Full wwPDB EM Validation Report ⓘ

Mar 3, 2025 – 08:23 PM JST

PDB ID	:	8X48
EMDB ID	:	EMD-38042
Title	:	Cryo-EM structure of Ryanodine receptor 1 (EGTA)
Authors	:	Chen, Q.; Hu, H.
Deposited on	:	2023-11-15
Resolution	:	4.00 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:

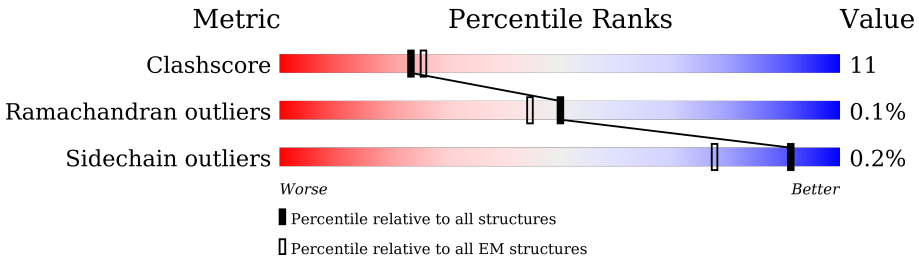
EMDB validation analysis	:	0.0.1.dev117
MolProbity	:	4.02b-467
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.41.2

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 4.00 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	5037	51% 14% 35%
1	B	5037	51% 14% 35%
1	C	5037	51% 14% 35%
1	D	5037	51% 14% 35%

2 Entry composition (i)

There is only 1 type of molecule in this entry. The entry contains 95972 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called Ryanodine receptor 1.

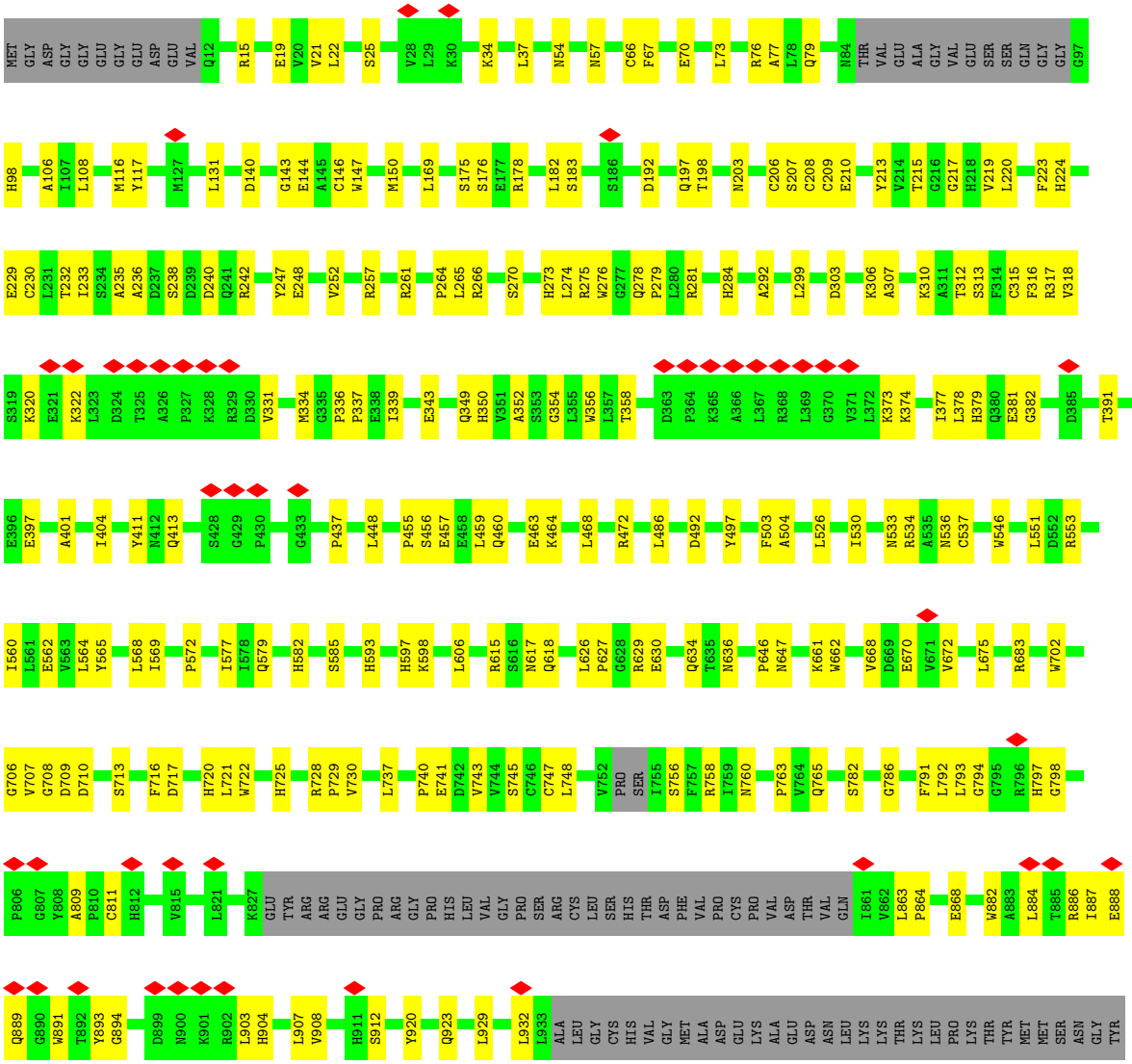
Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	3289	Total	C	N	O	S	0	0
			23993	15289	4189	4376	139		
1	B	3289	Total	C	N	O	S	0	0
			23993	15289	4189	4376	139		
1	C	3289	Total	C	N	O	S	0	0
			23993	15289	4189	4376	139		
1	D	3289	Total	C	N	O	S	0	0
			23993	15289	4189	4376	139		

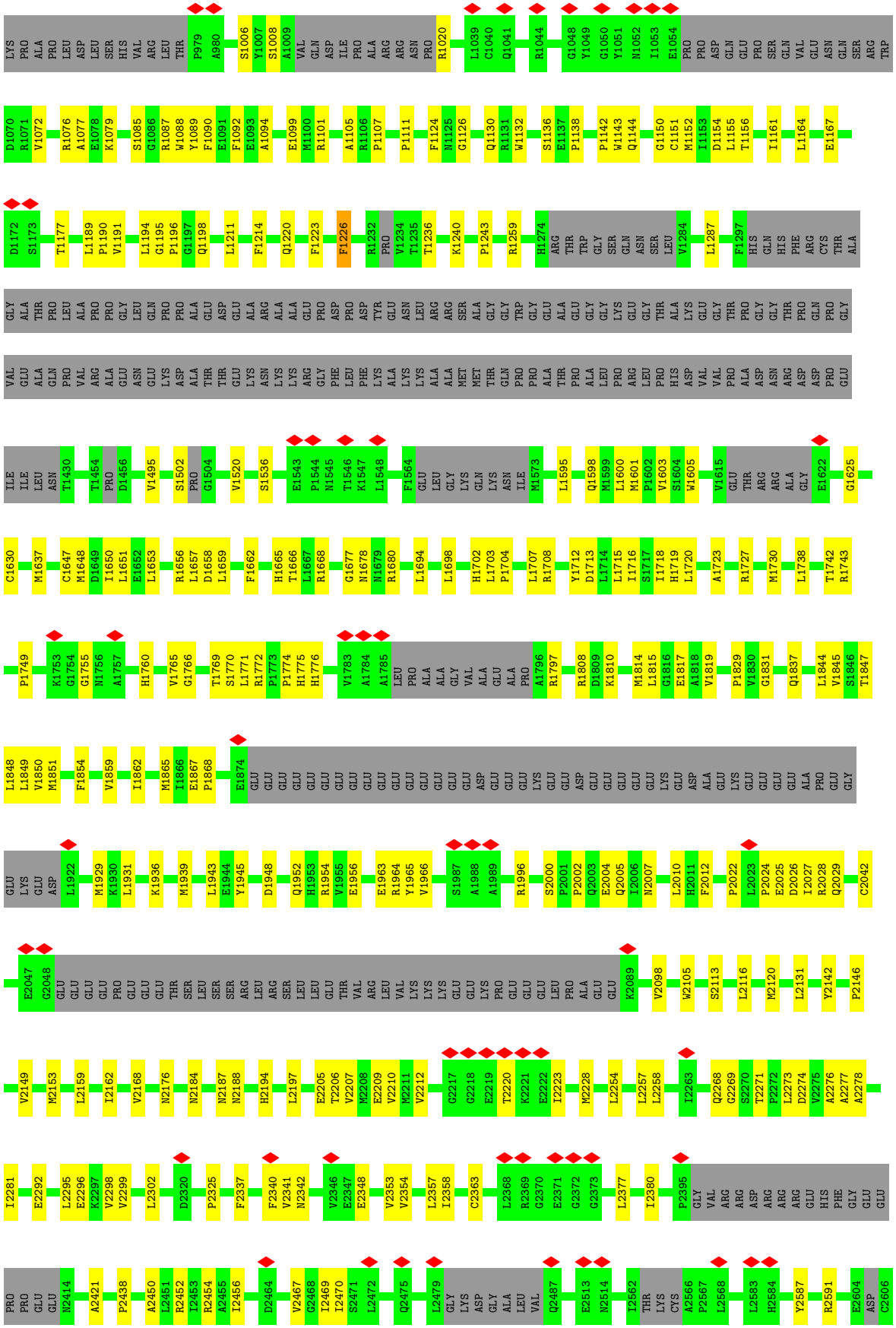
3 Residue-property plots (i)

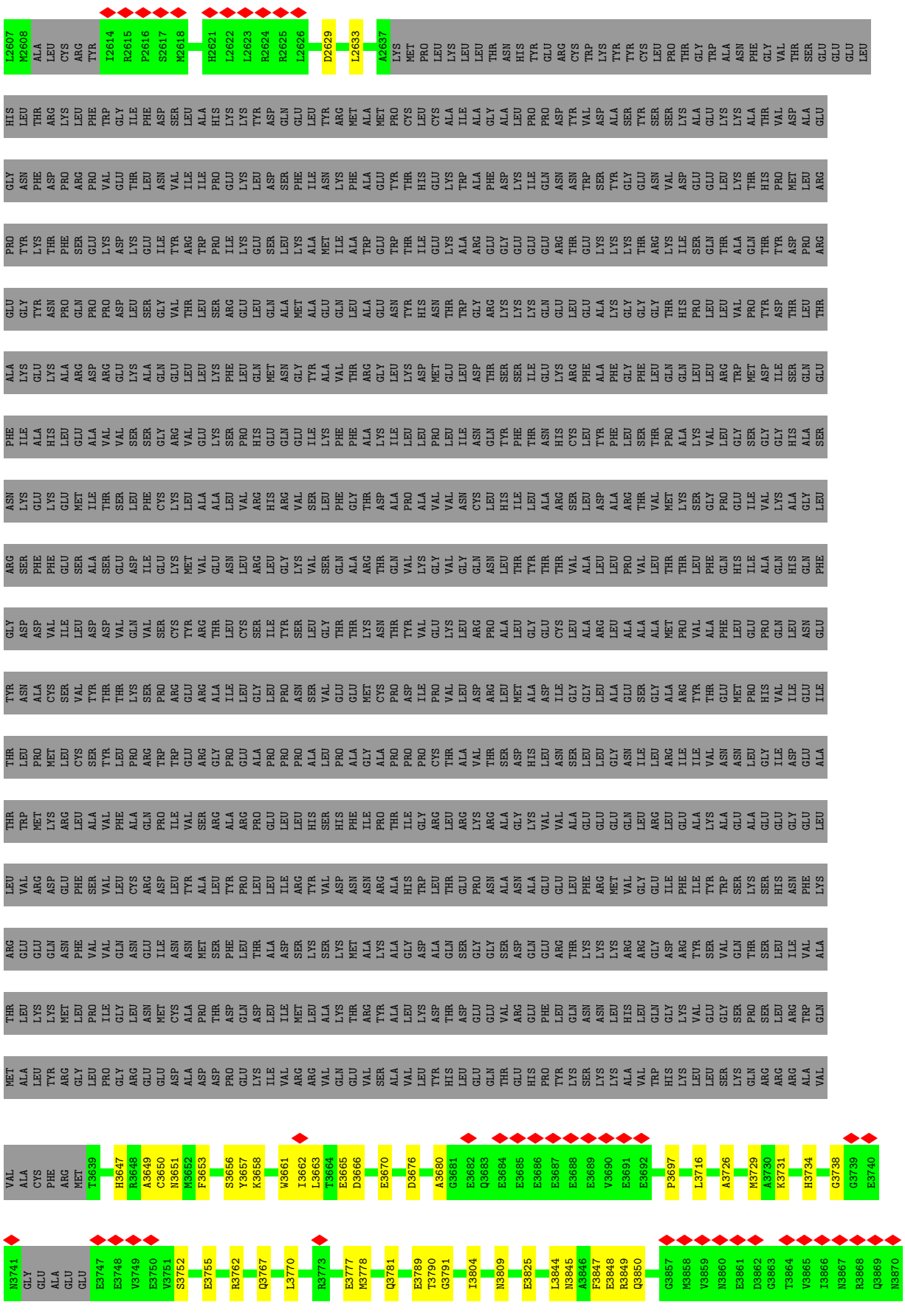
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion in map density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

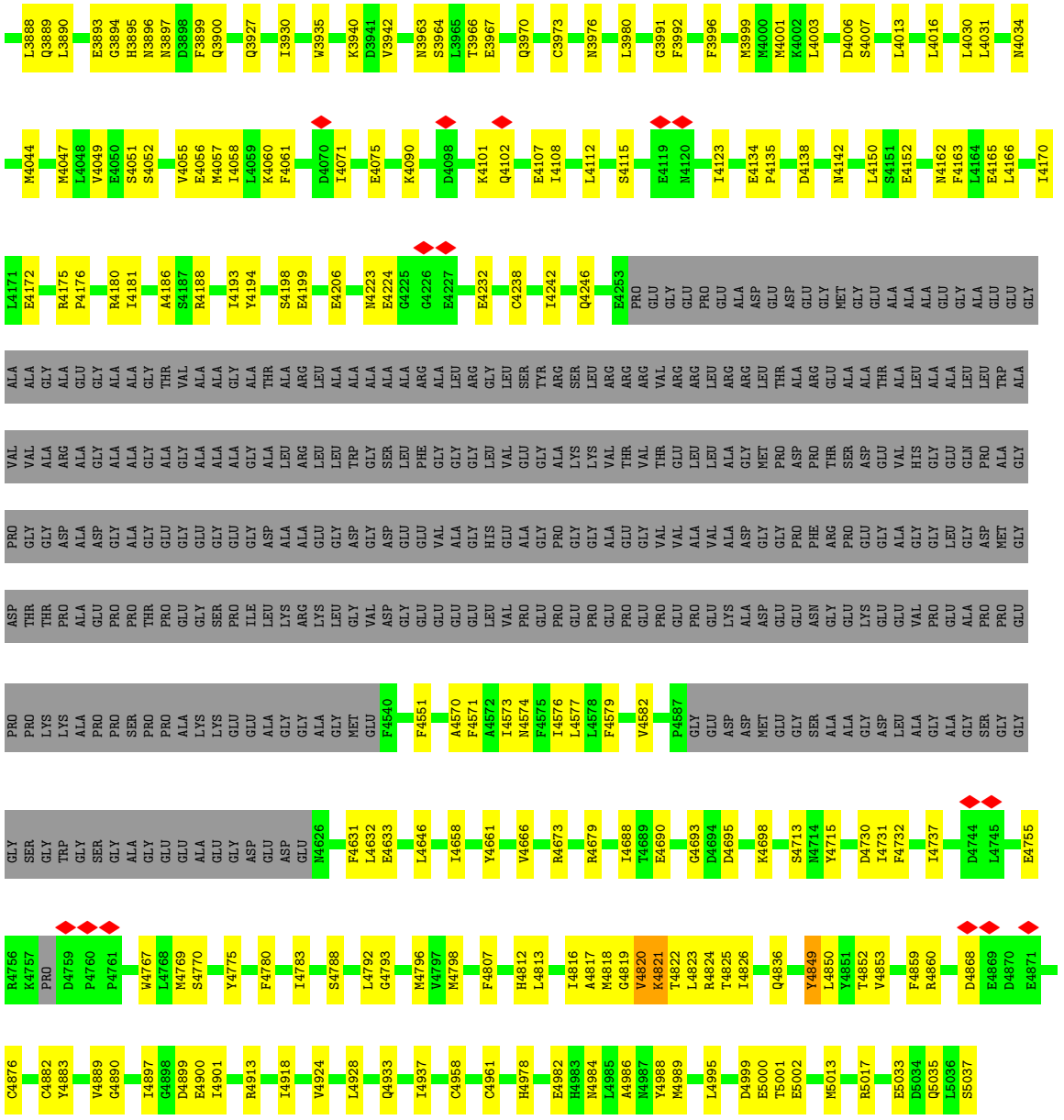
- Molecule 1: Ryanodine receptor 1

Chain A:



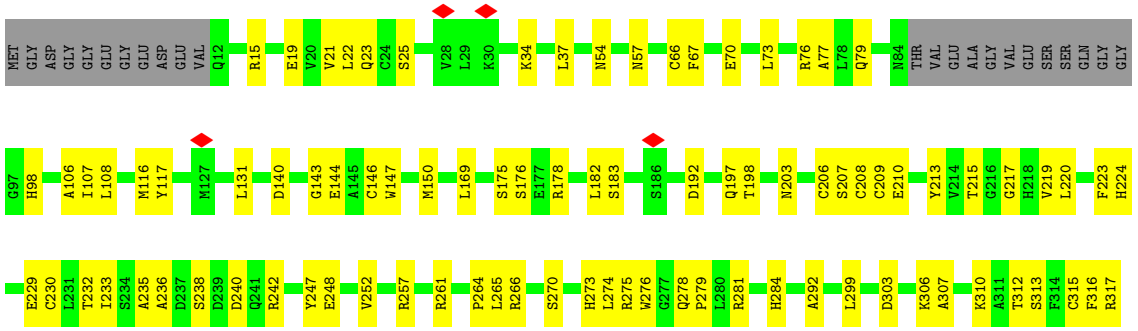


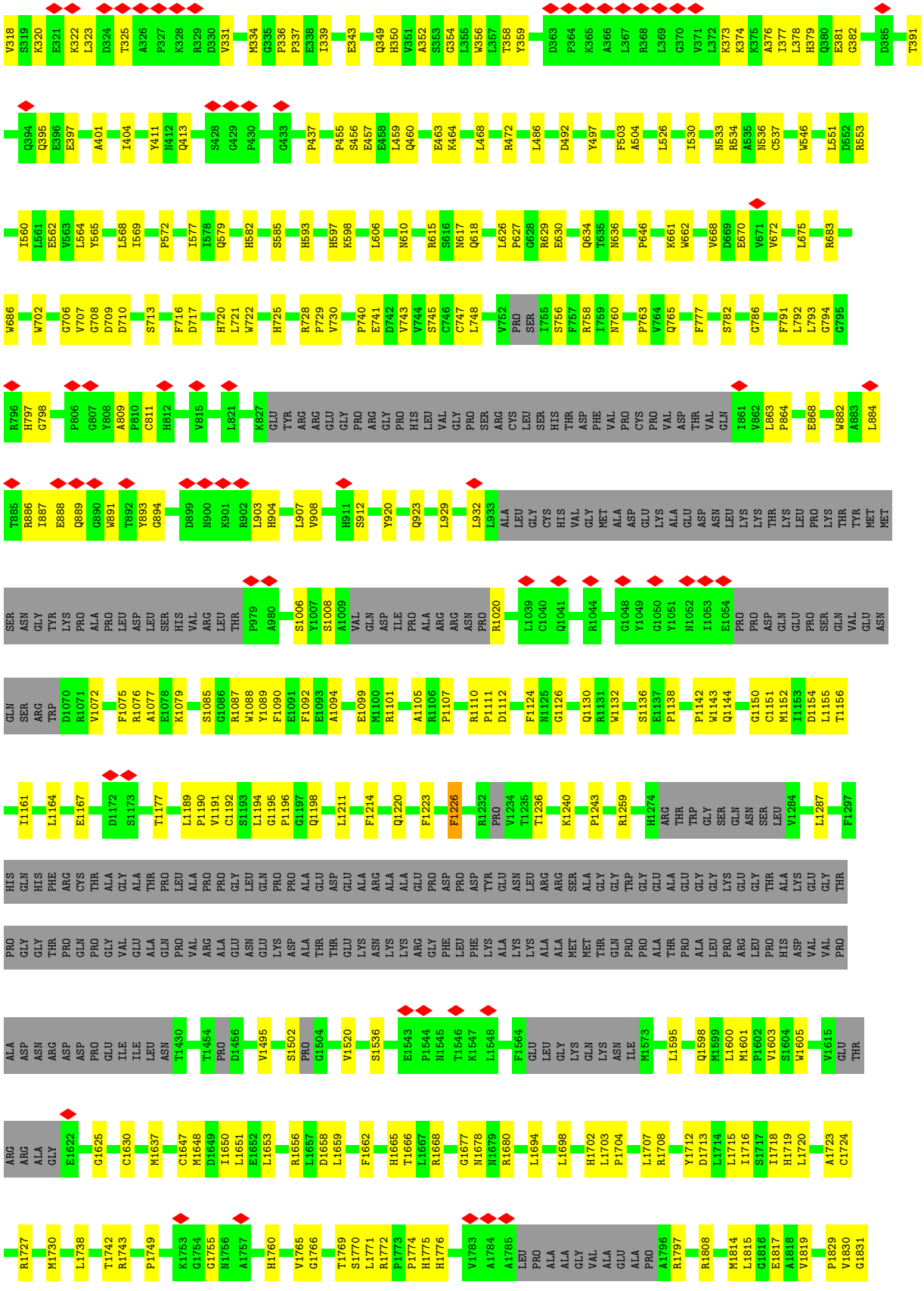

L2607 M2608 ALA LEU CYS ARG TYR I2614 R2615 P2616 S2617 M2618 H2621 L2622 L2623 R2624 R2625 L2626 D2629 L2633 A2637
T3639 H3647 R3648 A3649 C3650 N3651 M3652 F3653 S3656 Y3657 K3658 W3661 I3662 L3663 T3664 E3665 D3666 E3670 D3676 A3680 G3681 E3682 Q3683 E3684 E3685 E3686 E3687 E3688 E3689 V3690 E3691 E3692 P3697 L3716 A3726 M3729 A3730 K3731 H3734 G3738 G3739 E3740
N3741 E3747 E3748 V3749 E3750 V3751 S3752 E3755 R3762 Q3767 L3770 R3773 E3777 M3778 Q3781 E3789 T3790 G3791 I3804 N3809 E3825 L3844 N3845 A3846 F3847 E3848 R3849 Q3850 G3857 M3858 V3859 N3860 E3861 D3862 G3863 T3864 V3865 I3866 N3867 R3868 Q3869 N3870

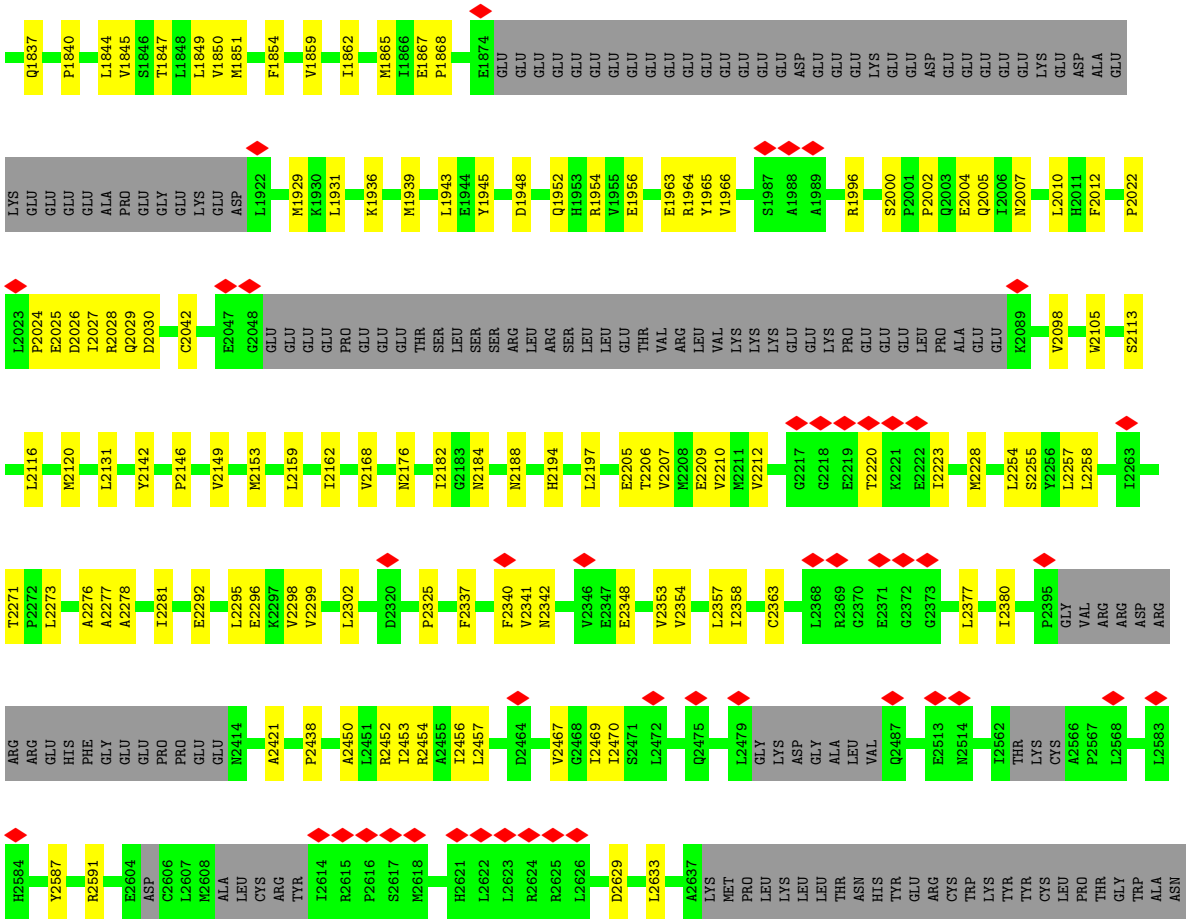


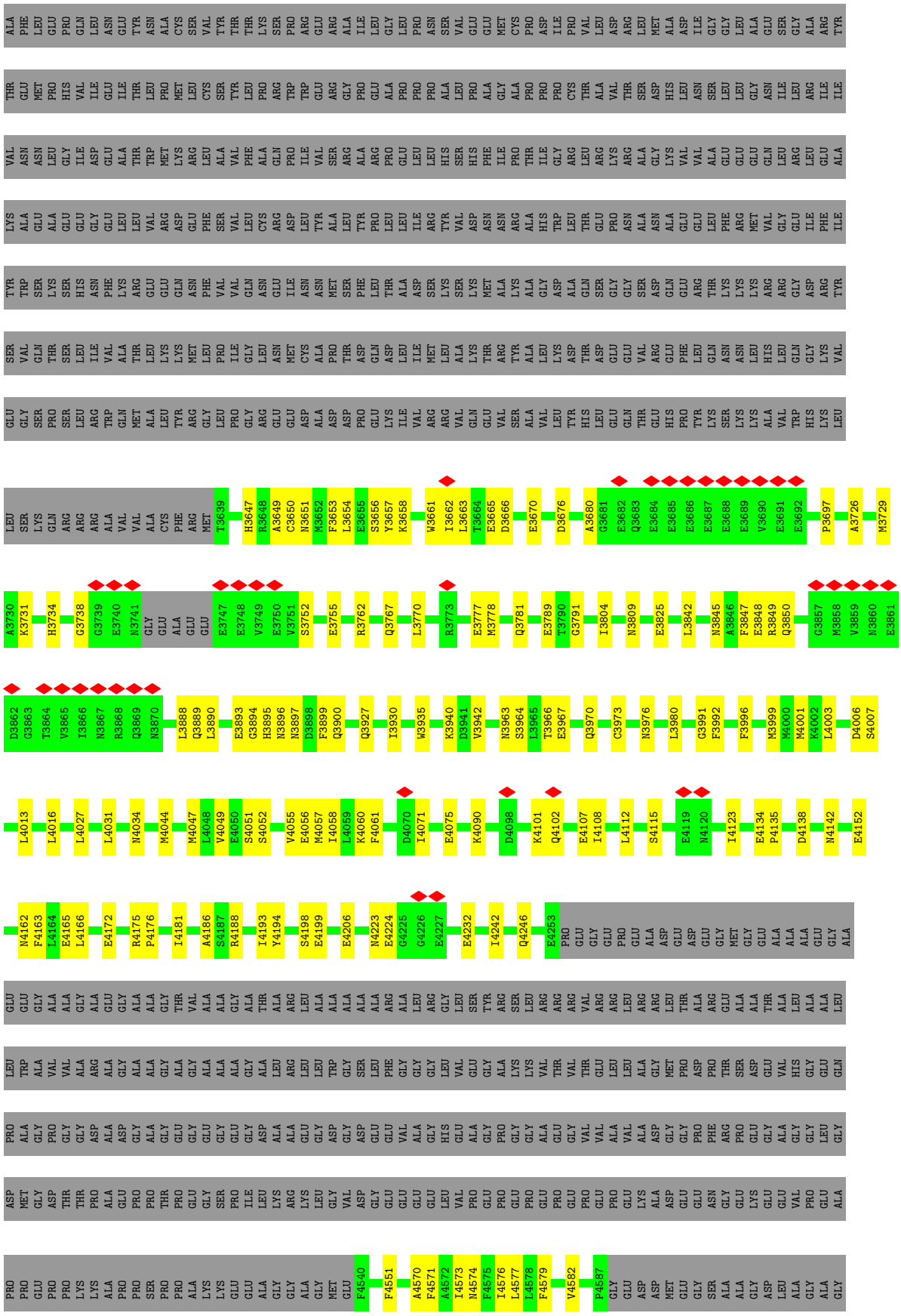
• Molecule 1: Ryanodine receptor 1

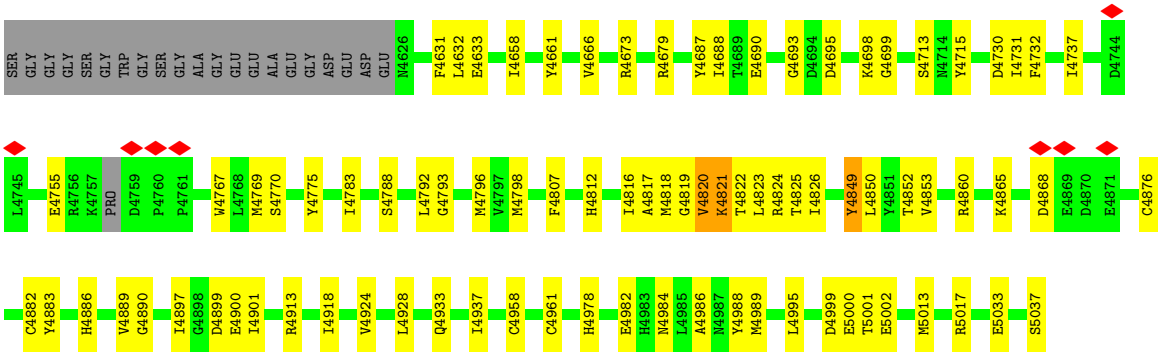
Chain B:

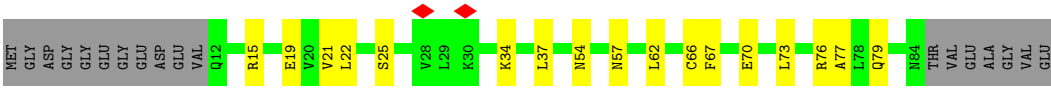



V318 S319 K320 E321 K322 L323 D324 T325 A326 P327 K328 R329 D330 V331 M334 G335 P336 P337 E338 I339 E343 Q349 H350 V351 A352 S353 G354 L355 W356 L357 T358 Y359 D363 P364 K365 A366 L367 R368 L369 G370 V371 L372 K373 K374 K375 A376 I377 L378 H379 Q380 E381 G382 D385 T391
Q394 Q395 E396 E397 A401 I404 Y411 N412 Q413 S428 G429 P430 G433 P437 P455 S456 E457 E458 L459 Q460 E463 K464 L468 R472 L486 D492 Y497 F503 A504 L526 I530 N533 R534 A535 N536 C537 W546 L551 D552 R553
I560 L561 E562 V563 L564 Y565 L568 I569 P572 I577 I578 Q579 H582 S585 H593 H597 K598 L606 N610 R615 S616 N617 Q618 L626 P627 G628 R629 E630 Q634 T635 N636 P646 K661 W662 V668 D669 E670 V671 V672 L675 R683
W686 W702 G706 V707 G708 D709 D710 S713 F716 D717 H720 L721 W722 H725 R728 P729 V730 P740 E741 D742 V743 V744 S745 C746 C747 L748 V752 PRO SER I755 S756 F757 R758 I759 N760 P763 V764 Q765 F777 S782 G786 F791 L792 L793 G794 G795
R796 H797 G798 P806 G807 Y808 A809 P810 C811 H812 V815 L821 K827 GLU TYR ARG ARG GLU GLY PRO ARG GLY PRO HIS LEU VAL GLY PRO SER ARG CYS LEU SER HIS THR ASP PHE VAL PRO CYS PRO VAL ASP THR VAL GLN I861 V862 L863 P864 E868 W882 A883 L884
T885 R886 I887 E888 Q889 G890 W891 T892 Y893 G894 D899 N900 K901 R902 L903 H904 L907 V908 H911 S912 Y920 Q923 L929 L932 L933 ALA LEU GLY CYS HIS VAL GLY MET ALA ASP GLU LYS ALA GLU ASP ASN LEU LYS LYS THR LYS LEU PRO LYS THR TYR MET MET
SER ASN GLY TYR LYS PRO ALA PRO LEU ASP LEU SER HIS VAL ARG LEU THR P979 A980 S1006 Y1007 S1008 A1009 VAL GLN ASP ILE PRO ALA ARG ARG ASN PRO R1020 L1039 C1040 Q1041 R1044 G1048 Y1049 G1050 Y1051 N1052 I1053 E1054 PRO PRO ASP GLN GLU PRO SER GLN VAL GLU ASN
GLN SER ARG TRP D1070 R1071 V1072 F1075 R1076 A1077 E1078 K1079 S1085 G1086 R1087 W1088 Y1089 F1090 E1091 F1092 E1093 A1094 E1099 M1100 R1101 A1105 R1106 P1107 R1110 P1111 D1112 F1124 N1125 G1126 Q1130 R1131 W1132 S1136 E1137 P1138 P1142 W1143 Q1144 G1150 C1151 M1152 I1153 D1154 L1155 T1156
I1161 L1164 E1167 D1172 S1173 T1177 L1189 P1190 V1191 C1192 S1193 L1194 G1195 P1196 G1197 Q1198 L1211 F1214 Q1220 F1223 F1226 R1232 PRO V1234 T1235 T1236 K1240 P1243 R1259 H1274 ARG THR TRP GLY SER GLN ASN SER LEU V1284 L1287 F1297
HIS GLN HIS PHE ARG CYS THR ALA GLY ALA THR PRO LEU ALA PRO PRO GLY LEU GLN PRO PRO ALA ASP GLU ALA ARG ALA ALA GLU PRO ASP PRO ASP TYR GLU ASN LEU ARG ARG SER ALA GLY GLY TRP GLY GLU ALA GLU GLY GLY LYS LEU GLY GLY GLU ARG GLY THR
PRO GLY GLY THR PRO GLN PRO GLY VAL GLU ALA GLN PRO VAL ARG ALA GLU ASN GLU LYS ASP ALA THR THR GLU LYS ASN LYS ARG GLY PHE LEU PHE LYS ALA LYS LYS ALA ALA MET MET THR GLN PRO PRO ALA THR PRO ALA LEU LEU PRO ARG LEU PRO HIS ASP VAL VAL PRO
ALA ASP ASN ARG ASP PRO GLU ILE ILE LEU ASN T1430 T1454 PRO D1456 V1495 S1502 PRO G1504 V1520 S1536 E1543 P1544 N1545 T1546 K1547 L1548 F1564 GLU LEU GLY LYS GLN LYS ASN ILE M1573 L1595 Q1598 M1599 L1600 M1601 P1602 V1603 S1604 W1605 V1615 GLU THR
ARG ARG ALA GLY E1622 G1625 C1630 M1637 C1647 M1648 D1649 I1650 L1651 E1652 L1653 R1656 L1657 D1658 L1659 F1662 H1665 T1666 L1667 R1668 G1677 N1678 N1679 R1680 L1694 L1698 H1702 L1703 P1704 L1707 R1708 Y1712 D1713 L1714 L1715 I1716 S1717 I1718 H1719 L1720 A1723 C1724
R1727 M1730 L1738 T1742 R1743 P1749 K1753 G1754 G1755 N1756 A1757 H1760 V1765 G1766 T1769 S1770 L1771 R1772 P1773 P1774 H1775 H1776 V1783 A1784 A1785 LEU PRO ALA ALA GLY VAL ALA GLU ALA PRO A1796 R1797 R1808 M1814 L1815 G1816 E1817 A1818 V1819 P1829 V1830 G1831



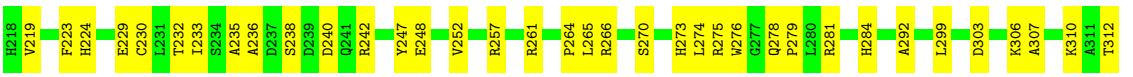


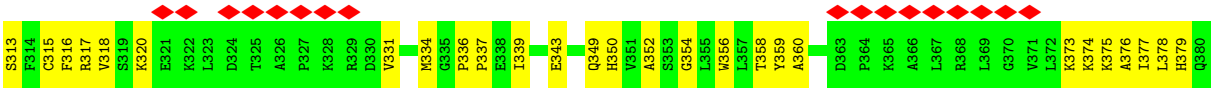


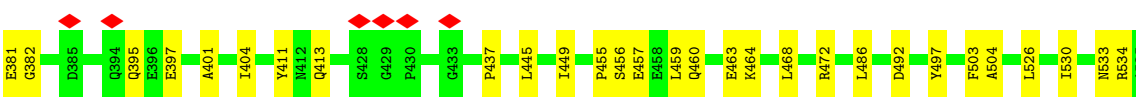


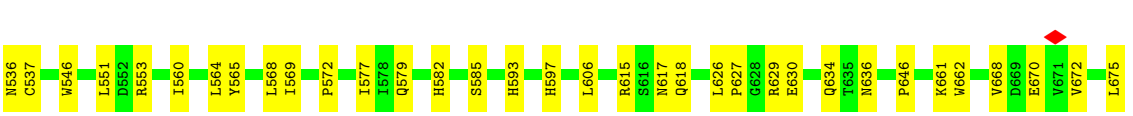
• Molecule 1: Ryanodine receptor 1

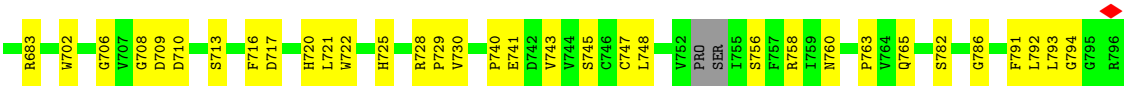
Chain C:

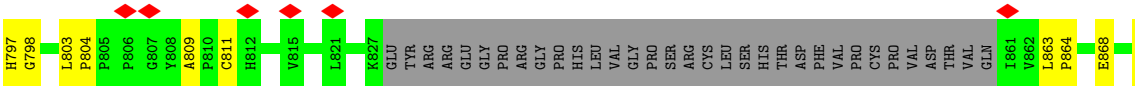


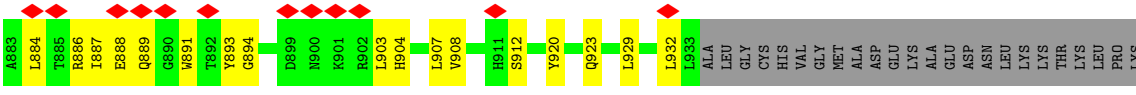


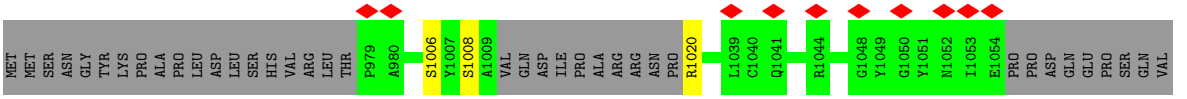


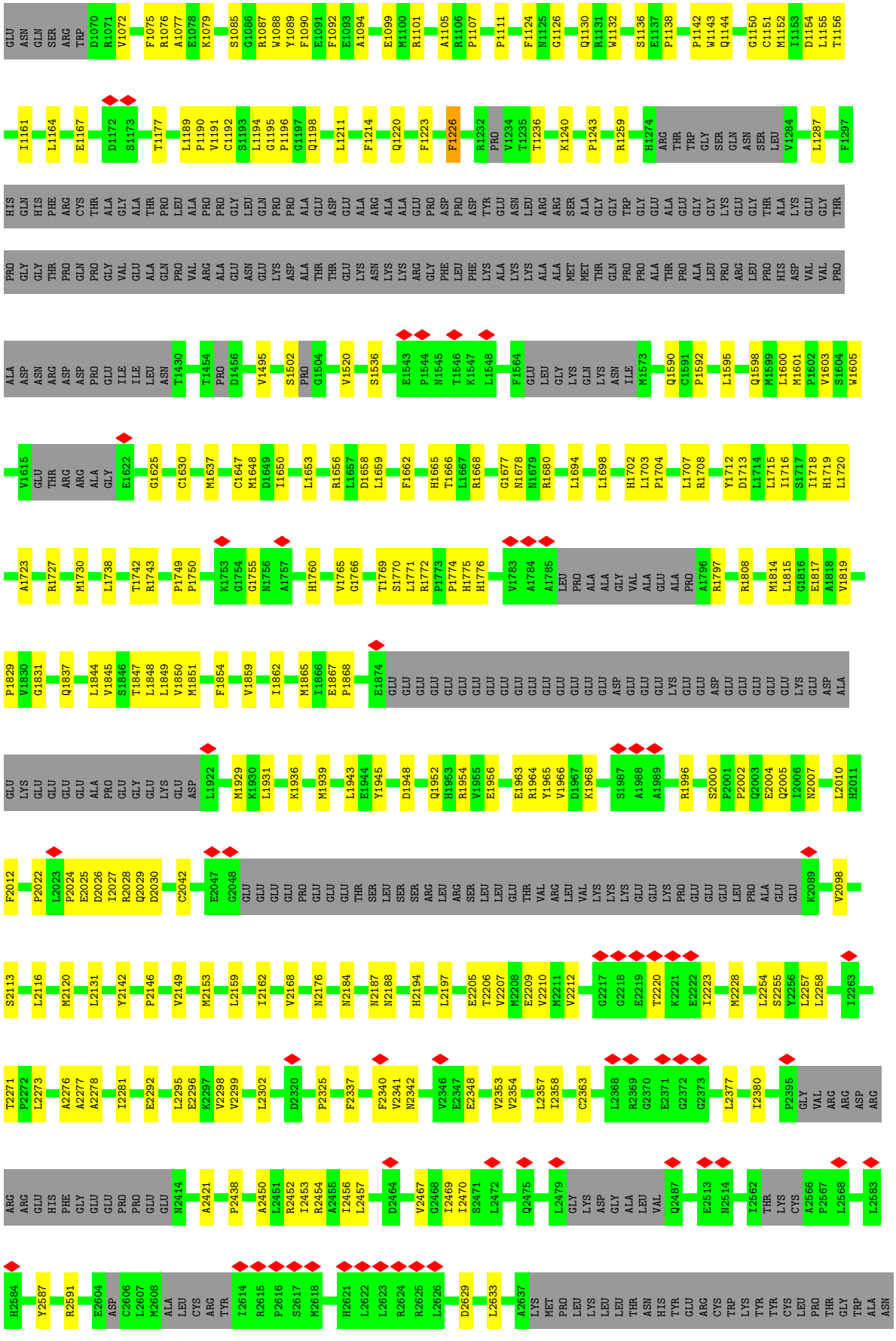


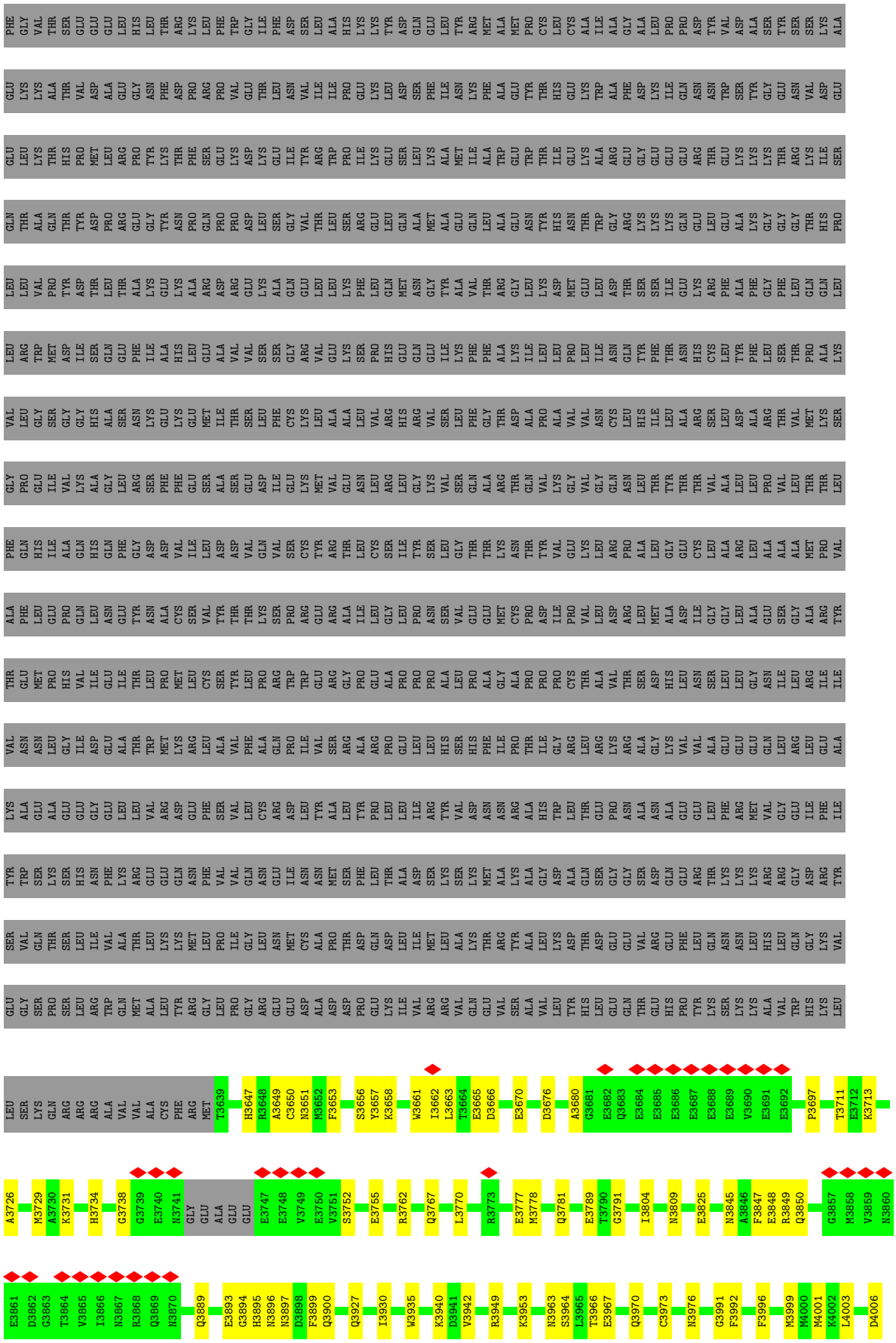


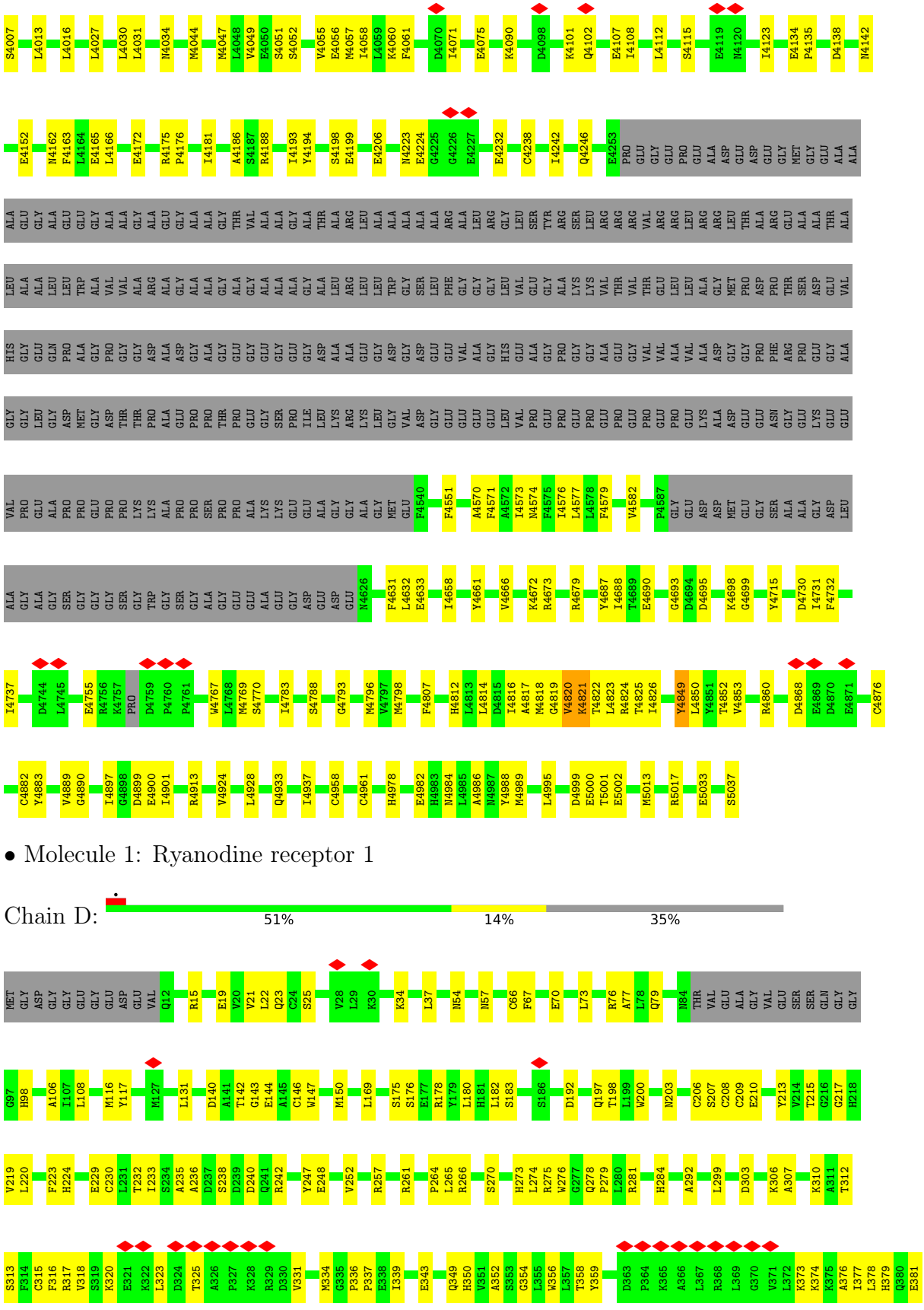






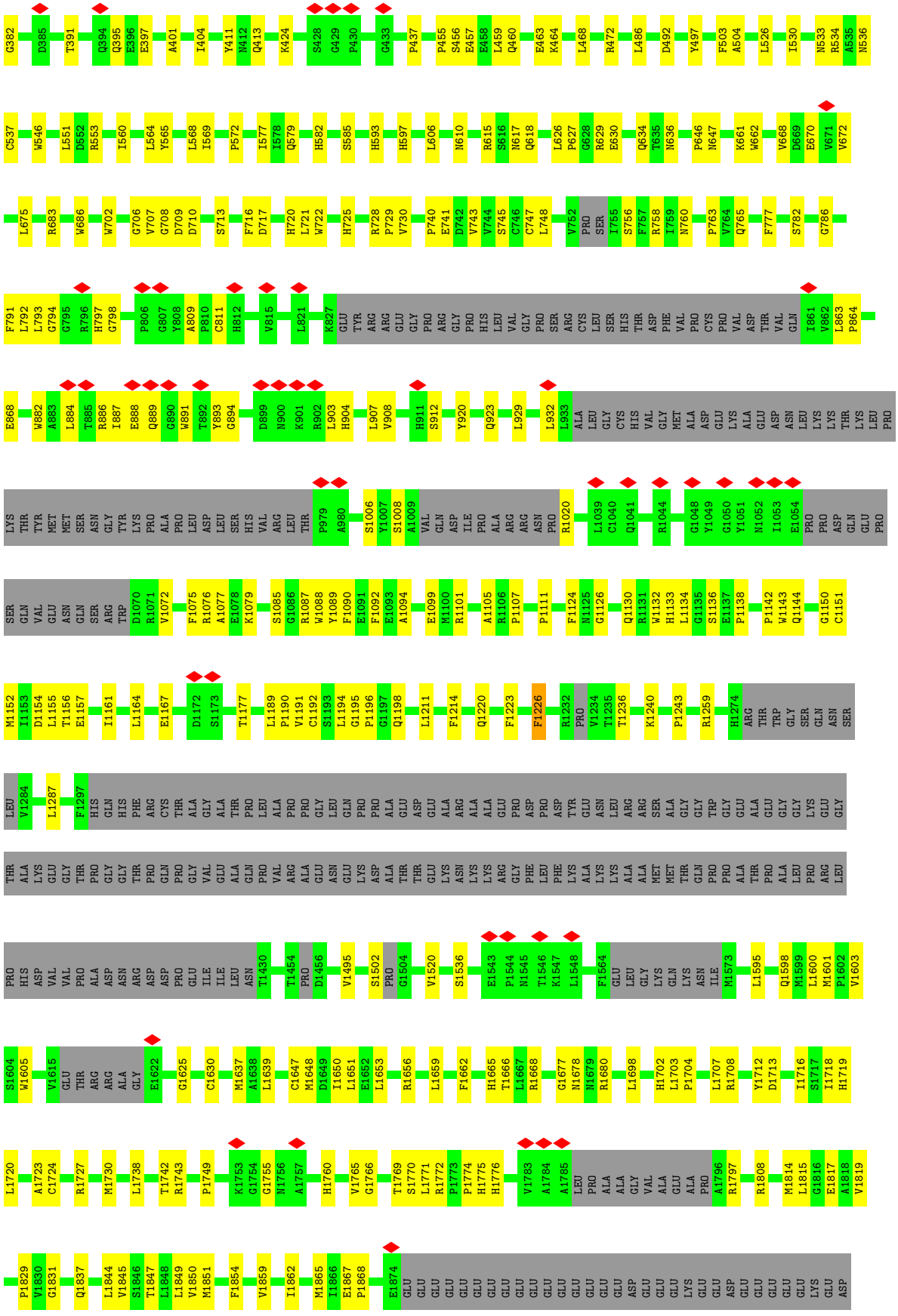


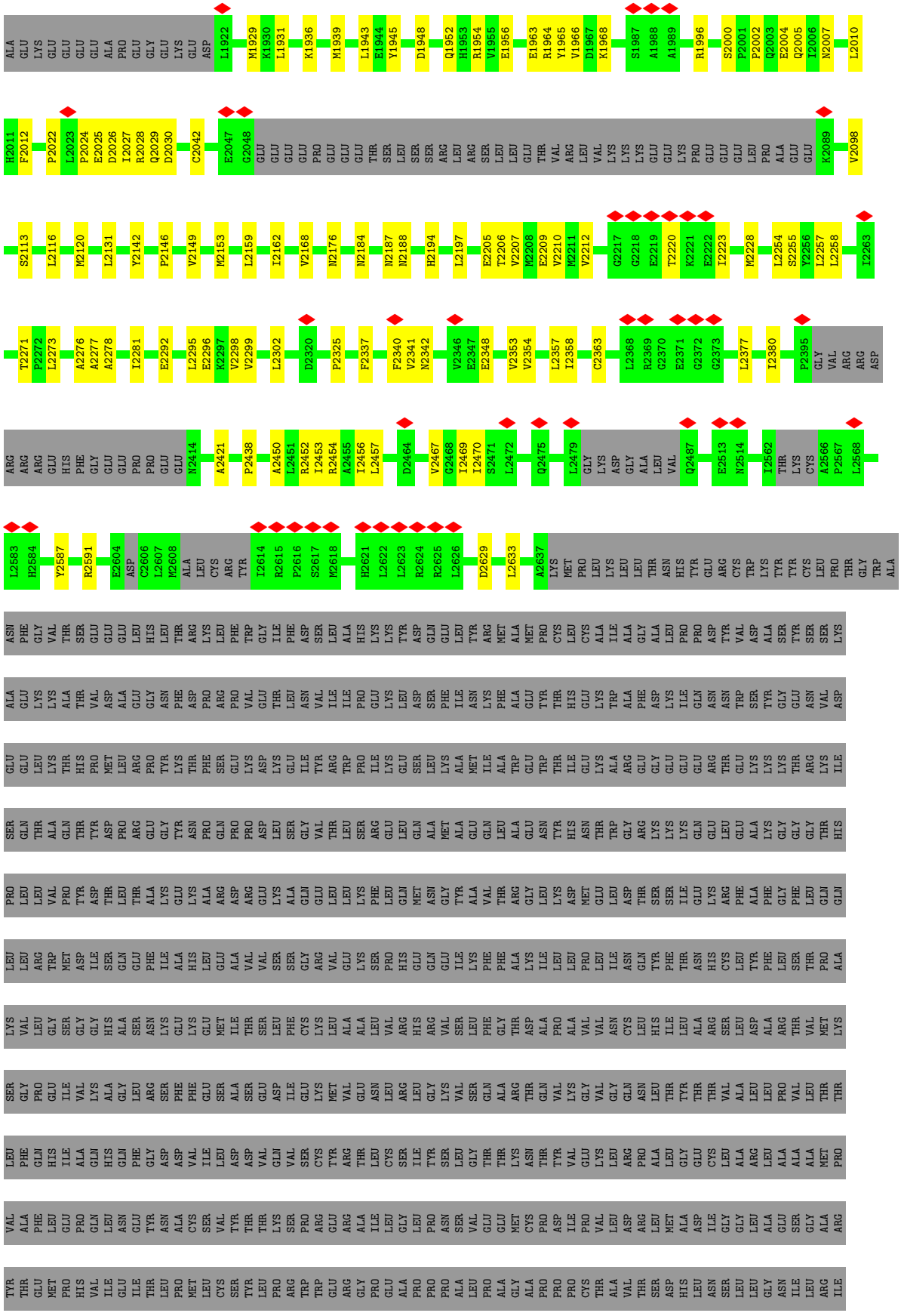


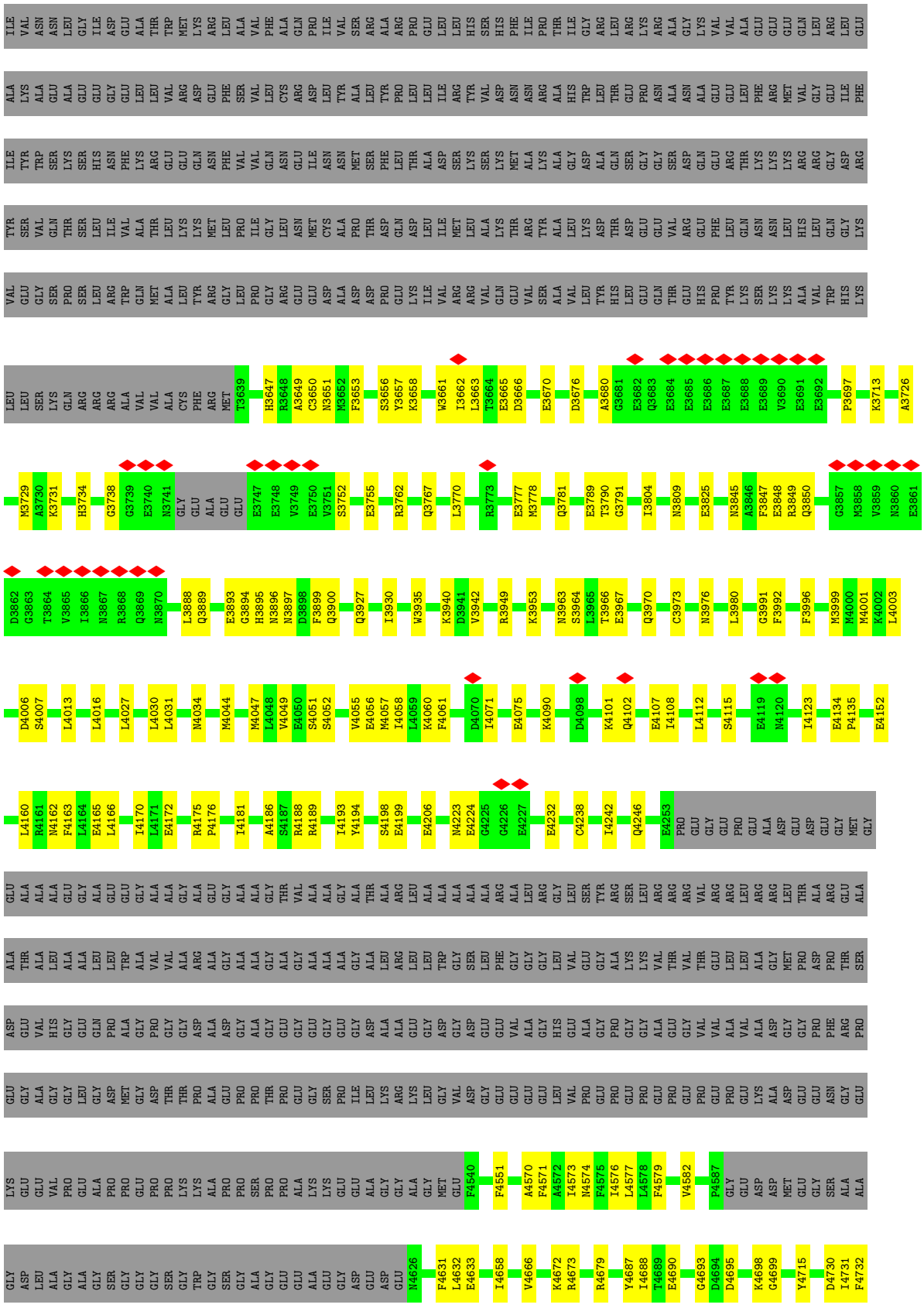


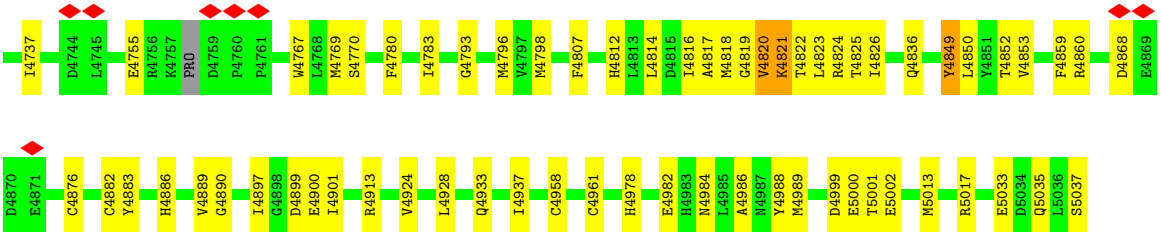
• Molecule 1: Ryanodine receptor 1

Chain D:








I4737
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L4745
E4755
R4756
K4757
PRO
D4759
P4760
P4761
W4767
L4768
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S4770
F4780
I4783
G4793
M4796
V4797
M4798
F4807
H4812
L4813
L4814
D4815
I4816
A4817
M4818
G4819
V4820
K4821
T4822
L4823
R4824
T4825
I4826
Q4836
Y4849
L4850
Y4851
T4852
V4853
F4859
R4860
D4868
E4869
D4870
E4871
C4876
C4882
Y4883
H4886
V4889
G4890
I4897
G4898
D4899
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I4901
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V4924
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Q4933
I4937
C4958
C4961
H4978
E4982
H4983
N4984
L4985
A4986
N4987
Y4988
M4989
D4999
E5000
T5001
E5002
M5013
R5017
E5033
D5034
Q5035
L5036
S5037

4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	60110	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	50	Depositor
Minimum defocus (nm)	1200	Depositor
Maximum defocus (nm)	2200	Depositor
Magnification	Not provided	
Image detector	FEI FALCON III (4k x 4k)	Depositor
Maximum map value	2.660	Depositor
Minimum map value	-1.411	Depositor
Average map value	-0.003	Depositor
Map value standard deviation	0.087	Depositor
Recommended contour level	0.35	Depositor
Map size (Å)	523.2, 523.2, 523.2	wwPDB
Map dimensions	480, 480, 480	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.09, 1.09, 1.09	Depositor

5 Model quality

5.1 Standard geometry

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\#\|Z\| > 5$	RMSZ	$\#\|Z\| > 5$
1	A	0.28	0/24473	0.51	0/33293
1	B	0.28	0/24473	0.51	0/33293
1	C	0.28	0/24473	0.51	0/33293
1	D	0.28	0/24473	0.51	0/33293
All	All	0.28	0/97892	0.51	0/133172

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	23993	0	21998	502	0
1	B	23993	0	21998	497	0
1	C	23993	0	21998	491	0
1	D	23993	0	21998	503	0
All	All	95972	0	87992	1977	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 11.

All (1977) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4816:ILE:HG23	1:A:4817:ALA:N	1.93	0.84
1:C:4816:ILE:HG23	1:C:4817:ALA:N	1.93	0.83
1:D:4055:VAL:HA	1:D:4058:ILE:HD12	1.60	0.83
1:C:4055:VAL:HA	1:C:4058:ILE:HD12	1.60	0.83
1:A:4055:VAL:HA	1:A:4058:ILE:HD12	1.60	0.83
1:B:4055:VAL:HA	1:B:4058:ILE:HD12	1.60	0.83
1:D:4816:ILE:HG23	1:D:4817:ALA:N	1.93	0.83
1:C:1738:LEU:HB2	1:C:2146:PRO:HD3	1.62	0.81
1:B:4816:ILE:HG23	1:B:4817:ALA:N	1.93	0.81
1:D:1738:LEU:HB2	1:D:2146:PRO:HD3	1.62	0.80
1:B:1738:LEU:HB2	1:B:2146:PRO:HD3	1.62	0.80
1:A:1738:LEU:HB2	1:A:2146:PRO:HD3	1.62	0.80
1:B:662:TRP:HA	1:B:809:ALA:HB3	1.68	0.76
1:C:662:TRP:HA	1:C:809:ALA:HB3	1.68	0.76
1:A:662:TRP:HA	1:A:809:ALA:HB3	1.68	0.75
1:D:662:TRP:HA	1:D:809:ALA:HB3	1.68	0.75
1:D:4816:ILE:CG2	1:D:4817:ALA:N	2.50	0.75
1:A:4816:ILE:CG2	1:A:4817:ALA:N	2.50	0.74
1:D:303:ASP:H	1:D:306:LYS:HZ2	1.35	0.74
1:B:4816:ILE:CG2	1:B:4817:ALA:N	2.50	0.74
1:D:456:SER:O	1:D:464:LYS:NZ	2.21	0.74
1:C:4816:ILE:CG2	1:C:4817:ALA:N	2.50	0.73
1:B:456:SER:O	1:B:464:LYS:NZ	2.21	0.73
1:A:456:SER:O	1:A:464:LYS:NZ	2.21	0.73
1:C:303:ASP:H	1:C:306:LYS:HZ2	1.36	0.73
1:B:303:ASP:H	1:B:306:LYS:HZ2	1.37	0.72
1:C:456:SER:O	1:C:464:LYS:NZ	2.21	0.72
1:A:303:ASP:H	1:A:306:LYS:HZ2	1.38	0.72
1:B:2022:PRO:HD2	1:B:2028:ARG:HH22	1.55	0.72
1:D:4199:GLU:N	1:D:4199:GLU:OE2	2.23	0.71
1:C:2022:PRO:HD2	1:C:2028:ARG:HH22	1.55	0.71
1:A:2022:PRO:HD2	1:A:2028:ARG:HH22	1.55	0.71
1:A:2194:HIS:HB3	1:A:2197:LEU:HD23	1.72	0.71
1:C:2194:HIS:HB3	1:C:2197:LEU:HD23	1.72	0.71
1:D:2194:HIS:HB3	1:D:2197:LEU:HD23	1.72	0.70
1:C:4199:GLU:OE2	1:C:4199:GLU:N	2.23	0.70
1:B:606:LEU:O	1:B:617:ASN:ND2	2.25	0.70
1:A:606:LEU:O	1:A:617:ASN:ND2	2.25	0.70
1:D:2022:PRO:HD2	1:D:2028:ARG:HH22	1.55	0.70
1:B:2194:HIS:HB3	1:B:2197:LEU:HD23	1.72	0.69
1:B:4199:GLU:N	1:B:4199:GLU:OE2	2.23	0.69
1:A:4199:GLU:N	1:A:4199:GLU:OE2	2.23	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:793:LEU:HD12	1:C:797:HIS:HB2	1.74	0.69
1:D:793:LEU:HD12	1:D:797:HIS:HB2	1.74	0.69
1:D:606:LEU:O	1:D:617:ASN:ND2	2.25	0.69
1:C:606:LEU:O	1:C:617:ASN:ND2	2.25	0.69
1:C:3935:TRP:HH2	1:D:77:ALA:HB2	1.58	0.69
1:B:1703:LEU:HA	1:B:1708:ARG:HH21	1.58	0.69
1:C:1703:LEU:HA	1:C:1708:ARG:HH21	1.58	0.68
1:A:1703:LEU:HA	1:A:1708:ARG:HH21	1.58	0.68
1:B:4978:HIS:ND1	1:B:4982:GLU:OE1	2.27	0.68
1:A:2438:PRO:HB3	1:A:2450:ALA:HB1	1.76	0.68
1:A:4978:HIS:ND1	1:A:4982:GLU:OE1	2.27	0.68
1:C:2184:ASN:O	1:C:2188:ASN:ND2	2.27	0.68
1:D:2184:ASN:O	1:D:2188:ASN:ND2	2.27	0.68
1:C:2438:PRO:HB3	1:C:2450:ALA:HB1	1.76	0.68
1:B:3935:TRP:HH2	1:C:77:ALA:HB2	1.58	0.67
1:A:77:ALA:HB2	1:D:3935:TRP:HH2	1.58	0.67
1:D:2438:PRO:HB3	1:D:2450:ALA:HB1	1.76	0.67
1:A:708:GLY:H	1:A:713:SER:HB3	1.60	0.67
1:D:4978:HIS:ND1	1:D:4982:GLU:OE1	2.27	0.67
1:A:793:LEU:HD12	1:A:797:HIS:HB2	1.74	0.67
1:A:2271:THR:HG22	1:A:2273:LEU:H	1.59	0.67
1:B:793:LEU:HD12	1:B:797:HIS:HB2	1.74	0.67
1:B:2438:PRO:HB3	1:B:2450:ALA:HB1	1.76	0.67
1:A:533:ASN:ND2	1:A:536:ASN:OD1	2.28	0.67
1:B:2184:ASN:O	1:B:2188:ASN:ND2	2.27	0.67
1:C:792:LEU:HD22	1:C:798:GLY:HA2	1.77	0.67
1:C:1099:GLU:HB3	1:C:1101:ARG:HH22	1.60	0.67
1:C:4978:HIS:ND1	1:C:4982:GLU:OE1	2.27	0.67
1:B:1099:GLU:HB3	1:B:1101:ARG:HH22	1.60	0.67
1:A:2184:ASN:O	1:A:2188:ASN:ND2	2.27	0.67
1:A:3935:TRP:HH2	1:B:77:ALA:HB2	1.58	0.67
1:A:4661:TYR:HH	1:A:4788:SER:HG	1.41	0.67
1:B:792:LEU:HD22	1:B:798:GLY:HA2	1.77	0.67
1:D:533:ASN:ND2	1:D:536:ASN:OD1	2.28	0.67
1:D:1099:GLU:HB3	1:D:1101:ARG:HH22	1.60	0.67
1:C:2271:THR:HG22	1:C:2273:LEU:H	1.59	0.67
1:B:533:ASN:ND2	1:B:536:ASN:OD1	2.28	0.67
1:D:1703:LEU:HA	1:D:1708:ARG:HH21	1.58	0.66
1:B:708:GLY:H	1:B:713:SER:HB3	1.60	0.66
1:B:401:ALA:O	1:B:404:ILE:HG13	1.96	0.66
1:D:708:GLY:H	1:D:713:SER:HB3	1.60	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2271:THR:HG22	1:B:2273:LEU:H	1.59	0.66
1:D:792:LEU:HD22	1:D:798:GLY:HA2	1.77	0.66
1:D:2271:THR:HG22	1:D:2273:LEU:H	1.59	0.66
1:B:4821:LYS:O	1:B:4822:THR:C	2.34	0.66
1:C:1771:LEU:HD12	1:C:2153:MET:SD	2.36	0.66
1:A:401:ALA:O	1:A:404:ILE:HG13	1.96	0.66
1:C:533:ASN:ND2	1:C:536:ASN:OD1	2.28	0.66
1:A:1099:GLU:HB3	1:A:1101:ARG:HH22	1.60	0.66
1:C:708:GLY:H	1:C:713:SER:HB3	1.60	0.66
1:A:455:PRO:HB2	1:A:464:LYS:HZ3	1.61	0.65
1:A:792:LEU:HD22	1:A:798:GLY:HA2	1.77	0.65
1:D:1771:LEU:HD12	1:D:2153:MET:SD	2.36	0.65
1:A:1152:MET:N	1:A:1152:MET:SD	2.69	0.65
1:B:1771:LEU:HD12	1:B:2153:MET:SD	2.36	0.65
1:B:1152:MET:N	1:B:1152:MET:SD	2.69	0.65
1:B:4661:TYR:HH	1:B:4788:SER:HG	1.44	0.65
1:C:401:ALA:O	1:C:404:ILE:HG13	1.96	0.65
1:A:1771:LEU:HD12	1:A:2153:MET:SD	2.36	0.65
1:C:1152:MET:N	1:C:1152:MET:SD	2.69	0.65
1:A:627:PRO:O	1:A:629:ARG:NH1	2.30	0.65
1:A:2131:LEU:HB3	1:A:3662:ILE:HG21	1.79	0.65
1:D:627:PRO:O	1:D:629:ARG:NH1	2.30	0.65
1:C:627:PRO:O	1:C:629:ARG:NH1	2.30	0.65
1:D:1152:MET:N	1:D:1152:MET:SD	2.69	0.65
1:B:627:PRO:O	1:B:629:ARG:NH1	2.30	0.65
1:C:4821:LYS:O	1:C:4822:THR:C	2.34	0.65
1:D:793:LEU:HB2	1:D:797:HIS:H	1.62	0.65
1:D:2131:LEU:HB3	1:D:3662:ILE:HG21	1.79	0.65
1:D:1770:SER:OG	1:D:1952:GLN:NE2	2.31	0.64
1:B:2131:LEU:HB3	1:B:3662:ILE:HG21	1.79	0.64
1:C:1770:SER:OG	1:C:1952:GLN:NE2	2.31	0.64
1:A:3658:LYS:HD2	1:A:3661:TRP:CZ3	2.33	0.64
1:D:401:ALA:O	1:D:404:ILE:HG13	1.96	0.64
1:C:1996:ARG:O	1:C:1996:ARG:NH1	2.27	0.64
1:A:1072:VAL:HG12	1:A:1195:GLY:HA2	1.80	0.64
1:D:3658:LYS:HD2	1:D:3661:TRP:CZ3	2.33	0.64
1:B:793:LEU:HB2	1:B:797:HIS:H	1.62	0.64
1:A:793:LEU:HB2	1:A:797:HIS:H	1.62	0.64
1:B:1770:SER:OG	1:B:1952:GLN:NE2	2.31	0.64
1:D:1072:VAL:HG12	1:D:1195:GLY:HA2	1.80	0.64
1:A:1770:SER:OG	1:A:1952:GLN:NE2	2.31	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:793:LEU:HB2	1:C:797:HIS:H	1.62	0.64
1:C:2131:LEU:HB3	1:C:3662:ILE:HG21	1.79	0.63
1:D:4821:LYS:O	1:D:4822:THR:C	2.34	0.63
1:B:4817:ALA:C	1:B:4819:GLY:H	2.02	0.63
1:A:4817:ALA:C	1:A:4819:GLY:H	2.02	0.63
1:D:411:TYR:HB3	1:D:486:LEU:HD21	1.79	0.63
1:B:3658:LYS:HD2	1:B:3661:TRP:CZ3	2.33	0.63
1:C:553:ARG:HE	1:C:593:HIS:HE1	1.47	0.63
1:C:3658:LYS:HD2	1:C:3661:TRP:CZ3	2.33	0.63
1:A:411:TYR:HB3	1:A:486:LEU:HD21	1.79	0.63
1:A:4900:GLU:N	1:A:4900:GLU:OE2	2.32	0.63
1:B:411:TYR:HB3	1:B:486:LEU:HD21	1.79	0.63
1:C:411:TYR:HB3	1:C:486:LEU:HD21	1.79	0.63
1:C:4817:ALA:C	1:C:4819:GLY:H	2.02	0.63
1:A:2026:ASP:O	1:A:2029:GLN:NE2	2.29	0.63
1:B:553:ARG:HE	1:B:593:HIS:HE1	1.47	0.63
1:C:1072:VAL:HG12	1:C:1195:GLY:HA2	1.80	0.63
1:A:3658:LYS:HA	1:A:3661:TRP:CE3	2.34	0.63
1:C:210:GLU:HB3	1:C:273:HIS:HE1	1.64	0.62
1:A:4821:LYS:O	1:A:4822:THR:C	2.34	0.62
1:B:1954:ARG:NH1	1:B:2042:CYS:SG	2.72	0.62
1:B:2205:GLU:N	1:B:2205:GLU:OE2	2.32	0.62
1:B:4900:GLU:N	1:B:4900:GLU:OE2	2.32	0.62
1:D:2205:GLU:OE2	1:D:2205:GLU:N	2.32	0.62
1:D:210:GLU:HB3	1:D:273:HIS:HE1	1.64	0.62
1:D:1954:ARG:NH1	1:D:2042:CYS:SG	2.72	0.62
1:D:4817:ALA:C	1:D:4819:GLY:H	2.02	0.62
1:B:1072:VAL:HG12	1:B:1195:GLY:HA2	1.80	0.62
1:B:3658:LYS:HA	1:B:3661:TRP:CE3	2.34	0.62
1:C:4900:GLU:OE2	1:C:4900:GLU:N	2.32	0.62
1:D:4900:GLU:N	1:D:4900:GLU:OE2	2.32	0.62
1:A:210:GLU:HB3	1:A:273:HIS:HE1	1.64	0.62
1:A:1647:CYS:SG	1:A:1648:MET:N	2.73	0.62
1:B:210:GLU:HB3	1:B:273:HIS:HE1	1.64	0.62
1:C:3658:LYS:HA	1:C:3661:TRP:CE3	2.34	0.62
1:C:4817:ALA:O	1:C:4819:GLY:N	2.33	0.62
1:A:2205:GLU:N	1:A:2205:GLU:OE2	2.32	0.62
1:A:3889:GLN:HG3	1:A:3967:GLU:HG3	1.82	0.62
1:B:4666:VAL:HG22	1:B:4783:ILE:HD11	1.82	0.62
1:C:1647:CYS:SG	1:C:1648:MET:N	2.73	0.62
1:D:553:ARG:HE	1:D:593:HIS:HE1	1.47	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1743:ARG:O	1:D:1964:ARG:NH2	2.33	0.62
1:D:4666:VAL:HG22	1:D:4783:ILE:HD11	1.82	0.62
1:B:1647:CYS:SG	1:B:1648:MET:N	2.73	0.62
1:B:4224:GLU:N	1:B:4224:GLU:OE2	2.33	0.62
1:D:455:PRO:HB2	1:D:464:LYS:HZ3	1.65	0.62
1:A:553:ARG:HE	1:A:593:HIS:HE1	1.47	0.61
1:D:1647:CYS:SG	1:D:1648:MET:N	2.73	0.61
1:A:597:HIS:HB3	1:A:1665:HIS:HD2	1.65	0.61
1:B:3889:GLN:HG3	1:B:3967:GLU:HG3	1.82	0.61
1:D:3658:LYS:HA	1:D:3661:TRP:CE3	2.34	0.61
1:A:4666:VAL:HG22	1:A:4783:ILE:HD11	1.82	0.61
1:B:1743:ARG:O	1:B:1964:ARG:NH2	2.33	0.61
1:B:3935:TRP:CH2	1:C:77:ALA:HB2	2.36	0.61
1:C:3889:GLN:HG3	1:C:3967:GLU:HG3	1.82	0.61
1:C:3897:ASN:H	1:C:3900:GLN:HE21	1.48	0.61
1:D:3889:GLN:HG3	1:D:3967:GLU:HG3	1.82	0.61
1:A:4817:ALA:O	1:A:4819:GLY:N	2.33	0.61
1:B:597:HIS:HB3	1:B:1665:HIS:HD2	1.65	0.61
1:B:720:HIS:HA	1:B:729:PRO:HA	1.82	0.61
1:C:618:GLN:OE1	1:C:1678:ASN:ND2	2.33	0.61
1:C:1954:ARG:NH1	1:C:2042:CYS:SG	2.72	0.61
1:D:618:GLN:OE1	1:D:1678:ASN:ND2	2.33	0.61
1:A:1954:ARG:NH1	1:A:2042:CYS:SG	2.72	0.61
1:B:4817:ALA:O	1:B:4819:GLY:N	2.33	0.61
1:C:597:HIS:HB3	1:C:1665:HIS:CD2	2.36	0.61
1:D:597:HIS:HB3	1:D:1665:HIS:CD2	2.36	0.61
1:D:4224:GLU:OE2	1:D:4224:GLU:N	2.33	0.61
1:A:1743:ARG:O	1:A:1964:ARG:NH2	2.33	0.61
1:C:720:HIS:HA	1:C:729:PRO:HA	1.82	0.61
1:C:4666:VAL:HG22	1:C:4783:ILE:HD11	1.82	0.61
1:A:4224:GLU:N	1:A:4224:GLU:OE2	2.33	0.61
1:C:3935:TRP:CH2	1:D:77:ALA:HB2	2.36	0.61
1:D:4820:VAL:O	1:D:4821:LYS:C	2.39	0.61
1:B:2026:ASP:O	1:B:2029:GLN:NE2	2.29	0.61
1:B:2281:ILE:HG23	1:B:2341:VAL:HG11	1.83	0.61
1:C:455:PRO:HB2	1:C:464:LYS:HZ3	1.66	0.61
1:C:2257:LEU:HD11	1:C:2276:ALA:HB2	1.82	0.61
1:C:4224:GLU:N	1:C:4224:GLU:OE2	2.33	0.61
1:D:4817:ALA:O	1:D:4819:GLY:N	2.33	0.61
1:D:597:HIS:HB3	1:D:1665:HIS:HD2	1.65	0.61
1:D:2026:ASP:O	1:D:2029:GLN:NE2	2.29	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:720:HIS:HA	1:A:729:PRO:HA	1.82	0.60
1:A:893:TYR:HB2	1:A:907:LEU:HB2	1.83	0.60
1:A:3896:ASN:HD22	1:A:3899:PHE:HB2	1.66	0.60
1:B:15:ARG:NH2	1:B:98:HIS:O	2.34	0.60
1:B:618:GLN:OE1	1:B:1678:ASN:ND2	2.33	0.60
1:D:2281:ILE:HG23	1:D:2341:VAL:HG11	1.83	0.60
1:C:893:TYR:HB2	1:C:907:LEU:HB2	1.83	0.60
1:C:3896:ASN:HD22	1:C:3899:PHE:HB2	1.66	0.60
1:D:720:HIS:HA	1:D:729:PRO:HA	1.82	0.60
1:A:15:ARG:NH2	1:A:98:HIS:O	2.34	0.60
1:A:77:ALA:HB2	1:D:3935:TRP:CH2	2.36	0.60
1:B:893:TYR:HB2	1:B:907:LEU:HB2	1.83	0.60
1:B:4958:CYS:SG	1:B:4961:CYS:O	2.60	0.60
1:C:597:HIS:HB3	1:C:1665:HIS:HD2	1.65	0.60
1:C:4820:VAL:O	1:C:4821:LYS:C	2.39	0.60
1:D:15:ARG:NH2	1:D:98:HIS:O	2.34	0.60
1:D:19:GLU:HB2	1:D:206:CYS:HB3	1.83	0.60
1:D:4958:CYS:SG	1:D:4961:CYS:O	2.60	0.60
1:C:2281:ILE:HG23	1:C:2341:VAL:HG11	1.83	0.60
1:A:19:GLU:HB2	1:A:206:CYS:HB3	1.83	0.60
1:A:2257:LEU:HD11	1:A:2276:ALA:HB2	1.82	0.60
1:C:1939:MET:N	1:C:1939:MET:SD	2.75	0.60
1:D:3897:ASN:H	1:D:3900:GLN:HE21	1.48	0.60
1:A:4958:CYS:SG	1:A:4961:CYS:O	2.60	0.60
1:B:597:HIS:HB3	1:B:1665:HIS:CD2	2.36	0.60
1:C:15:ARG:NH2	1:C:98:HIS:O	2.34	0.60
1:D:1996:ARG:O	1:D:1996:ARG:NH1	2.27	0.60
1:D:3896:ASN:HD22	1:D:3899:PHE:HB2	1.66	0.60
1:C:4206:GLU:N	1:C:4206:GLU:OE2	2.35	0.60
1:A:1243:PRO:HA	1:A:1601:MET:O	2.02	0.60
1:A:2281:ILE:HG23	1:A:2341:VAL:HG11	1.83	0.60
1:B:2116:LEU:O	1:B:2120:MET:HG3	2.02	0.60
1:C:794:GLY:H	1:C:798:GLY:HA3	1.66	0.60
1:D:456:SER:OG	1:D:457:GLU:N	2.35	0.60
1:A:597:HIS:HB3	1:A:1665:HIS:CD2	2.36	0.60
1:B:19:GLU:HB2	1:B:206:CYS:HB3	1.83	0.60
1:B:2257:LEU:HD11	1:B:2276:ALA:HB2	1.82	0.60
1:B:3897:ASN:H	1:B:3900:GLN:HE21	1.48	0.60
1:C:456:SER:OG	1:C:457:GLU:N	2.35	0.60
1:D:1243:PRO:HA	1:D:1601:MET:O	2.02	0.60
1:D:4206:GLU:N	1:D:4206:GLU:OE2	2.35	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:794:GLY:H	1:A:798:GLY:HA3	1.66	0.60
1:B:1939:MET:SD	1:B:1939:MET:N	2.75	0.60
1:B:4820:VAL:O	1:B:4821:LYS:C	2.39	0.60
1:C:1743:ARG:O	1:C:1964:ARG:NH2	2.33	0.60
1:C:2149:VAL:O	1:C:2153:MET:HG2	2.02	0.60
1:C:4958:CYS:SG	1:C:4961:CYS:O	2.60	0.60
1:D:893:TYR:HB2	1:D:907:LEU:HB2	1.83	0.60
1:B:1929:MET:SD	1:B:1929:MET:N	2.75	0.59
1:D:1929:MET:N	1:D:1929:MET:SD	2.75	0.59
1:D:4731:ILE:HG23	1:D:4732:PHE:HD1	1.67	0.59
1:A:618:GLN:OE1	1:A:1678:ASN:ND2	2.33	0.59
1:B:2149:VAL:O	1:B:2153:MET:HG2	2.02	0.59
1:C:1929:MET:N	1:C:1929:MET:SD	2.75	0.59
1:D:2149:VAL:O	1:D:2153:MET:HG2	2.02	0.59
1:A:2116:LEU:O	1:A:2120:MET:HG3	2.02	0.59
1:A:765:GLN:HB2	1:A:1520:VAL:HA	1.85	0.59
1:A:1996:ARG:O	1:A:1996:ARG:NH1	2.27	0.59
1:A:3935:TRP:CH2	1:B:77:ALA:HB2	2.36	0.59
1:D:765:GLN:HB2	1:D:1520:VAL:HA	1.85	0.59
1:D:794:GLY:H	1:D:798:GLY:HA3	1.66	0.59
1:A:4731:ILE:HG23	1:A:4732:PHE:HD1	1.67	0.59
1:B:456:SER:OG	1:B:457:GLU:N	2.35	0.59
1:B:1111:PRO:HD3	1:B:1605:TRP:HE1	1.68	0.59
1:C:765:GLN:HB2	1:C:1520:VAL:HA	1.85	0.59
1:A:4820:VAL:O	1:A:4821:LYS:C	2.39	0.59
1:B:1243:PRO:HA	1:B:1601:MET:O	2.02	0.59
1:B:3896:ASN:HD22	1:B:3899:PHE:HB2	1.66	0.59
1:C:1243:PRO:HA	1:C:1601:MET:O	2.02	0.59
1:D:1939:MET:N	1:D:1939:MET:SD	2.75	0.59
1:A:3897:ASN:H	1:A:3900:GLN:HE21	1.48	0.59
1:B:765:GLN:HB2	1:B:1520:VAL:HA	1.85	0.59
1:B:1996:ARG:O	1:B:1996:ARG:NH1	2.27	0.59
1:C:4731:ILE:HG23	1:C:4732:PHE:HD1	1.67	0.59
1:A:70:GLU:HB2	1:A:108:LEU:HD22	1.85	0.59
1:A:150:MET:HG2	1:A:169:LEU:HD12	1.85	0.59
1:A:1111:PRO:HD3	1:A:1605:TRP:HE1	1.68	0.59
1:B:4206:GLU:N	1:B:4206:GLU:OE2	2.35	0.59
1:D:2116:LEU:O	1:D:2120:MET:HG3	2.02	0.59
1:A:1939:MET:N	1:A:1939:MET:SD	2.75	0.59
1:B:794:GLY:H	1:B:798:GLY:HA3	1.66	0.59
1:C:73:LEU:O	1:C:106:ALA:N	2.35	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1111:PRO:HD3	1:C:1605:TRP:HE1	1.68	0.59
1:C:1815:LEU:HD22	1:C:1845:VAL:HG21	1.85	0.59
1:D:2257:LEU:HD11	1:D:2276:ALA:HB2	1.82	0.59
1:D:2292:GLU:N	1:D:2292:GLU:OE2	2.36	0.59
1:B:4731:ILE:HG23	1:B:4732:PHE:HD1	1.67	0.59
1:C:2116:LEU:O	1:C:2120:MET:HG3	2.02	0.59
1:D:1111:PRO:HD3	1:D:1605:TRP:HE1	1.68	0.59
1:A:4206:GLU:N	1:A:4206:GLU:OE2	2.35	0.58
1:D:70:GLU:HB2	1:D:108:LEU:HD22	1.85	0.58
1:C:19:GLU:HB2	1:C:206:CYS:HB3	1.83	0.58
1:C:2026:ASP:O	1:C:2029:GLN:NE2	2.29	0.58
1:C:2205:GLU:N	1:C:2205:GLU:OE2	2.32	0.58
1:D:3825:GLU:OE1	1:D:3825:GLU:N	2.36	0.58
1:A:315:CYS:SG	1:A:316:PHE:N	2.76	0.58
1:A:456:SER:OG	1:A:457:GLU:N	2.35	0.58
1:A:5033:GLU:HA	1:A:5037:SER:HB2	1.85	0.58
1:B:455:PRO:HB2	1:B:464:LYS:HZ3	1.68	0.58
1:B:2353:VAL:O	1:B:2357:LEU:HG	2.03	0.58
1:D:315:CYS:SG	1:D:316:PHE:N	2.76	0.58
1:A:2149:VAL:O	1:A:2153:MET:HG2	2.02	0.58
1:A:2292:GLU:OE2	1:A:2292:GLU:N	2.36	0.58
1:C:70:GLU:HB2	1:C:108:LEU:HD22	1.85	0.58
1:B:73:LEU:O	1:B:106:ALA:N	2.35	0.58
1:B:4031:LEU:HD23	1:B:4034:ASN:HD21	1.69	0.58
1:C:2292:GLU:N	1:C:2292:GLU:OE2	2.36	0.58
1:D:1085:SER:O	1:D:1088:TRP:NE1	2.37	0.58
1:D:1815:LEU:HD22	1:D:1845:VAL:HG21	1.85	0.58
1:B:2292:GLU:N	1:B:2292:GLU:OE2	2.36	0.58
1:B:3825:GLU:OE1	1:B:3825:GLU:N	2.36	0.58
1:C:150:MET:HG2	1:C:169:LEU:HD12	1.85	0.58
1:C:315:CYS:SG	1:C:316:PHE:N	2.76	0.58
1:C:5033:GLU:HA	1:C:5037:SER:HB2	1.85	0.58
1:D:1196:PRO:O	1:D:1198:GLN:NE2	2.36	0.58
1:B:150:MET:HG2	1:B:169:LEU:HD12	1.85	0.58
1:B:1815:LEU:HD22	1:B:1845:VAL:HG21	1.85	0.58
1:B:70:GLU:HB2	1:B:108:LEU:HD22	1.85	0.58
1:A:1929:MET:N	1:A:1929:MET:SD	2.75	0.58
1:C:2353:VAL:O	1:C:2357:LEU:HG	2.03	0.58
1:D:2353:VAL:O	1:D:2357:LEU:HG	2.03	0.58
1:D:5033:GLU:HA	1:D:5037:SER:HB2	1.85	0.58
1:A:76:ARG:O	1:A:79:GLN:HG3	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:315:CYS:SG	1:B:316:PHE:N	2.76	0.57
1:B:5033:GLU:HA	1:B:5037:SER:HB2	1.85	0.57
1:C:1089:TYR:HB2	1:C:1152:MET:HG3	1.86	0.57
1:C:4031:LEU:HD23	1:C:4034:ASN:HD21	1.69	0.57
1:D:150:MET:HG2	1:D:169:LEU:HD12	1.85	0.57
1:D:4031:LEU:HD23	1:D:4034:ASN:HD21	1.69	0.57
1:A:4823:LEU:O	1:A:4824:ARG:C	2.42	0.57
1:C:209:CYS:SG	1:C:210:GLU:N	2.78	0.57
1:A:1936:LYS:HA	1:A:1939:MET:HG2	1.87	0.57
1:D:1680:ARG:NH1	1:D:1797:ARG:H	2.03	0.57
1:A:2353:VAL:O	1:A:2357:LEU:HG	2.03	0.57
1:C:1936:LYS:HA	1:C:1939:MET:HG2	1.87	0.57
1:D:76:ARG:O	1:D:79:GLN:HG3	2.04	0.57
1:A:1085:SER:O	1:A:1088:TRP:NE1	2.37	0.57
1:A:1089:TYR:HB2	1:A:1152:MET:HG3	1.86	0.57
1:A:1680:ARG:NH1	1:A:1797:ARG:H	2.03	0.57
1:B:76:ARG:O	1:B:79:GLN:HG3	2.04	0.57
1:A:1815:LEU:HD22	1:A:1845:VAL:HG21	1.85	0.57
1:A:3825:GLU:OE1	1:A:3825:GLU:N	2.36	0.57
1:B:209:CYS:SG	1:B:210:GLU:N	2.78	0.57
1:C:1680:ARG:NH1	1:C:1797:ARG:H	2.03	0.57
1:D:4823:LEU:O	1:D:4824:ARG:C	2.42	0.57
1:B:2012:PHE:HB3	1:B:2022:PRO:HD3	1.86	0.57
1:A:2012:PHE:HB3	1:A:2022:PRO:HD3	1.86	0.57
1:B:668:VAL:O	1:B:741:GLU:N	2.35	0.57
1:C:4933:GLN:O	1:C:4937:ILE:HG12	2.05	0.57
1:C:116:MET:HE1	1:C:140:ASP:H	1.68	0.57
1:C:786:GLY:N	1:C:1630:CYS:O	2.38	0.57
1:A:209:CYS:SG	1:A:210:GLU:N	2.78	0.56
1:B:1936:LYS:HA	1:B:1939:MET:HG2	1.87	0.56
1:D:209:CYS:SG	1:D:210:GLU:N	2.78	0.56
1:A:217:GLY:O	1:A:261:ARG:NH1	2.38	0.56
1:A:2209:GLU:HA	1:A:2212:VAL:HG12	1.87	0.56
1:B:217:GLY:O	1:B:261:ARG:NH1	2.38	0.56
1:B:4817:ALA:C	1:B:4819:GLY:N	2.57	0.56
1:B:4933:GLN:O	1:B:4937:ILE:HG12	2.05	0.56
1:C:2012:PHE:HB3	1:C:2022:PRO:HD3	1.86	0.56
1:C:3825:GLU:N	1:C:3825:GLU:OE1	2.36	0.56
1:D:786:GLY:N	1:D:1630:CYS:O	2.38	0.56
1:A:317:ARG:NE	1:A:349:GLN:OE1	2.32	0.56
1:B:786:GLY:N	1:B:1630:CYS:O	2.38	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1085:SER:O	1:B:1088:TRP:NE1	2.37	0.56
1:B:1089:TYR:HB2	1:B:1152:MET:HG3	1.86	0.56
1:B:4769:MET:SD	1:B:4769:MET:N	2.73	0.56
1:C:2209:GLU:HA	1:C:2212:VAL:HG12	1.87	0.56
1:D:1936:LYS:HA	1:D:1939:MET:HG2	1.87	0.56
1:D:2209:GLU:HA	1:D:2212:VAL:HG12	1.87	0.56
1:A:4031:LEU:HD23	1:A:4034:ASN:HD21	1.69	0.56
1:B:2209:GLU:HA	1:B:2212:VAL:HG12	1.87	0.56
1:C:76:ARG:O	1:C:79:GLN:HG3	2.04	0.56
1:C:1196:PRO:O	1:C:1198:GLN:NE2	2.36	0.56
1:A:395:GLN:HG3	1:A:397:GLU:HG3	1.88	0.56
1:B:1658:ASP:OD1	1:B:1658:ASP:N	2.38	0.56
1:C:4817:ALA:C	1:C:4819:GLY:N	2.57	0.56
1:D:217:GLY:O	1:D:261:ARG:NH1	2.38	0.56
1:D:1089:TYR:HB2	1:D:1152:MET:HG3	1.86	0.56
1:D:3845:ASN:O	1:D:3848:GLU:HG3	2.06	0.56
1:A:4679:ARG:NH1	1:A:4715:TYR:OH	2.39	0.56
1:B:2438:PRO:HG2	1:B:2454:ARG:HB2	1.87	0.56
1:C:4823:LEU:O	1:C:4824:ARG:C	2.42	0.56
1:D:73:LEU:O	1:D:106:ALA:N	2.35	0.56
1:A:3845:ASN:O	1:A:3848:GLU:HG3	2.06	0.56
1:A:4817:ALA:C	1:A:4819:GLY:N	2.57	0.56
1:D:2012:PHE:HB3	1:D:2022:PRO:HD3	1.86	0.56
1:A:786:GLY:N	1:A:1630:CYS:O	2.38	0.56
1:A:2438:PRO:HG2	1:A:2454:ARG:HB2	1.87	0.56
1:B:1680:ARG:NH1	1:B:1797:ARG:H	2.03	0.56
1:C:217:GLY:O	1:C:261:ARG:NH1	2.38	0.56
1:D:4933:GLN:O	1:D:4937:ILE:HG12	2.05	0.56
1:B:219:VAL:HG12	1:B:261:ARG:HB2	1.88	0.56
1:C:4679:ARG:NH1	1:C:4715:TYR:OH	2.39	0.56
1:A:73:LEU:O	1:A:106:ALA:N	2.35	0.56
1:B:1196:PRO:O	1:B:1198:GLN:NE2	2.36	0.56
1:C:320:LYS:HA	1:C:356:TRP:CH2	2.41	0.56
1:A:763:PRO:O	1:A:765:GLN:NE2	2.39	0.55
1:B:379:HIS:HD2	1:B:381:GLU:H	1.54	0.55
1:B:4679:ARG:NH1	1:B:4715:TYR:OH	2.39	0.55
1:C:2438:PRO:HG2	1:C:2454:ARG:HB2	1.87	0.55
1:C:2467:VAL:HA	1:C:2470:ILE:HB	1.88	0.55
1:C:4769:MET:SD	1:C:4769:MET:N	2.73	0.55
1:A:2467:VAL:HA	1:A:2470:ILE:HB	1.88	0.55
1:A:4090:LYS:HE2	1:A:4112:LEU:HD22	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:395:GLN:HG3	1:B:397:GLU:HG3	1.88	0.55
1:B:763:PRO:O	1:B:765:GLN:NE2	2.39	0.55
1:B:3845:ASN:O	1:B:3848:GLU:HG3	2.06	0.55
1:C:763:PRO:O	1:C:765:GLN:NE2	2.39	0.55
1:C:4090:LYS:HE2	1:C:4112:LEU:HD22	1.88	0.55
1:C:4793:GLY:O	1:C:4796:MET:HB3	2.06	0.55
1:D:2467:VAL:HA	1:D:2470:ILE:HB	1.88	0.55
1:B:320:LYS:HA	1:B:356:TRP:CH2	2.41	0.55
1:C:144:GLU:O	1:C:175:SER:OG	2.24	0.55
1:C:534:ARG:HH22	1:C:572:PRO:HD2	1.72	0.55
1:D:320:LYS:HA	1:D:356:TRP:CH2	2.41	0.55
1:D:4817:ALA:C	1:D:4819:GLY:N	2.57	0.55
1:A:379:HIS:HD2	1:A:381:GLU:H	1.54	0.55
1:B:534:ARG:HH22	1:B:572:PRO:HD2	1.72	0.55
1:B:582:HIS:O	1:B:585:SER:OG	2.18	0.55
1:C:710:ASP:OD1	1:C:710:ASP:N	2.40	0.55
1:C:3845:ASN:O	1:C:3848:GLU:HG3	2.06	0.55
1:D:4679:ARG:NH1	1:D:4715:TYR:OH	2.39	0.55
1:D:4793:GLY:O	1:D:4796:MET:HB3	2.06	0.55
1:D:1653:LEU:HA	1:D:1656:ARG:HB2	1.89	0.55
1:A:534:ARG:HH22	1:A:572:PRO:HD2	1.72	0.55
1:A:4933:GLN:O	1:A:4937:ILE:HG12	2.05	0.55
1:B:2467:VAL:HA	1:B:2470:ILE:HB	1.88	0.55
1:B:4793:GLY:O	1:B:4796:MET:HB3	2.06	0.55
1:C:219:VAL:HG12	1:C:261:ARG:HB2	1.88	0.55
1:D:710:ASP:N	1:D:710:ASP:OD1	2.40	0.55
1:A:144:GLU:O	1:A:175:SER:OG	2.24	0.55
1:A:219:VAL:HG12	1:A:261:ARG:HB2	1.88	0.55
1:A:4793:GLY:O	1:A:4796:MET:HB3	2.06	0.55
1:C:312:THR:OG1	1:C:313:SER:N	2.40	0.55
1:D:395:GLN:HG3	1:D:397:GLU:HG3	1.88	0.55
1:D:4090:LYS:HE2	1:D:4112:LEU:HD22	1.88	0.55
1:C:2629:ASP:O	1:C:2633:LEU:N	2.40	0.55
1:D:534:ARG:HH22	1:D:572:PRO:HD2	1.72	0.55
1:D:763:PRO:O	1:D:765:GLN:NE2	2.39	0.55
1:D:2438:PRO:HG2	1:D:2454:ARG:HB2	1.87	0.55
1:B:4090:LYS:HE2	1:B:4112:LEU:HD22	1.88	0.55
1:C:1085:SER:O	1:C:1088:TRP:NE1	2.37	0.55
1:C:4822:THR:O	1:C:4823:LEU:C	2.44	0.55
1:A:320:LYS:HA	1:A:356:TRP:CH2	2.41	0.55
1:A:2629:ASP:O	1:A:2633:LEU:N	2.40	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:395:GLN:HG3	1:C:397:GLU:HG3	1.88	0.55
1:D:4822:THR:O	1:D:4823:LEU:C	2.44	0.55
1:B:710:ASP:OD1	1:B:710:ASP:N	2.40	0.54
1:C:1653:LEU:HA	1:C:1656:ARG:HB2	1.89	0.54
1:D:4052:SER:HA	1:D:4055:VAL:HG22	1.89	0.54
1:A:182:LEU:HB3	1:A:198:THR:HG21	1.90	0.54
1:B:1152:MET:HB3	1:B:1223:PHE:CE2	2.43	0.54
1:C:1152:MET:HB3	1:C:1223:PHE:CE2	2.43	0.54
1:A:1089:TYR:HE1	1:A:1150:GLY:HA3	1.73	0.54
1:B:1859:VAL:HA	1:B:1862:ILE:HG22	1.90	0.54
1:D:144:GLU:O	1:D:175:SER:OG	2.24	0.54
1:A:565:TYR:O	1:A:569:ILE:HG12	2.08	0.54
1:A:706:GLY:HA3	1:A:782:SER:HB2	1.90	0.54
1:A:710:ASP:N	1:A:710:ASP:OD1	2.40	0.54
1:B:21:VAL:HG12	1:B:66:CYS:HA	1.90	0.54
1:B:4823:LEU:O	1:B:4824:ARG:C	2.42	0.54
1:C:292:ALA:HB2	1:C:312:THR:HG22	1.90	0.54
1:C:2354:VAL:O	1:C:2358:ILE:HG22	2.08	0.54
1:D:1859:VAL:HA	1:D:1862:ILE:HG22	1.90	0.54
1:A:312:THR:OG1	1:A:313:SER:N	2.40	0.54
1:A:1859:VAL:HA	1:A:1862:ILE:HG22	1.90	0.54
1:B:706:GLY:HA3	1:B:782:SER:HB2	1.90	0.54
1:B:5002:GLU:OE1	1:B:5002:GLU:N	2.39	0.54
1:C:1859:VAL:HA	1:C:1862:ILE:HG22	1.90	0.54
1:D:206:CYS:SG	1:D:207:SER:N	2.81	0.54
1:D:213:TYR:CD2	1:D:337:PRO:HB2	2.43	0.54
1:D:379:HIS:HD2	1:D:381:GLU:H	1.54	0.54
1:D:920:TYR:O	1:D:923:GLN:HG3	2.08	0.54
1:A:206:CYS:SG	1:A:207:SER:N	2.81	0.54
1:A:1966:VAL:HG21	1:A:3649:ALA:HB1	1.90	0.54
1:A:2348:GLU:OE1	1:A:2348:GLU:N	2.38	0.54
1:A:4822:THR:O	1:A:4823:LEU:C	2.44	0.54
1:B:182:LEU:HB3	1:B:198:THR:HG21	1.90	0.54
1:C:706:GLY:HA3	1:C:782:SER:HB2	1.90	0.54
1:D:299:LEU:HD23	1:D:377:ILE:HD12	1.90	0.54
1:A:21:VAL:HG12	1:A:66:CYS:HA	1.90	0.54
1:A:5002:GLU:OE1	1:A:5002:GLU:N	2.39	0.54
1:B:1089:TYR:HE1	1:B:1150:GLY:HA3	1.73	0.54
1:B:4052:SER:HA	1:B:4055:VAL:HG22	1.89	0.54
1:C:206:CYS:SG	1:C:207:SER:N	2.81	0.54
1:C:213:TYR:CD2	1:C:337:PRO:HB2	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:4577:LEU:HD21	1:C:4807:PHE:HA	1.90	0.54
1:D:312:THR:OG1	1:D:313:SER:N	2.40	0.54
1:D:706:GLY:HA3	1:D:782:SER:HB2	1.90	0.54
1:A:1653:LEU:HA	1:A:1656:ARG:HB2	1.89	0.54
1:A:2354:VAL:O	1:A:2358:ILE:HG22	2.08	0.54
1:A:4052:SER:HA	1:A:4055:VAL:HG22	1.89	0.54
1:A:4730:ASP:OD2	1:D:4101:LYS:NZ	2.41	0.54
1:B:206:CYS:SG	1:B:207:SER:N	2.81	0.54
1:B:920:TYR:O	1:B:923:GLN:HG3	2.08	0.54
1:B:4816:ILE:CG2	1:B:4817:ALA:H	2.21	0.54
1:C:379:HIS:HD2	1:C:381:GLU:H	1.54	0.54
1:B:908:VAL:HB	1:B:912:SER:HB3	1.90	0.54
1:B:1653:LEU:HA	1:B:1656:ARG:HB2	1.89	0.54
1:B:2354:VAL:O	1:B:2358:ILE:HG22	2.08	0.54
1:C:908:VAL:HB	1:C:912:SER:HB3	1.90	0.54
1:C:1658:ASP:OD1	1:C:1658:ASP:N	2.38	0.54
1:D:565:TYR:O	1:D:569:ILE:HG12	2.08	0.54
1:B:144:GLU:O	1:B:175:SER:OG	2.24	0.53
1:B:299:LEU:HD23	1:B:377:ILE:HD12	1.90	0.53
1:B:2380:ILE:HD13	1:B:2469:ILE:HG13	1.90	0.53
1:B:4961:CYS:SG	1:B:4978:HIS:NE2	2.81	0.53
1:C:21:VAL:HG12	1:C:66:CYS:HA	1.90	0.53
1:C:565:TYR:O	1:C:569:ILE:HG12	2.08	0.53
1:C:4052:SER:HA	1:C:4055:VAL:HG22	1.89	0.53
1:D:908:VAL:HB	1:D:912:SER:HB3	1.90	0.53
1:D:4961:CYS:SG	1:D:4978:HIS:NE2	2.81	0.53
1:A:247:TYR:HB2	1:A:374:LYS:HB2	1.90	0.53
1:A:668:VAL:O	1:A:741:GLU:N	2.35	0.53
1:A:1152:MET:HB3	1:A:1223:PHE:CE2	2.43	0.53
1:A:2380:ILE:HD13	1:A:2469:ILE:HG13	1.90	0.53
1:A:3770:LEU:HD22	1:A:3804:ILE:HD11	1.91	0.53
1:A:4101:LYS:NZ	1:B:4730:ASP:OD2	2.41	0.53
1:D:219:VAL:HG12	1:D:261:ARG:HB2	1.88	0.53
1:D:349:GLN:NE2	1:D:354:GLY:O	2.42	0.53
1:D:2354:VAL:O	1:D:2358:ILE:HG22	2.08	0.53
1:D:3770:LEU:HD22	1:D:3804:ILE:HD11	1.91	0.53
1:D:3777:GLU:N	1:D:3777:GLU:OE2	2.41	0.53
1:B:4658:ILE:HG13	1:B:4796:MET:CE	2.39	0.53
1:C:379:HIS:CD2	1:C:382:GLY:H	2.27	0.53
1:C:4152:GLU:OE1	1:C:4194:TYR:OH	2.25	0.53
1:D:292:ALA:HB2	1:D:312:THR:HG22	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1966:VAL:HG21	1:D:3649:ALA:HB1	1.90	0.53
1:A:564:LEU:HD23	1:A:568:LEU:HD13	1.91	0.53
1:A:863:LEU:HD23	1:A:868:GLU:HA	1.91	0.53
1:A:1196:PRO:O	1:A:1198:GLN:NE2	2.36	0.53
1:B:238:SER:OG	1:B:240:ASP:OD1	2.27	0.53
1:B:4823:LEU:O	1:B:4826:ILE:N	2.42	0.53
1:C:116:MET:HE3	1:C:117:TYR:H	1.74	0.53
1:C:1966:VAL:HG21	1:C:3649:ALA:HB1	1.90	0.53
1:D:1152:MET:HB3	1:D:1223:PHE:CE2	2.43	0.53
1:B:1966:VAL:HG21	1:B:3649:ALA:HB1	1.90	0.53
1:B:4577:LEU:HD21	1:B:4807:PHE:HA	1.90	0.53
1:B:4822:THR:O	1:B:4823:LEU:C	2.44	0.53
1:C:281:ARG:NH1	1:C:307:ALA:O	2.42	0.53
1:C:349:GLN:NE2	1:C:354:GLY:O	2.42	0.53
1:C:668:VAL:O	1:C:741:GLU:N	2.35	0.53
1:C:2380:ILE:HD13	1:C:2469:ILE:HG13	1.90	0.53
1:D:247:TYR:HB2	1:D:374:LYS:HB2	1.90	0.53
1:D:379:HIS:CD2	1:D:382:GLY:H	2.27	0.53
1:A:908:VAL:HB	1:A:912:SER:HB3	1.90	0.53
1:B:564:LEU:HD23	1:B:568:LEU:HD13	1.91	0.53
1:C:299:LEU:HD21	1:C:378:LEU:HG	1.91	0.53
1:C:662:TRP:H	1:C:748:LEU:HG	1.74	0.53
1:C:4101:LYS:NZ	1:D:4730:ASP:OD2	2.41	0.53
1:D:182:LEU:HB3	1:D:198:THR:HG21	1.90	0.53
1:D:564:LEU:HD23	1:D:568:LEU:HD13	1.91	0.53
1:D:1089:TYR:HE1	1:D:1150:GLY:HA3	1.73	0.53
1:A:3777:GLU:N	1:A:3777:GLU:OE2	2.41	0.53
1:A:4823:LEU:O	1:A:4826:ILE:N	2.42	0.53
1:B:131:LEU:HD12	1:B:178:ARG:NH2	2.24	0.53
1:B:247:TYR:HB2	1:B:374:LYS:HB2	1.90	0.53
1:B:662:TRP:H	1:B:748:LEU:HG	1.74	0.53
1:B:3777:GLU:N	1:B:3777:GLU:OE2	2.41	0.53
1:B:4816:ILE:HG12	1:B:4823:LEU:HD12	1.91	0.53
1:C:4823:LEU:O	1:C:4826:ILE:N	2.42	0.53
1:D:3731:LYS:O	1:D:3731:LYS:HD3	2.09	0.53
1:D:4577:LEU:HD21	1:D:4807:PHE:HA	1.90	0.53
1:A:661:LYS:HG2	1:A:748:LEU:HB3	1.91	0.53
1:B:379:HIS:CD2	1:B:382:GLY:H	2.27	0.53
1:B:3731:LYS:O	1:B:3731:LYS:HD3	2.09	0.53
1:C:182:LEU:HB3	1:C:198:THR:HG21	1.90	0.53
1:C:317:ARG:NE	1:C:349:GLN:OE1	2.32	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1089:TYR:HE1	1:C:1150:GLY:HA3	1.73	0.53
1:C:3731:LYS:O	1:C:3731:LYS:HD3	2.09	0.53
1:D:21:VAL:HG12	1:D:66:CYS:HA	1.90	0.53
1:D:1077:ALA:HA	1:D:1236:THR:HA	1.91	0.53
1:D:2380:ILE:HD13	1:D:2469:ILE:HG13	1.90	0.53
1:D:4823:LEU:O	1:D:4826:ILE:N	2.42	0.53
1:A:281:ARG:NH1	1:A:307:ALA:O	2.42	0.53
1:A:662:TRP:H	1:A:748:LEU:HG	1.74	0.53
1:A:4769:MET:SD	1:A:4769:MET:N	2.73	0.53
1:B:292:ALA:HB2	1:B:312:THR:HG22	1.90	0.53
1:B:565:TYR:O	1:B:569:ILE:HG12	2.08	0.53
1:B:4101:LYS:NZ	1:C:4730:ASP:OD2	2.41	0.53
1:C:615:ARG:NH2	1:C:1677:GLY:O	2.42	0.53
1:C:3770:LEU:HD22	1:C:3804:ILE:HD11	1.91	0.53
1:C:4658:ILE:HG13	1:C:4796:MET:CE	2.39	0.53
1:D:131:LEU:HD12	1:D:178:ARG:NH2	2.24	0.53
1:D:281:ARG:NH1	1:D:307:ALA:O	2.42	0.53
1:D:299:LEU:HD21	1:D:378:LEU:HG	1.91	0.53
1:D:668:VAL:O	1:D:741:GLU:N	2.35	0.53
1:A:920:TYR:O	1:A:923:GLN:HG3	2.08	0.52
1:A:1680:ARG:HH12	1:A:1797:ARG:H	1.56	0.52
1:A:4816:ILE:HG12	1:A:4823:LEU:HD12	1.91	0.52
1:B:213:TYR:CD2	1:B:337:PRO:HB2	2.43	0.52
1:B:281:ARG:NH1	1:B:307:ALA:O	2.42	0.52
1:B:349:GLN:NE2	1:B:354:GLY:O	2.42	0.52
1:B:3770:LEU:HD22	1:B:3804:ILE:HD11	1.91	0.52
1:C:247:TYR:HB2	1:C:374:LYS:HB2	1.90	0.52
1:C:299:LEU:HD23	1:C:377:ILE:HD12	1.90	0.52
1:C:564:LEU:HD23	1:C:568:LEU:HD13	1.91	0.52
1:C:920:TYR:O	1:C:923:GLN:HG3	2.08	0.52
1:C:3777:GLU:N	1:C:3777:GLU:OE2	2.41	0.52
1:D:317:ARG:NE	1:D:349:GLN:OE1	2.32	0.52
1:D:662:TRP:H	1:D:748:LEU:HG	1.74	0.52
1:D:863:LEU:HD23	1:D:868:GLU:HA	1.91	0.52
1:A:379:HIS:CD2	1:A:382:GLY:H	2.27	0.52
1:A:3731:LYS:O	1:A:3731:LYS:HD3	2.09	0.52
1:A:4658:ILE:HG13	1:A:4796:MET:CE	2.39	0.52
1:B:1680:ARG:HH12	1:B:1797:ARG:H	1.56	0.52
1:C:3778:MET:HA	1:C:3781:GLN:HE21	1.75	0.52
1:A:299:LEU:HD21	1:A:378:LEU:HG	1.91	0.52
1:A:1105:ALA:O	1:A:1189:LEU:N	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3778:MET:HA	1:A:3781:GLN:HE21	1.75	0.52
1:A:4577:LEU:HD21	1:A:4807:PHE:HA	1.90	0.52
1:B:615:ARG:NH2	1:B:1677:GLY:O	2.42	0.52
1:C:4690:GLU:N	1:C:4690:GLU:OE2	2.43	0.52
1:C:4816:ILE:CG2	1:C:4817:ALA:H	2.21	0.52
1:D:116:MET:HE3	1:D:117:TYR:H	1.75	0.52
1:D:4198:SER:OG	1:D:4199:GLU:N	2.43	0.52
1:A:4816:ILE:CG2	1:A:4817:ALA:H	2.21	0.52
1:B:2025:GLU:HA	1:B:2028:ARG:HE	1.74	0.52
1:B:4198:SER:OG	1:B:4199:GLU:N	2.43	0.52
1:D:238:SER:OG	1:D:240:ASP:OD1	2.27	0.52
1:D:3778:MET:HA	1:D:3781:GLN:HE21	1.75	0.52
1:A:131:LEU:HD12	1:A:178:ARG:NH2	2.24	0.52
1:A:292:ALA:HB2	1:A:312:THR:HG22	1.90	0.52
1:A:299:LEU:HD23	1:A:377:ILE:HD12	1.90	0.52
1:A:615:ARG:NH2	1:A:1677:GLY:O	2.42	0.52
1:A:4961:CYS:SG	1:A:4978:HIS:NE2	2.81	0.52
1:B:1240:LYS:O	1:B:1603:VAL:HA	2.10	0.52
1:B:4690:GLU:N	1:B:4690:GLU:OE2	2.43	0.52
1:C:863:LEU:HD23	1:C:868:GLU:HA	1.91	0.52
1:C:1077:ALA:HA	1:C:1236:THR:HA	1.91	0.52
1:C:2025:GLU:HA	1:C:2028:ARG:HE	1.74	0.52
1:A:758:ARG:HG3	1:A:763:PRO:HB3	1.91	0.52
1:B:312:THR:OG1	1:B:313:SER:N	2.40	0.52
1:B:1077:ALA:HA	1:B:1236:THR:HA	1.91	0.52
1:C:3940:LYS:NZ	1:C:3942:VAL:O	2.35	0.52
1:D:4690:GLU:N	1:D:4690:GLU:OE2	2.43	0.52
1:A:213:TYR:CD2	1:A:337:PRO:HB2	2.43	0.52
1:B:299:LEU:HD21	1:B:378:LEU:HG	1.91	0.52
1:B:1155:LEU:HD12	1:B:1155:LEU:H	1.75	0.52
1:C:1240:LYS:O	1:C:1603:VAL:HA	2.10	0.52
1:C:1680:ARG:HH12	1:C:1797:ARG:H	1.56	0.52
1:D:661:LYS:HG2	1:D:748:LEU:HB3	1.91	0.52
1:D:1240:LYS:O	1:D:1603:VAL:HA	2.10	0.52
1:A:1077:ALA:HA	1:A:1236:THR:HA	1.91	0.52
1:A:1155:LEU:H	1:A:1155:LEU:HD12	1.75	0.52
1:A:4198:SER:OG	1:A:4199:GLU:N	2.43	0.52
1:A:4690:GLU:N	1:A:4690:GLU:OE2	2.43	0.52
1:B:661:LYS:HG2	1:B:748:LEU:HB3	1.91	0.52
1:C:1259:ARG:NH2	1:C:1595:LEU:O	2.43	0.52
1:C:3726:ALA:HA	1:C:3729:MET:HE3	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:4658:ILE:HG13	1:D:4796:MET:CE	2.39	0.52
1:B:2629:ASP:O	1:B:2633:LEU:N	2.40	0.52
1:C:1814:MET:O	1:C:1817:GLU:HG3	2.10	0.52
1:D:1680:ARG:HH12	1:D:1797:ARG:H	1.56	0.52
1:A:303:ASP:H	1:A:306:LYS:NZ	2.07	0.52
1:A:4044:MET:HE2	1:A:4044:MET:N	2.25	0.52
1:B:577:ILE:O	1:B:579:GLN:NE2	2.39	0.52
1:B:3778:MET:HA	1:B:3781:GLN:HE21	1.75	0.52
1:C:2207:VAL:HA	1:C:2210:VAL:HG12	1.92	0.52
1:D:582:HIS:O	1:D:585:SER:OG	2.18	0.52
1:D:2025:GLU:HA	1:D:2028:ARG:HE	1.74	0.52
1:A:2025:GLU:HA	1:A:2028:ARG:HE	1.74	0.51
1:B:1965:TYR:OH	1:B:2027:ILE:O	2.22	0.51
1:D:758:ARG:HG3	1:D:763:PRO:HB3	1.91	0.51
1:A:349:GLN:NE2	1:A:354:GLY:O	2.42	0.51
1:B:1105:ALA:O	1:B:1189:LEU:N	2.43	0.51
1:D:303:ASP:H	1:D:306:LYS:NZ	2.07	0.51
1:B:863:LEU:HD23	1:B:868:GLU:HA	1.91	0.51
1:B:1814:MET:O	1:B:1817:GLU:HG3	2.10	0.51
1:B:3726:ALA:HA	1:B:3729:MET:HE3	1.92	0.51
1:C:661:LYS:HG2	1:C:748:LEU:HB3	1.91	0.51
1:D:615:ARG:NH2	1:D:1677:GLY:O	2.42	0.51
1:D:747:CYS:SG	1:D:756:SER:N	2.84	0.51
1:D:1259:ARG:NH2	1:D:1595:LEU:O	2.43	0.51
1:A:1658:ASP:OD1	1:A:1658:ASP:N	2.38	0.51
1:B:758:ARG:HG3	1:B:763:PRO:HB3	1.91	0.51
1:B:4688:ILE:HD12	1:B:4737:ILE:HD12	1.92	0.51
1:C:4661:TYR:HH	1:C:4788:SER:HG	1.37	0.51
1:C:5002:GLU:OE1	1:C:5002:GLU:N	2.39	0.51
1:D:2629:ASP:O	1:D:2633:LEU:N	2.40	0.51
1:D:4769:MET:SD	1:D:4769:MET:N	2.73	0.51
1:D:4816:ILE:HG12	1:D:4823:LEU:HD12	1.91	0.51
1:A:1240:LYS:O	1:A:1603:VAL:HA	2.10	0.51
1:A:2206:THR:HA	1:A:2209:GLU:OE2	2.11	0.51
1:B:3658:LYS:HD2	1:B:3661:TRP:CE3	2.46	0.51
1:C:747:CYS:SG	1:C:756:SER:N	2.84	0.51
1:C:758:ARG:HG3	1:C:763:PRO:HB3	1.91	0.51
1:C:1749:PRO:HB3	1:C:1760:HIS:HA	1.93	0.51
1:C:3658:LYS:HD2	1:C:3661:TRP:CE3	2.46	0.51
1:C:4798:MET:HB3	1:C:4812:HIS:CE1	2.46	0.51
1:A:116:MET:HE3	1:A:117:TYR:H	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4688:ILE:HD12	1:A:4737:ILE:HD12	1.92	0.51
1:B:257:ARG:O	1:B:284:HIS:NE2	2.44	0.51
1:C:131:LEU:HD12	1:C:178:ARG:NH2	2.24	0.51
1:C:2206:THR:HA	1:C:2209:GLU:OE2	2.11	0.51
1:C:4897:ILE:HG13	1:C:4901:ILE:HD11	1.93	0.51
1:D:3726:ALA:HA	1:D:3729:MET:HE3	1.92	0.51
1:A:747:CYS:SG	1:A:756:SER:N	2.84	0.51
1:B:197:GLN:OE1	1:B:197:GLN:N	2.44	0.51
1:B:2206:THR:HA	1:B:2209:GLU:OE2	2.11	0.51
1:B:3680:ALA:HB3	1:B:3697:PRO:HG2	1.92	0.51
1:B:4798:MET:HB3	1:B:4812:HIS:CE1	2.46	0.51
1:C:4688:ILE:HD12	1:C:4737:ILE:HD12	1.92	0.51
1:C:4816:ILE:HG12	1:C:4823:LEU:HD12	1.91	0.51
1:D:197:GLN:N	1:D:197:GLN:OE1	2.44	0.51
1:D:4819:GLY:O	1:D:4820:VAL:C	2.49	0.51
1:A:207:SER:OG	1:A:208:CYS:N	2.44	0.51
1:A:238:SER:OG	1:A:240:ASP:OD1	2.27	0.51
1:A:3658:LYS:HD2	1:A:3661:TRP:CE3	2.46	0.51
1:B:1259:ARG:NH2	1:B:1595:LEU:O	2.43	0.51
1:C:238:SER:OG	1:C:240:ASP:OD1	2.27	0.51
1:C:2024:PRO:O	1:C:2028:ARG:NH2	2.30	0.51
1:D:2207:VAL:HA	1:D:2210:VAL:HG12	1.92	0.51
1:D:3680:ALA:HB3	1:D:3697:PRO:HG2	1.92	0.51
1:D:4897:ILE:HG13	1:D:4901:ILE:HD11	1.93	0.51
1:B:3973:CYS:SG	1:B:3976:ASN:ND2	2.83	0.51
1:C:197:GLN:OE1	1:C:197:GLN:N	2.44	0.51
1:C:1155:LEU:H	1:C:1155:LEU:HD12	1.75	0.51
1:D:116:MET:HE1	1:D:140:ASP:H	1.75	0.51
1:D:1155:LEU:H	1:D:1155:LEU:HD12	1.75	0.51
1:D:1749:PRO:HB3	1:D:1760:HIS:HA	1.93	0.51
1:D:5002:GLU:N	1:D:5002:GLU:OE1	2.39	0.51
1:A:116:MET:HE1	1:A:140:ASP:H	1.75	0.51
1:A:3726:ALA:HA	1:A:3729:MET:HE3	1.92	0.51
1:B:143:GLY:HA2	1:B:146:CYS:SG	2.51	0.51
1:C:303:ASP:H	1:C:306:LYS:NZ	2.07	0.51
1:C:4186:ALA:H	1:C:4188:ARG:HH22	1.59	0.51
1:B:317:ARG:NE	1:B:349:GLN:OE1	2.32	0.50
1:B:747:CYS:SG	1:B:756:SER:N	2.84	0.50
1:A:2207:VAL:HA	1:A:2210:VAL:HG12	1.92	0.50
1:A:2302:LEU:HD23	1:A:2363:CYS:HB2	1.93	0.50
1:A:4798:MET:HB3	1:A:4812:HIS:CE1	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:303:ASP:H	1:B:306:LYS:NZ	2.07	0.50
1:D:4186:ALA:H	1:D:4188:ARG:HH22	1.59	0.50
1:A:257:ARG:O	1:A:284:HIS:NE2	2.44	0.50
1:A:3680:ALA:HB3	1:A:3697:PRO:HG2	1.92	0.50
1:A:4897:ILE:HG13	1:A:4901:ILE:HD11	1.93	0.50
1:B:886:ARG:HB3	1:B:891:TRP:HB2	1.94	0.50
1:B:1703:LEU:HB3	1:B:1708:ARG:HE	1.77	0.50
1:B:4186:ALA:H	1:B:4188:ARG:HH22	1.59	0.50
1:D:1703:LEU:HB3	1:D:1708:ARG:HE	1.77	0.50
1:D:1814:MET:O	1:D:1817:GLU:HG3	2.10	0.50
1:D:4688:ILE:HD12	1:D:4737:ILE:HD12	1.92	0.50
1:A:4658:ILE:HG13	1:A:4796:MET:HE2	1.92	0.50
1:B:1749:PRO:HB3	1:B:1760:HIS:HA	1.93	0.50
1:C:530:ILE:HD11	1:C:537:CYS:HA	1.93	0.50
1:C:4003:LEU:HB2	1:C:4013:LEU:HD13	1.94	0.50
1:C:4198:SER:OG	1:C:4199:GLU:N	2.43	0.50
1:D:143:GLY:HA2	1:D:146:CYS:SG	2.51	0.50
1:D:2206:THR:HA	1:D:2209:GLU:OE2	2.11	0.50
1:D:4816:ILE:CG2	1:D:4817:ALA:H	2.21	0.50
1:A:197:GLN:N	1:A:197:GLN:OE1	2.44	0.50
1:A:223:PHE:CD1	1:A:230:CYS:HB3	2.46	0.50
1:B:207:SER:OG	1:B:208:CYS:N	2.44	0.50
1:B:2302:LEU:HD23	1:B:2363:CYS:HB2	1.93	0.50
1:C:223:PHE:HD1	1:C:230:CYS:HB3	1.76	0.50
1:C:1164:LEU:O	1:C:1167:GLU:HG3	2.12	0.50
1:D:4798:MET:HB3	1:D:4812:HIS:CE1	2.46	0.50
1:A:577:ILE:O	1:A:579:GLN:NE2	2.39	0.50
1:A:886:ARG:HB3	1:A:891:TRP:HB2	1.94	0.50
1:A:1164:LEU:O	1:A:1167:GLU:HG3	2.12	0.50
1:A:4573:ILE:HA	1:A:4576:ILE:HG22	1.94	0.50
1:B:929:LEU:HD23	1:B:932:LEU:HD21	1.93	0.50
1:B:1730:MET:O	1:B:1772:ARG:NH1	2.45	0.50
1:C:1703:LEU:HB3	1:C:1708:ARG:HE	1.77	0.50
1:D:207:SER:OG	1:D:208:CYS:N	2.44	0.50
1:D:1164:LEU:O	1:D:1167:GLU:HG3	2.12	0.50
1:D:1730:MET:O	1:D:1772:ARG:NH1	2.45	0.50
1:D:2348:GLU:OE1	1:D:2348:GLU:N	2.38	0.50
1:D:4573:ILE:HA	1:D:4576:ILE:HG22	1.94	0.50
1:A:1730:MET:O	1:A:1772:ARG:NH1	2.45	0.50
1:A:4186:ALA:H	1:A:4188:ARG:HH22	1.59	0.50
1:B:2207:VAL:HA	1:B:2210:VAL:HG12	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3734:HIS:O	1:B:3738:GLY:N	2.43	0.50
1:B:4897:ILE:HG13	1:B:4901:ILE:HD11	1.93	0.50
1:C:143:GLY:HA2	1:C:146:CYS:SG	2.51	0.50
1:C:229:GLU:HA	1:C:248:GLU:O	2.12	0.50
1:C:929:LEU:HD23	1:C:932:LEU:HD21	1.93	0.50
1:C:1730:MET:O	1:C:1772:ARG:NH1	2.45	0.50
1:C:3680:ALA:HB3	1:C:3697:PRO:HG2	1.92	0.50
1:D:223:PHE:CD1	1:D:230:CYS:HB3	2.46	0.50
1:D:530:ILE:HD11	1:D:537:CYS:HA	1.93	0.50
1:A:1814:MET:O	1:A:1817:GLU:HG3	2.10	0.50
1:B:229:GLU:HA	1:B:248:GLU:O	2.12	0.50
1:C:1105:ALA:O	1:C:1189:LEU:N	2.43	0.50
1:C:2302:LEU:HD23	1:C:2363:CYS:HB2	1.93	0.50
1:D:229:GLU:HA	1:D:248:GLU:O	2.12	0.50
1:D:3658:LYS:HD2	1:D:3661:TRP:CE3	2.46	0.50
1:A:3734:HIS:O	1:A:3738:GLY:N	2.43	0.50
1:B:4044:MET:N	1:B:4044:MET:HE2	2.27	0.50
1:C:207:SER:OG	1:C:208:CYS:N	2.44	0.50
1:C:223:PHE:CD1	1:C:230:CYS:HB3	2.46	0.50
1:D:4003:LEU:HB2	1:D:4013:LEU:HD13	1.94	0.50
1:A:1749:PRO:HB3	1:A:1760:HIS:HA	1.93	0.49
1:A:4819:GLY:O	1:A:4820:VAL:C	2.49	0.49
1:B:223:PHE:CD1	1:B:230:CYS:HB3	2.46	0.49
1:C:4961:CYS:SG	1:C:4978:HIS:NE2	2.81	0.49
1:D:929:LEU:HD23	1:D:932:LEU:HD21	1.93	0.49
1:D:2302:LEU:HD23	1:D:2363:CYS:HB2	1.93	0.49
1:A:1259:ARG:NH2	1:A:1595:LEU:O	2.43	0.49
1:A:1703:LEU:HB3	1:A:1708:ARG:HE	1.77	0.49
1:A:4172:GLU:OE2	1:A:4175:ARG:NH1	2.46	0.49
1:B:530:ILE:HD11	1:B:537:CYS:HA	1.93	0.49
1:B:1164:LEU:O	1:B:1167:GLU:HG3	2.12	0.49
1:B:4006:ASP:OD1	1:B:4007:SER:N	2.45	0.49
1:C:4006:ASP:OD1	1:C:4007:SER:N	2.45	0.49
1:D:1105:ALA:O	1:D:1189:LEU:N	2.43	0.49
1:D:4044:MET:N	1:D:4044:MET:HE2	2.27	0.49
1:D:4056:GLU:HB2	1:D:4166:LEU:HD13	1.94	0.49
1:A:229:GLU:HA	1:A:248:GLU:O	2.12	0.49
1:B:1154:ASP:OD1	1:B:1156:THR:OG1	2.31	0.49
1:B:3999:MET:HG3	1:B:4016:LEU:HD22	1.95	0.49
1:B:4003:LEU:HB2	1:B:4013:LEU:HD13	1.94	0.49
1:C:1076:ARG:HB3	1:C:1191:VAL:HG23	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:25:SER:HB2	1:A:34:LYS:HZ2	1.77	0.49
1:A:670:GLU:H	1:A:740:PRO:HB3	1.78	0.49
1:A:891:TRP:CE3	1:A:904:HIS:HB2	2.48	0.49
1:B:670:GLU:H	1:B:740:PRO:HB3	1.78	0.49
1:C:1243:PRO:HB2	1:C:1600:LEU:HD12	1.95	0.49
1:D:223:PHE:HD1	1:D:230:CYS:HB3	1.76	0.49
1:D:1243:PRO:HB2	1:D:1600:LEU:HD12	1.95	0.49
1:D:3734:HIS:O	1:D:3738:GLY:N	2.43	0.49
1:A:143:GLY:HA2	1:A:146:CYS:SG	2.51	0.49
1:A:223:PHE:HD1	1:A:230:CYS:HB3	1.76	0.49
1:A:1243:PRO:HB2	1:A:1600:LEU:HD12	1.95	0.49
1:A:3999:MET:HG3	1:A:4016:LEU:HD22	1.95	0.49
1:B:223:PHE:HD1	1:B:230:CYS:HB3	1.76	0.49
1:B:4172:GLU:OE2	1:B:4175:ARG:NH1	2.46	0.49
1:D:891:TRP:CE3	1:D:904:HIS:HB2	2.48	0.49
1:D:3999:MET:HG3	1:D:4016:LEU:HD22	1.95	0.49
1:D:4006:ASP:OD1	1:D:4007:SER:N	2.45	0.49
1:D:4632:LEU:HD12	1:D:4633:GLU:H	1.78	0.49
1:A:929:LEU:HD23	1:A:932:LEU:HD21	1.93	0.49
1:A:4006:ASP:OD1	1:A:4007:SER:N	2.45	0.49
1:A:4056:GLU:HB2	1:A:4166:LEU:HD13	1.94	0.49
1:B:4573:ILE:HA	1:B:4576:ILE:HG22	1.94	0.49
1:C:54:ASN:HD21	1:C:57:ASN:HD22	1.60	0.49
1:C:886:ARG:HB3	1:C:891:TRP:HB2	1.94	0.49
1:D:886:ARG:HB3	1:D:891:TRP:HB2	1.94	0.49
1:D:4152:GLU:OE1	1:D:4194:TYR:OH	2.25	0.49
1:A:66:CYS:SG	1:A:67:PHE:N	2.86	0.49
1:A:3940:LYS:NZ	1:A:3942:VAL:O	2.35	0.49
1:B:116:MET:HE3	1:B:117:TYR:H	1.76	0.49
1:B:1774:PRO:HG2	1:B:1776:HIS:NE2	2.28	0.49
1:B:1829:PRO:HB3	1:B:1837:GLN:HG3	1.95	0.49
1:C:3676:ASP:OD1	1:C:3676:ASP:N	2.46	0.49
1:C:3999:MET:HG3	1:C:4016:LEU:HD22	1.95	0.49
1:A:468:LEU:O	1:A:472:ARG:HG3	2.13	0.49
1:A:1829:PRO:HB3	1:A:1837:GLN:HG3	1.95	0.49
1:A:3762:ARG:NH2	1:A:4755:GLU:O	2.46	0.49
1:C:4056:GLU:HB2	1:C:4166:LEU:HD13	1.94	0.49
1:C:4573:ILE:HA	1:C:4576:ILE:HG22	1.94	0.49
1:D:54:ASN:HD21	1:D:57:ASN:HD22	1.60	0.49
1:D:1076:ARG:HB3	1:D:1191:VAL:HG23	1.95	0.49
1:D:3676:ASP:OD1	1:D:3676:ASP:N	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:4001:MET:HE1	1:D:4061:PHE:HB2	1.95	0.49
1:A:3670:GLU:OE1	1:A:3670:GLU:N	2.46	0.49
1:B:3670:GLU:OE1	1:B:3670:GLU:N	2.46	0.49
1:B:4632:LEU:HD12	1:B:4633:GLU:H	1.78	0.49
1:C:248:GLU:OE1	1:C:373:LYS:NZ	2.46	0.49
1:C:670:GLU:H	1:C:740:PRO:HB3	1.78	0.49
1:C:3973:CYS:SG	1:C:3976:ASN:ND2	2.83	0.49
1:D:4107:GLU:OE1	1:D:4107:GLU:N	2.41	0.49
1:A:530:ILE:HD11	1:A:537:CYS:HA	1.93	0.49
1:A:4003:LEU:HB2	1:A:4013:LEU:HD13	1.94	0.49
1:B:891:TRP:CE3	1:B:904:HIS:HB2	2.48	0.49
1:B:1076:ARG:HB3	1:B:1191:VAL:HG23	1.95	0.49
1:B:4001:MET:HE1	1:B:4061:PHE:HB2	1.95	0.49
1:B:468:LEU:O	1:B:472:ARG:HG3	2.13	0.48
1:B:1243:PRO:HB2	1:B:1600:LEU:HD12	1.95	0.48
1:C:582:HIS:O	1:C:585:SER:OG	2.18	0.48
1:C:891:TRP:CE3	1:C:904:HIS:HB2	2.48	0.48
1:C:1154:ASP:OD1	1:C:1156:THR:OG1	2.31	0.48
1:C:2004:GLU:HA	1:C:2007:ASN:ND2	2.28	0.48
1:C:2587:TYR:O	1:C:2591:ARG:N	2.45	0.48
1:D:3670:GLU:OE1	1:D:3670:GLU:N	2.46	0.48
1:A:1154:ASP:OD1	1:A:1156:THR:OG1	2.31	0.48
1:A:1194:LEU:HG	1:A:1198:GLN:HB2	1.95	0.48
1:A:1965:TYR:OH	1:A:2027:ILE:O	2.22	0.48
1:B:54:ASN:HD21	1:B:57:ASN:HD22	1.60	0.48
1:B:66:CYS:SG	1:B:67:PHE:N	2.86	0.48
1:C:1774:PRO:HG2	1:C:1776:HIS:NE2	2.28	0.48
1:C:1965:TYR:OH	1:C:2027:ILE:O	2.22	0.48
1:C:4172:GLU:OE2	1:C:4175:ARG:NH1	2.46	0.48
1:C:4632:LEU:HD12	1:C:4633:GLU:H	1.78	0.48
1:D:670:GLU:H	1:D:740:PRO:HB3	1.78	0.48
1:D:1006:SER:O	1:D:1020:ARG:N	2.46	0.48
1:A:3973:CYS:SG	1:A:3976:ASN:ND2	2.83	0.48
1:A:4001:MET:HE1	1:A:4061:PHE:HB2	1.95	0.48
1:A:4632:LEU:HD12	1:A:4633:GLU:H	1.78	0.48
1:A:4852:THR:HG21	1:A:4883:TYR:HB2	1.95	0.48
1:A:4901:ILE:HD12	1:A:4913:ARG:NH2	2.28	0.48
1:C:257:ARG:O	1:C:284:HIS:NE2	2.44	0.48
1:C:3734:HIS:O	1:C:3738:GLY:N	2.43	0.48
1:C:4044:MET:HE2	1:C:4044:MET:N	2.28	0.48
1:D:66:CYS:SG	1:D:67:PHE:N	2.86	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:257:ARG:O	1:D:284:HIS:NE2	2.44	0.48
1:D:1154:ASP:OD1	1:D:1156:THR:OG1	2.31	0.48
1:D:4901:ILE:HD12	1:D:4913:ARG:NH2	2.28	0.48
1:A:5013:MET:O	1:A:5017:ARG:N	2.47	0.48
1:B:4852:THR:HG21	1:B:4883:TYR:HB2	1.95	0.48
1:C:66:CYS:SG	1:C:67:PHE:N	2.86	0.48
1:C:468:LEU:O	1:C:472:ARG:HG3	2.13	0.48
1:C:1194:LEU:HG	1:C:1198:GLN:HB2	1.95	0.48
1:D:4172:GLU:OE2	1:D:4175:ARG:NH1	2.46	0.48
1:B:3762:ARG:NH2	1:B:4755:GLU:O	2.46	0.48
1:B:3940:LYS:NZ	1:B:3942:VAL:O	2.35	0.48
1:B:4056:GLU:HB2	1:B:4166:LEU:HD13	1.94	0.48
1:B:4819:GLY:O	1:B:4820:VAL:C	2.49	0.48
1:B:5013:MET:O	1:B:5017:ARG:N	2.47	0.48
1:C:4958:CYS:SG	1:C:4961:CYS:N	2.87	0.48
1:C:5013:MET:O	1:C:5017:ARG:N	2.47	0.48
1:D:1829:PRO:HB3	1:D:1837:GLN:HG3	1.95	0.48
1:D:2004:GLU:HA	1:D:2007:ASN:ND2	2.28	0.48
1:D:4108:ILE:O	1:D:4112:LEU:HG	2.14	0.48
1:A:1774:PRO:HG2	1:A:1776:HIS:NE2	2.28	0.48
1:C:577:ILE:O	1:C:579:GLN:NE2	2.39	0.48
1:C:3762:ARG:NH2	1:C:4755:GLU:O	2.46	0.48
1:A:1220:GLN:CD	1:A:1220:GLN:H	2.17	0.48
1:B:1006:SER:O	1:B:1020:ARG:N	2.46	0.48
1:C:1829:PRO:HB3	1:C:1837:GLN:HG3	1.95	0.48
1:C:3670:GLU:N	1:C:3670:GLU:OE1	2.46	0.48
1:D:1194:LEU:HG	1:D:1198:GLN:HB2	1.95	0.48
1:D:1220:GLN:CD	1:D:1220:GLN:H	2.17	0.48
1:B:2004:GLU:HA	1:B:2007:ASN:ND2	2.28	0.48
1:B:4958:CYS:SG	1:B:4961:CYS:N	2.87	0.48
1:C:25:SER:HB2	1:C:34:LYS:HZ2	1.78	0.48
1:D:1774:PRO:HG2	1:D:1776:HIS:NE2	2.28	0.48
1:A:721:LEU:N	1:A:728:ARG:O	2.47	0.48
1:A:1076:ARG:HB3	1:A:1191:VAL:HG23	1.95	0.48
1:A:3767:GLN:OE1	1:A:3809:ASN:ND2	2.47	0.48
1:B:1194:LEU:HG	1:B:1198:GLN:HB2	1.95	0.48
1:B:3767:GLN:OE1	1:B:3809:ASN:ND2	2.47	0.48
1:C:1006:SER:O	1:C:1020:ARG:N	2.46	0.48
1:C:3647:HIS:O	1:C:3651:ASN:ND2	2.47	0.48
1:C:4901:ILE:HD12	1:C:4913:ARG:NH2	2.28	0.48
1:D:468:LEU:O	1:D:472:ARG:HG3	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:4958:CYS:SG	1:D:4961:CYS:N	2.87	0.48
1:B:116:MET:HE1	1:B:140:ASP:H	1.79	0.48
1:B:213:TYR:HD2	1:B:337:PRO:HB2	1.79	0.48
1:B:1220:GLN:CD	1:B:1220:GLN:H	2.17	0.48
1:B:2348:GLU:OE1	1:B:2348:GLU:N	2.38	0.48
1:C:213:TYR:HD2	1:C:337:PRO:HB2	1.79	0.48
1:C:721:LEU:N	1:C:728:ARG:O	2.47	0.48
1:C:3767:GLN:OE1	1:C:3809:ASN:ND2	2.47	0.48
1:D:213:TYR:HD2	1:D:337:PRO:HB2	1.79	0.48
1:D:3762:ARG:NH2	1:D:4755:GLU:O	2.46	0.48
1:A:54:ASN:HD21	1:A:57:ASN:HD22	1.60	0.47
1:A:2228:MET:SD	1:A:2228:MET:N	2.86	0.47
1:A:4108:ILE:O	1:A:4112:LEU:HG	2.14	0.47
1:B:3897:ASN:H	1:B:3900:GLN:NE2	2.12	0.47
1:C:4852:THR:HG21	1:C:4883:TYR:HB2	1.95	0.47
1:D:273:HIS:CE1	1:D:337:PRO:HB3	2.49	0.47
1:D:5013:MET:O	1:D:5017:ARG:N	2.47	0.47
1:A:497:TYR:HA	1:A:503:PHE:CD2	2.50	0.47
1:A:1006:SER:O	1:A:1020:ARG:N	2.46	0.47
1:A:4057:MET:HA	1:A:4060:LYS:HG2	1.97	0.47
1:B:310:LYS:O	1:B:310:LYS:NZ	2.45	0.47
1:B:4658:ILE:HG13	1:B:4796:MET:HE2	1.95	0.47
1:B:5001:THR:OG1	1:B:5002:GLU:OE1	2.27	0.47
1:C:4108:ILE:O	1:C:4112:LEU:HG	2.14	0.47
1:D:2469:ILE:H	1:D:2469:ILE:HD12	1.80	0.47
1:D:3889:GLN:HB2	1:D:3964:SER:HA	1.97	0.47
1:A:273:HIS:CE1	1:A:337:PRO:HB3	2.49	0.47
1:B:526:LEU:O	1:B:530:ILE:HG22	2.15	0.47
1:B:2587:TYR:O	1:B:2591:ARG:N	2.45	0.47
1:C:4057:MET:HA	1:C:4060:LYS:HG2	1.97	0.47
1:C:4819:GLY:O	1:C:4820:VAL:C	2.49	0.47
1:D:4679:ARG:HH21	1:D:5017:ARG:NH1	2.12	0.47
1:A:213:TYR:HD2	1:A:337:PRO:HB2	1.79	0.47
1:A:310:LYS:O	1:A:310:LYS:NZ	2.45	0.47
1:A:3647:HIS:O	1:A:3651:ASN:ND2	2.47	0.47
1:A:4152:GLU:OE1	1:A:4194:TYR:OH	2.25	0.47
1:B:716:PHE:HE1	1:B:730:VAL:HG21	1.79	0.47
1:B:2228:MET:N	1:B:2228:MET:SD	2.86	0.47
1:B:3647:HIS:O	1:B:3651:ASN:ND2	2.47	0.47
1:B:4679:ARG:HH21	1:B:5017:ARG:NH1	2.12	0.47
1:C:1220:GLN:H	1:C:1220:GLN:CD	2.17	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:721:LEU:N	1:D:728:ARG:O	2.47	0.47
1:D:2587:TYR:O	1:D:2591:ARG:N	2.45	0.47
1:D:4057:MET:HA	1:D:4060:LYS:HG2	1.97	0.47
1:A:3897:ASN:H	1:A:3900:GLN:NE2	2.12	0.47
1:B:497:TYR:HA	1:B:503:PHE:CD2	2.50	0.47
1:B:721:LEU:N	1:B:728:ARG:O	2.47	0.47
1:B:4232:GLU:OE2	1:B:5017:ARG:NH2	2.48	0.47
1:B:4901:ILE:HD12	1:B:4913:ARG:NH2	2.28	0.47
1:D:1637:MET:HG3	1:D:1650:ILE:HG21	1.97	0.47
1:D:2228:MET:N	1:D:2228:MET:SD	2.86	0.47
1:D:3647:HIS:O	1:D:3651:ASN:ND2	2.47	0.47
1:A:526:LEU:O	1:A:530:ILE:HG22	2.15	0.47
1:A:3889:GLN:HB2	1:A:3964:SER:HA	1.97	0.47
1:A:4679:ARG:HH21	1:A:5017:ARG:NH1	2.12	0.47
1:A:4958:CYS:SG	1:A:4961:CYS:N	2.87	0.47
1:B:1704:PRO:HG2	1:B:1707:LEU:HB3	1.97	0.47
1:C:313:SER:HB2	1:C:350:HIS:CE1	2.50	0.47
1:C:2113:SER:O	1:C:2113:SER:OG	2.33	0.47
1:C:4232:GLU:OE2	1:C:5017:ARG:NH2	2.48	0.47
1:D:497:TYR:HA	1:D:503:PHE:CD2	2.50	0.47
1:A:248:GLU:OE1	1:A:373:LYS:NZ	2.46	0.47
1:A:582:HIS:O	1:A:585:SER:OG	2.18	0.47
1:A:716:PHE:HE1	1:A:730:VAL:HG21	1.79	0.47
1:A:1087:ARG:HB3	1:A:1223:PHE:CD2	2.50	0.47
1:A:1704:PRO:HG2	1:A:1707:LEU:HB3	1.97	0.47
1:B:232:THR:OG1	1:B:233:ILE:N	2.48	0.47
1:B:2113:SER:O	1:B:2113:SER:OG	2.33	0.47
1:B:4057:MET:HA	1:B:4060:LYS:HG2	1.97	0.47
1:B:4108:ILE:O	1:B:4112:LEU:HG	2.14	0.47
1:C:265:LEU:HD12	1:C:279:PRO:HB2	1.97	0.47
1:C:1637:MET:HG3	1:C:1650:ILE:HG21	1.97	0.47
1:C:4001:MET:HE1	1:C:4061:PHE:HB2	1.96	0.47
1:C:4582:VAL:HG11	1:D:4860:ARG:HD2	1.97	0.47
1:C:4679:ARG:HH21	1:C:5017:ARG:NH1	2.12	0.47
1:D:248:GLU:OE1	1:D:373:LYS:NZ	2.46	0.47
1:D:313:SER:HB2	1:D:350:HIS:CE1	2.50	0.47
1:D:716:PHE:HE1	1:D:730:VAL:HG21	1.79	0.47
1:D:5001:THR:OG1	1:D:5002:GLU:OE1	2.27	0.47
1:A:313:SER:HB2	1:A:350:HIS:CE1	2.50	0.47
1:A:551:LEU:HG	1:A:553:ARG:HD2	1.97	0.47
1:A:1211:LEU:HB3	1:A:1214:PHE:HB2	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:551:LEU:HG	1:B:553:ARG:HD2	1.97	0.47
1:B:1087:ARG:HB3	1:B:1223:PHE:CD2	2.50	0.47
1:B:4242:ILE:O	1:B:4246:GLN:HG2	2.15	0.47
1:C:497:TYR:HA	1:C:503:PHE:CD2	2.50	0.47
1:D:551:LEU:HG	1:D:553:ARG:HD2	1.97	0.47
1:D:4852:THR:HG21	1:D:4883:TYR:HB2	1.95	0.47
1:A:3752:SER:N	1:A:3755:GLU:OE2	2.44	0.47
1:A:4162:ASN:O	1:A:4166:LEU:HG	2.15	0.47
1:A:4242:ILE:O	1:A:4246:GLN:HG2	2.15	0.47
1:B:265:LEU:HD12	1:B:279:PRO:HB2	1.97	0.47
1:B:313:SER:HB2	1:B:350:HIS:CE1	2.50	0.47
1:B:1287:LEU:CB	1:B:1598:GLN:H	2.28	0.47
1:B:4107:GLU:OE1	1:B:4107:GLU:N	2.41	0.47
1:B:4162:ASN:O	1:B:4166:LEU:HG	2.15	0.47
1:C:2176:ASN:OD1	1:C:2176:ASN:N	2.48	0.47
1:D:1087:ARG:HB3	1:D:1223:PHE:CD2	2.50	0.47
1:D:1704:PRO:HG2	1:D:1707:LEU:HB3	1.97	0.47
1:D:4112:LEU:O	1:D:4115:SER:OG	2.32	0.47
1:A:1287:LEU:CB	1:A:1598:GLN:H	2.28	0.47
1:C:716:PHE:HE1	1:C:730:VAL:HG21	1.79	0.47
1:C:3752:SER:N	1:C:3755:GLU:OE2	2.44	0.47
1:A:1637:MET:HG3	1:A:1650:ILE:HG21	1.97	0.46
1:A:1707:LEU:HD23	1:A:1708:ARG:HG3	1.96	0.46
1:A:1939:MET:O	1:A:1943:LEU:HG	2.16	0.46
1:A:2004:GLU:HA	1:A:2007:ASN:ND2	2.28	0.46
1:B:276:TRP:CD2	1:B:318:VAL:HG22	2.51	0.46
1:C:276:TRP:CD2	1:C:318:VAL:HG22	2.51	0.46
1:C:526:LEU:O	1:C:530:ILE:HG22	2.15	0.46
1:C:1087:ARG:HB3	1:C:1223:PHE:CD2	2.50	0.46
1:C:4112:LEU:O	1:C:4115:SER:OG	2.32	0.46
1:D:192:ASP:OD1	1:D:192:ASP:N	2.48	0.46
1:D:526:LEU:O	1:D:530:ILE:HG22	2.15	0.46
1:D:1190:PRO:HD3	1:D:1226:PHE:CZ	2.51	0.46
1:D:1211:LEU:HB3	1:D:1214:PHE:HB2	1.97	0.46
1:D:2024:PRO:O	1:D:2028:ARG:NH2	2.30	0.46
1:A:626:LEU:HD11	1:A:630:GLU:H	1.80	0.46
1:B:626:LEU:HD11	1:B:630:GLU:H	1.80	0.46
1:B:1190:PRO:HD3	1:B:1226:PHE:CZ	2.51	0.46
1:B:1707:LEU:HD23	1:B:1708:ARG:HG3	1.96	0.46
1:C:743:VAL:HB	1:C:760:ASN:HD21	1.80	0.46
1:C:1211:LEU:HB3	1:C:1214:PHE:HB2	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1707:LEU:HD23	1:C:1708:ARG:HG3	1.96	0.46
1:C:1939:MET:O	1:C:1943:LEU:HG	2.16	0.46
1:D:1939:MET:O	1:D:1943:LEU:HG	2.16	0.46
1:D:3767:GLN:OE1	1:D:3809:ASN:ND2	2.47	0.46
1:A:460:GLN:N	1:A:463:GLU:OE1	2.49	0.46
1:A:1190:PRO:HD3	1:A:1226:PHE:CZ	2.51	0.46
1:A:2469:ILE:H	1:A:2469:ILE:HD12	1.80	0.46
1:A:3653:PHE:HA	1:A:3656:SER:OG	2.16	0.46
1:A:4232:GLU:OE2	1:A:5017:ARG:NH2	2.48	0.46
1:B:1211:LEU:HB3	1:B:1214:PHE:HB2	1.97	0.46
1:B:1939:MET:O	1:B:1943:LEU:HG	2.16	0.46
1:C:2228:MET:SD	1:C:2228:MET:N	2.86	0.46
1:C:2348:GLU:OE1	1:C:2348:GLU:N	2.38	0.46
1:C:2469:ILE:H	1:C:2469:ILE:HD12	1.80	0.46
1:C:5001:THR:OG1	1:C:5002:GLU:OE1	2.27	0.46
1:D:232:THR:OG1	1:D:233:ILE:N	2.48	0.46
1:D:3963:ASN:O	1:D:3966:THR:OG1	2.30	0.46
1:D:4232:GLU:OE2	1:D:5017:ARG:NH2	2.48	0.46
1:A:275:ARG:HD3	1:A:336:PRO:HD2	1.97	0.46
1:A:4071:ILE:HD11	1:A:4102:GLN:HE21	1.81	0.46
1:A:4860:ARG:HD2	1:D:4582:VAL:HG11	1.97	0.46
1:B:235:ALA:HA	1:B:257:ARG:HD3	1.98	0.46
1:C:235:ALA:HA	1:C:257:ARG:HD3	1.98	0.46
1:C:551:LEU:HG	1:C:553:ARG:HD2	1.97	0.46
1:C:1190:PRO:HD3	1:C:1226:PHE:CZ	2.51	0.46
1:D:460:GLN:N	1:D:463:GLU:OE1	2.49	0.46
1:D:1287:LEU:CB	1:D:1598:GLN:H	2.28	0.46
1:A:2587:TYR:O	1:A:2591:ARG:N	2.45	0.46
1:B:2469:ILE:HD12	1:B:2469:ILE:H	1.80	0.46
1:B:3653:PHE:HA	1:B:3656:SER:OG	2.16	0.46
1:B:3889:GLN:HB2	1:B:3964:SER:HA	1.97	0.46
1:C:236:ALA:HA	1:C:242:ARG:HD2	1.98	0.46
1:C:460:GLN:N	1:C:463:GLU:OE1	2.49	0.46
1:C:626:LEU:HD11	1:C:630:GLU:H	1.80	0.46
1:C:4570:ALA:O	1:C:4574:ASN:ND2	2.49	0.46
1:D:343:GLU:OE1	1:D:343:GLU:N	2.49	0.46
1:D:708:GLY:HA3	1:D:722:TRP:HB3	1.98	0.46
1:A:236:ALA:HA	1:A:242:ARG:HD2	1.98	0.46
1:A:1702:HIS:O	1:A:1708:ARG:NH2	2.49	0.46
1:B:708:GLY:HA3	1:B:722:TRP:HB3	1.98	0.46
1:B:1637:MET:HG3	1:B:1650:ILE:HG21	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3752:SER:N	1:B:3755:GLU:OE2	2.44	0.46
1:C:273:HIS:CE1	1:C:337:PRO:HB3	2.49	0.46
1:D:236:ALA:HA	1:D:242:ARG:HD2	1.98	0.46
1:D:278:GLN:N	1:D:315:CYS:SG	2.89	0.46
1:D:1707:LEU:HD23	1:D:1708:ARG:HG3	1.96	0.46
1:D:2113:SER:OG	1:D:2113:SER:O	2.33	0.46
1:D:3897:ASN:H	1:D:3900:GLN:NE2	2.12	0.46
1:D:4999:ASP:OD1	1:D:5000:GLU:N	2.49	0.46
1:A:2024:PRO:O	1:A:2028:ARG:NH2	2.30	0.46
1:B:236:ALA:HA	1:B:242:ARG:HD2	1.98	0.46
1:B:278:GLN:N	1:B:315:CYS:SG	2.89	0.46
1:B:343:GLU:OE1	1:B:343:GLU:N	2.49	0.46
1:C:2337:PHE:HA	1:C:2340:PHE:HB2	1.98	0.46
1:D:265:LEU:HD12	1:D:279:PRO:HB2	1.97	0.46
1:D:743:VAL:HB	1:D:760:ASN:HD21	1.80	0.46
1:D:1124:PHE:HE2	1:D:1143:TRP:HE1	1.63	0.46
1:D:3973:CYS:SG	1:D:3976:ASN:ND2	2.83	0.46
1:D:4579:PHE:HB2	1:D:4631:PHE:HE1	1.81	0.46
1:A:562:GLU:OE1	1:A:598:LYS:NZ	2.41	0.46
1:B:224:HIS:HB3	1:B:229:GLU:HB3	1.98	0.46
1:C:232:THR:OG1	1:C:233:ILE:N	2.48	0.46
1:C:1665:HIS:HA	1:C:1668:ARG:HG2	1.98	0.46
1:C:1704:PRO:HG2	1:C:1707:LEU:HB3	1.97	0.46
1:C:3889:GLN:HB2	1:C:3964:SER:HA	1.97	0.46
1:C:4999:ASP:OD1	1:C:5000:GLU:N	2.49	0.46
1:D:577:ILE:O	1:D:579:GLN:NE2	2.39	0.46
1:D:1665:HIS:HA	1:D:1668:ARG:HG2	1.98	0.46
1:D:2176:ASN:OD1	1:D:2176:ASN:N	2.48	0.46
1:A:192:ASP:OD1	1:A:192:ASP:N	2.48	0.46
1:A:708:GLY:HA3	1:A:722:TRP:HB3	1.98	0.46
1:A:2113:SER:O	1:A:2113:SER:OG	2.33	0.46
1:A:4582:VAL:HG11	1:B:4860:ARG:HD2	1.97	0.46
1:B:192:ASP:N	1:B:192:ASP:OD1	2.48	0.46
1:B:273:HIS:CE1	1:B:337:PRO:HB3	2.49	0.46
1:B:2337:PHE:HA	1:B:2340:PHE:HB2	1.98	0.46
1:C:275:ARG:HD3	1:C:336:PRO:HD2	1.97	0.46
1:C:4162:ASN:O	1:C:4166:LEU:HG	2.15	0.46
1:A:274:LEU:HD12	1:A:274:LEU:HA	1.77	0.46
1:A:343:GLU:OE1	1:A:343:GLU:N	2.49	0.46
1:A:1124:PHE:HE2	1:A:1143:TRP:HE1	1.63	0.46
1:A:2176:ASN:OD1	1:A:2176:ASN:N	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4071:ILE:HD11	1:B:4102:GLN:HE21	1.81	0.46
1:C:278:GLN:N	1:C:315:CYS:SG	2.89	0.46
1:C:4044:MET:O	1:C:4047:MET:HG3	2.16	0.46
1:C:4579:PHE:HB2	1:C:4631:PHE:HE1	1.81	0.46
1:D:276:TRP:CD2	1:D:318:VAL:HG22	2.51	0.46
1:D:626:LEU:HD11	1:D:630:GLU:H	1.80	0.46
1:D:3653:PHE:HA	1:D:3656:SER:OG	2.16	0.46
1:D:4044:MET:O	1:D:4047:MET:HG3	2.16	0.46
1:A:224:HIS:HB3	1:A:229:GLU:HB3	1.98	0.45
1:A:265:LEU:HD12	1:A:279:PRO:HB2	1.97	0.45
1:A:4999:ASP:OD1	1:A:5000:GLU:N	2.49	0.45
1:B:460:GLN:N	1:B:463:GLU:OE1	2.49	0.45
1:B:794:GLY:N	1:B:798:GLY:HA3	2.30	0.45
1:B:1665:HIS:HA	1:B:1668:ARG:HG2	1.98	0.45
1:B:4582:VAL:HG11	1:C:4860:ARG:HD2	1.97	0.45
1:B:4999:ASP:OD1	1:B:5000:GLU:N	2.49	0.45
1:C:1132:TRP:NE1	1:C:1136:SER:OG	2.49	0.45
1:D:1126:GLY:HA3	1:D:1143:TRP:CE2	2.51	0.45
1:D:1702:HIS:O	1:D:1708:ARG:NH2	2.49	0.45
1:D:2337:PHE:HA	1:D:2340:PHE:HB2	1.98	0.45
1:D:3663:LEU:HD23	1:D:3663:LEU:H	1.80	0.45
1:D:4242:ILE:O	1:D:4246:GLN:HG2	2.15	0.45
1:A:1132:TRP:NE1	1:A:1136:SER:OG	2.49	0.45
1:A:3676:ASP:N	1:A:3676:ASP:OD1	2.46	0.45
1:A:3888:LEU:HD23	1:A:3888:LEU:HA	1.82	0.45
1:A:4112:LEU:O	1:A:4115:SER:OG	2.32	0.45
1:A:4579:PHE:HB2	1:A:4631:PHE:HE1	1.81	0.45
1:B:4570:ALA:O	1:B:4574:ASN:ND2	2.49	0.45
1:C:794:GLY:N	1:C:798:GLY:HA3	2.30	0.45
1:C:1287:LEU:CB	1:C:1598:GLN:H	2.28	0.45
1:C:1653:LEU:HD11	1:C:1659:LEU:HB2	1.99	0.45
1:C:4876:CYS:HA	1:C:4882:CYS:HB2	1.98	0.45
1:D:4868:ASP:N	1:D:4868:ASP:OD1	2.49	0.45
1:D:4876:CYS:HA	1:D:4882:CYS:HB2	1.98	0.45
1:A:232:THR:OG1	1:A:233:ILE:N	2.48	0.45
1:A:743:VAL:HB	1:A:760:ASN:HD21	1.80	0.45
1:A:1665:HIS:HA	1:A:1668:ARG:HG2	1.98	0.45
1:B:743:VAL:HB	1:B:760:ASN:HD21	1.80	0.45
1:B:1132:TRP:NE1	1:B:1136:SER:OG	2.49	0.45
1:B:4868:ASP:OD1	1:B:4868:ASP:N	2.49	0.45
1:C:192:ASP:N	1:C:192:ASP:OD1	2.48	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:343:GLU:OE1	1:C:343:GLU:N	2.49	0.45
1:C:708:GLY:HA3	1:C:722:TRP:HB3	1.98	0.45
1:C:1124:PHE:HE2	1:C:1143:TRP:HE1	1.63	0.45
1:C:4658:ILE:HG13	1:C:4796:MET:HE2	1.98	0.45
1:D:215:THR:HG22	1:D:273:HIS:HA	1.98	0.45
1:D:235:ALA:HA	1:D:257:ARG:HD3	1.98	0.45
1:D:1653:LEU:HD11	1:D:1659:LEU:HB2	1.99	0.45
1:D:4071:ILE:HD11	1:D:4102:GLN:HE21	1.81	0.45
1:D:4162:ASN:O	1:D:4166:LEU:HG	2.15	0.45
1:D:4570:ALA:O	1:D:4574:ASN:ND2	2.49	0.45
1:A:235:ALA:HA	1:A:257:ARG:HD3	1.98	0.45
1:B:182:LEU:H	1:B:198:THR:HG21	1.82	0.45
1:B:2452:ARG:O	1:B:2456:ILE:HG12	2.17	0.45
1:C:2452:ARG:O	1:C:2456:ILE:HG12	2.17	0.45
1:C:3653:PHE:HA	1:C:3656:SER:OG	2.16	0.45
1:D:1132:TRP:NE1	1:D:1136:SER:OG	2.49	0.45
1:A:182:LEU:H	1:A:198:THR:HG21	1.82	0.45
1:A:745:SER:OG	1:A:758:ARG:HB3	2.16	0.45
1:A:1126:GLY:HA3	1:A:1143:TRP:CE2	2.51	0.45
1:A:2010:LEU:HD21	1:A:3657:TYR:HD1	1.81	0.45
1:A:3963:ASN:O	1:A:3966:THR:OG1	2.30	0.45
1:A:4044:MET:O	1:A:4047:MET:HG3	2.16	0.45
1:A:4876:CYS:HA	1:A:4882:CYS:HB2	1.98	0.45
1:A:4890:GLY:HA2	1:A:4897:ILE:HD13	1.99	0.45
1:A:5001:THR:OG1	1:A:5002:GLU:OE1	2.27	0.45
1:B:1702:HIS:O	1:B:1708:ARG:NH2	2.49	0.45
1:B:3663:LEU:HD23	1:B:3663:LEU:H	1.80	0.45
1:D:275:ARG:HD3	1:D:336:PRO:HD2	1.97	0.45
1:A:278:GLN:N	1:A:315:CYS:SG	2.89	0.45
1:A:2000:SER:O	1:A:2005:GLN:HB2	2.16	0.45
1:A:4138:ASP:O	1:A:4142:ASN:ND2	2.50	0.45
1:B:745:SER:OG	1:B:758:ARG:HB3	2.16	0.45
1:B:864:PRO:O	1:B:868:GLU:N	2.41	0.45
1:B:1126:GLY:HA3	1:B:1143:TRP:CE2	2.51	0.45
1:B:3676:ASP:OD1	1:B:3676:ASP:N	2.46	0.45
1:B:3845:ASN:O	1:B:3849:ARG:HG2	2.17	0.45
1:B:3890:LEU:HD23	1:B:3890:LEU:HA	1.83	0.45
1:B:4876:CYS:HA	1:B:4882:CYS:HB2	1.98	0.45
1:C:350:HIS:CE1	1:C:352:ALA:HB3	2.52	0.45
1:C:1126:GLY:HA3	1:C:1143:TRP:CE2	2.51	0.45
1:C:4242:ILE:O	1:C:4246:GLN:HG2	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:709:ASP:HB3	1:D:725:HIS:CE1	2.52	0.45
1:A:2452:ARG:O	1:A:2456:ILE:HG12	2.17	0.45
1:A:3663:LEU:HD23	1:A:3663:LEU:H	1.80	0.45
1:A:4570:ALA:O	1:A:4574:ASN:ND2	2.49	0.45
1:B:350:HIS:CE1	1:B:352:ALA:HB3	2.52	0.45
1:B:464:LYS:HE2	1:B:464:LYS:HB2	1.71	0.45
1:C:182:LEU:H	1:C:198:THR:HG21	1.82	0.45
1:C:358:THR:HG21	1:C:382:GLY:HA3	1.99	0.45
1:C:2010:LEU:HD21	1:C:3657:TYR:HD1	1.81	0.45
1:C:3996:PHE:CD1	1:C:4016:LEU:HD11	2.52	0.45
1:C:4071:ILE:HD11	1:C:4102:GLN:HE21	1.81	0.45
1:D:794:GLY:N	1:D:798:GLY:HA3	2.30	0.45
1:A:709:ASP:HB3	1:A:725:HIS:CE1	2.52	0.45
1:A:1650:ILE:HD12	1:A:1653:LEU:HD23	1.99	0.45
1:B:215:THR:HG22	1:B:273:HIS:HA	1.98	0.45
1:B:636:ASN:HB3	1:B:702:TRP:HZ3	1.82	0.45
1:B:2024:PRO:O	1:B:2028:ARG:NH2	2.30	0.45
1:B:2277:ALA:HB1	1:B:2337:PHE:HD2	1.82	0.45
1:B:4044:MET:O	1:B:4047:MET:HG3	2.16	0.45
1:C:4051:SER:O	1:C:4055:VAL:HG13	2.17	0.45
1:D:1090:PHE:CE1	1:D:1151:CYS:HB2	2.52	0.45
1:A:794:GLY:N	1:A:798:GLY:HA3	2.30	0.45
1:A:1653:LEU:HD11	1:A:1659:LEU:HB2	1.99	0.45
1:A:3996:PHE:CD1	1:A:4016:LEU:HD11	2.52	0.45
1:A:5035:GLN:OE1	1:A:5035:GLN:N	2.47	0.45
1:B:3927:GLN:HB2	1:B:3992:PHE:CE2	2.52	0.45
1:B:4579:PHE:HB2	1:B:4631:PHE:HE1	1.81	0.45
1:C:709:ASP:HB3	1:C:725:HIS:CE1	2.52	0.45
1:C:1161:ILE:HG23	1:C:1177:THR:HG21	1.99	0.45
1:C:2277:ALA:HB1	1:C:2337:PHE:HD2	1.82	0.45
1:C:3663:LEU:H	1:C:3663:LEU:HD23	1.80	0.45
1:C:4027:LEU:HA	1:C:4027:LEU:HD23	1.73	0.45
1:D:894:GLY:HA3	1:D:903:LEU:HD11	1.99	0.45
1:D:3996:PHE:CD1	1:D:4016:LEU:HD11	2.52	0.45
1:A:215:THR:HG22	1:A:273:HIS:HA	1.98	0.45
1:A:2207:VAL:O	1:A:2210:VAL:HG12	2.17	0.45
1:A:2337:PHE:HA	1:A:2340:PHE:HB2	1.98	0.45
1:A:3927:GLN:HB2	1:A:3992:PHE:CE2	2.52	0.45
1:B:1124:PHE:HE2	1:B:1143:TRP:HE1	1.63	0.45
1:B:1844:LEU:O	1:B:1847:THR:HG22	2.18	0.45
1:B:4731:ILE:HG23	1:B:4732:PHE:CD1	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:224:HIS:HB3	1:C:229:GLU:HB3	1.98	0.45
1:C:2000:SER:O	1:C:2005:GLN:HB2	2.16	0.45
1:C:3963:ASN:O	1:C:3966:THR:OG1	2.30	0.45
1:C:4731:ILE:HG23	1:C:4732:PHE:CD1	2.51	0.45
1:D:350:HIS:CE1	1:D:352:ALA:HB3	2.52	0.45
1:D:1819:VAL:HG11	1:D:1865:MET:SD	2.57	0.45
1:D:2000:SER:O	1:D:2005:GLN:HB2	2.16	0.45
1:D:4672:LYS:HE3	1:D:4672:LYS:HB2	1.80	0.45
1:A:276:TRP:CD2	1:A:318:VAL:HG22	2.51	0.44
1:A:636:ASN:HB3	1:A:702:TRP:HZ3	1.82	0.44
1:A:894:GLY:HA3	1:A:903:LEU:HD11	1.99	0.44
1:A:1090:PHE:CE1	1:A:1151:CYS:HB2	2.52	0.44
1:A:3790:THR:O	1:A:3790:THR:OG1	2.33	0.44
1:B:709:ASP:HB3	1:B:725:HIS:CE1	2.52	0.44
1:B:1770:SER:OG	1:B:1956:GLU:OE2	2.34	0.44
1:B:1819:VAL:HG11	1:B:1865:MET:SD	2.57	0.44
1:B:3963:ASN:O	1:B:3966:THR:OG1	2.30	0.44
1:B:4051:SER:O	1:B:4055:VAL:HG13	2.17	0.44
1:C:215:THR:HG22	1:C:273:HIS:HA	1.98	0.44
1:C:1702:HIS:O	1:C:1708:ARG:NH2	2.49	0.44
1:D:2277:ALA:HB1	1:D:2337:PHE:HD2	1.82	0.44
1:D:2452:ARG:O	1:D:2456:ILE:HG12	2.17	0.44
1:D:4056:GLU:O	1:D:4060:LYS:HG2	2.18	0.44
1:A:1819:VAL:HG11	1:A:1865:MET:SD	2.57	0.44
1:A:3845:ASN:O	1:A:3849:ARG:HG2	2.17	0.44
1:B:275:ARG:HD3	1:B:336:PRO:HD2	1.97	0.44
1:B:1650:ILE:HD12	1:B:1653:LEU:HD23	1.99	0.44
1:B:1662:PHE:O	1:B:1666:THR:HG22	2.18	0.44
1:B:2207:VAL:O	1:B:2210:VAL:HG12	2.17	0.44
1:B:2296:GLU:HA	1:B:2299:VAL:HG22	1.99	0.44
1:C:894:GLY:HA3	1:C:903:LEU:HD11	1.99	0.44
1:C:4051:SER:O	1:C:4051:SER:OG	2.33	0.44
1:D:22:LEU:HD12	1:D:37:LEU:HD23	2.00	0.44
1:D:224:HIS:HB3	1:D:229:GLU:HB3	1.98	0.44
1:D:3790:THR:O	1:D:3790:THR:OG1	2.33	0.44
1:D:3940:LYS:NZ	1:D:3942:VAL:O	2.35	0.44
1:A:4056:GLU:O	1:A:4060:LYS:HG2	2.18	0.44
1:B:1161:ILE:HG23	1:B:1177:THR:HG21	1.99	0.44
1:B:1653:LEU:HD11	1:B:1659:LEU:HB2	1.99	0.44
1:B:2010:LEU:HD21	1:B:3657:TYR:HD1	1.81	0.44
1:C:745:SER:OG	1:C:758:ARG:HB3	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1749:PRO:HB2	1:C:1755:GLY:HA3	2.00	0.44
1:C:1848:LEU:HD23	1:C:1848:LEU:HA	1.83	0.44
1:C:3845:ASN:O	1:C:3849:ARG:HG2	2.17	0.44
1:C:4890:GLY:HA2	1:C:4897:ILE:HD13	1.99	0.44
1:D:745:SER:OG	1:D:758:ARG:HB3	2.16	0.44
1:D:1931:LEU:O	1:D:1936:LYS:HE3	2.18	0.44
1:D:2010:LEU:HD21	1:D:3657:TYR:HD1	1.81	0.44
1:D:2296:GLU:HA	1:D:2299:VAL:HG22	1.99	0.44
1:D:4658:ILE:HG13	1:D:4796:MET:HE2	1.99	0.44
1:A:350:HIS:CE1	1:A:352:ALA:HB3	2.52	0.44
1:A:2277:ALA:HB1	1:A:2337:PHE:HD2	1.82	0.44
1:A:2296:GLU:HA	1:A:2299:VAL:HG22	1.99	0.44
1:A:4868:ASP:N	1:A:4868:ASP:OD1	2.49	0.44
1:B:248:GLU:OE1	1:B:373:LYS:NZ	2.46	0.44
1:B:1090:PHE:CE1	1:B:1151:CYS:HB2	2.52	0.44
1:B:2000:SER:O	1:B:2005:GLN:HB2	2.16	0.44
1:B:3996:PHE:CD1	1:B:4016:LEU:HD11	2.52	0.44
1:B:4056:GLU:O	1:B:4060:LYS:HG2	2.18	0.44
1:C:1819:VAL:HG11	1:C:1865:MET:SD	2.57	0.44
1:C:2022:PRO:HB2	1:C:2024:PRO:HD2	2.00	0.44
1:C:2207:VAL:O	1:C:2210:VAL:HG12	2.17	0.44
1:C:4056:GLU:O	1:C:4060:LYS:HG2	2.18	0.44
1:D:182:LEU:H	1:D:198:THR:HG21	1.82	0.44
1:D:378:LEU:HD23	1:D:378:LEU:HA	1.90	0.44
1:D:629:ARG:HB3	1:D:634:GLN:CD	2.38	0.44
1:D:1092:PHE:CE2	1:D:1094:ALA:HB2	2.53	0.44
1:D:5035:GLN:OE1	1:D:5035:GLN:N	2.47	0.44
1:B:894:GLY:HA3	1:B:903:LEU:HD11	1.99	0.44
1:C:107:ILE:HD12	1:C:107:ILE:HA	1.87	0.44
1:C:460:GLN:H	1:C:460:GLN:CD	2.21	0.44
1:C:1090:PHE:CE1	1:C:1151:CYS:HB2	2.52	0.44
1:C:1774:PRO:HG2	1:C:1776:HIS:CE1	2.53	0.44
1:D:1774:PRO:HG2	1:D:1776:HIS:CE1	2.53	0.44
1:D:2022:PRO:HB2	1:D:2024:PRO:HD2	2.00	0.44
1:D:2207:VAL:O	1:D:2210:VAL:HG12	2.17	0.44
1:D:3752:SER:N	1:D:3755:GLU:OE2	2.44	0.44
1:D:4890:GLY:HA2	1:D:4897:ILE:HD13	1.99	0.44
1:A:22:LEU:HD12	1:A:37:LEU:HD23	2.00	0.44
1:A:526:LEU:HD12	1:A:526:LEU:HA	1.82	0.44
1:A:2002:PRO:HA	1:A:2005:GLN:HB3	2.00	0.44
1:A:4850:LEU:O	1:A:4853:VAL:HG22	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:460:GLN:H	1:B:460:GLN:CD	2.21	0.44
1:B:1749:PRO:HB2	1:B:1755:GLY:HA3	2.00	0.44
1:B:1931:LEU:O	1:B:1936:LYS:HE3	2.18	0.44
1:B:4890:GLY:HA2	1:B:4897:ILE:HD13	1.99	0.44
1:C:1770:SER:OG	1:C:1956:GLU:OE2	2.34	0.44
1:C:4868:ASP:OD1	1:C:4868:ASP:N	2.49	0.44
1:D:358:THR:HG21	1:D:382:GLY:HA3	1.99	0.44
1:D:1844:LEU:O	1:D:1847:THR:HG22	2.18	0.44
1:D:3845:ASN:O	1:D:3849:ARG:HG2	2.17	0.44
1:A:358:THR:HG21	1:A:382:GLY:HA3	1.99	0.44
1:A:1092:PHE:CE2	1:A:1094:ALA:HB2	2.53	0.44
1:A:1161:ILE:HG23	1:A:1177:THR:HG21	1.99	0.44
1:A:2022:PRO:HB2	1:A:2024:PRO:HD2	2.00	0.44
1:A:4051:SER:O	1:A:4055:VAL:HG13	2.17	0.44
1:B:377:ILE:HD12	1:B:377:ILE:HA	1.84	0.44
1:B:1765:VAL:HG12	1:B:1766:GLY:H	1.83	0.44
1:B:4112:LEU:O	1:B:4115:SER:OG	2.32	0.44
1:C:629:ARG:HB3	1:C:634:GLN:CD	2.38	0.44
1:C:2377:LEU:HD13	1:C:2380:ILE:HD11	1.99	0.44
1:C:3897:ASN:H	1:C:3900:GLN:NE2	2.12	0.44
1:D:492:ASP:OD1	1:D:546:TRP:NE1	2.48	0.44
1:A:108:LEU:HD12	1:A:147:TRP:CZ2	2.53	0.44
1:A:683:ARG:NE	1:A:707:VAL:O	2.49	0.44
1:A:1662:PHE:O	1:A:1666:THR:HG22	2.18	0.44
1:A:1844:LEU:O	1:A:1847:THR:HG22	2.18	0.44
1:A:4049:VAL:HA	1:A:4163:PHE:HZ	1.83	0.44
1:A:4984:ASN:C	1:A:4986:ALA:H	2.21	0.44
1:B:884:LEU:O	1:B:888:GLU:HG2	2.18	0.44
1:B:887:ILE:HD13	1:B:907:LEU:HD11	2.00	0.44
1:C:108:LEU:HD12	1:C:147:TRP:CZ2	2.53	0.44
1:C:560:ILE:H	1:C:560:ILE:HD12	1.82	0.44
1:C:1650:ILE:HD12	1:C:1653:LEU:HD23	1.99	0.44
1:C:4134:GLU:HB2	1:C:4135:PRO:HD3	2.00	0.44
1:D:377:ILE:HD12	1:D:377:ILE:HA	1.84	0.44
1:D:1770:SER:OG	1:D:1956:GLU:OE2	2.34	0.44
1:A:1774:PRO:HG2	1:A:1776:HIS:CE1	2.53	0.44
1:A:1931:LEU:O	1:A:1936:LYS:HE3	2.18	0.44
1:A:3890:LEU:HD23	1:A:3890:LEU:HA	1.83	0.44
1:B:2002:PRO:HA	1:B:2005:GLN:HB3	2.00	0.44
1:C:1662:PHE:O	1:C:1666:THR:HG22	2.18	0.44
1:C:1765:VAL:HG12	1:C:1766:GLY:H	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:464:LYS:HB2	1:D:464:LYS:HE2	1.71	0.44
1:A:116:MET:HE2	1:A:116:MET:HB3	1.88	0.43
1:A:1765:VAL:HG12	1:A:1766:GLY:H	1.83	0.43
1:B:107:ILE:HD12	1:B:107:ILE:HA	1.87	0.43
1:B:358:THR:HG21	1:B:382:GLY:HA3	1.99	0.43
1:B:4223:ASN:HB2	1:B:4224:GLU:OE2	2.18	0.43
1:B:4850:LEU:O	1:B:4853:VAL:HG22	2.17	0.43
1:C:22:LEU:HD12	1:C:37:LEU:HD23	2.00	0.43
1:C:884:LEU:O	1:C:888:GLU:HG2	2.18	0.43
1:C:1844:LEU:O	1:C:1847:THR:HG22	2.18	0.43
1:C:2342:ASN:OD1	1:C:2342:ASN:N	2.51	0.43
1:C:4107:GLU:OE1	1:C:4107:GLU:N	2.41	0.43
1:D:25:SER:HB2	1:D:34:LYS:HZ2	1.83	0.43
1:D:176:SER:OG	1:D:178:ARG:HD3	2.18	0.43
1:D:3927:GLN:HB2	1:D:3992:PHE:CE2	2.52	0.43
1:A:2377:LEU:HD13	1:A:2380:ILE:HD11	1.99	0.43
1:B:4984:ASN:C	1:B:4986:ALA:H	2.21	0.43
1:C:4223:ASN:HB2	1:C:4224:GLU:OE2	2.18	0.43
1:D:636:ASN:HB3	1:D:702:TRP:HZ3	1.82	0.43
1:D:4223:ASN:HB2	1:D:4224:GLU:OE2	2.18	0.43
1:D:4850:LEU:O	1:D:4853:VAL:HG22	2.17	0.43
1:B:108:LEU:HD12	1:B:147:TRP:CZ2	2.53	0.43
1:D:310:LYS:O	1:D:310:LYS:NZ	2.45	0.43
1:D:2377:LEU:HD13	1:D:2380:ILE:HD11	1.99	0.43
1:A:210:GLU:HB3	1:A:273:HIS:CE1	2.50	0.43
1:A:560:ILE:HD12	1:A:560:ILE:H	1.82	0.43
1:A:2025:GLU:HA	1:A:2028:ARG:NE	2.34	0.43
1:A:4223:ASN:HB2	1:A:4224:GLU:OE2	2.18	0.43
1:B:176:SER:OG	1:B:178:ARG:HD3	2.18	0.43
1:B:1847:THR:O	1:B:1850:VAL:HB	2.19	0.43
1:B:4152:GLU:OE1	1:B:4194:TYR:OH	2.25	0.43
1:C:116:MET:HE3	1:C:117:TYR:N	2.33	0.43
1:C:3927:GLN:HB2	1:C:3992:PHE:CE2	2.52	0.43
1:D:1650:ILE:HD12	1:D:1653:LEU:HD23	1.99	0.43
1:D:1723:ALA:HA	1:D:1775:HIS:HD2	1.84	0.43
1:D:4049:VAL:HA	1:D:4163:PHE:HZ	1.83	0.43
1:D:4819:GLY:C	1:D:4820:VAL:HG23	2.39	0.43
1:A:2342:ASN:OD1	1:A:2342:ASN:N	2.51	0.43
1:A:3895:HIS:HE1	1:A:3970:GLN:HB3	1.84	0.43
1:B:526:LEU:HD12	1:B:526:LEU:HA	1.82	0.43
1:B:1723:ALA:HA	1:B:1775:HIS:HD2	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2377:LEU:HD13	1:B:2380:ILE:HD11	1.99	0.43
1:B:4134:GLU:HB2	1:B:4135:PRO:HD3	2.00	0.43
1:C:210:GLU:HB3	1:C:273:HIS:CE1	2.50	0.43
1:C:1723:ALA:HA	1:C:1775:HIS:HD2	1.84	0.43
1:D:1765:VAL:HG12	1:D:1766:GLY:H	1.83	0.43
1:D:4051:SER:O	1:D:4055:VAL:HG13	2.17	0.43
1:D:4181:ILE:HG22	1:D:4193:ILE:HB	2.01	0.43
1:D:4731:ILE:HG23	1:D:4732:PHE:CD1	2.51	0.43
1:A:629:ARG:HB3	1:A:634:GLN:CD	2.38	0.43
1:A:672:VAL:HG11	1:A:675:LEU:HD23	2.00	0.43
1:A:884:LEU:O	1:A:888:GLU:HG2	2.18	0.43
1:B:2342:ASN:OD1	1:B:2342:ASN:N	2.51	0.43
1:C:176:SER:OG	1:C:178:ARG:HD3	2.18	0.43
1:C:310:LYS:O	1:C:310:LYS:NZ	2.45	0.43
1:C:636:ASN:HB3	1:C:702:TRP:HZ3	1.82	0.43
1:C:2159:LEU:HA	1:C:2162:ILE:HG22	2.01	0.43
1:C:2296:GLU:HA	1:C:2299:VAL:HG22	1.99	0.43
1:D:460:GLN:H	1:D:460:GLN:CD	2.21	0.43
1:D:1749:PRO:HB2	1:D:1755:GLY:HA3	2.00	0.43
1:A:176:SER:OG	1:A:178:ARG:HD3	2.18	0.43
1:A:413:GLN:OE1	1:A:437:PRO:HG3	2.19	0.43
1:A:460:GLN:CD	1:A:460:GLN:H	2.21	0.43
1:A:1723:ALA:HA	1:A:1775:HIS:HD2	1.84	0.43
1:A:1808:ARG:HG3	1:A:1854:PHE:CE1	2.54	0.43
1:A:1847:THR:O	1:A:1850:VAL:HB	2.19	0.43
1:A:2220:THR:HA	1:A:2223:ILE:HD11	2.00	0.43
1:A:4713:SER:OG	1:A:4775:TYR:OH	2.30	0.43
1:C:455:PRO:HB2	1:C:464:LYS:NZ	2.32	0.43
1:C:1092:PHE:CE2	1:C:1094:ALA:HB2	2.53	0.43
1:C:1713:ASP:O	1:C:1716:ILE:HG22	2.19	0.43
1:C:1723:ALA:HB1	1:C:1851:MET:HG2	2.00	0.43
1:C:2002:PRO:HA	1:C:2005:GLN:HB3	2.00	0.43
1:C:4984:ASN:C	1:C:4986:ALA:H	2.21	0.43
1:D:108:LEU:HD12	1:D:147:TRP:CZ2	2.53	0.43
1:D:455:PRO:HB2	1:D:464:LYS:NZ	2.32	0.43
1:D:560:ILE:H	1:D:560:ILE:HD12	1.82	0.43
1:D:1161:ILE:HG23	1:D:1177:THR:HG21	1.99	0.43
1:D:1713:ASP:O	1:D:1716:ILE:HG22	2.19	0.43
1:D:2159:LEU:HA	1:D:2162:ILE:HG22	2.01	0.43
1:A:455:PRO:HB2	1:A:464:LYS:NZ	2.32	0.43
1:A:1749:PRO:HB2	1:A:1755:GLY:HA3	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2159:LEU:HA	1:A:2162:ILE:HG22	2.01	0.43
1:B:22:LEU:HD12	1:B:37:LEU:HD23	2.00	0.43
1:B:683:ARG:HG2	1:B:717:ASP:CB	2.49	0.43
1:B:1092:PHE:CE2	1:B:1094:ALA:HB2	2.53	0.43
1:B:1774:PRO:HG2	1:B:1776:HIS:CE1	2.53	0.43
1:C:683:ARG:HG2	1:C:717:ASP:CB	2.49	0.43
1:C:2025:GLU:HA	1:C:2028:ARG:NE	2.34	0.43
1:C:4850:LEU:O	1:C:4853:VAL:HG22	2.17	0.43
1:D:180:LEU:O	1:D:200:TRP:NE1	2.32	0.43
1:D:413:GLN:OE1	1:D:437:PRO:HG3	2.19	0.43
1:D:884:LEU:O	1:D:888:GLU:HG2	2.18	0.43
1:D:1130:GLN:HG2	1:D:1138:PRO:HA	2.00	0.43
1:D:1963:GLU:HA	1:D:3650:CYS:SG	2.59	0.43
1:D:2025:GLU:HA	1:D:2028:ARG:NE	2.34	0.43
1:A:737:LEU:HD13	1:A:737:LEU:HA	1.90	0.43
1:A:4134:GLU:HB2	1:A:4135:PRO:HD3	2.00	0.43
1:A:4819:GLY:C	1:A:4820:VAL:HG23	2.39	0.43
1:B:274:LEU:HD12	1:B:274:LEU:HA	1.77	0.43
1:B:459:LEU:HD12	1:B:464:LYS:HZ3	1.83	0.43
1:B:629:ARG:HB3	1:B:634:GLN:CD	2.38	0.43
1:B:1727:ARG:NH1	1:B:1772:ARG:HB3	2.34	0.43
1:B:3980:LEU:HD23	1:B:3980:LEU:HA	1.81	0.43
1:B:4049:VAL:HA	1:B:4163:PHE:HZ	1.83	0.43
1:B:4693:GLY:C	1:B:4695:ASP:H	2.22	0.43
1:C:864:PRO:O	1:C:868:GLU:N	2.41	0.43
1:C:1931:LEU:O	1:C:1936:LYS:HE3	2.18	0.43
1:D:683:ARG:HG2	1:D:717:ASP:CB	2.49	0.43
1:D:1847:THR:O	1:D:1850:VAL:HB	2.19	0.43
1:A:683:ARG:HG2	1:A:717:ASP:CB	2.49	0.43
1:A:1727:ARG:NH1	1:A:1772:ARG:HB3	2.34	0.43
1:A:3980:LEU:HD23	1:A:3980:LEU:HA	1.81	0.43
1:A:4101:LYS:O	1:A:4102:GLN:HG2	2.19	0.43
1:B:1808:ARG:HG3	1:B:1854:PHE:CE1	2.54	0.43
1:B:2022:PRO:HB2	1:B:2024:PRO:HD2	2.00	0.43
1:B:2159:LEU:HA	1:B:2162:ILE:HG22	2.01	0.43
1:B:4027:LEU:HD23	1:B:4027:LEU:HA	1.73	0.43
1:B:4865:LYS:HA	1:B:4865:LYS:HD2	1.84	0.43
1:C:887:ILE:HD13	1:C:907:LEU:HD11	2.00	0.43
1:C:1130:GLN:HG2	1:C:1138:PRO:HA	2.00	0.43
1:C:1495:VAL:HA	1:C:1536:SER:HA	2.01	0.43
1:C:4693:GLY:C	1:C:4695:ASP:H	2.22	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1662:PHE:O	1:D:1666:THR:HG22	2.18	0.43
1:D:1945:TYR:HA	1:D:1948:ASP:OD2	2.19	0.43
1:D:4984:ASN:C	1:D:4986:ALA:H	2.21	0.43
1:A:232:THR:HG21	1:A:252:VAL:HG11	2.01	0.42
1:A:377:ILE:HD12	1:A:377:ILE:HA	1.84	0.42
1:A:1495:VAL:HA	1:A:1536:SER:HA	2.01	0.42
1:A:3658:LYS:HD2	1:A:3661:TRP:HZ3	1.82	0.42
1:A:3893:GLU:OE1	1:A:3894:GLY:N	2.52	0.42
1:A:3927:GLN:HA	1:A:3930:ILE:HG22	2.01	0.42
1:B:560:ILE:H	1:B:560:ILE:HD12	1.82	0.42
1:B:1945:TYR:HA	1:B:1948:ASP:OD2	2.19	0.42
1:B:2176:ASN:OD1	1:B:2176:ASN:N	2.48	0.42
1:C:492:ASP:OD1	1:C:546:TRP:NE1	2.48	0.42
1:C:629:ARG:HD3	1:C:634:GLN:HG2	2.01	0.42
1:C:672:VAL:HG11	1:C:675:LEU:HD23	2.00	0.42
1:C:3895:HIS:HE1	1:C:3970:GLN:HB3	1.84	0.42
1:C:4138:ASP:O	1:C:4142:ASN:ND2	2.50	0.42
1:C:4687:TYR:OH	1:C:4699:GLY:O	2.37	0.42
1:D:424:LYS:HE3	1:D:424:LYS:HB3	1.91	0.42
1:D:459:LEU:HD12	1:D:464:LYS:NZ	2.34	0.42
1:D:629:ARG:HD3	1:D:634:GLN:HG2	2.01	0.42
1:D:1008:SER:H	1:D:1020:ARG:N	2.17	0.42
1:D:1723:ALA:HB1	1:D:1851:MET:HG2	2.00	0.42
1:D:1965:TYR:OH	1:D:2027:ILE:O	2.22	0.42
1:D:2002:PRO:HA	1:D:2005:GLN:HB3	2.00	0.42
1:D:4181:ILE:HD11	1:D:4988:TYR:CD2	2.54	0.42
1:A:274:LEU:HB3	1:A:339:ILE:HD12	2.01	0.42
1:A:1723:ALA:HB1	1:A:1851:MET:HG2	2.00	0.42
1:A:4731:ILE:HG23	1:A:4732:PHE:CD1	2.51	0.42
1:B:672:VAL:HG11	1:B:675:LEU:HD23	2.00	0.42
1:B:1723:ALA:HB1	1:B:1851:MET:CG	2.49	0.42
1:B:2220:THR:HA	1:B:2223:ILE:HD11	2.00	0.42
1:C:459:LEU:HD12	1:C:464:LYS:NZ	2.34	0.42
1:C:615:ARG:CZ	1:C:2168:VAL:HG21	2.50	0.42
1:C:1008:SER:H	1:C:1020:ARG:N	2.17	0.42
1:C:1963:GLU:HA	1:C:3650:CYS:SG	2.59	0.42
1:D:34:LYS:HA	1:D:34:LYS:HD2	1.83	0.42
1:D:142:THR:OG1	1:D:144:GLU:OE2	2.22	0.42
1:D:224:HIS:CG	1:D:247:TYR:HE2	2.38	0.42
1:D:672:VAL:HG11	1:D:675:LEU:HD23	2.00	0.42
1:D:3893:GLU:OE1	1:D:3894:GLY:N	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:4189:ARG:HE	1:D:4189:ARG:HB2	1.66	0.42
1:A:459:LEU:HD12	1:A:464:LYS:NZ	2.34	0.42
1:A:887:ILE:HD13	1:A:907:LEU:HD11	2.00	0.42
1:A:1770:SER:OG	1:A:1956:GLU:OE2	2.34	0.42
1:A:1943:LEU:HD13	1:A:2098:VAL:HG12	2.01	0.42
1:B:224:HIS:CG	1:B:247:TYR:HE2	2.38	0.42
1:B:3927:GLN:HA	1:B:3930:ILE:HG22	2.01	0.42
1:B:4071:ILE:HD11	1:B:4102:GLN:NE2	2.35	0.42
1:B:4075:GLU:OE1	1:B:4075:GLU:HA	2.19	0.42
1:B:4181:ILE:HD11	1:B:4988:TYR:CD2	2.54	0.42
1:C:4181:ILE:HG22	1:C:4193:ILE:HB	2.01	0.42
1:D:1808:ARG:HG3	1:D:1854:PHE:CE1	2.54	0.42
1:D:2342:ASN:OD1	1:D:2342:ASN:N	2.51	0.42
1:D:4134:GLU:HB2	1:D:4135:PRO:HD3	2.00	0.42
1:A:1713:ASP:O	1:A:1716:ILE:HG22	2.19	0.42
1:A:4071:ILE:HD11	1:A:4102:GLN:NE2	2.35	0.42
1:A:4107:GLU:OE1	1:A:4107:GLU:N	2.41	0.42
1:B:413:GLN:OE1	1:B:437:PRO:HG3	2.19	0.42
1:B:1130:GLN:HG2	1:B:1138:PRO:HA	2.00	0.42
1:B:1713:ASP:O	1:B:1716:ILE:HG22	2.19	0.42
1:B:1943:LEU:HD13	1:B:2098:VAL:HG12	2.01	0.42
1:B:3847:PHE:O	1:B:3850:GLN:HG3	2.19	0.42
1:B:3893:GLU:OE1	1:B:3894:GLY:N	2.52	0.42
1:B:4661:TYR:OH	1:B:4788:SER:OG	2.16	0.42
1:B:4995:LEU:HD23	1:B:4995:LEU:HA	1.86	0.42
1:C:1808:ARG:HG3	1:C:1854:PHE:CE1	2.54	0.42
1:C:1847:THR:O	1:C:1850:VAL:HB	2.19	0.42
1:C:1945:TYR:HA	1:C:1948:ASP:OD2	2.19	0.42
1:C:2220:THR:HA	1:C:2223:ILE:HD11	2.00	0.42
1:C:4672:LYS:HE3	1:C:4672:LYS:HB2	1.80	0.42
1:D:210:GLU:HB3	1:D:273:HIS:CE1	2.50	0.42
1:D:2142:TYR:CE2	1:D:2197:LEU:HD21	2.55	0.42
1:D:2220:THR:HA	1:D:2223:ILE:HD11	2.00	0.42
1:D:4101:LYS:O	1:D:4102:GLN:HG2	2.19	0.42
1:A:1130:GLN:HG2	1:A:1138:PRO:HA	2.00	0.42
1:A:4115:SER:HB2	1:A:4123:ILE:HD12	2.02	0.42
1:B:3895:HIS:HE1	1:B:3970:GLN:HB3	1.84	0.42
1:C:1142:PRO:O	1:C:1144:GLN:NE2	2.53	0.42
1:C:3893:GLU:OE1	1:C:3894:GLY:N	2.52	0.42
1:C:4049:VAL:HA	1:C:4163:PHE:HZ	1.83	0.42
1:C:4819:GLY:C	1:C:4820:VAL:HG23	2.39	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:683:ARG:NE	1:D:707:VAL:O	2.49	0.42
1:D:1723:ALA:HB1	1:D:1851:MET:CG	2.49	0.42
1:D:4693:GLY:C	1:D:4695:ASP:H	2.22	0.42
1:A:3789:GLU:CD	1:A:3791:GLY:H	2.22	0.42
1:A:3847:PHE:O	1:A:3850:GLN:HG3	2.19	0.42
1:A:4181:ILE:HD11	1:A:4988:TYR:CD2	2.54	0.42
1:B:25:SER:HB2	1:B:34:LYS:HZ2	1.84	0.42
1:B:266:ARG:NH2	1:B:331:VAL:O	2.53	0.42
1:B:459:LEU:HD12	1:B:464:LYS:NZ	2.34	0.42
1:B:1495:VAL:HA	1:B:1536:SER:HA	2.01	0.42
1:B:1963:GLU:HA	1:B:3650:CYS:SG	2.59	0.42
1:B:4175:ARG:N	1:B:4176:PRO:HD2	2.35	0.42
1:B:4819:GLY:C	1:B:4820:VAL:HG23	2.39	0.42
1:C:21:VAL:HG22	1:C:203:ASN:HB2	2.02	0.42
1:C:62:LEU:HD12	1:C:62:LEU:HA	1.90	0.42
1:C:182:LEU:H	1:C:198:THR:CG2	2.33	0.42
1:C:264:PRO:HG2	1:C:270:SER:HB2	2.02	0.42
1:C:273:HIS:CD2	1:C:334:MET:HG3	2.55	0.42
1:C:1742:THR:HG23	1:C:1769:THR:HG21	2.02	0.42
1:C:4075:GLU:OE1	1:C:4075:GLU:HA	2.19	0.42
1:C:4814:LEU:HD23	1:C:4814:LEU:HA	1.86	0.42
1:D:615:ARG:CZ	1:D:2168:VAL:HG21	2.50	0.42
1:D:1943:LEU:HD13	1:D:2098:VAL:HG12	2.01	0.42
1:D:3665:GLU:OE2	1:D:3666:ASP:N	2.53	0.42
1:A:224:HIS:CG	1:A:247:TYR:HE2	2.38	0.42
1:A:646:PRO:HG3	1:A:791:PHE:HE2	1.85	0.42
1:A:1945:TYR:HA	1:A:1948:ASP:OD2	2.19	0.42
1:A:1963:GLU:HA	1:A:3650:CYS:SG	2.59	0.42
1:A:4995:LEU:HD23	1:A:4995:LEU:HA	1.86	0.42
1:B:232:THR:HG21	1:B:252:VAL:HG11	2.01	0.42
1:B:3888:LEU:HD23	1:B:3888:LEU:HA	1.82	0.42
1:C:4071:ILE:HD11	1:C:4102:GLN:NE2	2.35	0.42
1:D:232:THR:HG21	1:D:252:VAL:HG11	2.01	0.42
1:D:266:ARG:NH2	1:D:331:VAL:O	2.53	0.42
1:D:273:HIS:CD2	1:D:334:MET:HG3	2.55	0.42
1:A:21:VAL:HG22	1:A:203:ASN:HB2	2.02	0.42
1:A:1008:SER:H	1:A:1020:ARG:N	2.17	0.42
1:A:1079:LYS:NZ	1:A:1107:PRO:O	2.53	0.42
1:A:2029:GLN:H	1:A:2029:GLN:HG3	1.62	0.42
1:A:4181:ILE:HG22	1:A:4193:ILE:HB	2.01	0.42
1:B:615:ARG:CZ	1:B:2168:VAL:HG21	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2025:GLU:HA	1:B:2028:ARG:NE	2.34	0.42
1:B:4673:ARG:NH2	1:B:4698:LYS:HG3	2.35	0.42
1:B:4924:VAL:HA	1:B:4928:LEU:HB2	2.02	0.42
1:C:2142:TYR:CE2	1:C:2197:LEU:HD21	2.55	0.42
1:D:21:VAL:HG22	1:D:203:ASN:HB2	2.02	0.42
1:D:1727:ARG:NH1	1:D:1772:ARG:HB3	2.34	0.42
1:D:3789:GLU:CD	1:D:3791:GLY:H	2.22	0.42
1:D:3895:HIS:HE1	1:D:3970:GLN:HB3	1.84	0.42
1:D:4030:LEU:HD23	1:D:4030:LEU:HA	1.85	0.42
1:A:273:HIS:CD2	1:A:334:MET:HG3	2.55	0.42
1:A:792:LEU:HD23	1:A:792:LEU:HA	1.87	0.42
1:A:1703:LEU:O	1:A:1831:GLY:HA2	2.20	0.42
1:A:4899:ASP:HB2	1:A:4900:GLU:OE2	2.20	0.42
1:B:264:PRO:HG2	1:B:270:SER:HB2	2.02	0.42
1:B:273:HIS:CD2	1:B:334:MET:HG3	2.55	0.42
1:B:562:GLU:OE1	1:B:598:LYS:NZ	2.41	0.42
1:B:683:ARG:NE	1:B:707:VAL:O	2.49	0.42
1:B:1651:LEU:HD22	1:B:1702:HIS:CE1	2.55	0.42
1:B:1703:LEU:O	1:B:1831:GLY:HA2	2.20	0.42
1:B:1723:ALA:HB1	1:B:1851:MET:HG2	2.00	0.42
1:B:1742:THR:HG23	1:B:1769:THR:HG21	2.02	0.42
1:B:1867:GLU:N	1:B:1868:PRO:HD2	2.35	0.42
1:B:3789:GLU:CD	1:B:3791:GLY:H	2.22	0.42
1:C:34:LYS:HA	1:C:34:LYS:HD2	1.83	0.42
1:C:224:HIS:CG	1:C:247:TYR:HE2	2.38	0.42
1:C:274:LEU:HB3	1:C:339:ILE:HD12	2.01	0.42
1:C:1723:ALA:HB1	1:C:1851:MET:CG	2.49	0.42
1:C:2254:LEU:O	1:C:2258:LEU:HG	2.20	0.42
1:C:3847:PHE:O	1:C:3850:GLN:HG3	2.19	0.42
1:C:4181:ILE:HD11	1:C:4988:TYR:CD2	2.54	0.42
1:D:182:LEU:H	1:D:198:THR:CG2	2.33	0.42
1:D:359:TYR:HA	1:D:376:ALA:HA	2.02	0.42
1:D:1495:VAL:HA	1:D:1536:SER:HA	2.01	0.42
1:D:3927:GLN:HA	1:D:3930:ILE:HG22	2.01	0.42
1:D:4115:SER:HB2	1:D:4123:ILE:HD12	2.02	0.42
1:D:4170:ILE:HD12	1:D:4170:ILE:HA	1.90	0.42
1:A:1723:ALA:HB1	1:A:1851:MET:CG	2.49	0.42
1:A:2142:TYR:CE2	1:A:2197:LEU:HD21	2.55	0.42
1:A:4673:ARG:NH2	1:A:4698:LYS:HG3	2.35	0.42
1:B:3665:GLU:OE2	1:B:3666:ASP:N	2.53	0.42
1:C:378:LEU:HD23	1:C:378:LEU:HA	1.90	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:551:LEU:HD12	1:C:551:LEU:HA	1.86	0.42
1:D:646:PRO:HG3	1:D:791:PHE:HE2	1.85	0.42
1:D:793:LEU:HD21	1:D:1625:GLY:HA2	2.02	0.42
1:D:887:ILE:HD13	1:D:907:LEU:HD11	2.00	0.42
1:D:1651:LEU:HD22	1:D:1702:HIS:CE1	2.55	0.42
1:D:3847:PHE:O	1:D:3850:GLN:HG3	2.19	0.42
1:D:3980:LEU:HD23	1:D:3980:LEU:HA	1.81	0.42
1:D:4162:ASN:HA	1:D:4165:GLU:OE2	2.20	0.42
1:A:492:ASP:OD1	1:A:546:TRP:NE1	2.48	0.41
1:A:1651:LEU:HD22	1:A:1702:HIS:CE1	2.55	0.41
1:A:4986:ALA:O	1:A:4989:MET:HB2	2.20	0.41
1:B:359:TYR:HA	1:B:376:ALA:HA	2.02	0.41
1:B:629:ARG:HD3	1:B:634:GLN:HG2	2.01	0.41
1:B:3661:TRP:HB3	1:B:3662:ILE:H	1.66	0.41
1:B:4115:SER:HB2	1:B:4123:ILE:HD12	2.02	0.41
1:B:4162:ASN:HA	1:B:4165:GLU:OE2	2.20	0.41
1:B:4181:ILE:HG22	1:B:4193:ILE:HB	2.01	0.41
1:C:793:LEU:HD21	1:C:1625:GLY:HA2	2.02	0.41
1:C:3789:GLU:CD	1:C:3791:GLY:H	2.22	0.41
1:C:4899:ASP:HB2	1:C:4900:GLU:OE2	2.20	0.41
1:D:264:PRO:HG2	1:D:270:SER:HB2	2.02	0.41
1:D:1742:THR:HG23	1:D:1769:THR:HG21	2.02	0.41
1:D:3661:TRP:HB3	1:D:3662:ILE:H	1.66	0.41
1:D:4687:TYR:OH	1:D:4699:GLY:O	2.37	0.41
1:A:615:ARG:CZ	1:A:2168:VAL:HG21	2.50	0.41
1:A:1867:GLU:N	1:A:1868:PRO:HD2	2.35	0.41
1:A:4051:SER:O	1:A:4051:SER:OG	2.33	0.41
1:A:4792:LEU:HD23	1:A:4792:LEU:HA	1.91	0.41
1:B:116:MET:HE2	1:B:116:MET:HB3	1.83	0.41
1:B:1718:ILE:HG13	1:B:1719:HIS:CD2	2.55	0.41
1:C:232:THR:HG21	1:C:252:VAL:HG11	2.01	0.41
1:C:266:ARG:NH2	1:C:331:VAL:O	2.53	0.41
1:D:463:GLU:OE2	1:D:463:GLU:N	2.40	0.41
1:D:1142:PRO:O	1:D:1144:GLN:NE2	2.53	0.41
1:D:1867:GLU:N	1:D:1868:PRO:HD2	2.35	0.41
1:D:3658:LYS:HD2	1:D:3661:TRP:HZ3	1.82	0.41
1:D:3888:LEU:HA	1:D:3888:LEU:HD23	1.82	0.41
1:D:4767:TRP:CE2	1:D:4770:SER:HB3	2.56	0.41
1:D:4849:TYR:O	1:D:4853:VAL:HG13	2.20	0.41
1:D:4899:ASP:HB2	1:D:4900:GLU:OE2	2.20	0.41
1:A:1657:LEU:HD12	1:A:1657:LEU:HA	1.82	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2254:LEU:O	1:A:2258:LEU:HG	2.20	0.41
1:A:2325:PRO:HB2	1:A:2421:ALA:HB1	2.02	0.41
1:B:21:VAL:HG22	1:B:203:ASN:HB2	2.02	0.41
1:B:882:TRP:HE1	1:B:886:ARG:CZ	2.34	0.41
1:B:1698:LEU:HG	1:B:1712:TYR:CZ	2.55	0.41
1:B:2142:TYR:CE2	1:B:2197:LEU:HD21	2.55	0.41
1:B:2255:SER:HA	1:B:2258:LEU:HD12	2.03	0.41
1:B:3927:GLN:NE2	1:B:3991:GLY:HA3	2.36	0.41
1:B:4101:LYS:O	1:B:4102:GLN:HG2	2.19	0.41
1:B:4138:ASP:O	1:B:4142:ASN:ND2	2.50	0.41
1:C:2029:GLN:H	1:C:2029:GLN:HG3	1.62	0.41
1:C:3895:HIS:CE1	1:C:3970:GLN:HB3	2.56	0.41
1:C:4175:ARG:N	1:C:4176:PRO:HD2	2.35	0.41
1:D:274:LEU:HB3	1:D:339:ILE:HD12	2.01	0.41
1:D:1079:LYS:NZ	1:D:1107:PRO:O	2.53	0.41
1:D:1718:ILE:HG13	1:D:1719:HIS:CD2	2.55	0.41
1:D:4071:ILE:HD11	1:D:4102:GLN:NE2	2.35	0.41
1:D:4075:GLU:OE1	1:D:4075:GLU:HA	2.19	0.41
1:A:794:GLY:HA3	1:A:811:CYS:SG	2.61	0.41
1:A:891:TRP:HE3	1:A:904:HIS:HB2	1.85	0.41
1:A:4030:LEU:HD23	1:A:4030:LEU:HA	1.85	0.41
1:A:4693:GLY:C	1:A:4695:ASP:H	2.22	0.41
1:B:223:PHE:HD1	1:B:223:PHE:HA	1.74	0.41
1:B:1142:PRO:O	1:B:1144:GLN:NE2	2.53	0.41
1:B:4792:LEU:HD23	1:B:4792:LEU:HA	1.91	0.41
1:C:464:LYS:HE2	1:C:464:LYS:HB2	1.71	0.41
1:C:497:TYR:CE1	1:C:504:ALA:HA	2.56	0.41
1:C:1703:LEU:HA	1:C:1708:ARG:NH2	2.32	0.41
1:C:2187:ASN:OD1	1:C:2187:ASN:N	2.54	0.41
1:C:3927:GLN:HA	1:C:3930:ILE:HG22	2.01	0.41
1:D:864:PRO:O	1:D:868:GLU:N	2.41	0.41
1:D:4889:VAL:HG11	1:D:4900:GLU:HG2	2.03	0.41
1:A:266:ARG:NH2	1:A:331:VAL:O	2.53	0.41
1:A:497:TYR:CE1	1:A:504:ALA:HA	2.56	0.41
1:A:3716:LEU:HD12	1:A:3716:LEU:HA	1.89	0.41
1:A:4075:GLU:OE1	1:A:4075:GLU:HA	2.19	0.41
1:A:4780:PHE:HD1	1:A:4780:PHE:HA	1.78	0.41
1:B:274:LEU:HB3	1:B:339:ILE:HD12	2.01	0.41
1:B:497:TYR:HA	1:B:503:PHE:HD2	1.86	0.41
1:B:793:LEU:HD21	1:B:1625:GLY:HA2	2.02	0.41
1:B:1008:SER:H	1:B:1020:ARG:N	2.17	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2278:ALA:HA	1:B:2281:ILE:HD11	2.02	0.41
1:C:1703:LEU:O	1:C:1831:GLY:HA2	2.20	0.41
1:C:1727:ARG:NH1	1:C:1772:ARG:HB3	2.34	0.41
1:C:4101:LYS:O	1:C:4102:GLN:HG2	2.19	0.41
1:C:4115:SER:HB2	1:C:4123:ILE:HD12	2.02	0.41
1:C:4924:VAL:HA	1:C:4928:LEU:HB2	2.02	0.41
1:D:1703:LEU:O	1:D:1831:GLY:HA2	2.20	0.41
1:A:1142:PRO:O	1:A:1144:GLN:NE2	2.53	0.41
1:A:1698:LEU:HG	1:A:1712:TYR:CZ	2.55	0.41
1:A:1848:LEU:HD23	1:A:1848:LEU:HA	1.83	0.41
1:A:3844:LEU:HD12	1:A:3844:LEU:HA	1.93	0.41
1:A:4730:ASP:OD1	1:A:4730:ASP:N	2.54	0.41
1:A:4813:LEU:HD12	1:A:4813:LEU:HA	1.87	0.41
1:B:646:PRO:HG3	1:B:791:PHE:HE2	1.85	0.41
1:C:497:TYR:HA	1:C:503:PHE:HD2	1.86	0.41
1:C:1943:LEU:HD13	1:C:2098:VAL:HG12	2.01	0.41
1:C:4767:TRP:CE2	1:C:4770:SER:HB3	2.56	0.41
1:C:4849:TYR:O	1:C:4853:VAL:HG13	2.20	0.41
1:D:2325:PRO:HB2	1:D:2421:ALA:HB1	2.02	0.41
1:D:4160:LEU:HD12	1:D:4160:LEU:HA	1.86	0.41
1:D:4175:ARG:N	1:D:4176:PRO:HD2	2.35	0.41
1:A:264:PRO:HG2	1:A:270:SER:HB2	2.02	0.41
1:A:629:ARG:HD3	1:A:634:GLN:HG2	2.01	0.41
1:A:882:TRP:HE1	1:A:886:ARG:CZ	2.34	0.41
1:A:1716:ILE:O	1:A:1720:LEU:HD23	2.21	0.41
1:A:1742:THR:HG23	1:A:1769:THR:HG21	2.02	0.41
1:A:4859:PHE:HE2	1:A:4913:ARG:HB2	1.86	0.41
1:A:4889:VAL:HG11	1:A:4900:GLU:HG2	2.03	0.41
1:B:1079:LYS:NZ	1:B:1107:PRO:O	2.53	0.41
1:B:4918:ILE:HD13	1:B:4918:ILE:HA	1.94	0.41
1:B:4986:ALA:O	1:B:4989:MET:HB2	2.20	0.41
1:C:3665:GLU:OE2	1:C:3666:ASP:N	2.53	0.41
1:C:4986:ALA:O	1:C:4989:MET:HB2	2.20	0.41
1:D:610:ASN:OD1	1:D:610:ASN:N	2.54	0.41
1:D:1720:LEU:O	1:D:1724:CYS:N	2.44	0.41
1:D:1968:LYS:HA	1:D:1968:LYS:HD3	1.92	0.41
1:D:2255:SER:HA	1:D:2258:LEU:HD12	2.03	0.41
1:D:4836:GLN:H	1:D:4836:GLN:HG2	1.75	0.41
1:D:4859:PHE:HE2	1:D:4913:ARG:HB2	1.86	0.41
1:D:4986:ALA:O	1:D:4989:MET:HB2	2.20	0.41
1:A:3665:GLU:OE2	1:A:3666:ASP:N	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4175:ARG:N	1:A:4176:PRO:HD2	2.35	0.41
1:A:4924:VAL:HA	1:A:4928:LEU:HB2	2.02	0.41
1:B:792:LEU:HD23	1:B:792:LEU:HA	1.87	0.41
1:B:794:GLY:HA3	1:B:811:CYS:SG	2.61	0.41
1:B:1694:LEU:HD23	1:B:1715:LEU:HB2	2.03	0.41
1:B:4051:SER:O	1:B:4051:SER:OG	2.33	0.41
1:B:4687:TYR:OH	1:B:4699:GLY:O	2.37	0.41
1:B:4713:SER:OG	1:B:4775:TYR:OH	2.30	0.41
1:B:4767:TRP:CE2	1:B:4770:SER:HB3	2.56	0.41
1:B:4823:LEU:O	1:B:4825:THR:N	2.54	0.41
1:C:646:PRO:HG3	1:C:791:PHE:HE2	1.85	0.41
1:C:889:GLN:HB2	1:C:891:TRP:CD1	2.56	0.41
1:C:1867:GLU:N	1:C:1868:PRO:HD2	2.35	0.41
1:C:2278:ALA:HA	1:C:2281:ILE:HD11	2.02	0.41
1:C:2295:LEU:O	1:C:2298:VAL:HG22	2.21	0.41
1:C:4162:ASN:HA	1:C:4165:GLU:OE2	2.20	0.41
1:C:4823:LEU:O	1:C:4825:THR:N	2.54	0.41
1:C:4889:VAL:HG11	1:C:4900:GLU:HG2	2.03	0.41
1:D:274:LEU:HD12	1:D:274:LEU:HA	1.77	0.41
1:D:3713:LYS:HE3	1:D:3713:LYS:HB2	1.88	0.41
1:D:4238:CYS:O	1:D:4242:ILE:HG12	2.21	0.41
1:A:183:SER:HB3	1:A:192:ASP:OD1	2.21	0.41
1:A:220:LEU:HB2	1:A:391:THR:O	2.21	0.41
1:A:448:LEU:HD23	1:A:448:LEU:HA	1.90	0.41
1:A:1243:PRO:HG3	1:A:1502:SER:H	1.86	0.41
1:A:1810:LYS:HE3	1:A:1810:LYS:HB2	1.91	0.41
1:A:2187:ASN:OD1	1:A:2187:ASN:N	2.54	0.41
1:A:2268:GLN:HG2	1:A:2269:GLY:N	2.36	0.41
1:A:2278:ALA:HA	1:A:2281:ILE:HD11	2.02	0.41
1:A:3895:HIS:CE1	1:A:3970:GLN:HB3	2.56	0.41
1:A:3927:GLN:NE2	1:A:3991:GLY:HA3	2.36	0.41
1:A:4162:ASN:HA	1:A:4165:GLU:OE2	2.20	0.41
1:A:4767:TRP:CE2	1:A:4770:SER:HB3	2.56	0.41
1:A:4823:LEU:O	1:A:4825:THR:N	2.54	0.41
1:A:4849:TYR:O	1:A:4853:VAL:HG13	2.20	0.41
1:B:183:SER:HB3	1:B:192:ASP:OD1	2.21	0.41
1:B:455:PRO:HB2	1:B:464:LYS:NZ	2.32	0.41
1:B:497:TYR:CE1	1:B:504:ALA:HA	2.56	0.41
1:B:1075:PHE:HB2	1:B:1192:CYS:SG	2.61	0.41
1:B:1243:PRO:HG3	1:B:1502:SER:H	1.86	0.41
1:B:2254:LEU:O	1:B:2258:LEU:HG	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4849:TYR:O	1:B:4853:VAL:HG13	2.20	0.41
1:B:4899:ASP:HB2	1:B:4900:GLU:OE2	2.20	0.41
1:C:1075:PHE:HB2	1:C:1192:CYS:SG	2.61	0.41
1:C:1079:LYS:NZ	1:C:1107:PRO:O	2.53	0.41
1:C:1590:GLN:HG2	1:C:1592:PRO:HD3	2.03	0.41
1:C:1694:LEU:HD23	1:C:1715:LEU:HB2	2.03	0.41
1:C:1716:ILE:O	1:C:1720:LEU:HD23	2.21	0.41
1:C:1718:ILE:HG13	1:C:1719:HIS:CD2	2.55	0.41
1:C:2325:PRO:HB2	1:C:2421:ALA:HB1	2.02	0.41
1:C:2453:ILE:O	1:C:2457:LEU:HG	2.21	0.41
1:C:3927:GLN:NE2	1:C:3991:GLY:HA3	2.36	0.41
1:C:4238:CYS:O	1:C:4242:ILE:HG12	2.21	0.41
1:C:4673:ARG:NH2	1:C:4698:LYS:HG3	2.35	0.41
1:D:223:PHE:HD1	1:D:223:PHE:HA	1.74	0.41
1:D:497:TYR:HA	1:D:503:PHE:HD2	1.86	0.41
1:D:497:TYR:CE1	1:D:504:ALA:HA	2.56	0.41
1:D:889:GLN:HB2	1:D:891:TRP:CD1	2.56	0.41
1:D:1075:PHE:HB2	1:D:1192:CYS:SG	2.61	0.41
1:D:1156:THR:OG1	1:D:1157:GLU:OE1	2.27	0.41
1:D:1698:LEU:HG	1:D:1712:TYR:CZ	2.55	0.41
1:D:1716:ILE:O	1:D:1720:LEU:HD23	2.21	0.41
1:D:2029:GLN:H	1:D:2029:GLN:HG3	1.62	0.41
1:D:2254:LEU:O	1:D:2258:LEU:HG	2.20	0.41
1:D:2278:ALA:HA	1:D:2281:ILE:HD11	2.02	0.41
1:D:3895:HIS:CE1	1:D:3970:GLN:HB3	2.56	0.41
1:D:4823:LEU:O	1:D:4825:THR:N	2.54	0.41
1:A:468:LEU:HD23	1:A:468:LEU:HA	1.92	0.41
1:A:1694:LEU:HD23	1:A:1715:LEU:HB2	2.03	0.41
1:A:4150:LEU:HD12	1:A:4150:LEU:HA	1.89	0.41
1:A:4180:ARG:HE	1:A:4180:ARG:HB2	1.70	0.41
1:A:4646:LEU:HD23	1:A:4646:LEU:HA	1.85	0.41
1:A:4918:ILE:HD13	1:A:4918:ILE:HA	1.94	0.41
1:B:220:LEU:HB2	1:B:391:THR:O	2.21	0.41
1:B:492:ASP:OD1	1:B:546:TRP:NE1	2.48	0.41
1:B:1716:ILE:O	1:B:1720:LEU:HD23	2.21	0.41
1:B:2182:ILE:HD13	1:B:2182:ILE:HA	1.89	0.41
1:C:180:LEU:O	1:C:200:TRP:NE1	2.32	0.41
1:C:3711:THR:HG22	1:C:3713:LYS:HE2	2.03	0.41
1:C:4816:ILE:HG12	1:C:4823:LEU:CD1	2.51	0.41
1:D:882:TRP:HE1	1:D:886:ARG:CZ	2.34	0.41
1:D:1849:LEU:HD12	1:D:1854:PHE:HD2	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2187:ASN:OD1	1:D:2187:ASN:N	2.54	0.41
1:D:4027:LEU:HD23	1:D:4027:LEU:HA	1.73	0.41
1:D:4658:ILE:HG13	1:D:4796:MET:HE3	2.03	0.41
1:D:4698:LYS:HE3	1:D:4698:LYS:HB2	1.89	0.41
1:A:2295:LEU:O	1:A:2298:VAL:HG22	2.21	0.40
1:A:4698:LYS:HE3	1:A:4698:LYS:HB2	1.89	0.40
1:B:182:LEU:H	1:B:198:THR:CG2	2.33	0.40
1:B:323:LEU:HG	1:B:325:THR:H	1.87	0.40
1:B:1830:VAL:HB	1:B:1837:GLN:OE1	2.21	0.40
1:B:2030:ASP:N	1:B:2030:ASP:OD1	2.54	0.40
1:B:2325:PRO:HB2	1:B:2421:ALA:HB1	2.02	0.40
1:C:359:TYR:HA	1:C:376:ALA:HA	2.02	0.40
1:C:891:TRP:HE3	1:C:904:HIS:HB2	1.85	0.40
1:C:1698:LEU:HG	1:C:1712:TYR:CZ	2.55	0.40
1:C:1849:LEU:HD12	1:C:1854:PHE:HD2	1.86	0.40
1:D:183:SER:HB3	1:D:192:ASP:OD1	2.21	0.40
1:D:794:GLY:HA3	1:D:811:CYS:SG	2.61	0.40
1:D:2295:LEU:O	1:D:2298:VAL:HG22	2.21	0.40
1:D:2453:ILE:O	1:D:2457:LEU:HG	2.21	0.40
1:D:4780:PHE:HD1	1:D:4780:PHE:HA	1.78	0.40
1:A:4170:ILE:HD12	1:A:4170:ILE:HA	1.90	0.40
1:B:610:ASN:OD1	1:B:610:ASN:N	2.54	0.40
1:B:686:TRP:CE3	1:B:777:PHE:HB3	2.57	0.40
1:B:1110:ARG:HH22	1:B:1112:ASP:HB2	1.87	0.40
1:B:2295:LEU:O	1:B:2298:VAL:HG22	2.21	0.40
1:C:794:GLY:HA3	1:C:811:CYS:SG	2.61	0.40
1:C:882:TRP:HE1	1:C:886:ARG:CZ	2.34	0.40
1:C:2030:ASP:N	1:C:2030:ASP:OD1	2.54	0.40
1:C:2255:SER:HA	1:C:2258:LEU:HD12	2.03	0.40
1:C:4030:LEU:HD23	1:C:4030:LEU:HA	1.85	0.40
1:D:2030:ASP:N	1:D:2030:ASP:OD1	2.54	0.40
1:D:4673:ARG:NH2	1:D:4698:LYS:HG3	2.35	0.40
1:D:4886:HIS:CE1	1:D:4897:ILE:HG12	2.57	0.40
1:A:322:LYS:HA	1:A:322:LYS:HD2	1.85	0.40
1:A:1849:LEU:HD12	1:A:1854:PHE:HD2	1.86	0.40
1:A:4238:CYS:O	1:A:4242:ILE:HG12	2.21	0.40
1:B:322:LYS:HA	1:B:322:LYS:HD2	1.85	0.40
1:B:2453:ILE:O	1:B:2457:LEU:HG	2.21	0.40
1:B:4816:ILE:HG12	1:B:4823:LEU:CD1	2.51	0.40
1:B:4886:HIS:CE1	1:B:4897:ILE:HG12	2.57	0.40
1:C:115:ARG:HE	1:C:115:ARG:HB3	1.82	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:413:GLN:OE1	1:C:437:PRO:HG3	2.19	0.40
1:C:459:LEU:HD12	1:C:464:LYS:HZ3	1.86	0.40
1:C:568:LEU:HD23	1:C:606:LEU:HD13	2.03	0.40
1:C:4995:LEU:HD23	1:C:4995:LEU:HA	1.86	0.40
1:D:1133:HIS:CE1	1:D:1134:LEU:HD12	2.57	0.40
1:D:1639:LEU:HD12	1:D:1639:LEU:HA	1.93	0.40
1:A:182:LEU:H	1:A:198:THR:CG2	2.33	0.40
1:A:647:ASN:OD1	1:A:647:ASN:N	2.55	0.40
1:A:889:GLN:HB2	1:A:891:TRP:CD1	2.56	0.40
1:A:1718:ILE:HG13	1:A:1719:HIS:CD2	2.55	0.40
1:A:2271:THR:N	1:A:2274:ASP:OD2	2.55	0.40
1:A:4850:LEU:HD23	1:A:4850:LEU:HA	1.94	0.40
1:B:1720:LEU:O	1:B:1724:CYS:N	2.44	0.40
1:B:1936:LYS:HG2	1:B:2105:TRP:CZ2	2.57	0.40
1:B:3842:LEU:HD23	1:B:3842:LEU:HA	1.87	0.40
1:C:183:SER:HB3	1:C:192:ASP:OD1	2.21	0.40
1:C:360:ALA:N	1:C:375:LYS:O	2.37	0.40
1:C:803:LEU:HA	1:C:804:PRO:HD3	1.95	0.40
1:C:1964:ARG:O	1:C:1968:LYS:HG2	2.21	0.40
1:D:220:LEU:HB2	1:D:391:THR:O	2.21	0.40
1:D:647:ASN:OD1	1:D:647:ASN:N	2.55	0.40
1:D:1243:PRO:HG3	1:D:1502:SER:H	1.86	0.40
1:D:3949:ARG:HH22	1:D:3953:LYS:HD3	1.87	0.40
1:D:4814:LEU:HD23	1:D:4814:LEU:HA	1.86	0.40
1:D:4816:ILE:HG12	1:D:4823:LEU:CD1	2.51	0.40
1:D:4924:VAL:HA	1:D:4928:LEU:HB2	2.02	0.40
1:A:299:LEU:HD23	1:A:377:ILE:HA	2.04	0.40
1:A:793:LEU:HD21	1:A:1625:GLY:HA2	2.02	0.40
1:A:864:PRO:O	1:A:868:GLU:N	2.41	0.40
1:A:1936:LYS:HG2	1:A:2105:TRP:CZ2	2.57	0.40
1:A:4816:ILE:HG12	1:A:4823:LEU:CD1	2.51	0.40
1:A:4836:GLN:H	1:A:4836:GLN:HG2	1.75	0.40
1:B:23:GLN:HG2	1:B:34:LYS:HE3	2.03	0.40
1:B:889:GLN:HB2	1:B:891:TRP:CD1	2.56	0.40
1:B:1712:TYR:CG	1:B:1840:PRO:HB3	2.57	0.40
1:B:1849:LEU:HD12	1:B:1854:PHE:HD2	1.86	0.40
1:B:3650:CYS:O	1:B:3654:LEU:HG	2.22	0.40
1:B:3895:HIS:CE1	1:B:3970:GLN:HB3	2.56	0.40
1:B:4889:VAL:HG11	1:B:4900:GLU:HG2	2.03	0.40
1:C:377:ILE:HD12	1:C:377:ILE:HA	1.84	0.40
1:C:445:LEU:O	1:C:449:ILE:HG13	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1243:PRO:HG3	1:C:1502:SER:H	1.86	0.40
1:C:1749:PRO:HA	1:C:1750:PRO:HD3	1.98	0.40
1:C:3949:ARG:HH22	1:C:3953:LYS:HD3	1.87	0.40
1:D:23:GLN:HG2	1:D:34:LYS:HE3	2.03	0.40
1:D:323:LEU:HG	1:D:325:THR:H	1.87	0.40
1:D:686:TRP:CE3	1:D:777:PHE:HB3	2.57	0.40
1:D:3927:GLN:NE2	1:D:3991:GLY:HA3	2.36	0.40
1:D:4816:ILE:O	1:D:4817:ALA:C	2.60	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	3235/5037 (64%)	2954 (91%)	279 (9%)	2 (0%)	48	81
1	B	3235/5037 (64%)	2954 (91%)	279 (9%)	2 (0%)	48	81
1	C	3235/5037 (64%)	2954 (91%)	279 (9%)	2 (0%)	48	81
1	D	3235/5037 (64%)	2954 (91%)	279 (9%)	2 (0%)	48	81
All	All	12940/20148 (64%)	11816 (91%)	1116 (9%)	8 (0%)	50	81

All (8) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	4821	LYS
1	B	4821	LYS
1	C	4821	LYS
1	D	4821	LYS
1	A	4818	MET
1	B	4818	MET
1	C	4818	MET

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Mol	Chain	Res	Type
1	D	4818	MET

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	2230/4276 (52%)	2225 (100%)	5 (0%)	92 93
1	B	2230/4276 (52%)	2225 (100%)	5 (0%)	92 93
1	C	2230/4276 (52%)	2225 (100%)	5 (0%)	92 93
1	D	2230/4276 (52%)	2225 (100%)	5 (0%)	92 93
All	All	8920/17104 (52%)	8900 (100%)	20 (0%)	91 93

All (20) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	1226	PHE
1	A	4551	PHE
1	A	4571	PHE
1	A	4820	VAL
1	A	4849	TYR
1	B	1226	PHE
1	B	4551	PHE
1	B	4571	PHE
1	B	4820	VAL
1	B	4849	TYR
1	C	1226	PHE
1	C	4551	PHE
1	C	4571	PHE
1	C	4820	VAL
1	C	4849	TYR
1	D	1226	PHE
1	D	4551	PHE
1	D	4571	PHE
1	D	4820	VAL
1	D	4849	TYR

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (174) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	57	ASN
1	A	71	GLN
1	A	111	HIS
1	A	151	HIS
1	A	273	HIS
1	A	379	HIS
1	A	461	HIS
1	A	465	GLN
1	A	495	ASN
1	A	533	ASN
1	A	593	HIS
1	A	597	HIS
1	A	735	GLN
1	A	760	ASN
1	A	1084	GLN
1	A	1665	HIS
1	A	1683	HIS
1	A	1696	HIS
1	A	1702	HIS
1	A	1775	HIS
1	A	1949	GLN
1	A	1952	GLN
1	A	3643	ASN
1	A	3651	ASN
1	A	3771	HIS
1	A	3781	GLN
1	A	3814	GLN
1	A	3895	HIS
1	A	3896	ASN
1	A	3897	ASN
1	A	3900	GLN
1	A	3960	GLN
1	A	3976	ASN
1	A	3994	HIS
1	A	3998	HIS
1	A	4020	GLN
1	A	4120	ASN
1	A	4133	GLN
1	A	4153	HIS
1	A	4650	HIS
1	A	4776	GLN

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Mol	Chain	Res	Type
1	A	4803	HIS
1	A	4886	HIS
1	A	4947	GLN
1	B	57	ASN
1	B	71	GLN
1	B	111	HIS
1	B	151	HIS
1	B	273	HIS
1	B	379	HIS
1	B	461	HIS
1	B	465	GLN
1	B	495	ASN
1	B	593	HIS
1	B	597	HIS
1	B	735	GLN
1	B	760	ASN
1	B	1084	GLN
1	B	1665	HIS
1	B	1683	HIS
1	B	1696	HIS
1	B	1702	HIS
1	B	1775	HIS
1	B	1949	GLN
1	B	1952	GLN
1	B	3643	ASN
1	B	3651	ASN
1	B	3771	HIS
1	B	3781	GLN
1	B	3814	GLN
1	B	3895	HIS
1	B	3896	ASN
1	B	3897	ASN
1	B	3900	GLN
1	B	3960	GLN
1	B	3976	ASN
1	B	3994	HIS
1	B	3998	HIS
1	B	4020	GLN
1	B	4120	ASN
1	B	4133	GLN
1	B	4153	HIS
1	B	4650	HIS

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Mol	Chain	Res	Type
1	B	4776	GLN
1	B	4803	HIS
1	B	4886	HIS
1	B	4947	GLN
1	C	57	ASN
1	C	71	GLN
1	C	111	HIS
1	C	151	HIS
1	C	273	HIS
1	C	379	HIS
1	C	461	HIS
1	C	465	GLN
1	C	495	ASN
1	C	593	HIS
1	C	597	HIS
1	C	735	GLN
1	C	760	ASN
1	C	765	GLN
1	C	1084	GLN
1	C	1665	HIS
1	C	1683	HIS
1	C	1696	HIS
1	C	1702	HIS
1	C	1775	HIS
1	C	1949	GLN
1	C	1952	GLN
1	C	3643	ASN
1	C	3651	ASN
1	C	3771	HIS
1	C	3781	GLN
1	C	3814	GLN
1	C	3895	HIS
1	C	3896	ASN
1	C	3897	ASN
1	C	3900	GLN
1	C	3960	GLN
1	C	3976	ASN
1	C	3994	HIS
1	C	3998	HIS
1	C	4020	GLN
1	C	4120	ASN
1	C	4133	GLN

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Mol	Chain	Res	Type
1	C	4153	HIS
1	C	4650	HIS
1	C	4776	GLN
1	C	4803	HIS
1	C	4886	HIS
1	C	4947	GLN
1	D	57	ASN
1	D	71	GLN
1	D	111	HIS
1	D	151	HIS
1	D	273	HIS
1	D	379	HIS
1	D	461	HIS
1	D	465	GLN
1	D	495	ASN
1	D	593	HIS
1	D	597	HIS
1	D	735	GLN
1	D	760	ASN
1	D	1084	GLN
1	D	1665	HIS
1	D	1683	HIS
1	D	1696	HIS
1	D	1702	HIS
1	D	1775	HIS
1	D	1949	GLN
1	D	1952	GLN
1	D	3643	ASN
1	D	3651	ASN
1	D	3771	HIS
1	D	3781	GLN
1	D	3814	GLN
1	D	3895	HIS
1	D	3896	ASN
1	D	3897	ASN
1	D	3900	GLN
1	D	3960	GLN
1	D	3976	ASN
1	D	3994	HIS
1	D	3998	HIS
1	D	4020	GLN
1	D	4120	ASN

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Mol	Chain	Res	Type
1	D	4133	GLN
1	D	4153	HIS
1	D	4650	HIS
1	D	4776	GLN
1	D	4803	HIS
1	D	4886	HIS
1	D	4947	GLN

5.3.3 RNA (i)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates (i)

There are no oligosaccharides in this entry.

5.6 Ligand geometry (i)

There are no ligands in this entry.

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

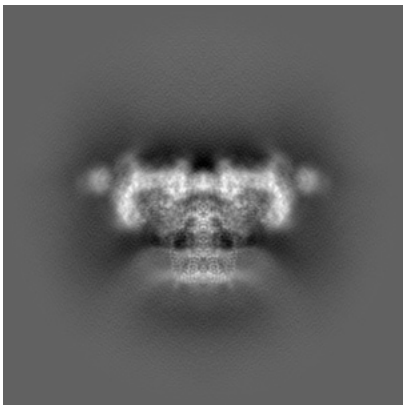
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-38042. These allow visual inspection of the internal detail of the map and identification of artifacts.

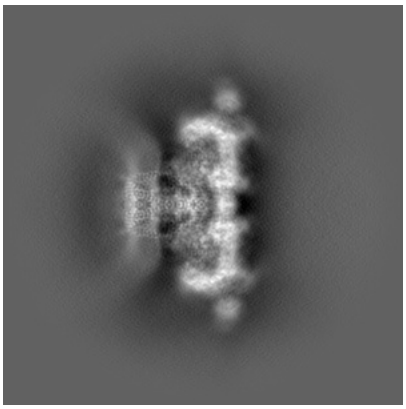
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections

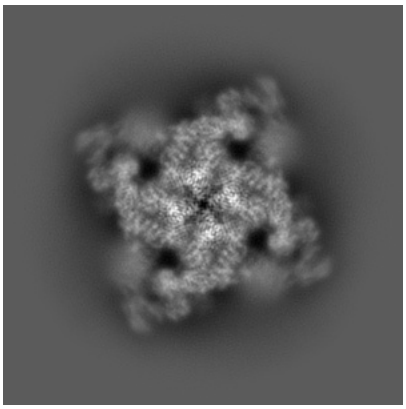
6.1.1 Primary map



X

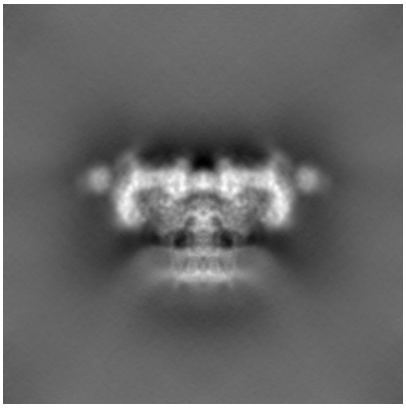


Y

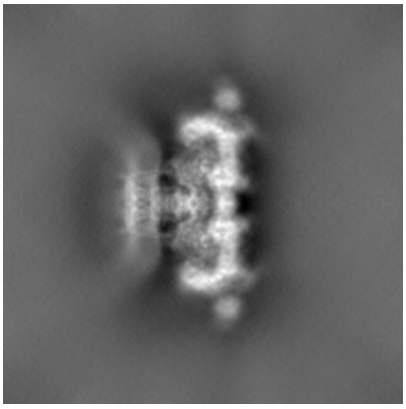


Z

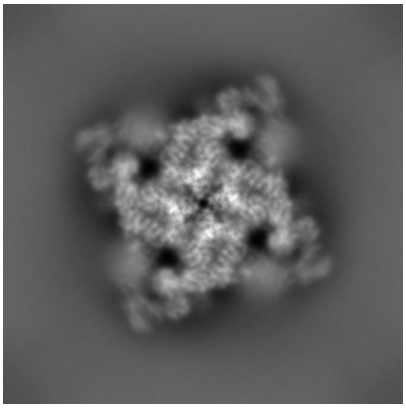
6.1.2 Raw map



X



Y

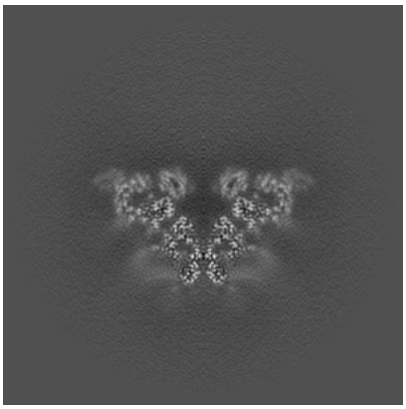


Z

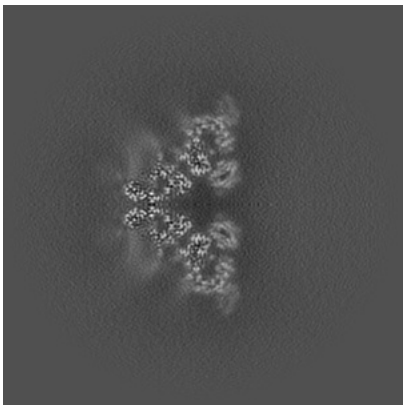
The images above show the map projected in three orthogonal directions.

6.2 Central slices (i)

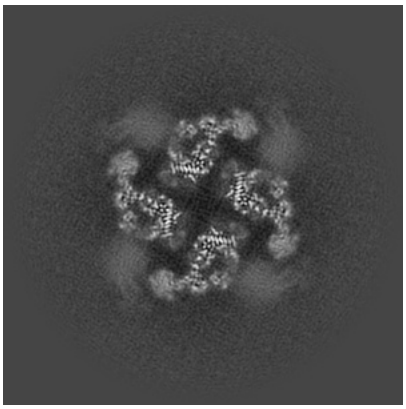
6.2.1 Primary map



X Index: 240

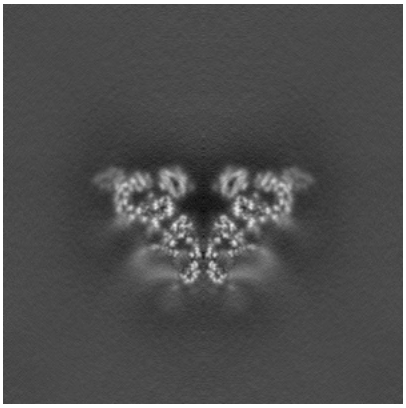


Y Index: 240

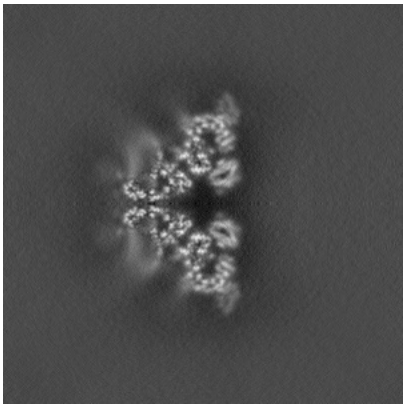


Z Index: 240

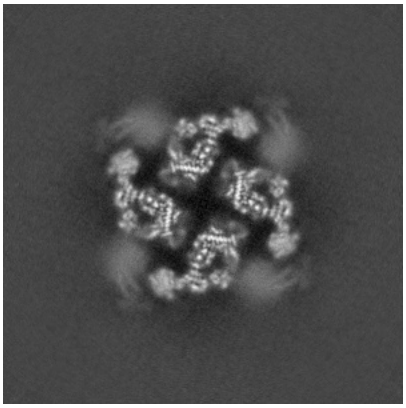
6.2.2 Raw map



X Index: 240



Y Index: 240

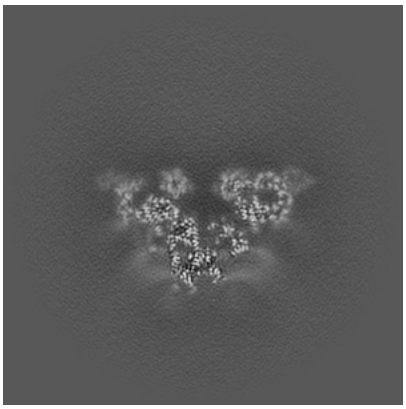


Z Index: 240

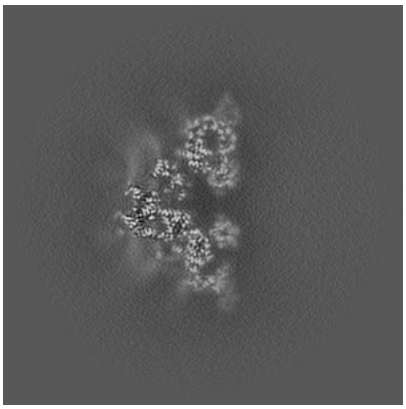
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

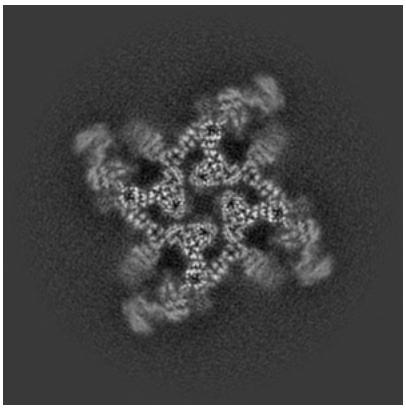
6.3.1 Primary map



X Index: 244

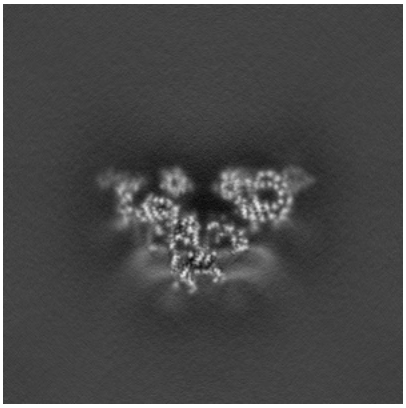


Y Index: 236

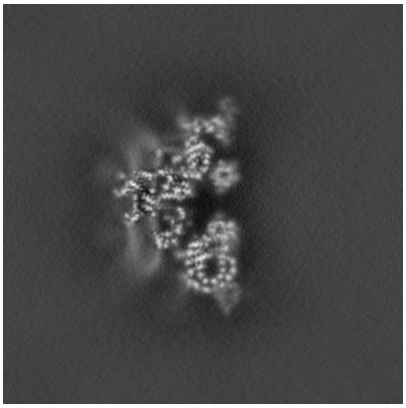


Z Index: 264

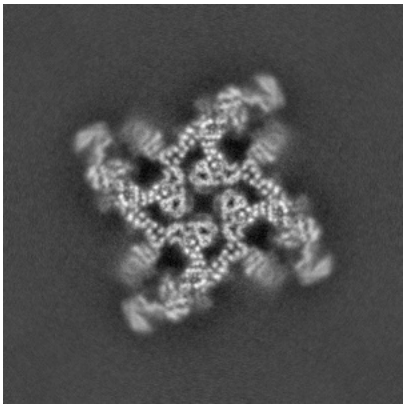
6.3.2 Raw map



X Index: 245



Y Index: 245

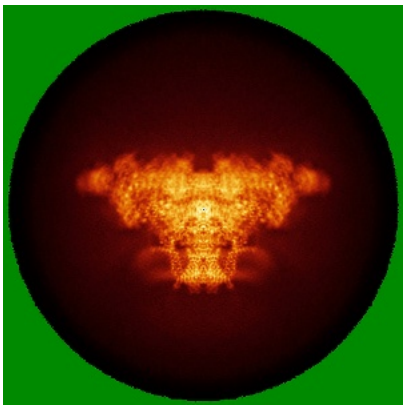


Z Index: 263

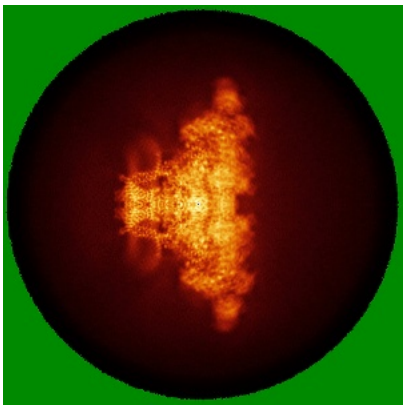
The images above show the largest variance slices of the map in three orthogonal directions.

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

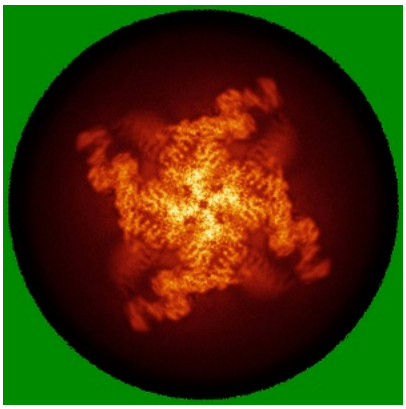
6.4.1 Primary map



X

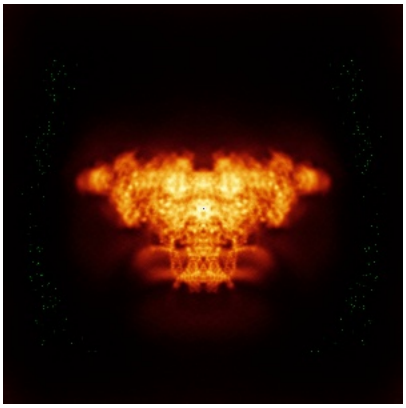


Y

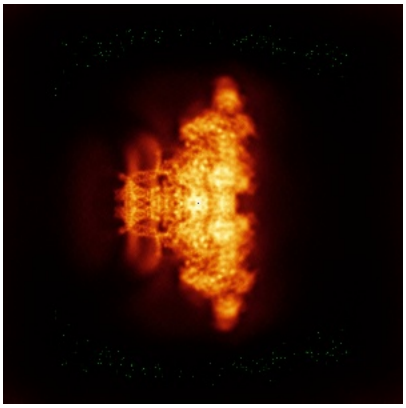


Z

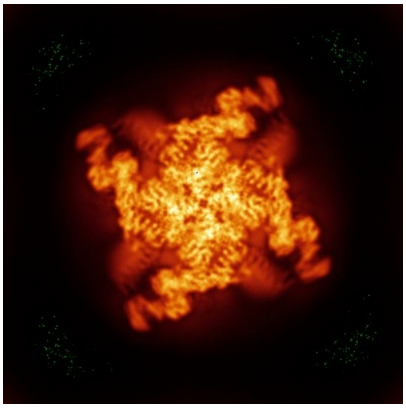
6.4.2 Raw map



X



Y

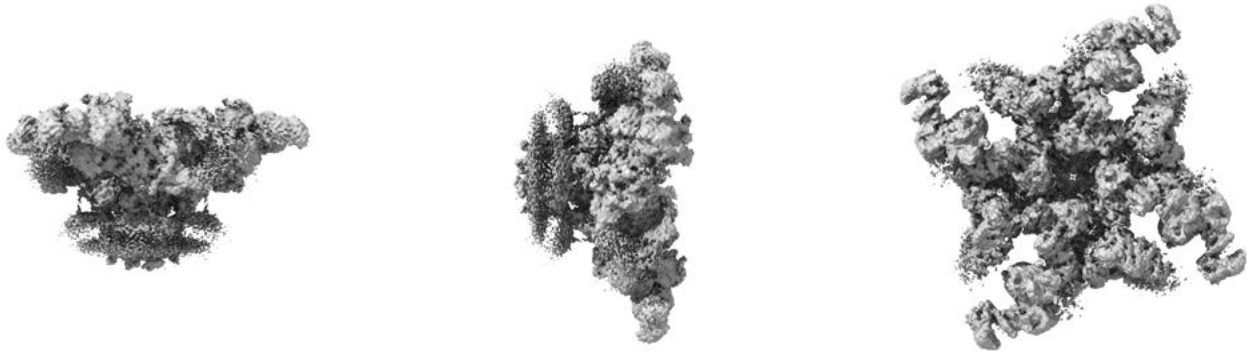


Z

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

6.5 Orthogonal surface views (i)

6.5.1 Primary map



X Y Z

The images above show the 3D surface view of the map at the recommended contour level 0.35. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.5.2 Raw map

X Y Z

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

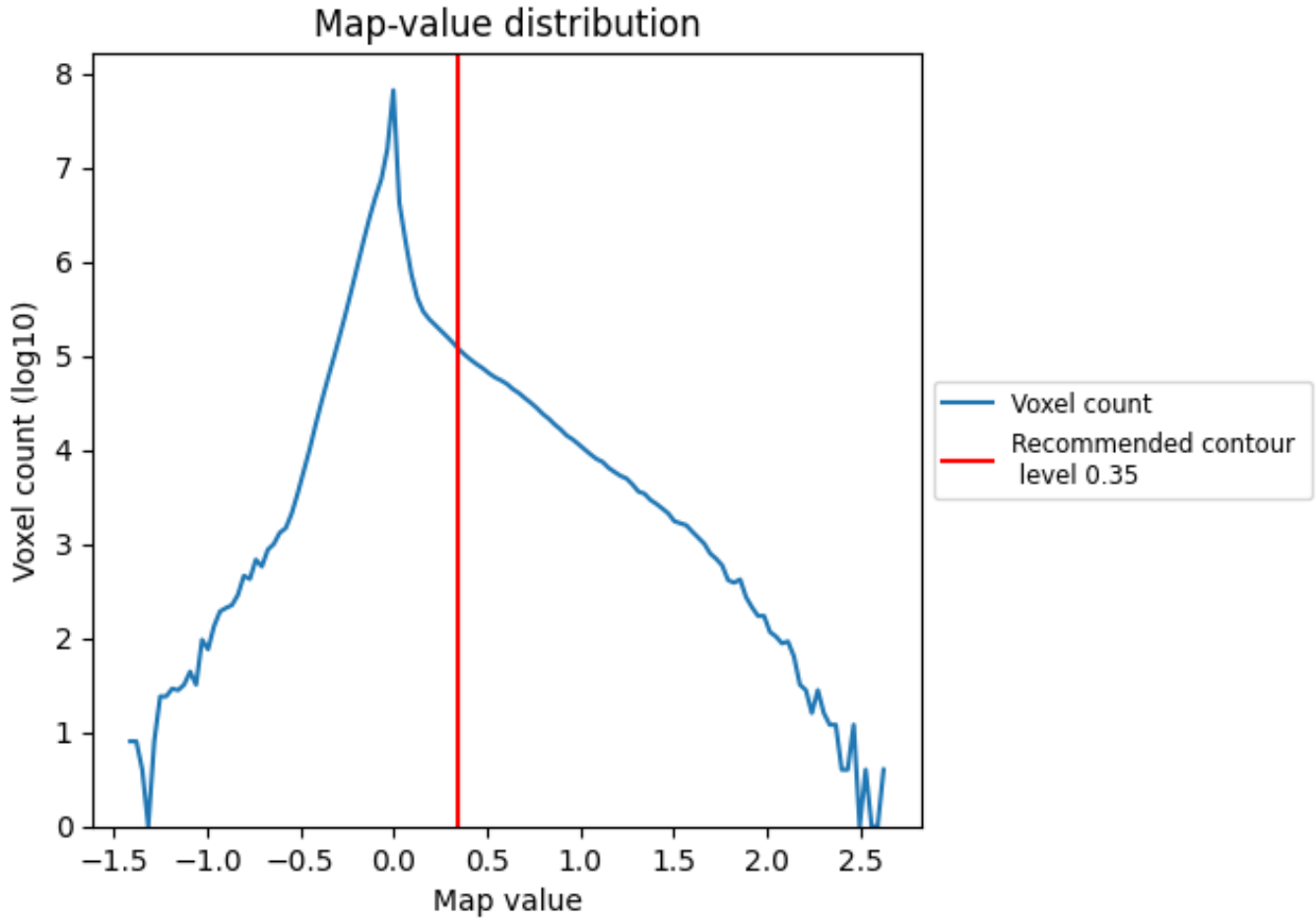
6.6 Mask visualisation (i)

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

7 Map analysis

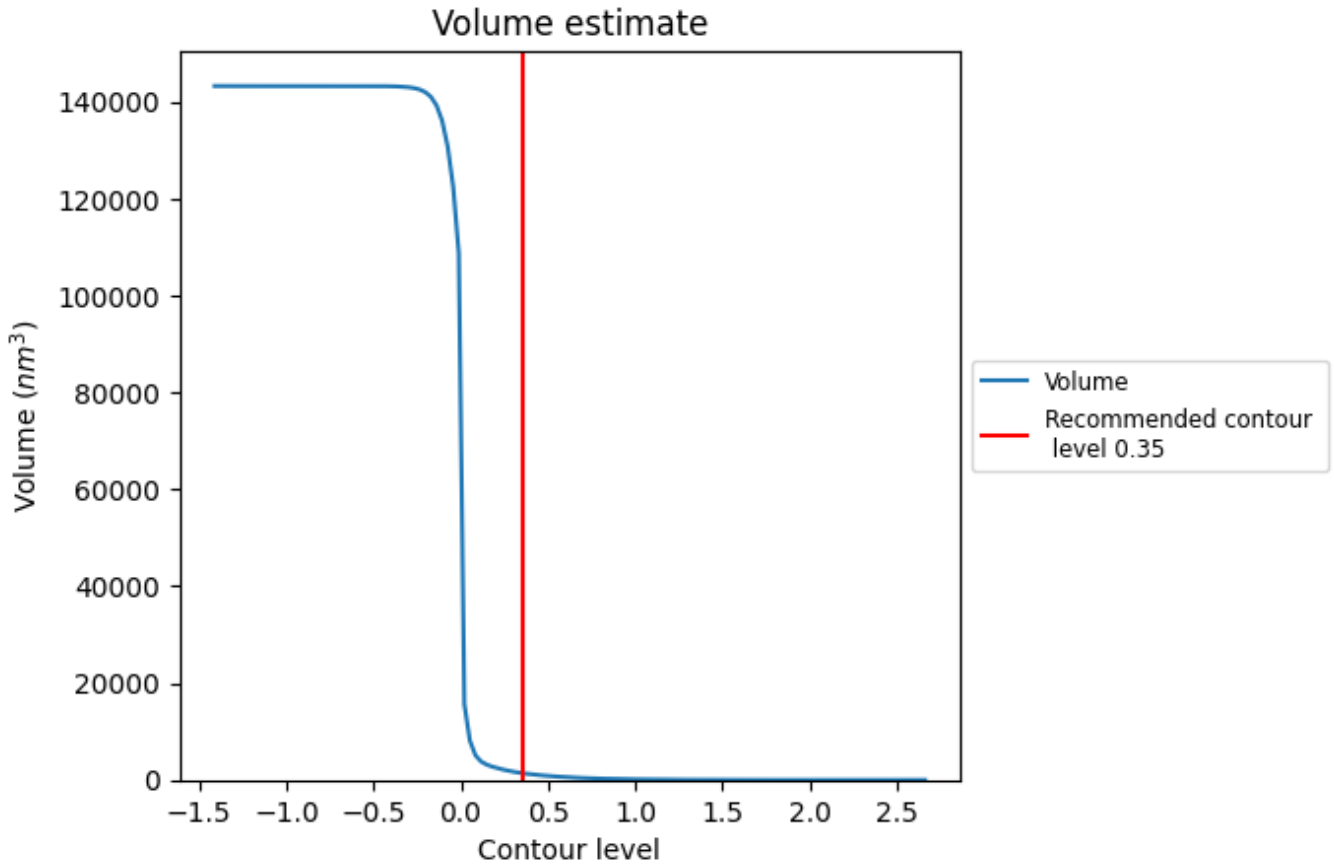
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



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

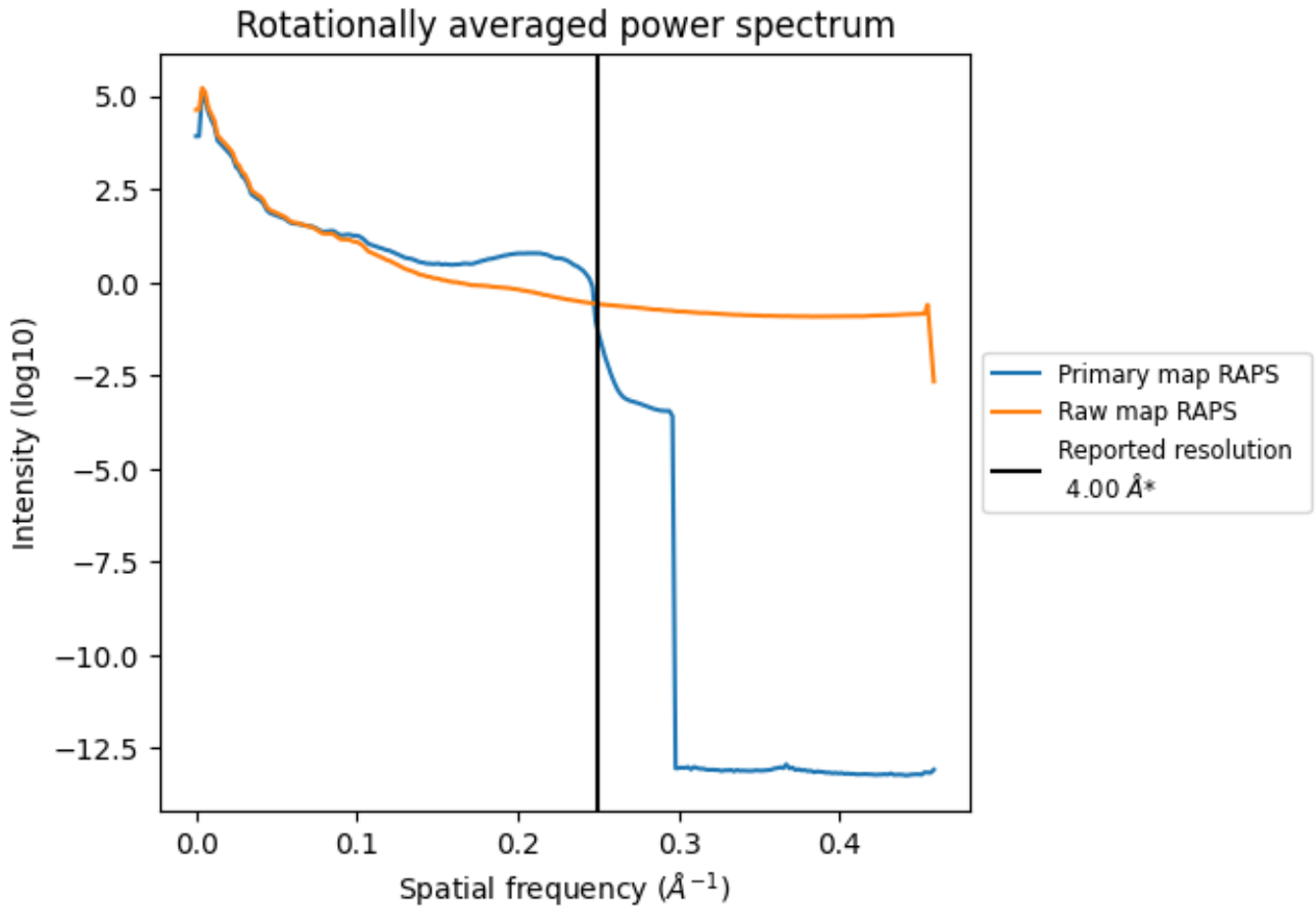
7.2 Volume estimate



The volume at the recommended contour level is 1415 nm^3; this corresponds to an approximate mass of 1278 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)

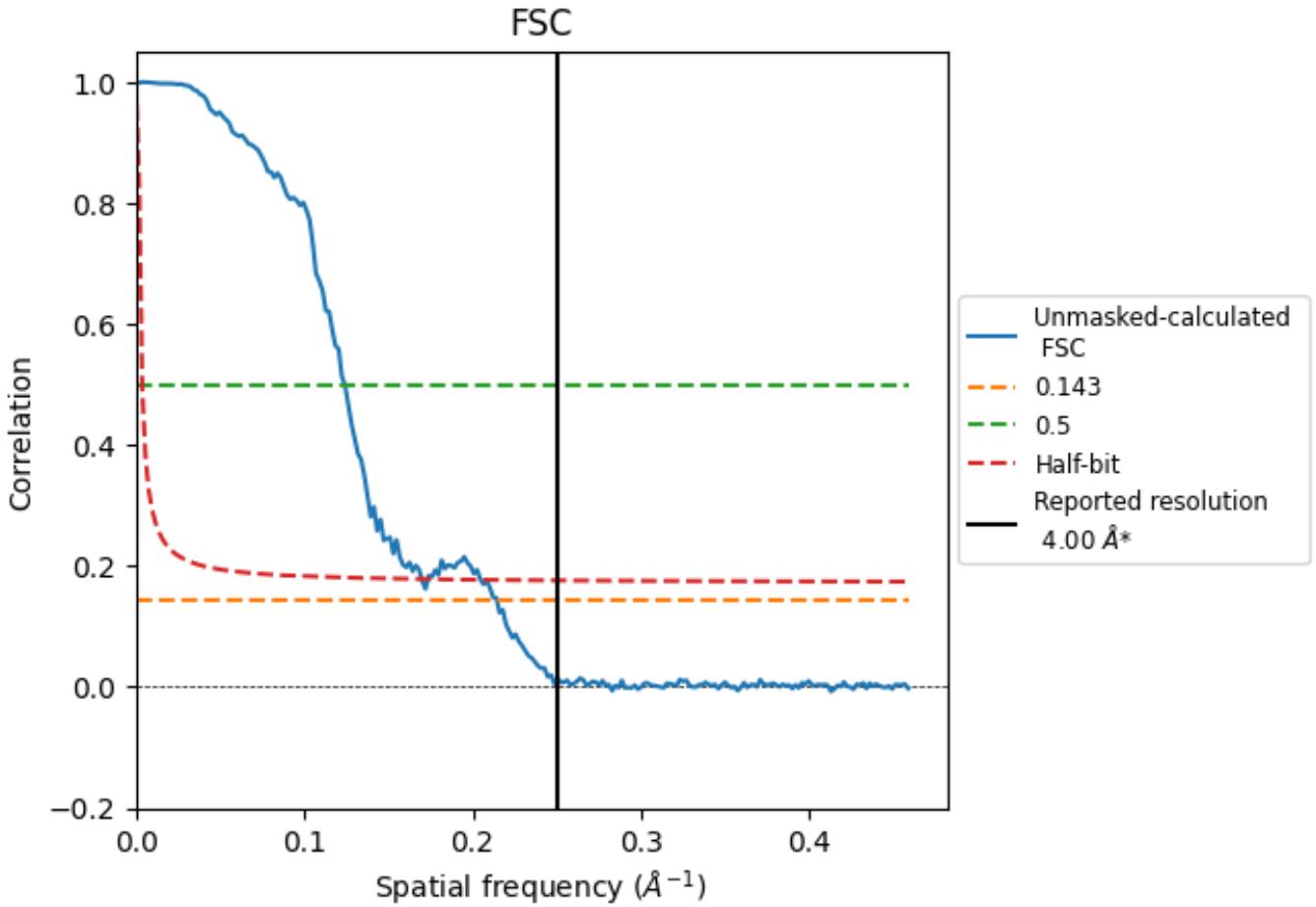


*Reported resolution corresponds to spatial frequency of 0.250 $Å^{-1}$

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 0.250 Å^{-1}

8.2 Resolution estimates (i)

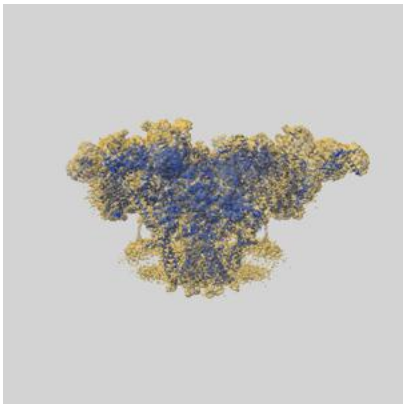
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	4.00	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	4.66	8.06	5.89

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 4.66 differs from the reported value 4.0 by more than 10 %

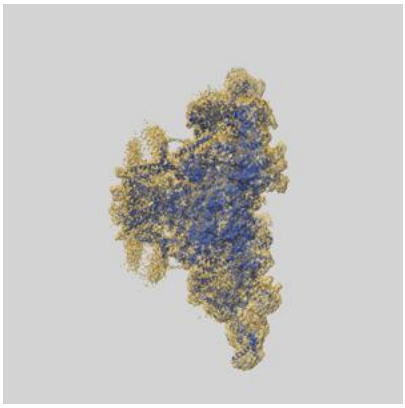
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-38042 and PDB model 8X48. Per-residue inclusion information can be found in section 3 on page 4.

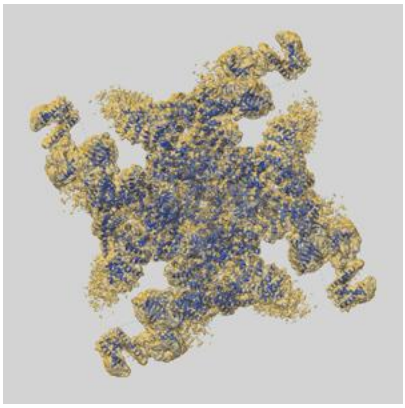
9.1 Map-model overlay



X



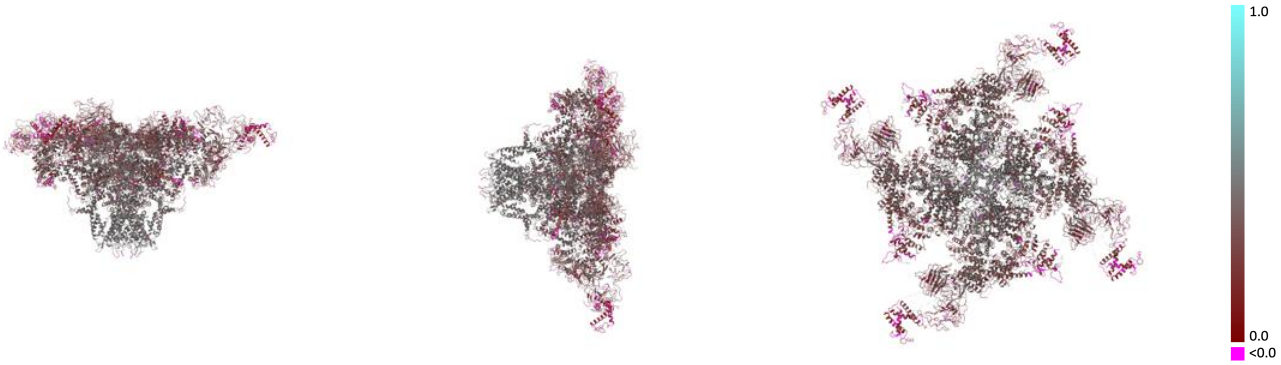
Y



Z

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

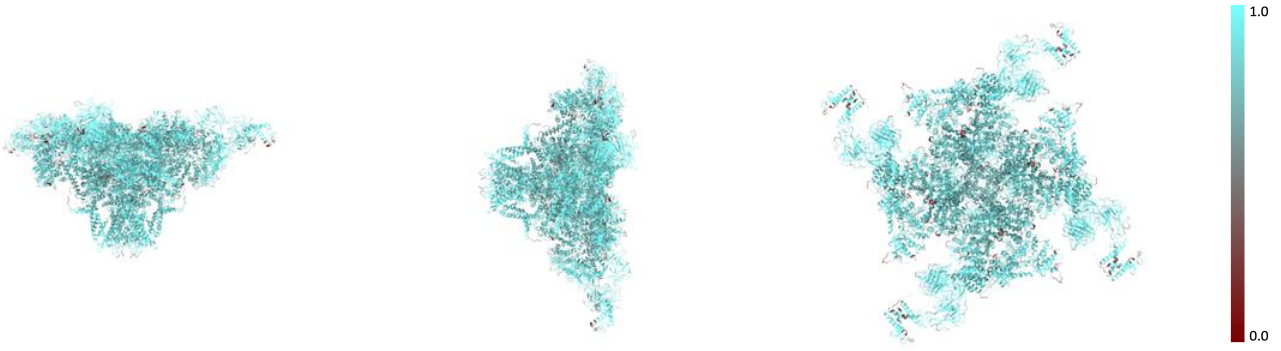
9.2 Q-score mapped to coordinate model (i)



X Y Z

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

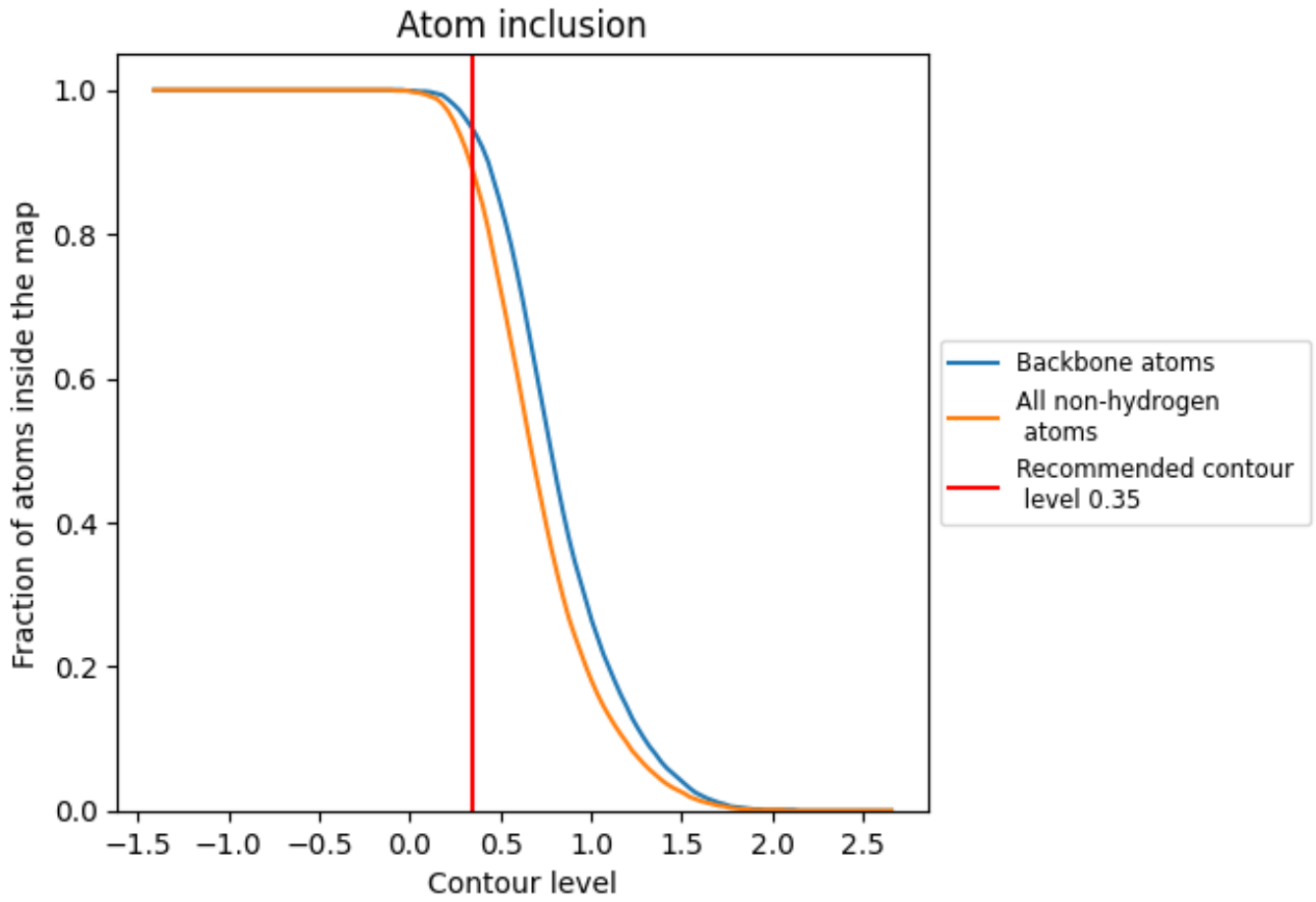
9.3 Atom inclusion mapped to coordinate model (i)



X Y Z

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

9.4 Atom inclusion (i)



At the recommended contour level, 94% of all backbone atoms, 89% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (0.35) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.8870	0.3390
A	0.8860	0.3390
B	0.8870	0.3380
C	0.8860	0.3390
D	0.8870	0.3390