99	0.45
1:D:837:SER:H	1:D:841:LYS:HZ2	1.64	0.45
1:D:4026:THR:O	1:D:4031:PHE:HB3	2.17	0.45
1:D:4785:PHE:HA	1:D:4789:ARG:HH21	1.81	0.45
1:A:723:PHE:HE2	1:A:1385:LYS:HE2	1.79	0.45
1:A:1909:LEU:HB2	1:A:2086:LEU:HD21	1.98	0.45
1:A:2271:CYS:SG	1:A:2293:GLU:HB2	2.56	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3796:MET:HG2	1:A:3838:LEU:HD21	1.98	0.45
1:A:4176:VAL:HG11	1:A:4879:VAL:HA	1.99	0.45
1:B:328:ALA:HB3	1:B:366:VAL:HG11	1.99	0.45
1:B:1304:LEU:HG	1:B:1340:ASP:HB2	1.98	0.45
1:B:2088:HIS:HB2	1:B:3690:TYR:CE1	2.51	0.45
1:B:3795:LEU:HD22	1:B:3834:PHE:HZ	1.82	0.45
1:B:3919:LEU:O	1:B:3923:ILE:HG12	2.17	0.45
1:C:267:VAL:HA	1:C:270:HIS:ND1	2.32	0.45
1:C:3795:LEU:HD22	1:C:3834:PHE:HZ	1.82	0.45
1:C:3796:MET:HG2	1:C:3838:LEU:HD21	1.98	0.45
1:C:3898:ASP:N	1:C:3898:ASP:OD1	2.49	0.45
1:D:1173:MET:HB2	1:D:1192:PHE:H	1.80	0.45
1:D:3898:ASP:OD1	1:D:3898:ASP:N	2.49	0.45
1:A:267:VAL:HA	1:A:270:HIS:ND1	2.32	0.45
1:A:328:ALA:HB3	1:A:366:VAL:HG11	1.99	0.45
1:A:552:SER:O	1:A:555:LEU:HD12	2.16	0.45
1:A:1256:PRO:HG2	1:A:1592:LEU:HD21	1.97	0.45
1:A:2330:PHE:CD2	1:A:2335:ARG:HG3	2.52	0.45
1:B:723:PHE:CE2	1:B:1385:LYS:HE2	2.52	0.45
1:B:837:SER:N	1:B:841:LYS:HZ2	2.15	0.45
1:B:891:GLU:HB2	1:B:978:PRO:HB3	1.98	0.45
1:B:1219:LYS:HE2	1:B:1219:LYS:HA	1.98	0.45
1:B:1358:ARG:HG3	1:B:1567:LEU:HD23	1.99	0.45
1:B:2330:PHE:CD2	1:B:2335:ARG:HG3	2.52	0.45
1:B:2454:ASP:OD1	1:B:2454:ASP:N	2.49	0.45
1:B:3804:LEU:HD21	1:B:3887:PHE:HA	1.99	0.45
1:C:238:HIS:HB2	1:C:241:MET:HB2	1.98	0.45
1:C:2330:PHE:CD2	1:C:2335:ARG:HG3	2.52	0.45
1:C:2383:MET:O	1:C:2387:ILE:HG13	2.17	0.45
1:D:176:ARG:N	1:D:179:ASP:OD2	2.42	0.45
1:A:644:LEU:HD11	1:A:1651:LEU:HD22	1.98	0.45
1:A:839:GLU:HG2	1:A:840:TYR:H	1.82	0.45
1:A:1102:TYR:HA	1:A:1164:CYS:O	2.17	0.45
1:A:1304:LEU:HG	1:A:1340:ASP:HB2	1.99	0.45
1:A:3720:LYS:HB2	1:A:3720:LYS:HE3	1.77	0.45
1:A:3919:LEU:O	1:A:3923:ILE:HG12	2.17	0.45
1:A:4583:PHE:O	1:A:4586:ILE:HG22	2.16	0.45
1:B:1303:ARG:N	1:B:1590:GLN:O	2.35	0.45
1:B:1641:ASP:OD1	1:B:1642:ILE:N	2.50	0.45
1:B:1900:PRO:O	1:B:1904:GLN:HG2	2.16	0.45
1:B:2383:MET:O	1:B:2387:ILE:HG13	2.17	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3796:MET:HG2	1:B:3838:LEU:HD21	1.98	0.45
1:B:4931:GLU:N	1:B:4931:GLU:OE2	2.49	0.45
1:C:2271:CYS:SG	1:C:2293:GLU:HB2	2.56	0.45
1:C:4029:ASP:OD1	1:C:4029:ASP:N	2.48	0.45
1:C:4931:GLU:N	1:C:4931:GLU:OE2	2.49	0.45
1:D:644:LEU:HD11	1:D:1651:LEU:HD22	1.98	0.45
1:D:1219:LYS:NZ	1:D:1243:THR:H	2.15	0.45
1:A:723:PHE:CE2	1:A:1385:LYS:HE2	2.52	0.45
1:A:1776:CYS:SG	1:A:1778:GLN:HB3	2.57	0.45
1:A:4072:ASP:O	1:A:4073:GLU:HG3	2.17	0.45
1:A:4648:VAL:O	1:A:4652:VAL:HG12	2.16	0.45
2:G:22:THR:CB	2:G:50:ARG:HG2	2.46	0.45
1:B:559:ILE:HD13	1:B:593:HIS:HB3	1.99	0.45
1:B:1092:LYS:HG2	1:B:1120:PRO:HB3	1.98	0.45
1:B:1256:PRO:HG2	1:B:1592:LEU:HD21	1.97	0.45
1:B:1681:VAL:HB	1:B:1685:GLN:NE2	2.32	0.45
1:B:2077:PRO:HA	1:B:2080:VAL:HG12	1.99	0.45
1:B:2233:MET:HE2	1:B:2233:MET:N	2.32	0.45
1:B:3748:GLY:HA2	1:B:3795:LEU:HG	1.98	0.45
1:C:3919:LEU:O	1:C:3923:ILE:HG12	2.17	0.45
1:D:1102:TYR:HA	1:D:1164:CYS:O	2.17	0.45
1:D:2220:LEU:CD1	1:D:2242:ALA:HB2	2.46	0.45
1:D:2238:PRO:HA	1:D:2241:VAL:HG12	1.98	0.45
1:D:2383:MET:O	1:D:2387:ILE:HG13	2.17	0.45
1:A:118:ALA:HA	1:A:161:THR:HA	1.98	0.45
1:A:1303:ARG:N	1:A:1590:GLN:O	2.35	0.45
1:A:1384:LEU:C	1:A:1385:LYS:HD2	2.37	0.45
1:A:1679:SER:HB3	1:A:1769:PHE:CE2	2.51	0.45
1:A:2383:MET:O	1:A:2387:ILE:HG13	2.17	0.45
1:B:238:HIS:HB2	1:B:241:MET:HB2	1.98	0.45
1:B:2065:MET:SD	1:B:2086:LEU:HD23	2.56	0.45
1:C:59:PRO:HB3	1:C:296:ARG:NH1	2.32	0.45
1:C:839:GLU:HG2	1:C:840:TYR:H	1.82	0.45
1:C:1832:MET:HB3	1:C:1832:MET:HE2	1.79	0.45
1:C:4026:THR:O	1:C:4031:PHE:HB3	2.16	0.45
1:C:4029:ASP:OD2	1:C:4054:HIS:NE2	2.43	0.45
1:C:4762:ASN:O	1:C:4764:LYS:N	2.49	0.45
1:D:552:SER:O	1:D:555:LEU:HD12	2.16	0.45
1:D:697:TRP:HB2	1:D:766:ILE:HD13	1.98	0.45
1:D:1219:LYS:HE2	1:D:1219:LYS:HA	1.98	0.45
1:D:4176:VAL:HG11	1:D:4879:VAL:HA	1.99	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:4648:VAL:O	1:D:4652:VAL:HG12	2.16	0.45
1:D:4931:GLU:N	1:D:4931:GLU:OE2	2.49	0.45
2:J:22:THR:CB	2:J:50:ARG:HG2	2.46	0.45
1:A:1358:ARG:HG3	1:A:1567:LEU:HD23	1.99	0.45
1:A:3804:LEU:HD21	1:A:3887:PHE:HA	1.99	0.45
1:C:328:ALA:HB3	1:C:366:VAL:HG11	1.99	0.45
1:C:1709:ASP:HA	1:C:1713:SER:HB3	1.99	0.45
1:C:2238:PRO:HA	1:C:2241:VAL:HG12	1.98	0.45
1:D:1384:LEU:C	1:D:1385:LYS:HD2	2.37	0.45
1:D:1981:ASP:OD1	1:D:1982:LYS:N	2.50	0.45
1:A:721:ASP:N	1:A:721:ASP:OD1	2.48	0.44
1:A:1173:MET:HB2	1:A:1192:PHE:H	1.80	0.44
1:A:1981:ASP:OD1	1:A:1982:LYS:N	2.50	0.44
1:A:4931:GLU:OE2	1:A:4931:GLU:N	2.49	0.44
1:B:59:PRO:HB3	1:B:296:ARG:NH1	2.32	0.44
1:B:884:ARG:HB3	1:B:1060:TYR:HE2	1.81	0.44
1:B:1305:SER:OG	1:B:1588:HIS:O	2.31	0.44
1:B:1909:LEU:HB2	1:B:2086:LEU:HD21	1.98	0.44
1:C:118:ALA:HA	1:C:161:THR:HA	1.98	0.44
1:C:552:SER:O	1:C:555:LEU:HD12	2.16	0.44
1:C:891:GLU:HB2	1:C:978:PRO:HB3	1.98	0.44
1:A:1305:SER:OG	1:A:1588:HIS:O	2.31	0.44
1:A:3795:LEU:HD22	1:A:3834:PHE:HZ	1.82	0.44
1:A:4042:ILE:HD11	1:A:4079:TYR:HD1	1.82	0.44
1:B:337:LYS:NZ	1:B:371:TRP:HE1	2.16	0.44
1:B:676:GLU:OE1	1:B:812:LYS:N	2.45	0.44
1:B:1679:SER:HB3	1:B:1769:PHE:CE2	2.51	0.44
1:B:2083:MET:HB2	1:B:2083:MET:HE3	1.64	0.44
1:B:4072:ASP:O	1:B:4073:GLU:HG3	2.17	0.44
1:C:1384:LEU:C	1:C:1385:LYS:HD2	2.37	0.44
1:C:4583:PHE:O	1:C:4586:ILE:HG22	2.16	0.44
1:D:169:ARG:HH22	1:D:176:ARG:HH21	1.64	0.44
1:D:1147:GLN:O	1:D:1147:GLN:HG2	2.17	0.44
1:D:2330:PHE:CD2	1:D:2335:ARG:HG3	2.52	0.44
1:D:3804:LEU:HD21	1:D:3887:PHE:HA	1.99	0.44
1:A:559:ILE:HD13	1:A:593:HIS:HB3	1.99	0.44
1:B:262:TYR:HE1	1:B:391:ALA:HB2	1.82	0.44
1:B:4176:VAL:HG11	1:B:4879:VAL:HA	1.99	0.44
2:H:38:ASP:OD1	2:H:39:SER:N	2.48	0.44
1:C:1153:GLY:HA3	1:C:1182:LEU:HD23	2.00	0.44
1:C:1761:ARG:NE	1:C:1763:ARG:HH12	2.16	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2077:PRO:HA	1:C:2080:VAL:HG12	1.99	0.44
1:C:2233:MET:HE2	1:C:2233:MET:H	1.81	0.44
1:C:2313:GLU:OE1	1:C:3812:LYS:NZ	2.40	0.44
2:I:22:THR:CB	2:I:50:ARG:HG2	2.46	0.44
1:D:723:PHE:CE2	1:D:1385:LYS:HE2	2.52	0.44
1:D:766:ILE:HG22	1:D:768:PHE:HE2	1.80	0.44
1:D:891:GLU:HB2	1:D:978:PRO:HB3	1.98	0.44
1:D:3919:LEU:O	1:D:3923:ILE:HG12	2.17	0.44
1:A:4026:THR:O	1:A:4031:PHE:HB3	2.17	0.44
1:A:4632:LEU:H	1:A:4632:LEU:HD23	1.82	0.44
1:B:409:GLN:HB2	1:B:412:GLU:OE1	2.18	0.44
1:B:1683:GLU:HB3	2:H:42:ASP:HB3	1.99	0.44
1:B:4789:ARG:NH2	1:B:4805:CYS:SG	2.91	0.44
2:H:26:HIS:CD2	2:H:41:ARG:HG2	2.52	0.44
1:C:262:TYR:HE1	1:C:391:ALA:HB2	1.82	0.44
1:D:1304:LEU:HG	1:D:1340:ASP:HB2	1.98	0.44
1:D:1305:SER:OG	1:D:1588:HIS:O	2.31	0.44
1:A:169:ARG:HH22	1:A:176:ARG:HH21	1.64	0.44
1:A:262:TYR:HE1	1:A:391:ALA:HB2	1.82	0.44
1:A:697:TRP:HB2	1:A:766:ILE:HD13	1.98	0.44
1:A:4941:LYS:HB3	1:A:4941:LYS:HE3	1.75	0.44
1:B:118:ALA:HA	1:B:161:THR:HA	1.98	0.44
1:B:1709:ASP:HA	1:B:1713:SER:HB3	1.99	0.44
1:B:1761:ARG:NE	1:B:1763:ARG:HH12	2.16	0.44
1:B:1981:ASP:OD1	1:B:1982:LYS:N	2.50	0.44
1:B:4632:LEU:HD23	1:B:4632:LEU:H	1.83	0.44
1:C:888:ASN:O	1:C:891:GLU:HG2	2.18	0.44
1:C:1893:LEU:CD1	1:C:2060:LEU:HD21	2.48	0.44
1:C:1987:CYS:N	1:C:1988:PRO:HD2	2.33	0.44
1:C:2220:LEU:CD1	1:C:2242:ALA:HB2	2.46	0.44
1:C:2335:ARG:NE	1:C:2336:GLY:N	2.65	0.44
1:C:4779:LEU:HD21	1:D:4742:LEU:HB2	1.98	0.44
1:D:1966:SER:OG	1:D:1966:SER:O	2.32	0.44
1:A:804:LEU:HB2	1:A:808:HIS:HB2	2.00	0.44
1:A:1153:GLY:HA3	1:A:1182:LEU:HD23	2.00	0.44
1:A:1924:ILE:HA	1:A:1998:PHE:HZ	1.82	0.44
1:A:4500:MET:HB2	1:A:4500:MET:HE2	1.73	0.44
1:B:312:LYS:HE3	1:B:315:LEU:HD12	2.00	0.44
1:B:1814:THR:HG23	1:B:1816:GLU:HG2	2.00	0.44
1:B:4042:ILE:HD11	1:B:4079:TYR:HD1	1.82	0.44
1:C:486:GLN:CB	1:C:544:ASN:HD21	2.24	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:697:TRP:HB2	1:C:766:ILE:HD13	1.98	0.44
1:C:1219:LYS:NZ	1:C:1243:THR:H	2.15	0.44
1:C:1304:LEU:HG	1:C:1340:ASP:HB2	1.98	0.44
1:C:1730:MET:CE	1:C:3616:VAL:HG11	2.48	0.44
1:C:2481:ASP:OD1	1:C:2482:PHE:N	2.51	0.44
1:D:1776:CYS:SG	1:D:1778:GLN:HB3	2.57	0.44
1:A:337:LYS:NZ	1:A:371:TRP:HE1	2.16	0.44
1:A:2763:SER:N	1:A:2766:GLU:HB2	2.33	0.44
1:B:1153:GLY:HA3	1:B:1182:LEU:HD23	2.00	0.44
1:B:1219:LYS:NZ	1:B:1243:THR:H	2.15	0.44
1:B:1384:LEU:C	1:B:1385:LYS:HD2	2.37	0.44
1:B:4583:PHE:O	1:B:4586:ILE:HG22	2.17	0.44
1:C:559:ILE:HD13	1:C:593:HIS:HB3	1.99	0.44
1:C:1679:SER:HB2	2:I:37:PHE:O	2.18	0.44
1:C:3663:LEU:O	1:C:3667:ILE:HG12	2.18	0.44
2:I:26:HIS:CD2	2:I:41:ARG:HG2	2.52	0.44
1:D:1970:GLU:HA	1:D:1973:ASN:HB2	2.00	0.44
1:D:4072:ASP:O	1:D:4073:GLU:HG3	2.17	0.44
1:A:1219:LYS:NZ	1:A:1243:THR:H	2.15	0.44
1:B:1893:LEU:CD1	1:B:2060:LEU:HD21	2.48	0.44
1:B:2763:SER:N	1:B:2766:GLU:HB2	2.33	0.44
2:H:22:THR:CB	2:H:50:ARG:HG2	2.46	0.44
1:C:49:LEU:HD21	1:C:203:VAL:HG13	2.00	0.44
1:C:1146:HIS:CE1	1:C:1147:GLN:OE1	2.71	0.44
1:C:1924:ILE:HA	1:C:1998:PHE:HZ	1.82	0.44
1:D:59:PRO:HB3	1:D:296:ARG:NH1	2.32	0.44
1:D:888:ASN:O	1:D:891:GLU:HG2	2.18	0.44
1:D:1146:HIS:HB2	1:D:1192:PHE:HE2	1.83	0.44
1:D:1304:LEU:HD21	1:D:1354:LEU:HD22	2.00	0.44
1:D:1761:ARG:NE	1:D:1763:ARG:HH12	2.16	0.44
1:D:1814:THR:HG23	1:D:1816:GLU:HG2	2.00	0.44
1:D:1909:LEU:HB2	1:D:2086:LEU:HD21	1.98	0.44
1:D:1924:ILE:HA	1:D:1998:PHE:HZ	1.82	0.44
1:D:3748:GLY:HA2	1:D:3795:LEU:HG	1.97	0.44
1:D:4103:ASN:OD1	1:D:4107:HIS:ND1	2.38	0.44
1:D:4789:ARG:NH2	1:D:4805:CYS:SG	2.91	0.44
2:J:26:HIS:CD2	2:J:41:ARG:HG2	2.52	0.44
1:A:59:PRO:HB3	1:A:296:ARG:NH1	2.32	0.44
1:A:894:VAL:HA	1:A:918:LEU:HD22	2.00	0.44
1:A:4807:ASP:HB3	1:A:4810:THR:HB	2.00	0.44
1:B:137:ARG:HG2	1:B:146:ASP:OD2	2.18	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:850:LEU:HD12	1:B:1088:PHE:CD2	2.53	0.44
1:B:1146:HIS:HB2	1:B:1192:PHE:HE2	1.83	0.44
1:B:1947:MET:HE2	1:B:1947:MET:HA	2.00	0.44
1:B:2873:TYR:HA	1:B:2876:LEU:HD13	2.00	0.44
1:C:228:LEU:HD12	1:C:405:LEU:HD13	2.00	0.44
1:C:337:LYS:NZ	1:C:371:TRP:HE1	2.16	0.44
1:C:783:ASN:ND2	1:C:1393:UNK:O	2.41	0.44
1:D:1146:HIS:CE1	1:D:1147:GLN:OE1	2.71	0.44
1:D:2481:ASP:OD1	1:D:2482:PHE:N	2.51	0.44
1:D:4039:LYS:HB2	1:D:4039:LYS:HE2	1.80	0.44
1:D:4807:ASP:HB3	1:D:4810:THR:HB	2.00	0.44
1:A:312:LYS:HE3	1:A:315:LEU:HD12	2.00	0.43
1:A:486:GLN:CB	1:A:544:ASN:HD21	2.24	0.43
1:A:713:TRP:HE1	1:A:1604:PHE:HD1	1.64	0.43
1:A:850:LEU:HD12	1:A:1088:PHE:CD2	2.53	0.43
1:A:1893:LEU:CD1	1:A:2060:LEU:HD21	2.48	0.43
1:A:2167:HIS:HB3	1:A:2202:PHE:CE2	2.53	0.43
1:A:3699:HIS:HB2	1:A:3723:LEU:HD12	2.00	0.43
1:B:804:LEU:HB2	1:B:808:HIS:HB2	2.00	0.43
1:B:1355:VAL:HB	1:B:1365:THR:OG1	2.18	0.43
1:B:1357:ASP:OD1	1:B:1358:ARG:N	2.44	0.43
1:B:2220:LEU:CD1	1:B:2242:ALA:HB2	2.46	0.43
1:C:694:ARG:NH1	1:C:720:ASP:OD2	2.51	0.43
1:C:1102:TYR:HA	1:C:1164:CYS:O	2.17	0.43
1:C:1909:LEU:HB2	1:C:2086:LEU:HD21	1.98	0.43
1:C:1981:ASP:OD1	1:C:1982:LYS:N	2.50	0.43
1:C:3804:LEU:HD21	1:C:3887:PHE:HA	1.99	0.43
1:C:4072:ASP:O	1:C:4073:GLU:HG3	2.17	0.43
1:C:4789:ARG:NH2	1:C:4805:CYS:SG	2.91	0.43
1:D:694:ARG:NH1	1:D:720:ASP:OD2	2.52	0.43
1:D:1242:ASN:O	1:D:1808:ARG:HG2	2.18	0.43
1:D:1730:MET:CE	1:D:3616:VAL:HG11	2.48	0.43
1:D:2747:SER:O	1:D:2753:GLN:NE2	2.47	0.43
1:D:4042:ILE:HD11	1:D:4079:TYR:HD1	1.82	0.43
1:A:1242:ASN:O	1:A:1808:ARG:HG2	2.18	0.43
1:A:1355:VAL:HB	1:A:1365:THR:OG1	2.18	0.43
1:A:1709:ASP:HA	1:A:1713:SER:HB3	1.99	0.43
1:A:2077:PRO:HA	1:A:2080:VAL:HG12	1.99	0.43
1:A:3829:LEU:HD12	1:A:3829:LEU:HA	1.87	0.43
1:A:4789:ARG:NH2	1:A:4805:CYS:SG	2.91	0.43
1:B:228:LEU:HD12	1:B:405:LEU:HD13	2.00	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4807:ASP:HB3	1:B:4810:THR:HB	2.00	0.43
1:C:850:LEU:HD12	1:C:1088:PHE:CD2	2.53	0.43
1:C:1242:ASN:O	1:C:1808:ARG:HG2	2.18	0.43
1:C:1680:HIS:HE2	2:I:91:VAL:HA	1.83	0.43
1:C:4176:VAL:HG11	1:C:4879:VAL:HA	1.99	0.43
1:D:1153:GLY:HA3	1:D:1182:LEU:HD23	2.00	0.43
1:D:3699:HIS:HB2	1:D:3723:LEU:HD12	2.00	0.43
1:A:888:ASN:O	1:A:891:GLU:HG2	2.18	0.43
1:A:1167:ASP:HB3	1:A:1172:THR:HB	2.00	0.43
1:A:1730:MET:CE	1:A:3616:VAL:HG11	2.48	0.43
1:B:36:CYS:SG	1:B:65:CYS:HB3	2.59	0.43
1:B:49:LEU:HD21	1:B:203:VAL:HG13	2.00	0.43
1:B:888:ASN:O	1:B:891:GLU:HG2	2.18	0.43
1:B:1102:TYR:HA	1:B:1164:CYS:O	2.17	0.43
1:B:1146:HIS:CE1	1:B:1147:GLN:OE1	2.71	0.43
1:B:1167:ASP:HB3	1:B:1172:THR:HB	2.00	0.43
1:B:1970:GLU:HA	1:B:1973:ASN:HB2	2.00	0.43
1:B:3758:LEU:O	1:B:3762:ILE:HG12	2.19	0.43
1:C:409:GLN:HB2	1:C:412:GLU:OE1	2.18	0.43
1:C:838:ARG:H	1:C:841:LYS:NZ	2.15	0.43
1:C:1167:ASP:HB3	1:C:1172:THR:HB	2.00	0.43
1:D:409:GLN:HB2	1:D:412:GLU:OE1	2.18	0.43
1:D:652:VAL:HG12	1:D:714:GLY:O	2.18	0.43
1:D:804:LEU:HB2	1:D:808:HIS:HB2	2.00	0.43
1:D:3663:LEU:O	1:D:3667:ILE:HG12	2.18	0.43
1:D:4195:THR:HA	1:D:4198:GLU:HG2	2.01	0.43
1:A:1113:MET:HG2	1:A:1207:LEU:HD22	2.01	0.43
1:A:1814:THR:HG23	1:A:1816:GLU:HG2	2.00	0.43
1:A:1947:MET:HA	1:A:1947:MET:HE2	2.01	0.43
1:A:2083:MET:HE3	1:A:2083:MET:HB2	1.65	0.43
1:B:446:ASP:OD1	1:B:446:ASP:N	2.45	0.43
1:B:694:ARG:NH1	1:B:720:ASP:OD2	2.51	0.43
1:B:1987:CYS:N	1:B:1988:PRO:HD2	2.33	0.43
1:B:2167:HIS:HB3	1:B:2202:PHE:CE2	2.53	0.43
1:B:4034:TYR:HE2	1:B:4050:ALA:HB2	1.83	0.43
1:C:380:LYS:HA	1:C:380:LYS:HD2	1.75	0.43
1:C:1113:MET:HG2	1:C:1207:LEU:HD22	2.01	0.43
1:C:1355:VAL:HB	1:C:1365:THR:OG1	2.18	0.43
1:C:1814:THR:HG23	1:C:1816:GLU:HG2	2.00	0.43
1:C:4034:TYR:HE2	1:C:4050:ALA:HB2	1.83	0.43
1:D:137:ARG:HG2	1:D:146:ASP:OD2	2.18	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:49:LEU:HD21	1:A:203:VAL:HG13	2.00	0.43
1:A:409:GLN:HB2	1:A:412:GLU:OE1	2.18	0.43
1:A:677:LEU:HD12	1:A:801:ARG:O	2.19	0.43
1:A:1761:ARG:NE	1:A:1763:ARG:HH12	2.15	0.43
1:B:894:VAL:HA	1:B:918:LEU:HD22	2.00	0.43
1:B:1730:MET:CE	1:B:3616:VAL:HG11	2.48	0.43
1:B:4001:MET:HE3	1:B:4001:MET:HB2	1.90	0.43
1:D:559:ILE:HD13	1:D:593:HIS:HB3	1.99	0.43
1:D:850:LEU:HD12	1:D:1088:PHE:CD2	2.53	0.43
1:D:1167:ASP:HB3	1:D:1172:THR:HB	2.00	0.43
1:D:1355:VAL:HB	1:D:1365:THR:OG1	2.18	0.43
1:D:1358:ARG:HG3	1:D:1567:LEU:HD23	1.99	0.43
1:D:1893:LEU:CD1	1:D:2060:LEU:HD21	2.48	0.43
1:D:1987:CYS:N	1:D:1988:PRO:HD2	2.33	0.43
1:D:4500:MET:HE2	1:D:4500:MET:HB2	1.71	0.43
1:A:487:ASN:O	1:A:491:GLU:HG2	2.19	0.43
1:A:652:VAL:HG12	1:A:714:GLY:O	2.18	0.43
1:A:694:ARG:NH1	1:A:720:ASP:OD2	2.51	0.43
1:A:1304:LEU:HD21	1:A:1354:LEU:HD22	2.00	0.43
1:B:169:ARG:HH12	1:B:176:ARG:NE	2.17	0.43
1:B:487:ASN:O	1:B:491:GLU:HG2	2.19	0.43
1:B:541:ILE:HG21	1:B:551:PHE:CZ	2.54	0.43
1:B:2722:LYS:HA	1:B:2722:LYS:HD2	1.77	0.43
1:C:312:LYS:HE3	1:C:315:LEU:HD12	2.00	0.43
1:C:894:VAL:HA	1:C:918:LEU:HD22	2.00	0.43
1:C:2763:SER:N	1:C:2766:GLU:HB2	2.33	0.43
1:C:4632:LEU:HD23	1:C:4632:LEU:H	1.82	0.43
1:D:836:HIS:HB2	1:D:841:LYS:HE3	2.01	0.43
1:D:2197:ARG:HB3	1:D:2236:SER:HG	1.83	0.43
1:D:2233:MET:H	1:D:2233:MET:CE	2.31	0.43
1:D:4632:LEU:HD23	1:D:4632:LEU:H	1.82	0.43
1:A:228:LEU:HD12	1:A:405:LEU:HD13	2.00	0.43
1:A:676:GLU:OE1	1:A:812:LYS:N	2.45	0.43
1:A:1146:HIS:CE1	1:A:1147:GLN:OE1	2.71	0.43
1:A:1970:GLU:HA	1:A:1973:ASN:HB2	2.00	0.43
1:A:3663:LEU:O	1:A:3667:ILE:HG12	2.18	0.43
1:A:4792:TYR:HH	1:A:4815:HIS:HE2	1.63	0.43
2:G:26:HIS:CD2	2:G:41:ARG:HG2	2.52	0.43
1:C:804:LEU:HB2	1:C:808:HIS:HB2	2.00	0.43
1:C:2167:HIS:HB3	1:C:2202:PHE:CE2	2.53	0.43
1:C:3699:HIS:HB2	1:C:3723:LEU:HD12	2.00	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3878:LEU:O	1:C:3882:GLU:HG3	2.18	0.43
1:D:49:LEU:HD21	1:D:203:VAL:HG13	2.00	0.43
1:D:337:LYS:NZ	1:D:371:TRP:HE1	2.16	0.43
1:D:2077:PRO:HA	1:D:2080:VAL:HG12	1.99	0.43
1:A:868:ASP:OD1	1:A:868:ASP:N	2.50	0.43
1:A:1681:VAL:O	1:A:1682:ASP:OD1	2.37	0.43
1:A:3758:LEU:O	1:A:3762:ILE:HG12	2.19	0.43
1:A:3810:GLN:OE1	1:A:3826:GLU:HB3	2.19	0.43
1:A:4846:ASP:HB2	1:B:4817:TYR:HE1	1.83	0.43
1:A:4955:ASP:OD1	1:A:4956:CYS:N	2.52	0.43
1:B:1113:MET:HG2	1:B:1207:LEU:HD22	2.01	0.43
1:B:1242:ASN:O	1:B:1808:ARG:HG2	2.18	0.43
1:B:1924:ILE:HA	1:B:1998:PHE:HZ	1.82	0.43
1:C:169:ARG:HH12	1:C:176:ARG:NE	2.17	0.43
1:D:169:ARG:HH12	1:D:176:ARG:NE	2.17	0.43
1:D:329:PHE:HB3	1:D:363:ILE:HD11	2.01	0.43
1:D:487:ASN:O	1:D:491:GLU:HG2	2.19	0.43
1:D:1113:MET:HG2	1:D:1207:LEU:HD22	2.01	0.43
1:D:1709:ASP:HA	1:D:1713:SER:HB3	1.99	0.43
1:D:2167:HIS:HB3	1:D:2202:PHE:CE2	2.53	0.43
1:D:3878:LEU:O	1:D:3882:GLU:HG3	2.18	0.43
1:A:137:ARG:HG2	1:A:146:ASP:OD2	2.18	0.43
1:A:2481:ASP:OD1	1:A:2482:PHE:N	2.51	0.43
1:A:3878:LEU:O	1:A:3882:GLU:HG3	2.18	0.43
1:B:652:VAL:HG12	1:B:714:GLY:O	2.18	0.43
1:B:807:ARG:O	1:B:1615:ARG:NH2	2.41	0.43
1:B:878:LEU:HA	1:B:881:ILE:HD13	2.01	0.43
1:B:1745:LYS:HE3	1:B:1745:LYS:HB3	1.78	0.43
1:B:2145:LEU:O	1:B:2149:MET:HG2	2.19	0.43
1:B:3699:HIS:HB2	1:B:3723:LEU:HD12	2.00	0.43
1:C:36:CYS:SG	1:C:65:CYS:HB3	2.59	0.43
1:C:137:ARG:HG2	1:C:146:ASP:OD2	2.18	0.43
1:C:677:LEU:HD12	1:C:801:ARG:O	2.19	0.43
1:C:1947:MET:HE2	1:C:1947:MET:HA	2.01	0.43
1:D:677:LEU:HD12	1:D:801:ARG:O	2.19	0.43
1:D:783:ASN:ND2	1:D:1393:UNK:O	2.41	0.43
1:D:2260:ASP:OD1	1:D:2260:ASP:N	2.51	0.43
1:D:2335:ARG:NE	1:D:2336:GLY:N	2.65	0.43
1:D:3758:LEU:O	1:D:3762:ILE:HG12	2.18	0.43
1:D:4920:PHE:HE2	1:D:4939:VAL:HG11	1.84	0.43
1:A:169:ARG:HH12	1:A:176:ARG:NE	2.17	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:932:ASN:HA	1:A:935:MET:HE3	2.01	0.43
1:A:1987:CYS:N	1:A:1988:PRO:HD2	2.33	0.43
1:A:2335:ARG:NE	1:A:2336:GLY:N	2.65	0.43
1:A:4034:TYR:HE2	1:A:4050:ALA:HB2	1.83	0.43
1:B:677:LEU:HD12	1:B:801:ARG:O	2.19	0.43
1:B:4920:PHE:HE2	1:B:4939:VAL:HG11	1.84	0.43
1:C:500:GLU:HA	1:C:503:ASP:HB2	2.01	0.43
1:C:652:VAL:HG12	1:C:714:GLY:O	2.18	0.43
1:C:836:HIS:HB2	1:C:841:LYS:HE3	2.01	0.43
1:C:2873:TYR:HA	1:C:2876:LEU:HD13	2.00	0.43
1:C:2876:LEU:HB2	1:C:2881:LYS:HE3	2.01	0.43
1:C:3810:GLN:OE1	1:C:3826:GLU:HB3	2.19	0.43
1:C:3842:LEU:HD23	1:C:3842:LEU:HA	1.89	0.43
1:D:228:LEU:HD12	1:D:405:LEU:HD13	2.00	0.43
1:D:262:TYR:HE1	1:D:391:ALA:HB2	1.82	0.43
1:D:1091:GLU:HB3	1:D:1094:TYR:CD2	2.53	0.43
1:D:1745:LYS:HE3	1:D:1745:LYS:HB3	1.78	0.43
1:D:2145:LEU:O	1:D:2149:MET:HG2	2.19	0.43
1:D:2873:TYR:HA	1:D:2876:LEU:HD13	2.00	0.43
1:D:4924:LEU:HD23	1:D:4924:LEU:HA	1.89	0.43
1:A:36:CYS:SG	1:A:65:CYS:HB3	2.59	0.42
1:A:182:ILE:HD11	1:A:191:TYR:CD1	2.54	0.42
1:A:329:PHE:HB3	1:A:363:ILE:HD11	2.01	0.42
1:A:390:LYS:HA	1:A:390:LYS:HD3	1.87	0.42
1:A:1796:LEU:HD12	1:A:1796:LEU:HA	1.89	0.42
1:A:2145:LEU:O	1:A:2149:MET:HG2	2.19	0.42
1:A:2334:LEU:HD12	1:A:2342:LEU:CD1	2.49	0.42
1:A:3802:LEU:HB2	1:A:3883:SER:OG	2.19	0.42
1:A:3839:PHE:CE1	1:A:3873:THR:HG23	2.54	0.42
1:B:35:LEU:HD23	1:B:51:SER:HA	2.01	0.42
1:B:1091:GLU:HB3	1:B:1094:TYR:CD2	2.53	0.42
1:B:1960:LYS:HD3	1:B:1960:LYS:HA	1.60	0.42
1:B:2260:ASP:OD1	1:B:2260:ASP:N	2.51	0.42
1:B:2481:ASP:OD1	1:B:2482:PHE:N	2.51	0.42
1:B:2747:SER:O	1:B:2753:GLN:NE2	2.47	0.42
1:B:2876:LEU:HB2	1:B:2881:LYS:HE3	2.00	0.42
1:B:3802:LEU:HB2	1:B:3883:SER:OG	2.19	0.42
1:B:3839:PHE:CE1	1:B:3873:THR:HG23	2.54	0.42
1:C:837:SER:N	1:C:841:LYS:HZ2	2.16	0.42
1:C:1091:GLU:HB3	1:C:1094:TYR:CD2	2.53	0.42
1:C:1304:LEU:HD21	1:C:1354:LEU:HD22	2.00	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3829:LEU:HD12	1:C:3829:LEU:HA	1.87	0.42
1:C:4001:MET:HE3	1:C:4001:MET:HB2	1.83	0.42
1:C:4042:ILE:HD11	1:C:4079:TYR:HD1	1.82	0.42
1:C:4807:ASP:HB3	1:C:4810:THR:HB	2.00	0.42
1:D:312:LYS:HE3	1:D:315:LEU:HD12	2.00	0.42
1:D:1085:PHE:HE2	1:D:1087:ILE:HD11	1.84	0.42
1:D:1572:PHE:HZ	1:D:1587:LEU:HD11	1.84	0.42
1:D:1947:MET:HE2	1:D:1947:MET:HA	2.00	0.42
1:A:1085:PHE:HE2	1:A:1087:ILE:HD11	1.84	0.42
1:A:2260:ASP:OD1	1:A:2260:ASP:N	2.51	0.42
1:B:191:TYR:HE2	1:C:2325:ARG:NH2	2.17	0.42
1:B:680:ASP:HB2	1:B:799:LYS:HB2	2.01	0.42
1:B:783:ASN:ND2	1:B:1393:UNK:O	2.41	0.42
1:B:3878:LEU:O	1:B:3882:GLU:HG3	2.18	0.42
1:C:487:ASN:O	1:C:491:GLU:HG2	2.19	0.42
1:C:661:LEU:HD13	1:C:673:TRP:CD1	2.55	0.42
1:C:730:LEU:HD12	2:I:6:GLU:OE1	2.19	0.42
1:C:2233:MET:H	1:C:2233:MET:CE	2.31	0.42
1:C:2334:LEU:HD12	1:C:2342:LEU:CD1	2.50	0.42
1:D:541:ILE:HG21	1:D:551:PHE:CZ	2.54	0.42
1:D:661:LEU:HD13	1:D:673:TRP:CD1	2.55	0.42
1:A:2876:LEU:HB2	1:A:2881:LYS:HE3	2.00	0.42
1:B:548:CYS:HB2	1:B:582:SER:HB3	2.01	0.42
1:B:2335:ARG:NE	1:B:2336:GLY:N	2.65	0.42
1:B:3663:LEU:O	1:B:3667:ILE:HG12	2.18	0.42
1:B:3810:GLN:OE1	1:B:3826:GLU:HB3	2.19	0.42
1:C:1358:ARG:HG3	1:C:1567:LEU:HD23	1.99	0.42
1:C:1786:ASP:O	1:C:1789:LYS:HG2	2.19	0.42
1:C:2145:LEU:O	1:C:2149:MET:HG2	2.19	0.42
1:C:2771:ARG:HH22	1:C:2775:LYS:HD2	1.84	0.42
1:C:3758:LEU:O	1:C:3762:ILE:HG12	2.19	0.42
1:C:3802:LEU:HB2	1:C:3883:SER:OG	2.19	0.42
1:D:680:ASP:HB2	1:D:799:LYS:HB2	2.01	0.42
1:D:838:ARG:H	1:D:841:LYS:NZ	2.15	0.42
1:D:1681:VAL:O	1:D:1682:ASP:OD1	2.37	0.42
1:D:1786:ASP:O	1:D:1789:LYS:HG2	2.19	0.42
1:D:2334:LEU:HD12	1:D:2342:LEU:CD1	2.49	0.42
1:D:4034:TYR:HE2	1:D:4050:ALA:HB2	1.83	0.42
1:A:2873:TYR:HA	1:A:2876:LEU:HD13	2.00	0.42
1:A:4920:PHE:HE2	1:A:4939:VAL:HG11	1.84	0.42
1:C:35:LEU:HD23	1:C:51:SER:HA	2.01	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:329:PHE:HB3	1:C:363:ILE:HD11	2.01	0.42
1:C:1146:HIS:HB2	1:C:1192:PHE:HE2	1.83	0.42
1:C:1899:GLU:HB2	1:C:1900:PRO:HD3	2.02	0.42
1:C:3612:ARG:HA	1:C:3612:ARG:HD2	1.86	0.42
1:C:3720:LYS:HE3	1:C:3720:LYS:HB2	1.77	0.42
1:D:441:LYS:HG2	1:D:442:LEU:HD23	2.00	0.42
1:D:894:VAL:HA	1:D:918:LEU:HD22	2.01	0.42
1:D:1152:TYR:CD1	1:D:1152:TYR:C	2.93	0.42
1:D:1899:GLU:HB2	1:D:1900:PRO:HD3	2.02	0.42
1:D:1946:VAL:HG11	1:D:1960:LYS:HE3	2.02	0.42
1:D:2763:SER:N	1:D:2766:GLU:HB2	2.33	0.42
1:A:661:LEU:HD13	1:A:673:TRP:CD1	2.55	0.42
1:A:1146:HIS:HB2	1:A:1192:PHE:HE2	1.83	0.42
1:A:3761:GLY:HA2	1:A:3764:ILE:HG22	2.01	0.42
1:A:3796:MET:HA	1:A:3799:CYS:SG	2.60	0.42
1:A:3898:ASP:OD1	1:A:3898:ASP:N	2.49	0.42
1:B:412:GLU:HB2	1:B:488:LEU:HD21	2.02	0.42
1:B:441:LYS:HG2	1:B:442:LEU:HD23	2.00	0.42
1:B:500:GLU:HA	1:B:503:ASP:HB2	2.01	0.42
1:B:661:LEU:HD13	1:B:673:TRP:CD1	2.55	0.42
1:B:1796:LEU:HD12	1:B:1796:LEU:HA	1.89	0.42
1:B:2233:MET:H	1:B:2233:MET:CE	2.31	0.42
1:B:2732:SER:HA	1:B:2735:LYS:HG3	2.02	0.42
1:C:496:ASN:HA	1:C:499:LEU:HD12	2.02	0.42
1:C:1681:VAL:O	1:C:1682:ASP:OD1	2.37	0.42
1:C:1970:GLU:HA	1:C:1973:ASN:HB2	2.00	0.42
1:C:2722:LYS:HA	1:C:2722:LYS:HD2	1.78	0.42
1:C:3808:GLU:HA	1:C:3811:ASN:HD22	1.85	0.42
1:C:4920:PHE:HE2	1:C:4939:VAL:HG11	1.84	0.42
1:D:35:LEU:HD23	1:D:51:SER:HA	2.01	0.42
1:D:1234:GLU:HG2	1:D:1236:TYR:HD1	1.85	0.42
1:A:541:ILE:HG21	1:A:551:PHE:CZ	2.54	0.42
1:A:1152:TYR:CD1	1:A:1152:TYR:C	2.93	0.42
1:B:624:ALA:HB2	1:B:1668:LEU:HD23	2.02	0.42
1:B:795:SER:OG	1:B:796:ALA:N	2.53	0.42
1:C:1684:PRO:HD3	2:I:42:ASP:HB3	2.00	0.42
1:C:1793:ILE:HD11	1:C:1839:ASP:OD1	2.20	0.42
1:D:36:CYS:SG	1:D:65:CYS:HB3	2.59	0.42
1:D:496:ASN:HA	1:D:499:LEU:HD12	2.02	0.42
1:D:2771:ARG:HH22	1:D:2775:LYS:HD2	1.85	0.42
1:D:3761:GLY:HA2	1:D:3764:ILE:HG22	2.01	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3803:ASP:OD1	1:D:3803:ASP:N	2.53	0.42
1:A:441:LYS:HG2	1:A:442:LEU:HD23	2.00	0.42
1:A:680:ASP:HB2	1:A:799:LYS:HB2	2.01	0.42
1:A:807:ARG:O	1:A:1615:ARG:NH2	2.41	0.42
1:A:1234:GLU:HG2	1:A:1236:TYR:HD1	1.85	0.42
1:A:1835:PHE:O	1:A:1840:LEU:HG	2.20	0.42
1:A:2292:VAL:O	1:A:2296:ARG:HG2	2.20	0.42
1:A:2486:LEU:HG	1:A:2491:PHE:HE2	1.85	0.42
1:A:2732:SER:HA	1:A:2735:LYS:HG3	2.02	0.42
1:A:3802:LEU:HG	1:A:3829:LEU:HD13	2.02	0.42
1:B:836:HIS:HB2	1:B:841:LYS:HE3	2.01	0.42
1:B:838:ARG:H	1:B:841:LYS:NZ	2.15	0.42
1:B:1304:LEU:HD21	1:B:1354:LEU:HD22	2.00	0.42
1:C:1678:CYS:SG	1:C:1679:SER:N	2.93	0.42
1:C:1946:VAL:HG11	1:C:1960:LYS:HE3	2.02	0.42
1:C:2083:MET:HE3	1:C:2083:MET:HB2	1.64	0.42
1:C:2732:SER:HA	1:C:2735:LYS:HG3	2.02	0.42
1:C:4955:ASP:OD1	1:C:4956:CYS:N	2.52	0.42
1:D:500:GLU:HA	1:D:503:ASP:HB2	2.01	0.42
1:D:548:CYS:HB2	1:D:582:SER:HB3	2.01	0.42
1:D:795:SER:OG	1:D:796:ALA:N	2.53	0.42
1:D:868:ASP:OD1	1:D:868:ASP:N	2.50	0.42
1:D:1091:GLU:HB2	1:D:1248:THR:OG1	2.19	0.42
1:D:3612:ARG:HA	1:D:3612:ARG:HD2	1.86	0.42
1:D:3810:GLN:OE1	1:D:3826:GLU:HB3	2.19	0.42
1:A:878:LEU:HA	1:A:881:ILE:HD13	2.01	0.42
1:A:4195:THR:HA	1:A:4198:GLU:HG2	2.01	0.42
1:B:496:ASN:HA	1:B:499:LEU:HD12	2.02	0.42
1:B:1782:GLU:HG2	2:H:45:LYS:NZ	2.35	0.42
1:B:2771:ARG:HH22	1:B:2775:LYS:HD2	1.84	0.42
1:B:3796:MET:HA	1:B:3799:CYS:SG	2.60	0.42
1:C:261:HIS:HB3	1:C:390:LYS:HD3	2.02	0.42
1:C:548:CYS:HB2	1:C:582:SER:HB3	2.01	0.42
1:C:878:LEU:HA	1:C:881:ILE:HD13	2.01	0.42
1:A:496:ASN:HA	1:A:499:LEU:HD12	2.02	0.42
1:A:680:ASP:OD1	1:A:801:ARG:HD3	2.20	0.42
1:A:795:SER:OG	1:A:796:ALA:N	2.53	0.42
1:A:836:HIS:HB2	1:A:841:LYS:HE3	2.01	0.42
1:A:1091:GLU:HB2	1:A:1248:THR:OG1	2.19	0.42
1:A:1572:PHE:HZ	1:A:1587:LEU:HD11	1.84	0.42
1:A:2092:ASP:O	1:A:2094:ILE:N	2.53	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:28:ILE:O	1:B:31:GLU:HG2	2.20	0.42
1:B:680:ASP:OD1	1:B:801:ARG:HD3	2.20	0.42
1:B:1085:PHE:HE2	1:B:1087:ILE:HD11	1.84	0.42
1:B:1152:TYR:CD1	1:B:1152:TYR:C	2.93	0.42
1:B:1678:CYS:SG	1:B:1679:SER:N	2.93	0.42
1:B:1786:ASP:O	1:B:1789:LYS:HG2	2.20	0.42
1:B:2334:LEU:HD12	1:B:2342:LEU:CD1	2.50	0.42
1:B:3808:GLU:HA	1:B:3811:ASN:HD22	1.85	0.42
1:B:3925:GLY:O	1:B:3927:CYS:N	2.52	0.42
1:C:986:ILE:O	1:C:1055:ARG:NH1	2.53	0.42
1:C:1091:GLU:HB2	1:C:1248:THR:OG1	2.19	0.42
1:C:1152:TYR:C	1:C:1152:TYR:CD1	2.93	0.42
1:C:2486:LEU:HG	1:C:2491:PHE:HE2	1.84	0.42
1:C:2847:TYR:CD2	1:C:2884:ASP:HB2	2.55	0.42
1:D:182:ILE:HD11	1:D:191:TYR:CD1	2.54	0.42
1:D:837:SER:N	1:D:841:LYS:HZ2	2.18	0.42
1:D:1835:PHE:O	1:D:1840:LEU:HG	2.20	0.42
1:D:2428:LEU:HD21	1:D:2482:PHE:CE2	2.55	0.42
1:D:3796:MET:HA	1:D:3799:CYS:SG	2.60	0.42
1:D:3839:PHE:CE1	1:D:3873:THR:HG23	2.54	0.42
1:A:548:CYS:HB2	1:A:582:SER:HB3	2.01	0.42
1:A:1091:GLU:HB3	1:A:1094:TYR:CD2	2.53	0.42
1:A:1789:LYS:O	1:A:1793:ILE:HG13	2.20	0.42
1:A:2233:MET:H	1:A:2233:MET:CE	2.31	0.42
1:B:1234:GLU:HG2	1:B:1236:TYR:CD1	2.55	0.42
1:B:1681:VAL:O	1:B:1682:ASP:OD1	2.37	0.42
1:B:2486:LEU:HG	1:B:2491:PHE:HE2	1.85	0.42
1:B:3802:LEU:HG	1:B:3829:LEU:HD13	2.02	0.42
1:C:541:ILE:HG21	1:C:551:PHE:CZ	2.54	0.42
1:C:795:SER:OG	1:C:796:ALA:N	2.53	0.42
1:C:1234:GLU:HG2	1:C:1236:TYR:HD1	1.85	0.42
1:C:3761:GLY:HA2	1:C:3764:ILE:HG22	2.01	0.42
1:D:261:HIS:HB3	1:D:390:LYS:HD3	2.02	0.42
1:D:1679:SER:HB2	2:J:37:PHE:O	2.20	0.42
1:A:1946:VAL:HG11	1:A:1960:LYS:HE3	2.02	0.41
1:B:261:HIS:HB3	1:B:390:LYS:HD3	2.02	0.41
1:B:986:ILE:O	1:B:1055:ARG:NH1	2.53	0.41
1:B:1091:GLU:HB2	1:B:1248:THR:OG1	2.19	0.41
1:B:3612:ARG:HD2	1:B:3612:ARG:HA	1.86	0.41
1:B:4195:THR:HA	1:B:4198:GLU:HG2	2.01	0.41
1:C:680:ASP:OD1	1:C:801:ARG:HD3	2.20	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1572:PHE:HZ	1:C:1587:LEU:HD11	1.84	0.41
1:C:4766:LEU:O	1:C:4770:VAL:HG13	2.20	0.41
1:D:30:LYS:HE2	1:D:30:LYS:HB2	1.92	0.41
1:D:680:ASP:OD1	1:D:801:ARG:HD3	2.20	0.41
1:D:1234:GLU:HG2	1:D:1236:TYR:CD1	2.55	0.41
1:D:1678:CYS:SG	1:D:1679:SER:N	2.93	0.41
1:D:1793:ILE:HD11	1:D:1839:ASP:OD1	2.20	0.41
1:D:2876:LEU:HB2	1:D:2881:LYS:HE3	2.01	0.41
1:D:3802:LEU:HG	1:D:3829:LEU:HD13	2.02	0.41
1:D:4607:ARG:NE	1:D:4643:TYR:OH	2.53	0.41
1:A:35:LEU:HD23	1:A:51:SER:HA	2.01	0.41
1:A:412:GLU:HB2	1:A:488:LEU:HD21	2.02	0.41
1:A:634:ASP:HA	2:G:90:GLY:HA2	2.02	0.41
1:A:986:ILE:O	1:A:1055:ARG:NH1	2.53	0.41
1:A:1786:ASP:O	1:A:1789:LYS:HG2	2.19	0.41
1:A:1793:ILE:HD11	1:A:1839:ASP:OD1	2.20	0.41
1:A:2847:TYR:CD2	1:A:2884:ASP:HB2	2.55	0.41
1:B:329:PHE:HB3	1:B:363:ILE:HD11	2.01	0.41
1:B:1793:ILE:HD11	1:B:1839:ASP:OD1	2.20	0.41
1:B:1835:PHE:O	1:B:1840:LEU:HG	2.20	0.41
1:B:1897:LEU:HD22	1:B:1901:VAL:HG11	2.02	0.41
1:B:1910:GLN:HG2	1:B:2086:LEU:HD13	2.02	0.41
1:B:1946:VAL:HG11	1:B:1960:LYS:HE3	2.02	0.41
1:B:4846:ASP:HB2	1:C:4817:TYR:HE1	1.85	0.41
1:C:680:ASP:HB2	1:C:799:LYS:HB2	2.01	0.41
1:C:872:ILE:HD13	1:C:944:LEU:HD22	2.02	0.41
1:C:946:LEU:HD21	1:C:998:LYS:HG2	2.02	0.41
1:D:516:ASP:OD1	1:D:516:ASP:N	2.52	0.41
1:D:587:ASN:HA	1:D:2132:ARG:NH1	2.35	0.41
1:D:624:ALA:HB2	1:D:1668:LEU:HD23	2.02	0.41
1:D:1990:GLU:H	1:D:1990:GLU:HG2	1.62	0.41
1:D:2092:ASP:O	1:D:2094:ILE:N	2.53	0.41
1:D:2847:TYR:CD2	1:D:2884:ASP:HB2	2.55	0.41
1:A:28:ILE:O	1:A:31:GLU:HG2	2.20	0.41
1:A:254:GLU:O	1:A:258:ARG:HG3	2.20	0.41
1:B:254:GLU:O	1:B:258:ARG:HG3	2.21	0.41
1:B:459:LEU:HD23	1:B:459:LEU:HA	1.95	0.41
1:B:516:ASP:N	1:B:516:ASP:OD1	2.52	0.41
1:B:1086:ARG:HB3	1:B:1088:PHE:CE1	2.56	0.41
1:B:2502:ASP:OD1	1:B:2503:THR:N	2.50	0.41
1:C:441:LYS:HG2	1:C:442:LEU:HD23	2.00	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1569:ALA:HA	1:C:1572:PHE:CE1	2.56	0.41
1:C:1960:LYS:HD3	1:C:1960:LYS:HA	1.60	0.41
1:C:2243:ALA:O	1:C:2247:MET:HG3	2.20	0.41
1:C:3712:SER:O	1:C:3712:SER:OG	2.38	0.41
1:C:4195:THR:HA	1:C:4198:GLU:HG2	2.01	0.41
1:D:2486:LEU:HG	1:D:2491:PHE:HE2	1.85	0.41
1:D:2732:SER:HA	1:D:2735:LYS:HG3	2.02	0.41
1:A:19:GLU:HG3	1:A:68:VAL:HG22	2.03	0.41
1:A:78:LEU:HD11	1:A:159:TRP:CG	2.56	0.41
1:A:606:ARG:HE	1:A:644:LEU:HG	1.86	0.41
1:A:1234:GLU:HG2	1:A:1236:TYR:CD1	2.55	0.41
1:A:1569:ALA:HA	1:A:1572:PHE:CE1	2.56	0.41
1:A:1678:CYS:SG	1:A:1679:SER:N	2.93	0.41
1:A:1899:GLU:HB2	1:A:1900:PRO:HD3	2.02	0.41
1:B:946:LEU:HD21	1:B:998:LYS:HG2	2.02	0.41
1:B:2428:LEU:HD21	1:B:2482:PHE:CE2	2.55	0.41
1:B:3864:ASN:OD1	1:B:3865:THR:HG23	2.21	0.41
2:H:63:GLY:HA3	2:H:75:LEU:HD21	2.03	0.41
1:C:28:ILE:O	1:C:31:GLU:HG2	2.20	0.41
1:C:182:ILE:HD11	1:C:191:TYR:CD1	2.54	0.41
1:C:1085:PHE:HE2	1:C:1087:ILE:HD11	1.84	0.41
1:C:3925:GLY:O	1:C:3927:CYS:N	2.52	0.41
1:C:4607:ARG:NE	1:C:4643:TYR:OH	2.53	0.41
1:D:28:ILE:O	1:D:31:GLU:HG2	2.20	0.41
1:D:878:LEU:HA	1:D:881:ILE:HD13	2.01	0.41
1:D:1569:ALA:HA	1:D:1572:PHE:CE1	2.56	0.41
1:A:261:HIS:HB3	1:A:390:LYS:HD3	2.02	0.41
1:A:500:GLU:HA	1:A:503:ASP:HB2	2.01	0.41
1:A:1897:LEU:HD22	1:A:1901:VAL:HG11	2.02	0.41
1:A:2428:LEU:HD21	1:A:2482:PHE:CE2	2.55	0.41
1:A:3808:GLU:HA	1:A:3811:ASN:HD22	1.85	0.41
2:G:63:GLY:HA3	2:G:75:LEU:HD21	2.03	0.41
1:B:49:LEU:HD21	1:B:203:VAL:CG1	2.51	0.41
1:B:587:ASN:HA	1:B:2132:ARG:NH1	2.35	0.41
1:B:872:ILE:HD13	1:B:944:LEU:HD22	2.02	0.41
1:B:1234:GLU:HG2	1:B:1236:TYR:HD1	1.85	0.41
1:B:1899:GLU:HB2	1:B:1900:PRO:HD3	2.02	0.41
1:B:1912:LEU:HD23	1:B:1912:LEU:HA	1.88	0.41
1:C:1897:LEU:HD22	1:C:1901:VAL:HG11	2.02	0.41
1:C:2292:VAL:O	1:C:2296:ARG:HG2	2.20	0.41
1:C:3796:MET:HA	1:C:3799:CYS:SG	2.60	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:63:GLY:HA3	2:I:75:LEU:HD21	2.03	0.41
1:D:49:LEU:HD21	1:D:203:VAL:CG1	2.51	0.41
1:D:1086:ARG:HB3	1:D:1088:PHE:CE1	2.56	0.41
1:D:1310:CYS:SG	1:D:1336:UNK:N	2.94	0.41
1:D:2083:MET:HE3	1:D:2083:MET:HB2	1.63	0.41
1:D:3802:LEU:HB2	1:D:3883:SER:OG	2.19	0.41
1:D:4602:GLU:OE2	1:D:4704:TYR:OH	2.31	0.41
1:A:189:GLU:O	1:B:2325:ARG:NH2	2.53	0.41
1:A:583:PRO:HB3	1:A:620:CYS:SG	2.61	0.41
1:A:670:TYR:HD2	1:A:672:LYS:HB2	1.86	0.41
1:A:837:SER:H	1:A:841:LYS:HZ2	1.69	0.41
1:A:1086:ARG:HB3	1:A:1088:PHE:CE1	2.55	0.41
1:A:1100:ARG:HB3	1:A:1236:TYR:CD2	2.56	0.41
1:A:2771:ARG:HH22	1:A:2775:LYS:HD2	1.84	0.41
1:A:4165:LYS:HE3	1:A:4165:LYS:HB2	1.83	0.41
1:B:19:GLU:HG3	1:B:68:VAL:HG22	2.03	0.41
1:B:2292:VAL:O	1:B:2296:ARG:HG2	2.20	0.41
1:B:2847:TYR:CD2	1:B:2884:ASP:HB2	2.55	0.41
1:C:78:LEU:HD11	1:C:159:TRP:CG	2.56	0.41
1:C:728:ASP:OD1	1:C:728:ASP:N	2.54	0.41
1:C:1234:GLU:HG2	1:C:1236:TYR:CD1	2.55	0.41
1:D:19:GLU:HG3	1:D:68:VAL:HG22	2.03	0.41
1:D:78:LEU:HD11	1:D:159:TRP:CG	2.56	0.41
1:D:2292:VAL:O	1:D:2296:ARG:HG2	2.20	0.41
1:D:2722:LYS:HD2	1:D:2722:LYS:HA	1.78	0.41
1:D:3927:CYS:SG	1:D:3930:ASN:HB2	2.61	0.41
1:A:49:LEU:HD21	1:A:203:VAL:CG1	2.51	0.41
1:A:644:LEU:HD23	1:A:644:LEU:HA	1.96	0.41
1:A:1287:GLN:HB3	1:A:1355:VAL:HG22	2.02	0.41
1:A:1960:LYS:HA	1:A:1960:LYS:HD3	1.60	0.41
1:A:2502:ASP:OD1	1:A:2503:THR:N	2.49	0.41
1:A:4039:LYS:HB2	1:A:4039:LYS:HE2	1.80	0.41
1:A:4515:LEU:HD13	1:A:4736:PHE:HD1	1.86	0.41
1:B:4766:LEU:O	1:B:4770:VAL:HG13	2.20	0.41
2:H:22:THR:CG2	2:H:108:GLU:HB3	2.49	0.41
1:C:1310:CYS:SG	1:C:1336:UNK:N	2.94	0.41
1:C:1902:LYS:HE2	1:C:1902:LYS:HB3	1.92	0.41
1:C:3864:ASN:OD1	1:C:3865:THR:HG23	2.21	0.41
1:D:190:ARG:HB2	1:D:205:ALA:HB1	2.02	0.41
1:D:412:GLU:HB2	1:D:488:LEU:HD21	2.02	0.41
1:D:606:ARG:HE	1:D:644:LEU:HG	1.85	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:795:SER:O	1:D:1605:LEU:HD11	2.21	0.41
1:D:1832:MET:HE2	1:D:1832:MET:HB3	1.76	0.41
1:D:1897:LEU:HD22	1:D:1901:VAL:HG11	2.03	0.41
1:D:2502:ASP:OD1	1:D:2503:THR:N	2.49	0.41
1:D:3864:ASN:OD1	1:D:3865:THR:HG23	2.21	0.41
1:A:190:ARG:HB2	1:A:205:ALA:HB1	2.03	0.41
1:A:233:VAL:O	1:A:408:SER:OG	2.37	0.41
1:A:3864:ASN:OD1	1:A:3865:THR:HG23	2.21	0.41
1:A:3878:LEU:HD21	1:A:3938:ARG:NH2	2.36	0.41
1:A:3925:GLY:O	1:A:3927:CYS:N	2.52	0.41
1:A:3927:CYS:SG	1:A:3930:ASN:HB2	2.61	0.41
1:A:4607:ARG:NE	1:A:4643:TYR:OH	2.54	0.41
1:B:76:ARG:NH1	1:C:3889:TRP:HB3	2.36	0.41
1:B:182:ILE:HD11	1:B:191:TYR:CD1	2.54	0.41
1:B:606:ARG:HE	1:B:644:LEU:HG	1.85	0.41
1:B:1569:ALA:HA	1:B:1572:PHE:CE1	2.56	0.41
1:B:3829:LEU:HD12	1:B:3829:LEU:HA	1.87	0.41
1:C:1730:MET:HE2	1:C:3616:VAL:HG11	2.02	0.41
1:C:4039:LYS:HE2	1:C:4039:LYS:HB2	1.80	0.41
1:C:4804:LYS:HE2	1:C:4804:LYS:HB3	1.92	0.41
1:D:390:LYS:HD3	1:D:390:LYS:HA	1.86	0.41
1:D:583:PRO:HB3	1:D:620:CYS:SG	2.61	0.41
1:D:986:ILE:O	1:D:1055:ARG:NH1	2.53	0.41
1:D:1100:ARG:HB3	1:D:1236:TYR:CD2	2.56	0.41
1:D:4034:TYR:CE2	1:D:4050:ALA:HB2	2.56	0.41
1:D:4941:LYS:HE3	1:D:4941:LYS:HB3	1.75	0.41
2:J:50:ARG:HE	2:J:50:ARG:HB3	1.74	0.41
1:A:624:ALA:HB2	1:A:1668:LEU:HD23	2.02	0.41
1:A:946:LEU:HD21	1:A:998:LYS:HG2	2.02	0.41
1:B:583:PRO:HB3	1:B:620:CYS:SG	2.61	0.41
1:B:1110:ALA:HA	1:B:1156:TRP:HE1	1.86	0.41
1:B:1572:PHE:HZ	1:B:1587:LEU:HD11	1.84	0.41
1:B:1789:LYS:O	1:B:1793:ILE:HG13	2.20	0.41
1:B:2243:ALA:O	1:B:2247:MET:HG3	2.20	0.41
1:B:3761:GLY:HA2	1:B:3764:ILE:HG22	2.01	0.41
1:B:3878:LEU:HD21	1:B:3938:ARG:NH2	2.36	0.41
1:B:3927:CYS:SG	1:B:3930:ASN:HB2	2.61	0.41
1:B:4034:TYR:CE2	1:B:4050:ALA:HB2	2.56	0.41
1:B:4955:ASP:OD1	1:B:4956:CYS:N	2.52	0.41
1:C:516:ASP:N	1:C:516:ASP:OD1	2.52	0.41
1:C:583:PRO:HB3	1:C:620:CYS:SG	2.61	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:624:ALA:HB2	1:C:1668:LEU:HD23	2.02	0.41
1:C:1086:ARG:HB3	1:C:1088:PHE:CE1	2.56	0.41
1:C:1587:LEU:HD23	1:C:1587:LEU:HA	1.93	0.41
1:C:1682:ASP:OD1	1:C:1685:GLN:NE2	2.54	0.41
1:C:1745:LYS:HE3	1:C:1745:LYS:HB3	1.78	0.41
1:C:1789:LYS:O	1:C:1793:ILE:HG13	2.20	0.41
1:C:1835:PHE:O	1:C:1840:LEU:HG	2.20	0.41
1:C:2092:ASP:O	1:C:2094:ILE:N	2.53	0.41
1:C:2260:ASP:OD1	1:C:2260:ASP:N	2.51	0.41
1:C:2404:GLU:HG3	1:C:2405:MET:N	2.36	0.41
1:C:2850:ILE:HG13	1:C:2851:TRP:N	2.36	0.41
1:C:3802:LEU:HG	1:C:3829:LEU:HD13	2.02	0.41
1:C:3839:PHE:CE1	1:C:3873:THR:HG23	2.54	0.41
1:C:3927:CYS:SG	1:C:3930:ASN:HB2	2.61	0.41
1:D:642:LEU:HG	1:D:643:LEU:HA	2.03	0.41
1:D:2404:GLU:HG3	1:D:2405:MET:N	2.36	0.41
1:D:3888:TYR:CE2	1:D:3889:TRP:CD1	3.09	0.41
1:D:4515:LEU:HD13	1:D:4736:PHE:HD1	1.86	0.41
1:D:4518:TYR:CE1	1:D:4560:LEU:HD12	2.56	0.41
1:D:4636:THR:OG1	1:D:4701:ASP:OD2	2.39	0.41
1:D:4766:LEU:O	1:D:4770:VAL:HG13	2.21	0.41
1:D:4955:ASP:OD1	1:D:4956:CYS:N	2.52	0.41
1:A:872:ILE:HD13	1:A:944:LEU:HD22	2.02	0.41
1:B:42:PHE:CZ	1:B:458:ASP:HB3	2.56	0.41
1:B:727:PHE:HB2	1:B:768:PHE:CD1	2.56	0.41
1:B:4518:TYR:CE1	1:B:4560:LEU:HD12	2.56	0.41
1:C:254:GLU:O	1:C:258:ARG:HG3	2.20	0.41
1:C:3888:TYR:CE2	1:C:3889:TRP:CD1	3.09	0.41
1:D:2130:SER:O	1:D:2130:SER:OG	2.39	0.41
1:D:2243:ALA:O	1:D:2247:MET:HG3	2.20	0.41
1:D:4165:LYS:HE3	1:D:4165:LYS:HB2	1.83	0.41
1:A:42:PHE:CZ	1:A:458:ASP:HB3	2.56	0.40
1:A:449:ILE:HD13	1:A:449:ILE:HA	1.95	0.40
1:A:2243:ALA:O	1:A:2247:MET:HG3	2.20	0.40
1:A:3888:TYR:CE2	1:A:3889:TRP:CD1	3.09	0.40
1:A:4518:TYR:CE1	1:A:4560:LEU:HD12	2.56	0.40
1:A:4584:PHE:HA	1:A:4587:ILE:HG12	2.03	0.40
1:A:4766:LEU:O	1:A:4770:VAL:HG13	2.20	0.40
1:B:262:TYR:CE1	1:B:391:ALA:HB2	2.56	0.40
1:B:1310:CYS:SG	1:B:1336:UNK:N	2.94	0.40
1:B:2404:GLU:HG3	1:B:2405:MET:N	2.36	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4792:TYR:HH	1:B:4815:HIS:HE2	1.66	0.40
1:C:331:PHE:HB3	1:C:361:CYS:HB3	2.04	0.40
1:C:606:ARG:HE	1:C:644:LEU:HG	1.85	0.40
1:C:643:LEU:HD22	1:C:1658:THR:HG23	2.03	0.40
1:C:4515:LEU:HD13	1:C:4736:PHE:HD1	1.86	0.40
1:C:4518:TYR:CE1	1:C:4560:LEU:HD12	2.56	0.40
1:D:262:TYR:CE1	1:D:391:ALA:HB2	2.56	0.40
1:D:643:LEU:HD22	1:D:1658:THR:HG23	2.03	0.40
1:D:1789:LYS:O	1:D:1793:ILE:HG13	2.20	0.40
1:D:3808:GLU:HA	1:D:3811:ASN:HD22	1.85	0.40
1:A:377:VAL:CG2	1:A:390:LYS:HG2	2.50	0.40
1:A:677:LEU:HD11	1:A:800:VAL:CG1	2.51	0.40
1:A:1912:LEU:HD23	1:A:1912:LEU:HA	1.88	0.40
1:A:2325:ARG:CZ	1:D:191:TYR:HE2	2.34	0.40
1:A:4636:THR:OG1	1:A:4701:ASP:OD2	2.39	0.40
1:B:677:LEU:HD11	1:B:800:VAL:CG1	2.51	0.40
1:B:1100:ARG:HB3	1:B:1236:TYR:CD2	2.56	0.40
1:B:1680:HIS:NE2	2:H:91:VAL:HG22	2.37	0.40
1:B:2395:ILE:HD13	1:B:2395:ILE:HA	1.95	0.40
1:C:19:GLU:HG3	1:C:68:VAL:HG22	2.03	0.40
1:C:412:GLU:HB2	1:C:488:LEU:HD21	2.02	0.40
1:C:617:LEU:HA	1:C:617:LEU:HD23	1.88	0.40
1:C:795:SER:O	1:C:1605:LEU:HD11	2.21	0.40
1:C:919:VAL:HG22	1:C:920:GLU:H	1.87	0.40
1:C:1623:LEU:HD23	1:C:1623:LEU:HA	1.93	0.40
1:C:3617:ASN:O	1:C:3621:GLN:HG2	2.22	0.40
1:D:459:LEU:HD23	1:D:459:LEU:HA	1.95	0.40
1:D:670:TYR:HD2	1:D:672:LYS:HB2	1.86	0.40
1:D:1682:ASP:OD1	1:D:1685:GLN:NE2	2.54	0.40
2:J:63:GLY:HA3	2:J:75:LEU:HD21	2.03	0.40
1:A:56:LYS:HA	1:A:324:VAL:HG13	2.03	0.40
1:A:114:LEU:HB2	1:A:117:HIS:CE1	2.56	0.40
1:A:262:TYR:CE1	1:A:391:ALA:HB2	2.56	0.40
1:A:331:PHE:HB3	1:A:361:CYS:HB3	2.04	0.40
1:A:643:LEU:HD22	1:A:1658:THR:HG23	2.03	0.40
1:A:1110:ALA:HA	1:A:1156:TRP:HE1	1.86	0.40
1:A:1310:CYS:SG	1:A:1336:UNK:N	2.94	0.40
1:A:1682:ASP:OD1	1:A:1685:GLN:NE2	2.54	0.40
1:A:3617:ASN:O	1:A:3621:GLN:HG2	2.22	0.40
1:A:3888:TYR:CE1	1:A:3953:MET:HG2	2.56	0.40
2:G:22:THR:CG2	2:G:108:GLU:HB3	2.49	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:331:PHE:HB3	1:B:361:CYS:HB3	2.04	0.40
1:B:377:VAL:CG2	1:B:390:LYS:HG2	2.50	0.40
1:B:642:LEU:HG	1:B:643:LEU:HA	2.03	0.40
1:B:882:ARG:HD2	1:B:937:LEU:HD23	2.04	0.40
1:B:2850:ILE:HG13	1:B:2851:TRP:N	2.36	0.40
1:B:4515:LEU:HD13	1:B:4736:PHE:HD1	1.86	0.40
1:B:4804:LYS:HE2	1:B:4804:LYS:HB3	1.92	0.40
1:C:42:PHE:CZ	1:C:458:ASP:HB3	2.56	0.40
1:C:49:LEU:HD21	1:C:203:VAL:CG1	2.51	0.40
1:C:882:ARG:HD2	1:C:937:LEU:HD23	2.04	0.40
1:C:1677:LEU:O	1:C:1681:VAL:HG22	2.22	0.40
1:C:4034:TYR:CE2	1:C:4050:ALA:HB2	2.56	0.40
2:I:22:THR:CG2	2:I:108:GLU:HB3	2.49	0.40
2:I:50:ARG:HE	2:I:50:ARG:HB3	1.74	0.40
1:D:3878:LEU:HD21	1:D:3938:ARG:NH2	2.36	0.40
1:A:380:LYS:HA	1:A:380:LYS:HD2	1.75	0.40
1:A:882:ARG:HD2	1:A:937:LEU:HD23	2.04	0.40
1:A:2404:GLU:HG3	1:A:2405:MET:N	2.36	0.40
1:A:4034:TYR:CE2	1:A:4050:ALA:HB2	2.56	0.40
1:B:114:LEU:HB2	1:B:117:HIS:CE1	2.56	0.40
1:B:919:VAL:HG22	1:B:920:GLU:H	1.87	0.40
1:B:1175:PHE:O	1:B:1181:ILE:HD12	2.22	0.40
1:B:2479:VAL:HG12	1:B:2482:PHE:H	1.86	0.40
1:B:3888:TYR:CE2	1:B:3889:TRP:CD1	3.09	0.40
1:B:4165:LYS:HE3	1:B:4165:LYS:HB2	1.83	0.40
1:C:587:ASN:HA	1:C:2132:ARG:NH1	2.35	0.40
1:C:642:LEU:HG	1:C:643:LEU:HA	2.03	0.40
1:C:677:LEU:HD11	1:C:800:VAL:CG1	2.51	0.40
1:C:727:PHE:HB2	1:C:768:PHE:CD1	2.56	0.40
1:C:874:LEU:HD21	1:C:937:LEU:HB3	2.04	0.40
1:C:1110:ALA:HA	1:C:1156:TRP:HE1	1.86	0.40
1:C:1265:HIS:ND1	1:C:1268:ILE:HB	2.37	0.40
1:C:3888:TYR:CE1	1:C:3953:MET:HG2	2.56	0.40
1:C:4044:LYS:HE2	1:C:4044:LYS:HB3	1.93	0.40
1:C:4824:GLY:O	1:D:4821:ARG:NH1	2.55	0.40
2:I:79:PRO:O	2:I:84:GLY:N	2.40	0.40
1:D:946:LEU:HD21	1:D:998:LYS:HG2	2.02	0.40
1:D:970:TYR:OH	1:D:978:PRO:O	2.30	0.40
1:D:1910:GLN:HG2	1:D:2086:LEU:HD13	2.02	0.40
1:A:313:ASN:ND2	1:A:392:ILE:HA	2.37	0.40
1:A:1910:GLN:HG2	1:A:2086:LEU:HD13	2.02	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3839:PHE:HE1	1:A:3873:THR:HG23	1.86	0.40
1:B:78:LEU:HD11	1:B:159:TRP:CG	2.56	0.40
1:B:499:LEU:HD22	1:B:557:TRP:CZ3	2.57	0.40
1:B:1287:GLN:HB3	1:B:1355:VAL:HG22	2.02	0.40
1:B:2112:VAL:O	1:B:2115:THR:HG22	2.22	0.40
1:B:3839:PHE:HE1	1:B:3873:THR:HG23	1.86	0.40
1:C:190:ARG:HB2	1:C:205:ALA:HB1	2.03	0.40
1:C:1796:LEU:HD12	1:C:1796:LEU:HA	1.89	0.40
1:C:4786:ASN:HD22	1:C:4786:ASN:N	2.18	0.40
1:D:42:PHE:CZ	1:D:458:ASP:HB3	2.56	0.40
1:D:617:LEU:HA	1:D:617:LEU:HD23	1.88	0.40
1:D:727:PHE:HB2	1:D:768:PHE:CD1	2.56	0.40
1:D:872:ILE:HD13	1:D:944:LEU:HD22	2.02	0.40
1:D:1110:ALA:HA	1:D:1156:TRP:HE1	1.86	0.40
1:D:2112:VAL:O	1:D:2115:THR:HG22	2.22	0.40
1:D:3617:ASN:O	1:D:3621:GLN:HG2	2.22	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	3255/4966 (66%)	3044 (94%)	211 (6%)	0	100	100
1	B	3255/4966 (66%)	3044 (94%)	211 (6%)	0	100	100
1	C	3255/4966 (66%)	3044 (94%)	211 (6%)	0	100	100
1	D	3255/4966 (66%)	3044 (94%)	211 (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

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	J	105/176 (60%)	100 (95%)	5 (5%)	0	100	100
All	All	13440/20568 (65%)	12576 (94%)	864 (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%)	2801 (98%)	60 (2%)	53	75
1	B	2861/3386 (84%)	2802 (98%)	59 (2%)	53	75
1	C	2861/3386 (84%)	2801 (98%)	60 (2%)	53	75
1	D	2861/3386 (84%)	2801 (98%)	60 (2%)	53	75
2	G	88/140 (63%)	85 (97%)	3 (3%)	37	65
2	H	88/140 (63%)	85 (97%)	3 (3%)	37	65
2	I	88/140 (63%)	85 (97%)	3 (3%)	37	65
2	J	88/140 (63%)	85 (97%)	3 (3%)	37	65
All	All	11796/14104 (84%)	11545 (98%)	251 (2%)	56	75

All (251) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	133	LEU
1	A	182	ILE
1	A	203	VAL
1	A	244	CYS
1	A	254	GLU
1	A	497	LEU
1	A	555	LEU
1	A	561	ARG
1	A	625	VAL
1	A	646	THR

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	711	GLU
1	A	778	MET
1	A	801	ARG
1	A	1028	ARG
1	A	1133	ARG
1	A	1152	TYR
1	A	1161	VAL
1	A	1190	LEU
1	A	1226	TYR
1	A	1261	VAL
1	A	1300	MET
1	A	1304	LEU
1	A	1682	ASP
1	A	1695	MET
1	A	1721	MET
1	A	1743	GLU
1	A	1792	THR
1	A	1798	GLU
1	A	1905	MET
1	A	1938	ASN
1	A	1969	GLN
1	A	1990	GLU
1	A	2004	THR
1	A	2065	MET
1	A	2113	GLU
1	A	2172	GLU
1	A	2191	MET
1	A	2233	MET
1	A	2274	GLN
1	A	2277	GLN
1	A	2278	MET
1	A	2302	ARG
1	A	2335	ARG
1	A	2405	MET
1	A	2425	LEU
1	A	2454	ASP
1	A	2478	GLU
1	A	2735	LYS
1	A	2771	ARG
1	A	2842	MET
1	A	2893	LYS
1	A	3885	SER

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	3889	TRP
1	A	3896	ILE
1	A	3972	ASP
1	A	4001	MET
1	A	4045	ARG
1	A	4782	VAL
1	A	4885	THR
1	A	4949	GLU
2	G	14	ARG
2	G	18	LYS
2	G	69	LEU
1	B	133	LEU
1	B	182	ILE
1	B	203	VAL
1	B	244	CYS
1	B	254	GLU
1	B	497	LEU
1	B	555	LEU
1	B	561	ARG
1	B	625	VAL
1	B	646	THR
1	B	711	GLU
1	B	778	MET
1	B	801	ARG
1	B	1028	ARG
1	B	1133	ARG
1	B	1152	TYR
1	B	1161	VAL
1	B	1190	LEU
1	B	1226	TYR
1	B	1261	VAL
1	B	1300	MET
1	B	1304	LEU
1	B	1682	ASP
1	B	1695	MET
1	B	1721	MET
1	B	1743	GLU
1	B	1792	THR
1	B	1798	GLU
1	B	1905	MET
1	B	1969	GLN
1	B	1990	GLU

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	B	2004	THR
1	B	2065	MET
1	B	2113	GLU
1	B	2172	GLU
1	B	2191	MET
1	B	2233	MET
1	B	2274	GLN
1	B	2277	GLN
1	B	2278	MET
1	B	2302	ARG
1	B	2335	ARG
1	B	2405	MET
1	B	2425	LEU
1	B	2454	ASP
1	B	2478	GLU
1	B	2735	LYS
1	B	2771	ARG
1	B	2842	MET
1	B	2893	LYS
1	B	3885	SER
1	B	3889	TRP
1	B	3896	ILE
1	B	3972	ASP
1	B	4001	MET
1	B	4045	ARG
1	B	4782	VAL
1	B	4885	THR
1	B	4949	GLU
2	H	14	ARG
2	H	18	LYS
2	H	69	LEU
1	C	133	LEU
1	C	182	ILE
1	C	203	VAL
1	C	244	CYS
1	C	254	GLU
1	C	497	LEU
1	C	555	LEU
1	C	561	ARG
1	C	625	VAL
1	C	646	THR
1	C	711	GLU

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	C	778	MET
1	C	801	ARG
1	C	1028	ARG
1	C	1133	ARG
1	C	1152	TYR
1	C	1161	VAL
1	C	1190	LEU
1	C	1226	TYR
1	C	1261	VAL
1	C	1300	MET
1	C	1304	LEU
1	C	1682	ASP
1	C	1695	MET
1	C	1721	MET
1	C	1743	GLU
1	C	1792	THR
1	C	1798	GLU
1	C	1905	MET
1	C	1969	GLN
1	C	1990	GLU
1	C	2004	THR
1	C	2065	MET
1	C	2113	GLU
1	C	2172	GLU
1	C	2191	MET
1	C	2233	MET
1	C	2274	GLN
1	C	2277	GLN
1	C	2278	MET
1	C	2302	ARG
1	C	2335	ARG
1	C	2405	MET
1	C	2425	LEU
1	C	2454	ASP
1	C	2478	GLU
1	C	2735	LYS
1	C	2771	ARG
1	C	2842	MET
1	C	2893	LYS
1	C	3885	SER
1	C	3889	TRP
1	C	3896	ILE

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	C	3972	ASP
1	C	4001	MET
1	C	4045	ARG
1	C	4782	VAL
1	C	4786	ASN
1	C	4885	THR
1	C	4949	GLU
2	I	14	ARG
2	I	18	LYS
2	I	69	LEU
1	D	133	LEU
1	D	182	ILE
1	D	203	VAL
1	D	244	CYS
1	D	254	GLU
1	D	497	LEU
1	D	555	LEU
1	D	561	ARG
1	D	625	VAL
1	D	646	THR
1	D	711	GLU
1	D	778	MET
1	D	801	ARG
1	D	1028	ARG
1	D	1133	ARG
1	D	1152	TYR
1	D	1161	VAL
1	D	1190	LEU
1	D	1226	TYR
1	D	1261	VAL
1	D	1300	MET
1	D	1304	LEU
1	D	1682	ASP
1	D	1695	MET
1	D	1721	MET
1	D	1743	GLU
1	D	1792	THR
1	D	1798	GLU
1	D	1905	MET
1	D	1938	ASN
1	D	1969	GLN
1	D	1990	GLU

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	D	2004	THR
1	D	2065	MET
1	D	2113	GLU
1	D	2172	GLU
1	D	2191	MET
1	D	2233	MET
1	D	2274	GLN
1	D	2277	GLN
1	D	2278	MET
1	D	2302	ARG
1	D	2335	ARG
1	D	2405	MET
1	D	2425	LEU
1	D	2454	ASP
1	D	2478	GLU
1	D	2735	LYS
1	D	2771	ARG
1	D	2842	MET
1	D	2893	LYS
1	D	3885	SER
1	D	3889	TRP
1	D	3896	ILE
1	D	3972	ASP
1	D	4001	MET
1	D	4045	ARG
1	D	4782	VAL
1	D	4885	THR
1	D	4949	GLU
2	J	14	ARG
2	J	18	LYS
2	J	69	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (36) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	490	GLN
1	A	544	ASN
1	A	547	ASN
1	A	2090	GLN
1	A	2151	ASN
1	A	2385	ASN
1	A	2480	GLN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	2848	HIS
1	A	4177	ASN
1	B	490	GLN
1	B	544	ASN
1	B	547	ASN
1	B	2090	GLN
1	B	2151	ASN
1	B	2385	ASN
1	B	2480	GLN
1	B	2848	HIS
1	B	4177	ASN
1	C	490	GLN
1	C	544	ASN
1	C	547	ASN
1	C	2090	GLN
1	C	2151	ASN
1	C	2385	ASN
1	C	2480	GLN
1	C	2848	HIS
1	C	4786	ASN
1	D	490	GLN
1	D	544	ASN
1	D	547	ASN
1	D	2090	GLN
1	D	2151	ASN
1	D	2385	ASN
1	D	2480	GLN
1	D	2848	HIS
1	D	4177	ASN

5.3.3 RNA

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates

There are no monosaccharides in this entry.

5.6 Ligand geometry

Of 4 ligands modelled in this entry, 4 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

There are no chain breaks in this entry.

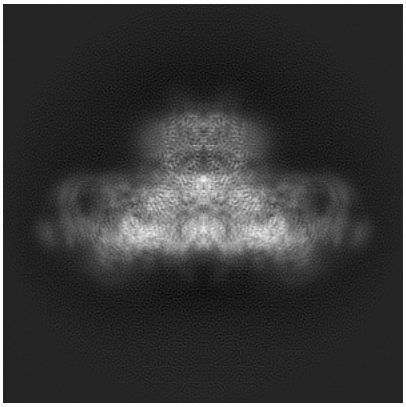
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-32036. These allow visual inspection of the internal detail of the map and identification of artifacts.

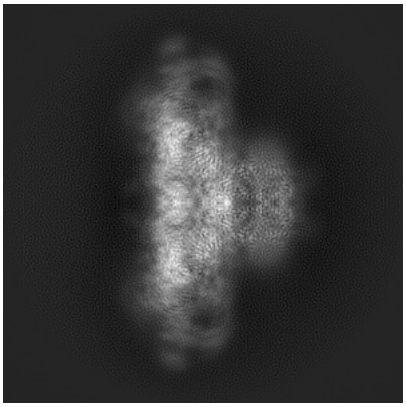
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections

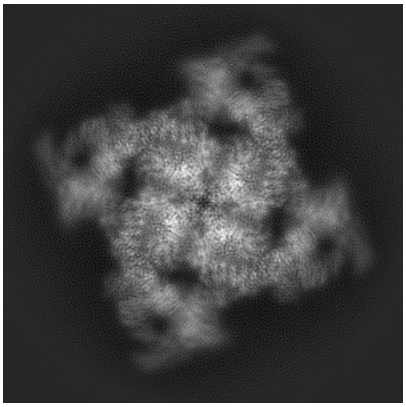
6.1.1 Primary map



X



Y

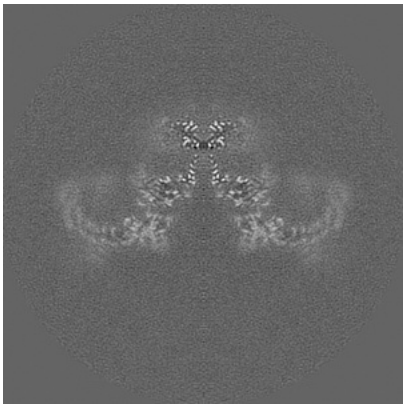


Z

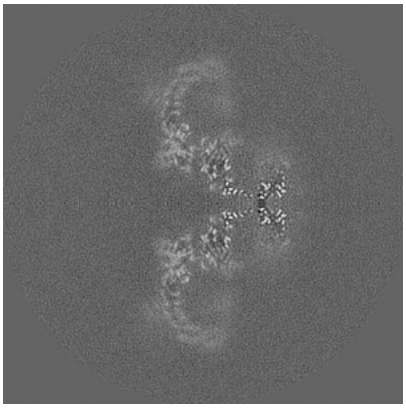
The images above show the map projected in three orthogonal directions.

6.2 Central slices

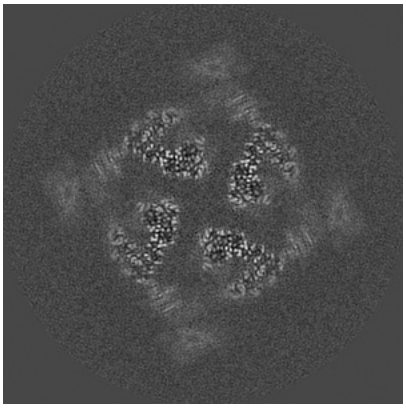
6.2.1 Primary map



X Index: 160



Y Index: 160

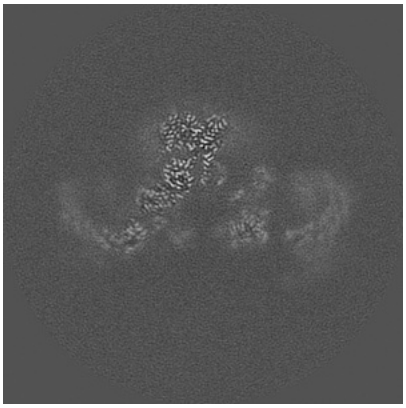


Z Index: 160

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

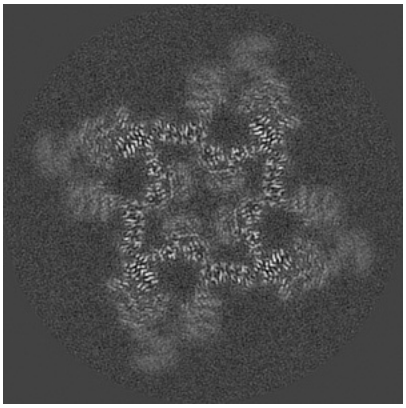
6.3 Largest variance slices (i)

6.3.1 Primary map



X Index: 167

Y Index: 153

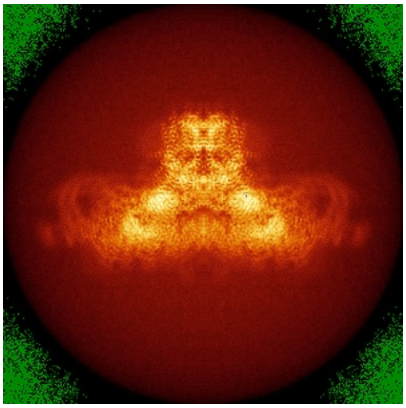


Z Index: 139

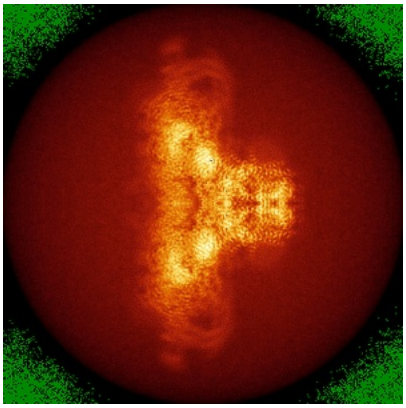
The images above show the largest variance slices of the map in three orthogonal directions.

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

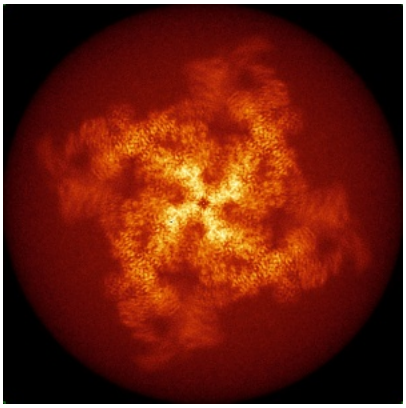
6.4.1 Primary map



X



Y



Z

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

6.5 Orthogonal surface views (i)

6.5.1 Primary map

X Y Z

The images above show the 3D surface view of the map at the recommended contour level 0.032. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

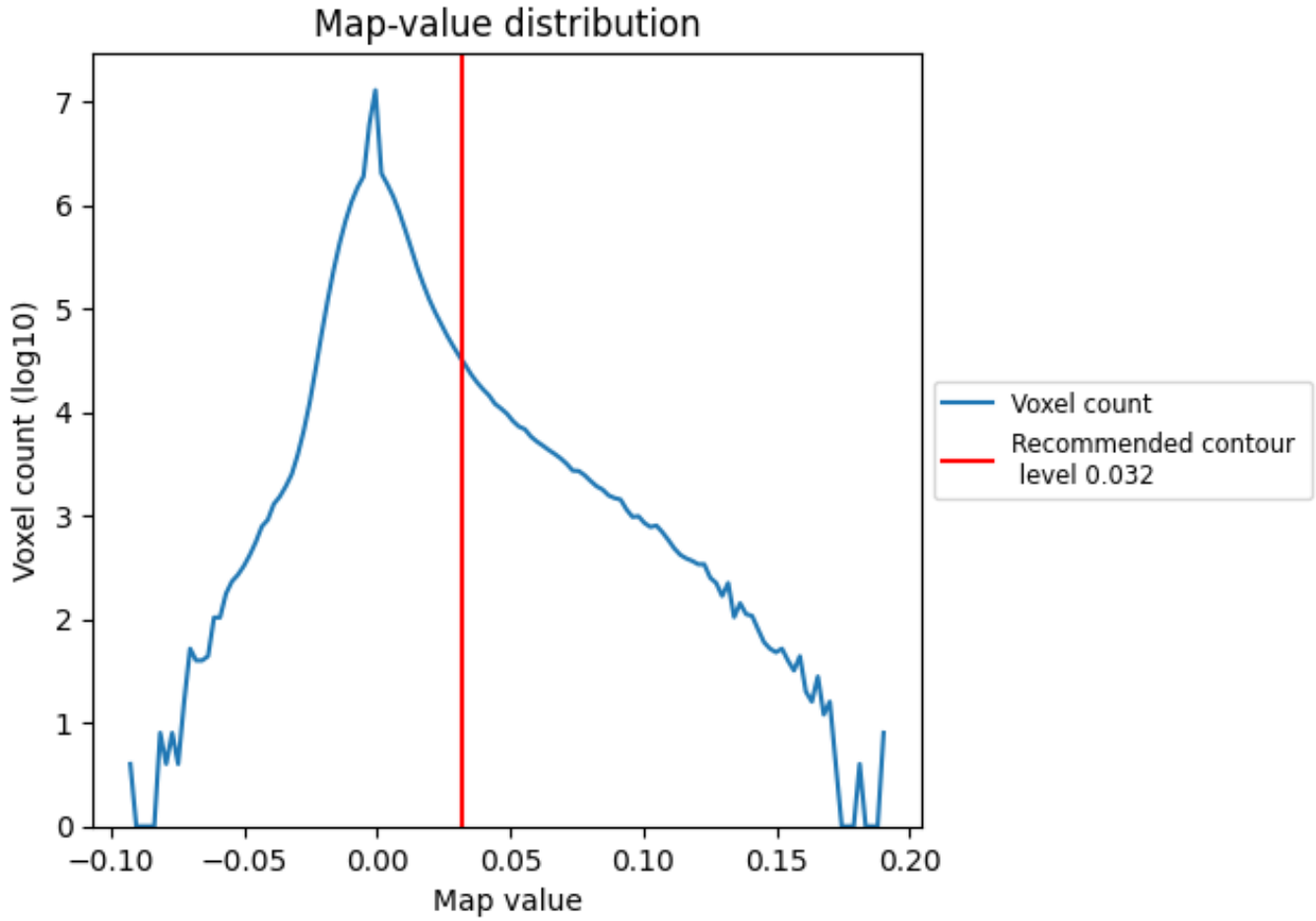
6.6 Mask visualisation (i)

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

7 Map analysis

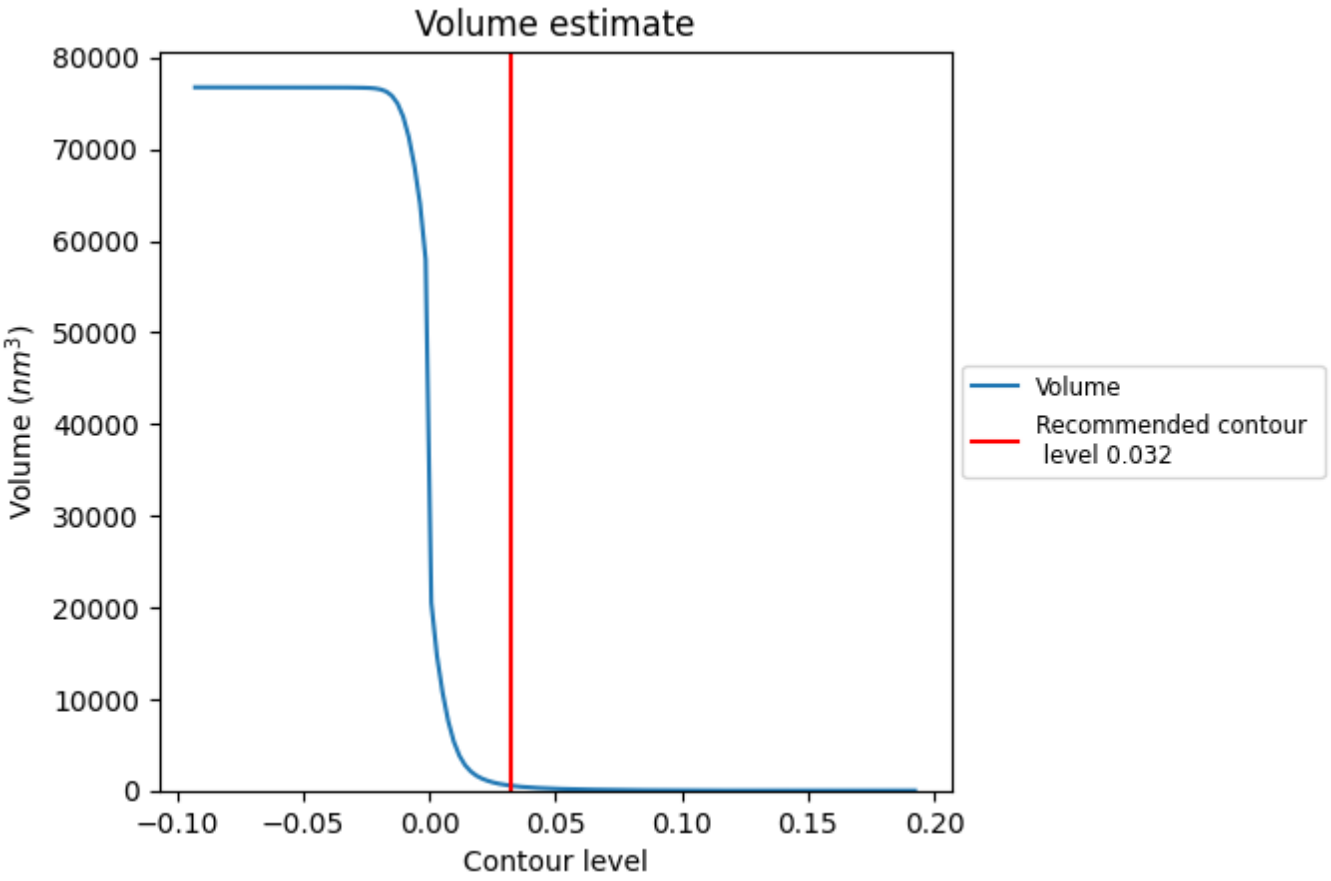
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



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

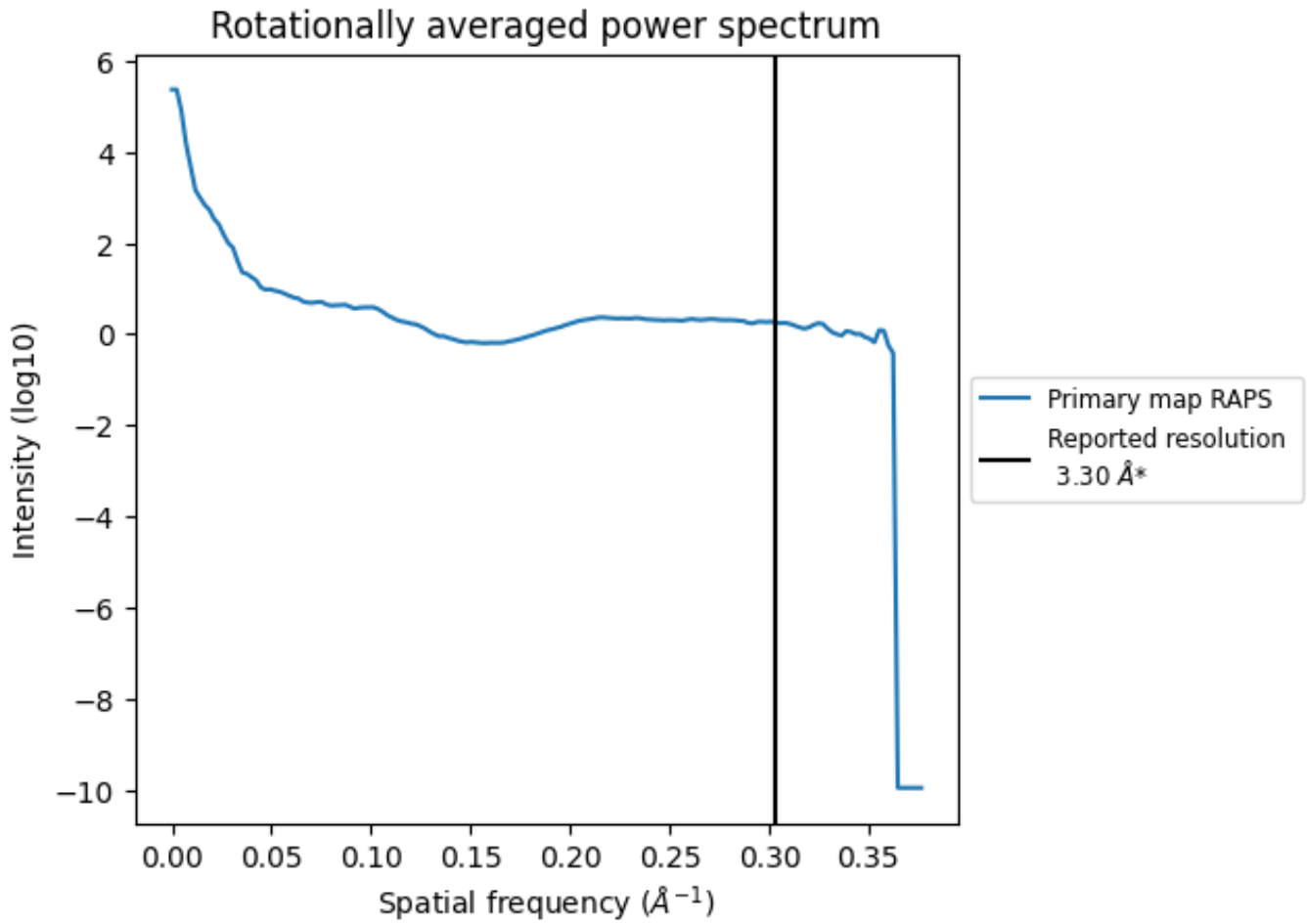
7.2 Volume estimate



The volume at the recommended contour level is 544 nm^3; this corresponds to an approximate mass of 492 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 0.303 Å^{-1}

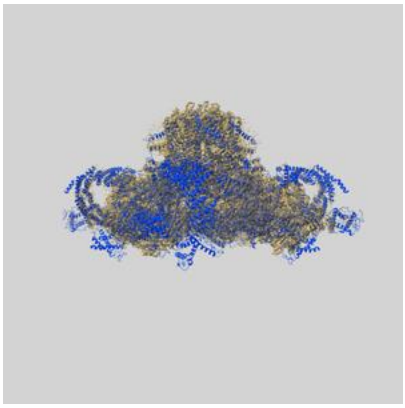
8 Fourier-Shell correlation

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

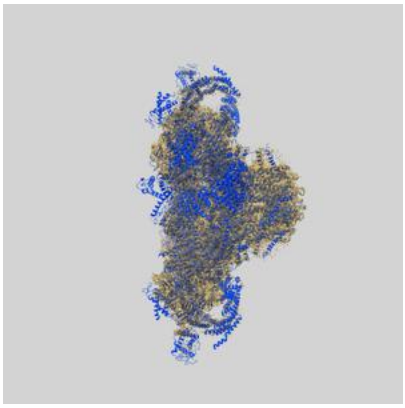
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-32036 and PDB model 7VMR. Per-residue inclusion information can be found in section 3 on page 11.

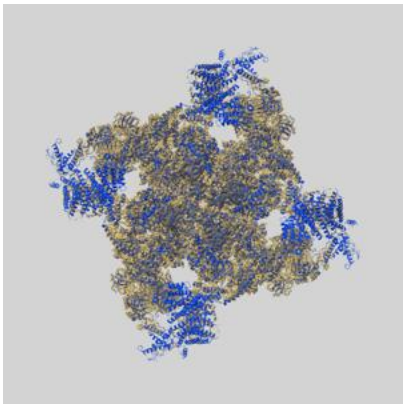
9.1 Map-model overlay



X



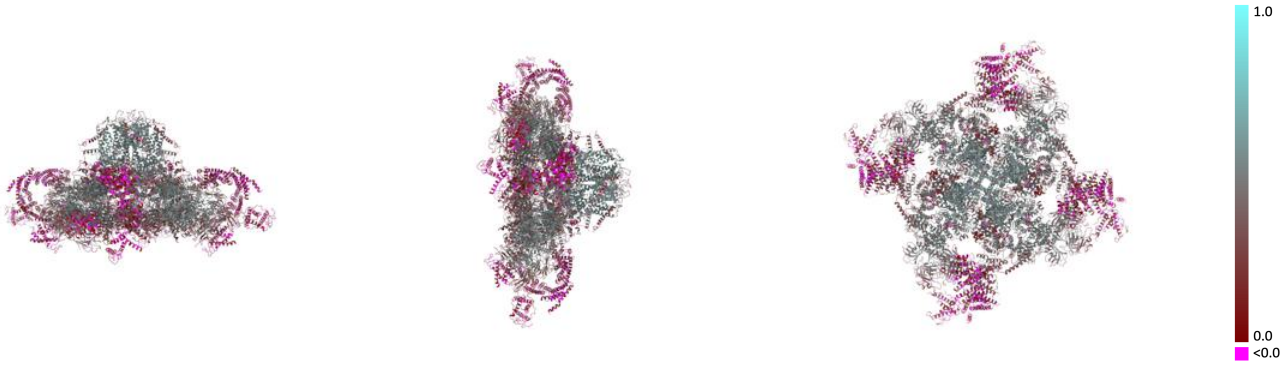
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.032 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

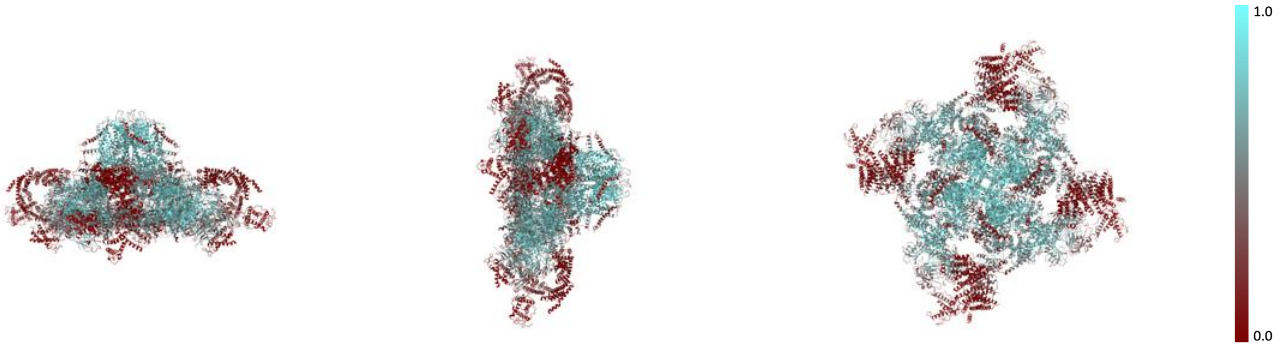
9.2 Q-score mapped to coordinate model



X Y Z

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

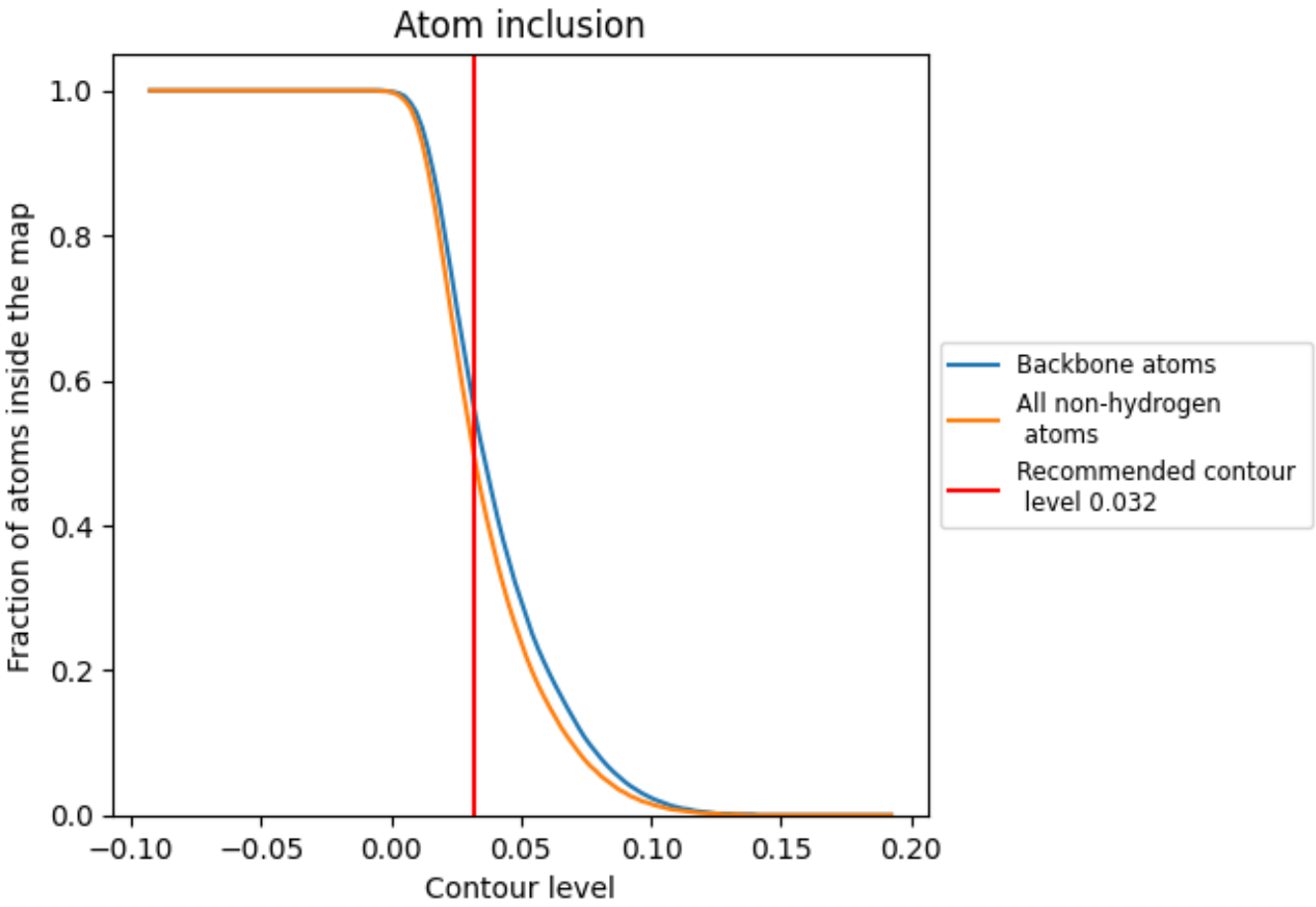
9.3 Atom inclusion mapped to coordinate model



X Y Z

The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.032).

9.4 Atom inclusion (i)



At the recommended contour level, 56% of all backbone atoms, 49% 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 (0.032) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.4940	0.3620
A	0.4960	0.3640
B	0.4910	0.3580
C	0.4940	0.3580
D	0.4940	0.3600
G	0.5190	0.4230
H	0.5220	0.4280
I	0.5250	0.4320
J	0.5200	0.4280