Full wwPDB EM Validation Report ⓘ

Jun 26, 2024 – 10:17 PM JST

PDB ID	:	7YV9
EMDB ID	:	EMD-34121
Title	:	Cryo-EM structure of full-length Myosin Va in the autoinhibited state
Authors	:	Niu, F.; Wei, Z.
Deposited on	:	2022-08-19
Resolution	:	4.78 Å(reported)
Based on initial models	:	2IX7, 3WB8, 1OE9

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:

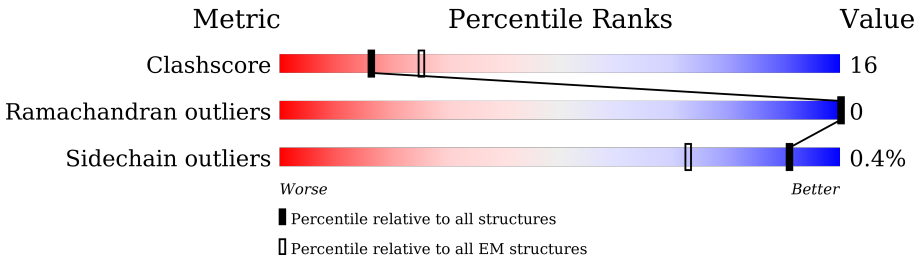
EMDB validation analysis	:	0.0.1.dev92
MolProbity	:	4.02b-467
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.37.1

1 Overall quality at a glance

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

The reported resolution of this entry is 4.78 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	1828	16% 38% 21% 42%
1	H	1828	18% 38% 19% 42%
1	X	1828	14% 6% 79%
1	Y	1828	15% 6% 80%
2	B	149	9% 64% 35%
2	C	149	18% 67% 32%
2	D	149	21% 58% 41%
2	E	149	25% 58% 38%

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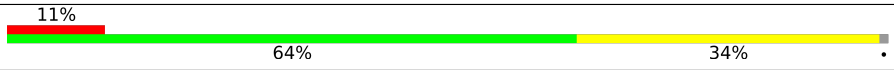
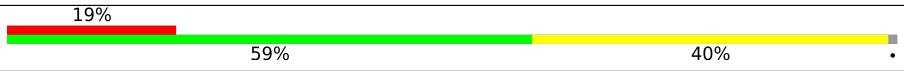
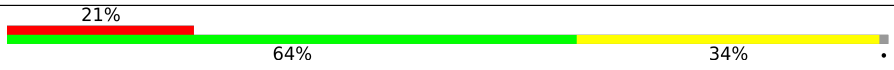
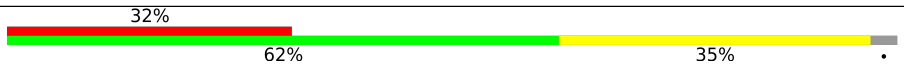
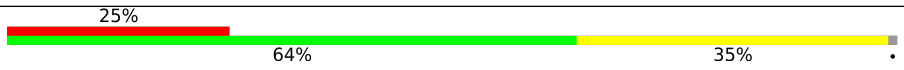
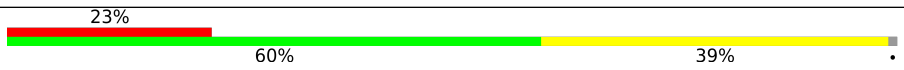
Mol	Chain	Length	Quality of chain
2	F	149	
2	G	149	
2	I	149	
2	J	149	
2	K	149	
2	L	149	
2	M	149	
2	N	149	

2 Entry composition (i)

There are 2 unique types of molecules in this entry. The entry contains 37510 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 Unconventional myosin-Va.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	1067	Total	C	N	O	S	0	0
			8806	5590	1555	1610	51		
1	H	1061	Total	C	N	O	S	0	0
			8766	5568	1546	1601	51		
1	X	376	Total	C	N	O	S	0	0
			3036	1931	527	556	22		
1	Y	373	Total	C	N	O	S	0	0
			3015	1918	523	552	22		

- Molecule 2 is a protein called Calmodulin-1.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	B	147	Total	C	N	O	S	0	0
			1161	711	191	250	9		
2	C	147	Total	C	N	O	S	0	0
			1161	711	191	250	9		
2	D	147	Total	C	N	O	S	0	0
			1161	711	191	250	9		
2	E	144	Total	C	N	O	S	0	0
			1136	696	187	244	9		
2	F	147	Total	C	N	O	S	0	0
			1161	711	191	250	9		
2	G	147	Total	C	N	O	S	0	0
			1161	711	191	250	9		
2	I	147	Total	C	N	O	S	0	0
			1161	711	191	250	9		
2	J	147	Total	C	N	O	S	0	0
			1161	711	191	250	9		
2	K	147	Total	C	N	O	S	0	0
			1161	711	191	250	9		
2	L	144	Total	C	N	O	S	0	0
			1136	696	187	244	9		
2	M	147	Total	C	N	O	S	0	0
			1161	711	191	250	9		

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Mol	Chain	Residues	Atoms					AltConf	Trace
2	N	148	Total	C	N	O	S	0	0
			1166	714	192	251	9		

There are 48 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
B	32	GLN	GLU	engineered mutation	UNP P0DP26
B	68	GLN	GLU	engineered mutation	UNP P0DP26
B	105	GLN	GLU	engineered mutation	UNP P0DP26
B	141	GLN	GLU	engineered mutation	UNP P0DP26
C	32	GLN	GLU	engineered mutation	UNP P0DP26
C	68	GLN	GLU	engineered mutation	UNP P0DP26
C	105	GLN	GLU	engineered mutation	UNP P0DP26
C	141	GLN	GLU	engineered mutation	UNP P0DP26
D	32	GLN	GLU	engineered mutation	UNP P0DP26
D	68	GLN	GLU	engineered mutation	UNP P0DP26
D	105	GLN	GLU	engineered mutation	UNP P0DP26
D	141	GLN	GLU	engineered mutation	UNP P0DP26
E	32	GLN	GLU	engineered mutation	UNP P0DP26
E	68	GLN	GLU	engineered mutation	UNP P0DP26
E	105	GLN	GLU	engineered mutation	UNP P0DP26
E	141	GLN	GLU	engineered mutation	UNP P0DP26
F	32	GLN	GLU	engineered mutation	UNP P0DP26
F	68	GLN	GLU	engineered mutation	UNP P0DP26
F	105	GLN	GLU	engineered mutation	UNP P0DP26
F	141	GLN	GLU	engineered mutation	UNP P0DP26
G	32	GLN	GLU	engineered mutation	UNP P0DP26
G	68	GLN	GLU	engineered mutation	UNP P0DP26
G	105	GLN	GLU	engineered mutation	UNP P0DP26
G	141	GLN	GLU	engineered mutation	UNP P0DP26
I	32	GLN	GLU	engineered mutation	UNP P0DP26
I	68	GLN	GLU	engineered mutation	UNP P0DP26
I	105	GLN	GLU	engineered mutation	UNP P0DP26
I	141	GLN	GLU	engineered mutation	UNP P0DP26
J	32	GLN	GLU	engineered mutation	UNP P0DP26
J	68	GLN	GLU	engineered mutation	UNP P0DP26
J	105	GLN	GLU	engineered mutation	UNP P0DP26
J	141	GLN	GLU	engineered mutation	UNP P0DP26
K	32	GLN	GLU	engineered mutation	UNP P0DP26
K	68	GLN	GLU	engineered mutation	UNP P0DP26
K	105	GLN	GLU	engineered mutation	UNP P0DP26
K	141	GLN	GLU	engineered mutation	UNP P0DP26

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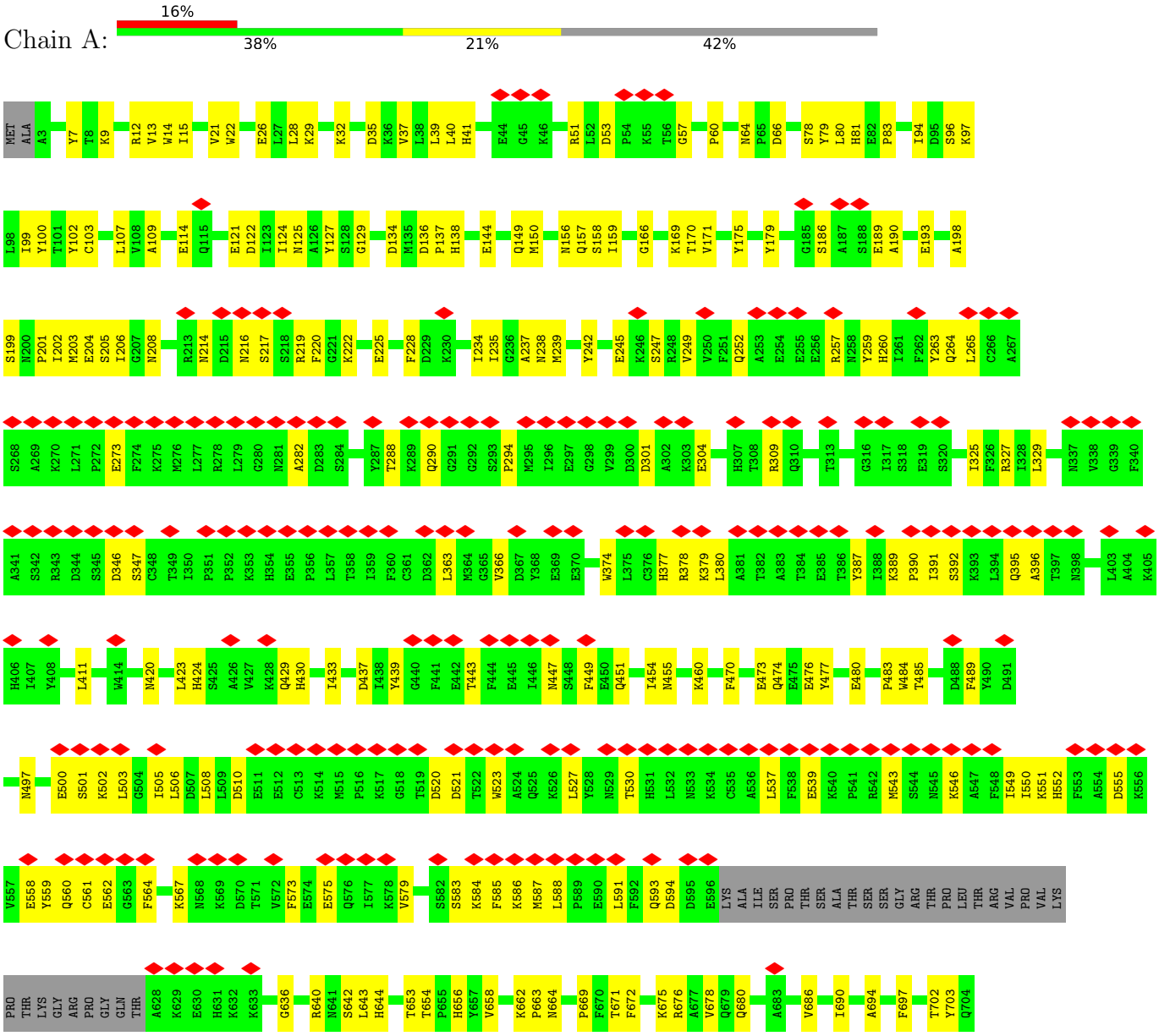
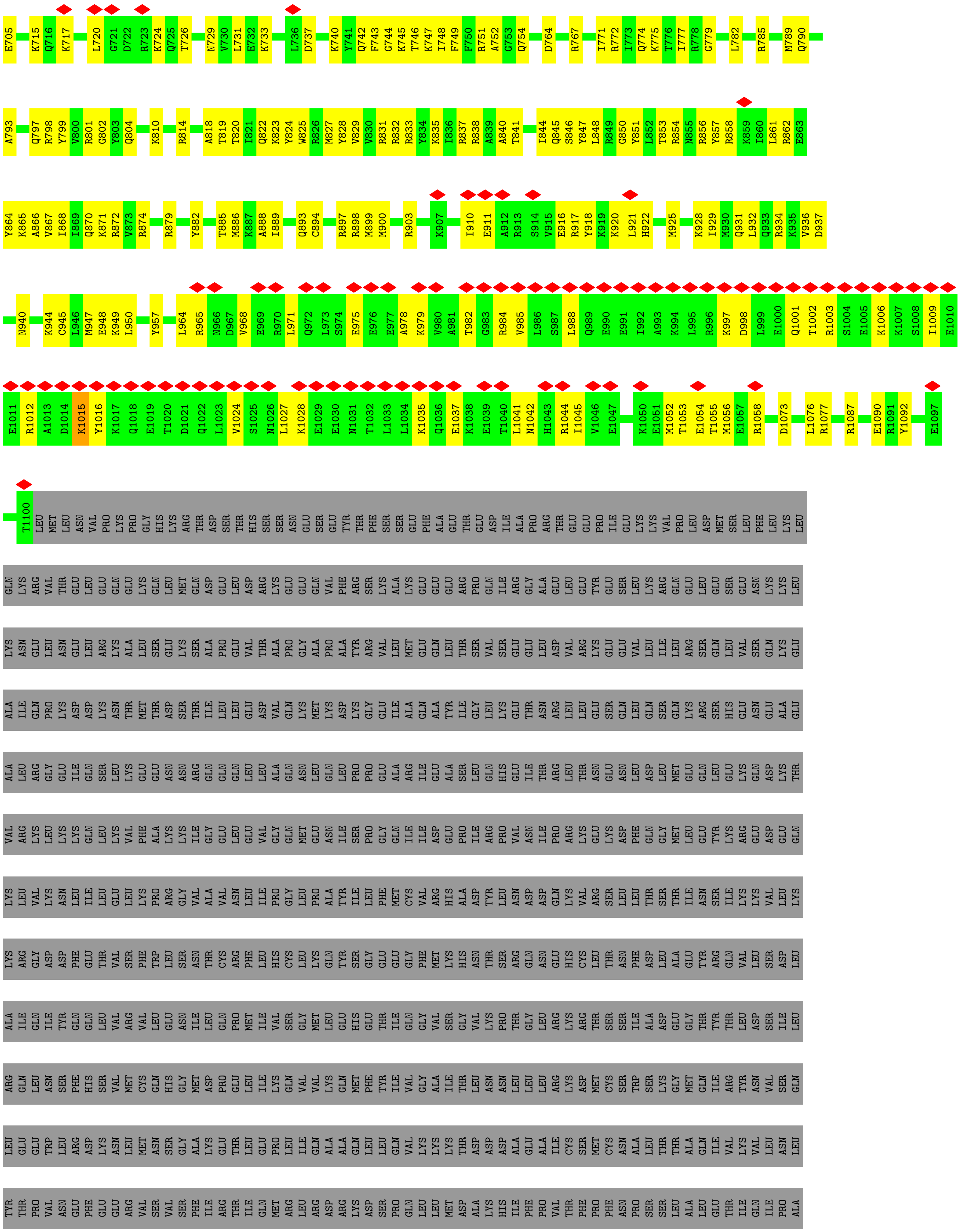
Chain	Residue	Modelled	Actual	Comment	Reference
L	32	GLN	GLU	engineered mutation	UNP P0DP26
L	68	GLN	GLU	engineered mutation	UNP P0DP26
L	105	GLN	GLU	engineered mutation	UNP P0DP26
L	141	GLN	GLU	engineered mutation	UNP P0DP26
M	32	GLN	GLU	engineered mutation	UNP P0DP26
M	68	GLN	GLU	engineered mutation	UNP P0DP26
M	105	GLN	GLU	engineered mutation	UNP P0DP26
M	141	GLN	GLU	engineered mutation	UNP P0DP26
N	32	GLN	GLU	engineered mutation	UNP P0DP26
N	68	GLN	GLU	engineered mutation	UNP P0DP26
N	105	GLN	GLU	engineered mutation	UNP P0DP26
N	141	GLN	GLU	engineered mutation	UNP P0DP26

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.

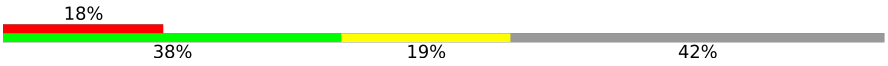
- Molecule 1: Unconventional myosin-Va

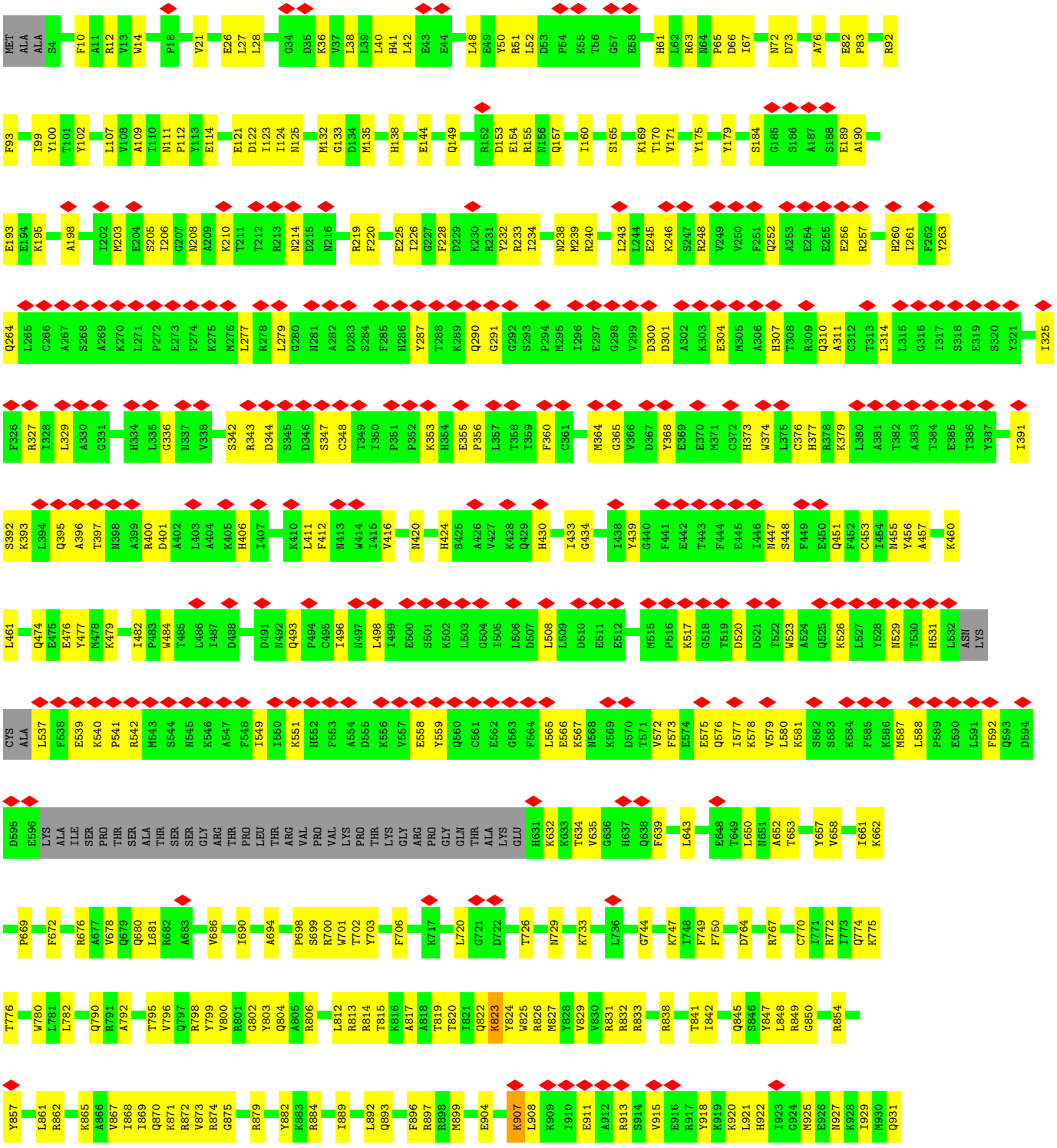


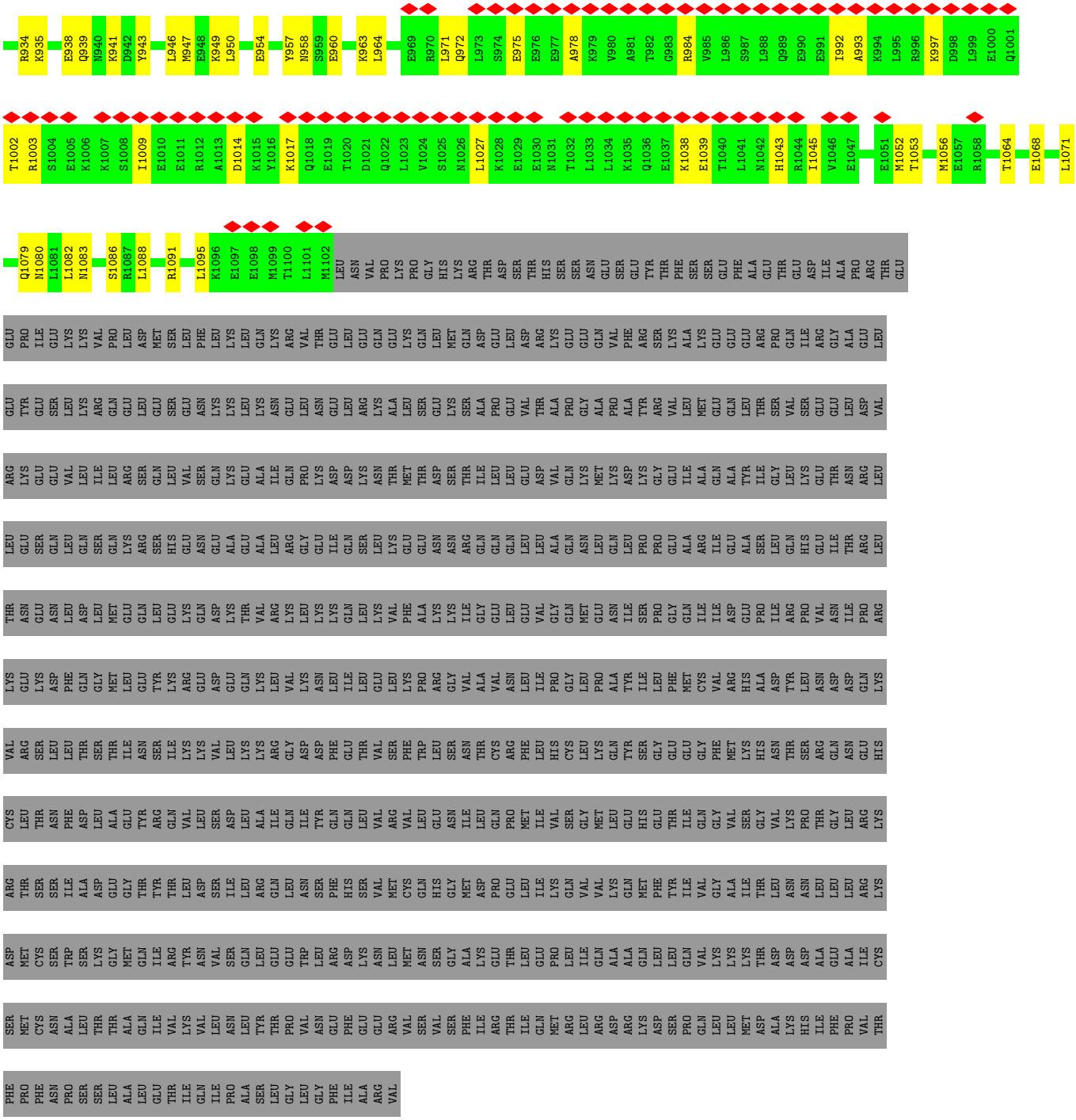

E705 K715 Q716 K717 L720 G721 D722 R723 K724 Q725 T726 N729 V730 L731 E732 K733 L736 D737 K740 Y741 Q742 F743 G744 K745 T746 K747 I748 F749 F750 R751 A752 G753 Q754 D764 R767 I771 R772 I773 Q774 K775 T776 I777 R778 G779 L782 R785 M789 Q790
A793 Q797 R798 Y799 V800 R801 G802 Y803 Q804 K810 R814 A818 T819 T820 I821 Q822 K823 Y824 W825 R826 M827 Y828 V829 V830 R831 R832 R833 Y834 K835 I836 R837 R838 A839 A840 T841 I844 Q845 S846 Y847 L848 R849 G850 Y851 L852 T853 R854 N855 R856 Y857 R858 K859 I860 L861 R862 E863
Y864 K865 A866 V867 I868 I869 Q870 K871 R872 V873 R874 R879 Y882 T885 M886 K887 A888 I889 Q893 C894 R897 R898 M899 M900 R903 K907 I910 E911 A912 R913 S914 V915 E916 R917 Y918 K919 K920 L921 H922 M925 K928 I929 M930 Q931 L932 Q933 R934 K935 V936 D937
N940 K944 C945 L946 M947 E948 K949 L950 Y957 L964 R965 N966 D967 V968 E969 R970 L971 Q972 L973 S974 E975 E976 E977 A978 K979 V980 A981 T982 G983 R984 V985 L986 S987 L988 Q989 E990 E991 I992 A993 K994 L995 R996 K997 D998 L999 E1000 Q1001 T1002 R1003 S1004 E1005 K1006 K1007 S1008 I1009 E1010
E1011 R1012 A1013 D1014 K1015 Y1016 K1017 Q1018 E1019 T1020 D1021 Q1022 L1023 V1024 S1025 N1026 L1027 K1028 E1029 E1030 N1031 T1032 L1033 L1034 K1035 Q1036 E1037 K1038 E1039 T1040 L1041 N1042 H1043 R1044 I1045 V1046 E1047 K1050 E1051 M1052 T1053 E1054 T1055 M1056 E1057 R1058 D1073 L1076 R1077 R1087 E1090 R1091 Y1092 E1097
T1100 LEU MET LEU ASN VAL PRO LYS PRO GLY HIS LYS ARG THR ASP SER THR HIS SER SER ASN GLU SER GLU TYR THR PHE SER SER GLU PHE ALA GLU THR GLU ASP ILE ALA PRO ARG THR GLU GLU PRO ILE GLU LYS LYS VAL PRO LEU ASP MET SER LEU PHE LEU LYS LEU
GLN LYS ARG VAL THR GLU LEU GLU GLN GLU LYS GLN LEU MET GLN ASP GLU LEU ASP ARG LYS GLU GLN VAL PHE ARG SER LYS ALA LYS GLU GLU GLU ARG PRO GLN ILE ARG GLY ALA GLU LEU GLU TYR GLU SER LEU LYS ARG GLN GLU LEU GLU SER GLU ASN LYS LYS LEU
LYS ASN GLU LEU ASN GLU LEU ARG LYS ALA LEU SER GLU LYS SER ALA PRO GLU VAL THR ALA PRO GLY ALA PRO ALA TYR ARG VAL LEU MET GLU GLN LEU THR SER VAL SER GLU GLU LEU ASP VAL ARG LYS GLU GLU VAL LEU ILE LEU ARG SER GLN LEU VAL SER GLN LYS GLU
ALA ILE GLN PRO LYS ASP ASP LYS ASN THR MET THR ASP SER THR ILE LEU LEU GLU ASP VAL GLN LYS MET LYS ASP LYS GLY GLU ILE ALA GLN ALA TYR ILE GLY LEU LYS GLU THR ASN ARG LEU LEU GLU SER GLN LEU GLN SER GLN LYS ARG SER HIS GLU ASN GLU ALA GLU
ALA LEU ARG GLY GLU ILE GLN SER LEU LYS GLU GLU ASN ASN ARG GLN GLN GLN LEU LEU ALA GLN ASN LEU GLN LEU PRO PRO GLU ALA ARG ILE GLU ALA SER LEU GLN HIS GLU ILE THR ARG LEU THR ASN GLU ASN LEU ASP LEU MET GLU GLN LEU GLU LYS GLN ASP LYS THR
VAL ARG LYS LEU LYS LYS GLN LEU LYS VAL PHE ALA LYS LYS ILE GLY GLU LEU GLU VAL GLY GLN MET GLU ASN ILE SER PRO GLY GLN ILE ILE ASP GLU PRO ILE ARG PRO VAL ASN ILE PRO ARG LYS GLU LYS ASP PHE GLN GLY MET LEU GLU TYR LYS ARG GLU ASP GLU GLN
LYS LEU VAL LYS ASN LEU ILE LEU GLU LEU LYS PRO ARG GLY VAL ALA VAL ASN LEU ILE PRO GLY LEU PRO ALA TYR ILE LEU PHE MET CYS VAL ARG HIS ALA ASP TYR LEU ASN ASP ASP GLN LYS VAL ARG SER LEU LEU THR SER THR ILE ASN SER ILE LYS LYS VAL LEU LYS
LYS ARG GLY ASP ASP PHE GLU THR VAL SER PHE TRP LEU SER ASN THR CYS ARG PHE LEU HIS CYS LEU LYS GLN TYR SER GLY GLU GLU GLY PHE MET LYS HIS ASN THR SER ARG GLN ASN GLU HIS CYS LEU THR ASN PHE ASP LEU ALA GLU TYR ARG GLN VAL LEU SER ASP LEU
ALA ILE GLN ILE TYR GLN GLN LEU VAL ARG VAL LEU GLU ASN ILE LEU GLN PRO MET ILE VAL SER GLY MET LEU GLU HIS GLU THR ILE GLN GLY VAL SER GLY VAL LYS PRO THR GLY LEU ARG LYS ARG THR SER SER ILE ALA ASP GLU GLY THR TYR THR LEU ASP SER ILE LEU
ARG GLN LEU ASN SER PHE HIS SER VAL MET CYS GLN HIS GLY MET ASP PRO GLU LEU ILE LYS GLN VAL VAL LYS GLN MET PHE TYR ILE VAL GLY ALA ILE THR LEU ASN ASN LEU LEU LEU ARG LYS ASP MET CYS SER TRP SER LYS GLY MET GLN ILE ARG TYR ASN VAL SER GLN
LEU GLU GLU TRP LEU ARG ASP LYS ASN LEU MET ASN SER GLY ALA LYS GLU THR LEU GLU PRO LEU ILE GLN ALA ALA GLN LEU LEU GLN VAL LYS LYS THR ASP ASP ASP ALA GLU ALA ILE CYS SER MET CYS ASN ALA LEU THR THR ALA GLN ILE VAL LYS VAL LEU ASN LEU
TYR THR PRO VAL ASN GLU PHE GLU GLU ARG VAL SER VAL SER PHE ILE ARG THR ILE GLN MET ARG LEU ARG ASP ARG LYS ASP SER PRO GLN LEU LEU MET ASP ALA LYS HIS ILE PHE PRO VAL THR PHE PRO PHE ASN PRO SER SER LEU ALA LEU GLU THR ILE GLN ILE PRO ALA

• Molecule 1: Unconventional myosin-Va

Chain H:






R934 K935 E938 Q939 N940 K941 D942 Y943 L946 M947 E948 K949 L950 E954 Y957 N958 S959 E960 K963 L964 E969 R970 L971 Q972 L973 S974 E975 E976 E977 A978 K979 V980 A981 T982 G983 R984 V985 L986 S987 L988 Q989 E990 E991 I992 A993 K994 L995 R996 K997 D998 L999 E1000 Q1001
T1002 R1003 S1004 E1005 K1006 K1007 S1008 I1009 E1010 E1011 R1012 A1013 D1014 K1015 Y1016 K1017 Q1018 E1019 T1020 D1021 Q1022 L1023 V1024 S1025 N1026 L1027 K1028 E1029 E1030 N1031 T1032 L1033 L1034 K1035 Q1036 E1037 K1038 E1039 T1040 L1041 N1042 H1043 R1044 I1045 V1046 E1047 E1051 M1052 T1053 M1056 E1057 R1058 T1064 E1068 L1071
Q1079 N1080 L1081 L1082 N1083 S1086 R1087 L1088 R1091 L1095 K1096 E1097 E1098 M1099 T1100 L1101 M1102 LEU ASN VAL PRO LYS PRO GLY HIS LYS ARG THR ASP SER THR HIS SER SER ASN GLU SER GLU TYR THR PHE SER SER GLU GLU PHE ALA GLU THR GLU ASP ILE ALA PRO ARG THR GLU
GLU PRO ILE GLU LYS LYS VAL PRO LEU ASP MET SER LEU PHE LEU LYS LEU GLN LYS ARG VAL THR GLU LEU GLU GLN LEU MET GLN ASP GLU LEU ASP ARG LYS GLU GLU GLN VAL PHE ARG SER LYS ALA LYS GLU GLU GLU ARG PRO GLN ILE ARG GLY ALA GLU LEU
GLU TYR GLU SER LEU LYS ARG GLN GLU LEU GLU SER GLU ASN LYS LYS LEU LYS ASN GLU LEU ASN GLU LEU ARG LYS SER ALA LEU SER GLU LYS SER ALA PRO GLU VAL THR ALA PRO GLY ALA PRO ALA TYR ARG VAL LEU MET GLU GLN LEU THR SER VAL SER GLU GLU LEU ASP VAL
ARG LYS GLU GLU VAL LEU ILE LEU ARG SER GLN LEU VAL SER GLN LYS GLU GLU ALA ILE GLN PRO LYS ASP ASP LYS ASN THR MET THR ASP SER THR ILE LEU LEU GLU ASP VAL GLN LYS MET LYS ASP LYS GLY GLU ILE ALA GLN ALA TYR ILE GLY LEU LYS GLU THR ASN ARG LEU
LEU GLU SER GLN LEU GLN SER GLN LYS ARG SER HIS GLU ASN GLU ALA GLU GLU ALA LEU ARG GLY GLU ILE GLN SER LEU LYS GLU GLU ASN ASN ARG GLN GLN GLN LEU LEU LEU ALA GLN ASN LEU GLN LEU PRO PRO GLU ALA ARG ILE GLU GLU ALA SER LEU GLN HIS GLU ILE THR ARG LEU
THR ASN GLU ASN LEU ASP LEU MET GLU GLN LEU GLU LEU LYS LYS VAL PHE ALA LYS LYS ILE GLY GLU GLU LEU GLU VAL GLY GLN MET GLU GLU ASN ILE SER PRO GLY GLN ILE ILE ASP GLU PRO ILE ARG PRO VAL ASN ILE PRO ARG
LYS GLU LYS ASP PHE GLN GLY MET LEU GLU GLU TYR LYS ARG GLU ASP GLU GLN LYS LEU VAL LYS ASN LEU ILE LEU GLU GLU LEU LYS PRO ARG GLY VAL ALA VAL ASN LEU ILE PRO GLY LEU PRO ALA TYR ILE LEU LEU PHE MET CYS VAL ARG HIS ALA ASP TYR LEU ASN ASP ASP GLN LYS
VAL ARG SER LEU LEU THR SER THR ILE ASN SER ILE LYS LYS VAL LEU LYS LYS ARG GLY ASP ASP PHE GLU THR VAL SER PHE TRP LEU SER ASN THR CYS ARG PHE LEU HIS CYS LEU LYS GLN TYR SER GLY GLU GLU GLY PHE MET LYS HIS ASN THR SER ARG GLN ASN GLU HIS
CYS LEU THR ASN PHE ASP LEU ALA GLU TYR ARG GLN VAL LEU SER ASP LEU ALA ILE GLN ILE TYR GLN GLN LEU VAL ARG VAL LEU LEU GLN PRO MET ILE VAL SER GLY MET LEU GLU HIS GLU THR ILE GLN GLY VAL SER GLY VAL LYS PRO THR GLY LEU ARG LYS
ARG THR SER SER ILE ALA ASP GLU GLY THR TYR THR LEU ASP SER ILE LEU ARG GLN LEU GLU ASN SER PHE HIS SER VAL MET CYS GLN HIS GLY MET ASP PRO GLU LEU ILE LYS GLN VAL VAL LYS GLN MET PHE TYR ILE ILE VAL GLY ALA ILE THR LEU GLU ASN ASN LEU LEU ARG LYS
ASP MET CYS SER TRP SER LYS GLY MET GLN ILE ARG TYR ASN VAL SER GLN LEU GLU GLU TRP LEU ARG ASP LYS ASN LEU MET ASN SER GLY ALA LYS GLU THR LEU GLU PRO LEU ILE GLN GLN ALA ALA GLN LEU LEU GLU VAL LYS LYS LYS THR ASP ASP ALA GLU ALA ILE CYS
SER MET CYS ASN ALA LEU THR THR ALA GLN ILE VAL LYS VAL LEU ASN GLU PHE GLU GLU ARG VAL SER VAL SER PHE ILE ARG THR ILE GLN MET ARG LEU ARG ASP ARG LYS ASP SER PRO GLN LEU LEU LEU MET ASP ALA LYS HIS ILE PHE PRO VAL THR
PHE PRO PHE ASN PRO SER SER LEU ALA LEU GLU GLU THR ILE GLN ILE PRO ALA SER LEU GLY LEU GLY PHE ILE ALA ARG VAL

• Molecule 1: Unconventional myosin-Va

Chain X:


MET ALA ALA SER GLU LEU TYR THR LYS PHE ALA ARG VAL TRP ILE PRO ASP PRO GLU GLU VAL TRP LYS SER ALA GLU LEU LEU LYS ASP TYR LYS PRO GLY ASP LYS VAL LEU LEU LEU LEU HIS LEU GLU GLU GLY GLY LYS ASP LEU GLU TYR ARG LEU ASP PRO PRO LYS THR GLY GLU LEU PRO
HIS LEU ARG ASN PRO ASP ILE LEU VAL GLY GLU ASN ASP LEU THR ALA LEU SER TYR LEU HIS GLU PRO ALA VAL LEU HIS ASN LEU ARG VAL ARG PHE ILE ASP SER LYS LEU LEU ILE TYR THR TYR CYS GLY ILE VAL LEU VAL ALA ILE ASN PRO TYR GLU GLN LEU PRO ILE TYR GLY

GLU ASP ILE ILE ASN ALA TYR SER GLY GLN ASN MET GLY ASP MET ASP PRO HIS ILE PHE ALA VAL ALA GLU GLU ALA TYR LYS GLN MET ALA ARG ASP GLU ARG ASN GLN SER ILE ILE VAL SER GLY GLU SER GLY ALA GLY LYS THR VAL SER ALA LYS TYR ALA MET ARG TYR PHE

ALA THR VAL SER GLY SER ALA SER GLU ALA ASN VAL GLU GLU LYS VAL LEU ALA SER ASN PRO ILE MET GLU SER ILE GLY ASN ALA LYS THR THR ARG ASN ASP ASN SER SER ARG PHE GLY LYS TYR ILE GLU ILE GLY PHE ASP LYS ARG TYR ARG ILE ILE GLY ALA ASN MET ARG

THR TYR LEU LEU GLU LYS SER ARG VAL VAL PHE GLN ALA GLU GLU GLU ARG ASN TYR HIS ILE PHE TYR GLN LEU CYS ALA SER ALA LYS LEU PRO GLU PHE LYS MET LEU ARG LEU GLY ASN ALA ASP SER PHE HIS TYR THR LYS GLN GLY GLY SER PRO MET ILE GLU GLY VAL ASP

ASP ALA LYS GLU MET ALA HIS THR ARG GLN ALA CYS THR LEU LEU GLY ILE SER GLU SER TYR GLN MET GLY ILE PHE ARG ILE LEU ALA GLY ILE LEU HIS LEU GLY ASN VAL GLY PHE ALA SER ARG ASP SER ASP SER CYS THR ILE PRO PRO LYS HIS GLU PRO LEU THR ILE PHE

CYS ASP LEU MET GLY VAL ASP TYR GLU GLU MET CYS HIS TRP LEU CYS HIS ARG LYS LEU ALA THR ALA THR GLU THR TYR ILE LYS PRO ILE SER LYS LEU GLN ALA THR ASN ALA ARG ASP ALA LEU ALA LYS HIS ILE TYR ALA LYS LEU PHE ASN TRP ILE VAL ASP HIS VAL ASN

GLN ALA LEU HIS SER ALA VAL LYS GLN HIS SER PHE ILE GLY VAL LEU ASP ILE TYR GLY PHE GLU THR PHE GLU ILE ASN SER PHE GLU GLN PHE CYS ILE ASN TYR ALA ASN GLU LYS LEU GLN GLN GLN PHE ASN MET HIS VAL PHE LYS LEU GLU GLN GLU GLU TYR MET LYS GLU

GLN ILE PRO TRP THR LEU ILE ASP PHE TYR ASP ASN GLN PRO CYS ILE ASN LEU ILE GLU SER LYS LEU GLY ILE LEU ASP LEU LEU ASP GLU GLU CYS LYS MET PRO LYS GLY THR ASP ASP THR TRP ALA GLN LYS LEU TYR ASN THR HIS LEU ASN LYS CYS ALA LEU PHE GLU LYS

PRO ARG MET SER ASN LYS ALA PHE ILE ILE LYS HIS PHE ALA ASP LYS VAL GLU TYR GLN CYS GLU GLY PHE LEU GLU LYS ASN LYS ASP THR VAL PHE GLU GLU GLN ILE LYS VAL LEU LYS SER SER LYS PHE LYS MET LEU PRO GLU LEU PHE GLN ASP ASP GLU LYS ALA ILE SER

PRO THR SER ALA THR SER SER GLY ARG THR PRO LEU THR ARG VAL PRO VAL LYS PRO THR LYS GLY ARG PRO GLY GLN THR ALA LYS GLU HIS LYS LYS THR VAL GLY HIS GLN PHE ARG ASN SER LEU HIS LEU LEU MET GLU THR LEU ASN ALA THR THR PRO HIS TYR VAL ARG CYS

ILE LYS PRO ASN ASP PHE LYS PHE PRO PHE THR PHE ASP GLU LYS ARG ALA VAL GLN GLN LEU ARG ALA CYS GLY VAL LEU GLU THR ILE ARG ILE SER ALA ALA GLY PHE PRO SER ARG TRP THR TYR GLN GLU PHE PHE SER ARG TYR ARG VAL LEU MET LYS GLN LYS ASP VAL LEU

GLY ASP ARG LYS GLN THR CYS LYS ASN VAL LEU GLU LYS LEU ILE LEU ASP LYS ASP LYS TYR GLN PHE GLY LYS THR LYS ILE PHE PHE ARG ALA GLY GLN VAL ALA TYR LEU GLU LYS LEU ARG ALA ASP LYS LEU ARG ALA ALA CYS ILE ARG ILE GLN LYS THR ILE ARG GLY TRP

LEU LEU ARG LYS ARG TYR LEU CYS MET GLN ARG ALA ALA ILE THR VAL GLN ARG TYR VAL ARG GLY TYR GLN ALA ARG CYS TYR ALA LYS PHE LEU ARG ARG THR LYS ALA ALA THR THR ILE GLN LYS TYR TRP ARG MET TYR VAL VAL ARG ARG TYR LYS ILE ARG ARG ALA ALA

THR ILE VAL ILE GLN SER TYR LEU ARG GLY TYR LEU THR ARG ASN ARG TYR ARG LYS ILE LEU ARG GLU TYR LYS ALA VAL ILE ILE GLN LYS ARG VAL ARG GLY TRP LEU ALA ARG THR HIS TYR LYS ARG THR MET LYS ALA ILE VAL TYR LEU GLN CYS CYS PHE ARG ARG MET MET

ALA LYS ARG GLU LEU LYS LYS LEU LYS ILE GLU ALA ARG SER VAL GLU ARG TYR LYS LYS LEU HIS ILE GLY MET GLU ASN LYS ILE MET GLN LEU GLN ARG LYS VAL ASP GLU GLN ASN LYS ASP TYR LYS CYS LEU MET GLU LYS LEU THR ASN LEU GLU GLY VAL TYR ASN SER GLU

THR GLU LYS LEU ARG ASN ASP VAL GLU ARG LEU GLN LEU SER GLU GLU ALA LYS VAL ALA THR GLY ARG VAL LEU SER LEU GLN GLU GLU ILE ALA LYS LEU ARG LYS ASP LEU GLU GLN THR ARG SER GLU LYS LYS SER ILE GLU GLU ARG ALA ASP LYS TYR LYS GLN GLU THR

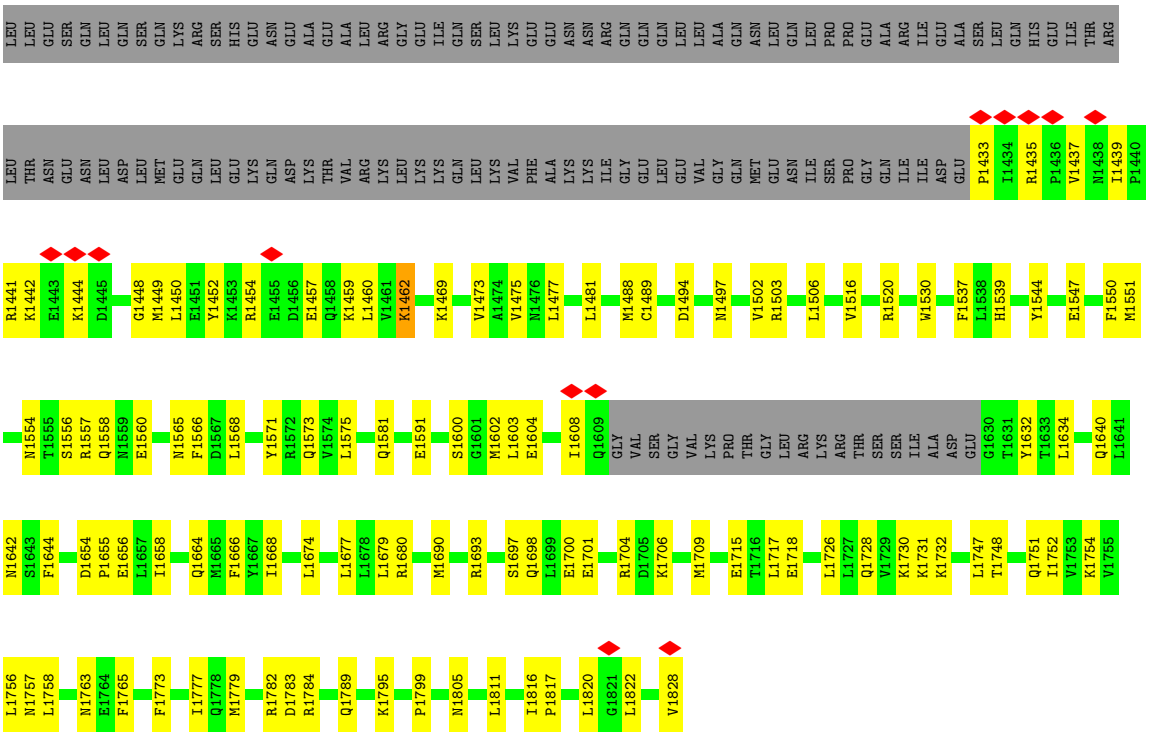
ASP GLN LEU VAL SER ASN LEU LYS GLU GLU ASN THR LEU LEU LYS GLN GLU LYS GLU THR LEU ASN HIS ARG ILE VAL GLU GLN ALA LYS GLU MET THR GLU THR MET GLU ARG LYS LEU VAL GLU GLU THR LYS GLN LEU GLU LEU ASP LEU ASN ASP GLU ARG LEU ARG TYR GLN ASN

LEU LEU ASN GLU PHE SER ARG LEU GLU GLU ARG TYR ASP ASP LEU LYS GLU GLU MET THR LEU MET LEU ASN VAL PRO LYS PRO GLY HIS LYS ARG THR ASP SER THR HIS SER SER ASN GLU SER GLU TYR THR PHE SER SER GLU PHE ALA GLU THR GLU ASP ILE ALA PRO ARG THR

GLU GLU PRO ILE GLU LYS LYS VAL PRO LEU ASP MET SER LEU PHE LEU LYS LEU GLN LYS ARG VAL THR GLU LEU GLU GLN GLU LYS GLN LEU MET GLN ASP GLU LEU ASP ARG LYS GLU GLU GLN VAL PHE ARG SER LYS ALA LYS GLU GLU ARG PRO GLN ILE ARG GLY ALA GLU

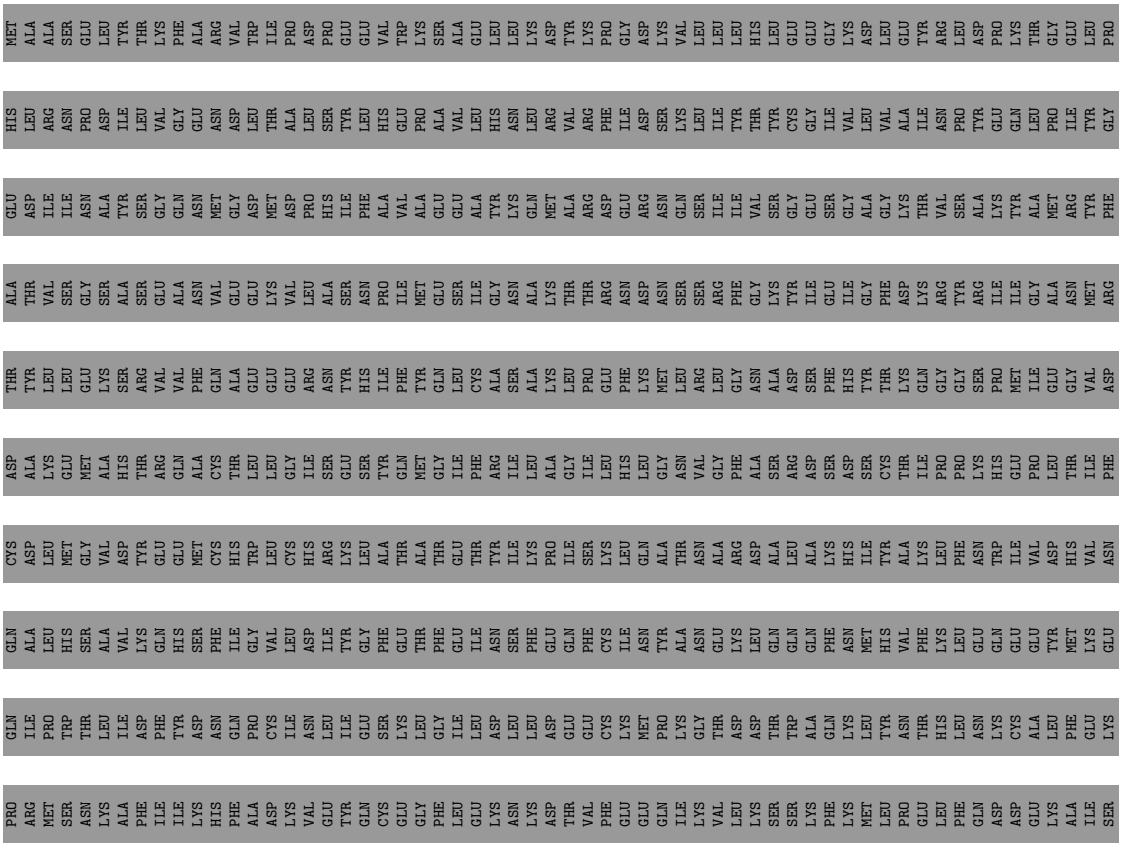
LEU GLU TYR GLU SER LEU LYS ARG GLN GLU LEU GLU SER GLU ASN LYS LYS LEU LYS ASN GLU LEU ASN GLU LEU ARG LYS ALA LEU SER GLU LYS SER ALA PRO GLU VAL THR ALA PRO GLY ALA PRO ALA TYR ARG VAL LEU MET GLU GLN LEU THR SER VAL SER GLU GLU LEU ASP

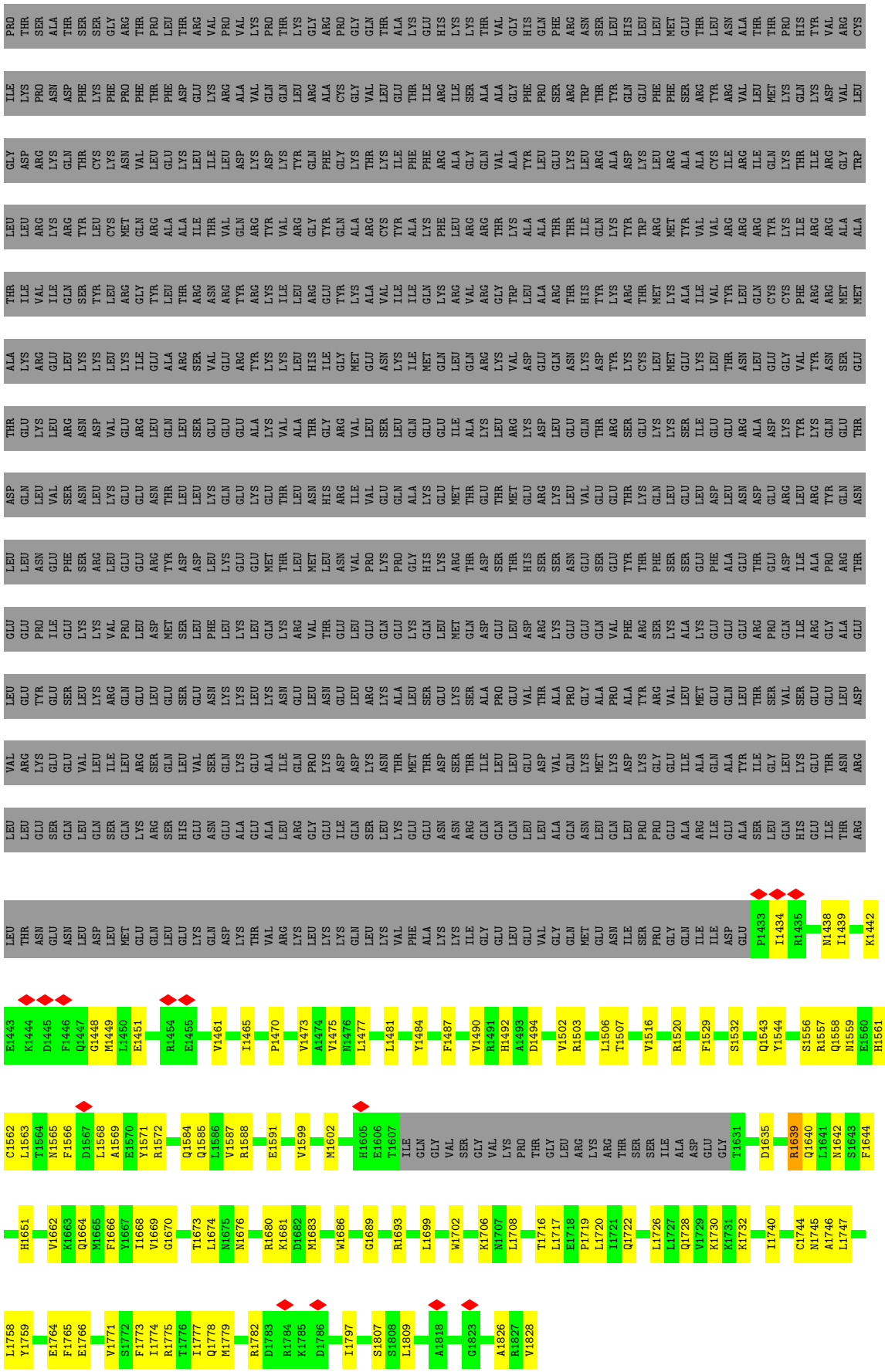
VAL ARG LYS GLU GLU VAL LEU ILE LEU ARG SER GLN LEU VAL SER GLN LYS GLU ALA ILE GLN PRO LYS ASP ASP LYS ASN THR MET THR ASP SER THR ILE LEU LEU GLU ASP VAL GLN LYS MET LYS ASP LYS GLY GLU ILE ALA GLN ALA TYR ILE GLY LEU LYS GLU THR ASN ARG



• Molecule 1: Unconventional myosin-Va

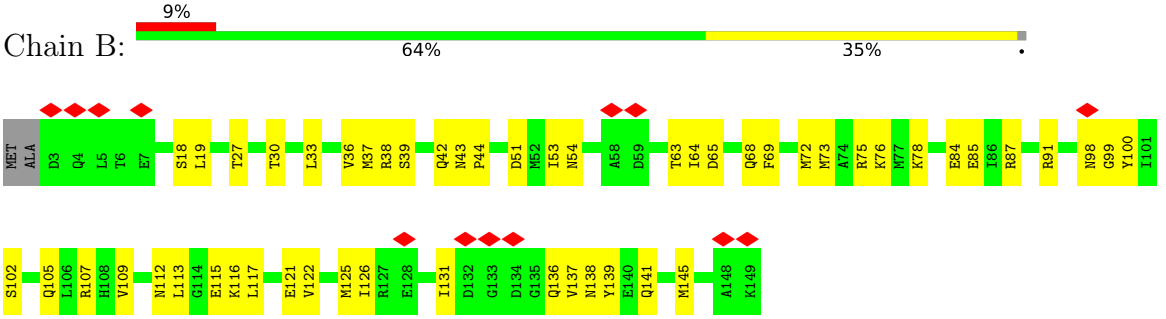
Chain Y:





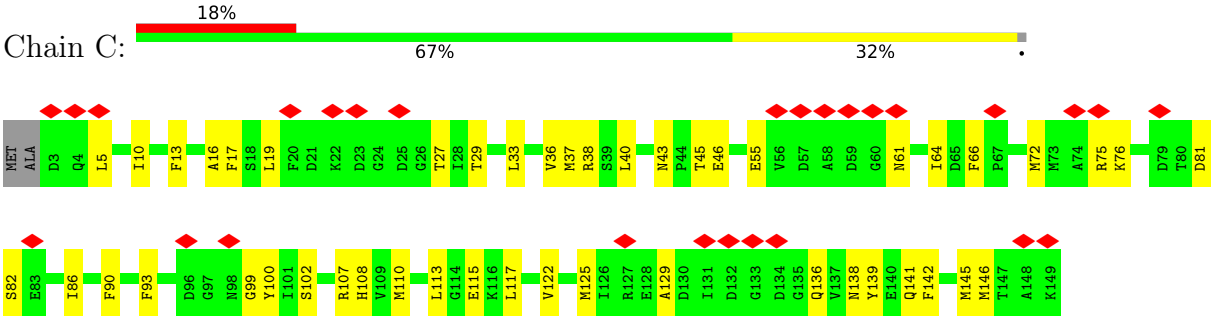
• Molecule 2: Calmodulin-1

Chain B:



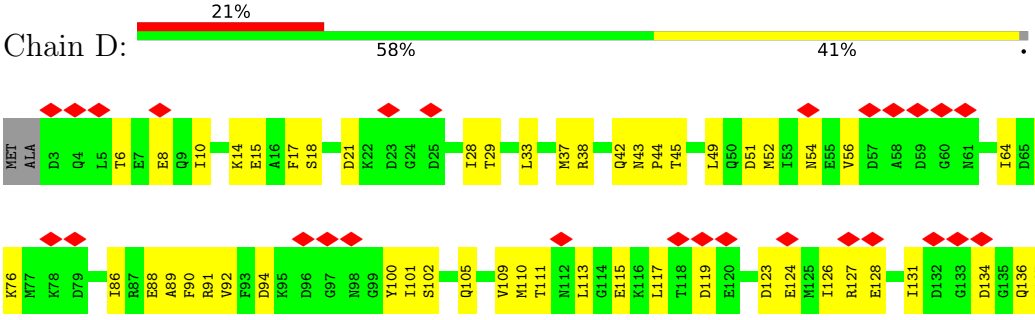
• Molecule 2: Calmodulin-1

Chain C:



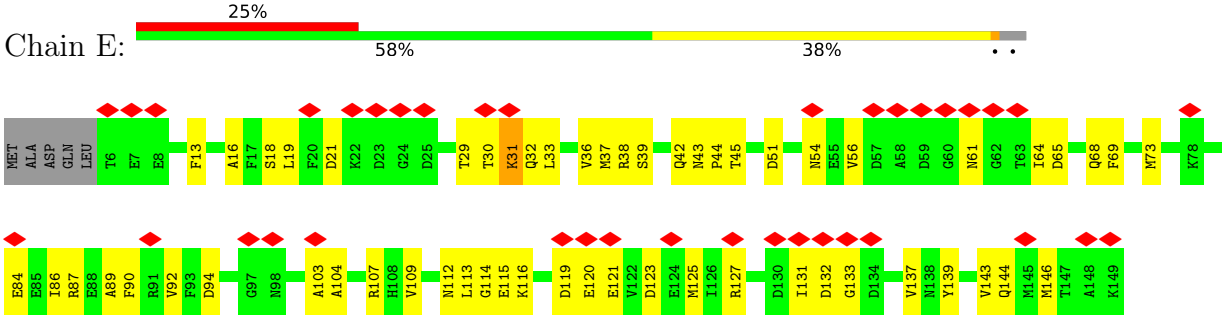
• Molecule 2: Calmodulin-1

Chain D:



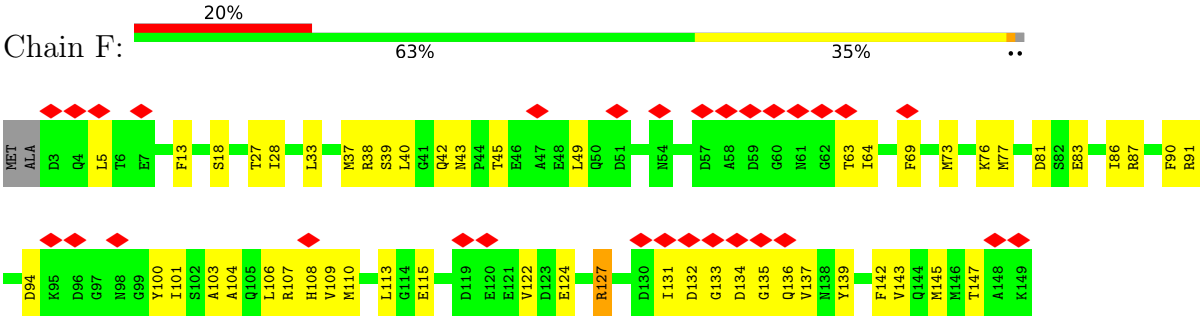
• Molecule 2: Calmodulin-1

Chain E:



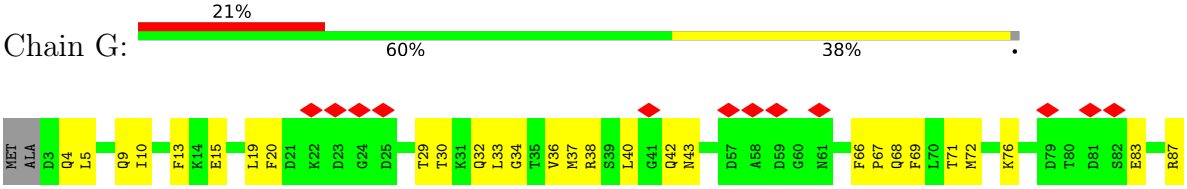
• Molecule 2: Calmodulin-1

Chain F:



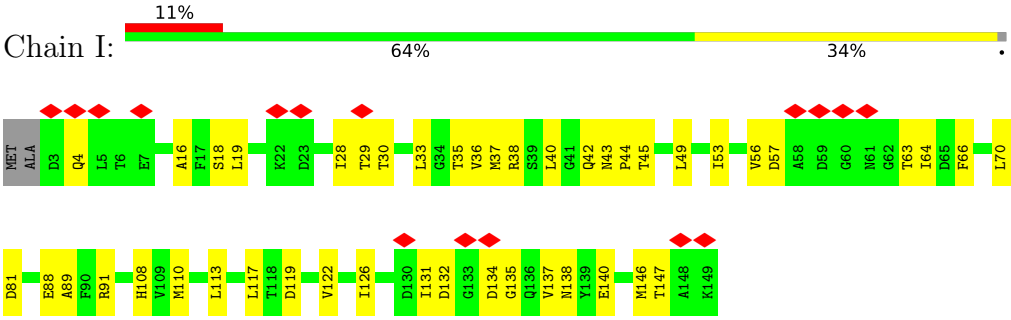
• Molecule 2: Calmodulin-1

Chain G:



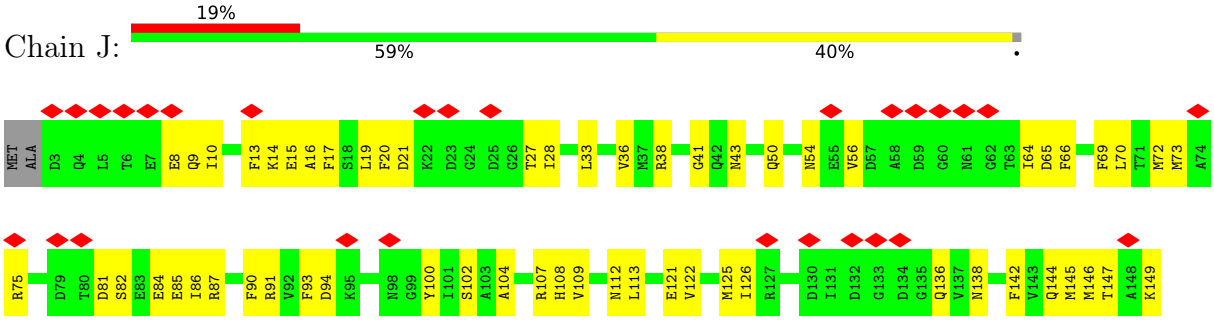
• Molecule 2: Calmodulin-1

Chain I:



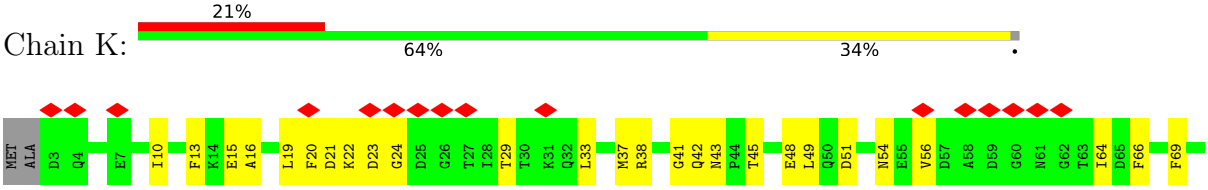
• Molecule 2: Calmodulin-1

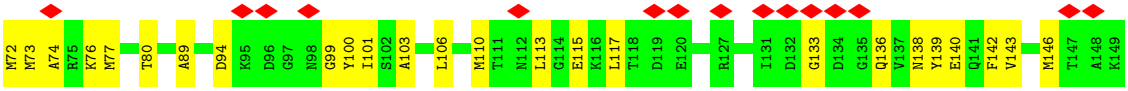
Chain J:



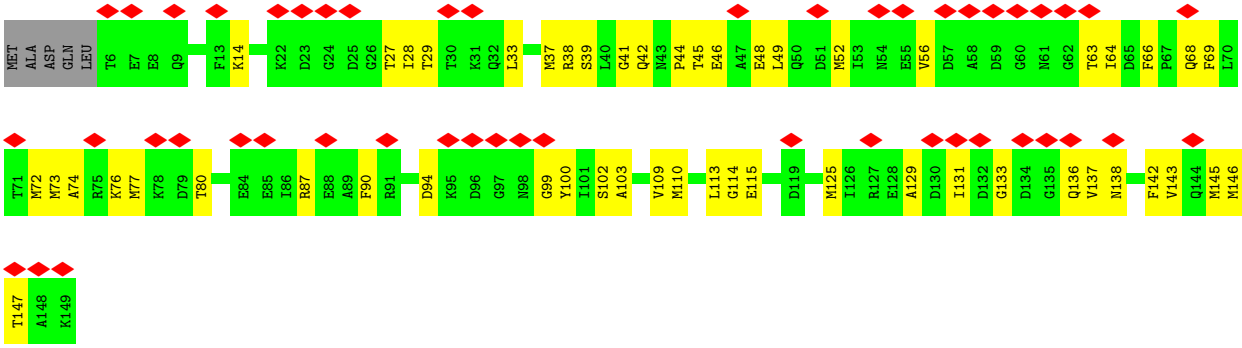
• Molecule 2: Calmodulin-1

Chain K:

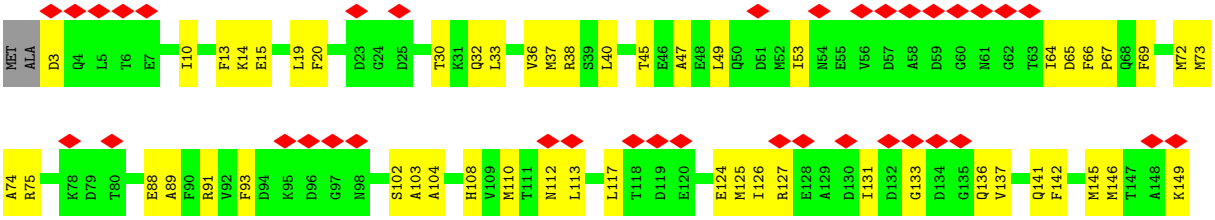




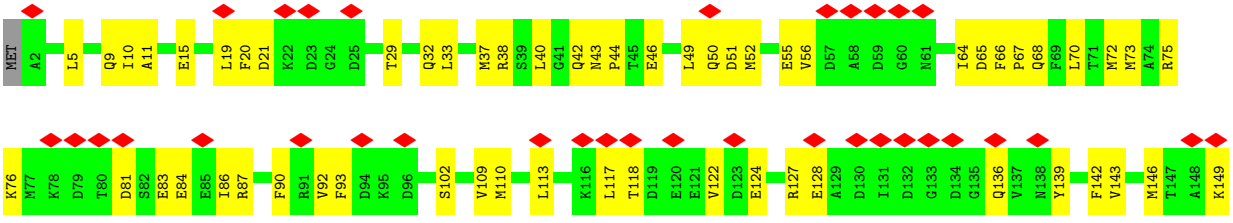
• Molecule 2: Calmodulin-1



• Molecule 2: Calmodulin-1



• Molecule 2: Calmodulin-1



4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	160273	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	NONE	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	50	Depositor
Minimum defocus (nm)	1500	Depositor
Maximum defocus (nm)	2500	Depositor
Magnification	81000	Depositor
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	1.236	Depositor
Minimum map value	-0.406	Depositor
Average map value	-0.000	Depositor
Map value standard deviation	0.027	Depositor
Recommended contour level	0.35	Depositor
Map size (Å)	643.2, 643.2, 643.2	wwPDB
Map dimensions	600, 600, 600	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.072, 1.072, 1.072	Depositor

5 Model quality

5.1 Standard geometry

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\#\|Z\| > 5$	RMSZ	$\#\|Z\| > 5$
1	A	0.25	0/8971	0.41	0/12051
1	H	0.25	0/8930	0.41	0/11995
1	X	0.27	0/3088	0.43	0/4165
1	Y	0.26	0/3067	0.40	0/4137
2	B	0.25	0/1173	0.41	0/1573
2	C	0.25	0/1173	0.43	0/1573
2	D	0.25	0/1173	0.45	0/1573
2	E	0.26	0/1148	0.44	0/1539
2	F	0.25	0/1173	0.43	0/1573
2	G	0.26	0/1173	0.47	0/1573
2	I	0.25	0/1173	0.41	0/1573
2	J	0.25	0/1173	0.48	0/1573
2	K	0.25	0/1173	0.45	0/1573
2	L	0.25	0/1148	0.43	0/1539
2	M	0.25	0/1173	0.44	0/1573
2	N	0.25	0/1178	0.43	0/1580
All	All	0.25	0/38087	0.42	0/51163

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	8806	0	8897	322	0
1	H	8766	0	8858	326	0
1	X	3036	0	3112	88	0
1	Y	3015	0	3090	76	0
2	B	1161	0	1096	42	0
2	C	1161	0	1096	44	0
2	D	1161	0	1096	59	0
2	E	1136	0	1073	52	0
2	F	1161	0	1096	38	0
2	G	1161	0	1096	53	0
2	I	1161	0	1096	38	0
2	J	1161	0	1096	58	0
2	K	1161	0	1096	45	0
2	L	1136	0	1073	47	0
2	M	1161	0	1096	47	0
2	N	1166	0	1101	55	0
All	All	37510	0	37068	1176	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 16.

All (1176) 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:H:248:ARG:HH12	1:H:252:GLN:HG2	1.28	0.95
1:A:827:MET:HG3	2:D:38:ARG:HA	1.49	0.94
1:A:470:PHE:O	1:A:474:GLN:NE2	2.10	0.85
1:A:205:SER:HA	1:A:260:HIS:HB2	1.62	0.81
1:X:1566:PHE:HA	1:Y:1442:LYS:H	1.43	0.81
1:H:549:ILE:HG12	1:H:558:GLU:HG2	1.65	0.79
1:H:879:ARG:NH2	2:M:38:ARG:O	2.17	0.77
2:B:100:TYR:HB3	2:B:136:GLN:HB3	1.67	0.76
1:H:798:ARG:HA	2:J:38:ARG:HH22	1.50	0.76
1:A:802:GLY:HA2	2:C:38:ARG:HB3	1.67	0.75
1:H:379:LYS:HD3	1:H:573:PHE:HB3	1.68	0.75
2:B:109:VAL:HG13	2:B:113:LEU:HD12	1.67	0.75
2:K:56:VAL:HG11	2:K:64:ILE:HG13	1.69	0.75
1:A:822:GLN:NE2	2:D:110:MET:O	2.20	0.75
1:A:751:ARG:HB2	1:A:754:GLN:HE22	1.50	0.74
1:Y:1642:ASN:OD1	1:Y:1702:TRP:NE1	2.22	0.73
1:H:165:SER:O	1:H:214:ASN:ND2	2.22	0.73
1:Y:1664:GLN:HE22	1:Y:1797:ILE:HA	1.52	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:378:ARG:HH11	1:A:391:ILE:HG22	1.53	0.72
1:H:252:GLN:NE2	1:H:287:TYR:O	2.22	0.72
2:C:72:MET:HA	2:C:75:ARG:HE	1.54	0.72
1:H:698:PRO:HA	1:H:700:ARG:HH21	1.55	0.71
2:F:103:ALA:HB3	2:F:133:GLY:HA2	1.72	0.70
2:F:5:LEU:HD21	2:F:77:MET:HG2	1.72	0.70
1:H:802:GLY:HA2	2:J:38:ARG:HB3	1.72	0.70
2:N:21:ASP:OD1	2:N:32:GLN:NE2	2.25	0.70
1:Y:1759:TYR:OH	1:Y:1766:GLU:HG2	1.91	0.70
1:X:1441:ARG:HA	1:Y:1566:PHE:HB3	1.72	0.69
1:A:832:ARG:NH2	2:D:128:GLU:OE1	2.24	0.69
1:A:824:TYR:CE2	2:D:86:ILE:HG13	2.26	0.69
2:B:107:ARG:HG3	2:B:122:VAL:HG11	1.74	0.69
2:I:16:ALA:HA	2:I:19:LEU:HG	1.75	0.69
2:G:30:THR:O	2:G:33:LEU:HB3	1.93	0.69
1:H:12:ARG:HD2	1:H:63:ARG:HD3	1.72	0.69
1:H:803:TYR:CG	2:J:149:LYS:HD3	2.28	0.69
2:C:129:ALA:HB1	2:C:141:GLN:HE22	1.58	0.69
2:F:131:ILE:HB	2:F:137:VAL:HG12	1.72	0.69
2:I:126:ILE:HG23	2:I:131:ILE:HB	1.75	0.69
2:N:109:VAL:HG13	2:N:113:LEU:HD22	1.72	0.69
1:A:449:PHE:HB2	1:A:564:PHE:HA	1.73	0.69
1:H:703:TYR:OH	1:H:744:GLY:O	2.09	0.69
1:A:997:LYS:O	1:A:1001:GLN:NE2	2.25	0.68
2:D:42:GLN:HA	2:D:76:LYS:HE3	1.74	0.68
1:X:1642:ASN:OD1	1:X:1706:LYS:NZ	2.26	0.68
1:A:510:ASP:OD2	1:A:640:ARG:NH2	2.26	0.68
2:B:131:ILE:HG23	2:B:137:VAL:HG21	1.75	0.68
2:D:100:TYR:HB3	2:D:136:GLN:HB3	1.76	0.68
1:H:804:GLN:NE2	2:J:125:MET:SD	2.66	0.68
2:E:123:ASP:HB3	2:E:127:ARG:HH12	1.59	0.68
1:A:828:TYR:HB2	2:D:146:MET:SD	2.34	0.68
1:A:824:TYR:HE2	2:D:86:ILE:HG13	1.56	0.68
1:A:931:GLN:HA	1:A:934:ARG:HD2	1.75	0.68
2:G:42:GLN:HB3	2:G:76:LYS:HD2	1.75	0.68
2:E:112:ASN:O	2:E:116:LYS:NZ	2.27	0.68
1:H:662:LYS:HB2	1:H:680:GLN:HE22	1.59	0.67
2:L:33:LEU:O	2:L:37:MET:HG2	1.94	0.67
2:C:110:MET:HB3	2:C:117:LEU:HD12	1.76	0.67
1:H:205:SER:HB2	1:H:264:GLN:HE22	1.58	0.67
2:N:46:GLU:O	2:N:50:GLN:NE2	2.27	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:879:ARG:NH1	2:F:39:SER:O	2.24	0.67
1:A:703:TYR:OH	1:A:744:GLY:O	2.12	0.67
2:F:43:ASN:ND2	2:F:81:ASP:OD1	2.28	0.67
1:H:219:ARG:HH21	1:H:245:GLU:HG2	1.59	0.67
1:H:804:GLN:HE22	2:J:121:GLU:HB3	1.59	0.67
2:D:29:THR:O	2:D:33:LEU:N	2.27	0.67
2:J:33:LEU:HD22	2:J:64:ILE:HG13	1.76	0.67
2:D:109:VAL:HG13	2:D:113:LEU:HD12	1.76	0.66
1:A:156:ASN:HB2	1:A:653:THR:HG22	1.76	0.66
1:A:257:ARG:NH1	1:A:294:PRO:O	2.28	0.66
1:A:379:LYS:HB3	1:A:575:GLU:HG3	1.75	0.66
1:H:925:MET:HE2	2:N:70:LEU:HD11	1.76	0.66
1:Y:1557:ARG:HH11	1:Y:1558:GLN:HG2	1.60	0.66
2:F:134:ASP:OD1	2:F:135:GLY:N	2.29	0.66
2:L:38:ARG:NH2	2:L:46:GLU:OE2	2.29	0.66
1:A:998:ASP:OD2	1:H:1003:ARG:NH2	2.29	0.66
2:E:61:ASN:ND2	2:E:68:GLN:OE1	2.28	0.66
2:C:138:ASN:O	2:C:141:GLN:NE2	2.28	0.66
2:E:103:ALA:HB3	2:E:133:GLY:HA2	1.78	0.66
1:H:195:LYS:NZ	1:H:314:LEU:O	2.29	0.66
2:N:38:ARG:HH22	2:N:49:LEU:HD11	1.60	0.66
1:A:97:LYS:HB2	1:X:1757:ASN:HD21	1.61	0.66
1:H:189:GLU:N	1:H:189:GLU:OE1	2.28	0.66
2:K:103:ALA:HB3	2:K:133:GLY:HA2	1.78	0.66
1:A:122:ASP:OD2	1:X:1789:GLN:NE2	2.29	0.65
2:M:72:MET:HA	2:M:75:ARG:HG2	1.78	0.65
1:A:107:LEU:HB2	1:A:658:VAL:HG12	1.77	0.65
2:F:100:TYR:HB3	2:F:136:GLN:HB3	1.76	0.65
1:H:12:ARG:HH12	1:H:65:PRO:HA	1.62	0.65
1:A:506:LEU:HD11	1:A:636:GLY:HA3	1.77	0.65
2:D:88:GLU:HA	2:D:91:ARG:HD2	1.79	0.65
2:J:122:VAL:HA	2:J:125:MET:HE2	1.79	0.65
1:H:36:LYS:O	1:H:51:ARG:NH1	2.29	0.65
2:N:46:GLU:HA	2:N:49:LEU:HD12	1.79	0.65
2:E:123:ASP:HB3	2:E:127:ARG:NH1	2.13	0.64
1:H:226:ILE:HB	1:H:433:ILE:HG22	1.79	0.64
2:N:40:LEU:HD22	2:N:76:LYS:HD3	1.77	0.64
1:H:455:ASN:ND2	1:H:559:TYR:OH	2.30	0.64
2:M:88:GLU:HG2	2:M:91:ARG:HH22	1.62	0.64
2:K:106:LEU:O	2:K:110:MET:HB2	1.96	0.64
1:A:858:ARG:HB3	1:A:862:ARG:HH21	1.63	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:964:LEU:HB3	1:H:964:LEU:HB3	1.80	0.64
2:F:87:ARG:HB2	2:F:143:VAL:HG11	1.79	0.64
1:H:848:LEU:HD22	2:L:125:MET:HG2	1.80	0.64
2:M:10:ILE:HG22	2:M:14:LYS:HE2	1.79	0.64
2:M:19:LEU:HD13	2:N:113:LEU:HD21	1.79	0.64
1:A:100:TYR:HB3	1:A:137:PRO:HB2	1.80	0.64
1:H:107:LEU:HB3	1:H:658:VAL:HG22	1.79	0.64
1:H:448:SER:HB3	1:H:451:GLN:HG3	1.80	0.64
1:A:460:LYS:HG2	1:A:643:LEU:HD21	1.80	0.63
2:N:87:ARG:HA	2:N:90:PHE:HD2	1.63	0.63
1:A:21:VAL:HG21	1:A:678:VAL:HG11	1.79	0.63
2:K:45:THR:O	2:K:49:LEU:N	2.30	0.63
1:A:779:GLY:HA2	2:B:38:ARG:HB3	1.78	0.63
1:H:854:ARG:NH2	2:L:146:MET:O	2.32	0.63
1:A:214:ASN:HB3	1:A:217:SER:HB3	1.80	0.63
2:B:98:ASN:HD21	1:X:1608:ILE:HG22	1.63	0.63
2:C:33:LEU:HD13	2:C:64:ILE:HG21	1.80	0.63
1:H:854:ARG:NE	2:L:41:GLY:HA2	2.14	0.63
1:X:1452:TYR:O	1:X:1454:ARG:NH1	2.32	0.63
1:X:1674:LEU:HD23	1:X:1677:LEU:HD21	1.80	0.63
1:X:1748:THR:OG1	1:X:1751:GLN:NE2	2.31	0.63
1:Y:1585:GLN:OE1	1:Y:1588:ARG:NH1	2.31	0.63
2:B:99:GLY:HA2	2:B:139:TYR:HE1	1.64	0.63
1:H:798:ARG:NH1	2:J:43:ASN:O	2.31	0.63
1:H:822:GLN:NE2	2:K:110:MET:O	2.31	0.63
1:H:40:LEU:HD21	1:H:42:LEU:HG	1.81	0.62
2:K:69:PHE:HA	2:K:72:MET:SD	2.39	0.62
1:A:242:TYR:HD2	1:A:642:SER:HB2	1.65	0.62
1:H:874:ARG:HB3	2:M:38:ARG:HD2	1.81	0.62
1:A:823:LYS:HD3	2:D:45:THR:HA	1.81	0.62
2:E:87:ARG:NH1	2:E:144:GLN:OE1	2.33	0.62
2:K:16:ALA:HA	2:K:19:LEU:HD12	1.81	0.62
1:A:282:ALA:O	1:A:288:THR:OG1	2.16	0.62
1:A:831:ARG:NH2	2:D:149:LYS:O	2.32	0.62
2:I:38:ARG:NH1	2:I:44:PRO:O	2.32	0.62
1:A:480:GLU:HG2	1:A:745:LYS:HG2	1.82	0.62
1:H:520:ASP:HB3	1:H:565:LEU:HD11	1.79	0.62
1:H:854:ARG:HE	2:L:41:GLY:HA2	1.63	0.62
2:D:111:THR:HG22	2:D:117:LEU:HB2	1.82	0.62
2:F:94:ASP:HA	2:F:101:ILE:HD12	1.81	0.62
2:J:100:TYR:HB3	2:J:136:GLN:HG2	1.80	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:N:87:ARG:HB3	2:N:143:VAL:HG11	1.82	0.62
1:A:697:PHE:HB3	1:A:749:PHE:HB3	1.82	0.62
1:A:745:LYS:HG3	1:A:746:THR:HG23	1.80	0.62
1:H:160:ILE:HG22	1:H:657:TYR:HA	1.82	0.62
1:A:822:GLN:NE2	2:D:115:GLU:O	2.31	0.61
1:A:978:ALA:HB2	1:H:978:ALA:HB2	1.82	0.61
2:L:102:SER:OG	2:L:133:GLY:O	2.18	0.61
1:X:1457:GLU:O	1:X:1460:LEU:HB3	1.99	0.61
2:D:90:PHE:O	2:D:94:ASP:N	2.33	0.61
1:H:938:GLU:HA	1:H:941:LYS:HD2	1.83	0.61
1:H:827:MET:HE1	2:K:43:ASN:HA	1.81	0.61
2:N:102:SER:HB2	2:N:136:GLN:HE22	1.65	0.61
2:C:10:ILE:HG23	2:C:66:PHE:HZ	1.63	0.61
2:F:40:LEU:HB3	2:F:76:LYS:HE2	1.82	0.61
1:A:508:LEU:HD12	1:A:527:LEU:HD23	1.83	0.61
1:A:810:LYS:HD3	1:A:814:ARG:HH21	1.65	0.61
2:I:29:THR:HA	2:I:63:THR:HA	1.83	0.61
1:A:214:ASN:ND2	1:A:216:ASN:O	2.34	0.61
2:C:27:THR:HG21	2:C:61:ASN:HD21	1.66	0.61
1:H:540:LYS:HB3	1:H:542:ARG:HH21	1.65	0.61
2:K:21:ASP:HB3	2:K:24:GLY:HA2	1.81	0.61
1:H:154:GLU:OE2	1:H:430:HIS:NE2	2.31	0.61
1:H:456:TYR:HE1	1:H:496:ILE:HG23	1.66	0.61
2:J:142:PHE:O	2:J:146:MET:HG2	2.00	0.61
1:A:929:ILE:HA	1:A:932:LEU:HD12	1.83	0.60
2:B:112:ASN:HA	2:B:116:LYS:HE3	1.83	0.60
1:H:799:TYR:HD1	2:J:43:ASN:HD22	1.49	0.60
2:L:28:ILE:HG13	2:L:64:ILE:HD13	1.83	0.60
2:L:100:TYR:HB3	2:L:136:GLN:HB3	1.83	0.60
1:A:872:ARG:HG3	2:F:86:ILE:HG12	1.83	0.60
2:G:103:ALA:HB3	2:G:133:GLY:HA2	1.82	0.60
1:A:715:LYS:HD3	1:A:717:LYS:HE2	1.83	0.60
1:A:928:LYS:HD2	2:G:67:PRO:HB2	1.83	0.60
2:J:142:PHE:HA	2:J:145:MET:SD	2.41	0.60
2:M:104:ALA:O	2:M:108:HIS:ND1	2.34	0.60
1:A:840:ALA:O	1:A:844:ILE:HG12	2.00	0.60
2:G:140:GLU:HA	2:G:143:VAL:HB	1.82	0.60
2:K:72:MET:O	2:K:76:LYS:HG2	2.00	0.60
1:H:875:GLY:O	1:H:879:ARG:HG2	2.02	0.60
2:D:15:GLU:OE2	2:E:114:GLY:N	2.31	0.60
1:H:767:ARG:HA	2:I:113:LEU:HD21	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:18:SER:OG	2:J:112:ASN:ND2	2.35	0.60
1:H:220:PHE:O	1:H:439:TYR:OH	2.16	0.60
1:A:378:ARG:HE	1:A:380:LEU:HD21	1.67	0.60
1:X:1568:LEU:HB3	1:X:1571:TYR:HB3	1.84	0.60
2:L:29:THR:O	2:L:33:LEU:N	2.32	0.59
1:X:1449:MET:HB2	1:X:1828:VAL:HB	1.84	0.59
1:A:51:ARG:NH1	1:A:53:ASP:OD1	2.35	0.59
1:A:159:ILE:HG22	1:A:656:HIS:HB2	1.84	0.59
1:H:264:GLN:HA	1:H:301:ASP:HB3	1.84	0.59
2:B:33:LEU:HB2	2:B:64:ILE:HG13	1.84	0.59
1:A:22:TRP:CG	1:A:83:PRO:HB3	2.37	0.59
2:D:28:ILE:HG22	2:D:64:ILE:HB	1.83	0.59
2:G:13:PHE:HB3	2:G:69:PHE:CE2	2.38	0.59
1:H:219:ARG:NH2	1:H:248:ARG:HD3	2.18	0.59
2:N:42:GLN:HB2	2:N:76:LYS:HE2	1.85	0.59
1:A:975:GLU:HG2	1:A:979:LYS:HE3	1.85	0.59
1:H:373:HIS:O	1:H:377:HIS:ND1	2.25	0.59
1:A:13:VAL:HB	1:A:60:PRO:HB2	1.85	0.59
1:H:252:GLN:OE1	1:H:291:GLY:N	2.34	0.59
1:H:277:LEU:HG	1:H:327:ARG:HG2	1.84	0.59
2:F:142:PHE:HA	2:F:145:MET:HG2	1.85	0.59
1:A:199:SER:O	1:A:202:ILE:HG12	2.03	0.58
1:H:774:GLN:HG2	2:I:117:LEU:HD11	1.84	0.58
1:H:813:ARG:NH2	2:J:15:GLU:OE2	2.36	0.58
2:L:72:MET:O	2:L:76:LYS:HG2	2.03	0.58
1:A:235:ILE:HD11	1:A:429:GLN:HA	1.85	0.58
1:A:944:LYS:HA	1:A:947:MET:SD	2.44	0.58
1:H:813:ARG:HG3	2:J:19:LEU:HD22	1.85	0.58
1:Y:1693:ARG:NH1	1:Y:1728:GLN:OE1	2.36	0.58
1:A:866:ALA:O	1:A:870:GLN:HG2	2.03	0.58
1:A:377:HIS:HA	1:A:390:PRO:HA	1.86	0.58
1:A:782:LEU:HD12	2:B:38:ARG:HB2	1.84	0.58
1:A:96:SER:O	1:X:1757:ASN:ND2	2.37	0.58
1:H:921:LEU:HD13	2:N:66:PHE:HE2	1.69	0.58
1:A:265:LEU:HD23	1:A:329:LEU:HD22	1.86	0.58
1:A:793:ALA:HA	2:C:93:PHE:HZ	1.66	0.58
2:F:28:ILE:HB	2:F:64:ILE:HB	1.86	0.58
2:F:45:THR:O	2:F:49:LEU:N	2.32	0.58
1:H:539:GLU:HB3	1:H:549:ILE:HB	1.86	0.58
1:A:122:ASP:HA	1:A:125:ASN:HD21	1.68	0.58
1:H:824:TYR:HE2	2:K:146:MET:HB3	1.69	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L:100:TYR:O	2:L:136:GLN:NE2	2.36	0.58
1:Y:1745:ASN:OD1	1:Y:1746:ALA:N	2.37	0.58
1:A:157:GLN:HB2	1:A:433:ILE:HG12	1.86	0.58
1:A:366:VAL:HA	1:A:584:LYS:HB2	1.85	0.58
1:A:1037:GLU:OE1	1:H:1038:LYS:NZ	2.37	0.58
2:J:102:SER:HA	2:J:136:GLN:HG3	1.85	0.58
1:X:1469:LYS:HE3	1:X:1520:ARG:HH12	1.68	0.58
1:A:936:VAL:HG13	1:H:939:GLN:HE22	1.68	0.57
1:H:889:ILE:HD11	2:N:113:LEU:HD23	1.85	0.57
2:G:30:THR:O	2:G:33:LEU:CB	2.51	0.57
1:Y:1451:GLU:HG2	1:Y:1492:HIS:CE1	2.39	0.57
2:D:126:ILE:HA	2:D:131:ILE:HD12	1.85	0.57
1:H:206:ILE:HB	1:H:412:PHE:HE1	1.69	0.57
1:H:397:THR:HA	1:H:400:ARG:HG2	1.87	0.57
1:A:539:GLU:HB2	1:A:549:ILE:HB	1.86	0.57
2:G:134:ASP:OD1	2:G:135:GLY:N	2.38	0.57
1:A:144:GLU:OE1	1:A:179:TYR:OH	2.23	0.57
1:H:841:THR:HG21	2:L:109:VAL:HG12	1.86	0.57
2:B:18:SER:O	2:C:108:HIS:NE2	2.35	0.57
1:X:1544:TYR:HE1	1:X:1558:GLN:HB3	1.69	0.57
1:X:1697:SER:HA	1:X:1700:GLU:HG2	1.85	0.57
1:X:1748:THR:N	1:X:1751:GLN:OE1	2.38	0.57
1:A:742:GLN:HB3	1:A:749:PHE:HB2	1.87	0.57
2:B:126:ILE:HA	2:B:131:ILE:HB	1.87	0.57
1:H:14:TRP:N	1:H:61:HIS:O	2.33	0.57
1:H:854:ARG:NH1	2:L:41:GLY:O	2.35	0.57
1:H:862:ARG:HH22	2:M:112:ASN:HD21	1.53	0.57
1:A:249:VAL:HG22	1:A:259:TYR:HE2	1.69	0.57
1:H:847:TYR:OH	2:L:143:VAL:O	2.20	0.57
2:J:16:ALA:HA	2:J:19:LEU:HD12	1.87	0.57
2:L:103:ALA:HB3	2:L:133:GLY:HA2	1.87	0.57
1:A:252:GLN:HB2	1:A:290:GLN:HB2	1.87	0.57
1:H:447:ASN:ND2	1:H:558:GLU:O	2.37	0.57
2:I:110:MET:HB3	2:I:117:LEU:HD12	1.86	0.57
2:N:38:ARG:HH12	2:N:49:LEU:HD11	1.70	0.57
2:G:4:GLN:NE2	2:G:5:LEU:O	2.38	0.56
1:Y:1543:GLN:HE22	1:Y:1807:SER:HB3	1.69	0.56
1:A:503:LEU:HG	1:A:530:THR:HB	1.86	0.56
2:F:18:SER:O	2:G:108:HIS:NE2	2.33	0.56
1:A:965:ARG:NH2	1:H:960:GLU:OE2	2.27	0.56
2:K:100:TYR:HB3	2:K:136:GLN:HB3	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1697:SER:O	1:X:1700:GLU:HG2	2.05	0.56
1:A:790:GLN:HA	2:C:113:LEU:HD21	1.86	0.56
1:A:868:ILE:HA	1:A:871:LYS:HE3	1.88	0.56
1:H:149:GLN:NE2	1:H:153:ASP:OD2	2.38	0.56
2:I:45:THR:O	2:I:49:LEU:N	2.35	0.56
2:J:72:MET:HA	2:J:75:ARG:HG2	1.87	0.56
2:F:107:ARG:HD3	2:F:122:VAL:HG13	1.88	0.56
2:M:49:LEU:O	2:M:53:ILE:HG12	2.06	0.56
1:A:186:SER:HB2	1:A:189:GLU:HB2	1.87	0.56
2:D:131:ILE:HG23	2:D:137:VAL:HG21	1.88	0.56
2:K:19:LEU:HD21	2:L:113:LEU:HG	1.87	0.56
2:F:104:ALA:O	2:F:108:HIS:ND1	2.38	0.56
2:I:122:VAL:O	2:I:126:ILE:HD12	2.06	0.56
1:H:772:ARG:HH21	2:I:89:ALA:HB2	1.70	0.56
1:Y:1662:VAL:HG21	1:Y:1708:LEU:HD13	1.86	0.56
1:A:640:ARG:O	1:A:644:HIS:ND1	2.39	0.55
2:F:69:PHE:O	2:F:73:MET:HG2	2.05	0.55
1:H:132:MET:SD	1:H:133:GLY:N	2.79	0.55
2:G:37:MET:HE2	2:G:42:GLN:HB2	1.88	0.55
2:G:123:ASP:O	2:G:127:ARG:HG3	2.05	0.55
1:H:477:TYR:HD2	1:H:484:TRP:HA	1.71	0.55
2:J:8:GLU:OE1	2:J:9:GLN:NE2	2.37	0.55
1:A:1027:LEU:HB3	1:H:1027:LEU:HB3	1.88	0.55
1:A:825:TRP:HZ3	2:D:131:ILE:HD11	1.71	0.55
2:L:131:ILE:HG23	2:L:137:VAL:HB	1.88	0.55
1:Y:1726:LEU:HD11	1:Y:1740:ILE:HG23	1.88	0.55
1:A:662:LYS:O	1:A:680:GLN:NE2	2.36	0.55
2:F:109:VAL:O	2:F:113:LEU:N	2.36	0.55
1:H:189:GLU:HG3	1:H:234:ILE:HB	1.89	0.55
2:M:33:LEU:HD13	2:M:64:ILE:HG21	1.89	0.55
1:A:53:ASP:HB2	1:A:57:GLY:HA3	1.88	0.55
2:L:48:GLU:O	2:L:52:MET:HG3	2.06	0.55
2:N:93:PHE:HE1	2:N:109:VAL:HG21	1.72	0.55
1:A:169:LYS:HD2	1:A:437:ASP:HB3	1.89	0.55
1:A:825:TRP:CZ3	2:D:131:ILE:HD11	2.42	0.55
2:G:4:GLN:OE1	1:H:927:ASN:ND2	2.28	0.55
1:H:248:ARG:O	1:H:248:ARG:NH1	2.38	0.55
2:K:45:THR:H	2:K:48:GLU:HB3	1.71	0.55
2:L:27:THR:HB	2:L:63:THR:HB	1.88	0.55
2:M:110:MET:SD	2:M:117:LEU:HD12	2.46	0.55
1:A:347:SER:HA	1:A:390:PRO:HB2	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:798:ARG:HD3	2:C:45:THR:HG22	1.89	0.55
2:F:124:GLU:HG2	2:F:127:ARG:CZ	2.37	0.55
2:J:20:PHE:HD2	2:J:36:VAL:HG22	1.71	0.55
2:D:18:SER:O	2:E:112:ASN:ND2	2.40	0.55
1:H:198:ALA:HB1	1:H:311:ALA:HB1	1.88	0.55
1:A:940:ASN:O	1:A:944:LYS:HG2	2.07	0.54
2:B:30:THR:HB	2:B:53:ILE:HG12	1.89	0.54
1:H:122:ASP:OD1	1:H:123:ILE:HD12	2.08	0.54
2:I:138:ASN:HD21	2:I:140:GLU:HB3	1.71	0.54
2:D:17:PHE:O	2:D:21:ASP:N	2.40	0.54
1:A:874:ARG:HH21	2:F:115:GLU:HG2	1.72	0.54
2:B:33:LEU:HD13	2:B:64:ILE:HG21	1.90	0.54
2:G:143:VAL:HA	2:G:146:MET:HB2	1.88	0.54
1:H:578:LYS:HA	1:H:581:LYS:HE3	1.89	0.54
1:X:1475:VAL:HA	1:X:1481:LEU:HD13	1.88	0.54
2:I:134:ASP:OD1	2:I:135:GLY:N	2.41	0.54
1:A:32:LYS:HB2	1:A:35:ASP:HB2	1.88	0.54
1:A:81:HIS:ND1	1:A:83:PRO:HG2	2.22	0.54
1:X:1442:LYS:H	1:Y:1566:PHE:HA	1.72	0.54
1:A:203:MET:HA	1:A:206:ILE:HG12	1.90	0.54
1:A:593:GLN:NE2	1:A:594:ASP:O	2.40	0.54
1:Y:1681:LYS:HG3	1:Y:1758:LEU:HD12	1.90	0.54
1:A:882:TYR:O	1:A:885:THR:OG1	2.23	0.54
1:A:80:LEU:HD23	1:A:694:ALA:HB2	1.90	0.54
2:G:30:THR:HA	2:G:33:LEU:HB2	1.90	0.54
1:H:225:GLU:OE2	1:H:240:ARG:NH2	2.41	0.54
1:H:795:THR:O	1:H:798:ARG:HG2	2.07	0.54
2:M:19:LEU:HA	2:N:113:LEU:HD11	1.90	0.54
1:A:777:ILE:HG21	2:B:125:MET:SD	2.48	0.53
1:H:493:GLN:HA	1:H:496:ILE:HD12	1.89	0.53
2:M:112:ASN:OD1	2:M:113:LEU:N	2.41	0.53
1:A:925:MET:HB3	1:H:929:ILE:HD11	1.89	0.53
2:G:126:ILE:HG23	2:G:131:ILE:HB	1.90	0.53
1:H:1052:MET:O	1:H:1056:MET:HG2	2.08	0.53
2:M:13:PHE:HD1	2:M:40:LEU:HD11	1.72	0.53
1:A:1087:ARG:NH2	1:A:1090:GLU:OE2	2.36	0.53
2:B:27:THR:HB	2:B:63:THR:HB	1.89	0.53
1:H:28:LEU:HG	1:H:41:HIS:HB2	1.91	0.53
1:H:453:CYS:HB3	1:H:639:PHE:CE1	2.43	0.53
1:A:264:GLN:HA	1:A:301:ASP:HB3	1.89	0.53
1:H:114:GLU:HB2	1:H:669:PRO:HB3	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:K:77:MET:O	2:K:80:THR:OG1	2.26	0.53
1:A:845:GLN:NE2	2:E:113:LEU:O	2.41	0.53
1:A:846:SER:HB3	2:E:45:THR:HA	1.90	0.53
2:F:106:LEU:HB3	2:F:110:MET:HE1	1.90	0.53
2:G:10:ILE:HA	2:G:13:PHE:CD2	2.43	0.53
1:H:474:GLN:HG2	1:H:484:TRP:CD2	2.43	0.53
1:H:632:LYS:HB3	1:H:634:THR:HG23	1.89	0.53
1:H:822:GLN:HG2	2:K:117:LEU:HD11	1.91	0.53
1:A:447:ASN:ND2	1:A:558:GLU:O	2.42	0.53
1:A:797:GLN:HG2	2:C:117:LEU:HD11	1.91	0.53
2:D:119:ASP:N	2:D:119:ASP:OD1	2.42	0.53
2:M:32:GLN:O	2:M:36:VAL:HG23	2.08	0.53
1:A:922:HIS:HA	1:A:925:MET:HE2	1.91	0.53
2:C:142:PHE:O	2:C:146:MET:HG2	2.09	0.53
2:E:131:ILE:HG12	2:E:137:VAL:HB	1.91	0.53
1:H:842:ILE:HG12	2:L:114:GLY:HA3	1.90	0.53
1:H:850:GLY:O	1:H:854:ARG:HG3	2.09	0.53
1:A:189:GLU:HG2	1:A:234:ILE:O	2.08	0.53
1:A:841:THR:HG22	2:E:109:VAL:HG13	1.91	0.53
2:N:83:GLU:OE2	2:N:149:LYS:NZ	2.31	0.53
1:X:1539:HIS:CD2	1:X:1805:ASN:H	2.27	0.53
1:A:703:TYR:OH	1:A:724:LYS:NZ	2.40	0.53
1:A:898:ARG:HE	1:A:899:MET:HE1	1.74	0.53
1:H:51:ARG:NH1	1:H:52:LEU:O	2.42	0.53
1:X:1697:SER:O	1:X:1700:GLU:N	2.42	0.53
1:A:327:ARG:HH21	1:A:363:LEU:HA	1.74	0.52
1:A:957:TYR:CG	1:H:957:TYR:HB3	2.43	0.52
2:E:51:ASP:HA	2:E:54:ASN:ND2	2.24	0.52
1:H:336:GLY:O	1:H:400:ARG:NH2	2.43	0.52
1:X:1503:ARG:HH11	1:Y:1439:ILE:HG13	1.75	0.52
1:Y:1494:ASP:OD1	1:Y:1565:ASN:HB2	2.10	0.52
1:A:483:PRO:HB2	1:A:485:THR:HG23	1.91	0.52
2:L:68:GLN:O	2:L:72:MET:HG3	2.08	0.52
1:A:790:GLN:HG2	2:C:113:LEU:HD21	1.92	0.52
1:A:921:LEU:HD13	2:G:66:PHE:HB2	1.92	0.52
2:C:142:PHE:HA	2:C:145:MET:SD	2.49	0.52
2:F:13:PHE:HB3	2:F:69:PHE:HE2	1.73	0.52
1:H:889:ILE:O	1:H:892:LEU:HG	2.09	0.52
2:J:84:GLU:OE1	2:J:87:ARG:NH1	2.41	0.52
2:M:102:SER:HA	2:M:136:GLN:HA	1.92	0.52
1:A:857:TYR:HD2	2:E:19:LEU:HD13	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L:33:LEU:HD13	2:L:64:ILE:HG12	1.90	0.52
1:X:1557:ARG:NH1	1:X:1560:GLU:OE1	2.42	0.52
1:A:392:SER:O	1:A:396:ALA:N	2.38	0.52
1:H:819:THR:HG22	2:K:115:GLU:H	1.75	0.52
1:A:847:TYR:CD1	2:E:86:ILE:HG21	2.44	0.52
1:H:879:ARG:HH11	2:M:149:LYS:HD3	1.75	0.52
2:K:10:ILE:HG23	2:K:66:PHE:HZ	1.74	0.52
1:Y:1775:ARG:NH1	1:Y:1778:GLN:OE1	2.43	0.52
1:A:1042:ASN:HA	1:A:1045:ILE:HD12	1.92	0.52
1:H:72:ASN:HA	1:H:92:ARG:NH2	2.25	0.52
1:H:246:LYS:HZ2	1:H:567:LYS:HB3	1.75	0.52
1:H:782:LEU:HD13	2:I:35:THR:HG23	1.92	0.52
2:L:69:PHE:O	2:L:73:MET:HG2	2.09	0.52
1:X:1459:LYS:O	1:X:1462:LYS:HG3	2.10	0.52
1:X:1715:GLU:HA	1:X:1718:GLU:OE1	2.10	0.52
1:Y:1544:TYR:HB3	1:Y:1562:CYS:HA	1.90	0.52
2:E:90:PHE:HB3	2:E:139:TYR:CE1	2.45	0.52
1:H:580:LEU:HD12	1:H:588:LEU:HD21	1.91	0.52
2:M:66:PHE:HA	2:M:69:PHE:HB3	1.90	0.52
1:A:523:TRP:O	1:A:527:LEU:HG	2.09	0.52
1:A:664:ASN:HA	1:A:676:ARG:HG3	1.91	0.52
1:A:729:ASN:O	1:A:733:LYS:HG2	2.10	0.52
2:B:27:THR:HG22	2:B:65:ASP:HA	1.91	0.52
2:J:109:VAL:HG13	2:J:113:LEU:HB3	1.92	0.52
1:A:872:ARG:CZ	2:F:43:ASN:HD22	2.23	0.52
2:E:18:SER:HA	2:E:21:ASP:HB2	1.92	0.52
1:H:854:ARG:HH22	2:L:147:THR:HA	1.75	0.52
2:N:51:ASP:O	2:N:55:GLU:HG3	2.09	0.52
1:A:166:GLY:H	1:A:169:LYS:HE3	1.75	0.51
1:A:751:ARG:HB2	1:A:754:GLN:NE2	2.22	0.51
1:H:453:CYS:HB3	1:H:639:PHE:CZ	2.45	0.51
2:K:33:LEU:O	2:K:37:MET:HG2	2.10	0.51
2:K:99:GLY:HA2	2:K:139:TYR:CZ	2.45	0.51
1:A:225:GLU:HB2	1:A:238:ASN:HB3	1.93	0.51
1:A:925:MET:HG2	2:G:67:PRO:HB3	1.90	0.51
1:A:1002:THR:HG22	1:H:1002:THR:HG22	1.93	0.51
1:H:219:ARG:HH22	1:H:248:ARG:HD3	1.75	0.51
1:A:500:GLU:OE2	1:A:644:HIS:NE2	2.43	0.51
1:A:771:ILE:O	1:A:775:LYS:HG2	2.10	0.51
1:H:392:SER:O	1:H:396:ALA:N	2.40	0.51
2:M:13:PHE:HB3	2:M:69:PHE:CE2	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:33:LEU:O	2:D:37:MET:HG2	2.10	0.51
1:H:915:VAL:O	1:H:918:TYR:HB3	2.10	0.51
1:H:1086:SER:OG	1:X:1581:GLN:OE1	2.21	0.51
1:A:29:LYS:HB2	1:A:39:LEU:HB3	1.91	0.51
1:A:99:ILE:O	1:A:109:ALA:HA	2.10	0.51
2:L:142:PHE:HD1	2:L:145:MET:HE3	1.75	0.51
2:N:29:THR:O	2:N:33:LEU:N	2.39	0.51
2:B:91:ARG:HD3	2:B:139:TYR:OH	2.10	0.51
1:H:831:ARG:HD2	2:K:41:GLY:HA3	1.91	0.51
1:H:1064:THR:O	1:H:1068:GLU:HB2	2.10	0.51
2:B:37:MET:HG3	2:B:44:PRO:HG3	1.92	0.51
1:H:806:ARG:HH22	2:J:41:GLY:HA2	1.75	0.51
2:N:29:THR:H	2:N:32:GLN:HB2	1.74	0.51
1:A:220:PHE:HE2	1:A:222:LYS:HD3	1.75	0.51
2:D:37:MET:HB3	2:D:44:PRO:HG3	1.92	0.51
2:I:66:PHE:O	2:I:70:LEU:HG	2.10	0.51
2:L:42:GLN:HB2	2:L:76:LYS:HE3	1.93	0.51
1:A:662:LYS:HD3	1:A:676:ARG:HH21	1.76	0.51
2:E:132:ASP:H	2:E:137:VAL:HG21	1.76	0.51
1:H:355:GLU:HG3	1:H:356:PRO:HD3	1.92	0.51
1:H:681:LEU:HD22	1:H:686:VAL:HG21	1.92	0.51
1:H:993:ALA:HB1	1:H:997:LYS:NZ	2.26	0.51
2:K:29:THR:O	2:K:33:LEU:N	2.39	0.51
2:M:66:PHE:CG	2:M:67:PRO:HD3	2.46	0.51
1:Y:1775:ARG:HB3	1:Y:1779:MET:HE1	1.93	0.51
1:A:888:ALA:HA	2:G:89:ALA:HB1	1.93	0.50
2:I:30:THR:HB	2:I:53:ILE:HG12	1.92	0.50
2:N:86:ILE:HG22	2:N:90:PHE:CE2	2.46	0.50
1:A:819:THR:HG22	2:D:115:GLU:H	1.76	0.50
1:A:1041:LEU:HA	1:A:1044:ARG:HD2	1.93	0.50
1:H:12:ARG:NH1	1:H:65:PRO:HA	2.24	0.50
1:H:248:ARG:NH1	1:H:252:GLN:HG2	2.11	0.50
1:Y:1470:PRO:HB3	1:Y:1529:PHE:CG	2.46	0.50
1:H:921:LEU:HD13	2:N:66:PHE:CE2	2.45	0.50
2:J:13:PHE:HB3	2:J:69:PHE:HE2	1.76	0.50
1:A:26:GLU:HB2	1:A:41:HIS:HB3	1.92	0.50
1:A:169:LYS:HZ2	1:A:170:THR:HG23	1.77	0.50
1:A:1056:MET:HG3	1:H:1056:MET:HE1	1.93	0.50
2:B:75:ARG:HA	2:B:78:LYS:HG2	1.94	0.50
2:B:99:GLY:O	2:B:138:ASN:ND2	2.39	0.50
2:D:51:ASP:HA	2:D:54:ASN:ND2	2.25	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Y:1569:ALA:O	1:Y:1572:ARG:HG2	2.12	0.50
1:A:861:LEU:HG	2:E:19:LEU:HD21	1.94	0.50
1:H:277:LEU:HD22	1:H:279:LEU:HG	1.94	0.50
1:H:845:GLN:HE21	2:L:110:MET:HA	1.76	0.50
1:H:943:TYR:O	1:H:947:MET:HG2	2.12	0.50
1:Y:1722:GLN:HE22	1:Y:1747:LEU:H	1.58	0.50
1:A:127:TYR:OH	1:A:136:ASP:O	2.28	0.50
1:H:798:ARG:NH2	2:J:81:ASP:OD1	2.45	0.50
2:G:13:PHE:HB3	2:G:69:PHE:HE2	1.76	0.50
1:H:420:ASN:O	1:H:424:HIS:N	2.45	0.50
1:A:134:ASP:OD1	1:X:1680:ARG:NH1	2.45	0.50
1:A:844:ILE:O	1:A:848:LEU:HG	2.12	0.50
1:H:867:VAL:O	1:H:870:GLN:HG2	2.11	0.50
1:H:1088:LEU:HD23	1:H:1091:ARG:HD2	1.93	0.50
2:N:52:MET:SD	2:N:68:GLN:NE2	2.80	0.50
1:H:541:PRO:HG3	1:H:549:ILE:HG13	1.93	0.50
1:H:701:TRP:HD1	1:H:706:PHE:HB2	1.76	0.50
1:H:872:ARG:HH21	2:M:146:MET:HG3	1.77	0.50
1:X:1634:LEU:HD21	1:X:1698:GLN:HG3	1.93	0.50
1:A:1077:ARG:HH21	1:X:1573:GLN:HE22	1.58	0.49
1:X:1591:GLU:OE1	1:X:1795:LYS:NZ	2.45	0.49
1:H:122:ASP:HA	1:H:125:ASN:HD21	1.76	0.49
2:M:30:THR:HB	2:M:53:ILE:HD12	1.93	0.49
2:G:68:GLN:O	2:G:71:THR:OG1	2.24	0.49
2:G:69:PHE:O	2:G:72:MET:HB3	2.12	0.49
1:H:169:LYS:HG3	1:H:170:THR:N	2.27	0.49
1:H:862:ARG:NH1	2:M:113:LEU:HB2	2.27	0.49
1:H:882:TYR:OH	2:M:15:GLU:OE1	2.24	0.49
1:A:537:LEU:HA	1:A:551:LYS:HB3	1.94	0.49
1:A:737:ASP:HB3	1:A:740:LYS:HG2	1.93	0.49
1:H:122:ASP:HA	1:H:125:ASN:ND2	2.27	0.49
1:H:184:SER:HB3	1:H:189:GLU:HG2	1.95	0.49
1:H:228:PHE:HE2	1:H:433:ILE:HB	1.76	0.49
2:C:16:ALA:HA	2:C:19:LEU:HD12	1.95	0.49
2:E:33:LEU:HD13	2:E:64:ILE:HD11	1.95	0.49
2:M:30:THR:HG21	2:M:53:ILE:HG23	1.94	0.49
2:C:10:ILE:HG23	2:C:66:PHE:CZ	2.47	0.49
1:H:400:ARG:HG3	1:H:401:ASP:N	2.27	0.49
1:H:838:ARG:HA	2:L:113:LEU:HD13	1.95	0.49
2:L:56:VAL:HG11	2:L:64:ILE:HG13	1.93	0.49
1:X:1731:LYS:HG2	1:X:1756:LEU:HD11	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:858:ARG:NH1	2:E:39:SER:O	2.45	0.49
1:A:867:VAL:O	1:A:871:LYS:HG3	2.13	0.49
2:D:123:ASP:HB3	2:D:127:ARG:HH12	1.77	0.49
1:H:845:GLN:O	1:H:849:ARG:HG2	2.12	0.49
2:L:42:GLN:OE1	2:L:80:THR:OG1	2.30	0.49
1:A:81:HIS:CE1	1:A:83:PRO:HG2	2.47	0.49
1:A:845:GLN:OE1	2:E:115:GLU:N	2.43	0.49
1:A:984:ARG:O	1:A:988:LEU:HG	2.12	0.49
1:X:1442:LYS:N	1:Y:1565:ASN:O	2.42	0.49
1:A:228:PHE:O	1:A:430:HIS:N	2.46	0.49
1:A:793:ALA:HB3	2:C:113:LEU:HD22	1.95	0.49
2:C:102:SER:HA	2:C:136:GLN:HG2	1.93	0.49
1:H:799:TYR:HA	2:J:43:ASN:HD22	1.77	0.49
1:H:1039:GLU:O	1:H:1043:HIS:ND1	2.46	0.49
2:M:141:GLN:O	2:M:145:MET:HG2	2.13	0.49
1:A:799:TYR:CE2	2:C:86:ILE:HG12	2.48	0.49
2:B:37:MET:HE2	2:B:42:GLN:HB2	1.95	0.49
2:C:55:GLU:OE1	2:C:75:ARG:NH1	2.46	0.49
2:C:100:TYR:CZ	2:C:138:ASN:HB2	2.47	0.49
2:J:27:THR:HG22	2:J:65:ASP:HB3	1.93	0.49
1:Y:1516:VAL:HG13	1:Y:1520:ARG:HE	1.77	0.49
1:A:949:LYS:HE2	1:H:950:LEU:HD11	1.95	0.48
2:B:51:ASP:HA	2:B:54:ASN:ND2	2.29	0.48
2:K:33:LEU:HB2	2:K:64:ILE:HD13	1.94	0.48
2:K:51:ASP:HA	2:K:54:ASN:ND2	2.28	0.48
1:A:585:PHE:HB3	1:A:588:LEU:HB2	1.95	0.48
1:A:837:ARG:O	1:A:841:THR:HG23	2.13	0.48
2:E:31:LYS:HD2	2:E:32:GLN:HG3	1.95	0.48
1:H:38:LEU:HB2	1:H:50:TYR:HD2	1.78	0.48
1:H:261:ILE:HA	1:H:264:GLN:HG2	1.95	0.48
1:H:798:ARG:O	2:J:38:ARG:NH1	2.46	0.48
1:H:935:LYS:O	1:H:938:GLU:HG2	2.13	0.48
2:J:145:MET:HG2	2:J:149:LYS:HE2	1.95	0.48
1:A:377:HIS:HD2	1:A:390:PRO:HG3	1.79	0.48
1:A:798:ARG:NH1	2:C:81:ASP:OD1	2.40	0.48
1:H:10:PHE:N	1:H:27:LEU:O	2.47	0.48
1:H:121:GLU:HA	1:H:124:ILE:HD12	1.95	0.48
1:Y:1666:PHE:HD1	1:Y:1717:LEU:HD21	1.78	0.48
1:A:94:ILE:O	1:A:97:LYS:NZ	2.27	0.48
1:A:831:ARG:HG2	2:D:149:LYS:HD3	1.96	0.48
2:E:29:THR:O	2:E:33:LEU:N	2.40	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1726:LEU:HD21	1:X:1756:LEU:HD21	1.95	0.48
2:C:38:ARG:NH1	2:C:46:GLU:OE1	2.33	0.48
1:H:817:ALA:HB1	2:K:89:ALA:HB1	1.96	0.48
2:K:13:PHE:HB3	2:K:69:PHE:HE2	1.78	0.48
2:D:102:SER:HB3	2:D:105:GLN:HE21	1.78	0.48
2:G:15:GLU:O	2:G:19:LEU:HG	2.13	0.48
1:H:12:ARG:NH2	1:H:66:ASP:OD1	2.45	0.48
1:H:862:ARG:HG2	2:M:93:PHE:HE1	1.79	0.48
1:A:829:VAL:O	1:A:832:ARG:HG2	2.14	0.48
2:F:42:GLN:HB2	2:F:76:LYS:HE3	1.96	0.48
2:F:83:GLU:HA	2:F:86:ILE:HG22	1.96	0.48
2:F:132:ASP:OD1	2:F:132:ASP:N	2.46	0.48
1:H:239:MET:HE3	1:H:416:VAL:HG13	1.96	0.48
2:N:38:ARG:HH12	2:N:49:LEU:HD21	1.79	0.48
2:N:65:ASP:C	2:N:67:PRO:HD2	2.33	0.48
1:X:1693:ARG:NH2	1:X:1728:GLN:OE1	2.46	0.48
2:G:10:ILE:HD13	2:G:13:PHE:HE2	1.79	0.48
1:H:720:LEU:HB2	1:H:726:THR:HB	1.94	0.48
1:H:847:TYR:CE2	2:L:146:MET:HE3	2.49	0.48
1:A:1012:ARG:O	1:A:1015:LYS:HG3	2.14	0.48
1:H:448:SER:OG	1:H:567:LYS:HE3	2.14	0.48
1:H:799:TYR:CE2	2:J:86:ILE:HG12	2.49	0.48
1:H:814:ARG:HE	2:K:113:LEU:HD11	1.79	0.48
1:X:1783:ASP:N	1:X:1783:ASP:OD1	2.46	0.48
2:B:84:GLU:HA	2:B:87:ARG:HE	1.78	0.48
2:E:120:GLU:HG2	2:E:121:GLU:N	2.29	0.48
1:H:72:ASN:HA	1:H:92:ARG:HH22	1.79	0.48
1:H:790:GLN:HG2	2:J:113:LEU:HD11	1.96	0.48
2:K:100:TYR:CZ	2:K:138:ASN:HB2	2.49	0.48
2:N:110:MET:SD	2:N:122:VAL:HG22	2.53	0.48
1:Y:1487:PHE:CZ	1:Y:1544:TYR:HB2	2.49	0.48
1:Y:1686:TRP:O	1:Y:1689:GLY:N	2.47	0.48
1:H:102:TYR:CE1	1:H:107:LEU:HD13	2.49	0.47
1:H:228:PHE:HB3	1:H:232:TYR:HA	1.96	0.47
2:M:33:LEU:HD22	2:M:64:ILE:HB	1.96	0.47
2:G:87:ARG:HE	2:G:143:VAL:HG11	1.79	0.47
2:G:138:ASN:HB3	2:G:141:GLN:HG3	1.97	0.47
1:H:379:LYS:NZ	1:H:575:GLU:HG2	2.29	0.47
1:H:806:ARG:NH2	2:J:149:LYS:OXT	2.47	0.47
2:N:139:TYR:O	2:N:143:VAL:HG23	2.14	0.47
1:A:1053:THR:O	1:A:1056:MET:HB2	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:122:VAL:HA	2:B:125:MET:HE3	1.95	0.47
2:E:64:ILE:HD12	2:E:69:PHE:HA	1.97	0.47
1:H:792:ALA:HB1	2:J:93:PHE:HB2	1.95	0.47
1:A:124:ILE:HG23	1:A:179:TYR:CD2	2.50	0.47
1:H:661:ILE:HD12	1:H:680:GLN:HB3	1.96	0.47
2:K:20:PHE:HA	2:K:22:LYS:HE2	1.96	0.47
1:X:1700:GLU:HG3	1:X:1704:ARG:NH2	2.29	0.47
1:A:257:ARG:HB3	1:A:263:TYR:CE1	2.49	0.47
1:A:264:GLN:NE2	1:A:304:GLU:OE1	2.48	0.47
2:G:145:MET:HA	2:G:148:ALA:HB3	1.95	0.47
1:A:724:LYS:NZ	1:A:744:GLY:O	2.47	0.47
1:A:857:TYR:CE2	2:E:36:VAL:HG12	2.49	0.47
1:A:871:LYS:HE2	2:F:45:THR:HG23	1.96	0.47
2:C:99:GLY:HA2	2:C:139:TYR:CZ	2.50	0.47
1:H:847:TYR:OH	2:L:147:THR:OG1	2.18	0.47
1:Y:1451:GLU:HB2	1:Y:1826:ALA:HB3	1.97	0.47
1:A:15:ILE:HD11	1:A:40:LEU:HD22	1.96	0.47
1:A:346:ASP:OD1	1:A:347:SER:N	2.48	0.47
1:A:798:ARG:HD2	2:C:43:ASN:O	2.15	0.47
1:A:822:GLN:HG2	2:D:117:LEU:HD21	1.96	0.47
1:A:853:THR:HA	1:A:856:ARG:HE	1.80	0.47
1:A:1009:ILE:O	1:A:1012:ARG:HG3	2.15	0.47
2:D:123:ASP:HB3	2:D:127:ARG:NH1	2.30	0.47
1:H:27:LEU:HD21	1:H:38:LEU:HD22	1.96	0.47
1:H:343:ARG:HG2	1:H:348:CYS:HA	1.96	0.47
1:H:865:LYS:O	1:H:869:ILE:HG12	2.15	0.47
1:H:896:PHE:O	1:H:899:MET:HG3	2.14	0.47
1:X:1539:HIS:CE1	1:X:1805:ASN:HB3	2.50	0.47
1:X:1690:MET:SD	1:X:1690:MET:N	2.87	0.47
1:X:1747:LEU:O	1:X:1784:ARG:NH1	2.33	0.47
1:Y:1666:PHE:HA	1:Y:1669:VAL:HG12	1.96	0.47
1:A:199:SER:O	1:A:202:ILE:N	2.47	0.47
1:A:470:PHE:CD1	1:A:489:PHE:HB2	2.49	0.47
1:H:124:ILE:HG23	1:H:179:TYR:CD1	2.50	0.47
1:H:526:LYS:HA	1:H:529:ASN:HD21	1.79	0.47
1:H:800:VAL:HG11	2:J:125:MET:HE3	1.96	0.47
1:Y:1584:GLN:HA	1:Y:1587:VAL:HG12	1.97	0.47
1:A:801:ARG:HD2	2:C:38:ARG:CZ	2.45	0.47
1:H:307:HIS:O	1:H:310:GLN:HG3	2.15	0.47
1:H:376:CYS:SG	1:H:393:LYS:NZ	2.83	0.47
1:H:650:LEU:HA	1:H:653:THR:HG22	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:829:VAL:HG12	1:H:833:ARG:HH21	1.80	0.47
2:J:145:MET:O	2:J:149:LYS:HG3	2.14	0.47
2:K:51:ASP:HA	2:K:54:ASN:HD21	1.79	0.47
1:A:193:GLU:OE2	1:A:234:ILE:HG21	2.15	0.46
1:A:702:THR:HB	1:A:705:GLU:HB3	1.97	0.46
2:F:90:PHE:HB3	2:F:139:TYR:CD1	2.51	0.46
2:G:83:GLU:OE2	2:G:149:LYS:NZ	2.39	0.46
2:N:146:MET:O	2:N:149:LYS:HG3	2.16	0.46
1:A:114:GLU:HG3	1:A:669:PRO:HB3	1.97	0.46
1:A:470:PHE:O	1:A:473:GLU:HG2	2.16	0.46
1:A:864:TYR:O	1:A:868:ILE:HG13	2.16	0.46
2:E:38:ARG:HG2	2:E:44:PRO:HD2	1.97	0.46
1:H:287:TYR:CZ	1:H:336:GLY:HA2	2.50	0.46
1:Y:1506:LEU:HB3	1:Y:1571:TYR:CE1	2.50	0.46
1:A:918:TYR:OH	1:H:922:HIS:HB3	2.15	0.46
1:H:815:THR:HB	2:K:113:LEU:HD22	1.98	0.46
1:H:911:GLU:OE1	1:H:913:ARG:NH2	2.48	0.46
1:Y:1666:PHE:CE1	1:Y:1699:LEU:HD12	2.50	0.46
1:Y:1706:LYS:HB3	1:Y:1708:LEU:HG	1.97	0.46
1:A:37:VAL:HG23	1:A:51:ARG:HA	1.96	0.46
1:H:189:GLU:OE2	1:H:233:ARG:HB3	2.14	0.46
1:H:210:LYS:HB3	1:H:257:ARG:HB3	1.97	0.46
1:H:342:SER:OG	1:H:344:ASP:O	2.30	0.46
1:H:826:ARG:CZ	2:K:38:ARG:HH21	2.29	0.46
1:Y:1771:VAL:HA	1:Y:1774:ILE:HD13	1.98	0.46
1:A:12:ARG:NH1	1:A:66:ASP:OD1	2.44	0.46
1:A:988:LEU:HD22	1:H:992:ILE:HD12	1.97	0.46
1:A:1009:ILE:HG22	1:H:1009:ILE:HG22	1.97	0.46
1:H:261:ILE:HA	1:H:264:GLN:HE21	1.79	0.46
1:H:587:MET:HA	1:H:587:MET:HE2	1.98	0.46
2:J:122:VAL:O	2:J:126:ILE:HG13	2.16	0.46
2:M:13:PHE:HB3	2:M:69:PHE:CZ	2.50	0.46
1:Y:1722:GLN:NE2	1:Y:1744:CYS:HA	2.30	0.46
1:A:916:GLU:OE2	1:A:917:ARG:NE	2.49	0.46
2:F:40:LEU:HD23	2:F:76:LYS:HD3	1.98	0.46
2:G:40:LEU:HD11	2:G:69:PHE:CZ	2.50	0.46
2:I:66:PHE:CZ	2:I:70:LEU:HD21	2.51	0.46
2:K:94:ASP:HA	2:K:101:ILE:HD12	1.96	0.46
2:B:141:GLN:O	2:B:145:MET:HG3	2.16	0.46
1:H:99:ILE:O	1:H:109:ALA:HA	2.16	0.46
1:H:776:THR:HA	2:I:43:ASN:ND2	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:1068:GLU:HA	1:H:1071:LEU:HB3	1.97	0.46
1:X:1704:ARG:HA	1:X:1709:MET:HE1	1.97	0.46
2:D:51:ASP:HA	2:D:54:ASN:HD21	1.79	0.46
1:H:190:ALA:O	1:H:193:GLU:HG3	2.16	0.46
1:H:857:TYR:CZ	1:H:861:LEU:HD11	2.51	0.46
2:M:126:ILE:HA	2:M:131:ILE:HB	1.98	0.46
1:X:1433:PRO:HB3	1:Y:1507:THR:HG22	1.98	0.46
1:Y:1449:MET:HB2	1:Y:1828:VAL:HB	1.98	0.46
1:Y:1568:LEU:HB3	1:Y:1571:TYR:HB3	1.98	0.46
1:Y:1686:TRP:CD1	1:Y:1728:GLN:HA	2.50	0.46
1:A:149:GLN:HG2	1:A:654:THR:HG21	1.98	0.46
2:E:30:THR:HG22	2:E:56:VAL:HG11	1.98	0.46
2:F:103:ALA:O	2:F:107:ARG:HG2	2.16	0.46
2:G:9:GLN:HG3	2:G:13:PHE:CZ	2.50	0.46
1:H:662:LYS:O	1:H:680:GLN:NE2	2.49	0.46
1:H:676:ARG:O	1:H:680:GLN:HG3	2.16	0.46
2:K:42:GLN:HG3	2:K:73:MET:SD	2.56	0.46
2:M:45:THR:HG22	2:M:47:ALA:H	1.81	0.46
2:N:84:GLU:O	2:N:87:ARG:HG2	2.16	0.46
2:N:128:GLU:HG3	2:N:142:PHE:CE1	2.51	0.46
1:Y:1490:VAL:HG12	1:Y:1563:LEU:HD21	1.97	0.46
1:A:171:VAL:HG12	1:A:175:TYR:CE2	2.51	0.46
1:A:1041:LEU:O	1:A:1045:ILE:HG13	2.16	0.46
1:A:1054:GLU:HB3	1:A:1058:ARG:CZ	2.46	0.46
2:B:122:VAL:HA	2:B:125:MET:CE	2.46	0.46
2:E:123:ASP:HB3	2:E:127:ARG:CZ	2.46	0.46
1:H:157:GLN:HB2	1:H:433:ILE:HG13	1.98	0.46
2:I:131:ILE:HA	2:I:137:VAL:HG21	1.97	0.46
2:J:17:PHE:O	2:J:21:ASP:N	2.49	0.46
1:A:823:LYS:O	1:A:827:MET:HE2	2.15	0.45
2:D:33:LEU:HD22	2:D:64:ILE:HG13	1.97	0.45
1:H:73:ASP:HB3	1:H:76:ALA:HB2	1.98	0.45
1:H:344:ASP:OD1	1:H:347:SER:OG	2.26	0.45
2:J:69:PHE:O	2:J:73:MET:HG2	2.16	0.45
2:K:23:ASP:OD1	2:K:23:ASP:N	2.49	0.45
1:X:1437:VAL:HG21	1:Y:1571:TYR:HD1	1.80	0.45
1:X:1816:ILE:HD12	1:X:1822:LEU:HB2	1.98	0.45
1:A:848:LEU:HD22	2:E:125:MET:SD	2.56	0.45
2:B:68:GLN:O	2:B:72:MET:HG2	2.16	0.45
2:C:33:LEU:O	2:C:37:MET:HG2	2.15	0.45
2:L:90:PHE:O	2:L:94:ASP:N	2.48	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L:109:VAL:HG13	2:L:113:LEU:HD12	1.97	0.45
1:Y:1502:VAL:O	1:Y:1506:LEU:HG	2.16	0.45
1:A:158:SER:N	1:A:654:THR:O	2.48	0.45
1:A:392:SER:HB3	1:A:395:GLN:HB2	1.98	0.45
2:B:30:THR:HG22	2:B:64:ILE:HD11	1.97	0.45
2:F:27:THR:HB	2:F:63:THR:HB	1.98	0.45
1:H:457:ALA:O	1:H:461:LEU:HG	2.17	0.45
1:H:865:LYS:HB3	2:M:89:ALA:HB1	1.98	0.45
1:H:874:ARG:HB3	2:M:38:ARG:CD	2.47	0.45
1:X:1444:LYS:HZ3	1:Y:1565:ASN:HA	1.81	0.45
1:A:7:TYR:OH	1:A:60:PRO:O	2.25	0.45
2:D:52:MET:O	2:D:56:VAL:HG23	2.16	0.45
2:D:143:VAL:O	2:D:146:MET:HB2	2.17	0.45
2:G:100:TYR:HB3	2:G:136:GLN:HB2	1.98	0.45
1:H:537:LEU:HD22	1:H:551:LYS:HD2	1.99	0.45
1:X:1452:TYR:HE2	1:X:1457:GLU:HB2	1.81	0.45
1:A:731:LEU:HD23	1:A:743:PHE:HE1	1.82	0.45
1:A:841:THR:HG22	2:E:109:VAL:CG1	2.46	0.45
2:C:90:PHE:HB3	2:C:139:TYR:CG	2.52	0.45
1:H:219:ARG:HB2	1:H:245:GLU:HB2	1.97	0.45
1:H:225:GLU:HB2	1:H:238:ASN:HB3	1.97	0.45
1:X:1817:PRO:HG2	1:X:1820:LEU:HD13	1.99	0.45
1:Y:1557:ARG:HG2	1:Y:1561:HIS:CE1	2.52	0.45
1:A:150:MET:HA	1:A:150:MET:HE3	1.99	0.45
1:A:473:GLU:O	1:A:476:GLU:HG3	2.17	0.45
1:A:804:GLN:HG3	2:C:125:MET:HE3	1.99	0.45
1:A:853:THR:HG22	1:A:856:ARG:HH21	1.81	0.45
1:A:854:ARG:HA	2:E:39:SER:HA	1.98	0.45
2:N:5:LEU:HD23	2:N:10:ILE:HB	1.99	0.45
2:E:104:ALA:HA	2:E:107:ARG:HG2	1.98	0.45
2:G:34:GLY:C	2:G:38:ARG:HE	2.20	0.45
1:H:780:TRP:CD1	2:I:146:MET:HA	2.52	0.45
2:I:56:VAL:HG11	2:I:64:ILE:HG13	1.99	0.45
2:J:10:ILE:HG12	2:J:70:LEU:HD22	1.99	0.45
2:J:14:LYS:HD3	2:J:66:PHE:CG	2.52	0.45
2:J:50:GLN:OE1	2:J:54:ASN:ND2	2.49	0.45
1:A:771:ILE:HA	1:A:774:GLN:NE2	2.32	0.45
2:B:19:LEU:HD13	2:C:113:LEU:HD12	1.99	0.45
1:H:157:GLN:O	1:H:434:GLY:N	2.48	0.45
1:H:897:ARG:HD2	2:N:38:ARG:NH2	2.32	0.45
2:I:40:LEU:HB2	2:I:42:GLN:HE22	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:M:131:ILE:HG23	2:M:137:VAL:HG22	1.98	0.45
2:N:5:LEU:HG	2:N:9:GLN:HB2	1.98	0.45
1:A:237:ALA:HB3	1:A:423:LEU:HD13	1.98	0.45
1:A:242:TYR:CD2	1:A:642:SER:HB2	2.49	0.45
1:A:520:ASP:OD1	1:A:561:CYS:HB3	2.17	0.45
2:D:45:THR:O	2:D:49:LEU:N	2.34	0.45
2:M:20:PHE:CD2	2:M:36:VAL:HG22	2.52	0.45
1:A:97:LYS:HB2	1:X:1757:ASN:ND2	2.28	0.45
1:A:1092:TYR:HD1	1:H:1095:LEU:HD11	1.82	0.45
2:E:123:ASP:HB3	2:E:127:ARG:NH2	2.31	0.45
2:G:142:PHE:O	2:G:146:MET:HG2	2.17	0.45
1:H:391:ILE:HG12	1:H:395:GLN:HB3	1.99	0.45
1:X:1556:SER:O	1:X:1560:GLU:HG3	2.17	0.45
1:Y:1730:LYS:HB3	1:Y:1732:LYS:HD2	1.99	0.45
1:A:103:CYS:SG	1:A:690:ILE:HD11	2.57	0.44
1:A:945:CYS:HA	1:A:948:GLU:OE1	2.17	0.44
2:D:10:ILE:HG23	2:D:66:PHE:CZ	2.52	0.44
1:H:889:ILE:HG12	2:N:113:LEU:HB3	1.99	0.44
2:C:76:LYS:HA	2:C:76:LYS:HD3	1.85	0.44
2:D:43:ASN:HD22	2:D:76:LYS:HE2	1.82	0.44
2:E:89:ALA:HA	2:E:92:VAL:HG12	1.98	0.44
1:X:1494:ASP:OD1	1:X:1565:ASN:HB2	2.18	0.44
1:A:720:LEU:HB2	1:A:726:THR:HG21	1.99	0.44
1:A:1003:ARG:O	1:A:1006:LYS:HG2	2.18	0.44
2:C:33:LEU:HB2	2:C:64:ILE:HG13	1.99	0.44
2:D:102:SER:HB2	2:D:136:GLN:HE22	1.81	0.44
1:H:26:GLU:HB2	1:H:41:HIS:HB3	1.99	0.44
2:J:82:SER:O	2:J:86:ILE:HG13	2.17	0.44
1:A:121:GLU:O	1:A:125:ASN:ND2	2.50	0.44
1:A:964:LEU:O	1:A:968:VAL:HG23	2.18	0.44
2:B:36:VAL:HA	2:B:39:SER:HB2	1.99	0.44
2:B:99:GLY:HA2	2:B:139:TYR:CE1	2.49	0.44
2:D:134:ASP:OD1	2:D:134:ASP:N	2.51	0.44
1:H:261:ILE:HA	1:H:264:GLN:NE2	2.32	0.44
1:H:825:TRP:CE2	2:K:142:PHE:HE2	2.35	0.44
2:M:124:GLU:HG2	2:M:127:ARG:HH22	1.82	0.44
1:Y:1670:GLY:O	1:Y:1720:LEU:HD21	2.17	0.44
1:A:502:LYS:HA	1:A:502:LYS:HD3	1.76	0.44
1:A:662:LYS:N	1:A:680:GLN:OE1	2.45	0.44
2:D:37:MET:SD	2:D:42:GLN:HG3	2.57	0.44
1:H:100:TYR:CD2	1:H:138:HIS:HA	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:822:GLN:HG3	2:K:110:MET:SD	2.57	0.44
1:H:870:GLN:HB2	2:M:117:LEU:HD11	2.00	0.44
1:X:1439:ILE:HG12	1:Y:1503:ARG:HE	1.83	0.44
1:X:1698:GLN:HA	1:X:1701:GLU:OE2	2.17	0.44
1:X:1779:MET:O	1:X:1782:ARG:HG2	2.17	0.44
1:A:64:ASN:ND2	1:A:79:TYR:O	2.50	0.44
1:A:374:TRP:CD1	1:A:579:VAL:HG11	2.52	0.44
1:A:480:GLU:HA	1:A:745:LYS:HE3	2.00	0.44
1:A:833:ARG:O	1:A:837:ARG:HG2	2.18	0.44
2:D:110:MET:HE2	2:D:117:LEU:HD11	2.00	0.44
2:J:93:PHE:CE1	2:J:109:VAL:HG11	2.53	0.44
1:A:874:ARG:HB3	2:F:38:ARG:HD3	1.99	0.44
2:G:129:ALA:HB3	2:G:131:ILE:HG13	1.99	0.44
1:H:169:LYS:HG3	1:H:170:THR:H	1.82	0.44
1:H:729:ASN:O	1:H:733:LYS:HG2	2.17	0.44
2:K:15:GLU:OE2	2:L:113:LEU:HD23	2.18	0.44
2:N:128:GLU:HG3	2:N:142:PHE:HE1	1.82	0.44
1:Y:1716:THR:O	1:Y:1719:PRO:HD2	2.18	0.44
1:A:166:GLY:O	1:A:214:ASN:ND2	2.50	0.44
1:A:703:TYR:HE1	1:A:748:ILE:HG13	1.83	0.44
1:A:985:VAL:HG21	1:H:984:ARG:HD3	1.99	0.44
2:B:27:THR:HA	2:B:64:ILE:O	2.17	0.44
1:H:578:LYS:O	1:H:581:LYS:HG2	2.18	0.44
1:H:764:ASP:OD1	1:H:767:ARG:NH2	2.44	0.44
1:H:798:ARG:HA	2:J:38:ARG:NH2	2.25	0.44
2:I:108:HIS:CE1	1:Y:1765:PHE:HE2	2.36	0.44
2:N:33:LEU:HD11	2:N:56:VAL:HG21	2.00	0.44
1:A:129:GLY:N	1:A:144:GLU:OE2	2.38	0.44
2:C:82:SER:O	2:C:86:ILE:HG13	2.18	0.44
1:H:1082:LEU:HD21	1:X:1581:GLN:HB2	2.00	0.44
1:X:1664:GLN:O	1:X:1668:ILE:HG12	2.18	0.44
1:X:1730:LYS:HD3	1:X:1732:LYS:HB3	1.99	0.44
1:Y:1475:VAL:HA	1:Y:1481:LEU:HD12	1.99	0.44
1:A:451:GLN:HE22	1:A:455:ASN:HD21	1.66	0.43
2:B:69:PHE:O	2:B:73:MET:HG2	2.17	0.43
1:H:406:HIS:CG	1:H:572:VAL:HG21	2.53	0.43
1:H:577:ILE:HG23	1:H:592:PHE:CG	2.53	0.43
1:H:694:ALA:HA	1:H:698:PRO:HG3	1.99	0.43
1:H:899:MET:HB3	2:N:146:MET:SD	2.58	0.43
1:A:850:GLY:HA3	2:E:43:ASN:OD1	2.18	0.43
1:A:889:ILE:HG12	2:G:113:LEU:CD2	2.47	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:107:ARG:HG3	2:C:122:VAL:HG11	1.99	0.43
2:E:123:ASP:HB3	2:E:127:ARG:HH22	1.83	0.43
2:F:33:LEU:O	2:F:37:MET:HG2	2.18	0.43
2:G:131:ILE:HG23	2:G:137:VAL:HB	2.00	0.43
1:Y:1556:SER:HA	1:Y:1559:ASN:HD22	1.82	0.43
1:A:273:GLU:OE1	1:A:309:ARG:NH1	2.45	0.43
1:A:550:ILE:HB	1:A:559:TYR:HE1	1.83	0.43
1:A:686:VAL:O	1:A:690:ILE:HG12	2.19	0.43
1:A:982:THR:O	1:A:985:VAL:HG12	2.18	0.43
2:E:87:ARG:HG2	2:E:143:VAL:HG11	2.00	0.43
2:E:94:ASP:HB2	2:E:139:TYR:OH	2.17	0.43
1:H:374:TRP:HE1	1:H:579:VAL:HG11	1.83	0.43
2:I:146:MET:HG3	2:I:147:THR:HG23	2.00	0.43
2:J:91:ARG:NH2	2:J:94:ASP:OD2	2.51	0.43
2:D:143:VAL:HA	2:D:146:MET:HG2	2.01	0.43
2:I:72:MET:SD	2:I:75:ARG:HD2	2.58	0.43
2:I:75:ARG:O	2:I:78:LYS:HB3	2.18	0.43
2:L:44:PRO:HB3	2:L:76:LYS:NZ	2.33	0.43
1:X:1537:PHE:HD2	1:X:1575:LEU:HD11	1.83	0.43
1:X:1666:PHE:HD1	1:X:1717:LEU:HD21	1.84	0.43
1:X:1674:LEU:HD23	1:X:1674:LEU:HA	1.87	0.43
1:A:378:ARG:HD2	1:A:573:PHE:CZ	2.53	0.43
1:A:387:TYR:HE2	1:A:389:LYS:HB2	1.83	0.43
1:A:443:THR:HG22	1:A:455:ASN:HD21	1.83	0.43
1:H:40:LEU:N	1:H:48:LEU:O	2.48	0.43
1:H:135:MET:SD	1:Y:1680:ARG:NE	2.92	0.43
1:H:203:MET:HA	1:H:206:ILE:HG12	2.00	0.43
2:M:66:PHE:CD1	2:M:67:PRO:HD3	2.54	0.43
1:A:497:ASN:O	1:A:501:SER:OG	2.32	0.43
1:A:523:TRP:NE1	1:A:527:LEU:HD21	2.34	0.43
1:A:585:PHE:CE2	1:A:587:MET:HB2	2.54	0.43
1:A:820:THR:HA	1:A:823:LYS:HE2	2.00	0.43
2:B:30:THR:HA	2:B:33:LEU:HB3	2.01	0.43
2:E:29:THR:OG1	2:E:32:GLN:OE1	2.27	0.43
2:G:10:ILE:HA	2:G:13:PHE:HD2	1.84	0.43
1:H:257:ARG:NH2	1:H:263:TYR:HB2	2.33	0.43
1:H:566:GLU:OE2	1:H:567:LYS:NZ	2.40	0.43
1:H:868:ILE:O	1:H:871:LYS:HG2	2.18	0.43
2:J:72:MET:HA	2:J:75:ARG:HE	1.84	0.43
2:N:38:ARG:NH2	2:N:49:LEU:HD11	2.31	0.43
1:A:898:ARG:HE	1:A:899:MET:CE	2.31	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:117:LEU:HB3	2:B:121:GLU:OE1	2.18	0.43
1:H:93:PHE:CD2	1:H:672:PHE:HB2	2.53	0.43
1:H:325:ILE:HG23	1:H:411:LEU:HD21	2.00	0.43
1:H:374:TRP:CE3	1:H:576:GLN:HG2	2.53	0.43
1:H:526:LYS:HA	1:H:529:ASN:ND2	2.34	0.43
1:H:812:LEU:HA	1:H:815:THR:HG22	2.01	0.43
1:X:1506:LEU:HD22	1:X:1571:TYR:CZ	2.54	0.43
1:Y:1779:MET:HG3	1:Y:1782:ARG:NH2	2.33	0.43
1:A:898:ARG:HD3	2:G:43:ASN:HB3	2.01	0.43
1:H:946:LEU:HD12	1:H:949:LYS:HB2	2.01	0.43
1:H:1014:ASP:HA	1:H:1017:LYS:HE2	2.01	0.43
1:X:1444:LYS:HE3	1:X:1444:LYS:HB2	1.85	0.43
1:X:1551:MET:HA	1:X:1554:ASN:ND2	2.33	0.43
1:Y:1640:GLN:HG3	1:Y:1644:PHE:CE2	2.54	0.43
1:A:846:SER:CB	2:E:45:THR:HA	2.48	0.43
1:A:1028:LYS:HZ2	1:H:1027:LEU:HD11	1.84	0.43
2:E:37:MET:CE	2:E:42:GLN:HB2	2.49	0.43
2:E:94:ASP:HB2	2:E:139:TYR:HH	1.84	0.43
1:H:155:ARG:NH2	1:H:652:ALA:O	2.52	0.43
1:H:353:LYS:N	1:H:368:TYR:OH	2.51	0.43
1:H:360:PHE:O	1:H:364:MET:HG3	2.18	0.43
1:H:699:SER:O	1:H:749:PHE:HA	2.19	0.43
1:H:847:TYR:HE2	2:L:146:MET:HE3	1.84	0.43
1:H:857:TYR:HB2	2:L:39:SER:HB3	2.01	0.43
1:H:862:ARG:HG2	2:M:93:PHE:CE1	2.54	0.43
2:L:14:LYS:HE2	2:L:66:PHE:CZ	2.54	0.43
2:N:11:ALA:O	2:N:15:GLU:HG2	2.18	0.43
1:X:1820:LEU:HB3	1:X:1822:LEU:HG	2.00	0.43
1:A:1016:TYR:CD2	1:H:1017:LYS:HG2	2.54	0.43
2:D:69:PHE:O	2:D:73:MET:HG2	2.19	0.43
1:X:1679:LEU:HD12	1:X:1679:LEU:O	2.19	0.43
1:A:158:SER:O	1:A:656:HIS:N	2.52	0.42
1:A:374:TRP:CH2	1:A:379:LYS:HB2	2.54	0.42
1:A:897:ARG:HA	1:A:900:MET:HG3	1.99	0.42
1:A:950:LEU:HD22	1:H:946:LEU:HD11	2.01	0.42
1:A:1052:MET:O	1:A:1055:THR:OG1	2.31	0.42
1:H:460:LYS:HD3	1:H:643:LEU:HD21	2.00	0.42
2:L:45:THR:O	2:L:49:LEU:N	2.40	0.42
2:N:37:MET:HG3	2:N:44:PRO:HB3	2.00	0.42
1:X:1502:VAL:HG11	1:X:1566:PHE:CZ	2.54	0.42
1:X:1602:MET:HG3	1:X:1603:LEU:HD22	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Y:1461:VAL:O	1:Y:1465:ILE:N	2.44	0.42
1:A:325:ILE:HG23	1:A:411:LEU:HD21	2.00	0.42
1:A:1077:ARG:NH2	1:X:1573:GLN:HE22	2.17	0.42
2:D:101:ILE:HG12	2:D:105:GLN:HE22	1.84	0.42
1:H:913:ARG:NH2	2:N:19:LEU:HA	2.34	0.42
1:X:1475:VAL:HG12	1:X:1481:LEU:HB2	2.00	0.42
1:H:67:ILE:HD11	1:Y:1764:GLU:HA	2.02	0.42
1:H:699:SER:HB2	1:H:750:PHE:HB2	2.00	0.42
1:H:972:GLN:HA	1:H:975:GLU:HG2	2.01	0.42
2:J:104:ALA:O	2:J:107:ARG:HG3	2.19	0.42
1:X:1439:ILE:H	1:Y:1503:ARG:HH21	1.65	0.42
1:A:543:MET:SD	1:A:543:MET:N	2.93	0.42
1:A:772:ARG:NH2	2:B:85:GLU:HB3	2.34	0.42
1:A:897:ARG:NH1	2:G:115:GLU:OE2	2.51	0.42
1:H:806:ARG:NH2	2:J:41:GLY:HA2	2.33	0.42
2:N:64:ILE:HG13	2:N:65:ASP:N	2.35	0.42
1:Y:1484:TYR:CE2	1:Y:1809:LEU:HD22	2.54	0.42
1:Y:1599:VAL:HG13	1:Y:1676:ASN:ND2	2.34	0.42
1:A:102:TYR:CD2	1:A:137:PRO:HG3	2.55	0.42
1:A:193:GLU:OE2	1:A:234:ILE:HD13	2.19	0.42
1:A:204:GLU:HA	1:A:208:ASN:ND2	2.35	0.42
2:D:89:ALA:O	2:D:92:VAL:HG12	2.20	0.42
2:G:43:ASN:OD1	2:G:43:ASN:N	2.52	0.42
1:H:248:ARG:NH2	1:H:256:GLU:HG3	2.34	0.42
1:H:686:VAL:O	1:H:690:ILE:HG12	2.18	0.42
1:H:845:GLN:HA	1:H:848:LEU:HD12	2.00	0.42
1:H:889:ILE:HG23	1:H:893:GLN:HE22	1.84	0.42
2:I:33:LEU:HG	2:I:37:MET:HE1	2.00	0.42
2:J:144:GLN:O	2:J:147:THR:OG1	2.27	0.42
2:L:129:ALA:HB2	2:L:142:PHE:CD2	2.53	0.42
2:N:52:MET:HE1	2:N:75:ARG:HH11	1.84	0.42
2:N:64:ILE:HG13	2:N:65:ASP:H	1.84	0.42
1:Y:1487:PHE:HZ	1:Y:1544:TYR:HB2	1.83	0.42
2:F:91:ARG:HD2	2:F:139:TYR:HE1	1.85	0.42
2:F:143:VAL:O	2:F:147:THR:HG23	2.20	0.42
1:H:144:GLU:OE1	1:H:179:TYR:OH	2.34	0.42
1:H:246:LYS:HZ1	1:H:635:VAL:HG11	1.85	0.42
1:H:248:ARG:HD2	1:H:248:ARG:HA	1.74	0.42
1:H:770:CYS:HB3	2:I:113:LEU:HD22	2.02	0.42
2:K:142:PHE:O	2:K:146:MET:HG2	2.19	0.42
1:Y:1602:MET:HG3	1:Y:1673:THR:HG21	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:121:GLU:HA	1:A:124:ILE:HD12	2.01	0.42
1:A:122:ASP:OD1	1:A:122:ASP:N	2.53	0.42
1:A:864:TYR:CE2	1:A:868:ILE:HD11	2.55	0.42
1:A:893:GLN:CD	2:G:113:LEU:HD22	2.40	0.42
2:B:42:GLN:HB3	2:B:76:LYS:HE2	2.00	0.42
2:C:5:LEU:HD13	2:C:13:PHE:HE2	1.84	0.42
2:D:145:MET:HA	2:D:148:ALA:HB3	2.01	0.42
2:E:13:PHE:CZ	2:E:73:MET:HB3	2.54	0.42
2:G:94:ASP:OD2	2:G:97:GLY:N	2.51	0.42
2:G:102:SER:HB2	2:G:136:GLN:HE22	1.85	0.42
1:H:477:TYR:O	1:H:482:ILE:N	2.45	0.42
1:H:904:GLU:O	1:H:907:LYS:HG3	2.19	0.42
2:I:75:ARG:HA	2:I:78:LYS:HE3	2.00	0.42
2:I:88:GLU:HA	2:I:91:ARG:HG2	2.01	0.42
2:N:118:THR:O	2:N:122:VAL:HG23	2.20	0.42
1:X:1448:GLY:C	1:X:1488:MET:HE2	2.40	0.42
1:X:1600:SER:HA	1:X:1604:GLU:HB2	2.02	0.42
1:X:1752:ILE:O	1:X:1756:LEU:HD23	2.19	0.42
1:Y:1544:TYR:HE1	1:Y:1558:GLN:HB3	1.85	0.42
1:Y:1674:LEU:HD21	1:Y:1747:LEU:HD21	2.01	0.42
1:A:14:TRP:HB3	1:A:22:TRP:HB3	2.01	0.42
1:A:222:LYS:NZ	1:A:239:MET:HB3	2.35	0.42
1:A:818:ALA:HB1	2:D:110:MET:HA	2.00	0.42
1:A:838:ARG:HG2	2:E:113:LEU:HD11	2.02	0.42
2:E:65:ASP:N	2:E:65:ASP:OD1	2.53	0.42
2:G:37:MET:SD	2:G:72:MET:HG3	2.60	0.42
2:G:117:LEU:HD23	2:G:117:LEU:HA	1.90	0.42
1:H:100:TYR:HB3	1:H:107:LEU:HD11	2.02	0.42
1:H:474:GLN:HG2	1:H:484:TRP:CE3	2.54	0.42
1:H:508:LEU:HB3	1:H:523:TRP:NE1	2.34	0.42
1:Y:1448:GLY:N	1:Y:1828:VAL:OXT	2.53	0.42
1:Y:1686:TRP:HD1	1:Y:1728:GLN:HA	1.84	0.42
1:A:186:SER:O	1:A:190:ALA:N	2.34	0.42
1:A:439:TYR:HE1	1:A:454:ILE:HG12	1.85	0.42
1:A:889:ILE:HG12	2:G:113:LEU:HD21	2.02	0.42
1:H:517:LYS:HE2	1:H:517:LYS:HB3	1.92	0.42
1:H:632:LYS:HA	1:H:632:LYS:HD3	1.81	0.42
1:H:799:TYR:HA	2:J:43:ASN:ND2	2.35	0.42
2:J:28:ILE:O	2:J:64:ILE:N	2.53	0.42
2:M:137:VAL:HG11	2:M:142:PHE:CZ	2.53	0.42
2:N:109:VAL:HA	2:N:113:LEU:HD13	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:100:TYR:CD2	1:A:138:HIS:HA	2.54	0.42
1:A:675:LYS:HD2	1:A:675:LYS:HA	1.78	0.42
1:A:861:LEU:O	1:A:865:LYS:HG2	2.20	0.42
1:A:894:CYS:SG	2:G:43:ASN:HB2	2.60	0.42
1:A:899:MET:HB3	1:A:903:ARG:NH1	2.35	0.42
2:E:51:ASP:HA	2:E:54:ASN:HD21	1.84	0.42
1:H:256:GLU:O	1:H:291:GLY:HA3	2.19	0.42
1:H:799:TYR:OH	2:J:85:GLU:OE1	2.22	0.42
1:H:921:LEU:O	1:H:925:MET:HG3	2.19	0.42
2:K:69:PHE:O	2:K:73:MET:HG2	2.19	0.42
2:L:46:GLU:HG3	2:L:115:GLU:HB3	2.02	0.42
2:N:72:MET:SD	2:N:73:MET:N	2.93	0.42
1:X:1754:LYS:HG3	1:X:1758:LEU:HD23	2.02	0.42
1:Y:1470:PRO:HB3	1:Y:1529:PHE:CD2	2.55	0.42
1:A:78:SER:OG	1:A:752:ALA:O	2.26	0.41
1:A:198:ALA:O	1:A:201:PRO:HD2	2.19	0.41
1:A:374:TRP:CZ3	1:A:379:LYS:HB2	2.55	0.41
1:A:1035:LYS:HE3	1:A:1035:LYS:HB2	1.81	0.41
2:D:6:THR:HG22	2:D:8:GLU:H	1.86	0.41
1:H:796:VAL:HG22	2:J:90:PHE:CE1	2.55	0.41
1:H:823:LYS:O	1:H:826:ARG:HG2	2.19	0.41
1:A:764:ASP:HA	1:A:767:ARG:HE	1.85	0.41
1:H:171:VAL:HG13	1:H:175:TYR:CD2	2.55	0.41
1:H:476:GLU:HA	1:H:479:LYS:HE3	2.01	0.41
2:I:28:ILE:HG12	2:I:36:VAL:HG21	2.01	0.41
2:I:119:ASP:OD1	2:I:119:ASP:N	2.53	0.41
2:K:140:GLU:HA	2:K:143:VAL:HG12	2.00	0.41
1:A:797:GLN:HB3	1:A:801:ARG:NH2	2.36	0.41
1:A:1024:VAL:HG13	1:A:1028:LYS:HZ2	1.85	0.41
2:G:20:PHE:CD2	2:G:36:VAL:HG22	2.55	0.41
2:I:76:LYS:HE3	2:I:76:LYS:HB3	1.92	0.41
2:J:13:PHE:HB3	2:J:69:PHE:CE2	2.55	0.41
2:L:42:GLN:HG3	2:L:76:LYS:HB3	2.01	0.41
1:X:1547:GLU:HB3	1:X:1550:PHE:HD2	1.86	0.41
1:X:1600:SER:HB3	1:X:1632:TYR:HD2	1.85	0.41
1:Y:1664:GLN:O	1:Y:1668:ILE:HG12	2.20	0.41
1:Y:1773:PHE:O	1:Y:1777:ILE:HG12	2.20	0.41
1:A:378:ARG:HH21	1:A:380:LEU:HD11	1.85	0.41
1:H:772:ARG:O	1:H:775:LYS:HG2	2.20	0.41
1:H:954:GLU:O	1:H:958:ASN:ND2	2.53	0.41
2:K:74:ALA:HA	2:K:77:MET:CE	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:560:GLN:HB3	1:A:562:GLU:OE1	2.21	0.41
1:A:971:LEU:HB3	1:H:971:LEU:HB3	2.02	0.41
1:H:1079:GLN:HE22	1:X:1799:PRO:HA	1.85	0.41
2:M:3:ASP:HB2	2:M:74:ALA:HB1	2.02	0.41
2:M:33:LEU:O	2:M:37:MET:HG2	2.20	0.41
2:M:103:ALA:HB3	2:M:133:GLY:HA2	2.02	0.41
1:A:189:GLU:O	1:A:193:GLU:OE1	2.39	0.41
1:A:822:GLN:HE21	2:D:117:LEU:HG	1.86	0.41
1:A:910:ILE:HG12	1:A:911:GLU:H	1.84	0.41
2:C:17:PHE:CE2	2:C:66:PHE:HD1	2.38	0.41
1:H:566:GLU:OE2	1:H:567:LYS:HG3	2.21	0.41
1:H:578:LYS:HG3	1:H:581:LYS:HE3	2.02	0.41
1:H:820:THR:O	1:H:823:LYS:HG3	2.19	0.41
1:H:873:VAL:HG22	2:M:125:MET:SD	2.60	0.41
2:I:132:ASP:H	2:I:137:VAL:HG21	1.85	0.41
1:X:1450:LEU:HD12	1:X:1489:CYS:N	2.36	0.41
1:X:1516:VAL:HG11	1:X:1530:TRP:NE1	2.35	0.41
1:X:1773:PHE:O	1:X:1777:ILE:HG12	2.21	0.41
1:A:785:ARG:O	1:A:789:MET:HG2	2.21	0.41
1:A:799:TYR:CD2	2:C:86:ILE:HG12	2.56	0.41
1:A:886:MET:O	1:A:889:ILE:HG22	2.20	0.41
2:F:103:ALA:HA	2:F:106:LEU:HD12	2.03	0.41
1:H:111:ASN:HA	1:H:112:PRO:HD3	1.93	0.41
1:H:252:GLN:CD	1:H:290:GLN:HB2	2.40	0.41
1:H:804:GLN:NE2	2:J:121:GLU:HB3	2.33	0.41
2:N:20:PHE:CE2	2:N:32:GLN:HG2	2.56	0.41
1:X:1763:ASN:HB2	1:X:1765:PHE:CE1	2.55	0.41
1:A:22:TRP:CD1	1:A:83:PRO:HB3	2.56	0.41
1:A:521:ASP:HB3	1:A:546:LYS:HE3	2.03	0.41
2:C:29:THR:O	2:C:33:LEU:N	2.48	0.41
2:C:36:VAL:O	2:C:40:LEU:HG	2.20	0.41
1:H:829:VAL:HG22	1:H:832:ARG:HH11	1.85	0.41
1:H:841:THR:HG22	1:H:845:GLN:HE21	1.86	0.41
1:H:1080:ASN:HA	1:H:1083:ASN:ND2	2.36	0.41
2:L:99:GLY:O	2:L:138:ASN:HA	2.21	0.41
1:X:1469:LYS:HE3	1:X:1520:ARG:NH1	2.33	0.41
1:A:94:ILE:HD11	1:A:672:PHE:HB3	2.02	0.41
1:A:247:SER:HB2	1:A:567:LYS:NZ	2.36	0.41
1:A:474:GLN:HG3	1:A:484:TRP:CG	2.55	0.41
1:A:505:ILE:HA	1:A:527:LEU:HD22	2.02	0.41
1:A:587:MET:O	1:A:591:LEU:HG	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:851:TYR:HD1	2:E:146:MET:O	2.04	0.41
1:A:934:ARG:O	1:A:937:ASP:N	2.54	0.41
1:A:957:TYR:CD1	1:H:957:TYR:HB3	2.56	0.41
2:C:33:LEU:HD22	2:C:64:ILE:HG13	2.03	0.41
2:D:14:LYS:O	2:D:17:PHE:HB2	2.21	0.41
2:D:18:SER:HA	2:D:21:ASP:HB2	2.03	0.41
2:D:91:ARG:HG3	2:D:139:TYR:OH	2.21	0.41
2:D:100:TYR:CE1	2:D:138:ASN:HB2	2.56	0.41
2:D:124:GLU:HG3	2:D:127:ARG:HH21	1.85	0.41
2:E:16:ALA:HA	2:E:19:LEU:HD12	2.02	0.41
2:G:29:THR:HG23	2:G:32:GLN:H	1.86	0.41
1:H:122:ASP:OD1	1:H:122:ASP:N	2.54	0.41
1:H:243:LEU:HD11	1:H:639:PHE:HE1	1.86	0.41
1:H:329:LEU:HD21	1:H:411:LEU:HD23	2.02	0.41
1:H:477:TYR:HB3	1:H:482:ILE:O	2.21	0.41
1:H:775:LYS:NZ	2:I:81:ASP:OD2	2.40	0.41
1:H:814:ARG:NE	2:K:113:LEU:HD11	2.35	0.41
1:H:827:MET:CE	2:K:43:ASN:HA	2.48	0.41
1:H:884:ARG:HD2	2:N:92:VAL:HG11	2.02	0.41
1:H:963:LYS:HG3	1:H:964:LEU:N	2.35	0.41
2:I:53:ILE:O	2:I:57:ASP:HB2	2.21	0.41
2:K:22:LYS:H	2:K:22:LYS:HG2	1.67	0.41
2:N:102:SER:N	2:N:136:GLN:OE1	2.53	0.41
2:N:124:GLU:N	2:N:127:ARG:HH21	2.19	0.41
1:X:1439:ILE:HD11	1:Y:1503:ARG:HG3	2.02	0.41
1:A:663:PRO:HB2	1:A:671:THR:O	2.21	0.41
1:A:702:THR:HA	1:A:747:LYS:HG2	2.03	0.41
1:A:774:GLN:HE22	2:B:115:GLU:H	1.68	0.41
1:A:801:ARG:NH2	2:C:115:GLU:OE2	2.54	0.41
1:A:835:LYS:HA	1:A:835:LYS:HD2	1.97	0.41
1:A:1045:ILE:HG12	1:H:1045:ILE:CG1	2.51	0.41
2:G:10:ILE:HD13	2:G:13:PHE:CE2	2.56	0.41
2:G:37:MET:HE3	2:G:40:LEU:HD12	2.02	0.41
1:H:111:ASN:N	1:H:661:ILE:O	2.45	0.41
1:H:364:MET:SD	1:H:365:GLY:N	2.94	0.41
1:H:477:TYR:CD2	1:H:484:TRP:HA	2.54	0.41
2:I:73:MET:O	2:I:77:MET:HG2	2.21	0.41
2:L:74:ALA:HA	2:L:77:MET:HG3	2.03	0.41
1:X:1544:TYR:CE2	1:X:1811:LEU:HD11	2.56	0.41
1:A:219:ARG:O	1:A:245:GLU:HG3	2.21	0.40
1:A:585:PHE:HD2	1:A:588:LEU:HB2	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:771:ILE:O	1:A:774:GLN:HG2	2.20	0.40
2:B:91:ARG:HD3	2:B:139:TYR:CZ	2.56	0.40
2:C:100:TYR:HB3	2:C:136:GLN:HB3	2.03	0.40
2:E:84:GLU:HA	2:E:87:ARG:HG3	2.02	0.40
1:H:82:GLU:N	1:H:83:PRO:HD2	2.37	0.40
1:H:300:ASP:O	1:H:304:GLU:HG2	2.21	0.40
2:J:100:TYR:CZ	2:J:138:ASN:HB2	2.56	0.40
2:J:107:ARG:HD2	2:J:108:HIS:N	2.36	0.40
1:X:1655:PRO:HA	1:X:1658:ILE:HD12	2.03	0.40
1:Y:1532:SER:OG	1:Y:1651:HIS:HB3	2.21	0.40
1:Y:1588:ARG:O	1:Y:1591:GLU:HG3	2.21	0.40
1:A:782:LEU:HD23	1:A:782:LEU:HA	1.79	0.40
1:A:1073:ASP:O	1:A:1076:LEU:HG	2.21	0.40
1:A:1092:TYR:CD1	1:H:1095:LEU:HD11	2.56	0.40
2:E:119:ASP:OD1	2:E:119:ASP:N	2.54	0.40
1:H:208:ASN:OD1	1:H:260:HIS:ND1	2.54	0.40
1:H:539:GLU:HG2	1:H:549:ILE:HD12	2.03	0.40
1:H:921:LEU:HD22	2:N:66:PHE:HD2	1.85	0.40
2:I:113:LEU:HD12	1:Y:1765:PHE:CD1	2.57	0.40
2:L:28:ILE:HD12	2:L:33:LEU:HA	2.04	0.40
2:M:13:PHE:CD1	2:M:40:LEU:HD11	2.55	0.40
2:M:69:PHE:O	2:M:73:MET:HG2	2.22	0.40
1:X:1715:GLU:OE1	1:X:1715:GLU:N	2.50	0.40
1:A:583:SER:HB2	1:A:588:LEU:HD23	2.02	0.40
1:A:775:LYS:HE2	2:B:43:ASN:HB3	2.03	0.40
2:G:102:SER:N	2:G:136:GLN:OE1	2.54	0.40
1:H:219:ARG:HE	1:H:245:GLU:CD	2.24	0.40
1:H:931:GLN:HA	1:H:934:ARG:HD2	2.03	0.40
1:H:1053:THR:O	1:H:1056:MET:HB2	2.22	0.40
2:J:56:VAL:HG11	2:J:64:ILE:HD12	2.04	0.40
2:N:43:ASN:ND2	2:N:81:ASP:OD2	2.50	0.40
1:X:1473:VAL:O	1:X:1477:LEU:HG	2.21	0.40
1:X:1654:ASP:OD2	1:X:1656:GLU:HB2	2.22	0.40
1:Y:1635:ASP:O	1:Y:1639:ARG:NE	2.48	0.40
1:A:9:LYS:NZ	1:A:28:LEU:O	2.34	0.40
1:A:552:HIS:HB2	1:A:555:ASP:O	2.22	0.40
1:H:391:ILE:HG23	1:H:396:ALA:HB2	2.04	0.40
1:H:702:THR:HA	1:H:747:LYS:HG2	2.02	0.40
1:H:907:LYS:HD2	1:H:908:LEU:HG	2.04	0.40
2:N:110:MET:HB2	2:N:117:LEU:HD12	2.03	0.40
1:Y:1473:VAL:O	1:Y:1477:LEU:HG	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:420:ASN:HB3	1:A:424:HIS:CE1	2.57	0.40
1:A:477:TYR:CD2	1:A:484:TRP:HB3	2.57	0.40
1:A:827:MET:HG2	2:D:42:GLN:O	2.21	0.40
2:B:102:SER:HB3	2:B:105:GLN:HG2	2.04	0.40
2:F:13:PHE:HE1	2:F:40:LEU:HD11	1.85	0.40
1:H:21:VAL:HG21	1:H:678:VAL:HG21	2.03	0.40
1:H:498:LEU:HD11	1:H:531:HIS:NE2	2.37	0.40
2:M:65:ASP:HB3	2:M:67:PRO:HD2	2.04	0.40
1:X:1640:GLN:HG3	1:X:1644:PHE:CE2	2.56	0.40
1:Y:1683:MET:SD	1:Y:1683:MET:N	2.95	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	1063/1828 (58%)	1042 (98%)	21 (2%)	0	100	100
1	H	1055/1828 (58%)	1031 (98%)	24 (2%)	0	100	100
1	X	372/1828 (20%)	368 (99%)	4 (1%)	0	100	100
1	Y	369/1828 (20%)	362 (98%)	7 (2%)	0	100	100
2	B	145/149 (97%)	142 (98%)	3 (2%)	0	100	100
2	C	145/149 (97%)	142 (98%)	3 (2%)	0	100	100
2	D	145/149 (97%)	142 (98%)	3 (2%)	0	100	100
2	E	142/149 (95%)	139 (98%)	3 (2%)	0	100	100
2	F	145/149 (97%)	142 (98%)	3 (2%)	0	100	100
2	G	145/149 (97%)	143 (99%)	2 (1%)	0	100	100
2	I	145/149 (97%)	140 (97%)	5 (3%)	0	100	100
2	J	145/149 (97%)	143 (99%)	2 (1%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	K	145/149 (97%)	140 (97%)	5 (3%)	0	100	100
2	L	142/149 (95%)	140 (99%)	2 (1%)	0	100	100
2	M	145/149 (97%)	142 (98%)	3 (2%)	0	100	100
2	N	146/149 (98%)	141 (97%)	5 (3%)	0	100	100
All	All	4594/9100 (50%)	4499 (98%)	95 (2%)	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	951/1644 (58%)	948 (100%)	3 (0%)	92	95
1	H	948/1644 (58%)	945 (100%)	3 (0%)	92	95
1	X	345/1644 (21%)	342 (99%)	3 (1%)	78	87
1	Y	343/1644 (21%)	340 (99%)	3 (1%)	78	87
2	B	126/127 (99%)	126 (100%)	0	100	100
2	C	126/127 (99%)	126 (100%)	0	100	100
2	D	126/127 (99%)	126 (100%)	0	100	100
2	E	123/127 (97%)	122 (99%)	1 (1%)	81	89
2	F	126/127 (99%)	125 (99%)	1 (1%)	81	89
2	G	126/127 (99%)	126 (100%)	0	100	100
2	I	126/127 (99%)	125 (99%)	1 (1%)	81	89
2	J	126/127 (99%)	126 (100%)	0	100	100
2	K	126/127 (99%)	126 (100%)	0	100	100
2	L	123/127 (97%)	122 (99%)	1 (1%)	81	89
2	M	126/127 (99%)	126 (100%)	0	100	100
2	N	126/127 (99%)	126 (100%)	0	100	100
All	All	4093/8100 (50%)	4077 (100%)	16 (0%)	91	94

All (16) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	586	LYS
1	A	920	LYS
1	A	1015	LYS
2	E	31	LYS
2	F	127	ARG
1	H	823	LYS
1	H	907	LYS
1	H	920	LYS
2	I	4	GLN
2	L	87	ARG
1	X	1435	ARG
1	X	1462	LYS
1	X	1497	ASN
1	Y	1434	ILE
1	Y	1438	ASN
1	Y	1639	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (24) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	125	ASN
1	A	200	ASN
1	A	451	GLN
1	A	474	GLN
1	A	552	HIS
1	A	725	GLN
1	A	729	ASN
1	A	754	GLN
1	A	774	GLN
1	A	1001	GLN
2	B	98	ASN
2	C	141	GLN
2	D	43	ASN
2	D	105	GLN
2	F	43	ASN
2	G	4	GLN
1	H	264	GLN
1	H	451	GLN
1	H	804	GLN
1	H	927	ASN
2	I	42	GLN

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Mol	Chain	Res	Type
2	J	43	ASN
2	N	50	GLN
1	X	1573	GLN

5.3.3 RNA (i)

There are no RNA molecules in this entry.

5.4 Non-standard residues in protein, DNA, RNA chains (i)

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

5.5 Carbohydrates (i)

There are no monosaccharides in this entry.

5.6 Ligand geometry (i)

There are no ligands in this entry.

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

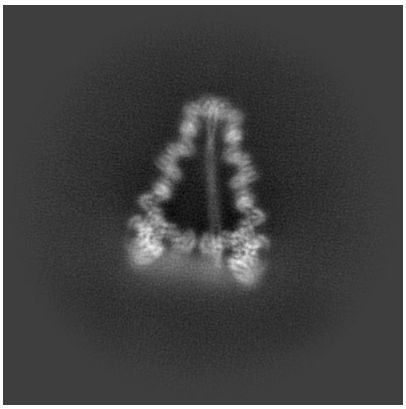
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-34121. These allow visual inspection of the internal detail of the map and identification of artifacts.

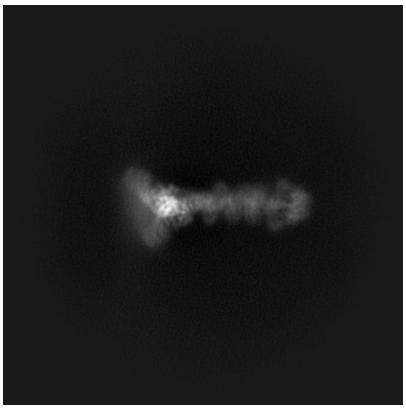
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections

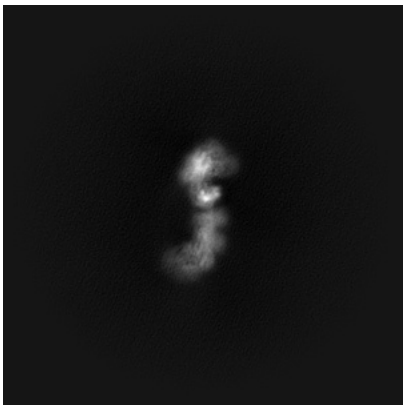
6.1.1 Primary map



X

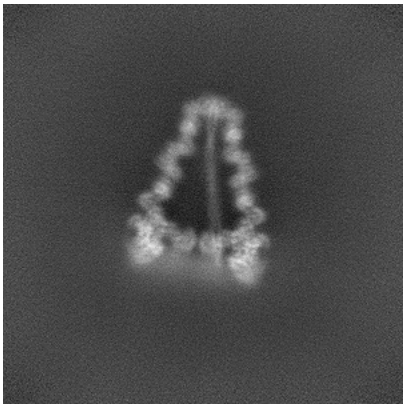


Y

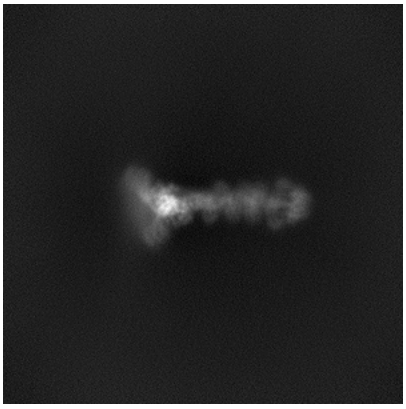


Z

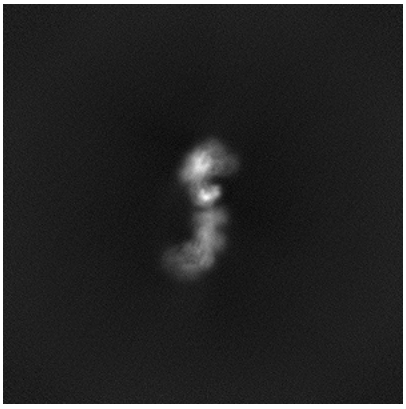
6.1.2 Raw map



X



Y

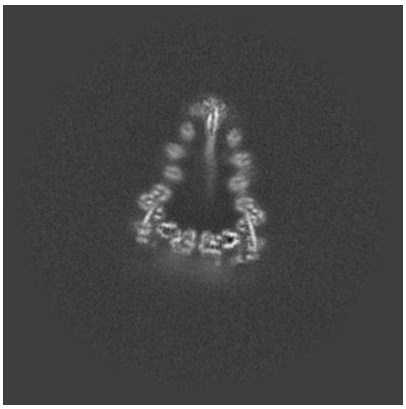


Z

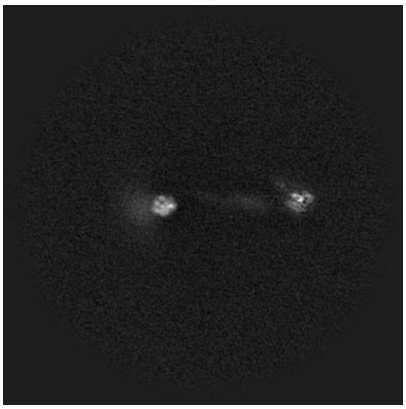
The images above show the map projected in three orthogonal directions.

6.2 Central slices (i)

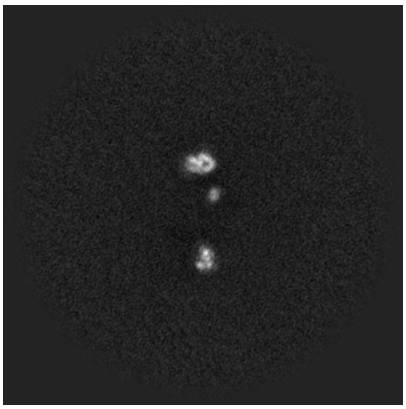
6.2.1 Primary map



X Index: 300

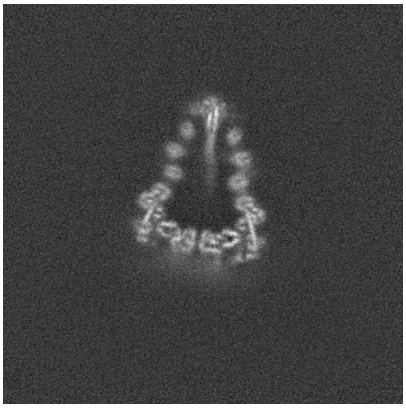


Y Index: 300

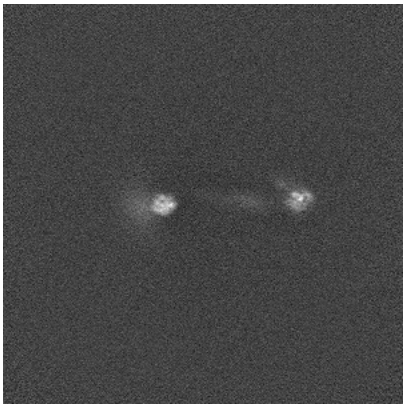


Z Index: 300

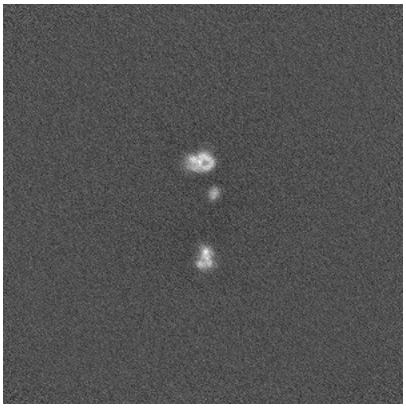
6.2.2 Raw map



X Index: 300



Y Index: 300

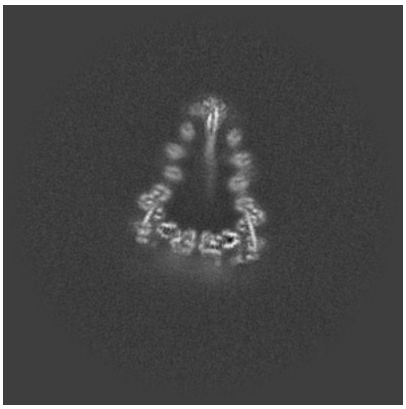


Z Index: 300

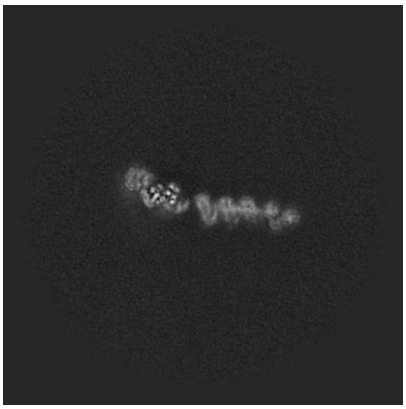
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

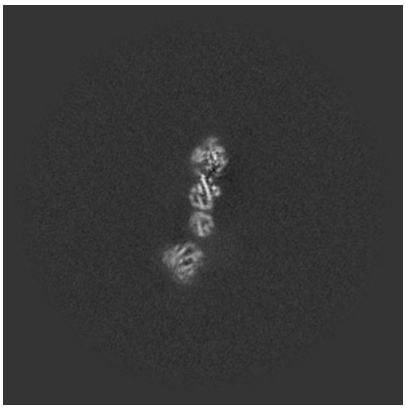
6.3.1 Primary map



X Index: 300

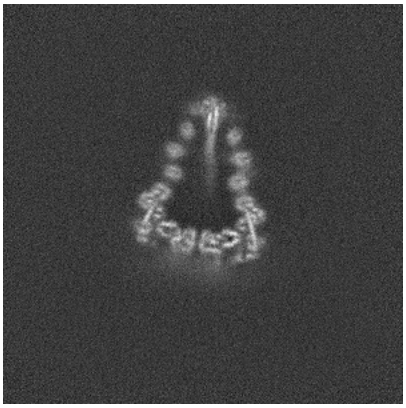


Y Index: 355

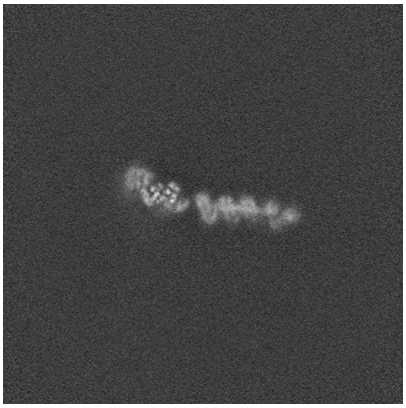


Z Index: 238

6.3.2 Raw map



X Index: 300



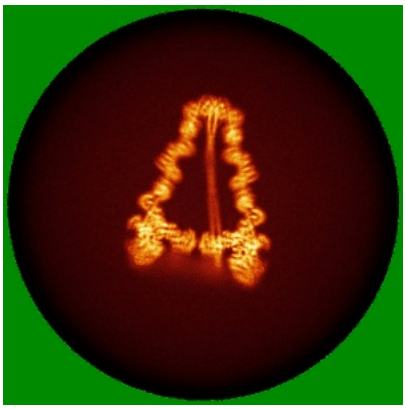
Y Index: 355

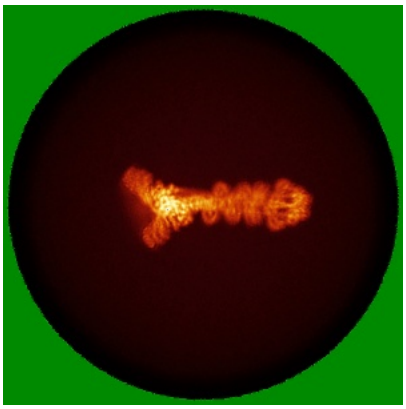
Z Index: 238

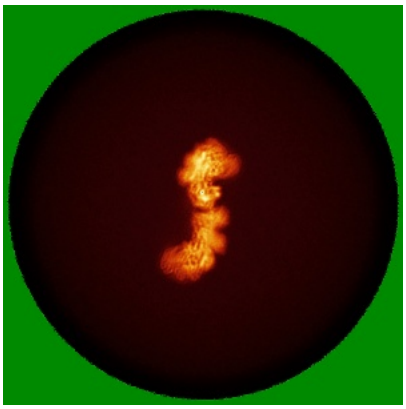
The images above show the largest variance slices of the map in three orthogonal directions.

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

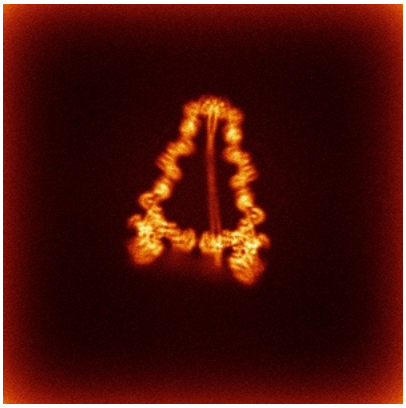
6.4.1 Primary map

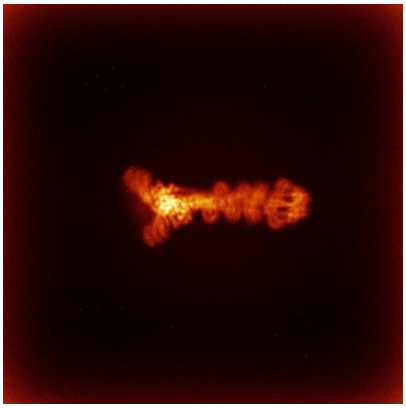

X

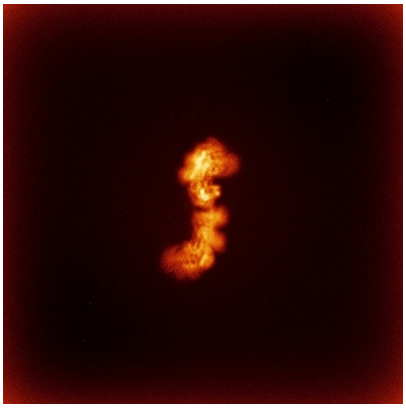

Y


Z

6.4.2 Raw 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 0.35. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.5.2 Raw map

X Y Z

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

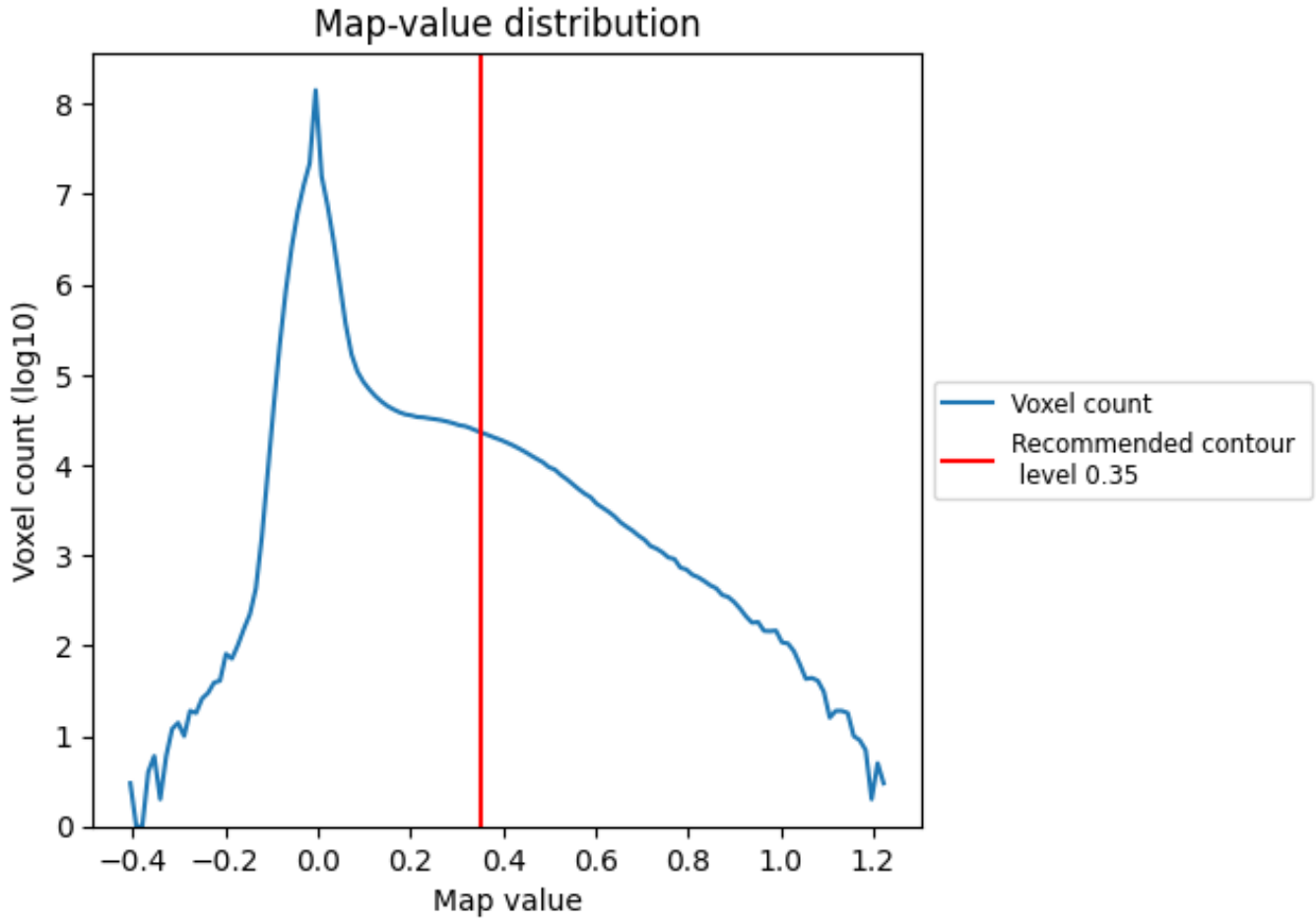
6.6 Mask visualisation (i)

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

7 Map analysis

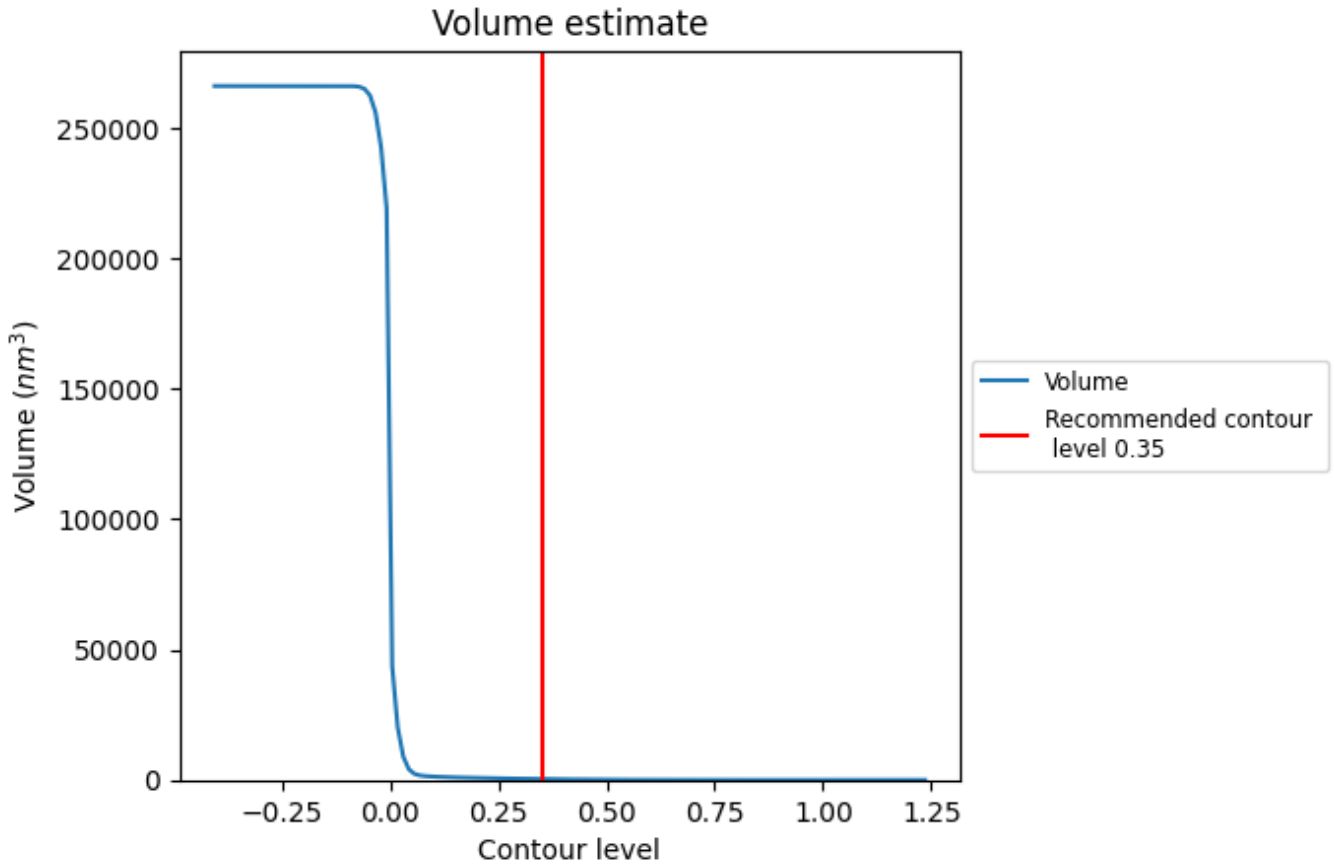
This section contains the results of statistical analysis of the map.

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.

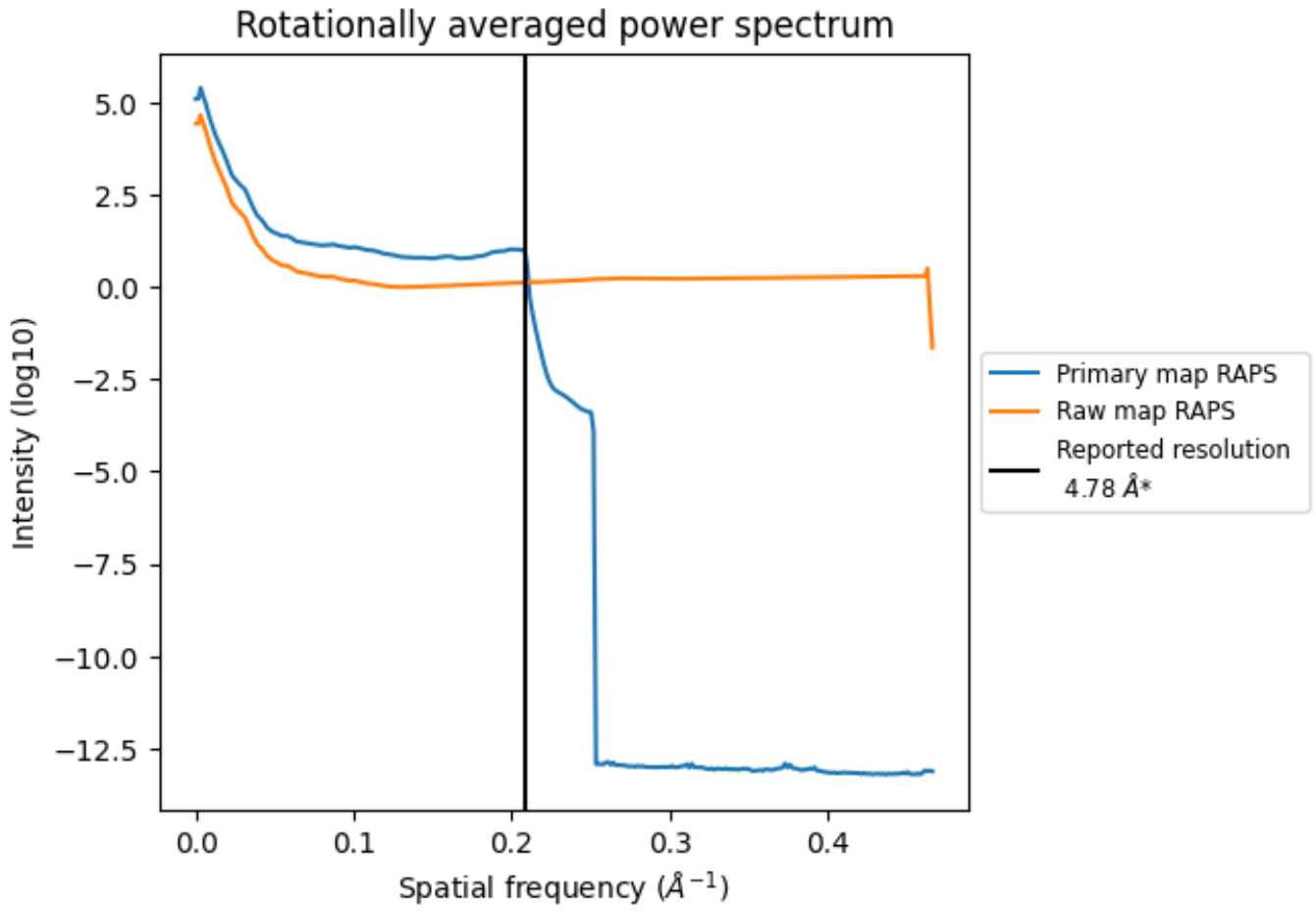
7.2 Volume estimate



The volume at the recommended contour level is 349 nm^3; this corresponds to an approximate mass of 316 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)

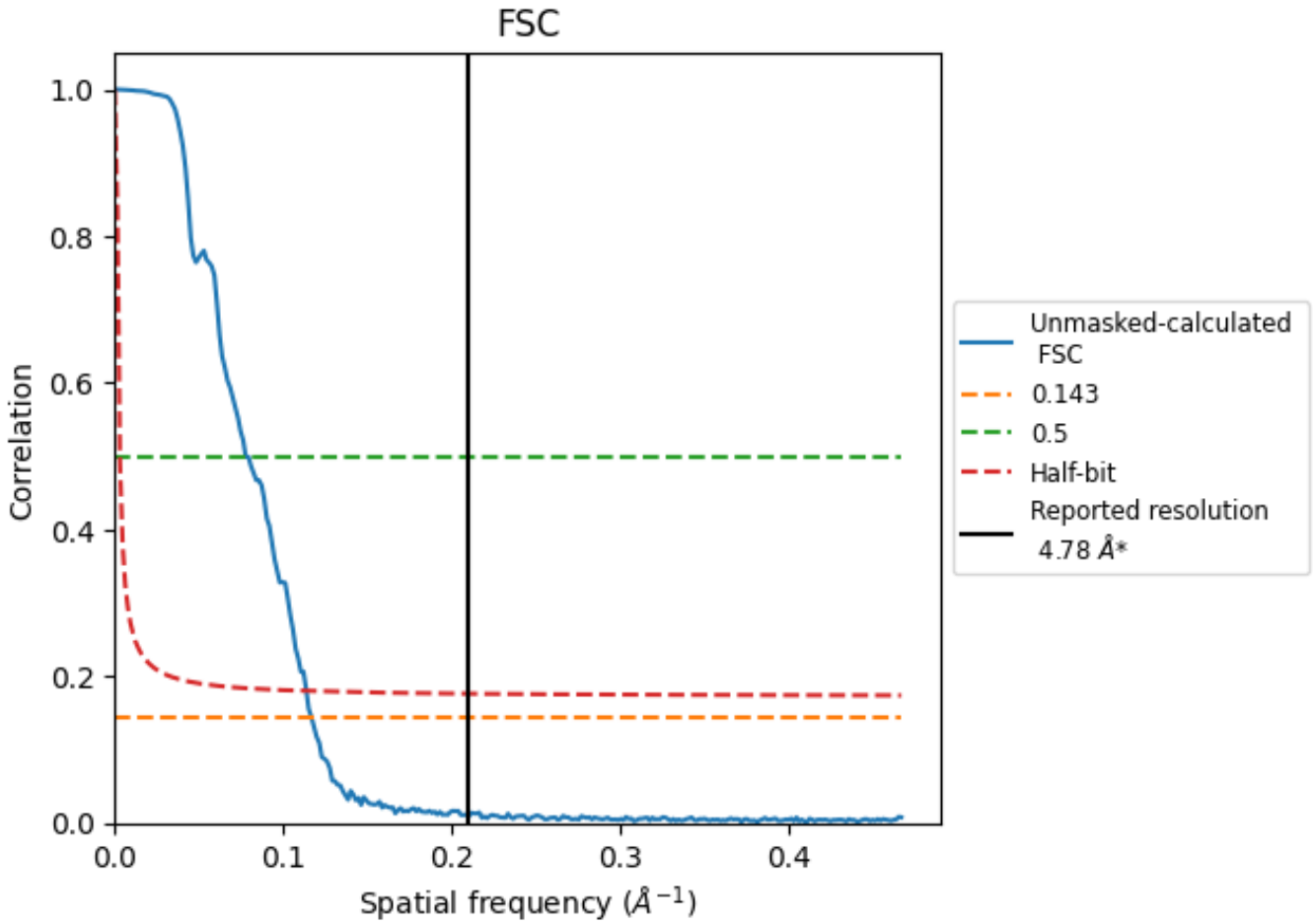


*Reported resolution corresponds to spatial frequency of 0.209 $Å^{-1}$

8 Fourier-Shell correlation

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

8.1 FSC



*Reported resolution corresponds to spatial frequency of 0.209 Å^{-1}

8.2 Resolution estimates (i)

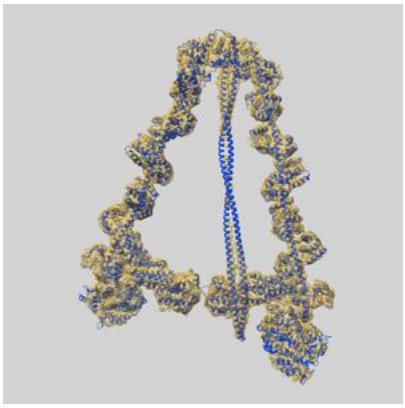
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	4.78	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	8.57	12.89	8.80

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 8.57 differs from the reported value 4.78 by more than 10 %

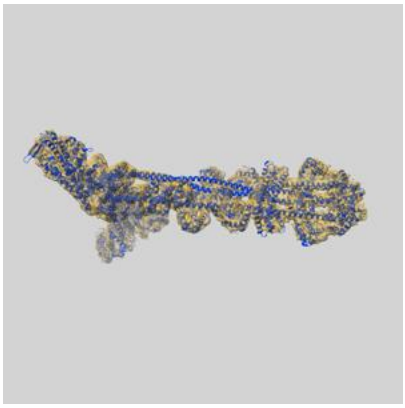
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-34121 and PDB model 7YV9. Per-residue inclusion information can be found in section 3 on page 7.

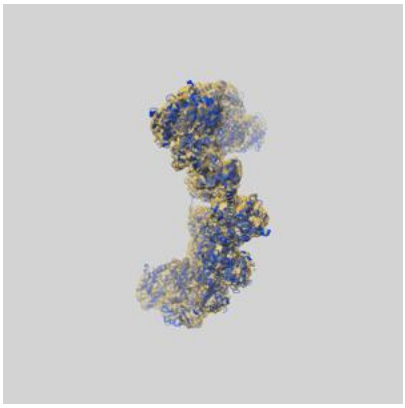
9.1 Map-model overlay



X



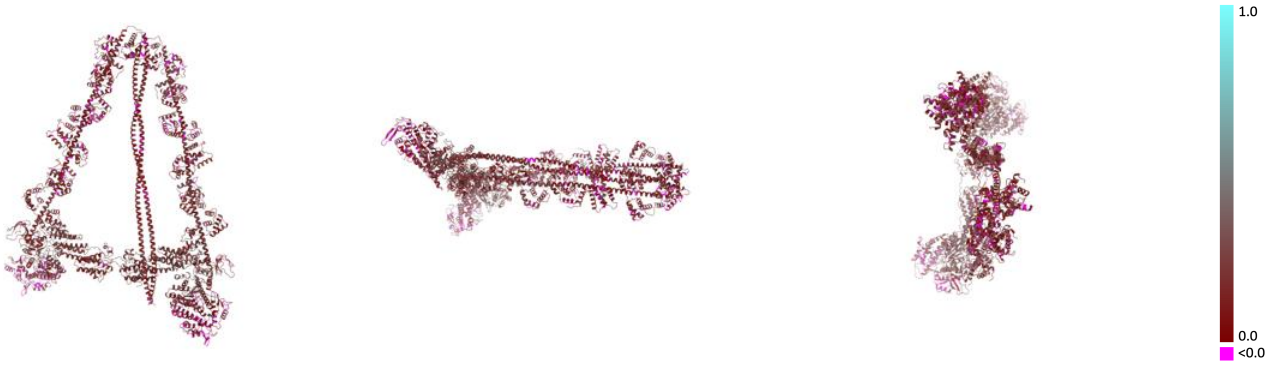
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.35 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

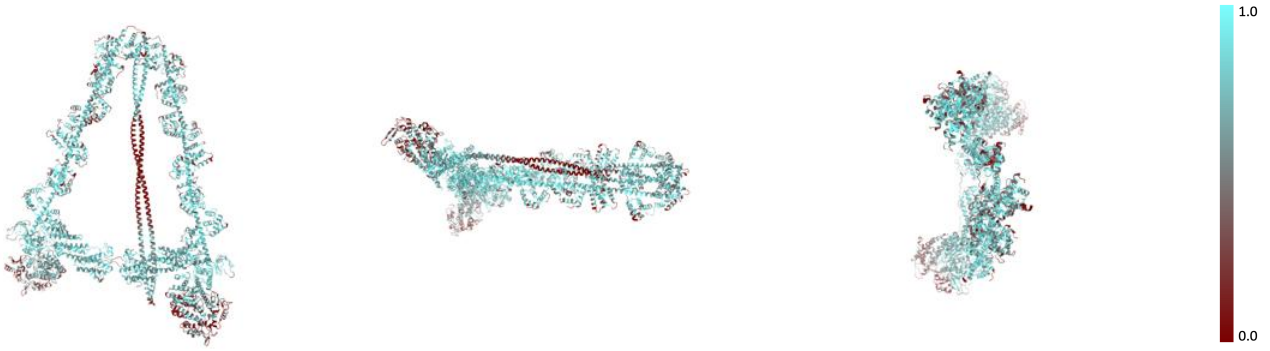
9.2 Q-score mapped to coordinate model (i)



X Y Z

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

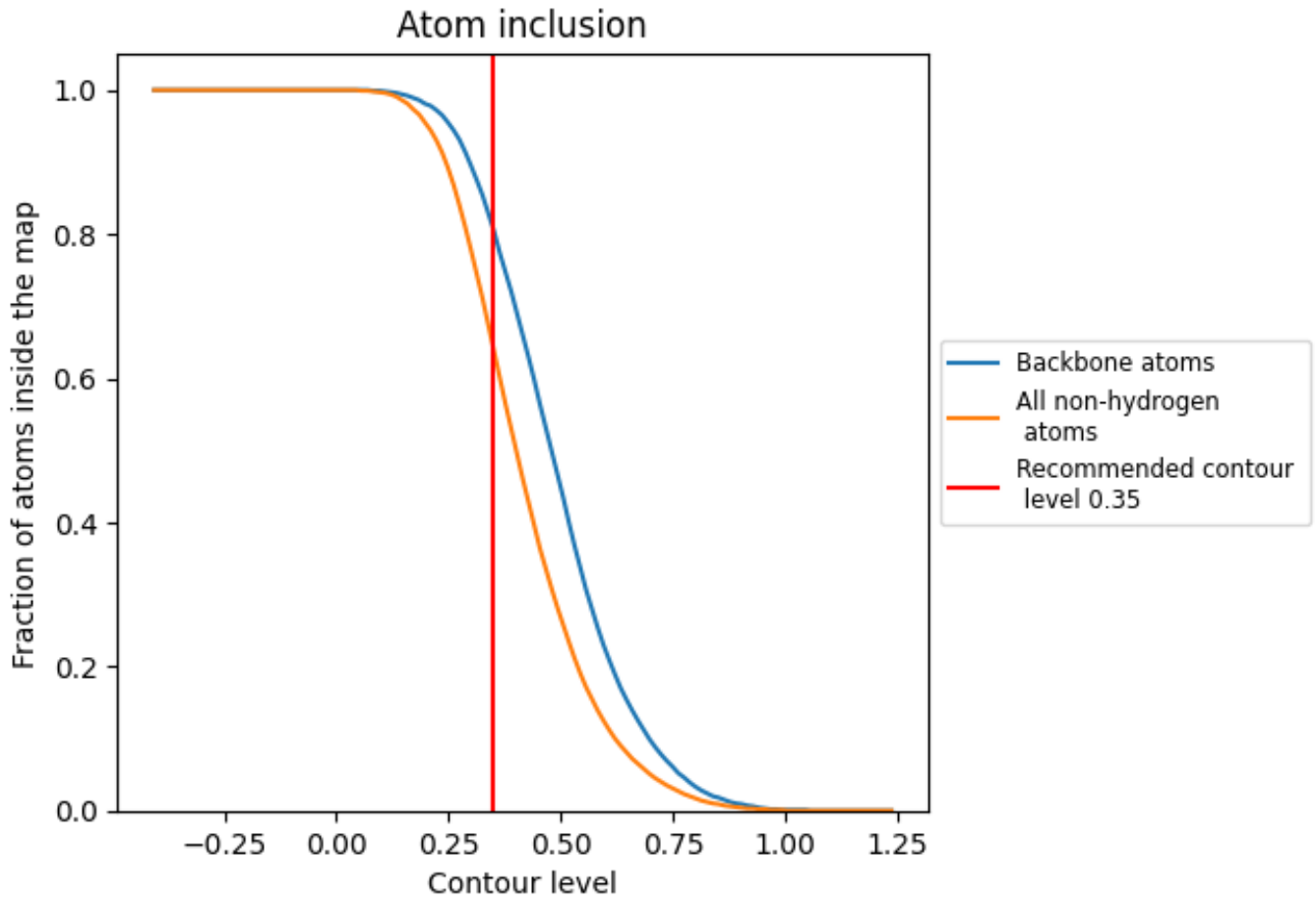
9.3 Atom inclusion mapped to coordinate model (i)



X Y Z

The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.35).

9.4 Atom inclusion (i)



At the recommended contour level, 80% of all backbone atoms, 64% 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 (0.35) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.6400	0.1890
A	0.6010	0.1860
B	0.7420	0.2130
C	0.6970	0.1830
D	0.6640	0.1590
E	0.6330	0.1340
F	0.6430	0.1610
G	0.6510	0.1720
H	0.5660	0.1750
I	0.7380	0.2100
J	0.6650	0.1720
K	0.6540	0.1540
L	0.5830	0.1360
M	0.6230	0.1690
N	0.6340	0.1640
X	0.7580	0.2640
Y	0.7550	0.2550