Full wwPDB EM Validation Report ⓘ

Jan 7, 2025 – 12:26 PM EST

PDB ID	:	9MLG
EMDB ID	:	EMD-48371
Title	:	Xenorhabdus nematophilus XptA2 State 2, 1181insYWK1183, D1182T mutant
Authors	:	Aller, S.G.; Martin, C.L.
Deposited on	:	2024-12-19
Resolution	:	4.30 Å(reported)

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

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

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

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

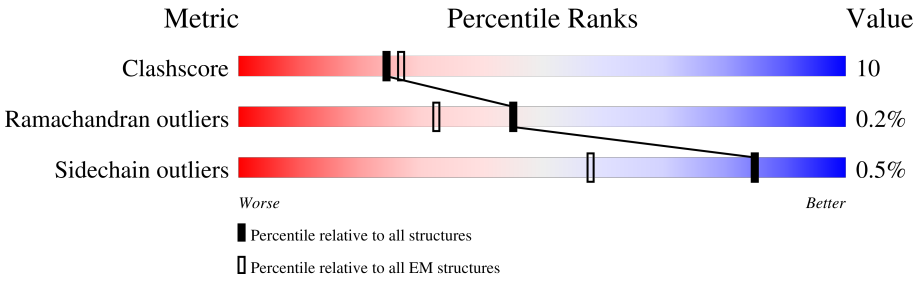
EMDB validation analysis	:	0.0.1.dev113
MolProbity	:	4.02b-467
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.40

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 4.30 Å.

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



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

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

Mol	Chain	Length	Quality of chain
1	A	2540	18% 77% 23%
1	B	2540	19% 77% 23%
1	C	2540	19% 76% 24%
1	D	2540	21% 76% 24%
1	E	2540	14% 76% 24%

2 Entry composition (i)

There is only 1 type of molecule in this entry. The entry contains 100205 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 XptA2 protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	2540	Total	C	N	O	S	0	0
			20041	12651	3420	3897	73		
1	B	2540	Total	C	N	O	S	0	0
			20041	12651	3420	3897	73		
1	C	2540	Total	C	N	O	S	0	0
			20041	12651	3420	3897	73		
1	D	2540	Total	C	N	O	S	0	0
			20041	12651	3420	3897	73		
1	E	2540	Total	C	N	O	S	0	0
			20041	12651	3420	3897	73		

There are 625 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	172	HIS	PRO	conflict	UNP Q93RN7
A	343	ASN	HIS	conflict	UNP Q93RN7
A	344	ILE	VAL	conflict	UNP Q93RN7
A	360	ARG	CYS	conflict	UNP Q93RN7
A	365	VAL	ILE	conflict	UNP Q93RN7
A	377	ALA	SER	conflict	UNP Q93RN7
A	379	PRO	THR	conflict	UNP Q93RN7
A	391	ILE	VAL	conflict	UNP Q93RN7
A	407	SER	ASN	conflict	UNP Q93RN7
A	410	LYS	ARG	conflict	UNP Q93RN7
A	566	VAL	ILE	conflict	UNP Q93RN7
A	583	ALA	THR	conflict	UNP Q93RN7
A	586	THR	ILE	conflict	UNP Q93RN7
A	587	ILE	LEU	conflict	UNP Q93RN7
A	592	PHE	PRO	conflict	UNP Q93RN7
A	606	VAL	ALA	conflict	UNP Q93RN7
A	620	LEU	PHE	conflict	UNP Q93RN7
A	637	PRO	SER	conflict	UNP Q93RN7
A	682	ASN	THR	conflict	UNP Q93RN7
A	686	SER	ARG	conflict	UNP Q93RN7

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Chain	Residue	Modelled	Actual	Comment	Reference
A	695	HIS	SER	conflict	UNP Q93RN7
A	696	ASN	ASP	conflict	UNP Q93RN7
A	736	ASP	ASN	conflict	UNP Q93RN7
A	742	THR	MET	conflict	UNP Q93RN7
A	748	SER	THR	conflict	UNP Q93RN7
A	750	ASN	SER	conflict	UNP Q93RN7
A	751	ALA	ASP	conflict	UNP Q93RN7
A	752	ASN	GLU	conflict	UNP Q93RN7
A	788	GLY	ASP	conflict	UNP Q93RN7
A	790	ALA	VAL	conflict	UNP Q93RN7
A	795	LYS	ARG	conflict	UNP Q93RN7
A	796	ASN	SER	conflict	UNP Q93RN7
A	799	ALA	PRO	conflict	UNP Q93RN7
A	800	GLY	ASP	conflict	UNP Q93RN7
A	801	GLN	ASN	conflict	UNP Q93RN7
A	?	-	THR	deletion	UNP Q93RN7
A	?	-	ILE	deletion	UNP Q93RN7
A	?	-	LEU	deletion	UNP Q93RN7
A	?	-	ILE	deletion	UNP Q93RN7
A	?	-	LEU	deletion	UNP Q93RN7
A	?	-	CYS	deletion	UNP Q93RN7
A	?	-	SER	deletion	UNP Q93RN7
A	803	ASN	SER	conflict	UNP Q93RN7
A	804	ILE	THR	conflict	UNP Q93RN7
A	806	THR	SER	conflict	UNP Q93RN7
A	807	LEU	THR	conflict	UNP Q93RN7
A	808	PHE	SER	conflict	UNP Q93RN7
A	809	SER	GLY	conflict	UNP Q93RN7
A	811	TYR	MET	conflict	UNP Q93RN7
A	812	ARG	-	insertion	UNP Q93RN7
A	813	PHE	-	insertion	UNP Q93RN7
A	814	HIS	-	insertion	UNP Q93RN7
A	815	GLN	-	insertion	UNP Q93RN7
A	816	TRP	-	insertion	UNP Q93RN7
A	817	ILE	-	insertion	UNP Q93RN7
A	818	ASN	-	insertion	UNP Q93RN7
A	820	LEU	TRP	conflict	UNP Q93RN7
A	821	GLY	GLU	conflict	UNP Q93RN7
A	822	ASN	ILE	conflict	UNP Q93RN7
A	824	GLY	ALA	conflict	UNP Q93RN7
A	825	SER	LEU	conflict	UNP Q93RN7
A	826	ASP	THR	conflict	UNP Q93RN7

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Chain	Residue	Modelled	Actual	Comment	Reference
A	827	THR	ARG	conflict	UNP Q93RN7
A	828	LEU	TRP	conflict	UNP Q93RN7
A	829	ASP	ILE	conflict	UNP Q93RN7
A	830	MET	CYS	conflict	UNP Q93RN7
A	831	LEU	CYS	conflict	UNP Q93RN7
A	832	ARG	ALA	conflict	UNP Q93RN7
A	833	GLN	LYS	conflict	UNP Q93RN7
A	838	ALA	GLY	conflict	UNP Q93RN7
A	842	ALA	GLY	conflict	UNP Q93RN7
A	843	SER	LEU	conflict	UNP Q93RN7
A	844	VAL	ARG	conflict	UNP Q93RN7
A	845	MET	ASP	conflict	UNP Q93RN7
A	847	LEU	ALA	conflict	UNP Q93RN7
A	848	ASP	GLY	conflict	UNP Q93RN7
A	849	ILE	HIS	conflict	UNP Q93RN7
A	850	SER	GLN	conflict	UNP Q93RN7
A	851	MET	TYR	conflict	UNP Q93RN7
A	852	VAL	GLY	conflict	UNP Q93RN7
A	853	THR	ASN	conflict	UNP Q93RN7
A	854	GLN	ALA	conflict	UNP Q93RN7
A	855	ALA	GLY	conflict	UNP Q93RN7
A	856	MET	HIS	conflict	UNP Q93RN7
A	857	VAL	GLY	conflict	UNP Q93RN7
A	872	THR	PRO	conflict	UNP Q93RN7
A	878	ASP	HIS	conflict	UNP Q93RN7
A	884	HIS	ILE	conflict	UNP Q93RN7
A	911	SER	ALA	conflict	UNP Q93RN7
A	914	GLU	LYS	conflict	UNP Q93RN7
A	923	GLU	ALA	conflict	UNP Q93RN7
A	1067	LYS	GLN	conflict	UNP Q93RN7
A	1075	ASP	GLU	conflict	UNP Q93RN7
A	1126	ASP	ASN	conflict	UNP Q93RN7
A	1182	TYR	-	insertion	UNP Q93RN7
A	1183	TRP	-	insertion	UNP Q93RN7
A	1184	LYS	-	insertion	UNP Q93RN7
A	1185	THR	ASP	engineered mutation	UNP Q93RN7
A	1253	LYS	VAL	conflict	UNP Q93RN7
A	1256	SER	PRO	conflict	UNP Q93RN7
A	1260	GLY	ASP	conflict	UNP Q93RN7
A	1261	SER	ASN	conflict	UNP Q93RN7
A	1517	ILE	VAL	conflict	UNP Q93RN7
A	1522	MET	VAL	conflict	UNP Q93RN7

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Chain	Residue	Modelled	Actual	Comment	Reference
A	1880	ASN	TYR	conflict	UNP Q93RN7
A	1883	MET	THR	conflict	UNP Q93RN7
A	1887	ILE	VAL	conflict	UNP Q93RN7
A	1923	THR	ALA	conflict	UNP Q93RN7
A	1946	GLY	VAL	conflict	UNP Q93RN7
A	1950	GLN	HIS	conflict	UNP Q93RN7
A	1962	MET	ALA	conflict	UNP Q93RN7
A	1964	GLY	ASP	conflict	UNP Q93RN7
A	1965	ARG	ASN	conflict	UNP Q93RN7
A	1967	GLY	GLU	conflict	UNP Q93RN7
A	1969	SER	ALA	conflict	UNP Q93RN7
A	1970	LYS	THR	conflict	UNP Q93RN7
A	1971	ASN	GLN	conflict	UNP Q93RN7
A	1972	LEU	PRO	conflict	UNP Q93RN7
A	2031	THR	PRO	conflict	UNP Q93RN7
A	2060	THR	ALA	conflict	UNP Q93RN7
A	2152	LEU	PHE	conflict	UNP Q93RN7
A	2164	VAL	ALA	conflict	UNP Q93RN7
A	2167	ILE	VAL	conflict	UNP Q93RN7
A	2181	LEU	PHE	conflict	UNP Q93RN7
A	2433	LEU	PHE	conflict	UNP Q93RN7
B	172	HIS	PRO	conflict	UNP Q93RN7
B	343	ASN	HIS	conflict	UNP Q93RN7
B	344	ILE	VAL	conflict	UNP Q93RN7
B	360	ARG	CYS	conflict	UNP Q93RN7
B	365	VAL	ILE	conflict	UNP Q93RN7
B	377	ALA	SER	conflict	UNP Q93RN7
B	379	PRO	THR	conflict	UNP Q93RN7
B	391	ILE	VAL	conflict	UNP Q93RN7
B	407	SER	ASN	conflict	UNP Q93RN7
B	410	LYS	ARG	conflict	UNP Q93RN7
B	566	VAL	ILE	conflict	UNP Q93RN7
B	583	ALA	THR	conflict	UNP Q93RN7
B	586	THR	ILE	conflict	UNP Q93RN7
B	587	ILE	LEU	conflict	UNP Q93RN7
B	592	PHE	PRO	conflict	UNP Q93RN7
B	606	VAL	ALA	conflict	UNP Q93RN7
B	620	LEU	PHE	conflict	UNP Q93RN7
B	637	PRO	SER	conflict	UNP Q93RN7
B	682	ASN	THR	conflict	UNP Q93RN7
B	686	SER	ARG	conflict	UNP Q93RN7
B	695	HIS	SER	conflict	UNP Q93RN7

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Chain	Residue	Modelled	Actual	Comment	Reference
B	696	ASN	ASP	conflict	UNP Q93RN7
B	736	ASP	ASN	conflict	UNP Q93RN7
B	742	THR	MET	conflict	UNP Q93RN7
B	748	SER	THR	conflict	UNP Q93RN7
B	750	ASN	SER	conflict	UNP Q93RN7
B	751	ALA	ASP	conflict	UNP Q93RN7
B	752	ASN	GLU	conflict	UNP Q93RN7
B	788	GLY	ASP	conflict	UNP Q93RN7
B	790	ALA	VAL	conflict	UNP Q93RN7
B	795	LYS	ARG	conflict	UNP Q93RN7
B	796	ASN	SER	conflict	UNP Q93RN7
B	799	ALA	PRO	conflict	UNP Q93RN7
B	800	GLY	ASP	conflict	UNP Q93RN7
B	801	GLN	ASN	conflict	UNP Q93RN7
B	?	-	THR	deletion	UNP Q93RN7
B	?	-	ILE	deletion	UNP Q93RN7
B	?	-	LEU	deletion	UNP Q93RN7
B	?	-	ILE	deletion	UNP Q93RN7
B	?	-	LEU	deletion	UNP Q93RN7
B	?	-	CYS	deletion	UNP Q93RN7
B	?	-	SER	deletion	UNP Q93RN7
B	803	ASN	SER	conflict	UNP Q93RN7
B	804	ILE	THR	conflict	UNP Q93RN7
B	806	THR	SER	conflict	UNP Q93RN7
B	807	LEU	THR	conflict	UNP Q93RN7
B	808	PHE	SER	conflict	UNP Q93RN7
B	809	SER	GLY	conflict	UNP Q93RN7
B	811	TYR	MET	conflict	UNP Q93RN7
B	812	ARG	-	insertion	UNP Q93RN7
B	813	PHE	-	insertion	UNP Q93RN7
B	814	HIS	-	insertion	UNP Q93RN7
B	815	GLN	-	insertion	UNP Q93RN7
B	816	TRP	-	insertion	UNP Q93RN7
B	817	ILE	-	insertion	UNP Q93RN7
B	818	ASN	-	insertion	UNP Q93RN7
B	820	LEU	TRP	conflict	UNP Q93RN7
B	821	GLY	GLU	conflict	UNP Q93RN7
B	822	ASN	ILE	conflict	UNP Q93RN7
B	824	GLY	ALA	conflict	UNP Q93RN7
B	825	SER	LEU	conflict	UNP Q93RN7
B	826	ASP	THR	conflict	UNP Q93RN7
B	827	THR	ARG	conflict	UNP Q93RN7

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Chain	Residue	Modelled	Actual	Comment	Reference
B	828	LEU	TRP	conflict	UNP Q93RN7
B	829	ASP	ILE	conflict	UNP Q93RN7
B	830	MET	CYS	conflict	UNP Q93RN7
B	831	LEU	CYS	conflict	UNP Q93RN7
B	832	ARG	ALA	conflict	UNP Q93RN7
B	833	GLN	LYS	conflict	UNP Q93RN7
B	838	ALA	GLY	conflict	UNP Q93RN7
B	842	ALA	GLY	conflict	UNP Q93RN7
B	843	SER	LEU	conflict	UNP Q93RN7
B	844	VAL	ARG	conflict	UNP Q93RN7
B	845	MET	ASP	conflict	UNP Q93RN7
B	847	LEU	ALA	conflict	UNP Q93RN7
B	848	ASP	GLY	conflict	UNP Q93RN7
B	849	ILE	HIS	conflict	UNP Q93RN7
B	850	SER	GLN	conflict	UNP Q93RN7
B	851	MET	TYR	conflict	UNP Q93RN7
B	852	VAL	GLY	conflict	UNP Q93RN7
B	853	THR	ASN	conflict	UNP Q93RN7
B	854	GLN	ALA	conflict	UNP Q93RN7
B	855	ALA	GLY	conflict	UNP Q93RN7
B	856	MET	HIS	conflict	UNP Q93RN7
B	857	VAL	GLY	conflict	UNP Q93RN7
B	872	THR	PRO	conflict	UNP Q93RN7
B	878	ASP	HIS	conflict	UNP Q93RN7
B	884	HIS	ILE	conflict	UNP Q93RN7
B	911	SER	ALA	conflict	UNP Q93RN7
B	914	GLU	LYS	conflict	UNP Q93RN7
B	923	GLU	ALA	conflict	UNP Q93RN7
B	1067	LYS	GLN	conflict	UNP Q93RN7
B	1075	ASP	GLU	conflict	UNP Q93RN7
B	1126	ASP	ASN	conflict	UNP Q93RN7
B	1182	TYR	-	insertion	UNP Q93RN7
B	1183	TRP	-	insertion	UNP Q93RN7
B	1184	LYS	-	insertion	UNP Q93RN7
B	1185	THR	ASP	engineered mutation	UNP Q93RN7
B	1253	LYS	VAL	conflict	UNP Q93RN7
B	1256	SER	PRO	conflict	UNP Q93RN7
B	1260	GLY	ASP	conflict	UNP Q93RN7
B	1261	SER	ASN	conflict	UNP Q93RN7
B	1517	ILE	VAL	conflict	UNP Q93RN7
B	1522	MET	VAL	conflict	UNP Q93RN7
B	1880	ASN	TYR	conflict	UNP Q93RN7

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Chain	Residue	Modelled	Actual	Comment	Reference
B	1883	MET	THR	conflict	UNP Q93RN7
B	1887	ILE	VAL	conflict	UNP Q93RN7
B	1923	THR	ALA	conflict	UNP Q93RN7
B	1946	GLY	VAL	conflict	UNP Q93RN7
B	1950	GLN	HIS	conflict	UNP Q93RN7
B	1962	MET	ALA	conflict	UNP Q93RN7
B	1964	GLY	ASP	conflict	UNP Q93RN7
B	1965	ARG	ASN	conflict	UNP Q93RN7
B	1967	GLY	GLU	conflict	UNP Q93RN7
B	1969	SER	ALA	conflict	UNP Q93RN7
B	1970	LYS	THR	conflict	UNP Q93RN7
B	1971	ASN	GLN	conflict	UNP Q93RN7
B	1972	LEU	PRO	conflict	UNP Q93RN7
B	2031	THR	PRO	conflict	UNP Q93RN7
B	2060	THR	ALA	conflict	UNP Q93RN7
B	2152	LEU	PHE	conflict	UNP Q93RN7
B	2164	VAL	ALA	conflict	UNP Q93RN7
B	2167	ILE	VAL	conflict	UNP Q93RN7
B	2181	LEU	PHE	conflict	UNP Q93RN7
B	2433	LEU	PHE	conflict	UNP Q93RN7
C	172	HIS	PRO	conflict	UNP Q93RN7
C	343	ASN	HIS	conflict	UNP Q93RN7
C	344	ILE	VAL	conflict	UNP Q93RN7
C	360	ARG	CYS	conflict	UNP Q93RN7
C	365	VAL	ILE	conflict	UNP Q93RN7
C	377	ALA	SER	conflict	UNP Q93RN7
C	379	PRO	THR	conflict	UNP Q93RN7
C	391	ILE	VAL	conflict	UNP Q93RN7
C	407	SER	ASN	conflict	UNP Q93RN7
C	410	LYS	ARG	conflict	UNP Q93RN7
C	566	VAL	ILE	conflict	UNP Q93RN7
C	583	ALA	THR	conflict	UNP Q93RN7
C	586	THR	ILE	conflict	UNP Q93RN7
C	587	ILE	LEU	conflict	UNP Q93RN7
C	592	PHE	PRO	conflict	UNP Q93RN7
C	606	VAL	ALA	conflict	UNP Q93RN7
C	620	LEU	PHE	conflict	UNP Q93RN7
C	637	PRO	SER	conflict	UNP Q93RN7
C	682	ASN	THR	conflict	UNP Q93RN7
C	686	SER	ARG	conflict	UNP Q93RN7
C	695	HIS	SER	conflict	UNP Q93RN7
C	696	ASN	ASP	conflict	UNP Q93RN7

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Chain	Residue	Modelled	Actual	Comment	Reference
C	736	ASP	ASN	conflict	UNP Q93RN7
C	742	THR	MET	conflict	UNP Q93RN7
C	748	SER	THR	conflict	UNP Q93RN7
C	750	ASN	SER	conflict	UNP Q93RN7
C	751	ALA	ASP	conflict	UNP Q93RN7
C	752	ASN	GLU	conflict	UNP Q93RN7
C	788	GLY	ASP	conflict	UNP Q93RN7
C	790	ALA	VAL	conflict	UNP Q93RN7
C	795	LYS	ARG	conflict	UNP Q93RN7
C	796	ASN	SER	conflict	UNP Q93RN7
C	799	ALA	PRO	conflict	UNP Q93RN7
C	800	GLY	ASP	conflict	UNP Q93RN7
C	801	GLN	ASN	conflict	UNP Q93RN7
C	?	-	THR	deletion	UNP Q93RN7
C	?	-	ILE	deletion	UNP Q93RN7
C	?	-	LEU	deletion	UNP Q93RN7
C	?	-	ILE	deletion	UNP Q93RN7
C	?	-	LEU	deletion	UNP Q93RN7
C	?	-	CYS	deletion	UNP Q93RN7
C	?	-	SER	deletion	UNP Q93RN7
C	803	ASN	SER	conflict	UNP Q93RN7
C	804	ILE	THR	conflict	UNP Q93RN7
C	806	THR	SER	conflict	UNP Q93RN7
C	807	LEU	THR	conflict	UNP Q93RN7
C	808	PHE	SER	conflict	UNP Q93RN7
C	809	SER	GLY	conflict	UNP Q93RN7
C	811	TYR	MET	conflict	UNP Q93RN7
C	812	ARG	-	insertion	UNP Q93RN7
C	813	PHE	-	insertion	UNP Q93RN7
C	814	HIS	-	insertion	UNP Q93RN7
C	815	GLN	-	insertion	UNP Q93RN7
C	816	TRP	-	insertion	UNP Q93RN7
C	817	ILE	-	insertion	UNP Q93RN7
C	818	ASN	-	insertion	UNP Q93RN7
C	820	LEU	TRP	conflict	UNP Q93RN7
C	821	GLY	GLU	conflict	UNP Q93RN7
C	822	ASN	ILE	conflict	UNP Q93RN7
C	824	GLY	ALA	conflict	UNP Q93RN7
C	825	SER	LEU	conflict	UNP Q93RN7
C	826	ASP	THR	conflict	UNP Q93RN7
C	827	THR	ARG	conflict	UNP Q93RN7
C	828	LEU	TRP	conflict	UNP Q93RN7

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Chain	Residue	Modelled	Actual	Comment	Reference
C	829	ASP	ILE	conflict	UNP Q93RN7
C	830	MET	CYS	conflict	UNP Q93RN7
C	831	LEU	CYS	conflict	UNP Q93RN7
C	832	ARG	ALA	conflict	UNP Q93RN7
C	833	GLN	LYS	conflict	UNP Q93RN7
C	838	ALA	GLY	conflict	UNP Q93RN7
C	842	ALA	GLY	conflict	UNP Q93RN7
C	843	SER	LEU	conflict	UNP Q93RN7
C	844	VAL	ARG	conflict	UNP Q93RN7
C	845	MET	ASP	conflict	UNP Q93RN7
C	847	LEU	ALA	conflict	UNP Q93RN7
C	848	ASP	GLY	conflict	UNP Q93RN7
C	849	ILE	HIS	conflict	UNP Q93RN7
C	850	SER	GLN	conflict	UNP Q93RN7
C	851	MET	TYR	conflict	UNP Q93RN7
C	852	VAL	GLY	conflict	UNP Q93RN7
C	853	THR	ASN	conflict	UNP Q93RN7
C	854	GLN	ALA	conflict	UNP Q93RN7
C	855	ALA	GLY	conflict	UNP Q93RN7
C	856	MET	HIS	conflict	UNP Q93RN7
C	857	VAL	GLY	conflict	UNP Q93RN7
C	872	THR	PRO	conflict	UNP Q93RN7
C	878	ASP	HIS	conflict	UNP Q93RN7
C	884	HIS	ILE	conflict	UNP Q93RN7
C	911	SER	ALA	conflict	UNP Q93RN7
C	914	GLU	LYS	conflict	UNP Q93RN7
C	923	GLU	ALA	conflict	UNP Q93RN7
C	1067	LYS	GLN	conflict	UNP Q93RN7
C	1075	ASP	GLU	conflict	UNP Q93RN7
C	1126	ASP	ASN	conflict	UNP Q93RN7
C	1182	TYR	-	insertion	UNP Q93RN7
C	1183	TRP	-	insertion	UNP Q93RN7
C	1184	LYS	-	insertion	UNP Q93RN7
C	1185	THR	ASP	engineered mutation	UNP Q93RN7
C	1253	LYS	VAL	conflict	UNP Q93RN7
C	1256	SER	PRO	conflict	UNP Q93RN7
C	1260	GLY	ASP	conflict	UNP Q93RN7
C	1261	SER	ASN	conflict	UNP Q93RN7
C	1517	ILE	VAL	conflict	UNP Q93RN7
C	1522	MET	VAL	conflict	UNP Q93RN7
C	1880	ASN	TYR	conflict	UNP Q93RN7
C	1883	MET	THR	conflict	UNP Q93RN7

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Chain	Residue	Modelled	Actual	Comment	Reference
C	1887	ILE	VAL	conflict	UNP Q93RN7
C	1923	THR	ALA	conflict	UNP Q93RN7
C	1946	GLY	VAL	conflict	UNP Q93RN7
C	1950	GLN	HIS	conflict	UNP Q93RN7
C	1962	MET	ALA	conflict	UNP Q93RN7
C	1964	GLY	ASP	conflict	UNP Q93RN7
C	1965	ARG	ASN	conflict	UNP Q93RN7
C	1967	GLY	GLU	conflict	UNP Q93RN7
C	1969	SER	ALA	conflict	UNP Q93RN7
C	1970	LYS	THR	conflict	UNP Q93RN7
C	1971	ASN	GLN	conflict	UNP Q93RN7
C	1972	LEU	PRO	conflict	UNP Q93RN7
C	2031	THR	PRO	conflict	UNP Q93RN7
C	2060	THR	ALA	conflict	UNP Q93RN7
C	2152	LEU	PHE	conflict	UNP Q93RN7
C	2164	VAL	ALA	conflict	UNP Q93RN7
C	2167	ILE	VAL	conflict	UNP Q93RN7
C	2181	LEU	PHE	conflict	UNP Q93RN7
C	2433	LEU	PHE	conflict	UNP Q93RN7
D	172	HIS	PRO	conflict	UNP Q93RN7
D	343	ASN	HIS	conflict	UNP Q93RN7
D	344	ILE	VAL	conflict	UNP Q93RN7
D	360	ARG	CYS	conflict	UNP Q93RN7
D	365	VAL	ILE	conflict	UNP Q93RN7
D	377	ALA	SER	conflict	UNP Q93RN7
D	379	PRO	THR	conflict	UNP Q93RN7
D	391	ILE	VAL	conflict	UNP Q93RN7
D	407	SER	ASN	conflict	UNP Q93RN7
D	410	LYS	ARG	conflict	UNP Q93RN7
D	566	VAL	ILE	conflict	UNP Q93RN7
D	583	ALA	THR	conflict	UNP Q93RN7
D	586	THR	ILE	conflict	UNP Q93RN7
D	587	ILE	LEU	conflict	UNP Q93RN7
D	592	PHE	PRO	conflict	UNP Q93RN7
D	606	VAL	ALA	conflict	UNP Q93RN7
D	620	LEU	PHE	conflict	UNP Q93RN7
D	637	PRO	SER	conflict	UNP Q93RN7
D	682	ASN	THR	conflict	UNP Q93RN7
D	686	SER	ARG	conflict	UNP Q93RN7
D	695	HIS	SER	conflict	UNP Q93RN7
D	696	ASN	ASP	conflict	UNP Q93RN7
D	736	ASP	ASN	conflict	UNP Q93RN7

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Chain	Residue	Modelled	Actual	Comment	Reference
D	742	THR	MET	conflict	UNP Q93RN7
D	748	SER	THR	conflict	UNP Q93RN7
D	750	ASN	SER	conflict	UNP Q93RN7
D	751	ALA	ASP	conflict	UNP Q93RN7
D	752	ASN	GLU	conflict	UNP Q93RN7
D	788	GLY	ASP	conflict	UNP Q93RN7
D	790	ALA	VAL	conflict	UNP Q93RN7
D	795	LYS	ARG	conflict	UNP Q93RN7
D	796	ASN	SER	conflict	UNP Q93RN7
D	799	ALA	PRO	conflict	UNP Q93RN7
D	800	GLY	ASP	conflict	UNP Q93RN7
D	801	GLN	ASN	conflict	UNP Q93RN7
D	?	-	THR	deletion	UNP Q93RN7
D	?	-	ILE	deletion	UNP Q93RN7
D	?	-	LEU	deletion	UNP Q93RN7
D	?	-	ILE	deletion	UNP Q93RN7
D	?	-	LEU	deletion	UNP Q93RN7
D	?	-	CYS	deletion	UNP Q93RN7
D	?	-	SER	deletion	UNP Q93RN7
D	803	ASN	SER	conflict	UNP Q93RN7
D	804	ILE	THR	conflict	UNP Q93RN7
D	806	THR	SER	conflict	UNP Q93RN7
D	807	LEU	THR	conflict	UNP Q93RN7
D	808	PHE	SER	conflict	UNP Q93RN7
D	809	SER	GLY	conflict	UNP Q93RN7
D	811	TYR	MET	conflict	UNP Q93RN7
D	812	ARG	-	insertion	UNP Q93RN7
D	813	PHE	-	insertion	UNP Q93RN7
D	814	HIS	-	insertion	UNP Q93RN7
D	815	GLN	-	insertion	UNP Q93RN7
D	816	TRP	-	insertion	UNP Q93RN7
D	817	ILE	-	insertion	UNP Q93RN7
D	818	ASN	-	insertion	UNP Q93RN7
D	820	LEU	TRP	conflict	UNP Q93RN7
D	821	GLY	GLU	conflict	UNP Q93RN7
D	822	ASN	ILE	conflict	UNP Q93RN7
D	824	GLY	ALA	conflict	UNP Q93RN7
D	825	SER	LEU	conflict	UNP Q93RN7
D	826	ASP	THR	conflict	UNP Q93RN7
D	827	THR	ARG	conflict	UNP Q93RN7
D	828	LEU	TRP	conflict	UNP Q93RN7
D	829	ASP	ILE	conflict	UNP Q93RN7

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Chain	Residue	Modelled	Actual	Comment	Reference
D	830	MET	CYS	conflict	UNP Q93RN7
D	831	LEU	CYS	conflict	UNP Q93RN7
D	832	ARG	ALA	conflict	UNP Q93RN7
D	833	GLN	LYS	conflict	UNP Q93RN7
D	838	ALA	GLY	conflict	UNP Q93RN7
D	842	ALA	GLY	conflict	UNP Q93RN7
D	843	SER	LEU	conflict	UNP Q93RN7
D	844	VAL	ARG	conflict	UNP Q93RN7
D	845	MET	ASP	conflict	UNP Q93RN7
D	847	LEU	ALA	conflict	UNP Q93RN7
D	848	ASP	GLY	conflict	UNP Q93RN7
D	849	ILE	HIS	conflict	UNP Q93RN7
D	850	SER	GLN	conflict	UNP Q93RN7
D	851	MET	TYR	conflict	UNP Q93RN7
D	852	VAL	GLY	conflict	UNP Q93RN7
D	853	THR	ASN	conflict	UNP Q93RN7
D	854	GLN	ALA	conflict	UNP Q93RN7
D	855	ALA	GLY	conflict	UNP Q93RN7
D	856	MET	HIS	conflict	UNP Q93RN7
D	857	VAL	GLY	conflict	UNP Q93RN7
D	872	THR	PRO	conflict	UNP Q93RN7
D	878	ASP	HIS	conflict	UNP Q93RN7
D	884	HIS	ILE	conflict	UNP Q93RN7
D	911	SER	ALA	conflict	UNP Q93RN7
D	914	GLU	LYS	conflict	UNP Q93RN7
D	923	GLU	ALA	conflict	UNP Q93RN7
D	1067	LYS	GLN	conflict	UNP Q93RN7
D	1075	ASP	GLU	conflict	UNP Q93RN7
D	1126	ASP	ASN	conflict	UNP Q93RN7
D	1182	TYR	-	insertion	UNP Q93RN7
D	1183	TRP	-	insertion	UNP Q93RN7
D	1184	LYS	-	insertion	UNP Q93RN7
D	1185	THR	ASP	engineered mutation	UNP Q93RN7
D	1253	LYS	VAL	conflict	UNP Q93RN7
D	1256	SER	PRO	conflict	UNP Q93RN7
D	1260	GLY	ASP	conflict	UNP Q93RN7
D	1261	SER	ASN	conflict	UNP Q93RN7
D	1517	ILE	VAL	conflict	UNP Q93RN7
D	1522	MET	VAL	conflict	UNP Q93RN7
D	1880	ASN	TYR	conflict	UNP Q93RN7
D	1883	MET	THR	conflict	UNP Q93RN7
D	1887	ILE	VAL	conflict	UNP Q93RN7

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Chain	Residue	Modelled	Actual	Comment	Reference
D	1923	THR	ALA	conflict	UNP Q93RN7
D	1946	GLY	VAL	conflict	UNP Q93RN7
D	1950	GLN	HIS	conflict	UNP Q93RN7
D	1962	MET	ALA	conflict	UNP Q93RN7
D	1964	GLY	ASP	conflict	UNP Q93RN7
D	1965	ARG	ASN	conflict	UNP Q93RN7
D	1967	GLY	GLU	conflict	UNP Q93RN7
D	1969	SER	ALA	conflict	UNP Q93RN7
D	1970	LYS	THR	conflict	UNP Q93RN7
D	1971	ASN	GLN	conflict	UNP Q93RN7
D	1972	LEU	PRO	conflict	UNP Q93RN7
D	2031	THR	PRO	conflict	UNP Q93RN7
D	2060	THR	ALA	conflict	UNP Q93RN7
D	2152	LEU	PHE	conflict	UNP Q93RN7
D	2164	VAL	ALA	conflict	UNP Q93RN7
D	2167	ILE	VAL	conflict	UNP Q93RN7
D	2181	LEU	PHE	conflict	UNP Q93RN7
D	2433	LEU	PHE	conflict	UNP Q93RN7
E	172	HIS	PRO	conflict	UNP Q93RN7
E	343	ASN	HIS	conflict	UNP Q93RN7
E	344	ILE	VAL	conflict	UNP Q93RN7
E	360	ARG	CYS	conflict	UNP Q93RN7
E	365	VAL	ILE	conflict	UNP Q93RN7
E	377	ALA	SER	conflict	UNP Q93RN7
E	379	PRO	THR	conflict	UNP Q93RN7
E	391	ILE	VAL	conflict	UNP Q93RN7
E	407	SER	ASN	conflict	UNP Q93RN7
E	410	LYS	ARG	conflict	UNP Q93RN7
E	566	VAL	ILE	conflict	UNP Q93RN7
E	583	ALA	THR	conflict	UNP Q93RN7
E	586	THR	ILE	conflict	UNP Q93RN7
E	587	ILE	LEU	conflict	UNP Q93RN7
E	592	PHE	PRO	conflict	UNP Q93RN7
E	606	VAL	ALA	conflict	UNP Q93RN7
E	620	LEU	PHE	conflict	UNP Q93RN7
E	637	PRO	SER	conflict	UNP Q93RN7
E	682	ASN	THR	conflict	UNP Q93RN7
E	686	SER	ARG	conflict	UNP Q93RN7
E	695	HIS	SER	conflict	UNP Q93RN7
E	696	ASN	ASP	conflict	UNP Q93RN7
E	736	ASP	ASN	conflict	UNP Q93RN7
E	742	THR	MET	conflict	UNP Q93RN7

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Chain	Residue	Modelled	Actual	Comment	Reference
E	748	SER	THR	conflict	UNP Q93RN7
E	750	ASN	SER	conflict	UNP Q93RN7
E	751	ALA	ASP	conflict	UNP Q93RN7
E	752	ASN	GLU	conflict	UNP Q93RN7
E	788	GLY	ASP	conflict	UNP Q93RN7
E	790	ALA	VAL	conflict	UNP Q93RN7
E	795	LYS	ARG	conflict	UNP Q93RN7
E	796	ASN	SER	conflict	UNP Q93RN7
E	799	ALA	PRO	conflict	UNP Q93RN7
E	800	GLY	ASP	conflict	UNP Q93RN7
E	801	GLN	ASN	conflict	UNP Q93RN7
E	?	-	THR	deletion	UNP Q93RN7
E	?	-	ILE	deletion	UNP Q93RN7
E	?	-	LEU	deletion	UNP Q93RN7
E	?	-	ILE	deletion	UNP Q93RN7
E	?	-	LEU	deletion	UNP Q93RN7
E	?	-	CYS	deletion	UNP Q93RN7
E	?	-	SER	deletion	UNP Q93RN7
E	803	ASN	SER	conflict	UNP Q93RN7
E	804	ILE	THR	conflict	UNP Q93RN7
E	806	THR	SER	conflict	UNP Q93RN7
E	807	LEU	THR	conflict	UNP Q93RN7
E	808	PHE	SER	conflict	UNP Q93RN7
E	809	SER	GLY	conflict	UNP Q93RN7
E	811	TYR	MET	conflict	UNP Q93RN7
E	812	ARG	-	insertion	UNP Q93RN7
E	813	PHE	-	insertion	UNP Q93RN7
E	814	HIS	-	insertion	UNP Q93RN7
E	815	GLN	-	insertion	UNP Q93RN7
E	816	TRP	-	insertion	UNP Q93RN7
E	817	ILE	-	insertion	UNP Q93RN7
E	818	ASN	-	insertion	UNP Q93RN7
E	820	LEU	TRP	conflict	UNP Q93RN7
E	821	GLY	GLU	conflict	UNP Q93RN7
E	822	ASN	ILE	conflict	UNP Q93RN7
E	824	GLY	ALA	conflict	UNP Q93RN7
E	825	SER	LEU	conflict	UNP Q93RN7
E	826	ASP	THR	conflict	UNP Q93RN7
E	827	THR	ARG	conflict	UNP Q93RN7
E	828	LEU	TRP	conflict	UNP Q93RN7
E	829	ASP	ILE	conflict	UNP Q93RN7
E	830	MET	CYS	conflict	UNP Q93RN7

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Chain	Residue	Modelled	Actual	Comment	Reference
E	831	LEU	CYS	conflict	UNP Q93RN7
E	832	ARG	ALA	conflict	UNP Q93RN7
E	833	GLN	LYS	conflict	UNP Q93RN7
E	838	ALA	GLY	conflict	UNP Q93RN7
E	842	ALA	GLY	conflict	UNP Q93RN7
E	843	SER	LEU	conflict	UNP Q93RN7
E	844	VAL	ARG	conflict	UNP Q93RN7
E	845	MET	ASP	conflict	UNP Q93RN7
E	847	LEU	ALA	conflict	UNP Q93RN7
E	848	ASP	GLY	conflict	UNP Q93RN7
E	849	ILE	HIS	conflict	UNP Q93RN7
E	850	SER	GLN	conflict	UNP Q93RN7
E	851	MET	TYR	conflict	UNP Q93RN7
E	852	VAL	GLY	conflict	UNP Q93RN7
E	853	THR	ASN	conflict	UNP Q93RN7
E	854	GLN	ALA	conflict	UNP Q93RN7
E	855	ALA	GLY	conflict	UNP Q93RN7
E	856	MET	HIS	conflict	UNP Q93RN7
E	857	VAL	GLY	conflict	UNP Q93RN7
E	872	THR	PRO	conflict	UNP Q93RN7
E	878	ASP	HIS	conflict	UNP Q93RN7
E	884	HIS	ILE	conflict	UNP Q93RN7
E	911	SER	ALA	conflict	UNP Q93RN7
E	914	GLU	LYS	conflict	UNP Q93RN7
E	923	GLU	ALA	conflict	UNP Q93RN7
E	1067	LYS	GLN	conflict	UNP Q93RN7
E	1075	ASP	GLU	conflict	UNP Q93RN7
E	1126	ASP	ASN	conflict	UNP Q93RN7
E	1182	TYR	-	insertion	UNP Q93RN7
E	1183	TRP	-	insertion	UNP Q93RN7
E	1184	LYS	-	insertion	UNP Q93RN7
E	1185	THR	ASP	engineered mutation	UNP Q93RN7
E	1253	LYS	VAL	conflict	UNP Q93RN7
E	1256	SER	PRO	conflict	UNP Q93RN7
E	1260	GLY	ASP	conflict	UNP Q93RN7
E	1261	SER	ASN	conflict	UNP Q93RN7
E	1517	ILE	VAL	conflict	UNP Q93RN7
E	1522	MET	VAL	conflict	UNP Q93RN7
E	1880	ASN	TYR	conflict	UNP Q93RN7
E	1883	MET	THR	conflict	UNP Q93RN7
E	1887	ILE	VAL	conflict	UNP Q93RN7
E	1923	THR	ALA	conflict	UNP Q93RN7

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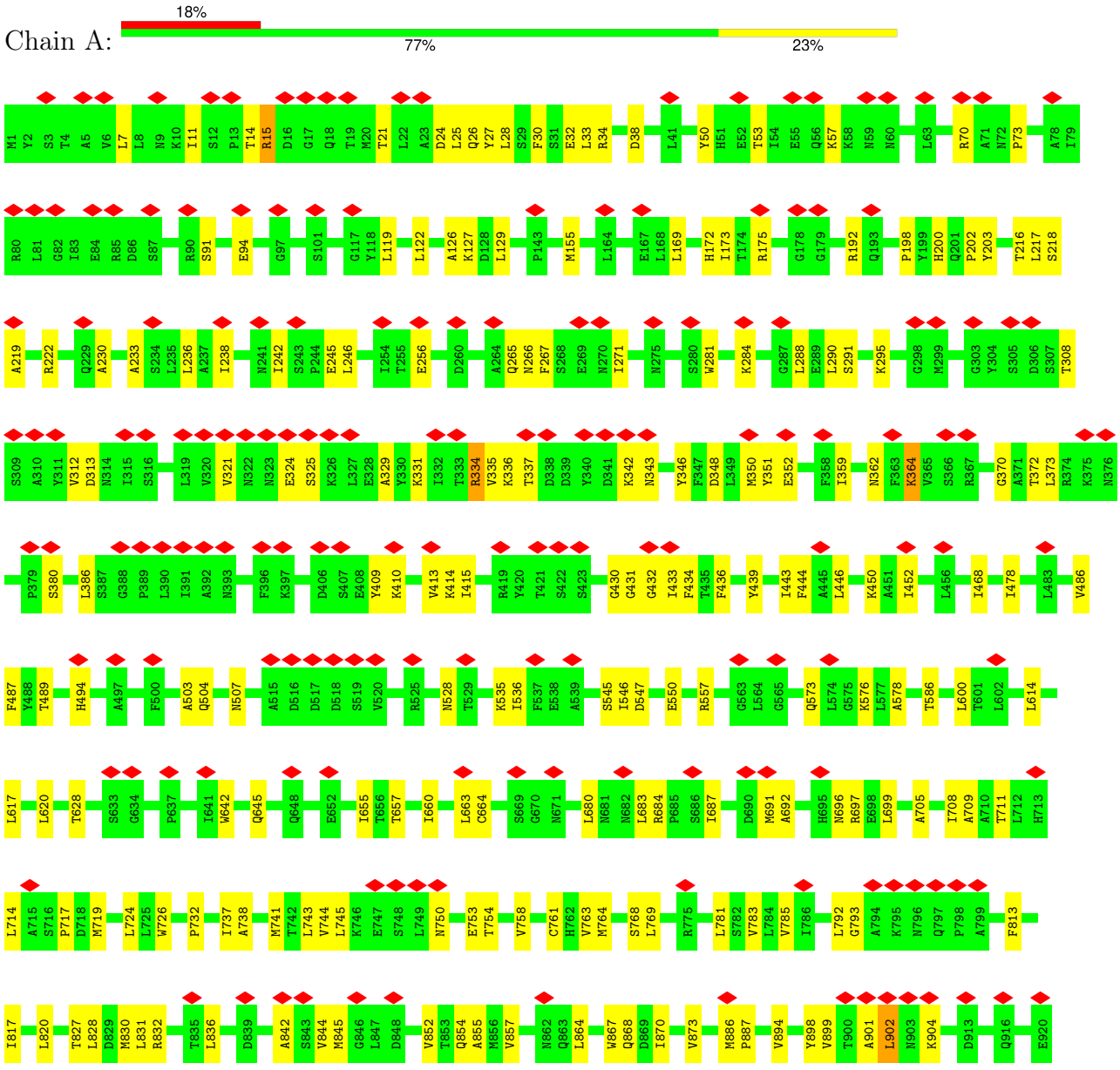
Chain	Residue	Modelled	Actual	Comment	Reference
E	1946	GLY	VAL	conflict	UNP Q93RN7
E	1950	GLN	HIS	conflict	UNP Q93RN7
E	1962	MET	ALA	conflict	UNP Q93RN7
E	1964	GLY	ASP	conflict	UNP Q93RN7
E	1965	ARG	ASN	conflict	UNP Q93RN7
E	1967	GLY	GLU	conflict	UNP Q93RN7
E	1969	SER	ALA	conflict	UNP Q93RN7
E	1970	LYS	THR	conflict	UNP Q93RN7
E	1971	ASN	GLN	conflict	UNP Q93RN7
E	1972	LEU	PRO	conflict	UNP Q93RN7
E	2031	THR	PRO	conflict	UNP Q93RN7
E	2060	THR	ALA	conflict	UNP Q93RN7
E	2152	LEU	PHE	conflict	UNP Q93RN7
E	2164	VAL	ALA	conflict	UNP Q93RN7
E	2167	ILE	VAL	conflict	UNP Q93RN7
E	2181	LEU	PHE	conflict	UNP Q93RN7
E	2433	LEU	PHE	conflict	UNP Q93RN7

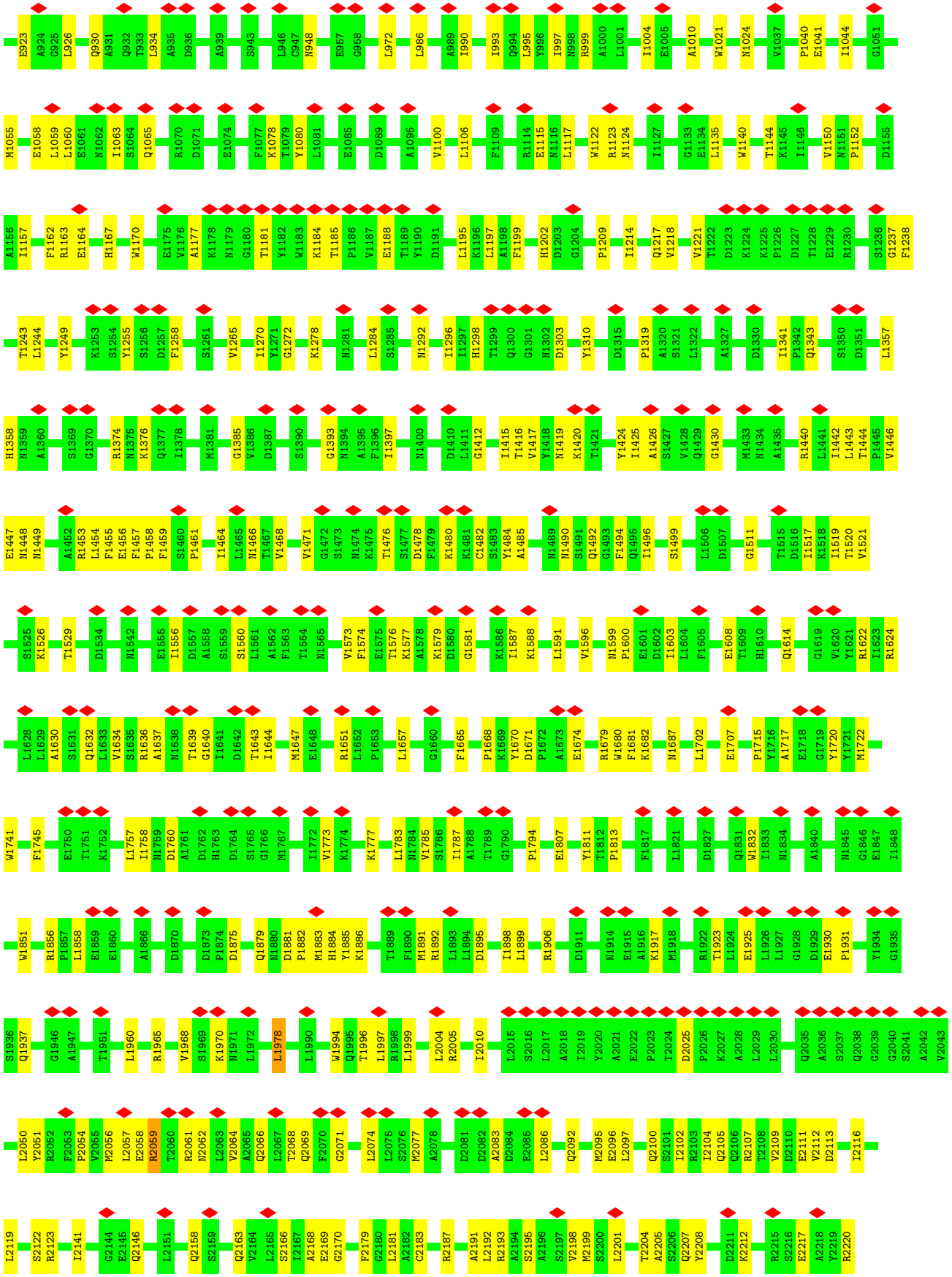
3 Residue-property plots (i)

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: XptA2 protein

Chain A:




E923 A924 G925 L926 Q930 A931 Q932 T933 L934 A935 D936 A939 S943 L946 C947 N948 E957 G958 L972 L986 A989 I990 I993 Q994 L995 Y996 I997 N998 R999 A1000 L1001 I1004 E1005 A1010 W1021 N1024 V1037 P1040 E1041 I1044 G1051
M1055 E1058 L1059 L1060 E1061 N1062 I1063 S1064 Q1065 R1070 D1071 E1074 F1077 K1078 T1079 Y1080 L1081 E1085 D1089 A1095 V1100 L1106 F1109 R1114 E1115 N1116 L1117 W1122 R1123 N1124 I1127 G1133 E1134 L1135 W1140 T1144 K1145 I1146 V1150 N1151 P1152 D1155
A1156 I1157 F1162 R1163 E1164 H1167 W1170 E1175 Y1176 A1177 K1178 N1179 G1180 T1181 Y1182 W1183 K1184 T1185 P1186 V1187 E1188 T1189 Y1190 D1191 L1195 K1196 L1197 A1198 F1199 H1202 D1203 G1204 P1209 I1214 Q1217 V1218 V1221 T1222 D1223 K1224 K1225 P1226 D1227 T1228 E1229 R1230 S1236 G1237 F1238
T1243 L1244 Y1249 K1253 S1254 Y1255 S1256 D1257 F1258 S1261 V1265 I1270 Y1271 G1272 K1278 N1281 L1284 S1285 N1292 I1296 I1297 H1298 T1299 Q1300 G1301 N1302 D1303 Y1310 D1315 P1319 A1320 S1321 L1322 A1327 D1330 I1341 P1342 Q1343 S1350 D1351 L1357
H1358 N1359 A1360 S1369 G1370 R1374 N1375 K1376 Q1377 I1378 M1381 G1385 V1386 D1387 S1390 G1393 N1394 A1395 F1396 I1397 N1400 D1410 L1411 G1412 I1415 T1416 V1417 Y1418 N1419 K1420 T1421 Y1424 I1425 A1426 S1427 V1428 Q1429 G1430 M1433 N1434 A1435 R1440 L1441 I1442 L1443 T1444 P1445 V1446
E1447 N1448 N1449 A1452 R1453 L1454 F1455 E1456 F1457 P1458 F1459 S1460 P1461 I1464 L1465 N1466 T1467 V1468 V1471 G1472 S1473 N1474 K1475 T1476 S1477 D1478 F1479 K1480 K1481 C1482 S1483 Y1484 A1485 N1489 N1490 S1491 Q1492 G1493 F1494 Q1495 I1496 S1499 L1506 D1507 G1511 T1515 D1516 I1517 K1518 I1519 T1520 V1521
S1525 K1526 T1529 D1534 N1542 E1555 I1556 D1557 A1558 S1559 S1560 L1561 A1562 F1563 T1564 N1565 V1573 F1574 E1575 T1576 K1577 A1578 K1579 D1580 G1581 K1586 I1587 K1588 L1591 V1596 N1599 P1600 E1601 D1602 I1603 L1604 F1605 E1608 T1609 H1610 Q1614 G1619 V1620 Y1621 R1622 I1623 R1624
L1628 L1629 A1630 S1631 Q1632 L1633 V1634 S1635 R1636 A1637 N1638 T1639 G1640 I1641 D1642 T1643 I1644 M1647 E1648 R1651 L1652 P1653 L1657 G1660 F1665 P1668 K1669 Y1670 D1671 P1672 A1673 E1674 R1679 W1680 F1681 K1682 N1687 L1702 E1707 P1715 Y1716 A1717 E1718 G1719 Y1720 Y1721 M1722
W1741 F1745 E1750 T1751 K1752 L1757 I1758 N1759 D1760 A1761 D1762 H1763 D1764 S1765 G1766 M1767 I1772 V1773 K1774 K1777 L1783 N1784 V1785 S1786 I1787 A1788 T1789 G1790 P1794 E1807 Y1811 T1812 P1813 F1817 L1821 D1827 Q1831 W1832 I1833 N1834 A1840 N1845 G1846 E1847 I1848
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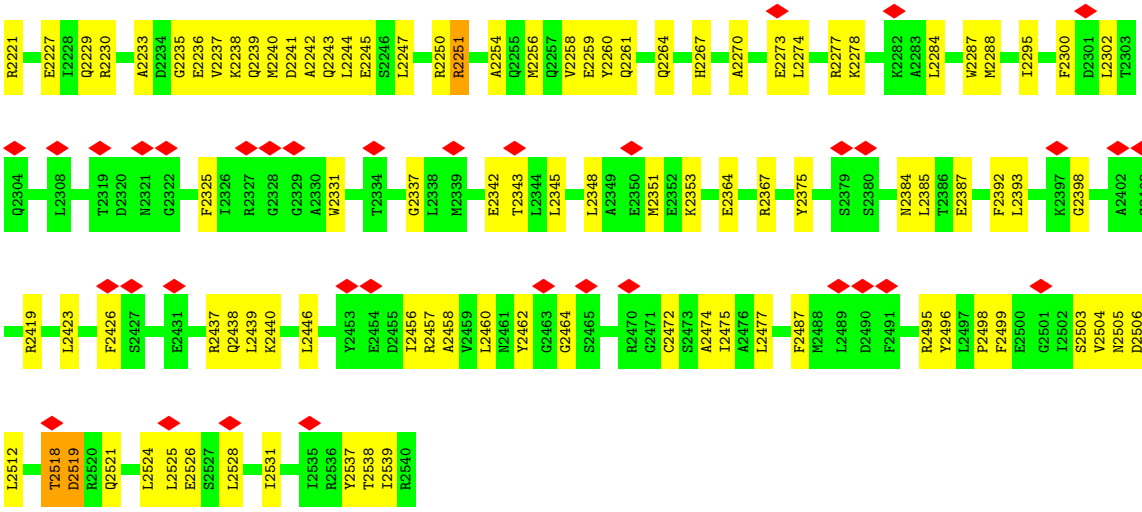

• Molecule 1: XptA2 protein

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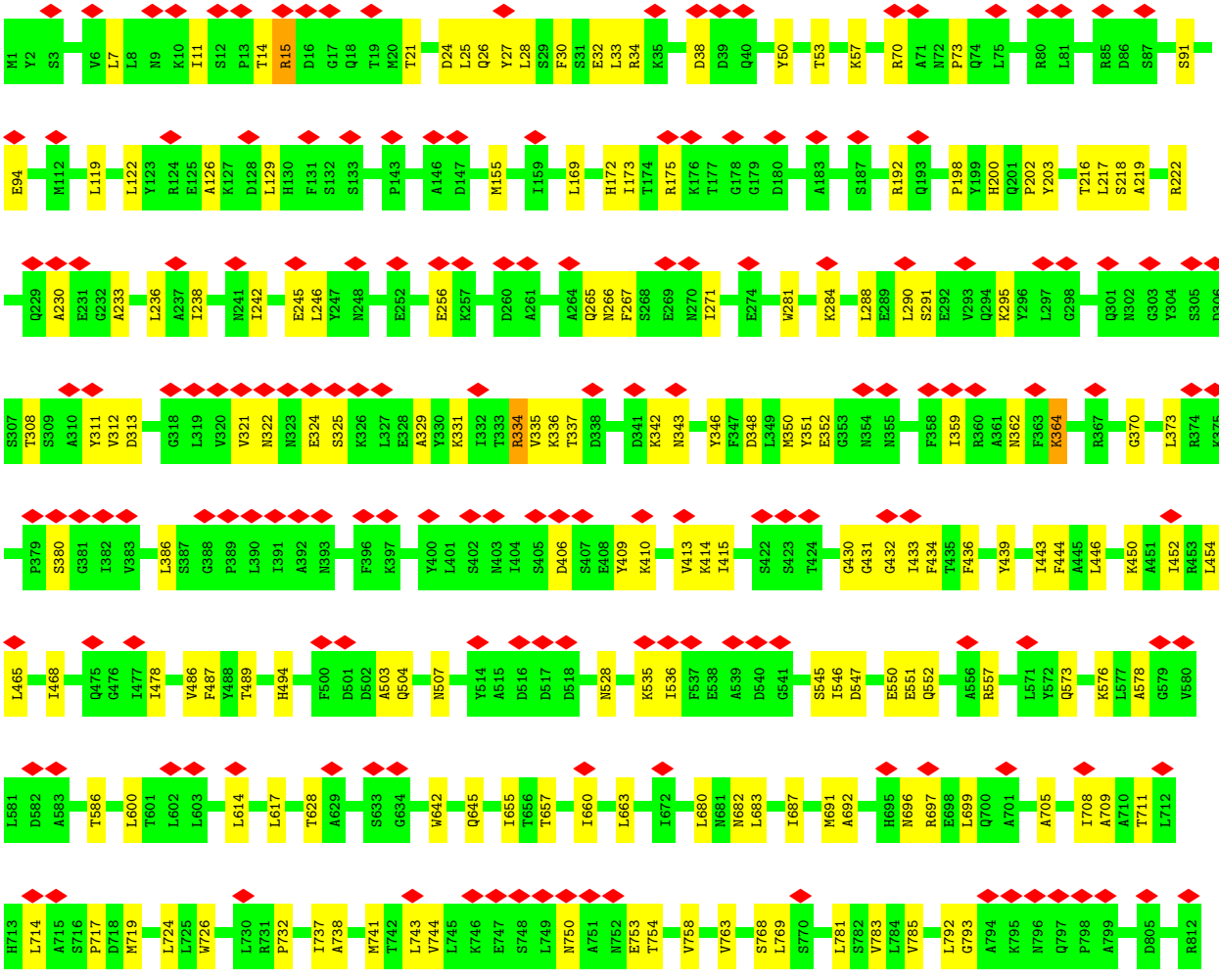

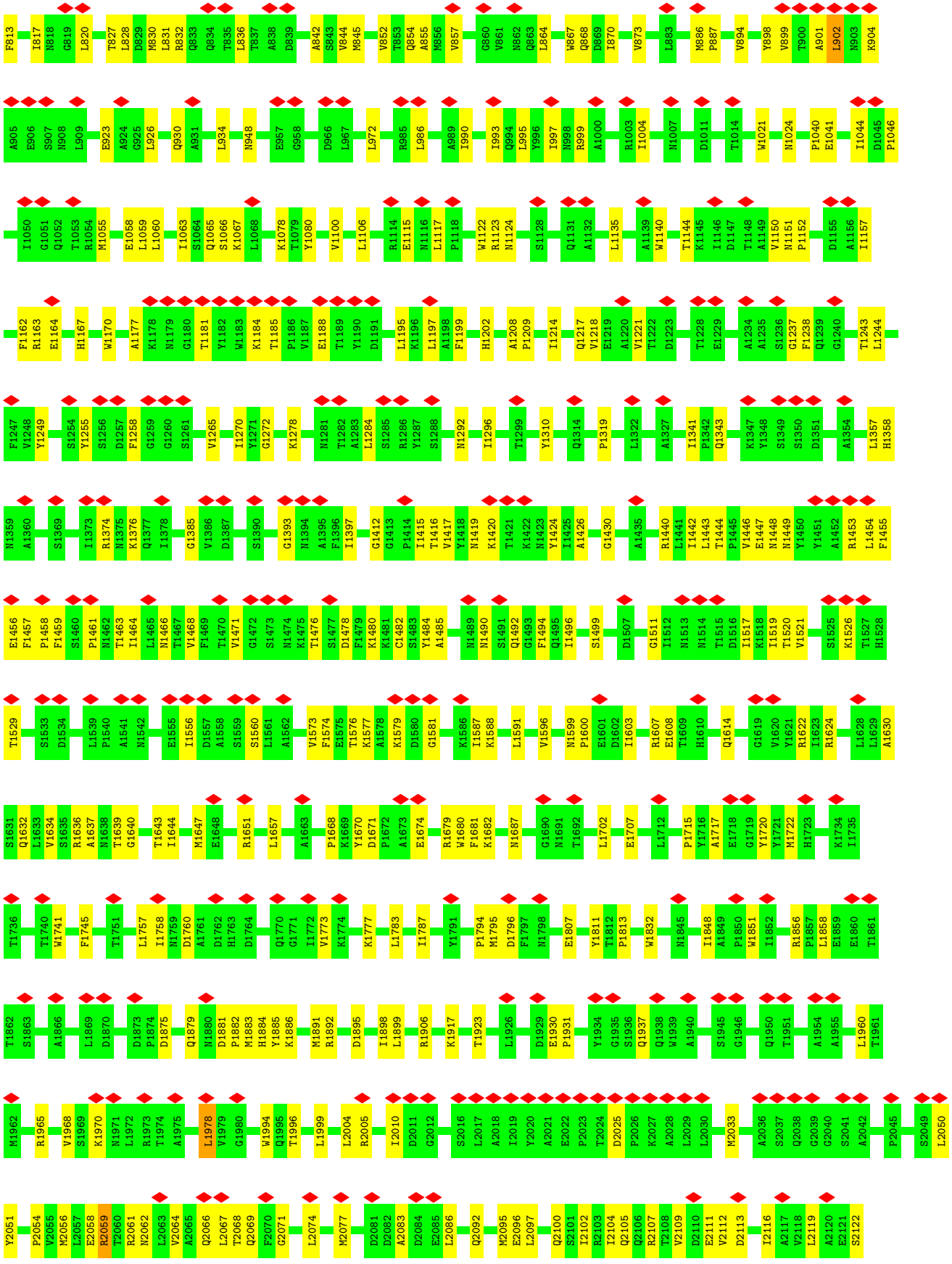
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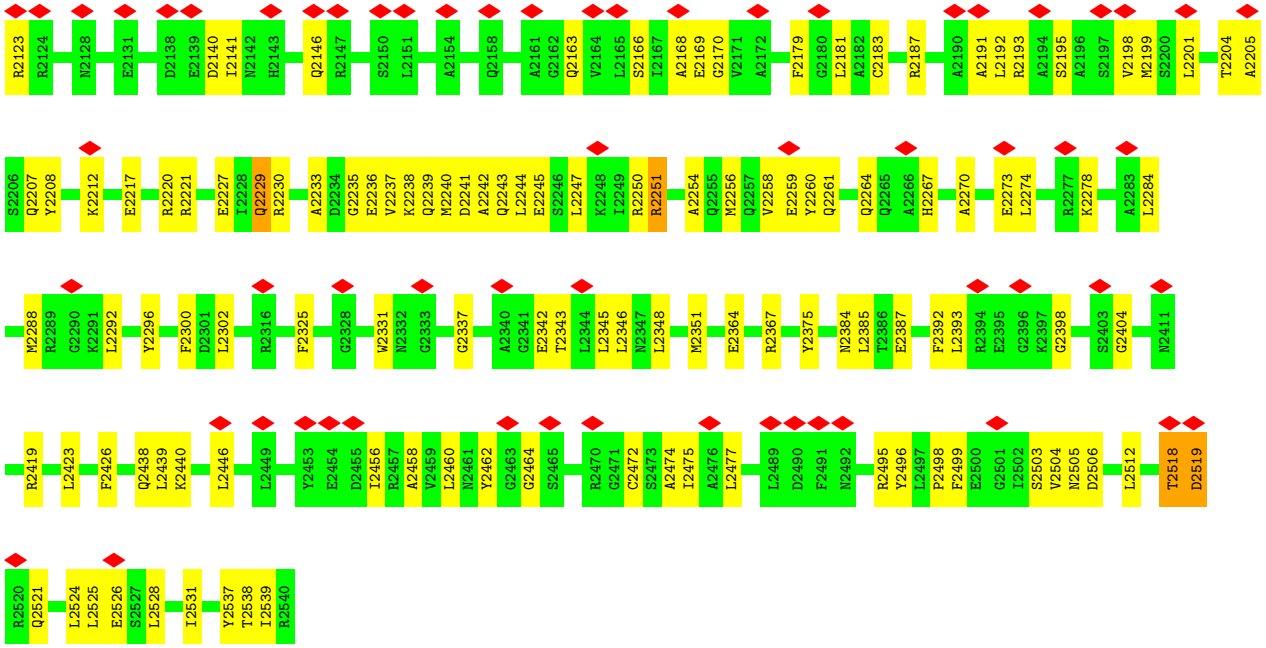
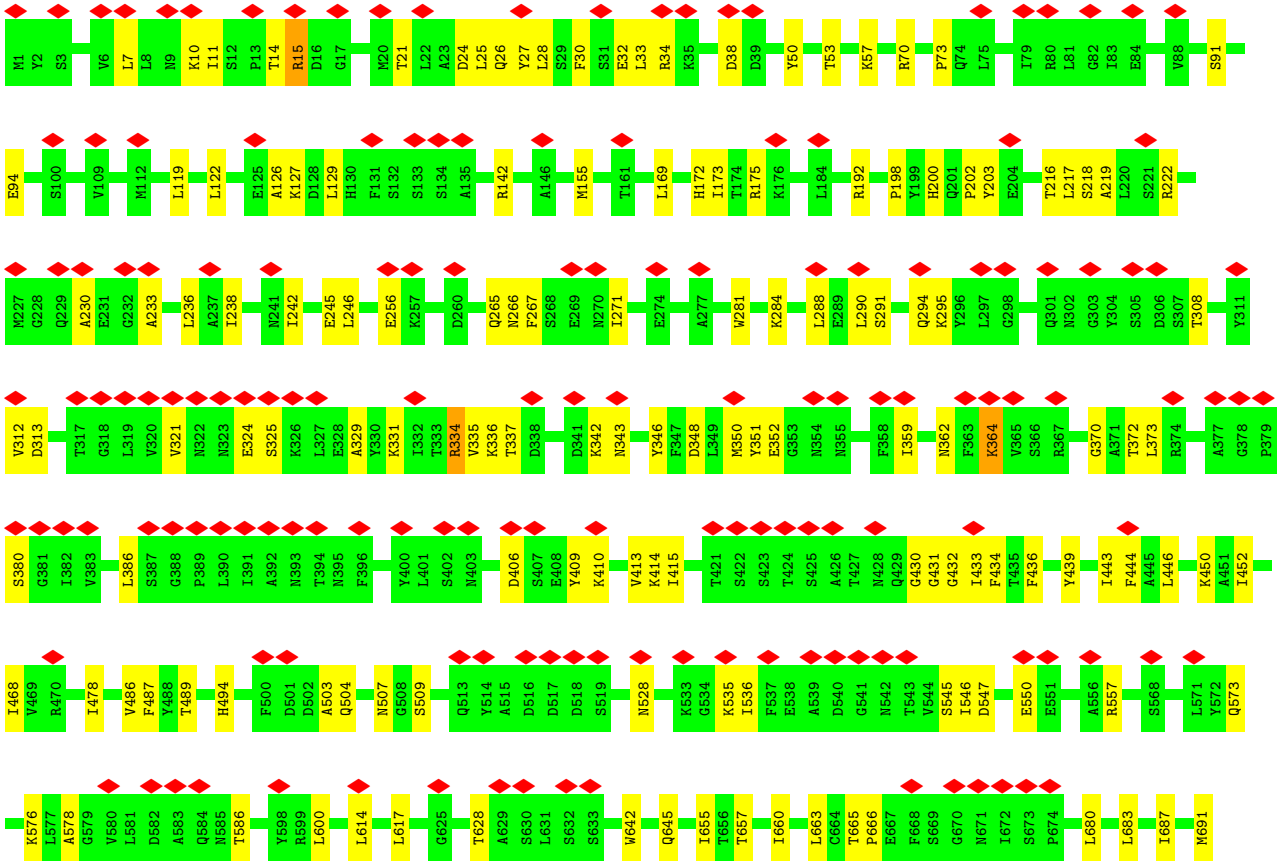
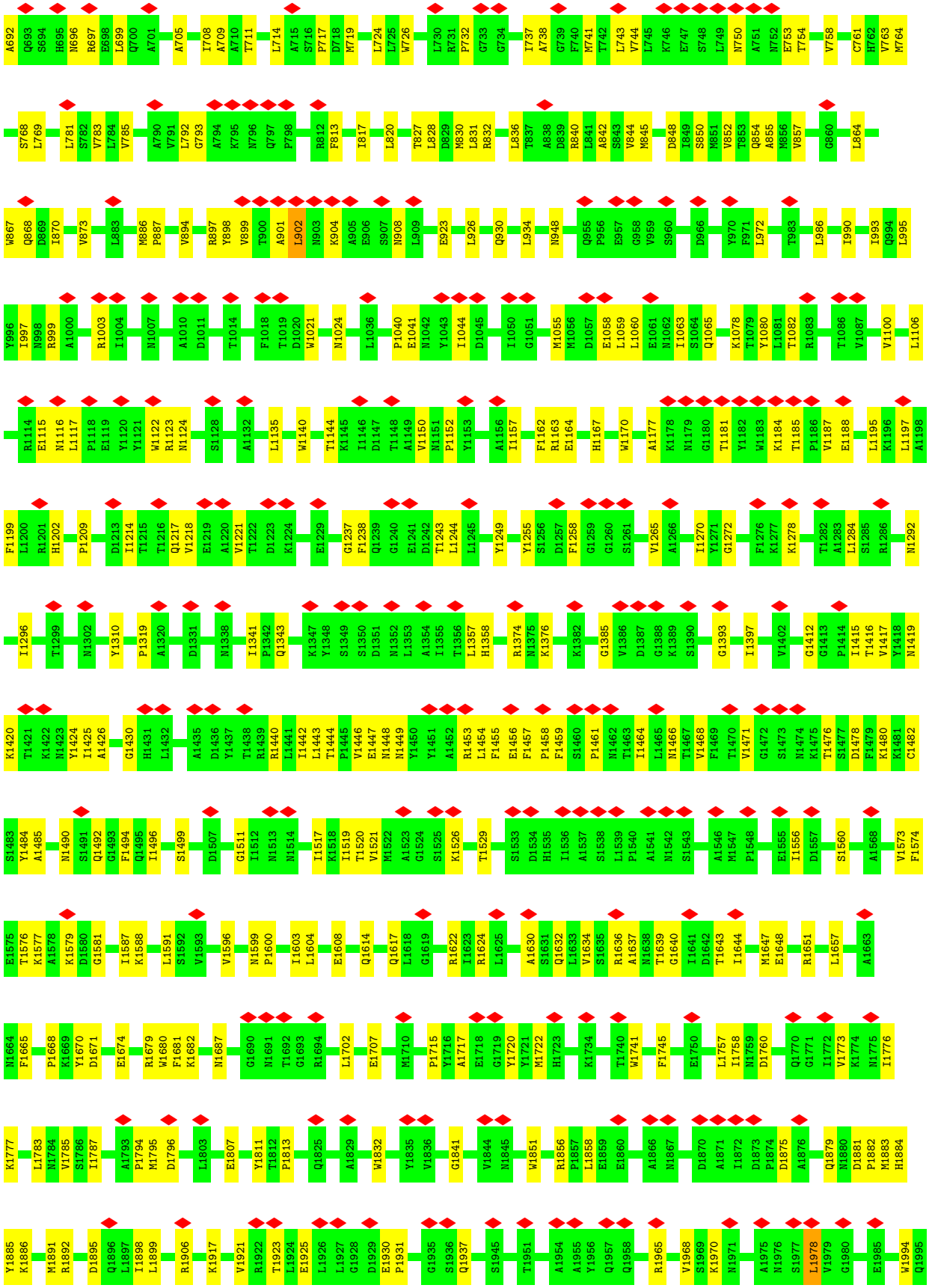


• Molecule 1: XptA2 protein

Chain C:

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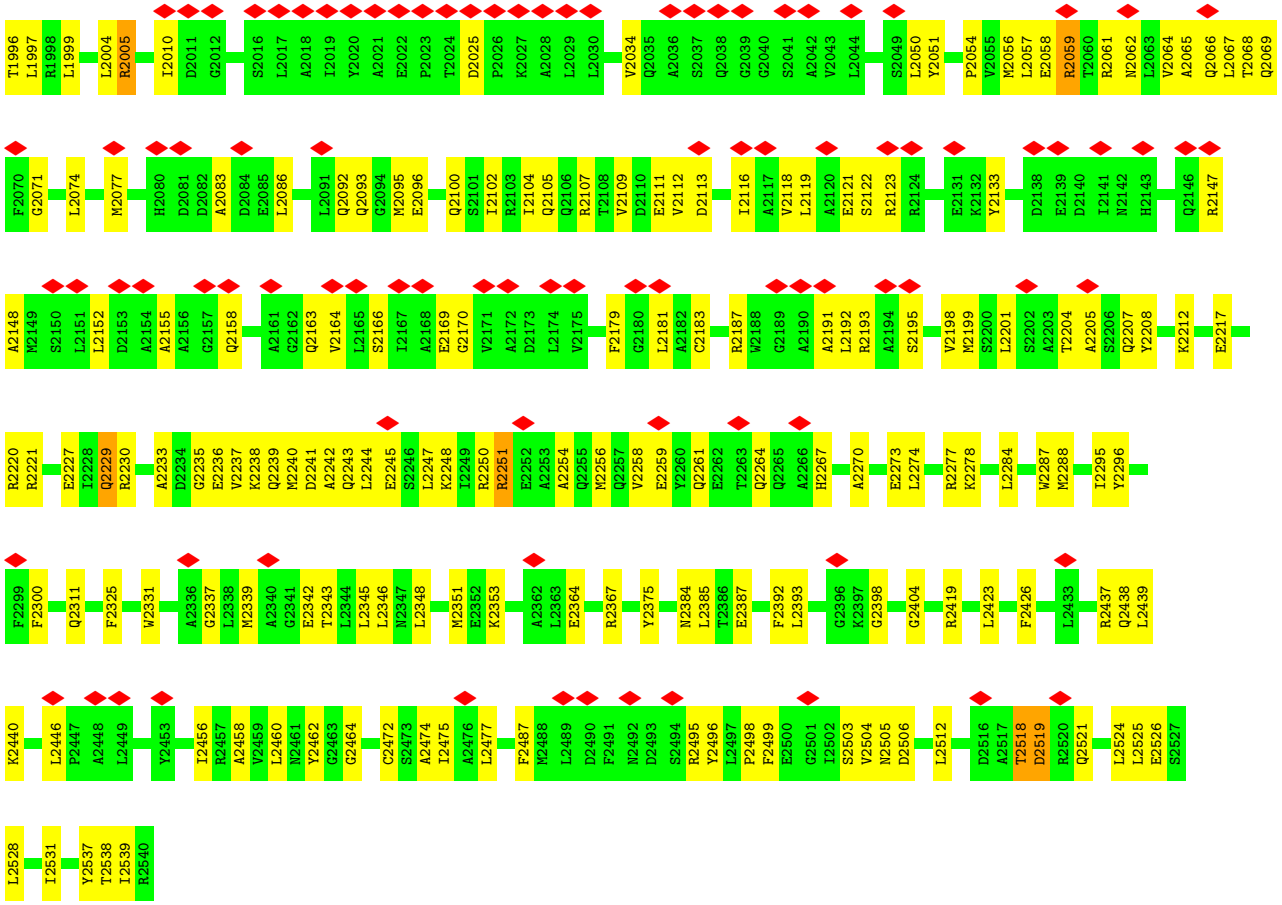
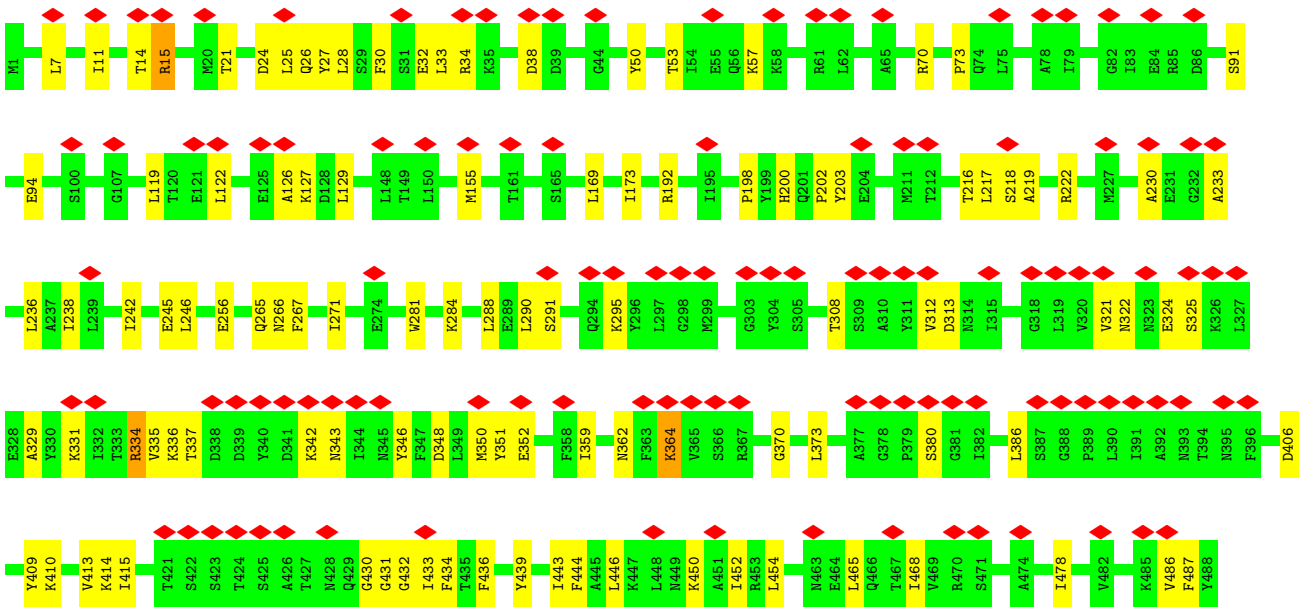
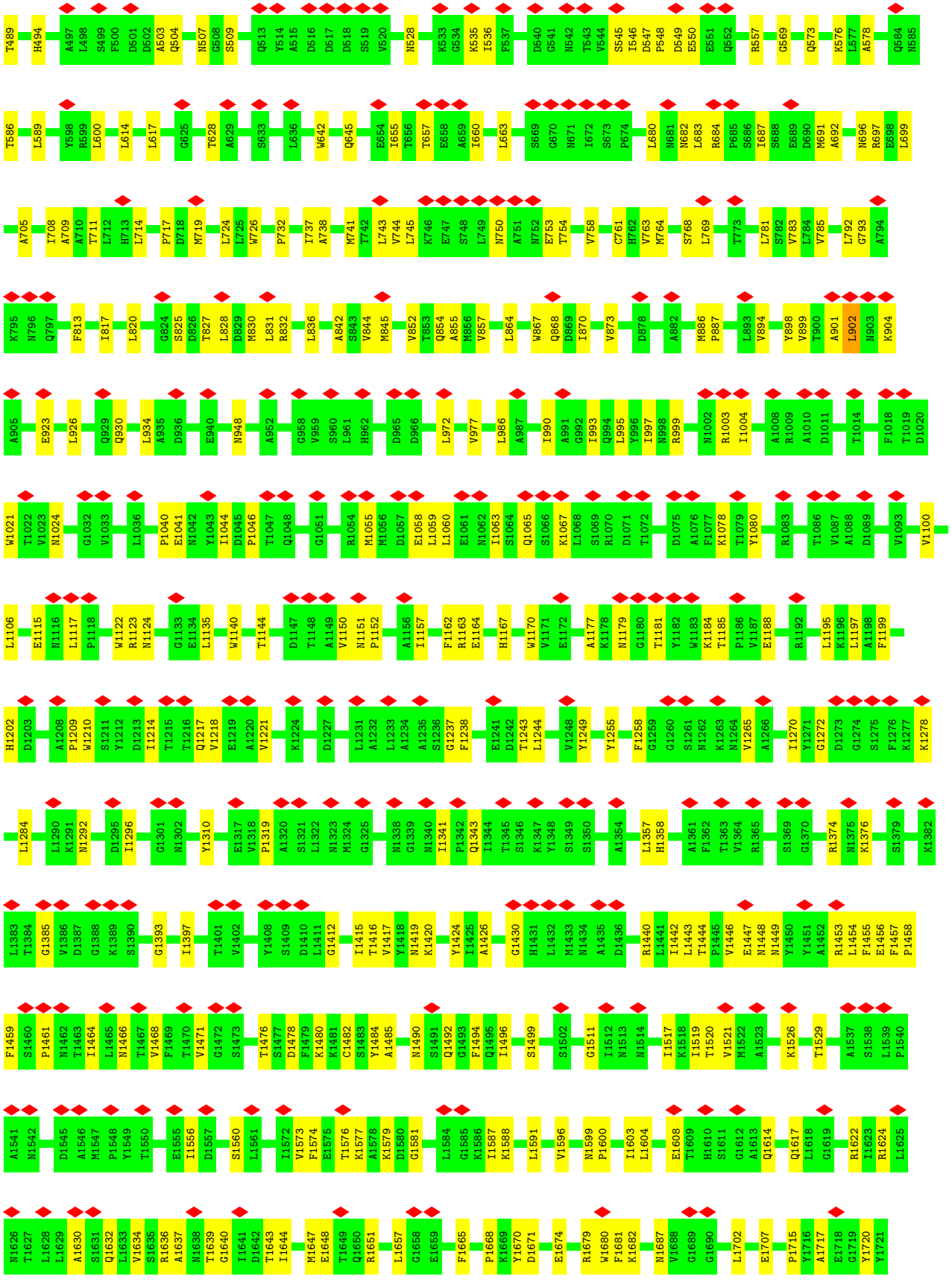


• Molecule 1: XptA2 protein

Chain D:

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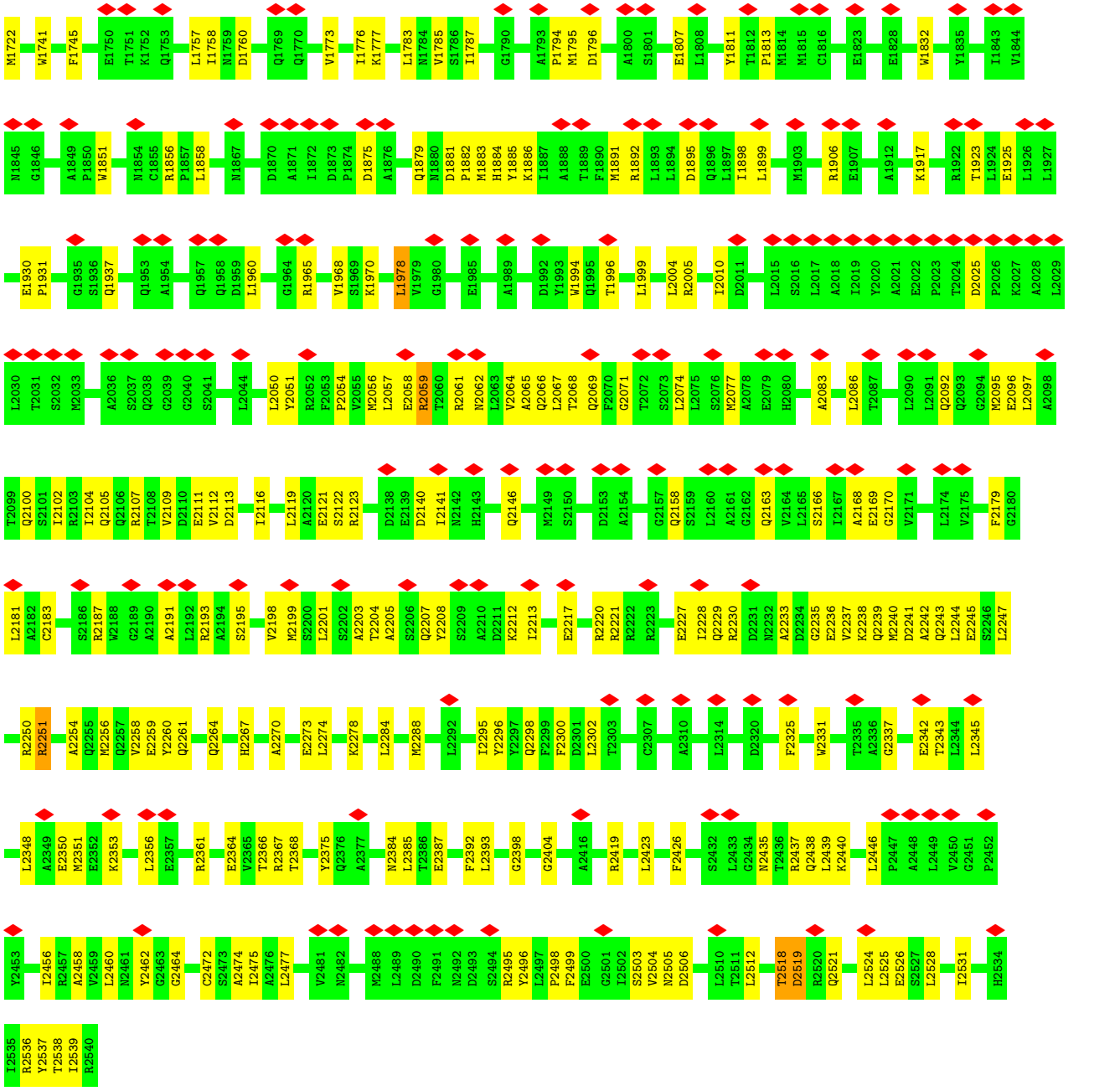
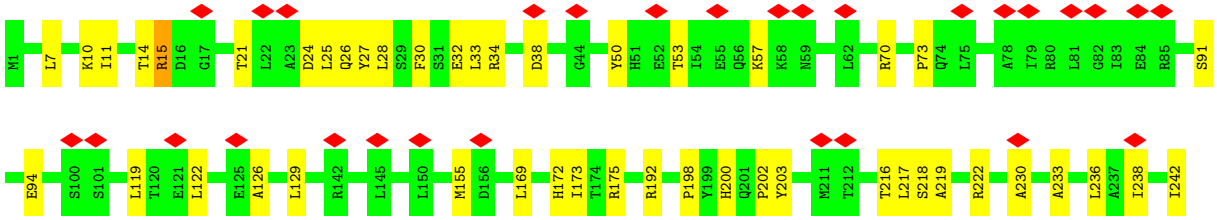
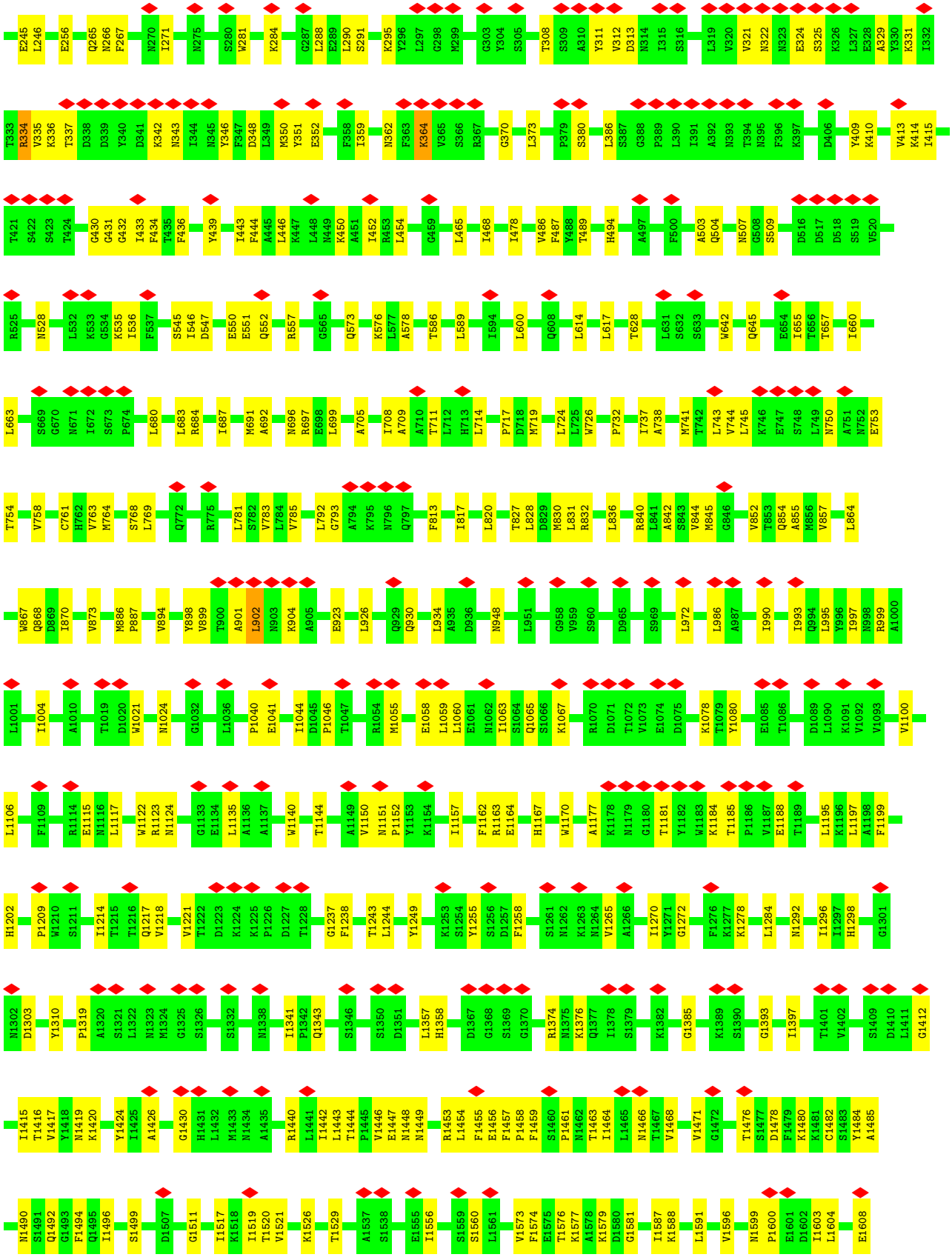


• Molecule 1: XptA2 protein

Chain E:

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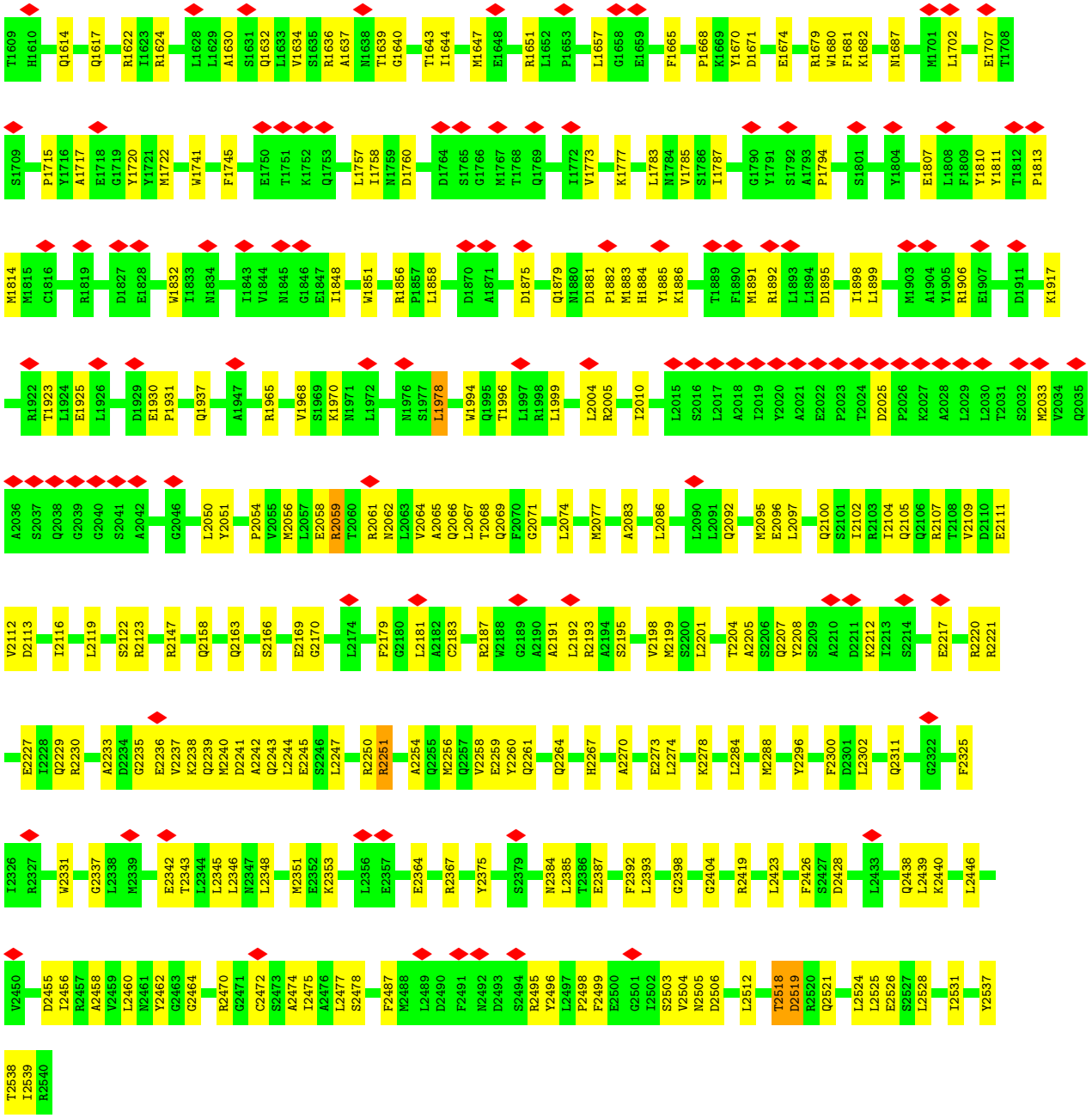
T754 V758 C761 H762 V763 M764 S768 L769 Q772 R775 L781 S782 V783 L784 V785 L792 G793 A794 K795 N796 Q797 F813 I817 L820 T827 L828 D829 M830 L831 R832 L836 R840 L841 A842 S843 V844 M845 G846 V852 T853 Q854 A855 M856 V857 L864
W867 Q868 D869 I870 V873 M886 P887 V894 Y898 V899 T900 A901 L902 N903 K904 A905 E923 L926 Q929 Q930 L934 A935 D936 N948 L951 G958 V959 S960 D965 S969 L972 L986 A987 I990 I993 Q994 L995 Y996 I997 N998 R999 A1000
L1001 I1004 A1010 T1019 D1020 W1021 N1024 G1032 L1036 P1040 E1041 I1044 D1045 P1046 T1047 R1054 M1055 E1058 L1059 L1060 E1061 N1062 I1063 S1064 Q1065 S1066 K1067 R1070 D1071 T1072 V1073 E1074 D1075 K1078 T1079 Y1080 E1085 T1086 D1089 L1090 K1091 V1092 V1093 V1100
L1106 F1109 R1114 E1115 N1116 L1117 W1122 R1123 N1124 G1133 E1134 L1135 A1136 A1137 W1140 T1144 A1149 V1150 N1151 P1152 Y1153 K1154 I1157 F1162 R1163 E1164 H1167 W1170 A1177 K1178 N1179 G1180 T1181 Y1182 W1183 K1184 T1185 P1186 V1187 E1188 T1189 L1195 K1196 L1197 A1198 F1199
H1202 P1209 W1210 S1211 I1214 T1215 T1216 Q1217 V1218 V1221 T1222 D1223 K1224 K1225 P1226 D1227 T1228 G1237 F1238 T1243 L1244 Y1249 K1253 S1254 Y1255 S1256 D1257 F1258 S1261 K1262 K1263 N1264 V1265 A1266 I1270 Y1271 G1272 F1276 K1277 K1278 L1284 N1292 I1296 I1297 H1298 G1301
N1302 D1303 Y1310 P1319 A1320 S1321 L1322 N1323 M1324 G1325 S1326 S1332 N1338 I1341 P1342 Q1343 S1346 S1350 D1351 L1357 H1358 D1367 G1368 S1369 G1370 R1374 N1375 K1376 Q1377 I1378 S1379 K1382 G1385 K1389 S1390 G1393 I1397 T1401 V1402 S1409 D1410 L1411 G1412
I1415 T1416 V1417 Y1418 N1419 K1420 Y1424 I1425 A1426 G1430 H1431 L1432 M1433 N1434 A1435 R1440 L1441 I1442 L1443 T1444 P1445 V1446 E1447 N1448 N1449 R1453 L1454 F1455 E1456 F1457 P1458 F1459 S1460 P1461 N1462 T1463 I1464 L1465 N1466 T1467 V1468 V1471 G1472 T1476 S1477 D1478 F1479 K1480 K1481 C1482 S1483 Y1484 A1485
N1490 S1491 Q1492 G1493 F1494 Q1495 I1496 S1499 D1507 G1511 I1517 K1518 I1519 T1520 V1521 K1526 T1529 A1537 S1538 E1555 I1556 S1559 S1560 L1561 V1573 F1574 E1575 T1576 K1577 A1578 K1579 D1580 G1581 I1587 K1588 L1591 V1596 N1599 P1600 E1601 D1602 I1603 L1604 E1608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S1709 P1715 Y1716 A1717 E1718 G1719 Y1720 Y1721 M1722 W1741 F1745 E1750 T1751 K1752 Q1753 L1757 I1758 N1759 D1760 D1764 S1765 G1766 M1767 T1768 Q1769 I1772 V1773 K1777 L1783 N1784 V1785 S1786 I1787 G1790 Y1791 S1792 A1793 P1794 S1801 Y1804 E1807 L1808 F1809 Y1810 Y1811 T1812 P1813
M1814 M1815 C1816 R1819 D1827 E1828 W1832 I1833 N1834 I1843 V1844 N1845 G1846 E1847 I1848 W1851 R1856 P1857 L1858 D1870 A1871 D1875 Q1879 M1880 D1881 P1882 M1883 H1884 Y1885 K1886 T1889 F1890 M1891 R1892 L1893 L1894 D1895 I1898 L1899 M1903 A1904 Y1905 R1906 E1907 D1911 K1917
R1922 T1923 L1924 E1925 L1926 D1929 E1930 P1931 Q1937 A1947 R1965 V1968 S1969 K1970 N1971 L1972 N1976 S1977 L1978 W1994 Q1995 T1996 L1997 R1998 L1999 L2004 R2005 I2010 L2015 S2016 L2017 A2018 I2019 Y2020 A2021 E2022 P2023 T2024 D2025 P2026 K2027 A2028 L2029 L2030 T2031 S2032 M2033 V2034 Q2035
A2036 S2037 Q2038 G2039 G2040 S2041 A2042 G2046 L2050 Y2051 P2054 V2055 M2056 L2057 E2058 R2059 T2060 R2061 N2062 L2063 V2064 A2065 Q2066 L2067 T2068 Q2069 F2070 G2071 L2074 M2077 A2083 L2086 L2090 L2091 Q2092 M2095 E2096 L2097 Q2100 S2101 I2102 R2103 I2104 Q2105 Q2106 R2107 T2108 V2109 D2110 E2111
V2112 D2113 I2116 L2119 S2122 R2123 R2147 Q2158 Q2163 S2166 E2169 G2170 L2174 F2179 G2180 L2181 A2182 C2183 R2187 W2188 G2189 A2190 A2191 L2192 R2193 A2194 S2195 V2198 M2199 S2200 L2201 T2204 A2205 S2206 Q2207 Y2208 S2209 A2210 D2211 K2212 I2213 S2214 E2217 R2220 R2221
E2227 I2228 Q2229 R2230 A2233 D2234 G2235 E2236 V2237 K2238 Q2239 M2240 D2241 A2242 Q2243 L2244 E2245 S2246 L2247 R2250 R2251 A2254 Q2255 M2256 Q2257 V2258 E2259 Y2260 Q2261 Q2264 H2267 A2270 E2273 L2274 K2278 L2284 M2288 Y2296 F2300 D2301 L2302 Q2311 G2322 F2325
I2326 R2327 W2331 G2337 L2338 M2339 E2342 T2343 L2344 L2345 L2346 N2347 L2348 M2351 E2352 K2353 L2356 E2357 E2364 R2367 Y2375 S2379 N2384 L2385 T2386 E2387 F2392 L2393 G2398 G2404 R2419 L2423 F2426 S2427 D2428 L2433 Q2438 L2439 K2440 L2446
Y2450 D2455 I2456 R2457 A2458 Y2459 L2460 N2461 Y2462 G2463 G2464 R2470 G2471 C2472 S2473 A2474 I2475 A2476 L2477 S2478 F2487 M2488 L2489 D2490 F2491 N2492 D2493 S2494 R2495 Y2496 L2497 P2498 P2499 E2500 G2501 I2502 S2503 V2504 N2505 D2506 L2512 T2518 D2519 R2520 Q2521 L2524 L2525 E2526 S2527 L2528 I2531 Y2537
T2538 I2539 R2540

4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	62247	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	JEOL 3200FSC	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	10	Depositor
Minimum defocus (nm)	500	Depositor
Maximum defocus (nm)	3000	Depositor
Magnification	Not provided	
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	1.069	Depositor
Minimum map value	-0.470	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.056	Depositor
Recommended contour level	0.29	Depositor
Map size (Å)	473.796, 473.796, 473.796	wwPDB
Map dimensions	246, 246, 246	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.926, 1.926, 1.926	Depositor

5 Model quality (i)

5.1 Standard geometry (i)

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	0/20450	0.52	3/27765 (0.0%)
1	B	0.25	0/20450	0.52	3/27765 (0.0%)
1	C	0.25	0/20450	0.52	3/27765 (0.0%)
1	D	0.25	0/20450	0.52	3/27765 (0.0%)
1	E	0.25	0/20450	0.52	3/27765 (0.0%)
All	All	0.25	0/102250	0.52	15/138825 (0.0%)

There are no bond length outliers.

All (15) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	D	2518	THR	C-N-CA	6.85	138.83	121.70
1	B	2518	THR	C-N-CA	6.84	138.80	121.70
1	C	2518	THR	C-N-CA	6.84	138.79	121.70
1	A	2518	THR	C-N-CA	6.83	138.77	121.70
1	E	2518	THR	C-N-CA	6.82	138.75	121.70
1	B	902	LEU	CA-CB-CG	5.55	128.07	115.30
1	C	902	LEU	CA-CB-CG	5.54	128.03	115.30
1	D	902	LEU	CA-CB-CG	5.53	128.02	115.30
1	E	902	LEU	CA-CB-CG	5.53	128.01	115.30
1	A	902	LEU	CA-CB-CG	5.51	127.98	115.30
1	D	1978	LEU	CA-CB-CG	5.13	127.09	115.30
1	C	1978	LEU	CA-CB-CG	5.12	127.07	115.30
1	E	1978	LEU	CA-CB-CG	5.11	127.06	115.30
1	A	1978	LEU	CA-CB-CG	5.11	127.05	115.30
1	B	1978	LEU	CA-CB-CG	5.11	127.05	115.30

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	20041	0	19627	420	0
1	B	20041	0	19627	432	0
1	C	20041	0	19627	464	0
1	D	20041	0	19627	479	0
1	E	20041	0	19627	438	0
All	All	100205	0	98135	2073	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 10.

All (2073) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2518:THR:H	1:C:2519:ASP:HB2	1.22	1.04
1:D:2518:THR:H	1:D:2519:ASP:HB2	1.22	1.04
1:B:2518:THR:H	1:B:2519:ASP:HB2	1.22	1.00
1:A:2518:THR:H	1:A:2519:ASP:HB2	1.22	0.99
1:E:2518:THR:H	1:E:2519:ASP:HB2	1.22	0.99
1:C:2122:SER:HA	1:D:2239:GLN:HE22	1.27	0.99
1:B:2169:GLU:HG2	1:C:2192:LEU:HD11	1.45	0.96
1:A:1185:THR:HG23	1:B:1181:THR:HA	1.51	0.90
1:E:1443:LEU:HB2	1:E:1455:PHE:HB2	1.55	0.89
1:C:1443:LEU:HB2	1:C:1455:PHE:HB2	1.55	0.88
1:B:1443:LEU:HB2	1:B:1455:PHE:HB2	1.55	0.88
1:D:1443:LEU:HB2	1:D:1455:PHE:HB2	1.55	0.87
1:A:1181:THR:HA	1:E:1185:THR:HG23	1.56	0.86
1:A:1443:LEU:HB2	1:A:1455:PHE:HB2	1.55	0.86
1:B:1078:LYS:HE2	1:C:1202:HIS:HB3	1.59	0.82
1:C:334:ARG:HG3	1:C:415:ILE:HG13	1.61	0.82
1:D:334:ARG:HG3	1:D:415:ILE:HG13	1.61	0.82
1:A:2122:SER:HA	1:B:2239:GLN:HE22	1.43	0.82
1:A:334:ARG:HG3	1:A:415:ILE:HG13	1.61	0.81
1:A:683:LEU:HD23	1:A:744:VAL:HG11	1.62	0.81
1:B:683:LEU:HD23	1:B:744:VAL:HG11	1.62	0.81
1:E:334:ARG:HG3	1:E:415:ILE:HG13	1.61	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:683:LEU:HD23	1:D:744:VAL:HG11	1.62	0.81
1:B:334:ARG:HG3	1:B:415:ILE:HG13	1.61	0.80
1:C:2104:ILE:HG12	1:D:2256:MET:SD	2.21	0.80
1:C:683:LEU:HD23	1:C:744:VAL:HG11	1.62	0.79
1:E:683:LEU:HD23	1:E:744:VAL:HG11	1.62	0.79
1:C:1925:GLU:HG2	1:D:1004:ILE:HD13	1.64	0.78
1:B:2212:LYS:HZ1	1:E:1065:GLN:HG3	1.48	0.78
1:C:2158:GLN:HG2	1:D:2199:MET:HE1	1.67	0.76
1:D:1185:THR:HG23	1:E:1181:THR:HA	1.67	0.75
1:C:2122:SER:HA	1:D:2239:GLN:NE2	2.02	0.74
1:E:155:MET:HB3	1:E:986:LEU:HD12	1.70	0.74
1:A:155:MET:HB3	1:A:986:LEU:HD12	1.70	0.74
1:D:1917:LYS:HE2	1:D:2004:LEU:HB3	1.70	0.74
1:D:155:MET:HB3	1:D:986:LEU:HD12	1.70	0.73
1:D:1858:LEU:HD12	1:D:1886:LYS:HG3	1.71	0.73
1:E:1858:LEU:HD12	1:E:1886:LYS:HG3	1.71	0.73
1:B:1135:LEU:HD13	1:B:1140:TRP:HE1	1.54	0.73
1:D:1078:LYS:HE2	1:E:1202:HIS:HB3	1.69	0.73
1:B:155:MET:HB3	1:B:986:LEU:HD12	1.70	0.73
1:C:1858:LEU:HD12	1:C:1886:LYS:HG3	1.71	0.73
1:D:2122:SER:HA	1:E:2239:GLN:HE22	1.54	0.72
1:C:1135:LEU:HD13	1:C:1140:TRP:HE1	1.54	0.72
1:C:155:MET:HB3	1:C:986:LEU:HD12	1.70	0.72
1:C:1917:LYS:HE2	1:C:2004:LEU:HB3	1.70	0.72
1:D:1517:ILE:HG12	1:D:1576:THR:HG23	1.72	0.72
1:E:2264:GLN:HA	1:E:2267:HIS:CE1	2.25	0.72
1:A:1917:LYS:HE2	1:A:2004:LEU:HB3	1.70	0.72
1:A:1858:LEU:HD12	1:A:1886:LYS:HG3	1.71	0.72
1:A:2264:GLN:HA	1:A:2267:HIS:CE1	2.25	0.72
1:C:2122:SER:CA	1:D:2239:GLN:HE22	2.02	0.72
1:D:2518:THR:N	1:D:2519:ASP:HB2	2.03	0.72
1:E:1258:PHE:HB3	1:E:1284:LEU:HG	1.72	0.72
1:B:325:SER:HB2	1:B:1492:GLN:HB3	1.72	0.72
1:C:1517:ILE:HG12	1:C:1576:THR:HG23	1.72	0.72
1:C:2264:GLN:HA	1:C:2267:HIS:CE1	2.25	0.72
1:D:2435:ASN:HD21	1:E:2470:ARG:HH12	1.38	0.72
1:D:1258:PHE:HB3	1:D:1284:LEU:HG	1.72	0.72
1:D:1135:LEU:HD13	1:D:1140:TRP:HE1	1.54	0.71
1:D:2264:GLN:HA	1:D:2267:HIS:CE1	2.25	0.71
1:E:1517:ILE:HG12	1:E:1576:THR:HG23	1.72	0.71
1:B:1858:LEU:HD12	1:B:1886:LYS:HG3	1.71	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1185:THR:HG23	1:D:1181:THR:HA	1.72	0.71
1:B:2247:LEU:HD23	1:B:2250:ARG:HE	1.56	0.71
1:C:325:SER:HB2	1:C:1492:GLN:HB3	1.72	0.71
1:C:2163:GLN:HG3	1:C:2198:VAL:HB	1.73	0.71
1:D:2163:GLN:HG3	1:D:2198:VAL:HB	1.73	0.71
1:E:2163:GLN:HG3	1:E:2198:VAL:HB	1.73	0.71
1:A:1135:LEU:HD13	1:A:1140:TRP:HE1	1.54	0.71
1:B:1917:LYS:HE2	1:B:2004:LEU:HB3	1.70	0.71
1:E:1917:LYS:HE2	1:E:2004:LEU:HB3	1.70	0.71
1:E:2123:ARG:HH12	1:E:2237:VAL:HG13	1.56	0.71
1:A:325:SER:HB2	1:A:1492:GLN:HB3	1.72	0.71
1:E:1162:PHE:CG	1:E:1244:LEU:HD21	2.26	0.71
1:E:1135:LEU:HD13	1:E:1140:TRP:HE1	1.54	0.71
1:B:2518:THR:N	1:B:2519:ASP:HB2	2.03	0.71
1:C:2247:LEU:HD23	1:C:2250:ARG:HE	1.56	0.71
1:E:2247:LEU:HD23	1:E:2250:ARG:HE	1.56	0.71
1:A:1258:PHE:HB3	1:A:1284:LEU:HG	1.72	0.71
1:A:2163:GLN:HG3	1:A:2198:VAL:HB	1.73	0.71
1:E:325:SER:HB2	1:E:1492:GLN:HB3	1.72	0.71
1:B:2264:GLN:HA	1:B:2267:HIS:CE1	2.25	0.70
1:A:2247:LEU:HD23	1:A:2250:ARG:HE	1.56	0.70
1:B:2163:GLN:HG3	1:B:2198:VAL:HB	1.73	0.70
1:C:1162:PHE:CG	1:C:1244:LEU:HD21	2.26	0.70
1:D:325:SER:HB2	1:D:1492:GLN:HB3	1.72	0.70
1:C:528:ASN:HD21	1:C:536:ILE:HG21	1.56	0.70
1:D:528:ASN:HD21	1:D:536:ILE:HG21	1.56	0.70
1:D:2247:LEU:HD23	1:D:2250:ARG:HE	1.56	0.70
1:C:1258:PHE:HB3	1:C:1284:LEU:HG	1.72	0.70
1:D:2123:ARG:HH12	1:D:2237:VAL:HG13	1.56	0.70
1:A:2123:ARG:HH12	1:A:2237:VAL:HG13	1.55	0.70
1:A:1517:ILE:HG12	1:A:1576:THR:HG23	1.72	0.70
1:B:1162:PHE:CG	1:B:1244:LEU:HD21	2.26	0.70
1:B:1258:PHE:HB3	1:B:1284:LEU:HG	1.72	0.70
1:A:1162:PHE:CG	1:A:1244:LEU:HD21	2.26	0.70
1:B:1517:ILE:HG12	1:B:1576:THR:HG23	1.72	0.70
1:A:528:ASN:HD21	1:A:536:ILE:HG21	1.56	0.70
1:B:1634:VAL:HG22	1:C:1202:HIS:CE1	2.26	0.70
1:D:1162:PHE:CG	1:D:1244:LEU:HD21	2.26	0.69
1:B:528:ASN:HD21	1:B:536:ILE:HG21	1.56	0.69
1:B:2123:ARG:HH12	1:B:2237:VAL:HG13	1.55	0.69
1:C:1082:THR:OG1	1:D:1202:HIS:HB2	1.92	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2123:ARG:HH12	1:C:2237:VAL:HG13	1.56	0.69
1:A:26:GLN:HB3	1:A:27:TYR:HA	1.75	0.69
1:A:2295:ILE:HG23	1:E:2346:LEU:HD22	1.73	0.69
1:C:2287:TRP:HH2	1:D:682:ASN:HD21	1.40	0.69
1:B:26:GLN:HB3	1:B:27:TYR:HA	1.75	0.69
1:E:528:ASN:HD21	1:E:536:ILE:HG21	1.56	0.68
1:E:26:GLN:HB3	1:E:27:TYR:HA	1.75	0.68
1:D:2356:LEU:HD13	1:E:2059:ARG:HH21	1.58	0.68
1:E:2518:THR:N	1:E:2519:ASP:HB2	2.03	0.68
1:A:2518:THR:N	1:A:2519:ASP:HB2	2.03	0.68
1:E:236:LEU:HD13	1:E:487:PHE:HB2	1.76	0.68
1:C:2518:THR:N	1:C:2519:ASP:HB2	2.03	0.68
1:C:2181:LEU:HD21	1:D:2181:LEU:HD13	1.76	0.68
1:D:236:LEU:HD13	1:D:487:PHE:HB2	1.76	0.68
1:C:236:LEU:HD13	1:C:487:PHE:HB2	1.76	0.67
1:C:26:GLN:HB3	1:C:27:TYR:HA	1.75	0.67
1:D:26:GLN:HB3	1:D:27:TYR:HA	1.75	0.67
1:D:336:LYS:HD3	1:D:415:ILE:HG22	1.77	0.67
1:D:1937:GLN:HE21	1:E:290:LEU:HD21	1.59	0.67
1:A:236:LEU:HD13	1:A:487:PHE:HB2	1.76	0.67
1:D:2353:LYS:HD2	1:E:2302:LEU:HD22	1.77	0.67
1:C:2158:GLN:HE21	1:D:2199:MET:HB2	1.60	0.67
1:B:836:LEU:HB3	1:B:864:LEU:HD11	1.78	0.66
1:E:321:VAL:HG23	1:E:352:GLU:HG2	1.78	0.66
1:C:836:LEU:HB3	1:C:864:LEU:HD11	1.78	0.66
1:C:2353:LYS:HD2	1:D:2302:LEU:HD22	1.78	0.66
1:A:336:LYS:HD3	1:A:415:ILE:HG22	1.77	0.66
1:C:1187:VAL:HG12	1:D:1179:ASN:HD21	1.61	0.66
1:D:321:VAL:HG23	1:D:352:GLU:HG2	1.78	0.66
1:E:836:LEU:HB3	1:E:864:LEU:HD11	1.78	0.66
1:A:836:LEU:HB3	1:A:864:LEU:HD11	1.78	0.66
1:A:321:VAL:HG23	1:A:352:GLU:HG2	1.78	0.66
1:E:334:ARG:HB2	1:E:434:PHE:HA	1.78	0.66
1:E:336:LYS:HD3	1:E:415:ILE:HG22	1.77	0.66
1:B:236:LEU:HD13	1:B:487:PHE:HB2	1.76	0.66
1:D:836:LEU:HB3	1:D:864:LEU:HD11	1.78	0.66
1:C:350:MET:HB2	1:C:359:ILE:HG13	1.78	0.65
1:C:2118:VAL:HG22	1:D:2242:ALA:HB3	1.78	0.65
1:A:2487:PHE:CZ	1:E:2364:GLU:HB3	2.31	0.65
1:B:600:LEU:HD11	1:B:628:THR:HG21	1.79	0.65
1:B:2102:ILE:HA	1:B:2261:GLN:NE2	2.12	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2105:GLN:HB2	1:A:2261:GLN:HE22	1.61	0.65
1:D:743:LEU:HD22	1:D:750:ASN:HD21	1.62	0.65
1:D:750:ASN:HB2	1:D:754:THR:HG23	1.79	0.65
1:E:750:ASN:HB2	1:E:754:THR:HG23	1.79	0.65
1:E:2105:GLN:HB2	1:E:2261:GLN:HE22	1.61	0.65
1:A:743:LEU:HD22	1:A:750:ASN:HD21	1.62	0.65
1:A:350:MET:HB2	1:A:359:ILE:HG13	1.78	0.65
1:B:321:VAL:HG23	1:B:352:GLU:HG2	1.78	0.65
1:B:336:LYS:HD3	1:B:415:ILE:HG22	1.77	0.65
1:B:750:ASN:HB2	1:B:754:THR:HG23	1.78	0.65
1:C:2121:GLU:OE1	1:D:2238:LYS:HG3	1.97	0.65
1:D:126:ALA:HA	1:D:129:LEU:HD23	1.79	0.65
1:D:2105:GLN:HB2	1:D:2261:GLN:HE22	1.61	0.65
1:B:350:MET:HB2	1:B:359:ILE:HG13	1.78	0.65
1:C:336:LYS:HD3	1:C:415:ILE:HG22	1.77	0.65
1:D:350:MET:HB2	1:D:359:ILE:HG13	1.78	0.65
1:D:2102:ILE:HA	1:D:2261:GLN:NE2	2.12	0.65
1:E:2102:ILE:HA	1:E:2261:GLN:NE2	2.12	0.65
1:A:2102:ILE:HA	1:A:2261:GLN:NE2	2.12	0.65
1:C:321:VAL:HG23	1:C:352:GLU:HG2	1.78	0.65
1:E:350:MET:HB2	1:E:359:ILE:HG13	1.78	0.65
1:C:2102:ILE:HA	1:C:2261:GLN:NE2	2.12	0.65
1:D:2350:GLU:HG3	1:E:2302:LEU:HD11	1.79	0.65
1:A:334:ARG:HB2	1:A:434:PHE:HA	1.78	0.65
1:C:600:LEU:HD11	1:C:628:THR:HG21	1.79	0.65
1:C:2105:GLN:HB2	1:C:2261:GLN:HE22	1.61	0.65
1:D:2536:ARG:HD3	1:E:2487:PHE:CZ	2.32	0.65
1:C:743:LEU:HD22	1:C:750:ASN:HD21	1.62	0.64
1:C:1116:ASN:HB2	1:D:1210:TRP:CD1	2.32	0.64
1:B:1813:PRO:HA	1:B:1832:TRP:HE1	1.63	0.64
1:C:1195:LEU:HD23	1:C:1214:ILE:HD12	1.80	0.64
1:C:1925:GLU:OE2	1:D:999:ARG:HG2	1.98	0.64
1:A:1813:PRO:HA	1:A:1832:TRP:HE1	1.63	0.64
1:C:334:ARG:HB2	1:C:434:PHE:HA	1.78	0.64
1:D:600:LEU:HD11	1:D:628:THR:HG21	1.79	0.64
1:E:600:LEU:HD11	1:E:628:THR:HG21	1.79	0.64
1:A:750:ASN:HB2	1:A:754:THR:HG23	1.79	0.64
1:D:334:ARG:HB2	1:D:434:PHE:HA	1.78	0.64
1:D:1573:VAL:HG22	1:D:1588:LYS:HG2	1.80	0.64
1:D:1813:PRO:HA	1:D:1832:TRP:HE1	1.63	0.64
1:C:1813:PRO:HA	1:C:1832:TRP:HE1	1.63	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:743:LEU:HD22	1:E:750:ASN:HD21	1.62	0.64
1:E:1813:PRO:HA	1:E:1832:TRP:HE1	1.63	0.64
1:C:750:ASN:HB2	1:C:754:THR:HG23	1.79	0.64
1:E:373:LEU:HD23	1:E:380:SER:H	1.63	0.64
1:C:1573:VAL:HG22	1:C:1588:LYS:HG2	1.80	0.64
1:B:2105:GLN:HB2	1:B:2261:GLN:HE22	1.61	0.64
1:E:2051:TYR:HA	1:E:2495:ARG:HA	1.80	0.64
1:B:126:ALA:HA	1:B:129:LEU:HD23	1.79	0.63
1:E:1195:LEU:HD23	1:E:1214:ILE:HD12	1.80	0.63
1:A:373:LEU:HD23	1:A:380:SER:H	1.63	0.63
1:A:600:LEU:HD11	1:A:628:THR:HG21	1.79	0.63
1:C:1385:GLY:HA3	1:C:1468:VAL:HB	1.80	0.63
1:B:334:ARG:HB2	1:B:434:PHE:HA	1.78	0.63
1:B:743:LEU:HD22	1:B:750:ASN:HD21	1.62	0.63
1:B:1937:GLN:HE21	1:C:290:LEU:HD21	1.63	0.63
1:D:2440:LYS:HD3	1:D:2538:THR:HG23	1.81	0.63
1:A:1573:VAL:HG22	1:A:1588:LYS:HG2	1.80	0.63
1:B:1385:GLY:HA3	1:B:1468:VAL:HB	1.80	0.63
1:A:126:ALA:HA	1:A:129:LEU:HD23	1.79	0.63
1:A:2051:TYR:HA	1:A:2495:ARG:HA	1.80	0.63
1:C:126:ALA:HA	1:C:129:LEU:HD23	1.79	0.63
1:C:373:LEU:HD23	1:C:380:SER:H	1.63	0.63
1:D:1195:LEU:HD23	1:D:1214:ILE:HD12	1.80	0.63
1:D:2051:TYR:HA	1:D:2495:ARG:HA	1.80	0.63
1:A:1385:GLY:HA3	1:A:1468:VAL:HB	1.80	0.63
1:B:28:LEU:HD12	1:B:32:GLU:HB3	1.81	0.63
1:C:28:LEU:HD12	1:C:32:GLU:HB3	1.81	0.63
1:A:28:LEU:HD12	1:A:32:GLU:HB3	1.81	0.63
1:B:373:LEU:HD23	1:B:380:SER:H	1.63	0.63
1:B:1195:LEU:HD23	1:B:1214:ILE:HD12	1.80	0.63
1:B:2440:LYS:HD3	1:B:2538:THR:HG23	1.81	0.63
1:C:2051:TYR:HA	1:C:2495:ARG:HA	1.80	0.63
1:B:1573:VAL:HG22	1:B:1588:LYS:HG2	1.80	0.62
1:B:2051:TYR:HA	1:B:2495:ARG:HA	1.80	0.62
1:C:2440:LYS:HD3	1:C:2538:THR:HG23	1.81	0.62
1:D:373:LEU:HD23	1:D:380:SER:H	1.63	0.62
1:E:126:ALA:HA	1:E:129:LEU:HD23	1.79	0.62
1:B:230:ALA:HB2	1:B:894:VAL:HG13	1.81	0.62
1:C:230:ALA:HB2	1:C:894:VAL:HG13	1.81	0.62
1:D:1385:GLY:HA3	1:D:1468:VAL:HB	1.80	0.62
1:E:28:LEU:HD12	1:E:32:GLU:HB3	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:2440:LYS:HD3	1:E:2538:THR:HG23	1.81	0.62
1:A:1636:ARG:HD2	1:A:1643:THR:HG22	1.81	0.62
1:E:1636:ARG:HD2	1:E:1643:THR:HG22	1.81	0.62
1:A:2440:LYS:HD3	1:A:2538:THR:HG23	1.81	0.62
1:B:2187:ARG:HG2	1:B:2193:ARG:HH22	1.65	0.62
1:C:2179:PHE:HA	1:C:2183:CYS:HA	1.82	0.62
1:E:1573:VAL:HG22	1:E:1588:LYS:HG2	1.80	0.62
1:A:230:ALA:HB2	1:A:894:VAL:HG13	1.81	0.62
1:A:1195:LEU:HD23	1:A:1214:ILE:HD12	1.80	0.62
1:E:230:ALA:HB2	1:E:894:VAL:HG13	1.81	0.62
1:E:2187:ARG:HG2	1:E:2193:ARG:HH22	1.65	0.62
1:A:1106:LEU:HD21	1:A:1124:ASN:HB2	1.82	0.62
1:A:854:GLN:HA	1:A:857:VAL:HG22	1.82	0.62
1:D:1106:LEU:HD21	1:D:1124:ASN:HB2	1.82	0.62
1:A:2187:ARG:HG2	1:A:2193:ARG:HH22	1.65	0.62
1:C:1106:LEU:HD21	1:C:1124:ASN:HB2	1.82	0.62
1:D:28:LEU:HD12	1:D:32:GLU:HB3	1.81	0.62
1:D:230:ALA:HB2	1:D:894:VAL:HG13	1.81	0.62
1:D:2092:GLN:O	1:D:2095:MET:HG3	2.00	0.62
1:B:1106:LEU:HD21	1:B:1124:ASN:HB2	1.82	0.62
1:B:1376:LYS:HG2	1:B:1415:ILE:HG13	1.82	0.62
1:C:2092:GLN:O	1:C:2095:MET:HG3	2.00	0.62
1:D:2325:PHE:HB2	1:D:2351:MET:HE2	1.82	0.62
1:A:1376:LYS:HG2	1:A:1415:ILE:HG13	1.82	0.61
1:B:34:ARG:O	1:B:38:ASP:HB2	2.00	0.61
1:C:792:LEU:HA	1:C:867:TRP:HB3	1.82	0.61
1:C:2187:ARG:HG2	1:C:2193:ARG:HH22	1.65	0.61
1:E:1376:LYS:HG2	1:E:1415:ILE:HG13	1.82	0.61
1:B:2179:PHE:HA	1:B:2183:CYS:HA	1.82	0.61
1:C:122:LEU:HB3	1:C:993:ILE:HG21	1.82	0.61
1:A:34:ARG:O	1:A:38:ASP:HB2	2.00	0.61
1:A:2393:LEU:HD13	1:A:2526:GLU:HG2	1.82	0.61
1:B:1636:ARG:HD2	1:B:1643:THR:HG22	1.81	0.61
1:B:2393:LEU:HD13	1:B:2526:GLU:HG2	1.82	0.61
1:D:2179:PHE:HA	1:D:2183:CYS:HA	1.82	0.61
1:E:2393:LEU:HD13	1:E:2526:GLU:HG2	1.82	0.61
1:B:2325:PHE:HB2	1:B:2351:MET:HE2	1.83	0.61
1:D:792:LEU:HA	1:D:867:TRP:HB3	1.82	0.61
1:A:2325:PHE:HB2	1:A:2351:MET:HE2	1.83	0.61
1:E:792:LEU:HA	1:E:867:TRP:HB3	1.82	0.61
1:C:34:ARG:O	1:C:38:ASP:HB2	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2393:LEU:HD13	1:C:2526:GLU:HG2	1.83	0.61
1:D:34:ARG:O	1:D:38:ASP:HB2	2.00	0.61
1:D:122:LEU:HB3	1:D:993:ILE:HG21	1.82	0.61
1:D:1636:ARG:HD2	1:D:1643:THR:HG22	1.81	0.61
1:A:1668:PRO:HA	1:A:1707:GLU:HG3	1.83	0.61
1:A:2192:LEU:HD11	1:E:2169:GLU:HG2	1.83	0.61
1:C:2458:ALA:HB3	1:C:2477:LEU:HB2	1.83	0.61
1:D:2187:ARG:HG2	1:D:2193:ARG:HH22	1.65	0.61
1:E:122:LEU:HB3	1:E:993:ILE:HG21	1.82	0.61
1:E:1385:GLY:HA3	1:E:1468:VAL:HB	1.80	0.61
1:E:2092:GLN:O	1:E:2095:MET:HG3	2.00	0.61
1:E:1106:LEU:HD21	1:E:1124:ASN:HB2	1.82	0.61
1:E:1668:PRO:HA	1:E:1707:GLU:HG3	1.83	0.61
1:A:2179:PHE:HA	1:A:2183:CYS:HA	1.82	0.60
1:B:1065:GLN:HG3	1:D:2212:LYS:HZ1	1.65	0.60
1:C:854:GLN:HA	1:C:857:VAL:HG22	1.82	0.60
1:C:2005:ARG:HG2	1:D:977:VAL:HA	1.83	0.60
1:D:854:GLN:HA	1:D:857:VAL:HG22	1.82	0.60
1:A:792:LEU:HA	1:A:867:TRP:HB3	1.82	0.60
1:B:2092:GLN:O	1:B:2095:MET:HG3	2.00	0.60
1:C:1636:ARG:HD2	1:C:1643:THR:HG22	1.81	0.60
1:E:34:ARG:O	1:E:38:ASP:HB2	2.00	0.60
1:E:2179:PHE:HA	1:E:2183:CYS:HA	1.82	0.60
1:A:2458:ALA:HB3	1:A:2477:LEU:HB2	1.83	0.60
1:B:1634:VAL:HG22	1:C:1202:HIS:HE1	1.65	0.60
1:D:2393:LEU:HD13	1:D:2526:GLU:HG2	1.82	0.60
1:A:692:ALA:HB1	1:A:741:MET:HG3	1.84	0.60
1:A:1794:PRO:HB2	1:A:1856:ARG:HH22	1.67	0.60
1:B:792:LEU:HA	1:B:867:TRP:HB3	1.82	0.60
1:B:2033:MET:HE1	1:C:2277:ARG:HH21	1.66	0.60
1:C:1343:GLN:HB2	1:C:1358:HIS:HB2	1.83	0.60
1:D:1343:GLN:HB2	1:D:1358:HIS:HB2	1.83	0.60
1:C:1794:PRO:HB2	1:C:1856:ARG:HH22	1.66	0.60
1:E:854:GLN:HA	1:E:857:VAL:HG22	1.82	0.60
1:A:2212:LYS:HZ1	1:D:1065:GLN:HG3	1.66	0.60
1:C:1376:LYS:HG2	1:C:1415:ILE:HG13	1.82	0.60
1:D:1376:LYS:HG2	1:D:1415:ILE:HG13	1.82	0.60
1:A:2113:ASP:HA	1:A:2116:ILE:HG12	1.84	0.60
1:B:692:ALA:HB1	1:B:741:MET:HG3	1.84	0.60
1:D:1794:PRO:HB2	1:D:1856:ARG:HH22	1.66	0.60
1:B:854:GLN:HA	1:B:857:VAL:HG22	1.82	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:122:LEU:HB3	1:A:993:ILE:HG21	1.82	0.60
1:B:2113:ASP:HA	1:B:2116:ILE:HG12	1.84	0.60
1:B:122:LEU:HB3	1:B:993:ILE:HG21	1.82	0.60
1:B:281:TRP:HA	1:B:284:LYS:HE3	1.84	0.60
1:B:1343:GLN:HB2	1:B:1358:HIS:HB2	1.83	0.59
1:C:1444:THR:HB	1:C:1453:ARG:HA	1.84	0.59
1:C:1668:PRO:HA	1:C:1707:GLU:HG3	1.83	0.59
1:A:281:TRP:HA	1:A:284:LYS:HE3	1.84	0.59
1:C:2148:ALA:HB2	1:D:2213:ILE:HD11	1.84	0.59
1:D:1668:PRO:HA	1:D:1707:GLU:HG3	1.83	0.59
1:E:1794:PRO:HB2	1:E:1856:ARG:HH22	1.66	0.59
1:B:1794:PRO:HB2	1:B:1856:ARG:HH22	1.66	0.59
1:B:2458:ALA:HB3	1:B:2477:LEU:HB2	1.83	0.59
1:C:2325:PHE:HB2	1:C:2351:MET:HE2	1.84	0.59
1:E:2458:ALA:HB3	1:E:2477:LEU:HB2	1.83	0.59
1:A:1202:HIS:HB3	1:E:1078:LYS:HE2	1.84	0.59
1:B:1668:PRO:HA	1:B:1707:GLU:HG3	1.83	0.59
1:C:73:PRO:HB2	1:C:1931:PRO:HG3	1.85	0.59
1:C:281:TRP:HA	1:C:284:LYS:HE3	1.84	0.59
1:C:1490:ASN:H	1:C:1492:GLN:HE22	1.50	0.59
1:C:2100:GLN:O	1:C:2104:ILE:HG13	2.03	0.59
1:C:2113:ASP:HA	1:C:2116:ILE:HG12	1.84	0.59
1:D:1444:THR:HB	1:D:1453:ARG:HA	1.84	0.59
1:E:1490:ASN:H	1:E:1492:GLN:HE22	1.50	0.59
1:B:1185:THR:HG23	1:C:1181:THR:HA	1.84	0.59
1:C:692:ALA:HB1	1:C:741:MET:HG3	1.84	0.59
1:D:1490:ASN:H	1:D:1492:GLN:HE22	1.50	0.59
1:D:2458:ALA:HB3	1:D:2477:LEU:HB2	1.83	0.59
1:E:692:ALA:HB1	1:E:741:MET:HG3	1.83	0.59
1:A:2100:GLN:O	1:A:2104:ILE:HG13	2.02	0.59
1:B:1717:ALA:HB3	1:B:1720:TYR:HB2	1.85	0.59
1:B:2100:GLN:O	1:B:2104:ILE:HG13	2.03	0.59
1:D:2100:GLN:O	1:D:2104:ILE:HG13	2.03	0.59
1:A:2092:GLN:O	1:A:2095:MET:HG3	2.00	0.59
1:B:73:PRO:HB2	1:B:1931:PRO:HG3	1.85	0.59
1:D:2384:ASN:HB3	1:D:2387:GLU:HB3	1.85	0.59
1:A:73:PRO:HB2	1:A:1931:PRO:HG3	1.85	0.59
1:A:708:ILE:HG13	1:A:724:LEU:HD21	1.85	0.59
1:A:1490:ASN:H	1:A:1492:GLN:HE22	1.50	0.59
1:E:1741:TRP:HB3	1:E:1777:LYS:HB2	1.85	0.59
1:A:1343:GLN:HB2	1:A:1358:HIS:HB2	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:1343:GLN:HB2	1:E:1358:HIS:HB2	1.83	0.59
1:B:1419:ASN:HB3	1:B:1424:TYR:HB2	1.85	0.59
1:C:1217:GLN:HE21	1:C:1278:LYS:HE2	1.68	0.59
1:C:2158:GLN:O	1:D:2199:MET:HE1	2.03	0.59
1:D:73:PRO:HB2	1:D:1931:PRO:HG3	1.85	0.59
1:E:2113:ASP:HA	1:E:2116:ILE:HG12	1.84	0.59
1:A:1925:GLU:HG2	1:B:1004:ILE:HD13	1.85	0.58
1:B:350:MET:HB2	1:B:359:ILE:HA	1.85	0.58
1:C:1717:ALA:HB3	1:C:1720:TYR:HB2	1.85	0.58
1:A:350:MET:HB2	1:A:359:ILE:HA	1.85	0.58
1:B:1217:GLN:HE21	1:B:1278:LYS:HE2	1.68	0.58
1:C:2064:VAL:HG11	1:C:2345:LEU:HG	1.85	0.58
1:A:1078:LYS:HE2	1:B:1202:HIS:HB3	1.85	0.58
1:B:2064:VAL:HG11	1:B:2345:LEU:HG	1.85	0.58
1:C:350:MET:HB2	1:C:359:ILE:HA	1.85	0.58
1:A:793:GLY:HA3	1:A:868:GLN:HG2	1.86	0.58
1:B:1687:ASN:HB3	1:B:1722:MET:SD	2.44	0.58
1:B:1741:TRP:HB3	1:B:1777:LYS:HB2	1.85	0.58
1:B:2384:ASN:HB3	1:B:2387:GLU:HB3	1.85	0.58
1:D:1419:ASN:HB3	1:D:1424:TYR:HB2	1.85	0.58
1:E:1717:ALA:HB3	1:E:1720:TYR:HB2	1.85	0.58
1:E:2325:PHE:HB2	1:E:2351:MET:HE2	1.85	0.58
1:A:1444:THR:HB	1:A:1453:ARG:HA	1.84	0.58
1:B:200:HIS:CE1	1:B:202:PRO:HG2	2.39	0.58
1:D:1217:GLN:HE21	1:D:1278:LYS:HE2	1.68	0.58
1:E:281:TRP:HA	1:E:284:LYS:HE3	1.84	0.58
1:E:614:LEU:HD12	1:E:617:LEU:HD11	1.86	0.58
1:E:1217:GLN:HE21	1:E:1278:LYS:HE2	1.68	0.58
1:A:614:LEU:HD12	1:A:617:LEU:HD11	1.86	0.58
1:C:614:LEU:HD12	1:C:617:LEU:HD11	1.86	0.58
1:C:1741:TRP:HB3	1:C:1777:LYS:HB2	1.85	0.58
1:C:2384:ASN:HB3	1:C:2387:GLU:HB3	1.85	0.58
1:D:692:ALA:HB1	1:D:741:MET:HG3	1.84	0.58
1:D:1687:ASN:HB3	1:D:1722:MET:SD	2.44	0.58
1:E:73:PRO:HB2	1:E:1931:PRO:HG3	1.85	0.58
1:D:614:LEU:HD12	1:D:617:LEU:HD11	1.86	0.58
1:D:1741:TRP:HB3	1:D:1777:LYS:HB2	1.84	0.58
1:D:2064:VAL:HG11	1:D:2345:LEU:HG	1.85	0.58
1:E:1444:THR:HB	1:E:1453:ARG:HA	1.85	0.58
1:A:1202:HIS:CE1	1:E:1634:VAL:HG22	2.39	0.58
1:A:2384:ASN:HB3	1:A:2387:GLU:HB3	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1150:VAL:HG12	1:B:1152:PRO:HD3	1.86	0.58
1:B:1444:THR:HB	1:B:1453:ARG:HA	1.85	0.58
1:C:1255:TYR:HE2	1:C:1296:ILE:HG22	1.69	0.58
1:D:200:HIS:CE1	1:D:202:PRO:HG2	2.39	0.58
1:D:793:GLY:HA3	1:D:868:GLN:HG2	1.86	0.58
1:D:1717:ALA:HB3	1:D:1720:TYR:HB2	1.85	0.58
1:A:200:HIS:CE1	1:A:202:PRO:HG2	2.39	0.58
1:A:1255:TYR:HE2	1:A:1296:ILE:HG22	1.69	0.58
1:A:1717:ALA:HB3	1:A:1720:TYR:HB2	1.85	0.58
1:B:1117:LEU:HD11	1:D:2168:ALA:HA	1.85	0.58
1:B:1490:ASN:H	1:B:1492:GLN:HE22	1.50	0.58
1:D:281:TRP:HA	1:D:284:LYS:HE3	1.84	0.58
1:D:1150:VAL:HG12	1:D:1152:PRO:HD3	1.86	0.58
1:E:350:MET:HB2	1:E:359:ILE:HA	1.85	0.58
1:E:1150:VAL:HG12	1:E:1152:PRO:HD3	1.86	0.58
1:A:216:THR:HG22	1:A:494:HIS:HB3	1.86	0.57
1:A:1687:ASN:HB3	1:A:1722:MET:SD	2.44	0.57
1:C:708:ILE:HG13	1:C:724:LEU:HD21	1.85	0.57
1:C:793:GLY:HA3	1:C:868:GLN:HG2	1.86	0.57
1:E:793:GLY:HA3	1:E:868:GLN:HG2	1.86	0.57
1:E:1687:ASN:HB3	1:E:1722:MET:SD	2.44	0.57
1:E:2100:GLN:O	1:E:2104:ILE:HG13	2.03	0.57
1:A:1741:TRP:HB3	1:A:1777:LYS:HB2	1.84	0.57
1:A:2353:LYS:HD2	1:B:2302:LEU:HD22	1.85	0.57
1:B:614:LEU:HD12	1:B:617:LEU:HD11	1.86	0.57
1:D:2113:ASP:HA	1:D:2116:ILE:HG12	1.84	0.57
1:E:708:ILE:HG13	1:E:724:LEU:HD21	1.85	0.57
1:B:793:GLY:HA3	1:B:868:GLN:HG2	1.86	0.57
1:E:2384:ASN:HB3	1:E:2387:GLU:HB3	1.85	0.57
1:A:1419:ASN:HB3	1:A:1424:TYR:HB2	1.85	0.57
1:C:200:HIS:CE1	1:C:202:PRO:HG2	2.39	0.57
1:E:1419:ASN:HB3	1:E:1424:TYR:HB2	1.85	0.57
1:A:242:ILE:HA	1:A:246:LEU:HD23	1.87	0.57
1:B:216:THR:HG22	1:B:494:HIS:HB3	1.86	0.57
1:B:708:ILE:HG13	1:B:724:LEU:HD21	1.85	0.57
1:C:1687:ASN:HB3	1:C:1722:MET:SD	2.44	0.57
1:C:1841:GLY:HA3	1:D:1003:ARG:NH2	2.19	0.57
1:D:708:ILE:HG13	1:D:724:LEU:HD21	1.85	0.57
1:E:216:THR:HG22	1:E:494:HIS:HB3	1.86	0.57
1:C:1440:ARG:HG2	1:C:1458:PRO:HA	1.87	0.57
1:D:1906:ARG:HH22	1:D:2010:ILE:HG21	1.70	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1217:GLN:HE21	1:A:1278:LYS:HE2	1.68	0.57
1:B:1440:ARG:HG2	1:B:1458:PRO:HA	1.87	0.57
1:C:242:ILE:HA	1:C:246:LEU:HD23	1.87	0.57
1:A:2064:VAL:HG11	1:A:2345:LEU:HG	1.85	0.57
1:C:1419:ASN:HB3	1:C:1424:TYR:HB2	1.85	0.57
1:C:1906:ARG:HH22	1:C:2010:ILE:HG21	1.70	0.57
1:C:1412:GLY:HA3	1:C:1430:GLY:H	1.70	0.57
1:D:242:ILE:HA	1:D:246:LEU:HD23	1.87	0.57
1:D:350:MET:HB2	1:D:359:ILE:HA	1.85	0.57
1:D:1255:TYR:HE2	1:D:1296:ILE:HG22	1.69	0.57
1:E:334:ARG:HB3	1:E:434:PHE:HD1	1.69	0.57
1:E:1255:TYR:HE2	1:E:1296:ILE:HG22	1.69	0.57
1:C:334:ARG:HB3	1:C:434:PHE:HD1	1.69	0.57
1:E:1412:GLY:HA3	1:E:1430:GLY:H	1.70	0.57
1:E:2064:VAL:HG11	1:E:2345:LEU:HG	1.85	0.57
1:A:2170:GLY:HA3	1:A:2191:ALA:HA	1.87	0.56
1:B:1906:ARG:HH22	1:B:2010:ILE:HG21	1.70	0.56
1:C:1150:VAL:HG12	1:C:1152:PRO:HD3	1.86	0.56
1:D:348:ASP:HB2	1:D:359:ILE:HG21	1.87	0.56
1:D:1412:GLY:HA3	1:D:1430:GLY:H	1.70	0.56
1:E:200:HIS:CE1	1:E:202:PRO:HG2	2.39	0.56
1:A:1440:ARG:HG2	1:A:1458:PRO:HA	1.87	0.56
1:A:2277:ARG:HH21	1:E:2033:MET:HE1	1.70	0.56
1:B:1412:GLY:HA3	1:B:1430:GLY:H	1.70	0.56
1:D:2345:LEU:HD13	1:E:2066:GLN:HG2	1.88	0.56
1:A:1906:ARG:HH22	1:A:2010:ILE:HG21	1.70	0.56
1:B:242:ILE:HA	1:B:246:LEU:HD23	1.87	0.56
1:C:216:THR:HG22	1:C:494:HIS:HB3	1.87	0.56
1:C:348:ASP:HB2	1:C:359:ILE:HG21	1.87	0.56
1:A:1150:VAL:HG12	1:A:1152:PRO:HD3	1.86	0.56
1:B:348:ASP:HB2	1:B:359:ILE:HG21	1.87	0.56
1:D:334:ARG:HB3	1:D:434:PHE:HD1	1.69	0.56
1:D:1440:ARG:HG2	1:D:1458:PRO:HA	1.87	0.56
1:D:2170:GLY:HA3	1:D:2191:ALA:HA	1.87	0.56
1:E:2170:GLY:HA3	1:E:2191:ALA:HA	1.87	0.56
1:B:1255:TYR:HE2	1:B:1296:ILE:HG22	1.69	0.56
1:D:216:THR:HG22	1:D:494:HIS:HB3	1.86	0.56
1:E:348:ASP:HB2	1:E:359:ILE:HG21	1.87	0.56
1:E:1906:ARG:HH22	1:E:2010:ILE:HG21	1.70	0.56
1:A:334:ARG:HB3	1:A:434:PHE:HD1	1.69	0.56
1:E:1898:ILE:HD11	1:E:1923:THR:HG21	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2169:GLU:HG2	1:C:2192:LEU:CD1	2.27	0.56
1:C:1416:THR:HG21	1:C:1443:LEU:HD21	1.88	0.56
1:B:2170:GLY:HA3	1:B:2191:ALA:HA	1.87	0.56
1:C:200:HIS:HB3	1:C:203:TYR:HB3	1.88	0.56
1:C:1021:TRP:HA	1:C:1024:ASN:HB2	1.88	0.56
1:E:1021:TRP:HA	1:E:1024:ASN:HB2	1.88	0.56
1:C:1520:THR:HG22	1:C:1529:THR:HG23	1.88	0.56
1:D:2366:THR:O	1:E:2478:SER:HB2	2.06	0.56
1:E:242:ILE:HA	1:E:246:LEU:HD23	1.87	0.56
1:B:334:ARG:HB3	1:B:434:PHE:HD1	1.69	0.56
1:D:1898:ILE:HD11	1:D:1923:THR:HG21	1.88	0.56
1:D:2100:GLN:HB2	1:E:2260:TYR:HD2	1.70	0.56
1:C:2166:SER:HB2	1:C:2198:VAL:HG11	1.89	0.55
1:A:1412:GLY:HA3	1:A:1430:GLY:H	1.70	0.55
1:D:200:HIS:HB3	1:D:203:TYR:HB3	1.88	0.55
1:A:348:ASP:HB2	1:A:359:ILE:HG21	1.88	0.55
1:B:2141:ILE:H	1:E:1067:LYS:HZ2	1.54	0.55
1:C:2056:MET:HG3	1:C:2059:ARG:CZ	2.37	0.55
1:A:2166:SER:HB2	1:A:2198:VAL:HG11	1.89	0.55
1:B:362:ASN:HD21	1:B:364:LYS:HE3	1.72	0.55
1:B:1898:ILE:HD11	1:B:1923:THR:HG21	1.88	0.55
1:B:2166:SER:HB2	1:B:2198:VAL:HG11	1.89	0.55
1:E:1440:ARG:HG2	1:E:1458:PRO:HA	1.87	0.55
1:A:362:ASN:HD21	1:A:364:LYS:HE3	1.72	0.55
1:C:2170:GLY:HA3	1:C:2191:ALA:HA	1.87	0.55
1:D:119:LEU:HD13	1:D:986:LEU:HD22	1.89	0.55
1:D:2056:MET:HG3	1:D:2059:ARG:CZ	2.37	0.55
1:E:334:ARG:HB2	1:E:433:ILE:O	2.07	0.55
1:A:1520:THR:HG22	1:A:1529:THR:HG23	1.88	0.55
1:A:1639:THR:HG22	1:A:1640:GLY:H	1.72	0.55
1:B:28:LEU:HD21	1:B:33:LEU:HD12	1.89	0.55
1:B:200:HIS:HB3	1:B:203:TYR:HB3	1.88	0.55
1:A:2056:MET:HG3	1:A:2059:ARG:CZ	2.37	0.55
1:B:1416:THR:HG21	1:B:1443:LEU:HD21	1.88	0.55
1:C:1898:ILE:HD11	1:C:1923:THR:HG21	1.88	0.55
1:D:2166:SER:HB2	1:D:2198:VAL:HG11	1.89	0.55
1:E:1668:PRO:HG3	1:E:1783:LEU:HB2	1.89	0.55
1:C:1065:GLN:HG3	1:E:2212:LYS:HZ1	1.72	0.55
1:E:119:LEU:HD13	1:E:986:LEU:HD22	1.89	0.55
1:E:2166:SER:HB2	1:E:2198:VAL:HG11	1.88	0.55
1:B:1639:THR:HG22	1:B:1640:GLY:H	1.72	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:119:LEU:HD13	1:C:986:LEU:HD22	1.89	0.55
1:C:334:ARG:HB2	1:C:433:ILE:O	2.07	0.55
1:C:362:ASN:HD21	1:C:364:LYS:HE3	1.71	0.55
1:D:1021:TRP:HA	1:D:1024:ASN:HB2	1.88	0.55
1:D:1416:THR:HG21	1:D:1443:LEU:HD21	1.88	0.55
1:D:1668:PRO:HG3	1:D:1783:LEU:HB2	1.89	0.55
1:D:2169:GLU:HG2	1:E:2192:LEU:HD11	1.88	0.55
1:A:28:LEU:HD21	1:A:33:LEU:HD12	1.89	0.55
1:A:119:LEU:HD13	1:A:986:LEU:HD22	1.89	0.55
1:E:1520:THR:HG22	1:E:1529:THR:HG23	1.88	0.55
1:A:1668:PRO:HG3	1:A:1783:LEU:HB2	1.89	0.54
1:A:2059:ARG:HA	1:A:2062:ASN:ND2	2.23	0.54
1:B:1624:ARG:HB2	1:B:1657:LEU:HD21	1.89	0.54
1:E:362:ASN:HD21	1:E:364:LYS:HE3	1.71	0.54
1:A:1898:ILE:HD11	1:A:1923:THR:HG21	1.88	0.54
1:A:2181:LEU:HD13	1:E:2181:LEU:HD21	1.89	0.54
1:B:1668:PRO:HG3	1:B:1783:LEU:HB2	1.89	0.54
1:B:2050:LEU:HG	1:B:2496:TYR:H	1.73	0.54
1:B:2059:ARG:HA	1:B:2062:ASN:ND2	2.23	0.54
1:B:2256:MET:O	1:B:2259:GLU:HG3	2.08	0.54
1:D:2050:LEU:HG	1:D:2496:TYR:H	1.73	0.54
1:A:334:ARG:HB2	1:A:433:ILE:O	2.07	0.54
1:A:2050:LEU:HG	1:A:2496:TYR:H	1.73	0.54
1:B:119:LEU:HD13	1:B:986:LEU:HD22	1.89	0.54
1:B:697:ARG:HG2	1:B:737:ILE:HD12	1.90	0.54
1:B:2331:TRP:CD2	1:B:2337:GLY:HA3	2.43	0.54
1:C:2059:ARG:HA	1:C:2062:ASN:ND2	2.23	0.54
1:A:1416:THR:HG21	1:A:1443:LEU:HD21	1.88	0.54
1:A:1624:ARG:HB2	1:A:1657:LEU:HD21	1.89	0.54
1:C:1668:PRO:HG3	1:C:1783:LEU:HB2	1.89	0.54
1:C:2050:LEU:HG	1:C:2496:TYR:H	1.73	0.54
1:C:2331:TRP:CD2	1:C:2337:GLY:HA3	2.43	0.54
1:D:697:ARG:HG2	1:D:737:ILE:HD12	1.90	0.54
1:D:1520:THR:HG22	1:D:1529:THR:HG23	1.88	0.54
1:D:1634:VAL:HG22	1:E:1202:HIS:CE1	2.42	0.54
1:E:350:MET:HG3	1:E:352:GLU:H	1.73	0.54
1:E:2059:ARG:HA	1:E:2062:ASN:ND2	2.22	0.54
1:A:200:HIS:HB3	1:A:203:TYR:HB3	1.88	0.54
1:B:2056:MET:HG3	1:B:2059:ARG:CZ	2.37	0.54
1:E:1416:THR:HG21	1:E:1443:LEU:HD21	1.88	0.54
1:E:2050:LEU:HG	1:E:2496:TYR:H	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:2056:MET:HG3	1:E:2059:ARG:CZ	2.37	0.54
1:A:2239:GLN:HE22	1:E:2122:SER:HA	1.72	0.54
1:D:362:ASN:HD21	1:D:364:LYS:HE3	1.72	0.54
1:D:2123:ARG:NH1	1:D:2237:VAL:HG13	2.23	0.54
1:D:2331:TRP:CD2	1:D:2337:GLY:HA3	2.43	0.54
1:E:288:LEU:HG	1:E:452:ILE:HD11	1.90	0.54
1:A:350:MET:HG3	1:A:352:GLU:H	1.73	0.54
1:B:350:MET:HG3	1:B:352:GLU:H	1.73	0.54
1:B:1021:TRP:HA	1:B:1024:ASN:HB2	1.88	0.54
1:C:28:LEU:HD21	1:C:33:LEU:HD12	1.89	0.54
1:D:350:MET:HG3	1:D:352:GLU:H	1.73	0.54
1:D:2256:MET:O	1:D:2259:GLU:HG3	2.08	0.54
1:E:200:HIS:HB3	1:E:203:TYR:HB3	1.88	0.54
1:E:1639:THR:HG22	1:E:1640:GLY:H	1.72	0.54
1:A:1021:TRP:HA	1:A:1024:ASN:HB2	1.88	0.54
1:A:2158:GLN:HG2	1:B:2199:MET:HE1	1.88	0.54
1:B:1238:PHE:HB3	1:B:1243:THR:HG22	1.90	0.54
1:B:1520:THR:HG22	1:B:1529:THR:HG23	1.88	0.54
1:C:370:GLY:H	1:C:386:LEU:HD22	1.73	0.54
1:E:370:GLY:H	1:E:386:LEU:HD22	1.73	0.54
1:A:288:LEU:HG	1:A:452:ILE:HD11	1.90	0.54
1:A:2331:TRP:CD2	1:A:2337:GLY:HA3	2.43	0.54
1:B:334:ARG:HB2	1:B:433:ILE:O	2.07	0.54
1:B:714:LEU:HD21	1:B:768:SER:HB2	1.90	0.54
1:B:2123:ARG:NH1	1:B:2237:VAL:HG13	2.23	0.54
1:C:288:LEU:HG	1:C:452:ILE:HD11	1.90	0.54
1:C:2256:MET:O	1:C:2259:GLU:HG3	2.08	0.54
1:D:1624:ARG:HB2	1:D:1657:LEU:HD21	1.89	0.54
1:D:1639:THR:HG22	1:D:1640:GLY:H	1.72	0.54
1:C:1238:PHE:HB3	1:C:1243:THR:HG22	1.90	0.53
1:C:1639:THR:HG22	1:C:1640:GLY:H	1.72	0.53
1:D:1197:LEU:O	1:D:1209:PRO:HA	2.09	0.53
1:E:1624:ARG:HB2	1:E:1657:LEU:HD21	1.89	0.53
1:A:1238:PHE:HB3	1:A:1243:THR:HG22	1.90	0.53
1:A:1494:PHE:CD2	1:A:1496:ILE:HG12	2.43	0.53
1:C:697:ARG:HG2	1:C:737:ILE:HD12	1.90	0.53
1:D:14:THR:O	1:D:15:ARG:HD3	2.09	0.53
1:E:2256:MET:O	1:E:2259:GLU:HG3	2.08	0.53
1:E:2521:GLN:HE21	1:E:2524:LEU:HD23	1.73	0.53
1:A:2212:LYS:NZ	1:D:1065:GLN:HG3	2.23	0.53
1:A:2521:GLN:HE21	1:A:2524:LEU:HD23	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1197:LEU:O	1:B:1209:PRO:HA	2.09	0.53
1:D:2059:ARG:HA	1:D:2062:ASN:ND2	2.23	0.53
1:E:1494:PHE:CD2	1:E:1496:ILE:HG12	2.43	0.53
1:B:288:LEU:HG	1:B:452:ILE:HD11	1.90	0.53
1:C:2116:ILE:HG22	1:C:2247:LEU:HB3	1.91	0.53
1:D:2521:GLN:HE21	1:D:2524:LEU:HD23	1.73	0.53
1:A:535:LYS:HD3	1:A:536:ILE:H	1.72	0.53
1:A:697:ARG:HG2	1:A:737:ILE:HD12	1.90	0.53
1:A:738:ALA:HA	1:A:741:MET:SD	2.48	0.53
1:B:2462:TYR:HB2	1:B:2499:PHE:HE1	1.74	0.53
1:C:738:ALA:HA	1:C:741:MET:SD	2.48	0.53
1:C:1197:LEU:O	1:C:1209:PRO:HA	2.09	0.53
1:C:2521:GLN:HE21	1:C:2524:LEU:HD23	1.73	0.53
1:D:334:ARG:HB2	1:D:433:ILE:O	2.07	0.53
1:D:410:LYS:HA	1:D:410:LYS:HE3	1.91	0.53
1:E:1197:LEU:O	1:E:1209:PRO:HA	2.09	0.53
1:E:2331:TRP:CD2	1:E:2337:GLY:HA3	2.43	0.53
1:A:714:LEU:HD21	1:A:768:SER:HB2	1.90	0.53
1:C:1494:PHE:CD2	1:C:1496:ILE:HG12	2.43	0.53
1:D:817:ILE:HA	1:D:820:LEU:HG	1.91	0.53
1:E:14:THR:O	1:E:15:ARG:HD3	2.09	0.53
1:E:535:LYS:HD3	1:E:536:ILE:H	1.72	0.53
1:A:2462:TYR:HB2	1:A:2499:PHE:HE1	1.74	0.53
1:B:535:LYS:HD3	1:B:536:ILE:H	1.72	0.53
1:B:2116:ILE:HG22	1:B:2247:LEU:HB3	1.91	0.53
1:B:2346:LEU:HD22	1:C:2295:ILE:HG23	1.89	0.53
1:C:535:LYS:HD3	1:C:536:ILE:H	1.72	0.53
1:C:1624:ARG:HB2	1:C:1657:LEU:HD21	1.89	0.53
1:C:2118:VAL:HG22	1:D:2242:ALA:CB	2.38	0.53
1:C:2123:ARG:NH1	1:C:2237:VAL:HG13	2.23	0.53
1:D:1457:PHE:HZ	1:D:1471:VAL:HG22	1.74	0.53
1:D:535:LYS:HD3	1:D:536:ILE:H	1.72	0.53
1:E:697:ARG:HG2	1:E:737:ILE:HD12	1.90	0.53
1:A:290:LEU:HD21	1:E:1937:GLN:HE21	1.73	0.53
1:A:1197:LEU:O	1:A:1209:PRO:HA	2.09	0.53
1:A:1457:PHE:HZ	1:A:1471:VAL:HG22	1.74	0.53
1:B:1151:ASN:HD21	1:D:2191:ALA:HB3	1.74	0.53
1:C:335:VAL:O	1:C:432:GLY:HA3	2.09	0.53
1:D:28:LEU:HD21	1:D:33:LEU:HD12	1.89	0.53
1:E:28:LEU:HD21	1:E:33:LEU:HD12	1.89	0.53
1:E:714:LEU:HD21	1:E:768:SER:HB2	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:370:GLY:H	1:A:386:LEU:HD22	1.73	0.53
1:A:1917:LYS:HG2	1:A:2004:LEU:HD13	1.91	0.53
1:A:2375:TYR:HD2	1:A:2385:LEU:HD13	1.74	0.53
1:C:850:SER:HB3	1:D:548:PRO:HB2	1.91	0.53
1:D:2116:ILE:HG22	1:D:2247:LEU:HB3	1.91	0.53
1:E:2462:TYR:HB2	1:E:2499:PHE:HE1	1.74	0.53
1:B:335:VAL:O	1:B:432:GLY:HA3	2.09	0.52
1:B:370:GLY:H	1:B:386:LEU:HD22	1.73	0.52
1:B:738:ALA:HA	1:B:741:MET:SD	2.48	0.52
1:B:1457:PHE:HZ	1:B:1471:VAL:HG22	1.74	0.52
1:B:2212:LYS:NZ	1:E:1065:GLN:HG3	2.21	0.52
1:B:2375:TYR:HD2	1:B:2385:LEU:HD13	1.74	0.52
1:C:1632:GLN:O	1:C:1636:ARG:HG2	2.10	0.52
1:D:288:LEU:HG	1:D:452:ILE:HD11	1.90	0.52
1:D:2284:LEU:O	1:D:2288:MET:HG2	2.10	0.52
1:E:335:VAL:O	1:E:432:GLY:HA3	2.09	0.52
1:E:1917:LYS:HG2	1:E:2004:LEU:HD13	1.91	0.52
1:A:2284:LEU:O	1:A:2288:MET:HG2	2.10	0.52
1:B:14:THR:O	1:B:15:ARG:HD3	2.09	0.52
1:D:738:ALA:HA	1:D:741:MET:SD	2.48	0.52
1:E:334:ARG:CB	1:E:434:PHE:HA	2.39	0.52
1:E:817:ILE:HA	1:E:820:LEU:HG	1.91	0.52
1:E:2284:LEU:O	1:E:2288:MET:HG2	2.10	0.52
1:A:1925:GLU:OE2	1:B:999:ARG:HG2	2.10	0.52
1:A:2256:MET:O	1:A:2259:GLU:HG3	2.08	0.52
1:B:2284:LEU:O	1:B:2288:MET:HG2	2.10	0.52
1:C:313:ASP:HA	1:C:331:LYS:HE2	1.91	0.52
1:C:350:MET:HG3	1:C:352:GLU:H	1.73	0.52
1:C:2284:LEU:O	1:C:2288:MET:HG2	2.10	0.52
1:D:370:GLY:H	1:D:386:LEU:HD22	1.73	0.52
1:D:1238:PHE:HB3	1:D:1243:THR:HG22	1.90	0.52
1:E:410:LYS:HA	1:E:410:LYS:HE3	1.91	0.52
1:E:1238:PHE:HB3	1:E:1243:THR:HG22	1.90	0.52
1:A:2116:ILE:HG22	1:A:2247:LEU:HB3	1.91	0.52
1:B:410:LYS:HE3	1:B:410:LYS:HA	1.91	0.52
1:B:817:ILE:HA	1:B:820:LEU:HG	1.91	0.52
1:B:1494:PHE:CD2	1:B:1496:ILE:HG12	2.43	0.52
1:C:14:THR:O	1:C:15:ARG:HD3	2.08	0.52
1:C:1457:PHE:HZ	1:C:1471:VAL:HG22	1.74	0.52
1:D:335:VAL:O	1:D:432:GLY:HA3	2.09	0.52
1:E:738:ALA:HA	1:E:741:MET:SD	2.48	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1632:GLN:O	1:A:1636:ARG:HG2	2.10	0.52
1:B:1917:LYS:HG2	1:B:2004:LEU:HD13	1.91	0.52
1:C:192:ARG:HG2	1:C:266:ASN:HA	1.92	0.52
1:C:714:LEU:HD21	1:C:768:SER:HB2	1.90	0.52
1:C:2133:TYR:CE1	1:D:2228:ILE:HG21	2.45	0.52
1:C:2155:ALA:HB1	1:D:2203:ALA:HB1	1.89	0.52
1:D:714:LEU:HD21	1:D:768:SER:HB2	1.90	0.52
1:D:2462:TYR:HB2	1:D:2499:PHE:HE1	1.74	0.52
1:A:817:ILE:HA	1:A:820:LEU:HG	1.91	0.52
1:C:972:LEU:HA	1:C:995:LEU:HD23	1.92	0.52
1:D:192:ARG:HG2	1:D:266:ASN:HA	1.92	0.52
1:A:14:THR:O	1:A:15:ARG:HD3	2.08	0.52
1:A:410:LYS:HA	1:A:410:LYS:HE3	1.90	0.52
1:B:2521:GLN:HE21	1:B:2524:LEU:HD23	1.73	0.52
1:C:410:LYS:HA	1:C:410:LYS:HE3	1.91	0.52
1:E:2375:TYR:HD2	1:E:2385:LEU:HD13	1.74	0.52
1:D:21:THR:HG23	1:D:24:ASP:H	1.75	0.52
1:D:1632:GLN:O	1:D:1636:ARG:HG2	2.10	0.52
1:E:2116:ILE:HG22	1:E:2247:LEU:HB3	1.91	0.52
1:A:2123:ARG:NH1	1:A:2237:VAL:HG13	2.23	0.52
1:C:2238:LYS:HA	1:C:2241:ASP:HB2	1.92	0.52
1:D:1494:PHE:CD2	1:D:1496:ILE:HG12	2.43	0.52
1:A:1637:ALA:HA	1:A:1644:ILE:HD11	1.92	0.52
1:B:1521:VAL:HG11	1:B:1556:ILE:HD13	1.92	0.52
1:B:2238:LYS:HA	1:B:2241:ASP:HB2	1.92	0.52
1:C:545:SER:HA	1:C:586:THR:HA	1.92	0.52
1:C:817:ILE:HA	1:C:820:LEU:HG	1.91	0.52
1:C:2462:TYR:HB2	1:C:2499:PHE:HE1	1.74	0.52
1:D:334:ARG:CB	1:D:434:PHE:HA	2.39	0.52
1:D:545:SER:HA	1:D:586:THR:HA	1.92	0.52
1:E:1599:ASN:O	1:E:1603:ILE:HG12	2.10	0.52
1:A:2518:THR:HB	1:A:2519:ASP:CG	2.31	0.51
1:B:545:SER:HA	1:B:586:THR:HA	1.93	0.51
1:B:1599:ASN:O	1:B:1603:ILE:HG12	2.10	0.51
1:B:2058:GLU:HA	1:B:2061:ARG:HE	1.75	0.51
1:E:313:ASP:HA	1:E:331:LYS:HE2	1.91	0.51
1:E:1455:PHE:HE1	1:E:1478:ASP:HB3	1.75	0.51
1:A:335:VAL:O	1:A:432:GLY:HA3	2.09	0.51
1:B:21:THR:HG23	1:B:24:ASP:H	1.75	0.51
1:B:233:ALA:HB1	1:B:898:TYR:HB3	1.93	0.51
1:B:334:ARG:CB	1:B:434:PHE:HA	2.39	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:434:PHE:CZ	1:D:436:PHE:HB2	2.45	0.51
1:D:2111:GLU:OE1	1:E:2250:ARG:HG3	2.10	0.51
1:E:545:SER:HB2	1:E:586:THR:HG22	1.93	0.51
1:E:1457:PHE:HZ	1:E:1471:VAL:HG22	1.74	0.51
1:A:21:THR:HG23	1:A:24:ASP:H	1.75	0.51
1:A:545:SER:HA	1:A:586:THR:HA	1.92	0.51
1:A:2058:GLU:HA	1:A:2061:ARG:HE	1.75	0.51
1:B:313:ASP:HA	1:B:331:LYS:HE2	1.91	0.51
1:B:663:LEU:HD21	1:B:769:LEU:HG	1.92	0.51
1:C:334:ARG:CB	1:C:434:PHE:HA	2.39	0.51
1:C:663:LEU:HD21	1:C:769:LEU:HG	1.92	0.51
1:A:972:LEU:HA	1:A:995:LEU:HD23	1.92	0.51
1:A:1647:MET:HG3	1:A:1851:TRP:CE2	2.46	0.51
1:C:1521:VAL:HG11	1:C:1556:ILE:HD13	1.92	0.51
1:D:663:LEU:HD21	1:D:769:LEU:HG	1.92	0.51
1:D:1599:ASN:O	1:D:1603:ILE:HG12	2.10	0.51
1:D:1978:LEU:HD12	1:D:1978:LEU:O	2.11	0.51
1:E:1632:GLN:O	1:E:1636:ARG:HG2	2.10	0.51
1:A:545:SER:HB2	1:A:586:THR:HG22	1.93	0.51
1:B:986:LEU:O	1:B:990:ILE:HG12	2.11	0.51
1:B:1632:GLN:O	1:B:1636:ARG:HG2	2.10	0.51
1:C:2375:TYR:HD2	1:C:2385:LEU:HD13	1.74	0.51
1:D:1647:MET:HG3	1:D:1851:TRP:CE2	2.46	0.51
1:D:2058:GLU:HA	1:D:2061:ARG:HE	1.75	0.51
1:E:21:THR:HG23	1:E:24:ASP:H	1.75	0.51
1:E:1464:ILE:HG12	1:E:1466:ASN:H	1.75	0.51
1:B:545:SER:HB2	1:B:586:THR:HG22	1.93	0.51
1:B:2518:THR:HB	1:B:2519:ASP:CG	2.31	0.51
1:C:434:PHE:CZ	1:C:436:PHE:HB2	2.45	0.51
1:C:2254:ALA:O	1:C:2258:VAL:HG23	2.11	0.51
1:C:2518:THR:HB	1:C:2519:ASP:CG	2.31	0.51
1:E:1647:MET:HG3	1:E:1851:TRP:CE2	2.46	0.51
1:A:192:ARG:HG2	1:A:266:ASN:HA	1.92	0.51
1:A:233:ALA:HB1	1:A:898:TYR:HB3	1.93	0.51
1:A:334:ARG:CB	1:A:434:PHE:HA	2.39	0.51
1:A:1521:VAL:HG11	1:A:1556:ILE:HD13	1.92	0.51
1:A:1599:ASN:O	1:A:1603:ILE:HG12	2.10	0.51
1:A:2168:ALA:HA	1:D:1117:LEU:HD11	1.92	0.51
1:A:2503:SER:HB3	1:A:2506:ASP:HB2	1.93	0.51
1:B:663:LEU:HD11	1:B:769:LEU:HD23	1.93	0.51
1:B:1067:LYS:HD2	1:D:2146:GLN:HE21	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1647:MET:HG3	1:B:1851:TRP:CE2	2.46	0.51
1:C:233:ALA:HB1	1:C:898:TYR:HB3	1.93	0.51
1:C:986:LEU:O	1:C:990:ILE:HG12	2.11	0.51
1:D:336:LYS:HB2	1:D:431:GLY:N	2.26	0.51
1:D:545:SER:HB2	1:D:586:THR:HG22	1.93	0.51
1:D:1455:PHE:HE1	1:D:1478:ASP:HB3	1.75	0.51
1:E:545:SER:HA	1:E:586:THR:HA	1.92	0.51
1:E:2238:LYS:HA	1:E:2241:ASP:HB2	1.92	0.51
1:A:709:ALA:HA	1:A:714:LEU:HB2	1.93	0.51
1:A:2105:GLN:HB2	1:A:2261:GLN:NE2	2.26	0.51
1:B:439:TYR:HD1	1:B:443:ILE:HD12	1.75	0.51
1:B:1637:ALA:HA	1:B:1644:ILE:HD11	1.92	0.51
1:C:1647:MET:HG3	1:C:1851:TRP:CE2	2.46	0.51
1:C:1917:LYS:HG2	1:C:2004:LEU:HD13	1.91	0.51
1:D:1464:ILE:HG12	1:D:1466:ASN:H	1.75	0.51
1:E:336:LYS:HB2	1:E:431:GLY:N	2.26	0.51
1:A:313:ASP:HA	1:A:331:LYS:HE2	1.91	0.51
1:B:546:ILE:HA	1:B:557:ARG:HD2	1.93	0.51
1:C:21:THR:HG23	1:C:24:ASP:H	1.75	0.51
1:C:546:ILE:HA	1:C:557:ARG:HD2	1.93	0.51
1:C:1637:ALA:HA	1:C:1644:ILE:HD11	1.92	0.51
1:C:1978:LEU:HD12	1:C:1978:LEU:O	2.11	0.51
1:D:546:ILE:HA	1:D:557:ARG:HD2	1.93	0.51
1:D:2518:THR:HB	1:D:2519:ASP:CG	2.31	0.51
1:E:663:LEU:HD11	1:E:769:LEU:HD23	1.93	0.51
1:E:1637:ALA:HA	1:E:1644:ILE:HD11	1.92	0.51
1:B:336:LYS:HB2	1:B:431:GLY:N	2.26	0.51
1:C:336:LYS:HB2	1:C:431:GLY:N	2.26	0.51
1:C:1464:ILE:HG12	1:C:1466:ASN:H	1.75	0.51
1:D:198:PRO:HG3	1:D:245:GLU:HB3	1.93	0.51
1:D:439:TYR:HD1	1:D:443:ILE:HD12	1.75	0.51
1:D:844:VAL:HG12	1:D:845:MET:HE2	1.93	0.51
1:D:986:LEU:O	1:D:990:ILE:HG12	2.11	0.51
1:D:2238:LYS:HA	1:D:2241:ASP:HB2	1.92	0.51
1:D:2254:ALA:O	1:D:2258:VAL:HG23	2.11	0.51
1:E:2058:GLU:HA	1:E:2061:ARG:HE	1.75	0.51
1:E:2503:SER:HB3	1:E:2506:ASP:HB2	1.93	0.51
1:A:434:PHE:CZ	1:A:436:PHE:HB2	2.45	0.50
1:B:2105:GLN:HB2	1:B:2261:GLN:NE2	2.26	0.50
1:C:2058:GLU:HA	1:C:2061:ARG:HE	1.75	0.50
1:C:2342:GLU:HG2	1:D:2295:ILE:HD13	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2503:SER:HB3	1:C:2506:ASP:HB2	1.93	0.50
1:D:1917:LYS:HG2	1:D:2004:LEU:HD13	1.91	0.50
1:D:2375:TYR:HD2	1:D:2385:LEU:HD13	1.74	0.50
1:E:439:TYR:HD1	1:E:443:ILE:HD12	1.75	0.50
1:E:663:LEU:HD21	1:E:769:LEU:HG	1.92	0.50
1:E:2254:ALA:O	1:E:2258:VAL:HG23	2.11	0.50
1:A:546:ILE:HA	1:A:557:ARG:HD2	1.93	0.50
1:A:986:LEU:O	1:A:990:ILE:HG12	2.11	0.50
1:B:192:ARG:HG2	1:B:266:ASN:HA	1.92	0.50
1:B:709:ALA:HA	1:B:714:LEU:HB2	1.93	0.50
1:B:972:LEU:HA	1:B:995:LEU:HD23	1.92	0.50
1:E:844:VAL:HG12	1:E:845:MET:HE2	1.93	0.50
1:A:336:LYS:HB2	1:A:431:GLY:N	2.26	0.50
1:B:1067:LYS:HD2	1:D:2146:GLN:NE2	2.26	0.50
1:B:1455:PHE:HE1	1:B:1478:ASP:HB3	1.75	0.50
1:B:1464:ILE:HG12	1:B:1466:ASN:H	1.75	0.50
1:C:848:ASP:CG	1:D:569:GLY:HA3	2.31	0.50
1:C:1455:PHE:HE1	1:C:1478:ASP:HB3	1.75	0.50
1:D:313:ASP:HA	1:D:331:LYS:HE2	1.91	0.50
1:D:1060:LEU:HG	1:E:2147:ARG:NH1	2.26	0.50
1:E:1041:GLU:HG3	1:E:1891:MET:HE1	1.94	0.50
1:B:434:PHE:CZ	1:B:436:PHE:HB2	2.46	0.50
1:B:2254:ALA:O	1:B:2258:VAL:HG23	2.11	0.50
1:D:1521:VAL:HG11	1:D:1556:ILE:HD13	1.92	0.50
1:E:198:PRO:HG3	1:E:245:GLU:HB3	1.93	0.50
1:E:233:ALA:HB1	1:E:898:TYR:HB3	1.93	0.50
1:E:546:ILE:HA	1:E:557:ARG:HD2	1.93	0.50
1:E:972:LEU:HA	1:E:995:LEU:HD23	1.92	0.50
1:E:986:LEU:O	1:E:990:ILE:HG12	2.11	0.50
1:A:663:LEU:HD11	1:A:769:LEU:HD23	1.93	0.50
1:A:663:LEU:HD21	1:A:769:LEU:HG	1.92	0.50
1:A:886:MET:HE3	1:A:887:PRO:HD2	1.92	0.50
1:A:1978:LEU:HD12	1:A:1978:LEU:O	2.11	0.50
1:C:545:SER:HB2	1:C:586:THR:HG22	1.93	0.50
1:C:1599:ASN:O	1:C:1603:ILE:HG12	2.10	0.50
1:D:663:LEU:HD11	1:D:769:LEU:HD23	1.93	0.50
1:D:709:ALA:HA	1:D:714:LEU:HB2	1.93	0.50
1:D:1637:ALA:HA	1:D:1644:ILE:HD11	1.92	0.50
1:E:192:ARG:HG2	1:E:266:ASN:HA	1.92	0.50
1:E:1521:VAL:HG11	1:E:1556:ILE:HD13	1.92	0.50
1:E:2123:ARG:NH1	1:E:2237:VAL:HG13	2.23	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2254:ALA:O	1:A:2258:VAL:HG23	2.11	0.50
1:B:1978:LEU:HD12	1:B:1978:LEU:O	2.11	0.50
1:C:923:GLU:O	1:C:926:LEU:HD22	2.12	0.50
1:D:26:GLN:HA	1:D:57:LYS:NZ	2.27	0.50
1:E:434:PHE:CZ	1:E:436:PHE:HB2	2.46	0.50
1:E:2105:GLN:HB2	1:E:2261:GLN:NE2	2.26	0.50
1:A:198:PRO:HG3	1:A:245:GLU:HB3	1.93	0.50
1:A:1464:ILE:HG12	1:A:1466:ASN:H	1.75	0.50
1:A:2238:LYS:HA	1:A:2241:ASP:HB2	1.92	0.50
1:B:1157:ILE:HD12	1:B:1170:TRP:HB3	1.94	0.50
1:C:26:GLN:HA	1:C:57:LYS:NZ	2.27	0.50
1:C:844:VAL:HG12	1:C:845:MET:HE2	1.93	0.50
1:E:923:GLU:O	1:E:926:LEU:HD22	2.12	0.50
1:E:2518:THR:HB	1:E:2519:ASP:CG	2.31	0.50
1:B:923:GLU:O	1:B:926:LEU:HD22	2.12	0.50
1:C:413:VAL:HG12	1:C:433:ILE:HD12	1.94	0.50
1:D:972:LEU:HA	1:D:995:LEU:HD23	1.92	0.50
1:E:413:VAL:HG12	1:E:433:ILE:HD12	1.94	0.50
1:E:1978:LEU:O	1:E:1978:LEU:HD12	2.11	0.50
1:A:439:TYR:HD1	1:A:443:ILE:HD12	1.75	0.49
1:B:26:GLN:HA	1:B:57:LYS:NZ	2.27	0.49
1:B:413:VAL:HG12	1:B:433:ILE:HD12	1.94	0.49
1:B:886:MET:HE3	1:B:887:PRO:HD2	1.93	0.49
1:E:886:MET:HE3	1:E:887:PRO:HD2	1.94	0.49
1:A:26:GLN:HA	1:A:57:LYS:NZ	2.27	0.49
1:A:1447:GLU:HB2	1:A:1484:TYR:CD2	2.47	0.49
1:A:1455:PHE:HE1	1:A:1478:ASP:HB3	1.75	0.49
1:B:198:PRO:HG3	1:B:245:GLU:HB3	1.93	0.49
1:B:844:VAL:HG12	1:B:845:MET:HE2	1.93	0.49
1:C:198:PRO:HG3	1:C:245:GLU:HB3	1.93	0.49
1:C:439:TYR:HD1	1:C:443:ILE:HD12	1.75	0.49
1:D:413:VAL:HG12	1:D:433:ILE:HD12	1.94	0.49
1:D:886:MET:HE3	1:D:887:PRO:HD2	1.93	0.49
1:B:2503:SER:HB3	1:B:2506:ASP:HB2	1.93	0.49
1:C:709:ALA:HA	1:C:714:LEU:HB2	1.93	0.49
1:C:1157:ILE:HD12	1:C:1170:TRP:HB3	1.94	0.49
1:D:233:ALA:HB1	1:D:898:TYR:HB3	1.93	0.49
1:A:1010:ALA:HB1	1:E:1848:ILE:HG13	1.95	0.49
1:B:126:ALA:HB2	1:B:997:ILE:HD11	1.94	0.49
1:B:1177:ALA:HB3	1:C:2179:PHE:CZ	2.48	0.49
1:C:1447:GLU:HB2	1:C:1484:TYR:CD2	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2097:LEU:HD22	1:E:2260:TYR:CE2	2.47	0.49
1:A:1041:GLU:HG3	1:A:1891:MET:HE1	1.95	0.49
1:A:1292:ASN:HB3	1:A:1600:PRO:HG3	1.95	0.49
1:B:1065:GLN:HG3	1:D:2212:LYS:NZ	2.25	0.49
1:B:1447:GLU:HB2	1:B:1484:TYR:CD2	2.47	0.49
1:C:663:LEU:HD11	1:C:769:LEU:HD23	1.93	0.49
1:C:2111:GLU:OE1	1:D:2250:ARG:HG3	2.11	0.49
1:D:2503:SER:HB3	1:D:2506:ASP:HB2	1.93	0.49
1:E:26:GLN:HA	1:E:57:LYS:NZ	2.27	0.49
1:A:2169:GLU:HG2	1:B:2192:LEU:HD11	1.94	0.49
1:D:923:GLU:O	1:D:926:LEU:HD22	2.12	0.49
1:E:709:ALA:HA	1:E:714:LEU:HB2	1.93	0.49
1:C:1292:ASN:HB3	1:C:1600:PRO:HG3	1.95	0.49
1:A:126:ALA:HB2	1:A:997:ILE:HD11	1.94	0.49
1:A:291:SER:O	1:A:295:LYS:HG2	2.12	0.49
1:E:1157:ILE:HD12	1:E:1170:TRP:HB3	1.94	0.49
1:E:1447:GLU:HB2	1:E:1484:TYR:CD2	2.47	0.49
1:A:1157:ILE:HD12	1:A:1170:TRP:HB3	1.94	0.49
1:B:1292:ASN:HB3	1:B:1600:PRO:HG3	1.95	0.49
1:C:1634:VAL:HG12	1:D:1164:GLU:OE2	2.12	0.49
1:D:1292:ASN:HB3	1:D:1600:PRO:HG3	1.95	0.49
1:D:2105:GLN:HB2	1:D:2261:GLN:NE2	2.26	0.49
1:E:291:SER:O	1:E:295:LYS:HG2	2.12	0.49
1:E:2446:LEU:HD22	1:E:2531:ILE:HD12	1.94	0.49
1:B:2446:LEU:HD22	1:B:2531:ILE:HD12	1.94	0.49
1:C:2169:GLU:HG3	1:D:2193:ARG:HB3	1.95	0.49
1:C:2446:LEU:HD22	1:C:2531:ILE:HD12	1.94	0.49
1:E:2119:LEU:HB3	1:E:2244:LEU:HD13	1.95	0.49
1:E:2525:LEU:HA	1:E:2528:LEU:HB3	1.95	0.49
1:A:844:VAL:HG12	1:A:845:MET:HE2	1.93	0.48
1:B:266:ASN:HD22	1:B:446:LEU:HD22	1.78	0.48
1:B:2056:MET:HG3	1:B:2059:ARG:NH2	2.28	0.48
1:B:2140:ASP:HB3	1:E:1067:LYS:HZ1	1.78	0.48
1:D:2158:GLN:HG2	1:E:2199:MET:HE1	1.94	0.48
1:E:1292:ASN:HB3	1:E:1600:PRO:HG3	1.95	0.48
1:A:923:GLU:O	1:A:926:LEU:HD22	2.12	0.48
1:C:126:ALA:HB2	1:C:997:ILE:HD11	1.94	0.48
1:C:337:THR:HB	1:C:430:GLY:HA2	1.95	0.48
1:C:2158:GLN:NE2	1:D:2199:MET:O	2.44	0.48
1:D:291:SER:O	1:D:295:LYS:HG2	2.12	0.48
1:E:726:TRP:NE1	1:E:785:VAL:HG22	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2119:LEU:HB3	1:B:2244:LEU:HD13	1.96	0.48
1:B:2518:THR:HB	1:B:2519:ASP:OD2	2.13	0.48
1:D:1622:ARG:HD2	1:D:1715:PRO:HB3	1.95	0.48
1:E:2426:PHE:HD2	1:E:2505:ASN:HD22	1.62	0.48
1:A:266:ASN:HD22	1:A:446:LEU:HD22	1.78	0.48
1:A:2056:MET:HG3	1:A:2059:ARG:NH2	2.28	0.48
1:A:2426:PHE:HD2	1:A:2505:ASN:HD22	1.61	0.48
1:A:2446:LEU:HD22	1:A:2531:ILE:HD12	1.94	0.48
1:C:2119:LEU:HB3	1:C:2244:LEU:HD13	1.95	0.48
1:C:2518:THR:HB	1:C:2519:ASP:OD2	2.14	0.48
1:D:1447:GLU:HB2	1:D:1484:TYR:CD2	2.47	0.48
1:B:291:SER:O	1:B:295:LYS:HG2	2.13	0.48
1:B:726:TRP:NE1	1:B:785:VAL:HG22	2.29	0.48
1:C:2056:MET:HG3	1:C:2059:ARG:NH2	2.28	0.48
1:C:2105:GLN:HB2	1:C:2261:GLN:NE2	2.26	0.48
1:D:2121:GLU:OE2	1:E:2239:GLN:OE1	2.31	0.48
1:D:2123:ARG:HB2	1:D:2240:MET:HE1	1.96	0.48
1:E:337:THR:HB	1:E:430:GLY:HA2	1.95	0.48
1:E:1167:HIS:ND1	1:E:1199:PHE:HB3	2.28	0.48
1:E:1622:ARG:HD2	1:E:1715:PRO:HB3	1.95	0.48
1:A:337:THR:HB	1:A:430:GLY:HA2	1.95	0.48
1:A:413:VAL:HG12	1:A:433:ILE:HD12	1.94	0.48
1:B:1848:ILE:HG23	1:C:1003:ARG:NH2	2.29	0.48
1:C:291:SER:O	1:C:295:LYS:HG2	2.13	0.48
1:C:842:ALA:HB2	1:C:852:VAL:HG21	1.96	0.48
1:D:1577:LYS:NZ	1:D:1581:GLY:HA2	2.29	0.48
1:D:2119:LEU:HB3	1:D:2244:LEU:HD13	1.95	0.48
1:E:409:TYR:CD2	1:E:410:LYS:HD2	2.49	0.48
1:E:1577:LYS:NZ	1:E:1581:GLY:HA2	2.29	0.48
1:A:2111:GLU:OE1	1:B:2250:ARG:HG3	2.13	0.48
1:A:2119:LEU:HB3	1:A:2244:LEU:HD13	1.96	0.48
1:B:409:TYR:CD2	1:B:410:LYS:HD2	2.49	0.48
1:D:126:ALA:HB2	1:D:997:ILE:HD11	1.94	0.48
1:D:266:ASN:HD22	1:D:446:LEU:HD22	1.78	0.48
1:D:409:TYR:CD2	1:D:410:LYS:HD2	2.49	0.48
1:D:2345:LEU:CD1	1:E:2066:GLN:HG2	2.44	0.48
1:A:2518:THR:HB	1:A:2519:ASP:OD2	2.13	0.48
1:B:1067:LYS:HZ1	1:D:2140:ASP:HB3	1.79	0.48
1:B:2107:ARG:O	1:B:2111:GLU:HG2	2.14	0.48
1:C:266:ASN:HD22	1:C:446:LEU:HD22	1.78	0.48
1:C:1577:LYS:NZ	1:C:1581:GLY:HA2	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2152:LEU:CD2	1:D:2207:GLN:HG3	2.44	0.48
1:D:842:ALA:HB2	1:D:852:VAL:HG21	1.96	0.48
1:D:2107:ARG:O	1:D:2111:GLU:HG2	2.14	0.48
1:D:2242:ALA:O	1:D:2245:GLU:HG3	2.14	0.48
1:D:2446:LEU:HD22	1:D:2531:ILE:HD12	1.94	0.48
1:E:842:ALA:HB2	1:E:852:VAL:HG21	1.96	0.48
1:A:726:TRP:NE1	1:A:785:VAL:HG22	2.29	0.48
1:A:1167:HIS:ND1	1:A:1199:PHE:HB3	2.28	0.48
1:A:1937:GLN:HE21	1:B:290:LEU:HD11	1.78	0.48
1:A:2525:LEU:HA	1:A:2528:LEU:HB3	1.95	0.48
1:C:2121:GLU:OE2	1:D:2239:GLN:HA	2.13	0.48
1:C:2456:ILE:HG23	1:C:2524:LEU:HD21	1.96	0.48
1:D:1157:ILE:HD12	1:D:1170:TRP:HB3	1.94	0.48
1:D:1937:GLN:NE2	1:E:290:LEU:HD21	2.27	0.48
1:D:2056:MET:HG3	1:D:2059:ARG:NH2	2.28	0.48
1:D:2518:THR:HB	1:D:2519:ASP:OD2	2.14	0.48
1:A:1526:LYS:HG3	1:A:1560:SER:HB2	1.96	0.48
1:B:842:ALA:HB2	1:B:852:VAL:HG21	1.96	0.48
1:C:726:TRP:NE1	1:C:785:VAL:HG22	2.29	0.48
1:D:726:TRP:NE1	1:D:785:VAL:HG22	2.29	0.48
1:D:2456:ILE:HG23	1:D:2524:LEU:HD21	1.96	0.48
1:E:267:PHE:HB3	1:E:271:ILE:HB	1.96	0.48
1:E:2056:MET:HG3	1:E:2059:ARG:NH2	2.28	0.48
1:A:1577:LYS:NZ	1:A:1581:GLY:HA2	2.29	0.47
1:B:2367:ARG:HH12	1:B:2423:LEU:HD22	1.79	0.47
1:B:2426:PHE:HD2	1:B:2505:ASN:HD22	1.62	0.47
1:B:2456:ILE:HG23	1:B:2524:LEU:HD21	1.96	0.47
1:C:267:PHE:HB3	1:C:271:ILE:HB	1.96	0.47
1:E:126:ALA:HB2	1:E:997:ILE:HD11	1.94	0.47
1:E:2270:ALA:O	1:E:2273:GLU:HG3	2.14	0.47
1:A:267:PHE:HB3	1:A:271:ILE:HB	1.96	0.47
1:A:842:ALA:HB2	1:A:852:VAL:HG21	1.96	0.47
1:A:1622:ARG:HD2	1:A:1715:PRO:HB3	1.95	0.47
1:B:1577:LYS:NZ	1:B:1581:GLY:HA2	2.29	0.47
1:B:2242:ALA:O	1:B:2245:GLU:HG3	2.14	0.47
1:D:337:THR:HB	1:D:430:GLY:HA2	1.95	0.47
1:D:2361:ARG:HD3	1:E:2498:PRO:HG3	1.95	0.47
1:A:1457:PHE:CZ	1:A:1471:VAL:HG22	2.50	0.47
1:A:2056:MET:HA	1:A:2059:ARG:HD3	1.97	0.47
1:B:1526:LYS:HG3	1:B:1560:SER:HB2	1.96	0.47
1:B:1622:ARG:HD2	1:B:1715:PRO:HB3	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1167:HIS:ND1	1:C:1199:PHE:HB3	2.28	0.47
1:C:2123:ARG:HB2	1:C:2240:MET:HE1	1.96	0.47
1:D:1167:HIS:ND1	1:D:1199:PHE:HB3	2.28	0.47
1:D:2235:GLY:O	1:D:2239:GLN:HG2	2.15	0.47
1:D:2426:PHE:HD2	1:D:2505:ASN:HD22	1.61	0.47
1:E:2518:THR:HB	1:E:2519:ASP:OD2	2.13	0.47
1:A:409:TYR:CD2	1:A:410:LYS:HD2	2.49	0.47
1:A:2107:ARG:O	1:A:2111:GLU:HG2	2.14	0.47
1:B:267:PHE:HB3	1:B:271:ILE:HB	1.96	0.47
1:B:2525:LEU:HA	1:B:2528:LEU:HB3	1.95	0.47
1:C:409:TYR:CD2	1:C:410:LYS:HD2	2.49	0.47
1:D:1457:PHE:CZ	1:D:1471:VAL:HG22	2.50	0.47
1:E:53:THR:O	1:E:57:LYS:HG2	2.15	0.47
1:E:266:ASN:HD22	1:E:446:LEU:HD22	1.78	0.47
1:E:1249:TYR:HB3	1:E:1265:VAL:HG22	1.96	0.47
1:E:1757:LEU:HB2	1:E:1787:ILE:HD11	1.97	0.47
1:E:2456:ILE:HG23	1:E:2524:LEU:HD21	1.96	0.47
1:A:1249:TYR:HB3	1:A:1265:VAL:HG22	1.96	0.47
1:A:2235:GLY:O	1:A:2239:GLN:HG2	2.15	0.47
1:C:2235:GLY:O	1:C:2239:GLN:HG2	2.15	0.47
1:D:70:ARG:HH12	1:D:1883:MET:CE	2.28	0.47
1:D:2270:ALA:O	1:D:2273:GLU:HG3	2.14	0.47
1:E:1123:ARG:HD3	1:E:1140:TRP:HE3	1.80	0.47
1:E:1526:LYS:HG3	1:E:1560:SER:HB2	1.96	0.47
1:B:70:ARG:HH12	1:B:1883:MET:CE	2.28	0.47
1:B:337:THR:HB	1:B:430:GLY:HA2	1.95	0.47
1:C:1526:LYS:HG3	1:C:1560:SER:HB2	1.96	0.47
1:D:504:GLN:HA	1:D:507:ASN:ND2	2.30	0.47
1:E:504:GLN:HA	1:E:507:ASN:ND2	2.30	0.47
1:A:70:ARG:HH12	1:A:1883:MET:CE	2.28	0.47
1:A:2074:LEU:HA	1:A:2077:MET:HG3	1.97	0.47
1:A:2270:ALA:O	1:A:2273:GLU:HG3	2.14	0.47
1:B:504:GLN:HA	1:B:507:ASN:ND2	2.29	0.47
1:B:1167:HIS:ND1	1:B:1199:PHE:HB3	2.28	0.47
1:B:1457:PHE:CZ	1:B:1471:VAL:HG22	2.50	0.47
1:B:2109:VAL:HA	1:B:2112:VAL:HG22	1.97	0.47
1:B:2195:SER:HA	1:B:2198:VAL:HG22	1.97	0.47
1:C:2195:SER:HA	1:C:2198:VAL:HG22	1.97	0.47
1:C:2367:ARG:HH12	1:C:2423:LEU:HD22	1.79	0.47
1:C:2525:LEU:HA	1:C:2528:LEU:HB3	1.95	0.47
1:E:2242:ALA:O	1:E:2245:GLU:HG3	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:504:GLN:HA	1:A:507:ASN:ND2	2.29	0.47
1:A:2456:ILE:HG23	1:A:2524:LEU:HD21	1.96	0.47
1:B:219:ALA:HA	1:B:222:ARG:HE	1.80	0.47
1:C:219:ALA:HA	1:C:222:ARG:HE	1.80	0.47
1:C:2107:ARG:O	1:C:2111:GLU:HG2	2.14	0.47
1:C:2109:VAL:HA	1:C:2112:VAL:HG22	1.97	0.47
1:C:2242:ALA:O	1:C:2245:GLU:HG3	2.14	0.47
1:D:70:ARG:HH12	1:D:1883:MET:HE2	1.80	0.47
1:D:267:PHE:HB3	1:D:271:ILE:HB	1.96	0.47
1:A:53:THR:O	1:A:57:LYS:HG2	2.15	0.47
1:B:1319:PRO:HG2	1:B:1591:LEU:HD11	1.97	0.47
1:B:1937:GLN:HG2	1:C:294:GLN:NE2	2.30	0.47
1:C:2426:PHE:HD2	1:C:2505:ASN:HD22	1.61	0.47
1:D:1060:LEU:HA	1:D:1063:ILE:HG22	1.97	0.47
1:D:1310:TYR:CE1	1:D:1603:ILE:HD12	2.50	0.47
1:D:1639:THR:HG22	1:D:1640:GLY:N	2.30	0.47
1:D:2109:VAL:HA	1:D:2112:VAL:HG22	1.97	0.47
1:D:2525:LEU:HA	1:D:2528:LEU:HB3	1.95	0.47
1:E:2112:VAL:HG21	1:E:2251:ARG:HA	1.97	0.47
1:A:219:ALA:HA	1:A:222:ARG:HE	1.80	0.47
1:A:1310:TYR:CE1	1:A:1603:ILE:HD12	2.50	0.47
1:A:1639:THR:HG22	1:A:1640:GLY:N	2.30	0.47
1:A:2109:VAL:HA	1:A:2112:VAL:HG22	1.97	0.47
1:A:2123:ARG:HB2	1:A:2240:MET:HE1	1.96	0.47
1:A:2404:GLY:HA3	1:A:2419:ARG:HE	1.80	0.47
1:B:1123:ARG:HD3	1:B:1140:TRP:HE3	1.80	0.47
1:B:2168:ALA:HA	1:E:1117:LEU:HD11	1.95	0.47
1:C:1622:ARG:HD2	1:C:1715:PRO:HB3	1.95	0.47
1:C:2112:VAL:HG21	1:C:2251:ARG:HA	1.97	0.47
1:D:53:THR:O	1:D:57:LYS:HG2	2.15	0.47
1:D:1123:ARG:HD3	1:D:1140:TRP:HE3	1.80	0.47
1:D:2100:GLN:HB2	1:E:2260:TYR:CD2	2.48	0.47
1:E:2107:ARG:O	1:E:2111:GLU:HG2	2.14	0.47
1:E:2109:VAL:HA	1:E:2112:VAL:HG22	1.97	0.47
1:A:1757:LEU:HB2	1:A:1787:ILE:HD11	1.96	0.46
1:A:2119:LEU:HG	1:A:2240:MET:HE2	1.98	0.46
1:A:2242:ALA:O	1:A:2245:GLU:HG3	2.14	0.46
1:A:2472:CYS:SG	1:A:2498:PRO:HA	2.55	0.46
1:C:25:LEU:HA	1:C:27:TYR:HB2	1.97	0.46
1:C:504:GLN:HA	1:C:507:ASN:ND2	2.29	0.46
1:D:1249:TYR:HB3	1:D:1265:VAL:HG22	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:70:ARG:HH12	1:E:1883:MET:CE	2.28	0.46
1:E:2235:GLY:O	1:E:2239:GLN:HG2	2.15	0.46
1:E:2404:GLY:HA3	1:E:2419:ARG:HE	1.80	0.46
1:B:813:PHE:O	1:B:817:ILE:HG12	2.15	0.46
1:C:1123:ARG:HD3	1:C:1140:TRP:HE3	1.80	0.46
1:D:1526:LYS:HG3	1:D:1560:SER:HB2	1.96	0.46
1:D:2112:VAL:HG21	1:D:2251:ARG:HA	1.97	0.46
1:D:2195:SER:HA	1:D:2198:VAL:HG22	1.97	0.46
1:E:70:ARG:HH12	1:E:1883:MET:HE2	1.80	0.46
1:E:219:ALA:HA	1:E:222:ARG:HE	1.80	0.46
1:E:489:THR:HG23	1:E:503:ALA:HB3	1.97	0.46
1:E:1639:THR:HG22	1:E:1640:GLY:N	2.30	0.46
1:A:2458:ALA:HB1	1:A:2512:LEU:HD11	1.97	0.46
1:B:2074:LEU:HA	1:B:2077:MET:HG3	1.97	0.46
1:B:2235:GLY:O	1:B:2239:GLN:HG2	2.15	0.46
1:C:1115:GLU:OE2	1:C:1117:LEU:HD23	2.15	0.46
1:C:1757:LEU:HB2	1:C:1787:ILE:HD11	1.97	0.46
1:C:1937:GLN:HE21	1:D:290:LEU:HD11	1.80	0.46
1:C:2270:ALA:O	1:C:2273:GLU:HG3	2.14	0.46
1:D:25:LEU:HA	1:D:27:TYR:HB2	1.98	0.46
1:E:1319:PRO:HG2	1:E:1591:LEU:HD11	1.97	0.46
1:A:2195:SER:HA	1:A:2198:VAL:HG22	1.97	0.46
1:B:1060:LEU:HA	1:B:1063:ILE:HG22	1.97	0.46
1:B:1249:TYR:HB3	1:B:1265:VAL:HG22	1.97	0.46
1:B:1341:ILE:HG21	1:B:1357:LEU:HB3	1.98	0.46
1:B:2056:MET:HA	1:B:2059:ARG:HD3	1.97	0.46
1:B:2123:ARG:HB2	1:B:2240:MET:HE1	1.97	0.46
1:C:1187:VAL:CG1	1:D:1179:ASN:HD21	2.27	0.46
1:C:2093:GLN:HG2	1:D:2267:HIS:HB2	1.97	0.46
1:D:1757:LEU:HB2	1:D:1787:ILE:HD11	1.97	0.46
1:D:2367:ARG:HH12	1:D:2423:LEU:HD22	1.79	0.46
1:E:1310:TYR:CE1	1:E:1603:ILE:HD12	2.50	0.46
1:E:2367:ARG:HH12	1:E:2423:LEU:HD22	1.80	0.46
1:A:813:PHE:O	1:A:817:ILE:HG12	2.16	0.46
1:A:2100:GLN:HB2	1:B:2260:TYR:HD2	1.81	0.46
1:A:2191:ALA:HB3	1:D:1151:ASN:HD21	1.80	0.46
1:B:53:THR:O	1:B:57:LYS:HG2	2.15	0.46
1:B:1639:THR:HG22	1:B:1640:GLY:N	2.30	0.46
1:C:489:THR:HG23	1:C:503:ALA:HB3	1.98	0.46
1:C:1457:PHE:CZ	1:C:1471:VAL:HG22	2.50	0.46
1:D:813:PHE:O	1:D:817:ILE:HG12	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2458:ALA:HB1	1:D:2512:LEU:HD11	1.97	0.46
1:E:25:LEU:HA	1:E:27:TYR:HB2	1.98	0.46
1:E:547:ASP:HB3	1:E:550:GLU:HB2	1.98	0.46
1:A:25:LEU:HA	1:A:27:TYR:HB2	1.97	0.46
1:A:2054:PRO:O	1:A:2058:GLU:OE1	2.34	0.46
1:B:2054:PRO:O	1:B:2058:GLU:OE1	2.34	0.46
1:B:2438:GLN:O	1:B:2537:TYR:HB2	2.16	0.46
1:C:53:THR:O	1:C:57:LYS:HG2	2.15	0.46
1:C:547:ASP:HB3	1:C:550:GLU:HB2	1.98	0.46
1:C:1341:ILE:HG21	1:C:1357:LEU:HB3	1.98	0.46
1:C:1639:THR:HG22	1:C:1640:GLY:N	2.30	0.46
1:C:2056:MET:HA	1:C:2059:ARG:HD3	1.97	0.46
1:C:2074:LEU:HA	1:C:2077:MET:HG3	1.97	0.46
1:C:2169:GLU:CD	1:D:2193:ARG:HD3	2.36	0.46
1:D:489:THR:HG23	1:D:503:ALA:HB3	1.97	0.46
1:D:1115:GLU:OE2	1:D:1117:LEU:HD23	2.15	0.46
1:D:1937:GLN:NE2	1:E:290:LEU:HD11	2.29	0.46
1:E:1457:PHE:CZ	1:E:1471:VAL:HG22	2.50	0.46
1:A:2457:ARG:HD2	1:E:2428:ASP:O	2.16	0.46
1:B:414:LYS:HD2	1:B:414:LYS:HA	1.79	0.46
1:B:489:THR:HG23	1:B:503:ALA:HB3	1.98	0.46
1:B:855:ALA:HB1	1:B:873:VAL:HG13	1.98	0.46
1:B:2240:MET:HA	1:B:2243:GLN:HB2	1.98	0.46
1:C:855:ALA:HB1	1:C:873:VAL:HG13	1.98	0.46
1:C:2240:MET:HA	1:C:2243:GLN:HB2	1.98	0.46
1:D:547:ASP:HB3	1:D:550:GLU:HB2	1.98	0.46
1:D:2240:MET:HA	1:D:2243:GLN:HB2	1.98	0.46
1:A:547:ASP:HB3	1:A:550:GLU:HB2	1.98	0.46
1:A:2112:VAL:HG21	1:A:2251:ARG:HA	1.97	0.46
1:A:2367:ARG:HH12	1:A:2423:LEU:HD22	1.79	0.46
1:B:25:LEU:HA	1:B:27:TYR:HB2	1.98	0.46
1:B:1310:TYR:CE1	1:B:1603:ILE:HD12	2.50	0.46
1:C:217:LEU:HD21	1:C:238:ILE:HD11	1.98	0.46
1:C:1214:ILE:HG22	1:C:1217:GLN:HB2	1.98	0.46
1:D:2056:MET:HA	1:D:2059:ARG:HD3	1.97	0.46
1:D:2472:CYS:SG	1:D:2498:PRO:HA	2.55	0.46
1:E:2074:LEU:HA	1:E:2077:MET:HG3	1.97	0.46
1:A:351:TYR:HB2	1:A:409:TYR:CE1	2.51	0.46
1:A:855:ALA:HB1	1:A:873:VAL:HG13	1.98	0.46
1:A:2302:LEU:HD22	1:E:2353:LYS:HD2	1.98	0.46
1:B:1115:GLU:OE2	1:B:1117:LEU:HD23	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:70:ARG:HH12	1:C:1883:MET:CE	2.28	0.46
1:C:813:PHE:O	1:C:817:ILE:HG12	2.16	0.46
1:C:1892:ARG:HD3	1:C:1892:ARG:HA	1.69	0.46
1:C:1921:VAL:HG11	1:D:995:LEU:HD13	1.96	0.46
1:C:2119:LEU:HG	1:C:2240:MET:HE2	1.98	0.46
1:C:2472:CYS:SG	1:C:2498:PRO:HA	2.55	0.46
1:D:2205:ALA:HA	1:D:2208:TYR:CD2	2.51	0.46
1:E:2056:MET:HA	1:E:2059:ARG:HD3	1.97	0.46
1:E:2195:SER:HA	1:E:2198:VAL:HG22	1.97	0.46
1:E:2472:CYS:SG	1:E:2498:PRO:HA	2.55	0.46
1:B:217:LEU:HD21	1:B:238:ILE:HD11	1.98	0.46
1:B:2112:VAL:HG21	1:B:2251:ARG:HA	1.97	0.46
1:B:2404:GLY:HA3	1:B:2419:ARG:HE	1.80	0.46
1:C:854:GLN:HE21	1:D:549:ASP:HA	1.81	0.46
1:C:1060:LEU:HA	1:C:1063:ILE:HG22	1.97	0.46
1:C:2166:SER:HB2	1:C:2198:VAL:CG1	2.46	0.46
1:C:2438:GLN:O	1:C:2537:TYR:HB2	2.16	0.46
1:D:855:ALA:HB1	1:D:873:VAL:HG13	1.98	0.46
1:D:1341:ILE:HG21	1:D:1357:LEU:HB3	1.98	0.46
1:D:1968:VAL:HG12	1:D:1970:LYS:H	1.81	0.46
1:D:2074:LEU:HA	1:D:2077:MET:HG3	1.97	0.46
1:D:2166:SER:HB2	1:D:2198:VAL:CG1	2.46	0.46
1:E:351:TYR:HB2	1:E:409:TYR:CE1	2.51	0.46
1:E:1115:GLU:OE2	1:E:1117:LEU:HD23	2.15	0.46
1:E:1214:ILE:HG22	1:E:1217:GLN:HB2	1.98	0.46
1:E:1681:PHE:CD1	1:E:1702:LEU:HG	2.51	0.46
1:E:2458:ALA:HB1	1:E:2512:LEU:HD11	1.97	0.46
1:A:489:THR:HG23	1:A:503:ALA:HB3	1.98	0.45
1:A:1055:MET:O	1:A:1058:GLU:HG3	2.17	0.45
1:A:1519:ILE:HG12	1:A:1574:PHE:HD1	1.81	0.45
1:A:1634:VAL:HG22	1:B:1202:HIS:CE1	2.51	0.45
1:A:2071:GLY:O	1:A:2074:LEU:HG	2.16	0.45
1:B:351:TYR:HB2	1:B:409:TYR:CE1	2.51	0.45
1:B:1968:VAL:HG12	1:B:1970:LYS:H	1.81	0.45
1:B:2205:ALA:HA	1:B:2208:TYR:CD2	2.51	0.45
1:C:1310:TYR:CE1	1:C:1603:ILE:HD12	2.50	0.45
1:C:1670:TYR:CD1	1:C:1679:ARG:HG2	2.51	0.45
1:D:351:TYR:HB2	1:D:409:TYR:CE1	2.51	0.45
1:E:1670:TYR:CD1	1:E:1679:ARG:HG2	2.51	0.45
1:A:1123:ARG:HD3	1:A:1140:TRP:HE3	1.80	0.45
1:A:1163:ARG:O	1:A:1164:GLU:HG3	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1341:ILE:HG21	1:A:1357:LEU:HB3	1.98	0.45
1:A:1968:VAL:HG12	1:A:1970:LYS:H	1.81	0.45
1:A:2236:GLU:O	1:A:2239:GLN:HB2	2.17	0.45
1:A:2438:GLN:O	1:A:2537:TYR:HB2	2.16	0.45
1:B:1055:MET:O	1:B:1058:GLU:HG3	2.17	0.45
1:B:1163:ARG:O	1:B:1164:GLU:HG3	2.17	0.45
1:B:1671:ASP:HB3	1:B:1674:GLU:HB3	1.99	0.45
1:B:1757:LEU:HB2	1:B:1787:ILE:HD11	1.97	0.45
1:B:2236:GLU:O	1:B:2239:GLN:HB2	2.17	0.45
1:B:2364:GLU:HB3	1:C:2487:PHE:CZ	2.51	0.45
1:B:2458:ALA:HB1	1:B:2512:LEU:HD11	1.97	0.45
1:C:1163:ARG:O	1:C:1164:GLU:HG3	2.17	0.45
1:C:1249:TYR:HB3	1:C:1265:VAL:HG22	1.97	0.45
1:C:1671:ASP:HB3	1:C:1674:GLU:HB3	1.99	0.45
1:D:219:ALA:HA	1:D:222:ARG:HE	1.80	0.45
1:D:1319:PRO:HG2	1:D:1591:LEU:HD11	1.97	0.45
1:D:2054:PRO:O	1:D:2058:GLU:OE1	2.34	0.45
1:D:2404:GLY:HA3	1:D:2419:ARG:HE	1.81	0.45
1:E:1519:ILE:HG12	1:E:1574:PHE:HD1	1.81	0.45
1:E:2071:GLY:O	1:E:2074:LEU:HG	2.16	0.45
1:E:2205:ALA:HA	1:E:2208:TYR:CD2	2.51	0.45
1:A:1681:PHE:CD1	1:A:1702:LEU:HG	2.51	0.45
1:A:2205:ALA:HA	1:A:2208:TYR:CD2	2.51	0.45
1:C:1319:PRO:HG2	1:C:1591:LEU:HD11	1.97	0.45
1:C:1968:VAL:HG12	1:C:1970:LYS:H	1.81	0.45
1:C:2205:ALA:HA	1:C:2208:TYR:CD2	2.51	0.45
1:D:217:LEU:HD21	1:D:238:ILE:HD11	1.98	0.45
1:D:1670:TYR:CD1	1:D:1679:ARG:HG2	2.51	0.45
1:E:217:LEU:HD21	1:E:238:ILE:HD11	1.98	0.45
1:A:1060:LEU:HA	1:A:1063:ILE:HG22	1.97	0.45
1:A:1177:ALA:HB2	1:A:1188:GLU:O	2.17	0.45
1:A:2287:TRP:HH2	1:B:682:ASN:HD21	1.64	0.45
1:B:504:GLN:HA	1:B:507:ASN:HD21	1.82	0.45
1:C:1519:ILE:HG12	1:C:1574:PHE:HD1	1.81	0.45
1:C:2236:GLU:O	1:C:2239:GLN:HB2	2.17	0.45
1:D:1519:ILE:HG12	1:D:1574:PHE:HD1	1.81	0.45
1:D:2236:GLU:O	1:D:2239:GLN:HB2	2.17	0.45
1:E:899:VAL:HG13	1:E:904:LYS:HB2	1.98	0.45
1:E:2240:MET:HA	1:E:2243:GLN:HB2	1.98	0.45
1:A:504:GLN:HA	1:A:507:ASN:HD21	1.82	0.45
1:A:1319:PRO:HG2	1:A:1591:LEU:HD11	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1214:ILE:HG22	1:B:1217:GLN:HB2	1.98	0.45
1:B:1741:TRP:HZ2	1:B:1773:VAL:HG11	1.82	0.45
1:B:2270:ALA:O	1:B:2273:GLU:HG3	2.14	0.45
1:B:2472:CYS:SG	1:B:2498:PRO:HA	2.55	0.45
1:D:1681:PHE:CD1	1:D:1702:LEU:HG	2.51	0.45
1:E:1163:ARG:O	1:E:1164:GLU:HG3	2.17	0.45
1:E:2236:GLU:O	1:E:2239:GLN:HB2	2.17	0.45
1:A:1115:GLU:OE2	1:A:1117:LEU:HD23	2.15	0.45
1:A:1741:TRP:HZ2	1:A:1773:VAL:HG11	1.82	0.45
1:A:2240:MET:HA	1:A:2243:GLN:HB2	1.98	0.45
1:B:547:ASP:HB3	1:B:550:GLU:HB2	1.98	0.45
1:C:828:LEU:HD12	1:C:831:LEU:HD23	1.99	0.45
1:D:899:VAL:HG13	1:D:904:LYS:HB2	1.98	0.45
1:D:1925:GLU:HG2	1:E:1004:ILE:HD13	1.97	0.45
1:E:813:PHE:O	1:E:817:ILE:HG12	2.16	0.45
1:E:855:ALA:HB1	1:E:873:VAL:HG13	1.98	0.45
1:E:2054:PRO:O	1:E:2058:GLU:OE1	2.34	0.45
1:A:217:LEU:HD21	1:A:238:ILE:HD11	1.98	0.45
1:A:1065:GLN:HG3	1:C:2212:LYS:HZ1	1.81	0.45
1:A:1670:TYR:CD1	1:A:1679:ARG:HG2	2.51	0.45
1:A:2146:GLN:HE21	1:D:1067:LYS:HD2	1.82	0.45
1:A:2204:THR:HA	1:A:2207:GLN:OE1	2.17	0.45
1:C:218:SER:O	1:C:222:ARG:HG3	2.17	0.45
1:C:504:GLN:HA	1:C:507:ASN:HD21	1.82	0.45
1:C:2158:GLN:O	1:D:2199:MET:CE	2.64	0.45
1:D:1163:ARG:O	1:D:1164:GLU:HG3	2.17	0.45
1:D:1881:ASP:HB3	1:D:1884:HIS:ND1	2.32	0.45
1:E:1968:VAL:HG12	1:E:1970:LYS:H	1.81	0.45
1:A:351:TYR:HB2	1:A:409:TYR:HE1	1.82	0.45
1:B:311:TYR:HB3	1:B:312:VAL:H	1.59	0.45
1:B:1060:LEU:HG	1:C:2147:ARG:NH1	2.32	0.45
1:B:1670:TYR:CD1	1:B:1679:ARG:HG2	2.51	0.45
1:B:1681:PHE:CD1	1:B:1702:LEU:HG	2.51	0.45
1:B:2119:LEU:HG	1:B:2240:MET:HE2	1.98	0.45
1:C:1055:MET:O	1:C:1058:GLU:HG3	2.17	0.45
1:C:1681:PHE:CD1	1:C:1702:LEU:HG	2.51	0.45
1:D:1214:ILE:HG22	1:D:1214:ILE:O	2.17	0.45
1:D:1214:ILE:HG22	1:D:1217:GLN:HB2	1.98	0.45
1:D:1741:TRP:HZ2	1:D:1773:VAL:HG11	1.82	0.45
1:D:1745:PHE:HB2	1:D:1758:ILE:HB	1.99	0.45
1:D:2119:LEU:HG	1:D:2240:MET:HE2	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2438:GLN:O	1:D:2537:TYR:HB2	2.16	0.45
1:E:1060:LEU:HA	1:E:1063:ILE:HG22	1.97	0.45
1:E:1881:ASP:HB3	1:E:1884:HIS:ND1	2.32	0.45
1:B:1177:ALA:HB2	1:B:1188:GLU:O	2.17	0.45
1:B:1519:ILE:HG12	1:B:1574:PHE:HD1	1.81	0.45
1:B:1881:ASP:HB3	1:B:1884:HIS:ND1	2.32	0.45
1:C:1745:PHE:HB2	1:C:1758:ILE:HB	1.99	0.45
1:C:2054:PRO:O	1:C:2058:GLU:OE1	2.34	0.45
1:C:2204:THR:HA	1:C:2207:GLN:OE1	2.17	0.45
1:C:2458:ALA:HB1	1:C:2512:LEU:HD11	1.97	0.45
1:E:2311:GLN:HG3	1:E:2351:MET:HE3	1.99	0.45
1:E:2438:GLN:O	1:E:2537:TYR:HB2	2.16	0.45
1:A:2166:SER:HB2	1:A:2198:VAL:CG1	2.46	0.45
1:B:899:VAL:HG13	1:B:904:LYS:HB2	1.98	0.45
1:B:2071:GLY:O	1:B:2074:LEU:HG	2.16	0.45
1:C:2404:GLY:HA3	1:C:2419:ARG:HE	1.80	0.45
1:E:1214:ILE:HG22	1:E:1214:ILE:O	2.17	0.45
1:E:1341:ILE:HG21	1:E:1357:LEU:HB3	1.98	0.45
1:B:828:LEU:HD12	1:B:831:LEU:HD23	1.99	0.44
1:B:1511:GLY:HA3	1:B:1579:LYS:HE2	1.99	0.44
1:B:2166:SER:HB2	1:B:2198:VAL:CG1	2.46	0.44
1:C:351:TYR:HB2	1:C:409:TYR:CE1	2.51	0.44
1:C:1511:GLY:HA3	1:C:1579:LYS:HE2	1.99	0.44
1:C:2071:GLY:O	1:C:2074:LEU:HG	2.16	0.44
1:D:504:GLN:HA	1:D:507:ASN:HD21	1.82	0.44
1:D:828:LEU:HD12	1:D:831:LEU:HD23	1.99	0.44
1:D:1055:MET:O	1:D:1058:GLU:HG3	2.17	0.44
1:D:2204:THR:HA	1:D:2207:GLN:OE1	2.17	0.44
1:E:504:GLN:HA	1:E:507:ASN:HD21	1.82	0.44
1:A:218:SER:O	1:A:222:ARG:HG3	2.17	0.44
1:B:218:SER:O	1:B:222:ARG:HG3	2.17	0.44
1:B:2204:THR:HA	1:B:2207:GLN:OE1	2.17	0.44
1:D:2083:ALA:O	1:D:2086:LEU:HG	2.17	0.44
1:E:192:ARG:HD2	1:E:265:GLN:HG2	2.00	0.44
1:E:1671:ASP:HB3	1:E:1674:GLU:HB3	1.99	0.44
1:E:1810:TYR:CE2	1:E:1814:MET:HE1	2.52	0.44
1:E:1882:PRO:O	1:E:1885:TYR:HB2	2.17	0.44
1:E:2119:LEU:HG	1:E:2240:MET:HE2	1.98	0.44
1:E:2166:SER:HB2	1:E:2198:VAL:CG1	2.46	0.44
1:A:1100:VAL:HB	1:A:1596:VAL:HG22	1.99	0.44
1:A:1214:ILE:O	1:A:1214:ILE:HG22	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1397:ILE:HG12	1:A:1420:LYS:HZ2	1.83	0.44
1:B:351:TYR:HB2	1:B:409:TYR:HE1	1.82	0.44
1:C:127:LYS:HB3	1:C:127:LYS:HE2	1.85	0.44
1:C:2112:VAL:O	1:C:2116:ILE:HG23	2.17	0.44
1:D:7:LEU:O	1:D:11:ILE:HG12	2.18	0.44
1:D:827:THR:HA	1:D:830:MET:SD	2.58	0.44
1:D:1671:ASP:HB3	1:D:1674:GLU:HB3	1.99	0.44
1:D:2368:THR:HB	1:E:2455:ASP:OD1	2.17	0.44
1:E:351:TYR:HB2	1:E:409:TYR:HE1	1.82	0.44
1:E:2083:ALA:O	1:E:2086:LEU:HG	2.17	0.44
1:A:192:ARG:HD2	1:A:265:GLN:HG2	2.00	0.44
1:A:827:THR:HA	1:A:830:MET:SD	2.58	0.44
1:B:119:LEU:HB2	1:B:990:ILE:HD11	1.99	0.44
1:B:708:ILE:HA	1:B:711:THR:HG22	2.00	0.44
1:C:783:VAL:HG22	1:C:832:ARG:NE	2.33	0.44
1:C:886:MET:HE3	1:C:887:PRO:HD2	1.99	0.44
1:C:1078:LYS:HE2	1:D:1202:HIS:HB3	1.99	0.44
1:C:2158:GLN:HG2	1:D:2199:MET:CE	2.44	0.44
1:D:1455:PHE:CE1	1:D:1478:ASP:HB3	2.52	0.44
1:D:1651:ARG:HA	1:D:1856:ARG:NH1	2.33	0.44
1:D:1680:TRP:HZ3	1:D:1682:LYS:HG3	1.83	0.44
1:E:218:SER:O	1:E:222:ARG:HG3	2.17	0.44
1:E:1892:ARG:HD3	1:E:1892:ARG:HA	1.69	0.44
1:A:1214:ILE:HG22	1:A:1217:GLN:HB2	1.98	0.44
1:A:1511:GLY:HA3	1:A:1579:LYS:HE2	1.99	0.44
1:A:1882:PRO:O	1:A:1885:TYR:HB2	2.18	0.44
1:B:655:ILE:HG21	1:B:660:ILE:HD13	2.00	0.44
1:B:1041:GLU:HG3	1:B:1891:MET:HE1	2.00	0.44
1:B:1651:ARG:HA	1:B:1856:ARG:NH1	2.33	0.44
1:B:2191:ALA:HB3	1:E:1151:ASN:HD21	1.82	0.44
1:C:119:LEU:HB2	1:C:990:ILE:HD11	2.00	0.44
1:C:1214:ILE:HG22	1:C:1214:ILE:O	2.17	0.44
1:C:1881:ASP:HB3	1:C:1884:HIS:ND1	2.32	0.44
1:D:655:ILE:HG21	1:D:660:ILE:HD13	2.00	0.44
1:E:827:THR:HA	1:E:830:MET:SD	2.58	0.44
1:E:1177:ALA:HB2	1:E:1188:GLU:O	2.17	0.44
1:A:1630:ALA:O	1:A:1634:VAL:HG23	2.18	0.44
1:A:1671:ASP:HB3	1:A:1674:GLU:HB3	1.99	0.44
1:A:1881:ASP:HB3	1:A:1884:HIS:ND1	2.32	0.44
1:A:2112:VAL:O	1:A:2116:ILE:HG23	2.17	0.44
1:B:783:VAL:HG22	1:B:832:ARG:NE	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:7:LEU:O	1:C:11:ILE:HG12	2.18	0.44
1:C:708:ILE:HA	1:C:711:THR:HG22	2.00	0.44
1:C:864:LEU:O	1:C:864:LEU:HD12	2.18	0.44
1:C:899:VAL:HG13	1:C:904:LYS:HB2	1.98	0.44
1:C:1100:VAL:HB	1:C:1596:VAL:HG22	1.99	0.44
1:C:2083:ALA:O	1:C:2086:LEU:HG	2.17	0.44
1:C:2100:GLN:HB2	1:D:2260:TYR:HD2	1.83	0.44
1:C:2169:GLU:OE2	1:D:2193:ARG:HD3	2.17	0.44
1:D:256:GLU:HG3	1:D:439:TYR:CE1	2.53	0.44
1:D:1882:PRO:O	1:D:1885:TYR:HB2	2.18	0.44
1:D:2071:GLY:O	1:D:2074:LEU:HG	2.16	0.44
1:D:2112:VAL:O	1:D:2116:ILE:HG23	2.17	0.44
1:E:256:GLU:HG3	1:E:439:TYR:CE1	2.53	0.44
1:E:1455:PHE:CE1	1:E:1478:ASP:HB3	2.52	0.44
1:E:1511:GLY:HA3	1:E:1579:LYS:HE2	1.99	0.44
1:E:2123:ARG:HB2	1:E:2240:MET:HE1	1.98	0.44
1:A:414:LYS:HD2	1:A:414:LYS:HA	1.80	0.44
1:A:899:VAL:HG13	1:A:904:LYS:HB2	1.98	0.44
1:A:2181:LEU:HD21	1:B:2181:LEU:HD13	1.98	0.44
1:B:7:LEU:O	1:B:11:ILE:HG12	2.18	0.44
1:B:1680:TRP:HZ3	1:B:1682:LYS:HG3	1.83	0.44
1:B:2112:VAL:O	1:B:2116:ILE:HG23	2.17	0.44
1:C:1187:VAL:HG12	1:D:1179:ASN:ND2	2.30	0.44
1:C:1741:TRP:HZ2	1:C:1773:VAL:HG11	1.82	0.44
1:C:2034:VAL:HA	1:D:825:SER:OG	2.17	0.44
1:D:1895:ASP:O	1:D:1899:LEU:HD23	2.18	0.44
1:D:2056:MET:HA	1:D:2059:ARG:CD	2.48	0.44
1:E:414:LYS:HA	1:E:414:LYS:HD2	1.79	0.44
1:E:1100:VAL:HB	1:E:1596:VAL:HG22	1.99	0.44
1:E:1630:ALA:O	1:E:1634:VAL:HG23	2.18	0.44
1:E:1651:ARG:HA	1:E:1856:ARG:NH1	2.33	0.44
1:E:1680:TRP:HZ3	1:E:1682:LYS:HG3	1.83	0.44
1:E:2112:VAL:O	1:E:2116:ILE:HG23	2.17	0.44
1:A:1181:THR:OG1	1:A:1184:LYS:HB2	2.18	0.44
1:A:2227:GLU:HG2	1:A:2230:ARG:NH2	2.33	0.44
1:B:827:THR:HA	1:B:830:MET:SD	2.58	0.44
1:B:1745:PHE:HB2	1:B:1758:ILE:HB	1.99	0.44
1:B:2227:GLU:HG2	1:B:2230:ARG:NH2	2.33	0.44
1:C:687:ILE:HG13	1:C:691:MET:SD	2.58	0.44
1:C:2227:GLU:HG2	1:C:2230:ARG:NH2	2.33	0.44
1:D:218:SER:O	1:D:222:ARG:HG3	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:864:LEU:HD12	1:D:864:LEU:O	2.18	0.44
1:D:1177:ALA:HB2	1:D:1188:GLU:O	2.17	0.44
1:E:864:LEU:HD12	1:E:864:LEU:O	2.18	0.44
1:E:1745:PHE:HB2	1:E:1758:ILE:HB	1.99	0.44
1:E:2227:GLU:HG2	1:E:2230:ARG:NH2	2.33	0.44
1:A:119:LEU:HB2	1:A:990:ILE:HD11	1.99	0.44
1:A:1455:PHE:CE1	1:A:1478:ASP:HB3	2.52	0.44
1:A:1651:ARG:HA	1:A:1856:ARG:NH1	2.33	0.44
1:A:1680:TRP:HZ3	1:A:1682:LYS:HG3	1.83	0.44
1:B:70:ARG:HH12	1:B:1883:MET:HE2	1.82	0.44
1:C:351:TYR:HB2	1:C:409:TYR:HE1	1.82	0.44
1:C:655:ILE:HG21	1:C:660:ILE:HD13	2.00	0.44
1:C:1455:PHE:CE1	1:C:1478:ASP:HB3	2.52	0.44
1:C:1680:TRP:HZ3	1:C:1682:LYS:HG3	1.83	0.44
1:D:351:TYR:HB2	1:D:409:TYR:HE1	1.82	0.44
1:D:2227:GLU:HG2	1:D:2230:ARG:NH2	2.33	0.44
1:E:1255:TYR:CE2	1:E:1296:ILE:HG22	2.52	0.44
1:A:655:ILE:HG21	1:A:660:ILE:HD13	2.00	0.43
1:A:1417:VAL:HG12	1:A:1426:ALA:HB3	2.00	0.43
1:B:864:LEU:HD12	1:B:864:LEU:O	2.18	0.43
1:B:1453:ARG:NE	1:B:1456:GLU:HB2	2.33	0.43
1:C:1177:ALA:HB2	1:C:1188:GLU:O	2.17	0.43
1:C:1651:ARG:HA	1:C:1856:ARG:NH1	2.33	0.43
1:E:655:ILE:HG21	1:E:660:ILE:HD13	2.00	0.43
1:E:1895:ASP:O	1:E:1899:LEU:HD23	2.18	0.43
1:A:334:ARG:CZ	1:A:342:LYS:HA	2.48	0.43
1:A:828:LEU:HD12	1:A:831:LEU:HD23	1.99	0.43
1:A:1184:LYS:HD2	1:A:1184:LYS:O	2.19	0.43
1:A:2083:ALA:O	1:A:2086:LEU:HG	2.17	0.43
1:B:256:GLU:HG3	1:B:439:TYR:CE1	2.53	0.43
1:B:1214:ILE:HG22	1:B:1214:ILE:O	2.17	0.43
1:B:1455:PHE:CE1	1:B:1478:ASP:HB3	2.52	0.43
1:B:2119:LEU:HD12	1:B:2119:LEU:HA	1.79	0.43
1:C:930:GLN:O	1:C:934:LEU:HD23	2.18	0.43
1:E:7:LEU:O	1:E:11:ILE:HG12	2.18	0.43
1:E:828:LEU:HD12	1:E:831:LEU:HD23	1.99	0.43
1:E:1184:LYS:HD2	1:E:1184:LYS:O	2.18	0.43
1:E:2392:PHE:CD1	1:E:2398:GLY:HA3	2.54	0.43
1:A:708:ILE:HA	1:A:711:THR:HG22	2.00	0.43
1:A:1040:PRO:O	1:A:1044:ILE:HG12	2.18	0.43
1:B:1100:VAL:HB	1:B:1596:VAL:HG22	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2083:ALA:O	1:B:2086:LEU:HG	2.17	0.43
1:C:732:PRO:HB3	1:C:763:VAL:HG21	2.00	0.43
1:C:1181:THR:OG1	1:C:1184:LYS:HB2	2.18	0.43
1:C:1184:LYS:O	1:C:1184:LYS:HD2	2.18	0.43
1:D:1630:ALA:O	1:D:1634:VAL:HG23	2.18	0.43
1:E:311:TYR:HB3	1:E:312:VAL:H	1.59	0.43
1:E:334:ARG:CZ	1:E:342:LYS:HA	2.48	0.43
1:E:783:VAL:HG22	1:E:832:ARG:NE	2.33	0.43
1:E:1055:MET:O	1:E:1058:GLU:HG3	2.17	0.43
1:E:2204:THR:HA	1:E:2207:GLN:OE1	2.17	0.43
1:E:2364:GLU:HG3	1:E:2538:THR:HG22	2.01	0.43
1:B:750:ASN:HB3	1:B:753:GLU:HB2	2.00	0.43
1:B:1417:VAL:HG12	1:B:1426:ALA:HB3	2.00	0.43
1:B:1745:PHE:HB3	1:B:1758:ILE:HD12	2.01	0.43
1:C:1040:PRO:O	1:C:1044:ILE:HG12	2.18	0.43
1:C:2056:MET:HA	1:C:2059:ARG:CD	2.48	0.43
1:D:334:ARG:CZ	1:D:342:LYS:HA	2.48	0.43
1:D:1511:GLY:HA3	1:D:1579:LYS:HE2	1.99	0.43
1:E:1745:PHE:HB3	1:E:1758:ILE:HD12	2.01	0.43
1:E:2056:MET:HA	1:E:2059:ARG:CD	2.48	0.43
1:A:2198:VAL:HA	1:A:2201:LEU:HG	2.00	0.43
1:B:687:ILE:HG13	1:B:691:MET:SD	2.58	0.43
1:B:2056:MET:HA	1:B:2059:ARG:CD	2.48	0.43
1:C:827:THR:HA	1:C:830:MET:SD	2.58	0.43
1:C:1630:ALA:O	1:C:1634:VAL:HG23	2.18	0.43
1:C:2148:ALA:HB2	1:D:2213:ILE:CD1	2.47	0.43
1:D:192:ARG:HD2	1:D:265:GLN:HG2	2.00	0.43
1:D:783:VAL:HG22	1:D:832:ARG:NE	2.33	0.43
1:D:930:GLN:O	1:D:934:LEU:HD23	2.19	0.43
1:A:1745:PHE:HB3	1:A:1758:ILE:HD12	2.01	0.43
1:A:2056:MET:HA	1:A:2059:ARG:CD	2.48	0.43
1:B:192:ARG:HD2	1:B:265:GLN:HG2	2.00	0.43
1:B:1630:ALA:O	1:B:1634:VAL:HG23	2.18	0.43
1:C:450:LYS:HD3	1:C:478:ILE:HD12	2.01	0.43
1:C:750:ASN:HB3	1:C:753:GLU:HB2	2.00	0.43
1:D:1100:VAL:HB	1:D:1596:VAL:HG22	1.99	0.43
1:D:1184:LYS:HD2	1:D:1184:LYS:O	2.18	0.43
1:E:1040:PRO:O	1:E:1044:ILE:HG12	2.19	0.43
1:E:1741:TRP:HZ2	1:E:1773:VAL:HG11	1.82	0.43
1:A:256:GLU:HG3	1:A:439:TYR:CE1	2.53	0.43
1:A:2104:ILE:HG12	1:B:2256:MET:SD	2.59	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2392:PHE:CD1	1:A:2398:GLY:HA3	2.54	0.43
1:B:1040:PRO:O	1:B:1044:ILE:HG12	2.18	0.43
1:B:1184:LYS:HD2	1:B:1184:LYS:O	2.19	0.43
1:B:1895:ASP:O	1:B:1899:LEU:HD23	2.18	0.43
1:B:2300:PHE:CE2	1:B:2331:TRP:HB2	2.54	0.43
1:C:334:ARG:CZ	1:C:342:LYS:HA	2.48	0.43
1:C:850:SER:CB	1:D:548:PRO:HB2	2.49	0.43
1:C:1882:PRO:O	1:C:1885:TYR:HB2	2.18	0.43
1:C:2198:VAL:HA	1:C:2201:LEU:HG	2.00	0.43
1:D:708:ILE:HA	1:D:711:THR:HG22	2.00	0.43
1:D:1122:TRP:CE2	1:D:1144:THR:HB	2.54	0.43
1:D:1446:VAL:HG13	1:D:1448:ASN:H	1.84	0.43
1:D:2392:PHE:CD1	1:D:2398:GLY:HA3	2.53	0.43
1:E:750:ASN:HB3	1:E:753:GLU:HB2	2.00	0.43
1:A:7:LEU:O	1:A:11:ILE:HG12	2.18	0.43
1:A:687:ILE:HG13	1:A:691:MET:SD	2.58	0.43
1:A:1745:PHE:HB2	1:A:1758:ILE:HB	1.99	0.43
1:B:450:LYS:HD3	1:B:478:ILE:HD12	2.01	0.43
1:B:1397:ILE:HG12	1:B:1420:LYS:HZ2	1.84	0.43
1:B:1882:PRO:O	1:B:1885:TYR:HB2	2.18	0.43
1:B:1960:LEU:HD23	1:B:1960:LEU:HA	1.88	0.43
1:C:1122:TRP:CE2	1:C:1144:THR:HB	2.54	0.43
1:D:1214:ILE:O	1:D:1218:VAL:HG23	2.19	0.43
1:D:1453:ARG:NE	1:D:1456:GLU:HB2	2.33	0.43
1:D:1745:PHE:HB3	1:D:1758:ILE:HD12	2.01	0.43
1:D:1757:LEU:HD22	1:D:1760:ASP:HB3	2.01	0.43
1:D:2198:VAL:HA	1:D:2201:LEU:HG	2.00	0.43
1:E:680:LEU:HD23	1:E:744:VAL:HG13	2.01	0.43
1:E:2300:PHE:CE2	1:E:2331:TRP:HB2	2.54	0.43
1:A:864:LEU:HD12	1:A:864:LEU:O	2.18	0.43
1:A:2141:ILE:H	1:D:1067:LYS:HZ2	1.67	0.43
1:B:334:ARG:CZ	1:B:342:LYS:HA	2.48	0.43
1:B:489:THR:HA	1:B:503:ALA:HB1	2.01	0.43
1:B:1181:THR:OG1	1:B:1184:LYS:HB2	2.18	0.43
1:B:1476:THR:O	1:B:1480:LYS:HG2	2.19	0.43
1:B:2456:ILE:HG12	1:B:2524:LEU:HD21	2.01	0.43
1:C:1162:PHE:CD2	1:C:1163:ARG:HG2	2.54	0.43
1:C:1453:ARG:NE	1:C:1456:GLU:HB2	2.33	0.43
1:C:2364:GLU:HG3	1:C:2538:THR:HG22	2.01	0.43
1:D:450:LYS:HD3	1:D:478:ILE:HD12	2.01	0.43
1:D:1397:ILE:HG12	1:D:1420:LYS:HZ2	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:1162:PHE:CD2	1:E:1163:ARG:HG2	2.54	0.43
1:E:1181:THR:OG1	1:E:1184:LYS:HB2	2.18	0.43
1:E:1214:ILE:O	1:E:1218:VAL:HG23	2.19	0.43
1:A:783:VAL:HG22	1:A:832:ARG:NE	2.33	0.43
1:A:1453:ARG:NE	1:A:1456:GLU:HB2	2.33	0.43
1:A:1937:GLN:NE2	1:B:290:LEU:HD11	2.34	0.43
1:A:2300:PHE:CE2	1:A:2331:TRP:HB2	2.54	0.43
1:B:930:GLN:O	1:B:934:LEU:HD23	2.19	0.43
1:B:1255:TYR:CE2	1:B:1296:ILE:HG22	2.52	0.43
1:B:1608:GLU:HB2	1:B:1614:GLN:HG2	2.01	0.43
1:C:192:ARG:HD2	1:C:265:GLN:HG2	2.00	0.43
1:C:256:GLU:HG3	1:C:439:TYR:CE1	2.53	0.43
1:C:1930:GLU:HB3	1:C:1994:TRP:CE2	2.54	0.43
1:C:2456:ILE:HG12	1:C:2524:LEU:HD21	2.01	0.43
1:D:1040:PRO:O	1:D:1044:ILE:HG12	2.18	0.43
1:D:1162:PHE:CD2	1:D:1163:ARG:HG2	2.54	0.43
1:D:2119:LEU:HD12	1:D:2119:LEU:HA	1.79	0.43
1:E:119:LEU:HB2	1:E:990:ILE:HD11	1.99	0.43
1:A:1162:PHE:HE2	1:A:1272:GLY:HA2	1.84	0.42
1:A:2064:VAL:O	1:A:2068:THR:HG23	2.19	0.42
1:A:2462:TYR:CZ	1:A:2464:GLY:HA3	2.54	0.42
1:B:578:ALA:HA	1:B:628:THR:HG23	2.01	0.42
1:B:1446:VAL:HG13	1:B:1448:ASN:H	1.84	0.42
1:B:2097:LEU:HD21	1:C:2267:HIS:HE1	1.83	0.42
1:B:2462:TYR:CZ	1:B:2464:GLY:HA3	2.54	0.42
1:C:489:THR:HA	1:C:503:ALA:HB1	2.01	0.42
1:C:1745:PHE:HB3	1:C:1758:ILE:HD12	2.01	0.42
1:C:1895:ASP:O	1:C:1899:LEU:HD23	2.18	0.42
1:C:2158:GLN:NE2	1:D:2199:MET:HB2	2.29	0.42
1:D:680:LEU:HD23	1:D:744:VAL:HG13	2.01	0.42
1:D:1181:THR:OG1	1:D:1184:LYS:HB2	2.18	0.42
1:D:1651:ARG:HA	1:D:1856:ARG:HH11	1.85	0.42
1:E:687:ILE:HG13	1:E:691:MET:SD	2.58	0.42
1:E:1417:VAL:HG12	1:E:1426:ALA:HB3	2.00	0.42
1:E:2198:VAL:HA	1:E:2201:LEU:HG	2.00	0.42
1:A:1520:THR:OG1	1:A:1573:VAL:HB	2.19	0.42
1:A:1875:ASP:O	1:A:1879:GLN:HG3	2.20	0.42
1:B:642:TRP:O	1:B:645:GLN:HG2	2.19	0.42
1:C:1214:ILE:O	1:C:1218:VAL:HG23	2.19	0.42
1:C:1397:ILE:HG12	1:C:1420:LYS:HZ2	1.83	0.42
1:C:2061:ARG:HG3	1:C:2348:LEU:HD13	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2375:TYR:CD2	1:C:2385:LEU:HD13	2.54	0.42
1:D:732:PRO:HB3	1:D:763:VAL:HG21	2.00	0.42
1:D:1520:THR:OG1	1:D:1573:VAL:HB	2.19	0.42
1:D:2217:GLU:O	1:D:2221:ARG:HG2	2.20	0.42
1:D:2375:TYR:CD2	1:D:2385:LEU:HD13	2.54	0.42
1:E:589:LEU:HD23	1:E:589:LEU:HA	1.88	0.42
1:E:1757:LEU:HD22	1:E:1760:ASP:HB3	2.01	0.42
1:E:2119:LEU:HD12	1:E:2119:LEU:HA	1.79	0.42
1:A:578:ALA:HA	1:A:628:THR:HG23	2.02	0.42
1:A:680:LEU:HD23	1:A:744:VAL:HG13	2.01	0.42
1:A:732:PRO:HB3	1:A:763:VAL:HG21	2.00	0.42
1:A:750:ASN:HB3	1:A:753:GLU:HB2	2.00	0.42
1:A:1476:THR:O	1:A:1480:LYS:HG2	2.19	0.42
1:B:1214:ILE:O	1:B:1218:VAL:HG23	2.19	0.42
1:B:1494:PHE:CE2	1:B:1496:ILE:HG12	2.54	0.42
1:C:901:ALA:O	1:C:902:LEU:HG	2.20	0.42
1:C:1446:VAL:HG13	1:C:1448:ASN:H	1.84	0.42
1:C:1454:LEU:HD12	1:C:1482:CYS:SG	2.59	0.42
1:C:1459:PHE:HB3	1:C:1461:PRO:O	2.19	0.42
1:D:687:ILE:HG13	1:D:691:MET:SD	2.58	0.42
1:D:1255:TYR:CE2	1:D:1296:ILE:HG22	2.52	0.42
1:D:1393:GLY:HA2	1:D:1511:GLY:HA2	2.01	0.42
1:D:2064:VAL:O	1:D:2068:THR:HG23	2.19	0.42
1:E:91:SER:O	1:E:94:GLU:HG2	2.20	0.42
1:E:2061:ARG:HG3	1:E:2348:LEU:HD13	2.01	0.42
1:A:450:LYS:HD3	1:A:478:ILE:HD12	2.01	0.42
1:A:468:ILE:HD13	1:A:486:VAL:HG22	2.02	0.42
1:A:1122:TRP:CE2	1:A:1144:THR:HB	2.54	0.42
1:A:1162:PHE:CD2	1:A:1163:ARG:HG2	2.54	0.42
1:A:1393:GLY:HA2	1:A:1511:GLY:HA2	2.01	0.42
1:A:1895:ASP:O	1:A:1899:LEU:HD23	2.18	0.42
1:A:2061:ARG:HG3	1:A:2348:LEU:HD13	2.01	0.42
1:A:2199:MET:HE1	1:E:2158:GLN:HG2	1.99	0.42
1:A:2217:GLU:O	1:A:2221:ARG:HG2	2.19	0.42
1:B:901:ALA:O	1:B:902:LEU:HG	2.20	0.42
1:B:1757:LEU:HD22	1:B:1760:ASP:HB3	2.00	0.42
1:C:642:TRP:O	1:C:645:GLN:HG2	2.19	0.42
1:C:1162:PHE:HE2	1:C:1272:GLY:HA2	1.84	0.42
1:C:1417:VAL:HG12	1:C:1426:ALA:HB3	2.00	0.42
1:C:1651:ARG:HA	1:C:1856:ARG:HH11	1.84	0.42
1:C:2300:PHE:CE2	1:C:2331:TRP:HB2	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:119:LEU:HB2	1:D:990:ILE:HD11	2.00	0.42
1:D:696:ASN:HB3	1:D:699:LEU:HB3	2.02	0.42
1:D:901:ALA:O	1:D:902:LEU:HG	2.20	0.42
1:E:901:ALA:O	1:E:902:LEU:HG	2.20	0.42
1:E:1446:VAL:HG13	1:E:1448:ASN:H	1.84	0.42
1:E:1453:ARG:NE	1:E:1456:GLU:HB2	2.33	0.42
1:A:1217:GLN:HG2	1:A:1278:LYS:NZ	2.35	0.42
1:A:1446:VAL:HG13	1:A:1448:ASN:H	1.84	0.42
1:A:1608:GLU:HB2	1:A:1614:GLN:HG2	2.01	0.42
1:B:1520:THR:OG1	1:B:1573:VAL:HB	2.19	0.42
1:C:1494:PHE:CE2	1:C:1496:ILE:HG12	2.54	0.42
1:C:1757:LEU:HD22	1:C:1760:ASP:HB3	2.01	0.42
1:C:2217:GLU:O	1:C:2221:ARG:HG2	2.20	0.42
1:C:2392:PHE:CD1	1:C:2398:GLY:HA3	2.54	0.42
1:D:1494:PHE:CE2	1:D:1496:ILE:HG12	2.54	0.42
1:D:1930:GLU:HB3	1:D:1994:TRP:CE2	2.54	0.42
1:D:2364:GLU:HG3	1:D:2538:THR:HG22	2.01	0.42
1:E:708:ILE:HA	1:E:711:THR:HG22	2.00	0.42
1:E:1122:TRP:CE2	1:E:1144:THR:HB	2.54	0.42
1:E:1397:ILE:HG12	1:E:1420:LYS:HZ2	1.83	0.42
1:E:1651:ARG:HA	1:E:1856:ARG:HH11	1.85	0.42
1:A:573:GLN:HA	1:A:576:LYS:HE2	2.02	0.42
1:A:901:ALA:O	1:A:902:LEU:HG	2.20	0.42
1:A:1459:PHE:HB3	1:A:1461:PRO:O	2.19	0.42
1:A:1494:PHE:CE2	1:A:1496:ILE:HG12	2.54	0.42
1:A:1960:LEU:HD23	1:A:1960:LEU:HA	1.88	0.42
1:B:1217:GLN:HG2	1:B:1278:LYS:NZ	2.35	0.42
1:B:1651:ARG:HA	1:B:1856:ARG:HH11	1.84	0.42
1:B:1875:ASP:O	1:B:1879:GLN:HG3	2.20	0.42
1:B:2229:GLN:HE21	1:B:2229:GLN:HB2	1.73	0.42
1:B:2392:PHE:CD1	1:B:2398:GLY:HA3	2.54	0.42
1:C:468:ILE:HD13	1:C:486:VAL:HG22	2.02	0.42
1:D:127:LYS:HB3	1:D:127:LYS:HE2	1.85	0.42
1:D:750:ASN:HB3	1:D:753:GLU:HB2	2.00	0.42
1:D:1162:PHE:HE2	1:D:1272:GLY:HA2	1.85	0.42
1:D:1417:VAL:HG12	1:D:1426:ALA:HB3	2.00	0.42
1:D:1892:ARG:HD3	1:D:1892:ARG:HA	1.69	0.42
1:D:1960:LEU:HD23	1:D:1960:LEU:HA	1.88	0.42
1:D:2439:LEU:HG	1:D:2504:VAL:HA	2.02	0.42
1:E:172:HIS:CE1	1:E:175:ARG:HH21	2.38	0.42
1:E:754:THR:O	1:E:758:VAL:HG13	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:1218:VAL:HA	1:E:1221:VAL:HG22	2.02	0.42
1:E:1573:VAL:HA	1:E:1587:ILE:O	2.20	0.42
1:E:2342:GLU:HG2	1:E:2343:THR:N	2.35	0.42
1:A:30:PHE:HA	1:A:50:TYR:CE2	2.55	0.42
1:A:696:ASN:HB3	1:A:699:LEU:HB3	2.02	0.42
1:A:2236:GLU:HA	1:A:2239:GLN:HG2	2.02	0.42
1:B:573:GLN:HA	1:B:576:LYS:HE2	2.02	0.42
1:B:754:THR:O	1:B:758:VAL:HG13	2.20	0.42
1:B:1930:GLU:HB3	1:B:1994:TRP:CE2	2.54	0.42
1:B:2064:VAL:O	1:B:2068:THR:HG23	2.19	0.42
1:B:2236:GLU:HA	1:B:2239:GLN:HG2	2.02	0.42
1:C:372:THR:HA	1:C:414:LYS:HZ1	1.84	0.42
1:C:2311:GLN:HG3	1:C:2351:MET:HE3	2.01	0.42
1:D:91:SER:O	1:D:94:GLU:HG2	2.19	0.42
1:E:450:LYS:HD3	1:E:478:ILE:HD12	2.01	0.42
1:E:468:ILE:HD13	1:E:486:VAL:HG22	2.02	0.42
1:E:719:MET:SD	1:E:781:LEU:HD23	2.60	0.42
1:E:732:PRO:HB3	1:E:763:VAL:HG21	2.00	0.42
1:E:930:GLN:O	1:E:934:LEU:HD23	2.19	0.42
1:E:1875:ASP:O	1:E:1879:GLN:HG3	2.20	0.42
1:E:2462:TYR:CZ	1:E:2464:GLY:HA3	2.54	0.42
1:A:754:THR:O	1:A:758:VAL:HG13	2.20	0.42
1:A:1485:ALA:O	1:A:1499:SER:HA	2.20	0.42
1:A:1757:LEU:HD22	1:A:1760:ASP:HB3	2.01	0.42
1:A:1892:ARG:HD3	1:A:1892:ARG:HA	1.69	0.42
1:A:1937:GLN:HE21	1:B:290:LEU:HD21	1.85	0.42
1:B:26:GLN:N	1:B:27:TYR:HB2	2.35	0.42
1:B:867:TRP:HA	1:B:870:ILE:HB	2.02	0.42
1:B:1162:PHE:CD2	1:B:1163:ARG:HG2	2.54	0.42
1:B:2066:GLN:HA	1:B:2069:GLN:NE2	2.35	0.42
1:B:2204:THR:HG22	1:B:2208:TYR:CZ	2.55	0.42
1:C:30:PHE:HA	1:C:50:TYR:HE2	1.85	0.42
1:C:336:LYS:HB2	1:C:431:GLY:H	1.85	0.42
1:C:578:ALA:HA	1:C:628:THR:HG23	2.01	0.42
1:C:680:LEU:HD23	1:C:744:VAL:HG13	2.01	0.42
1:C:1875:ASP:O	1:C:1879:GLN:HG3	2.20	0.42
1:C:2346:LEU:HD21	1:D:2298:GLN:NE2	2.34	0.42
1:D:336:LYS:HB2	1:D:431:GLY:H	1.85	0.42
1:D:1218:VAL:HA	1:D:1221:VAL:HG22	2.02	0.42
1:D:1459:PHE:HB3	1:D:1461:PRO:O	2.19	0.42
1:D:1608:GLU:HB2	1:D:1614:GLN:HG2	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1807:GLU:HA	1:D:1811:TYR:HD2	1.85	0.42
1:D:2462:TYR:CZ	1:D:2464:GLY:HA3	2.54	0.42
1:E:1162:PHE:HE2	1:E:1272:GLY:HA2	1.84	0.42
1:E:1217:GLN:HG2	1:E:1278:LYS:NZ	2.35	0.42
1:E:1485:ALA:O	1:E:1499:SER:HA	2.20	0.42
1:E:1520:THR:OG1	1:E:1573:VAL:HB	2.19	0.42
1:E:1930:GLU:HB3	1:E:1994:TRP:CE2	2.54	0.42
1:A:91:SER:O	1:A:94:GLU:HG2	2.20	0.42
1:A:1218:VAL:HA	1:A:1221:VAL:HG22	2.02	0.42
1:A:1454:LEU:HD12	1:A:1482:CYS:SG	2.59	0.42
1:A:2119:LEU:HD22	1:A:2247:LEU:HD12	2.01	0.42
1:A:2456:ILE:HG12	1:A:2524:LEU:HD21	2.01	0.42
1:B:30:PHE:HA	1:B:50:TYR:HE2	1.85	0.42
1:B:1459:PHE:HB3	1:B:1461:PRO:O	2.19	0.42
1:B:2119:LEU:HD22	1:B:2247:LEU:HD12	2.02	0.42
1:B:2198:VAL:HA	1:B:2201:LEU:HG	2.00	0.42
1:C:840:ARG:HD2	1:C:840:ARG:HA	1.80	0.42
1:C:1393:GLY:HA2	1:C:1511:GLY:HA2	2.01	0.42
1:C:1442:ILE:HA	1:C:1455:PHE:O	2.20	0.42
1:C:1476:THR:O	1:C:1480:LYS:HG2	2.19	0.42
1:C:1485:ALA:O	1:C:1499:SER:HA	2.20	0.42
1:C:1573:VAL:HA	1:C:1587:ILE:O	2.20	0.42
1:C:2439:LEU:HG	1:C:2504:VAL:HA	2.02	0.42
1:D:312:VAL:HG22	1:D:313:ASP:H	1.85	0.42
1:D:489:THR:HA	1:D:503:ALA:HB1	2.01	0.42
1:D:2066:GLN:HA	1:D:2069:GLN:NE2	2.35	0.42
1:D:2119:LEU:HD22	1:D:2247:LEU:HD12	2.01	0.42
1:E:1237:GLY:HA2	1:E:1244:LEU:HD13	2.02	0.42
1:E:1459:PHE:HB3	1:E:1461:PRO:O	2.19	0.42
1:E:1476:THR:O	1:E:1480:LYS:HG2	2.19	0.42
1:E:2066:GLN:HA	1:E:2069:GLN:NE2	2.35	0.42
1:A:172:HIS:CE1	1:A:175:ARG:HH21	2.38	0.42
1:A:372:THR:HA	1:A:414:LYS:HZ1	1.85	0.42
1:A:1214:ILE:O	1:A:1218:VAL:HG23	2.19	0.42
1:A:2146:GLN:NE2	1:D:1067:LYS:HD2	2.35	0.42
1:B:468:ILE:HD13	1:B:486:VAL:HG22	2.02	0.42
1:B:696:ASN:HB3	1:B:699:LEU:HB3	2.02	0.42
1:B:732:PRO:HB3	1:B:763:VAL:HG21	2.00	0.42
1:B:1122:TRP:CE2	1:B:1144:THR:HB	2.54	0.42
1:B:1208:ALA:HB2	1:C:2164:VAL:HG22	2.02	0.42
1:B:1996:THR:O	1:B:1999:LEU:HG	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:142:ARG:HE	1:C:142:ARG:HB3	1.72	0.42
1:C:1217:GLN:HG2	1:C:1278:LYS:NZ	2.35	0.42
1:C:1608:GLU:HB2	1:C:1614:GLN:HG2	2.01	0.42
1:C:2064:VAL:O	1:C:2068:THR:HG23	2.19	0.42
1:C:2066:GLN:HA	1:C:2069:GLN:CD	2.41	0.42
1:C:2204:THR:HG22	1:C:2208:TYR:CZ	2.55	0.42
1:C:2229:GLN:HE21	1:C:2229:GLN:HB2	1.72	0.42
1:C:2236:GLU:HA	1:C:2239:GLN:CG	2.50	0.42
1:C:2236:GLU:HA	1:C:2239:GLN:HG2	2.02	0.42
1:C:2462:TYR:CZ	1:C:2464:GLY:HA3	2.54	0.42
1:D:1446:VAL:HG13	1:D:1449:ASN:H	1.85	0.42
1:D:1454:LEU:HD12	1:D:1482:CYS:SG	2.59	0.42
1:D:1937:GLN:HE21	1:E:290:LEU:HD11	1.85	0.42
1:D:2300:PHE:CE2	1:D:2331:TRP:HB2	2.54	0.42
1:E:578:ALA:HA	1:E:628:THR:HG23	2.02	0.42
1:A:719:MET:SD	1:A:781:LEU:HD23	2.60	0.41
1:A:867:TRP:HA	1:A:870:ILE:HB	2.02	0.41
1:A:995:LEU:O	1:A:999:ARG:HG3	2.20	0.41
1:A:1651:ARG:HA	1:A:1856:ARG:HH11	1.85	0.41
1:A:1996:THR:O	1:A:1999:LEU:HG	2.20	0.41
1:A:2066:GLN:HA	1:A:2069:GLN:NE2	2.35	0.41
1:A:2260:TYR:CE2	1:E:2097:LEU:HD22	2.54	0.41
1:B:336:LYS:HB2	1:B:431:GLY:H	1.85	0.41
1:B:680:LEU:HD23	1:B:744:VAL:HG13	2.01	0.41
1:B:719:MET:SD	1:B:781:LEU:HD23	2.60	0.41
1:B:1485:ALA:O	1:B:1499:SER:HA	2.20	0.41
1:B:1892:ARG:HD3	1:B:1892:ARG:HA	1.69	0.41
1:B:2066:GLN:HA	1:B:2069:GLN:CD	2.41	0.41
1:C:573:GLN:HA	1:C:576:LYS:HE2	2.02	0.41
1:C:2342:GLU:CG	1:D:2295:ILE:HD13	2.50	0.41
1:D:468:ILE:HD13	1:D:486:VAL:HG22	2.02	0.41
1:E:312:VAL:HG22	1:E:313:ASP:H	1.85	0.41
1:E:573:GLN:HA	1:E:576:LYS:HE2	2.02	0.41
1:E:1494:PHE:CE2	1:E:1496:ILE:HG12	2.54	0.41
1:E:2119:LEU:HD22	1:E:2247:LEU:HD12	2.01	0.41
1:A:26:GLN:N	1:A:27:TYR:HB2	2.35	0.41
1:A:127:LYS:HB3	1:A:127:LYS:HE2	1.85	0.41
1:A:642:TRP:O	1:A:645:GLN:HG2	2.19	0.41
1:A:684:ARG:HG2	1:A:745:LEU:HA	2.03	0.41
1:A:930:GLN:O	1:A:934:LEU:HD23	2.19	0.41
1:A:2066:GLN:HA	1:A:2069:GLN:CD	2.41	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2364:GLU:HG3	1:A:2538:THR:HG22	2.01	0.41
1:B:1454:LEU:HD12	1:B:1482:CYS:SG	2.59	0.41
1:B:1807:GLU:HA	1:B:1811:TYR:HD2	1.85	0.41
1:B:2236:GLU:HA	1:B:2239:GLN:CG	2.50	0.41
1:B:2364:GLU:HG3	1:B:2538:THR:HG22	2.01	0.41
1:C:2066:GLN:HA	1:C:2069:GLN:NE2	2.35	0.41
1:D:26:GLN:N	1:D:27:TYR:HB2	2.35	0.41
1:D:2061:ARG:HG3	1:D:2348:LEU:HD13	2.01	0.41
1:D:2092:GLN:O	1:D:2096:GLU:OE1	2.38	0.41
1:D:2204:THR:HG22	1:D:2208:TYR:CZ	2.55	0.41
1:D:2236:GLU:HA	1:D:2239:GLN:HG2	2.02	0.41
1:E:995:LEU:O	1:E:999:ARG:HG3	2.20	0.41
1:E:2236:GLU:HA	1:E:2239:GLN:HG2	2.02	0.41
1:E:2375:TYR:CD2	1:E:2385:LEU:HD13	2.54	0.41
1:E:2456:ILE:HG12	1:E:2524:LEU:HD21	2.01	0.41
1:A:489:THR:HA	1:A:503:ALA:HB1	2.01	0.41
1:A:1237:GLY:HA2	1:A:1244:LEU:HD13	2.02	0.41
1:A:2236:GLU:HA	1:A:2239:GLN:CG	2.50	0.41
1:B:1059:LEU:HD22	1:B:1080:TYR:CD1	2.55	0.41
1:B:2375:TYR:CD2	1:B:2385:LEU:HD13	2.54	0.41
1:C:2158:GLN:OE1	1:D:2203:ALA:HB2	2.20	0.41
1:D:14:THR:C	1:D:15:ARG:HD3	2.41	0.41
1:D:578:ALA:HA	1:D:628:THR:HG23	2.02	0.41
1:D:642:TRP:O	1:D:645:GLN:HG2	2.19	0.41
1:D:1996:THR:O	1:D:1999:LEU:HG	2.20	0.41
1:D:2456:ILE:HG12	1:D:2524:LEU:HD21	2.01	0.41
1:E:489:THR:HA	1:E:503:ALA:HB1	2.01	0.41
1:E:1393:GLY:HA2	1:E:1511:GLY:HA2	2.01	0.41
1:E:1446:VAL:HG13	1:E:1449:ASN:H	1.85	0.41
1:E:2439:LEU:HG	1:E:2504:VAL:HA	2.02	0.41
1:E:2537:TYR:HE2	1:E:2539:ILE:HD11	1.86	0.41
1:A:999:ARG:HG2	1:E:1925:GLU:OE2	2.21	0.41
1:A:1930:GLU:HB3	1:A:1994:TRP:CE2	2.54	0.41
1:A:2342:GLU:HG2	1:A:2343:THR:N	2.35	0.41
1:B:439:TYR:CD1	1:B:443:ILE:HD12	2.55	0.41
1:B:1573:VAL:HA	1:B:1587:ILE:O	2.20	0.41
1:B:2217:GLU:O	1:B:2221:ARG:HG2	2.20	0.41
1:B:2439:LEU:HG	1:B:2504:VAL:HA	2.02	0.41
1:C:14:THR:C	1:C:15:ARG:HD3	2.41	0.41
1:C:30:PHE:HA	1:C:50:TYR:CE2	2.55	0.41
1:C:696:ASN:HB3	1:C:699:LEU:HB3	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1059:LEU:HD22	1:C:1080:TYR:CD1	2.55	0.41
1:C:1446:VAL:HG13	1:C:1449:ASN:H	1.85	0.41
1:D:589:LEU:HD23	1:D:589:LEU:HA	1.88	0.41
1:D:719:MET:SD	1:D:781:LEU:HD23	2.60	0.41
1:D:761:CYS:HA	1:D:764:MET:HG2	2.02	0.41
1:D:867:TRP:HA	1:D:870:ILE:HB	2.02	0.41
1:D:1875:ASP:O	1:D:1879:GLN:HG3	2.20	0.41
1:E:10:LYS:HB3	1:E:10:LYS:HE3	1.94	0.41
1:E:1442:ILE:HA	1:E:1455:PHE:O	2.20	0.41
1:E:1608:GLU:HB2	1:E:1614:GLN:HG2	2.01	0.41
1:E:1996:THR:O	1:E:1999:LEU:HG	2.20	0.41
1:A:312:VAL:HG22	1:A:313:ASP:H	1.85	0.41
1:A:336:LYS:HB2	1:A:431:GLY:H	1.85	0.41
1:A:1573:VAL:HA	1:A:1587:ILE:O	2.20	0.41
1:A:2204:THR:HG22	1:A:2208:TYR:CZ	2.55	0.41
1:B:312:VAL:HG22	1:B:313:ASP:H	1.85	0.41
1:B:2195:SER:O	1:B:2199:MET:HG3	2.21	0.41
1:B:2475:ILE:HG23	1:B:2499:PHE:CE2	2.56	0.41
1:C:26:GLN:N	1:C:27:TYR:HB2	2.35	0.41
1:C:91:SER:O	1:C:94:GLU:HG2	2.19	0.41
1:C:719:MET:SD	1:C:781:LEU:HD23	2.60	0.41
1:C:1218:VAL:HA	1:C:1221:VAL:HG22	2.02	0.41
1:C:1237:GLY:HA2	1:C:1244:LEU:HD13	2.02	0.41
1:C:1996:THR:O	1:C:1999:LEU:HG	2.20	0.41
1:C:2339:MET:CE	1:D:2288:MET:SD	3.09	0.41
1:D:406:ASP:HA	1:D:409:TYR:HB3	2.03	0.41
1:D:414:LYS:HA	1:D:414:LYS:HD2	1.79	0.41
1:D:1237:GLY:HA2	1:D:1244:LEU:HD13	2.02	0.41
1:D:1476:THR:O	1:D:1480:LYS:HG2	2.19	0.41
1:D:2236:GLU:HA	1:D:2239:GLN:CG	2.50	0.41
1:E:30:PHE:HA	1:E:50:TYR:CE2	2.55	0.41
1:E:705:ALA:HB1	1:E:717:PRO:O	2.21	0.41
1:E:1046:PRO:HG2	1:E:1892:ARG:HE	1.86	0.41
1:E:1454:LEU:HD12	1:E:1482:CYS:SG	2.59	0.41
1:E:2064:VAL:O	1:E:2068:THR:HG23	2.19	0.41
1:E:2092:GLN:O	1:E:2096:GLU:OE1	2.38	0.41
1:E:2217:GLU:O	1:E:2221:ARG:HG2	2.19	0.41
1:A:70:ARG:HH12	1:A:1883:MET:HE2	1.85	0.41
1:B:14:THR:C	1:B:15:ARG:HD3	2.41	0.41
1:B:30:PHE:HA	1:B:50:TYR:CE2	2.55	0.41
1:B:2233:ALA:O	1:B:2236:GLU:HG3	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:329:ALA:HB3	1:C:444:PHE:CE2	2.55	0.41
1:C:2119:LEU:HD22	1:C:2247:LEU:HD12	2.01	0.41
1:C:2233:ALA:O	1:C:2236:GLU:HG3	2.21	0.41
1:D:1217:GLN:HG2	1:D:1278:LYS:NZ	2.35	0.41
1:D:2066:GLN:HA	1:D:2069:GLN:CD	2.41	0.41
1:D:2537:TYR:HE2	1:D:2539:ILE:HD11	1.86	0.41
1:E:14:THR:C	1:E:15:ARG:HD3	2.41	0.41
1:E:329:ALA:HB3	1:E:444:PHE:CE2	2.55	0.41
1:E:642:TRP:O	1:E:645:GLN:HG2	2.19	0.41
1:E:840:ARG:HD2	1:E:840:ARG:HA	1.81	0.41
1:A:329:ALA:HB3	1:A:444:PHE:CE2	2.55	0.41
1:A:452:ILE:HD12	1:A:452:ILE:HA	1.96	0.41
1:A:1442:ILE:HA	1:A:1455:PHE:O	2.20	0.41
1:A:2097:LEU:HD21	1:B:2267:HIS:HE1	1.84	0.41
1:B:91:SER:O	1:B:94:GLU:HG2	2.20	0.41
1:B:660:ILE:HD12	1:B:660:ILE:HA	1.97	0.41
1:B:1446:VAL:HG13	1:B:1449:ASN:H	1.85	0.41
1:B:2274:LEU:O	1:B:2278:LYS:HG2	2.21	0.41
1:C:312:VAL:HG22	1:C:313:ASP:H	1.85	0.41
1:C:705:ALA:HB1	1:C:717:PRO:O	2.21	0.41
1:C:1520:THR:OG1	1:C:1573:VAL:HB	2.19	0.41
1:D:30:PHE:HA	1:D:50:TYR:HE2	1.85	0.41
1:D:504:GLN:HG2	1:D:509:SER:HB2	2.03	0.41
1:D:754:THR:O	1:D:758:VAL:HG13	2.20	0.41
1:D:1485:ALA:O	1:D:1499:SER:HA	2.20	0.41
1:E:26:GLN:N	1:E:27:TYR:HB2	2.35	0.41
1:E:867:TRP:HA	1:E:870:ILE:HB	2.02	0.41
1:E:2119:LEU:HA	1:E:2122:SER:HB2	2.02	0.41
1:E:2195:SER:O	1:E:2199:MET:HG3	2.21	0.41
1:A:30:PHE:HA	1:A:50:TYR:HE2	1.85	0.41
1:A:1059:LEU:HD22	1:A:1080:TYR:CD1	2.55	0.41
1:A:2475:ILE:HG23	1:A:2499:PHE:CE2	2.56	0.41
1:B:454:LEU:HD11	1:B:465:LEU:HD22	2.03	0.41
1:B:1162:PHE:HE2	1:B:1272:GLY:HA2	1.84	0.41
1:B:1218:VAL:HA	1:B:1221:VAL:HG22	2.02	0.41
1:B:1442:ILE:HA	1:B:1455:PHE:O	2.20	0.41
1:B:2061:ARG:HG3	1:B:2348:LEU:HD13	2.01	0.41
1:B:2212:LYS:HZ1	1:E:1065:GLN:CG	2.27	0.41
1:C:10:LYS:HB3	1:C:10:LYS:HE3	1.94	0.41
1:C:57:LYS:HA	1:C:57:LYS:HD3	1.92	0.41
1:C:1795:MET:HE3	1:C:1796:ASP:O	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1898:ILE:HD11	1:C:1997:LEU:HD21	2.02	0.41
1:C:2067:LEU:HG	1:C:2296:TYR:HE1	1.86	0.41
1:C:2092:GLN:O	1:C:2096:GLU:OE1	2.38	0.41
1:D:169:LEU:O	1:D:173:ILE:HG12	2.21	0.41
1:D:1059:LEU:HD22	1:D:1080:TYR:CD1	2.55	0.41
1:D:1442:ILE:HA	1:D:1455:PHE:O	2.20	0.41
1:D:1573:VAL:HA	1:D:1587:ILE:O	2.20	0.41
1:D:2119:LEU:HA	1:D:2122:SER:HB2	2.02	0.41
1:D:2233:ALA:O	1:D:2236:GLU:HG3	2.21	0.41
1:E:696:ASN:HB3	1:E:699:LEU:HB3	2.02	0.41
1:E:761:CYS:HA	1:E:764:MET:HG2	2.02	0.41
1:E:2460:LEU:O	1:E:2474:ALA:HA	2.20	0.41
1:A:1004:ILE:HD13	1:E:1925:GLU:HG2	2.03	0.41
1:A:1425:ILE:HD13	1:A:1425:ILE:HA	1.98	0.41
1:A:2274:LEU:O	1:A:2278:LYS:HG2	2.21	0.41
1:A:2537:TYR:HE2	1:A:2539:ILE:HD11	1.86	0.41
1:B:342:LYS:HD3	1:B:346:TYR:HA	2.03	0.41
1:B:1167:HIS:CE1	1:B:1199:PHE:HB3	2.56	0.41
1:B:1393:GLY:HA2	1:B:1511:GLY:HA2	2.01	0.41
1:B:2119:LEU:HA	1:B:2122:SER:HB2	2.02	0.41
1:B:2342:GLU:HG2	1:B:2343:THR:N	2.35	0.41
1:B:2460:LEU:O	1:B:2474:ALA:HA	2.20	0.41
1:C:169:LEU:O	1:C:173:ILE:HG12	2.21	0.41
1:C:172:HIS:CE1	1:C:175:ARG:HH21	2.38	0.41
1:C:321:VAL:HG11	1:C:324:GLU:HB3	2.03	0.41
1:C:406:ASP:HA	1:C:409:TYR:HB3	2.03	0.41
1:C:414:LYS:HA	1:C:414:LYS:HD2	1.80	0.41
1:C:665:THR:HA	1:C:666:PRO:HD3	1.93	0.41
1:C:761:CYS:HA	1:C:764:MET:HG2	2.02	0.41
1:C:1041:GLU:HG3	1:C:1891:MET:HE1	2.02	0.41
1:C:1167:HIS:CE1	1:C:1199:PHE:HB3	2.56	0.41
1:C:1425:ILE:HD13	1:C:1425:ILE:HA	1.98	0.41
1:C:2057:LEU:HD12	1:C:2348:LEU:HD22	2.03	0.41
1:C:2119:LEU:HA	1:C:2122:SER:HB2	2.02	0.41
1:C:2119:LEU:HA	1:C:2119:LEU:HD12	1.79	0.41
1:C:2122:SER:CB	1:D:2239:GLN:HE22	2.32	0.41
1:C:2342:GLU:HG2	1:C:2343:THR:N	2.35	0.41
1:C:2537:TYR:HE2	1:C:2539:ILE:HD11	1.86	0.41
1:D:573:GLN:HA	1:D:576:LYS:HE2	2.02	0.41
1:D:684:ARG:HG2	1:D:745:LEU:HA	2.03	0.41
1:D:1041:GLU:HG3	1:D:1891:MET:HE1	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2460:LEU:O	1:D:2474:ALA:HA	2.21	0.41
1:E:30:PHE:HA	1:E:50:TYR:HE2	1.85	0.41
1:E:336:LYS:HB2	1:E:431:GLY:H	1.85	0.41
1:E:342:LYS:HD3	1:E:346:TYR:HA	2.03	0.41
1:E:1059:LEU:HD22	1:E:1080:TYR:CD1	2.56	0.41
1:E:1298:HIS:HB3	1:E:1303:ASP:HB3	2.03	0.41
1:E:2233:ALA:O	1:E:2236:GLU:HG3	2.21	0.41
1:A:1298:HIS:HB3	1:A:1303:ASP:HB3	2.03	0.41
1:A:1446:VAL:HG13	1:A:1449:ASN:H	1.85	0.41
1:A:1898:ILE:HD11	1:A:1997:LEU:HD21	2.03	0.41
1:A:2195:SER:O	1:A:2199:MET:HG3	2.21	0.41
1:B:172:HIS:CE1	1:B:175:ARG:HH21	2.38	0.41
1:B:406:ASP:HA	1:B:409:TYR:HB3	2.03	0.41
1:B:995:LEU:O	1:B:999:ARG:HG3	2.20	0.41
1:B:1066:SER:HB2	1:D:2141:ILE:HD12	2.01	0.41
1:C:504:GLN:HG2	1:C:509:SER:HB2	2.03	0.41
1:C:657:THR:O	1:C:660:ILE:HG22	2.21	0.41
1:C:1065:GLN:HG3	1:E:2212:LYS:NZ	2.35	0.41
1:D:30:PHE:HA	1:D:50:TYR:CE2	2.55	0.41
1:D:454:LEU:HD11	1:D:465:LEU:HD22	2.03	0.41
1:D:1167:HIS:CE1	1:D:1199:PHE:HB3	2.56	0.41
1:D:1795:MET:HE3	1:D:1796:ASP:O	2.21	0.41
1:E:321:VAL:HG11	1:E:324:GLU:HB3	2.03	0.41
1:A:14:THR:C	1:A:15:ARG:HD3	2.41	0.40
1:A:1665:PHE:HD2	1:A:1785:VAL:HG22	1.87	0.40
1:A:2057:LEU:HD12	1:A:2348:LEU:HD22	2.03	0.40
1:B:57:LYS:HA	1:B:57:LYS:HD3	1.92	0.40
1:B:657:THR:O	1:B:660:ILE:HG22	2.21	0.40
1:B:705:ALA:HB1	1:B:717:PRO:O	2.21	0.40
1:B:1795:MET:HE3	1:B:1796:ASP:O	2.21	0.40
1:B:2092:GLN:O	1:B:2096:GLU:OE1	2.38	0.40
1:C:867:TRP:HA	1:C:870:ILE:HB	2.02	0.40
1:C:1648:GLU:HA	1:C:1651:ARG:HG2	2.03	0.40
1:C:1665:PHE:HD2	1:C:1785:VAL:HG22	1.87	0.40
1:D:329:ALA:HB3	1:D:444:PHE:CE2	2.56	0.40
1:D:657:THR:O	1:D:660:ILE:HG22	2.21	0.40
1:D:995:LEU:O	1:D:999:ARG:HG3	2.20	0.40
1:D:2475:ILE:HG23	1:D:2499:PHE:CE2	2.56	0.40
1:E:169:LEU:O	1:E:173:ILE:HG12	2.21	0.40
1:E:321:VAL:HG22	1:E:322:ASN:H	1.87	0.40
1:E:657:THR:O	1:E:660:ILE:HG22	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:2066:GLN:HA	1:E:2069:GLN:CD	2.41	0.40
1:E:2204:THR:HG22	1:E:2208:TYR:CZ	2.55	0.40
1:E:2274:LEU:O	1:E:2278:LYS:HG2	2.21	0.40
1:A:1807:GLU:HA	1:A:1811:TYR:HD2	1.85	0.40
1:A:2092:GLN:O	1:A:2096:GLU:OE1	2.39	0.40
1:A:2233:ALA:O	1:A:2236:GLU:HG3	2.21	0.40
1:A:2437:ARG:CZ	1:A:2539:ILE:HD13	2.51	0.40
1:A:2439:LEU:HG	1:A:2504:VAL:HA	2.02	0.40
1:B:321:VAL:HG22	1:B:322:ASN:H	1.87	0.40
1:B:321:VAL:HG11	1:B:324:GLU:HB3	2.03	0.40
1:B:551:GLU:HG3	1:B:552:GLN:HG2	2.04	0.40
1:B:1046:PRO:HG2	1:B:1892:ARG:HE	1.86	0.40
1:B:1244:LEU:HB2	1:B:1270:ILE:CG2	2.51	0.40
1:B:1607:ARG:HE	1:B:1607:ARG:HB3	1.79	0.40
1:B:2537:TYR:HE2	1:B:2539:ILE:HD11	1.86	0.40
1:C:342:LYS:HD3	1:C:346:TYR:HA	2.03	0.40
1:C:754:THR:O	1:C:758:VAL:HG13	2.20	0.40
1:C:1244:LEU:HB2	1:C:1270:ILE:CG2	2.52	0.40
1:C:2065:ALA:O	1:C:2069:GLN:OE1	2.39	0.40
1:D:705:ALA:HB1	1:D:717:PRO:O	2.21	0.40
1:D:1741:TRP:CH2	1:D:1776:ILE:HG12	2.57	0.40
1:D:2057:LEU:HD12	1:D:2348:LEU:HD22	2.03	0.40
1:D:2067:LEU:HG	1:D:2296:TYR:HE1	1.86	0.40
1:D:2158:GLN:HE21	1:E:2199:MET:CE	2.33	0.40
1:D:2274:LEU:O	1:D:2278:LYS:HG2	2.21	0.40
1:D:2342:GLU:HG2	1:D:2343:THR:N	2.35	0.40
1:E:1604:LEU:HA	1:E:1617:GLN:O	2.22	0.40
1:E:2065:ALA:O	1:E:2069:GLN:OE1	2.39	0.40
1:A:342:LYS:HD3	1:A:346:TYR:HA	2.03	0.40
1:A:660:ILE:HD12	1:A:660:ILE:HA	1.97	0.40
1:A:705:ALA:HB1	1:A:717:PRO:O	2.21	0.40
1:A:1167:HIS:CE1	1:A:1199:PHE:HB3	2.56	0.40
1:A:2460:LEU:O	1:A:2474:ALA:HA	2.20	0.40
1:B:169:LEU:O	1:B:173:ILE:HG12	2.21	0.40
1:B:2067:LEU:HG	1:B:2296:TYR:HE1	1.86	0.40
1:B:2146:GLN:HE21	1:E:1067:LYS:HD2	1.86	0.40
1:B:2292:LEU:O	1:B:2296:TYR:HB3	2.22	0.40
1:C:995:LEU:O	1:C:999:ARG:HG3	2.20	0.40
1:C:2195:SER:O	1:C:2199:MET:HG3	2.21	0.40
1:C:2475:ILE:HG23	1:C:2499:PHE:CE2	2.56	0.40
1:D:342:LYS:HD3	1:D:346:TYR:HA	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1046:PRO:HG2	1:D:1892:ARG:HE	1.86	0.40
1:D:1244:LEU:HB2	1:D:1270:ILE:CG2	2.52	0.40
1:D:1665:PHE:HD2	1:D:1785:VAL:HG22	1.87	0.40
1:D:2065:ALA:O	1:D:2069:GLN:OE1	2.39	0.40
1:E:454:LEU:HD11	1:E:465:LEU:HD22	2.03	0.40
1:E:551:GLU:HG3	1:E:552:GLN:HG2	2.04	0.40
1:E:684:ARG:HG2	1:E:745:LEU:HA	2.02	0.40
1:E:1244:LEU:HB2	1:E:1270:ILE:CG2	2.52	0.40
1:E:1461:PRO:HG2	1:E:1463:THR:O	2.22	0.40
1:E:1665:PHE:HD2	1:E:1785:VAL:HG22	1.86	0.40
1:E:2236:GLU:HA	1:E:2239:GLN:CG	2.50	0.40
1:A:620:LEU:HD22	1:A:664:CYS:SG	2.62	0.40
1:A:761:CYS:HA	1:A:764:MET:HG2	2.02	0.40
1:A:1681:PHE:HD1	1:A:1702:LEU:HG	1.86	0.40
1:B:1237:GLY:HA2	1:B:1244:LEU:HD13	2.02	0.40
1:B:1461:PRO:HG2	1:B:1463:THR:O	2.22	0.40
1:B:2033:MET:HE1	1:C:2277:ARG:NH2	2.34	0.40
1:C:439:TYR:CD1	1:C:443:ILE:HD12	2.55	0.40
1:C:897:ARG:HB2	1:C:908:ASN:HB2	2.03	0.40
1:C:1741:TRP:CH2	1:C:1776:ILE:HG12	2.56	0.40
1:C:1807:GLU:HA	1:C:1811:TYR:HD2	1.85	0.40
1:C:2245:GLU:O	1:C:2248:LYS:HG2	2.21	0.40
1:C:2274:LEU:O	1:C:2278:LYS:HG2	2.21	0.40
1:C:2437:ARG:CZ	1:C:2539:ILE:HD13	2.51	0.40
1:D:321:VAL:HG22	1:D:322:ASN:H	1.86	0.40
1:D:1604:LEU:HA	1:D:1617:GLN:O	2.22	0.40
1:D:1648:GLU:HA	1:D:1651:ARG:HG2	2.03	0.40
1:E:2067:LEU:HG	1:E:2296:TYR:HE1	1.86	0.40
1:A:169:LEU:O	1:A:173:ILE:HG12	2.21	0.40
1:A:321:VAL:HG11	1:A:324:GLU:HB3	2.03	0.40
1:A:657:THR:O	1:A:660:ILE:HG22	2.21	0.40
1:A:1244:LEU:HB2	1:A:1270:ILE:CG2	2.52	0.40
1:A:2119:LEU:HA	1:A:2122:SER:HB2	2.02	0.40
1:B:329:ALA:HB3	1:B:444:PHE:CE2	2.55	0.40
1:C:70:ARG:HH12	1:C:1883:MET:HE2	1.86	0.40
1:C:1604:LEU:HA	1:C:1617:GLN:O	2.22	0.40
1:C:2460:LEU:O	1:C:2474:ALA:HA	2.20	0.40
1:D:321:VAL:HG11	1:D:324:GLU:HB3	2.03	0.40
1:D:2437:ARG:CZ	1:D:2539:ILE:HD13	2.51	0.40
1:E:504:GLN:HG2	1:E:509:SER:HB2	2.03	0.40
1:E:1807:GLU:HA	1:E:1811:TYR:HD2	1.85	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:2475:ILE:HG23	1:E:2499:PHE:CE2	2.56	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	2538/2540 (100%)	2375 (94%)	159 (6%)	4 (0%)	44	78
1	B	2538/2540 (100%)	2375 (94%)	159 (6%)	4 (0%)	44	78
1	C	2538/2540 (100%)	2374 (94%)	160 (6%)	4 (0%)	44	78
1	D	2538/2540 (100%)	2374 (94%)	160 (6%)	4 (0%)	44	78
1	E	2538/2540 (100%)	2374 (94%)	160 (6%)	4 (0%)	44	78
All	All	12690/12700 (100%)	11872 (94%)	798 (6%)	20 (0%)	45	78

All (20) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	2519	ASP
1	B	2519	ASP
1	C	2519	ASP
1	D	2519	ASP
1	E	2519	ASP
1	A	343	ASN
1	B	343	ASN
1	C	343	ASN
1	D	343	ASN
1	E	343	ASN
1	A	308	THR
1	B	308	THR
1	C	308	THR

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Mol	Chain	Res	Type
1	D	308	THR
1	E	308	THR
1	A	2025	ASP
1	B	2025	ASP
1	C	2025	ASP
1	D	2025	ASP
1	E	2025	ASP

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	2175/2177 (100%)	2164 (100%)	11 (0%)	86	90
1	B	2175/2177 (100%)	2164 (100%)	11 (0%)	86	90
1	C	2175/2177 (100%)	2164 (100%)	11 (0%)	86	90
1	D	2175/2177 (100%)	2164 (100%)	11 (0%)	86	90
1	E	2175/2177 (100%)	2164 (100%)	11 (0%)	86	90
All	All	10875/10885 (100%)	10820 (100%)	55 (0%)	85	90

All (55) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	15	ARG
1	A	334	ARG
1	A	364	LYS
1	A	948	ASN
1	A	1374	ARG
1	A	1965	ARG
1	A	2005	ARG
1	A	2059	ARG
1	A	2220	ARG
1	A	2229	GLN
1	A	2251	ARG
1	B	15	ARG

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Mol	Chain	Res	Type
1	B	334	ARG
1	B	364	LYS
1	B	948	ASN
1	B	1374	ARG
1	B	1965	ARG
1	B	2005	ARG
1	B	2059	ARG
1	B	2220	ARG
1	B	2229	GLN
1	B	2251	ARG
1	C	15	ARG
1	C	334	ARG
1	C	364	LYS
1	C	948	ASN
1	C	1374	ARG
1	C	1965	ARG
1	C	2005	ARG
1	C	2059	ARG
1	C	2220	ARG
1	C	2229	GLN
1	C	2251	ARG
1	D	15	ARG
1	D	334	ARG
1	D	364	LYS
1	D	948	ASN
1	D	1374	ARG
1	D	1965	ARG
1	D	2005	ARG
1	D	2059	ARG
1	D	2220	ARG
1	D	2229	GLN
1	D	2251	ARG
1	E	15	ARG
1	E	334	ARG
1	E	364	LYS
1	E	948	ASN
1	E	1374	ARG
1	E	1965	ARG
1	E	2005	ARG
1	E	2059	ARG
1	E	2220	ARG
1	E	2229	GLN

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Mol	Chain	Res	Type
1	E	2251	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (48) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	266	ASN
1	A	345	ASN
1	A	362	ASN
1	A	750	ASN
1	A	1937	GLN
1	A	2261	GLN
1	A	2267	HIS
1	A	2505	ASN
1	B	266	ASN
1	B	345	ASN
1	B	362	ASN
1	B	682	ASN
1	B	750	ASN
1	B	1151	ASN
1	B	1937	GLN
1	B	2261	GLN
1	B	2267	HIS
1	B	2505	ASN
1	C	294	GLN
1	C	362	ASN
1	C	750	ASN
1	C	818	ASN
1	C	2261	GLN
1	C	2267	HIS
1	C	2505	ASN
1	D	266	ASN
1	D	345	ASN
1	D	362	ASN
1	D	682	ASN
1	D	750	ASN
1	D	1151	ASN
1	D	1937	GLN
1	D	2158	GLN
1	D	2239	GLN
1	D	2261	GLN
1	D	2267	HIS
1	D	2298	GLN

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Mol	Chain	Res	Type
1	D	2435	ASN
1	D	2505	ASN
1	E	345	ASN
1	E	362	ASN
1	E	750	ASN
1	E	1151	ASN
1	E	1937	GLN
1	E	2261	GLN
1	E	2267	HIS
1	E	2347	ASN
1	E	2505	ASN

5.3.3 RNA

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates

There are no oligosaccharides in this entry.

5.6 Ligand geometry

There are no ligands in this entry.

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

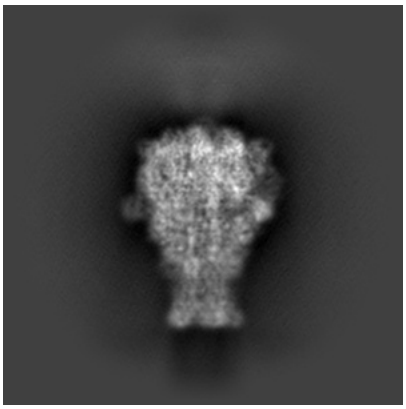
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-48371. These allow visual inspection of the internal detail of the map and identification of artifacts.

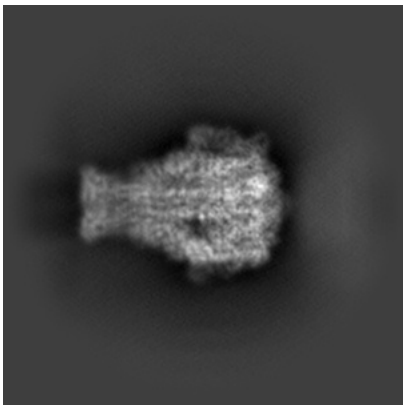
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections

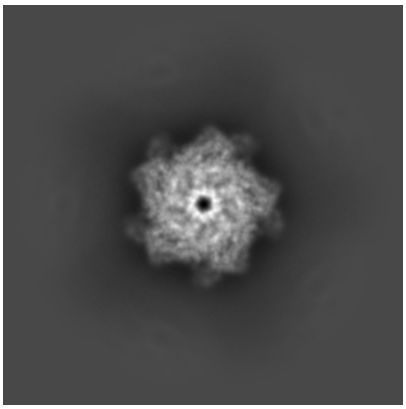
6.1.1 Primary map



X

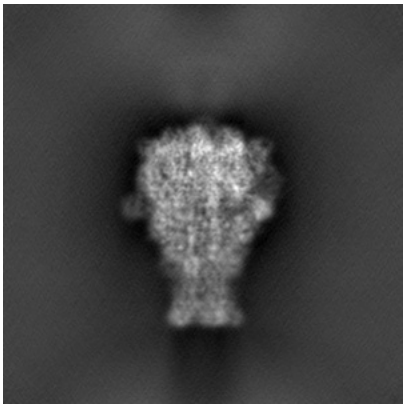


Y

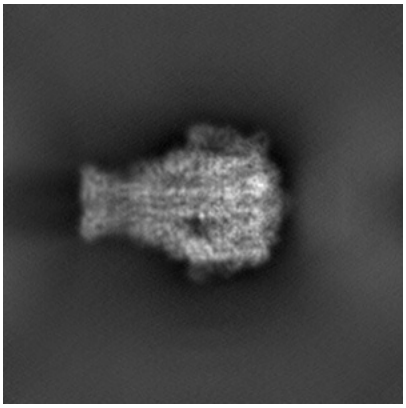


Z

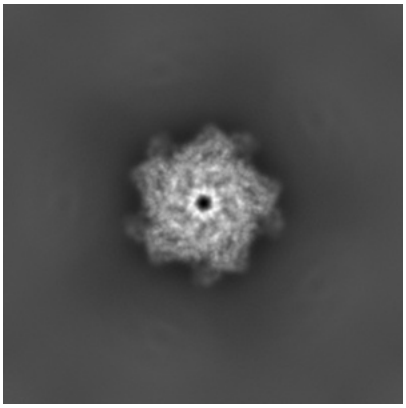
6.1.2 Raw map



X



Y

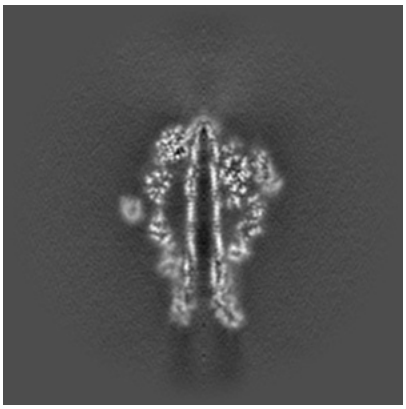


Z

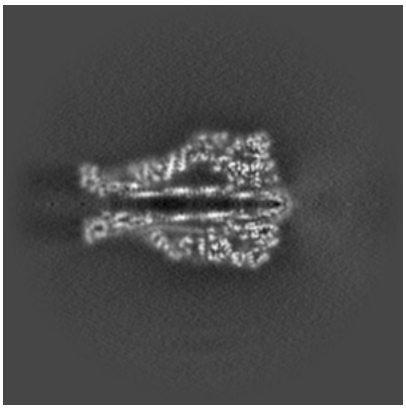
The images above show the map projected in three orthogonal directions.

6.2 Central slices (i)

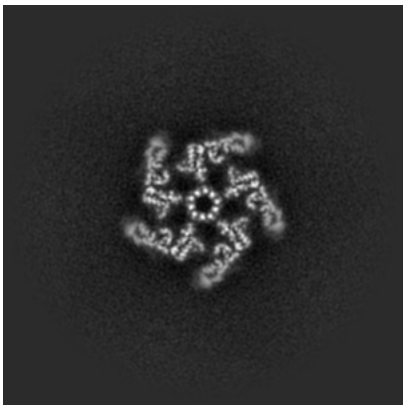
6.2.1 Primary map



X Index: 123

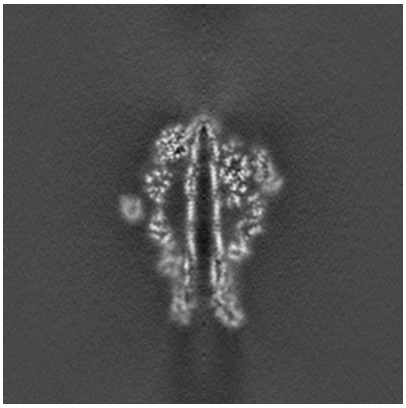


Y Index: 123

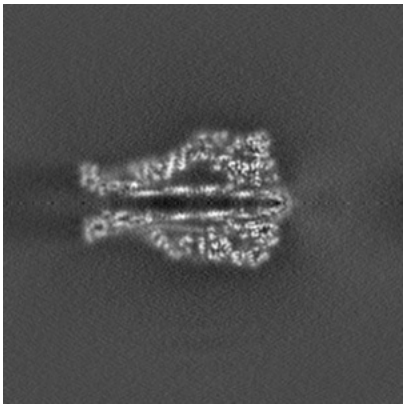


Z Index: 123

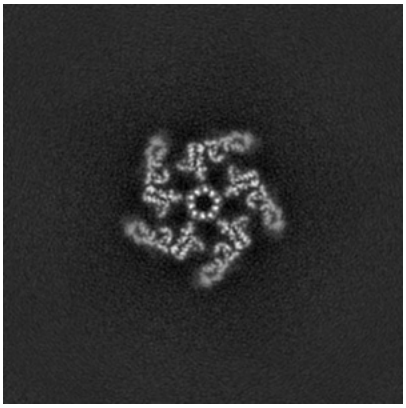
6.2.2 Raw map



X Index: 123



Y Index: 123

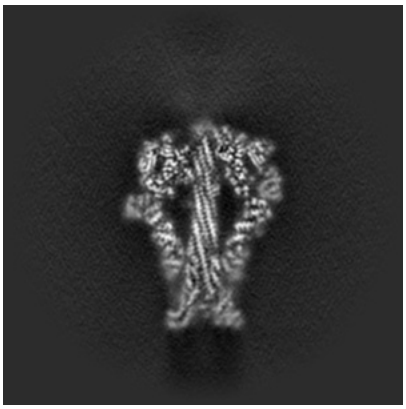


Z Index: 123

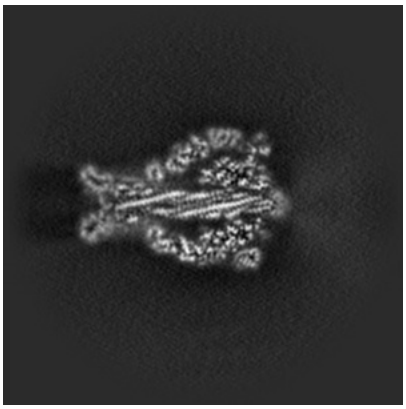
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

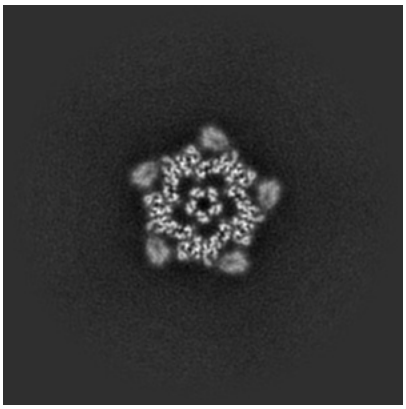
6.3.1 Primary map



X Index: 130

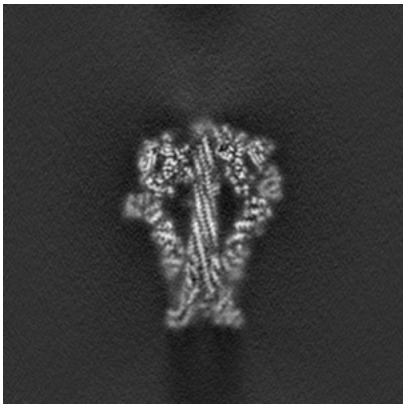


Y Index: 129

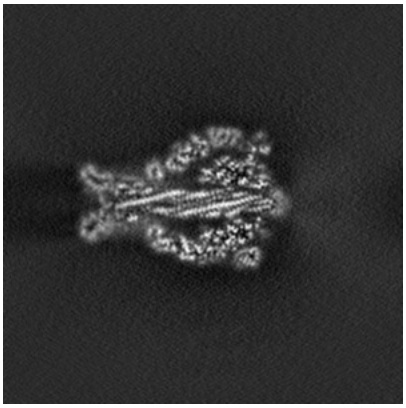


Z Index: 132

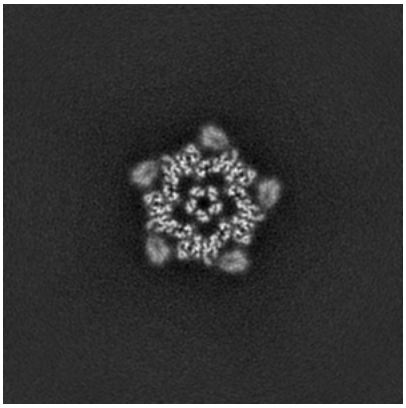
6.3.2 Raw map



X Index: 130



Y Index: 129

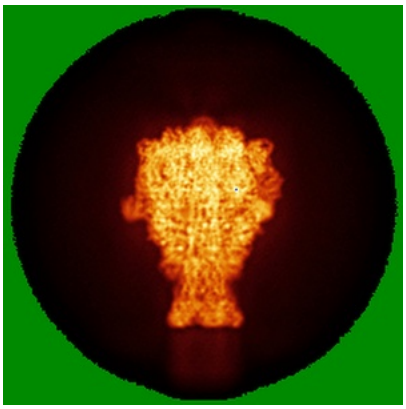


Z Index: 132

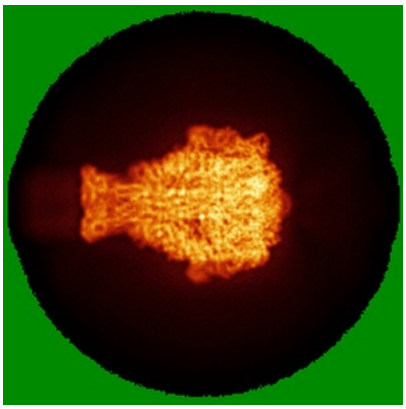
The images above show the largest variance slices of the map in three orthogonal directions.

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

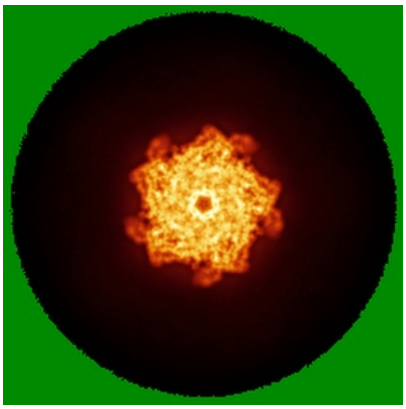
6.4.1 Primary map



X

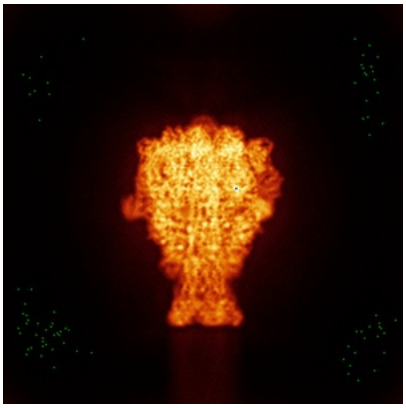


Y

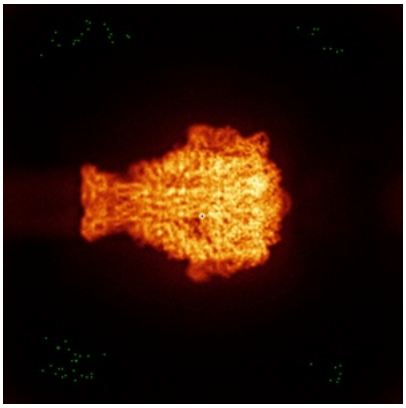


Z

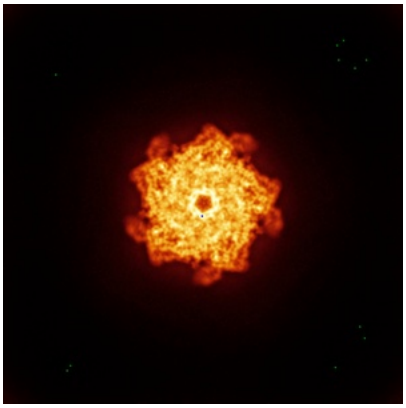
6.4.2 Raw map



X



Y

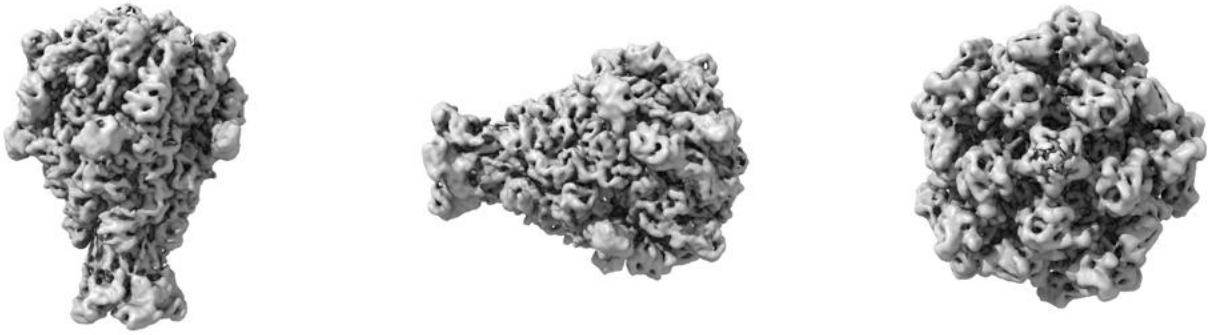


Z

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)

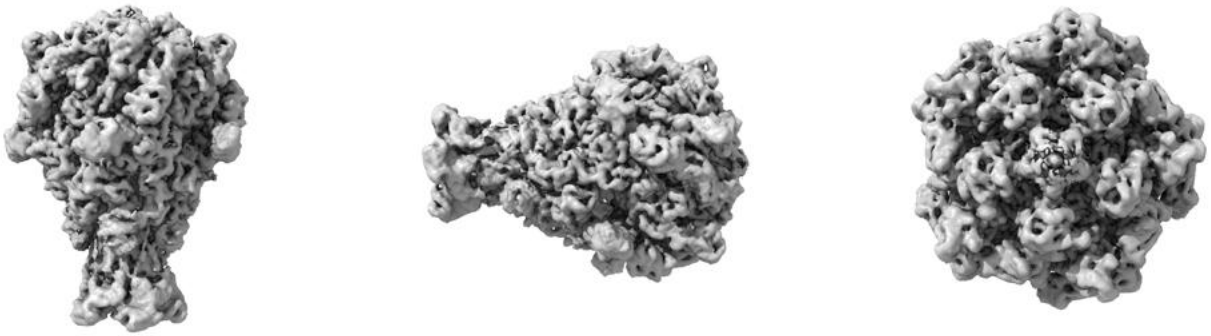
6.5.1 Primary map



X Y Z

The images above show the 3D surface view of the map at the recommended contour level 0.29. 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.

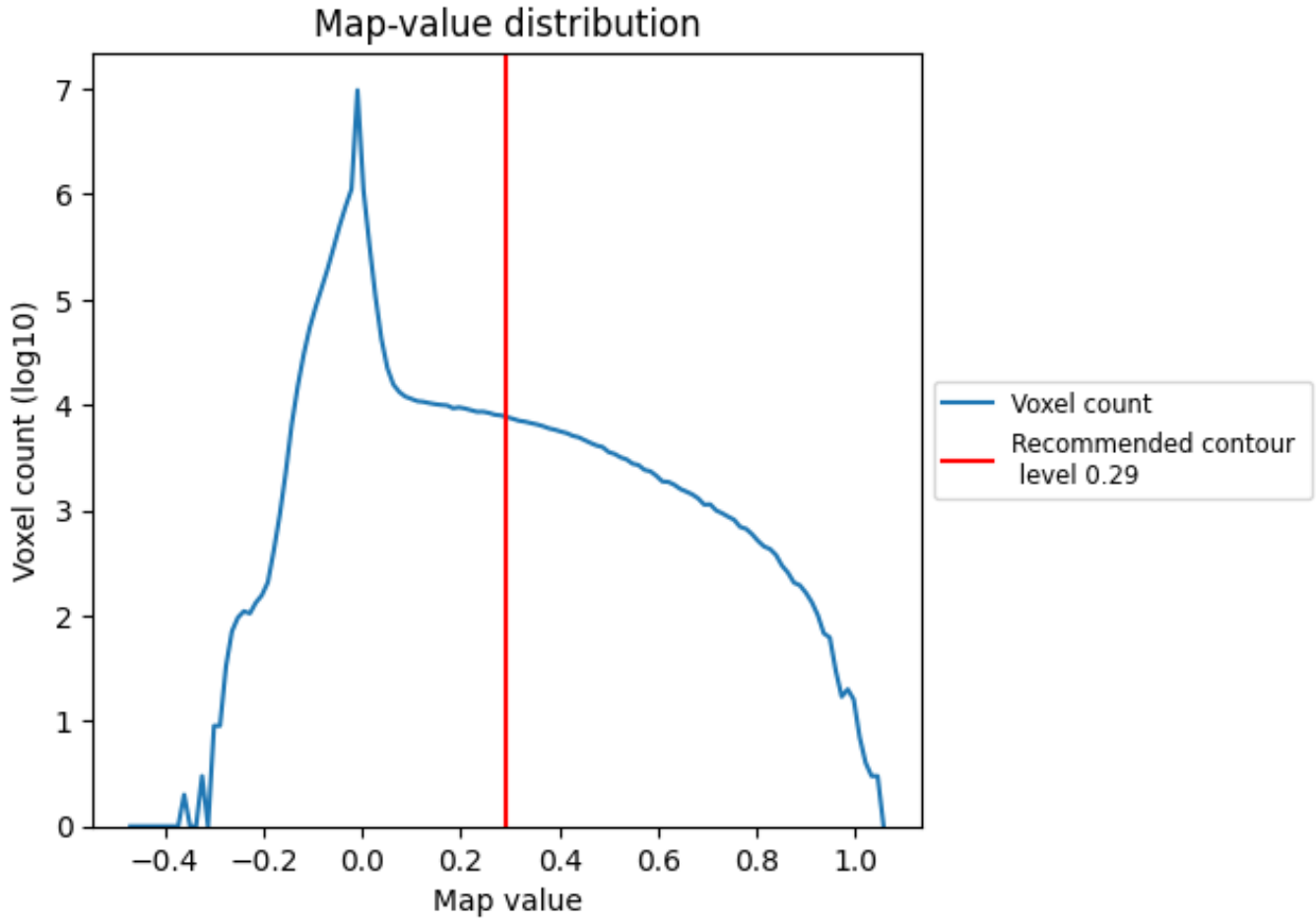
6.6 Mask visualisation (i)

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

7 Map analysis

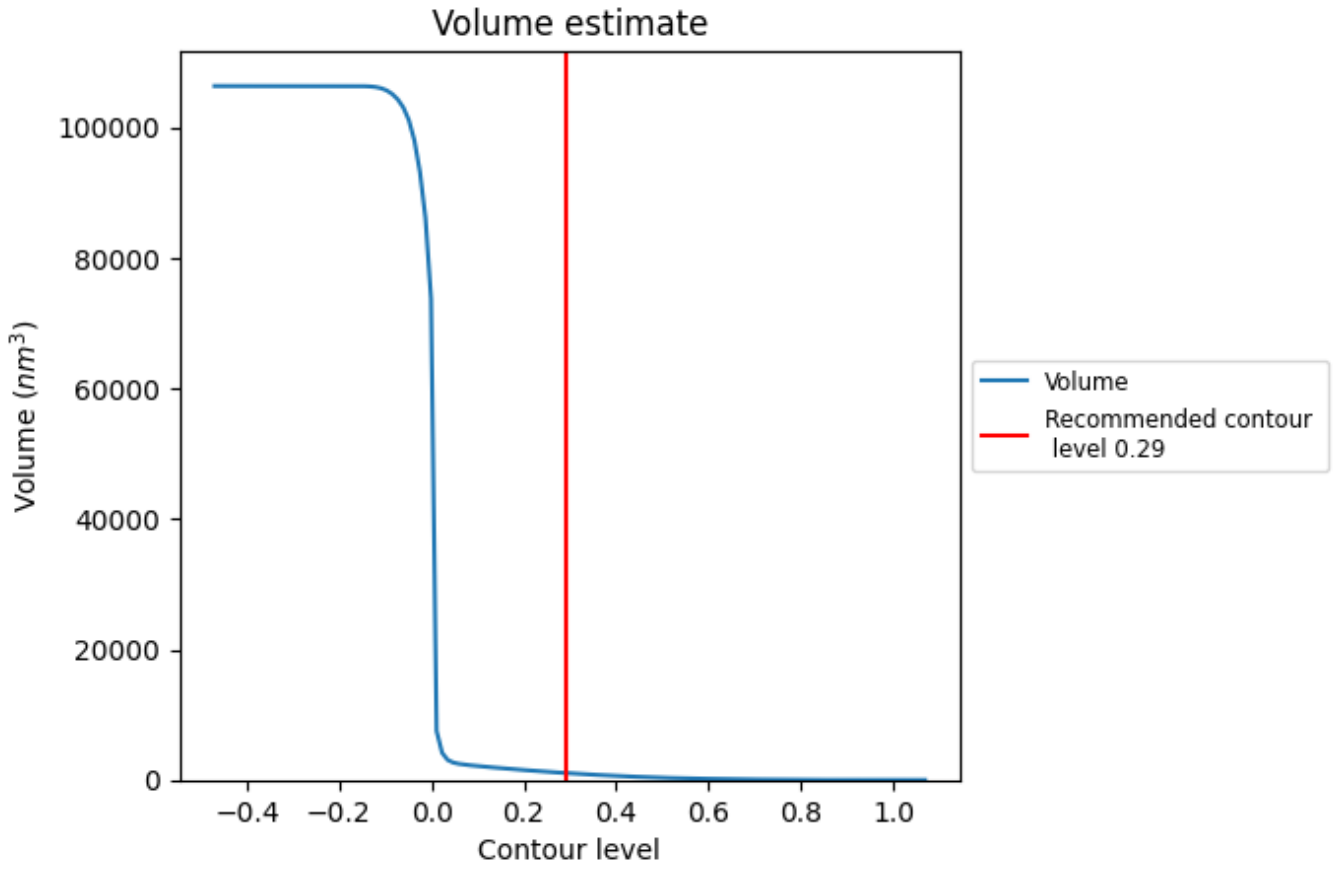
This section contains the results of statistical analysis of the map.

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.

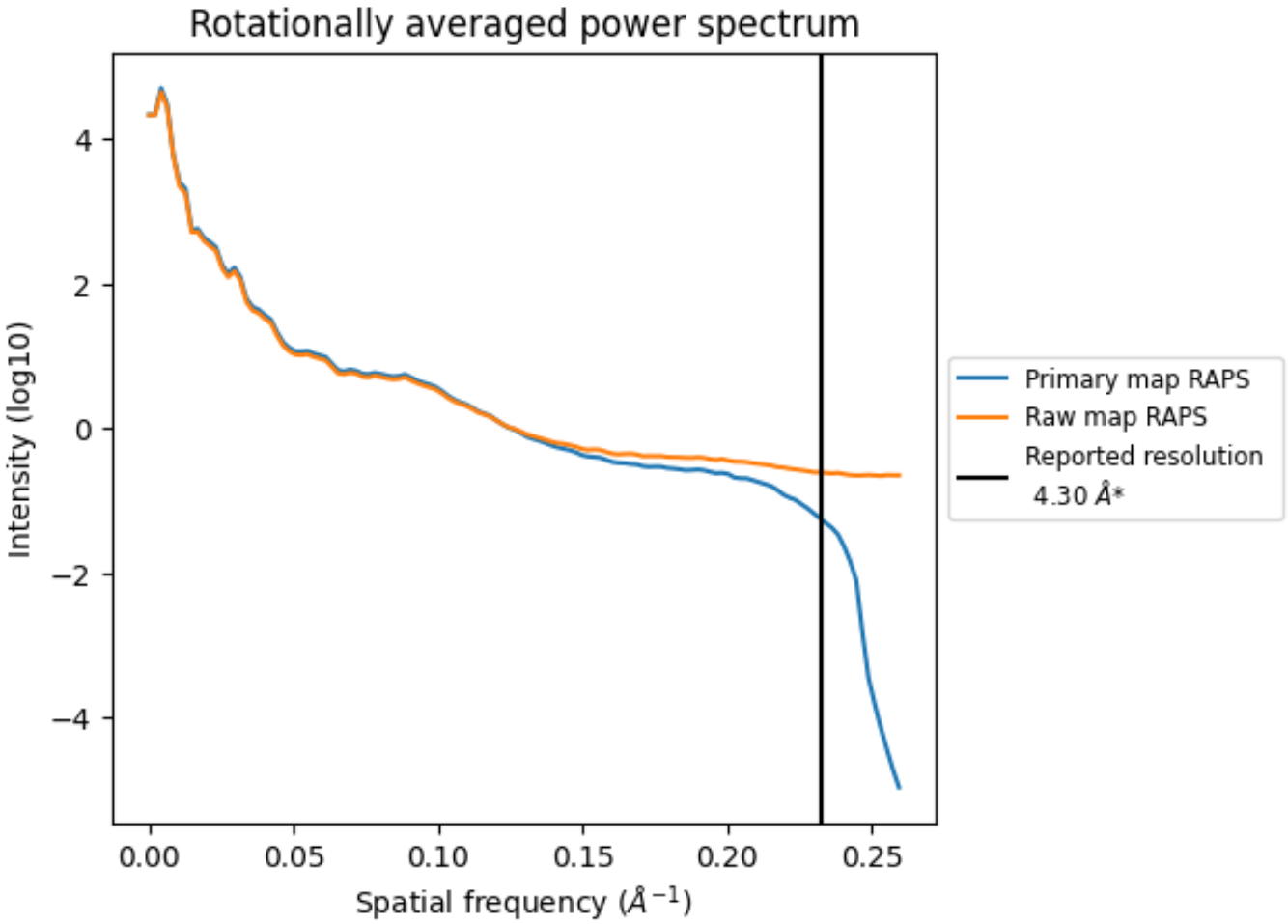
7.2 Volume estimate



The volume at the recommended contour level is 1065 nm^3; this corresponds to an approximate mass of 962 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)

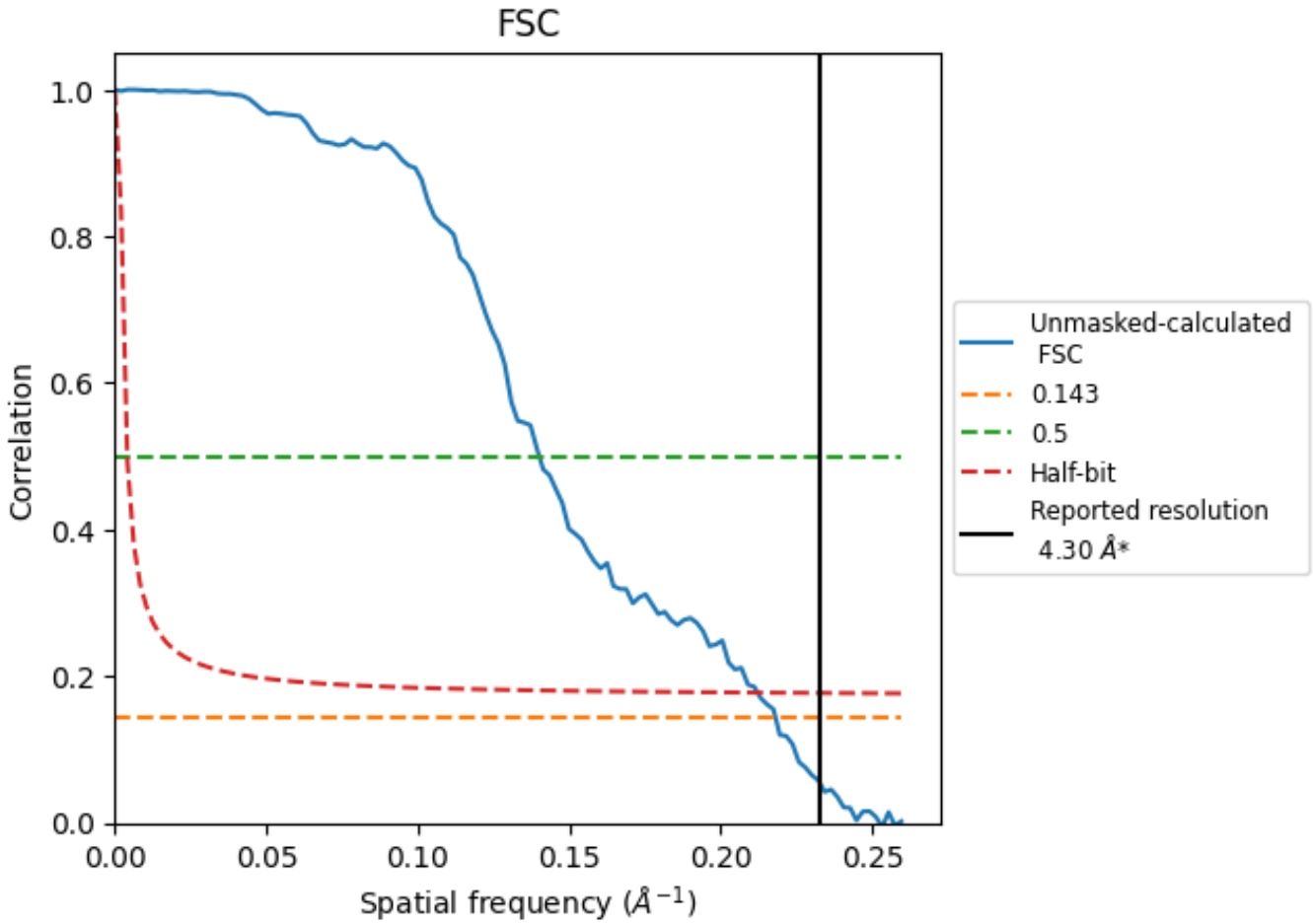


*Reported resolution corresponds to spatial frequency of 0.233 Å^{-1}

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 0.233 Å^{-1}

8.2 Resolution estimates (i)

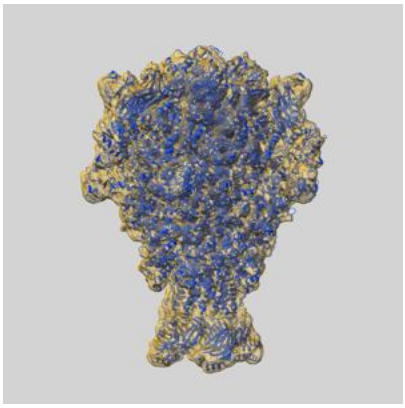
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	4.30	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	4.59	7.14	4.71

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps.

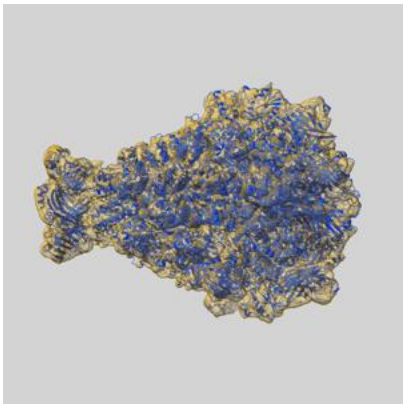
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-48371 and PDB model 9MLG. Per-residue inclusion information can be found in section 3 on page 19.

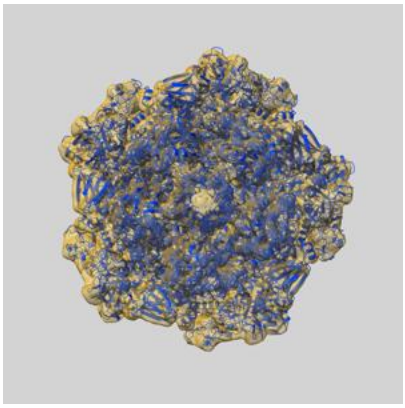
9.1 Map-model overlay



X



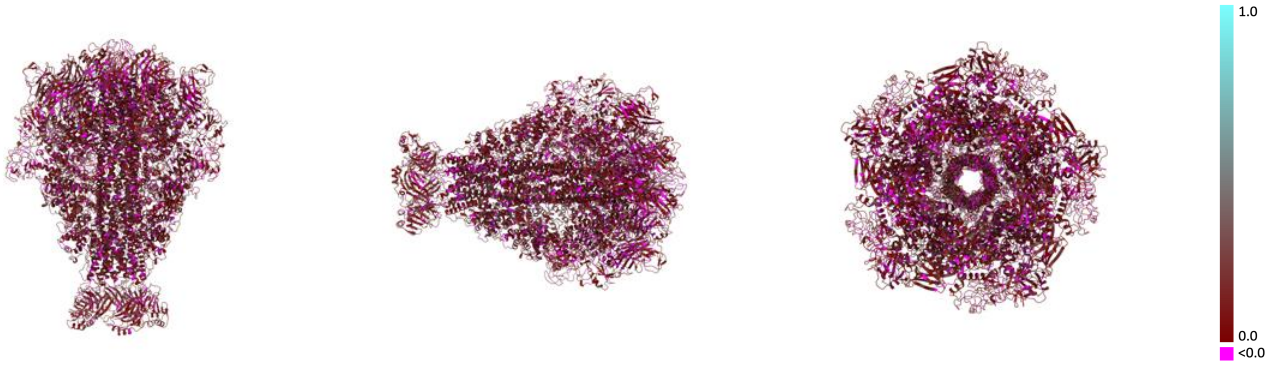
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.29 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.

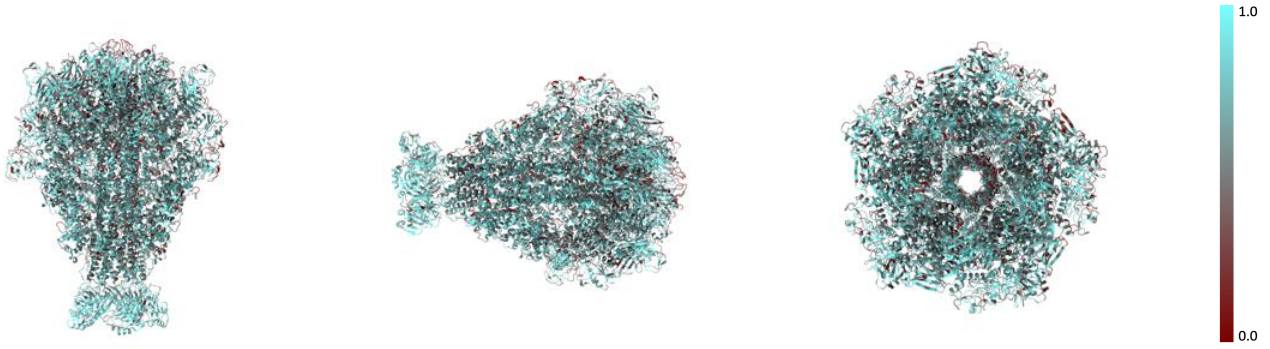
9.2 Q-score mapped to coordinate model (i)



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.

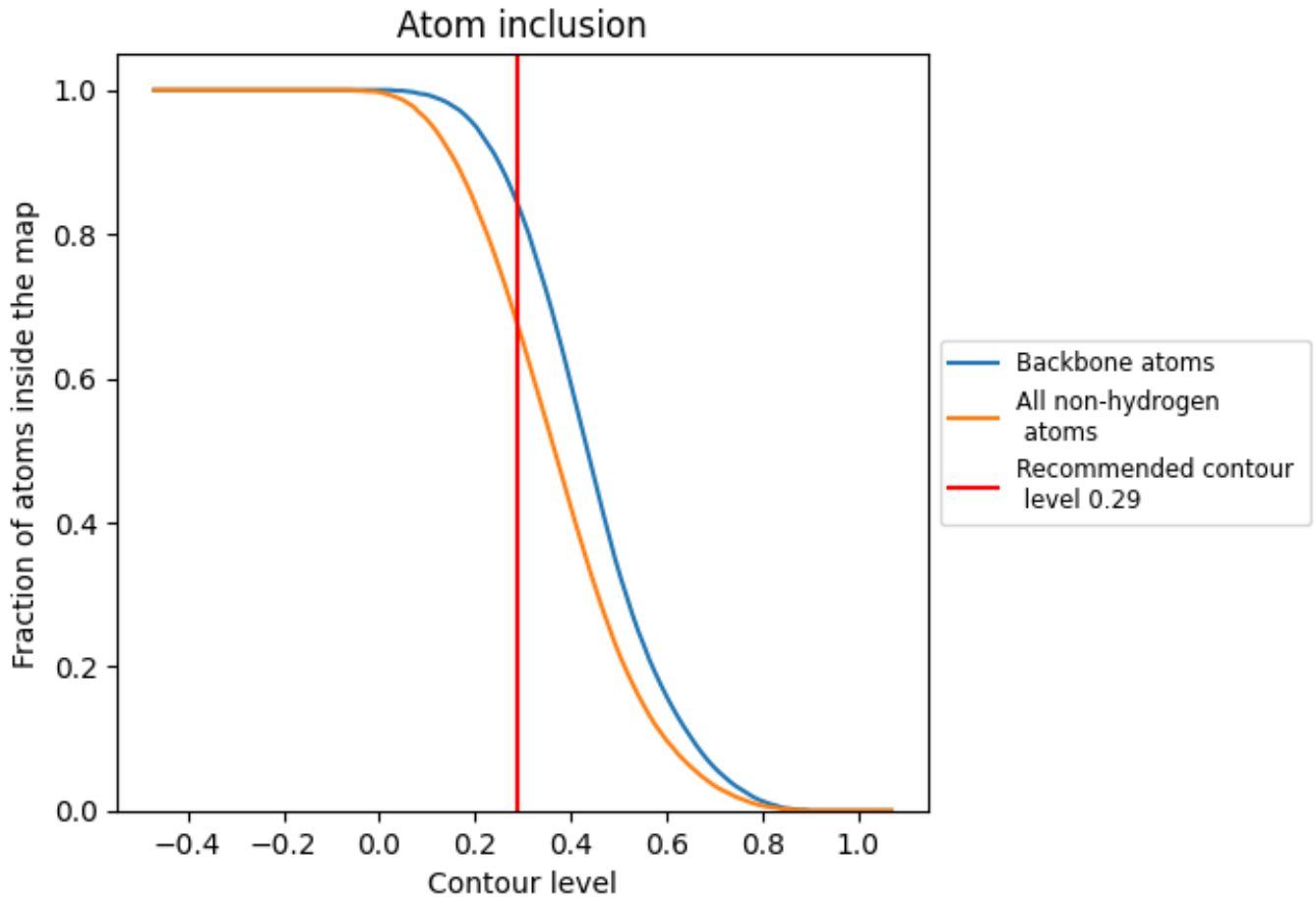
9.3 Atom inclusion mapped to coordinate model (i)



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 (0.29).

9.4 Atom inclusion (i)



At the recommended contour level, 84% of all backbone atoms, 67% 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 (0.29) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.6720	0.1370
A	0.6740	0.1390
B	0.6600	0.1280
C	0.6610	0.1250
D	0.6610	0.1310
E	0.7010	0.1610