# Full wwPDB X-ray Structure Validation Report ⓘ

Oct 22, 2023 – 05:50 PM EDT

| | | |
|---|---|---|
| PDB ID | : | 3AOA |
| Title | : | Structures of the multidrug exporter AcrB reveal a proximal multisite drug-binding pocket |
| Authors | : | Nakashima, R.; Sakurai, K.; Yamaguchi, A. |
| Deposited on | : | 2010-09-23 |
| Resolution | : | 3.35 Å(reported) |

This is a Full wwPDB X-ray Structure 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/XrayValidationReportHelp
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.

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

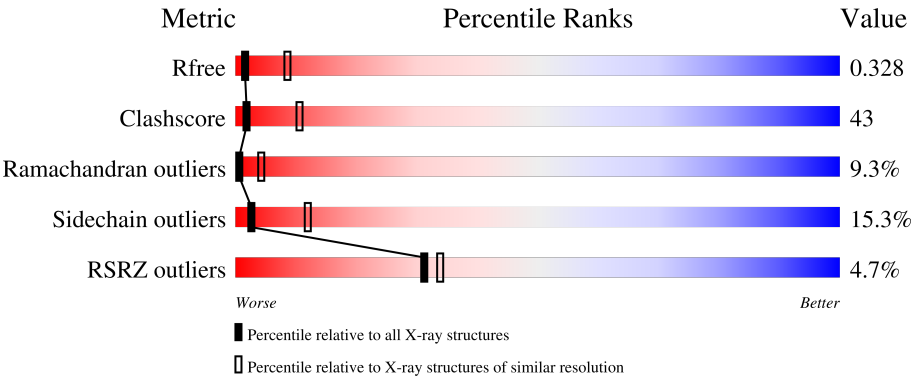
| | | |
|---|---|---|
| MolProbity | : | 4.02b-467 |
| Xtriage (Phenix) | : | 1.13 |
| EDS | : | 2.36 |
| Percentile statistics | : | 20191225.v01 (using entries in the PDB archive December 25th 2019) |
| Refmac | : | 5.8.0158 |
| CCP4 | : | 7.0.044 (Gargrove) |
| Ideal geometry (proteins) | : | Engh & Huber (2001) |
| Ideal geometry (DNA, RNA) | : | Parkinson et al. (1996) |
| Validation Pipeline (wwPDB-VP) | : | 2.36 |

# 1 Overall quality at a glance (i)

The following experimental techniques were used to determine the structure:
*X-RAY DIFFRACTION*

The reported resolution of this entry is 3.35 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) | Similar resolution (#Entries, resolution range(Å)) |
|---|---|---|
| $R_{free}$ | 130704 | 1558 (3.42-3.30) |
| Clashscore | 141614 | 1627 (3.42-3.30) |
| Ramachandran outliers | 138981 | 1599 (3.42-3.30) |
| Sidechain outliers | 138945 | 1598 (3.42-3.30) |
| RSRZ outliers | 127900 | 1507 (3.42-3.30) |

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower 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 electron density. The numeric value is given above the bar.

| Mol | Chain | Length | Quality of chain |
|---|---|---|---|
| 1 | A | 1053 | 4% 37% 45% 13% |
| 1 | B | 1053 | 4% 37% 45% 14% |
| 1 | C | 1053 | 5% 37% 47% 11% |

# 2 Entry composition (i)

There are 2 unique types of molecules in this entry. The entry contains 23325 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the ZeroOcc column contains the number of atoms modelled with zero occupancy, 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 Acriflavine resistance protein B.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | A | 1022 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 7774 | 5003 | 1283 | 1444 | 44 | | | |
| 1 | B | 1022 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 7774 | 5003 | 1283 | 1444 | 44 | | | |
| 1 | C | 1022 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 7774 | 5003 | 1283 | 1444 | 44 | | | |

There are 12 discrepancies between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|---|---|---|---|---|---|
| A | 1050 | HIS | - | expression tag | UNP P31224 |
| A | 1051 | HIS | - | expression tag | UNP P31224 |
| A | 1052 | HIS | - | expression tag | UNP P31224 |
| A | 1053 | HIS | - | expression tag | UNP P31224 |
| B | 1050 | HIS | - | expression tag | UNP P31224 |
| B | 1051 | HIS | - | expression tag | UNP P31224 |
| B | 1052 | HIS | - | expression tag | UNP P31224 |
| B | 1053 | HIS | - | expression tag | UNP P31224 |
| C | 1050 | HIS | - | expression tag | UNP P31224 |
| C | 1051 | HIS | - | expression tag | UNP P31224 |
| C | 1052 | HIS | - | expression tag | UNP P31224 |
| C | 1053 | HIS | - | expression tag | UNP P31224 |

- Molecule 2 is water.

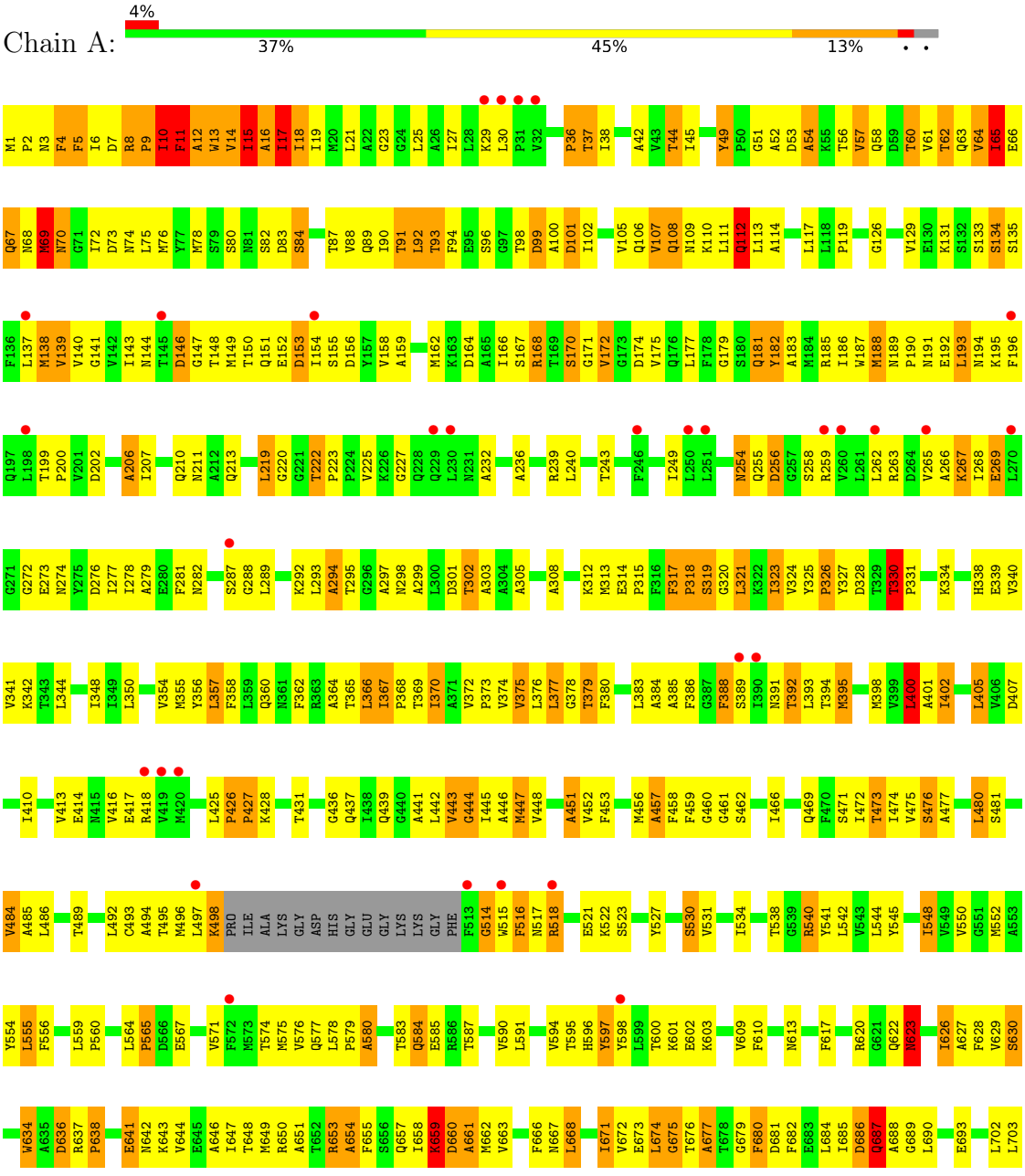
| Mol | Chain | Residues | Atoms | | ZeroOcc | AltConf |
|---|---|---|---|---|---|---|
| 2 | A | 1 | Total | O | 0 | 0 |
| | | | 1 | 1 | | |
| 2 | B | 1 | Total | O | 0 | 0 |
| | | | 1 | 1 | | |
| 2 | C | 1 | Total | O | 0 | 0 |
| | | | 1 | 1 | | |

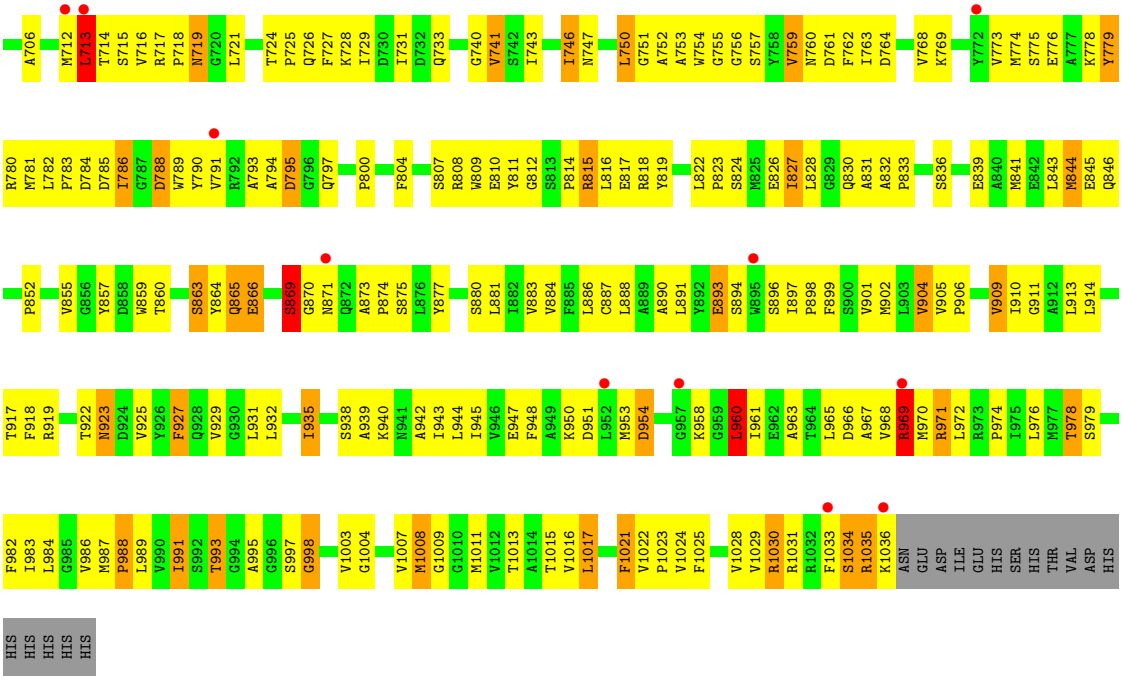
# 3 Residue-property plots (i)

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 electron 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 dot above a residue indicates a poor fit to the electron density (RSRZ > 2). 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: Acriflavine resistance protein B

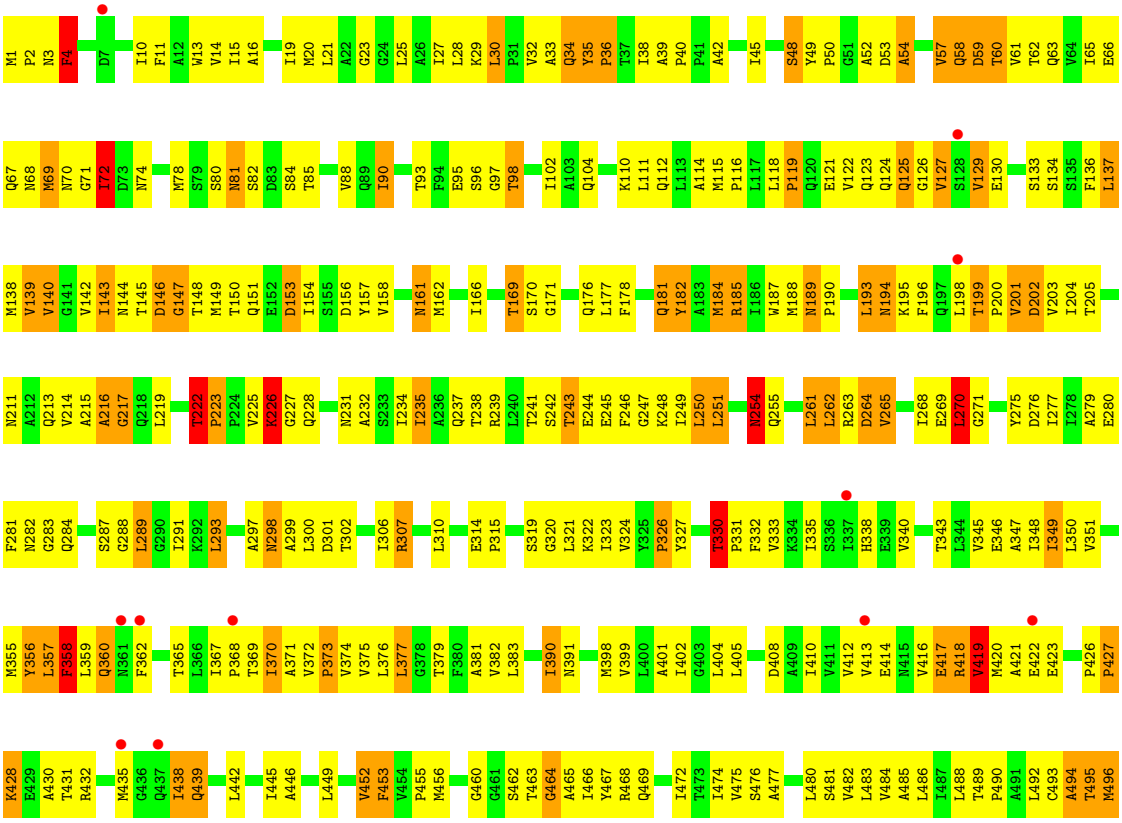
Chain A:

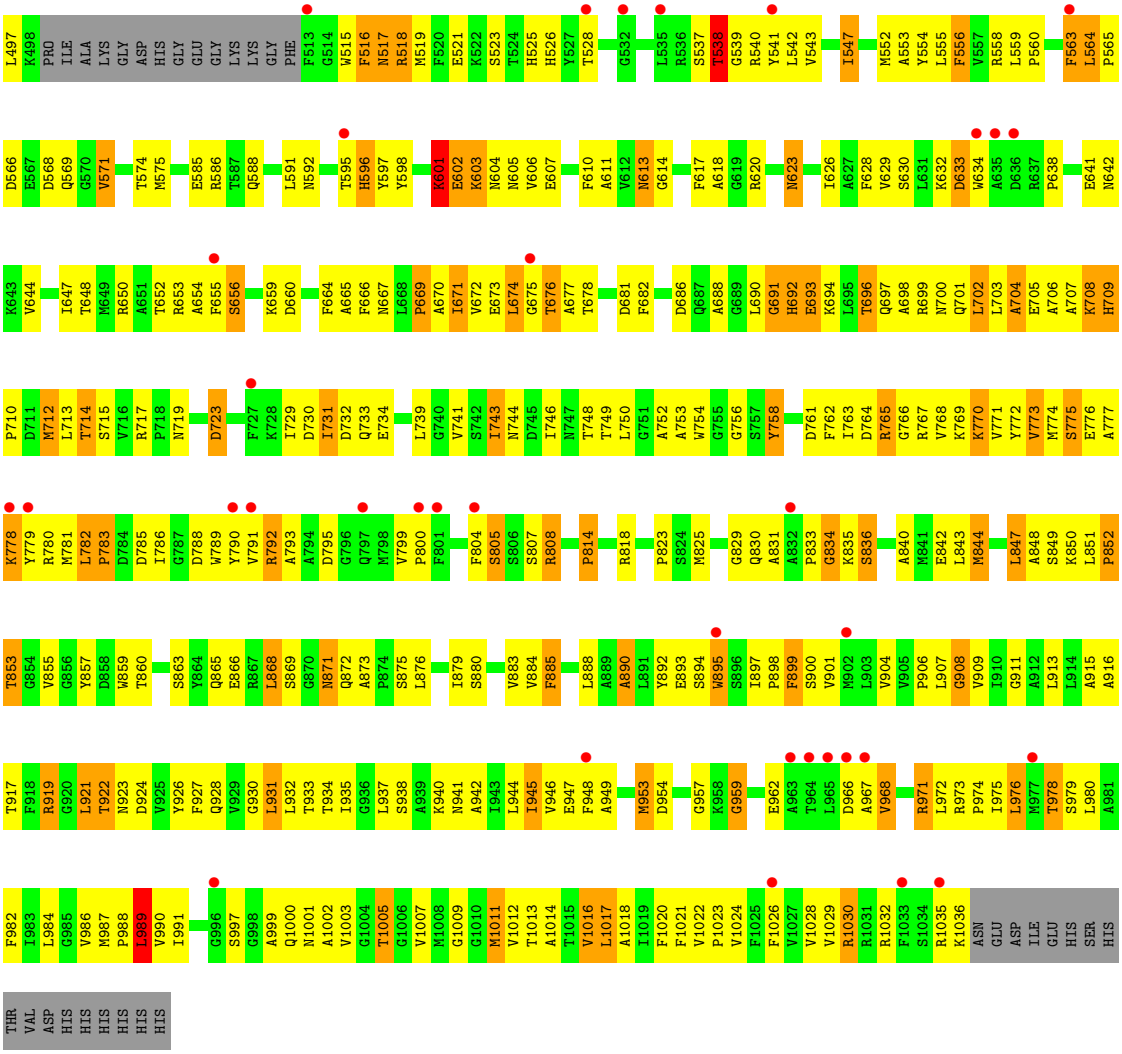




• Molecule 1: Acriflavine resistance protein B

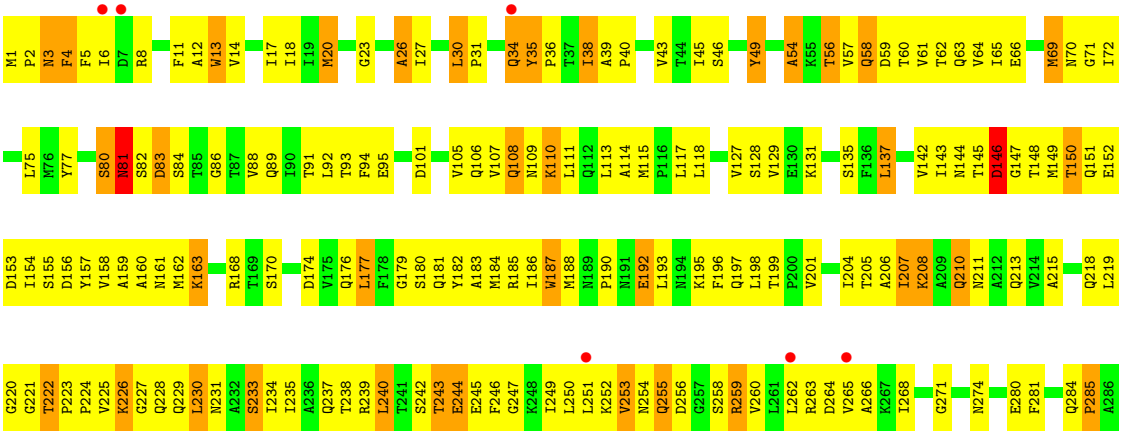
Chain B:

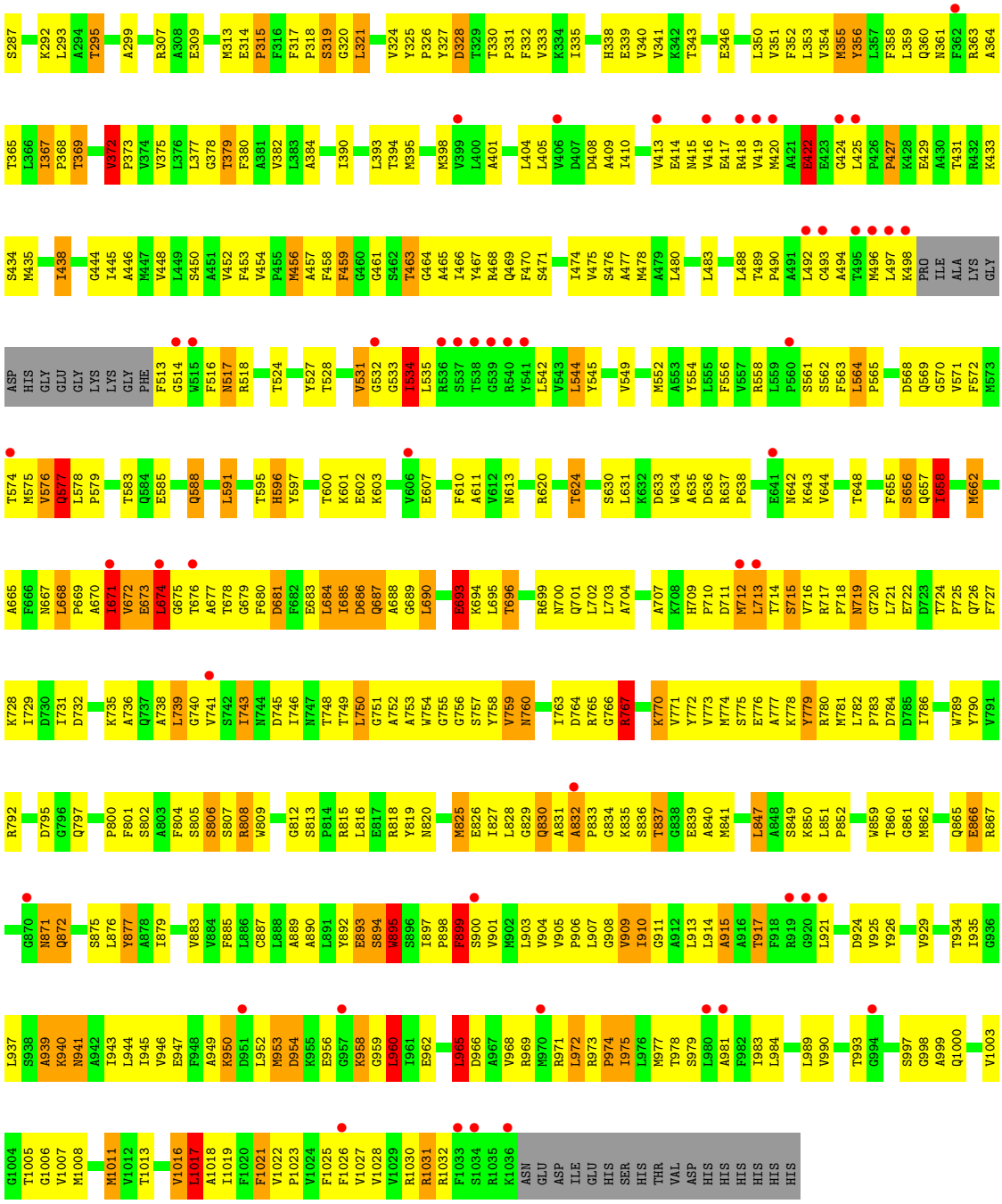





• Molecule 1: Acriflavine resistance protein B

Chain C:


S287 K292 L293 A294 T295 A299 R307 A308 E309 M313 E314 P315 F316 F317 P318 S319 G320 L321 V324 Y325 P326 Y327 D328 T329 T330 P331 F332 V333 K334 I335 H338 E339 V340 V341 K342 T343 E346 L350 V351 F352 L353 V354 M355 Y356 L357 F358 L359 Q360 N361 F362 R363 A364
T365 L366 I367 P368 T369 V372 P373 V374 V375 L376 L377 G378 T379 F380 A381 V382 L383 A384 I390 L393 T394 M396 M398 V399 L400 A401 L404 L405 V406 D407 D408 A409 I410 V413 E414 M415 V416 E417 R418 V419 M420 A421 E422 E423 G424 L425 P426 P427 K428 E429 A430 T431 R432 K433
S434 M435 I438 G444 I445 A446 M447 V448 L449 S450 A451 V452 F453 V454 P455 M456 A457 F458 F459 G460 G461 S462 T463 G464 A465 I466 Y467 R468 Q469 F470 S471 I474 V475 S476 A477 M478 A479 L480 L483 L488 T489 P490 A491 L492 C493 A494 T495 M496 L497 K498 PRO ILE ALA LYS GLY
ASP HIS GLY GLU GLY LYS LYS GLY PHE F513 G514 W515 F516 N517 R518 T524 Y527 T528 V531 G532 G533 I534 L535 R536 S537 T538 G539 R540 Y541 L542 L543 L544 Y545 V549 M552 A553 Y554 L555 F556 V557 R558 L559 P560 S561 S562 F563 L564 P565 D568 Q569 G570 V571 F572 M573
T574 M575 V576 Q577 L578 P579 T583 Q584 E585 Q588 L591 T595 H596 Y597 T600 K601 E602 K603 V606 E607 F610 A611 V612 N613 R620 T624 S630 L631 K632 D633 W634 A635 D636 R637 P638 E641 N642 K643 V644 T648 F655 S656 Q657 I658 M662
A665 F666 N667 L668 P669 A670 I671 V672 E673 L674 G675 T676 A677 T678 G679 F680 D681 F682 E683 L684 I685 D686 Q687 A688 G689 L690 E693 K694 L695 T696 R699 N700 Q701 L702 L703 A704 A707 K708 H709 P710 D711 M712 L713 T714 S715 V716 R717 P718 N719 G720 L721 E722 D723 T724 P725 Q726 F727
K728 I729 D730 I731 D732 K735 A736 Q737 A738 L739 G740 V741 S742 I743 N744 D745 I746 N747 T748 T749 L750 G751 A752 A753 W754 G755 G756 S757 Y758 V759 N760 I763 D764 R765 G766 R767 K770 V771 Y772 V773 M774 S775 E776 A777 K778 Y779 R780 M781 L782 P783 D784 D785 I786 W789 Y790 V791
R792 D795 G796 Q797 P800 F801 S802 A803 F804 S805 S806 S807 R808 W809 G812 S813 P814 R815 L816 E817 R818 Y819 N820 M825 E826 I827 L828 G829 Q830 A831 A832 P833 G834 K835 S836 T837 G838 E839 A840 M841 L847 A848 S849 K850 L851 P852 W859 T860 G861 M862 Q865 E866 R867
G870 N871 Q872 S875 L876 Y877 A878 I879 V883 V884 F885 L886 C887 L888 A889 A890 L891 Y892 E893 S894 W895 S896 I897 P898 F899 S900 V901 N902 L903 V904 V905 P906 L907 G908 V909 I910 G911 A912 L913 L914 A915 A916 T917 F918 R919 G920 L921 D924 V925 Y926 V929 T934 I935 G936
L937 S938 A939 K940 N941 A942 I943 L944 I945 V946 E947 F948 A949 K950 D951 L952 M953 D954 K955 E956 G957 K958 G959 L960 I961 E962 L965 D966 A967 V968 R969 M970 R971 L972 R973 P974 I975 L976 M977 T978 S979 L980 A981 F982 I983 L984 L989 V990 T993 G994 S997 G998 A999 Q1000 V1003
G1004 T1005 G1006 V1007 M1008 M1011 V1012 T1013 V1016 L1017 A1018 I1019 F1020 F1021 V1022 P1023 V1024 F1025 F1026 V1027 V1028 V1029 R1030 R1031 R1032 F1033 S1034 R1035 K1036 ASN GLU ASP ILE GLU HIS SER HIS THR VAL ASP HIS HIS HIS HIS HIS

# 4 Data and refinement statistics (i)

| Property | Value | Source |
|---|---|---|
| Space group | C 1 2 1 | Depositor |
| Cell constants<br>a, b, c, $\alpha$, $\beta$, $\gamma$ | 226.53Å 134.44Å 162.78Å<br>90.00° 97.73° 90.00° | Depositor |
| Resolution (Å) | 49.30 – 3.35<br>48.52 – 3.35 | Depositor<br>EDS |
| % Data completeness<br>(in resolution range) | 97.0 (49.30-3.35)<br>97.0 (48.52-3.35) | Depositor<br>EDS |
| $R_{merge}$ | 0.06 | Depositor |
| $R_{sym}$ | (Not available) | Depositor |
| $< I/\sigma(I) >$ [1] | 2.37 (at 3.33Å) | Xtriage |
| Refinement program | REFMAC | Depositor |
| R, $R_{free}$ | 0.271 , 0.326<br>0.272 , 0.328 | Depositor<br>DCC |
| $R_{free}$ test set | 3411 reflections (5.03%) | wwPDB-VP |
| Wilson B-factor (Å$^2$) | 105.7 | Xtriage |
| Anisotropy | 0.066 | Xtriage |
| Bulk solvent $k_{sol}$(e/Å$^3$), $B_{sol}$(Å$^2$) | 0.27 , 68.1 | EDS |
| L-test for twinning[2] | $< \|L\| > = 0.53$, $< L^2 > = 0.38$ | Xtriage |
| Estimated twinning fraction | No twinning to report. | Xtriage |
| $F_o$,$F_c$ correlation | 0.90 | EDS |
| Total number of atoms | 23325 | wwPDB-VP |
| Average B, all atoms (Å$^2$) | 118.0 | wwPDB-VP |

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.01% of the height of the origin peak. No significant pseudotranslation is detected.*

[1] Intensities estimated from amplitudes.

[2] Theoretical values of $< |L| >$, $< L^2 >$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

# 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 | 0.62 | 0/7920 | 0.76 | 5/10756 (0.0%) |
| 1 | B | 0.57 | 0/7920 | 0.74 | 4/10756 (0.0%) |
| 1 | C | 0.62 | 0/7920 | 0.75 | 3/10756 (0.0%) |
| All | All | 0.60 | 0/23760 | 0.75 | 12/32268 (0.0%) |

There are no bond length outliers.

All (12) bond angle outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | A | 713 | LEU | CA-CB-CG | 8.63 | 135.15 | 115.30 |
| 1 | B | 989 | LEU | CA-CB-CG | 7.46 | 132.46 | 115.30 |
| 1 | B | 563 | PHE | CB-CA-C | 7.28 | 124.95 | 110.40 |
| 1 | A | 400 | LEU | CA-CB-CG | 6.22 | 129.60 | 115.30 |
| 1 | B | 868 | LEU | CA-CB-CG | 5.67 | 128.35 | 115.30 |
| 1 | C | 35 | TYR | N-CA-C | -5.59 | 95.91 | 111.00 |
| 1 | C | 767 | ARG | NE-CZ-NH1 | -5.56 | 117.52 | 120.30 |
| 1 | B | 377 | LEU | CA-CB-CG | 5.41 | 127.74 | 115.30 |
| 1 | A | 8 | ARG | C-N-CD | -5.38 | 108.75 | 120.60 |
| 1 | C | 972 | LEU | CA-CB-CG | 5.31 | 127.50 | 115.30 |
| 1 | A | 542 | LEU | CA-CB-CG | 5.24 | 127.36 | 115.30 |
| 1 | A | 972 | LEU | CA-CB-CG | 5.00 | 126.81 | 115.30 |

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 | 7774 | 0 | 7931 | 726 | 0 |
| 1 | B | 7774 | 0 | 7931 | 686 | 0 |
| 1 | C | 7774 | 0 | 7931 | 672 | 0 |
| 2 | A | 1 | 0 | 0 | 0 | 0 |
| 2 | B | 1 | 0 | 0 | 0 | 0 |
| 2 | C | 1 | 0 | 0 | 0 | 0 |
| All | All | 23325 | 0 | 23793 | 2013 | 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 43.

All (2013) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:C:669:PRO:HB2 | 1:C:672:VAL:CG2 | 1.38 | 1.52 |
| 1:A:7:ASP:C | 1:A:9:PRO:HD2 | 1.43 | 1.38 |
| 1:A:6:ILE:HD12 | 1:A:7:ASP:N | 1.40 | 1.34 |
| 1:C:669:PRO:CB | 1:C:672:VAL:HG21 | 1.68 | 1.24 |
| 1:A:11:PHE:O | 1:A:14:VAL:HG22 | 1.38 | 1.21 |
| 1:B:222:THR:HB | 1:B:223:PRO:HD3 | 1.19 | 1.19 |
| 1:A:13:TRP:O | 1:A:17:ILE:HG12 | 1.43 | 1.17 |
| 1:B:59:ASP:HA | 1:B:63:GLN:HG2 | 1.24 | 1.14 |
| 1:A:14:VAL:HA | 1:A:17:ILE:HG13 | 1.29 | 1.13 |
| 1:A:276:ASP:HB3 | 1:C:222:THR:HG23 | 1.31 | 1.12 |
| 1:A:14:VAL:CG2 | 1:A:15:ILE:H | 1.58 | 1.12 |
| 1:A:69:MET:HA | 1:A:69:MET:CE | 1.78 | 1.12 |
| 1:A:69:MET:HE2 | 1:A:69:MET:CA | 1.79 | 1.12 |
| 1:B:226:LYS:HA | 1:B:226:LYS:HE3 | 1.17 | 1.12 |
| 1:B:59:ASP:OD2 | 1:B:60:THR:HG22 | 1.50 | 1.11 |
| 1:A:14:VAL:HG23 | 1:A:15:ILE:N | 1.54 | 1.10 |
| 1:A:69:MET:CE | 1:A:69:MET:CA | 2.30 | 1.10 |
| 1:A:8:ARG:N | 1:A:9:PRO:HD2 | 1.60 | 1.10 |
| 1:A:44:THR:HG23 | 1:A:91:THR:HG23 | 1.26 | 1.10 |
| 1:A:447:MET:HB3 | 1:A:887:CYS:SG | 1.92 | 1.09 |
| 1:A:668:LEU:H | 1:A:668:LEU:HD12 | 1.16 | 1.08 |
| 1:B:226:LYS:HA | 1:B:226:LYS:CE | 1.80 | 1.08 |
| 1:B:222:THR:HB | 1:B:223:PRO:CD | 1.83 | 1.08 |
| 1:B:709:HIS:H | 1:B:710:PRO:HD3 | 1.12 | 1.07 |
| 1:A:69:MET:N | 1:A:69:MET:HE3 | 1.69 | 1.06 |
| 1:A:367:ILE:HG13 | 1:A:368:PRO:N | 1.71 | 1.06 |
| 1:B:54:ALA:HA | 1:B:57:VAL:CG1 | 1.86 | 1.06 |
| 1:C:673:GLU:O | 1:C:674:LEU:HB2 | 1.50 | 1.05 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:C:713:LEU:HD11 | 1:C:835:LYS:H | 1.18 | 1.05 |
| 1:B:54:ALA:CA | 1:B:57:VAL:CG1 | 2.36 | 1.04 |
| 1:C:246:PHE:O | 1:C:249:ILE:HG12 | 1.56 | 1.04 |
| 1:B:54:ALA:CA | 1:B:57:VAL:HG13 | 1.87 | 1.04 |
| 1:C:767:ARG:HG2 | 1:C:767:ARG:HH11 | 1.13 | 1.04 |
| 1:B:1:MET:HB3 | 1:B:2:PRO:HD2 | 1.40 | 1.03 |
| 1:B:127:VAL:O | 1:B:127:VAL:HG12 | 1.54 | 1.02 |
| 1:B:591:LEU:HD12 | 1:B:611:ALA:HB1 | 1.40 | 1.02 |
| 1:A:69:MET:HA | 1:A:69:MET:HE2 | 1.03 | 1.01 |
| 1:A:7:ASP:O | 1:A:9:PRO:HG2 | 1.62 | 1.00 |
| 1:A:6:ILE:CD1 | 1:A:7:ASP:CG | 2.30 | 1.00 |
| 1:A:661:ALA:O | 1:A:663:VAL:HG23 | 1.61 | 1.00 |
| 1:B:54:ALA:O | 1:B:57:VAL:HG13 | 1.61 | 1.00 |
| 1:A:14:VAL:CA | 1:A:17:ILE:HG13 | 1.92 | 1.00 |
| 1:C:190:PRO:CD | 1:C:779:TYR:HD1 | 1.74 | 1.00 |
| 1:A:7:ASP:C | 1:A:9:PRO:CD | 2.30 | 0.99 |
| 1:B:54:ALA:C | 1:B:57:VAL:HG13 | 1.82 | 0.98 |
| 1:C:669:PRO:HG2 | 1:C:672:VAL:HB | 1.44 | 0.98 |
| 1:A:298:ASN:HB3 | 1:A:301:ASP:HB2 | 1.44 | 0.98 |
| 1:A:6:ILE:HD11 | 1:A:7:ASP:OD2 | 1.61 | 0.98 |
| 1:B:516:PHE:CD1 | 1:B:516:PHE:N | 2.30 | 0.97 |
| 1:A:112:GLN:HA | 1:A:112:GLN:HE21 | 1.28 | 0.96 |
| 1:B:213:GLN:HG3 | 1:C:56:THR:HG23 | 1.47 | 0.96 |
| 1:C:211:ASN:HD22 | 1:C:240:LEU:HG | 1.29 | 0.96 |
| 1:A:298:ASN:HD22 | 1:A:301:ASP:H | 1.09 | 0.95 |
| 1:A:472:ILE:O | 1:A:476:SER:HB2 | 1.66 | 0.95 |
| 1:C:669:PRO:CB | 1:C:672:VAL:CG2 | 2.35 | 0.95 |
| 1:A:10:ILE:HD13 | 1:B:893:GLU:HA | 1.47 | 0.95 |
| 1:C:702:LEU:HD12 | 1:C:851:LEU:HD11 | 1.48 | 0.95 |
| 1:A:11:PHE:HE1 | 1:B:890:ALA:HB1 | 1.29 | 0.95 |
| 1:B:145:THR:HG22 | 1:B:146:ASP:OD2 | 1.67 | 0.94 |
| 1:B:57:VAL:HG22 | 1:B:58:GLN:N | 1.79 | 0.94 |
| 1:C:901:VAL:HG11 | 1:C:943:ILE:HG13 | 1.49 | 0.94 |
| 1:B:1022:VAL:HG23 | 1:B:1023:PRO:HD3 | 1.48 | 0.94 |
| 1:A:328:ASP:OD1 | 1:A:330:THR:HB | 1.68 | 0.94 |
| 1:B:228:GLN:NE2 | 1:C:781:MET:SD | 2.40 | 0.93 |
| 1:B:525:HIS:HA | 1:B:528:THR:HG22 | 1.51 | 0.93 |
| 1:C:34:GLN:HG2 | 1:C:333:VAL:HG21 | 1.50 | 0.93 |
| 1:A:69:MET:CE | 1:A:69:MET:N | 2.30 | 0.93 |
| 1:A:367:ILE:HG13 | 1:A:368:PRO:CD | 1.98 | 0.93 |
| 1:A:901:VAL:O | 1:A:904:VAL:HG23 | 1.68 | 0.93 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:B:57:VAL:O | 1:B:60:THR:HG23 | 1.69 | 0.93 |
| 1:B:213:GLN:CG | 1:C:56:THR:HG23 | 1.98 | 0.92 |
| 1:A:6:ILE:CD1 | 1:A:7:ASP:N | 2.30 | 0.92 |
| 1:A:14:VAL:O | 1:A:17:ILE:HG12 | 1.69 | 0.92 |
| 1:B:971:ARG:HH11 | 1:B:971:ARG:HG3 | 1.33 | 0.92 |
| 1:C:190:PRO:HD2 | 1:C:779:TYR:HD1 | 1.33 | 0.92 |
| 1:B:650:ARG:O | 1:B:654:ALA:HB2 | 1.70 | 0.91 |
| 1:C:672:VAL:O | 1:C:672:VAL:HG12 | 1.70 | 0.91 |
| 1:B:54:ALA:HA | 1:B:57:VAL:HG13 | 1.48 | 0.91 |
| 1:B:792:ARG:HG2 | 1:B:793:ALA:H | 1.36 | 0.91 |
| 1:B:57:VAL:HG22 | 1:B:58:GLN:H | 1.35 | 0.91 |
| 1:A:674:LEU:HD22 | 1:A:675:GLY:H | 1.35 | 0.90 |
| 1:C:669:PRO:HB2 | 1:C:672:VAL:CB | 2.00 | 0.90 |
| 1:A:151:GLN:NE2 | 1:A:279:ALA:H | 1.68 | 0.90 |
| 1:A:733:GLN:OE1 | 1:A:743:ILE:HD11 | 1.71 | 0.89 |
| 1:B:699:ARG:HB3 | 1:B:699:ARG:HH11 | 1.36 | 0.89 |
| 1:A:945:ILE:HG13 | 1:A:971:ARG:HG2 | 1.54 | 0.89 |
| 1:C:66:GLU:OE2 | 1:C:80:SER:HB2 | 1.72 | 0.89 |
| 1:C:355:MET:HB3 | 1:C:365:THR:HG23 | 1.52 | 0.89 |
| 1:C:358:PHE:HB3 | 1:C:977:MET:HE2 | 1.51 | 0.89 |
| 1:B:904:VAL:HG13 | 1:B:907:LEU:HD12 | 1.54 | 0.88 |
| 1:C:459:PHE:HB2 | 1:C:871:ASN:HB3 | 1.53 | 0.88 |
| 1:C:176:GLN:NE2 | 1:C:620:ARG:HH11 | 1.72 | 0.88 |
| 1:B:59:ASP:HA | 1:B:63:GLN:CG | 2.03 | 0.88 |
| 1:C:444:GLY:O | 1:C:448:VAL:HG23 | 1.73 | 0.88 |
| 1:A:574:THR:HB | 1:A:627:ALA:HB3 | 1.54 | 0.88 |
| 1:A:63:GLN:O | 1:A:67:GLN:HG3 | 1.73 | 0.87 |
| 1:B:222:THR:CB | 1:B:223:PRO:HD3 | 2.03 | 0.87 |
| 1:A:364:ALA:HB2 | 1:A:497:LEU:HD22 | 1.55 | 0.87 |
| 1:B:54:ALA:N | 1:B:57:VAL:CG1 | 2.37 | 0.87 |
| 1:B:555:LEU:HB3 | 1:B:558:ARG:HH21 | 1.39 | 0.86 |
| 1:B:262:LEU:HA | 1:B:265:VAL:HG12 | 1.57 | 0.86 |
| 1:B:401:ALA:HA | 1:B:404:LEU:HB2 | 1.57 | 0.86 |
| 1:B:709:HIS:H | 1:B:710:PRO:CD | 1.88 | 0.86 |
| 1:B:892:TYR:HB3 | 1:B:897:ILE:HD11 | 1.58 | 0.86 |
| 1:A:623:ASN:C | 1:A:623:ASN:HD22 | 1.78 | 0.85 |
| 1:A:795:ASP:OD1 | 1:A:797:GLN:HG2 | 1.76 | 0.85 |
| 1:B:709:HIS:N | 1:B:710:PRO:HD3 | 1.89 | 0.85 |
| 1:B:54:ALA:HA | 1:B:57:VAL:HG11 | 1.57 | 0.85 |
| 1:A:6:ILE:HD12 | 1:A:7:ASP:H | 1.05 | 0.85 |
| 1:A:843:LEU:HA | 1:A:846:GLN:HE21 | 1.42 | 0.85 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:C:415:ASN:HD22 | 1:C:434:SER:HB2 | 1.41 | 0.85 |
| 1:C:952:LEU:O | 1:C:953:MET:HB2 | 1.75 | 0.84 |
| 1:C:832:ALA:HB1 | 1:C:833:PRO:HD2 | 1.57 | 0.84 |
| 1:A:12:ALA:O | 1:A:14:VAL:HG22 | 1.77 | 0.84 |
| 1:A:317:PHE:HB3 | 1:A:321:LEU:HD21 | 1.58 | 0.84 |
| 1:A:14:VAL:CA | 1:A:17:ILE:CG1 | 2.55 | 0.84 |
| 1:C:588:GLN:HG2 | 1:C:613:ASN:HD22 | 1.42 | 0.84 |
| 1:B:185:ARG:HH11 | 1:B:185:ARG:HG3 | 1.42 | 0.84 |
| 1:B:1026:PHE:HB3 | 1:B:1030:ARG:HH21 | 1.41 | 0.84 |
| 1:C:690:LEU:HD23 | 1:C:694:LYS:HD2 | 1.60 | 0.84 |
| 1:C:721:LEU:HD21 | 1:C:813:SER:OG | 1.77 | 0.84 |
| 1:B:269:GLU:O | 1:B:270:LEU:HB2 | 1.77 | 0.84 |
| 1:C:767:ARG:HH11 | 1:C:767:ARG:CG | 1.90 | 0.84 |
| 1:A:10:ILE:CD1 | 1:B:893:GLU:HA | 2.07 | 0.83 |
| 1:C:54:ALA:HB2 | 1:C:84:SER:HB2 | 1.59 | 0.83 |
| 1:C:367:ILE:HG23 | 1:C:368:PRO:HD3 | 1.60 | 0.83 |
| 1:A:69:MET:O | 1:C:168:ARG:HG2 | 1.79 | 0.83 |
| 1:B:226:LYS:HE3 | 1:B:226:LYS:CA | 2.05 | 0.83 |
| 1:A:6:ILE:O | 1:A:9:PRO:HG3 | 1.79 | 0.83 |
| 1:C:190:PRO:HD2 | 1:C:779:TYR:CD1 | 2.13 | 0.83 |
| 1:C:578:LEU:HB3 | 1:C:579:PRO:HD2 | 1.61 | 0.83 |
| 1:C:713:LEU:HD11 | 1:C:835:LYS:N | 1.94 | 0.83 |
| 1:A:62:THR:O | 1:A:66:GLU:HG3 | 1.79 | 0.82 |
| 1:C:81:ASN:C | 1:C:81:ASN:HD22 | 1.82 | 0.82 |
| 1:C:669:PRO:HB2 | 1:C:672:VAL:HG21 | 0.83 | 0.82 |
| 1:A:1029:VAL:O | 1:A:1030:ARG:HB2 | 1.76 | 0.82 |
| 1:A:365:THR:O | 1:A:368:PRO:HG2 | 1.79 | 0.82 |
| 1:A:644:VAL:HG11 | 1:A:667:ASN:HD22 | 1.44 | 0.82 |
| 1:B:139:VAL:O | 1:B:139:VAL:HG12 | 1.76 | 0.82 |
| 1:A:129:VAL:H | 1:B:112:GLN:HE22 | 1.24 | 0.82 |
| 1:C:953:MET:HG3 | 1:C:959:GLY:HA2 | 1.59 | 0.82 |
| 1:C:554:TYR:HB3 | 1:C:558:ARG:HH21 | 1.44 | 0.82 |
| 1:A:8:ARG:O | 1:A:10:ILE:HG13 | 1.80 | 0.82 |
| 1:C:778:LYS:HE3 | 1:C:779:TYR:HE2 | 1.44 | 0.82 |
| 1:C:829:GLY:O | 1:C:830:GLN:HB3 | 1.78 | 0.82 |
| 1:B:57:VAL:HG22 | 1:B:82:SER:HB2 | 1.60 | 0.82 |
| 1:B:58:GLN:HB2 | 1:B:82:SER:HB3 | 1.62 | 0.81 |
| 1:B:911:GLY:HA3 | 1:B:1013:THR:HG21 | 1.61 | 0.81 |
| 1:B:988:PRO:O | 1:B:989:LEU:HB3 | 1.80 | 0.81 |
| 1:A:66:GLU:C | 1:A:68:ASN:H | 1.79 | 0.81 |
| 1:C:204:ILE:HG23 | 1:C:759:VAL:CG1 | 2.11 | 0.81 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:B:115:MET:HE2 | 1:B:118:LEU:HD22 | 1.61 | 0.81 |
| 1:A:11:PHE:CE1 | 1:B:890:ALA:HB1 | 2.15 | 0.81 |
| 1:A:171:GLY:O | 1:A:294:ALA:HB2 | 1.81 | 0.81 |
| 1:B:516:PHE:HD1 | 1:B:516:PHE:H | 0.91 | 0.81 |
| 1:C:38:ILE:HD13 | 1:C:38:ILE:H | 1.45 | 0.81 |
| 1:C:190:PRO:CD | 1:C:779:TYR:CD1 | 2.61 | 0.81 |
| 1:A:785:ASP:O | 1:A:788:ASP:HB2 | 1.81 | 0.81 |
| 1:B:346:GLU:O | 1:B:988:PRO:HG3 | 1.80 | 0.81 |
| 1:B:767:ARG:HA | 1:C:63:GLN:HE22 | 1.46 | 0.81 |
| 1:B:894:SER:HB3 | 1:B:897:ILE:HG12 | 1.62 | 0.81 |
| 1:A:298:ASN:O | 1:A:302:THR:HG23 | 1.81 | 0.81 |
| 1:A:210:GLN:HG3 | 1:A:249:ILE:HG23 | 1.63 | 0.80 |
| 1:C:901:VAL:O | 1:C:904:VAL:HG23 | 1.80 | 0.80 |
| 1:A:364:ALA:HB2 | 1:A:497:LEU:CD2 | 2.12 | 0.80 |
| 1:A:6:ILE:O | 1:A:9:PRO:CD | 2.30 | 0.80 |
| 1:A:12:ALA:O | 1:A:14:VAL:CG2 | 2.30 | 0.80 |
| 1:A:367:ILE:N | 1:A:368:PRO:HD2 | 1.95 | 0.80 |
| 1:B:145:THR:CG2 | 1:B:146:ASP:OD2 | 2.30 | 0.80 |
| 1:B:456:MET:HG3 | 1:B:467:TYR:HB3 | 1.62 | 0.80 |
| 1:C:760:ASN:O | 1:C:771:VAL:HG23 | 1.82 | 0.80 |
| 1:B:516:PHE:O | 1:B:517:ASN:ND2 | 2.15 | 0.80 |
| 1:A:13:TRP:HB3 | 1:A:17:ILE:HD11 | 1.64 | 0.80 |
| 1:A:278:ILE:HB | 1:A:613:ASN:OD1 | 1.81 | 0.80 |
| 1:A:14:VAL:O | 1:A:17:ILE:CG1 | 2.30 | 0.80 |
| 1:A:6:ILE:O | 1:A:9:PRO:CG | 2.30 | 0.79 |
| 1:A:367:ILE:CG1 | 1:A:368:PRO:HD3 | 2.12 | 0.79 |
| 1:A:395:MET:CE | 1:A:395:MET:HA | 2.11 | 0.79 |
| 1:C:721:LEU:CD2 | 1:C:721:LEU:O | 2.30 | 0.79 |
| 1:C:655:PHE:C | 1:C:657:GLN:H | 1.86 | 0.79 |
| 1:A:74:ASN:HB3 | 1:A:98:THR:HG21 | 1.62 | 0.79 |
| 1:A:365:THR:O | 1:A:368:PRO:CG | 2.30 | 0.79 |
| 1:B:291:ILE:HG21 | 1:B:306:ILE:CD1 | 2.13 | 0.79 |
| 1:A:668:LEU:H | 1:A:668:LEU:CD1 | 1.94 | 0.79 |
| 1:A:888:LEU:HD11 | 1:A:943:ILE:CD1 | 2.12 | 0.79 |
| 1:C:415:ASN:ND2 | 1:C:434:SER:HB2 | 1.96 | 0.79 |
| 1:A:266:ALA:O | 1:A:267:LYS:HB2 | 1.81 | 0.79 |
| 1:A:367:ILE:HG13 | 1:A:368:PRO:HD3 | 1.64 | 0.78 |
| 1:A:712:MET:O | 1:A:832:ALA:HB2 | 1.83 | 0.78 |
| 1:C:326:PRO:HB3 | 1:C:610:PHE:HB2 | 1.62 | 0.78 |
| 1:C:355:MET:SD | 1:C:410:ILE:HD11 | 2.22 | 0.78 |
| 1:A:726:GLN:OE1 | 1:A:812:GLY:HA3 | 1.82 | 0.78 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:B:42:ALA:HB2 | 1:B:93:THR:HG22 | 1.64 | 0.78 |
| 1:A:317:PHE:HB3 | 1:A:321:LEU:CD2 | 2.13 | 0.78 |
| 1:A:7:ASP:O | 1:A:9:PRO:CG | 2.30 | 0.78 |
| 1:A:75:LEU:HD11 | 1:A:92:LEU:HB3 | 1.64 | 0.78 |
| 1:A:597:TYR:CD1 | 1:A:597:TYR:C | 2.57 | 0.78 |
| 1:C:35:TYR:CD2 | 1:C:671:ILE:HD11 | 2.18 | 0.78 |
| 1:A:6:ILE:CD1 | 1:A:7:ASP:OD2 | 2.30 | 0.78 |
| 1:B:57:VAL:CG2 | 1:B:58:GLN:N | 2.46 | 0.78 |
| 1:A:13:TRP:C | 1:A:17:ILE:HD11 | 2.04 | 0.78 |
| 1:C:57:VAL:HG21 | 1:C:86:GLY:HA2 | 1.64 | 0.78 |
| 1:B:58:GLN:CB | 1:B:82:SER:HB3 | 2.13 | 0.78 |
| 1:C:554:TYR:C | 1:C:556:PHE:H | 1.86 | 0.78 |
| 1:C:767:ARG:HG2 | 1:C:767:ARG:NH1 | 1.96 | 0.77 |
| 1:C:577:GLN:HE21 | 1:C:577:GLN:H | 1.28 | 0.77 |
| 1:A:14:VAL:HG23 | 1:A:15:ILE:H | 0.70 | 0.77 |
| 1:C:669:PRO:CG | 1:C:672:VAL:HB | 2.13 | 0.77 |
| 1:B:767:ARG:HA | 1:C:63:GLN:NE2 | 2.00 | 0.77 |
| 1:B:276:ASP:O | 1:B:614:GLY:HA3 | 1.84 | 0.77 |
| 1:C:457:ALA:H | 1:C:459:PHE:HE2 | 1.31 | 0.77 |
| 1:A:8:ARG:N | 1:A:9:PRO:CD | 2.45 | 0.77 |
| 1:C:972:LEU:H | 1:C:974:PRO:HD2 | 1.48 | 0.77 |
| 1:A:369:THR:O | 1:A:373:PRO:CD | 2.32 | 0.76 |
| 1:A:634:TRP:CE3 | 1:A:995:ALA:HB1 | 2.21 | 0.76 |
| 1:C:673:GLU:O | 1:C:674:LEU:CB | 2.32 | 0.76 |
| 1:C:832:ALA:HB1 | 1:C:833:PRO:CD | 2.15 | 0.76 |
| 1:A:1022:VAL:HA | 1:A:1025:PHE:CD1 | 2.20 | 0.76 |
| 1:A:686:ASP:O | 1:A:687:GLN:HB2 | 1.86 | 0.76 |
| 1:A:750:LEU:HD23 | 1:A:754:TRP:CD1 | 2.19 | 0.76 |
| 1:C:680:PHE:HB2 | 1:C:859:TRP:HZ3 | 1.51 | 0.76 |
| 1:A:498:LYS:HE2 | 1:A:498:LYS:O | 1.85 | 0.76 |
| 1:B:130:GLU:OE1 | 1:C:110:LYS:HE2 | 1.85 | 0.76 |
| 1:A:5:PHE:O | 1:A:9:PRO:HD3 | 1.85 | 0.76 |
| 1:B:767:ARG:O | 1:B:769:LYS:HG3 | 1.84 | 0.76 |
| 1:C:637:ARG:HB3 | 1:C:642:ASN:HB3 | 1.67 | 0.76 |
| 1:C:686:ASP:OD1 | 1:C:687:GLN:N | 2.19 | 0.76 |
| 1:C:1:MET:HB2 | 1:C:2:PRO:HD2 | 1.67 | 0.76 |
| 1:A:13:TRP:C | 1:A:17:ILE:HG12 | 2.06 | 0.75 |
| 1:C:686:ASP:OD2 | 1:C:690:LEU:HB2 | 1.86 | 0.75 |
| 1:A:578:LEU:HD21 | 1:A:590:VAL:HG21 | 1.67 | 0.75 |
| 1:A:790:TYR:HE1 | 1:A:800:PRO:HG3 | 1.49 | 0.75 |
| 1:B:307:ARG:HH11 | 1:B:307:ARG:HB2 | 1.51 | 0.75 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:B:171:GLY:HA3 | 1:B:302:THR:CB | 2.17 | 0.75 |
| 1:C:721:LEU:O | 1:C:721:LEU:HD23 | 1.86 | 0.75 |
| 1:A:193:LEU:HB2 | 1:A:265:VAL:HB | 1.67 | 0.75 |
| 1:B:690:LEU:HD22 | 1:B:694:LYS:HD2 | 1.68 | 0.75 |
| 1:A:11:PHE:C | 1:A:14:VAL:HG22 | 2.06 | 0.75 |
| 1:A:13:TRP:O | 1:A:17:ILE:CG1 | 2.30 | 0.75 |
| 1:B:171:GLY:HA3 | 1:B:302:THR:HB | 1.67 | 0.75 |
| 1:B:897:ILE:O | 1:B:901:VAL:HG23 | 1.87 | 0.75 |
| 1:B:792:ARG:HB2 | 1:B:792:ARG:HH11 | 1.51 | 0.75 |
| 1:C:568:ASP:OD1 | 1:C:634:TRP:CD1 | 2.40 | 0.75 |
| 1:A:151:GLN:NE2 | 1:A:279:ALA:N | 2.36 | 0.74 |
| 1:C:144:ASN:HD21 | 1:C:148:THR:N | 1.85 | 0.74 |
| 1:C:80:SER:HB3 | 1:C:818:ARG:HB2 | 1.67 | 0.74 |
| 1:C:721:LEU:HG | 1:C:815:ARG:O | 1.85 | 0.74 |
| 1:C:831:ALA:HB2 | 1:C:840:ALA:HB2 | 1.69 | 0.74 |
| 1:C:911:GLY:HA3 | 1:C:1013:THR:HG21 | 1.69 | 0.74 |
| 1:C:945:ILE:HD13 | 1:C:1022:VAL:HG11 | 1.69 | 0.74 |
| 1:A:453:PHE:CE2 | 1:A:474:ILE:HG21 | 2.23 | 0.74 |
| 1:B:28:LEU:HD12 | 1:B:29:LYS:HG2 | 1.70 | 0.74 |
| 1:C:317:PHE:HD2 | 1:C:321:LEU:HB3 | 1.51 | 0.74 |
| 1:B:372:VAL:HG22 | 1:B:373:PRO:HD3 | 1.69 | 0.74 |
| 1:C:247:GLY:HA3 | 1:C:263:ARG:CZ | 2.18 | 0.73 |
| 1:B:743:ILE:HD12 | 1:B:743:ILE:H | 1.52 | 0.73 |
| 1:C:131:LYS:HB2 | 1:C:295:THR:HG21 | 1.71 | 0.73 |
| 1:A:243:THR:HB | 1:A:268:ILE:HG22 | 1.69 | 0.73 |
| 1:B:831:ALA:HB2 | 1:B:840:ALA:HB2 | 1.71 | 0.73 |
| 1:C:184:MET:HA | 1:C:184:MET:HE3 | 1.70 | 0.73 |
| 1:B:1016:VAL:HG12 | 1:B:1017:LEU:HD12 | 1.70 | 0.72 |
| 1:A:880:SER:O | 1:A:884:VAL:HG23 | 1.89 | 0.72 |
| 1:B:157:TYR:HA | 1:B:161:ASN:ND2 | 2.04 | 0.72 |
| 1:B:564:LEU:HD23 | 1:B:565:PRO:HD2 | 1.70 | 0.72 |
| 1:A:634:TRP:HE3 | 1:A:995:ALA:HB1 | 1.55 | 0.72 |
| 1:C:779:TYR:N | 1:C:779:TYR:HD2 | 1.88 | 0.72 |
| 1:A:68:ASN:ND2 | 1:A:114:ALA:HB2 | 2.04 | 0.72 |
| 1:A:375:VAL:HG22 | 1:A:484:VAL:HG11 | 1.71 | 0.72 |
| 1:B:986:VAL:HG12 | 1:B:990:VAL:HG23 | 1.71 | 0.72 |
| 1:A:383:LEU:HD21 | 1:A:473:THR:HG23 | 1.70 | 0.72 |
| 1:A:911:GLY:H | 1:A:914:LEU:HD13 | 1.55 | 0.72 |
| 1:B:773:VAL:O | 1:B:773:VAL:HG12 | 1.89 | 0.72 |
| 1:A:781:MET:HE2 | 1:C:225:VAL:H | 1.54 | 0.72 |
| 1:B:84:SER:HB3 | 1:B:814:PRO:HA | 1.72 | 0.72 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:C:176:GLN:HE22 | 1:C:620:ARG:HH11 | 1.37 | 0.72 |
| 1:A:140:VAL:HG12 | 1:A:141:GLY:H | 1.53 | 0.72 |
| 1:A:298:ASN:ND2 | 1:A:301:ASP:H | 1.84 | 0.72 |
| 1:B:126:GLY:O | 1:B:127:VAL:HB | 1.88 | 0.72 |
| 1:A:437:GLN:HB3 | 1:A:948:PHE:HE2 | 1.55 | 0.71 |
| 1:A:759:VAL:HG12 | 1:A:760:ASN:N | 2.05 | 0.71 |
| 1:C:686:ASP:O | 1:C:687:GLN:HG2 | 1.89 | 0.71 |
| 1:C:714:THR:HG22 | 1:C:715:SER:H | 1.54 | 0.71 |
| 1:A:11:PHE:O | 1:A:12:ALA:C | 2.29 | 0.71 |
| 1:A:686:ASP:HB2 | 1:A:823:PRO:HG2 | 1.72 | 0.71 |
| 1:B:731:ILE:HD11 | 1:B:746:ILE:HG21 | 1.71 | 0.71 |
| 1:A:950:LYS:O | 1:A:954:ASP:HB2 | 1.89 | 0.71 |
| 1:B:516:PHE:N | 1:B:516:PHE:HD1 | 1.74 | 0.71 |
| 1:B:601:LYS:HB2 | 1:B:601:LYS:NZ | 2.06 | 0.71 |
| 1:B:851:LEU:N | 1:B:852:PRO:HD3 | 2.05 | 0.71 |
| 1:C:672:VAL:O | 1:C:672:VAL:CG1 | 2.37 | 0.71 |
| 1:C:688:ALA:HB3 | 1:C:690:LEU:HD12 | 1.73 | 0.71 |
| 1:C:713:LEU:CD1 | 1:C:835:LYS:H | 2.01 | 0.71 |
| 1:A:14:VAL:C | 1:A:17:ILE:HG12 | 2.12 | 0.71 |
| 1:A:112:GLN:HE21 | 1:A:112:GLN:CA | 2.03 | 0.71 |
| 1:A:137:LEU:O | 1:A:138:MET:HB3 | 1.90 | 0.71 |
| 1:C:38:ILE:H | 1:C:38:ILE:CD1 | 2.04 | 0.71 |
| 1:C:674:LEU:CD1 | 1:C:862:MET:HA | 2.21 | 0.71 |
| 1:B:428:LYS:O | 1:B:432:ARG:HG3 | 1.90 | 0.71 |
| 1:C:115:MET:SD | 1:C:127:VAL:HG11 | 2.31 | 0.71 |
| 1:B:58:GLN:HG3 | 1:B:59:ASP:N | 2.03 | 0.70 |
| 1:C:23:GLY:HA3 | 1:C:377:LEU:O | 1.91 | 0.70 |
| 1:C:575:MET:O | 1:C:576:VAL:HG13 | 1.91 | 0.70 |
| 1:A:27:ILE:HG12 | 1:A:380:PHE:HD2 | 1.56 | 0.70 |
| 1:B:974:PRO:O | 1:B:978:THR:HB | 1.91 | 0.70 |
| 1:C:759:VAL:C | 1:C:760:ASN:HD22 | 1.94 | 0.70 |
| 1:A:991:ILE:HD13 | 1:A:1008:MET:HG3 | 1.74 | 0.70 |
| 1:B:200:PRO:HD2 | 1:B:749:THR:HG22 | 1.74 | 0.70 |
| 1:A:11:PHE:O | 1:A:14:VAL:CG2 | 2.30 | 0.70 |
| 1:A:659:LYS:HG2 | 1:A:660:ASP:N | 2.06 | 0.70 |
| 1:B:1:MET:HB3 | 1:B:2:PRO:CD | 2.19 | 0.70 |
| 1:B:149:MET:HB3 | 1:B:154:ILE:CG2 | 2.21 | 0.70 |
| 1:A:10:ILE:HG22 | 1:B:895:TRP:HD1 | 1.55 | 0.70 |
| 1:A:13:TRP:C | 1:A:17:ILE:CD1 | 2.60 | 0.70 |
| 1:B:987:MET:O | 1:B:991:ILE:HG12 | 1.92 | 0.70 |
| 1:C:674:LEU:HD11 | 1:C:861:GLY:C | 2.12 | 0.70 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:A:945:ILE:CG1 | 1:A:971:ARG:HG2 | 2.21 | 0.70 |
| 1:B:145:THR:C | 1:B:146:ASP:OD2 | 2.30 | 0.70 |
| 1:B:563:PHE:HD1 | 1:B:866:GLU:HG2 | 1.55 | 0.70 |
| 1:A:12:ALA:O | 1:A:13:TRP:C | 2.29 | 0.70 |
| 1:B:177:LEU:HD12 | 1:B:178:PHE:N | 2.06 | 0.70 |
| 1:C:463:THR:O | 1:C:465:ALA:N | 2.25 | 0.70 |
| 1:C:754:TRP:CZ2 | 1:C:786:ILE:HD13 | 2.27 | 0.70 |
| 1:A:16:ALA:O | 1:A:17:ILE:C | 2.29 | 0.70 |
| 1:A:57:VAL:HG13 | 1:A:88:VAL:HG22 | 1.74 | 0.70 |
| 1:A:13:TRP:O | 1:A:14:VAL:C | 2.30 | 0.69 |
| 1:A:931:LEU:O | 1:A:935:ILE:HG12 | 1.91 | 0.69 |
| 1:A:13:TRP:O | 1:A:16:ALA:HB3 | 1.92 | 0.69 |
| 1:A:15:ILE:O | 1:A:16:ALA:C | 2.30 | 0.69 |
| 1:A:395:MET:HA | 1:A:395:MET:HE2 | 1.73 | 0.69 |
| 1:B:552:MET:SD | 1:B:909:VAL:HG23 | 2.31 | 0.69 |
| 1:C:445:ILE:HD13 | 1:C:940:LYS:HE3 | 1.73 | 0.69 |
| 1:B:25:LEU:O | 1:B:28:LEU:HG | 1.92 | 0.69 |
| 1:B:145:THR:O | 1:B:146:ASP:CG | 2.30 | 0.69 |
| 1:B:200:PRO:HD2 | 1:B:749:THR:CG2 | 2.22 | 0.69 |
| 1:A:139:VAL:CG1 | 1:A:327:TYR:HB3 | 2.22 | 0.69 |
| 1:B:762:PHE:CE1 | 1:B:764:ASP:HB2 | 2.28 | 0.69 |
| 1:C:683:GLU:HG3 | 1:C:819:TYR:CD2 | 2.27 | 0.69 |
| 1:A:30:LEU:HD21 | 1:A:384:ALA:HB2 | 1.75 | 0.69 |
| 1:C:741:VAL:HG11 | 1:C:746:ILE:HD11 | 1.75 | 0.69 |
| 1:C:778:LYS:C | 1:C:779:TYR:HD2 | 1.96 | 0.69 |
| 1:A:36:PRO:O | 1:A:38:ILE:HG23 | 1.93 | 0.69 |
| 1:A:740:GLY:CA | 1:A:793:ALA:HB1 | 2.23 | 0.69 |
| 1:B:968:VAL:O | 1:B:972:LEU:HB2 | 1.92 | 0.69 |
| 1:C:204:ILE:CG1 | 1:C:773:VAL:HG21 | 2.23 | 0.69 |
| 1:C:748:THR:O | 1:C:752:ALA:N | 2.26 | 0.69 |
| 1:A:883:VAL:O | 1:A:887:CYS:HB2 | 1.92 | 0.69 |
| 1:C:378:GLY:O | 1:C:382:VAL:HG23 | 1.93 | 0.69 |
| 1:C:474:ILE:O | 1:C:478:MET:HB2 | 1.92 | 0.69 |
| 1:C:973:ARG:O | 1:C:977:MET:HB2 | 1.93 | 0.69 |
| 1:A:9:PRO:O | 1:A:10:ILE:C | 2.29 | 0.69 |
| 1:A:400:LEU:HD13 | 1:A:1003:VAL:HG13 | 1.74 | 0.69 |
| 1:A:418:ARG:HD3 | 1:A:970:MET:HG3 | 1.74 | 0.69 |
| 1:A:584:GLN:H | 1:A:622:GLN:HG2 | 1.57 | 0.69 |
| 1:B:979:SER:HA | 1:B:1011:MET:HE3 | 1.74 | 0.69 |
| 1:B:145:THR:C | 1:B:146:ASP:CG | 2.51 | 0.68 |
| 1:A:13:TRP:C | 1:A:17:ILE:CG1 | 2.61 | 0.68 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:A:391:ASN:H | 1:A:394:THR:HG22 | 1.56 | 0.68 |
| 1:A:576:VAL:HG21 | 1:A:591:LEU:HD23 | 1.75 | 0.68 |
| 1:A:893:GLU:O | 1:A:893:GLU:HG3 | 1.92 | 0.68 |
| 1:C:58:GLN:HG3 | 1:C:59:ASP:OD2 | 1.92 | 0.68 |
| 1:C:115:MET:CE | 1:C:118:LEU:HD23 | 2.23 | 0.68 |
| 1:C:210:GLN:HB3 | 1:C:249:ILE:HD12 | 1.75 | 0.68 |
| 1:A:42:ALA:HB2 | 1:A:93:THR:HA | 1.75 | 0.68 |
| 1:B:198:LEU:HD13 | 1:B:251:LEU:HD23 | 1.74 | 0.68 |
| 1:B:213:GLN:HG2 | 1:C:56:THR:HG23 | 1.74 | 0.68 |
| 1:B:681:ASP:HB3 | 1:B:860:THR:CG2 | 2.22 | 0.68 |
| 1:B:947:GLU:OE1 | 1:B:947:GLU:HA | 1.92 | 0.68 |
| 1:C:779:TYR:N | 1:C:779:TYR:CD2 | 2.60 | 0.68 |
| 1:A:355:MET:CE | 1:A:410:ILE:HG12 | 2.23 | 0.68 |
| 1:B:219:LEU:HD12 | 1:B:234:ILE:HG12 | 1.74 | 0.68 |
| 1:B:592:ASN:HA | 1:B:595:THR:HG22 | 1.75 | 0.68 |
| 1:C:699:ARG:NH2 | 1:C:722:GLU:OE2 | 2.26 | 0.68 |
| 1:A:466:ILE:O | 1:A:469:GLN:HB2 | 1.93 | 0.68 |
| 1:C:375:VAL:HG11 | 1:C:405:LEU:HD22 | 1.75 | 0.68 |
| 1:B:648:THR:HG23 | 1:B:665:ALA:O | 1.93 | 0.68 |
| 1:C:184:MET:HB3 | 1:C:771:VAL:HG13 | 1.74 | 0.68 |
| 1:C:552:MET:SD | 1:C:909:VAL:HG21 | 2.34 | 0.68 |
| 1:A:6:ILE:HD12 | 1:A:7:ASP:CA | 2.24 | 0.68 |
| 1:A:578:LEU:HB3 | 1:A:579:PRO:HD2 | 1.75 | 0.68 |
| 1:A:778:LYS:HD2 | 1:A:779:TYR:CZ | 2.29 | 0.68 |
| 1:C:54:ALA:HB2 | 1:C:84:SER:CB | 2.23 | 0.68 |
| 1:A:886:LEU:HG | 1:C:14:VAL:HG23 | 1.76 | 0.68 |
| 1:C:210:GLN:O | 1:C:240:LEU:HD21 | 1.94 | 0.68 |
| 1:A:14:VAL:O | 1:A:15:ILE:C | 2.30 | 0.68 |
| 1:A:294:ALA:HB3 | 1:A:297:ALA:HB3 | 1.76 | 0.68 |
| 1:C:155:SER:OG | 1:C:179:GLY:HA3 | 1.94 | 0.68 |
| 1:C:925:VAL:HG23 | 1:C:926:TYR:H | 1.56 | 0.68 |
| 1:C:962:GLU:HA | 1:C:965:LEU:HD13 | 1.76 | 0.68 |
| 1:A:6:ILE:HD12 | 1:A:7:ASP:CG | 2.13 | 0.67 |
| 1:A:140:VAL:HG12 | 1:A:141:GLY:N | 2.09 | 0.67 |
| 1:B:332:PHE:CD1 | 1:B:569:GLN:HA | 2.30 | 0.67 |
| 1:B:731:ILE:CD1 | 1:B:746:ILE:HG21 | 2.25 | 0.67 |
| 1:A:102:ILE:HA | 1:A:105:VAL:HG23 | 1.75 | 0.67 |
| 1:B:1022:VAL:CG2 | 1:B:1023:PRO:HD3 | 2.24 | 0.67 |
| 1:C:62:THR:OG1 | 1:C:88:VAL:HG13 | 1.95 | 0.67 |
| 1:C:26:ALA:O | 1:C:30:LEU:HB2 | 1.93 | 0.67 |
| 1:C:577:GLN:HE21 | 1:C:577:GLN:N | 1.91 | 0.67 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:C:911:GLY:CA | 1:C:1013:THR:HG21 | 2.24 | 0.67 |
| 1:B:859:TRP:HB3 | 1:B:863:SER:HB2 | 1.77 | 0.67 |
| 1:C:672:VAL:C | 1:C:674:LEU:H | 1.97 | 0.67 |
| 1:A:134:SER:HB2 | 1:A:673:GLU:OE2 | 1.95 | 0.67 |
| 1:A:781:MET:HB3 | 1:C:228:GLN:OE1 | 1.94 | 0.67 |
| 1:B:944:LEU:HB3 | 1:B:971:ARG:HD3 | 1.77 | 0.67 |
| 1:C:674:LEU:HB3 | 1:C:865:GLN:OE1 | 1.95 | 0.66 |
| 1:C:326:PRO:O | 1:C:630:SER:HB2 | 1.94 | 0.66 |
| 1:B:575:MET:HA | 1:B:626:ILE:HG22 | 1.77 | 0.66 |
| 1:C:280:GLU:HB2 | 1:C:611:ALA:HB3 | 1.75 | 0.66 |
| 1:C:454:VAL:HG23 | 1:C:475:VAL:HG21 | 1.77 | 0.66 |
| 1:C:657:GLN:HG3 | 1:C:658:ILE:HG13 | 1.77 | 0.66 |
| 1:C:753:ALA:O | 1:C:775:SER:HB3 | 1.95 | 0.66 |
| 1:C:911:GLY:H | 1:C:1013:THR:HG21 | 1.59 | 0.66 |
| 1:A:355:MET:HE1 | 1:A:410:ILE:HG12 | 1.76 | 0.66 |
| 1:A:1033:PHE:O | 1:A:1034:SER:HB2 | 1.94 | 0.66 |
| 1:B:880:SER:O | 1:B:884:VAL:HG23 | 1.94 | 0.66 |
| 1:B:1026:PHE:HB3 | 1:B:1030:ARG:NH2 | 2.10 | 0.66 |
| 1:A:780:ARG:NH2 | 1:C:223:PRO:HD2 | 2.10 | 0.66 |
| 1:A:7:ASP:O | 1:A:9:PRO:CD | 2.42 | 0.66 |
| 1:A:367:ILE:CG1 | 1:A:368:PRO:CD | 2.70 | 0.66 |
| 1:A:852:PRO:O | 1:A:855:VAL:HG22 | 1.94 | 0.66 |
| 1:B:225:VAL:O | 1:B:225:VAL:HG23 | 1.94 | 0.66 |
| 1:C:65:ILE:HD13 | 1:C:111:LEU:CD2 | 2.26 | 0.66 |
| 1:A:153:ASP:HA | 1:A:182:TYR:CE1 | 2.31 | 0.66 |
| 1:A:671:ILE:HD13 | 1:A:674:LEU:HB3 | 1.76 | 0.66 |
| 1:B:762:PHE:HD2 | 1:B:771:VAL:HG22 | 1.60 | 0.65 |
| 1:A:299:ALA:O | 1:A:303:ALA:HB2 | 1.95 | 0.65 |
| 1:A:365:THR:C | 1:A:368:PRO:HD2 | 2.17 | 0.65 |
| 1:A:540:ARG:HD3 | 1:A:541:TYR:CD2 | 2.30 | 0.65 |
| 1:C:911:GLY:HA3 | 1:C:1013:THR:CG2 | 2.25 | 0.65 |
| 1:A:5:PHE:O | 1:A:9:PRO:CD | 2.44 | 0.65 |
| 1:A:102:ILE:O | 1:A:106:GLN:HG3 | 1.96 | 0.65 |
| 1:C:144:ASN:HA | 1:C:320:GLY:O | 1.95 | 0.65 |
| 1:A:268:ILE:HG22 | 1:A:269:GLU:N | 2.10 | 0.65 |
| 1:A:968:VAL:HG21 | 1:A:1023:PRO:HB3 | 1.78 | 0.65 |
| 1:B:188:MET:H | 1:B:775:SER:HA | 1.60 | 0.65 |
| 1:C:13:TRP:HE1 | 1:C:492:LEU:HD21 | 1.62 | 0.65 |
| 1:C:160:ALA:HA | 1:C:767:ARG:NH1 | 2.11 | 0.65 |
| 1:B:650:ARG:O | 1:B:654:ALA:CB | 2.43 | 0.65 |
| 1:C:459:PHE:HD2 | 1:C:459:PHE:N | 1.95 | 0.65 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:C:568:ASP:OD1 | 1:C:634:TRP:NE1 | 2.29 | 0.65 |
| 1:C:680:PHE:HB2 | 1:C:859:TRP:CZ3 | 2.31 | 0.65 |
| 1:A:7:ASP:O | 1:A:9:PRO:HD2 | 1.95 | 0.65 |
| 1:B:61:VAL:HG13 | 1:B:88:VAL:HG21 | 1.78 | 0.65 |
| 1:A:64:VAL:O | 1:A:66:GLU:N | 2.30 | 0.65 |
| 1:A:13:TRP:O | 1:A:17:ILE:N | 2.30 | 0.65 |
| 1:A:901:VAL:O | 1:A:904:VAL:CG2 | 2.43 | 0.65 |
| 1:B:911:GLY:HA3 | 1:B:1013:THR:CG2 | 2.26 | 0.65 |
| 1:C:679:GLY:HA2 | 1:C:830:GLN:HA | 1.79 | 0.65 |
| 1:A:518:ARG:HA | 1:A:521:GLU:HB2 | 1.79 | 0.65 |
| 1:B:59:ASP:OD2 | 1:B:60:THR:N | 2.30 | 0.65 |
| 1:B:127:VAL:O | 1:B:127:VAL:CG1 | 2.30 | 0.65 |
| 1:B:416:VAL:HG21 | 1:B:431:THR:HG22 | 1.77 | 0.65 |
| 1:A:9:PRO:O | 1:A:11:PHE:N | 2.30 | 0.64 |
| 1:A:66:GLU:C | 1:A:68:ASN:N | 2.47 | 0.64 |
| 1:B:145:THR:CB | 1:B:146:ASP:OD2 | 2.45 | 0.64 |
| 1:B:146:ASP:O | 1:B:148:THR:N | 2.30 | 0.64 |
| 1:B:602:GLU:OE2 | 1:B:650:ARG:NH2 | 2.30 | 0.64 |
| 1:C:655:PHE:O | 1:C:657:GLN:N | 2.30 | 0.64 |
| 1:A:637:ARG:HH11 | 1:A:643:LYS:HA | 1.60 | 0.64 |
| 1:C:45:ILE:HD13 | 1:C:111:LEU:HD23 | 1.78 | 0.64 |
| 1:A:12:ALA:O | 1:A:15:ILE:N | 2.30 | 0.64 |
| 1:A:68:ASN:O | 1:A:70:ASN:N | 2.30 | 0.64 |
| 1:B:906:PRO:HA | 1:B:909:VAL:HG22 | 1.79 | 0.64 |
| 1:B:150:THR:H | 1:B:153:ASP:HB3 | 1.62 | 0.64 |
| 1:B:177:LEU:HD12 | 1:B:178:PHE:H | 1.59 | 0.64 |
| 1:C:218:GLN:HB3 | 1:C:233:SER:HA | 1.80 | 0.64 |
| 1:B:465:ALA:HA | 1:B:468:ARG:HG3 | 1.79 | 0.64 |
| 1:C:144:ASN:HD21 | 1:C:148:THR:H | 1.45 | 0.64 |
| 1:C:901:VAL:HG11 | 1:C:943:ILE:CG1 | 2.25 | 0.64 |
| 1:A:66:GLU:O | 1:A:68:ASN:N | 2.29 | 0.64 |
| 1:A:610:PHE:HB3 | 1:A:628:PHE:HB2 | 1.79 | 0.64 |
| 1:A:746:ILE:HG12 | 1:A:804:PHE:CE1 | 2.33 | 0.64 |
| 1:B:516:PHE:O | 1:B:517:ASN:CG | 2.36 | 0.64 |
| 1:B:653:ARG:HA | 1:B:656:SER:HB3 | 1.79 | 0.64 |
| 1:C:956:GLU:HB3 | 1:C:958:LYS:HD2 | 1.80 | 0.64 |
| 1:A:989:LEU:HB3 | 1:A:993:THR:HG23 | 1.80 | 0.64 |
| 1:B:664:PHE:HB3 | 1:B:666:PHE:CE1 | 2.33 | 0.64 |
| 1:C:686:ASP:C | 1:C:687:GLN:HG2 | 2.17 | 0.64 |
| 1:A:74:ASN:CB | 1:A:98:THR:HG21 | 2.28 | 0.64 |
| 1:B:59:ASP:OD2 | 1:B:59:ASP:C | 2.34 | 0.64 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:B:780:ARG:HG2 | 1:B:780:ARG:O | 1.97 | 0.64 |
| 1:C:181:GLN:OE1 | 1:C:767:ARG:NH1 | 2.27 | 0.64 |
| 1:C:184:MET:HG2 | 1:C:246:PHE:CD1 | 2.33 | 0.64 |
| 1:C:190:PRO:HD3 | 1:C:779:TYR:CD1 | 2.33 | 0.64 |
| 1:A:44:THR:CG2 | 1:A:91:THR:HG23 | 2.16 | 0.64 |
| 1:A:51:GLY:O | 1:C:215:ALA:HB1 | 1.97 | 0.64 |
| 1:A:890:ALA:HB1 | 1:C:11:PHE:CD1 | 2.33 | 0.64 |
| 1:B:227:GLY:HA2 | 1:C:585:GLU:OE2 | 1.97 | 0.64 |
| 1:C:162:MET:HG2 | 1:C:313:MET:SD | 2.38 | 0.64 |
| 1:C:801:PHE:CD1 | 1:C:804:PHE:HE1 | 2.16 | 0.64 |
| 1:A:150:THR:O | 1:A:154:ILE:HG13 | 1.98 | 0.64 |
| 1:B:150:THR:HB | 1:B:153:ASP:HB2 | 1.79 | 0.64 |
| 1:C:459:PHE:CB | 1:C:871:ASN:HB3 | 2.27 | 0.64 |
| 1:C:911:GLY:N | 1:C:1013:THR:HG21 | 2.13 | 0.64 |
| 1:A:10:ILE:HD13 | 1:B:893:GLU:CA | 2.24 | 0.63 |
| 1:C:204:ILE:HG12 | 1:C:773:VAL:HG21 | 1.79 | 0.63 |
| 1:A:365:THR:O | 1:A:368:PRO:HD2 | 1.98 | 0.63 |
| 1:A:597:TYR:HD1 | 1:A:598:TYR:N | 1.97 | 0.63 |
| 1:B:708:LYS:HB2 | 1:B:708:LYS:NZ | 2.13 | 0.63 |
| 1:C:193:LEU:HB3 | 1:C:198:LEU:O | 1.99 | 0.63 |
| 1:C:754:TRP:CH2 | 1:C:780:ARG:HA | 2.33 | 0.63 |
| 1:A:1022:VAL:N | 1:A:1023:PRO:HD2 | 2.13 | 0.63 |
| 1:C:143:ILE:HD11 | 1:C:281:PHE:HB3 | 1.79 | 0.63 |
| 1:B:780:ARG:O | 1:B:780:ARG:CG | 2.46 | 0.63 |
| 1:A:6:ILE:C | 1:A:9:PRO:CD | 2.67 | 0.63 |
| 1:A:389:SER:O | 1:A:394:THR:HG21 | 1.97 | 0.63 |
| 1:A:747:ASN:HD21 | 1:C:237:GLN:NE2 | 1.97 | 0.63 |
| 1:A:367:ILE:O | 1:A:370:ILE:HG22 | 1.99 | 0.63 |
| 1:A:731:ILE:H | 1:A:731:ILE:HD12 | 1.63 | 0.63 |
| 1:B:184:MET:HB2 | 1:B:762:PHE:CE2 | 2.34 | 0.63 |
| 1:C:459:PHE:N | 1:C:459:PHE:CD2 | 2.66 | 0.63 |
| 1:A:298:ASN:HB3 | 1:A:301:ASP:CB | 2.24 | 0.63 |
| 1:B:741:VAL:HG22 | 1:B:792:ARG:O | 1.98 | 0.63 |
| 1:A:99:ASP:OD1 | 1:A:102:ILE:HG22 | 1.99 | 0.62 |
| 1:A:100:ALA:HB1 | 1:A:131:LYS:HE3 | 1.81 | 0.62 |
| 1:B:370:ILE:O | 1:B:370:ILE:CG2 | 2.47 | 0.62 |
| 1:C:192:GLU:HG2 | 1:C:264:ASP:O | 1.98 | 0.62 |
| 1:A:727:PHE:CZ | 1:A:807:SER:HB3 | 2.34 | 0.62 |
| 1:B:699:ARG:HG2 | 1:B:700:ASN:H | 1.64 | 0.62 |
| 1:B:945:ILE:HD13 | 1:B:946:VAL:HG23 | 1.81 | 0.62 |
| 1:B:54:ALA:N | 1:B:57:VAL:HG11 | 2.13 | 0.62 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:B:633:ASP:CG | 1:B:634:TRP:H | 2.03 | 0.62 |
| 1:C:118:LEU:H | 1:C:118:LEU:HD22 | 1.62 | 0.62 |
| 1:C:600:THR:O | 1:C:603:LYS:HB2 | 1.99 | 0.62 |
| 1:C:662:MET:N | 1:C:662:MET:SD | 2.72 | 0.62 |
| 1:C:672:VAL:O | 1:C:674:LEU:N | 2.30 | 0.62 |
| 1:A:268:ILE:O | 1:A:269:GLU:HB3 | 1.99 | 0.62 |
| 1:A:367:ILE:N | 1:A:368:PRO:CD | 2.62 | 0.62 |
| 1:A:445:ILE:HD13 | 1:A:940:LYS:HE3 | 1.82 | 0.62 |
| 1:A:317:PHE:HB3 | 1:A:321:LEU:CG | 2.29 | 0.62 |
| 1:B:911:GLY:CA | 1:B:1013:THR:HG21 | 2.29 | 0.62 |
| 1:C:413:VAL:HA | 1:C:493:CYS:SG | 2.40 | 0.62 |
| 1:B:115:MET:HA | 1:B:115:MET:CE | 2.30 | 0.62 |
| 1:B:185:ARG:HH11 | 1:B:185:ARG:CG | 2.10 | 0.62 |
| 1:C:713:LEU:HD12 | 1:C:834:GLY:HA3 | 1.81 | 0.62 |
| 1:C:925:VAL:HG23 | 1:C:926:TYR:N | 2.14 | 0.62 |
| 1:A:188:MET:SD | 1:A:200:PRO:HB3 | 2.40 | 0.62 |
| 1:A:728:LYS:HD3 | 1:C:235:ILE:HG22 | 1.82 | 0.62 |
| 1:B:351:VAL:O | 1:B:351:VAL:HG12 | 1.99 | 0.62 |
| 1:A:141:GLY:HA2 | 1:A:288:GLY:CA | 2.29 | 0.62 |
| 1:A:199:THR:HB | 1:A:200:PRO:HD2 | 1.82 | 0.62 |
| 1:A:741:VAL:HG21 | 1:A:791:VAL:HG23 | 1.82 | 0.62 |
| 1:B:298:ASN:O | 1:B:300:LEU:N | 2.33 | 0.62 |
| 1:B:790:TYR:CD1 | 1:B:800:PRO:HA | 2.35 | 0.62 |
| 1:A:369:THR:O | 1:A:373:PRO:CG | 2.48 | 0.61 |
| 1:B:713:LEU:HD21 | 1:B:844:MET:HG2 | 1.81 | 0.61 |
| 1:B:792:ARG:HG2 | 1:B:793:ALA:N | 2.12 | 0.61 |
| 1:C:144:ASN:ND2 | 1:C:148:THR:N | 2.47 | 0.61 |
| 1:A:129:VAL:H | 1:B:112:GLN:NE2 | 1.95 | 0.61 |
| 1:A:367:ILE:HG22 | 1:A:496:MET:CE | 2.29 | 0.61 |
| 1:B:493:CYS:O | 1:B:497:LEU:HB2 | 2.01 | 0.61 |
| 1:C:66:GLU:OE2 | 1:C:80:SER:CB | 2.48 | 0.61 |
| 1:C:186:ILE:HD12 | 1:C:262:LEU:HD21 | 1.82 | 0.61 |
| 1:C:690:LEU:HD23 | 1:C:694:LYS:CD | 2.29 | 0.61 |
| 1:A:3:ASN:O | 1:A:6:ILE:HG13 | 1.98 | 0.61 |
| 1:A:447:MET:CB | 1:A:887:CYS:SG | 2.82 | 0.61 |
| 1:B:291:ILE:HG21 | 1:B:306:ILE:HD11 | 1.81 | 0.61 |
| 1:C:669:PRO:CB | 1:C:672:VAL:CB | 2.73 | 0.61 |
| 1:B:150:THR:CB | 1:B:153:ASP:HB2 | 2.30 | 0.61 |
| 1:B:343:THR:HG21 | 1:B:1000:GLN:OE1 | 2.01 | 0.61 |
| 1:A:688:ALA:C | 1:A:690:LEU:H | 2.03 | 0.61 |
| 1:A:939:ALA:O | 1:A:943:ILE:HG12 | 2.01 | 0.61 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:A:1022:VAL:HA | 1:A:1025:PHE:HD1 | 1.66 | 0.61 |
| 1:C:247:GLY:HA3 | 1:C:263:ARG:NH2 | 2.15 | 0.61 |
| 1:A:719:ASN:HB2 | 1:A:828:LEU:HD22 | 1.81 | 0.61 |
| 1:B:158:VAL:HA | 1:B:162:MET:HG2 | 1.82 | 0.61 |
| 1:C:418:ARG:HH21 | 1:C:971:ARG:HH12 | 1.46 | 0.61 |
| 1:C:702:LEU:HB2 | 1:C:851:LEU:HD21 | 1.83 | 0.61 |
| 1:A:1:MET:O | 1:A:5:PHE:HB2 | 2.01 | 0.61 |
| 1:A:73:ASP:H | 1:A:106:GLN:HE22 | 1.47 | 0.61 |
| 1:B:484:VAL:HG13 | 1:B:488:LEU:HB3 | 1.82 | 0.61 |
| 1:C:5:PHE:HD2 | 1:C:12:ALA:HB2 | 1.66 | 0.61 |
| 1:C:358:PHE:HB3 | 1:C:977:MET:CE | 2.27 | 0.61 |
| 1:C:669:PRO:HG2 | 1:C:672:VAL:CB | 2.27 | 0.61 |
| 1:C:872:GLN:O | 1:C:875:SER:HB3 | 2.00 | 0.61 |
| 1:A:388:PHE:HD1 | 1:A:388:PHE:H | 1.49 | 0.61 |
| 1:B:178:PHE:HD2 | 1:B:288:GLY:O | 1.84 | 0.61 |
| 1:B:414:GLU:CD | 1:B:974:PRO:HG3 | 2.21 | 0.61 |
| 1:B:568:ASP:OD1 | 1:B:644:VAL:HG22 | 2.01 | 0.61 |
| 1:C:668:LEU:HD23 | 1:C:668:LEU:H | 1.65 | 0.61 |
| 1:C:903:LEU:HB3 | 1:C:1025:PHE:CE1 | 2.35 | 0.61 |
| 1:A:12:ALA:O | 1:A:14:VAL:N | 2.34 | 0.60 |
| 1:A:199:THR:HB | 1:A:200:PRO:CD | 2.31 | 0.60 |
| 1:A:369:THR:O | 1:A:373:PRO:HG2 | 2.01 | 0.60 |
| 1:C:204:ILE:HG23 | 1:C:759:VAL:HG13 | 1.82 | 0.60 |
| 1:C:758:TYR:HE2 | 1:C:770:LYS:HZ3 | 1.48 | 0.60 |
| 1:A:726:GLN:HB2 | 1:C:235:ILE:HD13 | 1.82 | 0.60 |
| 1:B:189:ASN:O | 1:B:193:LEU:HB2 | 2.00 | 0.60 |
| 1:B:241:THR:HG22 | 1:B:763:ILE:O | 2.00 | 0.60 |
| 1:C:30:LEU:HD23 | 1:C:31:PRO:HD2 | 1.83 | 0.60 |
| 1:C:110:LYS:HA | 1:C:113:LEU:HD12 | 1.83 | 0.60 |
| 1:C:262:LEU:HG | 1:C:268:ILE:HD11 | 1.83 | 0.60 |
| 1:A:367:ILE:HG22 | 1:A:496:MET:HE3 | 1.83 | 0.60 |
| 1:A:1024:VAL:O | 1:A:1028:VAL:HG23 | 2.01 | 0.60 |
| 1:C:115:MET:HE1 | 1:C:118:LEU:HD23 | 1.82 | 0.60 |
| 1:A:13:TRP:CB | 1:A:17:ILE:HD11 | 2.31 | 0.60 |
| 1:A:186:ILE:HD13 | 1:A:262:LEU:HD21 | 1.83 | 0.60 |
| 1:A:339:GLU:O | 1:A:340:VAL:HB | 2.02 | 0.60 |
| 1:A:688:ALA:O | 1:A:690:LEU:N | 2.34 | 0.60 |
| 1:B:355:MET:SD | 1:B:410:ILE:HD11 | 2.40 | 0.60 |
| 1:A:112:GLN:HA | 1:A:112:GLN:NE2 | 2.09 | 0.60 |
| 1:A:365:THR:O | 1:A:368:PRO:CD | 2.50 | 0.60 |
| 1:B:254:ASN:HD22 | 1:B:255:GLN:H | 1.50 | 0.60 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:C:763:ILE:HG22 | 1:C:764:ASP:O | 2.01 | 0.60 |
| 1:C:899:PHE:HD1 | 1:C:899:PHE:H | 1.49 | 0.60 |
| 1:A:18:ILE:O | 1:A:21:LEU:N | 2.35 | 0.60 |
| 1:A:986:VAL:HG13 | 1:A:1008:MET:HG2 | 1.82 | 0.60 |
| 1:C:184:MET:HA | 1:C:184:MET:CE | 2.31 | 0.60 |
| 1:C:220:GLY:H | 1:C:231:ASN:HD22 | 1.49 | 0.60 |
| 1:A:14:VAL:C | 1:A:17:ILE:CG1 | 2.70 | 0.60 |
| 1:A:188:MET:HA | 1:A:266:ALA:HA | 1.84 | 0.60 |
| 1:B:790:TYR:HD1 | 1:B:800:PRO:HA | 1.65 | 0.60 |
| 1:C:448:VAL:HG22 | 1:C:887:CYS:HB3 | 1.83 | 0.60 |
| 1:C:685:ILE:O | 1:C:685:ILE:HG13 | 2.01 | 0.60 |
| 1:C:702:LEU:CD1 | 1:C:851:LEU:HD11 | 2.27 | 0.60 |
| 1:A:211:ASN:ND2 | 1:A:760:ASN:OD1 | 2.31 | 0.60 |
| 1:A:890:ALA:HB1 | 1:C:11:PHE:HD1 | 1.66 | 0.60 |
| 1:B:58:GLN:HA | 1:B:62:THR:OG1 | 2.01 | 0.60 |
| 1:B:953:MET:HA | 1:B:957:GLY:O | 2.01 | 0.60 |
| 1:A:314:GLU:HA | 1:A:317:PHE:CZ | 2.36 | 0.60 |
| 1:B:123:GLN:O | 1:B:125:GLN:N | 2.29 | 0.60 |
| 1:B:476:SER:O | 1:B:480:LEU:HB2 | 2.02 | 0.60 |
| 1:A:137:LEU:O | 1:A:137:LEU:HG | 2.00 | 0.60 |
| 1:A:741:VAL:HG21 | 1:A:791:VAL:CG2 | 2.32 | 0.60 |
| 1:A:888:LEU:HD11 | 1:A:943:ILE:HD12 | 1.82 | 0.60 |
| 1:B:235:ILE:N | 1:B:235:ILE:CD1 | 2.65 | 0.60 |
| 1:B:1022:VAL:HG23 | 1:B:1023:PRO:CD | 2.29 | 0.60 |
| 1:A:6:ILE:O | 1:A:9:PRO:HD3 | 2.02 | 0.59 |
| 1:A:60:THR:CG2 | 1:A:119:PRO:HG3 | 2.31 | 0.59 |
| 1:A:530:SER:O | 1:A:534:ILE:HB | 2.02 | 0.59 |
| 1:B:193:LEU:CD1 | 1:B:198:LEU:O | 2.50 | 0.59 |
| 1:B:834:GLY:O | 1:B:835:LYS:HD3 | 2.02 | 0.59 |
| 1:B:885:PHE:C | 1:B:885:PHE:CD1 | 2.74 | 0.59 |
| 1:C:554:TYR:C | 1:C:556:PHE:N | 2.55 | 0.59 |
| 1:C:777:ALA:O | 1:C:781:MET:CE | 2.49 | 0.59 |
| 1:A:790:TYR:CE1 | 1:A:800:PRO:HG3 | 2.34 | 0.59 |
| 1:B:750:LEU:HD23 | 1:B:750:LEU:C | 2.22 | 0.59 |
| 1:A:102:ILE:HD11 | 1:C:101:ASP:HB3 | 1.84 | 0.59 |
| 1:A:126:GLY:HA3 | 1:B:116:PRO:HB3 | 1.84 | 0.59 |
| 1:A:276:ASP:CB | 1:C:222:THR:HG23 | 2.21 | 0.59 |
| 1:B:144:ASN:OD1 | 1:B:320:GLY:O | 2.20 | 0.59 |
| 1:A:471:SER:O | 1:A:475:VAL:HG12 | 2.01 | 0.59 |
| 1:A:901:VAL:HG11 | 1:A:943:ILE:HD13 | 1.82 | 0.59 |
| 1:B:247:GLY:O | 1:B:263:ARG:HB2 | 2.01 | 0.59 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:B:699:ARG:O | 1:B:701:GLN:N | 2.35 | 0.59 |
| 1:B:770:LYS:HB3 | 1:B:772:TYR:HE2 | 1.67 | 0.59 |
| 1:C:324:VAL:HG23 | 1:C:326:PRO:HD3 | 1.84 | 0.59 |
| 1:C:778:LYS:HE3 | 1:C:779:TYR:CE2 | 2.34 | 0.59 |
| 1:A:913:LEU:HD22 | 1:A:927:PHE:HZ | 1.65 | 0.59 |
| 1:B:773:VAL:O | 1:B:773:VAL:CG1 | 2.51 | 0.59 |
| 1:C:228:GLN:NE2 | 1:C:230:LEU:O | 2.32 | 0.59 |
| 1:B:242:SER:HB2 | 1:B:245:GLU:HG3 | 1.84 | 0.59 |
| 1:B:847:LEU:HD23 | 1:B:847:LEU:H | 1.67 | 0.59 |
| 1:C:514:GLY:HA2 | 1:C:518:ARG:HG3 | 1.85 | 0.59 |
| 1:C:754:TRP:CZ3 | 1:C:780:ARG:HA | 2.38 | 0.59 |
| 1:C:894:SER:HB2 | 1:C:897:ILE:HD12 | 1.84 | 0.59 |
| 1:A:6:ILE:C | 1:A:9:PRO:HD3 | 2.22 | 0.59 |
| 1:B:30:LEU:HD13 | 1:B:390:ILE:HD11 | 1.85 | 0.59 |
| 1:B:195:LYS:HG2 | 1:B:195:LYS:O | 2.03 | 0.59 |
| 1:C:456:MET:O | 1:C:457:ALA:HB3 | 2.03 | 0.59 |
| 1:C:513:PHE:CD2 | 1:C:517:ASN:HB3 | 2.38 | 0.59 |
| 1:A:68:ASN:HD22 | 1:A:114:ALA:HB2 | 1.67 | 0.59 |
| 1:C:66:GLU:O | 1:C:69:MET:HB2 | 2.02 | 0.59 |
| 1:C:578:LEU:HB3 | 1:C:579:PRO:CD | 2.31 | 0.59 |
| 1:C:847:LEU:HA | 1:C:850:LYS:CG | 2.33 | 0.59 |
| 1:A:3:ASN:O | 1:A:6:ILE:CG1 | 2.51 | 0.59 |
| 1:A:740:GLY:C | 1:A:793:ALA:HB1 | 2.23 | 0.59 |
| 1:C:427:PRO:HB3 | 1:C:498:LYS:HD2 | 1.84 | 0.59 |
| 1:C:939:ALA:O | 1:C:943:ILE:HG13 | 2.03 | 0.59 |
| 1:C:968:VAL:HG11 | 1:C:1023:PRO:HG3 | 1.85 | 0.59 |
| 1:C:674:LEU:HD11 | 1:C:862:MET:N | 2.18 | 0.58 |
| 1:A:609:VAL:HG12 | 1:A:629:VAL:HB | 1.85 | 0.58 |
| 1:B:463:THR:HG21 | 1:B:869:SER:HB2 | 1.85 | 0.58 |
| 1:B:808:ARG:HB2 | 1:B:808:ARG:HH21 | 1.68 | 0.58 |
| 1:C:688:ALA:O | 1:C:690:LEU:N | 2.29 | 0.58 |
| 1:A:68:ASN:C | 1:A:70:ASN:OD1 | 2.41 | 0.58 |
| 1:A:638:PRO:HD2 | 1:A:642:ASN:HD22 | 1.68 | 0.58 |
| 1:B:193:LEU:HD22 | 1:B:198:LEU:HB2 | 1.85 | 0.58 |
| 1:B:371:ALA:HA | 1:B:374:VAL:HG12 | 1.85 | 0.58 |
| 1:B:843:LEU:HD23 | 1:B:847:LEU:HD21 | 1.85 | 0.58 |
| 1:C:681:ASP:HB3 | 1:C:860:THR:HG22 | 1.85 | 0.58 |
| 1:B:1001:ASN:O | 1:B:1005:THR:HB | 2.03 | 0.58 |
| 1:C:368:PRO:HG3 | 1:C:413:VAL:HG11 | 1.83 | 0.58 |
| 1:C:445:ILE:HG13 | 1:C:446:ALA:H | 1.66 | 0.58 |
| 1:C:778:LYS:HB2 | 1:C:779:TYR:CE2 | 2.39 | 0.58 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:A:69:MET:C | 1:A:70:ASN:OD1 | 2.42 | 0.58 |
| 1:A:154:ILE:O | 1:A:158:VAL:HG23 | 2.03 | 0.58 |
| 1:A:181:GLN:HG2 | 1:A:181:GLN:O | 2.03 | 0.58 |
| 1:A:441:ALA:O | 1:A:445:ILE:HG23 | 2.03 | 0.58 |
| 1:A:682:PHE:CZ | 1:A:857:TYR:HB2 | 2.39 | 0.58 |
| 1:A:780:ARG:NH2 | 1:C:223:PRO:O | 2.37 | 0.58 |
| 1:B:959:GLY:HA2 | 1:B:962:GLU:HB3 | 1.84 | 0.58 |
| 1:C:144:ASN:ND2 | 1:C:149:MET:H | 2.02 | 0.58 |
| 1:A:677:ALA:C | 1:A:679:GLY:H | 2.06 | 0.58 |
| 1:A:971:ARG:O | 1:A:974:PRO:HD2 | 2.03 | 0.58 |
| 1:B:356:TYR:O | 1:B:360:GLN:N | 2.36 | 0.58 |
| 1:B:452:VAL:O | 1:B:453:PHE:HD2 | 1.87 | 0.58 |
| 1:B:585:GLU:O | 1:B:588:GLN:N | 2.36 | 0.58 |
| 1:B:693:GLU:HG3 | 1:B:694:LYS:H | 1.68 | 0.58 |
| 1:B:699:ARG:HB3 | 1:B:699:ARG:NH1 | 2.12 | 0.58 |
| 1:B:871:ASN:HD22 | 1:B:871:ASN:N | 2.00 | 0.58 |
| 1:A:584:GLN:H | 1:A:622:GLN:CG | 2.16 | 0.58 |
| 1:B:154:ILE:C | 1:B:156:ASP:N | 2.57 | 0.58 |
| 1:C:476:SER:O | 1:C:478:MET:N | 2.36 | 0.58 |
| 1:A:323:ILE:O | 1:A:323:ILE:HG12 | 2.02 | 0.58 |
| 1:A:597:TYR:C | 1:A:597:TYR:HD1 | 2.07 | 0.58 |
| 1:A:747:ASN:HD21 | 1:C:237:GLN:HE21 | 1.49 | 0.58 |
| 1:B:193:LEU:HD23 | 1:B:265:VAL:HG21 | 1.85 | 0.58 |
| 1:C:13:TRP:NE1 | 1:C:492:LEU:HD21 | 2.18 | 0.58 |
| 1:C:669:PRO:CG | 1:C:672:VAL:CB | 2.82 | 0.58 |
| 1:C:713:LEU:HD13 | 1:C:713:LEU:N | 2.18 | 0.58 |
| 1:A:7:ASP:CA | 1:A:9:PRO:HD2 | 2.30 | 0.58 |
| 1:A:733:GLN:OE1 | 1:A:743:ILE:CD1 | 2.48 | 0.58 |
| 1:B:171:GLY:HA3 | 1:B:302:THR:CG2 | 2.33 | 0.58 |
| 1:A:108:GLN:OE1 | 1:B:112:GLN:HB2 | 2.03 | 0.58 |
| 1:A:151:GLN:HE22 | 1:A:279:ALA:N | 2.01 | 0.58 |
| 1:A:172:VAL:HG23 | 1:A:172:VAL:O | 2.04 | 0.58 |
| 1:A:376:LEU:O | 1:A:378:GLY:N | 2.37 | 0.58 |
| 1:A:818:ARG:HG2 | 1:A:823:PRO:HA | 1.86 | 0.58 |
| 1:B:16:ALA:HB2 | 1:B:488:LEU:HG | 1.85 | 0.58 |
| 1:B:54:ALA:CA | 1:B:57:VAL:HG11 | 2.22 | 0.58 |
| 1:B:247:GLY:HA2 | 1:B:268:ILE:HG13 | 1.84 | 0.58 |
| 1:B:140:VAL:HG11 | 1:B:310:LEU:HD11 | 1.86 | 0.57 |
| 1:B:158:VAL:HA | 1:B:162:MET:CG | 2.34 | 0.57 |
| 1:A:156:ASP:OD1 | 1:A:182:TYR:HB2 | 2.03 | 0.57 |
| 1:A:815:ARG:HH11 | 1:A:815:ARG:HB3 | 1.69 | 0.57 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:C:572:PHE:HE2 | 1:C:631:LEU:HD21 | 1.69 | 0.57 |
| 1:C:777:ALA:C | 1:C:781:MET:HE3 | 2.25 | 0.57 |
| 1:C:875:SER:C | 1:C:877:TYR:H | 2.07 | 0.57 |
| 1:A:6:ILE:HD11 | 1:A:7:ASP:CG | 2.08 | 0.57 |
| 1:B:358:PHE:HE1 | 1:B:973:ARG:HB2 | 1.68 | 0.57 |
| 1:B:591:LEU:CD1 | 1:B:611:ALA:HB1 | 2.26 | 0.57 |
| 1:C:17:ILE:HA | 1:C:20:MET:HB2 | 1.86 | 0.57 |
| 1:B:144:ASN:ND2 | 1:B:149:MET:HG3 | 2.19 | 0.57 |
| 1:C:187:TRP:CZ3 | 1:C:774:MET:HB3 | 2.39 | 0.57 |
| 1:C:418:ARG:HH21 | 1:C:971:ARG:NH1 | 2.02 | 0.57 |
| 1:C:941:ASN:HB2 | 1:C:975:ILE:HG12 | 1.85 | 0.57 |
| 1:A:141:GLY:HA2 | 1:A:288:GLY:HA2 | 1.86 | 0.57 |
| 1:B:45:ILE:HD13 | 1:B:65:ILE:HG21 | 1.86 | 0.57 |
| 1:B:54:ALA:N | 1:B:57:VAL:HG12 | 2.19 | 0.57 |
| 1:B:324:VAL:HG23 | 1:B:326:PRO:HD3 | 1.85 | 0.57 |
| 1:B:571:VAL:HG12 | 1:B:630:SER:HA | 1.86 | 0.57 |
| 1:C:544:LEU:HD12 | 1:C:1021:PHE:HZ | 1.69 | 0.57 |
| 1:A:405:LEU:HD21 | 1:A:477:ALA:HB1 | 1.87 | 0.57 |
| 1:B:65:ILE:HB | 1:B:90:ILE:HD12 | 1.86 | 0.57 |
| 1:B:927:PHE:CE2 | 1:B:931:LEU:HG | 2.39 | 0.57 |
| 1:C:713:LEU:CD1 | 1:C:834:GLY:HA3 | 2.34 | 0.57 |
| 1:A:574:THR:HG1 | 1:A:598:TYR:HE1 | 1.50 | 0.57 |
| 1:A:841:MET:O | 1:A:845:GLU:HG3 | 2.05 | 0.57 |
| 1:B:289:LEU:HD12 | 1:B:289:LEU:N | 2.19 | 0.57 |
| 1:C:80:SER:O | 1:C:81:ASN:HB3 | 2.05 | 0.57 |
| 1:C:307:ARG:NE | 1:C:325:TYR:HE2 | 2.01 | 0.57 |
| 1:C:690:LEU:CD2 | 1:C:694:LYS:HD2 | 2.34 | 0.57 |
| 1:A:590:VAL:O | 1:A:594:VAL:HG23 | 2.05 | 0.57 |
| 1:A:836:SER:OG | 1:A:839:GLU:HG3 | 2.03 | 0.57 |
| 1:A:904:VAL:HG11 | 1:A:938:SER:O | 2.05 | 0.57 |
| 1:A:1017:LEU:O | 1:A:1021:PHE:HB2 | 2.03 | 0.57 |
| 1:B:988:PRO:O | 1:B:989:LEU:CB | 2.50 | 0.57 |
| 1:C:244:GLU:HA | 1:C:263:ARG:HH22 | 1.69 | 0.57 |
| 1:A:646:ALA:O | 1:A:649:MET:HB2 | 2.05 | 0.57 |
| 1:B:300:LEU:HD21 | 1:B:333:VAL:HG11 | 1.86 | 0.57 |
| 1:B:518:ARG:HA | 1:B:521:GLU:CG | 2.35 | 0.57 |
| 1:C:721:LEU:O | 1:C:721:LEU:HD22 | 2.03 | 0.57 |
| 1:C:727:PHE:CZ | 1:C:807:SER:CB | 2.88 | 0.57 |
| 1:A:601:LYS:O | 1:A:602:GLU:HG2 | 2.05 | 0.57 |
| 1:A:643:LYS:O | 1:A:647:ILE:HG13 | 2.04 | 0.57 |
| 1:B:237:GLN:HG2 | 1:B:238:THR:N | 2.20 | 0.57 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:B:452:VAL:O | 1:B:453:PHE:HB2 | 2.05 | 0.57 |
| 1:C:131:LYS:HB2 | 1:C:295:THR:CG2 | 2.34 | 0.57 |
| 1:C:575:MET:HB3 | 1:C:577:GLN:NE2 | 2.20 | 0.57 |
| 1:C:847:LEU:HA | 1:C:850:LYS:HG3 | 1.87 | 0.57 |
| 1:A:395:MET:HA | 1:A:395:MET:HE3 | 1.87 | 0.56 |
| 1:B:156:ASP:OD2 | 1:B:182:TYR:HB2 | 2.05 | 0.56 |
| 1:B:714:THR:HG23 | 1:B:830:GLN:HG3 | 1.87 | 0.56 |
| 1:C:115:MET:CE | 1:C:127:VAL:HG11 | 2.35 | 0.56 |
| 1:C:188:MET:HG3 | 1:C:774:MET:O | 2.05 | 0.56 |
| 1:C:213:GLN:NE2 | 1:C:238:THR:HA | 2.20 | 0.56 |
| 1:C:895:TRP:HA | 1:C:895:TRP:CE3 | 2.39 | 0.56 |
| 1:A:99:ASP:OD1 | 1:A:101:ASP:N | 2.37 | 0.56 |
| 1:A:298:ASN:HD22 | 1:A:301:ASP:N | 1.91 | 0.56 |
| 1:A:595:THR:HA | 1:A:609:VAL:HG21 | 1.86 | 0.56 |
| 1:A:894:SER:OG | 1:A:897:ILE:HB | 2.05 | 0.56 |
| 1:B:228:GLN:OE1 | 1:C:781:MET:HB3 | 2.05 | 0.56 |
| 1:A:14:VAL:N | 1:A:17:ILE:HD11 | 2.20 | 0.56 |
| 1:A:54:ALA:HA | 1:A:83:ASP:O | 2.04 | 0.56 |
| 1:A:69:MET:O | 1:C:168:ARG:CG | 2.53 | 0.56 |
| 1:A:344:LEU:HD23 | 1:A:402:ILE:CD1 | 2.34 | 0.56 |
| 1:A:445:ILE:HG21 | 1:A:940:LYS:HG3 | 1.87 | 0.56 |
| 1:A:545:TYR:HB2 | 1:A:1021:PHE:CE1 | 2.40 | 0.56 |
| 1:B:115:MET:HB2 | 1:B:116:PRO:HD3 | 1.86 | 0.56 |
| 1:B:214:VAL:HG12 | 1:B:215:ALA:O | 2.06 | 0.56 |
| 1:B:219:LEU:HD21 | 1:C:783:PRO:HB3 | 1.88 | 0.56 |
| 1:B:598:TYR:HB3 | 1:B:606:VAL:HG21 | 1.86 | 0.56 |
| 1:B:944:LEU:HD13 | 1:B:975:ILE:HG13 | 1.85 | 0.56 |
| 1:C:380:PHE:HE2 | 1:C:395:MET:HE3 | 1.69 | 0.56 |
| 1:A:443:VAL:HG22 | 1:A:486:LEU:HD11 | 1.87 | 0.56 |
| 1:A:591:LEU:CD1 | 1:A:613:ASN:HB3 | 2.35 | 0.56 |
| 1:B:676:THR:O | 1:B:676:THR:HG22 | 2.04 | 0.56 |
| 1:B:847:LEU:HD23 | 1:B:847:LEU:N | 2.20 | 0.56 |
| 1:C:62:THR:HA | 1:C:88:VAL:HG11 | 1.88 | 0.56 |
| 1:C:914:LEU:O | 1:C:915:ALA:HB3 | 2.06 | 0.56 |
| 1:A:6:ILE:CD1 | 1:A:7:ASP:H | 1.98 | 0.56 |
| 1:A:73:ASP:H | 1:A:106:GLN:NE2 | 2.03 | 0.56 |
| 1:A:729:ILE:HD11 | 1:A:786:ILE:HD12 | 1.88 | 0.56 |
| 1:A:897:ILE:N | 1:A:898:PRO:HD2 | 2.21 | 0.56 |
| 1:C:190:PRO:HB3 | 1:C:789:TRP:CE3 | 2.41 | 0.56 |
| 1:A:191:ASN:C | 1:A:193:LEU:H | 2.09 | 0.56 |
| 1:A:886:LEU:O | 1:C:14:VAL:HG21 | 2.06 | 0.56 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:B:219:LEU:CD1 | 1:B:234:ILE:HG12 | 2.35 | 0.56 |
| 1:B:946:VAL:HG21 | 1:B:1026:PHE:CZ | 2.41 | 0.56 |
| 1:C:183:ALA:HB1 | 1:C:770:LYS:O | 2.05 | 0.56 |
| 1:C:835:LYS:HG3 | 1:C:836:SER:N | 2.20 | 0.56 |
| 1:C:983:ILE:HD11 | 1:C:1011:MET:HB3 | 1.87 | 0.56 |
| 1:C:1022:VAL:HA | 1:C:1025:PHE:CE2 | 2.41 | 0.56 |
| 1:A:555:LEU:HB3 | 1:A:913:LEU:HD12 | 1.88 | 0.56 |
| 1:C:57:VAL:HG13 | 1:C:88:VAL:HG22 | 1.87 | 0.56 |
| 1:C:564:LEU:HD23 | 1:C:565:PRO:HD2 | 1.87 | 0.56 |
| 1:C:712:MET:HB2 | 1:C:713:LEU:HD13 | 1.87 | 0.56 |
| 1:C:727:PHE:CZ | 1:C:807:SER:HB2 | 2.40 | 0.56 |
| 1:A:164:ASP:OD2 | 1:B:67:GLN:HG3 | 2.05 | 0.56 |
| 1:B:115:MET:HE2 | 1:B:115:MET:HA | 1.87 | 0.56 |
| 1:B:149:MET:HB3 | 1:B:154:ILE:HG22 | 1.88 | 0.56 |
| 1:C:137:LEU:HD13 | 1:C:293:LEU:HD13 | 1.88 | 0.56 |
| 1:A:190:PRO:HD3 | 1:A:789:TRP:CZ2 | 2.41 | 0.56 |
| 1:A:330:THR:H | 1:A:331:PRO:HD2 | 1.70 | 0.56 |
| 1:B:145:THR:HB | 1:B:146:ASP:OD2 | 2.06 | 0.56 |
| 1:B:641:GLU:HB3 | 1:B:650:ARG:HH12 | 1.69 | 0.56 |
| 1:C:595:THR:HG21 | 1:C:611:ALA:HB2 | 1.88 | 0.56 |
| 1:C:743:ILE:HD13 | 1:C:743:ILE:H | 1.71 | 0.56 |
| 1:C:865:GLN:C | 1:C:867:ARG:H | 2.08 | 0.56 |
| 1:A:10:ILE:HG22 | 1:B:895:TRP:CD1 | 2.39 | 0.55 |
| 1:A:545:TYR:HB2 | 1:A:1021:PHE:HE1 | 1.71 | 0.55 |
| 1:B:307:ARG:HB2 | 1:B:307:ARG:NH1 | 2.21 | 0.55 |
| 1:B:419:VAL:HG13 | 1:B:419:VAL:O | 2.07 | 0.55 |
| 1:C:150:THR:H | 1:C:153:ASP:HB2 | 1.70 | 0.55 |
| 1:C:184:MET:HG2 | 1:C:246:PHE:CE1 | 2.41 | 0.55 |
| 1:A:139:VAL:HG12 | 1:A:327:TYR:HB3 | 1.88 | 0.55 |
| 1:A:843:LEU:HA | 1:A:846:GLN:NE2 | 2.17 | 0.55 |
| 1:B:68:ASN:HD22 | 1:B:114:ALA:HB2 | 1.70 | 0.55 |
| 1:B:446:ALA:HB2 | 1:B:482:VAL:HB | 1.88 | 0.55 |
| 1:B:705:GLU:O | 1:B:706:ALA:HB3 | 2.06 | 0.55 |
| 1:C:81:ASN:C | 1:C:81:ASN:ND2 | 2.56 | 0.55 |
| 1:A:57:VAL:HG12 | 1:A:82:SER:HB3 | 1.87 | 0.55 |
| 1:A:344:LEU:HD23 | 1:A:402:ILE:HD11 | 1.88 | 0.55 |
| 1:B:453:PHE:HA | 1:B:456:MET:SD | 2.46 | 0.55 |
| 1:B:971:ARG:HG3 | 1:B:971:ARG:NH1 | 2.09 | 0.55 |
| 1:B:982:PHE:HE2 | 1:B:1007:VAL:O | 1.90 | 0.55 |
| 1:B:412:VAL:HG21 | 1:B:485:ALA:HB1 | 1.88 | 0.55 |
| 1:B:885:PHE:C | 1:B:885:PHE:HD1 | 2.09 | 0.55 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:C:489:THR:O | 1:C:493:CYS:HB3 | 2.07 | 0.55 |
| 1:B:251:LEU:HD13 | 1:B:262:LEU:H | 1.71 | 0.55 |
| 1:B:904:VAL:HG21 | 1:B:942:ALA:HB2 | 1.87 | 0.55 |
| 1:C:731:ILE:HD13 | 1:C:746:ILE:HG21 | 1.89 | 0.55 |
| 1:A:3:ASN:O | 1:A:6:ILE:HD11 | 2.07 | 0.55 |
| 1:B:326:PRO:O | 1:B:630:SER:HB2 | 2.06 | 0.55 |
| 1:B:419:VAL:O | 1:B:419:VAL:CG1 | 2.55 | 0.55 |
| 1:B:945:ILE:HD12 | 1:B:1022:VAL:HB | 1.88 | 0.55 |
| 1:A:13:TRP:O | 1:A:16:ALA:N | 2.39 | 0.55 |
| 1:A:428:LYS:HA | 1:A:494:ALA:HB1 | 1.89 | 0.55 |
| 1:A:746:ILE:HG22 | 1:A:747:ASN:N | 2.22 | 0.55 |
| 1:A:948:PHE:HA | 1:A:951:ASP:HB2 | 1.89 | 0.55 |
| 1:B:23:GLY:HA2 | 1:B:381:ALA:HB2 | 1.88 | 0.55 |
| 1:B:370:ILE:O | 1:B:370:ILE:HG22 | 2.06 | 0.55 |
| 1:B:791:VAL:O | 1:B:799:VAL:HG12 | 2.07 | 0.55 |
| 1:C:115:MET:HA | 1:C:118:LEU:HD23 | 1.87 | 0.55 |
| 1:C:155:SER:HB3 | 1:C:180:SER:O | 2.05 | 0.55 |
| 1:C:950:LYS:O | 1:C:954:ASP:HB2 | 2.07 | 0.55 |
| 1:A:146:ASP:O | 1:A:148:THR:N | 2.40 | 0.55 |
| 1:A:282:ASN:HD21 | 1:A:609:VAL:H | 1.53 | 0.55 |
| 1:A:370:ILE:O | 1:A:374:VAL:HG23 | 2.06 | 0.55 |
| 1:A:578:LEU:HG | 1:A:587:THR:HG23 | 1.88 | 0.55 |
| 1:A:591:LEU:HD11 | 1:A:613:ASN:HB3 | 1.89 | 0.55 |
| 1:A:713:LEU:HD21 | 1:A:843:LEU:HD12 | 1.89 | 0.55 |
| 1:B:537:SER:HA | 1:B:540:ARG:HH21 | 1.71 | 0.55 |
| 1:C:644:VAL:O | 1:C:648:THR:HG22 | 2.07 | 0.55 |
| 1:C:701:GLN:NE2 | 1:C:852:PRO:HD3 | 2.22 | 0.55 |
| 1:A:706:ALA:HB1 | 1:A:716:VAL:HG11 | 1.88 | 0.55 |
| 1:A:945:ILE:HG13 | 1:A:971:ARG:CG | 2.33 | 0.55 |
| 1:B:193:LEU:HD13 | 1:B:198:LEU:O | 2.06 | 0.55 |
| 1:B:452:VAL:O | 1:B:453:PHE:CD2 | 2.60 | 0.55 |
| 1:B:492:LEU:O | 1:B:496:MET:HB2 | 2.07 | 0.55 |
| 1:C:435:MET:HA | 1:C:438:ILE:HG22 | 1.88 | 0.55 |
| 1:B:219:LEU:HD12 | 1:B:234:ILE:CG1 | 2.37 | 0.54 |
| 1:B:326:PRO:HG3 | 1:B:610:PHE:CD1 | 2.42 | 0.54 |
| 1:B:485:ALA:HA | 1:B:489:THR:HB | 1.88 | 0.54 |
| 1:C:759:VAL:HG23 | 1:C:771:VAL:O | 2.07 | 0.54 |
| 1:A:317:PHE:CD2 | 1:A:317:PHE:N | 2.74 | 0.54 |
| 1:B:372:VAL:CG2 | 1:B:373:PRO:HD3 | 2.37 | 0.54 |
| 1:C:213:GLN:HE22 | 1:C:238:THR:HA | 1.73 | 0.54 |
| 1:C:545:TYR:OH | 1:C:1021:PHE:HB3 | 2.08 | 0.54 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:C:721:LEU:CD2 | 1:C:813:SER:OG | 2.51 | 0.54 |
| 1:C:741:VAL:HG11 | 1:C:746:ILE:CD1 | 2.36 | 0.54 |
| 1:A:426:PRO:CB | 1:A:427:PRO:HD2 | 2.36 | 0.54 |
| 1:B:61:VAL:CG1 | 1:B:88:VAL:HG21 | 2.36 | 0.54 |
| 1:C:489:THR:O | 1:C:493:CYS:CB | 2.56 | 0.54 |
| 1:C:736:ALA:HB1 | 1:C:741:VAL:HB | 1.89 | 0.54 |
| 1:B:58:GLN:HB3 | 1:B:82:SER:HB3 | 1.87 | 0.54 |
| 1:B:730:ASP:O | 1:B:805:SER:HA | 2.08 | 0.54 |
| 1:B:879:ILE:O | 1:B:883:VAL:HG23 | 2.08 | 0.54 |
| 1:B:171:GLY:HA3 | 1:B:302:THR:HG21 | 1.89 | 0.54 |
| 1:B:399:VAL:HG11 | 1:B:989:LEU:HD23 | 1.90 | 0.54 |
| 1:B:623:ASN:OD1 | 1:B:623:ASN:N | 2.41 | 0.54 |
| 1:C:158:VAL:HG12 | 1:C:177:LEU:HD21 | 1.90 | 0.54 |
| 1:C:669:PRO:CB | 1:C:672:VAL:HB | 2.36 | 0.54 |
| 1:C:749:THR:O | 1:C:753:ALA:CB | 2.55 | 0.54 |
| 1:A:764:ASP:HB3 | 1:A:769:LYS:HD2 | 1.88 | 0.54 |
| 1:B:57:VAL:C | 1:B:60:THR:HG23 | 2.27 | 0.54 |
| 1:B:188:MET:H | 1:B:775:SER:CA | 2.20 | 0.54 |
| 1:B:921:LEU:HD21 | 1:B:1001:ASN:O | 2.08 | 0.54 |
| 1:C:61:VAL:O | 1:C:64:VAL:HG12 | 2.08 | 0.54 |
| 1:C:115:MET:HA | 1:C:115:MET:HE2 | 1.89 | 0.54 |
| 1:A:376:LEU:O | 1:A:377:LEU:C | 2.44 | 0.54 |
| 1:A:818:ARG:HA | 1:A:824:SER:H | 1.73 | 0.54 |
| 1:B:460:GLY:HA3 | 1:B:464:GLY:HA3 | 1.90 | 0.54 |
| 1:B:908:GLY:HA2 | 1:B:1013:THR:HG23 | 1.90 | 0.54 |
| 1:C:35:TYR:CD1 | 1:C:671:ILE:HG12 | 2.42 | 0.54 |
| 1:C:704:ALA:O | 1:C:707:ALA:HB3 | 2.07 | 0.54 |
| 1:A:223:PRO:HD3 | 1:B:275:TYR:HB2 | 1.90 | 0.54 |
| 1:A:873:ALA:HB3 | 1:A:874:PRO:HD3 | 1.90 | 0.54 |
| 1:B:463:THR:HA | 1:B:466:ILE:HG13 | 1.90 | 0.54 |
| 1:B:518:ARG:HG3 | 1:B:521:GLU:HB2 | 1.90 | 0.54 |
| 1:A:14:VAL:N | 1:A:17:ILE:CG1 | 2.71 | 0.54 |
| 1:A:680:PHE:HB2 | 1:A:859:TRP:CZ3 | 2.43 | 0.54 |
| 1:B:53:ASP:C | 1:B:57:VAL:HG12 | 2.27 | 0.54 |
| 1:B:289:LEU:N | 1:B:289:LEU:CD1 | 2.71 | 0.54 |
| 1:B:563:PHE:CD1 | 1:B:866:GLU:HG2 | 2.40 | 0.54 |
| 1:B:919:ARG:HG3 | 1:B:1005:THR:HG21 | 1.89 | 0.54 |
| 1:C:795:ASP:OD2 | 1:C:797:GLN:HB2 | 2.08 | 0.54 |
| 1:A:143:ILE:HG21 | 1:A:281:PHE:CD2 | 2.43 | 0.54 |
| 1:A:751:GLY:O | 1:A:755:GLY:N | 2.39 | 0.54 |
| 1:C:253:VAL:HG12 | 1:C:259:ARG:HB3 | 1.90 | 0.54 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:C:695:LEU:HD13 | 1:C:825:MET:HG3 | 1.90 | 0.54 |
| 1:C:894:SER:OG | 1:C:895:TRP:N | 2.40 | 0.54 |
| 1:A:268:ILE:CG2 | 1:A:269:GLU:N | 2.71 | 0.53 |
| 1:A:317:PHE:HB3 | 1:A:321:LEU:HG | 1.90 | 0.53 |
| 1:A:366:LEU:C | 1:A:368:PRO:HD2 | 2.29 | 0.53 |
| 1:B:157:TYR:O | 1:B:161:ASN:ND2 | 2.32 | 0.53 |
| 1:C:492:LEU:C | 1:C:494:ALA:H | 2.12 | 0.53 |
| 1:A:375:VAL:O | 1:A:379:THR:HG23 | 2.07 | 0.53 |
| 1:B:538:THR:H | 1:B:540:ARG:NH2 | 2.06 | 0.53 |
| 1:C:1:MET:HB2 | 1:C:2:PRO:CD | 2.37 | 0.53 |
| 1:C:36:PRO:HG3 | 1:C:469:GLN:HG3 | 1.90 | 0.53 |
| 1:C:115:MET:HE3 | 1:C:127:VAL:HG11 | 1.90 | 0.53 |
| 1:C:568:ASP:HB2 | 1:C:643:LYS:HG3 | 1.90 | 0.53 |
| 1:A:70:ASN:N | 1:A:70:ASN:OD1 | 2.41 | 0.53 |
| 1:A:649:MET:HA | 1:A:653:ARG:NH1 | 2.24 | 0.53 |
| 1:A:781:MET:CE | 1:C:225:VAL:HG22 | 2.38 | 0.53 |
| 1:B:345:VAL:HA | 1:B:348:ILE:HD12 | 1.90 | 0.53 |
| 1:C:5:PHE:CD2 | 1:C:12:ALA:HB2 | 2.43 | 0.53 |
| 1:C:146:ASP:HB3 | 1:C:148:THR:OG1 | 2.08 | 0.53 |
| 1:C:244:GLU:O | 1:C:263:ARG:NH2 | 2.41 | 0.53 |
| 1:C:355:MET:HG2 | 1:C:368:PRO:HG2 | 1.89 | 0.53 |
| 1:A:728:LYS:CD | 1:C:235:ILE:HG22 | 2.39 | 0.53 |
| 1:B:418:ARG:NH1 | 1:B:418:ARG:HB3 | 2.23 | 0.53 |
| 1:B:709:HIS:N | 1:B:710:PRO:CD | 2.61 | 0.53 |
| 1:C:114:ALA:O | 1:C:117:LEU:N | 2.38 | 0.53 |
| 1:C:571:VAL:HG12 | 1:C:630:SER:HA | 1.91 | 0.53 |
| 1:B:613:ASN:HD22 | 1:B:613:ASN:C | 2.11 | 0.53 |
| 1:B:681:ASP:CB | 1:B:860:THR:HG23 | 2.38 | 0.53 |
| 1:B:1012:VAL:HG23 | 1:B:1013:THR:N | 2.24 | 0.53 |
| 1:A:243:THR:HB | 1:A:268:ILE:CG2 | 2.36 | 0.53 |
| 1:A:282:ASN:ND2 | 1:A:609:VAL:H | 2.06 | 0.53 |
| 1:A:590:VAL:HG11 | 1:A:661:ALA:HB1 | 1.91 | 0.53 |
| 1:B:762:PHE:CZ | 1:B:764:ASP:HB2 | 2.44 | 0.53 |
| 1:C:420:MET:SD | 1:C:498:LYS:HD3 | 2.49 | 0.53 |
| 1:C:683:GLU:HG3 | 1:C:819:TYR:CE2 | 2.44 | 0.53 |
| 1:C:829:GLY:O | 1:C:830:GLN:CB | 2.53 | 0.53 |
| 1:A:379:THR:HG21 | 1:A:477:ALA:HA | 1.90 | 0.53 |
| 1:B:376:LEU:HD22 | 1:B:398:MET:HE3 | 1.90 | 0.53 |
| 1:B:555:LEU:HB2 | 1:B:913:LEU:HD23 | 1.91 | 0.53 |
| 1:C:197:GLN:HB3 | 1:C:792:ARG:HD3 | 1.91 | 0.53 |
| 1:C:707:ALA:O | 1:C:710:PRO:HD3 | 2.09 | 0.53 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:A:140:VAL:CG1 | 1:A:141:GLY:H | 2.22 | 0.53 |
| 1:A:560:PRO:HB2 | 1:A:922:THR:HG22 | 1.91 | 0.53 |
| 1:A:740:GLY:HA3 | 1:A:793:ALA:HB1 | 1.90 | 0.53 |
| 1:B:115:MET:HE1 | 1:B:127:VAL:HG21 | 1.89 | 0.53 |
| 1:B:228:GLN:O | 1:C:583:THR:HG21 | 2.09 | 0.53 |
| 1:B:681:ASP:HB3 | 1:B:860:THR:HG22 | 1.89 | 0.53 |
| 1:C:30:LEU:HD22 | 1:C:390:ILE:H | 1.74 | 0.53 |
| 1:C:669:PRO:HB2 | 1:C:672:VAL:HG23 | 1.71 | 0.53 |
| 1:A:68:ASN:C | 1:A:69:MET:HE3 | 2.27 | 0.53 |
| 1:B:332:PHE:HB2 | 1:B:569:GLN:O | 2.08 | 0.53 |
| 1:B:348:ILE:HG23 | 1:B:372:VAL:HG21 | 1.91 | 0.53 |
| 1:B:984:LEU:HA | 1:B:987:MET:HB2 | 1.91 | 0.53 |
| 1:C:174:ASP:HB3 | 1:C:292:LYS:HB2 | 1.91 | 0.53 |
| 1:A:623:ASN:C | 1:A:623:ASN:ND2 | 2.51 | 0.53 |
| 1:A:685:ILE:CG2 | 1:A:686:ASP:N | 2.72 | 0.53 |
| 1:B:57:VAL:CG2 | 1:B:82:SER:HB2 | 2.35 | 0.53 |
| 1:B:346:GLU:O | 1:B:346:GLU:HG2 | 2.08 | 0.53 |
| 1:B:776:GLU:HG2 | 1:B:777:ALA:H | 1.74 | 0.53 |
| 1:B:778:LYS:NZ | 1:B:778:LYS:HB3 | 2.24 | 0.53 |
| 1:C:156:ASP:CG | 1:C:182:TYR:CD2 | 2.83 | 0.53 |
| 1:C:690:LEU:HD23 | 1:C:694:LYS:CB | 2.38 | 0.53 |
| 1:A:11:PHE:HD1 | 1:B:890:ALA:HA | 1.74 | 0.52 |
| 1:A:14:VAL:CG2 | 1:A:15:ILE:N | 2.30 | 0.52 |
| 1:A:668:LEU:HD12 | 1:A:668:LEU:N | 2.02 | 0.52 |
| 1:B:516:PHE:O | 1:B:517:ASN:CB | 2.55 | 0.52 |
| 1:B:921:LEU:HD21 | 1:B:1002:ALA:HA | 1.91 | 0.52 |
| 1:A:249:ILE:HB | 1:A:262:LEU:HB2 | 1.92 | 0.52 |
| 1:B:213:GLN:HE21 | 1:B:239:ARG:HD2 | 1.75 | 0.52 |
| 1:B:972:LEU:N | 1:B:974:PRO:HD2 | 2.24 | 0.52 |
| 1:C:2:PRO:O | 1:C:6:ILE:HG13 | 2.08 | 0.52 |
| 1:C:43:VAL:HG23 | 1:C:94:PHE:CE1 | 2.44 | 0.52 |
| 1:C:767:ARG:CG | 1:C:767:ARG:NH1 | 2.59 | 0.52 |
| 1:A:457:ALA:O | 1:A:458:PHE:HD2 | 1.92 | 0.52 |
| 1:A:530:SER:HA | 1:A:534:ILE:HD12 | 1.91 | 0.52 |
| 1:A:552:MET:HG3 | 1:A:909:VAL:HG11 | 1.92 | 0.52 |
| 1:A:585:GLU:OE2 | 1:C:227:GLY:HA2 | 2.09 | 0.52 |
| 1:C:1007:VAL:O | 1:C:1011:MET:HB2 | 2.10 | 0.52 |
| 1:A:44:THR:HA | 1:A:90:ILE:O | 2.10 | 0.52 |
| 1:A:492:LEU:HG | 1:A:496:MET:CE | 2.38 | 0.52 |
| 1:B:14:VAL:HG11 | 1:C:890:ALA:HB2 | 1.92 | 0.52 |
| 1:C:897:ILE:N | 1:C:898:PRO:HD2 | 2.25 | 0.52 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:A:367:ILE:HG12 | 1:A:368:PRO:HD3 | 1.88 | 0.52 |
| 1:B:190:PRO:HG3 | 1:B:789:TRP:CZ2 | 2.45 | 0.52 |
| 1:B:601:LYS:HB2 | 1:B:601:LYS:HZ3 | 1.73 | 0.52 |
| 1:B:693:GLU:CG | 1:B:694:LYS:H | 2.22 | 0.52 |
| 1:B:694:LYS:HA | 1:B:697:GLN:HE21 | 1.73 | 0.52 |
| 1:B:708:LYS:HB2 | 1:B:708:LYS:HZ3 | 1.75 | 0.52 |
| 1:C:457:ALA:HB1 | 1:C:468:ARG:HA | 1.92 | 0.52 |
| 1:C:777:ALA:O | 1:C:781:MET:HE3 | 2.09 | 0.52 |
| 1:C:953:MET:CG | 1:C:959:GLY:HA2 | 2.34 | 0.52 |
| 1:A:222:THR:HB | 1:A:223:PRO:HD2 | 1.92 | 0.52 |
| 1:A:302:THR:HA | 1:A:305:ALA:HB3 | 1.91 | 0.52 |
| 1:A:498:LYS:O | 1:A:498:LYS:HG2 | 2.09 | 0.52 |
| 1:A:638:PRO:HD2 | 1:A:642:ASN:ND2 | 2.23 | 0.52 |
| 1:B:144:ASN:HD21 | 1:B:148:THR:H | 1.57 | 0.52 |
| 1:B:375:VAL:HG13 | 1:B:480:LEU:HB3 | 1.92 | 0.52 |
| 1:A:74:ASN:H | 1:C:170:SER:HB2 | 1.73 | 0.52 |
| 1:A:965:LEU:O | 1:A:969:ARG:HB2 | 2.09 | 0.52 |
| 1:B:307:ARG:HH11 | 1:B:307:ARG:CB | 2.23 | 0.52 |
| 1:B:754:TRP:CZ2 | 1:B:786:ILE:HD13 | 2.44 | 0.52 |
| 1:B:758:TYR:CE1 | 1:B:770:LYS:HG3 | 2.45 | 0.52 |
| 1:C:356:TYR:O | 1:C:360:GLN:HG2 | 2.10 | 0.52 |
| 1:C:990:VAL:HG13 | 1:C:1005:THR:HG22 | 1.92 | 0.52 |
| 1:A:442:LEU:C | 1:A:444:GLY:H | 2.12 | 0.52 |
| 1:A:1015:THR:O | 1:A:1017:LEU:N | 2.37 | 0.52 |
| 1:B:58:GLN:CB | 1:B:82:SER:CB | 2.86 | 0.52 |
| 1:B:185:ARG:HH12 | 1:B:774:MET:HG3 | 1.74 | 0.52 |
| 1:B:231:ASN:ND2 | 1:B:232:ALA:N | 2.57 | 0.52 |
| 1:B:901:VAL:HG22 | 1:B:1026:PHE:HZ | 1.75 | 0.52 |
| 1:C:355:MET:HG3 | 1:C:359:LEU:HD23 | 1.90 | 0.52 |
| 1:C:777:ALA:O | 1:C:781:MET:HE2 | 2.10 | 0.52 |
| 1:A:268:ILE:O | 1:A:269:GLU:CB | 2.58 | 0.52 |
| 1:A:583:THR:HG22 | 1:A:585:GLU:N | 2.24 | 0.52 |
| 1:B:330:THR:N | 1:B:331:PRO:CD | 2.73 | 0.52 |
| 1:B:226:LYS:CE | 1:B:226:LYS:CA | 2.66 | 0.52 |
| 1:B:468:ARG:O | 1:B:469:GLN:C | 2.48 | 0.52 |
| 1:B:763:ILE:HG12 | 1:C:59:ASP:OD1 | 2.10 | 0.52 |
| 1:C:841:MET:CE | 1:C:866:GLU:HG3 | 2.40 | 0.52 |
| 1:C:1018:ALA:HA | 1:C:1021:PHE:HB2 | 1.92 | 0.52 |
| 1:A:685:ILE:HG22 | 1:A:686:ASP:N | 2.25 | 0.51 |
| 1:A:740:GLY:O | 1:A:794:ALA:N | 2.43 | 0.51 |
| 1:B:349:ILE:HG22 | 1:B:350:LEU:HD23 | 1.92 | 0.51 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:B:888:LEU:HB2 | 1:B:898:PRO:HG3 | 1.91 | 0.51 |
| 1:C:595:THR:CG2 | 1:C:611:ALA:HB2 | 2.40 | 0.51 |
| 1:C:670:ALA:O | 1:C:672:VAL:N | 2.42 | 0.51 |
| 1:A:45:ILE:HG23 | 1:A:129:VAL:HG22 | 1.92 | 0.51 |
| 1:B:150:THR:H | 1:B:153:ASP:CB | 2.22 | 0.51 |
| 1:B:314:GLU:N | 1:B:315:PRO:CD | 2.74 | 0.51 |
| 1:B:474:ILE:HG22 | 1:B:475:VAL:N | 2.25 | 0.51 |
| 1:B:859:TRP:HB3 | 1:B:863:SER:CB | 2.40 | 0.51 |
| 1:B:900:SER:HB3 | 1:B:1029:VAL:HG11 | 1.92 | 0.51 |
| 1:A:183:ALA:HB2 | 1:A:273:GLU:HG2 | 1.91 | 0.51 |
| 1:A:456:MET:HA | 1:A:459:PHE:CE1 | 2.46 | 0.51 |
| 1:B:58:GLN:HB3 | 1:B:82:SER:CB | 2.40 | 0.51 |
| 1:B:216:ALA:O | 1:B:217:GLY:O | 2.27 | 0.51 |
| 1:C:672:VAL:C | 1:C:674:LEU:N | 2.64 | 0.51 |
| 1:C:749:THR:O | 1:C:753:ALA:HB3 | 2.10 | 0.51 |
| 1:A:133:SER:O | 1:A:135:SER:N | 2.43 | 0.51 |
| 1:A:199:THR:HG22 | 1:A:791:VAL:HA | 1.93 | 0.51 |
| 1:A:380:PHE:HE1 | 1:A:398:MET:SD | 2.33 | 0.51 |
| 1:B:517:ASN:H | 1:B:519:MET:HG2 | 1.76 | 0.51 |
| 1:B:973:ARG:CG | 1:B:974:PRO:HD3 | 2.41 | 0.51 |
| 1:C:331:PRO:O | 1:C:335:ILE:HG12 | 2.10 | 0.51 |
| 1:C:545:TYR:CZ | 1:C:1025:PHE:CZ | 2.99 | 0.51 |
| 1:B:330:THR:N | 1:B:331:PRO:HD2 | 2.26 | 0.51 |
| 1:B:924:ASP:HB3 | 1:B:926:TYR:H | 1.75 | 0.51 |
| 1:A:721:LEU:N | 1:A:721:LEU:HD23 | 2.25 | 0.51 |
| 1:A:841:MET:HE1 | 1:A:866:GLU:HG3 | 1.92 | 0.51 |
| 1:B:271:GLY:HA3 | 1:B:275:TYR:OH | 2.10 | 0.51 |
| 1:B:413:VAL:O | 1:B:417:GLU:HB2 | 2.10 | 0.51 |
| 1:B:681:ASP:CB | 1:B:860:THR:CG2 | 2.86 | 0.51 |
| 1:C:247:GLY:HA3 | 1:C:263:ARG:NE | 2.25 | 0.51 |
| 1:C:576:VAL:O | 1:C:577:GLN:C | 2.48 | 0.51 |
| 1:A:117:LEU:HD12 | 1:A:117:LEU:N | 2.26 | 0.51 |
| 1:A:167:SER:HA | 1:A:175:VAL:HG21 | 1.93 | 0.51 |
| 1:B:68:ASN:ND2 | 1:B:114:ALA:HB2 | 2.26 | 0.51 |
| 1:B:326:PRO:HB3 | 1:B:610:PHE:HB2 | 1.93 | 0.51 |
| 1:B:356:TYR:O | 1:B:358:PHE:N | 2.44 | 0.51 |
| 1:B:701:GLN:CB | 1:B:851:LEU:HD22 | 2.41 | 0.51 |
| 1:B:1035:ARG:HG3 | 1:B:1036:LYS:N | 2.25 | 0.51 |
| 1:C:252:LYS:HG2 | 1:C:260:VAL:CG1 | 2.40 | 0.51 |
| 1:C:467:TYR:CZ | 1:C:925:VAL:HG12 | 2.45 | 0.51 |
| 1:C:655:PHE:C | 1:C:657:GLN:N | 2.54 | 0.51 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:A:191:ASN:C | 1:A:193:LEU:N | 2.63 | 0.51 |
| 1:A:268:ILE:CG2 | 1:A:269:GLU:H | 2.24 | 0.51 |
| 1:B:282:ASN:C | 1:B:284:GLN:H | 2.14 | 0.51 |
| 1:B:428:LYS:HA | 1:B:494:ALA:HB1 | 1.93 | 0.51 |
| 1:B:924:ASP:O | 1:B:928:GLN:HG3 | 2.11 | 0.51 |
| 1:C:115:MET:HE2 | 1:C:118:LEU:HD23 | 1.91 | 0.51 |
| 1:C:137:LEU:CD1 | 1:C:293:LEU:HD13 | 2.41 | 0.51 |
| 1:A:15:ILE:HG22 | 1:A:16:ALA:N | 2.26 | 0.51 |
| 1:A:166:ILE:O | 1:A:172:VAL:HG21 | 2.10 | 0.51 |
| 1:A:174:ASP:HB3 | 1:A:292:LYS:HB2 | 1.92 | 0.51 |
| 1:A:431:THR:CB | 1:A:494:ALA:HB2 | 2.41 | 0.51 |
| 1:B:291:ILE:HG21 | 1:B:306:ILE:HD12 | 1.91 | 0.51 |
| 1:C:58:GLN:HE21 | 1:C:816:LEU:HB3 | 1.76 | 0.51 |
| 1:C:352:PHE:HD1 | 1:C:365:THR:HG22 | 1.76 | 0.51 |
| 1:C:713:LEU:O | 1:C:713:LEU:HD22 | 2.11 | 0.51 |
| 1:A:727:PHE:HE2 | 1:A:786:ILE:HG13 | 1.76 | 0.51 |
| 1:B:58:GLN:CG | 1:B:59:ASP:N | 2.72 | 0.51 |
| 1:B:489:THR:N | 1:B:490:PRO:HD2 | 2.26 | 0.51 |
| 1:A:12:ALA:O | 1:A:14:VAL:HG23 | 2.09 | 0.50 |
| 1:A:151:GLN:HB3 | 1:A:152:GLU:OE2 | 2.11 | 0.50 |
| 1:A:227:GLY:HA2 | 1:B:585:GLU:OE1 | 2.11 | 0.50 |
| 1:B:399:VAL:O | 1:B:402:ILE:HG22 | 2.11 | 0.50 |
| 1:B:492:LEU:O | 1:B:496:MET:N | 2.41 | 0.50 |
| 1:B:602:GLU:C | 1:B:604:ASN:H | 2.14 | 0.50 |
| 1:B:973:ARG:HG2 | 1:B:974:PRO:HD3 | 1.93 | 0.50 |
| 1:C:533:GLY:C | 1:C:535:LEU:H | 2.13 | 0.50 |
| 1:C:721:LEU:CG | 1:C:815:ARG:O | 2.55 | 0.50 |
| 1:A:426:PRO:CB | 1:A:427:PRO:CD | 2.90 | 0.50 |
| 1:B:517:ASN:C | 1:B:519:MET:H | 2.14 | 0.50 |
| 1:C:314:GLU:HB2 | 1:C:315:PRO:HD3 | 1.93 | 0.50 |
| 1:C:727:PHE:CE2 | 1:C:807:SER:CB | 2.94 | 0.50 |
| 1:C:753:ALA:O | 1:C:775:SER:CB | 2.59 | 0.50 |
| 1:C:841:MET:HE3 | 1:C:866:GLU:HG3 | 1.93 | 0.50 |
| 1:C:885:PHE:HE2 | 1:C:899:PHE:CE1 | 2.29 | 0.50 |
| 1:C:989:LEU:HD22 | 1:C:1000:GLN:HB3 | 1.93 | 0.50 |
| 1:A:658:ILE:HG22 | 1:A:659:LYS:HD3 | 1.93 | 0.50 |
| 1:B:652:THR:O | 1:B:656:SER:HB3 | 2.11 | 0.50 |
| 1:C:38:ILE:CD1 | 1:C:38:ILE:N | 2.74 | 0.50 |
| 1:C:61:VAL:HB | 1:C:88:VAL:HG21 | 1.93 | 0.50 |
| 1:C:137:LEU:HD13 | 1:C:293:LEU:HB2 | 1.93 | 0.50 |
| 1:C:343:THR:HG21 | 1:C:989:LEU:HD21 | 1.92 | 0.50 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:C:363:ARG:C | 1:C:365:THR:H | 2.14 | 0.50 |
| 1:C:492:LEU:HD22 | 1:C:496:MET:SD | 2.51 | 0.50 |
| 1:A:171:GLY:O | 1:A:294:ALA:CB | 2.55 | 0.50 |
| 1:B:39:ALA:HB1 | 1:B:40:PRO:HD2 | 1.92 | 0.50 |
| 1:B:469:GLN:O | 1:B:472:ILE:HG22 | 2.12 | 0.50 |
| 1:C:576:VAL:H | 1:C:577:GLN:NE2 | 2.09 | 0.50 |
| 1:C:945:ILE:HD13 | 1:C:1022:VAL:CG1 | 2.38 | 0.50 |
| 1:A:65:ILE:O | 1:A:65:ILE:HG22 | 2.11 | 0.50 |
| 1:A:456:MET:O | 1:A:458:PHE:N | 2.44 | 0.50 |
| 1:A:476:SER:O | 1:A:480:LEU:HB2 | 2.10 | 0.50 |
| 1:A:559:LEU:HD12 | 1:A:560:PRO:HD2 | 1.93 | 0.50 |
| 1:A:776:GLU:O | 1:A:780:ARG:HG2 | 2.12 | 0.50 |
| 1:A:14:VAL:O | 1:A:15:ILE:O | 2.30 | 0.50 |
| 1:A:575:MET:SD | 1:A:626:ILE:HG13 | 2.52 | 0.50 |
| 1:B:144:ASN:OD1 | 1:B:145:THR:O | 2.30 | 0.50 |
| 1:C:578:LEU:CB | 1:C:579:PRO:HD2 | 2.36 | 0.50 |
| 1:C:782:LEU:HB3 | 1:C:783:PRO:HD2 | 1.92 | 0.50 |
| 1:A:15:ILE:O | 1:A:16:ALA:O | 2.30 | 0.50 |
| 1:A:469:GLN:O | 1:A:473:THR:OG1 | 2.29 | 0.50 |
| 1:A:636:ASP:OD2 | 1:A:636:ASP:N | 2.45 | 0.50 |
| 1:B:123:GLN:C | 1:B:125:GLN:H | 2.13 | 0.50 |
| 1:A:10:ILE:O | 1:A:11:PHE:O | 2.30 | 0.50 |
| 1:A:354:VAL:O | 1:A:355:MET:CB | 2.59 | 0.50 |
| 1:A:584:GLN:N | 1:A:622:GLN:HG2 | 2.26 | 0.50 |
| 1:B:58:GLN:O | 1:B:59:ASP:OD2 | 2.30 | 0.50 |
| 1:B:254:ASN:ND2 | 1:B:255:GLN:H | 2.10 | 0.50 |
| 1:B:399:VAL:HG11 | 1:B:989:LEU:CD2 | 2.42 | 0.50 |
| 1:B:539:GLY:C | 1:B:541:TYR:H | 2.14 | 0.50 |
| 1:C:831:ALA:HB2 | 1:C:840:ALA:CB | 2.41 | 0.50 |
| 1:A:684:LEU:HB2 | 1:A:827:ILE:HD11 | 1.92 | 0.50 |
| 1:A:781:MET:HE2 | 1:C:225:VAL:HG22 | 1.93 | 0.50 |
| 1:C:154:ILE:HG22 | 1:C:287:SER:HB3 | 1.92 | 0.50 |
| 1:C:354:VAL:O | 1:C:354:VAL:HG12 | 2.10 | 0.50 |
| 1:C:417:GLU:HB2 | 1:C:973:ARG:HH12 | 1.77 | 0.50 |
| 1:C:722:GLU:OE1 | 1:C:722:GLU:HA | 2.12 | 0.50 |
| 1:A:11:PHE:O | 1:A:12:ALA:O | 2.30 | 0.49 |
| 1:A:418:ARG:HG2 | 1:A:970:MET:SD | 2.52 | 0.49 |
| 1:A:782:LEU:O | 1:A:785:ASP:HB2 | 2.11 | 0.49 |
| 1:A:905:VAL:HB | 1:A:906:PRO:HD3 | 1.92 | 0.49 |
| 1:B:517:ASN:O | 1:B:519:MET:N | 2.45 | 0.49 |
| 1:B:915:ALA:O | 1:B:917:THR:N | 2.39 | 0.49 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:A:6:ILE:CD1 | 1:A:7:ASP:OD1 | 2.60 | 0.49 |
| 1:A:8:ARG:O | 1:A:10:ILE:N | 2.44 | 0.49 |
| 1:A:702:LEU:HD11 | 1:A:844:MET:CE | 2.42 | 0.49 |
| 1:B:20:MET:CG | 1:B:374:VAL:HA | 2.41 | 0.49 |
| 1:B:973:ARG:N | 1:B:974:PRO:HD2 | 2.28 | 0.49 |
| 1:C:353:LEU:O | 1:C:356:TYR:HB2 | 2.12 | 0.49 |
| 1:A:13:TRP:O | 1:A:14:VAL:O | 2.30 | 0.49 |
| 1:A:64:VAL:C | 1:A:66:GLU:H | 2.16 | 0.49 |
| 1:A:74:ASN:H | 1:C:170:SER:CB | 2.25 | 0.49 |
| 1:A:832:ALA:O | 1:A:833:PRO:C | 2.50 | 0.49 |
| 1:B:146:ASP:O | 1:B:147:GLY:C | 2.49 | 0.49 |
| 1:B:231:ASN:HD22 | 1:B:232:ALA:N | 2.09 | 0.49 |
| 1:B:439:GLN:HA | 1:B:442:LEU:HD12 | 1.95 | 0.49 |
| 1:B:518:ARG:CG | 1:B:521:GLU:HB2 | 2.43 | 0.49 |
| 1:B:556:PHE:HD2 | 1:B:556:PHE:O | 1.95 | 0.49 |
| 1:B:743:ILE:H | 1:B:743:ILE:CD1 | 2.15 | 0.49 |
| 1:C:448:VAL:O | 1:C:452:VAL:HG23 | 2.12 | 0.49 |
| 1:A:144:ASN:HB2 | 1:A:149:MET:HE3 | 1.94 | 0.49 |
| 1:A:254:ASN:N | 1:A:258:SER:OG | 2.45 | 0.49 |
| 1:A:437:GLN:HB3 | 1:A:948:PHE:CE2 | 2.42 | 0.49 |
| 1:A:550:VAL:HG12 | 1:A:550:VAL:O | 2.13 | 0.49 |
| 1:A:902:MET:O | 1:A:905:VAL:HG23 | 2.12 | 0.49 |
| 1:B:598:TYR:CD1 | 1:B:606:VAL:HG21 | 2.48 | 0.49 |
| 1:C:199:THR:OG1 | 1:C:201:VAL:HB | 2.12 | 0.49 |
| 1:C:935:ILE:O | 1:C:935:ILE:CG2 | 2.59 | 0.49 |
| 1:A:170:SER:O | 1:A:170:SER:OG | 2.26 | 0.49 |
| 1:A:775:SER:HB2 | 1:A:789:TRP:HZ2 | 1.77 | 0.49 |
| 1:B:201:VAL:O | 1:B:202:ASP:C | 2.50 | 0.49 |
| 1:C:409:ALA:O | 1:C:413:VAL:HG12 | 2.12 | 0.49 |
| 1:C:695:LEU:HD13 | 1:C:825:MET:CG | 2.43 | 0.49 |
| 1:C:831:ALA:HB3 | 1:C:837:THR:HG22 | 1.94 | 0.49 |
| 1:A:99:ASP:OD1 | 1:A:99:ASP:C | 2.50 | 0.49 |
| 1:B:669:PRO:HG3 | 1:B:678:THR:HA | 1.94 | 0.49 |
| 1:B:915:ALA:HB2 | 1:B:1009:GLY:HA3 | 1.95 | 0.49 |
| 1:B:947:GLU:OE1 | 1:B:947:GLU:CA | 2.60 | 0.49 |
| 1:B:1005:THR:O | 1:B:1005:THR:HG22 | 2.13 | 0.49 |
| 1:C:158:VAL:CG1 | 1:C:177:LEU:HD21 | 2.43 | 0.49 |
| 1:C:693:GLU:O | 1:C:694:LYS:C | 2.51 | 0.49 |
| 1:A:6:ILE:HD13 | 1:A:7:ASP:OD1 | 2.13 | 0.49 |
| 1:A:294:ALA:O | 1:A:295:THR:HB | 2.13 | 0.49 |
| 1:A:481:SER:O | 1:A:484:VAL:N | 2.46 | 0.49 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:A:686:ASP:CB | 1:A:823:PRO:HG2 | 2.41 | 0.49 |
| 1:B:418:ARG:HB3 | 1:B:418:ARG:HH11 | 1.76 | 0.49 |
| 1:A:338:HIS:CD2 | 1:A:342:LYS:HE2 | 2.48 | 0.49 |
| 1:B:136:PHE:CE1 | 1:B:617:PHE:CZ | 3.00 | 0.49 |
| 1:B:427:PRO:O | 1:B:430:ALA:HB3 | 2.12 | 0.49 |
| 1:B:897:ILE:HG13 | 1:B:898:PRO:HD3 | 1.95 | 0.49 |
| 1:C:3:ASN:C | 1:C:5:PHE:H | 2.16 | 0.49 |
| 1:C:247:GLY:HA2 | 1:C:268:ILE:HD13 | 1.94 | 0.49 |
| 1:C:265:VAL:O | 1:C:266:ALA:HB2 | 2.13 | 0.49 |
| 1:C:674:LEU:HD12 | 1:C:862:MET:HA | 1.94 | 0.49 |
| 1:C:1028:VAL:HG13 | 1:C:1032:ARG:HH22 | 1.77 | 0.49 |
| 1:A:325:TYR:O | 1:A:327:TYR:N | 2.46 | 0.49 |
| 1:A:379:THR:CG2 | 1:A:477:ALA:HA | 2.42 | 0.49 |
| 1:B:200:PRO:CD | 1:B:749:THR:HG22 | 2.42 | 0.49 |
| 1:C:57:VAL:CG2 | 1:C:86:GLY:HA2 | 2.37 | 0.49 |
| 1:C:108:GLN:HG2 | 1:C:129:VAL:HG21 | 1.95 | 0.49 |
| 1:C:835:LYS:HD2 | 1:C:839:GLU:HG3 | 1.94 | 0.49 |
| 1:C:934:THR:HG22 | 1:C:1011:MET:SD | 2.53 | 0.49 |
| 1:A:211:ASN:HA | 1:A:240:LEU:HD13 | 1.95 | 0.49 |
| 1:A:682:PHE:CZ | 1:A:857:TYR:CB | 2.96 | 0.49 |
| 1:A:685:ILE:HG21 | 1:A:822:LEU:CD1 | 2.43 | 0.49 |
| 1:A:963:ALA:O | 1:A:967:ALA:N | 2.44 | 0.49 |
| 1:B:714:THR:HG21 | 1:B:833:PRO:HD2 | 1.94 | 0.49 |
| 1:C:146:ASP:HB2 | 1:C:320:GLY:HA3 | 1.95 | 0.49 |
| 1:A:364:ALA:O | 1:A:367:ILE:HG12 | 2.13 | 0.48 |
| 1:A:682:PHE:HD2 | 1:A:827:ILE:HG13 | 1.78 | 0.48 |
| 1:B:231:ASN:ND2 | 1:B:231:ASN:C | 2.65 | 0.48 |
| 1:B:282:ASN:O | 1:B:284:GLN:N | 2.46 | 0.48 |
| 1:B:792:ARG:HH11 | 1:B:792:ARG:CB | 2.24 | 0.48 |
| 1:C:58:GLN:HA | 1:C:62:THR:HB | 1.94 | 0.48 |
| 1:C:218:GLN:HA | 1:C:234:ILE:HG13 | 1.94 | 0.48 |
| 1:C:721:LEU:HD13 | 1:C:825:MET:CE | 2.43 | 0.48 |
| 1:A:6:ILE:HD12 | 1:A:7:ASP:CB | 2.43 | 0.48 |
| 1:A:83:ASP:HB3 | 1:A:815:ARG:HG3 | 1.94 | 0.48 |
| 1:A:451:ALA:O | 1:A:453:PHE:N | 2.46 | 0.48 |
| 1:C:527:TYR:HE2 | 1:C:968:VAL:O | 1.96 | 0.48 |
| 1:A:107:VAL:HG12 | 1:A:108:GLN:N | 2.28 | 0.48 |
| 1:B:698:ALA:CB | 1:B:855:VAL:HG21 | 2.42 | 0.48 |
| 1:B:1016:VAL:HG12 | 1:B:1017:LEU:N | 2.28 | 0.48 |
| 1:C:38:ILE:HG21 | 1:C:466:ILE:HD11 | 1.95 | 0.48 |
| 1:A:57:VAL:CG1 | 1:A:88:VAL:HG22 | 2.40 | 0.48 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:A:211:ASN:CG | 1:A:211:ASN:O | 2.51 | 0.48 |
| 1:A:688:ALA:C | 1:A:690:LEU:N | 2.67 | 0.48 |
| 1:B:201:VAL:O | 1:B:203:VAL:N | 2.47 | 0.48 |
| 1:B:264:ASP:O | 1:B:265:VAL:HB | 2.14 | 0.48 |
| 1:B:762:PHE:CD2 | 1:B:771:VAL:HG22 | 2.44 | 0.48 |
| 1:C:43:VAL:HG23 | 1:C:94:PHE:HE1 | 1.79 | 0.48 |
| 1:C:488:LEU:HG | 1:C:492:LEU:HD12 | 1.95 | 0.48 |
| 1:C:633:ASP:CG | 1:C:633:ASP:O | 2.52 | 0.48 |
| 1:A:3:ASN:O | 1:A:6:ILE:CD1 | 2.61 | 0.48 |
| 1:A:552:MET:HG3 | 1:A:909:VAL:CG1 | 2.44 | 0.48 |
| 1:C:946:VAL:O | 1:C:946:VAL:HG12 | 2.14 | 0.48 |
| 1:A:191:ASN:O | 1:A:193:LEU:N | 2.47 | 0.48 |
| 1:A:364:ALA:O | 1:A:367:ILE:HG23 | 2.13 | 0.48 |
| 1:A:445:ILE:HG13 | 1:A:446:ALA:N | 2.28 | 0.48 |
| 1:B:45:ILE:HD13 | 1:B:65:ILE:CG2 | 2.43 | 0.48 |
| 1:B:373:PRO:O | 1:B:377:LEU:HG | 2.14 | 0.48 |
| 1:B:423:GLU:HG3 | 1:B:426:PRO:HB3 | 1.96 | 0.48 |
| 1:B:765:ARG:HH21 | 1:B:765:ARG:HG3 | 1.79 | 0.48 |
| 1:C:445:ILE:HG13 | 1:C:446:ALA:N | 2.29 | 0.48 |
| 1:C:879:ILE:O | 1:C:883:VAL:HG23 | 2.13 | 0.48 |
| 1:C:898:PRO:O | 1:C:900:SER:N | 2.46 | 0.48 |
| 1:A:68:ASN:C | 1:A:69:MET:CE | 2.80 | 0.48 |
| 1:A:364:ALA:CB | 1:A:497:LEU:CD2 | 2.89 | 0.48 |
| 1:A:418:ARG:CD | 1:A:970:MET:HG3 | 2.44 | 0.48 |
| 1:B:115:MET:HE2 | 1:B:118:LEU:CD2 | 2.37 | 0.48 |
| 1:B:193:LEU:HD11 | 1:B:198:LEU:O | 2.14 | 0.48 |
| 1:B:692:HIS:ND1 | 1:B:692:HIS:O | 2.46 | 0.48 |
| 1:B:873:ALA:C | 1:B:875:SER:H | 2.17 | 0.48 |
| 1:B:1009:GLY:O | 1:B:1012:VAL:HG22 | 2.14 | 0.48 |
| 1:A:187:TRP:HA | 1:A:774:MET:O | 2.13 | 0.48 |
| 1:A:294:ALA:HB3 | 1:A:297:ALA:CB | 2.42 | 0.48 |
| 1:A:966:ASP:HA | 1:A:969:ARG:HB2 | 1.96 | 0.48 |
| 1:A:987:MET:O | 1:A:988:PRO:O | 2.32 | 0.48 |
| 1:B:681:ASP:HB3 | 1:B:860:THR:HG23 | 1.94 | 0.48 |
| 1:B:770:LYS:HB3 | 1:B:772:TYR:CE2 | 2.48 | 0.48 |
| 1:B:989:LEU:HD11 | 1:B:1003:VAL:HG13 | 1.95 | 0.48 |
| 1:C:394:THR:HG22 | 1:C:395:MET:HE2 | 1.95 | 0.48 |
| 1:C:524:THR:HA | 1:C:527:TYR:HB3 | 1.95 | 0.48 |
| 1:A:896:SER:C | 1:A:898:PRO:HD2 | 2.35 | 0.48 |
| 1:A:923:ASN:C | 1:A:923:ASN:HD22 | 2.17 | 0.48 |
| 1:B:111:LEU:HD21 | 1:B:127:VAL:HG13 | 1.96 | 0.48 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:B:190:PRO:HG3 | 1:B:789:TRP:CE2 | 2.48 | 0.48 |
| 1:B:203:VAL:HG13 | 1:B:262:LEU:HD21 | 1.96 | 0.48 |
| 1:B:226:LYS:HA | 1:B:226:LYS:HE2 | 1.87 | 0.48 |
| 1:B:898:PRO:O | 1:B:900:SER:N | 2.47 | 0.48 |
| 1:C:549:VAL:HG12 | 1:C:549:VAL:O | 2.13 | 0.48 |
| 1:C:805:SER:O | 1:C:806:SER:HB3 | 2.13 | 0.48 |
| 1:C:997:SER:O | 1:C:999:ALA:N | 2.47 | 0.48 |
| 1:A:56:THR:O | 1:A:60:THR:HB | 2.14 | 0.48 |
| 1:A:376:LEU:C | 1:A:378:GLY:N | 2.67 | 0.48 |
| 1:A:727:PHE:CE1 | 1:A:807:SER:HB3 | 2.49 | 0.48 |
| 1:B:764:ASP:HB3 | 1:B:769:LYS:HE3 | 1.95 | 0.48 |
| 1:B:785:ASP:O | 1:B:786:ILE:C | 2.51 | 0.48 |
| 1:C:681:ASP:OD2 | 1:C:826:GLU:OE2 | 2.32 | 0.48 |
| 1:C:754:TRP:CE3 | 1:C:780:ARG:HB2 | 2.49 | 0.48 |
| 1:A:139:VAL:HG13 | 1:A:327:TYR:HB3 | 1.93 | 0.47 |
| 1:A:400:LEU:HG | 1:A:929:VAL:HG12 | 1.96 | 0.47 |
| 1:B:10:ILE:HD13 | 1:C:893:GLU:O | 2.13 | 0.47 |
| 1:B:142:VAL:N | 1:B:287:SER:O | 2.43 | 0.47 |
| 1:B:338:HIS:C | 1:B:340:VAL:H | 2.17 | 0.47 |
| 1:B:696:THR:HG22 | 1:B:699:ARG:HH12 | 1.79 | 0.47 |
| 1:B:696:THR:HG22 | 1:B:699:ARG:NH1 | 2.29 | 0.47 |
| 1:B:732:ASP:O | 1:B:734:GLU:HG2 | 2.14 | 0.47 |
| 1:C:552:MET:HB3 | 1:C:910:ILE:HG12 | 1.95 | 0.47 |
| 1:C:681:ASP:HB3 | 1:C:860:THR:CG2 | 2.44 | 0.47 |
| 1:C:727:PHE:CE2 | 1:C:807:SER:HB2 | 2.49 | 0.47 |
| 1:C:898:PRO:C | 1:C:900:SER:H | 2.16 | 0.47 |
| 1:A:426:PRO:HB3 | 1:A:427:PRO:HD2 | 1.96 | 0.47 |
| 1:B:80:SER:HB2 | 1:B:90:ILE:HG23 | 1.96 | 0.47 |
| 1:B:355:MET:CE | 1:B:368:PRO:HB2 | 2.44 | 0.47 |
| 1:C:183:ALA:N | 1:C:271:GLY:O | 2.43 | 0.47 |
| 1:C:210:GLN:OE1 | 1:C:249:ILE:HG23 | 2.14 | 0.47 |
| 1:C:251:LEU:HB2 | 1:C:260:VAL:O | 2.14 | 0.47 |
| 1:C:943:ILE:O | 1:C:947:GLU:HB2 | 2.14 | 0.47 |
| 1:C:983:ILE:HG23 | 1:C:1008:MET:HG3 | 1.96 | 0.47 |
| 1:A:210:GLN:HG3 | 1:A:249:ILE:CG2 | 2.39 | 0.47 |
| 1:A:268:ILE:HG22 | 1:A:269:GLU:H | 1.74 | 0.47 |
| 1:A:385:ALA:C | 1:A:386:PHE:HD1 | 2.17 | 0.47 |
| 1:B:140:VAL:HG23 | 1:B:140:VAL:O | 2.14 | 0.47 |
| 1:A:686:ASP:O | 1:A:687:GLN:CB | 2.58 | 0.47 |
| 1:B:242:SER:O | 1:B:244:GLU:N | 2.47 | 0.47 |
| 1:B:307:ARG:HA | 1:B:310:LEU:HB2 | 1.96 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:B:452:VAL:O | 1:B:453:PHE:CB | 2.62 | 0.47 |
| 1:B:455:PRO:HG3 | 1:B:880:SER:HA | 1.94 | 0.47 |
| 1:B:596:HIS:O | 1:B:597:TYR:C | 2.53 | 0.47 |
| 1:B:633:ASP:CG | 1:B:634:TRP:N | 2.67 | 0.47 |
| 1:B:753:ALA:HA | 1:B:774:MET:O | 2.14 | 0.47 |
| 1:B:900:SER:CB | 1:B:1029:VAL:HG11 | 2.45 | 0.47 |
| 1:C:211:ASN:ND2 | 1:C:240:LEU:H | 2.12 | 0.47 |
| 1:A:84:SER:HB2 | 1:A:814:PRO:HA | 1.96 | 0.47 |
| 1:A:583:THR:HG23 | 1:A:622:GLN:HE21 | 1.78 | 0.47 |
| 1:B:185:ARG:CG | 1:B:185:ARG:NH1 | 2.74 | 0.47 |
| 1:C:332:PHE:CD2 | 1:C:569:GLN:HA | 2.49 | 0.47 |
| 1:C:801:PHE:CD1 | 1:C:804:PHE:CE1 | 2.99 | 0.47 |
| 1:A:917:THR:O | 1:A:919:ARG:N | 2.48 | 0.47 |
| 1:B:178:PHE:CD2 | 1:B:288:GLY:O | 2.67 | 0.47 |
| 1:B:485:ALA:HA | 1:B:489:THR:CB | 2.44 | 0.47 |
| 1:B:692:HIS:HE1 | 1:B:723:ASP:OD1 | 1.98 | 0.47 |
| 1:C:309:GLU:HG3 | 1:C:313:MET:CE | 2.45 | 0.47 |
| 1:C:997:SER:HA | 1:C:1000:GLN:OE1 | 2.14 | 0.47 |
| 1:A:219:LEU:HD12 | 1:A:232:ALA:HB3 | 1.96 | 0.47 |
| 1:A:274:ASN:ND2 | 1:A:276:ASP:OD2 | 2.46 | 0.47 |
| 1:A:356:TYR:C | 1:A:358:PHE:H | 2.18 | 0.47 |
| 1:A:391:ASN:O | 1:A:393:LEU:N | 2.48 | 0.47 |
| 1:A:756:GLY:HA2 | 1:A:774:MET:HG3 | 1.96 | 0.47 |
| 1:A:987:MET:N | 1:A:988:PRO:CD | 2.78 | 0.47 |
| 1:B:137:LEU:HD23 | 1:B:138:MET:HB2 | 1.96 | 0.47 |
| 1:B:185:ARG:HG2 | 1:B:187:TRP:CZ2 | 2.49 | 0.47 |
| 1:B:701:GLN:HB3 | 1:B:851:LEU:HD22 | 1.96 | 0.47 |
| 1:B:946:VAL:HG11 | 1:B:1026:PHE:CE1 | 2.50 | 0.47 |
| 1:C:240:LEU:HD23 | 1:C:240:LEU:N | 2.30 | 0.47 |
| 1:C:601:LYS:C | 1:C:603:LYS:H | 2.17 | 0.47 |
| 1:C:670:ALA:O | 1:C:671:ILE:C | 2.53 | 0.47 |
| 1:C:949:ALA:HB1 | 1:C:1026:PHE:CZ | 2.50 | 0.47 |
| 1:C:966:ASP:HA | 1:C:969:ARG:HB3 | 1.97 | 0.47 |
| 1:A:295:THR:HG22 | 1:A:295:THR:O | 2.15 | 0.47 |
| 1:B:682:PHE:CZ | 1:B:857:TYR:HB2 | 2.50 | 0.47 |
| 1:C:38:ILE:HD13 | 1:C:39:ALA:H | 1.80 | 0.47 |
| 1:C:889:ALA:HB2 | 1:C:898:PRO:HG3 | 1.95 | 0.47 |
| 1:A:740:GLY:HA3 | 1:A:794:ALA:H | 1.80 | 0.47 |
| 1:A:947:GLU:O | 1:A:951:ASP:N | 2.46 | 0.47 |
| 1:B:768:VAL:HG23 | 1:C:63:GLN:CD | 2.35 | 0.47 |
| 1:C:223:PRO:HA | 1:C:224:PRO:HD3 | 1.76 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:C:365:THR:C | 1:C:368:PRO:HD2 | 2.35 | 0.47 |
| 1:C:489:THR:OG1 | 1:C:490:PRO:HD3 | 2.15 | 0.47 |
| 1:C:596:HIS:O | 1:C:600:THR:HG23 | 2.15 | 0.47 |
| 1:A:819:TYR:H | 1:A:824:SER:HB3 | 1.80 | 0.47 |
| 1:A:904:VAL:HG21 | 1:A:942:ALA:CB | 2.45 | 0.47 |
| 1:B:58:GLN:O | 1:B:59:ASP:CG | 2.53 | 0.47 |
| 1:C:240:LEU:CD1 | 1:C:249:ILE:HD11 | 2.44 | 0.47 |
| 1:A:207:ILE:CG2 | 1:A:759:VAL:HG11 | 2.45 | 0.46 |
| 1:A:917:THR:C | 1:A:919:ARG:H | 2.19 | 0.46 |
| 1:A:997:SER:OG | 1:A:998:GLY:N | 2.48 | 0.46 |
| 1:B:641:GLU:HB3 | 1:B:650:ARG:NH1 | 2.30 | 0.46 |
| 1:B:782:LEU:HD23 | 1:B:783:PRO:HD2 | 1.98 | 0.46 |
| 1:C:190:PRO:HB3 | 1:C:789:TRP:CD2 | 2.49 | 0.46 |
| 1:C:754:TRP:CZ3 | 1:C:780:ARG:CA | 2.97 | 0.46 |
| 1:A:15:ILE:O | 1:A:18:ILE:N | 2.48 | 0.46 |
| 1:A:367:ILE:HG22 | 1:A:496:MET:HE1 | 1.97 | 0.46 |
| 1:A:367:ILE:HD11 | 1:A:413:VAL:HB | 1.97 | 0.46 |
| 1:A:781:MET:HE2 | 1:C:225:VAL:N | 2.23 | 0.46 |
| 1:A:944:LEU:HB3 | 1:A:971:ARG:NH2 | 2.30 | 0.46 |
| 1:B:34:GLN:HE21 | 1:B:332:PHE:HE2 | 1.62 | 0.46 |
| 1:B:713:LEU:HD13 | 1:B:843:LEU:HD13 | 1.97 | 0.46 |
| 1:B:1017:LEU:O | 1:B:1021:PHE:HB2 | 2.15 | 0.46 |
| 1:C:144:ASN:HB2 | 1:C:154:ILE:HD11 | 1.97 | 0.46 |
| 1:C:250:LEU:HD13 | 1:C:259:ARG:NH1 | 2.31 | 0.46 |
| 1:A:583:THR:HA | 1:A:622:GLN:HG2 | 1.98 | 0.46 |
| 1:B:538:THR:N | 1:B:540:ARG:NH2 | 2.64 | 0.46 |
| 1:C:351:VAL:HG12 | 1:C:369:THR:HG23 | 1.97 | 0.46 |
| 1:C:352:PHE:CD1 | 1:C:365:THR:HG22 | 2.50 | 0.46 |
| 1:A:6:ILE:HD13 | 1:A:7:ASP:CG | 2.32 | 0.46 |
| 1:A:10:ILE:HD13 | 1:B:893:GLU:C | 2.36 | 0.46 |
| 1:A:324:VAL:HG12 | 1:A:325:TYR:H | 1.80 | 0.46 |
| 1:A:324:VAL:HG12 | 1:A:325:TYR:N | 2.31 | 0.46 |
| 1:A:344:LEU:HD22 | 1:A:376:LEU:HD11 | 1.97 | 0.46 |
| 1:A:634:TRP:CD1 | 1:A:634:TRP:N | 2.79 | 0.46 |
| 1:B:238:THR:CG2 | 1:B:239:ARG:N | 2.78 | 0.46 |
| 1:B:417:GLU:O | 1:B:973:ARG:NH1 | 2.48 | 0.46 |
| 1:C:187:TRP:HZ3 | 1:C:774:MET:HB3 | 1.76 | 0.46 |
| 1:C:732:ASP:HB3 | 1:C:735:LYS:HB2 | 1.98 | 0.46 |
| 1:C:908:GLY:HA2 | 1:C:1013:THR:HG23 | 1.97 | 0.46 |
| 1:A:60:THR:HG22 | 1:A:61:VAL:HG23 | 1.97 | 0.46 |
| 1:A:102:ILE:HA | 1:A:105:VAL:CG2 | 2.43 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:A:369:THR:O | 1:A:373:PRO:HD2 | 2.14 | 0.46 |
| 1:A:407:ASP:OD2 | 1:A:978:THR:HG21 | 2.15 | 0.46 |
| 1:B:181:GLN:HE21 | 1:B:181:GLN:HB3 | 1.51 | 0.46 |
| 1:C:58:GLN:HE21 | 1:C:816:LEU:CB | 2.28 | 0.46 |
| 1:C:379:THR:HB | 1:C:398:MET:CE | 2.45 | 0.46 |
| 1:C:633:ASP:O | 1:C:634:TRP:HB2 | 2.16 | 0.46 |
| 1:C:685:ILE:HD11 | 1:C:687:GLN:OE1 | 2.15 | 0.46 |
| 1:C:778:LYS:HB2 | 1:C:779:TYR:CD2 | 2.51 | 0.46 |
| 1:A:54:ALA:HB1 | 1:A:816:LEU:HG | 1.97 | 0.46 |
| 1:A:457:ALA:HB2 | 1:A:471:SER:HB3 | 1.98 | 0.46 |
| 1:A:498:LYS:HE2 | 1:A:498:LYS:C | 2.35 | 0.46 |
| 1:B:81:ASN:O | 1:B:81:ASN:ND2 | 2.47 | 0.46 |
| 1:B:199:THR:N | 1:B:202:ASP:OD2 | 2.37 | 0.46 |
| 1:B:438:ILE:HD11 | 1:B:971:ARG:HH12 | 1.81 | 0.46 |
| 1:B:671:ILE:O | 1:B:673:GLU:N | 2.49 | 0.46 |
| 1:C:30:LEU:HA | 1:C:31:PRO:HD3 | 1.79 | 0.46 |
| 1:C:314:GLU:HA | 1:C:317:PHE:CE1 | 2.50 | 0.46 |
| 1:C:674:LEU:O | 1:C:865:GLN:NE2 | 2.37 | 0.46 |
| 1:A:1033:PHE:O | 1:A:1034:SER:CB | 2.63 | 0.46 |
| 1:B:348:ILE:CG2 | 1:B:372:VAL:HG21 | 2.45 | 0.46 |
| 1:C:229:GLN:H | 1:C:229:GLN:HG2 | 1.60 | 0.46 |
| 1:C:422:GLU:OE1 | 1:C:433:LYS:HE2 | 2.16 | 0.46 |
| 1:C:696:THR:HG22 | 1:C:699:ARG:NH1 | 2.30 | 0.46 |
| 1:C:782:LEU:HB2 | 1:C:784:ASP:OD2 | 2.16 | 0.46 |
| 1:A:126:GLY:HA3 | 1:B:116:PRO:CB | 2.44 | 0.46 |
| 1:A:326:PRO:HG3 | 1:A:610:PHE:HD1 | 1.80 | 0.46 |
| 1:A:344:LEU:CD2 | 1:A:402:ILE:HD11 | 2.45 | 0.46 |
| 1:A:583:THR:HG22 | 1:A:585:GLU:H | 1.81 | 0.46 |
| 1:A:960:LEU:HD22 | 1:A:1031:ARG:HH21 | 1.81 | 0.46 |
| 1:B:193:LEU:HD23 | 1:B:265:VAL:CG2 | 2.45 | 0.46 |
| 1:C:70:ASN:O | 1:C:72:ILE:HG13 | 2.16 | 0.46 |
| 1:A:597:TYR:HE2 | 1:A:654:ALA:HB1 | 1.81 | 0.46 |
| 1:A:965:LEU:HB3 | 1:A:969:ARG:HH11 | 1.81 | 0.46 |
| 1:A:1013:THR:O | 1:A:1017:LEU:HB3 | 2.15 | 0.46 |
| 1:B:706:ALA:HB2 | 1:B:847:LEU:HD12 | 1.97 | 0.46 |
| 1:B:715:SER:O | 1:B:829:GLY:HA2 | 2.16 | 0.46 |
| 1:B:402:ILE:HD12 | 1:B:402:ILE:HA | 1.83 | 0.46 |
| 1:B:932:LEU:HA | 1:B:935:ILE:HD12 | 1.98 | 0.46 |
| 1:B:973:ARG:N | 1:B:974:PRO:CD | 2.78 | 0.46 |
| 1:C:57:VAL:HG21 | 1:C:86:GLY:CA | 2.41 | 0.46 |
| 1:A:13:TRP:CZ2 | 1:A:492:LEU:HD11 | 2.51 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:B:453:PHE:HZ | 1:B:933:THR:HG23 | 1.80 | 0.45 |
| 1:B:703:LEU:O | 1:B:707:ALA:HB2 | 2.16 | 0.45 |
| 1:C:527:TYR:OH | 1:C:968:VAL:HG12 | 2.15 | 0.45 |
| 1:C:568:ASP:OD2 | 1:C:644:VAL:HG23 | 2.17 | 0.45 |
| 1:C:633:ASP:O | 1:C:635:ALA:N | 2.44 | 0.45 |
| 1:C:738:ALA:C | 1:C:740:GLY:H | 2.19 | 0.45 |
| 1:C:979:SER:O | 1:C:983:ILE:HG13 | 2.16 | 0.45 |
| 1:A:64:VAL:C | 1:A:66:GLU:N | 2.70 | 0.45 |
| 1:A:140:VAL:CG1 | 1:A:141:GLY:N | 2.77 | 0.45 |
| 1:B:371:ALA:HA | 1:B:374:VAL:CG1 | 2.46 | 0.45 |
| 1:B:463:THR:O | 1:B:465:ALA:N | 2.46 | 0.45 |
| 1:B:605:ASN:O | 1:B:632:LYS:HG2 | 2.16 | 0.45 |
| 1:B:699:ARG:HA | 1:B:702:LEU:HB2 | 1.98 | 0.45 |
| 1:B:763:ILE:HD11 | 1:C:59:ASP:HB3 | 1.98 | 0.45 |
| 1:C:84:SER:C | 1:C:86:GLY:H | 2.18 | 0.45 |
| 1:C:914:LEU:O | 1:C:915:ALA:CB | 2.64 | 0.45 |
| 1:C:945:ILE:HG13 | 1:C:971:ARG:HG3 | 1.96 | 0.45 |
| 1:A:83:ASP:HA | 1:A:815:ARG:HA | 1.97 | 0.45 |
| 1:B:57:VAL:O | 1:B:61:VAL:HG12 | 2.17 | 0.45 |
| 1:B:445:ILE:HG12 | 1:B:940:LYS:HG3 | 1.99 | 0.45 |
| 1:B:699:ARG:HG2 | 1:B:700:ASN:N | 2.30 | 0.45 |
| 1:B:938:SER:HB3 | 1:B:1014:ALA:HB1 | 1.97 | 0.45 |
| 1:C:253:VAL:CG1 | 1:C:259:ARG:HB3 | 2.47 | 0.45 |
| 1:C:254:ASN:OD1 | 1:C:258:SER:O | 2.34 | 0.45 |
| 1:C:727:PHE:HD1 | 1:C:809:TRP:CE2 | 2.35 | 0.45 |
| 1:C:837:THR:O | 1:C:841:MET:HG3 | 2.17 | 0.45 |
| 1:A:69:MET:O | 1:C:168:ARG:CD | 2.65 | 0.45 |
| 1:A:159:ALA:HB2 | 1:A:177:LEU:HD21 | 1.99 | 0.45 |
| 1:A:175:VAL:HG13 | 1:A:289:LEU:HD21 | 1.99 | 0.45 |
| 1:A:414:GLU:HG2 | 1:A:974:PRO:HG3 | 1.98 | 0.45 |
| 1:B:1014:ALA:O | 1:B:1018:ALA:HB2 | 2.16 | 0.45 |
| 1:C:154:ILE:O | 1:C:155:SER:C | 2.55 | 0.45 |
| 1:C:254:ASN:O | 1:C:256:ASP:N | 2.50 | 0.45 |
| 1:C:1022:VAL:N | 1:C:1023:PRO:CD | 2.79 | 0.45 |
| 1:A:37:THR:O | 1:A:37:THR:HG22 | 2.15 | 0.45 |
| 1:A:210:GLN:CG | 1:A:249:ILE:HG23 | 2.41 | 0.45 |
| 1:A:733:GLN:CD | 1:A:743:ILE:HD11 | 2.32 | 0.45 |
| 1:A:756:GLY:HA2 | 1:A:774:MET:HB2 | 1.99 | 0.45 |
| 1:A:759:VAL:HG12 | 1:A:760:ASN:H | 1.79 | 0.45 |
| 1:B:66:GLU:HG3 | 1:B:78:MET:SD | 2.57 | 0.45 |
| 1:B:701:GLN:HA | 1:B:704:ALA:HB2 | 1.98 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:C:263:ARG:HA | 1:C:268:ILE:HD12 | 1.98 | 0.45 |
| 1:C:574:THR:HA | 1:C:665:ALA:HA | 1.99 | 0.45 |
| 1:C:735:LYS:O | 1:C:739:LEU:HB2 | 2.16 | 0.45 |
| 1:A:23:GLY:HA3 | 1:A:377:LEU:O | 2.17 | 0.45 |
| 1:A:199:THR:CG2 | 1:A:791:VAL:HA | 2.45 | 0.45 |
| 1:B:922:THR:OG1 | 1:B:923:ASN:N | 2.50 | 0.45 |
| 1:C:395:MET:O | 1:C:398:MET:N | 2.49 | 0.45 |
| 1:C:556:PHE:HD1 | 1:C:913:LEU:HD11 | 1.82 | 0.45 |
| 1:C:895:TRP:HA | 1:C:895:TRP:HE3 | 1.79 | 0.45 |
| 1:C:952:LEU:HA | 1:C:956:GLU:HB2 | 1.98 | 0.45 |
| 1:A:367:ILE:HA | 1:A:370:ILE:HG22 | 1.98 | 0.45 |
| 1:A:401:ALA:O | 1:A:405:LEU:HD23 | 2.17 | 0.45 |
| 1:A:584:GLN:HB3 | 1:A:622:GLN:HG3 | 1.98 | 0.45 |
| 1:B:452:VAL:HG11 | 1:B:932:LEU:O | 2.16 | 0.45 |
| 1:B:474:ILE:O | 1:B:477:ALA:HB3 | 2.16 | 0.45 |
| 1:B:941:ASN:ND2 | 1:B:1014:ALA:O | 2.49 | 0.45 |
| 1:C:607:GLU:HB2 | 1:C:631:LEU:O | 2.17 | 0.45 |
| 1:C:674:LEU:CD1 | 1:C:862:MET:CA | 2.94 | 0.45 |
| 1:C:776:GLU:O | 1:C:780:ARG:HG2 | 2.17 | 0.45 |
| 1:A:317:PHE:CB | 1:A:321:LEU:HD21 | 2.40 | 0.45 |
| 1:A:416:VAL:HG21 | 1:A:493:CYS:SG | 2.57 | 0.45 |
| 1:A:447:MET:HB3 | 1:A:887:CYS:HG | 1.75 | 0.45 |
| 1:A:495:THR:O | 1:A:496:MET:HG3 | 2.17 | 0.45 |
| 1:A:768:VAL:CG2 | 1:B:60:THR:HA | 2.46 | 0.45 |
| 1:B:367:ILE:HG13 | 1:B:492:LEU:HD13 | 1.98 | 0.45 |
| 1:B:460:GLY:HA2 | 1:B:872:GLN:OE1 | 2.17 | 0.45 |
| 1:B:934:THR:O | 1:B:937:LEU:N | 2.50 | 0.45 |
| 1:C:420:MET:HB2 | 1:C:498:LYS:HE2 | 1.99 | 0.45 |
| 1:C:513:PHE:CD1 | 1:C:516:PHE:HB3 | 2.52 | 0.45 |
| 1:C:719:ASN:HD22 | 1:C:719:ASN:HA | 1.50 | 0.45 |
| 1:A:189:ASN:O | 1:A:193:LEU:HB3 | 2.17 | 0.45 |
| 1:B:136:PHE:HE1 | 1:B:617:PHE:CZ | 2.35 | 0.45 |
| 1:B:250:LEU:HA | 1:B:261:LEU:HB3 | 1.98 | 0.45 |
| 1:B:280:GLU:HB2 | 1:B:284:GLN:O | 2.17 | 0.45 |
| 1:B:468:ARG:HG3 | 1:B:468:ARG:HH11 | 1.82 | 0.45 |
| 1:B:756:GLY:HA2 | 1:B:774:MET:HA | 1.99 | 0.45 |
| 1:B:764:ASP:C | 1:B:766:GLY:H | 2.20 | 0.45 |
| 1:C:463:THR:HG23 | 1:C:563:PHE:HE1 | 1.82 | 0.45 |
| 1:C:476:SER:O | 1:C:477:ALA:HB3 | 2.17 | 0.45 |
| 1:C:717:ARG:O | 1:C:827:ILE:HG23 | 2.17 | 0.45 |
| 1:A:49:TYR:O | 1:A:52:ALA:HB2 | 2.17 | 0.44 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:A:66:GLU:HB3 | 1:A:78:MET:CE | 2.47 | 0.44 |
| 1:A:75:LEU:HD12 | 1:A:75:LEU:HA | 1.83 | 0.44 |
| 1:A:111:LEU:O | 1:A:113:LEU:N | 2.50 | 0.44 |
| 1:A:202:ASP:O | 1:A:206:ALA:HB3 | 2.17 | 0.44 |
| 1:A:481:SER:O | 1:A:484:VAL:HG12 | 2.17 | 0.44 |
| 1:A:725:PRO:HG3 | 1:A:811:TYR:CE1 | 2.52 | 0.44 |
| 1:A:753:ALA:HA | 1:A:775:SER:HB3 | 1.99 | 0.44 |
| 1:B:555:LEU:HB3 | 1:B:558:ARG:NH2 | 2.18 | 0.44 |
| 1:B:764:ASP:O | 1:B:766:GLY:N | 2.50 | 0.44 |
| 1:C:184:MET:N | 1:C:770:LYS:O | 2.49 | 0.44 |
| 1:C:562:SER:HB2 | 1:C:924:ASP:HB3 | 1.99 | 0.44 |
| 1:C:914:LEU:HA | 1:C:917:THR:OG1 | 2.17 | 0.44 |
| 1:C:941:ASN:HA | 1:C:944:LEU:HD12 | 1.99 | 0.44 |
| 1:A:29:LYS:HG2 | 1:A:29:LYS:O | 2.18 | 0.44 |
| 1:A:492:LEU:HG | 1:A:496:MET:HE2 | 1.98 | 0.44 |
| 1:A:514:GLY:O | 1:A:516:PHE:N | 2.51 | 0.44 |
| 1:A:681:ASP:H | 1:A:863:SER:HB2 | 1.82 | 0.44 |
| 1:A:729:ILE:HD11 | 1:A:786:ILE:CD1 | 2.47 | 0.44 |
| 1:A:807:SER:C | 1:A:808:ARG:HG2 | 2.37 | 0.44 |
| 1:A:865:GLN:HE21 | 1:A:865:GLN:HB2 | 1.55 | 0.44 |
| 1:B:67:GLN:O | 1:B:70:ASN:ND2 | 2.49 | 0.44 |
| 1:B:139:VAL:O | 1:B:139:VAL:CG1 | 2.48 | 0.44 |
| 1:B:346:GLU:OE1 | 1:B:988:PRO:HB3 | 2.17 | 0.44 |
| 1:B:691:GLY:O | 1:B:693:GLU:N | 2.51 | 0.44 |
| 1:C:57:VAL:CG1 | 1:C:88:VAL:HG22 | 2.47 | 0.44 |
| 1:C:284:GLN:HA | 1:C:285:PRO:HD2 | 1.81 | 0.44 |
| 1:C:393:LEU:CD1 | 1:C:466:ILE:HG23 | 2.48 | 0.44 |
| 1:C:524:THR:O | 1:C:528:THR:OG1 | 2.29 | 0.44 |
| 1:C:763:ILE:HD12 | 1:C:763:ILE:N | 2.31 | 0.44 |
| 1:A:141:GLY:HA2 | 1:A:288:GLY:HA3 | 1.97 | 0.44 |
| 1:A:211:ASN:ND2 | 1:A:761:ASP:O | 2.46 | 0.44 |
| 1:A:495:THR:O | 1:A:496:MET:CG | 2.65 | 0.44 |
| 1:B:930:GLY:O | 1:B:934:THR:HG23 | 2.17 | 0.44 |
| 1:C:80:SER:OG | 1:C:81:ASN:N | 2.50 | 0.44 |
| 1:C:195:LYS:HE3 | 1:C:196:PHE:CE1 | 2.52 | 0.44 |
| 1:C:968:VAL:HG21 | 1:C:1023:PRO:HG3 | 1.98 | 0.44 |
| 1:B:115:MET:O | 1:B:118:LEU:HB2 | 2.17 | 0.44 |
| 1:B:404:LEU:HD13 | 1:B:449:LEU:HD13 | 1.99 | 0.44 |
| 1:B:607:GLU:HG2 | 1:B:632:LYS:HA | 2.00 | 0.44 |
| 1:B:613:ASN:C | 1:B:613:ASN:ND2 | 2.71 | 0.44 |
| 1:A:579:PRO:O | 1:A:580:ALA:C | 2.55 | 0.44 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:A:756:GLY:CA | 1:A:774:MET:HG3 | 2.47 | 0.44 |
| 1:A:762:PHE:CE1 | 1:A:764:ASP:HB2 | 2.51 | 0.44 |
| 1:A:986:VAL:O | 1:A:991:ILE:HD12 | 2.18 | 0.44 |
| 1:B:54:ALA:C | 1:B:57:VAL:CG1 | 2.69 | 0.44 |
| 1:B:1016:VAL:C | 1:B:1018:ALA:H | 2.21 | 0.44 |
| 1:C:4:PHE:O | 1:C:8:ARG:NH1 | 2.49 | 0.44 |
| 1:C:401:ALA:O | 1:C:405:LEU:HG | 2.16 | 0.44 |
| 1:C:935:ILE:O | 1:C:935:ILE:HG22 | 2.17 | 0.44 |
| 1:C:1017:LEU:O | 1:C:1017:LEU:HD23 | 2.17 | 0.44 |
| 1:C:1027:VAL:HG12 | 1:C:1031:ARG:HD2 | 1.98 | 0.44 |
| 1:A:42:ALA:CB | 1:A:93:THR:HA | 2.45 | 0.44 |
| 1:A:194:ASN:C | 1:A:196:PHE:H | 2.21 | 0.44 |
| 1:A:314:GLU:HA | 1:A:317:PHE:CE1 | 2.53 | 0.44 |
| 1:B:211:ASN:ND2 | 1:B:246:PHE:HZ | 2.15 | 0.44 |
| 1:B:262:LEU:HA | 1:B:265:VAL:CG1 | 2.40 | 0.44 |
| 1:B:601:LYS:NZ | 1:B:601:LYS:CB | 2.79 | 0.44 |
| 1:C:188:MET:HA | 1:C:266:ALA:CB | 2.48 | 0.44 |
| 1:A:314:GLU:N | 1:A:315:PRO:HD2 | 2.33 | 0.44 |
| 1:A:687:GLN:HB2 | 1:A:687:GLN:HE21 | 1.62 | 0.44 |
| 1:B:306:ILE:HG22 | 1:B:310:LEU:HD12 | 1.99 | 0.44 |
| 1:B:941:ASN:HA | 1:B:944:LEU:HD12 | 1.99 | 0.44 |
| 1:B:1024:VAL:O | 1:B:1028:VAL:HG23 | 2.17 | 0.44 |
| 1:C:157:TYR:O | 1:C:161:ASN:HB2 | 2.18 | 0.44 |
| 1:C:463:THR:HG23 | 1:C:563:PHE:CE1 | 2.53 | 0.44 |
| 1:A:49:TYR:CE1 | 1:A:60:THR:HG21 | 2.53 | 0.44 |
| 1:A:276:ASP:HB3 | 1:C:222:THR:CG2 | 2.23 | 0.44 |
| 1:A:819:TYR:N | 1:A:824:SER:HB3 | 2.33 | 0.44 |
| 1:B:281:PHE:CE2 | 1:B:324:VAL:HG11 | 2.53 | 0.44 |
| 1:C:11:PHE:O | 1:C:14:VAL:HG12 | 2.18 | 0.44 |
| 1:C:903:LEU:O | 1:C:906:PRO:HD2 | 2.18 | 0.44 |
| 1:A:356:TYR:O | 1:A:360:GLN:HA | 2.17 | 0.44 |
| 1:B:225:VAL:HG11 | 1:C:778:LYS:HG2 | 1.99 | 0.44 |
| 1:B:369:THR:C | 1:B:371:ALA:H | 2.21 | 0.44 |
| 1:B:585:GLU:O | 1:B:586:ARG:C | 2.56 | 0.44 |
| 1:B:990:VAL:HG13 | 1:B:1005:THR:OG1 | 2.18 | 0.44 |
| 1:C:265:VAL:O | 1:C:265:VAL:HG23 | 2.18 | 0.44 |
| 1:A:70:ASN:O | 1:A:110:LYS:HG2 | 2.17 | 0.43 |
| 1:A:372:VAL:HA | 1:A:375:VAL:HG23 | 1.99 | 0.43 |
| 1:A:564:LEU:O | 1:A:565:PRO:C | 2.56 | 0.43 |
| 1:A:714:THR:O | 1:A:715:SER:HB2 | 2.18 | 0.43 |
| 1:B:1:MET:CB | 1:B:2:PRO:HD2 | 2.27 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:B:42:ALA:CB | 1:B:93:THR:HG22 | 2.40 | 0.43 |
| 1:B:144:ASN:CG | 1:B:149:MET:HG3 | 2.38 | 0.43 |
| 1:C:131:LYS:O | 1:C:295:THR:HG22 | 2.18 | 0.43 |
| 1:C:184:MET:HE3 | 1:C:185:ARG:H | 1.83 | 0.43 |
| 1:C:252:LYS:O | 1:C:260:VAL:HG12 | 2.18 | 0.43 |
| 1:C:644:VAL:HG11 | 1:C:667:ASN:HB2 | 2.00 | 0.43 |
| 1:A:9:PRO:C | 1:A:11:PHE:N | 2.72 | 0.43 |
| 1:A:367:ILE:HD12 | 1:A:489:THR:HG22 | 1.98 | 0.43 |
| 1:A:448:VAL:HG21 | 1:A:888:LEU:HD13 | 2.00 | 0.43 |
| 1:B:382:VAL:O | 1:B:383:LEU:C | 2.55 | 0.43 |
| 1:B:712:MET:HE2 | 1:B:835:LYS:H | 1.82 | 0.43 |
| 1:C:146:ASP:OD2 | 1:C:319:SER:HB3 | 2.18 | 0.43 |
| 1:C:159:ALA:HA | 1:C:163:LYS:HB3 | 2.00 | 0.43 |
| 1:C:307:ARG:HG2 | 1:C:307:ARG:HH11 | 1.83 | 0.43 |
| 1:C:450:SER:O | 1:C:454:VAL:HB | 2.17 | 0.43 |
| 1:C:470:PHE:CD2 | 1:C:929:VAL:HG11 | 2.52 | 0.43 |
| 1:A:149:MET:HE1 | 1:A:321:LEU:HD22 | 2.00 | 0.43 |
| 1:A:571:VAL:HG12 | 1:A:630:SER:HA | 2.00 | 0.43 |
| 1:B:215:ALA:O | 1:B:216:ALA:HB2 | 2.19 | 0.43 |
| 1:B:225:VAL:O | 1:B:225:VAL:CG2 | 2.65 | 0.43 |
| 1:B:523:SER:HA | 1:B:526:HIS:CD2 | 2.52 | 0.43 |
| 1:B:756:GLY:CA | 1:B:774:MET:HG2 | 2.48 | 0.43 |
| 1:C:92:LEU:HD12 | 1:C:92:LEU:H | 1.83 | 0.43 |
| 1:C:418:ARG:NH2 | 1:C:971:ARG:HH12 | 2.13 | 0.43 |
| 1:A:548:ILE:CG1 | 1:A:910:ILE:HD13 | 2.49 | 0.43 |
| 1:A:596:HIS:O | 1:A:597:TYR:C | 2.56 | 0.43 |
| 1:B:111:LEU:HD22 | 1:B:129:VAL:HG13 | 2.00 | 0.43 |
| 1:B:133:SER:OG | 1:B:134:SER:N | 2.51 | 0.43 |
| 1:B:144:ASN:ND2 | 1:B:149:MET:N | 2.67 | 0.43 |
| 1:B:189:ASN:ND2 | 1:B:779:TYR:OH | 2.51 | 0.43 |
| 1:B:201:VAL:O | 1:B:204:ILE:N | 2.52 | 0.43 |
| 1:B:298:ASN:HB2 | 1:B:301:ASP:HB2 | 1.99 | 0.43 |
| 1:B:602:GLU:O | 1:B:604:ASN:N | 2.51 | 0.43 |
| 1:B:748:THR:O | 1:B:752:ALA:HB2 | 2.19 | 0.43 |
| 1:C:106:GLN:O | 1:C:107:VAL:C | 2.56 | 0.43 |
| 1:C:186:ILE:HG13 | 1:C:207:ILE:CD1 | 2.49 | 0.43 |
| 1:C:318:PRO:HD2 | 1:C:321:LEU:HG | 2.00 | 0.43 |
| 1:C:575:MET:O | 1:C:576:VAL:CG1 | 2.62 | 0.43 |
| 1:C:778:LYS:HB2 | 1:C:779:TYR:HE2 | 1.80 | 0.43 |
| 1:A:190:PRO:O | 1:A:194:ASN:N | 2.52 | 0.43 |
| 1:A:376:LEU:O | 1:A:379:THR:N | 2.51 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:A:393:LEU:HD11 | 1:A:466:ILE:HG12 | 1.99 | 0.43 |
| 1:A:781:MET:HE1 | 1:C:228:GLN:HG2 | 1.99 | 0.43 |
| 1:A:783:PRO:HD3 | 1:C:219:LEU:HD13 | 2.01 | 0.43 |
| 1:A:1029:VAL:HG13 | 1:A:1033:PHE:HD2 | 1.83 | 0.43 |
| 1:B:453:PHE:CD2 | 1:B:474:ILE:HG21 | 2.53 | 0.43 |
| 1:B:463:THR:C | 1:B:465:ALA:H | 2.21 | 0.43 |
| 1:C:489:THR:O | 1:C:493:CYS:HB2 | 2.19 | 0.43 |
| 1:C:972:LEU:HA | 1:C:1019:ILE:HD11 | 2.00 | 0.43 |
| 1:C:1016:VAL:HA | 1:C:1019:ILE:HG22 | 1.99 | 0.43 |
| 1:A:76:MET:SD | 1:A:864:TYR:HE2 | 2.42 | 0.43 |
| 1:A:167:SER:HB3 | 1:B:70:ASN:ND2 | 2.33 | 0.43 |
| 1:A:651:ALA:HA | 1:A:654:ALA:HB3 | 2.01 | 0.43 |
| 1:A:731:ILE:HG12 | 1:A:746:ILE:HG21 | 2.00 | 0.43 |
| 1:A:754:TRP:CZ3 | 1:A:780:ARG:HA | 2.53 | 0.43 |
| 1:A:953:MET:HB2 | 1:A:963:ALA:CB | 2.48 | 0.43 |
| 1:A:961:ILE:O | 1:A:961:ILE:HG22 | 2.18 | 0.43 |
| 1:B:36:PRO:HD2 | 1:B:38:ILE:HD11 | 2.01 | 0.43 |
| 1:B:300:LEU:CD2 | 1:B:333:VAL:HG11 | 2.47 | 0.43 |
| 1:B:477:ALA:O | 1:B:481:SER:N | 2.50 | 0.43 |
| 1:B:538:THR:H | 1:B:540:ARG:HH21 | 1.66 | 0.43 |
| 1:B:618:ALA:HB1 | 1:B:719:ASN:O | 2.17 | 0.43 |
| 1:B:669:PRO:HB2 | 1:B:670:ALA:H | 1.61 | 0.43 |
| 1:C:14:VAL:HG22 | 1:C:18:ILE:HG12 | 1.99 | 0.43 |
| 1:C:40:PRO:HB2 | 1:C:94:PHE:O | 2.18 | 0.43 |
| 1:C:459:PHE:HD2 | 1:C:459:PHE:H | 1.64 | 0.43 |
| 1:C:578:LEU:CB | 1:C:579:PRO:CD | 2.96 | 0.43 |
| 1:C:672:VAL:HG11 | 1:C:677:ALA:HA | 2.01 | 0.43 |
| 1:C:700:ASN:HA | 1:C:703:LEU:HD12 | 1.99 | 0.43 |
| 1:C:757:SER:O | 1:C:772:TYR:HA | 2.19 | 0.43 |
| 1:A:44:THR:CG2 | 1:A:89:GLN:HG2 | 2.48 | 0.43 |
| 1:A:364:ALA:O | 1:A:368:PRO:HD3 | 2.19 | 0.43 |
| 1:A:894:SER:C | 1:A:896:SER:H | 2.21 | 0.43 |
| 1:B:154:ILE:O | 1:B:157:TYR:N | 2.50 | 0.43 |
| 1:B:242:SER:O | 1:B:243:THR:C | 2.56 | 0.43 |
| 1:B:675:GLY:C | 1:B:677:ALA:H | 2.22 | 0.43 |
| 1:C:367:ILE:HD11 | 1:C:489:THR:HA | 1.99 | 0.43 |
| 1:C:679:GLY:HA2 | 1:C:830:GLN:CA | 2.46 | 0.43 |
| 1:A:189:ASN:OD1 | 1:A:189:ASN:C | 2.56 | 0.43 |
| 1:A:225:VAL:HG12 | 1:B:781:MET:CE | 2.49 | 0.43 |
| 1:A:983:ILE:HA | 1:A:986:VAL:HG12 | 2.00 | 0.43 |
| 1:B:462:SER:H | 1:B:865:GLN:NE2 | 2.17 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:B:986:VAL:O | 1:B:990:VAL:HG23 | 2.18 | 0.43 |
| 1:C:49:TYR:HE1 | 1:C:60:THR:HG21 | 1.83 | 0.43 |
| 1:C:206:ALA:O | 1:C:208:LYS:N | 2.51 | 0.43 |
| 1:C:326:PRO:CG | 1:C:610:PHE:CD1 | 3.02 | 0.43 |
| 1:C:726:GLN:CD | 1:C:812:GLY:HA3 | 2.39 | 0.43 |
| 1:C:959:GLY:H | 1:C:962:GLU:HB2 | 1.83 | 0.43 |
| 1:A:1:MET:N | 1:A:2:PRO:HD2 | 2.34 | 0.43 |
| 1:A:62:THR:HG23 | 1:A:88:VAL:HG11 | 2.01 | 0.43 |
| 1:A:648:THR:O | 1:A:649:MET:C | 2.57 | 0.43 |
| 1:A:681:ASP:OD2 | 1:A:860:THR:HG23 | 2.19 | 0.43 |
| 1:B:204:ILE:O | 1:B:205:THR:C | 2.57 | 0.43 |
| 1:B:674:LEU:C | 1:B:676:THR:H | 2.22 | 0.43 |
| 1:B:915:ALA:CB | 1:B:1009:GLY:HA3 | 2.49 | 0.43 |
| 1:B:976:LEU:O | 1:B:980:LEU:HD12 | 2.18 | 0.43 |
| 1:C:453:PHE:O | 1:C:456:MET:HG3 | 2.19 | 0.43 |
| 1:C:577:GLN:HA | 1:C:624:THR:HA | 2.00 | 0.43 |
| 1:C:752:ALA:O | 1:C:756:GLY:HA2 | 2.19 | 0.43 |
| 1:A:75:LEU:HD21 | 1:A:92:LEU:HD23 | 1.99 | 0.43 |
| 1:A:108:GLN:OE1 | 1:B:112:GLN:CB | 2.67 | 0.43 |
| 1:A:1022:VAL:N | 1:A:1023:PRO:CD | 2.80 | 0.43 |
| 1:B:68:ASN:O | 1:B:110:LYS:HE3 | 2.19 | 0.43 |
| 1:B:144:ASN:HD22 | 1:B:149:MET:N | 2.17 | 0.43 |
| 1:B:566:ASP:HB3 | 1:B:667:ASN:HD22 | 1.84 | 0.43 |
| 1:B:574:THR:HA | 1:B:664:PHE:O | 2.19 | 0.43 |
| 1:B:686:ASP:HB3 | 1:B:823:PRO:O | 2.19 | 0.43 |
| 1:C:115:MET:CE | 1:C:115:MET:HA | 2.48 | 0.43 |
| 1:C:145:THR:O | 1:C:147:GLY:N | 2.52 | 0.43 |
| 1:C:251:LEU:HD11 | 1:C:262:LEU:HA | 2.01 | 0.43 |
| 1:C:470:PHE:O | 1:C:471:SER:C | 2.56 | 0.43 |
| 1:A:255:GLN:O | 1:A:256:ASP:HB3 | 2.18 | 0.42 |
| 1:A:268:ILE:N | 1:A:268:ILE:HD12 | 2.34 | 0.42 |
| 1:A:369:THR:O | 1:A:373:PRO:HD3 | 2.17 | 0.42 |
| 1:A:779:TYR:CD1 | 1:A:779:TYR:N | 2.86 | 0.42 |
| 1:B:15:ILE:O | 1:B:19:ILE:HG12 | 2.19 | 0.42 |
| 1:B:293:LEU:CD1 | 1:B:297:ALA:HB3 | 2.49 | 0.42 |
| 1:B:345:VAL:C | 1:B:347:ALA:H | 2.23 | 0.42 |
| 1:B:990:VAL:HG22 | 1:B:1005:THR:N | 2.33 | 0.42 |
| 1:C:576:VAL:HG11 | 1:C:591:LEU:HD22 | 2.01 | 0.42 |
| 1:C:832:ALA:CB | 1:C:833:PRO:CD | 2.90 | 0.42 |
| 1:C:847:LEU:HA | 1:C:850:LYS:HG2 | 2.00 | 0.42 |
| 1:C:875:SER:C | 1:C:877:TYR:N | 2.72 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:B:145:THR:N | 1:B:320:GLY:O | 2.52 | 0.42 |
| 1:B:300:LEU:HD21 | 1:B:333:VAL:CG1 | 2.48 | 0.42 |
| 1:B:330:THR:H | 1:B:331:PRO:CD | 2.32 | 0.42 |
| 1:B:967:ALA:O | 1:B:968:VAL:C | 2.57 | 0.42 |
| 1:B:986:VAL:HG12 | 1:B:986:VAL:O | 2.18 | 0.42 |
| 1:C:144:ASN:ND2 | 1:C:148:THR:H | 2.12 | 0.42 |
| 1:A:4:PHE:O | 1:A:8:ARG:NH1 | 2.52 | 0.42 |
| 1:A:171:GLY:O | 1:A:172:VAL:C | 2.58 | 0.42 |
| 1:A:318:PRO:HB2 | 1:A:319:SER:H | 1.74 | 0.42 |
| 1:A:571:VAL:HG12 | 1:A:630:SER:HB3 | 2.01 | 0.42 |
| 1:B:355:MET:O | 1:B:365:THR:OG1 | 2.28 | 0.42 |
| 1:B:602:GLU:C | 1:B:604:ASN:N | 2.73 | 0.42 |
| 1:C:146:ASP:HB3 | 1:C:148:THR:HG23 | 2.01 | 0.42 |
| 1:C:218:GLN:HA | 1:C:234:ILE:H | 1.84 | 0.42 |
| 1:C:372:VAL:HG13 | 1:C:373:PRO:HD3 | 2.01 | 0.42 |
| 1:C:410:ILE:O | 1:C:414:GLU:HB2 | 2.19 | 0.42 |
| 1:C:684:LEU:HD13 | 1:C:685:ILE:N | 2.34 | 0.42 |
| 1:C:978:THR:O | 1:C:981:ALA:N | 2.52 | 0.42 |
| 1:A:17:ILE:O | 1:A:18:ILE:C | 2.56 | 0.42 |
| 1:A:552:MET:CG | 1:A:909:VAL:HG11 | 2.49 | 0.42 |
| 1:B:34:GLN:O | 1:B:391:ASN:HB2 | 2.19 | 0.42 |
| 1:C:34:GLN:HG3 | 1:C:333:VAL:HG11 | 2.00 | 0.42 |
| 1:C:242:SER:O | 1:C:243:THR:C | 2.56 | 0.42 |
| 1:C:764:ASP:O | 1:C:766:GLY:N | 2.51 | 0.42 |
| 1:A:425:LEU:HB3 | 1:A:426:PRO:HD2 | 2.01 | 0.42 |
| 1:A:703:LEU:HD11 | 1:A:718:PRO:HG3 | 2.00 | 0.42 |
| 1:A:729:ILE:CD1 | 1:A:786:ILE:HD12 | 2.50 | 0.42 |
| 1:B:65:ILE:HB | 1:B:90:ILE:CD1 | 2.48 | 0.42 |
| 1:B:559:LEU:HA | 1:B:560:PRO:HD3 | 1.87 | 0.42 |
| 1:B:698:ALA:O | 1:B:702:LEU:HB2 | 2.19 | 0.42 |
| 1:B:906:PRO:HA | 1:B:909:VAL:CG2 | 2.47 | 0.42 |
| 1:B:1020:PHE:N | 1:B:1020:PHE:CD2 | 2.87 | 0.42 |
| 1:C:77:TYR:CD2 | 1:C:77:TYR:N | 2.87 | 0.42 |
| 1:C:83:ASP:HA | 1:C:815:ARG:HA | 2.01 | 0.42 |
| 1:C:204:ILE:HD11 | 1:C:773:VAL:HG21 | 2.01 | 0.42 |
| 1:C:686:ASP:OD1 | 1:C:686:ASP:C | 2.56 | 0.42 |
| 1:C:950:LYS:HE3 | 1:C:954:ASP:OD1 | 2.20 | 0.42 |
| 1:C:958:LYS:HB3 | 1:C:962:GLU:HB3 | 2.02 | 0.42 |
| 1:A:10:ILE:O | 1:A:11:PHE:C | 2.57 | 0.42 |
| 1:A:54:ALA:CA | 1:A:83:ASP:O | 2.68 | 0.42 |
| 1:A:655:PHE:C | 1:A:657:GLN:H | 2.23 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:A:713:LEU:HD21 | 1:A:843:LEU:CD1 | 2.49 | 0.42 |
| 1:B:123:GLN:C | 1:B:125:GLN:N | 2.72 | 0.42 |
| 1:B:420:MET:O | 1:B:421:ALA:C | 2.58 | 0.42 |
| 1:B:758:TYR:HD2 | 1:B:758:TYR:C | 2.23 | 0.42 |
| 1:B:776:GLU:HG2 | 1:B:777:ALA:N | 2.34 | 0.42 |
| 1:C:57:VAL:HG13 | 1:C:88:VAL:CG2 | 2.49 | 0.42 |
| 1:C:534:ILE:H | 1:C:534:ILE:HG13 | 1.36 | 0.42 |
| 1:C:591:LEU:HD12 | 1:C:611:ALA:HB1 | 2.01 | 0.42 |
| 1:A:112:GLN:CA | 1:A:112:GLN:NE2 | 2.76 | 0.42 |
| 1:A:134:SER:HB2 | 1:A:673:GLU:CD | 2.40 | 0.42 |
| 1:A:164:ASP:O | 1:A:168:ARG:HG2 | 2.20 | 0.42 |
| 1:B:182:TYR:HD1 | 1:B:182:TYR:HA | 1.72 | 0.42 |
| 1:B:237:GLN:CG | 1:B:238:THR:N | 2.83 | 0.42 |
| 1:B:575:MET:N | 1:B:664:PHE:O | 2.52 | 0.42 |
| 1:C:225:VAL:O | 1:C:226:LYS:C | 2.57 | 0.42 |
| 1:C:295:THR:O | 1:C:295:THR:HG23 | 2.19 | 0.42 |
| 1:C:327:TYR:O | 1:C:328:ASP:HB2 | 2.19 | 0.42 |
| 1:C:338:HIS:HA | 1:C:341:VAL:HG12 | 2.01 | 0.42 |
| 1:C:414:GLU:OE2 | 1:C:974:PRO:HA | 2.19 | 0.42 |
| 1:A:11:PHE:HB3 | 1:A:12:ALA:H | 1.49 | 0.42 |
| 1:A:117:LEU:N | 1:A:117:LEU:CD1 | 2.82 | 0.42 |
| 1:A:314:GLU:O | 1:A:314:GLU:HG2 | 2.19 | 0.42 |
| 1:A:425:LEU:HD12 | 1:A:425:LEU:H | 1.84 | 0.42 |
| 1:A:817:GLU:OE1 | 1:A:826:GLU:N | 2.45 | 0.42 |
| 1:B:136:PHE:CE1 | 1:B:617:PHE:HZ | 2.37 | 0.42 |
| 1:B:190:PRO:O | 1:B:193:LEU:HB3 | 2.19 | 0.42 |
| 1:C:72:ILE:CG2 | 1:C:94:PHE:HE2 | 2.33 | 0.42 |
| 1:C:340:VAL:HG12 | 1:C:395:MET:HB3 | 2.01 | 0.42 |
| 1:A:11:PHE:CD1 | 1:B:890:ALA:HA | 2.54 | 0.42 |
| 1:A:578:LEU:CD2 | 1:A:590:VAL:HG21 | 2.44 | 0.42 |
| 1:B:178:PHE:HA | 1:B:277:ILE:HG21 | 2.00 | 0.42 |
| 1:B:453:PHE:CZ | 1:B:933:THR:HG23 | 2.55 | 0.42 |
| 1:C:204:ILE:CD1 | 1:C:773:VAL:HG21 | 2.50 | 0.42 |
| 1:C:219:LEU:O | 1:C:221:GLY:N | 2.52 | 0.42 |
| 1:C:775:SER:HG | 1:C:789:TRP:HZ2 | 1.67 | 0.42 |
| 1:A:641:GLU:OE1 | 1:A:642:ASN:N | 2.53 | 0.42 |
| 1:A:953:MET:O | 1:A:953:MET:HG2 | 2.20 | 0.42 |
| 1:B:23:GLY:HA3 | 1:B:377:LEU:O | 2.20 | 0.42 |
| 1:B:184:MET:H | 1:B:762:PHE:HE2 | 1.68 | 0.42 |
| 1:B:602:GLU:HG3 | 1:B:647:ILE:HG23 | 2.02 | 0.42 |
| 1:B:705:GLU:O | 1:B:706:ALA:CB | 2.67 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:C:101:ASP:O | 1:C:105:VAL:HG23 | 2.20 | 0.42 |
| 1:C:795:ASP:OD2 | 1:C:795:ASP:C | 2.58 | 0.42 |
| 1:A:13:TRP:O | 1:A:16:ALA:CB | 2.65 | 0.41 |
| 1:A:72:ILE:HD13 | 1:A:107:VAL:HA | 2.02 | 0.41 |
| 1:A:76:MET:HG3 | 1:A:94:PHE:O | 2.19 | 0.41 |
| 1:A:155:SER:OG | 1:A:179:GLY:HA3 | 2.20 | 0.41 |
| 1:A:225:VAL:HG11 | 1:B:778:LYS:NZ | 2.35 | 0.41 |
| 1:A:456:MET:HA | 1:A:459:PHE:HE1 | 1.82 | 0.41 |
| 1:A:567:GLU:HG2 | 1:A:998:GLY:HA3 | 2.02 | 0.41 |
| 1:A:869:SER:HB2 | 1:A:870:GLY:H | 1.70 | 0.41 |
| 1:B:166:ILE:HA | 1:B:169:THR:OG1 | 2.19 | 0.41 |
| 1:B:376:LEU:HD23 | 1:B:376:LEU:HA | 1.83 | 0.41 |
| 1:B:898:PRO:C | 1:B:900:SER:N | 2.74 | 0.41 |
| 1:C:456:MET:O | 1:C:457:ALA:CB | 2.67 | 0.41 |
| 1:C:684:LEU:C | 1:C:684:LEU:CD1 | 2.88 | 0.41 |
| 1:C:885:PHE:CE2 | 1:C:899:PHE:CE1 | 3.07 | 0.41 |
| 1:A:1:MET:N | 1:A:2:PRO:CD | 2.83 | 0.41 |
| 1:A:189:ASN:OD1 | 1:A:191:ASN:N | 2.53 | 0.41 |
| 1:A:927:PHE:CD2 | 1:A:927:PHE:C | 2.93 | 0.41 |
| 1:A:978:THR:CG2 | 1:A:979:SER:N | 2.84 | 0.41 |
| 1:B:468:ARG:HG3 | 1:B:468:ARG:NH1 | 2.35 | 0.41 |
| 1:B:938:SER:HB3 | 1:B:1014:ALA:CB | 2.50 | 0.41 |
| 1:B:948:PHE:HD2 | 1:B:967:ALA:HA | 1.84 | 0.41 |
| 1:B:949:ALA:HB3 | 1:B:1030:ARG:HH12 | 1.85 | 0.41 |
| 1:C:70:ASN:O | 1:C:71:GLY:C | 2.58 | 0.41 |
| 1:C:750:LEU:O | 1:C:754:TRP:HD1 | 2.03 | 0.41 |
| 1:C:1030:ARG:C | 1:C:1032:ARG:H | 2.24 | 0.41 |
| 1:A:574:THR:OG1 | 1:A:598:TYR:HE1 | 2.01 | 0.41 |
| 1:B:3:ASN:O | 1:B:4:PHE:C | 2.58 | 0.41 |
| 1:B:48:SER:O | 1:B:50:PRO:HD3 | 2.19 | 0.41 |
| 1:C:142:VAL:HG13 | 1:C:321:LEU:HD13 | 2.01 | 0.41 |
| 1:C:352:PHE:N | 1:C:369:THR:HG21 | 2.34 | 0.41 |
| 1:C:670:ALA:C | 1:C:672:VAL:N | 2.74 | 0.41 |
| 1:A:185:ARG:HD3 | 1:A:272:GLY:O | 2.20 | 0.41 |
| 1:A:674:LEU:HD22 | 1:A:675:GLY:N | 2.18 | 0.41 |
| 1:A:877:TYR:OH | 1:A:932:LEU:HD11 | 2.20 | 0.41 |
| 1:A:888:LEU:HD21 | 1:A:901:VAL:HB | 2.01 | 0.41 |
| 1:B:34:GLN:NE2 | 1:B:332:PHE:HE2 | 2.18 | 0.41 |
| 1:B:235:ILE:N | 1:B:235:ILE:HD12 | 2.34 | 0.41 |
| 1:B:249:ILE:O | 1:B:251:LEU:HD12 | 2.20 | 0.41 |
| 1:B:605:ASN:ND2 | 1:B:642:ASN:HA | 2.35 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:C:27:ILE:HD11 | 1:C:380:PHE:CD1 | 2.56 | 0.41 |
| 1:C:394:THR:HG22 | 1:C:395:MET:CE | 2.50 | 0.41 |
| 1:C:926:TYR:HB3 | 1:C:1003:VAL:HG22 | 2.02 | 0.41 |
| 1:C:945:ILE:C | 1:C:947:GLU:H | 2.24 | 0.41 |
| 1:A:444:GLY:HA3 | 1:A:891:LEU:HD13 | 2.02 | 0.41 |
| 1:A:577:GLN:O | 1:A:577:GLN:HG3 | 2.20 | 0.41 |
| 1:B:34:GLN:HB2 | 1:B:333:VAL:HG22 | 2.02 | 0.41 |
| 1:B:35:TYR:HB3 | 1:B:36:PRO:HD2 | 2.01 | 0.41 |
| 1:B:97:GLY:O | 1:B:98:THR:O | 2.38 | 0.41 |
| 1:B:144:ASN:HB2 | 1:B:321:LEU:HD12 | 2.02 | 0.41 |
| 1:B:157:TYR:CA | 1:B:161:ASN:ND2 | 2.81 | 0.41 |
| 1:B:701:GLN:HB2 | 1:B:851:LEU:HD22 | 2.03 | 0.41 |
| 1:C:416:VAL:HA | 1:C:419:VAL:HG22 | 2.02 | 0.41 |
| 1:C:713:LEU:O | 1:C:713:LEU:CD2 | 2.68 | 0.41 |
| 1:C:774:MET:HG2 | 1:C:775:SER:N | 2.35 | 0.41 |
| 1:A:23:GLY:O | 1:A:27:ILE:HG13 | 2.20 | 0.41 |
| 1:A:323:ILE:O | 1:A:325:TYR:CE1 | 2.74 | 0.41 |
| 1:A:367:ILE:CD1 | 1:A:413:VAL:HB | 2.49 | 0.41 |
| 1:A:461:GLY:O | 1:A:462:SER:C | 2.59 | 0.41 |
| 1:A:728:LYS:HD2 | 1:C:235:ILE:O | 2.21 | 0.41 |
| 1:A:911:GLY:HA2 | 1:A:914:LEU:HB2 | 2.02 | 0.41 |
| 1:B:895:TRP:O | 1:B:899:PHE:CD2 | 2.74 | 0.41 |
| 1:C:240:LEU:HB3 | 1:C:245:GLU:HB2 | 2.02 | 0.41 |
| 1:A:189:ASN:ND2 | 1:A:779:TYR:CZ | 2.88 | 0.41 |
| 1:A:308:ALA:O | 1:A:312:LYS:HD3 | 2.20 | 0.41 |
| 1:A:591:LEU:HD12 | 1:A:613:ASN:HB3 | 2.03 | 0.41 |
| 1:A:682:PHE:CE1 | 1:A:857:TYR:HB2 | 2.55 | 0.41 |
| 1:A:726:GLN:N | 1:A:810:GLU:O | 2.49 | 0.41 |
| 1:A:1036:LYS:NZ | 1:A:1036:LYS:HB2 | 2.36 | 0.41 |
| 1:B:58:GLN:HG3 | 1:B:59:ASP:H | 1.84 | 0.41 |
| 1:B:194:ASN:C | 1:B:196:PHE:H | 2.24 | 0.41 |
| 1:B:671:ILE:C | 1:B:673:GLU:H | 2.24 | 0.41 |
| 1:B:758:TYR:C | 1:B:758:TYR:CD2 | 2.94 | 0.41 |
| 1:C:293:LEU:HD22 | 1:C:299:ALA:HB2 | 2.03 | 0.41 |
| 1:C:597:TYR:CD1 | 1:C:601:LYS:HG3 | 2.56 | 0.41 |
| 1:C:714:THR:CG2 | 1:C:716:VAL:HG23 | 2.51 | 0.41 |
| 1:A:380:PHE:CE1 | 1:A:398:MET:SD | 3.14 | 0.41 |
| 1:A:653:ARG:C | 1:A:655:PHE:H | 2.24 | 0.41 |
| 1:A:706:ALA:HB3 | 1:A:716:VAL:HG21 | 2.02 | 0.41 |
| 1:A:731:ILE:HG21 | 1:A:746:ILE:HG21 | 2.01 | 0.41 |
| 1:B:428:LYS:HA | 1:B:494:ALA:CB | 2.51 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:B:676:THR:O | 1:B:676:THR:CG2 | 2.69 | 0.41 |
| 1:B:774:MET:O | 1:B:775:SER:HB3 | 2.20 | 0.41 |
| 1:B:852:PRO:HB2 | 1:B:853:THR:H | 1.58 | 0.41 |
| 1:B:916:ALA:HA | 1:B:919:ARG:HG2 | 2.03 | 0.41 |
| 1:B:986:VAL:O | 1:B:990:VAL:CG2 | 2.69 | 0.41 |
| 1:C:69:MET:SD | 1:C:92:LEU:HD21 | 2.60 | 0.41 |
| 1:C:728:LYS:HG3 | 1:C:729:ILE:N | 2.35 | 0.41 |
| 1:C:947:GLU:O | 1:C:950:LYS:HB2 | 2.21 | 0.41 |
| 1:A:3:ASN:C | 1:A:6:ILE:HG13 | 2.42 | 0.41 |
| 1:A:111:LEU:C | 1:A:113:LEU:H | 2.24 | 0.41 |
| 1:A:162:MET:HA | 1:A:313:MET:HE1 | 2.03 | 0.41 |
| 1:A:442:LEU:C | 1:A:444:GLY:N | 2.73 | 0.41 |
| 1:A:601:LYS:O | 1:A:601:LYS:HG2 | 2.21 | 0.41 |
| 1:A:1004:GLY:O | 1:A:1007:VAL:N | 2.54 | 0.41 |
| 1:B:20:MET:HG2 | 1:B:374:VAL:HA | 2.03 | 0.41 |
| 1:B:119:PRO:HB2 | 1:B:122:VAL:HG23 | 2.02 | 0.41 |
| 1:B:146:ASP:OD2 | 1:B:146:ASP:N | 2.53 | 0.41 |
| 1:B:150:THR:HG22 | 1:B:151:GLN:N | 2.36 | 0.41 |
| 1:B:226:LYS:HB3 | 1:B:227:GLY:H | 1.69 | 0.41 |
| 1:B:414:GLU:OE1 | 1:B:974:PRO:HG3 | 2.21 | 0.41 |
| 1:B:518:ARG:O | 1:B:518:ARG:HG2 | 2.20 | 0.41 |
| 1:B:543:VAL:O | 1:B:547:ILE:HD13 | 2.20 | 0.41 |
| 1:B:696:THR:HA | 1:B:699:ARG:NH1 | 2.36 | 0.41 |
| 1:B:804:PHE:O | 1:B:805:SER:CB | 2.68 | 0.41 |
| 1:B:997:SER:C | 1:B:999:ALA:H | 2.24 | 0.41 |
| 1:C:350:LEU:HD22 | 1:C:984:LEU:CD2 | 2.50 | 0.41 |
| 1:C:545:TYR:OH | 1:C:1025:PHE:CZ | 2.71 | 0.41 |
| 1:C:688:ALA:HB3 | 1:C:690:LEU:CD1 | 2.47 | 0.41 |
| 1:C:713:LEU:HD23 | 1:C:832:ALA:N | 2.35 | 0.41 |
| 1:C:925:VAL:CG2 | 1:C:926:TYR:H | 2.28 | 0.41 |
| 1:A:239:ARG:HD3 | 1:A:762:PHE:HA | 2.03 | 0.41 |
| 1:A:548:ILE:HG12 | 1:A:910:ILE:HD13 | 2.02 | 0.41 |
| 1:A:644:VAL:HG11 | 1:A:667:ASN:ND2 | 2.23 | 0.41 |
| 1:A:775:SER:HB2 | 1:A:789:TRP:CZ2 | 2.53 | 0.41 |
| 1:B:146:ASP:O | 1:B:148:THR:OG1 | 2.30 | 0.41 |
| 1:B:235:ILE:N | 1:B:235:ILE:HD13 | 2.36 | 0.41 |
| 1:B:372:VAL:O | 1:B:376:LEU:HB2 | 2.21 | 0.41 |
| 1:B:375:VAL:HB | 1:B:405:LEU:HD22 | 2.03 | 0.41 |
| 1:B:574:THR:HA | 1:B:665:ALA:HA | 2.04 | 0.41 |
| 1:B:775:SER:HB2 | 1:B:789:TRP:HZ2 | 1.86 | 0.41 |
| 1:C:356:TYR:HD1 | 1:C:356:TYR:HA | 1.81 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:C:724:THR:HG23 | 1:C:725:PRO:HD2 | 2.02 | 0.41 |
| 1:A:576:VAL:HG21 | 1:A:591:LEU:CD2 | 2.47 | 0.40 |
| 1:B:71:GLY:O | 1:B:72:ILE:C | 2.59 | 0.40 |
| 1:B:438:ILE:HD12 | 1:B:438:ILE:HA | 1.84 | 0.40 |
| 1:B:848:ALA:C | 1:B:850:LYS:H | 2.24 | 0.40 |
| 1:B:900:SER:OG | 1:B:1029:VAL:HG11 | 2.21 | 0.40 |
| 1:B:931:LEU:HD23 | 1:B:931:LEU:HA | 1.97 | 0.40 |
| 1:B:1012:VAL:CG2 | 1:B:1013:THR:N | 2.83 | 0.40 |
| 1:C:26:ALA:HB1 | 1:C:384:ALA:CB | 2.51 | 0.40 |
| 1:C:155:SER:HB3 | 1:C:180:SER:H | 1.86 | 0.40 |
| 1:C:176:GLN:NE2 | 1:C:620:ARG:NH1 | 2.55 | 0.40 |
| 1:C:574:THR:HG22 | 1:C:575:MET:N | 2.36 | 0.40 |
| 1:C:759:VAL:O | 1:C:760:ASN:HB3 | 2.21 | 0.40 |
| 1:C:959:GLY:O | 1:C:960:LEU:C | 2.59 | 0.40 |
| 1:A:325:TYR:N | 1:A:325:TYR:CD1 | 2.89 | 0.40 |
| 1:A:1008:MET:HB3 | 1:A:1009:GLY:H | 1.72 | 0.40 |
| 1:B:518:ARG:HA | 1:B:521:GLU:HB2 | 2.03 | 0.40 |
| 1:B:871:ASN:N | 1:B:871:ASN:ND2 | 2.67 | 0.40 |
| 1:C:418:ARG:CZ | 1:C:974:PRO:HG3 | 2.50 | 0.40 |
| 1:C:531:VAL:HB | 1:C:532:GLY:H | 1.69 | 0.40 |
| 1:C:937:LEU:HD12 | 1:C:937:LEU:HA | 1.83 | 0.40 |
| 1:A:87:THR:HG21 | 1:A:620:ARG:NH1 | 2.36 | 0.40 |
| 1:A:187:TRP:O | 1:A:188:MET:O | 2.39 | 0.40 |
| 1:A:350:LEU:HD11 | 1:A:984:LEU:HB3 | 2.02 | 0.40 |
| 1:A:685:ILE:HG21 | 1:A:822:LEU:HD12 | 2.02 | 0.40 |
| 1:A:970:MET:O | 1:A:971:ARG:HB2 | 2.21 | 0.40 |
| 1:B:151:GLN:HE22 | 1:B:279:ALA:H | 1.67 | 0.40 |
| 1:B:314:GLU:H | 1:B:315:PRO:CD | 2.34 | 0.40 |
| 1:B:327:TYR:HB2 | 1:B:628:PHE:HB3 | 2.04 | 0.40 |
| 1:B:439:GLN:HG2 | 1:B:439:GLN:O | 2.22 | 0.40 |
| 1:B:692:HIS:HD2 | 1:B:825:MET:HE2 | 1.87 | 0.40 |
| 1:C:790:TYR:CE1 | 1:C:800:PRO:HB3 | 2.56 | 0.40 |
| 1:A:391:ASN:O | 1:A:392:THR:C | 2.60 | 0.40 |
| 1:A:485:ALA:HA | 1:A:489:THR:OG1 | 2.21 | 0.40 |
| 1:A:493:CYS:O | 1:A:497:LEU:HG | 2.21 | 0.40 |
| 1:A:685:ILE:HG21 | 1:A:822:LEU:HD13 | 2.04 | 0.40 |
| 1:B:552:MET:C | 1:B:554:TYR:H | 2.24 | 0.40 |
| 1:B:1007:VAL:O | 1:B:1007:VAL:HG13 | 2.20 | 0.40 |
| 1:C:343:THR:HA | 1:C:346:GLU:HG2 | 2.02 | 0.40 |
| 1:C:350:LEU:HD13 | 1:C:984:LEU:HD23 | 2.04 | 0.40 |
| 1:C:636:ASP:O | 1:C:638:PRO:HD3 | 2.21 | 0.40 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:C:709:HIS:C | 1:C:711:ASP:H | 2.25 | 0.40 |
| 1:C:751:GLY:O | 1:C:755:GLY:N | 2.47 | 0.40 |
| 1:C:905:VAL:HB | 1:C:906:PRO:HD3 | 2.04 | 0.40 |
| 1:A:7:ASP:C | 1:A:9:PRO:CG | 2.82 | 0.40 |
| 1:A:886:LEU:HG | 1:C:14:VAL:CG2 | 2.48 | 0.40 |
| 1:B:32:VAL:O | 1:B:33:ALA:HB2 | 2.21 | 0.40 |
| 1:B:58:GLN:C | 1:B:60:THR:H | 2.25 | 0.40 |
| 1:B:143:ILE:HD13 | 1:B:322:LYS:O | 2.22 | 0.40 |
| 1:B:251:LEU:HD13 | 1:B:262:LEU:N | 2.34 | 0.40 |
| 1:B:310:LEU:HD22 | 1:B:323:ILE:HD13 | 2.04 | 0.40 |
| 1:B:560:PRO:HB3 | 1:B:836:SER:CB | 2.51 | 0.40 |
| 1:B:659:LYS:HG2 | 1:B:660:ASP:H | 1.87 | 0.40 |
| 1:B:741:VAL:HG21 | 1:B:799:VAL:HG11 | 2.02 | 0.40 |
| 1:C:1:MET:HG3 | 1:C:3:ASN:H | 1.87 | 0.40 |
| 1:C:190:PRO:HG3 | 1:C:789:TRP:CZ2 | 2.57 | 0.40 |
| 1:C:361:ASN:HB2 | 1:C:364:ALA:HB3 | 2.02 | 0.40 |
| 1:C:570:GLY:HA3 | 1:C:634:TRP:CZ2 | 2.57 | 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 X-ray entries followed by that with respect to entries of similar resolution.

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 | 1018/1053 (97%) | 713 (70%) | 191 (19%) | 114 (11%) | 0 2 |
| 1 | B | 1018/1053 (97%) | 695 (68%) | 231 (23%) | 92 (9%) | 1 5 |
| 1 | C | 1018/1053 (97%) | 728 (72%) | 213 (21%) | 77 (8%) | 1 7 |
| All | All | 3054/3159 (97%) | 2136 (70%) | 635 (21%) | 283 (9%) | 0 4 |

All (283) Ramachandran outliers are listed below:

| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | A | 9 | PRO |
| 1 | A | 11 | PHE |
| 1 | A | 12 | ALA |
| 1 | A | 13 | TRP |
| 1 | A | 14 | VAL |
| 1 | A | 15 | ILE |
| 1 | A | 134 | SER |
| 1 | A | 146 | ASP |
| 1 | A | 147 | GLY |
| 1 | A | 181 | GLN |
| 1 | A | 188 | MET |
| 1 | A | 206 | ALA |
| 1 | A | 256 | ASP |
| 1 | A | 267 | LYS |
| 1 | A | 269 | GLU |
| 1 | A | 293 | LEU |
| 1 | A | 388 | PHE |
| 1 | A | 392 | THR |
| 1 | A | 460 | GLY |
| 1 | A | 515 | TRP |
| 1 | A | 516 | PHE |
| 1 | A | 580 | ALA |
| 1 | A | 659 | LYS |
| 1 | A | 676 | THR |
| 1 | A | 746 | ILE |
| 1 | A | 831 | ALA |
| 1 | A | 958 | LYS |
| 1 | A | 960 | LEU |
| 1 | A | 1008 | MET |
| 1 | A | 1017 | LEU |
| 1 | A | 1030 | ARG |
| 1 | A | 1034 | SER |
| 1 | B | 52 | ALA |
| 1 | B | 54 | ALA |
| 1 | B | 72 | ILE |
| 1 | B | 98 | THR |
| 1 | B | 147 | GLY |
| 1 | B | 216 | ALA |
| 1 | B | 217 | GLY |
| 1 | B | 222 | THR |
| 1 | B | 254 | ASN |
| 1 | B | 265 | VAL |
| 1 | B | 270 | LEU |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | B | 299 | ALA |
| 1 | B | 427 | PRO |
| 1 | B | 486 | LEU |
| 1 | B | 517 | ASN |
| 1 | B | 671 | ILE |
| 1 | B | 672 | VAL |
| 1 | B | 709 | HIS |
| 1 | B | 723 | ASP |
| 1 | B | 733 | GLN |
| 1 | B | 765 | ARG |
| 1 | B | 775 | SER |
| 1 | B | 852 | PRO |
| 1 | B | 1016 | VAL |
| 1 | C | 80 | SER |
| 1 | C | 146 | ASP |
| 1 | C | 226 | LYS |
| 1 | C | 255 | GLN |
| 1 | C | 295 | THR |
| 1 | C | 438 | ILE |
| 1 | C | 464 | GLY |
| 1 | C | 656 | SER |
| 1 | C | 674 | LEU |
| 1 | C | 678 | THR |
| 1 | C | 715 | SER |
| 1 | C | 806 | SER |
| 1 | C | 820 | ASN |
| 1 | C | 830 | GLN |
| 1 | C | 871 | ASN |
| 1 | C | 895 | TRP |
| 1 | C | 953 | MET |
| 1 | C | 960 | LEU |
| 1 | C | 965 | LEU |
| 1 | A | 10 | ILE |
| 1 | A | 16 | ALA |
| 1 | A | 17 | ILE |
| 1 | A | 18 | ILE |
| 1 | A | 37 | THR |
| 1 | A | 65 | ILE |
| 1 | A | 67 | GLN |
| 1 | A | 69 | MET |
| 1 | A | 112 | GLN |
| 1 | A | 138 | MET |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | A | 172 | VAL |
| 1 | A | 192 | GLU |
| 1 | A | 294 | ALA |
| 1 | A | 318 | PRO |
| 1 | A | 320 | GLY |
| 1 | A | 362 | PHE |
| 1 | A | 426 | PRO |
| 1 | A | 427 | PRO |
| 1 | A | 443 | VAL |
| 1 | A | 517 | ASN |
| 1 | A | 538 | THR |
| 1 | A | 617 | PHE |
| 1 | A | 650 | ARG |
| 1 | A | 660 | ASP |
| 1 | A | 661 | ALA |
| 1 | A | 662 | MET |
| 1 | A | 672 | VAL |
| 1 | A | 675 | GLY |
| 1 | A | 686 | ASP |
| 1 | A | 689 | GLY |
| 1 | A | 759 | VAL |
| 1 | A | 893 | GLU |
| 1 | A | 925 | VAL |
| 1 | A | 971 | ARG |
| 1 | A | 988 | PRO |
| 1 | A | 1016 | VAL |
| 1 | B | 36 | PRO |
| 1 | B | 140 | VAL |
| 1 | B | 201 | VAL |
| 1 | B | 243 | THR |
| 1 | B | 262 | LEU |
| 1 | B | 283 | GLY |
| 1 | B | 319 | SER |
| 1 | B | 357 | LEU |
| 1 | B | 358 | PHE |
| 1 | B | 360 | GLN |
| 1 | B | 370 | ILE |
| 1 | B | 418 | ARG |
| 1 | B | 453 | PHE |
| 1 | B | 518 | ARG |
| 1 | B | 633 | ASP |
| 1 | B | 656 | SER |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | B | 669 | PRO |
| 1 | B | 704 | ALA |
| 1 | B | 807 | SER |
| 1 | B | 834 | GLY |
| 1 | B | 890 | ALA |
| 1 | B | 899 | PHE |
| 1 | B | 921 | LEU |
| 1 | B | 953 | MET |
| 1 | C | 285 | PRO |
| 1 | C | 404 | LEU |
| 1 | C | 427 | PRO |
| 1 | C | 534 | ILE |
| 1 | C | 576 | VAL |
| 1 | C | 577 | GLN |
| 1 | C | 673 | GLU |
| 1 | C | 872 | GLN |
| 1 | C | 893 | GLU |
| 1 | C | 899 | PHE |
| 1 | C | 998 | GLY |
| 1 | A | 96 | SER |
| 1 | A | 219 | LEU |
| 1 | A | 330 | THR |
| 1 | A | 357 | LEU |
| 1 | A | 377 | LEU |
| 1 | A | 439 | GLN |
| 1 | A | 444 | GLY |
| 1 | A | 457 | ALA |
| 1 | A | 687 | GLN |
| 1 | A | 809 | TRP |
| 1 | A | 844 | MET |
| 1 | A | 869 | SER |
| 1 | A | 875 | SER |
| 1 | A | 918 | PHE |
| 1 | A | 969 | ARG |
| 1 | B | 69 | MET |
| 1 | B | 124 | GLN |
| 1 | B | 202 | ASP |
| 1 | B | 226 | LYS |
| 1 | B | 251 | LEU |
| 1 | B | 439 | GLN |
| 1 | B | 495 | THR |
| 1 | B | 601 | LYS |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | B | 603 | LYS |
| 1 | B | 692 | HIS |
| 1 | B | 849 | SER |
| 1 | B | 1005 | THR |
| 1 | B | 1017 | LEU |
| 1 | C | 4 | PHE |
| 1 | C | 54 | ALA |
| 1 | C | 69 | MET |
| 1 | C | 422 | GLU |
| 1 | C | 461 | GLY |
| 1 | C | 463 | THR |
| 1 | C | 602 | GLU |
| 1 | C | 718 | PRO |
| 1 | C | 720 | GLY |
| 1 | C | 808 | ARG |
| 1 | C | 832 | ALA |
| 1 | C | 892 | TYR |
| 1 | A | 19 | ILE |
| 1 | A | 54 | ALA |
| 1 | A | 287 | SER |
| 1 | A | 451 | ALA |
| 1 | A | 452 | VAL |
| 1 | A | 514 | GLY |
| 1 | A | 531 | VAL |
| 1 | A | 623 | ASN |
| 1 | A | 752 | ALA |
| 1 | A | 871 | ASN |
| 1 | A | 1035 | ARG |
| 1 | B | 184 | MET |
| 1 | B | 553 | ALA |
| 1 | B | 676 | THR |
| 1 | B | 693 | GLU |
| 1 | B | 814 | PRO |
| 1 | B | 959 | GLY |
| 1 | C | 26 | ALA |
| 1 | C | 81 | ASN |
| 1 | C | 207 | ILE |
| 1 | C | 222 | THR |
| 1 | C | 230 | LEU |
| 1 | C | 328 | ASP |
| 1 | C | 424 | GLY |
| 1 | C | 425 | LEU |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | C | 693 | GLU |
| 1 | C | 765 | ARG |
| 1 | C | 802 | SER |
| 1 | C | 866 | GLU |
| 1 | C | 876 | LEU |
| 1 | C | 894 | SER |
| 1 | C | 915 | ALA |
| 1 | C | 1006 | GLY |
| 1 | C | 1017 | LEU |
| 1 | A | 36 | PRO |
| 1 | A | 53 | ASP |
| 1 | A | 220 | GLY |
| 1 | A | 236 | ALA |
| 1 | A | 326 | PRO |
| 1 | A | 436 | GLY |
| 1 | A | 565 | PRO |
| 1 | A | 638 | PRO |
| 1 | A | 654 | ALA |
| 1 | A | 677 | ALA |
| 1 | A | 784 | ASP |
| 1 | A | 788 | ASP |
| 1 | A | 866 | GLU |
| 1 | A | 991 | ILE |
| 1 | B | 4 | PHE |
| 1 | B | 223 | PRO |
| 1 | B | 250 | LEU |
| 1 | B | 428 | LYS |
| 1 | B | 542 | LEU |
| 1 | B | 688 | ALA |
| 1 | B | 805 | SER |
| 1 | C | 939 | ALA |
| 1 | C | 940 | LYS |
| 1 | C | 974 | PRO |
| 1 | C | 1016 | VAL |
| 1 | C | 1031 | ARG |
| 1 | A | 64 | VAL |
| 1 | A | 195 | LYS |
| 1 | A | 263 | ARG |
| 1 | A | 909 | VAL |
| 1 | B | 119 | PRO |
| 1 | B | 127 | VAL |
| 1 | B | 494 | ALA |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | B | 538 | THR |
| 1 | B | 602 | GLU |
| 1 | B | 638 | PRO |
| 1 | B | 691 | GLY |
| 1 | C | 187 | TRP |
| 1 | C | 243 | THR |
| 1 | C | 531 | VAL |
| 1 | C | 712 | MET |
| 1 | C | 837 | THR |
| 1 | A | 107 | VAL |
| 1 | A | 998 | GLY |
| 1 | B | 773 | VAL |
| 1 | B | 326 | PRO |
| 1 | B | 783 | PRO |
| 1 | C | 675 | GLY |
| 1 | C | 975 | ILE |
| 1 | B | 390 | ILE |
| 1 | B | 419 | VAL |
| 1 | B | 464 | GLY |
| 1 | B | 908 | GLY |
| 1 | B | 968 | VAL |
| 1 | C | 372 | VAL |
| 1 | B | 330 | THR |
| 1 | B | 373 | PRO |
| 1 | C | 671 | ILE |
| 1 | C | 689 | GLY |
| 1 | B | 139 | VAL |
| 1 | C | 315 | PRO |
| 1 | C | 658 | ILE |
| 1 | C | 672 | VAL |

### 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 X-ray entries followed by that with respect to entries of similar resolution.

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 | 833/859 (97%) | 706 (85%) | 127 (15%) | 3 12 |

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| Mol | Chain | Analysed | Rotameric | Outliers | Percentiles |
|---|---|---|---|---|---|
| 1 | B | 833/859 (97%) | 700 (84%) | 133 (16%) | 2 10 |
| 1 | C | 833/859 (97%) | 711 (85%) | 122 (15%) | 3 13 |
| All | All | 2499/2577 (97%) | 2117 (85%) | 382 (15%) | 2 12 |

All (382) residues with a non-rotameric sidechain are listed below:

| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | A | 4 | PHE |
| 1 | A | 5 | PHE |
| 1 | A | 10 | ILE |
| 1 | A | 11 | PHE |
| 1 | A | 15 | ILE |
| 1 | A | 17 | ILE |
| 1 | A | 25 | LEU |
| 1 | A | 44 | THR |
| 1 | A | 49 | TYR |
| 1 | A | 57 | VAL |
| 1 | A | 58 | GLN |
| 1 | A | 60 | THR |
| 1 | A | 62 | THR |
| 1 | A | 65 | ILE |
| 1 | A | 69 | MET |
| 1 | A | 70 | ASN |
| 1 | A | 80 | SER |
| 1 | A | 84 | SER |
| 1 | A | 91 | THR |
| 1 | A | 92 | LEU |
| 1 | A | 93 | THR |
| 1 | A | 99 | ASP |
| 1 | A | 101 | ASP |
| 1 | A | 108 | GLN |
| 1 | A | 109 | ASN |
| 1 | A | 112 | GLN |
| 1 | A | 139 | VAL |
| 1 | A | 153 | ASP |
| 1 | A | 168 | ARG |
| 1 | A | 170 | SER |
| 1 | A | 182 | TYR |
| 1 | A | 193 | LEU |
| 1 | A | 213 | GLN |
| 1 | A | 222 | THR |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | A | 254 | ASN |
| 1 | A | 259 | ARG |
| 1 | A | 277 | ILE |
| 1 | A | 302 | THR |
| 1 | A | 317 | PHE |
| 1 | A | 319 | SER |
| 1 | A | 321 | LEU |
| 1 | A | 323 | ILE |
| 1 | A | 330 | THR |
| 1 | A | 334 | LYS |
| 1 | A | 341 | VAL |
| 1 | A | 348 | ILE |
| 1 | A | 357 | LEU |
| 1 | A | 366 | LEU |
| 1 | A | 367 | ILE |
| 1 | A | 370 | ILE |
| 1 | A | 375 | VAL |
| 1 | A | 379 | THR |
| 1 | A | 395 | MET |
| 1 | A | 400 | LEU |
| 1 | A | 402 | ILE |
| 1 | A | 405 | LEU |
| 1 | A | 417 | GLU |
| 1 | A | 447 | MET |
| 1 | A | 473 | THR |
| 1 | A | 476 | SER |
| 1 | A | 480 | LEU |
| 1 | A | 484 | VAL |
| 1 | A | 498 | LYS |
| 1 | A | 518 | ARG |
| 1 | A | 522 | LYS |
| 1 | A | 523 | SER |
| 1 | A | 527 | TYR |
| 1 | A | 530 | SER |
| 1 | A | 540 | ARG |
| 1 | A | 544 | LEU |
| 1 | A | 548 | ILE |
| 1 | A | 554 | TYR |
| 1 | A | 555 | LEU |
| 1 | A | 556 | PHE |
| 1 | A | 584 | GLN |
| 1 | A | 597 | TYR |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | A | 600 | THR |
| 1 | A | 603 | LYS |
| 1 | A | 623 | ASN |
| 1 | A | 626 | ILE |
| 1 | A | 630 | SER |
| 1 | A | 634 | TRP |
| 1 | A | 636 | ASP |
| 1 | A | 641 | GLU |
| 1 | A | 653 | ARG |
| 1 | A | 659 | LYS |
| 1 | A | 666 | PHE |
| 1 | A | 668 | LEU |
| 1 | A | 671 | ILE |
| 1 | A | 674 | LEU |
| 1 | A | 680 | PHE |
| 1 | A | 687 | GLN |
| 1 | A | 693 | GLU |
| 1 | A | 713 | LEU |
| 1 | A | 717 | ARG |
| 1 | A | 719 | ASN |
| 1 | A | 724 | THR |
| 1 | A | 741 | VAL |
| 1 | A | 750 | LEU |
| 1 | A | 757 | SER |
| 1 | A | 763 | ILE |
| 1 | A | 773 | VAL |
| 1 | A | 779 | TYR |
| 1 | A | 786 | ILE |
| 1 | A | 795 | ASP |
| 1 | A | 815 | ARG |
| 1 | A | 827 | ILE |
| 1 | A | 830 | GLN |
| 1 | A | 863 | SER |
| 1 | A | 865 | GLN |
| 1 | A | 869 | SER |
| 1 | A | 881 | LEU |
| 1 | A | 899 | PHE |
| 1 | A | 904 | VAL |
| 1 | A | 923 | ASN |
| 1 | A | 927 | PHE |
| 1 | A | 935 | ILE |
| 1 | A | 954 | ASP |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | A | 960 | LEU |
| 1 | A | 969 | ARG |
| 1 | A | 976 | LEU |
| 1 | A | 978 | THR |
| 1 | A | 982 | PHE |
| 1 | A | 993 | THR |
| 1 | A | 1011 | MET |
| 1 | A | 1021 | PHE |
| 1 | A | 1035 | ARG |
| 1 | B | 4 | PHE |
| 1 | B | 11 | PHE |
| 1 | B | 13 | TRP |
| 1 | B | 21 | LEU |
| 1 | B | 27 | ILE |
| 1 | B | 30 | LEU |
| 1 | B | 34 | GLN |
| 1 | B | 35 | TYR |
| 1 | B | 48 | SER |
| 1 | B | 49 | TYR |
| 1 | B | 57 | VAL |
| 1 | B | 58 | GLN |
| 1 | B | 59 | ASP |
| 1 | B | 60 | THR |
| 1 | B | 69 | MET |
| 1 | B | 72 | ILE |
| 1 | B | 74 | ASN |
| 1 | B | 81 | ASN |
| 1 | B | 85 | THR |
| 1 | B | 90 | ILE |
| 1 | B | 95 | GLU |
| 1 | B | 96 | SER |
| 1 | B | 102 | ILE |
| 1 | B | 104 | GLN |
| 1 | B | 121 | GLU |
| 1 | B | 125 | GLN |
| 1 | B | 129 | VAL |
| 1 | B | 137 | LEU |
| 1 | B | 143 | ILE |
| 1 | B | 146 | ASP |
| 1 | B | 153 | ASP |
| 1 | B | 161 | ASN |
| 1 | B | 169 | THR |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | B | 170 | SER |
| 1 | B | 176 | GLN |
| 1 | B | 181 | GLN |
| 1 | B | 182 | TYR |
| 1 | B | 185 | ARG |
| 1 | B | 189 | ASN |
| 1 | B | 193 | LEU |
| 1 | B | 194 | ASN |
| 1 | B | 199 | THR |
| 1 | B | 222 | THR |
| 1 | B | 226 | LYS |
| 1 | B | 235 | ILE |
| 1 | B | 248 | LYS |
| 1 | B | 254 | ASN |
| 1 | B | 261 | LEU |
| 1 | B | 264 | ASP |
| 1 | B | 270 | LEU |
| 1 | B | 289 | LEU |
| 1 | B | 293 | LEU |
| 1 | B | 298 | ASN |
| 1 | B | 307 | ARG |
| 1 | B | 330 | THR |
| 1 | B | 335 | ILE |
| 1 | B | 349 | ILE |
| 1 | B | 356 | TYR |
| 1 | B | 357 | LEU |
| 1 | B | 358 | PHE |
| 1 | B | 359 | LEU |
| 1 | B | 362 | PHE |
| 1 | B | 379 | THR |
| 1 | B | 408 | ASP |
| 1 | B | 417 | GLU |
| 1 | B | 419 | VAL |
| 1 | B | 422 | GLU |
| 1 | B | 435 | MET |
| 1 | B | 438 | ILE |
| 1 | B | 452 | VAL |
| 1 | B | 483 | LEU |
| 1 | B | 495 | THR |
| 1 | B | 496 | MET |
| 1 | B | 515 | TRP |
| 1 | B | 516 | PHE |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | B | 538 | THR |
| 1 | B | 547 | ILE |
| 1 | B | 556 | PHE |
| 1 | B | 564 | LEU |
| 1 | B | 571 | VAL |
| 1 | B | 596 | HIS |
| 1 | B | 601 | LYS |
| 1 | B | 603 | LYS |
| 1 | B | 613 | ASN |
| 1 | B | 620 | ARG |
| 1 | B | 623 | ASN |
| 1 | B | 629 | VAL |
| 1 | B | 655 | PHE |
| 1 | B | 674 | LEU |
| 1 | B | 696 | THR |
| 1 | B | 702 | LEU |
| 1 | B | 708 | LYS |
| 1 | B | 712 | MET |
| 1 | B | 714 | THR |
| 1 | B | 717 | ARG |
| 1 | B | 729 | ILE |
| 1 | B | 731 | ILE |
| 1 | B | 739 | LEU |
| 1 | B | 743 | ILE |
| 1 | B | 744 | ASN |
| 1 | B | 758 | TYR |
| 1 | B | 761 | ASP |
| 1 | B | 770 | LYS |
| 1 | B | 778 | LYS |
| 1 | B | 782 | LEU |
| 1 | B | 788 | ASP |
| 1 | B | 792 | ARG |
| 1 | B | 795 | ASP |
| 1 | B | 808 | ARG |
| 1 | B | 818 | ARG |
| 1 | B | 836 | SER |
| 1 | B | 842 | GLU |
| 1 | B | 844 | MET |
| 1 | B | 847 | LEU |
| 1 | B | 853 | THR |
| 1 | B | 868 | LEU |
| 1 | B | 871 | ASN |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | B | 876 | LEU |
| 1 | B | 885 | PHE |
| 1 | B | 895 | TRP |
| 1 | B | 919 | ARG |
| 1 | B | 922 | THR |
| 1 | B | 931 | LEU |
| 1 | B | 945 | ILE |
| 1 | B | 954 | ASP |
| 1 | B | 966 | ASP |
| 1 | B | 971 | ARG |
| 1 | B | 976 | LEU |
| 1 | B | 978 | THR |
| 1 | B | 989 | LEU |
| 1 | B | 1011 | MET |
| 1 | B | 1030 | ARG |
| 1 | B | 1032 | ARG |
| 1 | C | 3 | ASN |
| 1 | C | 13 | TRP |
| 1 | C | 20 | MET |
| 1 | C | 30 | LEU |
| 1 | C | 34 | GLN |
| 1 | C | 38 | ILE |
| 1 | C | 46 | SER |
| 1 | C | 49 | TYR |
| 1 | C | 56 | THR |
| 1 | C | 58 | GLN |
| 1 | C | 75 | LEU |
| 1 | C | 81 | ASN |
| 1 | C | 82 | SER |
| 1 | C | 83 | ASP |
| 1 | C | 89 | GLN |
| 1 | C | 91 | THR |
| 1 | C | 93 | THR |
| 1 | C | 95 | GLU |
| 1 | C | 108 | GLN |
| 1 | C | 109 | ASN |
| 1 | C | 110 | LYS |
| 1 | C | 128 | SER |
| 1 | C | 135 | SER |
| 1 | C | 137 | LEU |
| 1 | C | 146 | ASP |
| 1 | C | 150 | THR |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | C | 151 | GLN |
| 1 | C | 152 | GLU |
| 1 | C | 163 | LYS |
| 1 | C | 177 | LEU |
| 1 | C | 192 | GLU |
| 1 | C | 205 | THR |
| 1 | C | 208 | LYS |
| 1 | C | 210 | GLN |
| 1 | C | 233 | SER |
| 1 | C | 239 | ARG |
| 1 | C | 240 | LEU |
| 1 | C | 244 | GLU |
| 1 | C | 253 | VAL |
| 1 | C | 255 | GLN |
| 1 | C | 259 | ARG |
| 1 | C | 274 | ASN |
| 1 | C | 319 | SER |
| 1 | C | 321 | LEU |
| 1 | C | 330 | THR |
| 1 | C | 339 | GLU |
| 1 | C | 355 | MET |
| 1 | C | 356 | TYR |
| 1 | C | 367 | ILE |
| 1 | C | 369 | THR |
| 1 | C | 372 | VAL |
| 1 | C | 379 | THR |
| 1 | C | 408 | ASP |
| 1 | C | 422 | GLU |
| 1 | C | 429 | GLU |
| 1 | C | 431 | THR |
| 1 | C | 456 | MET |
| 1 | C | 458 | PHE |
| 1 | C | 459 | PHE |
| 1 | C | 480 | LEU |
| 1 | C | 483 | LEU |
| 1 | C | 497 | LEU |
| 1 | C | 517 | ASN |
| 1 | C | 534 | ILE |
| 1 | C | 542 | LEU |
| 1 | C | 544 | LEU |
| 1 | C | 561 | SER |
| 1 | C | 564 | LEU |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | C | 577 | GLN |
| 1 | C | 588 | GLN |
| 1 | C | 591 | LEU |
| 1 | C | 596 | HIS |
| 1 | C | 624 | THR |
| 1 | C | 656 | SER |
| 1 | C | 658 | ILE |
| 1 | C | 662 | MET |
| 1 | C | 668 | LEU |
| 1 | C | 671 | ILE |
| 1 | C | 674 | LEU |
| 1 | C | 676 | THR |
| 1 | C | 681 | ASP |
| 1 | C | 684 | LEU |
| 1 | C | 685 | ILE |
| 1 | C | 686 | ASP |
| 1 | C | 687 | GLN |
| 1 | C | 690 | LEU |
| 1 | C | 693 | GLU |
| 1 | C | 696 | THR |
| 1 | C | 713 | LEU |
| 1 | C | 719 | ASN |
| 1 | C | 739 | LEU |
| 1 | C | 743 | ILE |
| 1 | C | 745 | ASP |
| 1 | C | 750 | LEU |
| 1 | C | 759 | VAL |
| 1 | C | 760 | ASN |
| 1 | C | 767 | ARG |
| 1 | C | 770 | LYS |
| 1 | C | 779 | TYR |
| 1 | C | 808 | ARG |
| 1 | C | 825 | MET |
| 1 | C | 828 | LEU |
| 1 | C | 847 | LEU |
| 1 | C | 849 | SER |
| 1 | C | 877 | TYR |
| 1 | C | 895 | TRP |
| 1 | C | 899 | PHE |
| 1 | C | 907 | LEU |
| 1 | C | 909 | VAL |
| 1 | C | 910 | ILE |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | C | 917 | THR |
| 1 | C | 921 | LEU |
| 1 | C | 941 | ASN |
| 1 | C | 950 | LYS |
| 1 | C | 954 | ASP |
| 1 | C | 958 | LYS |
| 1 | C | 960 | LEU |
| 1 | C | 965 | LEU |
| 1 | C | 993 | THR |
| 1 | C | 1011 | MET |
| 1 | C | 1017 | LEU |
| 1 | C | 1021 | PHE |

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (89) such sidechains are listed below:

| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | A | 3 | ASN |
| 1 | A | 81 | ASN |
| 1 | A | 106 | GLN |
| 1 | A | 109 | ASN |
| 1 | A | 112 | GLN |
| 1 | A | 123 | GLN |
| 1 | A | 151 | GLN |
| 1 | A | 181 | GLN |
| 1 | A | 210 | GLN |
| 1 | A | 254 | ASN |
| 1 | A | 282 | ASN |
| 1 | A | 284 | GLN |
| 1 | A | 298 | ASN |
| 1 | A | 338 | HIS |
| 1 | A | 360 | GLN |
| 1 | A | 569 | GLN |
| 1 | A | 584 | GLN |
| 1 | A | 622 | GLN |
| 1 | A | 623 | ASN |
| 1 | A | 667 | ASN |
| 1 | A | 687 | GLN |
| 1 | A | 701 | GLN |
| 1 | A | 709 | HIS |
| 1 | A | 719 | ASN |
| 1 | A | 737 | GLN |
| 1 | A | 846 | GLN |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | A | 865 | GLN |
| 1 | A | 923 | ASN |
| 1 | B | 34 | GLN |
| 1 | B | 63 | GLN |
| 1 | B | 67 | GLN |
| 1 | B | 68 | ASN |
| 1 | B | 104 | GLN |
| 1 | B | 108 | GLN |
| 1 | B | 109 | ASN |
| 1 | B | 112 | GLN |
| 1 | B | 125 | GLN |
| 1 | B | 144 | ASN |
| 1 | B | 151 | GLN |
| 1 | B | 161 | ASN |
| 1 | B | 189 | ASN |
| 1 | B | 194 | ASN |
| 1 | B | 213 | GLN |
| 1 | B | 231 | ASN |
| 1 | B | 254 | ASN |
| 1 | B | 437 | GLN |
| 1 | B | 526 | HIS |
| 1 | B | 569 | GLN |
| 1 | B | 613 | ASN |
| 1 | B | 692 | HIS |
| 1 | B | 697 | GLN |
| 1 | B | 700 | ASN |
| 1 | B | 726 | GLN |
| 1 | B | 744 | ASN |
| 1 | B | 760 | ASN |
| 1 | B | 820 | ASN |
| 1 | B | 846 | GLN |
| 1 | B | 865 | GLN |
| 1 | B | 871 | ASN |
| 1 | C | 3 | ASN |
| 1 | C | 58 | GLN |
| 1 | C | 63 | GLN |
| 1 | C | 81 | ASN |
| 1 | C | 104 | GLN |
| 1 | C | 144 | ASN |
| 1 | C | 176 | GLN |
| 1 | C | 211 | ASN |
| 1 | C | 213 | GLN |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | C | 231 | ASN |
| 1 | C | 237 | GLN |
| 1 | C | 274 | ASN |
| 1 | C | 360 | GLN |
| 1 | C | 415 | ASN |
| 1 | C | 577 | GLN |
| 1 | C | 588 | GLN |
| 1 | C | 592 | ASN |
| 1 | C | 605 | ASN |
| 1 | C | 667 | ASN |
| 1 | C | 687 | GLN |
| 1 | C | 697 | GLN |
| 1 | C | 700 | ASN |
| 1 | C | 709 | HIS |
| 1 | C | 719 | ASN |
| 1 | C | 737 | GLN |
| 1 | C | 760 | ASN |
| 1 | C | 820 | ASN |
| 1 | C | 846 | GLN |
| 1 | C | 923 | ASN |
| 1 | C | 941 | ASN |

### 5.3.3 RNA (i)

There are no RNA molecules in this entry.

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

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

## 5.5 Carbohydrates (i)

There are no monosaccharides in this entry.

## 5.6 Ligand geometry (i)

There are no ligands in this entry.

## 5.7 Other polymers (i)

There are no such residues in this entry.

## 5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

# 6 Fit of model and data

## 6.1 Protein, DNA and RNA chains

In the following table, the column labelled '#RSRZ> 2' contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, $95^{th}$ percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled 'Q< 0.9' lists the number of (and percentage) of residues with an average occupancy less than 0.9.

| Mol | Chain | Analysed | <RSRZ> | #RSRZ>2 | | | OWAB(Å$^2$) | Q<0.9 |
|---|---|---|---|---|---|---|---|---|
| 1 | A | 1022/1053 (97%) | 0.18 | 42 (4%) | 37 | 39 | 61, 117, 152, 178 | 0 |
| 1 | B | 1022/1053 (97%) | 0.23 | 46 (4%) | 33 | 36 | 78, 122, 158, 177 | 0 |
| 1 | C | 1022/1053 (97%) | 0.24 | 57 (5%) | 24 | 26 | 59, 113, 162, 190 | 0 |
| All | All | 3066/3159 (97%) | 0.22 | 145 (4%) | 31 | 34 | 59, 118, 158, 190 | 0 |

All (145) RSRZ outliers are listed below:

| Mol | Chain | Res | Type | RSRZ |
|---|---|---|---|---|
| 1 | A | 513 | PHE | 7.7 |
| 1 | C | 497 | LEU | 6.9 |
| 1 | C | 920 | GLY | 6.0 |
| 1 | A | 1036 | LYS | 5.4 |
| 1 | B | 963 | ALA | 5.0 |
| 1 | C | 515 | TRP | 5.0 |
| 1 | A | 265 | VAL | 4.5 |
| 1 | C | 7 | ASP | 4.3 |
| 1 | B | 964 | THR | 4.3 |
| 1 | A | 515 | TRP | 4.2 |
| 1 | C | 425 | LEU | 4.2 |
| 1 | C | 413 | VAL | 4.2 |
| 1 | A | 390 | ILE | 4.2 |
| 1 | B | 435 | MET | 4.1 |
| 1 | A | 497 | LEU | 4.0 |
| 1 | B | 1035 | ARG | 3.9 |
| 1 | C | 957 | GLY | 3.9 |
| 1 | C | 538 | THR | 3.8 |
| 1 | B | 804 | PHE | 3.8 |
| 1 | C | 921 | LEU | 3.7 |
| 1 | C | 541 | TYR | 3.7 |
| 1 | A | 259 | ARG | 3.7 |
| 1 | B | 513 | PHE | 3.7 |

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| Mol | Chain | Res | Type | RSRZ |
|---|---|---|---|---|
| 1 | B | 337 | ILE | 3.6 |
| 1 | A | 32 | VAL | 3.5 |
| 1 | C | 416 | VAL | 3.5 |
| 1 | C | 496 | MET | 3.5 |
| 1 | C | 539 | GLY | 3.5 |
| 1 | C | 493 | CYS | 3.4 |
| 1 | C | 498 | LYS | 3.4 |
| 1 | B | 532 | GLY | 3.4 |
| 1 | C | 537 | SER | 3.3 |
| 1 | A | 230 | LEU | 3.3 |
| 1 | A | 198 | LEU | 3.3 |
| 1 | B | 966 | ASP | 3.3 |
| 1 | B | 7 | ASP | 3.2 |
| 1 | B | 634 | TRP | 3.2 |
| 1 | B | 791 | VAL | 3.2 |
| 1 | B | 801 | PHE | 3.1 |
| 1 | C | 671 | ILE | 3.1 |
| 1 | A | 871 | ASN | 3.1 |
| 1 | B | 779 | TYR | 3.1 |
| 1 | B | 635 | ALA | 3.1 |
| 1 | C | 676 | THR | 3.1 |
| 1 | C | 34 | GLN | 3.1 |
| 1 | A | 712 | MET | 3.1 |
| 1 | B | 1033 | PHE | 3.0 |
| 1 | C | 1033 | PHE | 3.0 |
| 1 | C | 536 | ARG | 2.9 |
| 1 | C | 574 | THR | 2.9 |
| 1 | C | 495 | THR | 2.9 |
| 1 | B | 535 | LEU | 2.9 |
| 1 | C | 424 | GLY | 2.9 |
| 1 | B | 832 | ALA | 2.8 |
| 1 | C | 540 | ARG | 2.8 |
| 1 | C | 970 | MET | 2.8 |
| 1 | B | 362 | PHE | 2.8 |
| 1 | A | 30 | LEU | 2.8 |
| 1 | C | 606 | VAL | 2.8 |
| 1 | A | 420 | MET | 2.8 |
| 1 | A | 145 | THR | 2.8 |
| 1 | B | 965 | LEU | 2.8 |
| 1 | C | 870 | GLY | 2.8 |
| 1 | A | 419 | VAL | 2.7 |
| 1 | B | 902 | MET | 2.7 |

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| Mol | Chain | Res | Type | RSRZ |
|---|---|---|---|---|
| 1 | B | 437 | GLN | 2.7 |
| 1 | A | 772 | TYR | 2.7 |
| 1 | C | 420 | MET | 2.7 |
| 1 | C | 418 | ARG | 2.7 |
| 1 | C | 832 | ALA | 2.7 |
| 1 | C | 560 | PRO | 2.7 |
| 1 | A | 31 | PRO | 2.6 |
| 1 | C | 951 | ASP | 2.6 |
| 1 | A | 287 | SER | 2.6 |
| 1 | A | 389 | SER | 2.6 |
| 1 | C | 713 | LEU | 2.6 |
| 1 | A | 791 | VAL | 2.5 |
| 1 | B | 368 | PRO | 2.5 |
| 1 | B | 948 | PHE | 2.5 |
| 1 | A | 952 | LEU | 2.5 |
| 1 | A | 246 | PHE | 2.5 |
| 1 | A | 572 | PHE | 2.5 |
| 1 | B | 996 | GLY | 2.5 |
| 1 | A | 251 | LEU | 2.4 |
| 1 | C | 532 | GLY | 2.4 |
| 1 | A | 1033 | PHE | 2.4 |
| 1 | B | 675 | GLY | 2.4 |
| 1 | C | 900 | SER | 2.4 |
| 1 | C | 1036 | LYS | 2.4 |
| 1 | A | 154 | ILE | 2.4 |
| 1 | C | 514 | GLY | 2.4 |
| 1 | A | 260 | VAL | 2.4 |
| 1 | C | 741 | VAL | 2.4 |
| 1 | C | 262 | LEU | 2.3 |
| 1 | C | 6 | ILE | 2.3 |
| 1 | B | 655 | PHE | 2.3 |
| 1 | C | 399 | VAL | 2.3 |
| 1 | B | 800 | PRO | 2.3 |
| 1 | A | 713 | LEU | 2.3 |
| 1 | B | 198 | LEU | 2.3 |
| 1 | C | 362 | PHE | 2.3 |
| 1 | A | 957 | GLY | 2.3 |
| 1 | A | 229 | GLN | 2.3 |
| 1 | A | 250 | LEU | 2.3 |
| 1 | A | 598 | TYR | 2.3 |
| 1 | B | 541 | TYR | 2.3 |
| 1 | B | 727 | PHE | 2.3 |

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| Mol | Chain | Res | Type | RSRZ |
|---|---|---|---|---|
| 1 | C | 1034 | SER | 2.3 |
| 1 | A | 969 | ARG | 2.2 |
| 1 | B | 895 | TRP | 2.2 |
| 1 | B | 797 | GLN | 2.2 |
| 1 | B | 636 | ASP | 2.2 |
| 1 | C | 492 | LEU | 2.2 |
| 1 | B | 1026 | PHE | 2.2 |
| 1 | B | 413 | VAL | 2.2 |
| 1 | A | 418 | ARG | 2.2 |
| 1 | B | 967 | ALA | 2.2 |
| 1 | C | 981 | ALA | 2.2 |
| 1 | C | 712 | MET | 2.2 |
| 1 | A | 137 | LEU | 2.1 |
| 1 | C | 994 | GLY | 2.1 |
| 1 | A | 196 | PHE | 2.1 |
| 1 | C | 1026 | PHE | 2.1 |
| 1 | C | 674 | LEU | 2.1 |
| 1 | B | 790 | TYR | 2.1 |
| 1 | B | 595 | THR | 2.1 |
| 1 | A | 262 | LEU | 2.1 |
| 1 | A | 518 | ARG | 2.1 |
| 1 | B | 778 | LYS | 2.1 |
| 1 | B | 422 | GLU | 2.1 |
| 1 | C | 919 | ARG | 2.1 |
| 1 | B | 361 | ASN | 2.1 |
| 1 | B | 977 | MET | 2.1 |
| 1 | A | 270 | LEU | 2.1 |
| 1 | B | 528 | THR | 2.1 |
| 1 | C | 406 | VAL | 2.1 |
| 1 | C | 980 | LEU | 2.1 |
| 1 | B | 563 | PHE | 2.1 |
| 1 | A | 29 | LYS | 2.0 |
| 1 | A | 895 | TRP | 2.0 |
| 1 | C | 641 | GLU | 2.0 |
| 1 | C | 419 | VAL | 2.0 |
| 1 | C | 251 | LEU | 2.0 |
| 1 | C | 265 | VAL | 2.0 |
| 1 | B | 128 | SER | 2.0 |

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

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

## 6.3 Carbohydrates (i)

There are no monosaccharides in this entry.

## 6.4 Ligands (i)

There are no ligands in this entry.

## 6.5 Other polymers (i)

There are no such residues in this entry.