Full wwPDB EM Validation Report ⓘ

Feb 27, 2024 – 01:28 AM EST

PDB ID	:	6W1N
EMDB ID	:	EMD-21513
Title	:	Pig Ryanodine Receptor (WT) in 5mM EGTA condition
Authors	:	Woll, K.W.; Haji-Ghassemi, O.; Van Petegem, F.
Deposited on	:	2020-03-04
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:

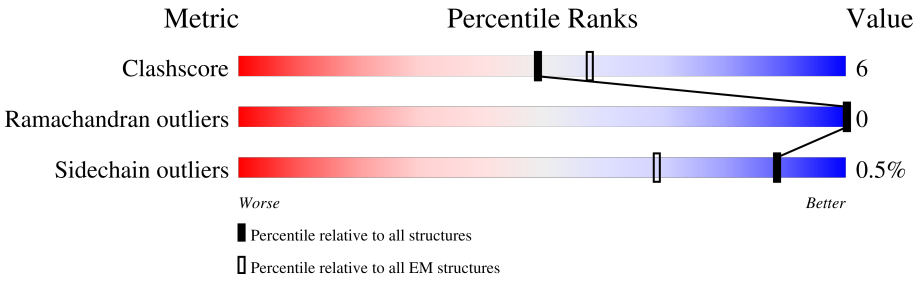
EMDB validation analysis	:	FAILED
MolProbity	:	4.02b-467
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ	:	FAILED
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.36

1 Overall quality at a glance

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

The reported resolution of this entry is 4.00 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	158937	4297
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions <=5%

Mol	Chain	Length	Quality of chain
1	A	110	77% 17% • •
1	C	110	78% 16% • •
1	E	110	76% 18% • •
1	G	110	78% 16% • •
2	B	4624	71% 10% 20%
2	D	4624	71% 10% 20%
2	F	4624	71% 10% 20%
2	H	4624	71% 10% 20%

2 Entry composition

There are 3 unique types of molecules in this entry. The entry contains 105232 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 Peptidyl-prolyl cis-trans isomerase FKBP1B.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	106	Total	C	N	O	S	0	0
			730	465	128	133	4		
1	C	106	Total	C	N	O	S	0	0
			730	465	128	133	4		
1	E	106	Total	C	N	O	S	0	0
			730	465	128	133	4		
1	G	106	Total	C	N	O	S	0	0
			730	465	128	133	4		

There are 12 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	-2	SER	-	expression tag	UNP P68106
A	-1	ASN	-	expression tag	UNP P68106
A	0	ALA	-	expression tag	UNP P68106
C	-2	SER	-	expression tag	UNP P68106
C	-1	ASN	-	expression tag	UNP P68106
C	0	ALA	-	expression tag	UNP P68106
E	-2	SER	-	expression tag	UNP P68106
E	-1	ASN	-	expression tag	UNP P68106
E	0	ALA	-	expression tag	UNP P68106
G	-2	SER	-	expression tag	UNP P68106
G	-1	ASN	-	expression tag	UNP P68106
G	0	ALA	-	expression tag	UNP P68106

- Molecule 2 is a protein called Ryanodine Receptor.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	B	3719	Total	C	N	O	S	1	0
			25577	16407	4433	4587	150		
2	D	3719	Total	C	N	O	S	1	0
			25577	16407	4433	4587	150		
2	F	3719	Total	C	N	O	S	1	0
			25577	16407	4433	4587	150		

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Mol	Chain	Residues	Atoms					AltConf	Trace
2	H	3719	Total 25577	C 16407	N 4433	O 4587	S 150	1	0

- Molecule 3 is ZINC ION (three-letter code: ZN) (formula: Zn).

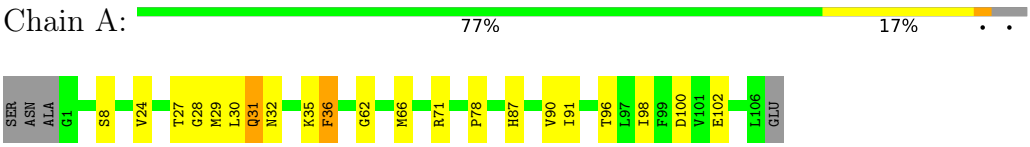
Mol	Chain	Residues	Atoms		AltConf
3	B	1	Total 1	Zn 1	0
3	D	1	Total 1	Zn 1	0
3	F	1	Total 1	Zn 1	0
3	H	1	Total 1	Zn 1	0

3 Residue-property plots (i)

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

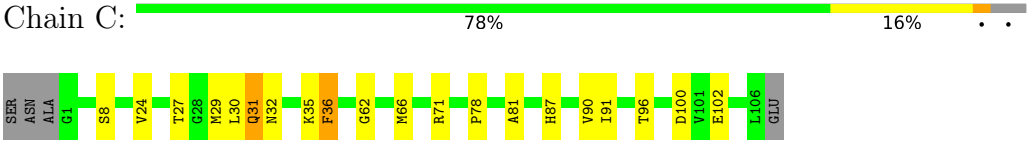
• Molecule 1: Peptidyl-prolyl cis-trans isomerase FKBP1B

Chain A:



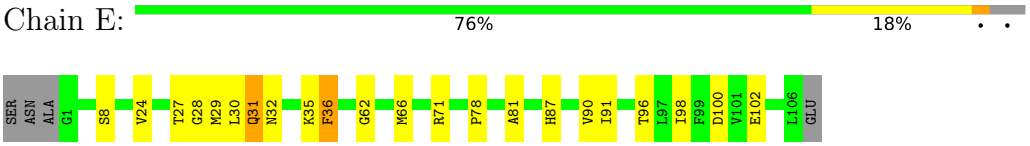
• Molecule 1: Peptidyl-prolyl cis-trans isomerase FKBP1B

Chain C:



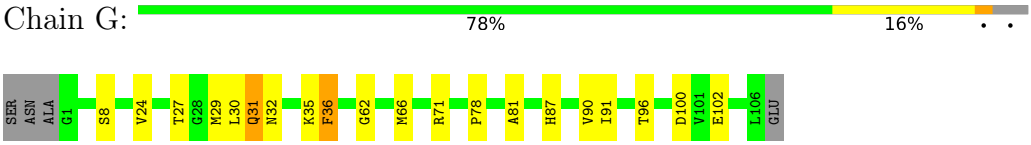
• Molecule 1: Peptidyl-prolyl cis-trans isomerase FKBP1B

Chain E:



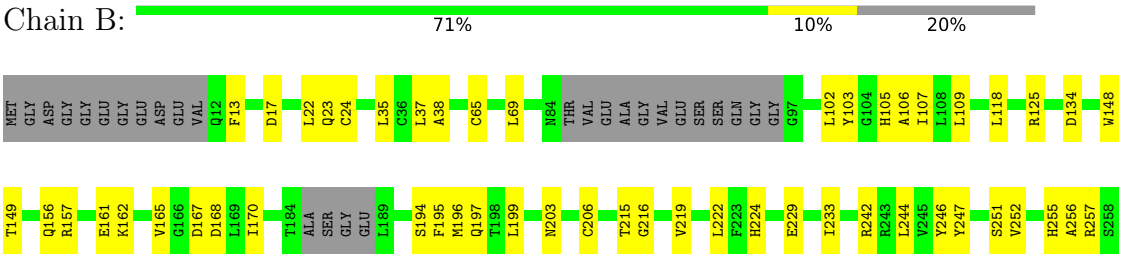
• Molecule 1: Peptidyl-prolyl cis-trans isomerase FKBP1B

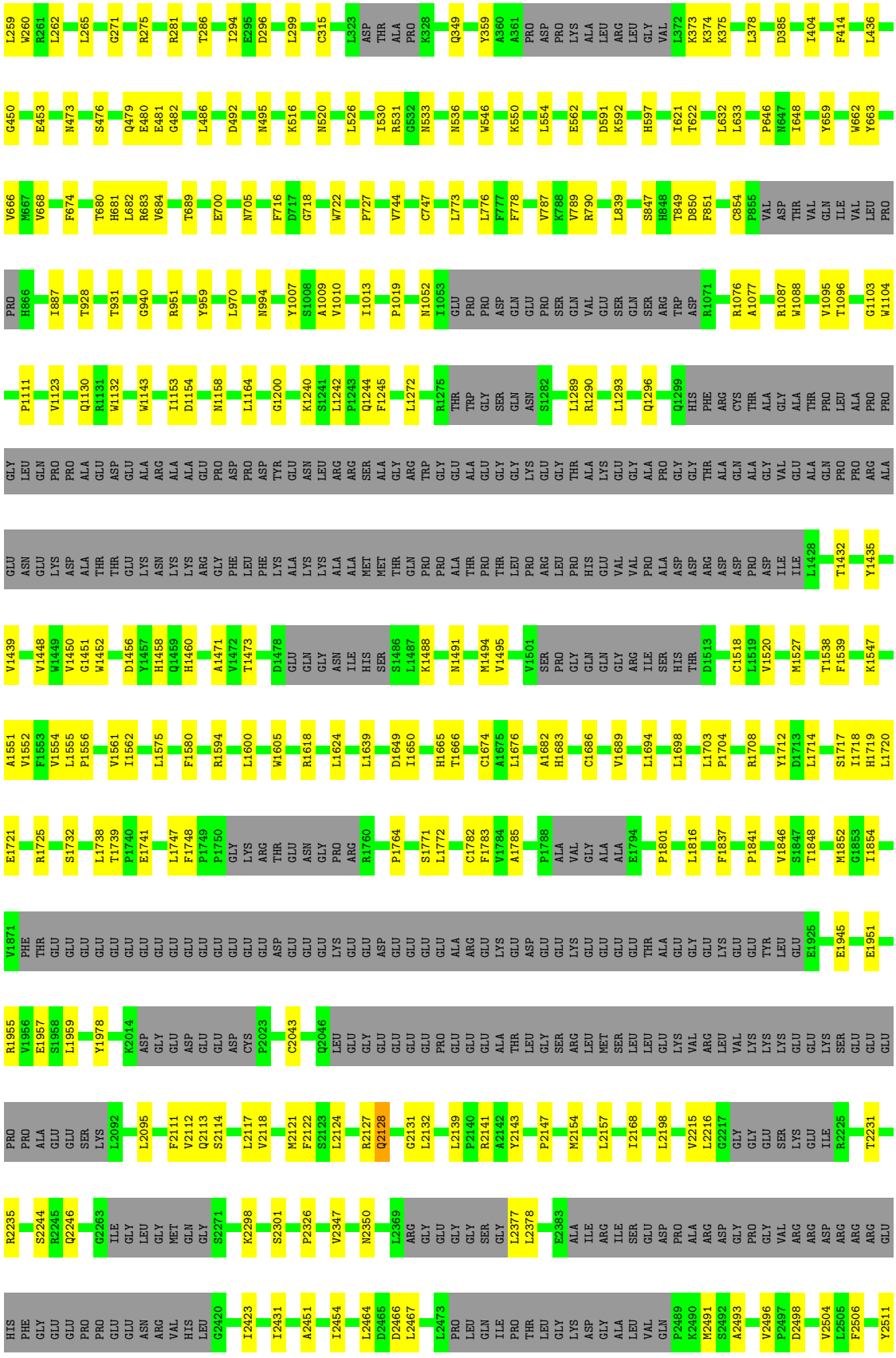
Chain G:



• Molecule 2: Ryanodine Receptor

Chain B:

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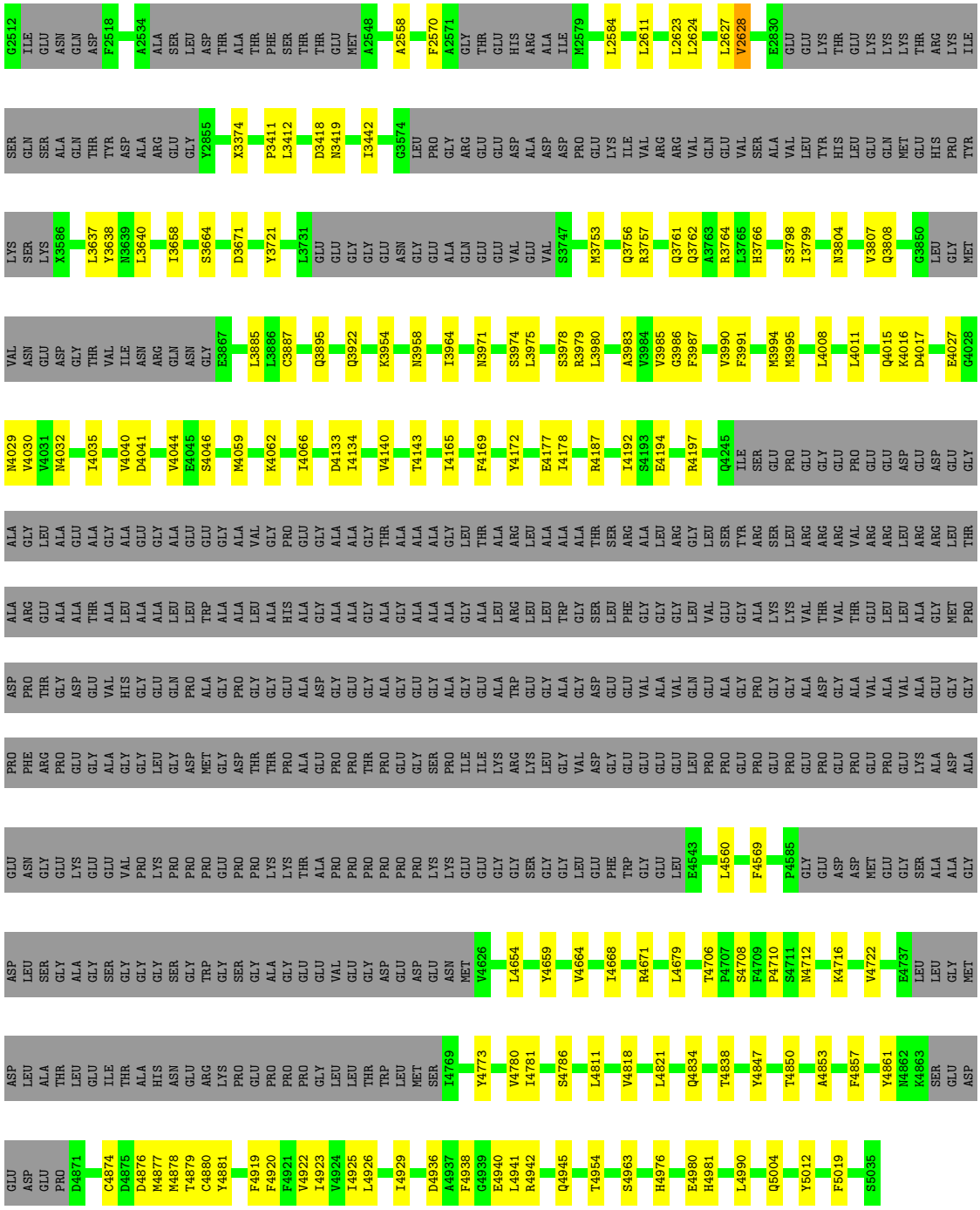
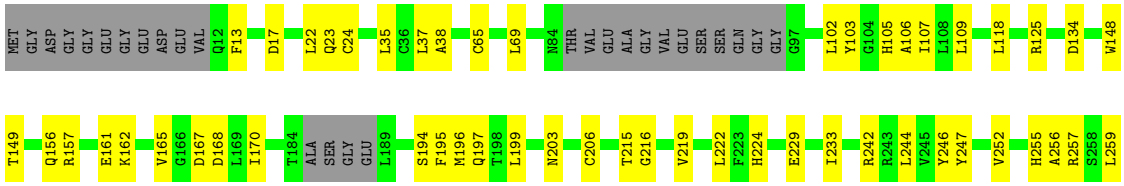
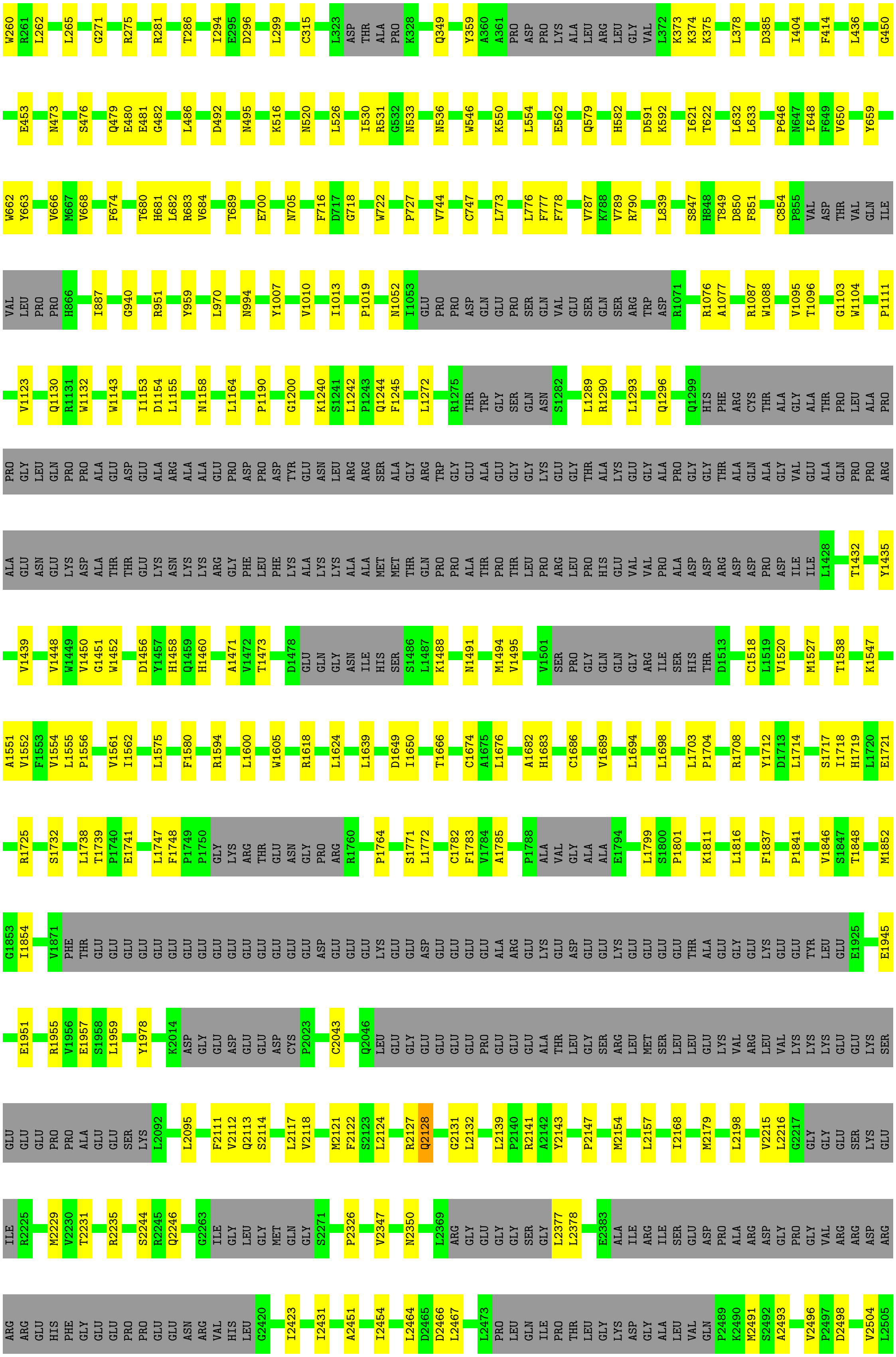
G450 E453 N473 S476 Q479 E480 E481 G482 L486 D492 N495 K516 N520 L526 I530 R531 G532 N533 N536 W546 K550 L554 E562 D591 K592 H597 I621 T622 L632 L633 P646 N647 I648 Y659 W662 Y663
V666 M667 V668 F674 T680 H681 L682 R683 V684 T689 E700 N705 F716 D717 G718 W722 P727 V744 C747 L773 L776 F777 F778 V787 K788 V789 R790 L839 S847 H848 T849 D850 F851 C854 P855 VAL ASP THR VAL GLN ILE VAL LEU PRO
PRO H866 I887 T928 T931 G940 R951 Y959 L970 N994 Y1007 S1008 A1009 V1010 I1013 P1019 N1052 I1053 GLU PRO PRO ASP GLN GLU PRO SER GLN VAL GLU SER GLN SER ARG TRP ASP R1071 R1076 A1077 R1087 W1088 V1096 T1096 G1103 W1104
P1111 V1123 Q1130 R1131 W1132 W1143 I1153 D1154 N1158 L1164 G1200 K1240 S1241 L1242 P1243 Q1244 F1245 L1272 R1275 THR TRP GLY SER GLN ASN S1282 L1289 R1290 L1293 Q1296 Q1299 HIS PHE ARG CYS THR ALA GLY VAL GLU ALA THR PRO LEU ALA PRO PRO
GLY LEU GLN PRO PRO ALA GLU ASP GLU ALA ARG ALA ALA GLU PRO ASP PRO ASP TYR GLU ASN LEU ARG ARG SER ALA GLY ARG TRP GLY GLU ALA GLU GLY LYS GLU GLY THR ALA LYS GLU GLY ALA PRO GLY GLY THR ALA GLY GLN ALA GLY VAL GLU ALA ALA GLN PRO PRO ARG ALA
GLU ASN GLU LYS ASP ALA THR THR GLU LYS ASN LYS LYS ARG GLY PHE LEU PHE LYS ALA LYS LYS ALA ALA MET MET THR GLN PRO PRO ALA THR PRO THR LEU PRO ARG LEU PRO HIS GLU VAL VAL PRO ALA ASP ARG ASP ASP PRO ASP ASP PRO ILE ILE L1428 T1432 Y1435
V1439 V1448 W1449 V1450 G1451 W1452 D1456 Y1457 H1458 Q1459 H1460 A1471 V1472 T1473 D1478 GLU GLN GLY ASN ILE HIS SER S1486 L1487 K1488 N1491 M1494 V1495 V1501 SER PRO GLY GLN GLN GLY ARG ILE SER HIS THR D1513 C1518 L1519 V1520 M1527 T1538 F1539 K1547
A1551 V1552 F1553 V1554 L1555 P1556 V1561 I1562 L1575 F1580 R1594 L1600 W1605 R1618 L1624 L1639 D1649 I1650 H1665 T1666 C1674 A1675 L1676 A1682 H1683 C1686 V1689 L1694 L1698 L1703 P1704 R1708 Y1712 D1713 L1714 S1717 I1718 H1719 L1720
E1721 R1725 S1732 L1738 T1739 P1740 E1741 L1747 F1748 P1749 P1750 GLY LYS ARG THR GLU ASN GLY PRO ARG R1760 P1764 S1771 L1772 C1782 F1783 V1784 A1785 P1788 ALA VAL GLY ALA ALA E1794 P1801 L1816 F1837 P1841 V1846 S1847 T1848 M1852 G1853 I1854
V1871 PHE THR GLU GLU GLU GLU GLU GLU GLU GLU GLU GLU GLU GLU GLU GLU ASP GLU GLU GLU GLU GLU ALA ARG GLU LYS GLU ASP GLU GLU LYS GLU GLU GLU GLU THR ALA GLU GLY GLU LYS GLU VAL ARG LEU VAL LYS LYS LYS GLU GLU LYS SER GLU GLU E1925 E1945 E1961
R1955 V1956 E1957 S1958 L1959 Y1978 K2014 ASP GLY GLU ASP GLU GLU CYS P2023 C2043 Q2046 LEU LEU GLY GLU GLU GLU GLU PRO GLU GLU GLU THR LEU GLY SER ARG LEU MET SER LEU LEU GLU LYS VAL ARG LEU VAL LYS LYS LYS GLU GLU LYS SER GLU GLU GLU
PRO PRO ALA GLU GLU SER LYS L2092 L2095 F2111 V2112 Q2113 S2114 L2117 V2118 M2121 F2122 S2123 L2124 R2127 Q2128 G2131 L2132 L2139 P2140 R2141 A2142 Y2143 P2147 M2154 L2157 I2168 L2198 V2215 L2216 G2217 GLY GLY GLU SER LYS GLU ILE R2225 T2231
R2235 S2244 R2245 Q2246 G2263 ILE GLY LEU GLY MET GLN GLY S2271 K2298 S2301 P2326 V2347 N2350 L2369 ARG GLY GLU GLY GLY SER GLY L2377 L2378 E2383 ALA ILE ARG ILE SER GLU ASP PRO ALA ARG ASP GLY PRO GLY VAL ARG ARG ASP ARG ARG GLU
HIS PHE GLY GLU GLU PRO PRO GLU GLU ASN ARG VAL HIS LEU G2420 I2423 I2431 A2451 I2454 L2464 D2465 D2466 L2467 L2473 PRO LEU GLN ILE PRO THR LEU GLY LYS ASP GLY ALA LEU VAL GLN P2489 K2490 M2491 S2492 A2493 V2496 P2497 D2498 V2504 L2505 F2506 Y2511



• Molecule 2: Ryanodine Receptor

Chain D:

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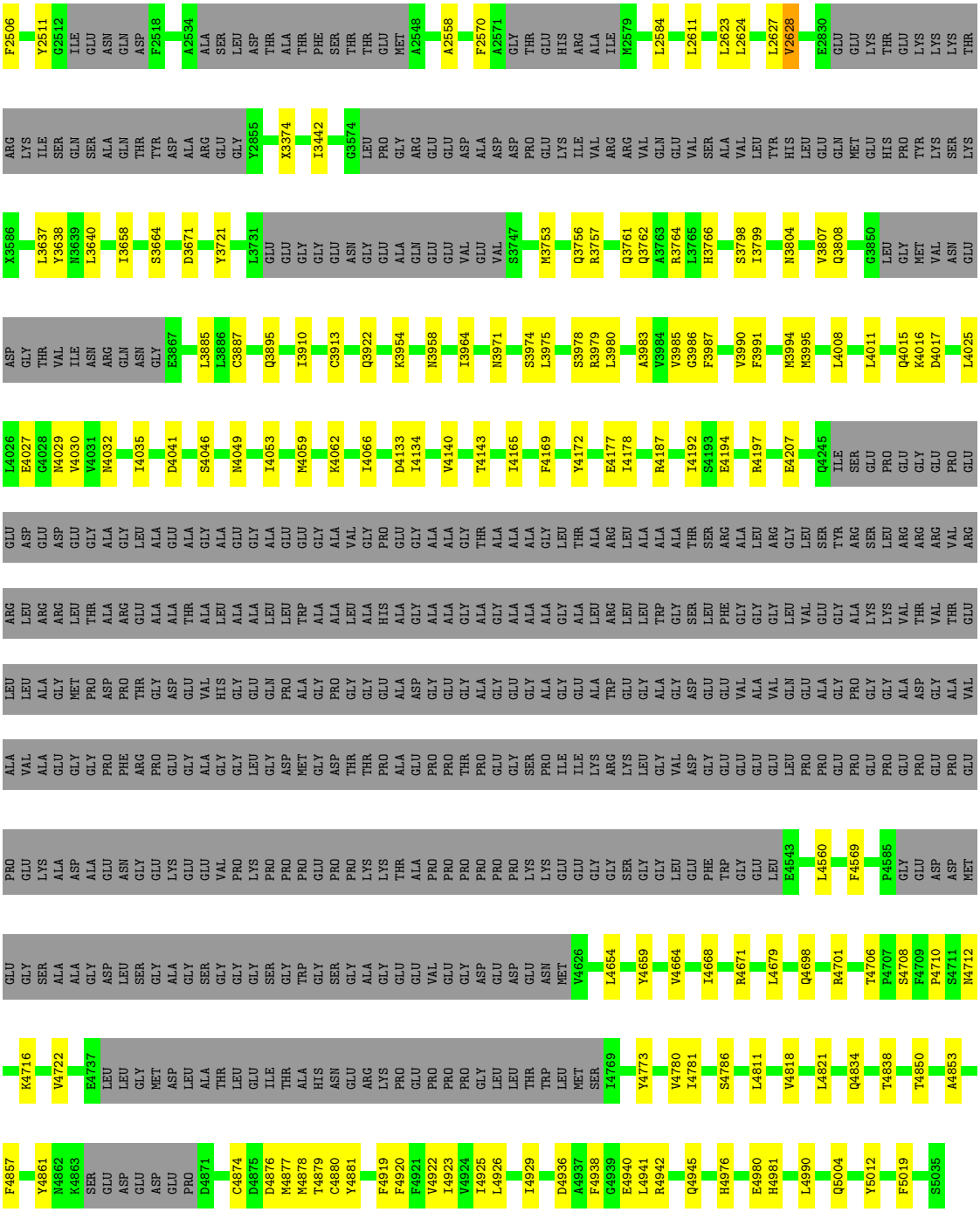
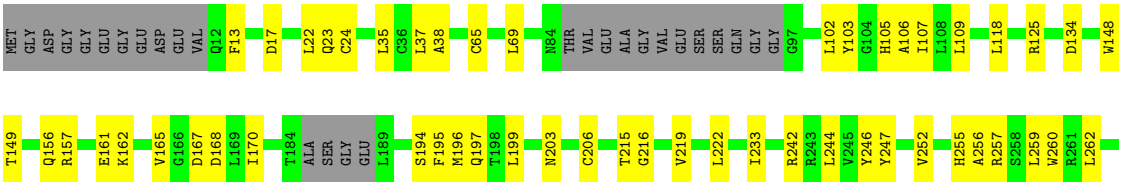
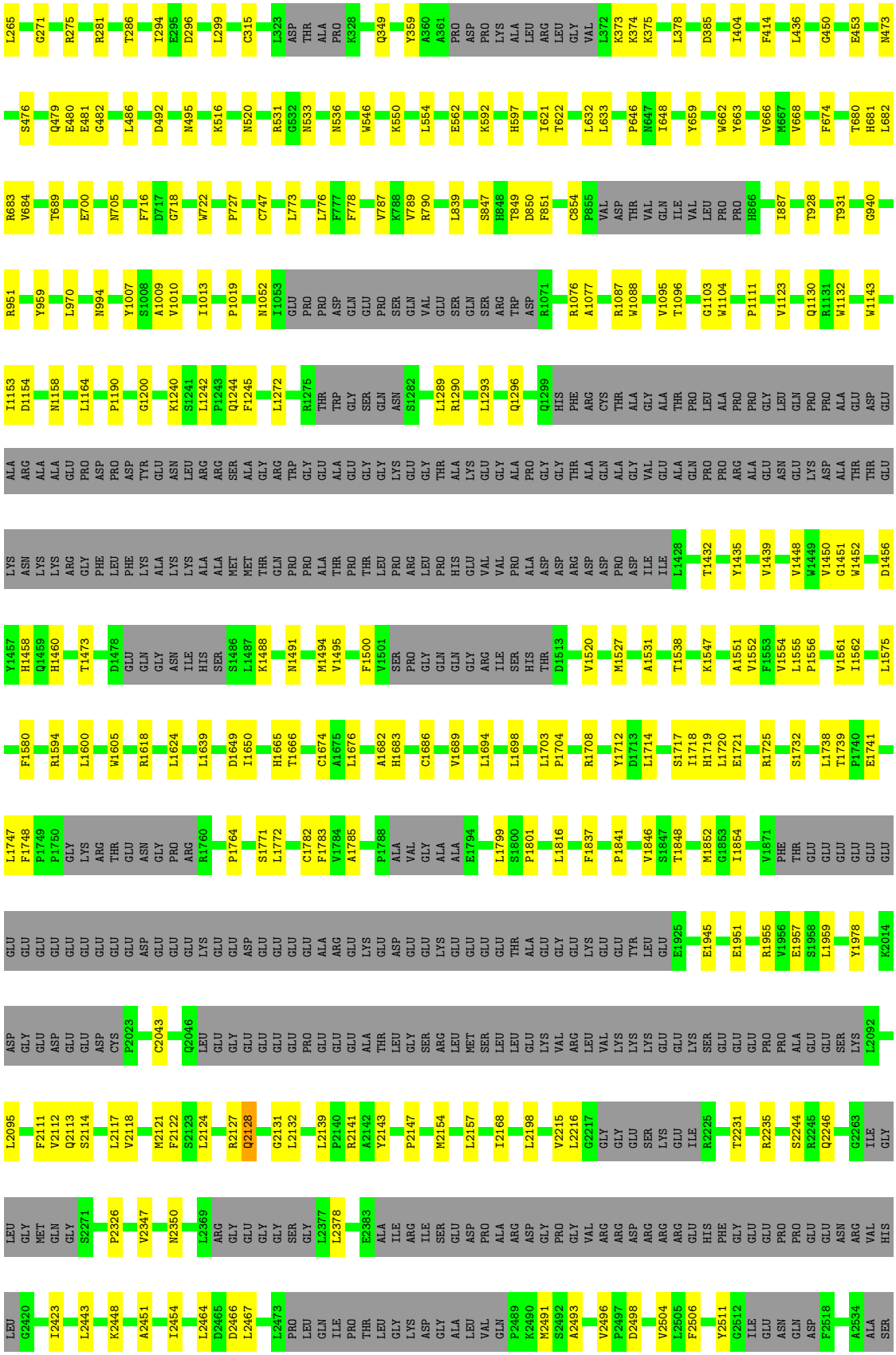
E453 N473 S476 Q479 E480 E481 G482 L486 D492 N495 K516 N520 L526 I530 R531 G532 N533 N536 W546 K550 L554 E562 Q579 H582 D591 K592 I621 T622 L632 L633 P646 N647 I648 F649 V650 Y659
W662 Y663 V666 M667 V668 F674 T680 H681 L682 R683 V684 T689 E700 N705 F716 D717 G718 W722 P727 V744 C747 L773 L776 F777 F778 V787 K788 V789 R790 L839 S847 H848 T849 D850 F851 C854 P855 VAL ASP THR VAL GLN ILE
VAL LEU PRO PRO H866 I887 G940 R951 Y959 L970 N994 Y1007 V1010 I1013 P1019 N1052 I1053 GLU PRO PRO ASP GLN GLU PRO SER GLN VAL GLU SER GLN SER ARG TRP ASP R1071 R1076 A1077 R1087 W1088 V1095 T1096 G1103 W1104 P1111
V1123 Q1130 R1131 W1132 W1143 I1153 D1154 L1155 N1158 L1164 P1190 G1200 K1240 S1241 L1242 P1243 Q1244 F1245 L1272 R1275 THR TRP GLY SER GLN ASN S1282 L1289 R1290 L1293 Q1296 Q1299 HIS PHE ARG CYS THR ALA GLY ALA THR PRO LEU ALA PRO
PRO GLY LEU GLN PRO PRO ALA GLU ASP GLU ALA ARG ALA ALA GLU PRO ASP PRO ASP TYR GLU ASN LEU ARG ARG SER ALA GLY ARG TRP GLY GLU ALA GLU GLY GLY LYS GLU GLY THR ALA LYS GLU GLY ALA PRO GLY GLY THR ALA GLN ALA GLY VAL GLU ALA GLN PRO PRO ARG
ALA GLU ASN GLU LYS ASP ALA THR THR GLU LYS ASN LYS LYS ARG GLY PHE LEU PHE LYS ALA LYS LYS ALA ALA MET MET THR GLN PRO PRO ALA THR PRO THR LEU PRO ARG LEU PRO HIS GLU VAL VAL PRO ALA ASP ASP ARG ASP ASP PRO ASP ILE ILE L1428 T1432 Y1435
V1439 V1448 W1449 V1450 G1451 W1452 D1456 Y1457 H1458 Q1459 H1460 A1471 V1472 T1473 D1478 GLU GLN GLY ASN ILE HIS SER S1486 L1487 K1488 N1491 M1494 V1495 V1501 SER PRO GLY GLN GLN GLY ARG ILE SER HIS THR D1513 C1518 L1519 V1520 M1527 T1538 K1547
A1551 V1552 F1553 V1554 L1555 P1556 V1561 I1562 L1575 F1580 R1594 L1600 W1605 R1618 L1624 L1639 D1649 I1650 T1666 C1674 A1675 L1676 A1682 H1683 C1686 V1689 L1694 L1698 L1703 P1704 R1708 Y1712 D1713 L1714 S1717 I1718 H1719 L1720 E1721
R1725 S1732 L1738 T1739 P1740 E1741 L1747 F1748 P1749 P1750 GLY LYS ARG THR GLU ASN GLY PRO ARG R1760 P1764 S1771 L1772 C1782 F1783 V1784 A1785 P1788 ALA VAL GLY ALA ALA E1794 L1799 S1800 P1801 K1811 L1816 F1837 P1841 V1846 S1847 T1848 M1852
G1853 I1854 V1871 PHE THR GLU GLU GLU GLU GLU GLU GLU GLU GLU GLU GLU GLU GLU GLU ASP GLU GLU GLU LYS GLU GLU ASP GLU GLU GLU GLU ALA ARG GLU LYS GLU ASP GLU GLU LYS GLU GLU GLU GLU THR ALA GLU GLY GLU LYS GLU GLU TYR LEU GLU E1925 E1945
E1951 R1955 V1956 E1957 S1958 L1959 Y1978 K2014 ASP GLY GLU ASP GLU GLU ASP CYS GLY P2023 C2043 Q2046 LEU GLU GLY GLU GLU GLU GLU PRO GLU GLU GLU ALA THR LEU GLY SER ARG LEU MET SER LEU LEU GLU LYS VAL ARG LEU VAL LYS LYS LYS GLU GLU LYS SER
GLU GLU GLU PRO PRO ALA GLU GLU SER LYS L2092 L2095 F2111 V2112 Q2113 S2114 L2117 V2118 M2121 F2122 S2123 L2124 R2127 Q2128 G2131 L2132 L2139 P2140 R2141 A2142 Y2143 P2147 M2154 L2157 I2168 M2179 L2198 V2215 L2216 G2217 GLY GLY GLU SER LYS GLU
ILE R2225 M2229 V2230 T2231 R2235 S2244 R2245 Q2246 G2263 ILE GLY LEU GLY MET GLN GLY S2271 P2326 V2347 N2350 L2369 ARG GLY GLY GLY SER GLY L2377 L2378 E2383 ALA ILE ARG ILE SER GLU ASP PRO ALA ARG ASP GLY PRO GLY VAL ARG ARG ASP ARG
ARG ARG GLU HIS PHE GLY GLU GLU PRO PRO GLU GLU ASN ARG VAL HIS LEU G2420 I2423 I2431 A2451 I2454 L2464 D2465 D2466 L2467 L2473 PRO LEU GLN ILE PRO THR LEU GLY LYS ASP GLY ALA LEU VAL GLN P2489 K2490 M2491 S2492 A2493 V2496 P2497 D2498 V2504 L2505



• Molecule 2: Ryanodine Receptor

Chain F:

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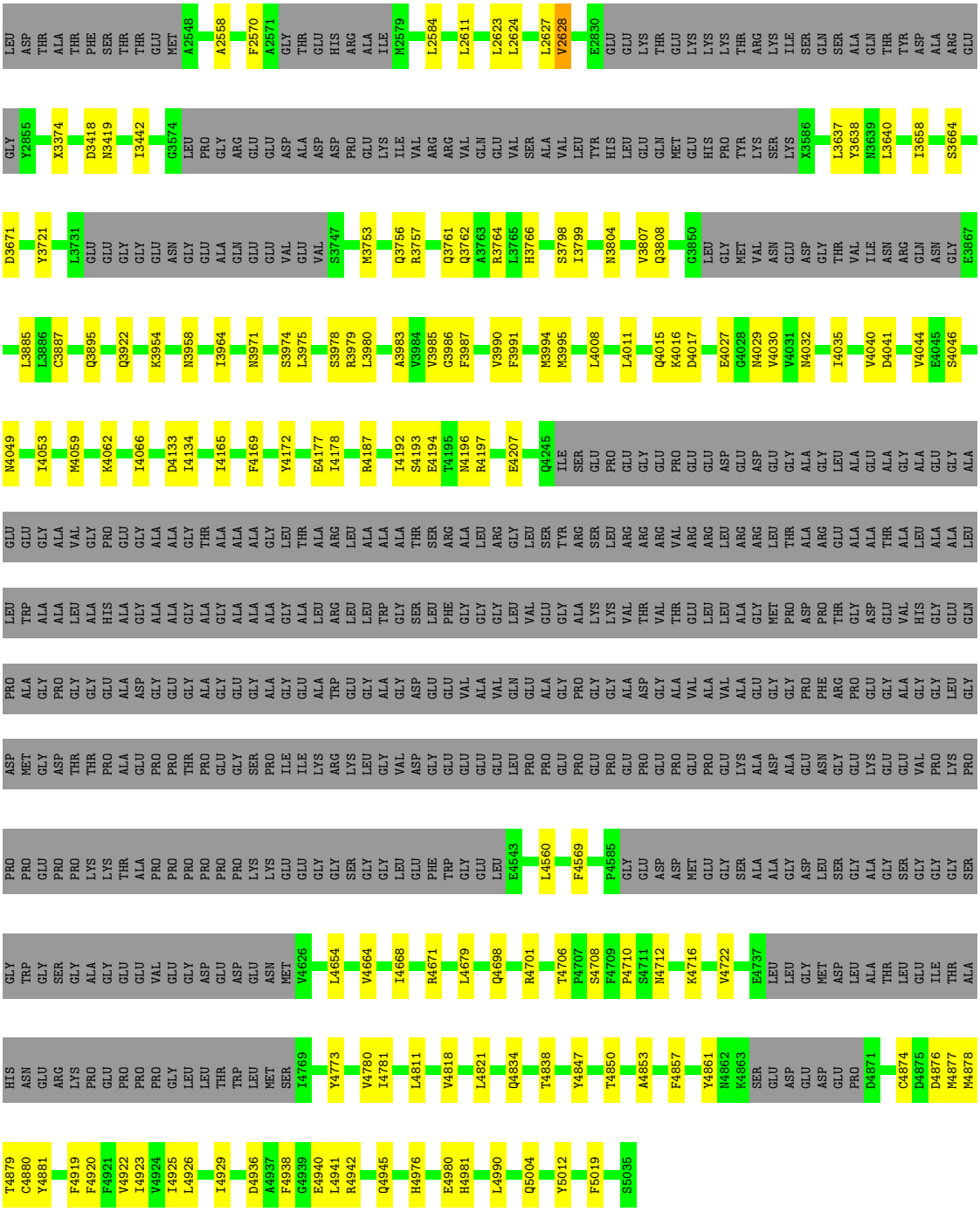
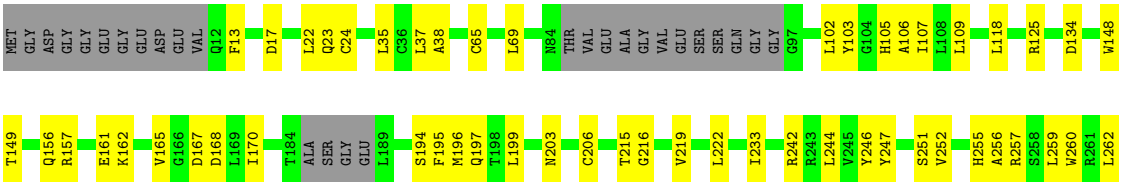
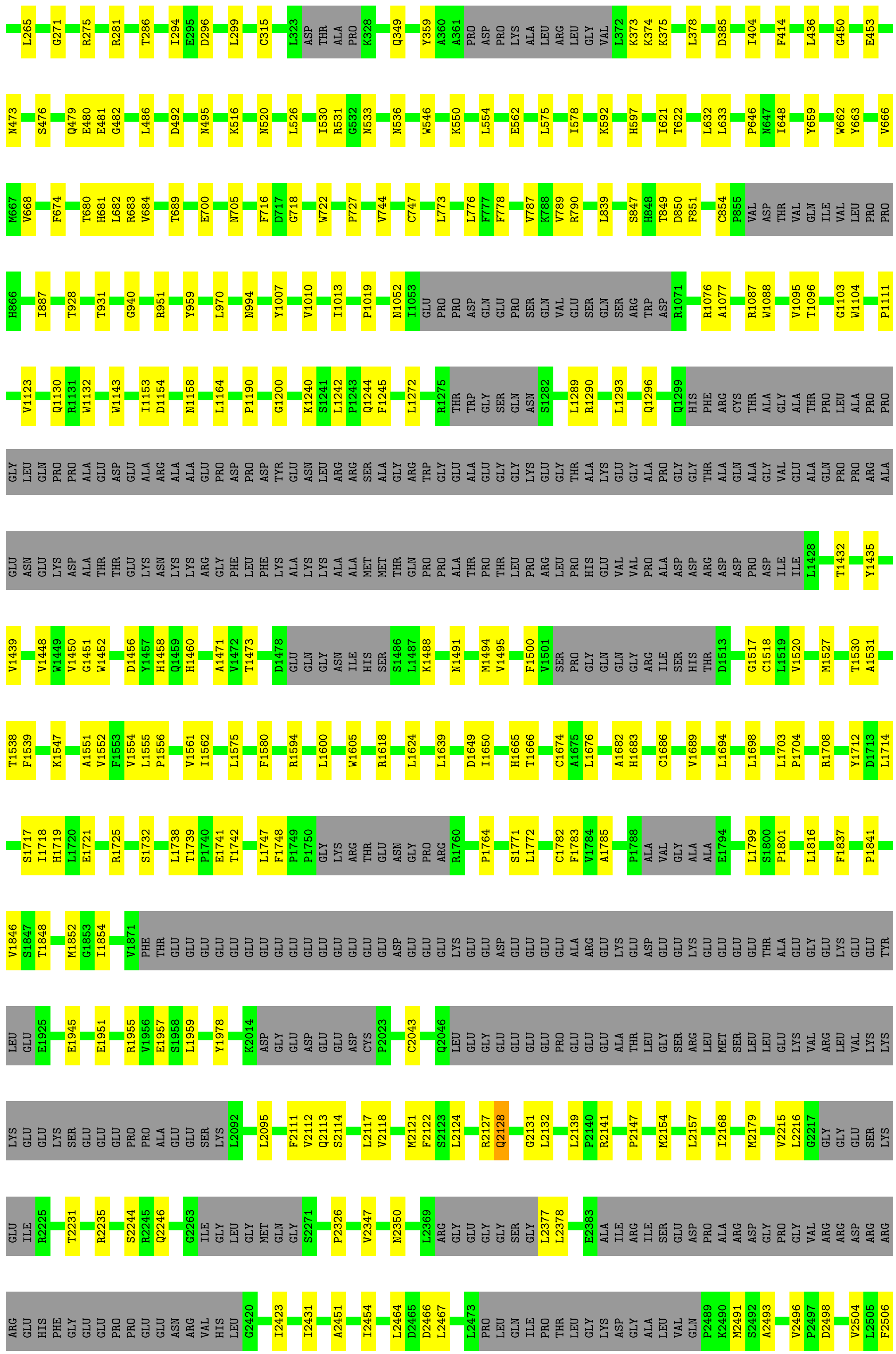
S476 Q479 E480 E481 G482 L486 D492 N495 K516 N520 R531 G532 N533 N536 W546 K550 L554 E562 K592 H597 I621 T622 L632 L633 P646 N647 I648 Y659 W662 Y663 V666 M667 V668 F674 T680 H681 L682
R683 V684 T689 E700 N705 F716 D717 G718 W722 P727 C747 L773 L776 F777 F778 V787 K788 V789 R790 L839 S847 H848 T849 D850 F851 C854 P855 VAL ASP THR VAL GLN ILE VAL LEU PRO PRO H866 I887 T928 T931 G940
R951 Y959 L970 N994 Y1007 S1008 A1009 V1010 I1013 P1019 N1052 I1053 GLU PRO PRO ASP GLN GLU PRO SER GLN SER ARG TRP ASP R1071 R1076 A1077 R1087 W1088 V1095 T1096 G1103 W1104 P1111 V1123 Q1130 R1131 W1132 W1143
I1153 D1154 N1158 L1164 P1190 G1200 K1240 S1241 L1242 P1243 Q1244 F1245 L1272 R1275 THR TRP GLY SER GLN ASN S1282 L1289 R1290 L1293 Q1296 Q1299 HIS PHE ARG CYS THR ALA GLY ALA THR PRO LEU ALA PRO PRO ARG PRO GLY LEU GLN PRO PRO ALA GLU ASP GLU
ALA ARG ALA ALA GLU PRO ASP PRO ASP TYR GLU ASN LEU ARG ARG SER ALA GLY ARG TRP GLY GLU ALA ALA GLU GLY GLY LYS GLU GLY THR ALA LYS GLU GLY ALA PRO GLY GLY THR ALA GLN ALA GLY VAL GLU ALA PRO ARG PRO ARG ALA GLU ASN GLU LYS ASP ALA THR THR GLU
LYS ASN LYS LYS ARG GLY PHE LEU PHE LYS ALA ALA LYS LYS ALA ALA MET MET THR GLN PRO PRO ALA THR PRO THR LEU PRO ARG LEU PRO HIS GLU VAL VAL PRO ALA ASP ASP ARG ASP ASP PRO ASP ILE ILE L1428 T1432 Y1435 V1439 V1448 W1449 V1450 G1451 W1452 D1456
Y1457 H1458 Q1459 H1460 T1473 D1478 GLU GLN GLY ASN ILE HIS SER S1486 L1487 K1488 N1491 M1494 V1495 F1500 V1501 SER PRO GLY GLN GLN GLY ARG ILE SER HIS THR D1513 V1520 M1527 A1531 T1538 K1547 A1551 V1552 F1553 V1554 L1555 P1556 V1561 I1562 L1575
F1580 R1594 L1600 W1605 R1618 L1624 L1639 D1649 I1650 H1665 T1666 C1674 A1675 L1676 A1682 H1683 C1686 V1689 L1694 L1698 L1703 P1704 R1708 Y1712 D1713 L1714 S1717 I1718 H1719 L1720 E1721 R1725 S1732 L1738 T1739 P1740 E1741
L1747 F1748 P1749 P1750 GLY LYS ARG THR GLU ASN GLY PRO ARG R1760 P1764 S1771 L1772 C1782 F1783 V1784 A1785 P1788 ALA VAL GLY ALA ALA E1794 L1799 S1800 P1801 L1816 F1837 P1841 V1846 S1847 T1848 M1852 G1853 I1854 V1871 PHE THR GLU GLU GLU GLU GLU
GLU GLU GLU GLU GLU GLU GLU GLU ASP GLU GLU LYS GLU GLU ALA ARG GLU LYS GLU ASP GLU GLU GLU THR ALA GLU GLY GLU LYS GLU GLU TYR LEU GLU E1925 E1945 E1961 R1955 V1966 E1957 S1958 L1959 Y1978 K2014
ASP GLY GLU ASP GLU GLU ASP CYS P2023 C2043 Q2046 LEU LEU GLY GLU GLU PRO GLU GLU ALA THR LEU GLY SER ARG LEU MET SER LEU LEU GLU LYS VAL ARG LEU VAL LYS LYS LYS GLU GLU SER GLU GLU PRO PRO ALA GLU GLU SER LYS L2092
L2095 F2111 V2112 Q2113 S2114 L2117 V2118 M2121 F2122 S2123 L2124 R2127 Q2128 G2131 L2132 L2139 P2140 R2141 A2142 Y2143 P2147 M2154 L2157 I2168 L2198 V2215 L2216 G2217 GLY GLY GLU SER LYS GLU ILE R2225 T2231 R2235 S2244 R2245 Q2246 G2263 ILE GLY
LEU GLY MET GLN GLY S2271 P2326 V2347 N2350 L2369 ARG GLY GLU GLY GLY SER GLY L2377 L2378 E2383 ALA ILE ARG ILE SER GLU ASP PRO ALA ARG ASP GLY PRO GLY VAL ARG ARG ASP ARG ARG GLU HIS PHE GLY GLU GLU PRO PRO GLU GLU ASN ARG VAL HIS
LEU G2420 I2423 L2443 K2448 A2451 I2454 L2464 D2465 D2466 L2467 L2473 PRO LEU GLN ILE PRO THR LEU GLY LYS ASP GLY ALA LEU VAL GLN P2489 K2490 M2491 S2492 A2493 V2496 P2497 D2498 V2504 L2505 F2506 Y2511 G2512 ILE GLU ASN GLN ASP F2518 A2534 ALA SER

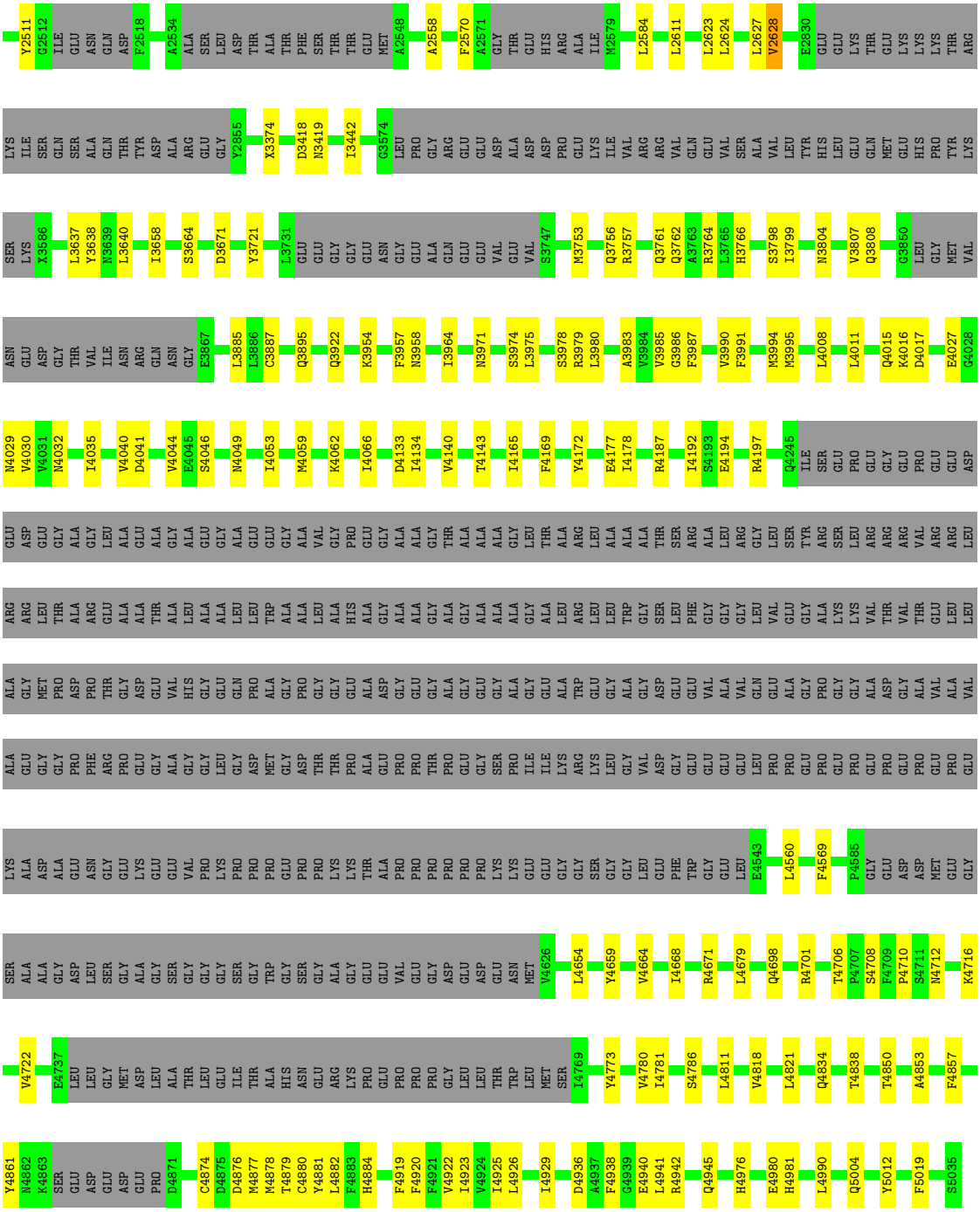


• Molecule 2: Ryanodine Receptor

Chain H:




L265 G271 R275 R281 T286 I294 E295 D296 L299 C315 L323 ASP THR ALA PRO K328 Q349 Y359 A360 A361 PRO ASP PRO LYS ALA LEU ARG LEU GLY VAL L372 K373 K374 K375 L378 D385 I404 F414 L436 G450 E453
N473 S476 Q479 E480 E481 G482 L486 D492 N495 K516 N520 L526 I530 R531 G532 N533 N536 W546 K550 L554 E562 L575 I578 K592 H597 I621 T622 L632 L633 P646 N647 I648 Y659 W662 Y663 V666
M667 V668 F674 T680 H681 L682 R683 V684 T689 E700 N705 F716 D717 G718 W722 P727 V744 C747 L773 L776 F777 F778 V787 K788 V789 R790 L839 S847 H848 T849 D850 F851 C854 P855 VAL ASP THR VAL GLN ILE VAL LEU PRO PRO
H866 I887 T928 T931 G940 R951 Y959 L970 N994 Y1007 V1010 I1013 P1019 N1052 I1053 GLU PRO PRO ASP GLN GLU PRO SER GLN VAL GLU SER GLN SER ARG TRP ASP R1071 R1076 A1077 R1087 W1088 V1095 T1096 G1103 W1104 P1111
V1123 Q1130 R1131 W1132 W1143 I1153 D1154 N1158 L1164 P1190 G1200 K1240 S1241 L1242 P1243 Q1244 F1245 L1272 R1275 THR TRP GLY SER GLN ASN S1282 L1289 R1290 L1293 Q1296 Q1299 HIS PHE ARG CYS THR ALA GLY ALA THR PRO LEU ALA PRO PRO
GLY LEU GLN PRO PRO ALA GLU ASP GLU ALA ARG ALA ALA GLU PRO ASP PRO ASP TYR GLU ASN LEU ARG ARG SER ALA GLY ARG TRP GLY GLU ALA GLU GLY GLY LYS GLU GLY THR ALA LYS GLU GLY ALA PRO GLY GLY THR ALA GLN ALA GLY VAL GLU ALA GLN PRO PRO ARG ALA
GLU ASN GLU LYS ASP ALA THR THR GLU LYS ASN LYS LYS ARG GLY PHE LEU PHE LYS ALA LYS LYS ALA ALA MET MET THR GLN PRO PRO ALA THR PRO THR LEU PRO ARG LEU PRO HIS GLU VAL VAL PRO ALA ASP ASP ARG ASP ASP PRO ASP ILE ILE L1428 T1432 Y1435
V1439 V1448 W1449 V1450 G1451 W1452 D1456 Y1457 H1458 Q1459 H1460 A1471 V1472 T1473 D1478 GLU GLN GLY ASN ILE HIS SER S1486 L1487 K1488 N1491 M1494 V1495 F1500 V1501 SER PRO GLY GLN GLN GLY ARG ILE SER HIS THR D1513 G1517 C1518 L1519 V1520 M1527 T1530 A1531
T1538 F1539 K1547 A1551 V1552 F1553 V1554 L1555 P1556 V1561 I1562 L1575 F1580 R1594 L1600 W1605 R1618 L1624 L1639 D1649 I1650 H1665 T1666 C1674 A1675 L1676 A1682 H1683 C1686 V1689 L1694 L1698 L1703 P1704 R1708 Y1712 D1713 L1714
S1717 I1718 H1719 L1720 E1721 R1725 S1732 L1738 T1739 P1740 E1741 T1742 L1747 F1748 P1749 P1750 GLY LYS ARG THR GLU ASN GLY PRO ARG R1760 P1764 S1771 L1772 C1782 F1783 V1784 A1785 P1788 ALA VAL GLY ALA ALA E1794 L1799 S1800 P1801 L1816 F1837 P1841
V1846 S1847 T1848 M1852 G1853 I1854 V1871 PHE THR GLU GLU GLU GLU GLU GLU GLU GLU GLU GLU GLU GLU GLU GLU GLU ASP GLU GLU GLU LYS GLU GLU ASP GLU GLU GLU GLU ALA ARG GLU LYS GLU ASP GLU GLU LYS GLU GLU GLU GLU THR ALA GLU GLY GLU LYS GLU GLU TYR
LEU GLU E1925 E1945 E1951 R1955 V1956 E1957 S1958 L1959 Y1978 K2014 ASP GLY GLU ASP GLU GLU ASP CYS P2023 C2043 Q2046 LEU GLU GLY GLU GLU GLU GLU PRO GLU GLU GLU ALA THR LEU GLY SER ARG LEU MET SER LEU LEU GLU LYS VAL ARG LEU VAL LYS LYS
LYS GLU GLU LYS SER GLU GLU GLU PRO PRO ALA GLU GLU SER LYS L2092 L2095 F2111 V2112 Q2113 S2114 L2117 V2118 M2121 F2122 S2123 L2124 R2127 Q2128 G2131 L2132 L2139 P2140 R2141 P2147 M2154 L2157 I2168 M2179 V2215 L2216 G2217 GLY GLY GLU SER LYS
GLU ILE R2225 T2231 R2235 S2244 R2245 Q2246 G2263 ILE GLY LEU GLY MET GLN GLY S2271 P2326 V2347 N2350 L2369 ARG GLY GLU GLY GLY SER GLY L2377 L2378 E2383 ALA ILE ARG ILE SER GLU ASP PRO ALA ARG ASP GLY PRO GLY VAL ARG ARG ASP ARG ARG
ARG GLU HIS PHE GLY GLU GLU PRO PRO GLU GLU ASN ARG VAL HIS LEU G2420 I2423 I2431 A2451 I2454 L2464 D2465 D2466 L2467 L2473 PRO LEU GLN ILE PRO THR LEU GLY LYS ASP GLY ALA LEU VAL GLN P2489 K2490 M2491 S2492 A2493 V2496 P2497 D2498 V2504 L2505 F2506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A2558
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L2584
L2611
L2623 L2624
L2627 V2628
E2830 GLU GLU LYS THR GLU LYS LYS LYS THR ARG
LYS ILE SER GLN SER ALA GLN THR TYR ASP ALA ARG GLU GLY Y2855
X3374
D3418 N3419
I3442
G3574 LEU PRO GLY ARG GLU GLU ASP ALA ASP ASP PRO GLU LYS ILE VAL ARG ARG VAL GLN GLU VAL SER ALA VAL LEU TYR HIS LEU GLU GLN MET GLU HIS PRO TYR LYS
SER LYS X3586
L3637 Y3638 N3639 L3640
I3658
S3664
D3671
Y3721
L3731 GLU GLU GLY GLY GLU ASN GLY GLU ALA GLN GLU GLU VAL GLU VAL S3747
M3753
Q3756 R3757
Q3761 Q3762 A3763 R3764 L3765 H3766
S3798 I3799
N3804
V3807 Q3808
G3850 LEU GLY MET VAL
ASN GLU ASP GLY THR VAL ILE ASN ARG GLN ASN GLY E3867
L3885 L3886 C3887
Q3895
Q3922
K3954
F3957 N3958
I3964
N3971
S3974 L3975
S3978 R3979 L3980
A3983 V3984 V3985 G3986 F3987
V3990 F3991
M3994 M3995
L4008
L4011
Q4015 K4016 D4017
E4027 G4028
N4029 V4030 V4031 N4032
I4035
V4040 D4041
V4044 E4045 S4046
N4049
I4053
M4059
K4062
I4066
D4133 I4134
V4140
T4143
I4165
F4169
Y4172
E4177 I4178
R4187
I4192 S4193 E4194
R4197
Q4245 ILE SER GLU PRO GLU GLY GLU PRO GLU ASP
GLU ASP GLU GLY ALA GLY LEU ALA GLU GLY ALA ALA GLU GLY ALA ALA GLY THR ALA ALA ALA GLY LEU THR ALA ARG LEU ALA ALA ALA THR SER ARG ALA LEU ARG GLY LEU SER TYR ARG SER LEU ARG ARG VAL ARG LEU
ARG ARG LEU THR ALA ARG GLU ALA ALA THR ALA ALA LEU LEU TRP ALA ALA LEU ARG LEU LEU TRP LEU ALA ALA ALA GLY ALA ALA GLY ALA ALA GLY GLY ALA ALA ALA GLY LEU LEU TRP GLY SER LEU PHE GLY GLY LEU VAL GLU GLY ALA LYS LYS VAL THR VAL THR GLU LEU LEU
ALA GLY MET PRO ASP PRO THR GLY ASP GLU VAL HIS GLY GLU GLN PRO ALA GLY PRO GLY GLY GLU GLY ALA ALA GLY GLU ALA ALA TRP GLU GLY GLY ALA GLY ASP GLU GLU VAL ALA VAL GLN GLU ALA GLY PRO GLY GLY ALA ASP GLY ALA VAL ALA VAL
ALA GLU GLY PRO PHE ARG PRO GLU GLY LEU GLY ASP MET GLY ASP THR THR PRO ALA GLU PRO PRO THR PRO GLU GLY SER PRO ILE ILE LYS ARG LYS LEU GLY VAL ASP GLY GLU GLU GLU LEU PRO PRO GLU PRO GLU PRO GLU PRO GLU GLU PRO GLU PRO GLU GLU GLU
LYS ALA ASP ALA GLU GLY GLU VAL PRO LYS GLU GLU VAL PRO PRO PRO PRO PRO LYS LYS GLU GLU GLY SER GLY GLY LEU GLU GLU PHE TRP GLY GLU LEU E4543 L4560 F4569 P4585 GLY GLU ASP ASP MET GLU GLY
SER ALA ALA GLY ASP LEU SER GLY ALA GLY GLU SER GLY GLY GLY ASP GLU ASN MET V4626 L4654 Y4659 V4664 I4668 R4671 I4679 Q4698 R4701 T4706 P4707 S4708 F4709 P4710 S4711 N4712 K4716
V4722 E4737 LEU LEU GLY MET ASP LEU ALA THR LEU GLU ILE THR ALA HIS ASN GLU ARG LYS PRO GLU PRO PRO PRO GLY LEU LEU THR TRP LEU MET SER I4769 Y4773 V4780 I4781 S4786 L4811 V4818 L4821 Q4834 T4838 T4850 A4853 F4857
Y4861 N4862 K4863 SER GLU ASP GLU ASP GLU PRO D4871 C4874 D4875 D4876 M4877 M4878 T4879 C4880 Y4881 L4882 F4883 H4884 F4919 F4920 F4921 V4922 I4923 V4924 I4925 L4926 I4929 D4936 A4937 F4938 G4939 E4940 L4941 R4942 Q4945 H4976 E4980 H4981 L4990 Q5004 Y5012 F5019 S5035

4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C4	Depositor
Number of particles used	52289	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	NONE	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	30	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	FEI FALCON III (4k x 4k)	Depositor

5 Model quality

5.1 Standard geometry

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

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$\|Z\|$ >5	RMSZ	#$\|Z\|$ >5
1	A	0.28	0/746	0.56	1/1019 (0.1%)
1	C	0.28	0/746	0.56	1/1019 (0.1%)
1	E	0.28	0/746	0.56	1/1019 (0.1%)
1	G	0.28	0/746	0.56	1/1019 (0.1%)
2	B	0.24	0/24464	0.41	1/33485 (0.0%)
2	D	0.24	0/24464	0.41	1/33485 (0.0%)
2	F	0.24	0/24464	0.41	1/33485 (0.0%)
2	H	0.24	0/24464	0.41	1/33485 (0.0%)
All	All	0.25	0/100840	0.42	8/138016 (0.0%)

There are no bond length outliers.

All (8) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	E	31	GLN	CA-CB-CG	5.80	126.15	113.40
1	A	31	GLN	CA-CB-CG	5.78	126.10	113.40
1	C	31	GLN	CA-CB-CG	5.78	126.11	113.40
1	G	31	GLN	CA-CB-CG	5.77	126.09	113.40
2	H	1554	VAL	C-N-CA	5.62	135.74	121.70
2	D	1554	VAL	C-N-CA	5.59	135.67	121.70
2	F	1554	VAL	C-N-CA	5.59	135.67	121.70
2	B	1554	VAL	C-N-CA	5.58	135.65	121.70

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	730	0	674	14	0
1	C	730	0	674	16	0
1	E	730	0	674	16	0
1	G	730	0	674	15	0
2	B	25577	0	21686	288	0
2	D	25577	0	21686	288	0
2	F	25577	0	21686	279	0
2	H	25577	0	21686	286	0
3	B	1	0	0	0	0
3	D	1	0	0	0	0
3	F	1	0	0	0	0
3	H	1	0	0	0	0
All	All	105232	0	89440	1180	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 6.

All (1180) 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)
2:F:1561:VAL:HG12	2:F:1562:ILE:HG12	1.55	0.88
2:H:1561:VAL:HG12	2:H:1562:ILE:HG12	1.55	0.88
2:D:1561:VAL:HG12	2:D:1562:ILE:HG12	1.55	0.88
2:B:1561:VAL:HG12	2:B:1562:ILE:HG12	1.55	0.86
2:H:252:VAL:HA	2:H:255:HIS:HD2	1.45	0.81
2:F:252:VAL:HA	2:F:255:HIS:HD2	1.45	0.80
2:B:252:VAL:HA	2:B:255:HIS:HD2	1.45	0.79
2:D:1452:TRP:HE1	2:D:1518:CYS:HG	1.30	0.79
2:D:252:VAL:HA	2:D:255:HIS:HD2	1.45	0.79
2:H:2128:GLN:HA	2:H:2128:GLN:HE21	1.50	0.77
2:B:2128:GLN:HE21	2:B:2128:GLN:HA	1.50	0.76
2:F:2128:GLN:HE21	2:F:2128:GLN:HA	1.50	0.75
2:D:2128:GLN:HE21	2:D:2128:GLN:HA	1.50	0.74
2:H:3991:PHE:HA	2:H:3994:MET:HG2	1.70	0.74
2:B:3991:PHE:HA	2:B:3994:MET:HG2	1.70	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:4706:THR:HG21	2:B:4773:TYR:HB2	1.70	0.74
2:D:4706:THR:HG21	2:D:4773:TYR:HB2	1.70	0.74
2:D:3991:PHE:HA	2:D:3994:MET:HG2	1.70	0.74
2:F:3991:PHE:HA	2:F:3994:MET:HG2	1.70	0.74
2:H:1452:TRP:HE1	2:H:1518:CYS:HG	1.35	0.74
2:F:4706:THR:HG21	2:F:4773:TYR:HB2	1.70	0.73
2:H:4706:THR:HG21	2:H:4773:TYR:HB2	1.70	0.73
1:A:24:VAL:HG13	1:A:102:GLU:H	1.54	0.73
1:C:24:VAL:HG13	1:C:102:GLU:H	1.54	0.73
2:D:252:VAL:HA	2:D:255:HIS:CD2	2.24	0.73
1:E:24:VAL:HG13	1:E:102:GLU:H	1.54	0.73
2:B:252:VAL:HA	2:B:255:HIS:CD2	2.24	0.73
2:F:252:VAL:HA	2:F:255:HIS:CD2	2.24	0.73
1:G:24:VAL:HG13	1:G:102:GLU:H	1.54	0.72
2:B:790:ARG:HD2	2:B:1624:LEU:HB3	1.72	0.72
2:D:790:ARG:HD2	2:D:1624:LEU:HB3	1.72	0.72
2:H:252:VAL:HA	2:H:255:HIS:CD2	2.24	0.71
2:F:790:ARG:HD2	2:F:1624:LEU:HB3	1.72	0.71
2:F:161:GLU:HG2	2:H:3979:ARG:NH2	2.06	0.71
2:B:4940:GLU:OE2	2:D:4942:ARG:NH1	2.24	0.71
2:B:4942:ARG:NH1	2:H:4940:GLU:OE2	2.24	0.71
2:F:4940:GLU:OE2	2:H:4942:ARG:NH1	2.24	0.71
2:B:161:GLU:HG2	2:D:3979:ARG:NH2	2.06	0.71
2:D:161:GLU:HG2	2:F:3979:ARG:NH2	2.06	0.71
2:D:4940:GLU:OE2	2:F:4942:ARG:NH1	2.24	0.71
1:A:29:MET:HG2	1:A:35:LYS:HB3	1.73	0.70
2:H:790:ARG:HD2	2:H:1624:LEU:HB3	1.72	0.70
1:G:29:MET:HG2	1:G:35:LYS:HB3	1.73	0.70
1:E:29:MET:HG2	1:E:35:LYS:HB3	1.73	0.70
2:F:1945:GLU:OE2	2:F:2127:ARG:NH2	2.25	0.70
1:C:29:MET:HG2	1:C:35:LYS:HB3	1.73	0.70
2:H:1945:GLU:OE2	2:H:2127:ARG:NH2	2.25	0.70
1:G:30:LEU:HD23	1:G:32:ASN:H	1.57	0.70
2:B:1452:TRP:HE1	2:B:1518:CYS:HG	1.38	0.69
2:B:1945:GLU:OE2	2:B:2127:ARG:NH2	2.25	0.69
2:B:3979:ARG:NH2	2:H:161:GLU:HG2	2.06	0.69
2:D:1945:GLU:OE2	2:D:2127:ARG:NH2	2.25	0.69
2:B:1555:LEU:HD12	2:B:1556:PRO:HD2	1.75	0.69
2:B:4919:PHE:HA	2:B:4923:ILE:HD13	1.75	0.69
2:H:4919:PHE:HA	2:H:4923:ILE:HD13	1.75	0.69
1:A:30:LEU:HD23	1:A:32:ASN:H	1.57	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:1555:LEU:HD12	2:D:1556:PRO:HD2	1.75	0.68
2:D:663:TYR:HD1	2:D:747:CYS:HB2	1.58	0.68
2:B:663:TYR:HD1	2:B:747:CYS:HB2	1.58	0.68
2:D:4919:PHE:HA	2:D:4923:ILE:HD13	1.75	0.68
2:F:1555:LEU:HD12	2:F:1556:PRO:HD2	1.75	0.68
1:C:30:LEU:HD23	1:C:32:ASN:H	1.57	0.68
2:D:850:ASP:OD1	2:D:851:PHE:N	2.24	0.67
2:F:663:TYR:HD1	2:F:747:CYS:HB2	1.58	0.67
2:F:4919:PHE:HA	2:F:4923:ILE:HD13	1.75	0.67
1:E:30:LEU:HD23	1:E:32:ASN:H	1.57	0.67
2:H:663:TYR:HD1	2:H:747:CYS:HB2	1.58	0.67
2:H:1555:LEU:HD12	2:H:1556:PRO:HD2	1.75	0.67
2:B:168:ASP:HB3	2:B:199:LEU:HD11	1.77	0.67
2:F:168:ASP:HB3	2:F:199:LEU:HD11	1.77	0.67
2:D:168:ASP:HB3	2:D:199:LEU:HD11	1.77	0.66
2:F:103:TYR:CD1	2:F:161:GLU:HB2	2.31	0.66
2:D:103:TYR:CD1	2:D:161:GLU:HB2	2.31	0.66
2:H:168:ASP:HB3	2:H:199:LEU:HD11	1.77	0.66
2:H:4177:GLU:OE2	2:H:4981:HIS:NE2	2.29	0.66
2:D:1816:LEU:HD22	2:D:1846:VAL:HG21	1.78	0.66
2:F:850:ASP:OD1	2:F:851:PHE:N	2.24	0.66
2:B:4177:GLU:OE2	2:B:4981:HIS:NE2	2.29	0.65
2:H:103:TYR:CD1	2:H:161:GLU:HB2	2.31	0.65
2:B:103:TYR:CD1	2:B:161:GLU:HB2	2.31	0.65
2:B:887:ILE:HG12	2:B:959:TYR:HA	1.79	0.65
2:D:109:LEU:HD12	2:D:118:LEU:HD23	1.79	0.65
2:D:887:ILE:HG12	2:D:959:TYR:HA	1.79	0.65
2:F:4853:ALA:HA	2:F:4857:PHE:HD2	1.62	0.65
2:H:257:ARG:NH2	2:H:481:GLU:HG3	2.12	0.65
2:B:1816:LEU:HD22	2:B:1846:VAL:HG21	1.78	0.65
2:H:1739:THR:HG22	2:H:1741:GLU:H	1.62	0.65
2:B:257:ARG:NH2	2:B:481:GLU:HG3	2.12	0.65
2:B:1739:THR:HG22	2:B:1741:GLU:H	1.62	0.65
2:H:1816:LEU:HD22	2:H:1846:VAL:HG21	1.78	0.65
2:B:109:LEU:HD12	2:B:118:LEU:HD23	1.79	0.65
2:D:257:ARG:NH2	2:D:481:GLU:HG3	2.12	0.65
2:D:4668:ILE:HG23	2:D:4712:ASN:HD21	1.62	0.65
2:F:257:ARG:NH2	2:F:481:GLU:HG3	2.12	0.65
2:D:1739:THR:HG22	2:D:1741:GLU:H	1.62	0.65
2:F:4177:GLU:OE2	2:F:4981:HIS:NE2	2.29	0.64
2:B:4668:ILE:HG23	2:B:4712:ASN:HD21	1.62	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:1739:THR:HG22	2:F:1741:GLU:H	1.62	0.64
2:B:1473:THR:HG22	2:B:1488:LYS:HD3	1.80	0.64
2:D:4177:GLU:OE2	2:D:4981:HIS:NE2	2.29	0.64
2:F:1473:THR:HG22	2:F:1488:LYS:HD3	1.80	0.64
2:H:887:ILE:HG12	2:H:959:TYR:HA	1.79	0.64
2:D:4853:ALA:HA	2:D:4857:PHE:HD2	1.62	0.64
2:H:1473:THR:HG22	2:H:1488:LYS:HD3	1.80	0.64
2:H:4853:ALA:HA	2:H:4857:PHE:HD2	1.62	0.64
2:F:887:ILE:HG12	2:F:959:TYR:HA	1.79	0.64
2:F:1816:LEU:HD22	2:F:1846:VAL:HG21	1.78	0.64
2:H:109:LEU:HD12	2:H:118:LEU:HD23	1.79	0.64
2:D:1473:THR:HG22	2:D:1488:LYS:HD3	1.80	0.64
2:B:850:ASP:OD1	2:B:851:PHE:N	2.24	0.63
2:D:2128:GLN:HE21	2:D:2128:GLN:CA	2.11	0.63
2:F:109:LEU:HD12	2:F:118:LEU:HD23	1.79	0.63
2:B:4560:LEU:HD21	2:B:4654:LEU:HB2	1.81	0.63
2:F:2128:GLN:HE21	2:F:2128:GLN:CA	2.11	0.63
2:F:4668:ILE:HG23	2:F:4712:ASN:HD21	1.62	0.63
2:D:3895:GLN:HB3	2:D:3971:ASN:HD21	1.64	0.63
2:H:4560:LEU:HD21	2:H:4654:LEU:HB2	1.81	0.63
2:H:2128:GLN:HE21	2:H:2128:GLN:CA	2.11	0.63
2:H:4668:ILE:HG23	2:H:4712:ASN:HD21	1.62	0.63
2:F:4560:LEU:HD21	2:F:4654:LEU:HB2	1.81	0.63
2:B:3895:GLN:HB3	2:B:3971:ASN:HD21	1.64	0.63
2:B:4853:ALA:HA	2:B:4857:PHE:HD2	1.62	0.63
2:B:2128:GLN:HE21	2:B:2128:GLN:CA	2.11	0.62
2:D:4560:LEU:HD21	2:D:4654:LEU:HB2	1.81	0.62
2:H:1747:LEU:HG	2:H:1748:PHE:HD1	1.64	0.62
2:B:633:LEU:HD23	2:B:1639:LEU:HD23	1.82	0.62
2:F:3895:GLN:HB3	2:F:3971:ASN:HD21	1.64	0.62
2:F:1738:LEU:HB2	2:F:2147:PRO:HD3	1.81	0.62
2:F:1747:LEU:HG	2:F:1748:PHE:HD1	1.65	0.62
2:D:1738:LEU:HB2	2:D:2147:PRO:HD3	1.82	0.62
2:B:1747:LEU:HG	2:B:1748:PHE:HD1	1.64	0.62
2:D:1747:LEU:HG	2:D:1748:PHE:HD1	1.64	0.62
2:H:850:ASP:OD1	2:H:851:PHE:N	2.24	0.62
2:H:3895:GLN:HB3	2:H:3971:ASN:HD21	1.64	0.62
2:D:495:ASN:HD22	2:D:550:LYS:HE3	1.64	0.62
2:F:1296:GLN:HG2	2:F:1547:LYS:HG2	1.82	0.62
2:F:495:ASN:HD22	2:F:550:LYS:HE3	1.64	0.61
2:F:633:LEU:HD23	2:F:1639:LEU:HD23	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:1296:GLN:HG2	2:H:1547:LYS:HG2	1.82	0.61
2:H:1738:LEU:HB2	2:H:2147:PRO:HD3	1.81	0.61
2:B:1296:GLN:HG2	2:B:1547:LYS:HG2	1.82	0.61
2:F:404:ILE:HD13	2:F:481:GLU:HG2	1.82	0.61
2:H:495:ASN:HD22	2:H:550:LYS:HE3	1.64	0.61
2:B:1738:LEU:HB2	2:B:2147:PRO:HD3	1.82	0.61
2:H:633:LEU:HD23	2:H:1639:LEU:HD23	1.82	0.61
2:B:404:ILE:HD13	2:B:481:GLU:HG2	1.82	0.60
2:D:4706:THR:HG22	2:D:4708:SER:H	1.66	0.60
2:B:495:ASN:HD22	2:B:550:LYS:HE3	1.64	0.60
2:D:404:ILE:HD13	2:D:481:GLU:HG2	1.82	0.60
2:D:1296:GLN:HG2	2:D:1547:LYS:HG2	1.82	0.60
2:B:2454:ILE:HD12	2:B:2454:ILE:H	1.66	0.60
2:B:3671:ASP:OD1	2:B:3764:ARG:NH1	2.35	0.60
2:F:4706:THR:HG22	2:F:4708:SER:H	1.66	0.60
2:F:161:GLU:HG2	2:H:3979:ARG:HH22	1.67	0.60
2:F:1076:ARG:NH1	2:F:1077:ALA:O	2.35	0.60
2:H:404:ILE:HD13	2:H:481:GLU:HG2	1.82	0.60
2:H:2454:ILE:H	2:H:2454:ILE:HD12	1.66	0.60
2:H:4706:THR:HG22	2:H:4708:SER:H	1.66	0.60
2:B:1076:ARG:NH1	2:B:1077:ALA:O	2.35	0.60
2:H:4671:ARG:HH11	2:H:4780:VAL:HG13	1.67	0.60
2:B:1708:ARG:NH1	2:B:1837:PHE:O	2.35	0.60
2:D:633:LEU:HD23	2:D:1639:LEU:HD23	1.82	0.60
2:H:1708:ARG:NH1	2:H:1837:PHE:O	2.35	0.60
2:B:4671:ARG:HH11	2:B:4780:VAL:HG13	1.67	0.59
2:B:4706:THR:HG22	2:B:4708:SER:H	1.66	0.59
2:D:23:GLN:OE1	2:D:203:ASN:ND2	2.35	0.59
2:D:4671:ARG:HH11	2:D:4780:VAL:HG13	1.67	0.59
2:B:3985:VAL:HG23	2:B:4046:SER:HB3	1.85	0.59
2:H:3671:ASP:OD1	2:H:3764:ARG:NH1	2.35	0.59
2:F:244:LEU:HD23	2:F:375:LYS:HE3	1.85	0.59
2:D:2454:ILE:HD12	2:D:2454:ILE:H	1.66	0.59
1:E:29:MET:HA	1:E:35:LYS:HA	1.84	0.59
2:D:1076:ARG:NH1	2:D:1077:ALA:O	2.35	0.59
2:H:244:LEU:HD23	2:H:375:LYS:HE3	1.85	0.59
2:B:23:GLN:OE1	2:B:203:ASN:ND2	2.35	0.59
2:D:3671:ASP:OD1	2:D:3764:ARG:NH1	2.35	0.59
2:B:161:GLU:HG2	2:D:3979:ARG:HH22	1.67	0.59
2:B:244:LEU:HD23	2:B:375:LYS:HE3	1.85	0.59
2:D:940:GLY:O	2:D:1052:ASN:ND2	2.36	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:23:GLN:OE1	2:H:203:ASN:ND2	2.35	0.59
2:H:1076:ARG:NH1	2:H:1077:ALA:O	2.35	0.59
2:D:3985:VAL:HG23	2:D:4046:SER:HB3	1.85	0.59
2:F:2454:ILE:HD12	2:F:2454:ILE:H	1.66	0.59
2:F:3671:ASP:OD1	2:F:3764:ARG:NH1	2.35	0.59
2:H:359:TYR:HE1	2:H:385:ASP:HB3	1.68	0.59
2:D:359:TYR:HE1	2:D:385:ASP:HB3	1.68	0.59
2:F:359:TYR:HE1	2:F:385:ASP:HB3	1.68	0.58
2:F:1708:ARG:NH1	2:F:1837:PHE:O	2.35	0.58
1:A:29:MET:HA	1:A:35:LYS:HA	1.84	0.58
2:D:1708:ARG:NH1	2:D:1837:PHE:O	2.35	0.58
2:H:940:GLY:O	2:H:1052:ASN:ND2	2.36	0.58
2:D:244:LEU:HD23	2:D:375:LYS:HE3	1.85	0.58
2:F:4671:ARG:HH11	2:F:4780:VAL:HG13	1.67	0.58
1:G:29:MET:HA	1:G:35:LYS:HA	1.84	0.58
2:B:3979:ARG:HH22	2:H:161:GLU:HG2	1.67	0.58
1:C:29:MET:HA	1:C:35:LYS:HA	1.84	0.58
2:F:23:GLN:OE1	2:F:203:ASN:ND2	2.35	0.58
2:F:940:GLY:O	2:F:1052:ASN:ND2	2.36	0.58
2:F:3985:VAL:HG23	2:F:4046:SER:HB3	1.85	0.58
2:B:17:ASP:N	2:B:69:LEU:O	2.32	0.58
2:H:102:LEU:HB2	2:H:105:HIS:HD2	1.69	0.58
2:H:1698:LEU:HA	2:H:1712:TYR:HE1	1.69	0.58
2:B:102:LEU:HB2	2:B:105:HIS:HD2	1.69	0.58
2:D:161:GLU:HG2	2:F:3979:ARG:HH22	1.67	0.58
2:B:940:GLY:O	2:B:1052:ASN:ND2	2.36	0.58
2:B:1698:LEU:HA	2:B:1712:TYR:HE1	1.69	0.58
2:F:1451:GLY:HA3	2:F:1494:MET:HG2	1.85	0.58
2:B:359:TYR:HE1	2:B:385:ASP:HB3	1.68	0.57
2:F:102:LEU:HB2	2:F:105:HIS:HD2	1.69	0.57
2:B:404:ILE:HG21	2:B:481:GLU:HG2	1.86	0.57
2:D:1088:TRP:H	2:D:1153:ILE:HG22	1.69	0.57
2:F:3887:CYS:HB3	2:F:3895:GLN:HE21	1.69	0.57
2:H:1451:GLY:HA3	2:H:1494:MET:HG2	1.85	0.57
2:B:1451:GLY:HA3	2:B:1494:MET:HG2	1.85	0.57
2:H:1088:TRP:H	2:H:1153:ILE:HG22	1.69	0.57
2:D:102:LEU:HB2	2:D:105:HIS:HD2	1.69	0.57
2:D:1698:LEU:HA	2:D:1712:TYR:HE1	1.69	0.57
2:F:1088:TRP:H	2:F:1153:ILE:HG22	1.69	0.57
2:F:1698:LEU:HA	2:F:1712:TYR:HE1	1.69	0.57
2:F:4818:VAL:HB	2:F:4821:LEU:HD23	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:404:ILE:HG21	2:D:481:GLU:HG2	1.86	0.57
2:D:4818:VAL:HB	2:D:4821:LEU:HD23	1.86	0.57
2:B:2112:VAL:HG21	2:B:2118:VAL:HG22	1.87	0.57
2:H:404:ILE:HG21	2:H:481:GLU:HG2	1.86	0.57
2:D:1451:GLY:HA3	2:D:1494:MET:HG2	1.85	0.57
2:H:3985:VAL:HG23	2:H:4046:SER:HB3	1.85	0.57
2:B:1088:TRP:H	2:B:1153:ILE:HG22	1.69	0.57
2:B:3887:CYS:HB3	2:B:3895:GLN:HE21	1.69	0.57
2:B:4922:VAL:HG23	2:B:4923:ILE:HD12	1.86	0.57
2:F:215:THR:OG1	2:F:271:GLY:O	2.23	0.57
2:D:3887:CYS:HB3	2:D:3895:GLN:HE21	1.69	0.56
2:B:479:GLN:HB3	2:B:536:ASN:HD21	1.70	0.56
2:B:215:THR:OG1	2:B:271:GLY:O	2.23	0.56
2:D:2112:VAL:HG21	2:D:2118:VAL:HG22	1.87	0.56
2:H:479:GLN:HB3	2:H:536:ASN:HD21	1.70	0.56
2:D:215:THR:OG1	2:D:271:GLY:O	2.23	0.56
2:D:4922:VAL:HG23	2:D:4923:ILE:HD12	1.86	0.56
2:F:404:ILE:HG21	2:F:481:GLU:HG2	1.86	0.56
2:H:215:THR:OG1	2:H:271:GLY:O	2.23	0.56
2:H:2112:VAL:HG21	2:H:2118:VAL:HG22	1.87	0.56
2:H:473:ASN:O	2:H:476:SER:OG	2.24	0.56
2:H:3887:CYS:HB3	2:H:3895:GLN:HE21	1.69	0.56
2:H:4922:VAL:HG23	2:H:4923:ILE:HD12	1.86	0.56
2:F:216:GLY:HA2	2:F:262:LEU:HD11	1.88	0.56
2:B:4818:VAL:HB	2:B:4821:LEU:HD23	1.86	0.56
2:D:2124:LEU:O	2:D:2128:GLN:HG2	2.06	0.56
2:F:4922:VAL:HG23	2:F:4923:ILE:HD12	1.87	0.56
2:H:2124:LEU:O	2:H:2128:GLN:HG2	2.06	0.56
2:D:473:ASN:O	2:D:476:SER:OG	2.24	0.56
2:H:4818:VAL:HB	2:H:4821:LEU:HD23	1.86	0.56
2:F:2112:VAL:HG21	2:F:2118:VAL:HG22	1.87	0.55
2:H:854:CYS:O	2:H:994:ASN:ND2	2.39	0.55
2:B:1771:SER:OG	2:B:1957:GLU:OE2	2.25	0.55
2:D:854:CYS:O	2:D:994:ASN:ND2	2.39	0.55
2:F:2624:LEU:HA	2:F:2627:LEU:HB2	1.89	0.55
2:D:479:GLN:HB3	2:D:536:ASN:HD21	1.70	0.55
2:F:2124:LEU:O	2:F:2128:GLN:HG2	2.06	0.55
2:H:216:GLY:HA2	2:H:262:LEU:HD11	1.88	0.55
2:B:2624:LEU:HA	2:B:2627:LEU:HB2	1.89	0.55
2:D:414:PHE:HE1	2:D:436:LEU:HD12	1.72	0.55
2:D:1103:GLY:HA3	2:D:1123:VAL:HA	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:1103:GLY:HA3	2:H:1123:VAL:HA	1.89	0.55
2:B:216:GLY:HA2	2:B:262:LEU:HD11	1.88	0.55
2:F:1103:GLY:HA3	2:F:1123:VAL:HA	1.89	0.55
2:B:1103:GLY:HA3	2:B:1123:VAL:HA	1.89	0.55
2:B:2124:LEU:O	2:B:2128:GLN:HG2	2.06	0.55
2:F:17:ASP:N	2:F:69:LEU:O	2.32	0.55
2:D:2624:LEU:HA	2:D:2627:LEU:HB2	1.89	0.54
2:F:414:PHE:HE1	2:F:436:LEU:HD12	1.72	0.54
2:H:414:PHE:HE1	2:H:436:LEU:HD12	1.72	0.54
2:B:854:CYS:O	2:B:994:ASN:ND2	2.39	0.54
2:B:1154:ASP:O	2:B:1158:ASN:N	2.40	0.54
2:D:17:ASP:N	2:D:69:LEU:O	2.32	0.54
2:D:216:GLY:HA2	2:D:262:LEU:HD11	1.88	0.54
2:D:1771:SER:OG	2:D:1957:GLU:OE2	2.25	0.54
2:D:2326:PRO:HG3	2:D:2423:ILE:HD13	1.90	0.54
2:B:414:PHE:HE1	2:B:436:LEU:HD12	1.72	0.54
2:F:479:GLN:HB3	2:F:536:ASN:HD21	1.70	0.54
2:F:854:CYS:O	2:F:994:ASN:ND2	2.39	0.54
2:F:4664:VAL:HG13	2:F:4781:ILE:HD11	1.89	0.54
2:H:1154:ASP:O	2:H:1158:ASN:N	2.40	0.54
2:H:2624:LEU:HA	2:H:2627:LEU:HB2	1.89	0.54
2:B:473:ASN:O	2:B:476:SER:OG	2.24	0.54
2:D:299:LEU:HD12	2:D:378:LEU:HG	1.90	0.54
2:D:1154:ASP:O	2:D:1158:ASN:N	2.40	0.54
2:D:4861:TYR:HB2	2:D:4874:CYS:HB3	1.90	0.54
2:F:1154:ASP:O	2:F:1158:ASN:N	2.40	0.54
2:F:1771:SER:OG	2:F:1957:GLU:OE2	2.25	0.54
2:D:4664:VAL:HG13	2:D:4781:ILE:HD11	1.89	0.54
2:F:3975:LEU:HD22	2:F:3980:LEU:HD22	1.90	0.54
2:H:17:ASP:N	2:H:69:LEU:O	2.32	0.54
2:H:2244:SER:OG	2:H:2246:GLN:OE1	2.26	0.54
2:B:385:ASP:OD1	2:H:156:GLN:NE2	2.34	0.54
2:B:2326:PRO:HG3	2:B:2423:ILE:HD13	1.90	0.54
2:H:3975:LEU:HD22	2:H:3980:LEU:HD22	1.90	0.54
2:D:257:ARG:HH22	2:D:481:GLU:HG3	1.73	0.53
2:H:4664:VAL:HG13	2:H:4781:ILE:HD11	1.89	0.53
2:B:257:ARG:HH22	2:B:481:GLU:HG3	1.73	0.53
2:B:2244:SER:OG	2:B:2246:GLN:OE1	2.26	0.53
2:H:103:TYR:HD1	2:H:161:GLU:HB2	1.74	0.53
2:D:4976:HIS:HA	2:D:4980:GLU:HB3	1.91	0.53
2:F:2326:PRO:HG3	2:F:2423:ILE:HD13	1.89	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:4861:TYR:HB2	2:F:4874:CYS:HB3	1.90	0.53
2:H:1771:SER:OG	2:H:1957:GLU:OE2	2.25	0.53
2:B:299:LEU:HD12	2:B:378:LEU:HG	1.90	0.53
2:F:299:LEU:HD12	2:F:378:LEU:HG	1.90	0.53
2:F:2244:SER:OG	2:F:2246:GLN:OE1	2.26	0.53
2:F:257:ARG:HH22	2:F:481:GLU:HG3	1.73	0.53
2:F:492:ASP:OD1	2:F:546:TRP:NE1	2.42	0.53
2:B:479:GLN:NE2	2:B:480:GLU:HG3	2.24	0.53
2:B:4861:TYR:HB2	2:B:4874:CYS:HB3	1.90	0.53
2:D:492:ASP:OD1	2:D:546:TRP:NE1	2.42	0.53
2:F:4976:HIS:HA	2:F:4980:GLU:HB3	1.91	0.53
2:H:479:GLN:NE2	2:H:480:GLU:HG3	2.24	0.53
2:H:4861:TYR:HB2	2:H:4874:CYS:HB3	1.90	0.53
2:D:2244:SER:OG	2:D:2246:GLN:OE1	2.26	0.53
2:H:492:ASP:OD1	2:H:546:TRP:NE1	2.42	0.53
2:B:492:ASP:OD1	2:B:546:TRP:NE1	2.42	0.53
2:B:4664:VAL:HG13	2:B:4781:ILE:HD11	1.89	0.53
2:D:479:GLN:NE2	2:D:480:GLU:HG3	2.24	0.53
2:H:102:LEU:HB2	2:H:105:HIS:CD2	2.44	0.53
2:H:3808:GLN:NE2	2:H:3885:LEU:O	2.42	0.53
2:B:3954:LYS:O	2:B:3958:ASN:ND2	2.42	0.53
2:B:4976:HIS:HA	2:B:4980:GLU:HB3	1.91	0.53
2:H:299:LEU:HD12	2:H:378:LEU:HG	1.90	0.53
2:B:103:TYR:HD1	2:B:161:GLU:HB2	1.74	0.52
2:B:255:HIS:CE1	2:B:480:GLU:OE1	2.62	0.52
2:D:255:HIS:CE1	2:D:480:GLU:OE1	2.63	0.52
2:D:3808:GLN:NE2	2:D:3885:LEU:O	2.42	0.52
2:F:479:GLN:NE2	2:F:480:GLU:HG3	2.24	0.52
2:F:3983:ALA:O	2:F:3987:PHE:HB2	2.10	0.52
2:H:2326:PRO:HG3	2:H:2423:ILE:HD13	1.90	0.52
2:D:2584:LEU:HB3	2:D:2623:LEU:HD22	1.91	0.52
2:F:2584:LEU:HB3	2:F:2623:LEU:HD22	1.92	0.52
2:B:102:LEU:HB2	2:B:105:HIS:CD2	2.44	0.52
2:H:257:ARG:HH22	2:H:481:GLU:HG3	1.73	0.52
2:B:3808:GLN:NE2	2:B:3885:LEU:O	2.42	0.52
2:B:3983:ALA:O	2:B:3987:PHE:HB2	2.10	0.52
2:D:3975:LEU:HD22	2:D:3980:LEU:HD22	1.90	0.52
2:F:102:LEU:HB2	2:F:105:HIS:CD2	2.44	0.52
2:H:4976:HIS:HA	2:H:4980:GLU:HB3	1.91	0.52
2:H:2624:LEU:HA	2:H:2627:LEU:HD12	1.92	0.52
2:B:3975:LEU:HD22	2:B:3980:LEU:HD22	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:1703:LEU:HD12	2:D:1704:PRO:HD2	1.92	0.52
1:E:36:PHE:H	1:E:36:PHE:HD1	1.58	0.52
2:H:255:HIS:CE1	2:H:480:GLU:OE1	2.62	0.52
2:D:1719:HIS:CD2	2:D:1801:PRO:HB2	2.45	0.52
1:E:62:GLY:O	1:E:66:MET:HG3	2.10	0.52
2:F:1719:HIS:CD2	2:F:1801:PRO:HB2	2.45	0.52
2:D:3983:ALA:O	2:D:3987:PHE:HB2	2.10	0.51
2:H:1719:HIS:CD2	2:H:1801:PRO:HB2	2.45	0.51
1:C:62:GLY:O	1:C:66:MET:HG3	2.11	0.51
2:F:1703:LEU:HD12	2:F:1704:PRO:HD2	1.92	0.51
2:F:3808:GLN:NE2	2:F:3885:LEU:O	2.42	0.51
1:G:36:PHE:HD1	1:G:36:PHE:H	1.58	0.51
2:D:3954:LYS:O	2:D:3958:ASN:ND2	2.42	0.51
2:F:255:HIS:CE1	2:F:480:GLU:OE1	2.62	0.51
2:B:1683:HIS:CD2	2:B:1801:PRO:HD3	2.46	0.51
2:B:4876:ASP:O	2:B:4879:THR:OG1	2.24	0.51
2:D:1435:TYR:CD1	2:D:1575:LEU:HD22	2.46	0.51
2:H:2584:LEU:HB3	2:H:2623:LEU:HD22	1.92	0.51
2:H:3954:LYS:O	2:H:3958:ASN:ND2	2.42	0.51
2:B:1435:TYR:CD1	2:B:1575:LEU:HD22	2.46	0.51
2:B:2491:MET:HG3	2:B:2493:ALA:H	1.76	0.51
2:B:2584:LEU:HB3	2:B:2623:LEU:HD22	1.91	0.51
2:D:2624:LEU:HA	2:D:2627:LEU:HD12	1.92	0.51
2:H:1703:LEU:HD12	2:H:1704:PRO:HD2	1.92	0.51
2:D:681:HIS:CD2	2:D:683:ARG:HE	2.29	0.51
2:F:2624:LEU:HA	2:F:2627:LEU:HD12	1.92	0.51
2:H:3983:ALA:O	2:H:3987:PHE:HB2	2.09	0.51
1:A:8:SER:HB3	1:A:71:ARG:H	1.76	0.51
2:F:1435:TYR:CD1	2:F:1575:LEU:HD22	2.46	0.51
2:H:1978:TYR:HD2	2:H:3638:TYR:HE2	1.59	0.51
2:B:294:ILE:HG22	2:B:296:ASP:H	1.76	0.51
2:F:681:HIS:CD2	2:F:683:ARG:HE	2.29	0.51
1:G:62:GLY:O	1:G:66:MET:HG3	2.11	0.51
2:H:666:VAL:HG11	2:H:684:VAL:HG11	1.93	0.51
2:H:2491:MET:HG3	2:H:2493:ALA:H	1.76	0.51
2:B:1719:HIS:CD2	2:B:1801:PRO:HB2	2.45	0.51
1:C:8:SER:HB3	1:C:71:ARG:H	1.76	0.51
2:D:102:LEU:HB2	2:D:105:HIS:CD2	2.44	0.51
2:F:1978:TYR:HD2	2:F:3638:TYR:HE2	1.59	0.51
2:H:1435:TYR:CD1	2:H:1575:LEU:HD22	2.46	0.51
2:H:2043:CYS:HB3	2:H:2131:GLY:HA3	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:62:GLY:O	1:A:66:MET:HG3	2.11	0.51
2:B:1272:LEU:HD22	2:B:1289:LEU:HD11	1.93	0.51
2:D:666:VAL:HG11	2:D:684:VAL:HG11	1.93	0.51
2:D:1683:HIS:CD2	2:D:1801:PRO:HD3	2.46	0.51
2:D:4876:ASP:O	2:D:4879:THR:OG1	2.24	0.51
2:H:294:ILE:HG22	2:H:296:ASP:H	1.76	0.51
2:H:1683:HIS:CD2	2:H:1801:PRO:HD3	2.46	0.51
2:B:2043:CYS:HB3	2:B:2131:GLY:HA3	1.93	0.50
1:C:36:PHE:HD1	1:C:36:PHE:H	1.58	0.50
2:D:682:LEU:HD13	2:D:787:VAL:HG11	1.94	0.50
2:F:473:ASN:O	2:F:476:SER:OG	2.24	0.50
2:F:3954:LYS:O	2:F:3958:ASN:ND2	2.42	0.50
2:D:2043:CYS:HB3	2:D:2131:GLY:HA3	1.93	0.50
2:D:2491:MET:HG3	2:D:2493:ALA:H	1.76	0.50
2:F:294:ILE:HG22	2:F:296:ASP:H	1.76	0.50
2:H:1272:LEU:HD22	2:H:1289:LEU:HD11	1.93	0.50
2:H:2496:VAL:HG12	2:H:2498:ASP:H	1.76	0.50
2:B:1703:LEU:HD12	2:B:1704:PRO:HD2	1.92	0.50
2:D:294:ILE:HG22	2:D:296:ASP:H	1.76	0.50
2:F:2491:MET:HG3	2:F:2493:ALA:H	1.76	0.50
2:H:102:LEU:HD12	2:H:105:HIS:HE2	1.77	0.50
2:H:681:HIS:CD2	2:H:683:ARG:HE	2.29	0.50
2:B:170:ILE:HD11	2:B:197:GLN:HB2	1.93	0.50
2:B:689:THR:HG22	2:B:776:LEU:H	1.77	0.50
2:B:2496:VAL:HG12	2:B:2498:ASP:H	1.76	0.50
2:D:1095:VAL:HG23	2:D:1096:THR:HG23	1.93	0.50
2:F:2043:CYS:HB3	2:F:2131:GLY:HA3	1.93	0.50
2:D:2496:VAL:HG12	2:D:2498:ASP:H	1.76	0.50
2:F:659:TYR:O	2:F:662:TRP:NE1	2.45	0.50
2:F:1683:HIS:CD2	2:F:1801:PRO:HD3	2.46	0.50
2:B:681:HIS:CD2	2:B:683:ARG:HE	2.29	0.50
2:B:682:LEU:HD13	2:B:787:VAL:HG11	1.94	0.50
2:F:666:VAL:HG11	2:F:684:VAL:HG11	1.93	0.50
2:F:682:LEU:HD13	2:F:787:VAL:HG11	1.94	0.50
2:F:1272:LEU:HD22	2:F:1289:LEU:HD11	1.93	0.50
2:B:2624:LEU:HA	2:B:2627:LEU:HD12	1.92	0.50
2:D:4877:MET:HA	2:D:4880:CYS:HB3	1.94	0.50
1:E:8:SER:HB3	1:E:71:ARG:H	1.76	0.50
2:F:482:GLY:O	2:F:486:LEU:HG	2.12	0.50
2:F:1010:VAL:HA	2:F:1019:PRO:HB3	1.94	0.50
2:F:1095:VAL:HG23	2:F:1096:THR:HG23	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:2496:VAL:HG12	2:F:2498:ASP:H	1.76	0.50
2:H:1095:VAL:HG23	2:H:1096:THR:HG23	1.93	0.50
2:H:4027:GLU:OE1	2:H:5004:GLN:NE2	2.45	0.50
2:B:666:VAL:HG11	2:B:684:VAL:HG11	1.92	0.50
2:D:1978:TYR:HD2	2:D:3638:TYR:HE2	1.59	0.50
2:F:102:LEU:HD12	2:F:105:HIS:HE2	1.77	0.50
2:F:4027:GLU:OE1	2:F:5004:GLN:NE2	2.45	0.50
2:H:482:GLY:O	2:H:486:LEU:HG	2.12	0.50
1:A:36:PHE:HD1	1:A:36:PHE:H	1.58	0.49
2:B:102:LEU:HD12	2:B:105:HIS:HE2	1.77	0.49
2:B:659:TYR:O	2:B:662:TRP:NE1	2.45	0.49
2:D:516:LYS:O	2:D:520:ASN:ND2	2.44	0.49
2:F:516:LYS:O	2:F:520:ASN:ND2	2.44	0.49
1:G:8:SER:HB3	1:G:71:ARG:H	1.76	0.49
2:H:716:PHE:HD2	2:H:718:GLY:H	1.60	0.49
2:H:1010:VAL:HA	2:H:1019:PRO:HB3	1.94	0.49
2:B:4679:LEU:HD13	2:B:4722:VAL:HB	1.95	0.49
2:D:482:GLY:O	2:D:486:LEU:HG	2.12	0.49
2:F:3964:ILE:HG21	2:F:3975:LEU:HD12	1.95	0.49
2:H:1007:TYR:HE2	2:H:1013:ILE:HD13	1.77	0.49
2:B:1095:VAL:HG23	2:B:1096:THR:HG23	1.93	0.49
2:B:4027:GLU:OE1	2:B:5004:GLN:NE2	2.45	0.49
2:D:1272:LEU:HD22	2:D:1289:LEU:HD11	1.93	0.49
2:F:689:THR:HG22	2:F:776:LEU:H	1.77	0.49
2:F:716:PHE:HD2	2:F:718:GLY:H	1.60	0.49
2:D:170:ILE:HD11	2:D:197:GLN:HB2	1.93	0.49
2:D:689:THR:HG22	2:D:776:LEU:H	1.77	0.49
2:D:1439:VAL:HG11	2:D:1448:VAL:HG11	1.94	0.49
2:F:2504:VAL:HG21	2:F:2558:ALA:HB1	1.94	0.49
2:H:682:LEU:HD13	2:H:787:VAL:HG11	1.94	0.49
2:H:689:THR:HG22	2:H:776:LEU:H	1.77	0.49
2:D:450:GLY:HA2	2:D:453:GLU:OE2	2.12	0.49
2:D:1010:VAL:HA	2:D:1019:PRO:HB3	1.94	0.49
2:F:4679:LEU:HD13	2:F:4722:VAL:HB	1.94	0.49
2:B:450:GLY:HA2	2:B:453:GLU:OE2	2.12	0.49
2:B:4877:MET:HA	2:B:4880:CYS:HB3	1.94	0.49
2:D:102:LEU:HD12	2:D:105:HIS:HE2	1.77	0.49
2:D:1104:TRP:CZ3	2:D:1153:ILE:HB	2.47	0.49
2:D:4027:GLU:OE1	2:D:5004:GLN:NE2	2.45	0.49
2:D:4187:ARG:NH1	2:D:4980:GLU:OE1	2.46	0.49
2:F:170:ILE:HD11	2:F:197:GLN:HB2	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1104:TRP:CZ3	2:B:1153:ILE:HB	2.47	0.49
2:B:4187:ARG:NH1	2:B:4980:GLU:OE1	2.46	0.49
2:D:716:PHE:HD2	2:D:718:GLY:H	1.60	0.49
2:D:4172:TYR:HE1	2:D:4194:GLU:HB2	1.78	0.49
2:H:450:GLY:HA2	2:H:453:GLU:OE2	2.12	0.49
2:B:1978:TYR:HD2	2:B:3638:TYR:HE2	1.59	0.49
2:D:103:TYR:HD1	2:D:161:GLU:HB2	1.74	0.49
2:D:2122:PHE:O	2:D:3721:TYR:OH	2.30	0.49
2:D:4922:VAL:HA	2:D:4926:LEU:HB2	1.95	0.49
2:F:1104:TRP:CZ3	2:F:1153:ILE:HB	2.47	0.49
2:F:4178:ILE:HG23	2:F:5019:PHE:HB2	1.95	0.49
2:F:4187:ARG:NH1	2:F:4980:GLU:OE1	2.46	0.49
2:H:4877:MET:HA	2:H:4880:CYS:HB3	1.94	0.49
2:B:2122:PHE:O	2:B:3721:TYR:OH	2.31	0.49
2:D:156:GLN:NE2	2:F:385:ASP:OD1	2.34	0.49
2:D:2504:VAL:HG21	2:D:2558:ALA:HB1	1.94	0.49
2:H:4187:ARG:NH1	2:H:4980:GLU:OE1	2.46	0.49
2:B:156:GLN:NE2	2:D:385:ASP:OD1	2.34	0.49
2:B:1010:VAL:HA	2:B:1019:PRO:HB3	1.94	0.49
2:D:1764:PRO:HG3	2:D:2095:LEU:HD22	1.94	0.49
2:H:170:ILE:HD11	2:H:197:GLN:HB2	1.93	0.49
2:H:928:THR:O	2:H:931:THR:OG1	2.31	0.49
2:H:4178:ILE:HG23	2:H:5019:PHE:HB2	1.95	0.49
2:B:2504:VAL:HG21	2:B:2558:ALA:HB1	1.94	0.48
2:F:103:TYR:HD1	2:F:161:GLU:HB2	1.74	0.48
2:F:4922:VAL:HA	2:F:4926:LEU:HB2	1.95	0.48
2:H:1764:PRO:HG3	2:H:2095:LEU:HD22	1.94	0.48
2:H:3964:ILE:HG21	2:H:3975:LEU:HD12	1.95	0.48
2:H:4922:VAL:HA	2:H:4926:LEU:HB2	1.95	0.48
2:B:3664:SER:OG	2:B:3664:SER:O	2.30	0.48
2:F:450:GLY:HA2	2:F:453:GLU:OE2	2.12	0.48
2:F:2122:PHE:O	2:F:3721:TYR:OH	2.31	0.48
2:B:722:TRP:CZ3	2:B:727:PRO:HD3	2.49	0.48
2:B:4834:GLN:O	2:B:4838:THR:HG23	2.13	0.48
2:D:4178:ILE:HG23	2:D:5019:PHE:HB2	1.95	0.48
2:H:4015:GLN:HG3	2:H:4134:ILE:HD11	1.95	0.48
2:H:4834:GLN:O	2:H:4838:THR:HG23	2.14	0.48
2:B:219:VAL:HG12	2:B:259:LEU:HD12	1.96	0.48
2:B:1007:TYR:HE2	2:B:1013:ILE:HD13	1.77	0.48
2:B:3964:ILE:HG21	2:B:3975:LEU:HD12	1.95	0.48
2:D:4850:THR:HG1	2:D:4880:CYS:HG	1.56	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:4850:THR:HG21	2:D:4881:TYR:HD1	1.79	0.48
2:F:1439:VAL:HG11	2:F:1448:VAL:HG11	1.94	0.48
2:F:4850:THR:HG21	2:F:4881:TYR:HD1	1.79	0.48
2:F:4877:MET:HA	2:F:4880:CYS:HB3	1.94	0.48
2:H:722:TRP:CZ3	2:H:727:PRO:HD3	2.49	0.48
2:H:4679:LEU:HD13	2:H:4722:VAL:HB	1.95	0.48
2:B:4015:GLN:HG3	2:B:4134:ILE:HD11	1.95	0.48
2:B:4172:TYR:HE1	2:B:4194:GLU:HB2	1.78	0.48
2:D:722:TRP:CZ3	2:D:727:PRO:HD3	2.49	0.48
2:F:125:ARG:N	2:F:134:ASP:OD2	2.42	0.48
2:F:1007:TYR:HE2	2:F:1013:ILE:HD13	1.78	0.48
2:H:659:TYR:O	2:H:662:TRP:NE1	2.45	0.48
2:H:1439:VAL:HG11	2:H:1448:VAL:HG11	1.94	0.48
2:H:2122:PHE:O	2:H:3721:TYR:OH	2.31	0.48
2:B:716:PHE:HD2	2:B:718:GLY:H	1.60	0.48
2:B:4178:ILE:HG23	2:B:5019:PHE:HB2	1.95	0.48
2:B:4922:VAL:HA	2:B:4926:LEU:HB2	1.95	0.48
2:D:659:TYR:O	2:D:662:TRP:NE1	2.45	0.48
2:H:1104:TRP:CZ3	2:H:1153:ILE:HB	2.47	0.48
2:B:482:GLY:O	2:B:486:LEU:HG	2.12	0.48
2:F:4172:TYR:HE1	2:F:4194:GLU:HB2	1.78	0.48
2:F:674:PHE:H	2:F:680:THR:HG23	1.79	0.48
2:H:219:VAL:HG12	2:H:259:LEU:HD12	1.95	0.48
2:H:246:TYR:HD1	2:H:375:LYS:HA	1.79	0.48
2:H:2504:VAL:HG21	2:H:2558:ALA:HB1	1.94	0.48
2:B:1007:TYR:CE2	2:B:1013:ILE:HD13	2.49	0.48
2:B:1764:PRO:HG3	2:B:2095:LEU:HD22	1.94	0.48
2:F:722:TRP:CZ3	2:F:727:PRO:HD3	2.49	0.48
2:F:4834:GLN:O	2:F:4838:THR:HG23	2.13	0.48
2:H:4172:TYR:HE1	2:H:4194:GLU:HB2	1.78	0.48
2:B:4850:THR:HG1	2:B:4880:CYS:HG	1.58	0.48
2:D:125:ARG:N	2:D:134:ASP:OD2	2.42	0.48
2:D:3964:ILE:HG21	2:D:3975:LEU:HD12	1.95	0.48
2:F:1764:PRO:HG3	2:F:2095:LEU:HD22	1.94	0.48
2:F:4016:LYS:HE3	2:F:4133:ASP:OD2	2.14	0.48
2:H:2451:ALA:HA	2:H:2454:ILE:HD13	1.96	0.48
2:H:4850:THR:HG21	2:H:4881:TYR:HD1	1.79	0.48
2:B:246:TYR:HD1	2:B:375:LYS:HA	1.79	0.47
2:B:2451:ALA:HA	2:B:2454:ILE:HD13	1.95	0.47
2:D:219:VAL:HG12	2:D:259:LEU:HD12	1.96	0.47
2:H:4016:LYS:HE3	2:H:4133:ASP:OD2	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1439:VAL:HG11	2:B:1448:VAL:HG11	1.94	0.47
2:D:1007:TYR:CE2	2:D:1013:ILE:HD13	2.49	0.47
2:F:2451:ALA:HA	2:F:2454:ILE:HD13	1.96	0.47
2:F:4920:PHE:O	2:F:4925:ILE:HG12	2.14	0.47
2:H:533:ASN:ND2	2:H:536:ASN:OD1	2.42	0.47
2:B:4850:THR:HG21	2:B:4881:TYR:HD1	1.79	0.47
2:D:2451:ALA:HA	2:D:2454:ILE:HD13	1.96	0.47
2:D:2624:LEU:O	2:D:2628:VAL:HG12	2.14	0.47
2:D:4679:LEU:HD13	2:D:4722:VAL:HB	1.94	0.47
2:D:4834:GLN:O	2:D:4838:THR:HG23	2.13	0.47
2:H:674:PHE:H	2:H:680:THR:HG23	1.79	0.47
2:D:1007:TYR:HE2	2:D:1013:ILE:HD13	1.77	0.47
2:F:2624:LEU:O	2:F:2628:VAL:HG12	2.14	0.47
2:F:4015:GLN:HG3	2:F:4134:ILE:HD11	1.95	0.47
2:B:4016:LYS:HE3	2:B:4133:ASP:OD2	2.14	0.47
2:F:1676:LEU:HD22	2:F:2168:ILE:HD12	1.96	0.47
2:H:1007:TYR:CE2	2:H:1013:ILE:HD13	2.49	0.47
2:B:533:ASN:ND2	2:B:536:ASN:OD1	2.41	0.47
2:B:1618:ARG:HG3	2:B:1618:ARG:HH21	1.80	0.47
2:D:1717:SER:HA	2:D:1721:GLU:HB2	1.97	0.47
2:F:533:ASN:ND2	2:F:536:ASN:OD1	2.42	0.47
2:F:1007:TYR:CE2	2:F:1013:ILE:HD13	2.49	0.47
2:B:4920:PHE:O	2:B:4925:ILE:HG12	2.14	0.47
2:D:674:PHE:H	2:D:680:THR:HG23	1.79	0.47
2:D:3753:MET:O	2:D:3756:GLN:NE2	2.48	0.47
2:D:4015:GLN:HG3	2:D:4134:ILE:HD11	1.95	0.47
2:F:219:VAL:HG12	2:F:259:LEU:HD12	1.95	0.47
2:F:3664:SER:O	2:F:3664:SER:OG	2.30	0.47
2:F:3964:ILE:HG22	2:F:3971:ASN:HB3	1.97	0.47
2:H:125:ARG:N	2:H:134:ASP:OD2	2.42	0.47
2:H:1460:HIS:HB2	2:H:1600:LEU:HD21	1.97	0.47
2:D:1618:ARG:HH21	2:D:1618:ARG:HG3	1.80	0.47
2:D:4016:LYS:HE3	2:D:4133:ASP:OD2	2.14	0.47
2:H:3964:ILE:HG22	2:H:3971:ASN:HB3	1.97	0.47
2:B:1717:SER:HA	2:B:1721:GLU:HB2	1.97	0.47
2:D:668:VAL:HG12	2:D:789:VAL:HG23	1.97	0.47
2:D:4929:ILE:HG23	2:F:4938:PHE:HZ	1.80	0.47
2:H:106:ALA:HA	2:H:149:THR:HA	1.97	0.47
2:H:1618:ARG:HH21	2:H:1618:ARG:HG3	1.80	0.47
2:B:668:VAL:HG12	2:B:789:VAL:HG23	1.97	0.47
2:D:4920:PHE:O	2:D:4925:ILE:HG12	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:668:VAL:HG12	2:H:789:VAL:HG23	1.97	0.47
1:A:90:VAL:HG12	1:A:91:ILE:HG12	1.98	0.46
2:B:106:ALA:HA	2:B:149:THR:HA	1.97	0.46
2:B:2624:LEU:O	2:B:2628:VAL:HG12	2.14	0.46
2:B:4929:ILE:HG23	2:D:4938:PHE:HZ	1.80	0.46
2:D:106:ALA:HA	2:D:149:THR:HA	1.97	0.46
2:D:1676:LEU:HD22	2:D:2168:ILE:HD12	1.96	0.46
2:F:106:ALA:HA	2:F:149:THR:HA	1.97	0.46
2:F:668:VAL:HG12	2:F:789:VAL:HG23	1.97	0.46
2:F:1460:HIS:HB2	2:F:1600:LEU:HD21	1.97	0.46
2:H:1717:SER:HA	2:H:1721:GLU:HB2	1.97	0.46
2:H:3664:SER:O	2:H:3664:SER:OG	2.30	0.46
2:D:246:TYR:HD1	2:D:375:LYS:HA	1.79	0.46
2:F:246:TYR:HD1	2:F:375:LYS:HA	1.79	0.46
2:H:2624:LEU:O	2:H:2628:VAL:HG12	2.14	0.46
2:B:1772:LEU:HD11	2:B:2154:MET:HG3	1.97	0.46
2:D:1772:LEU:HD11	2:D:2154:MET:HG3	1.97	0.46
2:B:194:SER:OG	2:B:195:PHE:N	2.48	0.46
2:H:3753:MET:O	2:H:3756:GLN:NE2	2.48	0.46
2:H:4920:PHE:O	2:H:4925:ILE:HG12	2.14	0.46
2:B:621:ILE:HG13	2:B:622:THR:N	2.31	0.46
2:B:1676:LEU:HD22	2:B:2168:ILE:HD12	1.96	0.46
2:B:3994:MET:HB3	2:B:4011:LEU:HD11	1.97	0.46
2:H:621:ILE:HG13	2:H:622:THR:N	2.31	0.46
2:B:1452:TRP:CZ2	2:B:1520:VAL:HG21	2.51	0.46
1:C:90:VAL:HG12	1:C:91:ILE:HG12	1.98	0.46
2:D:1460:HIS:HB2	2:D:1600:LEU:HD21	1.97	0.46
2:D:2215:VAL:HG13	2:D:2216:LEU:HD12	1.98	0.46
2:F:1717:SER:HA	2:F:1721:GLU:HB2	1.97	0.46
2:F:4929:ILE:HG23	2:H:4938:PHE:HZ	1.80	0.46
2:H:1520:VAL:HG22	2:H:1527:MET:SD	2.56	0.46
2:H:1676:LEU:HD22	2:H:2168:ILE:HD12	1.96	0.46
2:B:103:TYR:OH	2:B:167:ASP:OD2	2.34	0.46
2:B:1293:LEU:HD11	2:B:1594:ARG:HH21	1.81	0.46
2:B:1848:THR:O	2:B:1852:MET:HG3	2.16	0.46
2:D:1293:LEU:HD11	2:D:1594:ARG:HH21	1.81	0.46
2:D:1452:TRP:CZ2	2:D:1520:VAL:HG21	2.51	0.46
2:D:3994:MET:HB3	2:D:4011:LEU:HD11	1.97	0.46
2:F:621:ILE:HG13	2:F:622:THR:N	2.31	0.46
2:F:1293:LEU:HD11	2:F:1594:ARG:HD3	1.98	0.46
1:G:87:HIS:HB3	1:G:90:VAL:HB	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:90:VAL:HG12	1:G:91:ILE:HG12	1.98	0.46
2:B:1460:HIS:HB2	2:B:1600:LEU:HD21	1.97	0.46
2:B:2570:PHE:HE2	2:B:2611:LEU:HD11	1.81	0.46
2:B:4664:VAL:O	2:B:4668:ILE:HG22	2.16	0.46
2:B:4938:PHE:HZ	2:H:4929:ILE:HG23	1.80	0.46
2:D:1848:THR:O	2:D:1852:MET:HG3	2.16	0.46
2:F:1848:THR:O	2:F:1852:MET:HG3	2.16	0.46
2:H:1772:LEU:HD11	2:H:2154:MET:HG3	1.97	0.46
2:B:1520:VAL:HG22	2:B:1527:MET:SD	2.56	0.46
2:F:3994:MET:HB3	2:F:4011:LEU:HD11	1.97	0.46
2:H:359:TYR:CE1	2:H:385:ASP:HB3	2.51	0.46
2:H:1848:THR:O	2:H:1852:MET:HG3	2.16	0.46
2:B:436:LEU:H	2:B:436:LEU:HD23	1.81	0.45
2:B:2215:VAL:HG13	2:B:2216:LEU:HD12	1.98	0.45
2:B:3964:ILE:HG22	2:B:3971:ASN:HB3	1.97	0.45
2:D:194:SER:OG	2:D:195:PHE:N	2.48	0.45
2:D:479:GLN:CB	2:D:536:ASN:HD21	2.28	0.45
2:D:621:ILE:HG13	2:D:622:THR:N	2.31	0.45
2:D:1245:PHE:CE2	2:D:1290:ARG:HD3	2.51	0.45
2:D:2117:LEU:O	2:D:2121:MET:HG3	2.17	0.45
2:F:1772:LEU:HD11	2:F:2154:MET:HG3	1.97	0.45
2:F:3753:MET:O	2:F:3756:GLN:NE2	2.48	0.45
2:H:1452:TRP:CZ2	2:H:1520:VAL:HG21	2.51	0.45
2:H:3762:GLN:NE2	2:H:3798:SER:O	2.42	0.45
2:D:436:LEU:HD23	2:D:436:LEU:H	1.82	0.45
2:F:103:TYR:OH	2:F:167:ASP:OD2	2.34	0.45
2:F:359:TYR:CE1	2:F:385:ASP:HB3	2.51	0.45
2:F:1452:TRP:CZ2	2:F:1520:VAL:HG21	2.51	0.45
2:F:2570:PHE:HE2	2:F:2611:LEU:HD11	1.81	0.45
2:F:4192:ILE:HG21	2:F:4197:ARG:HH21	1.82	0.45
2:F:4710:PRO:HB2	2:F:4716:LYS:HA	1.99	0.45
2:H:479:GLN:CB	2:H:536:ASN:HD21	2.28	0.45
2:H:3994:MET:HB3	2:H:4011:LEU:HD11	1.98	0.45
2:H:4664:VAL:O	2:H:4668:ILE:HG22	2.16	0.45
2:H:4710:PRO:HB2	2:H:4716:LYS:HA	1.99	0.45
2:F:479:GLN:CB	2:F:536:ASN:HD21	2.28	0.45
2:F:928:THR:O	2:F:931:THR:OG1	2.31	0.45
2:F:1245:PHE:CE2	2:F:1290:ARG:HD3	2.51	0.45
2:F:1293:LEU:HD11	2:F:1594:ARG:HH21	1.81	0.45
2:F:1520:VAL:HG22	2:F:1527:MET:SD	2.56	0.45
2:H:1245:PHE:CE2	2:H:1290:ARG:HD3	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:1676:LEU:HA	2:H:1725:ARG:HH22	1.82	0.45
2:B:928:THR:O	2:B:931:THR:OG1	2.31	0.45
1:C:87:HIS:HB3	1:C:90:VAL:HB	1.98	0.45
2:D:2570:PHE:HE2	2:D:2611:LEU:HD11	1.81	0.45
2:D:3964:ILE:HG22	2:D:3971:ASN:HB3	1.97	0.45
1:E:90:VAL:HG12	1:E:91:ILE:HG12	1.98	0.45
2:F:1618:ARG:HH21	2:F:1618:ARG:HG3	1.80	0.45
2:F:2117:LEU:O	2:F:2121:MET:HG3	2.17	0.45
2:H:436:LEU:HD23	2:H:436:LEU:H	1.82	0.45
2:H:2570:PHE:HE2	2:H:2611:LEU:HD11	1.82	0.45
2:B:674:PHE:H	2:B:680:THR:HG23	1.79	0.45
2:B:1676:LEU:HA	2:B:1725:ARG:HH22	1.82	0.45
2:D:247:TYR:HB2	2:D:374:LYS:HG3	1.99	0.45
2:D:4192:ILE:HG21	2:D:4197:ARG:HH21	1.82	0.45
2:F:2215:VAL:HG13	2:F:2216:LEU:HD12	1.98	0.45
2:H:1293:LEU:HD11	2:H:1594:ARG:HH21	1.81	0.45
2:B:247:TYR:HB2	2:B:374:LYS:HG3	1.99	0.45
2:D:103:TYR:OH	2:D:167:ASP:OD2	2.34	0.45
2:F:4664:VAL:O	2:F:4668:ILE:HG22	2.16	0.45
2:H:103:TYR:OH	2:H:167:ASP:OD2	2.34	0.45
2:H:194:SER:OG	2:H:195:PHE:N	2.49	0.45
2:H:2117:LEU:O	2:H:2121:MET:HG3	2.17	0.45
2:H:3995:MET:HG2	2:H:4008:LEU:HD11	1.99	0.45
2:B:632:LEU:HD12	2:B:1666:THR:HG23	1.99	0.45
2:D:1293:LEU:HD11	2:D:1594:ARG:HD3	1.98	0.45
2:F:436:LEU:HD23	2:F:436:LEU:H	1.82	0.45
2:B:2117:LEU:O	2:B:2121:MET:HG3	2.17	0.45
2:D:632:LEU:HD12	2:D:1666:THR:HG23	1.99	0.45
2:D:1698:LEU:HA	2:D:1712:TYR:CE1	2.51	0.45
2:F:1432:THR:HA	2:F:1520:VAL:O	2.17	0.45
2:B:479:GLN:CB	2:B:536:ASN:HD21	2.28	0.45
2:B:2111:PHE:HD2	2:B:2113:GLN:HG2	1.82	0.45
2:B:3995:MET:HG2	2:B:4008:LEU:HD11	1.99	0.45
2:B:4659:TYR:OH	2:B:4786:SER:OG	2.31	0.45
2:B:4710:PRO:HB2	2:B:4716:LYS:HA	1.99	0.45
2:D:4710:PRO:HB2	2:D:4716:LYS:HA	1.99	0.45
2:F:1676:LEU:HA	2:F:1725:ARG:HH22	1.82	0.45
2:F:4850:THR:HG1	2:F:4880:CYS:HG	1.62	0.45
2:H:531:ARG:NH2	2:H:562:GLU:OE2	2.49	0.45
2:B:1293:LEU:HD11	2:B:1594:ARG:HD3	1.98	0.45
2:B:2231:THR:O	2:B:2235:ARG:HG2	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:4192:ILE:HG21	2:B:4197:ARG:HH21	1.82	0.45
2:F:531:ARG:NH2	2:F:562:GLU:OE2	2.49	0.45
2:F:4942:ARG:HE	2:F:4942:ARG:HB3	1.61	0.45
2:B:1432:THR:HA	2:B:1520:VAL:O	2.17	0.44
2:D:1520:VAL:HG22	2:D:1527:MET:SD	2.56	0.44
2:D:4659:TYR:OH	2:D:4786:SER:OG	2.31	0.44
1:E:87:HIS:HB3	1:E:90:VAL:HB	1.98	0.44
2:F:700:GLU:N	2:F:705:ASN:OD1	2.51	0.44
2:H:2179:MET:HB3	2:H:2179:MET:HE3	1.61	0.44
2:H:2231:THR:O	2:H:2235:ARG:HG2	2.17	0.44
2:H:2464:LEU:HD21	2:H:2511:TYR:CD1	2.52	0.44
2:B:4942:ARG:HE	2:B:4942:ARG:HB3	1.61	0.44
2:D:1471:ALA:HB1	2:D:1488:LYS:HZ1	1.82	0.44
2:D:2111:PHE:HD2	2:D:2113:GLN:HG2	1.82	0.44
2:D:4664:VAL:O	2:D:4668:ILE:HG22	2.16	0.44
2:H:2215:VAL:HG13	2:H:2216:LEU:HD12	1.98	0.44
2:H:4192:ILE:HG21	2:H:4197:ARG:HH21	1.82	0.44
1:A:87:HIS:HB3	1:A:90:VAL:HB	1.98	0.44
2:B:531:ARG:NH2	2:B:562:GLU:OE2	2.49	0.44
2:B:1718:ILE:HG23	2:B:1719:HIS:ND1	2.33	0.44
2:F:3762:GLN:NE2	2:F:3798:SER:O	2.41	0.44
1:G:78:PRO:HD3	1:G:96:THR:HG22	2.00	0.44
2:H:516:LYS:O	2:H:520:ASN:ND2	2.44	0.44
2:B:196:MET:SD	2:B:196:MET:N	2.91	0.44
2:B:1782:CYS:SG	2:B:1785:ALA:HB2	2.58	0.44
2:B:3753:MET:O	2:B:3756:GLN:NE2	2.48	0.44
2:D:1432:THR:HA	2:D:1520:VAL:O	2.17	0.44
2:D:2179:MET:HE1	2:D:2229:MET:HE3	1.99	0.44
2:F:1698:LEU:HA	2:F:1712:TYR:CE1	2.51	0.44
2:F:1782:CYS:SG	2:F:1785:ALA:HB2	2.57	0.44
2:F:2347:VAL:HG12	2:F:2350:ASN:H	1.83	0.44
2:H:1782:CYS:SG	2:H:1785:ALA:HB2	2.58	0.44
2:H:2132:LEU:HD22	2:H:3658:ILE:HG23	1.99	0.44
2:B:233:ILE:HD11	2:B:242:ARG:O	2.18	0.44
2:B:359:TYR:CE1	2:B:385:ASP:HB3	2.51	0.44
2:F:233:ILE:HD11	2:F:242:ARG:O	2.18	0.44
2:H:632:LEU:HD12	2:H:1666:THR:HG23	1.99	0.44
2:B:700:GLU:N	2:B:705:ASN:OD1	2.50	0.44
2:B:1245:PHE:CE2	2:B:1290:ARG:HD3	2.51	0.44
2:B:3762:GLN:NE2	2:B:3798:SER:O	2.41	0.44
2:D:359:TYR:CE1	2:D:385:ASP:HB3	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:1686:CYS:HB3	2:D:1783:PHE:HZ	1.83	0.44
2:D:3799:ILE:O	2:D:3804:ASN:ND2	2.51	0.44
2:D:4062:LYS:O	2:D:4066:ILE:HG13	2.17	0.44
2:H:1686:CYS:HB3	2:H:1783:PHE:HZ	1.83	0.44
2:H:2111:PHE:HD2	2:H:2113:GLN:HG2	1.82	0.44
2:B:2464:LEU:HD21	2:B:2511:TYR:CD1	2.52	0.44
2:B:3799:ILE:O	2:B:3804:ASN:ND2	2.51	0.44
2:D:2464:LEU:HD21	2:D:2511:TYR:CD1	2.52	0.44
2:D:3922:GLN:HE21	2:D:3986:GLY:HA3	1.83	0.44
2:F:1718:ILE:HG23	2:F:1719:HIS:ND1	2.33	0.44
2:F:2464:LEU:HD21	2:F:2511:TYR:CD1	2.52	0.44
2:F:3995:MET:HG2	2:F:4008:LEU:HD11	1.99	0.44
2:D:196:MET:SD	2:D:196:MET:N	2.91	0.44
2:F:194:SER:OG	2:F:195:PHE:N	2.48	0.44
2:F:1686:CYS:HB3	2:F:1783:PHE:HZ	1.83	0.44
2:F:2132:LEU:HD22	2:F:3658:ILE:HG23	1.99	0.44
2:H:1293:LEU:HD11	2:H:1594:ARG:HD3	1.98	0.44
2:H:4062:LYS:O	2:H:4066:ILE:HG13	2.17	0.44
2:F:3922:GLN:HE21	2:F:3986:GLY:HA3	1.83	0.44
2:F:4062:LYS:O	2:F:4066:ILE:HG13	2.17	0.44
2:H:196:MET:SD	2:H:196:MET:N	2.91	0.44
2:H:247:TYR:HB2	2:H:374:LYS:HG3	1.99	0.44
2:B:4062:LYS:O	2:B:4066:ILE:HG13	2.17	0.43
2:D:2467:LEU:HD11	2:D:2506:PHE:HD2	1.83	0.43
2:D:3995:MET:HG2	2:D:4008:LEU:HD11	1.99	0.43
1:E:78:PRO:HD3	1:E:96:THR:HG22	2.00	0.43
2:F:156:GLN:NE2	2:H:385:ASP:OD1	2.33	0.43
2:F:3799:ILE:O	2:F:3804:ASN:ND2	2.51	0.43
2:H:1432:THR:HA	2:H:1520:VAL:O	2.17	0.43
2:H:1718:ILE:HG23	2:H:1719:HIS:ND1	2.33	0.43
2:B:516:LYS:O	2:B:520:ASN:ND2	2.44	0.43
2:D:107:ILE:N	2:D:148:TRP:O	2.47	0.43
2:D:700:GLU:N	2:D:705:ASN:OD1	2.50	0.43
2:D:1782:CYS:SG	2:D:1785:ALA:HB2	2.58	0.43
2:H:3799:ILE:O	2:H:3804:ASN:ND2	2.51	0.43
2:D:3664:SER:O	2:D:3664:SER:OG	2.30	0.43
2:D:3762:GLN:NE2	2:D:3798:SER:O	2.41	0.43
2:D:4030:VAL:HG12	2:D:4032:ASN:H	1.83	0.43
2:F:632:LEU:HD12	2:F:1666:THR:HG23	1.99	0.43
2:F:2111:PHE:HD2	2:F:2113:GLN:HG2	1.83	0.43
2:H:4941:LEU:O	2:H:4945:GLN:HG2	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1686:CYS:HB3	2:B:1783:PHE:HZ	1.83	0.43
2:B:4029:ASN:ND2	2:B:4035:ILE:HB	2.34	0.43
2:D:1676:LEU:HA	2:D:1725:ARG:HH22	1.82	0.43
2:F:1290:ARG:HB3	2:F:1551:ALA:HB2	2.01	0.43
2:F:2467:LEU:HD11	2:F:2506:PHE:HD2	1.83	0.43
2:H:2347:VAL:HG12	2:H:2350:ASN:H	1.83	0.43
2:D:1718:ILE:HG23	2:D:1719:HIS:ND1	2.33	0.43
2:F:196:MET:SD	2:F:196:MET:N	2.91	0.43
2:F:206:CYS:HB3	2:F:271:GLY:HA3	2.00	0.43
2:F:247:TYR:HB2	2:F:374:LYS:HG3	1.99	0.43
2:F:2231:THR:O	2:F:2235:ARG:HG2	2.17	0.43
2:H:206:CYS:HB3	2:H:271:GLY:HA3	2.00	0.43
2:H:1130:GLN:HE21	2:H:1132:TRP:HZ3	1.66	0.43
2:H:4882:LEU:HD23	2:H:4882:LEU:HA	1.91	0.43
2:B:1290:ARG:HB3	2:B:1551:ALA:HB2	2.01	0.43
2:B:2132:LEU:HD22	2:B:3658:ILE:HG23	1.99	0.43
2:B:3799:ILE:HG22	2:B:3807:VAL:HG11	2.00	0.43
2:B:4030:VAL:HG12	2:B:4032:ASN:H	1.83	0.43
2:D:1290:ARG:HB3	2:D:1551:ALA:HB2	2.01	0.43
2:D:2347:VAL:HG12	2:D:2350:ASN:H	1.83	0.43
2:H:4029:ASN:ND2	2:H:4035:ILE:HB	2.34	0.43
2:B:257:ARG:HH22	2:B:286:THR:HG21	1.84	0.43
2:B:2347:VAL:HG12	2:B:2350:ASN:H	1.83	0.43
2:B:4941:LEU:O	2:B:4945:GLN:HG2	2.19	0.43
1:C:71:ARG:HH21	2:D:674:PHE:HZ	1.61	0.43
2:D:233:ILE:HD11	2:D:242:ARG:O	2.18	0.43
2:D:4936:ASP:O	2:D:4940:GLU:HG2	2.18	0.43
2:F:1130:GLN:HE21	2:F:1132:TRP:HZ3	1.66	0.43
2:H:2114:SER:O	2:H:2118:VAL:HG23	2.19	0.43
2:H:3799:ILE:HG22	2:H:3807:VAL:HG11	2.00	0.43
2:H:4876:ASP:O	2:H:4879:THR:OG1	2.24	0.43
2:B:22:LEU:HD12	2:B:37:LEU:HD22	2.01	0.43
2:B:3991:PHE:HA	2:B:3994:MET:CG	2.46	0.43
2:B:4936:ASP:O	2:B:4940:GLU:HG2	2.19	0.43
2:B:4990:LEU:HD11	2:B:5012:TYR:CE1	2.54	0.43
2:F:1959:LEU:HD23	2:F:2139:LEU:HD21	2.01	0.43
2:F:4030:VAL:HG12	2:F:4032:ASN:H	1.83	0.43
2:H:222:LEU:HD12	2:H:260:TRP:CD1	2.54	0.43
2:H:1698:LEU:HA	2:H:1712:TYR:CE1	2.51	0.43
2:B:38:ALA:HB2	2:B:65:CYS:HB3	2.01	0.43
2:B:222:LEU:HD12	2:B:260:TRP:CD1	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2467:LEU:HD11	2:B:2506:PHE:HD2	1.84	0.43
2:D:2231:THR:O	2:D:2235:ARG:HG2	2.17	0.43
2:D:4850:THR:OG1	2:D:4880:CYS:SG	2.74	0.43
2:D:4941:LEU:O	2:D:4945:GLN:HG2	2.19	0.43
2:D:4990:LEU:HD11	2:D:5012:TYR:CE1	2.54	0.43
2:F:4941:LEU:O	2:F:4945:GLN:HG2	2.19	0.43
2:H:38:ALA:HB2	2:H:65:CYS:HB3	2.01	0.43
2:H:1290:ARG:HB3	2:H:1551:ALA:HB2	2.01	0.43
2:H:2467:LEU:HD11	2:H:2506:PHE:HD2	1.83	0.43
2:H:4936:ASP:O	2:H:4940:GLU:HG2	2.19	0.43
2:B:3922:GLN:HE21	2:B:3986:GLY:HA3	1.83	0.43
2:D:1712:TYR:HD2	2:D:1841:PRO:HB2	1.84	0.43
2:F:4990:LEU:HD11	2:F:5012:TYR:CE1	2.54	0.43
2:H:700:GLU:N	2:H:705:ASN:OD1	2.50	0.43
2:H:1816:LEU:HD12	2:H:1816:LEU:HA	1.91	0.43
2:B:646:PRO:HB2	2:B:648:ILE:HG12	2.01	0.42
2:B:1143:TRP:HB3	2:B:1164:LEU:HD11	2.01	0.42
2:D:222:LEU:HD12	2:D:260:TRP:CD1	2.54	0.42
2:D:646:PRO:HB2	2:D:648:ILE:HG12	2.01	0.42
2:D:2132:LEU:HD22	2:D:3658:ILE:HG23	1.99	0.42
1:E:8:SER:HB2	1:E:71:ARG:HB2	2.01	0.42
2:H:4990:LEU:HD11	2:H:5012:TYR:CE1	2.54	0.42
1:A:8:SER:HB2	1:A:71:ARG:HB2	2.01	0.42
1:A:78:PRO:HD3	1:A:96:THR:HG22	2.00	0.42
2:B:1130:GLN:HE21	2:B:1132:TRP:HZ3	1.66	0.42
2:B:1649:ASP:OD1	2:B:1650:ILE:N	2.52	0.42
2:D:22:LEU:HD12	2:D:37:LEU:HD22	2.01	0.42
2:D:1245:PHE:CE1	2:D:1600:LEU:HB2	2.54	0.42
2:F:24:CYS:SG	2:F:35:LEU:HB2	2.59	0.42
2:F:951:ARG:H	2:F:970:LEU:HA	1.84	0.42
2:F:1245:PHE:CE1	2:F:1600:LEU:HB2	2.54	0.42
2:F:1649:ASP:OD1	2:F:1650:ILE:N	2.52	0.42
2:H:233:ILE:HD11	2:H:242:ARG:O	2.18	0.42
2:B:3757:ARG:O	2:B:3761:GLN:HG3	2.19	0.42
1:C:78:PRO:HD3	1:C:96:THR:HG22	2.00	0.42
2:D:156:GLN:HG2	2:D:157:ARG:N	2.34	0.42
2:D:1456:ASP:C	2:D:1491:ASN:HD21	2.22	0.42
2:D:1495:VAL:HG12	2:D:1538:THR:HG21	2.02	0.42
2:D:3757:ARG:O	2:D:3761:GLN:HG3	2.19	0.42
2:D:3987:PHE:O	2:D:3990:VAL:HG22	2.19	0.42
2:F:257:ARG:HH22	2:F:286:THR:HG21	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:1456:ASP:C	2:F:1491:ASN:HD21	2.22	0.42
2:H:1649:ASP:OD1	2:H:1650:ILE:N	2.52	0.42
2:H:3922:GLN:HE21	2:H:3986:GLY:HA3	1.83	0.42
2:D:650:VAL:O	2:D:777:PHE:N	2.37	0.42
2:D:951:ARG:H	2:D:970:LEU:HA	1.84	0.42
2:D:1143:TRP:HB3	2:D:1164:LEU:HD11	2.01	0.42
2:D:1244:GLN:OE1	2:D:1458:HIS:ND1	2.52	0.42
2:D:2114:SER:O	2:D:2118:VAL:HG23	2.19	0.42
2:D:3804:ASN:HB3	2:D:3807:VAL:HB	2.02	0.42
2:F:222:LEU:HD12	2:F:260:TRP:CD1	2.54	0.42
2:F:1495:VAL:HG12	2:F:1538:THR:HG21	2.02	0.42
2:F:3766:HIS:CE1	2:F:3807:VAL:HA	2.55	0.42
2:F:4876:ASP:O	2:F:4879:THR:OG1	2.24	0.42
2:H:22:LEU:HD12	2:H:37:LEU:HD22	2.01	0.42
2:H:554:LEU:HD23	2:H:554:LEU:H	1.84	0.42
2:H:847:SER:OG	2:H:849:THR:HG22	2.20	0.42
2:H:1517:GLY:N	2:H:1530:THR:O	2.35	0.42
2:B:1245:PHE:CE1	2:B:1600:LEU:HB2	2.54	0.42
2:B:1714:LEU:O	2:B:1718:ILE:HG22	2.20	0.42
2:D:257:ARG:HH22	2:D:286:THR:HG21	1.84	0.42
2:F:156:GLN:HG2	2:F:157:ARG:N	2.34	0.42
2:F:847:SER:OG	2:F:849:THR:HG22	2.20	0.42
2:F:3958:ASN:ND2	2:F:4017:ASP:OD2	2.53	0.42
2:F:4029:ASN:ND2	2:F:4035:ILE:HB	2.34	0.42
2:F:4936:ASP:O	2:F:4940:GLU:HG2	2.19	0.42
1:G:8:SER:HB2	1:G:71:ARG:HB2	2.02	0.42
2:H:257:ARG:HH22	2:H:286:THR:HG21	1.84	0.42
2:H:4059:MET:HA	2:H:4062:LYS:HE2	2.02	0.42
2:B:24:CYS:SG	2:B:35:LEU:HB2	2.60	0.42
2:B:1712:TYR:HD2	2:B:1841:PRO:HB2	1.84	0.42
2:B:1816:LEU:HD12	2:B:1816:LEU:HA	1.91	0.42
2:B:1951:GLU:OE1	2:B:1955:ARG:NH1	2.53	0.42
2:B:3987:PHE:O	2:B:3990:VAL:HG22	2.19	0.42
2:D:554:LEU:H	2:D:554:LEU:HD23	1.84	0.42
2:D:1649:ASP:OD1	2:D:1650:ILE:N	2.52	0.42
2:D:3799:ILE:HG22	2:D:3807:VAL:HG11	2.00	0.42
2:F:22:LEU:HD12	2:F:37:LEU:HD22	2.01	0.42
2:F:592:LYS:HA	2:F:1580:PHE:CE1	2.55	0.42
2:F:1732:SER:OG	2:F:2141:ARG:NH2	2.53	0.42
2:F:2114:SER:O	2:F:2118:VAL:HG23	2.19	0.42
2:F:3799:ILE:HG22	2:F:3807:VAL:HG11	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:3974:SER:O	2:F:3978:SER:HB3	2.20	0.42
2:H:1714:LEU:O	2:H:1718:ILE:HG22	2.20	0.42
2:H:3958:ASN:ND2	2:H:4017:ASP:OD2	2.52	0.42
2:H:4030:VAL:HG12	2:H:4032:ASN:H	1.83	0.42
2:B:1450:VAL:HA	2:B:1552:VAL:HG12	2.02	0.42
2:B:1495:VAL:HG12	2:B:1538:THR:HG21	2.02	0.42
2:D:255:HIS:ND1	2:D:480:GLU:OE1	2.53	0.42
2:D:592:LYS:HA	2:D:1580:PHE:CE1	2.55	0.42
2:D:847:SER:OG	2:D:849:THR:HG22	2.20	0.42
2:D:1959:LEU:HD23	2:D:2139:LEU:HD21	2.01	0.42
2:F:1712:TYR:HD2	2:F:1841:PRO:HB2	1.84	0.42
2:H:646:PRO:HB2	2:H:648:ILE:HG12	2.01	0.42
2:H:1450:VAL:HA	2:H:1552:VAL:HG12	2.02	0.42
2:B:206:CYS:HB3	2:B:271:GLY:HA3	2.00	0.42
2:B:3766:HIS:CE1	2:B:3807:VAL:HA	2.55	0.42
2:B:4059:MET:HA	2:B:4062:LYS:HE2	2.02	0.42
2:D:206:CYS:HB3	2:D:271:GLY:HA3	2.00	0.42
2:D:3766:HIS:CE1	2:D:3807:VAL:HA	2.55	0.42
2:F:1143:TRP:HB3	2:F:1164:LEU:HD11	2.01	0.42
2:F:3374:UNK:HA	2:F:3442:ILE:HD11	2.02	0.42
2:F:3757:ARG:O	2:F:3761:GLN:HG3	2.19	0.42
2:H:255:HIS:ND1	2:H:480:GLU:OE1	2.53	0.42
2:H:1495:VAL:HG12	2:H:1538:THR:HG21	2.02	0.42
2:H:1712:TYR:HD2	2:H:1841:PRO:HB2	1.84	0.42
2:H:1959:LEU:HD23	2:H:2139:LEU:HD21	2.01	0.42
2:H:3987:PHE:O	2:H:3990:VAL:HG22	2.20	0.42
2:B:3804:ASN:HB3	2:B:3807:VAL:HB	2.02	0.42
2:D:4029:ASN:ND2	2:D:4035:ILE:HB	2.34	0.42
2:F:1714:LEU:O	2:F:1718:ILE:HG22	2.20	0.42
2:H:1456:ASP:C	2:H:1491:ASN:HD21	2.22	0.42
2:H:1852:MET:HB2	2:H:1854:ILE:HG12	2.02	0.42
2:H:3757:ARG:O	2:H:3761:GLN:HG3	2.19	0.42
2:H:3766:HIS:CE1	2:H:3807:VAL:HA	2.55	0.42
2:B:156:GLN:HG2	2:B:157:ARG:N	2.34	0.42
2:B:951:ARG:H	2:B:970:LEU:HA	1.84	0.42
2:B:3958:ASN:ND2	2:B:4017:ASP:OD2	2.52	0.42
2:B:3974:SER:O	2:B:3978:SER:HB3	2.19	0.42
2:B:4165:ILE:O	2:B:4169:PHE:HD1	2.03	0.42
2:B:4954:THR:O	2:B:4963:SER:OG	2.31	0.42
2:D:1732:SER:OG	2:D:2141:ARG:NH2	2.53	0.42
2:F:646:PRO:HB2	2:F:648:ILE:HG12	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:3637:LEU:HD12	2:F:3640:LEU:HD12	2.02	0.42
2:H:1245:PHE:CE1	2:H:1600:LEU:HB2	2.54	0.42
2:H:2139:LEU:HD23	2:H:2139:LEU:HA	1.90	0.42
2:H:4861:TYR:OH	2:H:4884:HIS:NE2	2.49	0.42
1:A:27:THR:HB	1:A:100:ASP:HB3	2.02	0.41
2:B:2114:SER:O	2:B:2118:VAL:HG23	2.19	0.41
2:B:2139:LEU:HD23	2:B:2139:LEU:HA	1.90	0.41
1:C:8:SER:HB2	1:C:71:ARG:HB2	2.01	0.41
2:D:533:ASN:ND2	2:D:536:ASN:OD1	2.41	0.41
2:F:597:HIS:HB2	2:F:1665:HIS:ND1	2.35	0.41
2:F:1450:VAL:HA	2:F:1552:VAL:HG12	2.02	0.41
2:F:3987:PHE:O	2:F:3990:VAL:HG22	2.19	0.41
2:F:4059:MET:HA	2:F:4062:LYS:HE2	2.02	0.41
1:G:27:THR:HB	1:G:100:ASP:HB3	2.02	0.41
2:H:24:CYS:SG	2:H:35:LEU:HB2	2.60	0.41
2:H:107:ILE:N	2:H:148:TRP:O	2.47	0.41
2:H:156:GLN:HG2	2:H:157:ARG:N	2.34	0.41
2:H:4165:ILE:O	2:H:4169:PHE:HD1	2.03	0.41
2:B:255:HIS:ND1	2:B:480:GLU:OE1	2.53	0.41
2:B:1244:GLN:OE1	2:B:1458:HIS:ND1	2.52	0.41
2:B:1456:ASP:C	2:B:1491:ASN:HD21	2.22	0.41
2:D:3637:LEU:HD12	2:D:3640:LEU:HD12	2.02	0.41
2:D:4059:MET:HA	2:D:4062:LYS:HE2	2.02	0.41
1:E:78:PRO:HA	1:E:81:ALA:HB3	2.03	0.41
2:F:38:ALA:HB2	2:F:65:CYS:HB3	2.01	0.41
2:F:1245:PHE:CD2	2:F:1290:ARG:HD3	2.55	0.41
2:F:1951:GLU:OE1	2:F:1955:ARG:NH1	2.53	0.41
2:F:3804:ASN:HB3	2:F:3807:VAL:HB	2.02	0.41
2:H:1143:TRP:HB3	2:H:1164:LEU:HD11	2.01	0.41
2:H:1245:PHE:CD2	2:H:1290:ARG:HD3	2.56	0.41
2:H:3974:SER:O	2:H:3978:SER:HB3	2.20	0.41
2:B:125:ARG:N	2:B:134:ASP:OD2	2.42	0.41
2:B:689:THR:HA	2:B:778:PHE:HE2	1.85	0.41
2:B:1732:SER:OG	2:B:2141:ARG:NH2	2.53	0.41
2:B:1959:LEU:HD23	2:B:2139:LEU:HD21	2.01	0.41
2:D:24:CYS:SG	2:D:35:LEU:HB2	2.60	0.41
2:D:102:LEU:HA	2:D:161:GLU:O	2.20	0.41
2:D:1130:GLN:HE21	2:D:1132:TRP:HZ3	1.66	0.41
2:D:4165:ILE:O	2:D:4169:PHE:HD1	2.03	0.41
2:F:102:LEU:HA	2:F:161:GLU:O	2.21	0.41
2:F:773:LEU:HD23	2:F:773:LEU:H	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:1683:HIS:NE2	2:F:1799:LEU:O	2.36	0.41
2:B:1111:PRO:HD3	2:B:1605:TRP:HE1	1.86	0.41
2:B:1852:MET:HB2	2:B:1854:ILE:HG12	2.02	0.41
2:D:38:ALA:HB2	2:D:65:CYS:HB3	2.01	0.41
2:D:265:LEU:HD13	2:D:281:ARG:HH12	1.85	0.41
2:D:773:LEU:HD23	2:D:773:LEU:H	1.85	0.41
2:D:1155:LEU:HD23	2:D:1155:LEU:HA	1.92	0.41
2:F:255:HIS:ND1	2:F:480:GLU:OE1	2.53	0.41
2:H:1732:SER:OG	2:H:2141:ARG:NH2	2.53	0.41
2:B:1240:LYS:HG2	2:B:1242:LEU:HB3	2.03	0.41
2:D:689:THR:HA	2:D:778:PHE:HE2	1.85	0.41
2:D:1450:VAL:HA	2:D:1552:VAL:HG12	2.02	0.41
2:D:3958:ASN:ND2	2:D:4017:ASP:OD2	2.53	0.41
2:F:265:LEU:HD13	2:F:281:ARG:HH12	1.85	0.41
2:F:1111:PRO:HD3	2:F:1605:TRP:HE1	1.86	0.41
2:F:1240:LYS:HG2	2:F:1242:LEU:HB3	2.03	0.41
2:F:2143:TYR:CD2	2:F:2198:LEU:HD13	2.56	0.41
2:F:4029:ASN:OD1	2:F:4030:VAL:N	2.54	0.41
2:H:265:LEU:HD13	2:H:281:ARG:HH12	1.85	0.41
2:H:592:LYS:HA	2:H:1580:PHE:CE1	2.55	0.41
2:H:4040:VAL:O	2:H:4044:VAL:HG23	2.21	0.41
2:B:256:ALA:HB3	2:B:481:GLU:OE1	2.21	0.41
2:B:385:ASP:CG	2:H:156:GLN:HE22	2.22	0.41
2:B:554:LEU:HD23	2:B:554:LEU:H	1.84	0.41
2:B:1245:PHE:CD2	2:B:1290:ARG:HD3	2.56	0.41
2:B:4029:ASN:OD1	2:B:4030:VAL:N	2.54	0.41
2:B:4569:PHE:CE1	2:B:4811:LEU:HD11	2.56	0.41
2:D:839:LEU:N	2:D:1200:GLY:O	2.54	0.41
2:D:1683:HIS:NE2	2:D:1799:LEU:O	2.36	0.41
2:D:1714:LEU:O	2:D:1718:ILE:HG22	2.20	0.41
2:D:1951:GLU:OE1	2:D:1955:ARG:NH1	2.53	0.41
2:F:554:LEU:H	2:F:554:LEU:HD23	1.85	0.41
2:F:839:LEU:N	2:F:1200:GLY:O	2.54	0.41
2:F:1104:TRP:CD1	2:F:1190:PRO:HA	2.56	0.41
2:H:13:PHE:CD1	2:H:162:LYS:HB3	2.56	0.41
2:H:773:LEU:HD23	2:H:773:LEU:H	1.85	0.41
2:H:1683:HIS:NE2	2:H:1799:LEU:O	2.36	0.41
2:H:4140:VAL:HA	2:H:4143:THR:HG22	2.03	0.41
2:B:773:LEU:H	2:B:773:LEU:HD23	1.85	0.41
2:D:1240:LYS:HG2	2:D:1242:LEU:HB3	2.03	0.41
2:D:4925:ILE:O	2:D:4929:ILE:HG12	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:4942:ARG:HE	2:D:4942:ARG:HB3	1.61	0.41
2:F:13:PHE:CD1	2:F:162:LYS:HB3	2.56	0.41
2:F:1244:GLN:OE1	2:F:1458:HIS:ND1	2.52	0.41
2:F:4569:PHE:CE1	2:F:4811:LEU:HD11	2.56	0.41
2:H:951:ARG:H	2:H:970:LEU:HA	1.84	0.41
2:H:1951:GLU:OE1	2:H:1955:ARG:NH1	2.53	0.41
2:B:526:LEU:O	2:B:530:ILE:HG12	2.21	0.41
2:B:839:LEU:N	2:B:1200:GLY:O	2.54	0.41
2:B:2377:LEU:HD11	2:B:2431:ILE:HD11	2.03	0.41
2:B:4925:ILE:O	2:B:4929:ILE:HG12	2.21	0.41
2:D:315:CYS:HB2	2:D:349:GLN:NE2	2.35	0.41
2:D:1104:TRP:CD1	2:D:1190:PRO:HA	2.56	0.41
2:D:3374:UNK:HA	2:D:3442:ILE:HD11	2.02	0.41
2:D:3974:SER:O	2:D:3978:SER:HB3	2.20	0.41
2:D:4976:HIS:CD2	2:D:4981:HIS:HB2	2.55	0.41
2:F:4040:VAL:O	2:F:4044:VAL:HG23	2.21	0.41
2:F:4207:GLU:OE1	2:F:4207:GLU:HA	2.21	0.41
2:H:839:LEU:N	2:H:1200:GLY:O	2.54	0.41
2:H:1104:TRP:CD1	2:H:1190:PRO:HA	2.56	0.41
2:H:1674:CYS:SG	2:H:1682:ALA:HA	2.61	0.41
2:B:224:HIS:N	2:B:229:GLU:O	2.51	0.41
2:B:251:SER:O	2:B:255:HIS:CD2	2.74	0.41
2:B:592:LYS:HA	2:B:1580:PHE:CE1	2.55	0.41
2:B:847:SER:OG	2:B:849:THR:HG22	2.20	0.41
2:B:1674:CYS:SG	2:B:1682:ALA:HA	2.61	0.41
2:B:1689:VAL:HG12	2:B:1694:LEU:HD12	2.03	0.41
2:B:4140:VAL:HA	2:B:4143:THR:HG22	2.03	0.41
2:B:4853:ALA:HA	2:B:4857:PHE:CD2	2.50	0.41
2:B:4976:HIS:CD2	2:B:4981:HIS:HB2	2.55	0.41
1:C:78:PRO:HA	1:C:81:ALA:HB3	2.03	0.41
2:D:224:HIS:N	2:D:229:GLU:O	2.51	0.41
2:D:3910:ILE:HA	2:D:3913:CYS:SG	2.61	0.41
2:D:4029:ASN:OD1	2:D:4030:VAL:N	2.54	0.41
1:E:27:THR:HB	1:E:100:ASP:HB3	2.02	0.41
1:E:36:PHE:N	1:E:36:PHE:CD1	2.89	0.41
2:F:315:CYS:HB2	2:F:349:GLN:NE2	2.35	0.41
1:G:24:VAL:HA	1:G:102:GLU:O	2.21	0.41
1:G:78:PRO:HA	1:G:81:ALA:HB3	2.03	0.41
2:H:1111:PRO:HD3	2:H:1605:TRP:HE1	1.86	0.41
2:H:1689:VAL:HG12	2:H:1694:LEU:HD12	2.03	0.41
2:H:2377:LEU:HD11	2:H:2431:ILE:HD11	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:3637:LEU:HD12	2:H:3640:LEU:HD12	2.02	0.41
2:H:4049:ASN:O	2:H:4053:ILE:HD12	2.21	0.41
2:H:4659:TYR:OH	2:H:4786:SER:OG	2.31	0.41
2:B:1471:ALA:HB1	2:B:1488:LYS:HZ1	1.86	0.41
2:B:3411:PRO:HB2	2:B:3412:LEU:H	1.73	0.41
1:C:27:THR:HB	1:C:100:ASP:HB3	2.02	0.41
2:D:666:VAL:HG13	2:D:744:VAL:HB	2.03	0.41
2:D:1811:LYS:HE3	2:D:1811:LYS:HB3	1.87	0.41
2:D:1852:MET:HB2	2:D:1854:ILE:HG12	2.02	0.41
2:D:2378:LEU:HD12	2:D:2466:ASP:HA	2.03	0.41
2:D:3964:ILE:HD12	2:D:4025:LEU:HA	2.03	0.41
2:F:107:ILE:N	2:F:148:TRP:O	2.47	0.41
2:F:256:ALA:HB3	2:F:481:GLU:OE1	2.21	0.41
2:F:1500:PHE:CD1	2:F:1531:ALA:HB2	2.56	0.41
2:H:597:HIS:HB2	2:H:1665:HIS:ND1	2.35	0.41
2:H:4569:PHE:CE1	2:H:4811:LEU:HD11	2.56	0.41
2:H:4698:GLN:O	2:H:4701:ARG:HG2	2.21	0.41
2:B:315:CYS:HB2	2:B:349:GLN:NE2	2.35	0.40
2:B:597:HIS:HB2	2:B:1665:HIS:ND1	2.35	0.40
2:B:1527:MET:O	2:B:1539:PHE:HA	2.21	0.40
2:B:3374:UNK:HA	2:B:3442:ILE:HD11	2.02	0.40
2:B:3637:LEU:HD12	2:B:3640:LEU:HD12	2.02	0.40
1:C:36:PHE:CD1	1:C:36:PHE:N	2.89	0.40
2:D:256:ALA:HB3	2:D:481:GLU:OE1	2.21	0.40
2:D:1245:PHE:CD2	2:D:1290:ARG:HD3	2.56	0.40
2:D:1674:CYS:SG	2:D:1682:ALA:HA	2.61	0.40
2:F:2378:LEU:HD12	2:F:2466:ASP:HA	2.03	0.40
2:H:251:SER:O	2:H:255:HIS:CD2	2.74	0.40
2:H:256:ALA:HB3	2:H:481:GLU:OE1	2.21	0.40
2:H:689:THR:HA	2:H:778:PHE:HE2	1.85	0.40
2:H:1240:LYS:HG2	2:H:1242:LEU:HB3	2.03	0.40
2:H:1244:GLN:OE1	2:H:1458:HIS:ND1	2.52	0.40
2:H:1500:PHE:CD1	2:H:1531:ALA:HB2	2.56	0.40
2:H:3418:ASP:OD1	2:H:3419:ASN:N	2.54	0.40
2:H:4976:HIS:CD2	2:H:4981:HIS:HB2	2.55	0.40
2:B:265:LEU:HD13	2:B:281:ARG:HH12	1.85	0.40
2:B:591:ASP:HA	2:B:1594:ARG:NH1	2.36	0.40
2:B:1720:LEU:HD22	2:B:1852:MET:SD	2.62	0.40
2:B:2143:TYR:CD2	2:B:2198:LEU:HD13	2.56	0.40
2:B:3418:ASP:OD1	2:B:3419:ASN:N	2.54	0.40
2:D:526:LEU:O	2:D:530:ILE:HG12	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:4671:ARG:NH1	2:D:4780:VAL:HG13	2.36	0.40
1:E:24:VAL:HA	1:E:102:GLU:O	2.21	0.40
2:F:1720:LEU:HD22	2:F:1852:MET:SD	2.61	0.40
2:F:1816:LEU:HD12	2:F:1816:LEU:HA	1.91	0.40
2:F:3418:ASP:OD1	2:F:3419:ASN:N	2.55	0.40
2:F:4193:SER:HB3	2:F:4196:ASN:ND2	2.37	0.40
2:F:4698:GLN:O	2:F:4701:ARG:HG2	2.22	0.40
2:F:4847:TYR:O	2:F:4850:THR:HG22	2.21	0.40
2:F:4976:HIS:CD2	2:F:4981:HIS:HB2	2.55	0.40
1:G:36:PHE:CD1	1:G:36:PHE:N	2.89	0.40
2:H:1739:THR:O	2:H:1742:THR:OG1	2.32	0.40
2:H:3804:ASN:HB3	2:H:3807:VAL:HB	2.02	0.40
2:H:3957:PHE:HD1	2:H:3957:PHE:HA	1.77	0.40
2:H:4029:ASN:OD1	2:H:4030:VAL:N	2.54	0.40
1:A:24:VAL:HA	1:A:102:GLU:O	2.21	0.40
2:B:13:PHE:CD1	2:B:162:LYS:HB3	2.56	0.40
2:B:666:VAL:HG13	2:B:744:VAL:HB	2.03	0.40
2:B:2298:LYS:O	2:B:2301:SER:OG	2.33	0.40
2:B:4847:TYR:O	2:B:4850:THR:HG22	2.21	0.40
2:D:531:ARG:NH2	2:D:562:GLU:OE2	2.49	0.40
2:D:579:GLN:H	2:D:582:HIS:CD2	2.40	0.40
2:D:591:ASP:HA	2:D:1594:ARG:NH1	2.36	0.40
2:D:1689:VAL:HG12	2:D:1694:LEU:HD12	2.03	0.40
2:D:4207:GLU:OE1	2:D:4207:GLU:HA	2.21	0.40
2:F:1007:TYR:CE2	2:F:1009:ALA:HB3	2.57	0.40
2:F:1674:CYS:SG	2:F:1682:ALA:HA	2.61	0.40
2:F:2443:LEU:O	2:F:2448:LYS:N	2.37	0.40
2:F:4049:ASN:O	2:F:4053:ILE:HD12	2.21	0.40
2:F:4165:ILE:O	2:F:4169:PHE:HD1	2.04	0.40
2:H:3374:UNK:HA	2:H:3442:ILE:HD11	2.02	0.40
1:A:28:GLY:HA2	1:A:98:ILE:O	2.21	0.40
2:B:107:ILE:N	2:B:148:TRP:O	2.47	0.40
2:B:1007:TYR:CE2	2:B:1009:ALA:HB3	2.57	0.40
2:B:1698:LEU:HA	2:B:1712:TYR:CE1	2.51	0.40
2:D:13:PHE:CD1	2:D:162:LYS:HB3	2.56	0.40
2:D:1111:PRO:HD3	2:D:1605:TRP:HE1	1.86	0.40
2:D:4569:PHE:CE1	2:D:4811:LEU:HD11	2.56	0.40
1:E:28:GLY:HA2	1:E:98:ILE:O	2.21	0.40
2:F:689:THR:HA	2:F:778:PHE:HE2	1.85	0.40
2:F:1852:MET:HB2	2:F:1854:ILE:HG12	2.02	0.40
2:H:315:CYS:HB2	2:H:349:GLN:NE2	2.35	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:526:LEU:O	2:H:530:ILE:HG12	2.21	0.40
2:B:2378:LEU:HD12	2:B:2466:ASP:HA	2.03	0.40
2:B:4040:VAL:O	2:B:4044:VAL:HG23	2.21	0.40
1:C:8:SER:HB2	1:C:71:ARG:HH11	1.87	0.40
2:D:2143:TYR:CD2	2:D:2198:LEU:HD13	2.56	0.40
2:D:2377:LEU:HD11	2:D:2431:ILE:HD11	2.03	0.40
2:D:4035:ILE:H	2:D:4035:ILE:HD12	1.86	0.40
2:D:4049:ASN:O	2:D:4053:ILE:HD12	2.21	0.40
2:D:4140:VAL:HA	2:D:4143:THR:HG22	2.03	0.40
2:D:4698:GLN:O	2:D:4701:ARG:HG2	2.21	0.40
2:F:1689:VAL:HG12	2:F:1694:LEU:HD12	2.03	0.40
2:F:4925:ILE:O	2:F:4929:ILE:HG12	2.21	0.40
2:H:575:LEU:HA	2:H:578:ILE:HG12	2.03	0.40
2:H:666:VAL:HG13	2:H:744:VAL:HB	2.03	0.40
2:H:1471:ALA:HB1	2:H:1488:LYS:HZ1	1.86	0.40
2:H:1527:MET:O	2:H:1539:PHE:HA	2.21	0.40
2:H:2378:LEU:HD12	2:H:2466:ASP:HA	2.03	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	104/110 (94%)	99 (95%)	5 (5%)	0	100	100
1	C	104/110 (94%)	99 (95%)	5 (5%)	0	100	100
1	E	104/110 (94%)	99 (95%)	5 (5%)	0	100	100
1	G	104/110 (94%)	99 (95%)	5 (5%)	0	100	100
2	B	3319/4624 (72%)	3275 (99%)	44 (1%)	0	100	100
2	D	3319/4624 (72%)	3273 (99%)	46 (1%)	0	100	100
2	F	3319/4624 (72%)	3275 (99%)	44 (1%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	H	3319/4624 (72%)	3275 (99%)	44 (1%)	0	100	100
All	All	13692/18936 (72%)	13494 (99%)	198 (1%)	0	100	100

There are no Ramachandran outliers to report.

5.3.2 Protein sidechains (i)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	67/90 (74%)	65 (97%)	2 (3%)	41	64
1	C	67/90 (74%)	65 (97%)	2 (3%)	41	64
1	E	67/90 (74%)	65 (97%)	2 (3%)	41	64
1	G	67/90 (74%)	65 (97%)	2 (3%)	41	64
2	B	2115/3648 (58%)	2106 (100%)	9 (0%)	91	94
2	D	2115/3648 (58%)	2106 (100%)	9 (0%)	91	94
2	F	2115/3648 (58%)	2106 (100%)	9 (0%)	91	94
2	H	2115/3648 (58%)	2106 (100%)	9 (0%)	91	94
All	All	8728/14952 (58%)	8684 (100%)	44 (0%)	89	93

All (44) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	31	GLN
1	A	36	PHE
2	B	165	VAL
2	B	275	ARG
2	B	373	LYS
2	B	1087	ARG
2	B	2128	GLN
2	B	2157	LEU
2	B	2628	VAL
2	B	4041	ASP

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Mol	Chain	Res	Type
2	B	4878	MET
1	C	31	GLN
1	C	36	PHE
2	D	165	VAL
2	D	275	ARG
2	D	373	LYS
2	D	1087	ARG
2	D	2128	GLN
2	D	2157	LEU
2	D	2628	VAL
2	D	4041	ASP
2	D	4878	MET
1	E	31	GLN
1	E	36	PHE
2	F	165	VAL
2	F	275	ARG
2	F	373	LYS
2	F	1087	ARG
2	F	2128	GLN
2	F	2157	LEU
2	F	2628	VAL
2	F	4041	ASP
2	F	4878	MET
1	G	31	GLN
1	G	36	PHE
2	H	165	VAL
2	H	275	ARG
2	H	373	LYS
2	H	1087	ARG
2	H	2128	GLN
2	H	2157	LEU
2	H	2628	VAL
2	H	4041	ASP
2	H	4878	MET

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (17) such sidechains are listed below:

Mol	Chain	Res	Type
2	B	255	HIS
2	B	495	ASN
2	B	1052	ASN
2	B	4712	ASN

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Mol	Chain	Res	Type
2	D	255	HIS
2	D	495	ASN
2	D	1052	ASN
2	D	4712	ASN
2	F	255	HIS
2	F	495	ASN
2	F	1052	ASN
2	F	1696	HIS
2	F	4712	ASN
2	H	255	HIS
2	H	495	ASN
2	H	1052	ASN
2	H	4712	ASN

5.3.3 RNA

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates

There are no monosaccharides in this entry.

5.6 Ligand geometry

Of 4 ligands modelled in this entry, 4 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
2	B	25
2	D	25
2	F	25
2	H	25

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	B	3606:UNK	C	3634:MET	N	44.08
1	D	3606:UNK	C	3634:MET	N	44.08
1	F	3606:UNK	C	3634:MET	N	44.08
1	H	3606:UNK	C	3634:MET	N	44.08
1	B	2939:ARG	C	2956:UNK	N	30.87
1	D	2939:ARG	C	2956:UNK	N	30.87
1	F	2939:ARG	C	2956:UNK	N	30.87
1	H	2939:ARG	C	2956:UNK	N	30.87
1	B	2700:UNK	C	2736:ASP	N	28.31
1	D	2700:UNK	C	2736:ASP	N	28.31
1	F	2700:UNK	C	2736:ASP	N	28.31
1	H	2700:UNK	C	2736:ASP	N	28.31
1	B	3385:UNK	C	3411:PRO	N	28.09
1	D	3385:UNK	C	3411:PRO	N	28.09
1	F	3385:UNK	C	3411:PRO	N	28.09
1	H	3385:UNK	C	3411:PRO	N	28.09
1	B	3555:UNK	C	3564:SER	N	21.04
1	D	3555:UNK	C	3564:SER	N	21.04
1	F	3555:UNK	C	3564:SER	N	21.04
1	H	3555:UNK	C	3564:SER	N	21.04
1	B	2653:UNK	C	2664:UNK	N	18.19
1	D	2653:UNK	C	2664:UNK	N	18.19
1	F	2653:UNK	C	2664:UNK	N	18.19
1	H	2653:UNK	C	2664:UNK	N	18.19
1	B	3238:UNK	C	3278:UNK	N	17.52
1	D	3238:UNK	C	3278:UNK	N	17.52
1	F	3238:UNK	C	3278:UNK	N	17.52

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Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	H	3238:UNK	C	3278:UNK	N	17.52
1	B	3193:UNK	C	3202:UNK	N	17.16
1	D	3193:UNK	C	3202:UNK	N	17.16
1	F	3193:UNK	C	3202:UNK	N	17.16
1	H	3193:UNK	C	3202:UNK	N	17.16
1	B	2978:UNK	C	2999:UNK	N	15.49
1	D	2978:UNK	C	2999:UNK	N	15.49
1	F	2978:UNK	C	2999:UNK	N	15.49
1	H	2978:UNK	C	2999:UNK	N	15.49
1	B	3166:UNK	C	3173:UNK	N	15.27
1	D	3166:UNK	C	3173:UNK	N	15.27
1	F	3166:UNK	C	3173:UNK	N	15.27
1	H	3166:UNK	C	3173:UNK	N	15.27
1	B	3062:UNK	C	3146:UNK	N	14.85
1	D	3062:UNK	C	3146:UNK	N	14.85
1	F	3062:UNK	C	3146:UNK	N	14.85
1	H	3062:UNK	C	3146:UNK	N	14.85
1	B	3448:LYS	C	3509:UNK	N	14.70
1	D	3448:LYS	C	3509:UNK	N	14.70
1	H	3448:LYS	C	3509:UNK	N	14.70
1	F	3448:LYS	C	3509:UNK	N	14.69
1	B	3358:UNK	C	3365:UNK	N	14.66
1	D	3358:UNK	C	3365:UNK	N	14.66
1	F	3358:UNK	C	3365:UNK	N	14.66
1	H	3358:UNK	C	3365:UNK	N	14.66
1	B	3018:UNK	C	3032:UNK	N	13.52
1	D	3018:UNK	C	3032:UNK	N	13.52
1	F	3018:UNK	C	3032:UNK	N	13.52
1	H	3018:UNK	C	3032:UNK	N	13.52
1	B	3046:UNK	C	3051:UNK	N	12.43
1	D	3046:UNK	C	3051:UNK	N	12.43
1	F	3046:UNK	C	3051:UNK	N	12.43
1	H	3046:UNK	C	3051:UNK	N	12.43
1	B	3217:UNK	C	3225:UNK	N	12.35
1	D	3217:UNK	C	3225:UNK	N	12.35
1	F	3217:UNK	C	3225:UNK	N	12.35
1	H	3217:UNK	C	3225:UNK	N	12.35
1	B	4090:LYS	C	4109:UNK	N	11.51
1	D	4090:LYS	C	4109:UNK	N	11.51
1	F	4090:LYS	C	4109:UNK	N	11.51
1	H	4090:LYS	C	4109:UNK	N	11.51
1	B	2683:UNK	C	2688:UNK	N	11.14

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Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	D	2683:UNK	C	2688:UNK	N	11.14
1	F	2683:UNK	C	2688:UNK	N	11.14
1	H	2683:UNK	C	2688:UNK	N	11.14
1	B	3308:UNK	C	3321:UNK	N	10.68
1	D	3308:UNK	C	3321:UNK	N	10.68
1	F	3308:UNK	C	3321:UNK	N	10.68
1	H	3308:UNK	C	3321:UNK	N	10.68
1	B	2632:PRO	C	2641:UNK	N	10.67
1	D	2632:PRO	C	2641:UNK	N	10.67
1	F	2632:PRO	C	2641:UNK	N	10.67
1	H	2632:PRO	C	2641:UNK	N	10.67
1	B	3526:UNK	C	3534:UNK	N	10.45
1	D	3526:UNK	C	3534:UNK	N	10.45
1	F	3526:UNK	C	3534:UNK	N	10.45
1	H	3526:UNK	C	3534:UNK	N	10.45
1	B	4114:UNK	C	4121:GLU	N	9.88
1	D	4114:UNK	C	4121:GLU	N	9.88
1	F	4114:UNK	C	4121:GLU	N	9.88
1	H	4114:UNK	C	4121:GLU	N	9.88
1	B	3335:UNK	C	3346:UNK	N	9.64
1	D	3335:UNK	C	3346:UNK	N	9.64
1	F	3335:UNK	C	3346:UNK	N	9.64
1	H	3335:UNK	C	3346:UNK	N	9.64
1	B	3288:UNK	C	3292:UNK	N	9.19
1	D	3288:UNK	C	3292:UNK	N	9.19
1	F	3288:UNK	C	3292:UNK	N	9.19
1	H	3288:UNK	C	3292:UNK	N	9.19
1	D	3544:UNK	C	3548:UNK	N	8.82
1	H	3544:UNK	C	3548:UNK	N	8.82
1	B	3544:UNK	C	3548:UNK	N	8.81
1	F	3544:UNK	C	3548:UNK	N	8.81