



Full wwPDB X-ray Structure Validation Report ⓘ

May 24, 2020 – 05:18 pm BST

PDB ID : 2PMZ
Title : Archaeal RNA polymerase from Sulfolobus solfataricus
Authors : Murakami, K.S.
Deposited on : 2007-04-23
Resolution : 3.40 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 following versions of software and data (see [references ⓘ](#)) were used in the production of this report:

MolProbity : 4.02b-467
Mogul : 1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix) : 1.13
EDS : 2.11
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) : 2.11

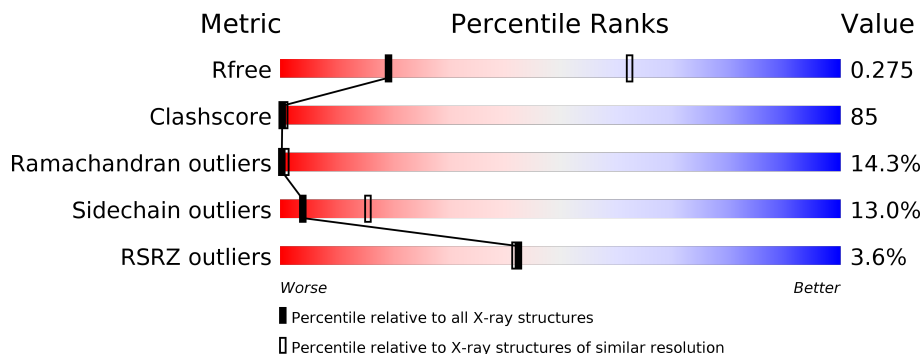
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.40 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.



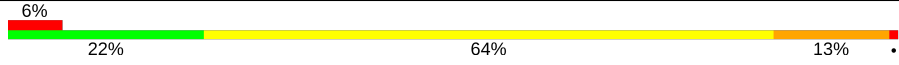
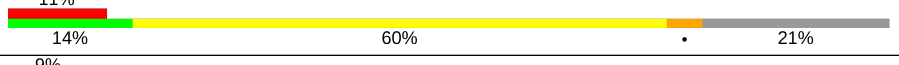
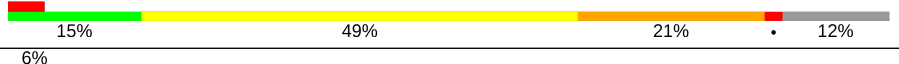

| Metric | Whole archive (#Entries) | Similar resolution (#Entries, resolution range(Å)) |
|-----------------------|-----------------------------|---|
| R_{free} | 130704 | 1026 (3.48-3.32) |
| Clashscore | 141614 | 1055 (3.48-3.32) |
| Ramachandran outliers | 138981 | 1038 (3.48-3.32) |
| Sidechain outliers | 138945 | 1038 (3.48-3.32) |
| RSRZ outliers | 127900 | 2173 (3.50-3.30) |

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 on 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 $\leq 5\%$. 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 | 880 | |
| 1 | Q | 880 | |
| 2 | C | 392 | |
| 2 | G | 392 | |
| 3 | B | 1124 | |
| 3 | R | 1124 | |

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| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|--|
| 4 | D | 265 |  |
| 4 | S | 265 |  |
| 5 | E | 180 |  |
| 5 | T | 180 |  |
| 6 | F | 113 |  |
| 6 | U | 113 |  |
| 7 | H | 84 |  |
| 7 | V | 84 |  |
| 8 | K | 95 |  |
| 8 | W | 95 |  |
| 9 | L | 92 |  |
| 9 | X | 92 |  |
| 10 | N | 66 |  |
| 10 | Y | 66 |  |
| 11 | P | 48 |  |
| 11 | Z | 48 |  |

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

| Mol | Type | Chain | Res | Chirality | Geometry | Clashes | Electron density |
|-----|------|-------|------|-----------|----------|---------|------------------|
| 14 | F3S | D | 1001 | - | - | X | - |
| 14 | F3S | S | 1001 | - | - | X | - |

2 Entry composition [i](#)

There are 14 unique types of molecules in this entry. The entry contains 48122 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 DNA-directed RNA polymerase subunit A.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|---------------|-----------|-----------|-----------|---------|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 1 | A | 776 | Total 6173 | C 3936 | N 1081 | O 1135 | S 21 | 0 | 0 | 0 |
| 1 | Q | 776 | Total 6173 | C 3936 | N 1081 | O 1135 | S 21 | 0 | 0 | 0 |

- Molecule 2 is a protein called DNA-directed RNA polymerase subunit A".

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|---------------|-----------|----------|----------|--------|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 2 | C | 279 | Total 2169 | C 1376 | N 375 | O 412 | S 6 | 0 | 0 | 0 |
| 2 | G | 279 | Total 2169 | C 1376 | N 375 | O 412 | S 6 | 0 | 0 | 0 |

- Molecule 3 is a protein called DNA-directed RNA polymerase subunit B.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|---------------|-----------|-----------|-----------|---------|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 3 | B | 1090 | Total 8645 | C 5483 | N 1529 | O 1602 | S 31 | 0 | 0 | 0 |
| 3 | R | 1090 | Total 8645 | C 5483 | N 1529 | O 1602 | S 31 | 0 | 0 | 0 |

- Molecule 4 is a protein called DNA-directed RNA polymerase subunit D.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|---------------|-----------|----------|----------|---------|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 4 | D | 264 | Total 2114 | C 1355 | N 342 | O 403 | S 14 | 0 | 0 | 0 |
| 4 | S | 264 | Total 2114 | C 1355 | N 342 | O 403 | S 14 | 0 | 0 | 0 |

- Molecule 5 is a protein called DNA-directed RNA polymerase subunit E.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 5 | E | 176 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1402 | 903 | 236 | 259 | 4 | | | |
| 5 | T | 176 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1402 | 903 | 236 | 259 | 4 | | | |

- Molecule 6 is a protein called DNA-directed RNA polymerase subunit F.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 6 | F | 89 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 694 | 433 | 115 | 142 | 4 | | | |
| 6 | U | 89 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 694 | 433 | 115 | 142 | 4 | | | |

- Molecule 7 is a protein called DNA-directed RNA polymerase subunit H.

| Mol | Chain | Residues | Atoms | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---------|---------|-------|
| 7 | H | 74 | Total | C | N | O | 0 | 0 | 0 |
| | | | 611 | 397 | 109 | 105 | | | |
| 7 | V | 74 | Total | C | N | O | 0 | 0 | 0 |
| | | | 611 | 397 | 109 | 105 | | | |

- Molecule 8 is a protein called DNA-directed RNA polymerase subunit K.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 8 | K | 82 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 658 | 420 | 121 | 116 | 1 | | | |
| 8 | W | 82 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 658 | 420 | 121 | 116 | 1 | | | |

- Molecule 9 is a protein called DNA-directed RNA polymerase subunit L.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 9 | L | 92 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 723 | 459 | 121 | 141 | 2 | | | |
| 9 | X | 92 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 723 | 459 | 121 | 141 | 2 | | | |

- Molecule 10 is a protein called DNA-directed RNA polymerase subunit N.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---|---------|---------|-------|
| 10 | N | 64 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 514 | 326 | 94 | 88 | 6 | | | |

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| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---|---------|---------|-------|
| 10 | Y | 64 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 514 | 326 | 94 | 88 | 6 | | | |

- Molecule 11 is a protein called DNA-directed RNA polymerase subunit P.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---|---------|---------|-------|
| 11 | P | 43 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 346 | 230 | 58 | 53 | 5 | | | |
| 11 | Z | 43 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 346 | 230 | 58 | 53 | 5 | | | |

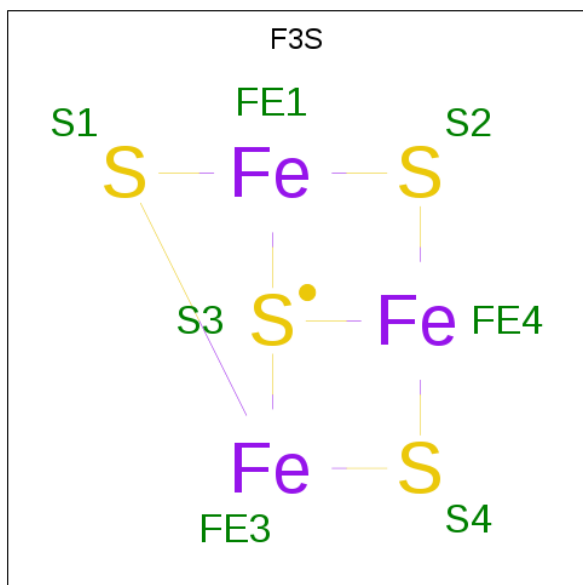
- Molecule 12 is ZINC ION (three-letter code: ZN) (formula: Zn).

| Mol | Chain | Residues | Atoms | | ZeroOcc | AltConf |
|-----|-------|----------|-------|----|---------|---------|
| 12 | P | 1 | Total | Zn | 0 | 0 |
| | | | 1 | 1 | | |
| 12 | Q | 1 | Total | Zn | 0 | 0 |
| | | | 1 | 1 | | |
| 12 | B | 1 | Total | Zn | 0 | 0 |
| | | | 1 | 1 | | |
| 12 | Z | 1 | Total | Zn | 0 | 0 |
| | | | 1 | 1 | | |
| 12 | A | 1 | Total | Zn | 0 | 0 |
| | | | 1 | 1 | | |
| 12 | N | 1 | Total | Zn | 0 | 0 |
| | | | 1 | 1 | | |
| 12 | R | 1 | Total | Zn | 0 | 0 |
| | | | 1 | 1 | | |
| 12 | Y | 1 | Total | Zn | 0 | 0 |
| | | | 1 | 1 | | |

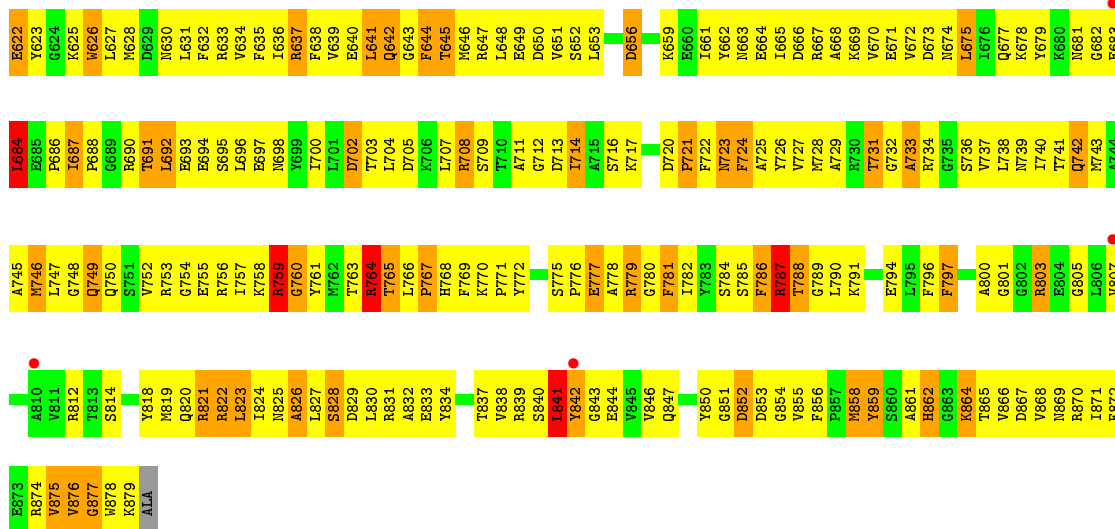
- Molecule 13 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

| Mol | Chain | Residues | Atoms | | ZeroOcc | AltConf |
|-----|-------|----------|-------|----|---------|---------|
| 13 | Q | 1 | Total | Mg | 0 | 0 |
| | | | 1 | 1 | | |
| 13 | A | 1 | Total | Mg | 0 | 0 |
| | | | 1 | 1 | | |

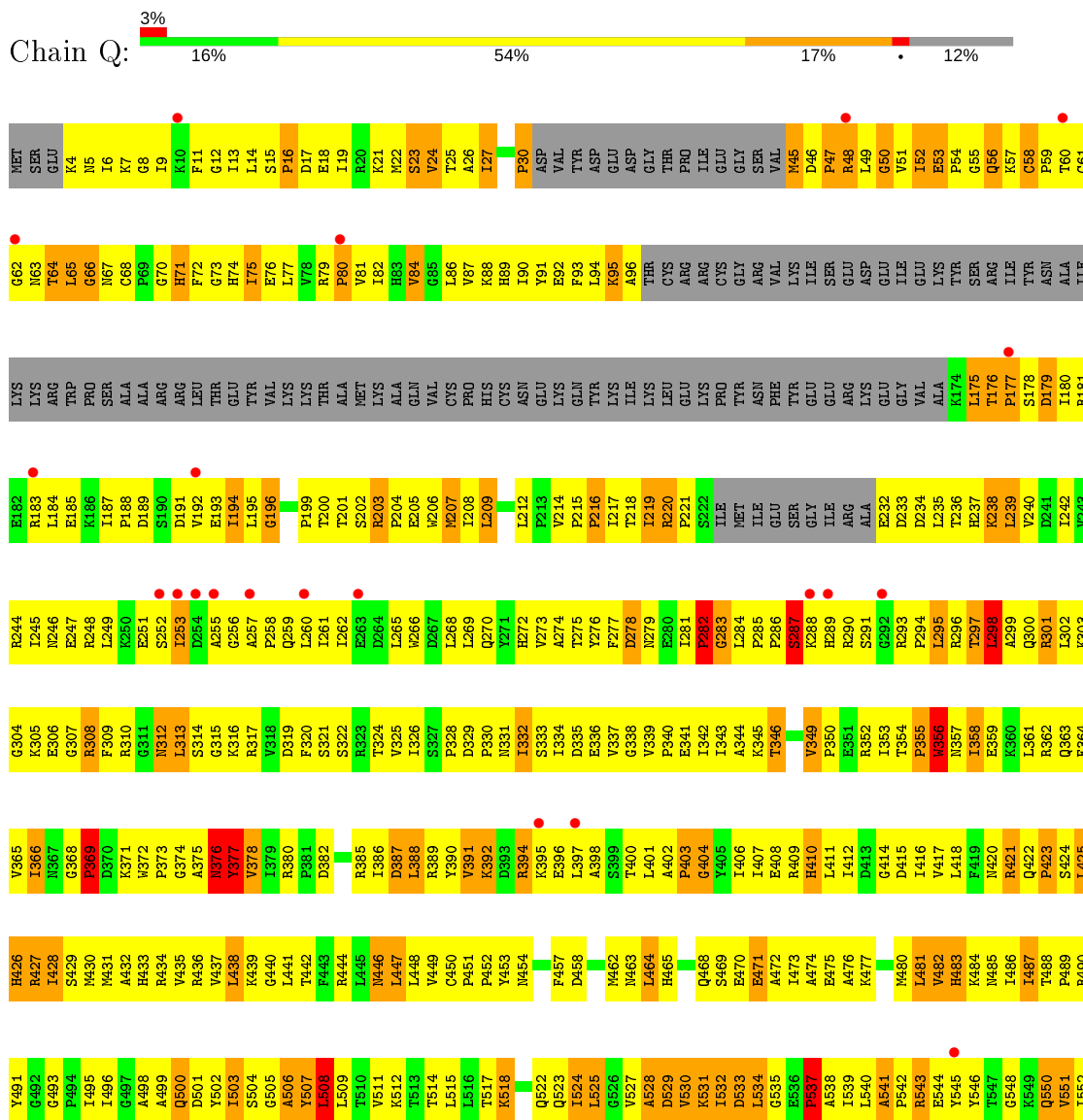
- Molecule 14 is FE3-S4 CLUSTER (three-letter code: F3S) (formula: Fe₃S₄).

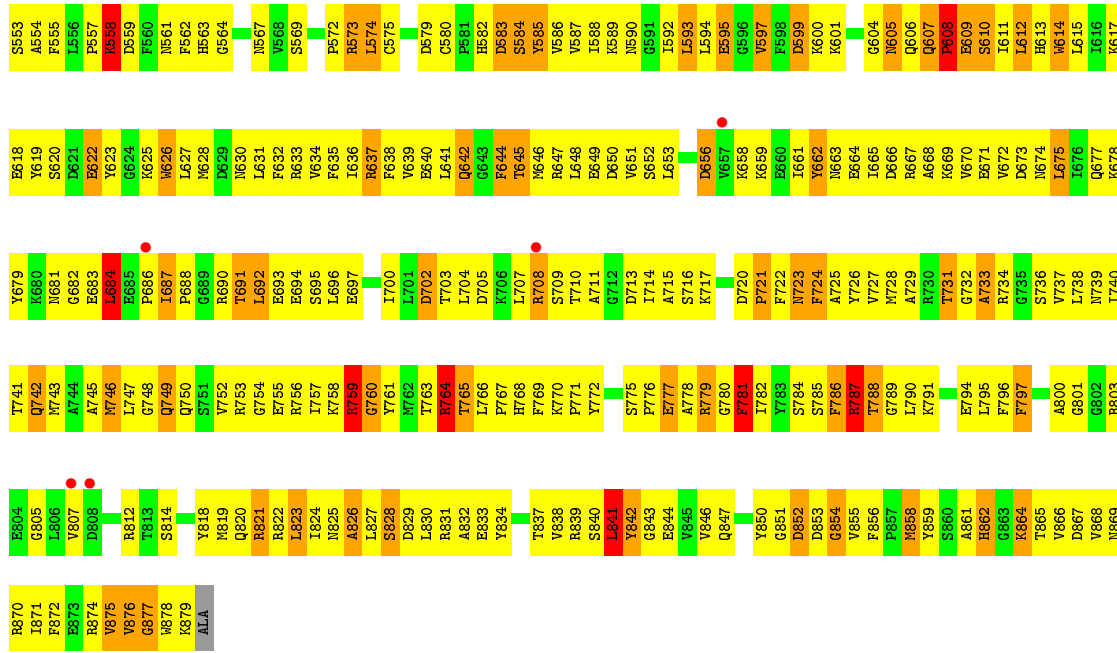


| Mol | Chain | Residues | Atoms | | | ZeroOcc | AltConf |
|-----|-------|----------|-------|----|---|---------|---------|
| 14 | D | 1 | Total | Fe | S | 0 | 0 |
| | | | 7 | 3 | 4 | | |
| 14 | S | 1 | Total | Fe | S | 0 | 0 |
| | | | 7 | 3 | 4 | | |

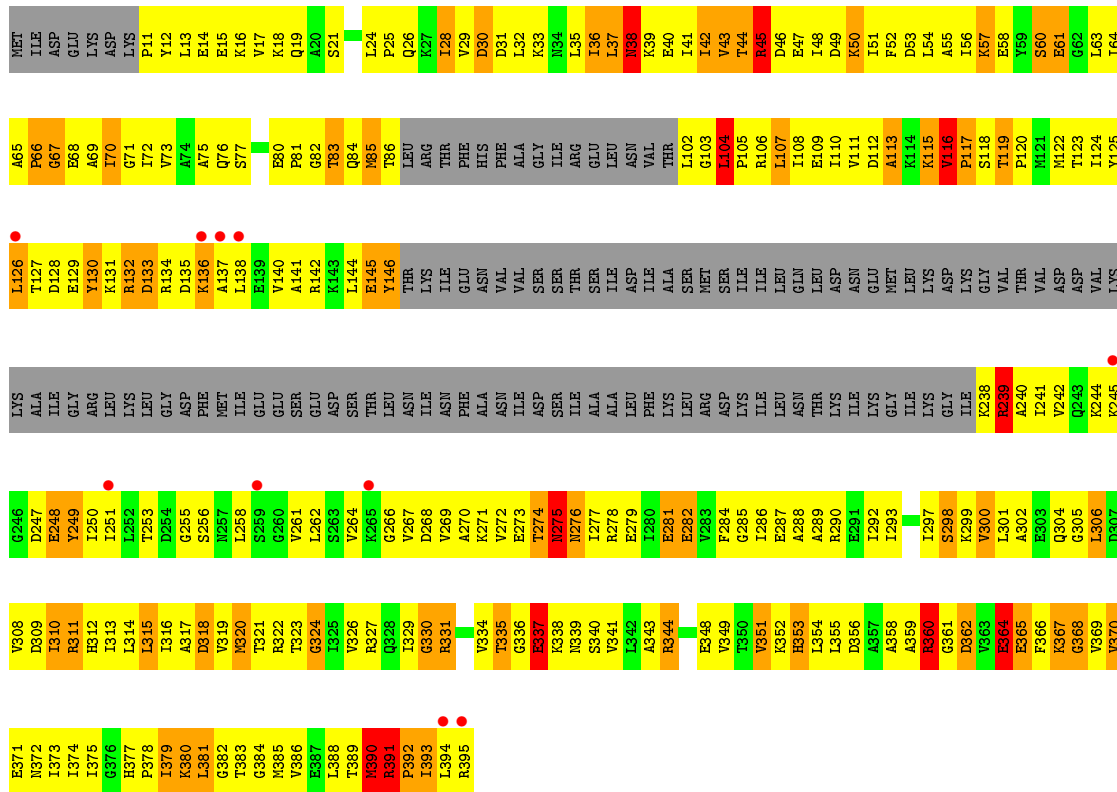


• Molecule 1: DNA-directed RNA polymerase subunit A



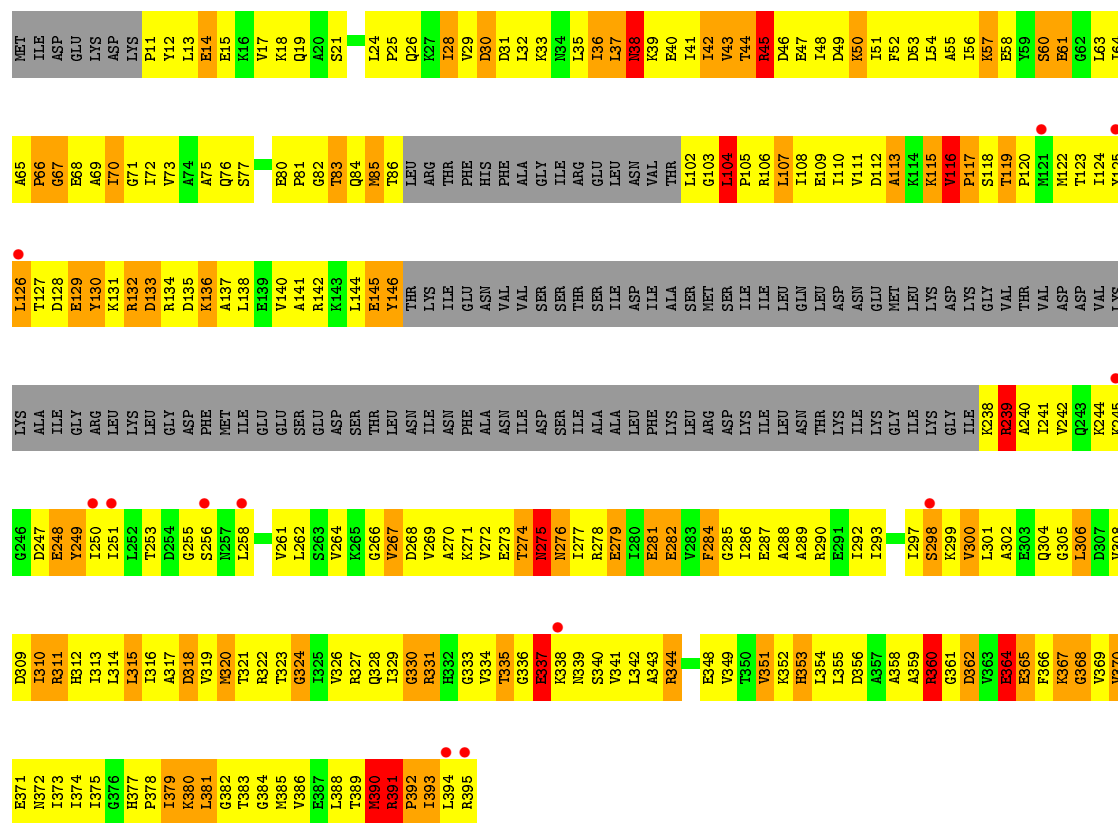


• Molecule 2: DNA-directed RNA polymerase subunit A"

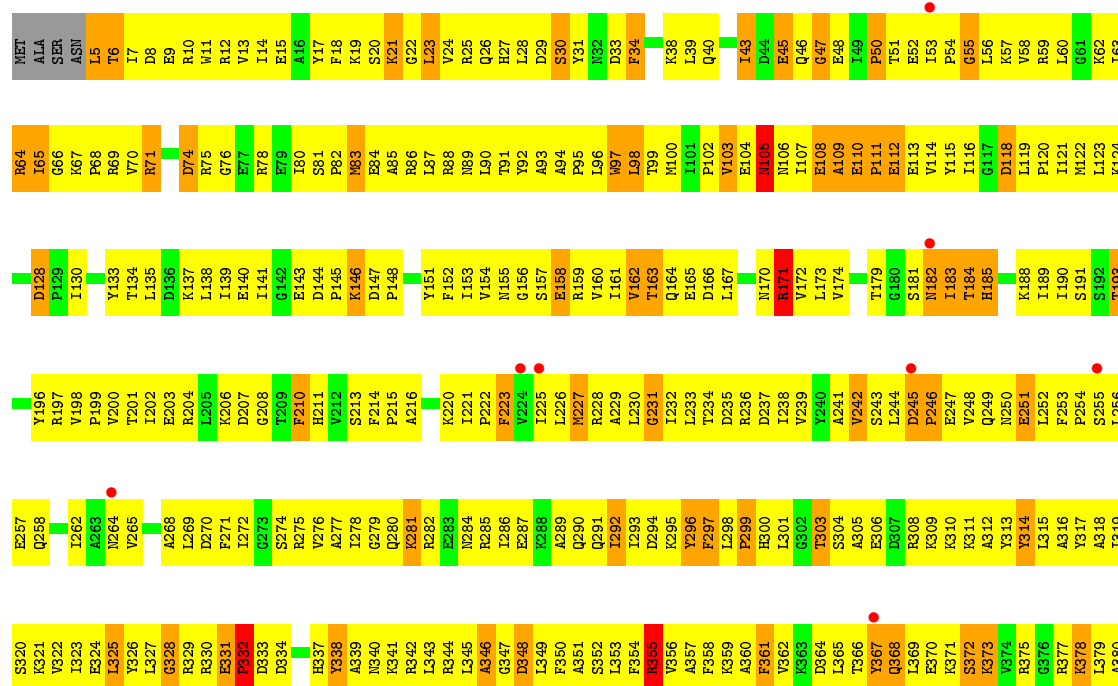


• Molecule 2: DNA-directed RNA polymerase subunit A"



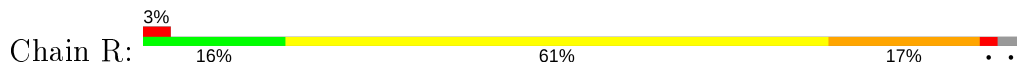


• Molecule 3: DNA-directed RNA polymerase subunit B



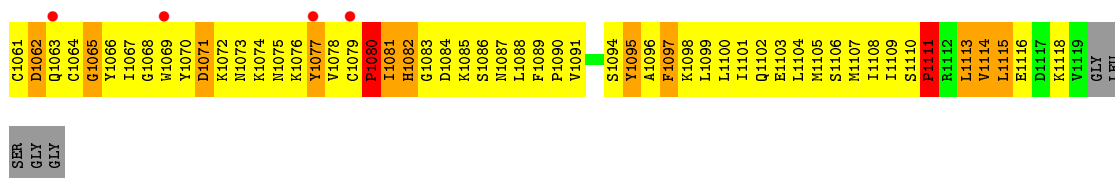
| | | | | | | | | | | | |
|------|------|------|------|------|------|------|------|------|-------|-------|-------|
| L381 | R443 | ARG | E565 | A627 | A692 | T753 | S815 | D876 | D941 | R1004 | Y1066 |
| K362 | D444 | VAL | V666 | L628 | H693 | F754 | P816 | K877 | A942 | G1004 | I1067 |
| A383 | L445 | THR | H567 | L629 | H694 | F755 | P817 | F878 | T943 | G1007 | G1068 |
| L384 | R446 | GLU | V668 | P630 | L695 | R756 | R818 | A879 | P944 | P1008 | W1069 |
| V385 | G447 | GLY | N569 | L633 | H696 | L757 | PHE | S880 | F945 | V1009 | I65 |
| R386 | T448 | GLY | C570 | L634 | H697 | V758 | LEU | R881 | Y946 | Q1010 | D1071 |
| E387 | Q449 | GLU | D571 | H635 | H698 | S759 | GLN | H882 | K947 | I1011 | K1072 |
| D388 | W450 | ASP | S572 | P635 | Q899 | E762 | GLU | G883 | T948 | L1012 | N1073 |
| I389 | W451 | GLN | G573 | T638 | R700 | R763 | PHE | Q884 | F949 | T1013 | K1074 |
| V390 | R452 | ASN | R574 | H639 | P701 | K764 | LVS | K885 | I950 | R1014 | N1075 |
| T391 | M453 | GLU | V575 | H639 | L702 | L702 | GLU | K886 | E951 | Q1015 | K1076 |
| E392 | M454 | TVR | R576 | L640 | V703 | V765 | LEU | V887 | Q952 | P1016 | Y1077 |
| R393 | P455 | L515 | R577 | E641 | Q704 | P766 | SER | I888 | L953 | T1017 | V1078 |
| I394 | F456 | K516 | P578 | L642 | T705 | G767 | PRO | G889 | Q954 | E1018 | C1079 |
| R395 | E457 | H517 | P579 | H643 | R706 | G768 | GLU | M890 | N955 | A1021 | P1080 |
| H396 | T458 | S518 | L580 | S644 | A707 | G769 | GLN | L891 | E956 | I1081 | I1081 |
| A397 | P459 | K519 | V581 | P645 | L708 | E770 | A831 | I892 | I957 | R1022 | H1082 |
| L398 | E460 | V520 | V582 | A646 | D709 | D771 | K832 | P893 | L958 | G1023 | G1083 |
| A399 | G461 | I521 | V583 | L647 | I710 | K772 | R833 | Q894 | R959 | G1024 | D1084 |
| G400 | P462 | L522 | H584 | L650 | I711 | I773 | D834 | V895 | Y962 | G1025 | K1085 |
| G401 | M463 | R525 | H585 | L651 | G712 | M775 | T835 | D896 | T968 | L1026 | S1086 |
| N402 | S464 | L526 | N586 | A652 | Y713 | A778 | S836 | M897 | L963 | R1027 | G22 |
| W403 | G465 | L527 | P687 | A652 | T714 | M775 | I837 | P898 | P964 | F1028 | N1087 |
| V404 | E466 | I527 | L588 | S653 | N715 | A778 | V838 | Y899 | D965 | G1029 | L1088 |
| G405 | V467 | G528 | V589 | L654 | R716 | G779 | T839 | T900 | A966 | E1030 | F1089 |
| G406 | K468 | Y529 | T590 | L655 | F717 | V780 | R840 | H901 | T967 | M1031 | P1090 |
| R407 | M469 | H530 | L591 | L656 | A718 | R781 | E843 | K902 | E968 | E1032 | V1091 |
| V410 | L470 | Q531 | E592 | L657 | G719 | R782 | M844 | G903 | R969 | R1033 | S1094 |
| S411 | L471 | D532 | D593 | P658 | N720 | Y783 | V904 | V904 | T970 | R1034 | Y1095 |
| Q412 | A472 | O533 | L594 | E593 | N721 | K784 | G845 | V905 | Y971 | G1035 | A1096 |
| L413 | M473 | G534 | E595 | H660 | A722 | K785 | I846 | P906 | D972 | L1036 | F1097 |
| L414 | A474 | E535 | V596 | H661 | I723 | K786 | V847 | D907 | 6973 | L1037 | K1098 |
| L414 | Q475 | L536 | L597 | Q662 | L724 | E787 | D848 | I908 | R974 | G1038 | L1099 |
| D415 | L476 | A537 | E598 | S663 | A725 | Y788 | L849 | I909 | T975 | F1039 | F1099 |
| R416 | V477 | N538 | S599 | P664 | V726 | Y789 | V850 | N911 | Q977 | G1040 | Q1101 |
| T417 | V478 | K539 | G600 | H665 | N727 | R790 | L851 | P912 | I977 | T1041 | E1102 |
| N418 | G479 | I540 | A601 | L666 | S728 | L791 | I852 | H913 | R978 | M1043 | L1104 |
| V419 | I480 | R541 | L602 | H667 | F729 | L792 | T853 | A914 | F980 | L1044 | M1105 |
| L420 | M481 | E542 | L603 | H668 | I730 | E793 | E884 | G915 | S981 | L1045 | S1106 |
| M422 | E482 | R543 | F604 | H669 | G731 | D794 | T855 | L915 | R982 | K1046 | M1107 |
| H425 | I484 | R544 | D605 | S670 | N733 | G796 | A856 | P916 | R983 | D1047 | I1108 |
| L426 | V485 | R545 | D606 | A671 | M734 | V797 | G858 | R918 | Y984 | R1048 | I1109 |
| L427 | E486 | R545 | L607 | H672 | E735 | V798 | H859 | M919 | F985 | L1049 | S1110 |
| R428 | K487 | E548 | V608 | L676 | D736 | S799 | H960 | T920 | G986 | L1050 | P1111 |
| V429 | T488 | S550 | R612 | L677 | S737 | P800 | L861 | L921 | V987 | D1051 | L1112 |
| I430 | L489 | D651 | L613 | G678 | I738 | E801 | V862 | G922 | V988 | M1052 | L1113 |
| S431 | Y490 | E552 | E614 | H679 | I739 | V802 | K863 | Q923 | Y989 | S1053 | L1114 |
| S432 | E491 | V553 | V615 | V680 | M740 | E803 | V864 | I924 | Y990 | D1054 | L1115 |
| L433 | M492 | N554 | L616 | A681 | N741 | V804 | R865 | M925 | Q991 | M1055 | P1111 |
| A434 | G493 | V555 | D617 | L682 | R742 | K805 | V866 | E926 | K992 | T1056 | T51 |
| R435 | V494 | G556 | A618 | H683 | S743 | G806 | R867 | G930 | L993 | M1057 | V1119 |
| G436 | V495 | H557 | E519 | V684 | S744 | G807 | D868 | G930 | H994 | I1058 | GLY |
| Q437 | P496 | L558 | E620 | Q685 | V745 | D808 | L869 | K931 | H995 | Y1059 | LEU |
| P438 | V497 | V559 | E621 | L686 | E746 | V809 | R870 | Y932 | N996 | V1060 | SER |
| M439 | E498 | T560 | H622 | H687 | R747 | I810 | I871 | A833 | K1000 | C1061 | GLY |
| V500 | E499 | D601 | H623 | T688 | E748 | I811 | P872 | A834 | L1001 | D1062 | GLY |
| I501 | V500 | P562 | A624 | H689 | M749 | G812 | T873 | L935 | L1002 | Q1063 | H1064 |
| E441 | F501 | I563 | H625 | T690 | Y750 | G813 | R874 | V940 | A1003 | G1065 | L60 |
| A442 | ARG | M564 | V626 | H691 | V814 | V814 | G875 | | | | |

• Molecule 3: DNA-directed RNA polymerase subunit B

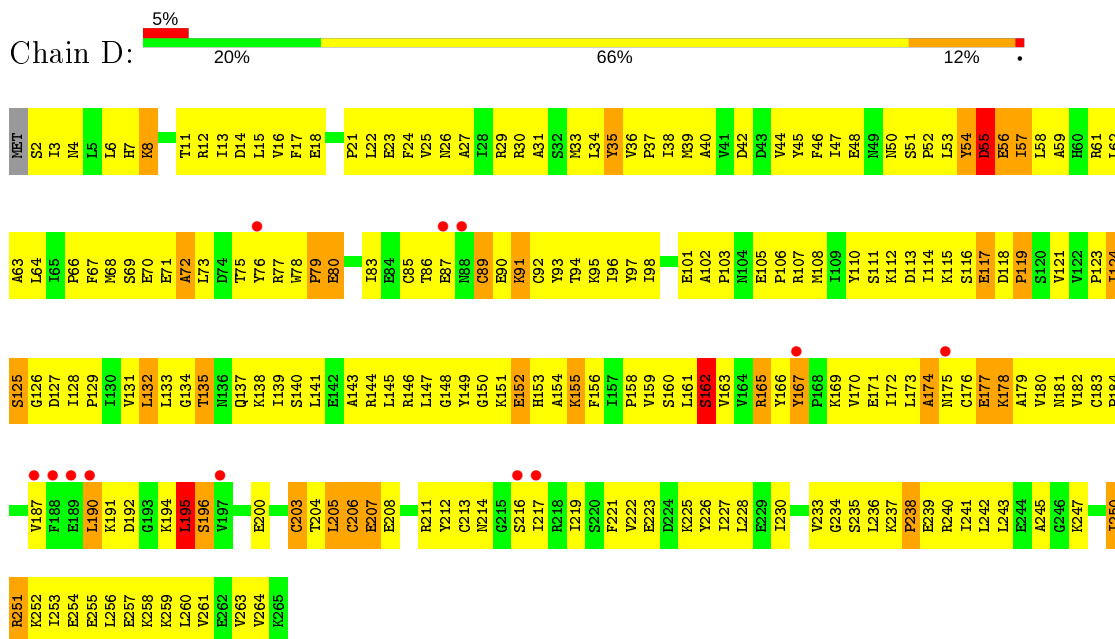


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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| WET | E15 | E16 | E17 | E18 | E19 | E20 | E21 | E22 | E23 | E24 | E25 | E26 | E27 | E28 | E29 | E30 | E31 | E32 | E33 | E34 | E35 | E36 | E37 | E38 | E39 | E40 | E41 | E42 | E43 | E44 | E45 | E46 | E47 | E48 | E49 | E50 | E51 | E52 | E53 | E54 | E55 | E56 | E57 | E58 | E59 | E60 | E61 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ALA | H16 | H17 | H18 | H19 | H20 | H21 | H22 | H23 | H24 | H25 | H26 | H27 | H28 | H29 | H30 | H31 | H32 | H33 | H34 | H35 | H36 | H37 | H38 | H39 | H40 | H41 | H42 | H43 | H44 | H45 | H46 | H47 | H48 | H49 | H50 | H51 | H52 | H53 | H54 | H55 | H56 | H57 | H58 | H59 | H60 | H61 | H62 | H63 | H64 | H65 | H66 | H67 | H68 | H69 | H70 | H71 | H72 | H73 | H74 | H75 | H76 | H77 | H78 | H79 | H80 | H81 | H82 | H83 | H84 | H85 | H86 | H87 | H88 | H89 | H90 | H91 | H92 | H93 | H94 | H95 | H96 | H97 | H98 | H99 | H100 | H101 | H102 | H103 | H104 | H105 | H106 | H107 | H108 | H109 | H110 | H111 | H112 | H113 | H114 | H115 | H116 | H117 | H118 | H119 | H120 | H121 | H122 |

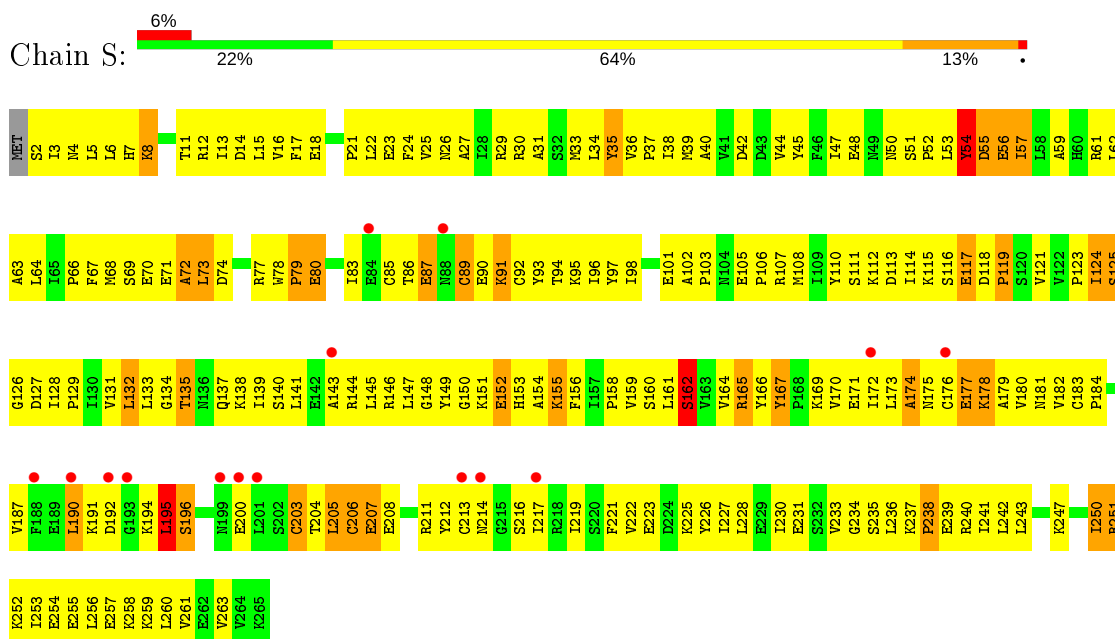
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
| L1001 | L1002 | A1003 | R1004 | A1005 | R1006 | G1007 | F1008 | Q1009 | Q1010 | T1011 | L1012 | T1013 | L1014 | Q1015 | Q1016 | L1017 | Q1018 | E1019 | R1020 | A1021 | I1022 | E1023 | G1024 | G1025 | L1026 | I1027 | F1028 | G1029 | E1030 | L1031 | E1032 | R1033 | C1034 | C1035 | L1036 | L1037 | G1038 | F1039 | G1040 | K1041 | A1042 | M1043 | L1044 | L1045 | K1046 | D1047 | G1048 | Q1049 | L1050 | L1051 | R1052 | D1053 | D1054 | L1055 | M1056 | M1057 | L1058 | Y1059 | L1060 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S936 | I874 | K813 | R751 | R691 | V626 | I563 | I501 | E441 | L379 | Y317 | P254 | S255 | S191 | K124 | S125 | D128 | P139 | I130 | Y133 | T134 | L135 | K136 | K137 | L138 | L139 | E140 | I141 | E142 | E143 | D144 | K145 | K146 | P147 | P148 | Y151 | F152 | I153 | V154 | M155 | G156 | S157 | E158 | R159 | V160 | I161 | V162 | T163 | Q164 | E165 | D166 | L167 | M170 | R171 | L172 | L173 | V174 | T179 | G180 | S181 | M182 | I183 | T184 | H185 | K188 | I189 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| H813 | H814 | S815 | R816 | R817 | R818 | R819 | R820 | R821 | R822 | R823 | R824 | R825 | R826 | R827 | R828 | R829 | R830 | R831 | R832 | R833 | R834 | R835 | R836 | R837 | R838 | R839 | R840 | R841 | R842 | R843 | R844 | R845 | R846 | R847 | R848 | R849 | R850 | R851 | R852 | R853 | R854 | R855 | R856 | R857 | R858 | R859 | R860 | R861 | R862 | R863 | R864 | R865 | R866 | R867 | R868 | R869 | R870 | R871 | R872 | R873 | R874 | R875 | R876 | R877 | R878 | R879 | R880 | R881 | R882 | R883 | R884 | R885 | R886 | R887 | R888 | R889 | R890 | R891 | R892 | R893 | R894 | R895 | R896 | R897 | R898 | R899 | R900 | R901 | R902 | R903 | R904 | R905 | R906 | R907 | R908 | R909 | R910 | R911 | R912 | R913 | R914 | R915 | R916 | R917 | R918 | R919 | R920 | R921 | R922 | R923 | R924 | R925 | R926 | R927 | R928 | R929 | R930 | R931 | R932 | R933 | R934 | R935 | R936 | R937 | R938 | R939 | R940 | R941 | R942 | R943 | R944 | R945 | R946 | R947 | R948 | R949 | R950 | R951 | R952 | R953 | R954 | R955 | R956 | R957 | R958 | R959 | R960 | R961 | R962 | R963 | R964 | R965 | R966 | R967 | R968 | R969 | R970 | R971 | R972 | R973 | R974 | R975 | R976 | R977 | R978 | R979 | R980 | R981 | R982 | R983 | R984 | R985 | R986 | R987 | R988 | R989 | R990 | R991 | R992 | R993 | R994 | R995 | R996 | R997 | R998 | R999 | K1000 |
| L1001 | L1002 | A1003 | R1004 | A1005 | R1006 | G1007 | F1008 | Q1009 | Q1010 | T1011 | L1012 | T1013 | L1014 | Q1015 | Q1016 | L1017 | Q1018 | E1019 | R1020 | A1021 | I1022 | E1023 | G1024 | G1025 | L1026 | I1027 | F1028 | G1029 | E1030 | L1031 | E1032 | R1033 | C1034 | C1035 | L1036 | L1037 | G1038 | F1039 | G1040 | K1041 | A1042 | M1043 | L1044 | L1045 | K1046 | D1047 | G1048 | Q1049 | L1050 | L1051 | R1052 | D1053 | D1054 | L1055 | M1056 | M1057 | L1058 | Y1059 | L1060 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |



• Molecule 4: DNA-directed RNA polymerase subunit D

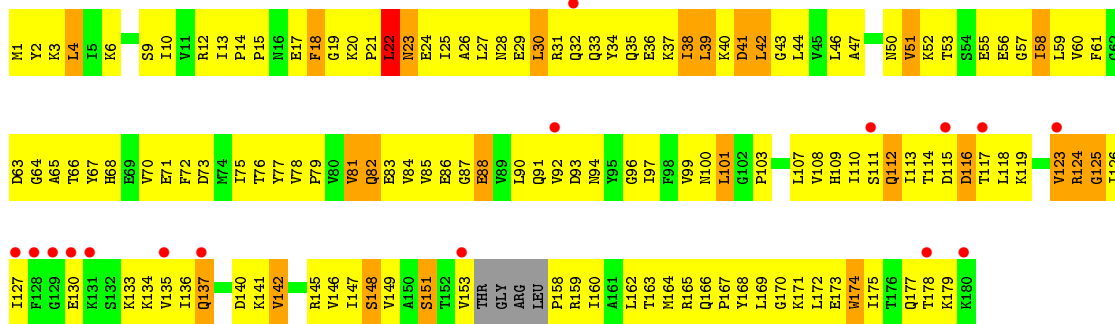


• Molecule 4: DNA-directed RNA polymerase subunit D

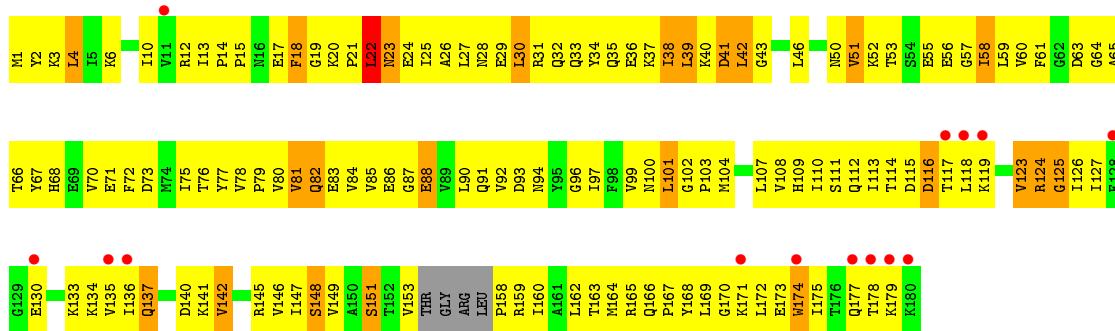


• Molecule 5: DNA-directed RNA polymerase subunit E

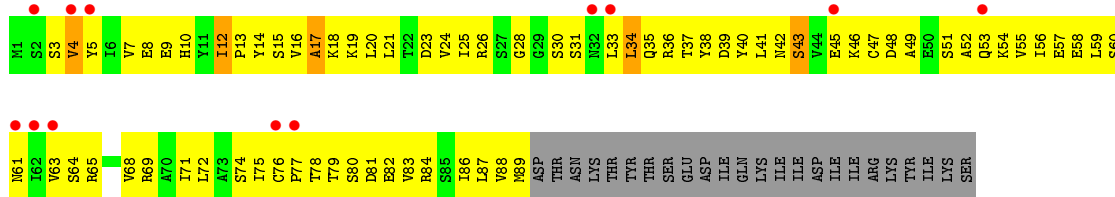
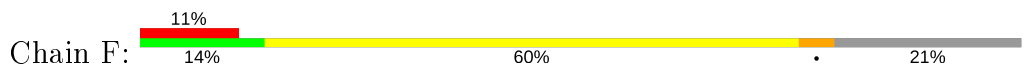




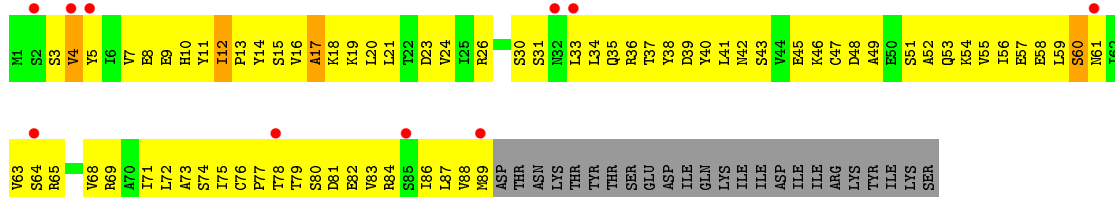
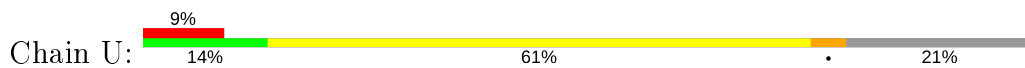
• Molecule 5: DNA-directed RNA polymerase subunit E



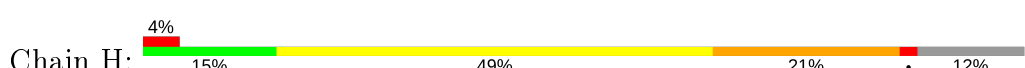
• Molecule 6: DNA-directed RNA polymerase subunit F

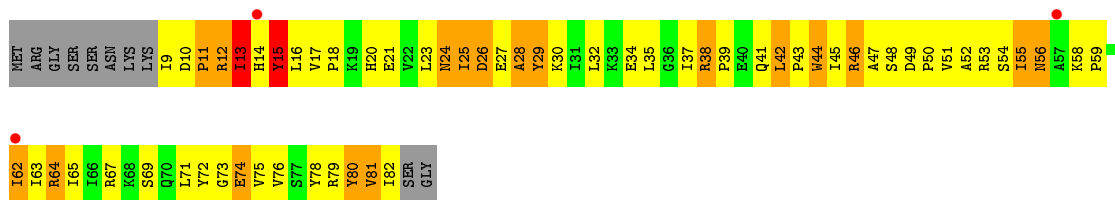


• Molecule 6: DNA-directed RNA polymerase subunit F

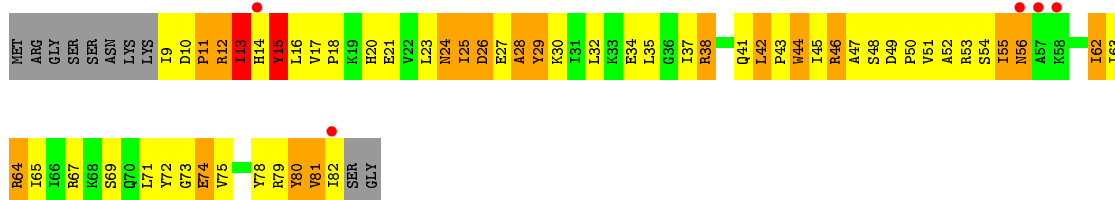
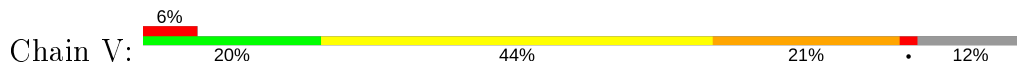


• Molecule 7: DNA-directed RNA polymerase subunit H

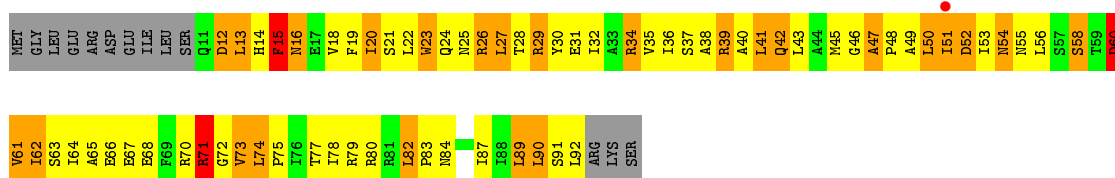




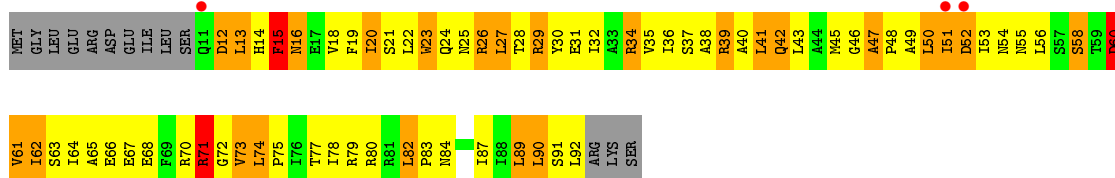
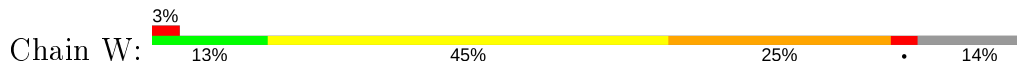
• Molecule 7: DNA-directed RNA polymerase subunit H



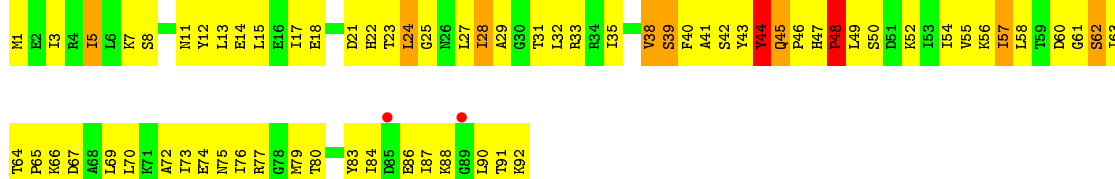
• Molecule 8: DNA-directed RNA polymerase subunit K



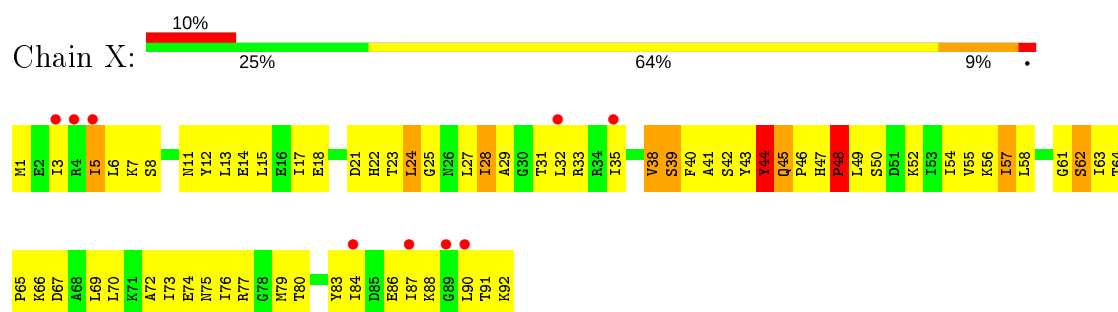
• Molecule 8: DNA-directed RNA polymerase subunit K



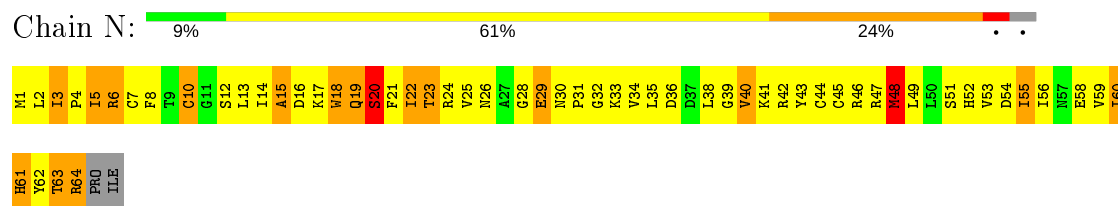
• Molecule 9: DNA-directed RNA polymerase subunit L



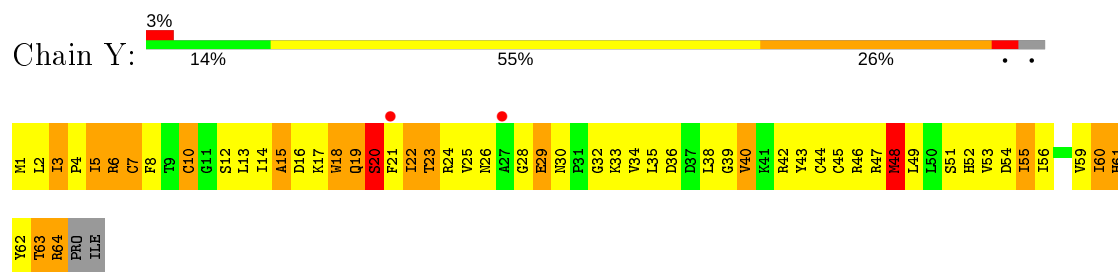
• Molecule 9: DNA-directed RNA polymerase subunit L



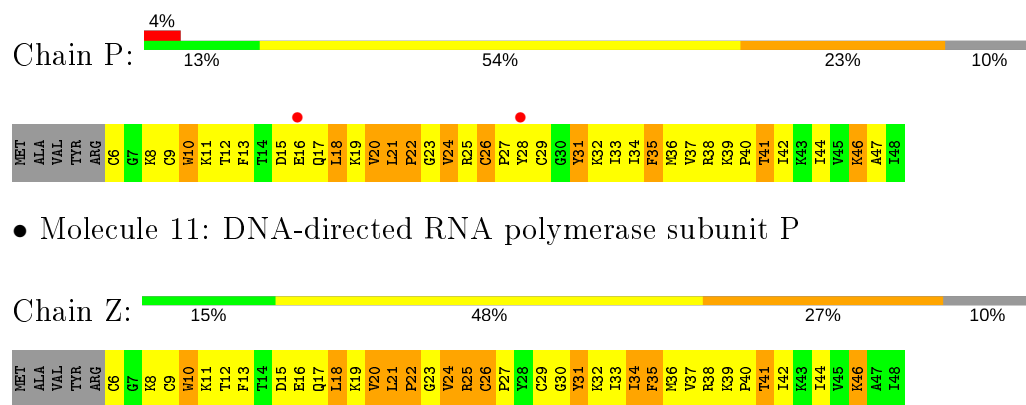
- Molecule 10: DNA-directed RNA polymerase subunit N



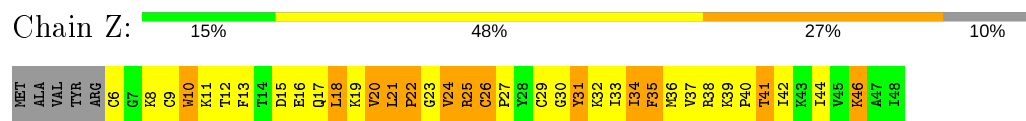
- Molecule 10: DNA-directed RNA polymerase subunit N



- Molecule 11: DNA-directed RNA polymerase subunit P



- Molecule 11: DNA-directed RNA polymerase subunit P



4 Data and refinement statistics

| Property | Value | Source |
|---|---|------------------|
| Space group | P 1 21 1 | Depositor |
| Cell constants a, b, c, α , β , γ | 125.82Å 201.24Å 196.05Å 90.00° 100.92° 90.00° | Depositor |
| Resolution (Å) | 39.79 – 3.40 39.79 – 3.40 | Depositor EDS |
| % Data completeness (in resolution range) | 80.4 (39.79-3.40) 80.3 (39.79-3.40) | Depositor EDS |
| R_{merge} | 0.10 | Depositor |
| R_{sym} | (Not available) | Depositor |
| $\langle I/\sigma(I) \rangle$ ¹ | 1.73 (at 3.40Å) | Xtrriage |
| Refinement program | REFMAC | Depositor |
| R, R_{free} | 0.274 , 0.343 0.271 , 0.275 | Depositor DCC |
| R_{free} test set | 5323 reflections (5.04%) | wwPDB-VP |
| Wilson B-factor (Å ²) | 79.3 | Xtrriage |
| Anisotropy | 0.345 | Xtrriage |
| Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²) | 0.28 , 83.7 | EDS |
| L-test for twinning ² | $\langle L \rangle = 0.41$, $\langle L^2 \rangle = 0.23$ | Xtrriage |
| Estimated twinning fraction | No twinning to report. | Xtrriage |
| F_o, F_c correlation | 0.86 | EDS |
| Total number of atoms | 48122 | wwPDB-VP |
| Average B, all atoms (Å ²) | 93.0 | wwPDB-VP |

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 6.66% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

²Theoretical values of $\langle |L| \rangle$, $\langle L^2 \rangle$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality i

5.1 Standard geometry i

Bond lengths and bond angles in the following residue types are not validated in this section: ZN, F3S, MG

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 | 0.48 | 0/6306 | 0.80 | 4/8539 (0.0%) |
| 1 | Q | 0.46 | 0/6306 | 0.79 | 4/8539 (0.0%) |
| 2 | C | 0.46 | 0/2189 | 0.81 | 0/2947 |
| 2 | G | 0.43 | 0/2189 | 0.80 | 0/2947 |
| 3 | B | 0.46 | 0/8810 | 0.79 | 5/11921 (0.0%) |
| 3 | R | 0.45 | 0/8810 | 0.79 | 3/11921 (0.0%) |
| 4 | D | 0.40 | 0/2152 | 0.68 | 0/2911 |
| 4 | S | 0.37 | 0/2152 | 0.67 | 0/2911 |
| 5 | E | 0.38 | 0/1423 | 0.69 | 0/1919 |
| 5 | T | 0.37 | 0/1423 | 0.69 | 0/1919 |
| 6 | F | 0.35 | 0/701 | 0.63 | 0/949 |
| 6 | U | 0.35 | 0/701 | 0.62 | 0/949 |
| 7 | H | 0.44 | 0/625 | 0.76 | 0/848 |
| 7 | V | 0.41 | 0/625 | 0.76 | 0/848 |
| 8 | K | 0.50 | 0/667 | 0.82 | 0/903 |
| 8 | W | 0.49 | 0/667 | 0.81 | 0/903 |
| 9 | L | 0.39 | 0/733 | 0.72 | 0/986 |
| 9 | X | 0.38 | 0/733 | 0.72 | 0/986 |
| 10 | N | 0.38 | 0/523 | 0.75 | 0/705 |
| 10 | Y | 0.37 | 0/523 | 0.74 | 0/705 |
| 11 | P | 0.45 | 0/354 | 0.68 | 0/475 |
| 11 | Z | 0.46 | 0/354 | 0.67 | 0/475 |
| All | All | 0.44 | 0/48966 | 0.77 | 16/66206 (0.0%) |

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand. A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

| Mol | Chain | #Chirality outliers | #Planarity outliers |
|-----|-------|---------------------|---------------------|
| 3 | B | 0 | 1 |

Continued on next page...

Continued from previous page...

| Mol | Chain | #Chirality outliers | #Planarity outliers |
|-----|-------|---------------------|---------------------|
| 3 | R | 0 | 1 |
| 4 | D | 0 | 1 |
| 4 | S | 0 | 1 |
| All | All | 0 | 4 |

There are no bond length outliers.

All (16) bond angle outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|----------|-------|-------------|----------|
| 1 | A | 841 | LEU | CA-CB-CG | 7.67 | 132.93 | 115.30 |
| 1 | Q | 841 | LEU | CA-CB-CG | 7.56 | 132.69 | 115.30 |
| 3 | B | 436 | GLY | N-CA-C | -6.16 | 97.70 | 113.10 |
| 3 | R | 436 | GLY | N-CA-C | -5.97 | 98.17 | 113.10 |
| 1 | A | 508 | LEU | N-CA-C | -5.89 | 95.11 | 111.00 |
| 3 | B | 522 | LEU | CA-CB-CG | 5.79 | 128.62 | 115.30 |
| 3 | B | 946 | TYR | N-CA-C | 5.64 | 126.23 | 111.00 |
| 1 | Q | 508 | LEU | N-CA-C | -5.52 | 96.11 | 111.00 |
| 1 | Q | 787 | ARG | N-CA-C | -5.50 | 96.16 | 111.00 |
| 3 | R | 522 | LEU | CA-CB-CG | 5.47 | 127.87 | 115.30 |
| 3 | B | 1039 | PHE | N-CA-C | -5.37 | 96.50 | 111.00 |
| 1 | A | 787 | ARG | N-CA-C | -5.33 | 96.60 | 111.00 |
| 3 | R | 946 | TYR | N-CA-C | 5.30 | 125.31 | 111.00 |
| 1 | Q | 854 | GLY | N-CA-C | -5.22 | 100.05 | 113.10 |
| 1 | A | 534 | LEU | CA-CB-CG | 5.16 | 127.16 | 115.30 |
| 3 | B | 45 | GLU | N-CA-C | -5.01 | 97.46 | 111.00 |

There are no chirality outliers.

All (4) planarity outliers are listed below:

| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-----------|
| 3 | B | 314 | TYR | Sidechain |
| 4 | D | 54 | TYR | Sidechain |
| 3 | R | 314 | TYR | Sidechain |
| 4 | S | 54 | TYR | Sidechain |

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 | 6173 | 0 | 6243 | 1147 | 0 |
| 1 | Q | 6173 | 0 | 6243 | 1128 | 0 |
| 2 | C | 2169 | 0 | 2288 | 501 | 0 |
| 2 | G | 2169 | 0 | 2288 | 526 | 0 |
| 3 | B | 8645 | 0 | 8782 | 1656 | 0 |
| 3 | R | 8645 | 0 | 8780 | 1698 | 0 |
| 4 | D | 2114 | 0 | 2145 | 357 | 0 |
| 4 | S | 2114 | 0 | 2145 | 348 | 0 |
| 5 | E | 1402 | 0 | 1467 | 222 | 0 |
| 5 | T | 1402 | 0 | 1467 | 246 | 0 |
| 6 | F | 694 | 0 | 705 | 129 | 0 |
| 6 | U | 694 | 0 | 705 | 139 | 0 |
| 7 | H | 611 | 0 | 641 | 117 | 0 |
| 7 | V | 611 | 0 | 641 | 125 | 0 |
| 8 | K | 658 | 0 | 692 | 161 | 0 |
| 8 | W | 658 | 0 | 692 | 174 | 0 |
| 9 | L | 723 | 0 | 749 | 94 | 0 |
| 9 | X | 723 | 0 | 749 | 91 | 0 |
| 10 | N | 514 | 0 | 528 | 159 | 0 |
| 10 | Y | 514 | 0 | 529 | 151 | 0 |
| 11 | P | 346 | 0 | 376 | 63 | 0 |
| 11 | Z | 346 | 0 | 375 | 58 | 0 |
| 12 | A | 1 | 0 | 0 | 0 | 0 |
| 12 | B | 1 | 0 | 0 | 0 | 0 |
| 12 | N | 1 | 0 | 0 | 0 | 0 |
| 12 | P | 1 | 0 | 0 | 0 | 0 |
| 12 | Q | 1 | 0 | 0 | 0 | 0 |
| 12 | R | 1 | 0 | 0 | 0 | 0 |
| 12 | Y | 1 | 0 | 0 | 0 | 0 |
| 12 | Z | 1 | 0 | 0 | 0 | 0 |
| 13 | A | 1 | 0 | 0 | 0 | 0 |
| 13 | Q | 1 | 0 | 0 | 0 | 0 |
| 14 | D | 7 | 0 | 0 | 4 | 0 |
| 14 | S | 7 | 0 | 0 | 3 | 0 |
| All | All | 48122 | 0 | 49230 | 8272 | 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 85.

All (8272) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 1:A:238:LYS:NZ | 1:A:297:THR:HB | 1.42 | 1.31 |
| 1:Q:238:LYS:NZ | 1:Q:297:THR:HB | 1.43 | 1.31 |
| 1:A:803:ARG:HG2 | 3:B:444:ASP:HA | 1.20 | 1.17 |
| 1:A:308:ARG:HH21 | 3:B:1099:LEU:HD13 | 1.10 | 1.16 |
| 3:R:329:ARG:HD2 | 3:R:562:PHE:HB3 | 1.24 | 1.15 |
| 3:R:88:ARG:HD3 | 3:R:853:THR:HG21 | 1.25 | 1.15 |
| 11:Z:46:LYS:H | 11:Z:46:LYS:HD2 | 1.06 | 1.15 |
| 3:B:329:ARG:HD2 | 3:B:562:PHE:HB3 | 1.24 | 1.14 |
| 11:P:46:LYS:HD2 | 11:P:46:LYS:H | 1.06 | 1.14 |
| 3:B:88:ARG:HD3 | 3:B:853:THR:HG21 | 1.26 | 1.14 |
| 1:Q:803:ARG:HG2 | 3:R:444:ASP:HA | 1.17 | 1.13 |
| 1:A:418:LEU:HD21 | 3:B:1044:LEU:HD21 | 1.24 | 1.12 |
| 6:U:16:VAL:HG21 | 6:U:53:GLN:HG3 | 1.32 | 1.11 |
| 3:B:560:THR:HG22 | 3:B:562:PHE:H | 1.02 | 1.11 |
| 1:Q:290:ARG:HD2 | 1:Q:291:SER:H | 1.11 | 1.11 |
| 4:D:190:LEU:HD22 | 4:D:195:LEU:HA | 1.32 | 1.11 |
| 1:A:868:VAL:HG22 | 2:C:39:LYS:HZ3 | 1.11 | 1.10 |
| 1:Q:308:ARG:HH21 | 3:R:1099:LEU:HD13 | 1.09 | 1.10 |
| 3:B:640:LEU:CD2 | 3:B:641:GLU:H | 1.65 | 1.10 |
| 2:C:274:THR:HG22 | 2:C:275:ASN:H | 1.15 | 1.10 |
| 7:V:29:TYR:HA | 7:V:32:LEU:HD12 | 1.16 | 1.10 |
| 7:H:29:TYR:HA | 7:H:32:LEU:HD12 | 1.12 | 1.09 |
| 3:R:560:THR:HG22 | 3:R:562:PHE:H | 1.02 | 1.09 |
| 3:R:581:ILE:HD11 | 3:R:614:GLU:HB2 | 1.31 | 1.08 |
| 6:F:16:VAL:HG21 | 6:F:53:GLN:HG3 | 1.31 | 1.08 |
| 3:R:458:THR:HG21 | 3:R:465:GLY:H | 1.14 | 1.08 |
| 3:R:640:LEU:CD2 | 3:R:641:GLU:H | 1.67 | 1.07 |
| 2:G:274:THR:HG22 | 2:G:275:ASN:H | 1.11 | 1.07 |
| 2:G:340:SER:HB3 | 2:G:371:GLU:HG2 | 1.09 | 1.07 |
| 1:Q:418:LEU:HD21 | 3:R:1044:LEU:HD21 | 1.37 | 1.07 |
| 2:G:309:ASP:OD2 | 2:G:311:ARG:HD3 | 1.55 | 1.07 |
| 3:R:869:LEU:HD11 | 4:S:56:GLU:HB3 | 1.34 | 1.07 |
| 3:B:249:GLN:HG3 | 3:B:250:ASN:H | 1.20 | 1.07 |
| 3:B:650:ILE:H | 3:B:650:ILE:HD13 | 1.16 | 1.07 |
| 2:C:55:ALA:HA | 2:C:58:GLU:HG3 | 1.37 | 1.06 |
| 7:H:12:ARG:H | 7:H:12:ARG:HD3 | 1.18 | 1.06 |
| 4:S:190:LEU:HD22 | 4:S:195:LEU:HA | 1.31 | 1.06 |
| 3:B:458:THR:HG21 | 3:B:465:GLY:H | 1.14 | 1.06 |
| 2:C:340:SER:HB3 | 2:C:371:GLU:HG2 | 1.08 | 1.06 |
| 1:Q:369:PRO:HB3 | 1:Q:376:ASN:HB3 | 1.37 | 1.06 |
| 3:B:581:ILE:HD11 | 3:B:614:GLU:HB2 | 1.36 | 1.06 |
| 1:Q:866:VAL:HG12 | 1:Q:869:ASN:H | 1.19 | 1.05 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 3:R:650:ILE:H | 3:R:650:ILE:HD13 | 1.15 | 1.05 |
| 1:A:58:CYS:SG | 1:A:59:PRO:HD2 | 1.95 | 1.05 |
| 1:A:290:ARG:HD2 | 1:A:291:SER:H | 1.09 | 1.05 |
| 3:R:569:ASN:HB3 | 3:R:574:ARG:HH22 | 1.21 | 1.04 |
| 1:Q:575:CYS:SG | 1:Q:580:CYS:HB3 | 1.97 | 1.04 |
| 1:Q:874:ARG:HE | 2:G:53:ASP:HB3 | 1.18 | 1.04 |
| 2:G:390:MET:HB2 | 5:T:56:GLU:HG3 | 1.38 | 1.04 |
| 3:B:26:GLN:O | 3:B:345:LEU:HD23 | 1.55 | 1.04 |
| 3:B:640:LEU:HD23 | 3:B:641:GLU:H | 1.18 | 1.04 |
| 2:G:286:ILE:HD12 | 7:V:45:ILE:HG13 | 1.36 | 1.04 |
| 3:R:890:MET:HE2 | 3:R:891:LEU:H | 1.21 | 1.04 |
| 4:D:191:LYS:HB2 | 4:D:194:LYS:HD2 | 1.37 | 1.04 |
| 3:B:569:ASN:HB3 | 3:B:574:ARG:HH22 | 1.24 | 1.03 |
| 4:S:191:LYS:HB2 | 4:S:194:LYS:HD2 | 1.41 | 1.03 |
| 7:V:12:ARG:H | 7:V:12:ARG:HD3 | 1.17 | 1.03 |
| 3:R:705:THR:HG22 | 3:R:706:ARG:H | 1.24 | 1.03 |
| 1:A:575:CYS:SG | 1:A:580:CYS:HB3 | 1.99 | 1.02 |
| 2:C:340:SER:HB3 | 2:C:371:GLU:CG | 1.87 | 1.02 |
| 1:A:874:ARG:HE | 2:C:53:ASP:HB3 | 1.19 | 1.02 |
| 3:R:640:LEU:HD23 | 3:R:641:GLU:H | 1.19 | 1.02 |
| 3:B:479:GLY:HA2 | 3:B:552:GLU:HB3 | 1.41 | 1.02 |
| 5:T:179:LYS:HE2 | 6:U:81:ASP:HB2 | 1.40 | 1.02 |
| 3:B:1033:ARG:NH1 | 3:B:1034:ASP:OD2 | 1.90 | 1.02 |
| 3:R:853:THR:HG22 | 3:R:854:GLU:H | 1.24 | 1.02 |
| 3:B:874:ILE:H | 3:B:874:ILE:HD12 | 1.23 | 1.02 |
| 3:R:479:GLY:HA2 | 3:R:552:GLU:HB3 | 1.38 | 1.02 |
| 1:A:866:VAL:HG12 | 1:A:869:ASN:H | 1.20 | 1.02 |
| 1:Q:868:VAL:HG22 | 2:G:39:LYS:HZ3 | 1.23 | 1.02 |
| 3:R:242:VAL:HA | 3:R:316:ALA:HB1 | 1.38 | 1.02 |
| 2:G:340:SER:HB3 | 2:G:371:GLU:CG | 1.89 | 1.02 |
| 3:B:242:VAL:HA | 3:B:316:ALA:HB1 | 1.38 | 1.02 |
| 1:Q:826:ALA:HB2 | 2:G:335:THR:HG23 | 1.38 | 1.02 |
| 1:A:749:GLN:H | 1:A:781:PHE:HA | 1.24 | 1.01 |
| 1:Q:58:CYS:SG | 1:Q:59:PRO:HD2 | 2.00 | 1.01 |
| 1:Q:760:GLY:HA3 | 3:R:447:GLY:HA3 | 1.42 | 1.01 |
| 1:A:743:MET:HG3 | 3:B:919:MET:HE2 | 1.40 | 1.01 |
| 1:A:238:LYS:HZ1 | 1:A:297:THR:CB | 1.71 | 1.01 |
| 1:A:365:VAL:HG23 | 1:A:388:LEU:HD11 | 1.43 | 1.01 |
| 3:R:582:VAL:HG13 | 3:R:586:ASN:H | 1.21 | 1.01 |
| 2:G:69:ALA:HB2 | 2:G:381:LEU:HD22 | 1.43 | 1.01 |
| 3:R:65:ILE:HD12 | 3:R:65:ILE:H | 1.22 | 1.01 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:Q:175:LEU:HD23 | 1:Q:176:THR:H | 1.25 | 1.00 |
| 3:R:26:GLN:O | 3:R:345:LEU:HD23 | 1.60 | 1.00 |
| 1:A:830:LEU:HD23 | 1:A:840:SER:HB3 | 1.43 | 1.00 |
| 5:T:166:GLN:HB2 | 5:T:169:LEU:HD12 | 1.41 | 1.00 |
| 3:B:582:VAL:HG13 | 3:B:586:ASN:H | 1.23 | 1.00 |
| 2:C:310:ILE:HD12 | 2:C:310:ILE:H | 1.27 | 1.00 |
| 3:B:65:ILE:H | 3:B:65:ILE:HD12 | 1.26 | 1.00 |
| 4:D:131:VAL:HG22 | 4:D:132:LEU:H | 1.27 | 1.00 |
| 3:B:24:VAL:HG11 | 3:B:426:LEU:HD13 | 1.43 | 1.00 |
| 3:B:853:THR:HG22 | 3:B:854:GLU:H | 1.26 | 0.99 |
| 2:C:309:ASP:OD2 | 2:C:311:ARG:HD3 | 1.61 | 0.99 |
| 10:N:35:LEU:HD22 | 10:N:40:VAL:HG21 | 1.43 | 0.99 |
| 3:R:249:GLN:HG3 | 3:R:250:ASN:H | 1.22 | 0.99 |
| 1:A:293:ARG:HH11 | 1:A:296:ARG:NH2 | 1.59 | 0.99 |
| 1:A:79:ARG:HB2 | 1:A:266:TRP:CE3 | 1.97 | 0.99 |
| 1:Q:365:VAL:HG23 | 1:Q:388:LEU:HD11 | 1.42 | 0.99 |
| 3:R:197:ARG:NH2 | 3:R:359:LYS:HG2 | 1.75 | 0.99 |
| 1:A:175:LEU:HD23 | 1:A:176:THR:H | 1.25 | 0.99 |
| 2:C:102:LEU:HD23 | 2:C:103:GLY:N | 1.77 | 0.99 |
| 2:C:329:ILE:HA | 2:C:334:VAL:HG12 | 1.44 | 0.99 |
| 1:A:369:PRO:HB3 | 1:A:376:ASN:HB3 | 1.41 | 0.99 |
| 3:B:108:GLU:O | 3:B:110:GLU:HG3 | 1.63 | 0.99 |
| 3:B:890:MET:HE2 | 3:B:891:LEU:H | 1.24 | 0.99 |
| 2:C:69:ALA:HB2 | 2:C:381:LEU:HD22 | 1.44 | 0.99 |
| 3:R:1033:ARG:NH1 | 3:R:1034:ASP:OD2 | 1.94 | 0.98 |
| 4:S:131:VAL:HG22 | 4:S:132:LEU:H | 1.28 | 0.98 |
| 1:Q:293:ARG:HH11 | 1:Q:296:ARG:NH2 | 1.61 | 0.98 |
| 4:S:175:ASN:HA | 4:S:195:LEU:HD11 | 1.45 | 0.98 |
| 1:Q:238:LYS:HZ1 | 1:Q:297:THR:HB | 0.86 | 0.98 |
| 1:Q:176:THR:HG23 | 1:Q:179:ASP:HB2 | 1.46 | 0.98 |
| 3:B:197:ARG:NH2 | 3:B:359:LYS:HG2 | 1.79 | 0.98 |
| 3:R:47:GLY:HA2 | 3:R:58:VAL:O | 1.62 | 0.98 |
| 1:A:826:ALA:HB2 | 2:C:335:THR:HG23 | 1.45 | 0.98 |
| 3:B:557:HIS:N | 3:B:623:ASN:HD21 | 1.61 | 0.98 |
| 4:S:11:THR:O | 4:S:238:PRO:HB3 | 1.64 | 0.98 |
| 5:E:166:GLN:HB2 | 5:E:169:LEU:HD12 | 1.42 | 0.98 |
| 3:B:588:LEU:HD13 | 3:B:612:LYS:HB3 | 1.44 | 0.97 |
| 2:G:55:ALA:HA | 2:G:58:GLU:HG3 | 1.42 | 0.97 |
| 3:B:982:ARG:O | 3:B:983:ILE:HG12 | 1.63 | 0.97 |
| 1:Q:749:GLN:H | 1:Q:781:PHE:HA | 1.24 | 0.97 |
| 1:Q:79:ARG:HB2 | 1:Q:266:TRP:CE3 | 1.99 | 0.97 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 3:R:201:THR:HG23 | 3:R:215:PRO:HG3 | 1.45 | 0.97 |
| 3:B:781:ARG:HD3 | 3:B:782:GLY:H | 1.30 | 0.97 |
| 4:D:11:THR:O | 4:D:238:PRO:HB3 | 1.63 | 0.97 |
| 1:Q:238:LYS:HZ2 | 1:Q:276:TYR:HA | 1.27 | 0.97 |
| 1:A:376:ASN:O | 1:A:377:TYR:HB2 | 1.65 | 0.96 |
| 2:G:289:ALA:O | 2:G:292:ILE:HG22 | 1.64 | 0.96 |
| 3:R:759:SER:HB2 | 3:R:862:VAL:O | 1.64 | 0.96 |
| 10:Y:35:LEU:HD22 | 10:Y:40:VAL:HG21 | 1.45 | 0.96 |
| 3:B:557:HIS:H | 3:B:623:ASN:HD21 | 1.03 | 0.96 |
| 5:T:53:THR:HB | 5:T:71:GLU:H | 1.28 | 0.96 |
| 3:B:628:LEU:HD23 | 3:B:628:LEU:H | 1.29 | 0.96 |
| 2:C:104:LEU:HB3 | 2:C:105:PRO:HD3 | 1.47 | 0.96 |
| 4:D:175:ASN:HA | 4:D:195:LEU:HD11 | 1.48 | 0.96 |
| 2:G:25:PRO:HD3 | 2:G:33:LYS:HD2 | 1.48 | 0.96 |
| 1:Q:830:LEU:HD23 | 1:Q:840:SER:HB3 | 1.45 | 0.96 |
| 3:B:47:GLY:HA2 | 3:B:58:VAL:O | 1.66 | 0.96 |
| 2:C:286:ILE:HD12 | 7:H:45:ILE:HG13 | 1.48 | 0.96 |
| 2:G:102:LEU:HD23 | 2:G:103:GLY:N | 1.80 | 0.96 |
| 1:Q:600:LYS:HE3 | 1:Q:732:GLY:HA2 | 1.48 | 0.96 |
| 3:B:201:THR:HG23 | 3:B:215:PRO:HG3 | 1.45 | 0.95 |
| 3:R:982:ARG:O | 3:R:983:ILE:HG12 | 1.64 | 0.95 |
| 3:B:702:LEU:H | 3:B:721:ASN:ND2 | 1.64 | 0.95 |
| 5:E:53:THR:HB | 5:E:71:GLU:H | 1.31 | 0.95 |
| 3:R:781:ARG:HD3 | 3:R:782:GLY:H | 1.31 | 0.95 |
| 5:E:84:VAL:HG21 | 6:F:86:ILE:HG12 | 1.47 | 0.95 |
| 11:Z:26:CYS:SG | 11:Z:29:CYS:HB2 | 2.06 | 0.95 |
| 1:A:354:THR:HB | 1:A:355:PRO:HD2 | 1.48 | 0.95 |
| 3:B:1074:LYS:HB3 | 3:B:1076:LYS:HE2 | 1.49 | 0.95 |
| 1:Q:81:VAL:HG23 | 1:Q:209:LEU:HB2 | 1.48 | 0.95 |
| 1:A:290:ARG:HD2 | 1:A:291:SER:N | 1.81 | 0.95 |
| 4:S:98:ILE:HD11 | 4:S:114:ILE:HG23 | 1.47 | 0.95 |
| 1:Q:376:ASN:O | 1:Q:377:TYR:HB2 | 1.66 | 0.95 |
| 1:A:672:VAL:HG13 | 1:A:700:ILE:HD12 | 1.48 | 0.95 |
| 1:A:653:LEU:HD11 | 1:A:745:ALA:HB2 | 1.49 | 0.94 |
| 1:Q:653:LEU:HD11 | 1:Q:745:ALA:HB2 | 1.47 | 0.94 |
| 3:R:628:LEU:HD23 | 3:R:628:LEU:H | 1.30 | 0.94 |
| 1:A:473:ILE:HD12 | 1:A:474:ALA:N | 1.82 | 0.94 |
| 3:B:221:ILE:HG21 | 3:B:226:LEU:HG | 1.49 | 0.94 |
| 2:G:80:GLU:HB3 | 2:G:81:PRO:HD3 | 1.50 | 0.94 |
| 1:Q:743:MET:HG3 | 3:R:919:MET:HE2 | 1.48 | 0.94 |
| 1:Q:855:VAL:HG22 | 2:G:64:ILE:HB | 1.48 | 0.94 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|------------------|--------------------------|-------------------|
| 3:B:946:TYR:HD2 | 3:B:947:LYS:N | 1.65 | 0.94 |
| 3:R:1060:VAL:HG12 | 3:R:1065:GLY:HA3 | 1.47 | 0.94 |
| 1:A:238:LYS:HZ2 | 1:A:276:TYR:HA | 1.30 | 0.94 |
| 5:T:179:LYS:NZ | 6:U:79:THR:HB | 1.83 | 0.94 |
| 3:B:43:ILE:HG21 | 3:B:63:ILE:HD11 | 1.50 | 0.94 |
| 3:B:705:THR:HG22 | 3:B:706:ARG:H | 1.31 | 0.94 |
| 2:G:344:ARG:HB2 | 2:G:344:ARG:HH11 | 1.33 | 0.94 |
| 1:A:765:THR:HG22 | 1:A:766:LEU:HD23 | 1.50 | 0.94 |
| 1:A:81:VAL:HG23 | 1:A:209:LEU:HB2 | 1.49 | 0.94 |
| 3:R:702:LEU:H | 3:R:721:ASN:HD21 | 0.96 | 0.94 |
| 3:R:764:LYS:HZ3 | 3:R:814:VAL:H | 0.95 | 0.94 |
| 3:R:764:LYS:HZ3 | 3:R:814:VAL:N | 1.66 | 0.94 |
| 2:C:25:PRO:HD3 | 2:C:33:LYS:HD2 | 1.48 | 0.93 |
| 1:Q:803:ARG:CG | 3:R:444:ASP:HA | 1.97 | 0.93 |
| 5:T:84:VAL:HG21 | 6:U:86:ILE:HG12 | 1.50 | 0.93 |
| 1:A:293:ARG:HH11 | 1:A:296:ARG:HH22 | 0.94 | 0.93 |
| 2:G:329:ILE:HA | 2:G:334:VAL:HG12 | 1.50 | 0.93 |
| 11:P:26:CYS:SG | 11:P:29:CYS:HB2 | 2.07 | 0.93 |
| 1:A:637:ARG:HH11 | 3:B:974:ARG:HH12 | 1.16 | 0.93 |
| 1:Q:238:LYS:HZ1 | 1:Q:297:THR:CB | 1.78 | 0.93 |
| 1:Q:650:ASP:HB3 | 1:Q:723:ASN:ND2 | 1.81 | 0.93 |
| 1:A:650:ASP:HB3 | 1:A:723:ASN:ND2 | 1.82 | 0.93 |
| 5:T:179:LYS:CE | 6:U:81:ASP:HB2 | 1.97 | 0.93 |
| 3:R:946:TYR:HD2 | 3:R:947:LYS:N | 1.67 | 0.93 |
| 1:Q:352:ARG:HD3 | 1:Q:406:ILE:HD12 | 1.50 | 0.93 |
| 1:A:855:VAL:HG22 | 2:C:64:ILE:HB | 1.49 | 0.93 |
| 3:R:537:ALA:HB2 | 3:R:557:HIS:NE2 | 1.84 | 0.93 |
| 1:A:90:ILE:HD11 | 1:A:207:MET:HB3 | 1.51 | 0.93 |
| 1:Q:290:ARG:HD2 | 1:Q:291:SER:N | 1.82 | 0.93 |
| 3:R:38:LYS:HG3 | 3:R:39:LEU:H | 1.30 | 0.93 |
| 2:C:344:ARG:HH11 | 2:C:344:ARG:HB2 | 1.33 | 0.93 |
| 3:R:108:GLU:O | 3:R:110:GLU:HG3 | 1.69 | 0.93 |
| 3:B:954:GLN:HA | 3:B:957:ILE:HD11 | 1.50 | 0.93 |
| 1:A:176:THR:HG23 | 1:A:179:ASP:HB2 | 1.49 | 0.92 |
| 1:A:803:ARG:CG | 3:B:444:ASP:HA | 1.97 | 0.92 |
| 3:R:339:ALA:HB2 | 3:R:618:ALA:HB3 | 1.50 | 0.92 |
| 3:B:686:LEU:H | 3:B:686:LEU:HD12 | 1.34 | 0.92 |
| 1:Q:868:VAL:HG22 | 2:G:39:LYS:NZ | 1.83 | 0.92 |
| 1:Q:338:GLY:HA3 | 1:Q:444:ARG:HG2 | 1.49 | 0.92 |
| 3:R:686:LEU:HD12 | 3:R:686:LEU:H | 1.33 | 0.92 |
| 2:C:270:ALA:HA | 7:H:14:HIS:ND1 | 1.85 | 0.92 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 3:R:557:HIS:H | 3:R:623:ASN:HD21 | 1.11 | 0.92 |
| 10:Y:42:ARG:HG3 | 10:Y:43:TYR:H | 1.33 | 0.92 |
| 3:R:1004:ARG:HH11 | 3:R:1025:GLY:H | 1.18 | 0.92 |
| 3:R:43:ILE:HG21 | 3:R:63:ILE:HD11 | 1.49 | 0.92 |
| 1:Q:765:THR:HG22 | 1:Q:766:LEU:HD23 | 1.49 | 0.92 |
| 3:B:771:ASP:HB2 | 3:B:816:PRO:HD3 | 1.51 | 0.92 |
| 8:K:90:LEU:N | 8:K:90:LEU:HD23 | 1.85 | 0.92 |
| 1:Q:90:ILE:HD11 | 1:Q:207:MET:HB3 | 1.50 | 0.92 |
| 3:B:537:ALA:HB2 | 3:B:557:HIS:NE2 | 1.83 | 0.92 |
| 3:B:764:LYS:HZ3 | 3:B:814:VAL:H | 1.01 | 0.92 |
| 3:B:781:ARG:CD | 3:B:782:GLY:H | 1.83 | 0.92 |
| 1:Q:238:LYS:NZ | 1:Q:297:THR:CB | 2.32 | 0.92 |
| 1:A:50:GLY:HA2 | 1:A:68:CYS:SG | 2.09 | 0.92 |
| 3:B:854:GLU:HA | 3:B:859:ASN:O | 1.70 | 0.92 |
| 2:C:120:PRO:HA | 2:C:275:ASN:ND2 | 1.84 | 0.92 |
| 2:G:120:PRO:HA | 2:G:275:ASN:ND2 | 1.84 | 0.92 |
| 11:P:26:CYS:HB2 | 11:P:27:PRO:HD2 | 1.49 | 0.92 |
| 3:R:24:VAL:HG11 | 3:R:426:LEU:HD13 | 1.51 | 0.92 |
| 3:R:557:HIS:N | 3:R:623:ASN:HD21 | 1.66 | 0.92 |
| 1:A:338:GLY:HA3 | 1:A:444:ARG:HG2 | 1.48 | 0.92 |
| 1:Q:672:VAL:HG13 | 1:Q:700:ILE:HD12 | 1.49 | 0.92 |
| 1:Q:238:LYS:HZ2 | 1:Q:276:TYR:CA | 1.82 | 0.91 |
| 1:Q:331:ASN:O | 1:Q:332:ILE:HB | 1.69 | 0.91 |
| 1:A:308:ARG:NH2 | 3:B:1099:LEU:HD13 | 1.85 | 0.91 |
| 3:B:172:VAL:HG22 | 3:B:189:ILE:HD11 | 1.52 | 0.91 |
| 10:N:42:ARG:HG3 | 10:N:43:TYR:H | 1.35 | 0.91 |
| 1:A:238:LYS:HZ1 | 1:A:297:THR:HB | 0.79 | 0.91 |
| 2:C:55:ALA:HA | 2:C:58:GLU:CG | 2.00 | 0.91 |
| 1:Q:647:ARG:HH11 | 3:R:965:ASP:HB2 | 1.34 | 0.91 |
| 1:A:507:TYR:OH | 1:A:727:VAL:HG13 | 1.71 | 0.91 |
| 2:C:391:ARG:HG3 | 2:C:391:ARG:HH11 | 1.36 | 0.91 |
| 7:V:12:ARG:CD | 7:V:12:ARG:H | 1.83 | 0.91 |
| 1:Q:293:ARG:HH11 | 1:Q:296:ARG:HH22 | 0.94 | 0.91 |
| 2:G:310:ILE:H | 2:G:310:ILE:HD12 | 1.34 | 0.91 |
| 3:R:781:ARG:CD | 3:R:782:GLY:H | 1.83 | 0.91 |
| 1:Q:604:GLY:C | 1:Q:606:GLN:H | 1.70 | 0.91 |
| 1:Q:50:GLY:HA2 | 1:Q:68:CYS:SG | 2.11 | 0.91 |
| 8:W:53:ILE:H | 8:W:53:ILE:HD12 | 1.35 | 0.91 |
| 3:B:869:LEU:HD11 | 4:D:56:GLU:HB3 | 1.51 | 0.90 |
| 4:D:98:ILE:HD11 | 4:D:114:ILE:HG23 | 1.53 | 0.90 |
| 3:R:473:MET:HA | 3:R:577:ARG:HH21 | 1.35 | 0.90 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 6:F:18:LYS:HE2 | 6:F:41:LEU:HB3 | 1.54 | 0.90 |
| 1:Q:354:THR:HB | 1:Q:355:PRO:HD2 | 1.51 | 0.90 |
| 3:R:954:GLN:HA | 3:R:957:ILE:HD11 | 1.54 | 0.90 |
| 3:B:759:SER:HB2 | 3:B:862:VAL:O | 1.72 | 0.90 |
| 3:B:1004:ARG:HH11 | 3:B:1025:GLY:H | 1.18 | 0.90 |
| 2:C:115:LYS:O | 2:C:116:VAL:HG13 | 1.72 | 0.90 |
| 5:E:39:LEU:HD23 | 5:E:40:LYS:H | 1.37 | 0.90 |
| 7:H:12:ARG:H | 7:H:12:ARG:CD | 1.82 | 0.90 |
| 3:B:1069:TRP:CD1 | 3:B:1088:LEU:HD22 | 2.07 | 0.90 |
| 2:C:390:MET:HB2 | 5:E:56:GLU:HG3 | 1.53 | 0.90 |
| 2:G:310:ILE:O | 2:G:314:LEU:HD23 | 1.69 | 0.90 |
| 5:T:179:LYS:HZ1 | 6:U:82:GLU:H | 1.17 | 0.90 |
| 2:C:337:GLU:HG2 | 2:C:338:LYS:H | 1.37 | 0.90 |
| 2:C:310:ILE:O | 2:C:314:LEU:HD23 | 1.72 | 0.90 |
| 3:R:874:ILE:HD12 | 3:R:874:ILE:H | 1.36 | 0.90 |
| 6:U:18:LYS:HE2 | 6:U:41:LEU:HB3 | 1.54 | 0.90 |
| 1:A:868:VAL:HG22 | 2:C:39:LYS:NZ | 1.85 | 0.89 |
| 1:A:647:ARG:HH11 | 3:B:965:ASP:HB2 | 1.36 | 0.89 |
| 3:R:437:GLN:HB3 | 3:R:438:PRO:HD2 | 1.54 | 0.89 |
| 3:R:560:THR:HG22 | 3:R:562:PHE:N | 1.86 | 0.89 |
| 3:R:221:ILE:HG21 | 3:R:226:LEU:HG | 1.55 | 0.89 |
| 3:R:854:GLU:HA | 3:R:859:ASN:O | 1.72 | 0.89 |
| 1:A:760:GLY:HA3 | 3:B:447:GLY:HA3 | 1.53 | 0.89 |
| 3:B:276:VAL:HG12 | 3:B:277:ALA:H | 1.36 | 0.89 |
| 3:B:702:LEU:H | 3:B:721:ASN:HD21 | 0.91 | 0.89 |
| 8:W:90:LEU:HD23 | 8:W:90:LEU:N | 1.88 | 0.89 |
| 3:B:1050:LEU:HD23 | 3:B:1051:ASP:H | 1.38 | 0.89 |
| 2:C:262:LEU:HD22 | 2:C:269:VAL:HG13 | 1.55 | 0.89 |
| 3:R:702:LEU:H | 3:R:721:ASN:ND2 | 1.69 | 0.89 |
| 3:B:38:LYS:HG3 | 3:B:39:LEU:H | 1.35 | 0.89 |
| 5:E:179:LYS:NZ | 6:F:79:THR:HB | 1.88 | 0.89 |
| 2:C:80:GLU:HB3 | 2:C:81:PRO:HD3 | 1.55 | 0.89 |
| 3:B:373:LYS:HE3 | 3:B:375:ARG:HD2 | 1.53 | 0.89 |
| 1:Q:365:VAL:HG11 | 1:Q:401:LEU:HD11 | 1.54 | 0.89 |
| 3:R:276:VAL:HG12 | 3:R:277:ALA:H | 1.38 | 0.89 |
| 3:R:588:LEU:HD13 | 3:R:612:LYS:HB3 | 1.51 | 0.89 |
| 1:Q:637:ARG:HH11 | 3:R:974:ARG:HH12 | 1.19 | 0.89 |
| 4:S:44:VAL:HA | 4:S:143:ALA:HA | 1.55 | 0.89 |
| 1:Q:421:ARG:HB2 | 1:Q:462:MET:HE3 | 1.55 | 0.89 |
| 11:Z:26:CYS:HB2 | 11:Z:27:PRO:HD2 | 1.55 | 0.89 |
| 3:B:700:ARG:HG3 | 3:B:714:THR:HG22 | 1.52 | 0.89 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 2:C:289:ALA:O | 2:C:292:ILE:HG22 | 1.73 | 0.89 |
| 9:L:64:THR:HG22 | 9:L:65:PRO:HD2 | 1.52 | 0.89 |
| 1:A:600:LYS:HE3 | 1:A:732:GLY:HA2 | 1.55 | 0.89 |
| 1:Q:308:ARG:NH2 | 3:R:1099:LEU:HD13 | 1.86 | 0.89 |
| 3:R:554:ASN:HD21 | 3:R:576:ARG:HH21 | 1.15 | 0.89 |
| 1:A:249:LEU:HD13 | 1:A:266:TRP:CE3 | 2.07 | 0.88 |
| 3:B:1060:VAL:HG12 | 3:B:1065:GLY:HA3 | 1.54 | 0.88 |
| 3:B:591:ILE:HG12 | 3:B:612:LYS:HZ2 | 1.38 | 0.88 |
| 2:C:340:SER:CB | 2:C:371:GLU:HG2 | 2.02 | 0.88 |
| 2:G:340:SER:CB | 2:G:371:GLU:HG2 | 2.02 | 0.88 |
| 1:Q:16:PRO:HD3 | 1:Q:206:TRP:CD1 | 2.06 | 0.88 |
| 1:Q:503:ILE:HD11 | 1:Q:733:ALA:N | 1.88 | 0.88 |
| 3:B:851:LEU:HA | 11:P:35:PHE:HB3 | 1.54 | 0.88 |
| 3:B:60:LEU:HD22 | 3:B:98:LEU:HD21 | 1.53 | 0.88 |
| 1:A:875:VAL:O | 1:A:877:GLY:N | 2.06 | 0.88 |
| 1:Q:203:ARG:HG3 | 1:Q:203:ARG:HH11 | 1.38 | 0.88 |
| 1:Q:518:LYS:HE3 | 1:Q:544:GLU:HB2 | 1.56 | 0.88 |
| 3:B:437:GLN:HB3 | 3:B:438:PRO:HD2 | 1.52 | 0.88 |
| 4:D:230:ILE:HG13 | 4:D:242:LEU:HD21 | 1.56 | 0.88 |
| 1:Q:875:VAL:O | 1:Q:877:GLY:N | 2.07 | 0.88 |
| 1:Q:704:LEU:HD13 | 1:Q:781:PHE:HD1 | 1.37 | 0.88 |
| 3:R:602:ILE:HG22 | 3:R:603:THR:H | 1.39 | 0.88 |
| 3:B:1011:ILE:H | 3:B:1011:ILE:HD12 | 1.37 | 0.88 |
| 3:B:560:THR:HG22 | 3:B:562:PHE:N | 1.86 | 0.88 |
| 8:K:39:ARG:HD3 | 8:K:74:LEU:HD23 | 1.53 | 0.88 |
| 10:N:3:ILE:HD12 | 10:N:3:ILE:H | 1.36 | 0.88 |
| 3:B:416:ARG:NH1 | 3:B:687:ARG:NH2 | 2.21 | 0.88 |
| 2:C:145:GLU:HA | 2:C:239:ARG:H | 1.36 | 0.88 |
| 1:Q:704:LEU:HD22 | 1:Q:781:PHE:CE1 | 2.09 | 0.88 |
| 1:A:290:ARG:HH11 | 1:A:291:SER:HB2 | 1.39 | 0.88 |
| 3:B:403:TRP:O | 3:B:404:VAL:HG23 | 1.73 | 0.88 |
| 2:G:145:GLU:HA | 2:G:239:ARG:H | 1.38 | 0.88 |
| 1:A:503:ILE:HD11 | 1:A:733:ALA:N | 1.89 | 0.88 |
| 1:A:590:ASN:ND2 | 3:R:377:ARG:HB2 | 1.88 | 0.88 |
| 3:R:771:ASP:HB2 | 3:R:816:PRO:HD3 | 1.54 | 0.88 |
| 5:E:79:PRO:HG3 | 5:E:160:ILE:HD11 | 1.54 | 0.87 |
| 1:A:548:GLY:O | 1:A:551:VAL:HG12 | 1.73 | 0.87 |
| 1:Q:807:VAL:HG21 | 3:R:443:ARG:HD3 | 1.55 | 0.87 |
| 3:B:769:GLN:O | 3:B:770:GLU:HB3 | 1.74 | 0.87 |
| 1:A:283:GLY:C | 1:A:285:PRO:HD2 | 1.95 | 0.87 |
| 3:B:702:LEU:N | 3:B:721:ASN:HD21 | 1.72 | 0.87 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 5:E:116:ASP:CG | 5:E:117:THR:H | 1.78 | 0.87 |
| 5:E:179:LYS:HZ3 | 6:F:79:THR:HB | 1.40 | 0.87 |
| 8:K:53:ILE:H | 8:K:53:ILE:HD12 | 1.37 | 0.87 |
| 9:X:64:THR:HG22 | 9:X:65:PRO:HD2 | 1.54 | 0.87 |
| 3:R:1074:LYS:HB3 | 3:R:1076:LYS:HE2 | 1.56 | 0.87 |
| 3:R:569:ASN:CB | 3:R:574:ARG:HH22 | 1.88 | 0.87 |
| 3:B:554:ASN:HD21 | 3:B:576:ARG:HH21 | 1.17 | 0.87 |
| 2:G:55:ALA:HA | 2:G:58:GLU:CG | 2.03 | 0.87 |
| 1:Q:249:LEU:HD13 | 1:Q:266:TRP:CE3 | 2.08 | 0.87 |
| 5:T:116:ASP:CG | 5:T:117:THR:H | 1.78 | 0.87 |
| 1:A:16:PRO:HD3 | 1:A:206:TRP:CD1 | 2.09 | 0.87 |
| 1:A:532:ILE:HD11 | 9:L:56:LYS:HD3 | 1.57 | 0.87 |
| 10:N:38:LEU:HD23 | 10:N:39:GLY:H | 1.40 | 0.87 |
| 1:Q:563:HIS:HB2 | 1:Q:872:PHE:HE2 | 1.39 | 0.87 |
| 3:R:536:LEU:HD11 | 3:R:540:ILE:HD12 | 1.57 | 0.87 |
| 3:R:773:ILE:HG12 | 3:R:813:LYS:HG2 | 1.57 | 0.87 |
| 1:A:518:LYS:HE3 | 1:A:544:GLU:HB2 | 1.56 | 0.86 |
| 11:P:46:LYS:H | 11:P:46:LYS:CD | 1.88 | 0.86 |
| 1:A:604:GLY:C | 1:A:606:GLN:H | 1.74 | 0.86 |
| 4:S:230:ILE:HG13 | 4:S:242:LEU:HD21 | 1.57 | 0.86 |
| 5:T:39:LEU:HD23 | 5:T:40:LYS:H | 1.40 | 0.86 |
| 3:B:1080:PRO:O | 3:B:1081:ILE:HG13 | 1.75 | 0.86 |
| 3:B:497:VAL:HG12 | 3:B:498:GLU:N | 1.90 | 0.86 |
| 4:D:40:ALA:HB3 | 4:D:156:PHE:HE2 | 1.41 | 0.86 |
| 3:R:1069:TRP:CD1 | 3:R:1088:LEU:HD22 | 2.10 | 0.86 |
| 3:R:416:ARG:NH1 | 3:R:687:ARG:NH2 | 2.23 | 0.86 |
| 3:R:650:ILE:H | 3:R:650:ILE:CD1 | 1.88 | 0.86 |
| 3:R:851:LEU:HA | 11:Z:35:PHE:HB3 | 1.57 | 0.86 |
| 3:R:591:ILE:HG12 | 3:R:612:LYS:HZ2 | 1.40 | 0.86 |
| 3:R:1011:ILE:HD12 | 3:R:1011:ILE:H | 1.39 | 0.86 |
| 3:R:517:TRP:HD1 | 3:R:531:GLN:H | 1.20 | 0.86 |
| 1:A:749:GLN:N | 1:A:781:PHE:HA | 1.89 | 0.86 |
| 3:B:339:ALA:HB2 | 3:B:618:ALA:HB3 | 1.58 | 0.86 |
| 4:D:190:LEU:CD2 | 4:D:195:LEU:HA | 2.05 | 0.86 |
| 2:G:290:ARG:HG3 | 2:G:321:THR:OG1 | 1.75 | 0.86 |
| 2:G:393:ILE:HG21 | 2:G:395:ARG:HH21 | 1.41 | 0.86 |
| 3:R:943:THR:HG22 | 3:R:944:PRO:HD2 | 1.55 | 0.86 |
| 3:B:764:LYS:HZ3 | 3:B:814:VAL:N | 1.73 | 0.86 |
| 2:G:392:PRO:HB3 | 5:T:22:LEU:HD11 | 1.58 | 0.86 |
| 1:Q:491:TYR:HB3 | 1:Q:607:GLN:OE1 | 1.73 | 0.86 |
| 1:Q:749:GLN:N | 1:Q:781:PHE:HA | 1.90 | 0.86 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 3:R:172:VAL:HG22 | 3:R:189:ILE:HD11 | 1.54 | 0.86 |
| 3:R:769:GLN:O | 3:R:770:GLU:HB3 | 1.75 | 0.86 |
| 3:B:943:THR:HG22 | 3:B:944:PRO:HD2 | 1.55 | 0.86 |
| 2:G:115:LYS:O | 2:G:116:VAL:HG13 | 1.74 | 0.86 |
| 7:V:42:LEU:HD11 | 7:V:80:TYR:HB2 | 1.58 | 0.86 |
| 2:G:270:ALA:HA | 7:V:14:HIS:ND1 | 1.91 | 0.86 |
| 3:R:569:ASN:HB3 | 3:R:574:ARG:NH2 | 1.91 | 0.85 |
| 3:R:700:ARG:HG3 | 3:R:714:THR:HG22 | 1.55 | 0.85 |
| 10:N:7:CYS:HB3 | 10:N:45:CYS:SG | 2.16 | 0.85 |
| 1:A:4:LYS:HD3 | 3:B:1091:VAL:HB | 1.59 | 0.85 |
| 11:P:46:LYS:HD2 | 11:P:46:LYS:N | 1.90 | 0.85 |
| 1:Q:283:GLY:C | 1:Q:285:PRO:HD2 | 1.96 | 0.85 |
| 3:R:587:PRO:O | 3:R:588:LEU:HD23 | 1.76 | 0.85 |
| 4:S:190:LEU:CD2 | 4:S:195:LEU:HA | 2.06 | 0.85 |
| 8:W:39:ARG:HD3 | 8:W:74:LEU:HD23 | 1.57 | 0.85 |
| 3:B:539:LYS:O | 3:B:543:ARG:HG3 | 1.75 | 0.85 |
| 1:Q:290:ARG:HH11 | 1:Q:291:SER:HB2 | 1.40 | 0.85 |
| 1:Q:507:TYR:OH | 1:Q:727:VAL:HG13 | 1.77 | 0.85 |
| 3:R:560:THR:HB | 3:R:563:ILE:HB | 1.57 | 0.85 |
| 2:C:290:ARG:HG3 | 2:C:321:THR:OG1 | 1.76 | 0.85 |
| 11:Z:46:LYS:N | 11:Z:46:LYS:HD2 | 1.90 | 0.85 |
| 11:Z:46:LYS:CD | 11:Z:46:LYS:H | 1.89 | 0.85 |
| 3:B:569:ASN:CB | 3:B:574:ARG:HH22 | 1.90 | 0.85 |
| 1:Q:473:ILE:HD12 | 1:Q:474:ALA:N | 1.90 | 0.85 |
| 3:R:248:VAL:HG11 | 3:R:329:ARG:HH12 | 1.42 | 0.85 |
| 1:A:853:ASP:HB2 | 2:C:311:ARG:HH12 | 1.41 | 0.85 |
| 3:B:458:THR:CG2 | 3:B:465:GLY:H | 1.88 | 0.85 |
| 3:R:338:TYR:HB2 | 3:R:448:THR:HG21 | 1.57 | 0.85 |
| 3:R:458:THR:CG2 | 3:R:465:GLY:H | 1.90 | 0.85 |
| 2:G:391:ARG:HH11 | 2:G:391:ARG:HG3 | 1.41 | 0.85 |
| 1:Q:256:GLY:O | 1:Q:258:PRO:HD3 | 1.77 | 0.85 |
| 2:C:244:LYS:HE2 | 2:C:247:ASP:HA | 1.59 | 0.85 |
| 2:G:104:LEU:HB3 | 2:G:105:PRO:HD3 | 1.56 | 0.85 |
| 1:A:331:ASN:O | 1:A:332:ILE:HB | 1.75 | 0.84 |
| 1:A:558:LYS:HG3 | 3:R:104:GLU:HB2 | 1.59 | 0.84 |
| 3:R:797:VAL:HB | 11:Z:36:MET:HE1 | 1.58 | 0.84 |
| 1:A:563:HIS:HB2 | 1:A:872:PHE:HE2 | 1.41 | 0.84 |
| 3:R:672:MET:HG2 | 3:R:993:LEU:HD21 | 1.59 | 0.84 |
| 1:A:491:TYR:HB3 | 1:A:607:GLN:OE1 | 1.78 | 0.84 |
| 7:H:11:PRO:HG2 | 7:H:50:PRO:O | 1.76 | 0.84 |
| 1:Q:317:ARG:HA | 3:R:1027:ARG:HA | 1.58 | 0.84 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:238:LYS:HZ2 | 1:A:276:TYR:CA | 1.91 | 0.84 |
| 3:B:1014:ARG:HG3 | 3:B:1095:TYR:CD2 | 2.13 | 0.84 |
| 3:B:119:LEU:HD12 | 3:B:120:PRO:HD2 | 1.58 | 0.84 |
| 3:B:325:LEU:HD21 | 3:B:332:PRO:HD3 | 1.59 | 0.84 |
| 3:B:874:ILE:N | 3:B:874:ILE:HD12 | 1.91 | 0.84 |
| 10:N:7:CYS:SG | 10:N:48:MET:HG3 | 2.17 | 0.84 |
| 3:B:418:ASN:HD21 | 3:B:420:LEU:HB3 | 1.43 | 0.84 |
| 3:B:587:PRO:O | 3:B:588:LEU:HD23 | 1.76 | 0.84 |
| 2:C:389:THR:HG21 | 8:K:79:ARG:NH1 | 1.93 | 0.84 |
| 2:C:70:ILE:HA | 2:C:73:VAL:HG22 | 1.60 | 0.84 |
| 3:B:851:LEU:HG | 11:P:35:PHE:HD2 | 1.39 | 0.84 |
| 1:Q:828:SER:HB2 | 2:G:72:ILE:HD11 | 1.57 | 0.84 |
| 1:A:352:ARG:HD3 | 1:A:406:ILE:HD12 | 1.57 | 0.84 |
| 5:E:75:ILE:HG21 | 6:F:21:LEU:HD21 | 1.59 | 0.84 |
| 2:G:244:LYS:HE2 | 2:G:247:ASP:HA | 1.59 | 0.84 |
| 3:R:922:GLY:HA2 | 3:R:925:MET:HB2 | 1.58 | 0.84 |
| 3:B:536:LEU:HD11 | 3:B:540:ILE:HD12 | 1.59 | 0.84 |
| 2:G:262:LEU:HD22 | 2:G:269:VAL:HG13 | 1.58 | 0.84 |
| 3:R:696:HIS:ND1 | 4:S:57:ILE:HD11 | 1.92 | 0.84 |
| 1:A:527:VAL:HG13 | 1:A:630:ASN:HB3 | 1.59 | 0.83 |
| 3:B:473:MET:HA | 3:B:577:ARG:HH21 | 1.38 | 0.83 |
| 3:R:803:GLU:HB3 | 3:R:805:LYS:NZ | 1.92 | 0.83 |
| 1:A:290:ARG:NH1 | 1:A:291:SER:HB2 | 1.92 | 0.83 |
| 1:A:365:VAL:HG11 | 1:A:401:LEU:HD11 | 1.60 | 0.83 |
| 3:B:191:SER:HA | 3:B:300:HIS:NE2 | 1.92 | 0.83 |
| 2:G:274:THR:HG22 | 2:G:275:ASN:N | 1.92 | 0.83 |
| 1:A:502:TYR:HE1 | 1:A:636:ILE:HD11 | 1.43 | 0.83 |
| 1:A:317:ARG:HA | 3:B:1027:ARG:HA | 1.60 | 0.83 |
| 10:N:60:ILE:HG23 | 10:N:61:HIS:H | 1.40 | 0.83 |
| 3:R:189:ILE:HB | 3:R:203:GLU:HB2 | 1.60 | 0.83 |
| 3:R:204:ARG:HB2 | 3:R:213:SER:OG | 1.78 | 0.83 |
| 3:B:579:LEU:HD12 | 3:B:616:LEU:HD12 | 1.58 | 0.83 |
| 1:Q:548:GLY:O | 1:Q:551:VAL:HG12 | 1.78 | 0.83 |
| 3:B:315:LEU:O | 3:B:319:ILE:HG12 | 1.79 | 0.83 |
| 4:D:131:VAL:HG22 | 4:D:132:LEU:N | 1.90 | 0.83 |
| 1:Q:527:VAL:HG13 | 1:Q:630:ASN:HB3 | 1.60 | 0.83 |
| 3:R:60:LEU:HD22 | 3:R:98:LEU:HD21 | 1.58 | 0.83 |
| 3:R:451:GLY:H | 3:R:647:ILE:HG23 | 1.42 | 0.83 |
| 3:B:330:ARG:O | 3:B:331:GLU:HB2 | 1.78 | 0.83 |
| 3:B:338:TYR:HB2 | 3:B:448:THR:HG21 | 1.60 | 0.83 |
| 3:B:517:TRP:HD1 | 3:B:531:GLN:H | 1.23 | 0.83 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 10:N:64:ARG:H | 10:N:64:ARG:HD3 | 1.42 | 0.83 |
| 3:R:1014:ARG:HG3 | 3:R:1095:TYR:CD2 | 2.14 | 0.83 |
| 1:Q:369:PRO:CB | 1:Q:376:ASN:HB3 | 2.08 | 0.83 |
| 3:R:582:VAL:HG13 | 3:R:586:ASN:N | 1.93 | 0.83 |
| 1:Q:647:ARG:NH1 | 3:R:965:ASP:HB2 | 1.93 | 0.83 |
| 4:S:131:VAL:HG22 | 4:S:132:LEU:N | 1.93 | 0.83 |
| 10:Y:60:ILE:HG23 | 10:Y:61:HIS:H | 1.43 | 0.83 |
| 3:B:582:VAL:HG13 | 3:B:586:ASN:N | 1.94 | 0.83 |
| 1:Q:290:ARG:NH1 | 1:Q:291:SER:HB2 | 1.94 | 0.83 |
| 3:R:591:ILE:HD12 | 3:R:591:ILE:H | 1.43 | 0.83 |
| 1:A:219:ILE:HD13 | 1:A:219:ILE:H | 1.43 | 0.83 |
| 3:B:591:ILE:H | 3:B:591:ILE:HD12 | 1.41 | 0.83 |
| 2:G:337:GLU:HG2 | 2:G:338:LYS:H | 1.44 | 0.83 |
| 2:G:391:ARG:HH22 | 8:W:39:ARG:NH1 | 1.75 | 0.83 |
| 3:R:702:LEU:N | 3:R:721:ASN:HD21 | 1.76 | 0.83 |
| 3:B:702:LEU:HD13 | 10:N:47:ARG:CZ | 2.08 | 0.83 |
| 3:R:330:ARG:O | 3:R:331:GLU:HB2 | 1.79 | 0.83 |
| 3:R:665:ARG:HG3 | 3:R:920:THR:HG21 | 1.60 | 0.83 |
| 3:B:59:ARG:HH22 | 3:B:107:ILE:HB | 1.44 | 0.82 |
| 3:R:873:THR:HG22 | 3:R:874:ILE:N | 1.94 | 0.82 |
| 5:T:53:THR:HB | 5:T:71:GLU:N | 1.92 | 0.82 |
| 7:V:28:ALA:HB1 | 7:V:62:ILE:HD11 | 1.60 | 0.82 |
| 3:B:1069:TRP:CH2 | 3:B:1077:TYR:HB2 | 2.14 | 0.82 |
| 3:B:220:LYS:H | 3:B:275:ARG:NH1 | 1.77 | 0.82 |
| 4:D:144:ARG:C | 4:D:145:LEU:HD12 | 2.00 | 0.82 |
| 1:Q:853:ASP:HB2 | 2:G:311:ARG:HH12 | 1.44 | 0.82 |
| 1:Q:716:SER:HB2 | 1:Q:726:TYR:OH | 1.79 | 0.82 |
| 5:T:39:LEU:HD22 | 5:T:42:LEU:HG | 1.61 | 0.82 |
| 1:A:647:ARG:NH1 | 3:B:965:ASP:HB2 | 1.95 | 0.82 |
| 3:B:904:VAL:HG21 | 10:N:42:ARG:HE | 1.42 | 0.82 |
| 3:R:98:LEU:HD12 | 3:R:116:ILE:HD11 | 1.61 | 0.82 |
| 4:S:25:VAL:HG21 | 4:S:226:TYR:HD1 | 1.45 | 0.82 |
| 1:A:691:THR:HG22 | 1:A:692:LEU:HD12 | 1.58 | 0.82 |
| 3:B:1072:LYS:HG2 | 3:B:1077:TYR:HB3 | 1.59 | 0.82 |
| 2:G:57:LYS:HA | 2:G:57:LYS:HE3 | 1.59 | 0.82 |
| 3:R:497:VAL:HG12 | 3:R:498:GLU:N | 1.91 | 0.82 |
| 3:R:902:LYS:HB2 | 10:Y:42:ARG:NH1 | 1.94 | 0.82 |
| 3:B:246:PRO:HG2 | 3:B:249:GLN:HG2 | 1.59 | 0.82 |
| 3:B:490:TYR:HE1 | 3:B:527:ILE:HG21 | 1.43 | 0.82 |
| 3:R:220:LYS:H | 3:R:275:ARG:NH1 | 1.77 | 0.82 |
| 4:S:40:ALA:HB3 | 4:S:156:PHE:HE2 | 1.45 | 0.82 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 3:B:453:MET:HG2 | 3:B:468:LYS:HD2 | 1.61 | 0.82 |
| 2:C:57:LYS:HA | 2:C:57:LYS:HE3 | 1.62 | 0.82 |
| 5:E:39:LEU:HD22 | 5:E:42:LEU:HG | 1.62 | 0.82 |
| 6:U:19:LYS:HG3 | 6:U:49:ALA:HB2 | 1.60 | 0.82 |
| 10:Y:64:ARG:HD3 | 10:Y:64:ARG:H | 1.44 | 0.82 |
| 3:B:497:VAL:HG23 | 3:B:527:ILE:O | 1.80 | 0.82 |
| 3:B:560:THR:HB | 3:B:563:ILE:HB | 1.58 | 0.82 |
| 3:B:797:VAL:HB | 11:P:36:MET:HE1 | 1.59 | 0.82 |
| 4:D:44:VAL:HA | 4:D:143:ALA:HA | 1.62 | 0.82 |
| 4:D:53:LEU:HD22 | 4:D:57:ILE:HG21 | 1.62 | 0.82 |
| 7:H:42:LEU:HD11 | 7:H:80:TYR:HB2 | 1.60 | 0.82 |
| 3:R:373:LYS:HE3 | 3:R:375:ARG:HD2 | 1.60 | 0.82 |
| 1:A:747:LEU:HD11 | 1:A:790:LEU:HD21 | 1.60 | 0.82 |
| 3:B:803:GLU:HB3 | 3:B:805:LYS:NZ | 1.94 | 0.82 |
| 3:B:933:ALA:HB3 | 10:N:47:ARG:HH12 | 1.44 | 0.82 |
| 3:R:59:ARG:HH22 | 3:R:107:ILE:HB | 1.44 | 0.82 |
| 5:T:79:PRO:HG3 | 5:T:160:ILE:HD11 | 1.59 | 0.82 |
| 1:A:704:LEU:HD13 | 1:A:781:PHE:HD1 | 1.43 | 0.82 |
| 1:A:807:VAL:HG21 | 3:B:443:ARG:HD3 | 1.61 | 0.82 |
| 3:B:569:ASN:HB3 | 3:B:574:ARG:NH2 | 1.94 | 0.82 |
| 2:C:393:ILE:HG21 | 2:C:395:ARG:HH21 | 1.45 | 0.82 |
| 5:E:82:GLN:HA | 5:E:145:ARG:HG3 | 1.62 | 0.82 |
| 2:G:269:VAL:HA | 2:G:272:VAL:HG23 | 1.62 | 0.82 |
| 7:H:28:ALA:HB1 | 7:H:62:ILE:HD11 | 1.60 | 0.82 |
| 3:R:246:PRO:HG2 | 3:R:249:GLN:HG2 | 1.60 | 0.82 |
| 3:R:418:ASN:HD21 | 3:R:420:LEU:HB3 | 1.43 | 0.82 |
| 3:R:490:TYR:HE1 | 3:R:527:ILE:HG21 | 1.43 | 0.82 |
| 1:A:203:ARG:HH11 | 1:A:203:ARG:HG3 | 1.43 | 0.81 |
| 3:B:355:ARG:HB2 | 3:B:355:ARG:NH1 | 1.95 | 0.81 |
| 3:B:874:ILE:H | 3:B:874:ILE:CD1 | 1.91 | 0.81 |
| 1:A:704:LEU:HD22 | 1:A:781:PHE:CE1 | 2.13 | 0.81 |
| 3:B:248:VAL:HG11 | 3:B:329:ARG:HH12 | 1.43 | 0.81 |
| 3:B:700:ARG:O | 10:N:51:SER:HB2 | 1.80 | 0.81 |
| 3:R:325:LEU:HD21 | 3:R:332:PRO:HD3 | 1.60 | 0.81 |
| 7:V:11:PRO:HG2 | 7:V:50:PRO:O | 1.80 | 0.81 |
| 1:A:238:LYS:NZ | 1:A:297:THR:CB | 2.37 | 0.81 |
| 3:B:650:ILE:H | 3:B:650:ILE:CD1 | 1.90 | 0.81 |
| 10:N:38:LEU:HD23 | 10:N:39:GLY:N | 1.95 | 0.81 |
| 3:R:191:SER:HA | 3:R:300:HIS:NE2 | 1.94 | 0.81 |
| 3:R:453:MET:HG2 | 3:R:468:LYS:HD2 | 1.60 | 0.81 |
| 3:R:687:ARG:NH1 | 3:R:689:ASP:OD1 | 2.13 | 0.81 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|------------------|--------------------------|-------------------|
| 3:R:726:VAL:HG12 | 3:R:912:PRO:HG3 | 1.61 | 0.81 |
| 3:R:665:ARG:HG3 | 3:R:920:THR:CG2 | 2.10 | 0.81 |
| 3:B:204:ARG:HB2 | 3:B:213:SER:OG | 1.79 | 0.81 |
| 3:R:539:LYS:O | 3:R:543:ARG:HG3 | 1.79 | 0.81 |
| 5:E:179:LYS:HZ1 | 6:F:82:GLU:HG3 | 1.45 | 0.81 |
| 3:R:1050:LEU:HD23 | 3:R:1051:ASP:H | 1.42 | 0.81 |
| 1:Q:4:LYS:NZ | 3:R:1115:LEU:HB3 | 1.95 | 0.81 |
| 3:R:119:LEU:HD12 | 3:R:120:PRO:HD2 | 1.61 | 0.81 |
| 3:R:579:LEU:HD12 | 3:R:616:LEU:HD12 | 1.61 | 0.81 |
| 3:B:589:VAL:O | 3:B:591:ILE:N | 2.14 | 0.81 |
| 3:B:602:ILE:HG22 | 3:B:603:THR:H | 1.43 | 0.81 |
| 1:Q:691:THR:HG22 | 1:Q:692:LEU:HD12 | 1.61 | 0.81 |
| 4:S:66:PRO:HB2 | 4:S:124:ILE:HG12 | 1.61 | 0.81 |
| 10:Y:38:LEU:HD23 | 10:Y:39:GLY:H | 1.46 | 0.81 |
| 3:B:962:TYR:OH | 10:N:42:ARG:HD2 | 1.80 | 0.81 |
| 5:E:53:THR:HB | 5:E:71:GLU:N | 1.95 | 0.81 |
| 3:R:50:PRO:HG2 | 3:R:51:THR:H | 1.46 | 0.81 |
| 1:A:279:ASN:HB2 | 1:A:297:THR:CG2 | 2.10 | 0.81 |
| 1:A:743:MET:O | 1:A:785:SER:HB2 | 1.80 | 0.81 |
| 3:B:1004:ARG:HH21 | 3:B:1007:GLY:H | 1.29 | 0.81 |
| 3:B:14:ILE:O | 3:B:17:TYR:HB3 | 1.80 | 0.81 |
| 3:B:848:ASP:HB2 | 3:B:867:ARG:HB2 | 1.61 | 0.81 |
| 3:R:700:ARG:O | 10:Y:51:SER:HB2 | 1.80 | 0.81 |
| 3:R:851:LEU:HG | 11:Z:35:PHE:HD2 | 1.44 | 0.81 |
| 5:T:53:THR:HG23 | 5:T:55:GLU:HG3 | 1.63 | 0.81 |
| 1:A:238:LYS:NZ | 1:A:276:TYR:HA | 1.95 | 0.81 |
| 3:R:197:ARG:HH22 | 3:R:359:LYS:HG2 | 1.46 | 0.81 |
| 3:R:813:LYS:O | 3:R:814:VAL:HG23 | 1.80 | 0.81 |
| 2:G:390:MET:HB2 | 5:T:56:GLU:CG | 2.11 | 0.81 |
| 3:R:902:LYS:HB3 | 10:Y:42:ARG:HD3 | 1.64 | 0.81 |
| 3:R:933:ALA:HB3 | 10:Y:47:ARG:HH12 | 1.46 | 0.80 |
| 4:D:190:LEU:HD22 | 4:D:195:LEU:CA | 2.12 | 0.80 |
| 3:R:88:ARG:NH1 | 3:R:854:GLU:O | 2.13 | 0.80 |
| 3:B:451:GLY:H | 3:B:647:ILE:HG23 | 1.44 | 0.80 |
| 8:K:63:SER:C | 8:K:65:ALA:H | 1.85 | 0.80 |
| 3:R:962:TYR:OH | 10:Y:42:ARG:HD2 | 1.81 | 0.80 |
| 1:A:276:TYR:HD2 | 1:A:277:PHE:CE1 | 1.98 | 0.80 |
| 1:A:369:PRO:CB | 1:A:376:ASN:HB3 | 2.11 | 0.80 |
| 3:B:557:HIS:H | 3:B:623:ASN:ND2 | 1.78 | 0.80 |
| 3:B:813:LYS:O | 3:B:814:VAL:HG23 | 1.81 | 0.80 |
| 2:G:120:PRO:HA | 2:G:275:ASN:HD21 | 1.46 | 0.80 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 7:V:45:ILE:HG22 | 7:V:80:TYR:H | 1.45 | 0.80 |
| 1:A:181:ARG:O | 1:A:185:GLU:HG3 | 1.82 | 0.80 |
| 2:G:85:MET:HB3 | 2:G:304:GLN:OE1 | 1.82 | 0.80 |
| 3:R:248:VAL:HG21 | 3:R:329:ARG:HH22 | 1.45 | 0.80 |
| 3:R:361:PHE:HE1 | 3:R:385:VAL:HG13 | 1.45 | 0.80 |
| 3:R:602:ILE:HG22 | 3:R:603:THR:N | 1.96 | 0.80 |
| 4:S:13:ILE:CD1 | 4:S:238:PRO:HB2 | 2.12 | 0.80 |
| 1:Q:747:LEU:HD11 | 1:Q:790:LEU:HD21 | 1.63 | 0.80 |
| 3:R:403:TRP:O | 3:R:404:VAL:HG23 | 1.81 | 0.80 |
| 3:R:589:VAL:O | 3:R:591:ILE:N | 2.14 | 0.80 |
| 3:B:355:ARG:HB2 | 3:B:355:ARG:HH11 | 1.47 | 0.80 |
| 3:B:386:ARG:HB2 | 3:B:389:ILE:HD11 | 1.64 | 0.80 |
| 2:G:379:ILE:HD11 | 3:R:1042:ALA:HA | 1.62 | 0.80 |
| 3:R:1047:ASP:HA | 3:R:1051:ASP:HB2 | 1.64 | 0.80 |
| 5:T:82:GLN:HA | 5:T:145:ARG:HG3 | 1.63 | 0.80 |
| 3:B:189:ILE:HB | 3:B:203:GLU:HB2 | 1.61 | 0.80 |
| 3:B:88:ARG:NH1 | 3:B:854:GLU:O | 2.14 | 0.80 |
| 2:C:269:VAL:HA | 2:C:272:VAL:HG23 | 1.63 | 0.80 |
| 5:E:53:THR:HG23 | 5:E:55:GLU:HG3 | 1.63 | 0.80 |
| 3:R:764:LYS:NZ | 3:R:814:VAL:H | 1.79 | 0.80 |
| 4:S:37:PRO:HA | 4:S:148:GLY:O | 1.82 | 0.80 |
| 4:S:175:ASN:HA | 4:S:195:LEU:CD1 | 2.11 | 0.80 |
| 4:S:34:LEU:HD22 | 4:S:151:LYS:HB2 | 1.63 | 0.80 |
| 2:G:28:ILE:HB | 8:W:18:VAL:HG21 | 1.64 | 0.80 |
| 3:B:318:ALA:O | 3:B:321:LYS:HB2 | 1.81 | 0.80 |
| 3:B:475:GLN:HG2 | 3:B:476:ILE:H | 1.46 | 0.80 |
| 2:C:392:PRO:HB3 | 5:E:22:LEU:HD11 | 1.64 | 0.80 |
| 5:E:107:LEU:HD12 | 5:E:108:VAL:H | 1.45 | 0.80 |
| 3:B:702:LEU:HD13 | 10:N:47:ARG:NE | 1.96 | 0.80 |
| 1:Q:721:PRO:HA | 1:Q:726:TYR:HD1 | 1.46 | 0.80 |
| 3:R:1080:PRO:O | 3:R:1081:ILE:HG13 | 1.81 | 0.80 |
| 3:R:318:ALA:O | 3:R:321:LYS:HB2 | 1.82 | 0.80 |
| 1:A:57:LYS:HD2 | 1:A:60:THR:HA | 1.65 | 0.79 |
| 3:B:855:THR:HB | 3:B:857:GLU:HG2 | 1.64 | 0.79 |
| 5:T:107:LEU:HD12 | 5:T:108:VAL:H | 1.46 | 0.79 |
| 5:T:38:ILE:HG22 | 5:T:39:LEU:H | 1.47 | 0.79 |
| 6:F:19:LYS:HG3 | 6:F:49:ALA:HB2 | 1.62 | 0.79 |
| 3:R:1014:ARG:HG2 | 3:R:1014:ARG:HH11 | 1.48 | 0.79 |
| 3:R:450:TRP:HZ2 | 3:R:641:GLU:OE1 | 1.64 | 0.79 |
| 4:S:144:ARG:C | 4:S:145:LEU:HD12 | 2.03 | 0.79 |
| 7:V:12:ARG:N | 7:V:12:ARG:HD3 | 1.96 | 0.79 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:245:ILE:HD13 | 1:A:268:LEU:HB3 | 1.65 | 0.79 |
| 1:A:764:ARG:HB3 | 1:A:764:ARG:HH11 | 1.47 | 0.79 |
| 3:B:98:LEU:HD12 | 3:B:116:ILE:HD11 | 1.61 | 0.79 |
| 3:R:1004:ARG:NH1 | 3:R:1025:GLY:H | 1.81 | 0.79 |
| 10:Y:3:ILE:HD12 | 10:Y:3:ILE:H | 1.47 | 0.79 |
| 1:A:256:GLY:O | 1:A:258:PRO:HD3 | 1.81 | 0.79 |
| 3:B:249:GLN:HG3 | 3:B:250:ASN:N | 1.98 | 0.79 |
| 1:Q:764:ARG:HB3 | 1:Q:764:ARG:HH11 | 1.47 | 0.79 |
| 3:R:248:VAL:HA | 3:R:251:GLU:OE2 | 1.83 | 0.79 |
| 3:R:315:LEU:O | 3:R:319:ILE:HG12 | 1.83 | 0.79 |
| 3:R:801:GLU:HG3 | 11:Z:38:ARG:NH2 | 1.98 | 0.79 |
| 1:A:421:ARG:HB2 | 1:A:462:MET:HE3 | 1.65 | 0.79 |
| 3:B:403:TRP:C | 3:B:404:VAL:HG23 | 2.01 | 0.79 |
| 3:R:148:PRO:HG3 | 3:R:422:MET:HE3 | 1.65 | 0.79 |
| 3:R:579:LEU:O | 3:R:613:ILE:HG23 | 1.83 | 0.79 |
| 3:B:248:VAL:HG21 | 3:B:329:ARG:HH22 | 1.47 | 0.79 |
| 3:B:687:ARG:NH1 | 3:B:689:ASP:OD1 | 2.16 | 0.79 |
| 1:Q:181:ARG:O | 1:Q:185:GLU:HG3 | 1.82 | 0.79 |
| 1:Q:486:ILE:HD11 | 1:Q:628:MET:CE | 2.13 | 0.79 |
| 1:Q:541:ALA:HB1 | 1:Q:542:PRO:HD3 | 1.65 | 0.79 |
| 3:R:386:ARG:HB2 | 3:R:389:ILE:HD11 | 1.64 | 0.79 |
| 4:S:53:LEU:HD22 | 4:S:57:ILE:HG21 | 1.63 | 0.79 |
| 3:R:702:LEU:HD13 | 10:Y:47:ARG:CZ | 2.13 | 0.79 |
| 1:A:289:HIS:HB2 | 1:A:295:LEU:HD21 | 1.64 | 0.79 |
| 3:B:223:PHE:CE1 | 3:B:227:MET:HG3 | 2.18 | 0.79 |
| 3:B:64:ARG:O | 3:B:97:TRP:HB2 | 1.83 | 0.79 |
| 1:Q:452:PRO:HA | 1:Q:495:ILE:HD11 | 1.63 | 0.79 |
| 8:W:92:LEU:O | 8:W:92:LEU:HD23 | 1.82 | 0.79 |
| 1:A:446:ASN:HD22 | 1:A:446:ASN:C | 1.86 | 0.79 |
| 1:A:830:LEU:CD2 | 1:A:840:SER:HB3 | 2.13 | 0.79 |
| 3:B:739:ILE:HG23 | 3:B:909:ILE:HB | 1.63 | 0.79 |
| 7:H:12:ARG:N | 7:H:12:ARG:HD3 | 1.96 | 0.79 |
| 1:Q:16:PRO:HD3 | 1:Q:206:TRP:HD1 | 1.45 | 0.79 |
| 3:R:874:ILE:HD12 | 3:R:874:ILE:N | 1.98 | 0.79 |
| 4:S:190:LEU:HD22 | 4:S:195:LEU:CA | 2.12 | 0.79 |
| 5:T:179:LYS:NZ | 6:U:81:ASP:HB2 | 1.98 | 0.79 |
| 3:R:355:ARG:HB2 | 3:R:355:ARG:NH1 | 1.98 | 0.79 |
| 2:C:274:THR:HG22 | 2:C:275:ASN:N | 1.96 | 0.79 |
| 2:C:310:ILE:HD12 | 2:C:310:ILE:N | 1.98 | 0.79 |
| 1:Q:216:PRO:HG2 | 1:Q:219:ILE:HD12 | 1.65 | 0.79 |
| 1:Q:397:LEU:HA | 1:Q:400:THR:OG1 | 1.83 | 0.79 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 1:Q:324:THR:HG22 | 1:Q:325:VAL:H | 1.47 | 0.78 |
| 5:T:179:LYS:HZ2 | 6:U:79:THR:HB | 1.47 | 0.78 |
| 3:B:922:GLY:HA2 | 3:B:925:MET:HB2 | 1.65 | 0.78 |
| 10:N:1:MET:HB3 | 10:N:56:ILE:HD13 | 1.65 | 0.78 |
| 3:R:739:ILE:HG23 | 3:R:909:ILE:HB | 1.63 | 0.78 |
| 5:T:179:LYS:HZ1 | 6:U:82:GLU:N | 1.80 | 0.78 |
| 1:A:301:ARG:O | 1:A:302:LEU:HG | 1.83 | 0.78 |
| 1:A:716:SER:HB2 | 1:A:726:TYR:OH | 1.83 | 0.78 |
| 1:A:721:PRO:HA | 1:A:726:TYR:HD1 | 1.49 | 0.78 |
| 1:Q:14:LEU:HB3 | 3:R:1108:ILE:HG23 | 1.64 | 0.78 |
| 1:A:59:PRO:O | 1:A:60:THR:HG22 | 1.84 | 0.78 |
| 1:A:14:LEU:HB3 | 3:B:1108:ILE:HG23 | 1.66 | 0.78 |
| 3:B:248:VAL:HA | 3:B:251:GLU:OE2 | 1.84 | 0.78 |
| 2:C:145:GLU:HG2 | 2:C:240:ALA:H | 1.47 | 0.78 |
| 2:C:120:PRO:HA | 2:C:275:ASN:HD21 | 1.47 | 0.78 |
| 3:R:14:ILE:O | 3:R:17:TYR:HB3 | 1.83 | 0.78 |
| 10:Y:38:LEU:HD23 | 10:Y:39:GLY:N | 1.98 | 0.78 |
| 1:A:477:LYS:O | 1:A:481:LEU:HB2 | 1.82 | 0.78 |
| 2:G:383:THR:HG22 | 3:R:1042:ALA:H | 1.47 | 0.78 |
| 3:R:650:ILE:HD13 | 3:R:650:ILE:N | 1.97 | 0.78 |
| 1:A:293:ARG:NH1 | 1:A:296:ARG:HH22 | 1.79 | 0.78 |
| 1:A:530:VAL:HG13 | 1:A:530:VAL:O | 1.81 | 0.78 |
| 1:A:334:ILE:HD11 | 1:A:628:MET:HB3 | 1.64 | 0.78 |
| 3:B:234:THR:HG22 | 3:B:236:ARG:H | 1.49 | 0.78 |
| 1:Q:219:ILE:HD13 | 1:Q:219:ILE:H | 1.47 | 0.78 |
| 1:A:509:LEU:O | 1:A:548:GLY:HA3 | 1.84 | 0.78 |
| 3:B:602:ILE:HG22 | 3:B:603:THR:N | 1.98 | 0.78 |
| 3:B:873:THR:HG22 | 3:B:874:ILE:N | 1.96 | 0.78 |
| 4:D:66:PRO:HB2 | 4:D:124:ILE:HG12 | 1.65 | 0.78 |
| 3:R:1072:LYS:HG2 | 3:R:1077:TYR:HB3 | 1.63 | 0.78 |
| 3:R:355:ARG:HB2 | 3:R:355:ARG:HH11 | 1.49 | 0.78 |
| 1:A:486:ILE:HD11 | 1:A:628:MET:CE | 2.14 | 0.78 |
| 3:B:773:ILE:HG12 | 3:B:813:LYS:HG2 | 1.64 | 0.78 |
| 5:E:135:VAL:H | 5:E:174:TRP:HZ2 | 1.31 | 0.78 |
| 2:C:28:ILE:HD13 | 8:K:14:HIS:CB | 2.14 | 0.78 |
| 1:Q:59:PRO:O | 1:Q:60:THR:HG22 | 1.84 | 0.78 |
| 1:Q:600:LYS:HB2 | 1:Q:732:GLY:HA3 | 1.65 | 0.78 |
| 3:R:1069:TRP:CH2 | 3:R:1077:TYR:HB2 | 2.17 | 0.78 |
| 5:T:142:VAL:HG12 | 5:T:171:LYS:HA | 1.65 | 0.78 |
| 8:W:63:SER:C | 8:W:65:ALA:H | 1.86 | 0.78 |
| 3:B:450:TRP:HZ2 | 3:B:641:GLU:OE1 | 1.66 | 0.78 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 2:C:329:ILE:HA | 2:C:334:VAL:CG1 | 2.11 | 0.78 |
| 4:D:175:ASN:HA | 4:D:195:LEU:CD1 | 2.14 | 0.78 |
| 3:R:435:ARG:HH11 | 3:R:435:ARG:HG2 | 1.49 | 0.78 |
| 3:B:1033:ARG:HG3 | 3:B:1033:ARG:HH11 | 1.49 | 0.78 |
| 3:B:445:LEU:HD21 | 3:B:455:PRO:HA | 1.64 | 0.78 |
| 4:D:177:GLU:HB2 | 4:D:178:LYS:NZ | 1.99 | 0.78 |
| 4:D:25:VAL:HG21 | 4:D:226:TYR:HD1 | 1.47 | 0.78 |
| 2:G:111:VAL:CG1 | 2:G:329:ILE:HD12 | 2.14 | 0.78 |
| 1:Q:336:GLU:HA | 1:Q:434:ARG:O | 1.84 | 0.78 |
| 1:Q:563:HIS:HB2 | 1:Q:872:PHE:CE2 | 2.18 | 0.78 |
| 3:R:234:THR:HG22 | 3:R:236:ARG:H | 1.49 | 0.78 |
| 3:B:650:ILE:HD13 | 3:B:650:ILE:N | 1.98 | 0.77 |
| 3:B:852:ILE:HG23 | 3:B:862:VAL:HG22 | 1.66 | 0.77 |
| 2:G:70:ILE:HA | 2:G:73:VAL:HG22 | 1.65 | 0.77 |
| 1:Q:276:TYR:HD2 | 1:Q:277:PHE:CE1 | 2.01 | 0.77 |
| 1:Q:293:ARG:HG2 | 1:Q:296:ARG:NH2 | 2.00 | 0.77 |
| 1:A:324:THR:HG22 | 1:A:325:VAL:H | 1.47 | 0.77 |
| 1:Q:589:LYS:NZ | 1:Q:879:LYS:H | 1.81 | 0.77 |
| 3:R:361:PHE:CE1 | 3:R:385:VAL:HG13 | 2.18 | 0.77 |
| 7:V:15:TYR:HB3 | 7:V:16:LEU:HD12 | 1.66 | 0.77 |
| 10:Y:7:CYS:HB3 | 10:Y:45:CYS:SG | 2.24 | 0.77 |
| 3:B:749:MET:HB2 | 10:N:8:PHE:CD1 | 2.19 | 0.77 |
| 3:R:557:HIS:H | 3:R:623:ASN:ND2 | 1.82 | 0.77 |
| 4:S:4:ASN:HA | 9:X:90:LEU:HD22 | 1.66 | 0.77 |
| 5:T:18:PHE:HB2 | 8:W:48:PRO:HD2 | 1.65 | 0.77 |
| 3:R:749:MET:HB2 | 10:Y:8:PHE:CD1 | 2.20 | 0.77 |
| 1:A:339:VAL:HG21 | 1:A:435:VAL:HG23 | 1.65 | 0.77 |
| 1:A:728:MET:CE | 3:B:913:HIS:HA | 2.15 | 0.77 |
| 3:B:1047:ASP:HA | 3:B:1051:ASP:HB2 | 1.66 | 0.77 |
| 3:B:435:ARG:HH11 | 3:B:435:ARG:HG2 | 1.48 | 0.77 |
| 3:B:918:ARG:O | 3:B:920:THR:HG23 | 1.85 | 0.77 |
| 2:G:392:PRO:CB | 5:T:22:LEU:HD21 | 2.14 | 0.77 |
| 1:Q:464:LEU:HD13 | 1:Q:465:HIS:N | 2.00 | 0.77 |
| 3:R:497:VAL:HG23 | 3:R:527:ILE:O | 1.84 | 0.77 |
| 3:R:554:ASN:ND2 | 3:R:576:ARG:HH21 | 1.82 | 0.77 |
| 3:R:757:LEU:HD23 | 3:R:758:TYR:N | 2.00 | 0.77 |
| 3:R:803:GLU:HB3 | 3:R:805:LYS:HZ1 | 1.50 | 0.77 |
| 3:R:965:ASP:O | 3:R:967:THR:N | 2.17 | 0.77 |
| 5:T:145:ARG:NH2 | 5:T:169:LEU:HD11 | 2.00 | 0.77 |
| 3:B:764:LYS:NZ | 3:B:814:VAL:H | 1.81 | 0.77 |
| 3:B:726:VAL:HG12 | 3:B:912:PRO:HG3 | 1.66 | 0.77 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 3:B:965:ASP:O | 3:B:967:THR:N | 2.18 | 0.77 |
| 2:C:28:ILE:HD13 | 8:K:14:HIS:HB3 | 1.66 | 0.77 |
| 1:Q:289:HIS:HB2 | 1:Q:295:LEU:HD21 | 1.66 | 0.77 |
| 1:Q:475:GLU:CD | 2:G:383:THR:HG21 | 2.05 | 0.77 |
| 1:Q:57:LYS:HD2 | 1:Q:60:THR:HA | 1.67 | 0.77 |
| 1:Q:830:LEU:CD2 | 1:Q:840:SER:HB3 | 2.14 | 0.77 |
| 3:R:301:LEU:HD22 | 3:R:483:ARG:HH21 | 1.49 | 0.77 |
| 4:D:148:GLY:HA3 | 4:D:156:PHE:CD1 | 2.20 | 0.77 |
| 6:F:14:TYR:CD1 | 6:F:74:SER:HB2 | 2.19 | 0.77 |
| 2:G:281:GLU:OE1 | 2:G:326:VAL:HG12 | 1.84 | 0.77 |
| 7:H:15:TYR:HB3 | 7:H:16:LEU:HD12 | 1.67 | 0.77 |
| 3:R:1004:ARG:HH21 | 3:R:1007:GLY:H | 1.33 | 0.77 |
| 3:R:749:MET:HG2 | 3:R:750:TYR:CD1 | 2.20 | 0.77 |
| 3:B:361:PHE:HE1 | 3:B:385:VAL:HG13 | 1.49 | 0.77 |
| 3:B:902:LYS:HB2 | 10:N:42:ARG:NH1 | 2.00 | 0.77 |
| 3:B:702:LEU:HB3 | 10:N:47:ARG:NH2 | 1.98 | 0.77 |
| 1:Q:238:LYS:NZ | 1:Q:276:TYR:HA | 2.00 | 0.77 |
| 1:Q:509:LEU:O | 1:Q:548:GLY:HA3 | 1.84 | 0.77 |
| 1:Q:90:ILE:HG21 | 1:Q:208:ILE:HD11 | 1.67 | 0.77 |
| 3:R:1033:ARG:HG3 | 3:R:1033:ARG:HH11 | 1.50 | 0.77 |
| 5:T:75:ILE:HG21 | 6:U:21:LEU:HD21 | 1.67 | 0.77 |
| 7:V:45:ILE:HB | 7:V:79:ARG:HB3 | 1.67 | 0.77 |
| 3:B:50:PRO:HG2 | 3:B:51:THR:H | 1.50 | 0.77 |
| 2:G:145:GLU:HG2 | 2:G:240:ALA:H | 1.48 | 0.77 |
| 2:G:390:MET:HG3 | 5:T:57:GLY:N | 2.00 | 0.77 |
| 1:Q:262:ILE:HG12 | 1:Q:266:TRP:NE1 | 2.00 | 0.77 |
| 1:Q:339:VAL:HG21 | 1:Q:435:VAL:HG23 | 1.67 | 0.77 |
| 5:T:64:GLY:H | 8:W:41:LEU:CD2 | 1.97 | 0.77 |
| 8:W:18:VAL:HG12 | 8:W:22:LEU:HD12 | 1.66 | 0.77 |
| 9:X:31:THR:O | 9:X:35:ILE:HG12 | 1.85 | 0.77 |
| 3:B:640:LEU:HD23 | 3:B:641:GLU:N | 1.97 | 0.77 |
| 2:C:331:ARG:HD2 | 2:C:349:VAL:HG12 | 1.67 | 0.77 |
| 3:R:249:GLN:HG3 | 3:R:250:ASN:N | 1.99 | 0.77 |
| 3:R:554:ASN:HD21 | 3:R:576:ARG:NH2 | 1.83 | 0.77 |
| 3:R:855:THR:HB | 3:R:857:GLU:HG2 | 1.67 | 0.77 |
| 3:B:758:TYR:O | 3:B:759:SER:HB3 | 1.84 | 0.76 |
| 3:R:206:LYS:O | 3:R:210:PHE:HA | 1.85 | 0.76 |
| 4:S:8:LYS:HD2 | 4:S:13:ILE:HG12 | 1.65 | 0.76 |
| 3:R:248:VAL:HG11 | 3:R:329:ARG:NH1 | 2.00 | 0.76 |
| 3:R:654:ILE:H | 3:R:654:ILE:HD12 | 1.49 | 0.76 |
| 8:W:18:VAL:O | 8:W:22:LEU:HB2 | 1.85 | 0.76 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 3:B:749:MET:HG2 | 3:B:750:TYR:CD1 | 2.21 | 0.76 |
| 3:B:727:MET:HE3 | 3:B:898:PRO:HG3 | 1.67 | 0.76 |
| 2:C:85:MET:HB3 | 2:C:304:GLN:OE1 | 1.86 | 0.76 |
| 4:S:180:VAL:CG2 | 4:S:190:LEU:HG | 2.16 | 0.76 |
| 8:W:50:LEU:CD2 | 8:W:75:PRO:HD3 | 2.16 | 0.76 |
| 1:A:336:GLU:HA | 1:A:434:ARG:O | 1.85 | 0.76 |
| 1:A:502:TYR:CE1 | 1:A:636:ILE:HD11 | 2.20 | 0.76 |
| 3:B:301:LEU:HD22 | 3:B:483:ARG:HH21 | 1.49 | 0.76 |
| 6:F:16:VAL:HG22 | 6:F:49:ALA:HA | 1.67 | 0.76 |
| 1:Q:477:LYS:O | 1:Q:481:LEU:HB2 | 1.86 | 0.76 |
| 1:Q:52:ILE:O | 1:Q:53:GLU:HB2 | 1.85 | 0.76 |
| 3:R:223:PHE:CE1 | 3:R:227:MET:HG3 | 2.21 | 0.76 |
| 3:R:403:TRP:C | 3:R:404:VAL:HG23 | 2.04 | 0.76 |
| 2:G:14:GLU:O | 2:G:17:VAL:HG12 | 1.86 | 0.76 |
| 1:Q:666:ASP:O | 1:Q:670:VAL:HG13 | 1.85 | 0.76 |
| 3:R:473:MET:HA | 3:R:577:ARG:NH2 | 2.00 | 0.76 |
| 9:X:72:ALA:O | 9:X:76:ILE:HG12 | 1.85 | 0.76 |
| 3:B:560:THR:CG2 | 3:B:562:PHE:H | 1.92 | 0.76 |
| 2:C:120:PRO:HB3 | 2:C:256:SER:HB3 | 1.68 | 0.76 |
| 9:L:72:ALA:O | 9:L:76:ILE:HG12 | 1.85 | 0.76 |
| 3:R:848:ASP:HB2 | 3:R:867:ARG:HB2 | 1.64 | 0.76 |
| 5:T:101:LEU:HD21 | 5:T:162:LEU:HD11 | 1.68 | 0.76 |
| 1:A:262:ILE:HG12 | 1:A:266:TRP:NE1 | 2.01 | 0.76 |
| 2:C:379:ILE:HD11 | 3:B:1042:ALA:HA | 1.67 | 0.76 |
| 3:B:473:MET:HA | 3:B:577:ARG:NH2 | 1.99 | 0.76 |
| 3:B:708:LEU:HD13 | 3:B:713:TYR:HB3 | 1.68 | 0.76 |
| 2:C:277:ILE:HG22 | 2:C:278:ARG:H | 1.48 | 0.76 |
| 4:D:4:ASN:HA | 9:L:90:LEU:HD22 | 1.67 | 0.76 |
| 3:R:708:LEU:HD13 | 3:R:713:TYR:HB3 | 1.66 | 0.76 |
| 3:R:764:LYS:NZ | 3:R:772:LYS:O | 2.15 | 0.76 |
| 4:S:177:GLU:HB2 | 4:S:178:LYS:NZ | 2.00 | 0.76 |
| 4:S:79:PRO:O | 4:S:83:ILE:HG13 | 1.86 | 0.76 |
| 5:T:18:PHE:CE2 | 8:W:42:GLN:HG2 | 2.20 | 0.76 |
| 5:T:179:LYS:NZ | 6:U:82:GLU:H | 1.84 | 0.76 |
| 1:A:16:PRO:HD3 | 1:A:206:TRP:HD1 | 1.47 | 0.76 |
| 1:A:193:GLU:O | 1:A:195:LEU:N | 2.19 | 0.76 |
| 3:B:727:MET:HE2 | 3:B:983:ILE:HG21 | 1.67 | 0.76 |
| 3:R:475:GLN:HG2 | 3:R:476:ILE:H | 1.49 | 0.76 |
| 1:A:487:ILE:HD12 | 1:A:487:ILE:H | 1.48 | 0.76 |
| 1:A:541:ALA:HB1 | 1:A:542:PRO:HD3 | 1.68 | 0.76 |
| 3:B:1004:ARG:NH1 | 3:B:1025:GLY:H | 1.83 | 0.76 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:G:310:ILE:HD12 | 2:G:310:ILE:N | 2.00 | 0.76 |
| 8:W:50:LEU:HD23 | 8:W:75:PRO:HD3 | 1.67 | 0.76 |
| 2:G:331:ARG:HD2 | 2:G:349:VAL:HG12 | 1.68 | 0.76 |
| 2:G:391:ARG:NH1 | 2:G:391:ARG:HG3 | 2.00 | 0.76 |
| 1:Q:245:ILE:HD13 | 1:Q:268:LEU:HB3 | 1.68 | 0.76 |
| 3:R:64:ARG:HG2 | 3:R:64:ARG:HH11 | 1.49 | 0.76 |
| 5:T:134:LYS:HD3 | 5:T:174:TRP:NE1 | 2.02 | 0.76 |
| 3:R:987:VAL:HG11 | 10:Y:47:ARG:NE | 1.99 | 0.75 |
| 4:S:250:ILE:HA | 4:S:253:ILE:HG22 | 1.68 | 0.75 |
| 3:R:702:LEU:HD13 | 10:Y:47:ARG:NE | 2.01 | 0.75 |
| 1:A:293:ARG:HG2 | 1:A:296:ARG:NH2 | 2.01 | 0.75 |
| 1:A:569:SER:HB2 | 1:A:584:SER:OG | 1.86 | 0.75 |
| 1:A:864:LYS:O | 1:A:864:LYS:HG3 | 1.86 | 0.75 |
| 8:K:50:LEU:HD23 | 8:K:75:PRO:HD3 | 1.67 | 0.75 |
| 9:L:31:THR:O | 9:L:35:ILE:HG12 | 1.85 | 0.75 |
| 3:R:861:LEU:HD12 | 3:R:862:VAL:N | 2.01 | 0.75 |
| 1:A:308:ARG:HH21 | 3:B:1099:LEU:CD1 | 1.96 | 0.75 |
| 3:B:870:ARG:NH1 | 3:B:996:MET:HB2 | 2.01 | 0.75 |
| 7:H:45:ILE:HG22 | 7:H:80:TYR:H | 1.50 | 0.75 |
| 1:Q:530:VAL:O | 1:Q:530:VAL:HG13 | 1.85 | 0.75 |
| 3:R:1060:VAL:CG1 | 3:R:1065:GLY:HA3 | 2.15 | 0.75 |
| 3:R:581:ILE:HD11 | 3:R:614:GLU:CB | 2.16 | 0.75 |
| 6:U:16:VAL:CG2 | 6:U:53:GLN:HG3 | 2.15 | 0.75 |
| 7:V:45:ILE:O | 7:V:81:VAL:HA | 1.86 | 0.75 |
| 5:E:179:LYS:NZ | 6:F:82:GLU:HG3 | 2.02 | 0.75 |
| 1:Q:667:ARG:O | 1:Q:670:VAL:HG22 | 1.87 | 0.75 |
| 4:S:148:GLY:HA3 | 4:S:156:PHE:CD1 | 2.22 | 0.75 |
| 5:T:170:GLY:N | 5:T:175:ILE:HD11 | 2.00 | 0.75 |
| 1:A:563:HIS:HB2 | 1:A:872:PHE:CE2 | 2.20 | 0.75 |
| 1:A:733:ALA:HB1 | 3:B:913:HIS:HE1 | 1.52 | 0.75 |
| 3:B:147:ASP:OD2 | 3:B:148:PRO:HD2 | 1.85 | 0.75 |
| 3:B:183:ILE:HB | 3:B:207:ASP:C | 2.05 | 0.75 |
| 3:B:457:GLU:HG2 | 3:B:469:ASN:OD1 | 1.87 | 0.75 |
| 2:G:277:ILE:O | 2:G:279:GLU:N | 2.16 | 0.75 |
| 1:Q:293:ARG:NH1 | 1:Q:296:ARG:HH22 | 1.79 | 0.75 |
| 5:T:135:VAL:H | 5:T:174:TRP:HZ2 | 1.31 | 0.75 |
| 7:V:65:ILE:HD12 | 7:V:65:ILE:N | 2.02 | 0.75 |
| 1:A:216:PRO:HG2 | 1:A:219:ILE:HD12 | 1.68 | 0.75 |
| 8:K:34:ARG:O | 8:K:37:SER:HB2 | 1.87 | 0.75 |
| 3:R:536:LEU:HD11 | 3:R:540:ILE:CD1 | 2.16 | 0.75 |
| 10:Y:7:CYS:SG | 10:Y:48:MET:HG3 | 2.26 | 0.75 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 3:B:594:ILE:HD12 | 3:B:601:ALA:HB2 | 1.69 | 0.75 |
| 2:G:107:LEU:O | 2:G:111:VAL:HG23 | 1.86 | 0.75 |
| 1:Q:308:ARG:HG3 | 1:Q:312:ASN:HD22 | 1.50 | 0.75 |
| 3:R:1087:ASN:O | 3:R:1088:LEU:HG | 1.86 | 0.75 |
| 3:R:739:ILE:CG2 | 3:R:909:ILE:HB | 2.17 | 0.75 |
| 6:U:15:SER:O | 6:U:19:LYS:HE2 | 1.86 | 0.75 |
| 3:B:554:ASN:ND2 | 3:B:576:ARG:HH21 | 1.83 | 0.75 |
| 3:B:771:ASP:CB | 3:B:816:PRO:HD3 | 2.17 | 0.75 |
| 4:D:38:ILE:O | 4:D:147:LEU:HA | 1.86 | 0.75 |
| 6:F:35:GLN:HA | 6:F:38:TYR:CD1 | 2.22 | 0.75 |
| 2:G:329:ILE:HA | 2:G:334:VAL:CG1 | 2.17 | 0.75 |
| 8:K:50:LEU:CD2 | 8:K:75:PRO:HD3 | 2.16 | 0.75 |
| 1:Q:681:ASN:O | 1:Q:683:GLU:HG3 | 1.86 | 0.75 |
| 5:T:149:VAL:HG13 | 5:T:159:ARG:O | 1.86 | 0.75 |
| 7:V:23:LEU:HD12 | 7:V:62:ILE:HG12 | 1.69 | 0.75 |
| 1:A:176:THR:O | 1:A:180:ILE:HG13 | 1.87 | 0.75 |
| 1:A:528:ALA:O | 1:A:530:VAL:HG12 | 1.87 | 0.75 |
| 1:A:539:ILE:HB | 1:A:545:TYR:HB2 | 1.67 | 0.75 |
| 3:B:665:ARG:HG3 | 3:B:920:THR:CG2 | 2.17 | 0.75 |
| 1:Q:334:ILE:HD11 | 1:Q:628:MET:HB3 | 1.68 | 0.75 |
| 3:R:104:GLU:O | 3:R:105:ASN:HB2 | 1.85 | 0.75 |
| 3:R:490:TYR:CE1 | 3:R:527:ILE:HG21 | 2.21 | 0.75 |
| 6:U:16:VAL:HG22 | 6:U:49:ALA:HA | 1.66 | 0.75 |
| 1:A:551:VAL:HG13 | 1:A:552:ILE:N | 2.02 | 0.74 |
| 3:B:554:ASN:HD21 | 3:B:576:ARG:NH2 | 1.83 | 0.74 |
| 2:C:55:ALA:CA | 2:C:58:GLU:HG3 | 2.17 | 0.74 |
| 5:E:6:LYS:HE3 | 6:F:8:GLU:HB2 | 1.67 | 0.74 |
| 1:Q:176:THR:O | 1:Q:180:ILE:HG13 | 1.87 | 0.74 |
| 3:R:457:GLU:HG2 | 3:R:469:ASN:OD1 | 1.87 | 0.74 |
| 3:R:458:THR:HG21 | 3:R:465:GLY:N | 1.97 | 0.74 |
| 4:S:175:ASN:CA | 4:S:195:LEU:HD11 | 2.17 | 0.74 |
| 1:A:412:ILE:HD12 | 1:A:415:ASP:HB2 | 1.67 | 0.74 |
| 1:A:90:ILE:HG21 | 1:A:208:ILE:HD11 | 1.69 | 0.74 |
| 3:B:1069:TRP:HB2 | 3:B:1078:VAL:O | 1.85 | 0.74 |
| 3:B:1114:VAL:HG23 | 3:B:1115:LEU:N | 2.02 | 0.74 |
| 2:G:355:LEU:CD2 | 3:R:1109:ILE:HD11 | 2.18 | 0.74 |
| 1:Q:491:TYR:CB | 1:Q:607:GLN:OE1 | 2.34 | 0.74 |
| 3:R:918:ARG:O | 3:R:920:THR:HG23 | 1.86 | 0.74 |
| 3:R:904:VAL:HG21 | 10:Y:42:ARG:HE | 1.52 | 0.74 |
| 3:B:724:LEU:HD12 | 3:B:908:ILE:HG22 | 1.69 | 0.74 |
| 4:D:131:VAL:CG2 | 4:D:132:LEU:H | 1.99 | 0.74 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 2:G:286:ILE:CD1 | 7:V:45:ILE:HG13 | 2.17 | 0.74 |
| 8:K:92:LEU:O | 8:K:92:LEU:HD23 | 1.86 | 0.74 |
| 1:Q:502:TYR:HE1 | 1:Q:636:ILE:HD11 | 1.52 | 0.74 |
| 3:R:445:LEU:HD21 | 3:R:455:PRO:HA | 1.67 | 0.74 |
| 3:R:64:ARG:O | 3:R:97:TRP:HB2 | 1.86 | 0.74 |
| 5:T:107:LEU:HD12 | 5:T:108:VAL:N | 2.02 | 0.74 |
| 1:A:681:ASN:O | 1:A:683:GLU:HG3 | 1.86 | 0.74 |
| 1:Q:426:HIS:CD2 | 1:Q:490:ARG:HH12 | 2.06 | 0.74 |
| 1:Q:538:ALA:HB2 | 1:Q:550:GLN:OE1 | 1.88 | 0.74 |
| 4:S:38:ILE:O | 4:S:147:LEU:HA | 1.87 | 0.74 |
| 1:A:600:LYS:HB2 | 1:A:732:GLY:HA3 | 1.70 | 0.74 |
| 3:B:104:GLU:O | 3:B:105:ASN:HB2 | 1.86 | 0.74 |
| 3:B:458:THR:HG21 | 3:B:465:GLY:N | 1.96 | 0.74 |
| 2:C:391:ARG:HG3 | 2:C:391:ARG:NH1 | 1.96 | 0.74 |
| 5:E:170:GLY:N | 5:E:175:ILE:HD11 | 2.01 | 0.74 |
| 6:F:30:SER:HG | 6:F:38:TYR:HE1 | 1.35 | 0.74 |
| 1:Q:328:PRO:HG3 | 1:Q:457:PHE:CG | 2.23 | 0.74 |
| 4:S:131:VAL:CG2 | 4:S:132:LEU:H | 2.01 | 0.74 |
| 5:T:38:ILE:O | 5:T:39:LEU:HB2 | 1.87 | 0.74 |
| 1:A:640:GLU:OE1 | 3:B:974:ARG:NH1 | 2.20 | 0.74 |
| 3:B:1014:ARG:HG2 | 3:B:1014:ARG:HH11 | 1.52 | 0.74 |
| 4:D:250:ILE:HA | 4:D:253:ILE:HG22 | 1.70 | 0.74 |
| 5:E:39:LEU:HD23 | 5:E:40:LYS:N | 2.02 | 0.74 |
| 1:Q:632:PHE:HA | 1:Q:635:PHE:CD1 | 2.22 | 0.74 |
| 3:R:59:ARG:NH2 | 3:R:107:ILE:HB | 2.01 | 0.74 |
| 5:T:97:ILE:HD12 | 5:T:113:ILE:HD11 | 1.70 | 0.74 |
| 3:B:490:TYR:CE1 | 3:B:527:ILE:HG21 | 2.22 | 0.74 |
| 3:B:665:ARG:HG3 | 3:B:920:THR:HG21 | 1.69 | 0.74 |
| 5:E:142:VAL:HG12 | 5:E:171:LYS:HA | 1.69 | 0.74 |
| 5:E:145:ARG:NH2 | 5:E:169:LEU:HD11 | 2.03 | 0.74 |
| 1:Q:743:MET:O | 1:Q:785:SER:HB2 | 1.87 | 0.74 |
| 3:B:393:ARG:HE | 3:B:403:TRP:HZ3 | 1.35 | 0.74 |
| 4:D:40:ALA:HB3 | 4:D:156:PHE:CE2 | 2.22 | 0.74 |
| 2:G:391:ARG:HH21 | 8:W:42:GLN:CD | 1.90 | 0.74 |
| 1:Q:238:LYS:CD | 1:Q:276:TYR:HA | 2.18 | 0.74 |
| 1:Q:301:ARG:O | 1:Q:302:LEU:HG | 1.87 | 0.74 |
| 4:S:222:VAL:HG11 | 4:S:225:LYS:HD3 | 1.69 | 0.74 |
| 4:S:89:CYS:O | 4:S:92:CYS:HB2 | 1.88 | 0.74 |
| 7:V:65:ILE:HD12 | 7:V:65:ILE:H | 1.53 | 0.74 |
| 1:Q:539:ILE:HB | 1:Q:545:TYR:HB2 | 1.69 | 0.74 |
| 1:Q:723:ASN:ND2 | 1:Q:723:ASN:C | 2.40 | 0.74 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 3:R:975:THR:OG1 | 3:R:977:GLN:HG2 | 1.87 | 0.74 |
| 1:A:418:LEU:HD21 | 3:B:1044:LEU:CD2 | 2.14 | 0.74 |
| 1:A:828:SER:HB2 | 2:C:72:ILE:HD11 | 1.70 | 0.74 |
| 5:E:38:ILE:HG22 | 5:E:39:LEU:H | 1.51 | 0.74 |
| 1:Q:827:LEU:HD11 | 2:G:315:LEU:HD13 | 1.68 | 0.74 |
| 7:H:13:ILE:HG23 | 7:H:14:HIS:H | 1.53 | 0.74 |
| 7:H:45:ILE:O | 7:H:81:VAL:HA | 1.87 | 0.74 |
| 1:Q:206:TRP:O | 1:Q:208:ILE:N | 2.20 | 0.74 |
| 1:Q:288:LYS:HG2 | 1:Q:294:PRO:HA | 1.70 | 0.74 |
| 3:R:48:GLU:HG3 | 3:R:365:LEU:HD23 | 1.70 | 0.74 |
| 3:R:65:ILE:HD12 | 3:R:65:ILE:N | 2.00 | 0.74 |
| 3:B:401:GLY:O | 3:B:402:ASN:O | 2.06 | 0.73 |
| 2:C:107:LEU:O | 2:C:111:VAL:HG23 | 1.88 | 0.73 |
| 1:A:475:GLU:CD | 2:C:383:THR:HG21 | 2.08 | 0.73 |
| 4:D:37:PRO:HA | 4:D:148:GLY:O | 1.87 | 0.73 |
| 4:D:79:PRO:O | 4:D:83:ILE:HG13 | 1.88 | 0.73 |
| 7:H:65:ILE:HD12 | 7:H:65:ILE:N | 2.03 | 0.73 |
| 1:Q:826:ALA:HB1 | 2:G:334:VAL:HG13 | 1.67 | 0.73 |
| 1:Q:864:LYS:O | 1:Q:864:LYS:HG3 | 1.87 | 0.73 |
| 3:R:10:ARG:HB2 | 3:R:642:ILE:O | 1.88 | 0.73 |
| 1:Q:647:ARG:HH11 | 3:R:965:ASP:CB | 2.01 | 0.73 |
| 1:A:761:TYR:CE2 | 1:A:767:PRO:HD3 | 2.24 | 0.73 |
| 2:C:144:LEU:O | 2:C:146:TYR:N | 2.21 | 0.73 |
| 4:D:89:CYS:O | 4:D:92:CYS:HB2 | 1.87 | 0.73 |
| 6:F:56:ILE:HG23 | 6:F:69:ARG:HB3 | 1.70 | 0.73 |
| 6:F:77:PRO:HG3 | 6:F:83:VAL:HG22 | 1.69 | 0.73 |
| 2:G:331:ARG:HD3 | 2:G:348:GLU:HB3 | 1.70 | 0.73 |
| 7:H:45:ILE:HB | 7:H:79:ARG:HB3 | 1.68 | 0.73 |
| 1:Q:487:ILE:H | 1:Q:487:ILE:HD12 | 1.53 | 0.73 |
| 3:R:38:LYS:HG3 | 3:R:39:LEU:N | 2.02 | 0.73 |
| 5:T:41:ASP:C | 5:T:42:LEU:HD23 | 2.07 | 0.73 |
| 3:B:361:PHE:CE1 | 3:B:385:VAL:HG13 | 2.23 | 0.73 |
| 2:C:281:GLU:OE1 | 2:C:326:VAL:HG12 | 1.87 | 0.73 |
| 5:E:113:ILE:HG23 | 5:E:114:THR:H | 1.53 | 0.73 |
| 5:E:34:TYR:O | 5:E:37:LYS:HB2 | 1.88 | 0.73 |
| 2:G:277:ILE:HG22 | 2:G:278:ARG:H | 1.54 | 0.73 |
| 1:A:666:ASP:O | 1:A:670:VAL:HG13 | 1.87 | 0.73 |
| 3:B:1051:ASP:O | 3:B:1055:ARG:HD2 | 1.87 | 0.73 |
| 2:C:355:LEU:CD2 | 3:B:1109:ILE:HD11 | 2.18 | 0.73 |
| 3:R:214:PHE:HZ | 3:R:297:PHE:HA | 1.54 | 0.73 |
| 9:X:62:SER:O | 9:X:63:ILE:HD13 | 1.88 | 0.73 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:293:ARG:NH1 | 1:A:296:ARG:NH2 | 2.35 | 0.73 |
| 1:A:874:ARG:HE | 2:C:53:ASP:CB | 1.98 | 0.73 |
| 4:D:175:ASN:HA | 4:D:195:LEU:HD21 | 1.70 | 0.73 |
| 2:G:122:MET:SD | 2:G:256:SER:HA | 2.29 | 0.73 |
| 1:Q:293:ARG:NH1 | 1:Q:296:ARG:NH2 | 2.36 | 0.73 |
| 3:R:193:THR:OG1 | 3:R:198:VAL:HA | 1.88 | 0.73 |
| 3:R:52:GLU:HB2 | 3:R:56:LEU:HB3 | 1.71 | 0.73 |
| 3:R:763:VAL:HG23 | 3:R:859:ASN:OD1 | 1.88 | 0.73 |
| 3:B:59:ARG:NH2 | 3:B:107:ILE:HB | 2.02 | 0.73 |
| 3:B:579:LEU:O | 3:B:613:ILE:HG23 | 1.88 | 0.73 |
| 2:C:389:THR:HG21 | 8:K:79:ARG:HH12 | 1.53 | 0.73 |
| 4:D:222:VAL:HG11 | 4:D:225:LYS:HD3 | 1.70 | 0.73 |
| 3:R:555:VAL:HG22 | 3:R:568:VAL:HA | 1.70 | 0.73 |
| 5:T:34:TYR:O | 5:T:37:LYS:HB2 | 1.88 | 0.73 |
| 6:U:14:TYR:CD1 | 6:U:74:SER:HB2 | 2.23 | 0.73 |
| 1:A:397:LEU:HA | 1:A:400:THR:OG1 | 1.89 | 0.73 |
| 1:A:827:LEU:HD11 | 2:C:315:LEU:HD13 | 1.71 | 0.73 |
| 2:C:111:VAL:CG1 | 2:C:329:ILE:HD12 | 2.16 | 0.73 |
| 5:E:101:LEU:HD21 | 5:E:162:LEU:HD11 | 1.71 | 0.73 |
| 2:G:250:ILE:HG22 | 2:G:251:ILE:H | 1.54 | 0.73 |
| 7:H:69:SER:HB2 | 7:H:75:VAL:HG23 | 1.70 | 0.73 |
| 3:R:59:ARG:HH22 | 3:R:107:ILE:HD12 | 1.54 | 0.73 |
| 4:S:228:LEU:HD11 | 4:S:230:ILE:HD11 | 1.70 | 0.73 |
| 1:A:52:ILE:O | 1:A:53:GLU:HB2 | 1.89 | 0.73 |
| 3:B:197:ARG:HH22 | 3:B:359:LYS:HG2 | 1.50 | 0.73 |
| 1:Q:4:LYS:HD3 | 3:R:1091:VAL:HB | 1.70 | 0.73 |
| 3:R:473:MET:SD | 3:R:474:ALA:N | 2.61 | 0.73 |
| 3:R:890:MET:HE2 | 3:R:891:LEU:N | 2.02 | 0.73 |
| 6:U:12:ILE:HG22 | 6:U:13:PRO:HD2 | 1.71 | 0.73 |
| 1:A:530:VAL:O | 1:A:532:ILE:HG13 | 1.89 | 0.73 |
| 1:A:507:TYR:HB3 | 1:A:597:VAL:HG13 | 1.69 | 0.73 |
| 3:B:203:GLU:HA | 3:B:203:GLU:OE1 | 1.87 | 0.73 |
| 3:B:757:LEU:HD23 | 3:B:758:TYR:N | 2.03 | 0.73 |
| 4:D:13:ILE:CD1 | 4:D:238:PRO:HB2 | 2.17 | 0.73 |
| 2:G:144:LEU:O | 2:G:146:TYR:N | 2.21 | 0.73 |
| 2:G:120:PRO:HB3 | 2:G:256:SER:HB3 | 1.70 | 0.73 |
| 3:R:724:LEU:HD12 | 3:R:908:ILE:HG22 | 1.69 | 0.73 |
| 3:R:897:MET:SD | 3:R:906:PRO:HG2 | 2.29 | 0.73 |
| 3:R:68:PRO:HA | 3:R:93:ALA:O | 1.89 | 0.73 |
| 3:R:870:ARG:NH1 | 3:R:996:MET:HB2 | 2.04 | 0.73 |
| 2:C:331:ARG:HD3 | 2:C:348:GLU:HB3 | 1.71 | 0.73 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 5:E:107:LEU:HD12 | 5:E:108:VAL:N | 2.02 | 0.73 |
| 5:E:134:LYS:HD3 | 5:E:174:TRP:NE1 | 2.04 | 0.73 |
| 2:G:241:ILE:HG22 | 2:G:242:VAL:N | 2.04 | 0.73 |
| 1:Q:761:TYR:CE2 | 1:Q:767:PRO:HD3 | 2.23 | 0.73 |
| 1:Q:775:SER:OG | 1:Q:776:PRO:HD2 | 1.89 | 0.73 |
| 3:R:239:VAL:HA | 3:R:253:PHE:CE2 | 2.23 | 0.73 |
| 3:R:758:TYR:O | 3:R:759:SER:HB3 | 1.88 | 0.73 |
| 3:B:248:VAL:HG11 | 3:B:329:ARG:NH1 | 2.02 | 0.72 |
| 3:B:987:VAL:HG11 | 10:N:47:ARG:NE | 2.03 | 0.72 |
| 2:C:250:ILE:HG22 | 2:C:251:ILE:H | 1.54 | 0.72 |
| 10:N:35:LEU:CD2 | 10:N:40:VAL:HG21 | 2.18 | 0.72 |
| 1:Q:239:LEU:HD12 | 1:Q:276:TYR:HE1 | 1.54 | 0.72 |
| 1:Q:446:ASN:HD22 | 1:Q:446:ASN:C | 1.92 | 0.72 |
| 1:Q:561:ASN:HA | 1:Q:588:ILE:O | 1.89 | 0.72 |
| 1:Q:839:ARG:HA | 1:Q:844:GLU:O | 1.89 | 0.72 |
| 1:Q:847:GLN:HG2 | 2:G:318:ASP:OD1 | 1.90 | 0.72 |
| 1:A:377:TYR:H | 1:A:388:LEU:HB3 | 1.54 | 0.72 |
| 1:A:537:PRO:HB2 | 1:A:540:LEU:HD21 | 1.71 | 0.72 |
| 1:A:723:ASN:C | 1:A:723:ASN:ND2 | 2.41 | 0.72 |
| 3:B:317:TYR:CD2 | 3:B:526:LEU:HD13 | 2.24 | 0.72 |
| 3:B:708:LEU:HD13 | 3:B:708:LEU:O | 1.89 | 0.72 |
| 1:Q:409:ARG:HB3 | 1:Q:409:ARG:NH1 | 2.04 | 0.72 |
| 3:R:401:GLY:O | 3:R:402:ASN:O | 2.08 | 0.72 |
| 10:Y:55:ILE:HD13 | 10:Y:55:ILE:H | 1.54 | 0.72 |
| 1:A:450:CYS:HB2 | 1:A:451:PRO:HD3 | 1.71 | 0.72 |
| 3:B:373:LYS:CE | 3:B:375:ARG:HD2 | 2.19 | 0.72 |
| 3:B:780:VAL:HG11 | 3:B:831:ALA:HB3 | 1.70 | 0.72 |
| 4:D:8:LYS:HD2 | 4:D:13:ILE:HG12 | 1.69 | 0.72 |
| 2:G:24:LEU:HD11 | 2:G:58:GLU:OE1 | 1.89 | 0.72 |
| 2:G:72:ILE:O | 2:G:76:GLN:HB2 | 1.89 | 0.72 |
| 1:Q:728:MET:CE | 3:R:913:HIS:HA | 2.18 | 0.72 |
| 3:R:65:ILE:CD1 | 3:R:65:ILE:H | 2.01 | 0.72 |
| 1:A:507:TYR:HB2 | 1:A:511:VAL:HG13 | 1.72 | 0.72 |
| 3:B:1109:ILE:O | 3:B:1111:PRO:HD3 | 1.89 | 0.72 |
| 3:B:900:THR:HG21 | 3:B:968:GLU:OE2 | 1.88 | 0.72 |
| 5:E:149:VAL:HG13 | 5:E:159:ARG:O | 1.90 | 0.72 |
| 6:F:15:SER:O | 6:F:19:LYS:HE2 | 1.88 | 0.72 |
| 9:L:84:ILE:O | 9:L:87:ILE:HG22 | 1.89 | 0.72 |
| 3:R:43:ILE:HG21 | 3:R:63:ILE:CD1 | 2.20 | 0.72 |
| 3:R:602:ILE:CG2 | 3:R:603:THR:H | 2.02 | 0.72 |
| 3:R:640:LEU:HD23 | 3:R:641:GLU:N | 2.00 | 0.72 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 5:T:113:ILE:HG23 | 5:T:114:THR:H | 1.54 | 0.72 |
| 1:A:491:TYR:CB | 1:A:607:GLN:OE1 | 2.37 | 0.72 |
| 2:G:274:THR:HG22 | 2:G:276:ASN:H | 1.52 | 0.72 |
| 8:K:18:VAL:O | 8:K:22:LEU:HB2 | 1.88 | 0.72 |
| 1:Q:589:LYS:HZ3 | 1:Q:879:LYS:H | 1.37 | 0.72 |
| 3:R:874:ILE:H | 3:R:874:ILE:CD1 | 2.03 | 0.72 |
| 1:A:288:LYS:HG2 | 1:A:294:PRO:HA | 1.71 | 0.72 |
| 1:A:512:LYS:HG3 | 1:A:583:ASP:OD2 | 1.87 | 0.72 |
| 3:B:43:ILE:HG21 | 3:B:63:ILE:CD1 | 2.19 | 0.72 |
| 2:C:391:ARG:HH21 | 8:K:42:GLN:CD | 1.92 | 0.72 |
| 5:E:179:LYS:HE2 | 6:F:81:ASP:HB2 | 1.72 | 0.72 |
| 1:Q:81:VAL:HG12 | 1:Q:270:GLN:HG3 | 1.71 | 0.72 |
| 1:Q:733:ALA:HB1 | 3:R:913:HIS:HE1 | 1.54 | 0.72 |
| 3:R:163:THR:HG23 | 3:R:428:ARG:O | 1.88 | 0.72 |
| 3:R:869:LEU:HD11 | 4:S:56:GLU:CB | 2.15 | 0.72 |
| 1:A:426:HIS:CD2 | 1:A:490:ARG:HH12 | 2.06 | 0.72 |
| 1:A:7:LYS:HE2 | 2:C:365:GLU:OE2 | 1.89 | 0.72 |
| 3:B:64:ARG:HH11 | 3:B:64:ARG:HG2 | 1.54 | 0.72 |
| 1:A:831:ARG:HH21 | 2:C:385:MET:HB2 | 1.54 | 0.72 |
| 2:C:391:ARG:HH22 | 8:K:39:ARG:NH1 | 1.87 | 0.72 |
| 1:Q:409:ARG:HB3 | 1:Q:409:ARG:HH11 | 1.55 | 0.72 |
| 1:Q:530:VAL:O | 1:Q:532:ILE:HG13 | 1.90 | 0.72 |
| 3:B:1060:VAL:CG1 | 3:B:1065:GLY:HA3 | 2.19 | 0.72 |
| 1:A:826:ALA:HB1 | 2:C:334:VAL:HG13 | 1.71 | 0.72 |
| 2:C:383:THR:HG22 | 3:B:1042:ALA:H | 1.55 | 0.72 |
| 5:E:39:LEU:HD23 | 5:E:41:ASP:H | 1.54 | 0.72 |
| 1:Q:7:LYS:HE2 | 2:G:365:GLU:OE2 | 1.90 | 0.72 |
| 1:Q:377:TYR:H | 1:Q:388:LEU:HB3 | 1.54 | 0.72 |
| 1:Q:6:ILE:HG13 | 3:R:1091:VAL:HG21 | 1.71 | 0.72 |
| 7:V:21:GLU:O | 7:V:63:ILE:HG23 | 1.90 | 0.72 |
| 1:A:206:TRP:O | 1:A:208:ILE:N | 2.22 | 0.72 |
| 1:A:632:PHE:HA | 1:A:635:PHE:CD1 | 2.25 | 0.72 |
| 3:B:48:GLU:HG3 | 3:B:365:LEU:HD23 | 1.71 | 0.72 |
| 3:B:699:GLN:NE2 | 10:N:48:MET:HE3 | 2.05 | 0.72 |
| 3:B:764:LYS:HD3 | 3:B:815:SER:HA | 1.70 | 0.72 |
| 2:C:277:ILE:O | 2:C:279:GLU:N | 2.19 | 0.72 |
| 2:C:72:ILE:O | 2:C:76:GLN:HB2 | 1.88 | 0.72 |
| 3:B:902:LYS:HB3 | 10:N:42:ARG:HD3 | 1.72 | 0.72 |
| 3:R:1069:TRP:HB2 | 3:R:1078:VAL:O | 1.90 | 0.72 |
| 3:R:781:ARG:CG | 3:R:782:GLY:H | 2.02 | 0.72 |
| 6:U:77:PRO:HG3 | 6:U:83:VAL:HG22 | 1.72 | 0.72 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|------------------|--------------------------|-------------------|
| 8:W:61:VAL:HG12 | 8:W:62:ILE:H | 1.53 | 0.72 |
| 2:C:241:ILE:HG22 | 2:C:242:VAL:N | 2.05 | 0.72 |
| 2:G:40:GLU:O | 2:G:45:ARG:HG2 | 1.90 | 0.72 |
| 3:R:364:ASP:O | 3:R:367:TYR:HB3 | 1.89 | 0.72 |
| 3:R:430:ILE:HG12 | 3:R:467:VAL:HG23 | 1.71 | 0.72 |
| 10:Y:1:MET:HB3 | 10:Y:56:ILE:HD13 | 1.72 | 0.72 |
| 1:A:308:ARG:HG3 | 1:A:312:ASN:HD22 | 1.54 | 0.71 |
| 3:B:390:VAL:O | 3:B:394:ILE:HB | 1.90 | 0.71 |
| 3:B:781:ARG:CG | 3:B:782:GLY:H | 2.02 | 0.71 |
| 3:B:81:SER:HB3 | 3:B:84:GLU:HG3 | 1.71 | 0.71 |
| 3:B:861:LEU:HD12 | 3:B:862:VAL:N | 2.05 | 0.71 |
| 1:A:733:ALA:HB1 | 3:B:913:HIS:CE1 | 2.25 | 0.71 |
| 3:B:68:PRO:HA | 3:B:93:ALA:O | 1.90 | 0.71 |
| 8:K:18:VAL:HG12 | 8:K:22:LEU:HD12 | 1.72 | 0.71 |
| 1:Q:4:LYS:HG2 | 1:Q:5:ASN:N | 2.04 | 0.71 |
| 3:R:544:ARG:HH11 | 3:R:544:ARG:HG3 | 1.54 | 0.71 |
| 3:R:560:THR:CG2 | 3:R:562:PHE:H | 1.92 | 0.71 |
| 3:R:698:PRO:HB3 | 3:R:717:PRO:HG2 | 1.72 | 0.71 |
| 3:B:116:ILE:HD12 | 3:B:361:PHE:CZ | 2.25 | 0.71 |
| 3:B:39:LEU:HD11 | 3:B:354:PHE:CE2 | 2.24 | 0.71 |
| 3:B:88:ARG:CD | 3:B:853:THR:HG21 | 2.13 | 0.71 |
| 5:E:41:ASP:C | 5:E:42:LEU:HD23 | 2.10 | 0.71 |
| 8:K:26:ARG:HG2 | 8:K:90:LEU:HB3 | 1.72 | 0.71 |
| 3:R:147:ASP:OD2 | 3:R:148:PRO:HD2 | 1.89 | 0.71 |
| 3:R:594:ILE:HD12 | 3:R:601:ALA:HB2 | 1.71 | 0.71 |
| 1:A:238:LYS:CD | 1:A:276:TYR:HA | 2.20 | 0.71 |
| 3:B:654:ILE:H | 3:B:654:ILE:HD12 | 1.53 | 0.71 |
| 4:D:228:LEU:HD11 | 4:D:230:ILE:HD11 | 1.72 | 0.71 |
| 2:G:301:LEU:HD12 | 2:G:302:ALA:N | 2.05 | 0.71 |
| 2:C:388:LEU:HD11 | 8:K:34:ARG:HG3 | 1.71 | 0.71 |
| 10:N:55:ILE:H | 10:N:55:ILE:HD13 | 1.55 | 0.71 |
| 1:A:551:VAL:HG13 | 1:A:552:ILE:H | 1.56 | 0.71 |
| 3:B:1050:LEU:HD23 | 3:B:1051:ASP:N | 2.05 | 0.71 |
| 4:D:190:LEU:HA | 4:D:194:LYS:O | 1.90 | 0.71 |
| 4:D:175:ASN:CA | 4:D:195:LEU:HD11 | 2.19 | 0.71 |
| 1:Q:47:PRO:HG2 | 1:Q:48:ARG:HD3 | 1.73 | 0.71 |
| 3:R:393:ARG:HE | 3:R:403:TRP:HZ3 | 1.36 | 0.71 |
| 3:R:88:ARG:CD | 3:R:853:THR:HG21 | 2.14 | 0.71 |
| 6:U:35:GLN:HA | 6:U:38:TYR:CD1 | 2.25 | 0.71 |
| 7:V:69:SER:HB2 | 7:V:75:VAL:HG23 | 1.71 | 0.71 |
| 9:X:40:PHE:HE2 | 9:X:42:SER:HG | 1.38 | 0.71 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|------------------|--------------------------|-------------------|
| 1:A:589:LYS:NZ | 1:A:879:LYS:H | 1.88 | 0.71 |
| 3:B:911:ASN:ND2 | 3:B:913:HIS:HB2 | 2.05 | 0.71 |
| 2:G:115:LYS:HD2 | 2:G:276:ASN:HD22 | 1.55 | 0.71 |
| 3:R:59:ARG:HH22 | 3:R:107:ILE:CG1 | 2.04 | 0.71 |
| 3:R:1079:CYS:SG | 3:R:1080:PRO:HD2 | 2.31 | 0.71 |
| 3:R:725:ALA:HB2 | 3:R:906:PRO:HB3 | 1.73 | 0.71 |
| 1:A:350:PRO:HD3 | 1:A:468:GLN:HE22 | 1.56 | 0.71 |
| 1:A:538:ALA:HB2 | 1:A:550:GLN:OE1 | 1.91 | 0.71 |
| 3:B:210:PHE:HZ | 3:B:323:ILE:HG22 | 1.56 | 0.71 |
| 3:B:330:ARG:HG2 | 3:B:330:ARG:HH11 | 1.56 | 0.71 |
| 3:B:371:LYS:O | 3:B:373:LYS:N | 2.23 | 0.71 |
| 3:B:663:SER:HB3 | 3:B:664:PRO:HD3 | 1.71 | 0.71 |
| 3:B:416:ARG:HH12 | 3:B:687:ARG:HH21 | 1.39 | 0.71 |
| 3:B:910:LEU:HD23 | 3:B:911:ASN:N | 2.06 | 0.71 |
| 3:B:139:ILE:HG21 | 10:N:61:HIS:HD2 | 1.56 | 0.71 |
| 1:Q:864:LYS:HG3 | 2:G:32:LEU:HD11 | 1.72 | 0.71 |
| 3:R:427:ARG:HH11 | 3:R:650:ILE:HD12 | 1.55 | 0.71 |
| 3:R:762:GLU:O | 3:R:764:LYS:HG3 | 1.91 | 0.71 |
| 8:W:39:ARG:NH2 | 8:W:50:LEU:HD13 | 2.06 | 0.71 |
| 3:R:930:GLY:HA2 | 10:Y:47:ARG:HH22 | 1.54 | 0.71 |
| 1:A:518:LYS:CE | 1:A:544:GLU:HB2 | 2.19 | 0.71 |
| 3:B:1004:ARG:NH2 | 3:B:1007:GLY:H | 1.87 | 0.71 |
| 2:C:115:LYS:HD2 | 2:C:276:ASN:HD22 | 1.56 | 0.71 |
| 2:C:69:ALA:CB | 2:C:381:LEU:HD22 | 2.20 | 0.71 |
| 1:Q:653:LEU:CD1 | 1:Q:745:ALA:HB2 | 2.18 | 0.71 |
| 3:R:21:LYS:HA | 3:R:25:ARG:CZ | 2.20 | 0.71 |
| 4:S:98:ILE:CG1 | 4:S:114:ILE:HG12 | 2.21 | 0.71 |
| 1:A:667:ARG:O | 1:A:670:VAL:HG22 | 1.91 | 0.71 |
| 3:B:536:LEU:HD11 | 3:B:540:ILE:CD1 | 2.20 | 0.71 |
| 3:B:52:GLU:HB2 | 3:B:56:LEU:HB3 | 1.73 | 0.71 |
| 2:G:322:ARG:N | 2:G:322:ARG:HD2 | 2.04 | 0.71 |
| 2:G:393:ILE:HB | 5:T:18:PHE:O | 1.91 | 0.71 |
| 1:Q:245:ILE:HD13 | 1:Q:268:LEU:HD13 | 1.71 | 0.71 |
| 1:Q:874:ARG:HE | 2:G:53:ASP:CB | 1.98 | 0.71 |
| 3:R:1114:VAL:HG23 | 3:R:1115:LEU:N | 2.06 | 0.71 |
| 3:R:390:VAL:O | 3:R:394:ILE:HB | 1.90 | 0.71 |
| 3:R:663:SER:HB3 | 3:R:664:PRO:HD3 | 1.71 | 0.71 |
| 3:R:771:ASP:CB | 3:R:816:PRO:HD3 | 2.20 | 0.71 |
| 5:T:3:LYS:HA | 6:U:12:ILE:HG13 | 1.73 | 0.71 |
| 6:U:56:ILE:HG23 | 6:U:69:ARG:HB3 | 1.71 | 0.71 |
| 9:X:84:ILE:O | 9:X:87:ILE:HG22 | 1.91 | 0.71 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:452:PRO:HA | 1:A:495:ILE:HD11 | 1.72 | 0.71 |
| 3:B:239:VAL:HA | 3:B:253:PHE:CE2 | 2.25 | 0.71 |
| 3:B:21:LYS:HA | 3:B:25:ARG:CZ | 2.21 | 0.71 |
| 3:B:214:PHE:HZ | 3:B:297:PHE:HA | 1.55 | 0.71 |
| 3:B:555:VAL:HG22 | 3:B:568:VAL:HA | 1.73 | 0.71 |
| 1:Q:491:TYR:HB2 | 1:Q:607:GLN:HE22 | 1.54 | 0.71 |
| 5:T:179:LYS:HZ3 | 6:U:79:THR:HB | 1.54 | 0.71 |
| 8:W:61:VAL:HG12 | 8:W:62:ILE:N | 2.06 | 0.71 |
| 3:B:700:ARG:N | 10:N:51:SER:O | 2.22 | 0.71 |
| 2:C:322:ARG:HD2 | 2:C:322:ARG:N | 2.05 | 0.71 |
| 1:Q:756:ARG:NH2 | 1:Q:776:PRO:HA | 2.06 | 0.71 |
| 3:R:183:ILE:HB | 3:R:207:ASP:C | 2.10 | 0.71 |
| 3:R:39:LEU:HD11 | 3:R:354:PHE:CE2 | 2.26 | 0.71 |
| 4:S:51:SER:HB2 | 4:S:52:PRO:HD2 | 1.73 | 0.71 |
| 3:B:10:ARG:HB2 | 3:B:642:ILE:O | 1.90 | 0.70 |
| 3:B:252:LEU:HD12 | 3:B:323:ILE:HB | 1.73 | 0.70 |
| 1:Q:736:SER:HB3 | 1:Q:739:ASN:OD1 | 1.90 | 0.70 |
| 3:R:371:LYS:O | 3:R:373:LYS:N | 2.23 | 0.70 |
| 3:R:971:TYR:CE2 | 4:S:165:ARG:HA | 2.25 | 0.70 |
| 1:A:15:SER:HA | 1:A:203:ARG:NH2 | 2.07 | 0.70 |
| 1:A:481:LEU:HD23 | 1:A:482:VAL:H | 1.55 | 0.70 |
| 4:D:51:SER:HB2 | 4:D:52:PRO:HD2 | 1.73 | 0.70 |
| 2:G:130:TYR:CD1 | 2:G:136:LYS:HG3 | 2.27 | 0.70 |
| 2:G:141:ALA:HA | 2:G:144:LEU:HD12 | 1.73 | 0.70 |
| 1:Q:537:PRO:HB2 | 1:Q:540:LEU:HD21 | 1.73 | 0.70 |
| 3:R:1109:ILE:O | 3:R:1111:PRO:HD3 | 1.91 | 0.70 |
| 3:R:416:ARG:NH1 | 3:R:687:ARG:HH21 | 1.87 | 0.70 |
| 5:T:39:LEU:HD23 | 5:T:40:LYS:N | 2.06 | 0.70 |
| 3:B:206:LYS:O | 3:B:210:PHE:HA | 1.90 | 0.70 |
| 6:F:16:VAL:CG2 | 6:F:53:GLN:HG3 | 2.15 | 0.70 |
| 1:Q:553:SER:OG | 1:Q:592:ILE:HA | 1.91 | 0.70 |
| 3:R:591:ILE:HG12 | 3:R:612:LYS:NZ | 2.06 | 0.70 |
| 8:W:26:ARG:HG2 | 8:W:90:LEU:HB3 | 1.74 | 0.70 |
| 1:A:364:PHE:CE1 | 1:A:409:ARG:HD2 | 2.26 | 0.70 |
| 4:D:90:GLU:C | 4:D:92:CYS:H | 1.95 | 0.70 |
| 1:Q:485:ASN:HD21 | 3:R:1039:PHE:HE2 | 1.38 | 0.70 |
| 1:Q:507:TYR:HB2 | 1:Q:511:VAL:HG13 | 1.72 | 0.70 |
| 3:R:252:LEU:HD12 | 3:R:323:ILE:HB | 1.74 | 0.70 |
| 4:S:66:PRO:HG2 | 10:Y:13:LEU:HD21 | 1.72 | 0.70 |
| 1:A:637:ARG:HD3 | 1:A:640:GLU:CD | 2.12 | 0.70 |
| 3:B:193:THR:OG1 | 3:B:198:VAL:HA | 1.91 | 0.70 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 3:B:480:ILE:HG22 | 3:B:481:ASN:N | 2.06 | 0.70 |
| 4:D:180:VAL:CG2 | 4:D:190:LEU:HG | 2.20 | 0.70 |
| 5:E:100:ASN:HD21 | 6:F:36:ARG:HD3 | 1.55 | 0.70 |
| 2:G:115:LYS:HB2 | 2:G:278:ARG:HG3 | 1.72 | 0.70 |
| 2:G:28:ILE:HD12 | 8:W:18:VAL:HG23 | 1.73 | 0.70 |
| 1:Q:604:GLY:C | 1:Q:606:GLN:N | 2.44 | 0.70 |
| 1:Q:742:GLN:HB2 | 3:R:919:MET:HE3 | 1.73 | 0.70 |
| 1:A:279:ASN:HB2 | 1:A:297:THR:HG21 | 1.74 | 0.70 |
| 1:A:328:PRO:HG3 | 1:A:457:PHE:CG | 2.27 | 0.70 |
| 3:B:437:GLN:HB3 | 3:B:438:PRO:CD | 2.21 | 0.70 |
| 3:B:764:LYS:NZ | 3:B:772:LYS:O | 2.24 | 0.70 |
| 2:C:14:GLU:O | 2:C:17:VAL:HG12 | 1.90 | 0.70 |
| 3:R:1114:VAL:C | 3:R:1115:LEU:HD23 | 2.12 | 0.70 |
| 3:R:932:TYR:CD2 | 3:R:953:LEU:HD22 | 2.27 | 0.70 |
| 3:B:1097:PHE:CE2 | 3:B:1101:ILE:HD11 | 2.27 | 0.70 |
| 3:B:763:VAL:HG23 | 3:B:859:ASN:OD1 | 1.90 | 0.70 |
| 11:P:10:TRP:O | 11:P:11:LYS:HB2 | 1.92 | 0.70 |
| 1:Q:528:ALA:O | 1:Q:530:VAL:HG12 | 1.91 | 0.70 |
| 3:R:203:GLU:OE1 | 3:R:203:GLU:HA | 1.91 | 0.70 |
| 3:R:482:GLU:O | 3:R:484:ILE:N | 2.25 | 0.70 |
| 3:R:764:LYS:HD3 | 3:R:815:SER:HA | 1.74 | 0.70 |
| 3:R:852:ILE:HG23 | 3:R:862:VAL:HG22 | 1.74 | 0.70 |
| 5:T:15:PRO:HB2 | 8:W:45:MET:O | 1.91 | 0.70 |
| 1:A:252:SER:O | 1:A:257:ALA:HB2 | 1.92 | 0.70 |
| 1:A:6:ILE:HG13 | 3:B:1091:VAL:HG21 | 1.74 | 0.70 |
| 3:B:116:ILE:HG23 | 3:B:361:PHE:CE1 | 2.27 | 0.70 |
| 3:B:518:SER:HB3 | 3:B:564:ASN:ND2 | 2.07 | 0.70 |
| 3:B:591:ILE:HG12 | 3:B:612:LYS:NZ | 2.06 | 0.70 |
| 3:B:814:VAL:HG11 | 3:B:832:LYS:HB3 | 1.74 | 0.70 |
| 3:B:932:TYR:CD2 | 3:B:953:LEU:HD22 | 2.26 | 0.70 |
| 5:E:17:GLU:HG2 | 5:E:20:LYS:NZ | 2.06 | 0.70 |
| 1:Q:279:ASN:HB2 | 1:Q:297:THR:CG2 | 2.22 | 0.70 |
| 1:Q:551:VAL:HG13 | 1:Q:552:ILE:N | 2.06 | 0.70 |
| 1:Q:841:LEU:HD11 | 2:G:339:ASN:HB3 | 1.74 | 0.70 |
| 1:A:644:PHE:HA | 1:A:724:PHE:HE2 | 1.57 | 0.70 |
| 1:A:728:MET:O | 1:A:733:ALA:HB3 | 1.91 | 0.70 |
| 1:A:866:VAL:HG12 | 1:A:869:ASN:N | 2.03 | 0.70 |
| 3:B:430:ILE:HG12 | 3:B:467:VAL:HG23 | 1.73 | 0.70 |
| 3:B:416:ARG:NH1 | 3:B:687:ARG:HH21 | 1.87 | 0.70 |
| 3:B:723:ILE:HD12 | 10:N:43:TYR:HE1 | 1.57 | 0.70 |
| 5:E:126:ILE:HD11 | 5:E:137:GLN:HG2 | 1.72 | 0.70 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 2:G:69:ALA:CB | 2:G:381:LEU:HD22 | 2.20 | 0.70 |
| 7:H:12:ARG:HH12 | 7:H:55:ILE:HB | 1.57 | 0.70 |
| 7:H:65:ILE:HD12 | 7:H:65:ILE:H | 1.57 | 0.70 |
| 1:Q:412:ILE:HD12 | 1:Q:415:ASP:HB2 | 1.72 | 0.70 |
| 1:Q:458:ASP:HA | 3:R:886:GLY:HA2 | 1.73 | 0.70 |
| 3:R:116:ILE:HD12 | 3:R:361:PHE:CZ | 2.27 | 0.70 |
| 4:S:34:LEU:HA | 4:S:150:GLY:HA3 | 1.74 | 0.70 |
| 7:V:12:ARG:HH12 | 7:V:55:ILE:HB | 1.57 | 0.70 |
| 1:A:756:ARG:NH2 | 1:A:776:PRO:HA | 2.07 | 0.70 |
| 3:B:59:ARG:HH22 | 3:B:107:ILE:HD12 | 1.57 | 0.70 |
| 4:D:6:LEU:HD13 | 4:D:16:VAL:HG21 | 1.73 | 0.70 |
| 4:D:18:GLU:CD | 4:D:225:LYS:HD2 | 2.12 | 0.70 |
| 1:Q:828:SER:HB2 | 2:G:72:ILE:CD1 | 2.21 | 0.70 |
| 1:Q:346:THR:HG21 | 3:R:1003:ALA:HB1 | 1.72 | 0.70 |
| 1:Q:644:PHE:HA | 1:Q:724:PHE:HE2 | 1.57 | 0.70 |
| 1:Q:737:VAL:HG23 | 1:Q:738:LEU:HD22 | 1.72 | 0.70 |
| 3:R:210:PHE:HZ | 3:R:323:ILE:HG22 | 1.56 | 0.70 |
| 3:R:522:LEU:O | 3:R:525:ARG:HB3 | 1.92 | 0.70 |
| 3:R:52:GLU:HG3 | 3:R:56:LEU:HD23 | 1.74 | 0.70 |
| 3:R:590:THR:HA | 3:R:593:ASP:OD2 | 1.90 | 0.70 |
| 3:R:81:SER:HB3 | 3:R:84:GLU:HG3 | 1.73 | 0.70 |
| 8:W:79:ARG:HG3 | 8:W:79:ARG:HH11 | 1.57 | 0.70 |
| 1:A:253:ILE:HG13 | 1:A:262:ILE:HD11 | 1.73 | 0.69 |
| 3:B:683:ASN:O | 3:B:685:GLN:N | 2.25 | 0.69 |
| 1:A:647:ARG:HH11 | 3:B:965:ASP:CB | 2.03 | 0.69 |
| 2:C:274:THR:HG22 | 2:C:276:ASN:H | 1.56 | 0.69 |
| 6:F:12:ILE:HG22 | 6:F:13:PRO:HD2 | 1.74 | 0.69 |
| 2:G:392:PRO:HG3 | 5:T:68:HIS:CE1 | 2.27 | 0.69 |
| 1:Q:518:LYS:CE | 1:Q:544:GLU:HB2 | 2.22 | 0.69 |
| 1:Q:637:ARG:HD3 | 1:Q:640:GLU:CD | 2.12 | 0.69 |
| 3:R:702:LEU:HB3 | 10:Y:47:ARG:NH2 | 2.07 | 0.69 |
| 1:A:653:LEU:CD1 | 1:A:745:ALA:HB2 | 2.21 | 0.69 |
| 1:A:841:LEU:O | 1:A:843:GLY:N | 2.25 | 0.69 |
| 3:B:1114:VAL:C | 3:B:1115:LEU:HD23 | 2.12 | 0.69 |
| 3:B:63:ILE:HD12 | 3:B:63:ILE:N | 2.07 | 0.69 |
| 10:N:19:GLN:HA | 10:N:22:ILE:HD11 | 1.73 | 0.69 |
| 1:Q:525:LEU:C | 1:Q:527:VAL:H | 1.96 | 0.69 |
| 3:R:88:ARG:HD3 | 3:R:853:THR:CG2 | 2.15 | 0.69 |
| 4:S:40:ALA:HB3 | 4:S:156:PHE:CE2 | 2.25 | 0.69 |
| 8:W:34:ARG:O | 8:W:37:SER:HB2 | 1.92 | 0.69 |
| 4:D:34:LEU:HA | 4:D:150:GLY:HA3 | 1.75 | 0.69 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 5:E:31:ARG:C | 5:E:33:GLN:H | 1.95 | 0.69 |
| 2:G:344:ARG:NH1 | 2:G:344:ARG:HB2 | 2.07 | 0.69 |
| 1:Q:238:LYS:NZ | 1:Q:275:THR:O | 2.24 | 0.69 |
| 1:Q:575:CYS:SG | 1:Q:580:CYS:CB | 2.77 | 0.69 |
| 3:R:1014:ARG:HG2 | 3:R:1014:ARG:NH1 | 2.04 | 0.69 |
| 8:W:28:THR:OG1 | 8:W:31:GLU:HG3 | 1.92 | 0.69 |
| 3:R:904:VAL:CG2 | 10:Y:42:ARG:HG2 | 2.22 | 0.69 |
| 1:A:553:SER:OG | 1:A:592:ILE:HA | 1.92 | 0.69 |
| 1:A:737:VAL:HG23 | 1:A:738:LEU:HD22 | 1.75 | 0.69 |
| 3:B:662:GLN:HG2 | 3:B:664:PRO:HD2 | 1.74 | 0.69 |
| 3:B:890:MET:HE2 | 3:B:891:LEU:N | 2.03 | 0.69 |
| 2:C:368:GLY:HA3 | 2:C:371:GLU:OE1 | 1.92 | 0.69 |
| 1:Q:704:LEU:HD22 | 1:Q:781:PHE:HE1 | 1.56 | 0.69 |
| 3:R:64:ARG:H | 3:R:97:TRP:HB2 | 1.56 | 0.69 |
| 5:T:39:LEU:HD23 | 5:T:41:ASP:H | 1.56 | 0.69 |
| 5:T:53:THR:O | 5:T:70:VAL:HG13 | 1.93 | 0.69 |
| 1:A:491:TYR:HB2 | 1:A:607:GLN:HE22 | 1.57 | 0.69 |
| 3:B:698:PRO:HB3 | 3:B:717:PRO:HG2 | 1.74 | 0.69 |
| 2:C:141:ALA:HA | 2:C:144:LEU:HD12 | 1.75 | 0.69 |
| 1:Q:203:ARG:NH1 | 1:Q:206:TRP:HB2 | 2.07 | 0.69 |
| 1:Q:324:THR:HG21 | 1:Q:441:LEU:O | 1.92 | 0.69 |
| 3:R:360:ALA:HB2 | 3:R:393:ARG:NH1 | 2.08 | 0.69 |
| 7:V:62:ILE:HD13 | 7:V:62:ILE:H | 1.57 | 0.69 |
| 1:A:458:ASP:HA | 3:B:886:GLY:HA2 | 1.74 | 0.69 |
| 3:B:59:ARG:HH22 | 3:B:107:ILE:CB | 2.06 | 0.69 |
| 8:K:39:ARG:NH2 | 8:K:50:LEU:HD13 | 2.06 | 0.69 |
| 10:N:22:ILE:HD13 | 10:N:22:ILE:N | 2.08 | 0.69 |
| 3:R:764:LYS:HZ1 | 3:R:772:LYS:C | 1.94 | 0.69 |
| 3:R:873:THR:CG2 | 3:R:874:ILE:N | 2.55 | 0.69 |
| 4:S:175:ASN:HA | 4:S:195:LEU:HD21 | 1.72 | 0.69 |
| 1:A:337:VAL:HG23 | 1:A:433:HIS:CB | 2.23 | 0.69 |
| 3:B:522:LEU:O | 3:B:525:ARG:HB3 | 1.93 | 0.69 |
| 3:B:934:ALA:O | 10:N:46:ARG:HD3 | 1.92 | 0.69 |
| 7:H:23:LEU:HD12 | 7:H:62:ILE:HG12 | 1.72 | 0.69 |
| 3:B:851:LEU:HG | 11:P:35:PHE:CD2 | 2.26 | 0.69 |
| 1:Q:262:ILE:HG12 | 1:Q:266:TRP:HE1 | 1.56 | 0.69 |
| 1:Q:532:ILE:HD11 | 9:X:56:LYS:HD3 | 1.72 | 0.69 |
| 3:R:458:THR:HG23 | 3:R:467:VAL:O | 1.92 | 0.69 |
| 3:R:971:TYR:CZ | 4:S:165:ARG:HA | 2.28 | 0.69 |
| 4:S:90:GLU:C | 4:S:92:CYS:H | 1.96 | 0.69 |
| 10:Y:19:GLN:HA | 10:Y:22:ILE:HD11 | 1.74 | 0.69 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:A:324:THR:HG21 | 1:A:441:LEU:O | 1.92 | 0.69 |
| 3:B:38:LYS:HG3 | 3:B:39:LEU:N | 2.06 | 0.69 |
| 3:B:967:THR:HB | 3:B:982:ARG:HG2 | 1.74 | 0.69 |
| 8:K:45:MET:CE | 8:K:45:MET:HA | 2.23 | 0.69 |
| 1:Q:253:ILE:HG13 | 1:Q:262:ILE:HD11 | 1.75 | 0.69 |
| 1:Q:483:HIS:CD2 | 1:Q:625:LYS:HD2 | 2.28 | 0.69 |
| 3:R:688:THR:OG1 | 3:R:863:LYS:HD3 | 1.92 | 0.69 |
| 4:D:191:LYS:CB | 4:D:194:LYS:HD2 | 2.21 | 0.69 |
| 4:D:34:LEU:HD22 | 4:D:151:LYS:HB2 | 1.74 | 0.69 |
| 7:H:9:ILE:O | 7:H:9:ILE:HG22 | 1.93 | 0.69 |
| 8:K:28:THR:OG1 | 8:K:31:GLU:HG3 | 1.93 | 0.69 |
| 3:R:427:ARG:NH1 | 3:R:650:ILE:HD12 | 2.08 | 0.69 |
| 3:R:518:SER:HB3 | 3:R:564:ASN:ND2 | 2.07 | 0.69 |
| 4:S:250:ILE:HA | 4:S:253:ILE:CG2 | 2.23 | 0.69 |
| 10:Y:3:ILE:HD11 | 10:Y:18:TRP:CE3 | 2.27 | 0.69 |
| 1:A:313:LEU:HD21 | 3:B:1100:LEU:HD22 | 1.75 | 0.69 |
| 1:A:464:LEU:HD13 | 1:A:465:HIS:N | 2.08 | 0.69 |
| 3:B:1119:VAL:HG21 | 6:F:4:VAL:HG11 | 1.74 | 0.69 |
| 3:B:707:ALA:O | 3:B:711:ILE:HG13 | 1.92 | 0.69 |
| 3:B:943:THR:HG22 | 3:B:944:PRO:CD | 2.23 | 0.69 |
| 2:C:107:LEU:O | 2:C:110:ILE:HG22 | 1.93 | 0.69 |
| 2:C:310:ILE:CD1 | 2:C:310:ILE:H | 2.01 | 0.69 |
| 9:L:62:SER:O | 9:L:63:ILE:HD13 | 1.92 | 0.69 |
| 1:Q:353:ILE:HG13 | 1:Q:361:LEU:HD23 | 1.73 | 0.69 |
| 3:R:1057:MET:O | 3:R:1058:ILE:HD13 | 1.93 | 0.69 |
| 1:Q:501:ASP:OD2 | 3:R:913:HIS:HD2 | 1.75 | 0.69 |
| 1:A:58:CYS:SG | 1:A:59:PRO:CD | 2.80 | 0.69 |
| 3:B:164:GLN:HG2 | 3:B:349:LEU:HD21 | 1.75 | 0.69 |
| 3:B:672:MET:HG2 | 3:B:993:LEU:HD21 | 1.74 | 0.69 |
| 4:D:67:PHE:HD2 | 4:D:121:VAL:HG12 | 1.58 | 0.69 |
| 1:Q:376:ASN:O | 1:Q:377:TYR:CB | 2.40 | 0.69 |
| 3:R:1050:LEU:HD23 | 3:R:1051:ASP:N | 2.06 | 0.69 |
| 3:R:700:ARG:N | 10:Y:51:SER:O | 2.26 | 0.69 |
| 1:A:27:ILE:HG23 | 1:A:45:MET:HG2 | 1.73 | 0.68 |
| 1:A:525:LEU:C | 1:A:527:VAL:H | 1.96 | 0.68 |
| 1:A:765:THR:HG21 | 1:A:797:PHE:HE2 | 1.58 | 0.68 |
| 1:A:841:LEU:HD11 | 2:C:339:ASN:HB3 | 1.74 | 0.68 |
| 3:B:139:ILE:HD12 | 10:N:61:HIS:CD2 | 2.27 | 0.68 |
| 3:B:450:TRP:CZ2 | 3:B:641:GLU:OE1 | 2.46 | 0.68 |
| 2:C:370:VAL:O | 2:C:373:ILE:HG22 | 1.93 | 0.68 |
| 2:C:38:ASN:HD22 | 2:C:38:ASN:N | 1.91 | 0.68 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 2:G:38:ASN:N | 2:G:38:ASN:HD22 | 1.90 | 0.68 |
| 1:Q:238:LYS:CE | 1:Q:297:THR:HB | 2.22 | 0.68 |
| 3:R:480:ILE:HG22 | 3:R:481:ASN:N | 2.08 | 0.68 |
| 3:R:780:VAL:HG11 | 3:R:831:ALA:HB3 | 1.75 | 0.68 |
| 4:S:63:ALA:HB1 | 4:S:155:LYS:HZ3 | 1.58 | 0.68 |
| 1:A:534:LEU:HD13 | 1:A:535:GLY:N | 2.09 | 0.68 |
| 1:A:697:GLU:OE1 | 1:A:756:ARG:HD3 | 1.94 | 0.68 |
| 3:B:321:LYS:HD2 | 3:B:330:ARG:HE | 1.58 | 0.68 |
| 3:B:330:ARG:NH1 | 3:B:330:ARG:HG2 | 2.07 | 0.68 |
| 2:C:146:TYR:HD1 | 2:C:146:TYR:H | 1.38 | 0.68 |
| 3:R:1061:CYS:HB3 | 3:R:1065:GLY:N | 2.09 | 0.68 |
| 3:R:814:VAL:HG11 | 3:R:832:LYS:HB3 | 1.74 | 0.68 |
| 7:V:20:HIS:O | 7:V:21:GLU:HG3 | 1.94 | 0.68 |
| 10:Y:42:ARG:CG | 10:Y:43:TYR:H | 2.06 | 0.68 |
| 1:A:877:GLY:HA3 | 3:R:377:ARG:NH1 | 2.08 | 0.68 |
| 3:B:364:ASP:O | 3:B:367:TYR:HB3 | 1.93 | 0.68 |
| 3:B:52:GLU:HG3 | 3:B:56:LEU:HD23 | 1.75 | 0.68 |
| 3:B:6:THR:HG22 | 3:B:7:ILE:H | 1.58 | 0.68 |
| 3:B:806:GLY:O | 3:B:839:THR:HB | 1.93 | 0.68 |
| 3:B:959:ARG:HG2 | 3:B:959:ARG:HH11 | 1.57 | 0.68 |
| 7:H:23:LEU:HD21 | 7:H:64:ARG:HB2 | 1.76 | 0.68 |
| 1:Q:476:ALA:HB2 | 3:R:1044:LEU:HD13 | 1.74 | 0.68 |
| 1:Q:561:ASN:ND2 | 1:Q:590:ASN:H | 1.90 | 0.68 |
| 1:Q:502:TYR:CE1 | 1:Q:636:ILE:HD11 | 2.28 | 0.68 |
| 3:R:1074:LYS:HA | 3:R:1074:LYS:HE2 | 1.76 | 0.68 |
| 7:V:23:LEU:HD21 | 7:V:64:ARG:HB2 | 1.75 | 0.68 |
| 1:A:27:ILE:N | 1:A:27:ILE:HD12 | 2.07 | 0.68 |
| 1:A:409:ARG:NH1 | 1:A:409:ARG:HB3 | 2.07 | 0.68 |
| 3:B:482:GLU:O | 3:B:484:ILE:N | 2.25 | 0.68 |
| 3:B:65:ILE:HD12 | 3:B:65:ILE:N | 2.04 | 0.68 |
| 3:B:762:GLU:O | 3:B:764:LYS:HG3 | 1.93 | 0.68 |
| 3:B:725:ALA:HB2 | 3:B:906:PRO:HB3 | 1.74 | 0.68 |
| 2:C:130:TYR:CD1 | 2:C:136:LYS:HG3 | 2.28 | 0.68 |
| 2:C:13:LEU:CD2 | 2:C:16:LYS:HZ2 | 2.06 | 0.68 |
| 1:Q:427:ARG:N | 2:G:76:GLN:NE2 | 2.41 | 0.68 |
| 7:H:21:GLU:O | 7:H:63:ILE:HG23 | 1.92 | 0.68 |
| 1:Q:708:ARG:HG3 | 1:Q:709:SER:N | 2.06 | 0.68 |
| 2:G:355:LEU:HD23 | 3:R:1109:ILE:HD11 | 1.76 | 0.68 |
| 3:R:707:ALA:O | 3:R:711:ILE:HG13 | 1.93 | 0.68 |
| 4:S:190:LEU:HA | 4:S:194:LYS:O | 1.92 | 0.68 |
| 11:Z:10:TRP:O | 11:Z:11:LYS:HB2 | 1.93 | 0.68 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 1:A:837:THR:HG22 | 1:A:838:VAL:H | 1.59 | 0.68 |
| 3:B:59:ARG:HH22 | 3:B:107:ILE:CG1 | 2.06 | 0.68 |
| 3:B:582:VAL:HG22 | 3:B:586:ASN:O | 1.93 | 0.68 |
| 3:B:590:THR:HA | 3:B:593:ASP:OD2 | 1.94 | 0.68 |
| 3:B:873:THR:CG2 | 3:B:874:ILE:N | 2.57 | 0.68 |
| 2:C:122:MET:SD | 2:C:256:SER:HA | 2.33 | 0.68 |
| 2:C:24:LEU:HD11 | 2:C:58:GLU:OE1 | 1.93 | 0.68 |
| 1:Q:569:SER:HB2 | 1:Q:584:SER:OG | 1.92 | 0.68 |
| 1:Q:640:GLU:OE1 | 3:R:974:ARG:NH1 | 2.26 | 0.68 |
| 1:Q:696:LEU:O | 1:Q:700:ILE:HG12 | 1.94 | 0.68 |
| 3:R:277:ALA:HB3 | 3:R:280:GLN:OE1 | 1.92 | 0.68 |
| 3:R:368:GLN:HE22 | 3:R:386:ARG:HE | 1.40 | 0.68 |
| 3:R:59:ARG:HH22 | 3:R:107:ILE:CB | 2.05 | 0.68 |
| 1:A:827:LEU:HG | 2:C:75:ALA:HB2 | 1.75 | 0.68 |
| 3:B:1074:LYS:HE2 | 3:B:1074:LYS:HA | 1.75 | 0.68 |
| 3:B:975:THR:OG1 | 3:B:977:GLN:HG2 | 1.94 | 0.68 |
| 10:N:52:HIS:NE2 | 10:N:54:ASP:HB2 | 2.09 | 0.68 |
| 1:Q:27:ILE:HD12 | 1:Q:27:ILE:N | 2.09 | 0.68 |
| 1:Q:612:LEU:HA | 1:Q:615:LEU:HD12 | 1.74 | 0.68 |
| 1:Q:697:GLU:OE1 | 1:Q:756:ARG:HD3 | 1.93 | 0.68 |
| 3:R:119:LEU:HD12 | 3:R:120:PRO:CD | 2.22 | 0.68 |
| 3:R:708:LEU:O | 3:R:708:LEU:HD13 | 1.94 | 0.68 |
| 3:R:911:ASN:ND2 | 3:R:913:HIS:HB2 | 2.07 | 0.68 |
| 1:Q:733:ALA:HB1 | 3:R:913:HIS:CE1 | 2.29 | 0.68 |
| 2:G:390:MET:CB | 5:T:56:GLU:HG3 | 2.21 | 0.68 |
| 9:X:15:LEU:HB3 | 9:X:55:VAL:HG23 | 1.76 | 0.68 |
| 9:X:40:PHE:HB3 | 9:X:58:LEU:HB3 | 1.74 | 0.68 |
| 3:R:934:ALA:HB2 | 10:Y:47:ARG:HD3 | 1.75 | 0.68 |
| 1:A:177:PRO:HG2 | 1:A:270:GLN:HE22 | 1.59 | 0.68 |
| 1:A:575:CYS:SG | 1:A:580:CYS:CB | 2.81 | 0.68 |
| 1:A:647:ARG:HB2 | 1:A:650:ASP:OD2 | 1.94 | 0.68 |
| 2:C:301:LEU:HD12 | 2:C:302:ALA:N | 2.08 | 0.68 |
| 1:A:878:TRP:CZ3 | 2:C:50:LYS:HE2 | 2.29 | 0.68 |
| 5:E:113:ILE:HG23 | 5:E:114:THR:N | 2.09 | 0.68 |
| 5:E:116:ASP:CG | 5:E:117:THR:N | 2.47 | 0.68 |
| 2:G:301:LEU:HA | 2:G:304:GLN:HG3 | 1.76 | 0.68 |
| 2:G:393:ILE:CG2 | 2:G:395:ARG:HH21 | 2.07 | 0.68 |
| 7:H:24:ASN:O | 7:H:26:ASP:N | 2.27 | 0.68 |
| 1:Q:313:LEU:HD21 | 3:R:1100:LEU:HD22 | 1.74 | 0.68 |
| 1:Q:4:LYS:HZ2 | 3:R:1115:LEU:HB3 | 1.57 | 0.68 |
| 1:Q:57:LYS:HB3 | 1:Q:62:GLY:HA2 | 1.76 | 0.68 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:G:28:ILE:HD13 | 8:W:14:HIS:CB | 2.23 | 0.68 |
| 8:W:32:ILE:O | 8:W:35:VAL:HG22 | 1.94 | 0.68 |
| 1:A:506:ALA:HA | 1:A:635:PHE:HE2 | 1.59 | 0.68 |
| 1:A:506:ALA:HA | 1:A:635:PHE:CE2 | 2.28 | 0.68 |
| 1:A:864:LYS:HG3 | 2:C:32:LEU:HD11 | 1.76 | 0.68 |
| 3:B:899:TYR:CE1 | 3:B:971:TYR:HB2 | 2.29 | 0.68 |
| 5:E:4:LEU:HD21 | 5:E:73:ASP:HB3 | 1.76 | 0.68 |
| 1:Q:350:PRO:HD3 | 1:Q:468:GLN:HE22 | 1.58 | 0.68 |
| 1:Q:27:ILE:HG23 | 1:Q:45:MET:HG2 | 1.75 | 0.68 |
| 1:Q:512:LYS:HG3 | 1:Q:583:ASP:OD2 | 1.93 | 0.68 |
| 1:Q:728:MET:HE1 | 3:R:913:HIS:HA | 1.75 | 0.68 |
| 4:S:16:VAL:HG12 | 4:S:16:VAL:O | 1.93 | 0.68 |
| 9:X:15:LEU:HB3 | 9:X:55:VAL:CG2 | 2.24 | 0.68 |
| 3:B:163:THR:HG23 | 3:B:428:ARG:O | 1.94 | 0.68 |
| 2:C:269:VAL:HA | 2:C:272:VAL:CG2 | 2.24 | 0.68 |
| 1:Q:308:ARG:HH21 | 3:R:1099:LEU:CD1 | 1.97 | 0.68 |
| 1:Q:481:LEU:HD23 | 1:Q:482:VAL:H | 1.58 | 0.68 |
| 1:Q:507:TYR:HB3 | 1:Q:597:VAL:HG13 | 1.76 | 0.68 |
| 3:R:1004:ARG:NH2 | 3:R:1007:GLY:H | 1.92 | 0.68 |
| 3:R:63:ILE:N | 3:R:63:ILE:HD12 | 2.08 | 0.68 |
| 3:R:806:GLY:O | 3:R:839:THR:HB | 1.93 | 0.68 |
| 8:W:82:LEU:HB2 | 8:W:83:PRO:HD2 | 1.76 | 0.68 |
| 7:V:34:GLU:HG3 | 8:W:84:ASN:OD1 | 1.94 | 0.68 |
| 10:Y:52:HIS:NE2 | 10:Y:54:ASP:HB2 | 2.09 | 0.68 |
| 3:B:244:LEU:C | 3:B:246:PRO:HD3 | 2.14 | 0.68 |
| 3:B:602:ILE:CG2 | 3:B:603:THR:H | 2.06 | 0.68 |
| 3:B:427:ARG:HH11 | 3:B:650:ILE:HD12 | 1.59 | 0.68 |
| 2:C:11:PRO:O | 2:C:14:GLU:HG3 | 1.94 | 0.68 |
| 5:E:126:ILE:HG23 | 5:E:136:ILE:H | 1.59 | 0.68 |
| 5:E:3:LYS:HA | 6:F:12:ILE:HG13 | 1.75 | 0.68 |
| 2:G:310:ILE:HG22 | 2:G:314:LEU:CD2 | 2.24 | 0.68 |
| 1:Q:252:SER:O | 1:Q:257:ALA:HB2 | 1.92 | 0.68 |
| 1:Q:878:TRP:CZ3 | 2:G:50:LYS:HE2 | 2.29 | 0.68 |
| 3:R:453:MET:HE3 | 3:R:470:LEU:HA | 1.75 | 0.68 |
| 3:R:317:TYR:CD2 | 3:R:526:LEU:HD13 | 2.29 | 0.68 |
| 3:R:900:THR:HG21 | 3:R:968:GLU:OE2 | 1.93 | 0.68 |
| 7:V:24:ASN:O | 7:V:26:ASP:N | 2.27 | 0.68 |
| 8:W:53:ILE:CD1 | 8:W:53:ILE:H | 2.06 | 0.68 |
| 10:Y:22:ILE:HD13 | 10:Y:22:ILE:N | 2.08 | 0.68 |
| 1:A:387:ASP:CG | 1:A:388:LEU:H | 1.97 | 0.67 |
| 1:A:567:ASN:HB2 | 1:A:601:LYS:HG2 | 1.74 | 0.67 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 3:B:360:ALA:HB2 | 3:B:393:ARG:NH1 | 2.08 | 0.67 |
| 3:B:427:ARG:NH1 | 3:B:650:ILE:HD12 | 2.09 | 0.67 |
| 3:B:530:TYR:OH | 3:B:536:LEU:HB2 | 1.94 | 0.67 |
| 3:B:696:HIS:ND1 | 4:D:57:ILE:HD11 | 2.09 | 0.67 |
| 7:H:64:ARG:NH2 | 8:K:12:ASP:OD1 | 2.26 | 0.67 |
| 8:K:23:TRP:CE3 | 8:K:23:TRP:HA | 2.28 | 0.67 |
| 8:K:23:TRP:HE3 | 8:K:23:TRP:HA | 1.59 | 0.67 |
| 1:Q:55:GLY:O | 1:Q:57:LYS:N | 2.27 | 0.67 |
| 3:R:161:ILE:HG21 | 3:R:346:ALA:HA | 1.76 | 0.67 |
| 3:R:536:LEU:C | 3:R:536:LEU:HD13 | 2.15 | 0.67 |
| 3:R:971:TYR:CZ | 3:R:978:LYS:HB3 | 2.30 | 0.67 |
| 4:S:12:ARG:HA | 4:S:230:ILE:O | 1.94 | 0.67 |
| 5:T:179:LYS:HE2 | 6:U:81:ASP:CB | 2.21 | 0.67 |
| 5:T:31:ARG:C | 5:T:33:GLN:H | 1.94 | 0.67 |
| 1:A:262:ILE:HG12 | 1:A:266:TRP:HE1 | 1.58 | 0.67 |
| 1:A:47:PRO:HG2 | 1:A:48:ARG:H | 1.59 | 0.67 |
| 2:C:115:LYS:HE2 | 2:C:279:GLU:HB2 | 1.76 | 0.67 |
| 1:A:427:ARG:N | 2:C:76:GLN:NE2 | 2.42 | 0.67 |
| 4:D:235:SER:O | 4:D:236:LEU:HD12 | 1.94 | 0.67 |
| 2:G:277:ILE:C | 2:G:279:GLU:H | 1.98 | 0.67 |
| 2:G:393:ILE:HG22 | 2:G:394:LEU:H | 1.58 | 0.67 |
| 8:K:79:ARG:HG3 | 8:K:79:ARG:HH11 | 1.59 | 0.67 |
| 10:N:43:TYR:HA | 10:N:46:ARG:HB3 | 1.75 | 0.67 |
| 1:Q:876:VAL:O | 1:Q:878:TRP:N | 2.27 | 0.67 |
| 3:R:1069:TRP:HB3 | 3:R:1079:CYS:HA | 1.77 | 0.67 |
| 8:W:82:LEU:H | 8:W:82:LEU:HD23 | 1.58 | 0.67 |
| 10:Y:35:LEU:CD2 | 10:Y:40:VAL:HG21 | 2.22 | 0.67 |
| 3:B:480:ILE:HG22 | 3:B:481:ASN:H | 1.58 | 0.67 |
| 3:B:40:GLN:HE22 | 3:B:62:LYS:HA | 1.59 | 0.67 |
| 2:C:40:GLU:O | 2:C:45:ARG:HG2 | 1.93 | 0.67 |
| 10:N:42:ARG:CG | 10:N:43:TYR:H | 2.07 | 0.67 |
| 1:Q:203:ARG:CZ | 1:Q:206:TRP:HB2 | 2.23 | 0.67 |
| 1:Q:551:VAL:HG13 | 1:Q:552:ILE:H | 1.60 | 0.67 |
| 1:Q:765:THR:HG21 | 1:Q:797:PHE:HE2 | 1.58 | 0.67 |
| 3:R:450:TRP:CZ2 | 3:R:641:GLU:OE1 | 2.45 | 0.67 |
| 1:A:872:PHE:CG | 1:A:876:VAL:HG21 | 2.29 | 0.67 |
| 3:B:119:LEU:HD12 | 3:B:120:PRO:CD | 2.24 | 0.67 |
| 3:B:189:ILE:HB | 3:B:203:GLU:CB | 2.24 | 0.67 |
| 3:B:690:THR:HG22 | 3:B:691:ARG:HG3 | 1.76 | 0.67 |
| 3:B:739:ILE:CG2 | 3:B:909:ILE:HB | 2.23 | 0.67 |
| 4:D:217:ILE:N | 4:D:217:ILE:HD12 | 2.10 | 0.67 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 9:L:40:PHE:HB3 | 9:L:58:LEU:HB3 | 1.76 | 0.67 |
| 1:Q:324:THR:HG22 | 1:Q:325:VAL:N | 2.08 | 0.67 |
| 1:Q:331:ASN:O | 1:Q:332:ILE:CB | 2.42 | 0.67 |
| 3:R:1097:PHE:CE2 | 3:R:1101:ILE:HD11 | 2.30 | 0.67 |
| 3:R:727:MET:HE2 | 3:R:983:ILE:HG21 | 1.77 | 0.67 |
| 5:T:110:ILE:O | 5:T:113:ILE:HG22 | 1.94 | 0.67 |
| 5:T:83:GLU:O | 5:T:145:ARG:HA | 1.94 | 0.67 |
| 1:A:324:THR:HG22 | 1:A:325:VAL:N | 2.10 | 0.67 |
| 3:B:946:TYR:CD2 | 3:B:947:LYS:N | 2.49 | 0.67 |
| 8:K:71:ARG:HB2 | 8:K:71:ARG:HH11 | 1.59 | 0.67 |
| 3:R:330:ARG:HG2 | 3:R:330:ARG:HH11 | 1.59 | 0.67 |
| 3:R:433:LEU:HB2 | 3:R:435:ARG:CZ | 2.25 | 0.67 |
| 3:R:959:ARG:HH11 | 3:R:959:ARG:HG2 | 1.59 | 0.67 |
| 3:R:972:ASP:OD2 | 3:R:974:ARG:HG2 | 1.95 | 0.67 |
| 6:U:30:SER:HG | 6:U:38:TYR:HE1 | 1.39 | 0.67 |
| 3:B:1057:MET:O | 3:B:1058:ILE:HD13 | 1.95 | 0.67 |
| 3:B:536:LEU:C | 3:B:536:LEU:HD13 | 2.14 | 0.67 |
| 3:B:544:ARG:HH11 | 3:B:544:ARG:HG3 | 1.58 | 0.67 |
| 2:C:104:LEU:HB3 | 2:C:105:PRO:CD | 2.22 | 0.67 |
| 5:E:83:GLU:O | 5:E:145:ARG:HA | 1.95 | 0.67 |
| 4:D:64:LEU:HD22 | 10:N:6:ARG:HD3 | 1.76 | 0.67 |
| 5:T:126:ILE:HD11 | 5:T:137:GLN:HG2 | 1.76 | 0.67 |
| 8:W:60:ASP:N | 8:W:60:ASP:OD2 | 2.27 | 0.67 |
| 1:Q:15:SER:HA | 1:Q:203:ARG:NH2 | 2.09 | 0.67 |
| 1:Q:238:LYS:HD3 | 1:Q:276:TYR:HA | 1.76 | 0.67 |
| 1:Q:402:ALA:O | 1:Q:404:GLY:N | 2.28 | 0.67 |
| 3:R:683:ASN:O | 3:R:685:GLN:N | 2.28 | 0.67 |
| 3:R:690:THR:HG22 | 3:R:691:ARG:HG3 | 1.77 | 0.67 |
| 5:T:126:ILE:HG23 | 5:T:136:ILE:H | 1.59 | 0.67 |
| 7:V:38:ARG:HH11 | 7:V:38:ARG:HG2 | 1.60 | 0.67 |
| 2:G:388:LEU:HD11 | 8:W:34:ARG:HG3 | 1.76 | 0.67 |
| 1:A:203:ARG:NH1 | 1:A:206:TRP:HB2 | 2.08 | 0.67 |
| 1:A:490:ARG:HG3 | 2:C:77:SER:HB3 | 1.77 | 0.67 |
| 3:B:1009:VAL:HG12 | 3:B:1016:PRO:HA | 1.77 | 0.67 |
| 3:B:1069:TRP:HB3 | 3:B:1079:CYS:HA | 1.74 | 0.67 |
| 3:B:1079:CYS:SG | 3:B:1080:PRO:HD2 | 2.34 | 0.67 |
| 3:B:157:SER:O | 3:B:158:GLU:HB2 | 1.95 | 0.67 |
| 4:D:250:ILE:HA | 4:D:253:ILE:CG2 | 2.25 | 0.67 |
| 1:Q:490:ARG:HG3 | 2:G:77:SER:HB3 | 1.76 | 0.67 |
| 1:Q:567:ASN:HB3 | 1:Q:599:ASP:OD2 | 1.95 | 0.67 |
| 3:R:244:LEU:C | 3:R:246:PRO:HD3 | 2.15 | 0.67 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 3:R:373:LYS:CE | 3:R:375:ARG:HD2 | 2.25 | 0.67 |
| 3:R:910:LEU:HD23 | 3:R:911:ASN:N | 2.10 | 0.67 |
| 3:R:967:THR:HB | 3:R:982:ARG:HG2 | 1.77 | 0.67 |
| 4:S:51:SER:HA | 4:S:137:GLN:NE2 | 2.10 | 0.67 |
| 5:T:4:LEU:HD21 | 5:T:73:ASP:HB3 | 1.76 | 0.67 |
| 6:U:31:SER:HA | 6:U:35:GLN:HE21 | 1.58 | 0.67 |
| 8:W:45:MET:HE2 | 8:W:45:MET:HA | 1.76 | 0.67 |
| 1:A:47:PRO:HG2 | 1:A:48:ARG:HD3 | 1.75 | 0.67 |
| 3:B:581:ILE:HD11 | 3:B:614:GLU:CB | 2.19 | 0.67 |
| 5:E:110:ILE:O | 5:E:113:ILE:HG22 | 1.95 | 0.67 |
| 6:F:79:THR:O | 6:F:83:VAL:HG23 | 1.95 | 0.67 |
| 2:G:146:TYR:HD1 | 2:G:146:TYR:H | 1.38 | 0.67 |
| 1:Q:534:LEU:HD23 | 9:X:39:SER:OG | 1.95 | 0.67 |
| 1:Q:567:ASN:HB2 | 1:Q:601:LYS:HG2 | 1.75 | 0.67 |
| 3:R:200:VAL:O | 3:R:200:VAL:HG13 | 1.95 | 0.67 |
| 2:G:63:LEU:HD21 | 8:W:23:TRP:CZ3 | 2.30 | 0.67 |
| 1:A:376:ASN:O | 1:A:377:TYR:CB | 2.41 | 0.67 |
| 3:B:754:PHE:HE2 | 3:B:756:ARG:HB2 | 1.60 | 0.67 |
| 3:B:971:TYR:CE2 | 4:D:165:ARG:HA | 2.30 | 0.67 |
| 1:Q:490:ARG:HA | 2:G:312:HIS:HE1 | 1.58 | 0.67 |
| 3:B:853:THR:HG23 | 11:P:32:LYS:O | 1.94 | 0.67 |
| 1:Q:328:PRO:HG3 | 1:Q:457:PHE:CD1 | 2.30 | 0.67 |
| 1:Q:721:PRO:HA | 1:Q:726:TYR:CD1 | 2.30 | 0.67 |
| 1:Q:728:MET:O | 1:Q:733:ALA:HB3 | 1.95 | 0.67 |
| 3:R:189:ILE:HB | 3:R:203:GLU:CB | 2.24 | 0.67 |
| 4:S:205:LEU:HA | 4:S:221:PHE:HZ | 1.60 | 0.67 |
| 1:A:245:ILE:HD13 | 1:A:268:LEU:HD13 | 1.75 | 0.66 |
| 1:A:390:TYR:HD1 | 1:A:391:VAL:HG23 | 1.60 | 0.66 |
| 1:A:409:ARG:HH11 | 1:A:409:ARG:HB3 | 1.59 | 0.66 |
| 1:A:446:ASN:ND2 | 1:A:446:ASN:C | 2.48 | 0.66 |
| 1:A:648:LEU:HD23 | 1:A:648:LEU:O | 1.95 | 0.66 |
| 1:A:749:GLN:H | 1:A:781:PHE:CA | 2.06 | 0.66 |
| 1:A:842:TYR:HB3 | 1:A:844:GLU:HG3 | 1.77 | 0.66 |
| 3:B:1014:ARG:HG2 | 3:B:1014:ARG:NH1 | 2.08 | 0.66 |
| 2:C:126:LEU:HD11 | 2:C:249:TYR:HB2 | 1.77 | 0.66 |
| 7:H:20:HIS:O | 7:H:21:GLU:HG3 | 1.94 | 0.66 |
| 7:H:29:TYR:HA | 7:H:32:LEU:CD1 | 2.07 | 0.66 |
| 1:Q:199:PRO:HA | 1:Q:202:SER:O | 1.94 | 0.66 |
| 1:Q:558:LYS:H | 1:Q:558:LYS:HD3 | 1.59 | 0.66 |
| 1:Q:645:THR:OG1 | 1:Q:646:MET:N | 2.29 | 0.66 |
| 6:U:79:THR:HG22 | 6:U:80:SER:H | 1.58 | 0.66 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 2:G:28:ILE:HG21 | 8:W:14:HIS:HB3 | 1.76 | 0.66 |
| 1:A:346:THR:HG21 | 3:B:1003:ALA:HB1 | 1.75 | 0.66 |
| 1:A:337:VAL:HG23 | 1:A:433:HIS:HB3 | 1.77 | 0.66 |
| 1:A:604:GLY:C | 1:A:606:GLN:N | 2.48 | 0.66 |
| 6:F:52:ALA:HA | 6:F:55:VAL:HG23 | 1.76 | 0.66 |
| 8:K:70:ARG:HB3 | 8:K:70:ARG:HH11 | 1.60 | 0.66 |
| 1:Q:193:GLU:O | 1:Q:195:LEU:N | 2.27 | 0.66 |
| 1:Q:203:ARG:CG | 1:Q:203:ARG:HH11 | 2.09 | 0.66 |
| 1:Q:648:LEU:O | 1:Q:648:LEU:HD23 | 1.94 | 0.66 |
| 3:R:278:ILE:HG22 | 3:R:279:GLY:N | 2.10 | 0.66 |
| 3:B:59:ARG:HH12 | 3:B:107:ILE:HD12 | 1.60 | 0.66 |
| 1:A:490:ARG:HA | 2:C:312:HIS:HE1 | 1.61 | 0.66 |
| 2:G:369:VAL:O | 2:G:373:ILE:HB | 1.95 | 0.66 |
| 1:Q:308:ARG:NH2 | 3:R:1012:LEU:HD11 | 2.11 | 0.66 |
| 3:R:1069:TRP:HE1 | 3:R:1088:LEU:CB | 2.09 | 0.66 |
| 3:R:591:ILE:HD11 | 3:R:612:LYS:HZ3 | 1.60 | 0.66 |
| 4:S:67:PHE:HD2 | 4:S:121:VAL:HG12 | 1.59 | 0.66 |
| 1:A:199:PRO:HA | 1:A:202:SER:O | 1.95 | 0.66 |
| 1:A:480:MET:HG2 | 3:B:1039:PHE:CE1 | 2.31 | 0.66 |
| 1:A:481:LEU:CD2 | 1:A:482:VAL:H | 2.07 | 0.66 |
| 1:A:522:GLN:HG2 | 9:L:40:PHE:CE1 | 2.30 | 0.66 |
| 3:B:870:ARG:CZ | 3:B:996:MET:SD | 2.83 | 0.66 |
| 2:C:115:LYS:HB2 | 2:C:278:ARG:HG3 | 1.78 | 0.66 |
| 4:D:12:ARG:HA | 4:D:230:ILE:O | 1.95 | 0.66 |
| 5:E:179:LYS:HZ1 | 6:F:82:GLU:H | 1.43 | 0.66 |
| 8:K:61:VAL:HG12 | 8:K:62:ILE:H | 1.60 | 0.66 |
| 1:Q:489:PRO:HB3 | 1:Q:858:MET:HG3 | 1.75 | 0.66 |
| 3:R:943:THR:HG22 | 3:R:944:PRO:CD | 2.25 | 0.66 |
| 5:T:113:ILE:HG23 | 5:T:114:THR:N | 2.08 | 0.66 |
| 3:R:934:ALA:O | 10:Y:46:ARG:HD3 | 1.96 | 0.66 |
| 1:A:238:LYS:CE | 1:A:297:THR:HB | 2.25 | 0.66 |
| 1:A:68:CYS:SG | 1:A:71:HIS:NE2 | 2.67 | 0.66 |
| 2:C:122:MET:HB2 | 2:C:253:THR:OG1 | 1.96 | 0.66 |
| 2:C:277:ILE:C | 2:C:279:GLU:H | 1.97 | 0.66 |
| 2:C:390:MET:HG3 | 5:E:57:GLY:N | 2.10 | 0.66 |
| 6:F:53:GLN:O | 6:F:57:GLU:HG3 | 1.94 | 0.66 |
| 3:R:1107:MET:C | 3:R:1108:ILE:HD12 | 2.16 | 0.66 |
| 3:R:838:VAL:HG12 | 3:R:839:THR:H | 1.60 | 0.66 |
| 3:R:861:LEU:HD12 | 3:R:862:VAL:H | 1.61 | 0.66 |
| 1:A:349:VAL:HG21 | 1:A:415:ASP:OD2 | 1.96 | 0.66 |
| 1:A:558:LYS:CG | 3:R:104:GLU:HB2 | 2.26 | 0.66 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:A:775:SER:OG | 1:A:776:PRO:HD2 | 1.94 | 0.66 |
| 3:B:70:VAL:HG22 | 3:B:78:ARG:O | 1.96 | 0.66 |
| 3:B:897:MET:SD | 3:B:906:PRO:HG2 | 2.36 | 0.66 |
| 3:B:978:LYS:HZ1 | 4:D:205:LEU:HD13 | 1.60 | 0.66 |
| 1:Q:874:ARG:NE | 2:G:53:ASP:HB3 | 2.03 | 0.66 |
| 10:N:30:ASN:O | 10:N:34:VAL:HG23 | 1.95 | 0.66 |
| 1:Q:387:ASP:CG | 1:Q:388:LEU:H | 1.99 | 0.66 |
| 1:Q:765:THR:HG22 | 1:Q:766:LEU:CD2 | 2.24 | 0.66 |
| 1:Q:872:PHE:CG | 1:Q:876:VAL:HG21 | 2.31 | 0.66 |
| 3:R:1033:ARG:CG | 3:R:1033:ARG:HH11 | 2.08 | 0.66 |
| 3:R:197:ARG:HB2 | 3:R:199:PRO:HD3 | 1.76 | 0.66 |
| 3:R:253:PHE:N | 3:R:254:PRO:HD2 | 2.11 | 0.66 |
| 3:R:164:GLN:HG2 | 3:R:349:LEU:HD21 | 1.77 | 0.66 |
| 3:R:591:ILE:CG1 | 3:R:612:LYS:NZ | 2.58 | 0.66 |
| 8:W:45:MET:HA | 8:W:45:MET:CE | 2.25 | 0.66 |
| 1:A:525:LEU:HD11 | 1:A:530:VAL:HG11 | 1.78 | 0.66 |
| 3:B:588:LEU:HD22 | 3:B:612:LYS:HG2 | 1.78 | 0.66 |
| 3:B:48:GLU:HG2 | 3:B:58:VAL:HB | 1.77 | 0.66 |
| 3:B:853:THR:HG22 | 3:B:854:GLU:N | 2.06 | 0.66 |
| 2:G:269:VAL:HA | 2:G:272:VAL:CG2 | 2.26 | 0.66 |
| 2:G:54:LEU:O | 2:G:58:GLU:HG3 | 1.96 | 0.66 |
| 1:Q:345:LYS:HA | 1:Q:410:HIS:CD2 | 2.30 | 0.66 |
| 1:Q:486:ILE:HD11 | 1:Q:628:MET:HE2 | 1.78 | 0.66 |
| 1:Q:752:VAL:C | 1:Q:754:GLY:H | 2.00 | 0.66 |
| 1:A:203:ARG:CZ | 1:A:206:TRP:HB2 | 2.26 | 0.66 |
| 3:B:277:ALA:HB3 | 3:B:280:GLN:OE1 | 1.94 | 0.66 |
| 3:B:545:ARG:NE | 3:B:581:ILE:HD13 | 2.10 | 0.66 |
| 4:D:205:LEU:HA | 4:D:221:PHE:HZ | 1.59 | 0.66 |
| 1:Q:390:TYR:HD1 | 1:Q:391:VAL:HG23 | 1.61 | 0.66 |
| 1:Q:531:LYS:O | 1:Q:532:ILE:HB | 1.96 | 0.66 |
| 3:R:1081:ILE:HG21 | 3:R:1085:LYS:NZ | 2.10 | 0.66 |
| 3:R:153:ILE:CG2 | 3:R:156:GLY:HA2 | 2.26 | 0.66 |
| 4:S:108:MET:HE1 | 10:Y:2:LEU:HD21 | 1.77 | 0.66 |
| 7:V:18:PRO:HB2 | 7:V:67:ARG:HA | 1.78 | 0.66 |
| 8:W:53:ILE:N | 8:W:53:ILE:HD12 | 2.08 | 0.66 |
| 1:A:438:LEU:O | 1:A:438:LEU:HD23 | 1.95 | 0.66 |
| 1:A:561:ASN:HA | 1:A:588:ILE:O | 1.96 | 0.66 |
| 1:A:721:PRO:HA | 1:A:726:TYR:CD1 | 2.31 | 0.66 |
| 1:A:765:THR:HG22 | 1:A:766:LEU:CD2 | 2.25 | 0.66 |
| 3:B:200:VAL:O | 3:B:200:VAL:HG13 | 1.96 | 0.66 |
| 3:B:930:GLY:HA2 | 10:N:47:ARG:HH22 | 1.60 | 0.66 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 4:D:191:LYS:H | 4:D:194:LYS:HB2 | 1.60 | 0.66 |
| 5:E:126:ILE:CD1 | 5:E:137:GLN:HG2 | 2.26 | 0.66 |
| 6:F:79:THR:HG22 | 6:F:80:SER:H | 1.61 | 0.66 |
| 1:Q:15:SER:O | 1:Q:19:ILE:HG13 | 1.95 | 0.66 |
| 1:Q:316:LYS:HE2 | 3:R:1094:SER:HG | 1.59 | 0.66 |
| 1:Q:364:PHE:CE1 | 1:Q:409:ARG:HD2 | 2.31 | 0.66 |
| 3:R:116:ILE:HG23 | 3:R:361:PHE:CE1 | 2.31 | 0.66 |
| 3:R:530:TYR:OH | 3:R:536:LEU:HB2 | 1.95 | 0.66 |
| 3:R:765:TYR:CG | 3:R:766:PRO:HD2 | 2.31 | 0.66 |
| 3:R:946:TYR:CD2 | 3:R:947:LYS:N | 2.51 | 0.66 |
| 4:S:18:GLU:CD | 4:S:225:LYS:HD2 | 2.17 | 0.66 |
| 1:A:57:LYS:HB3 | 1:A:62:GLY:HA2 | 1.78 | 0.66 |
| 1:A:876:VAL:O | 1:A:878:TRP:N | 2.29 | 0.66 |
| 3:B:473:MET:SD | 3:B:474:ALA:N | 2.69 | 0.66 |
| 3:B:488:THR:HG21 | 3:B:549:ILE:HD11 | 1.77 | 0.66 |
| 4:D:98:ILE:CG1 | 4:D:114:ILE:HG12 | 2.24 | 0.66 |
| 6:F:31:SER:HA | 6:F:35:GLN:HE21 | 1.60 | 0.66 |
| 2:G:11:PRO:O | 2:G:14:GLU:HG3 | 1.96 | 0.66 |
| 7:H:62:ILE:HD13 | 7:H:62:ILE:H | 1.61 | 0.66 |
| 3:R:222:PRO:HD2 | 3:R:225:ILE:HD12 | 1.77 | 0.66 |
| 1:Q:807:VAL:CG1 | 3:R:443:ARG:HH11 | 2.09 | 0.66 |
| 3:R:70:VAL:HG22 | 3:R:78:ARG:O | 1.96 | 0.66 |
| 7:V:13:ILE:HG23 | 7:V:14:HIS:H | 1.61 | 0.66 |
| 1:A:446:ASN:HD22 | 1:A:447:LEU:N | 1.93 | 0.65 |
| 1:A:558:LYS:HD3 | 1:A:558:LYS:H | 1.60 | 0.65 |
| 1:A:861:ALA:O | 1:A:862:HIS:CD2 | 2.49 | 0.65 |
| 3:B:479:GLY:HA2 | 3:B:552:GLU:CB | 2.23 | 0.65 |
| 3:B:67:LYS:HB3 | 3:B:68:PRO:HD2 | 1.78 | 0.65 |
| 3:B:855:THR:C | 3:B:857:GLU:N | 2.48 | 0.65 |
| 2:C:63:LEU:HD23 | 2:C:63:LEU:O | 1.97 | 0.65 |
| 4:D:77:ARG:N | 4:D:91:LYS:O | 2.28 | 0.65 |
| 1:Q:234:ASP:OD2 | 1:Q:296:ARG:HD3 | 1.96 | 0.65 |
| 1:Q:650:ASP:HB3 | 1:Q:723:ASN:HD21 | 1.59 | 0.65 |
| 1:Q:831:ARG:HH21 | 2:G:385:MET:HB2 | 1.61 | 0.65 |
| 3:R:1099:LEU:HB3 | 3:R:1103:GLU:OE1 | 1.96 | 0.65 |
| 3:R:600:GLY:O | 3:R:602:ILE:HG13 | 1.96 | 0.65 |
| 3:R:727:MET:HE2 | 3:R:983:ILE:HG13 | 1.79 | 0.65 |
| 2:G:392:PRO:HB3 | 5:T:22:LEU:HD21 | 1.77 | 0.65 |
| 1:A:736:SER:HB3 | 1:A:739:ASN:OD1 | 1.97 | 0.65 |
| 3:B:343:LEU:N | 3:B:343:LEU:HD12 | 2.10 | 0.65 |
| 3:B:417:THR:O | 3:B:418:ASN:HB3 | 1.95 | 0.65 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 3:B:792:LEU:HD11 | 3:B:809:VAL:CG1 | 2.25 | 0.65 |
| 3:B:838:VAL:HG12 | 3:B:839:THR:H | 1.61 | 0.65 |
| 1:A:867:ASP:OD1 | 2:C:32:LEU:HB3 | 1.96 | 0.65 |
| 2:C:393:ILE:HG22 | 2:C:394:LEU:H | 1.60 | 0.65 |
| 1:Q:308:ARG:O | 1:Q:313:LEU:HB2 | 1.96 | 0.65 |
| 1:Q:763:THR:C | 1:Q:764:ARG:HG2 | 2.15 | 0.65 |
| 3:R:1085:LYS:HE3 | 3:R:1086:SER:HB3 | 1.76 | 0.65 |
| 3:R:662:GLN:HG2 | 3:R:664:PRO:HD2 | 1.78 | 0.65 |
| 2:G:321:THR:HG22 | 7:V:79:ARG:HH12 | 1.62 | 0.65 |
| 3:B:1069:TRP:HE1 | 3:B:1088:LEU:CB | 2.08 | 0.65 |
| 3:B:108:GLU:O | 3:B:110:GLU:N | 2.29 | 0.65 |
| 3:B:89:ASN:HD21 | 3:B:863:LYS:NZ | 1.94 | 0.65 |
| 2:C:329:ILE:CA | 2:C:334:VAL:HG12 | 2.24 | 0.65 |
| 2:G:288:ALA:HB2 | 7:V:17:VAL:HB | 1.78 | 0.65 |
| 8:K:61:VAL:HG12 | 8:K:62:ILE:N | 2.12 | 0.65 |
| 8:K:82:LEU:HB2 | 8:K:83:PRO:HD2 | 1.77 | 0.65 |
| 10:N:10:CYS:HB3 | 10:N:44:CYS:SG | 2.35 | 0.65 |
| 1:Q:47:PRO:HG2 | 1:Q:48:ARG:H | 1.61 | 0.65 |
| 3:R:102:PRO:HG2 | 3:R:108:GLU:OE2 | 1.96 | 0.65 |
| 3:R:330:ARG:HG2 | 3:R:330:ARG:NH1 | 2.10 | 0.65 |
| 4:S:29:ARG:HG3 | 4:S:162:SER:O | 1.96 | 0.65 |
| 1:A:483:HIS:CD2 | 1:A:625:LYS:HD2 | 2.32 | 0.65 |
| 3:B:197:ARG:HB2 | 3:B:199:PRO:HD3 | 1.78 | 0.65 |
| 3:B:453:MET:HE3 | 3:B:470:LEU:HA | 1.79 | 0.65 |
| 3:B:640:LEU:CD2 | 3:B:641:GLU:N | 2.50 | 0.65 |
| 3:B:656:PRO:HD3 | 3:B:881:ARG:HH21 | 1.62 | 0.65 |
| 1:A:501:ASP:OD2 | 3:B:913:HIS:HD2 | 1.80 | 0.65 |
| 2:G:318:ASP:O | 2:G:322:ARG:HD3 | 1.96 | 0.65 |
| 3:R:235:ASP:O | 3:R:239:VAL:HG23 | 1.96 | 0.65 |
| 1:A:877:GLY:CA | 3:R:377:ARG:HH12 | 2.10 | 0.65 |
| 3:R:48:GLU:HG2 | 3:R:58:VAL:HB | 1.77 | 0.65 |
| 5:T:64:GLY:N | 8:W:41:LEU:CD2 | 2.59 | 0.65 |
| 6:U:52:ALA:HA | 6:U:55:VAL:HG23 | 1.76 | 0.65 |
| 1:A:81:VAL:HG12 | 1:A:270:GLN:HG3 | 1.78 | 0.65 |
| 1:A:276:TYR:HD2 | 1:A:277:PHE:CD1 | 2.15 | 0.65 |
| 1:A:823:LEU:HB3 | 2:C:329:ILE:HD13 | 1.79 | 0.65 |
| 1:A:859:TYR:HB2 | 2:C:64:ILE:CG1 | 2.27 | 0.65 |
| 3:B:214:PHE:CG | 3:B:215:PRO:HD2 | 2.31 | 0.65 |
| 3:B:794:ASP:OD2 | 11:P:18:LEU:HD11 | 1.95 | 0.65 |
| 2:C:111:VAL:HG13 | 2:C:329:ILE:HD12 | 1.77 | 0.65 |
| 6:F:77:PRO:CG | 6:F:83:VAL:HG22 | 2.25 | 0.65 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 1:Q:827:LEU:HG | 2:G:75:ALA:HB2 | 1.77 | 0.65 |
| 7:H:81:VAL:O | 7:H:82:ILE:HG12 | 1.97 | 0.65 |
| 1:Q:90:ILE:HG23 | 1:Q:184:LEU:HD11 | 1.79 | 0.65 |
| 1:Q:431:MET:CE | 1:Q:482:VAL:HG13 | 2.27 | 0.65 |
| 1:Q:517:THR:HG22 | 1:Q:518:LYS:N | 2.11 | 0.65 |
| 3:R:600:GLY:C | 3:R:602:ILE:H | 2.00 | 0.65 |
| 3:R:628:LEU:HD23 | 3:R:628:LEU:N | 2.09 | 0.65 |
| 5:T:18:PHE:CD2 | 8:W:47:ALA:HB1 | 2.32 | 0.65 |
| 8:W:91:SER:O | 8:W:92:LEU:CB | 2.43 | 0.65 |
| 1:A:531:LYS:O | 1:A:532:ILE:HB | 1.96 | 0.65 |
| 1:A:752:VAL:C | 1:A:754:GLY:H | 2.00 | 0.65 |
| 3:B:244:LEU:HD13 | 3:B:500:VAL:HB | 1.78 | 0.65 |
| 3:B:591:ILE:CG1 | 3:B:612:LYS:NZ | 2.59 | 0.65 |
| 3:B:88:ARG:HD3 | 3:B:853:THR:CG2 | 2.15 | 0.65 |
| 1:A:853:ASP:OD2 | 2:C:311:ARG:NH2 | 2.29 | 0.65 |
| 5:E:38:ILE:O | 5:E:39:LEU:HB2 | 1.94 | 0.65 |
| 7:H:38:ARG:HG2 | 7:H:38:ARG:HH11 | 1.60 | 0.65 |
| 1:Q:646:MET:CE | 1:Q:725:ALA:HB2 | 2.26 | 0.65 |
| 1:Q:842:TYR:HB3 | 1:Q:844:GLU:HG3 | 1.79 | 0.65 |
| 1:Q:6:ILE:HD13 | 3:R:1113:LEU:HD22 | 1.79 | 0.65 |
| 3:R:214:PHE:CG | 3:R:215:PRO:HD2 | 2.32 | 0.65 |
| 3:R:517:TRP:HD1 | 3:R:531:GLN:N | 1.94 | 0.65 |
| 3:R:70:VAL:HG13 | 3:R:80:ILE:HD13 | 1.79 | 0.65 |
| 3:R:812:GLY:HA2 | 3:R:836:SER:HB3 | 1.78 | 0.65 |
| 5:T:116:ASP:CG | 5:T:117:THR:N | 2.46 | 0.65 |
| 6:U:79:THR:O | 6:U:83:VAL:HG23 | 1.96 | 0.65 |
| 7:V:9:ILE:O | 7:V:9:ILE:HG22 | 1.95 | 0.65 |
| 8:W:26:ARG:HB3 | 8:W:27:LEU:HD12 | 1.79 | 0.65 |
| 10:Y:3:ILE:HG12 | 10:Y:18:TRP:CG | 2.31 | 0.65 |
| 1:A:319:ASP:O | 1:A:320:PHE:HB2 | 1.96 | 0.65 |
| 1:A:567:ASN:HB3 | 1:A:599:ASP:OD2 | 1.97 | 0.65 |
| 3:B:1069:TRP:NE1 | 3:B:1088:LEU:HD13 | 2.12 | 0.65 |
| 3:B:789:TYR:O | 3:B:791:LEU:N | 2.30 | 0.65 |
| 7:H:52:ALA:C | 7:H:54:SER:H | 1.99 | 0.65 |
| 3:R:1054:ASP:HB2 | 3:R:1094:SER:HA | 1.77 | 0.65 |
| 3:R:139:ILE:HG21 | 10:Y:61:HIS:HD2 | 1.62 | 0.65 |
| 5:T:64:GLY:N | 8:W:41:LEU:HD22 | 2.12 | 0.65 |
| 8:W:71:ARG:HH11 | 8:W:71:ARG:HB2 | 1.61 | 0.65 |
| 3:B:1085:LYS:HE3 | 3:B:1086:SER:HB3 | 1.78 | 0.65 |
| 3:B:214:PHE:CD1 | 3:B:215:PRO:HD2 | 2.32 | 0.65 |
| 3:B:803:GLU:HB3 | 3:B:805:LYS:HZ1 | 1.59 | 0.65 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 2:G:379:ILE:H | 2:G:379:ILE:HD13 | 1.61 | 0.65 |
| 1:Q:16:PRO:HG2 | 1:Q:17:ASP:H | 1.62 | 0.65 |
| 1:Q:450:CYS:HB2 | 1:Q:451:PRO:HD3 | 1.78 | 0.65 |
| 1:Q:480:MET:HG2 | 3:R:1039:PHE:CE1 | 2.32 | 0.65 |
| 1:Q:647:ARG:HB2 | 1:Q:650:ASP:OD2 | 1.96 | 0.65 |
| 3:R:244:LEU:HD13 | 3:R:500:VAL:HB | 1.78 | 0.65 |
| 3:R:873:THR:CG2 | 3:R:874:ILE:H | 2.10 | 0.65 |
| 3:R:98:LEU:HD11 | 3:R:100:MET:HG3 | 1.79 | 0.65 |
| 3:R:672:MET:CG | 3:R:993:LEU:HD21 | 2.26 | 0.65 |
| 1:A:177:PRO:HG2 | 1:A:270:GLN:NE2 | 2.12 | 0.65 |
| 1:A:203:ARG:HH11 | 1:A:203:ARG:CG | 2.10 | 0.65 |
| 1:A:609:GLU:HB3 | 1:A:614:TRP:CZ2 | 2.32 | 0.65 |
| 1:A:831:ARG:HH21 | 2:C:385:MET:CG | 2.09 | 0.65 |
| 1:A:8:GLY:O | 3:B:1114:VAL:HG13 | 1.96 | 0.65 |
| 3:B:210:PHE:CZ | 3:B:323:ILE:HG22 | 2.32 | 0.65 |
| 3:B:368:GLN:HE22 | 3:B:386:ARG:HE | 1.42 | 0.65 |
| 3:B:419:TRP:CZ3 | 3:B:712:GLY:HA3 | 2.31 | 0.65 |
| 3:B:458:THR:HG23 | 3:B:467:VAL:O | 1.96 | 0.65 |
| 3:B:895:VAL:HG11 | 4:D:34:LEU:HD21 | 1.79 | 0.65 |
| 2:C:244:LYS:HA | 2:C:249:TYR:HA | 1.78 | 0.65 |
| 1:Q:609:GLU:HB3 | 1:Q:614:TRP:CZ2 | 2.32 | 0.65 |
| 3:R:6:THR:HG22 | 3:R:7:ILE:H | 1.61 | 0.65 |
| 5:T:86:GLU:OE1 | 6:U:75:ILE:HG23 | 1.97 | 0.65 |
| 1:A:728:MET:HE1 | 3:B:913:HIS:HA | 1.78 | 0.65 |
| 2:G:123:THR:OG1 | 2:G:273:GLU:HB3 | 1.97 | 0.65 |
| 10:N:6:ARG:HA | 10:N:12:SER:O | 1.96 | 0.65 |
| 1:Q:177:PRO:HG2 | 1:Q:270:GLN:HE22 | 1.60 | 0.65 |
| 1:Q:488:THR:CG2 | 1:Q:490:ARG:H | 2.09 | 0.65 |
| 3:R:148:PRO:HG3 | 3:R:422:MET:CE | 2.27 | 0.65 |
| 3:R:59:ARG:HH22 | 3:R:107:ILE:CD1 | 2.10 | 0.65 |
| 4:S:258:LYS:O | 4:S:261:VAL:HG22 | 1.97 | 0.65 |
| 10:Y:43:TYR:HA | 10:Y:46:ARG:HB3 | 1.78 | 0.65 |
| 1:A:353:ILE:HG13 | 1:A:361:LEU:HD23 | 1.78 | 0.64 |
| 1:A:825:ASN:O | 1:A:828:SER:HB3 | 1.97 | 0.64 |
| 3:B:153:ILE:CG2 | 3:B:156:GLY:HA2 | 2.25 | 0.64 |
| 2:G:244:LYS:HA | 2:G:249:TYR:HA | 1.79 | 0.64 |
| 3:R:480:ILE:HG22 | 3:R:481:ASN:H | 1.62 | 0.64 |
| 5:T:17:GLU:HG2 | 5:T:20:LYS:NZ | 2.10 | 0.64 |
| 2:G:392:PRO:HG3 | 5:T:68:HIS:HE1 | 1.63 | 0.64 |
| 3:R:851:LEU:HG | 11:Z:35:PHE:CD2 | 2.29 | 0.64 |
| 1:A:16:PRO:HG2 | 1:A:17:ASP:H | 1.63 | 0.64 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 1:A:339:VAL:CG2 | 1:A:435:VAL:HG23 | 2.27 | 0.64 |
| 3:B:282:ARG:HA | 3:B:285:ARG:HD2 | 1.78 | 0.64 |
| 3:B:971:TYR:CZ | 3:B:978:LYS:HB3 | 2.31 | 0.64 |
| 2:G:377:HIS:ND1 | 2:G:378:PRO:HD2 | 2.13 | 0.64 |
| 9:L:15:LEU:HB3 | 9:L:55:VAL:HG23 | 1.79 | 0.64 |
| 1:Q:245:ILE:CD1 | 1:Q:268:LEU:HB3 | 2.26 | 0.64 |
| 3:R:778:ALA:HA | 3:R:783:TYR:CE1 | 2.32 | 0.64 |
| 3:R:946:TYR:CD1 | 3:R:949:PRO:HA | 2.32 | 0.64 |
| 5:T:50:ASN:O | 5:T:72:PHE:HA | 1.96 | 0.64 |
| 1:Q:522:GLN:OE1 | 9:X:40:PHE:HA | 1.97 | 0.64 |
| 1:A:176:THR:HG23 | 1:A:179:ASP:CB | 2.26 | 0.64 |
| 3:B:1087:ASN:O | 3:B:1088:LEU:HG | 1.97 | 0.64 |
| 3:B:591:ILE:CG1 | 3:B:612:LYS:HZ2 | 2.08 | 0.64 |
| 3:B:624:ALA:HB1 | 3:B:639:HIS:HD2 | 1.63 | 0.64 |
| 3:B:663:SER:CB | 3:B:664:PRO:HD3 | 2.27 | 0.64 |
| 3:B:696:HIS:HE2 | 3:B:753:THR:HG1 | 1.45 | 0.64 |
| 3:B:64:ARG:H | 3:B:97:TRP:HB2 | 1.61 | 0.64 |
| 2:C:123:THR:OG1 | 2:C:273:GLU:HB3 | 1.97 | 0.64 |
| 2:C:344:ARG:NH1 | 2:C:344:ARG:HB2 | 2.08 | 0.64 |
| 2:G:102:LEU:HD23 | 2:G:103:GLY:H | 1.58 | 0.64 |
| 2:G:250:ILE:HG22 | 2:G:251:ILE:N | 2.12 | 0.64 |
| 8:K:32:ILE:O | 8:K:35:VAL:HG22 | 1.96 | 0.64 |
| 1:Q:325:VAL:O | 1:Q:442:THR:HB | 1.97 | 0.64 |
| 1:Q:763:THR:HG21 | 1:Q:772:TYR:CD2 | 2.32 | 0.64 |
| 1:Q:6:ILE:HD11 | 3:R:1091:VAL:HG11 | 1.79 | 0.64 |
| 3:R:157:SER:O | 3:R:158:GLU:HB2 | 1.96 | 0.64 |
| 3:R:557:HIS:CE1 | 3:R:566:VAL:HG13 | 2.32 | 0.64 |
| 3:R:545:ARG:NE | 3:R:581:ILE:HD13 | 2.12 | 0.64 |
| 4:S:98:ILE:CD1 | 4:S:114:ILE:HG23 | 2.24 | 0.64 |
| 5:T:26:ALA:O | 5:T:30:LEU:HB2 | 1.96 | 0.64 |
| 1:A:90:ILE:CD1 | 1:A:207:MET:HB3 | 2.27 | 0.64 |
| 1:A:245:ILE:CD1 | 1:A:268:LEU:HB3 | 2.27 | 0.64 |
| 1:A:839:ARG:HA | 1:A:844:GLU:O | 1.97 | 0.64 |
| 3:B:1054:ASP:HB2 | 3:B:1094:SER:HA | 1.78 | 0.64 |
| 5:E:29:GLU:O | 5:E:33:GLN:HG3 | 1.97 | 0.64 |
| 2:G:297:ILE:C | 2:G:299:LYS:H | 1.99 | 0.64 |
| 7:H:34:GLU:HG3 | 8:K:84:ASN:OD1 | 1.97 | 0.64 |
| 3:B:934:ALA:HB2 | 10:N:47:ARG:HD3 | 1.77 | 0.64 |
| 1:Q:338:GLY:HA3 | 1:Q:444:ARG:CG | 2.26 | 0.64 |
| 1:Q:749:GLN:H | 1:Q:781:PHE:CA | 2.07 | 0.64 |
| 3:R:98:LEU:CD1 | 3:R:100:MET:HG3 | 2.27 | 0.64 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 3:R:582:VAL:HG22 | 3:R:586:ASN:O | 1.97 | 0.64 |
| 3:R:40:GLN:HE22 | 3:R:62:LYS:HA | 1.62 | 0.64 |
| 6:U:53:GLN:O | 6:U:57:GLU:HG3 | 1.97 | 0.64 |
| 3:R:853:THR:HG23 | 11:Z:32:LYS:O | 1.98 | 0.64 |
| 1:A:345:LYS:HA | 1:A:410:HIS:CD2 | 2.32 | 0.64 |
| 1:A:71:HIS:HB3 | 3:B:1070:TYR:OH | 1.97 | 0.64 |
| 3:B:495:VAL:O | 3:B:528:GLY:HA3 | 1.98 | 0.64 |
| 3:B:727:MET:HB2 | 3:B:983:ILE:HD12 | 1.78 | 0.64 |
| 3:B:971:TYR:CZ | 4:D:165:ARG:HA | 2.33 | 0.64 |
| 2:C:102:LEU:HD23 | 2:C:103:GLY:H | 1.60 | 0.64 |
| 2:G:297:ILE:HG22 | 2:G:313:ILE:HD13 | 1.80 | 0.64 |
| 2:G:55:ALA:CA | 2:G:58:GLU:HG3 | 2.22 | 0.64 |
| 3:R:20:SER:O | 3:R:21:LYS:HG2 | 1.96 | 0.64 |
| 3:R:171:ARG:HD2 | 3:R:342:ARG:NH2 | 2.13 | 0.64 |
| 3:R:558:ILE:HG12 | 3:R:567:HIS:CD2 | 2.33 | 0.64 |
| 3:R:591:ILE:HG21 | 3:R:607:LEU:HD21 | 1.80 | 0.64 |
| 3:R:595:GLU:HA | 3:R:599:SER:HB3 | 1.78 | 0.64 |
| 3:R:5:LEU:O | 3:R:5:LEU:HD22 | 1.97 | 0.64 |
| 3:R:729:PHE:O | 3:R:731:GLY:N | 2.29 | 0.64 |
| 4:S:105:GLU:N | 4:S:135:THR:HG22 | 2.13 | 0.64 |
| 8:W:82:LEU:HD12 | 8:W:84:ASN:HB2 | 1.79 | 0.64 |
| 1:A:234:ASP:OD2 | 1:A:296:ARG:HD3 | 1.96 | 0.64 |
| 1:A:486:ILE:HD11 | 1:A:628:MET:HE1 | 1.78 | 0.64 |
| 1:A:646:MET:CE | 1:A:725:ALA:HB2 | 2.27 | 0.64 |
| 3:B:393:ARG:HH21 | 3:B:403:TRP:HH2 | 1.42 | 0.64 |
| 3:B:433:LEU:HB2 | 3:B:435:ARG:CZ | 2.27 | 0.64 |
| 2:C:103:GLY:HA3 | 2:C:300:VAL:HG13 | 1.80 | 0.64 |
| 1:Q:349:VAL:HG21 | 1:Q:415:ASP:OD2 | 1.98 | 0.64 |
| 3:R:705:THR:HG22 | 3:R:706:ARG:N | 2.05 | 0.64 |
| 2:G:282:GLU:O | 7:V:50:PRO:HB3 | 1.97 | 0.64 |
| 10:Y:55:ILE:O | 10:Y:59:VAL:HG23 | 1.97 | 0.64 |
| 1:A:386:ILE:O | 1:A:387:ASP:O | 2.14 | 0.64 |
| 3:B:246:PRO:HG2 | 3:B:249:GLN:CG | 2.28 | 0.64 |
| 3:B:278:ILE:HG22 | 3:B:279:GLY:N | 2.12 | 0.64 |
| 3:B:557:HIS:CE1 | 3:B:566:VAL:HG13 | 2.32 | 0.64 |
| 2:C:250:ILE:HG22 | 2:C:251:ILE:N | 2.13 | 0.64 |
| 2:C:305:GLY:O | 2:C:306:LEU:O | 2.16 | 0.64 |
| 4:D:16:VAL:O | 4:D:16:VAL:HG12 | 1.97 | 0.64 |
| 4:D:236:LEU:HB2 | 4:D:241:ILE:HD11 | 1.80 | 0.64 |
| 1:Q:859:TYR:HB2 | 2:G:64:ILE:CG1 | 2.28 | 0.64 |
| 1:Q:334:ILE:HG22 | 1:Q:482:VAL:HG11 | 1.78 | 0.64 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|------------------|--------------------------|-------------------|
| 1:Q:452:PRO:HA | 1:Q:495:ILE:CD1 | 2.28 | 0.64 |
| 1:Q:79:ARG:HB2 | 1:Q:266:TRP:HE3 | 1.61 | 0.64 |
| 3:R:792:LEU:HD11 | 3:R:809:VAL:CG1 | 2.27 | 0.64 |
| 6:U:77:PRO:CG | 6:U:83:VAL:HG22 | 2.28 | 0.64 |
| 7:V:42:LEU:CD1 | 7:V:80:TYR:HB2 | 2.26 | 0.64 |
| 8:W:43:LEU:CD1 | 8:W:64:ILE:HG13 | 2.28 | 0.64 |
| 4:S:23:GLU:O | 9:X:27:LEU:HD13 | 1.98 | 0.64 |
| 3:R:800:PRO:HG2 | 11:Z:37:VAL:HA | 1.80 | 0.64 |
| 3:B:1081:ILE:HG21 | 3:B:1085:LYS:NZ | 2.13 | 0.64 |
| 3:B:245:ASP:N | 3:B:246:PRO:HD3 | 2.13 | 0.64 |
| 3:B:765:TYR:CG | 3:B:766:PRO:HD2 | 2.32 | 0.64 |
| 4:D:29:ARG:HG3 | 4:D:162:SER:O | 1.97 | 0.64 |
| 9:L:87:ILE:CG2 | 9:L:88:LYS:N | 2.61 | 0.64 |
| 3:R:8:ASP:O | 3:R:12:ARG:HG2 | 1.98 | 0.64 |
| 10:Y:54:ASP:OD2 | 10:Y:56:ILE:HG22 | 1.98 | 0.64 |
| 3:B:1004:ARG:C | 3:B:1004:ARG:HD3 | 2.17 | 0.64 |
| 3:B:154:VAL:HG21 | 3:B:399:ALA:CB | 2.28 | 0.64 |
| 3:B:600:GLY:O | 3:B:602:ILE:HG13 | 1.98 | 0.64 |
| 3:B:588:LEU:CD1 | 3:B:612:LYS:HB3 | 2.24 | 0.64 |
| 3:B:904:VAL:CG2 | 10:N:42:ARG:HG2 | 2.28 | 0.64 |
| 10:N:54:ASP:OD2 | 10:N:56:ILE:HG22 | 1.98 | 0.64 |
| 1:Q:369:PRO:HA | 1:Q:410:HIS:HE1 | 1.63 | 0.64 |
| 1:Q:446:ASN:HD22 | 1:Q:447:LEU:N | 1.95 | 0.64 |
| 3:R:154:VAL:HG21 | 3:R:399:ALA:CB | 2.27 | 0.64 |
| 3:R:348:ASP:OD2 | 3:R:348:ASP:N | 2.31 | 0.64 |
| 3:R:624:ALA:HB1 | 3:R:639:HIS:HD2 | 1.63 | 0.64 |
| 1:A:589:LYS:HD3 | 1:A:877:GLY:O | 1.98 | 0.64 |
| 3:B:43:ILE:O | 3:B:43:ILE:HG22 | 1.98 | 0.64 |
| 3:B:463:ASN:HB3 | 3:B:467:VAL:HG12 | 1.80 | 0.64 |
| 3:B:630:PRO:O | 3:B:633:LEU:HB3 | 1.97 | 0.64 |
| 3:B:691:ARG:NH1 | 3:B:756:ARG:NH2 | 2.45 | 0.64 |
| 3:B:778:ALA:HA | 3:B:783:TYR:CE1 | 2.32 | 0.64 |
| 2:C:52:PHE:O | 2:C:55:ALA:HB3 | 1.98 | 0.64 |
| 4:D:39:MET:HE3 | 4:D:72:ALA:HB1 | 1.78 | 0.64 |
| 2:G:310:ILE:H | 2:G:310:ILE:CD1 | 2.08 | 0.64 |
| 8:K:60:ASP:OD2 | 8:K:60:ASP:N | 2.31 | 0.64 |
| 1:Q:506:ALA:HA | 1:Q:635:PHE:CE2 | 2.33 | 0.64 |
| 1:Q:90:ILE:CD1 | 1:Q:207:MET:HB3 | 2.27 | 0.64 |
| 3:R:183:ILE:HG13 | 3:R:206:LYS:HB3 | 1.80 | 0.64 |
| 3:R:591:ILE:CG1 | 3:R:612:LYS:HZ2 | 2.10 | 0.64 |
| 3:R:663:SER:CB | 3:R:664:PRO:HD3 | 2.28 | 0.64 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 5:T:29:GLU:O | 5:T:33:GLN:HG3 | 1.98 | 0.64 |
| 2:G:28:ILE:HD13 | 8:W:14:HIS:HB3 | 1.80 | 0.64 |
| 8:W:70:ARG:HB3 | 8:W:70:ARG:HH11 | 1.62 | 0.64 |
| 3:B:98:LEU:CD1 | 3:B:100:MET:HG3 | 2.28 | 0.63 |
| 3:B:861:LEU:HD12 | 3:B:862:VAL:H | 1.63 | 0.63 |
| 2:C:318:ASP:O | 2:C:322:ARG:HD3 | 1.98 | 0.63 |
| 4:D:115:LYS:O | 4:D:116:SER:HB3 | 1.97 | 0.63 |
| 1:Q:12:GLY:HA2 | 2:G:358:ALA:O | 1.97 | 0.63 |
| 1:Q:15:SER:HB2 | 1:Q:16:PRO:HD2 | 1.79 | 0.63 |
| 1:Q:176:THR:HG23 | 1:Q:179:ASP:CB | 2.25 | 0.63 |
| 3:R:518:SER:CB | 3:R:564:ASN:ND2 | 2.61 | 0.63 |
| 4:S:6:LEU:HD13 | 4:S:16:VAL:HG21 | 1.79 | 0.63 |
| 4:S:13:ILE:HD11 | 4:S:238:PRO:HB2 | 1.80 | 0.63 |
| 8:W:23:TRP:CE3 | 8:W:23:TRP:HA | 2.32 | 0.63 |
| 1:A:219:ILE:HD13 | 1:A:219:ILE:N | 2.12 | 0.63 |
| 1:A:656:ASP:HA | 1:A:659:LYS:HD2 | 1.80 | 0.63 |
| 1:A:728:MET:HE3 | 3:B:913:HIS:HA | 1.80 | 0.63 |
| 1:A:833:GLU:HG3 | 1:A:839:ARG:HG3 | 1.80 | 0.63 |
| 3:B:518:SER:CB | 3:B:564:ASN:ND2 | 2.61 | 0.63 |
| 3:B:63:ILE:HG13 | 3:B:98:LEU:HD23 | 1.79 | 0.63 |
| 2:C:297:ILE:HG22 | 2:C:313:ILE:HD13 | 1.79 | 0.63 |
| 2:C:369:VAL:O | 2:C:373:ILE:HB | 1.98 | 0.63 |
| 2:C:379:ILE:HD13 | 2:C:379:ILE:H | 1.63 | 0.63 |
| 2:G:126:LEU:HD11 | 2:G:249:TYR:HB2 | 1.79 | 0.63 |
| 2:G:122:MET:HB2 | 2:G:253:THR:OG1 | 1.97 | 0.63 |
| 9:L:35:ILE:HD11 | 9:L:75:ASN:ND2 | 2.13 | 0.63 |
| 3:R:210:PHE:CZ | 3:R:323:ILE:HG22 | 2.32 | 0.63 |
| 3:R:358:PHE:O | 3:R:362:VAL:HG23 | 1.98 | 0.63 |
| 3:R:402:ASN:HB2 | 3:R:410:VAL:HB | 1.81 | 0.63 |
| 3:R:893:PRO:HG2 | 3:R:896:ASP:OD1 | 1.98 | 0.63 |
| 4:S:124:ILE:O | 4:S:125:SER:HB2 | 1.97 | 0.63 |
| 4:S:77:ARG:N | 4:S:91:LYS:O | 2.28 | 0.63 |
| 1:A:238:LYS:HD3 | 1:A:276:TYR:HA | 1.80 | 0.63 |
| 1:A:6:ILE:HD11 | 3:B:1091:VAL:HG11 | 1.79 | 0.63 |
| 3:B:193:THR:HG1 | 3:B:198:VAL:HA | 1.63 | 0.63 |
| 3:B:745:VAL:HG13 | 3:B:872:PRO:HG2 | 1.81 | 0.63 |
| 3:B:727:MET:CE | 3:B:898:PRO:HG3 | 2.29 | 0.63 |
| 2:C:52:PHE:HA | 2:C:55:ALA:HB3 | 1.81 | 0.63 |
| 4:D:48:GLU:OE2 | 4:D:138:LYS:HD3 | 1.98 | 0.63 |
| 1:Q:417:VAL:HG11 | 1:Q:464:LEU:CD1 | 2.27 | 0.63 |
| 1:Q:339:VAL:CG2 | 1:Q:435:VAL:HG23 | 2.27 | 0.63 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 1:Q:448:LEU:O | 1:Q:451:PRO:HD2 | 1.98 | 0.63 |
| 1:Q:68:CYS:SG | 1:Q:71:HIS:NE2 | 2.71 | 0.63 |
| 1:Q:866:VAL:HG12 | 1:Q:869:ASN:N | 2.02 | 0.63 |
| 3:R:403:TRP:CG | 3:R:404:VAL:N | 2.65 | 0.63 |
| 3:R:680:TYR:HE1 | 3:R:687:ARG:HH12 | 1.46 | 0.63 |
| 3:R:853:THR:HG22 | 3:R:854:GLU:N | 2.04 | 0.63 |
| 4:S:48:GLU:OE2 | 4:S:138:LYS:HD3 | 1.98 | 0.63 |
| 1:A:476:ALA:HB2 | 3:B:1044:LEU:HD13 | 1.80 | 0.63 |
| 1:A:489:PRO:HB3 | 1:A:858:MET:HG3 | 1.81 | 0.63 |
| 1:A:687:ILE:HG13 | 1:A:695:SER:HB3 | 1.81 | 0.63 |
| 3:B:253:PHE:N | 3:B:254:PRO:HD2 | 2.12 | 0.63 |
| 3:B:325:LEU:HD13 | 3:B:330:ARG:HB2 | 1.80 | 0.63 |
| 3:B:699:GLN:HG3 | 3:B:720:ASN:ND2 | 2.13 | 0.63 |
| 3:B:81:SER:O | 3:B:84:GLU:HB2 | 1.99 | 0.63 |
| 3:B:850:VAL:HG13 | 3:B:864:VAL:HG22 | 1.80 | 0.63 |
| 3:B:910:LEU:HD23 | 3:B:911:ASN:H | 1.62 | 0.63 |
| 2:C:274:THR:CG2 | 2:C:275:ASN:H | 1.94 | 0.63 |
| 2:G:115:LYS:HE2 | 2:G:279:GLU:HB2 | 1.79 | 0.63 |
| 2:G:354:LEU:O | 3:R:1109:ILE:HD12 | 1.99 | 0.63 |
| 2:G:370:VAL:O | 2:G:373:ILE:HG22 | 1.98 | 0.63 |
| 8:K:90:LEU:HD23 | 8:K:90:LEU:H | 1.64 | 0.63 |
| 1:Q:506:ALA:HA | 1:Q:635:PHE:HE2 | 1.63 | 0.63 |
| 1:Q:704:LEU:HD13 | 1:Q:781:PHE:CD1 | 2.27 | 0.63 |
| 3:R:214:PHE:CD1 | 3:R:215:PRO:HD2 | 2.34 | 0.63 |
| 3:R:43:ILE:HG22 | 3:R:43:ILE:O | 1.97 | 0.63 |
| 3:R:495:VAL:O | 3:R:528:GLY:HA3 | 1.98 | 0.63 |
| 3:R:63:ILE:HG13 | 3:R:98:LEU:HD23 | 1.80 | 0.63 |
| 3:R:81:SER:O | 3:R:84:GLU:HB2 | 1.97 | 0.63 |
| 1:A:354:THR:HB | 1:A:355:PRO:CD | 2.27 | 0.63 |
| 1:A:827:LEU:CD2 | 2:C:316:ILE:HD13 | 2.28 | 0.63 |
| 1:A:589:LYS:HZ3 | 1:A:879:LYS:H | 1.46 | 0.63 |
| 2:G:111:VAL:HG13 | 2:G:329:ILE:HD12 | 1.78 | 0.63 |
| 2:G:57:LYS:HE3 | 2:G:57:LYS:CA | 2.26 | 0.63 |
| 1:Q:308:ARG:HH22 | 3:R:1012:LEU:HD11 | 1.62 | 0.63 |
| 3:R:1049:LEU:O | 3:R:1049:LEU:HD12 | 1.97 | 0.63 |
| 3:R:416:ARG:HH12 | 3:R:687:ARG:HH21 | 1.47 | 0.63 |
| 3:R:754:PHE:HE2 | 3:R:756:ARG:HB2 | 1.64 | 0.63 |
| 5:T:63:ASP:OD2 | 5:T:65:ALA:HB3 | 1.98 | 0.63 |
| 8:W:71:ARG:HB3 | 8:W:73:VAL:CG1 | 2.29 | 0.63 |
| 1:A:90:ILE:HG23 | 1:A:184:LEU:HD11 | 1.81 | 0.63 |
| 1:A:708:ARG:O | 1:A:711:ALA:HB3 | 1.98 | 0.63 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 1:A:79:ARG:HB2 | 1:A:266:TRP:HE3 | 1.60 | 0.63 |
| 3:B:1069:TRP:CZ3 | 3:B:1077:TYR:HB2 | 2.34 | 0.63 |
| 2:C:355:LEU:HD23 | 3:B:1109:ILE:HD11 | 1.80 | 0.63 |
| 1:A:831:ARG:HH21 | 2:C:385:MET:CB | 2.10 | 0.63 |
| 1:Q:438:LEU:O | 1:Q:438:LEU:HD23 | 1.98 | 0.63 |
| 1:Q:782:ILE:N | 1:Q:782:ILE:HD12 | 2.14 | 0.63 |
| 3:R:1004:ARG:C | 3:R:1004:ARG:HD3 | 2.19 | 0.63 |
| 3:R:628:LEU:CD2 | 3:R:628:LEU:H | 2.09 | 0.63 |
| 3:R:794:ASP:OD2 | 11:Z:18:LEU:HD11 | 1.98 | 0.63 |
| 2:G:292:ILE:HD13 | 7:V:16:LEU:HD21 | 1.78 | 0.63 |
| 8:W:23:TRP:HE3 | 8:W:23:TRP:HA | 1.63 | 0.63 |
| 1:A:431:MET:CE | 1:A:482:VAL:HG13 | 2.29 | 0.63 |
| 1:A:328:PRO:HG3 | 1:A:457:PHE:CD1 | 2.34 | 0.63 |
| 1:A:528:ALA:O | 1:A:530:VAL:N | 2.32 | 0.63 |
| 3:B:159:ARG:HD3 | 3:B:399:ALA:HA | 1.80 | 0.63 |
| 3:B:789:TYR:HB3 | 3:B:792:LEU:HD12 | 1.80 | 0.63 |
| 3:B:855:THR:CB | 3:B:857:GLU:HG2 | 2.28 | 0.63 |
| 2:C:106:ARG:HD2 | 2:C:109:GLU:OE1 | 1.99 | 0.63 |
| 2:C:310:ILE:HG22 | 2:C:314:LEU:CD2 | 2.27 | 0.63 |
| 2:G:305:GLY:O | 2:G:306:LEU:O | 2.17 | 0.63 |
| 2:G:35:LEU:O | 2:G:39:LYS:HG3 | 1.99 | 0.63 |
| 7:H:42:LEU:CD1 | 7:H:80:TYR:HB2 | 2.29 | 0.63 |
| 8:K:53:ILE:CD1 | 8:K:53:ILE:H | 2.08 | 0.63 |
| 9:L:15:LEU:HB3 | 9:L:55:VAL:CG2 | 2.29 | 0.63 |
| 1:Q:245:ILE:HD13 | 1:Q:268:LEU:CD1 | 2.28 | 0.63 |
| 1:Q:353:ILE:HD11 | 1:Q:407:ILE:HG23 | 1.80 | 0.63 |
| 1:Q:534:LEU:HD13 | 1:Q:535:GLY:N | 2.14 | 0.63 |
| 1:Q:58:CYS:SG | 1:Q:59:PRO:CD | 2.83 | 0.63 |
| 1:Q:615:LEU:O | 1:Q:619:TYR:HB2 | 1.99 | 0.63 |
| 1:Q:841:LEU:O | 1:Q:843:GLY:N | 2.32 | 0.63 |
| 3:R:727:MET:HB2 | 3:R:983:ILE:HD12 | 1.79 | 0.63 |
| 3:R:677:LEU:HD12 | 3:R:992:LYS:CD | 2.29 | 0.63 |
| 4:S:35:TYR:HE2 | 9:X:23:THR:HG21 | 1.63 | 0.63 |
| 6:U:23:ASP:HA | 6:U:26:ARG:CD | 2.29 | 0.63 |
| 6:U:79:THR:HG22 | 6:U:80:SER:N | 2.13 | 0.63 |
| 7:V:23:LEU:HB3 | 7:V:28:ALA:HB2 | 1.79 | 0.63 |
| 4:S:24:PHE:HZ | 9:X:80:THR:HA | 1.64 | 0.63 |
| 1:A:338:GLY:HA3 | 1:A:444:ARG:CG | 2.24 | 0.63 |
| 1:A:402:ALA:O | 1:A:404:GLY:N | 2.31 | 0.63 |
| 1:A:448:LEU:O | 1:A:451:PRO:HD2 | 1.99 | 0.63 |
| 3:B:280:GLN:O | 3:B:285:ARG:NH1 | 2.32 | 0.63 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 3:B:419:TRP:HZ3 | 3:B:712:GLY:HA3 | 1.64 | 0.63 |
| 3:B:59:ARG:HH12 | 3:B:107:ILE:CD1 | 2.11 | 0.63 |
| 3:B:70:VAL:HG13 | 3:B:80:ILE:HD13 | 1.79 | 0.63 |
| 2:G:126:LEU:HD12 | 2:G:131:LYS:HG3 | 1.81 | 0.63 |
| 2:G:356:ASP:O | 2:G:360:ARG:HB2 | 1.99 | 0.63 |
| 1:Q:180:ILE:O | 1:Q:183:ARG:HB2 | 1.98 | 0.63 |
| 1:Q:386:ILE:O | 1:Q:387:ASP:O | 2.16 | 0.63 |
| 1:Q:589:LYS:HD3 | 1:Q:877:GLY:O | 1.98 | 0.63 |
| 3:R:59:ARG:HH12 | 3:R:107:ILE:HD12 | 1.64 | 0.63 |
| 1:A:558:LYS:HZ1 | 3:R:108:GLU:HG3 | 1.64 | 0.63 |
| 3:R:108:GLU:O | 3:R:110:GLU:N | 2.31 | 0.63 |
| 3:R:28:LEU:HG | 3:R:122:MET:CE | 2.27 | 0.63 |
| 3:R:148:PRO:HG3 | 3:R:422:MET:SD | 2.39 | 0.63 |
| 3:R:691:ARG:NH1 | 3:R:756:ARG:NH2 | 2.47 | 0.63 |
| 3:R:701:PRO:HG3 | 3:R:708:LEU:HD11 | 1.79 | 0.63 |
| 3:R:881:ARG:HH11 | 3:R:989:TYR:CB | 2.12 | 0.63 |
| 1:Q:834:TYR:CE1 | 8:W:80:ARG:HD3 | 2.34 | 0.63 |
| 1:A:573:ARG:HH21 | 1:A:721:PRO:HB3 | 1.64 | 0.63 |
| 1:A:782:ILE:HD12 | 1:A:782:ILE:N | 2.14 | 0.63 |
| 1:A:4:LYS:HB2 | 3:B:1089:PHE:HB3 | 1.81 | 0.63 |
| 3:B:403:TRP:CG | 3:B:404:VAL:N | 2.65 | 0.63 |
| 3:B:591:ILE:HG21 | 3:B:607:LEU:HD21 | 1.81 | 0.63 |
| 3:B:600:GLY:C | 3:B:602:ILE:H | 2.00 | 0.63 |
| 3:B:764:LYS:HD2 | 3:B:771:ASP:HB2 | 1.81 | 0.63 |
| 3:B:946:TYR:CD1 | 3:B:949:PRO:HA | 2.34 | 0.63 |
| 2:C:132:ARG:HA | 2:C:249:TYR:CD1 | 2.34 | 0.63 |
| 2:G:126:LEU:HB2 | 2:G:131:LYS:HG3 | 1.79 | 0.63 |
| 10:N:55:ILE:O | 10:N:59:VAL:HG23 | 1.99 | 0.63 |
| 1:Q:258:PRO:O | 1:Q:260:LEU:N | 2.32 | 0.63 |
| 1:Q:337:VAL:HG23 | 1:Q:433:HIS:HB3 | 1.81 | 0.63 |
| 8:W:12:ASP:O | 8:W:13:LEU:HB2 | 1.98 | 0.63 |
| 10:Y:6:ARG:HA | 10:Y:12:SER:O | 1.98 | 0.63 |
| 1:A:234:ASP:C | 1:A:236:THR:H | 2.00 | 0.62 |
| 1:A:25:THR:HG22 | 1:A:27:ILE:H | 1.63 | 0.62 |
| 1:A:369:PRO:HA | 1:A:410:HIS:HE1 | 1.64 | 0.62 |
| 3:B:1099:LEU:HB3 | 3:B:1103:GLU:OE1 | 1.98 | 0.62 |
| 3:B:161:ILE:HG21 | 3:B:346:ALA:HA | 1.80 | 0.62 |
| 3:B:148:PRO:HG3 | 3:B:422:MET:SD | 2.39 | 0.62 |
| 3:B:764:LYS:HZ1 | 3:B:772:LYS:C | 2.01 | 0.62 |
| 3:B:812:GLY:HA2 | 3:B:836:SER:HB3 | 1.79 | 0.62 |
| 5:E:127:ILE:HB | 5:E:136:ILE:HG13 | 1.80 | 0.62 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 6:F:23:ASP:HA | 6:F:26:ARG:CD | 2.29 | 0.62 |
| 1:Q:827:LEU:CD2 | 2:G:316:ILE:HD13 | 2.29 | 0.62 |
| 2:G:52:PHE:O | 2:G:55:ALA:HB3 | 1.98 | 0.62 |
| 1:Q:177:PRO:HG2 | 1:Q:270:GLN:NE2 | 2.13 | 0.62 |
| 3:R:1058:ILE:O | 3:R:1091:VAL:HG12 | 1.99 | 0.62 |
| 3:R:245:ASP:N | 3:R:246:PRO:HD3 | 2.13 | 0.62 |
| 3:R:537:ALA:HB2 | 3:R:557:HIS:CD2 | 2.34 | 0.62 |
| 3:R:557:HIS:ND1 | 3:R:566:VAL:HG22 | 2.14 | 0.62 |
| 3:R:723:ILE:HD12 | 10:Y:43:TYR:HE1 | 1.63 | 0.62 |
| 3:R:789:TYR:HB3 | 3:R:792:LEU:HD12 | 1.81 | 0.62 |
| 3:R:803:GLU:HG2 | 3:R:846:ILE:CG1 | 2.29 | 0.62 |
| 3:R:838:VAL:HG12 | 3:R:839:THR:N | 2.13 | 0.62 |
| 3:R:910:LEU:HD23 | 3:R:911:ASN:H | 1.64 | 0.62 |
| 4:S:191:LYS:CB | 4:S:194:LYS:HD2 | 2.25 | 0.62 |
| 1:A:55:GLY:O | 1:A:57:LYS:N | 2.32 | 0.62 |
| 1:A:723:ASN:HD22 | 1:A:723:ASN:C | 2.02 | 0.62 |
| 1:A:704:LEU:HD22 | 1:A:781:PHE:HE1 | 1.60 | 0.62 |
| 3:B:287:GLU:C | 3:B:289:ALA:H | 2.02 | 0.62 |
| 3:B:242:VAL:CA | 3:B:316:ALA:HB1 | 2.24 | 0.62 |
| 2:G:112:ASP:O | 2:G:113:ALA:HB3 | 1.99 | 0.62 |
| 8:K:82:LEU:H | 8:K:82:LEU:HD23 | 1.64 | 0.62 |
| 3:B:850:VAL:O | 11:P:35:PHE:HB2 | 1.99 | 0.62 |
| 1:Q:219:ILE:HD13 | 1:Q:219:ILE:N | 2.13 | 0.62 |
| 1:Q:573:ARG:HH21 | 1:Q:721:PRO:HB3 | 1.63 | 0.62 |
| 3:R:1069:TRP:HE1 | 3:R:1088:LEU:HB3 | 1.64 | 0.62 |
| 1:Q:71:HIS:HB3 | 3:R:1070:TYR:OH | 1.98 | 0.62 |
| 3:R:321:LYS:HD2 | 3:R:330:ARG:HE | 1.63 | 0.62 |
| 3:R:638:THR:HB | 3:R:639:HIS:CD2 | 2.34 | 0.62 |
| 4:S:217:ILE:HD12 | 4:S:217:ILE:N | 2.13 | 0.62 |
| 2:G:391:ARG:HH21 | 8:W:42:GLN:CG | 2.11 | 0.62 |
| 1:A:775:SER:HB3 | 1:A:777:GLU:HG2 | 1.81 | 0.62 |
| 3:B:373:LYS:HE3 | 3:B:375:ARG:CD | 2.28 | 0.62 |
| 3:B:17:TYR:OH | 3:B:474:ALA:HA | 1.99 | 0.62 |
| 3:B:5:LEU:O | 3:B:5:LEU:HD22 | 1.99 | 0.62 |
| 3:B:677:LEU:HD12 | 3:B:992:LYS:CD | 2.28 | 0.62 |
| 2:C:112:ASP:O | 2:C:113:ALA:HB3 | 2.00 | 0.62 |
| 2:C:301:LEU:HA | 2:C:304:GLN:HG3 | 1.81 | 0.62 |
| 2:C:47:GLU:HA | 2:C:50:LYS:HD2 | 1.79 | 0.62 |
| 4:D:69:SER:HA | 4:D:72:ALA:HB3 | 1.80 | 0.62 |
| 5:E:171:LYS:HE2 | 5:E:173:GLU:HB2 | 1.79 | 0.62 |
| 2:G:310:ILE:HG22 | 2:G:314:LEU:HD23 | 1.81 | 0.62 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 2:G:389:THR:HG21 | 8:W:79:ARG:NH1 | 2.13 | 0.62 |
| 10:N:42:ARG:O | 10:N:46:ARG:HB2 | 2.00 | 0.62 |
| 1:Q:418:LEU:HD11 | 3:R:1044:LEU:HD11 | 1.80 | 0.62 |
| 1:Q:337:VAL:HG23 | 1:Q:433:HIS:CB | 2.29 | 0.62 |
| 4:S:236:LEU:HB2 | 4:S:241:ILE:HD11 | 1.80 | 0.62 |
| 5:T:6:LYS:HE3 | 6:U:8:GLU:HB2 | 1.79 | 0.62 |
| 7:V:55:ILE:HG23 | 7:V:55:ILE:O | 1.99 | 0.62 |
| 1:A:15:SER:O | 1:A:19:ILE:HG13 | 1.99 | 0.62 |
| 1:A:764:ARG:CB | 1:A:764:ARG:HH11 | 2.12 | 0.62 |
| 3:B:476:ILE:N | 3:B:476:ILE:HD13 | 2.15 | 0.62 |
| 3:B:887:VAL:CG1 | 3:B:888:ILE:N | 2.61 | 0.62 |
| 2:C:126:LEU:HB2 | 2:C:131:LYS:HG3 | 1.80 | 0.62 |
| 2:C:126:LEU:HD12 | 2:C:131:LYS:HG3 | 1.80 | 0.62 |
| 2:C:292:ILE:HG23 | 2:C:293:ILE:N | 2.14 | 0.62 |
| 2:G:390:MET:HE2 | 5:T:66:THR:HG23 | 1.81 | 0.62 |
| 2:G:80:GLU:HB3 | 2:G:81:PRO:CD | 2.28 | 0.62 |
| 10:N:42:ARG:HG3 | 10:N:43:TYR:N | 2.12 | 0.62 |
| 1:Q:312:ASN:HB3 | 3:R:1015:GLN:OE1 | 1.98 | 0.62 |
| 1:Q:648:LEU:O | 1:Q:651:VAL:HG12 | 1.98 | 0.62 |
| 1:Q:741:THR:O | 1:Q:743:MET:N | 2.33 | 0.62 |
| 1:Q:764:ARG:O | 1:Q:766:LEU:N | 2.32 | 0.62 |
| 3:R:473:MET:SD | 3:R:475:GLN:N | 2.72 | 0.62 |
| 3:R:904:VAL:HG21 | 10:Y:42:ARG:HG2 | 1.81 | 0.62 |
| 5:T:103:PRO:HB3 | 6:U:37:THR:OG1 | 1.98 | 0.62 |
| 7:V:24:ASN:HB2 | 7:V:27:GLU:OE2 | 1.99 | 0.62 |
| 1:A:696:LEU:O | 1:A:700:ILE:HG12 | 2.00 | 0.62 |
| 3:B:116:ILE:HG23 | 3:B:361:PHE:CZ | 2.34 | 0.62 |
| 3:B:230:LEU:HD13 | 3:B:312:ALA:CB | 2.30 | 0.62 |
| 3:B:325:LEU:HD12 | 3:B:328:GLY:HA2 | 1.81 | 0.62 |
| 4:D:101:GLU:HG2 | 4:D:102:ALA:H | 1.64 | 0.62 |
| 6:F:79:THR:HG22 | 6:F:80:SER:N | 2.14 | 0.62 |
| 2:G:107:LEU:O | 2:G:110:ILE:HG22 | 1.99 | 0.62 |
| 7:H:18:PRO:HB2 | 7:H:67:ARG:HA | 1.81 | 0.62 |
| 8:K:26:ARG:HB3 | 8:K:27:LEU:HD12 | 1.80 | 0.62 |
| 8:K:45:MET:HA | 8:K:45:MET:HE2 | 1.82 | 0.62 |
| 1:Q:319:ASP:O | 1:Q:320:PHE:HB2 | 1.99 | 0.62 |
| 1:Q:644:PHE:HA | 1:Q:724:PHE:CE2 | 2.34 | 0.62 |
| 1:Q:764:ARG:CB | 1:Q:764:ARG:HH11 | 2.11 | 0.62 |
| 1:Q:746:MET:H | 1:Q:785:SER:HB3 | 1.65 | 0.62 |
| 3:R:1077:TYR:HD1 | 3:R:1077:TYR:O | 1.82 | 0.62 |
| 3:R:248:VAL:HG21 | 3:R:329:ARG:NH2 | 2.15 | 0.62 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 3:R:59:ARG:HH12 | 3:R:107:ILE:CD1 | 2.13 | 0.62 |
| 4:S:235:SER:O | 4:S:236:LEU:HD12 | 1.98 | 0.62 |
| 4:S:69:SER:HA | 4:S:72:ALA:HB3 | 1.81 | 0.62 |
| 1:A:220:ARG:HA | 1:A:233:ASP:OD1 | 2.00 | 0.62 |
| 1:A:446:ASN:O | 1:A:448:LEU:N | 2.32 | 0.62 |
| 1:A:561:ASN:ND2 | 1:A:590:ASN:H | 1.98 | 0.62 |
| 3:B:536:LEU:HD13 | 3:B:537:ALA:N | 2.14 | 0.62 |
| 4:D:148:GLY:HA3 | 4:D:156:PHE:CE1 | 2.34 | 0.62 |
| 2:G:115:LYS:HB2 | 2:G:278:ARG:CG | 2.29 | 0.62 |
| 2:G:68:GLU:HB3 | 8:W:30:TYR:CZ | 2.34 | 0.62 |
| 2:C:28:ILE:HD13 | 8:K:14:HIS:CG | 2.34 | 0.62 |
| 9:L:18:GLU:HG3 | 9:L:52:LYS:HG2 | 1.82 | 0.62 |
| 3:R:248:VAL:O | 3:R:251:GLU:HB2 | 1.99 | 0.62 |
| 3:R:230:LEU:HD13 | 3:R:312:ALA:CB | 2.30 | 0.62 |
| 3:R:602:ILE:CG2 | 3:R:603:THR:N | 2.62 | 0.62 |
| 3:R:702:LEU:HB2 | 3:R:721:ASN:CG | 2.19 | 0.62 |
| 4:S:206:CYS:O | 4:S:207:GLU:HB2 | 1.98 | 0.62 |
| 1:A:350:PRO:HD3 | 1:A:468:GLN:NE2 | 2.15 | 0.62 |
| 1:A:612:LEU:HA | 1:A:615:LEU:HD12 | 1.81 | 0.62 |
| 1:A:837:THR:HG22 | 1:A:838:VAL:N | 2.13 | 0.62 |
| 3:B:537:ALA:HB2 | 3:B:557:HIS:CD2 | 2.34 | 0.62 |
| 3:B:518:SER:HB3 | 3:B:564:ASN:HD21 | 1.64 | 0.62 |
| 4:D:105:GLU:N | 4:D:135:THR:HG22 | 2.15 | 0.62 |
| 4:D:63:ALA:HB1 | 4:D:155:LYS:HZ3 | 1.64 | 0.62 |
| 6:F:16:VAL:C | 6:F:18:LYS:H | 2.03 | 0.62 |
| 2:G:131:LYS:HB3 | 2:G:248:GLU:HG2 | 1.81 | 0.62 |
| 2:G:115:LYS:HD3 | 2:G:278:ARG:HB3 | 1.82 | 0.62 |
| 2:G:368:GLY:HA3 | 2:G:371:GLU:OE1 | 1.99 | 0.62 |
| 8:K:12:ASP:O | 8:K:13:LEU:HB2 | 1.97 | 0.62 |
| 3:R:1051:ASP:O | 3:R:1055:ARG:HD2 | 2.00 | 0.62 |
| 5:T:36:GLU:OE2 | 6:U:34:LEU:HD11 | 1.98 | 0.62 |
| 7:V:62:ILE:HD13 | 7:V:62:ILE:N | 2.14 | 0.62 |
| 1:A:13:ILE:HD11 | 1:A:86:LEU:HD13 | 1.82 | 0.62 |
| 1:A:258:PRO:O | 1:A:260:LEU:N | 2.33 | 0.62 |
| 1:A:238:LYS:HZ2 | 1:A:276:TYR:C | 2.02 | 0.62 |
| 1:A:284:LEU:N | 1:A:285:PRO:HD2 | 2.13 | 0.62 |
| 1:A:23:SER:OG | 1:A:73:GLY:HA2 | 2.00 | 0.62 |
| 3:B:319:ILE:O | 3:B:323:ILE:HG12 | 2.00 | 0.62 |
| 4:D:183:CYS:SG | 14:D:1001:F3S:S4 | 2.98 | 0.62 |
| 2:G:106:ARG:HD2 | 2:G:109:GLU:OE1 | 2.00 | 0.62 |
| 8:K:53:ILE:N | 8:K:53:ILE:HD12 | 2.12 | 0.62 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 8:K:91:SER:O | 8:K:92:LEU:CB | 2.48 | 0.62 |
| 10:N:64:ARG:N | 10:N:64:ARG:HD3 | 2.13 | 0.62 |
| 1:Q:175:LEU:CD2 | 1:Q:176:THR:H | 2.06 | 0.62 |
| 1:Q:220:ARG:HA | 1:Q:233:ASP:OD1 | 2.00 | 0.62 |
| 1:Q:418:LEU:HD21 | 3:R:1044:LEU:CD2 | 2.22 | 0.62 |
| 1:Q:672:VAL:HG13 | 1:Q:700:ILE:CD1 | 2.28 | 0.62 |
| 1:Q:856:PHE:CD1 | 1:Q:858:MET:HB2 | 2.35 | 0.62 |
| 3:R:158:GLU:OE2 | 3:R:416:ARG:NH1 | 2.32 | 0.62 |
| 3:R:282:ARG:HA | 3:R:285:ARG:HD2 | 1.82 | 0.62 |
| 3:R:651:THR:HG22 | 3:R:670:SER:HA | 1.82 | 0.62 |
| 3:R:702:LEU:HB2 | 3:R:721:ASN:ND2 | 2.15 | 0.62 |
| 3:R:70:VAL:HG11 | 3:R:80:ILE:HG21 | 1.81 | 0.62 |
| 3:R:899:TYR:CE1 | 3:R:971:TYR:HB2 | 2.35 | 0.62 |
| 7:V:25:ILE:H | 7:V:25:ILE:HD12 | 1.63 | 0.62 |
| 10:Y:24:ARG:HD2 | 10:Y:34:VAL:HG13 | 1.82 | 0.62 |
| 1:A:645:THR:OG1 | 1:A:646:MET:N | 2.33 | 0.62 |
| 3:B:353:LEU:HA | 3:B:404:VAL:HG11 | 1.81 | 0.62 |
| 3:B:469:ASN:HD22 | 3:B:469:ASN:N | 1.98 | 0.62 |
| 3:B:517:TRP:HD1 | 3:B:531:GLN:N | 1.94 | 0.62 |
| 3:B:651:THR:HG22 | 3:B:670:SER:HA | 1.82 | 0.62 |
| 2:C:15:GLU:HA | 2:C:18:LYS:CD | 2.30 | 0.62 |
| 4:D:124:ILE:O | 4:D:125:SER:HB2 | 1.99 | 0.62 |
| 4:D:173:LEU:O | 4:D:174:ALA:HB2 | 2.00 | 0.62 |
| 2:G:339:ASN:OD1 | 2:G:344:ARG:HD2 | 2.00 | 0.62 |
| 8:K:55:ASN:O | 8:K:56:LEU:HB3 | 1.99 | 0.62 |
| 9:L:46:PRO:HD2 | 9:L:52:LYS:O | 1.99 | 0.62 |
| 1:Q:25:THR:HG22 | 1:Q:27:ILE:H | 1.64 | 0.62 |
| 1:Q:317:ARG:NH1 | 3:R:1018:GLU:HG3 | 2.15 | 0.62 |
| 1:Q:488:THR:HG22 | 1:Q:490:ARG:H | 1.64 | 0.62 |
| 1:Q:608:PRO:O | 1:Q:609:GLU:HG2 | 1.99 | 0.62 |
| 3:R:1083:GLY:C | 3:R:1085:LYS:H | 2.03 | 0.62 |
| 3:R:243:SER:HB2 | 3:R:246:PRO:HG3 | 1.82 | 0.62 |
| 3:R:343:LEU:HD12 | 3:R:343:LEU:N | 2.14 | 0.62 |
| 1:A:15:SER:HB2 | 1:A:16:PRO:HD2 | 1.80 | 0.62 |
| 1:A:650:ASP:HB3 | 1:A:723:ASN:HD21 | 1.65 | 0.62 |
| 3:B:688:THR:OG1 | 3:B:863:LYS:HD3 | 2.00 | 0.62 |
| 5:E:50:ASN:O | 5:E:72:PHE:HA | 1.99 | 0.62 |
| 2:G:115:LYS:C | 2:G:116:VAL:HG22 | 2.20 | 0.62 |
| 8:K:21:SER:O | 8:K:24:GLN:HG3 | 2.00 | 0.62 |
| 3:R:287:GLU:C | 3:R:289:ALA:H | 2.03 | 0.62 |
| 3:R:419:TRP:CZ3 | 3:R:712:GLY:HA3 | 2.34 | 0.62 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 4:S:176:CYS:N | 4:S:195:LEU:HD21 | 2.15 | 0.62 |
| 9:X:46:PRO:HD2 | 9:X:52:LYS:O | 2.00 | 0.62 |
| 3:B:555:VAL:HA | 3:B:567:HIS:O | 2.00 | 0.61 |
| 2:C:145:GLU:HG2 | 2:C:239:ARG:HA | 1.82 | 0.61 |
| 2:C:311:ARG:HD3 | 2:C:311:ARG:H | 1.63 | 0.61 |
| 4:D:250:ILE:HD11 | 9:L:84:ILE:HD11 | 1.82 | 0.61 |
| 5:E:26:ALA:O | 5:E:30:LEU:HB2 | 2.00 | 0.61 |
| 7:H:55:ILE:O | 7:H:55:ILE:HG23 | 2.00 | 0.61 |
| 9:L:40:PHE:HE2 | 9:L:42:SER:HG | 1.46 | 0.61 |
| 1:Q:299:ALA:HB1 | 2:G:351:VAL:HG11 | 1.81 | 0.61 |
| 1:Q:867:ASP:OD1 | 2:G:32:LEU:HB3 | 2.00 | 0.61 |
| 3:R:741:ASN:OD1 | 3:R:743:SER:N | 2.33 | 0.61 |
| 3:R:764:LYS:HD2 | 3:R:771:ASP:HB2 | 1.82 | 0.61 |
| 3:R:773:ILE:HG12 | 3:R:813:LYS:CG | 2.30 | 0.61 |
| 3:R:873:THR:HG22 | 3:R:874:ILE:H | 1.64 | 0.61 |
| 4:S:191:LYS:H | 4:S:194:LYS:HB2 | 1.65 | 0.61 |
| 1:A:180:ILE:O | 1:A:183:ARG:HB2 | 1.99 | 0.61 |
| 1:A:378:VAL:HG12 | 1:A:388:LEU:HD12 | 1.82 | 0.61 |
| 1:A:500:GLN:HB2 | 3:B:913:HIS:CG | 2.34 | 0.61 |
| 1:A:821:ARG:HG2 | 1:A:821:ARG:HH11 | 1.64 | 0.61 |
| 3:B:1033:ARG:CG | 3:B:1033:ARG:HH11 | 2.10 | 0.61 |
| 3:B:1077:TYR:HD1 | 3:B:1077:TYR:O | 1.82 | 0.61 |
| 3:B:638:THR:HB | 3:B:639:HIS:CD2 | 2.34 | 0.61 |
| 2:C:389:THR:CG2 | 8:K:77:THR:HB | 2.29 | 0.61 |
| 5:E:97:ILE:HD12 | 5:E:113:ILE:HD11 | 1.81 | 0.61 |
| 2:G:393:ILE:HG21 | 2:G:395:ARG:NH2 | 2.12 | 0.61 |
| 7:H:52:ALA:C | 7:H:54:SER:N | 2.51 | 0.61 |
| 1:Q:828:SER:C | 1:Q:830:LEU:H | 2.03 | 0.61 |
| 3:R:1004:ARG:NH1 | 3:R:1024:GLY:HA2 | 2.16 | 0.61 |
| 3:R:12:ARG:HH11 | 3:R:596:LYS:HG2 | 1.65 | 0.61 |
| 3:R:339:ALA:HB2 | 3:R:618:ALA:CB | 2.28 | 0.61 |
| 1:Q:471:GLU:OE1 | 8:W:41:LEU:HD13 | 2.01 | 0.61 |
| 1:A:206:TRP:CH2 | 1:A:209:LEU:HD23 | 2.35 | 0.61 |
| 1:A:763:THR:HG21 | 1:A:772:TYR:CD2 | 2.35 | 0.61 |
| 3:B:702:LEU:HD13 | 10:N:47:ARG:CD | 2.30 | 0.61 |
| 3:B:911:ASN:HD22 | 3:B:913:HIS:HB2 | 1.63 | 0.61 |
| 2:C:12:TYR:O | 2:C:13:LEU:HD23 | 2.00 | 0.61 |
| 2:C:310:ILE:HG22 | 2:C:314:LEU:HD23 | 1.82 | 0.61 |
| 4:D:51:SER:HA | 4:D:137:GLN:NE2 | 2.14 | 0.61 |
| 1:Q:823:LEU:HB3 | 2:G:329:ILE:HD13 | 1.82 | 0.61 |
| 1:Q:276:TYR:HD2 | 1:Q:277:PHE:HE1 | 1.44 | 0.61 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:Q:525:LEU:HD11 | 1:Q:530:VAL:HG11 | 1.81 | 0.61 |
| 1:Q:807:VAL:HG13 | 3:R:443:ARG:NH1 | 2.15 | 0.61 |
| 2:G:383:THR:CG2 | 3:R:1042:ALA:H | 2.13 | 0.61 |
| 3:R:325:LEU:HD13 | 3:R:330:ARG:HB2 | 1.81 | 0.61 |
| 3:R:476:ILE:N | 3:R:476:ILE:HD13 | 2.14 | 0.61 |
| 3:R:536:LEU:HD13 | 3:R:537:ALA:N | 2.15 | 0.61 |
| 3:R:895:VAL:HG11 | 4:S:34:LEU:HD21 | 1.82 | 0.61 |
| 3:R:70:VAL:HG11 | 3:R:90:LEU:HD23 | 1.82 | 0.61 |
| 3:R:63:ILE:HG13 | 3:R:98:LEU:CB | 2.31 | 0.61 |
| 5:T:17:GLU:HB3 | 5:T:20:LYS:HD2 | 1.82 | 0.61 |
| 8:W:50:LEU:O | 8:W:52:ASP:HB2 | 2.00 | 0.61 |
| 1:A:377:TYR:HE1 | 1:A:385:ARG:HG2 | 1.65 | 0.61 |
| 1:A:787:ARG:NH2 | 1:A:788:THR:HA | 2.16 | 0.61 |
| 3:B:402:ASN:HB2 | 3:B:410:VAL:HB | 1.82 | 0.61 |
| 3:B:533:GLY:O | 3:B:535:GLU:N | 2.33 | 0.61 |
| 1:A:739:ASN:HB2 | 3:B:919:MET:SD | 2.40 | 0.61 |
| 2:C:24:LEU:HD21 | 2:C:58:GLU:HB3 | 1.82 | 0.61 |
| 7:H:23:LEU:HB2 | 7:H:62:ILE:O | 2.00 | 0.61 |
| 1:Q:326:ILE:O | 1:Q:326:ILE:HG13 | 2.00 | 0.61 |
| 1:Q:807:VAL:HG21 | 3:R:443:ARG:CD | 2.30 | 0.61 |
| 1:Q:876:VAL:C | 1:Q:878:TRP:H | 2.03 | 0.61 |
| 3:R:81:SER:OG | 3:R:141:ILE:HG23 | 2.00 | 0.61 |
| 3:R:319:ILE:O | 3:R:323:ILE:HG12 | 2.00 | 0.61 |
| 3:R:887:VAL:CG1 | 3:R:888:ILE:N | 2.63 | 0.61 |
| 7:V:52:ALA:C | 7:V:54:SER:H | 2.01 | 0.61 |
| 1:A:425:LEU:O | 1:A:426:HIS:HB2 | 1.99 | 0.61 |
| 1:A:522:GLN:OE1 | 9:L:40:PHE:HA | 2.01 | 0.61 |
| 3:B:687:ARG:CG | 3:B:687:ARG:HH11 | 2.12 | 0.61 |
| 3:B:96:LEU:O | 3:B:115:TYR:HA | 2.00 | 0.61 |
| 2:G:132:ARG:HA | 2:G:249:TYR:CD1 | 2.35 | 0.61 |
| 2:G:52:PHE:O | 2:G:56:ILE:N | 2.27 | 0.61 |
| 7:H:24:ASN:HB2 | 7:H:27:GLU:OE2 | 2.00 | 0.61 |
| 1:Q:234:ASP:C | 1:Q:236:THR:H | 2.03 | 0.61 |
| 1:Q:837:THR:HG22 | 1:Q:838:VAL:H | 1.65 | 0.61 |
| 3:R:930:GLY:HA3 | 3:R:987:VAL:HB | 1.82 | 0.61 |
| 4:S:159:VAL:HG22 | 4:S:160:SER:N | 2.16 | 0.61 |
| 4:S:259:LYS:O | 4:S:263:VAL:HG23 | 2.00 | 0.61 |
| 7:V:15:TYR:HD2 | 7:V:16:LEU:CD1 | 2.13 | 0.61 |
| 1:A:175:LEU:CD2 | 1:A:176:THR:H | 2.08 | 0.61 |
| 1:A:308:ARG:O | 1:A:313:LEU:HB2 | 2.01 | 0.61 |
| 1:A:486:ILE:HD11 | 1:A:628:MET:HE2 | 1.81 | 0.61 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:77:LEU:HD13 | 1:A:81:VAL:HG22 | 1.81 | 0.61 |
| 3:B:12:ARG:HH11 | 3:B:596:LYS:HG2 | 1.65 | 0.61 |
| 3:B:595:GLU:HA | 3:B:599:SER:HB3 | 1.82 | 0.61 |
| 5:E:82:GLN:HA | 5:E:145:ARG:CG | 2.31 | 0.61 |
| 6:F:88:VAL:HG12 | 6:F:89:MET:H | 1.65 | 0.61 |
| 2:G:52:PHE:HA | 2:G:55:ALA:HB3 | 1.81 | 0.61 |
| 8:K:43:LEU:CD1 | 8:K:64:ILE:HG13 | 2.31 | 0.61 |
| 8:K:71:ARG:HB3 | 8:K:73:VAL:CG1 | 2.30 | 0.61 |
| 1:Q:656:ASP:HA | 1:Q:659:LYS:HD2 | 1.81 | 0.61 |
| 1:Q:687:ILE:HG13 | 1:Q:695:SER:HB3 | 1.82 | 0.61 |
| 1:Q:723:ASN:HD22 | 1:Q:724:PHE:N | 1.97 | 0.61 |
| 1:Q:821:ARG:HG2 | 1:Q:821:ARG:HH11 | 1.65 | 0.61 |
| 3:R:1012:LEU:O | 3:R:1095:TYR:HE2 | 1.83 | 0.61 |
| 3:R:479:GLY:HA2 | 3:R:552:GLU:CB | 2.21 | 0.61 |
| 3:R:560:THR:HG22 | 3:R:561:ASP:N | 2.13 | 0.61 |
| 3:R:867:ARG:NH2 | 4:S:54:TYR:CE2 | 2.68 | 0.61 |
| 3:R:63:ILE:CD1 | 3:R:98:LEU:HD23 | 2.31 | 0.61 |
| 4:S:173:LEU:O | 4:S:174:ALA:HB2 | 2.00 | 0.61 |
| 7:V:23:LEU:HB2 | 7:V:62:ILE:O | 2.01 | 0.61 |
| 1:A:775:SER:CB | 1:A:777:GLU:HG2 | 2.31 | 0.61 |
| 3:B:1061:CYS:HB3 | 3:B:1065:GLY:N | 2.16 | 0.61 |
| 3:B:803:GLU:HG2 | 3:B:846:ILE:CG1 | 2.31 | 0.61 |
| 2:C:109:GLU:O | 2:C:113:ALA:HA | 2.00 | 0.61 |
| 2:C:54:LEU:O | 2:C:58:GLU:HG3 | 2.00 | 0.61 |
| 4:D:257:GLU:O | 4:D:260:LEU:HB3 | 2.00 | 0.61 |
| 4:D:6:LEU:HD13 | 4:D:16:VAL:CG2 | 2.30 | 0.61 |
| 7:H:15:TYR:HD2 | 7:H:16:LEU:CD1 | 2.14 | 0.61 |
| 1:Q:500:GLN:HB2 | 3:R:913:HIS:CG | 2.35 | 0.61 |
| 1:Q:853:ASP:OD2 | 2:G:311:ARG:NH2 | 2.34 | 0.61 |
| 3:R:414:LEU:HA | 3:R:425:HIS:HD2 | 1.65 | 0.61 |
| 3:R:690:THR:HG22 | 3:R:691:ARG:CG | 2.31 | 0.61 |
| 3:R:6:THR:HB | 3:R:9:GLU:CB | 2.30 | 0.61 |
| 3:R:881:ARG:HH11 | 3:R:989:TYR:HB3 | 1.64 | 0.61 |
| 3:R:911:ASN:HD22 | 3:R:913:HIS:HB2 | 1.65 | 0.61 |
| 4:S:101:GLU:HG2 | 4:S:102:ALA:H | 1.65 | 0.61 |
| 10:Y:64:ARG:N | 10:Y:64:ARG:HD3 | 2.14 | 0.61 |
| 1:A:355:PRO:HG2 | 1:A:356:TRP:CE2 | 2.35 | 0.61 |
| 3:B:1070:TYR:O | 3:B:1071:ASP:O | 2.18 | 0.61 |
| 3:B:803:GLU:HB3 | 3:B:805:LYS:HZ2 | 1.65 | 0.61 |
| 3:B:972:ASP:OD2 | 3:B:974:ARG:HG2 | 2.00 | 0.61 |
| 5:E:30:LEU:HD11 | 5:E:72:PHE:CD2 | 2.36 | 0.61 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 2:G:47:GLU:HA | 2:G:50:LYS:HD2 | 1.81 | 0.61 |
| 1:Q:446:ASN:ND2 | 1:Q:446:ASN:C | 2.53 | 0.61 |
| 1:Q:486:ILE:HD11 | 1:Q:628:MET:HE1 | 1.80 | 0.61 |
| 1:Q:789:GLY:HA2 | 3:R:659:GLU:O | 2.00 | 0.61 |
| 3:R:300:HIS:O | 3:R:301:LEU:C | 2.39 | 0.61 |
| 3:R:497:VAL:CG1 | 3:R:498:GLU:N | 2.63 | 0.61 |
| 3:R:533:GLY:O | 3:R:535:GLU:N | 2.33 | 0.61 |
| 3:R:855:THR:C | 3:R:857:GLU:N | 2.51 | 0.61 |
| 7:V:52:ALA:C | 7:V:54:SER:N | 2.52 | 0.61 |
| 8:W:55:ASN:O | 8:W:56:LEU:HB3 | 2.00 | 0.61 |
| 1:A:215:PRO:HB3 | 3:B:1106:SER:HB3 | 1.83 | 0.61 |
| 1:A:238:LYS:NZ | 1:A:275:THR:O | 2.34 | 0.61 |
| 1:A:79:ARG:HB2 | 1:A:266:TRP:CZ3 | 2.36 | 0.61 |
| 3:B:171:ARG:HD2 | 3:B:342:ARG:NH2 | 2.15 | 0.61 |
| 3:B:560:THR:HG22 | 3:B:561:ASP:N | 2.15 | 0.61 |
| 3:B:59:ARG:HH22 | 3:B:107:ILE:CD1 | 2.13 | 0.61 |
| 5:E:100:ASN:ND2 | 6:F:36:ARG:HD3 | 2.16 | 0.61 |
| 2:G:24:LEU:HD21 | 2:G:58:GLU:HB3 | 1.82 | 0.61 |
| 2:G:274:THR:CG2 | 2:G:275:ASN:H | 1.91 | 0.61 |
| 1:Q:427:ARG:N | 2:G:76:GLN:HE22 | 1.98 | 0.61 |
| 1:Q:262:ILE:CG1 | 1:Q:266:TRP:HE1 | 2.13 | 0.61 |
| 1:Q:488:THR:OG1 | 1:Q:495:ILE:HB | 2.00 | 0.61 |
| 3:R:1004:ARG:HH11 | 3:R:1025:GLY:N | 1.94 | 0.61 |
| 3:R:67:LYS:HB3 | 3:R:68:PRO:HD2 | 1.83 | 0.61 |
| 4:S:115:LYS:O | 4:S:116:SER:HB3 | 2.00 | 0.61 |
| 5:T:145:ARG:O | 5:T:163:THR:HG22 | 2.00 | 0.61 |
| 5:T:171:LYS:HE2 | 5:T:173:GLU:HB2 | 1.81 | 0.61 |
| 3:B:1069:TRP:HE1 | 3:B:1088:LEU:HB3 | 1.64 | 0.61 |
| 3:B:1069:TRP:HD1 | 3:B:1088:LEU:HD22 | 1.64 | 0.61 |
| 3:B:276:VAL:HG12 | 3:B:277:ALA:N | 2.13 | 0.61 |
| 3:B:414:LEU:HA | 3:B:425:HIS:HD2 | 1.65 | 0.61 |
| 3:B:838:VAL:HG12 | 3:B:839:THR:N | 2.14 | 0.61 |
| 2:C:131:LYS:HB3 | 2:C:248:GLU:HG2 | 1.83 | 0.61 |
| 1:A:878:TRP:HZ3 | 2:C:50:LYS:HE2 | 1.65 | 0.61 |
| 5:E:17:GLU:OE1 | 5:E:25:ILE:HD12 | 2.01 | 0.61 |
| 2:G:103:GLY:HA3 | 2:G:300:VAL:HG13 | 1.81 | 0.61 |
| 2:G:109:GLU:OE2 | 2:G:117:PRO:HA | 2.01 | 0.61 |
| 1:A:470:GLU:HB2 | 8:K:41:LEU:HD12 | 1.82 | 0.61 |
| 4:D:24:PHE:HZ | 9:L:80:THR:HA | 1.66 | 0.61 |
| 10:N:20:SER:O | 10:N:24:ARG:HG3 | 2.01 | 0.61 |
| 11:P:26:CYS:CB | 11:P:27:PRO:HD2 | 2.28 | 0.61 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 1:Q:522:GLN:HE21 | 9:X:33:ARG:HD3 | 1.66 | 0.61 |
| 1:Q:723:ASN:HD22 | 1:Q:723:ASN:C | 2.02 | 0.61 |
| 3:R:1079:CYS:O | 3:R:1081:ILE:N | 2.28 | 0.61 |
| 3:R:325:LEU:HD12 | 3:R:328:GLY:HA2 | 1.82 | 0.61 |
| 3:R:555:VAL:HA | 3:R:567:HIS:O | 2.01 | 0.61 |
| 3:R:640:LEU:HD22 | 3:R:641:GLU:H | 1.64 | 0.61 |
| 1:A:334:ILE:HG22 | 1:A:482:VAL:HG11 | 1.81 | 0.60 |
| 1:A:485:ASN:HD21 | 3:B:1039:PHE:HE2 | 1.48 | 0.60 |
| 3:B:403:TRP:C | 3:B:404:VAL:CG2 | 2.68 | 0.60 |
| 3:B:658:PRO:C | 3:B:660:HIS:H | 2.03 | 0.60 |
| 3:B:814:VAL:HG22 | 3:B:834:ASP:HA | 1.83 | 0.60 |
| 3:B:922:GLY:O | 3:B:926:GLU:HB2 | 2.01 | 0.60 |
| 4:D:258:LYS:O | 4:D:261:VAL:HG22 | 2.02 | 0.60 |
| 3:R:437:GLN:HB3 | 3:R:438:PRO:CD | 2.23 | 0.60 |
| 4:S:101:GLU:OE1 | 4:S:138:LYS:HD2 | 2.01 | 0.60 |
| 4:S:39:MET:HE3 | 4:S:72:ALA:HB1 | 1.83 | 0.60 |
| 10:Y:10:CYS:HB3 | 10:Y:44:CYS:SG | 2.42 | 0.60 |
| 1:A:249:LEU:HD13 | 1:A:266:TRP:CZ3 | 2.36 | 0.60 |
| 1:A:416:ILE:HG12 | 1:A:477:LYS:HB2 | 1.83 | 0.60 |
| 1:A:488:THR:CG2 | 1:A:490:ARG:H | 2.14 | 0.60 |
| 1:A:644:PHE:HA | 1:A:724:PHE:CE2 | 2.34 | 0.60 |
| 1:A:764:ARG:O | 1:A:766:LEU:N | 2.35 | 0.60 |
| 3:B:723:ILE:HB | 3:B:907:ASP:OD2 | 2.02 | 0.60 |
| 3:B:881:ARG:HH11 | 3:B:989:TYR:CB | 2.14 | 0.60 |
| 2:C:115:LYS:HD3 | 2:C:278:ARG:HB3 | 1.83 | 0.60 |
| 1:Q:239:LEU:HD12 | 1:Q:276:TYR:CE1 | 2.36 | 0.60 |
| 1:Q:708:ARG:O | 1:Q:711:ALA:HB3 | 2.02 | 0.60 |
| 3:R:173:LEU:HA | 3:R:333:ASP:OD2 | 2.01 | 0.60 |
| 3:R:295:LYS:C | 3:R:296:TYR:HD1 | 2.05 | 0.60 |
| 3:R:463:ASN:HB3 | 3:R:467:VAL:HG12 | 1.83 | 0.60 |
| 3:R:922:GLY:O | 3:R:926:GLU:N | 2.30 | 0.60 |
| 2:G:390:MET:SD | 5:T:58:ILE:N | 2.74 | 0.60 |
| 6:U:16:VAL:C | 6:U:18:LYS:H | 2.05 | 0.60 |
| 9:X:35:ILE:HD11 | 9:X:75:ASN:ND2 | 2.15 | 0.60 |
| 1:A:488:THR:OG1 | 1:A:495:ILE:HB | 2.00 | 0.60 |
| 3:B:1107:MET:C | 3:B:1108:ILE:HD12 | 2.22 | 0.60 |
| 3:B:558:ILE:HG12 | 3:B:567:HIS:CD2 | 2.36 | 0.60 |
| 2:C:115:LYS:HB2 | 2:C:278:ARG:CG | 2.31 | 0.60 |
| 1:A:847:GLN:HG2 | 2:C:318:ASP:OD1 | 2.01 | 0.60 |
| 2:C:337:GLU:OE2 | 2:C:339:ASN:ND2 | 2.34 | 0.60 |
| 2:C:393:ILE:CG2 | 2:C:395:ARG:HH21 | 2.11 | 0.60 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 4:D:23:GLU:O | 9:L:27:LEU:HD13 | 2.01 | 0.60 |
| 10:N:39:GLY:O | 10:N:40:VAL:HG23 | 2.02 | 0.60 |
| 1:Q:522:GLN:HG2 | 9:X:40:PHE:CE1 | 2.36 | 0.60 |
| 3:R:1069:TRP:CZ3 | 3:R:1077:TYR:HB2 | 2.36 | 0.60 |
| 3:R:414:LEU:HA | 3:R:425:HIS:CD2 | 2.36 | 0.60 |
| 3:R:738:ILE:HG23 | 3:R:888:ILE:HA | 1.81 | 0.60 |
| 3:R:803:GLU:HG2 | 3:R:846:ILE:HG13 | 1.83 | 0.60 |
| 3:R:98:LEU:HD11 | 3:R:100:MET:CG | 2.32 | 0.60 |
| 5:T:31:ARG:O | 5:T:33:GLN:N | 2.33 | 0.60 |
| 8:W:70:ARG:C | 8:W:72:GLY:H | 2.05 | 0.60 |
| 3:B:348:ASP:OD2 | 3:B:348:ASP:N | 2.33 | 0.60 |
| 3:B:800:PRO:HD3 | 3:B:850:VAL:HG23 | 1.84 | 0.60 |
| 2:C:57:LYS:CA | 2:C:57:LYS:HE3 | 2.28 | 0.60 |
| 10:N:3:ILE:HG12 | 10:N:18:TRP:CG | 2.36 | 0.60 |
| 1:Q:573:ARG:NH2 | 1:Q:721:PRO:HB3 | 2.17 | 0.60 |
| 3:R:63:ILE:HD11 | 3:R:98:LEU:HD23 | 1.82 | 0.60 |
| 4:S:183:CYS:SG | 14:S:1001:F3S:S4 | 3.00 | 0.60 |
| 4:S:50:ASN:HD22 | 10:Y:64:ARG:HD2 | 1.66 | 0.60 |
| 4:S:98:ILE:HD11 | 4:S:114:ILE:CG2 | 2.27 | 0.60 |
| 6:U:88:VAL:HG12 | 6:U:89:MET:H | 1.67 | 0.60 |
| 7:V:64:ARG:NH2 | 8:W:12:ASP:OD1 | 2.35 | 0.60 |
| 3:B:102:PRO:HG2 | 3:B:108:GLU:OE2 | 2.02 | 0.60 |
| 3:B:82:PRO:HG2 | 3:B:143:GLU:OE1 | 2.01 | 0.60 |
| 3:B:28:LEU:HG | 3:B:122:MET:CE | 2.31 | 0.60 |
| 3:B:602:ILE:CG2 | 3:B:603:THR:N | 2.64 | 0.60 |
| 3:B:954:GLN:HA | 3:B:957:ILE:CD1 | 2.27 | 0.60 |
| 2:C:134:ARG:O | 2:C:138:LEU:HD12 | 2.02 | 0.60 |
| 8:K:70:ARG:C | 8:K:72:GLY:H | 2.05 | 0.60 |
| 9:L:7:LYS:H | 9:L:14:GLU:HB3 | 1.66 | 0.60 |
| 1:Q:690:ARG:HD2 | 1:Q:694:GLU:OE1 | 2.01 | 0.60 |
| 1:Q:853:ASP:OD1 | 1:Q:864:LYS:HD3 | 2.00 | 0.60 |
| 3:R:373:LYS:HG3 | 3:R:375:ARG:HB2 | 1.83 | 0.60 |
| 3:R:488:THR:HG21 | 3:R:549:ILE:HD11 | 1.83 | 0.60 |
| 3:R:855:THR:CB | 3:R:857:GLU:HG2 | 2.31 | 0.60 |
| 3:R:870:ARG:CZ | 3:R:996:MET:SD | 2.89 | 0.60 |
| 3:R:971:TYR:CE2 | 3:R:978:LYS:HB3 | 2.37 | 0.60 |
| 6:U:87:LEU:HD23 | 6:U:88:VAL:O | 2.01 | 0.60 |
| 1:A:608:PRO:O | 1:A:609:GLU:HG2 | 2.01 | 0.60 |
| 1:A:864:LYS:HE3 | 2:C:32:LEU:CD1 | 2.32 | 0.60 |
| 3:B:111:PRO:O | 3:B:112:GLU:HB3 | 2.02 | 0.60 |
| 3:B:20:SER:O | 3:B:21:LYS:HG2 | 2.02 | 0.60 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 3:B:243:SER:HB2 | 3:B:246:PRO:HG3 | 1.82 | 0.60 |
| 3:B:414:LEU:HA | 3:B:425:HIS:CD2 | 2.37 | 0.60 |
| 3:B:679:LEU:HD23 | 3:B:716:ARG:HD3 | 1.83 | 0.60 |
| 3:B:781:ARG:CG | 3:B:782:GLY:N | 2.65 | 0.60 |
| 3:B:70:VAL:HG11 | 3:B:80:ILE:HG21 | 1.84 | 0.60 |
| 3:B:932:TYR:O | 3:B:933:ALA:HB2 | 2.01 | 0.60 |
| 4:D:101:GLU:OE1 | 4:D:138:LYS:HD2 | 2.01 | 0.60 |
| 2:G:261:VAL:O | 2:G:261:VAL:HG12 | 2.02 | 0.60 |
| 2:G:329:ILE:CA | 2:G:334:VAL:HG12 | 2.28 | 0.60 |
| 8:K:38:ALA:HB1 | 8:K:42:GLN:HE22 | 1.67 | 0.60 |
| 1:Q:13:ILE:HD11 | 1:Q:86:LEU:HD13 | 1.82 | 0.60 |
| 1:Q:363:GLN:O | 1:Q:366:ILE:HG23 | 2.01 | 0.60 |
| 3:R:246:PRO:HG2 | 3:R:249:GLN:CG | 2.29 | 0.60 |
| 3:R:242:VAL:CA | 3:R:316:ALA:HB1 | 2.24 | 0.60 |
| 3:R:963:LEU:HD22 | 4:S:208:GLU:HG3 | 1.83 | 0.60 |
| 8:W:63:SER:C | 8:W:65:ALA:N | 2.54 | 0.60 |
| 9:X:18:GLU:HG3 | 9:X:52:LYS:HG2 | 1.82 | 0.60 |
| 10:Y:30:ASN:O | 10:Y:34:VAL:HG23 | 2.02 | 0.60 |
| 10:Y:43:TYR:HA | 10:Y:46:ARG:CB | 2.31 | 0.60 |
| 10:Y:42:ARG:O | 10:Y:46:ARG:HB2 | 2.01 | 0.60 |
| 1:A:299:ALA:HB1 | 2:C:351:VAL:HG11 | 1.82 | 0.60 |
| 2:C:355:LEU:HD22 | 3:B:1109:ILE:HD11 | 1.83 | 0.60 |
| 1:A:742:GLN:HB2 | 3:B:919:MET:HE3 | 1.82 | 0.60 |
| 1:Q:249:LEU:HD13 | 1:Q:266:TRP:CZ3 | 2.35 | 0.60 |
| 1:Q:30:PRO:HB2 | 1:Q:244:ARG:HG3 | 1.83 | 0.60 |
| 1:Q:827:LEU:HD23 | 2:G:316:ILE:HD13 | 1.84 | 0.60 |
| 1:Q:833:GLU:HG3 | 1:Q:839:ARG:HG3 | 1.82 | 0.60 |
| 3:R:59:ARG:NH2 | 3:R:107:ILE:HD12 | 2.16 | 0.60 |
| 3:R:63:ILE:CG1 | 3:R:98:LEU:HD23 | 2.32 | 0.60 |
| 3:R:64:ARG:NH1 | 3:R:64:ARG:HG2 | 2.16 | 0.60 |
| 3:R:676:ALA:HB1 | 3:R:718:ALA:HB1 | 1.84 | 0.60 |
| 10:Y:39:GLY:O | 10:Y:40:VAL:HG23 | 2.02 | 0.60 |
| 3:B:576:ARG:HD3 | 3:B:615:TYR:HD2 | 1.67 | 0.60 |
| 3:B:930:GLY:HA3 | 3:B:987:VAL:HB | 1.84 | 0.60 |
| 4:D:13:ILE:HD11 | 4:D:238:PRO:HB2 | 1.84 | 0.60 |
| 5:E:31:ARG:O | 5:E:33:GLN:N | 2.33 | 0.60 |
| 5:E:50:ASN:HB2 | 5:E:73:ASP:OD2 | 2.01 | 0.60 |
| 2:G:389:THR:CG2 | 8:W:77:THR:HB | 2.31 | 0.60 |
| 10:N:24:ARG:HD2 | 10:N:34:VAL:HG13 | 1.82 | 0.60 |
| 1:Q:245:ILE:CD1 | 1:Q:268:LEU:HD13 | 2.31 | 0.60 |
| 1:Q:276:TYR:CD2 | 1:Q:277:PHE:CE1 | 2.87 | 0.60 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:Q:775:SER:HB3 | 1:Q:777:GLU:HG2 | 1.84 | 0.60 |
| 3:R:419:TRP:HZ3 | 3:R:712:GLY:HA3 | 1.66 | 0.60 |
| 3:R:518:SER:HB3 | 3:R:564:ASN:HD21 | 1.66 | 0.60 |
| 3:R:853:THR:CG2 | 3:R:854:GLU:H | 2.07 | 0.60 |
| 4:S:4:ASN:O | 4:S:15:LEU:HA | 2.01 | 0.60 |
| 6:U:59:LEU:HD13 | 6:U:69:ARG:HG2 | 1.82 | 0.60 |
| 8:W:35:VAL:HG23 | 8:W:36:ILE:N | 2.17 | 0.60 |
| 1:A:377:TYR:OH | 1:A:385:ARG:HD2 | 2.01 | 0.60 |
| 1:A:412:ILE:O | 1:A:415:ASP:HB2 | 2.02 | 0.60 |
| 3:B:701:PRO:HG3 | 3:B:708:LEU:HD11 | 1.82 | 0.60 |
| 3:B:729:PHE:C | 3:B:731:GLY:H | 2.05 | 0.60 |
| 3:B:741:ASN:OD1 | 3:B:743:SER:N | 2.34 | 0.60 |
| 3:B:738:ILE:HG23 | 3:B:888:ILE:HA | 1.84 | 0.60 |
| 3:B:906:PRO:HD3 | 3:B:985:PHE:HZ | 1.66 | 0.60 |
| 3:B:6:THR:HB | 3:B:9:GLU:CB | 2.31 | 0.60 |
| 2:C:392:PRO:HG3 | 5:E:68:HIS:CE1 | 2.37 | 0.60 |
| 4:D:175:ASN:HA | 4:D:195:LEU:CD2 | 2.30 | 0.60 |
| 2:G:292:ILE:HG23 | 2:G:293:ILE:N | 2.16 | 0.60 |
| 1:Q:525:LEU:HG | 9:X:40:PHE:HZ | 1.66 | 0.60 |
| 1:Q:604:GLY:O | 1:Q:606:GLN:N | 2.34 | 0.60 |
| 1:Q:691:THR:CG2 | 1:Q:692:LEU:HD12 | 2.32 | 0.60 |
| 3:R:204:ARG:HB2 | 3:R:213:SER:HG | 1.64 | 0.60 |
| 3:R:377:ARG:O | 3:R:378:LYS:HB2 | 2.00 | 0.60 |
| 3:R:393:ARG:HH21 | 3:R:403:TRP:HH2 | 1.44 | 0.60 |
| 3:R:789:TYR:O | 3:R:791:LEU:N | 2.35 | 0.60 |
| 3:R:932:TYR:O | 3:R:933:ALA:HB2 | 2.02 | 0.60 |
| 3:R:6:THR:HB | 3:R:9:GLU:HB3 | 1.84 | 0.60 |
| 4:S:38:ILE:HD12 | 4:S:39:MET:N | 2.15 | 0.60 |
| 5:T:15:PRO:HG2 | 8:W:45:MET:HB3 | 1.83 | 0.60 |
| 6:U:72:LEU:C | 6:U:74:SER:H | 2.05 | 0.60 |
| 1:A:4:LYS:HD2 | 3:B:1089:PHE:CB | 2.31 | 0.60 |
| 1:A:648:LEU:O | 1:A:651:VAL:HG12 | 2.01 | 0.60 |
| 1:A:763:THR:C | 1:A:764:ARG:HG2 | 2.21 | 0.60 |
| 3:B:764:LYS:HD3 | 3:B:815:SER:CA | 2.32 | 0.60 |
| 2:C:262:LEU:HD22 | 2:C:269:VAL:CG1 | 2.30 | 0.60 |
| 5:E:145:ARG:O | 5:E:163:THR:HG22 | 2.01 | 0.60 |
| 2:G:15:GLU:HA | 2:G:18:LYS:CD | 2.31 | 0.60 |
| 2:G:311:ARG:HD3 | 2:G:311:ARG:H | 1.65 | 0.60 |
| 3:R:1036:LEU:HD12 | 3:R:1045:LEU:HB2 | 1.82 | 0.60 |
| 3:R:1069:TRP:HD1 | 3:R:1088:LEU:HD22 | 1.65 | 0.60 |
| 3:R:280:GLN:O | 3:R:285:ARG:NH1 | 2.34 | 0.60 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 3:R:291:GLN:HB3 | 3:R:295:LYS:HE2 | 1.83 | 0.60 |
| 3:R:699:GLN:NE2 | 10:Y:48:MET:HE3 | 2.17 | 0.60 |
| 3:R:759:SER:HB3 | 3:R:863:LYS:HA | 1.84 | 0.60 |
| 3:R:80:ILE:CD1 | 3:R:92:TYR:HA | 2.31 | 0.60 |
| 3:R:6:THR:N | 3:R:9:GLU:OE2 | 2.35 | 0.60 |
| 4:S:171:GLU:O | 4:S:217:ILE:HG23 | 2.01 | 0.60 |
| 5:T:126:ILE:CD1 | 5:T:137:GLN:HG2 | 2.32 | 0.60 |
| 2:G:28:ILE:HD12 | 8:W:18:VAL:CG2 | 2.31 | 0.60 |
| 1:A:363:GLN:O | 1:A:366:ILE:HG23 | 2.01 | 0.59 |
| 3:B:628:LEU:HD23 | 3:B:628:LEU:N | 2.08 | 0.59 |
| 3:B:63:ILE:CG1 | 3:B:98:LEU:HD23 | 2.32 | 0.59 |
| 3:B:6:THR:N | 3:B:9:GLU:OE2 | 2.34 | 0.59 |
| 2:C:390:MET:HB2 | 5:E:56:GLU:CG | 2.28 | 0.59 |
| 2:G:109:GLU:O | 2:G:113:ALA:HA | 2.02 | 0.59 |
| 1:Q:288:LYS:HG2 | 1:Q:294:PRO:CA | 2.31 | 0.59 |
| 1:Q:543:ARG:HG2 | 1:Q:544:GLU:H | 1.67 | 0.59 |
| 1:Q:831:ARG:HH21 | 2:G:385:MET:CG | 2.15 | 0.59 |
| 3:R:1061:CYS:HB3 | 3:R:1065:GLY:HA2 | 1.84 | 0.59 |
| 3:R:906:PRO:HD3 | 3:R:985:PHE:HZ | 1.67 | 0.59 |
| 4:S:26:ASN:O | 4:S:30:ARG:HG3 | 2.02 | 0.59 |
| 1:A:573:ARG:NH2 | 1:A:721:PRO:HB3 | 2.17 | 0.59 |
| 3:B:206:LYS:HE3 | 3:B:220:LYS:NZ | 2.17 | 0.59 |
| 3:B:557:HIS:ND1 | 3:B:566:VAL:HG22 | 2.17 | 0.59 |
| 3:B:690:THR:HG22 | 3:B:691:ARG:CG | 2.32 | 0.59 |
| 1:A:827:LEU:HD23 | 2:C:316:ILE:HD13 | 1.82 | 0.59 |
| 2:C:35:LEU:O | 2:C:39:LYS:HG3 | 2.02 | 0.59 |
| 1:A:427:ARG:N | 2:C:76:GLN:HE22 | 2.00 | 0.59 |
| 4:D:108:MET:HE1 | 10:N:2:LEU:HD21 | 1.83 | 0.59 |
| 5:E:17:GLU:HB3 | 5:E:20:LYS:HD2 | 1.83 | 0.59 |
| 5:E:63:ASP:OD2 | 5:E:65:ALA:HB3 | 2.02 | 0.59 |
| 2:C:391:ARG:CB | 8:K:75:PRO:HB2 | 2.32 | 0.59 |
| 1:Q:206:TRP:CH2 | 1:Q:209:LEU:HD23 | 2.37 | 0.59 |
| 1:Q:276:TYR:CD2 | 1:Q:277:PHE:HE1 | 2.21 | 0.59 |
| 1:Q:362:ARG:O | 1:Q:366:ILE:HG22 | 2.02 | 0.59 |
| 1:Q:377:TYR:HE1 | 1:Q:385:ARG:HG2 | 1.67 | 0.59 |
| 3:R:729:PHE:CD2 | 3:R:730:THR:HG23 | 2.36 | 0.59 |
| 7:V:18:PRO:CB | 7:V:67:ARG:HA | 2.32 | 0.59 |
| 8:W:34:ARG:HD2 | 8:W:34:ARG:O | 2.01 | 0.59 |
| 1:A:525:LEU:CD1 | 1:A:530:VAL:HG11 | 2.33 | 0.59 |
| 1:A:828:SER:C | 1:A:830:LEU:H | 2.05 | 0.59 |
| 3:B:1083:GLY:C | 3:B:1085:LYS:H | 2.05 | 0.59 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|------------------|--------------------------|-------------------|
| 3:B:210:PHE:HE2 | 3:B:319:ILE:HG23 | 1.67 | 0.59 |
| 3:B:680:TYR:HE1 | 3:B:687:ARG:HH12 | 1.48 | 0.59 |
| 3:B:63:ILE:HG13 | 3:B:98:LEU:CB | 2.32 | 0.59 |
| 1:A:874:ARG:NE | 2:C:53:ASP:HB3 | 2.04 | 0.59 |
| 4:D:27:ALA:HB1 | 9:L:23:THR:HG22 | 1.84 | 0.59 |
| 10:N:43:TYR:HA | 10:N:46:ARG:CB | 2.30 | 0.59 |
| 1:Q:238:LYS:HZ2 | 1:Q:276:TYR:C | 2.05 | 0.59 |
| 1:Q:524:ILE:CG2 | 1:Q:634:VAL:HG13 | 2.32 | 0.59 |
| 1:Q:827:LEU:CD1 | 1:Q:830:LEU:HD12 | 2.33 | 0.59 |
| 3:R:291:GLN:C | 3:R:293:ILE:H | 2.05 | 0.59 |
| 3:R:576:ARG:HD3 | 3:R:615:TYR:HD2 | 1.65 | 0.59 |
| 3:R:589:VAL:HG12 | 3:R:590:THR:N | 2.16 | 0.59 |
| 3:R:729:PHE:C | 3:R:731:GLY:H | 2.05 | 0.59 |
| 3:R:849:LEU:HB3 | 3:R:865:ARG:HG2 | 1.84 | 0.59 |
| 8:W:21:SER:O | 8:W:24:GLN:HG3 | 2.02 | 0.59 |
| 1:A:376:ASN:N | 1:A:376:ASN:ND2 | 2.51 | 0.59 |
| 1:A:552:ILE:HD11 | 1:A:593:LEU:HD12 | 1.84 | 0.59 |
| 1:A:64:THR:O | 1:A:66:GLY:N | 2.36 | 0.59 |
| 3:B:164:GLN:CG | 3:B:349:LEU:HD21 | 2.32 | 0.59 |
| 3:B:52:GLU:HG3 | 3:B:56:LEU:CD2 | 2.32 | 0.59 |
| 3:B:591:ILE:HD11 | 3:B:612:LYS:HZ3 | 1.68 | 0.59 |
| 2:C:49:ASP:O | 2:C:52:PHE:N | 2.35 | 0.59 |
| 4:D:171:GLU:O | 4:D:217:ILE:HG23 | 2.01 | 0.59 |
| 4:D:52:PRO:HB2 | 10:N:56:ILE:HD11 | 1.82 | 0.59 |
| 6:F:47:CYS:HB2 | 6:F:52:ALA:HB2 | 1.84 | 0.59 |
| 7:H:23:LEU:HB3 | 7:H:28:ALA:HB2 | 1.84 | 0.59 |
| 1:Q:609:GLU:HB3 | 1:Q:614:TRP:CE2 | 2.37 | 0.59 |
| 1:Q:64:THR:HG22 | 1:Q:65:LEU:H | 1.68 | 0.59 |
| 3:R:1009:VAL:HG12 | 3:R:1016:PRO:HA | 1.83 | 0.59 |
| 3:R:1040:GLY:HA3 | 8:W:30:TYR:HE2 | 1.67 | 0.59 |
| 3:R:560:THR:CG2 | 3:R:561:ASP:N | 2.64 | 0.59 |
| 1:A:522:GLN:HE21 | 9:L:33:ARG:HD3 | 1.67 | 0.59 |
| 1:A:609:GLU:HB3 | 1:A:614:TRP:CE2 | 2.38 | 0.59 |
| 1:A:615:LEU:O | 1:A:619:TYR:HB2 | 2.03 | 0.59 |
| 3:B:153:ILE:HG22 | 3:B:156:GLY:HA2 | 1.83 | 0.59 |
| 3:B:183:ILE:HG13 | 3:B:206:LYS:HB3 | 1.83 | 0.59 |
| 5:E:88:GLU:H | 5:E:99:VAL:CG1 | 2.15 | 0.59 |
| 2:G:262:LEU:HD22 | 2:G:269:VAL:CG1 | 2.31 | 0.59 |
| 11:P:17:GLN:C | 11:P:19:LYS:H | 2.05 | 0.59 |
| 1:Q:284:LEU:N | 1:Q:285:PRO:HD2 | 2.17 | 0.59 |
| 1:Q:417:VAL:HG13 | 1:Q:465:HIS:O | 2.03 | 0.59 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 1:Q:446:ASN:O | 1:Q:448:LEU:N | 2.35 | 0.59 |
| 3:R:1009:VAL:HB | 3:R:1014:ARG:O | 2.02 | 0.59 |
| 3:R:978:LYS:HZ3 | 4:S:205:LEU:HD22 | 1.67 | 0.59 |
| 7:V:65:ILE:CD1 | 7:V:65:ILE:H | 2.15 | 0.59 |
| 1:A:377:TYR:H | 1:A:388:LEU:CB | 2.16 | 0.59 |
| 1:A:487:ILE:HD12 | 1:A:487:ILE:N | 2.18 | 0.59 |
| 1:A:604:GLY:O | 1:A:606:GLN:N | 2.35 | 0.59 |
| 3:B:1009:VAL:HB | 3:B:1014:ARG:O | 2.03 | 0.59 |
| 3:B:295:LYS:C | 3:B:296:TYR:HD1 | 2.06 | 0.59 |
| 3:B:63:ILE:HD11 | 3:B:98:LEU:HD23 | 1.85 | 0.59 |
| 2:C:277:ILE:C | 2:C:279:GLU:N | 2.55 | 0.59 |
| 2:C:361:GLY:O | 2:C:362:ASP:O | 2.20 | 0.59 |
| 4:D:247:LYS:HA | 4:D:250:ILE:HD12 | 1.84 | 0.59 |
| 2:G:39:LYS:O | 2:G:43:VAL:HG23 | 2.03 | 0.59 |
| 1:Q:491:TYR:HB2 | 1:Q:607:GLN:NE2 | 2.16 | 0.59 |
| 1:Q:768:HIS:NE2 | 3:R:450:TRP:CZ2 | 2.68 | 0.59 |
| 3:R:814:VAL:HG22 | 3:R:834:ASP:HA | 1.83 | 0.59 |
| 3:R:89:ASN:HD21 | 3:R:863:LYS:NZ | 2.01 | 0.59 |
| 7:V:23:LEU:CD1 | 7:V:62:ILE:HG12 | 2.33 | 0.59 |
| 8:W:90:LEU:HD23 | 8:W:90:LEU:H | 1.67 | 0.59 |
| 1:A:418:LEU:HD11 | 3:B:1044:LEU:HD11 | 1.85 | 0.59 |
| 1:A:827:LEU:CD1 | 1:A:830:LEU:HD12 | 2.33 | 0.59 |
| 3:B:355:ARG:HH11 | 3:B:355:ARG:CB | 2.15 | 0.59 |
| 3:B:475:GLN:HG2 | 3:B:476:ILE:N | 2.15 | 0.59 |
| 3:B:640:LEU:HD22 | 3:B:641:GLU:H | 1.60 | 0.59 |
| 3:B:699:GLN:HE22 | 10:N:48:MET:HE3 | 1.66 | 0.59 |
| 3:B:80:ILE:CD1 | 3:B:92:TYR:HA | 2.33 | 0.59 |
| 4:D:97:TYR:C | 4:D:98:ILE:HD12 | 2.23 | 0.59 |
| 6:F:87:LEU:HD23 | 6:F:88:VAL:O | 2.03 | 0.59 |
| 2:G:12:TYR:O | 2:G:13:LEU:HD23 | 2.02 | 0.59 |
| 1:Q:371:LYS:HD3 | 1:Q:372:TRP:N | 2.17 | 0.59 |
| 3:R:1000:LYS:O | 3:R:1001:LEU:HB2 | 2.02 | 0.59 |
| 3:R:781:ARG:CG | 3:R:782:GLY:N | 2.65 | 0.59 |
| 6:U:14:TYR:O | 6:U:18:LYS:HG3 | 2.03 | 0.59 |
| 1:A:517:THR:HG22 | 1:A:518:LYS:N | 2.17 | 0.59 |
| 3:B:296:TYR:HD1 | 3:B:296:TYR:N | 2.01 | 0.59 |
| 4:D:98:ILE:CD1 | 4:D:114:ILE:HG23 | 2.29 | 0.59 |
| 6:F:35:GLN:O | 6:F:38:TYR:HB2 | 2.02 | 0.59 |
| 2:G:268:ASP:OD1 | 2:G:270:ALA:HB3 | 2.03 | 0.59 |
| 1:Q:23:SER:O | 1:Q:24:VAL:HG13 | 2.02 | 0.59 |
| 1:Q:293:ARG:H | 1:Q:293:ARG:HD2 | 1.68 | 0.59 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 3:R:182:ASN:HD22 | 3:R:182:ASN:N | 1.99 | 0.59 |
| 5:T:30:LEU:HD11 | 5:T:72:PHE:CD2 | 2.38 | 0.59 |
| 2:G:284:PHE:CE2 | 7:V:14:HIS:HB2 | 2.37 | 0.59 |
| 1:A:23:SER:O | 1:A:24:VAL:HG13 | 2.03 | 0.59 |
| 1:A:876:VAL:C | 1:A:878:TRP:H | 2.05 | 0.59 |
| 3:B:1058:ILE:O | 3:B:1091:VAL:HG12 | 2.03 | 0.59 |
| 3:B:515:LEU:N | 3:B:517:TRP:CE3 | 2.71 | 0.59 |
| 3:B:805:LYS:HG3 | 3:B:844:MET:HB2 | 1.85 | 0.59 |
| 2:C:297:ILE:C | 2:C:299:LYS:H | 2.04 | 0.59 |
| 4:D:114:ILE:HD12 | 4:D:123:PRO:HG2 | 1.84 | 0.59 |
| 4:D:194:LYS:O | 4:D:196:SER:N | 2.35 | 0.59 |
| 8:K:70:ARG:NH1 | 8:K:70:ARG:HB3 | 2.18 | 0.59 |
| 1:Q:350:PRO:HD3 | 1:Q:468:GLN:NE2 | 2.17 | 0.59 |
| 1:Q:487:ILE:HD12 | 1:Q:487:ILE:N | 2.18 | 0.59 |
| 3:R:417:THR:O | 3:R:418:ASN:HB3 | 2.03 | 0.59 |
| 3:R:735:GLU:O | 3:R:736:ASP:C | 2.41 | 0.59 |
| 3:R:814:VAL:CG1 | 3:R:832:LYS:HB3 | 2.32 | 0.59 |
| 3:R:954:GLN:HA | 3:R:957:ILE:CD1 | 2.31 | 0.59 |
| 4:S:175:ASN:HA | 4:S:195:LEU:CD2 | 2.31 | 0.59 |
| 4:S:98:ILE:HG13 | 4:S:114:ILE:HA | 1.85 | 0.59 |
| 3:R:902:LYS:CB | 10:Y:42:ARG:HD3 | 2.33 | 0.59 |
| 1:A:708:ARG:HG3 | 1:A:709:SER:N | 2.18 | 0.59 |
| 2:C:391:ARG:H | 2:C:392:PRO:HD3 | 1.68 | 0.59 |
| 4:D:177:GLU:HB2 | 4:D:178:LYS:HZ3 | 1.66 | 0.59 |
| 4:D:175:ASN:CA | 4:D:195:LEU:HD21 | 2.33 | 0.59 |
| 2:G:241:ILE:HG22 | 2:G:242:VAL:H | 1.68 | 0.59 |
| 2:G:355:LEU:HD22 | 3:R:1109:ILE:HD11 | 1.85 | 0.59 |
| 2:G:392:PRO:HB3 | 5:T:22:LEU:CD1 | 2.31 | 0.59 |
| 3:B:795:ASN:HD21 | 11:P:36:MET:CE | 2.14 | 0.59 |
| 1:Q:64:THR:O | 1:Q:66:GLY:N | 2.36 | 0.59 |
| 3:R:515:LEU:N | 3:R:517:TRP:CE3 | 2.71 | 0.59 |
| 3:R:630:PRO:O | 3:R:633:LEU:HB3 | 2.03 | 0.59 |
| 5:T:168:TYR:O | 5:T:175:ILE:HD13 | 2.03 | 0.59 |
| 9:X:87:ILE:CG2 | 9:X:88:LYS:N | 2.66 | 0.59 |
| 1:A:244:ARG:O | 1:A:248:ARG:HG3 | 2.02 | 0.58 |
| 1:A:262:ILE:CG1 | 1:A:266:TRP:HE1 | 2.16 | 0.58 |
| 1:A:317:ARG:NH1 | 3:B:1018:GLU:HG3 | 2.18 | 0.58 |
| 1:A:362:ARG:O | 1:A:366:ILE:HG22 | 2.04 | 0.58 |
| 1:A:412:ILE:O | 1:A:412:ILE:HD12 | 2.03 | 0.58 |
| 1:A:532:ILE:HD11 | 9:L:56:LYS:CD | 2.31 | 0.58 |
| 1:A:723:ASN:HD22 | 1:A:724:PHE:N | 2.00 | 0.58 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 3:B:294:ASP:HB3 | 3:B:303:THR:O | 2.02 | 0.58 |
| 3:B:291:GLN:HB3 | 3:B:295:LYS:HE2 | 1.84 | 0.58 |
| 3:B:560:THR:CG2 | 3:B:561:ASP:N | 2.66 | 0.58 |
| 3:B:702:LEU:HB2 | 3:B:721:ASN:CG | 2.22 | 0.58 |
| 3:B:727:MET:HE3 | 3:B:898:PRO:CG | 2.32 | 0.58 |
| 4:D:38:ILE:HD12 | 4:D:39:MET:N | 2.18 | 0.58 |
| 3:R:795:ASN:HD21 | 11:Z:36:MET:CE | 2.16 | 0.58 |
| 5:T:82:GLN:HA | 5:T:145:ARG:CG | 2.33 | 0.58 |
| 5:T:2:TYR:CZ | 6:U:41:LEU:HD21 | 2.38 | 0.58 |
| 7:V:45:ILE:CB | 7:V:79:ARG:HB3 | 2.33 | 0.58 |
| 8:W:70:ARG:NH1 | 8:W:70:ARG:HB3 | 2.18 | 0.58 |
| 11:Z:8:LYS:HD3 | 11:Z:13:PHE:HB3 | 1.85 | 0.58 |
| 1:A:409:ARG:HH21 | 1:A:412:ILE:CG1 | 2.16 | 0.58 |
| 1:A:491:TYR:HB2 | 1:A:607:GLN:NE2 | 2.18 | 0.58 |
| 3:B:1079:CYS:O | 3:B:1081:ILE:N | 2.28 | 0.58 |
| 3:B:1012:LEU:O | 3:B:1095:TYR:HE2 | 1.86 | 0.58 |
| 3:B:281:LYS:O | 3:B:285:ARG:HG3 | 2.03 | 0.58 |
| 3:B:729:PHE:O | 3:B:731:GLY:N | 2.36 | 0.58 |
| 2:C:28:ILE:HD12 | 8:K:18:VAL:HG23 | 1.84 | 0.58 |
| 1:A:870:ARG:CZ | 2:C:57:LYS:O | 2.52 | 0.58 |
| 2:G:286:ILE:HD13 | 2:G:324:GLY:O | 2.03 | 0.58 |
| 1:Q:552:ILE:HD11 | 1:Q:593:LEU:HD12 | 1.85 | 0.58 |
| 1:Q:4:LYS:HG2 | 1:Q:5:ASN:H | 1.66 | 0.58 |
| 1:Q:507:TYR:HH | 1:Q:727:VAL:HG13 | 1.68 | 0.58 |
| 3:R:1079:CYS:C | 3:R:1081:ILE:H | 2.05 | 0.58 |
| 3:R:159:ARG:HD3 | 3:R:399:ALA:HA | 1.83 | 0.58 |
| 3:R:154:VAL:HG21 | 3:R:399:ALA:HB2 | 1.85 | 0.58 |
| 7:V:81:VAL:O | 7:V:82:ILE:HG12 | 2.03 | 0.58 |
| 3:B:173:LEU:HA | 3:B:333:ASP:OD2 | 2.02 | 0.58 |
| 3:B:735:GLU:O | 3:B:736:ASP:C | 2.41 | 0.58 |
| 3:B:814:VAL:CG1 | 3:B:832:LYS:HB3 | 2.32 | 0.58 |
| 3:B:677:LEU:HD12 | 3:B:992:LYS:HD3 | 1.84 | 0.58 |
| 2:C:28:ILE:HB | 8:K:18:VAL:HG21 | 1.84 | 0.58 |
| 2:C:377:HIS:ND1 | 2:C:378:PRO:HD2 | 2.17 | 0.58 |
| 6:F:18:LYS:HE2 | 6:F:41:LEU:CB | 2.28 | 0.58 |
| 1:Q:258:PRO:C | 1:Q:260:LEU:H | 2.06 | 0.58 |
| 1:Q:541:ALA:HB1 | 1:Q:542:PRO:CD | 2.33 | 0.58 |
| 1:Q:820:GLN:O | 1:Q:824:ILE:HG12 | 2.03 | 0.58 |
| 1:Q:825:ASN:O | 1:Q:826:ALA:C | 2.41 | 0.58 |
| 3:R:52:GLU:HG3 | 3:R:56:LEU:CD2 | 2.32 | 0.58 |
| 3:R:558:ILE:HG12 | 3:R:567:HIS:HD2 | 1.68 | 0.58 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 3:R:96:LEU:O | 3:R:115:TYR:HA | 2.03 | 0.58 |
| 3:R:982:ARG:O | 3:R:983:ILE:CG1 | 2.45 | 0.58 |
| 5:T:117:THR:O | 5:T:118:LEU:HD23 | 2.03 | 0.58 |
| 2:G:386:VAL:HG13 | 8:W:34:ARG:HG2 | 1.85 | 0.58 |
| 3:B:8:ASP:O | 3:B:12:ARG:HG2 | 2.03 | 0.58 |
| 3:B:358:PHE:O | 3:B:362:VAL:HG23 | 2.03 | 0.58 |
| 3:B:98:LEU:HD11 | 3:B:100:MET:HG3 | 1.86 | 0.58 |
| 2:C:119:THR:N | 2:C:120:PRO:HD3 | 2.18 | 0.58 |
| 2:C:268:ASP:OD1 | 2:C:270:ALA:HB3 | 2.04 | 0.58 |
| 2:C:390:MET:SD | 5:E:58:ILE:N | 2.77 | 0.58 |
| 1:A:828:SER:HB2 | 2:C:72:ILE:CD1 | 2.32 | 0.58 |
| 4:D:4:ASN:O | 4:D:15:LEU:HA | 2.02 | 0.58 |
| 2:C:390:MET:CE | 5:E:66:THR:HG23 | 2.34 | 0.58 |
| 9:L:11:ASN:O | 9:L:58:LEU:HD12 | 2.03 | 0.58 |
| 1:Q:336:GLU:OE2 | 1:Q:436:ARG:HD3 | 2.03 | 0.58 |
| 1:Q:378:VAL:HG12 | 1:Q:388:LEU:HD12 | 1.86 | 0.58 |
| 1:Q:4:LYS:HD2 | 3:R:1089:PHE:HB3 | 1.85 | 0.58 |
| 3:R:244:LEU:HD13 | 3:R:500:VAL:CG1 | 2.34 | 0.58 |
| 3:R:247:GLU:HA | 3:R:250:ASN:ND2 | 2.19 | 0.58 |
| 3:R:294:ASP:HB3 | 3:R:303:THR:O | 2.03 | 0.58 |
| 3:R:361:PHE:CD2 | 3:R:361:PHE:C | 2.76 | 0.58 |
| 4:S:148:GLY:HA3 | 4:S:156:PHE:CE1 | 2.38 | 0.58 |
| 5:T:179:LYS:HZ3 | 6:U:81:ASP:HB2 | 1.66 | 0.58 |
| 5:T:18:PHE:CB | 8:W:48:PRO:HD2 | 2.33 | 0.58 |
| 5:T:50:ASN:HB2 | 5:T:73:ASP:OD2 | 2.03 | 0.58 |
| 8:W:46:GLY:O | 8:W:47:ALA:O | 2.21 | 0.58 |
| 1:A:672:VAL:HG11 | 1:A:776:PRO:HD3 | 1.86 | 0.58 |
| 3:B:81:SER:OG | 3:B:141:ILE:HG23 | 2.03 | 0.58 |
| 3:B:248:VAL:O | 3:B:251:GLU:HB2 | 2.03 | 0.58 |
| 3:B:298:LEU:C | 3:B:300:HIS:H | 2.06 | 0.58 |
| 3:B:448:THR:C | 3:B:450:TRP:H | 2.07 | 0.58 |
| 3:B:63:ILE:CD1 | 3:B:98:LEU:HD23 | 2.34 | 0.58 |
| 2:C:127:THR:HA | 2:C:266:GLY:O | 2.02 | 0.58 |
| 1:A:12:GLY:HA2 | 2:C:358:ALA:O | 2.04 | 0.58 |
| 1:Q:632:PHE:HA | 1:Q:635:PHE:CE1 | 2.39 | 0.58 |
| 1:Q:79:ARG:HB2 | 1:Q:266:TRP:CZ3 | 2.38 | 0.58 |
| 1:Q:870:ARG:CZ | 2:G:57:LYS:O | 2.51 | 0.58 |
| 3:R:338:TYR:CZ | 3:R:341:LYS:NZ | 2.67 | 0.58 |
| 3:R:600:GLY:C | 3:R:602:ILE:N | 2.57 | 0.58 |
| 3:R:654:ILE:HG22 | 3:R:881:ARG:HG2 | 1.85 | 0.58 |
| 3:R:723:ILE:HB | 3:R:907:ASP:OD2 | 2.04 | 0.58 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:353:ILE:HD11 | 1:A:407:ILE:HG23 | 1.84 | 0.58 |
| 1:A:864:LYS:HE3 | 2:C:32:LEU:HD11 | 1.84 | 0.58 |
| 1:A:872:PHE:HA | 1:A:876:VAL:HB | 1.84 | 0.58 |
| 3:B:1079:CYS:C | 3:B:1081:ILE:H | 2.04 | 0.58 |
| 3:B:388:ASP:C | 3:B:390:VAL:N | 2.55 | 0.58 |
| 3:B:881:ARG:HH11 | 3:B:989:TYR:HB3 | 1.68 | 0.58 |
| 2:C:245:LYS:HD2 | 2:C:250:ILE:HD12 | 1.86 | 0.58 |
| 4:D:159:VAL:HG22 | 4:D:160:SER:N | 2.18 | 0.58 |
| 4:D:45:TYR:HD1 | 11:P:44:ILE:HG12 | 1.68 | 0.58 |
| 5:E:53:THR:O | 5:E:70:VAL:HG13 | 2.04 | 0.58 |
| 6:F:18:LYS:CE | 6:F:41:LEU:HB3 | 2.31 | 0.58 |
| 9:L:70:LEU:HA | 9:L:73:ILE:HB | 1.85 | 0.58 |
| 9:L:66:LYS:O | 9:L:70:LEU:HD13 | 2.03 | 0.58 |
| 4:D:128:ILE:HG12 | 10:N:16:ASP:HB3 | 1.86 | 0.58 |
| 1:Q:376:ASN:ND2 | 1:Q:376:ASN:N | 2.48 | 0.58 |
| 1:Q:412:ILE:HD12 | 1:Q:412:ILE:O | 2.03 | 0.58 |
| 1:Q:425:LEU:O | 1:Q:426:HIS:HB2 | 2.02 | 0.58 |
| 1:Q:541:ALA:CB | 1:Q:542:PRO:CD | 2.82 | 0.58 |
| 3:R:106:ASN:O | 3:R:108:GLU:HG3 | 2.04 | 0.58 |
| 3:R:153:ILE:HG22 | 3:R:156:GLY:HA2 | 1.85 | 0.58 |
| 3:R:296:TYR:N | 3:R:296:TYR:HD1 | 2.01 | 0.58 |
| 3:R:448:THR:C | 3:R:450:TRP:H | 2.06 | 0.58 |
| 3:R:518:SER:CB | 3:R:564:ASN:HD22 | 2.16 | 0.58 |
| 3:R:713:TYR:OH | 3:R:718:ALA:HB3 | 2.03 | 0.58 |
| 4:S:97:TYR:C | 4:S:98:ILE:HD12 | 2.22 | 0.58 |
| 6:U:14:TYR:HE2 | 6:U:40:TYR:HH | 1.50 | 0.58 |
| 7:V:63:ILE:HD12 | 7:V:63:ILE:N | 2.18 | 0.58 |
| 1:A:522:GLN:NE2 | 9:L:33:ARG:HD3 | 2.18 | 0.58 |
| 1:A:524:ILE:CG2 | 1:A:634:VAL:HG13 | 2.33 | 0.58 |
| 3:B:316:ALA:C | 3:B:318:ALA:H | 2.07 | 0.58 |
| 3:B:518:SER:CB | 3:B:564:ASN:HD22 | 2.17 | 0.58 |
| 3:B:59:ARG:NH2 | 3:B:107:ILE:HD12 | 2.18 | 0.58 |
| 1:A:499:ALA:HB3 | 3:B:734:MET:HE3 | 1.86 | 0.58 |
| 2:G:119:THR:N | 2:G:120:PRO:HD3 | 2.18 | 0.58 |
| 1:Q:812:ARG:HG3 | 2:G:86:THR:HG23 | 1.84 | 0.58 |
| 8:K:36:ILE:O | 8:K:40:ALA:HB2 | 2.04 | 0.58 |
| 1:Q:355:PRO:HG2 | 1:Q:356:TRP:CE2 | 2.38 | 0.58 |
| 3:R:1070:TYR:O | 3:R:1071:ASP:O | 2.22 | 0.58 |
| 9:X:66:LYS:O | 9:X:70:LEU:HD13 | 2.04 | 0.58 |
| 11:Z:17:GLN:C | 11:Z:19:LYS:H | 2.06 | 0.58 |
| 1:A:4:LYS:HD2 | 3:B:1089:PHE:HB3 | 1.84 | 0.58 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 1:A:727:VAL:HG12 | 1:A:728:MET:N | 2.19 | 0.58 |
| 1:A:749:GLN:CA | 1:A:781:PHE:HA | 2.33 | 0.58 |
| 3:B:298:LEU:N | 3:B:299:PRO:HD3 | 2.19 | 0.58 |
| 3:B:416:ARG:NH1 | 3:B:687:ARG:HH22 | 1.99 | 0.58 |
| 1:A:499:ALA:HB3 | 3:B:734:MET:CE | 2.33 | 0.58 |
| 2:C:321:THR:HG22 | 7:H:79:ARG:HH12 | 1.69 | 0.58 |
| 2:G:277:ILE:C | 2:G:279:GLU:N | 2.55 | 0.58 |
| 2:G:63:LEU:HD23 | 2:G:63:LEU:O | 2.03 | 0.58 |
| 3:R:123:LEU:HD21 | 3:R:153:ILE:HD11 | 1.85 | 0.58 |
| 1:A:877:GLY:C | 3:R:377:ARG:HH12 | 2.07 | 0.58 |
| 3:R:435:ARG:HH11 | 3:R:435:ARG:CG | 2.17 | 0.58 |
| 3:R:769:GLN:O | 3:R:770:GLU:CB | 2.51 | 0.58 |
| 5:T:100:ASN:HD21 | 6:U:36:ARG:HD3 | 1.69 | 0.58 |
| 6:U:52:ALA:HA | 6:U:55:VAL:CG2 | 2.34 | 0.58 |
| 1:A:507:TYR:O | 1:A:508:LEU:HB2 | 2.04 | 0.58 |
| 3:B:1033:ARG:HD2 | 3:B:1037:ILE:HD11 | 1.86 | 0.58 |
| 3:B:247:GLU:HA | 3:B:250:ASN:ND2 | 2.18 | 0.58 |
| 3:B:296:TYR:CD1 | 3:B:296:TYR:N | 2.72 | 0.58 |
| 3:B:803:GLU:HG2 | 3:B:846:ILE:HG13 | 1.86 | 0.58 |
| 2:C:390:MET:HE2 | 5:E:66:THR:HG23 | 1.86 | 0.58 |
| 1:A:427:ARG:H | 2:C:76:GLN:NE2 | 2.00 | 0.58 |
| 2:G:103:GLY:HA2 | 2:G:106:ARG:HB3 | 1.85 | 0.58 |
| 2:G:115:LYS:HD2 | 2:G:276:ASN:ND2 | 2.18 | 0.58 |
| 7:H:62:ILE:HD13 | 7:H:62:ILE:N | 2.19 | 0.58 |
| 1:Q:490:ARG:HG2 | 1:Q:491:TYR:CD2 | 2.39 | 0.58 |
| 1:Q:77:LEU:HD13 | 1:Q:81:VAL:HG22 | 1.85 | 0.58 |
| 1:Q:837:THR:HG22 | 1:Q:838:VAL:N | 2.19 | 0.58 |
| 3:R:1061:CYS:HB3 | 3:R:1065:GLY:CA | 2.34 | 0.58 |
| 3:R:116:ILE:HG23 | 3:R:361:PHE:CZ | 2.38 | 0.58 |
| 5:T:166:GLN:HB3 | 5:T:167:PRO:HD2 | 1.85 | 0.58 |
| 1:A:288:LYS:HG2 | 1:A:294:PRO:CA | 2.33 | 0.58 |
| 1:A:293:ARG:H | 1:A:293:ARG:HD2 | 1.69 | 0.58 |
| 1:A:452:PRO:HA | 1:A:495:ILE:CD1 | 2.34 | 0.58 |
| 1:A:524:ILE:HG22 | 1:A:524:ILE:O | 2.04 | 0.58 |
| 1:A:610:SER:O | 1:A:613:HIS:HB3 | 2.03 | 0.58 |
| 3:B:253:PHE:N | 3:B:254:PRO:CD | 2.67 | 0.58 |
| 3:B:893:PRO:HG2 | 3:B:896:ASP:OD1 | 2.04 | 0.58 |
| 3:B:971:TYR:CE2 | 3:B:978:LYS:HB3 | 2.39 | 0.58 |
| 3:B:6:THR:HB | 3:B:9:GLU:HB3 | 1.86 | 0.58 |
| 2:C:356:ASP:O | 2:C:360:ARG:HB2 | 2.03 | 0.58 |
| 4:D:176:CYS:N | 4:D:195:LEU:HD21 | 2.18 | 0.58 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 5:E:117:THR:O | 5:E:118:LEU:HD23 | 2.04 | 0.58 |
| 6:F:35:GLN:HA | 6:F:38:TYR:HD1 | 1.68 | 0.58 |
| 8:K:50:LEU:O | 8:K:52:ASP:HB2 | 2.03 | 0.58 |
| 4:D:129:PRO:HG2 | 10:N:15:ALA:HB1 | 1.86 | 0.58 |
| 10:N:40:VAL:O | 10:N:40:VAL:HG12 | 2.03 | 0.58 |
| 10:N:7:CYS:CB | 10:N:45:CYS:SG | 2.90 | 0.58 |
| 1:Q:481:LEU:CD2 | 1:Q:482:VAL:H | 2.17 | 0.58 |
| 1:Q:831:ARG:HH21 | 2:G:385:MET:CB | 2.17 | 0.58 |
| 1:Q:876:VAL:C | 1:Q:878:TRP:N | 2.58 | 0.58 |
| 3:R:253:PHE:N | 3:R:254:PRO:CD | 2.66 | 0.58 |
| 3:R:386:ARG:HB2 | 3:R:389:ILE:CD1 | 2.34 | 0.58 |
| 3:R:403:TRP:C | 3:R:404:VAL:CG2 | 2.73 | 0.58 |
| 3:R:922:GLY:O | 3:R:926:GLU:HB2 | 2.03 | 0.58 |
| 4:S:31:ALA:HA | 4:S:35:TYR:CD2 | 2.39 | 0.58 |
| 5:T:147:ILE:CG1 | 5:T:163:THR:HB | 2.34 | 0.58 |
| 6:U:18:LYS:HE2 | 6:U:41:LEU:CB | 2.29 | 0.58 |
| 10:Y:21:PHE:HE2 | 10:Y:35:LEU:HD23 | 1.69 | 0.58 |
| 1:A:276:TYR:CD2 | 1:A:277:PHE:CE1 | 2.89 | 0.57 |
| 1:A:789:GLY:HA2 | 3:B:659:GLU:O | 2.04 | 0.57 |
| 3:B:167:LEU:O | 3:B:341:LYS:HA | 2.04 | 0.57 |
| 3:B:21:LYS:HA | 3:B:25:ARG:NH1 | 2.19 | 0.57 |
| 3:B:497:VAL:CG1 | 3:B:498:GLU:N | 2.62 | 0.57 |
| 3:B:702:LEU:CD2 | 3:B:933:ALA:HB1 | 2.34 | 0.57 |
| 3:B:812:GLY:HA2 | 3:B:836:SER:CB | 2.33 | 0.57 |
| 5:E:166:GLN:HB3 | 5:E:167:PRO:HD2 | 1.86 | 0.57 |
| 5:E:179:LYS:NZ | 6:F:82:GLU:H | 2.01 | 0.57 |
| 8:K:15:PHE:O | 8:K:19:PHE:HB2 | 2.04 | 0.57 |
| 1:Q:409:ARG:NH2 | 1:Q:415:ASP:OD2 | 2.37 | 0.57 |
| 1:Q:584:SER:OG | 1:Q:585:TYR:N | 2.37 | 0.57 |
| 1:Q:656:ASP:O | 1:Q:659:LYS:HB2 | 2.04 | 0.57 |
| 3:R:1046:LYS:C | 3:R:1048:ARG:H | 2.08 | 0.57 |
| 3:R:658:PRO:C | 3:R:660:HIS:H | 2.07 | 0.57 |
| 1:Q:499:ALA:HB3 | 3:R:734:MET:CE | 2.34 | 0.57 |
| 3:R:881:ARG:NH1 | 3:R:989:TYR:CB | 2.67 | 0.57 |
| 4:S:169:LYS:HE2 | 4:S:222:VAL:HG22 | 1.85 | 0.57 |
| 4:S:194:LYS:O | 4:S:196:SER:N | 2.37 | 0.57 |
| 4:S:25:VAL:HG21 | 4:S:226:TYR:CD1 | 2.33 | 0.57 |
| 5:T:17:GLU:OE1 | 5:T:25:ILE:HD12 | 2.04 | 0.57 |
| 1:A:372:TRP:HB3 | 1:A:373:PRO:HD3 | 1.84 | 0.57 |
| 1:A:543:ARG:HG2 | 1:A:544:GLU:H | 1.68 | 0.57 |
| 1:A:567:ASN:N | 1:A:599:ASP:OD2 | 2.36 | 0.57 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 1:A:672:VAL:HG13 | 1:A:700:ILE:CD1 | 2.28 | 0.57 |
| 3:B:1085:LYS:O | 3:B:1086:SER:OG | 2.17 | 0.57 |
| 3:B:158:GLU:OE2 | 3:B:416:ARG:NH1 | 2.36 | 0.57 |
| 3:B:300:HIS:O | 3:B:301:LEU:C | 2.42 | 0.57 |
| 3:B:457:GLU:OE1 | 3:B:652:ALA:HB2 | 2.05 | 0.57 |
| 2:C:321:THR:HB | 2:C:322:ARG:HH11 | 1.69 | 0.57 |
| 4:D:206:CYS:O | 4:D:207:GLU:HB2 | 2.03 | 0.57 |
| 6:F:14:TYR:O | 6:F:18:LYS:HG3 | 2.03 | 0.57 |
| 2:G:134:ARG:O | 2:G:138:LEU:HD12 | 2.04 | 0.57 |
| 8:K:34:ARG:O | 8:K:34:ARG:HD2 | 2.04 | 0.57 |
| 8:K:63:SER:C | 8:K:65:ALA:N | 2.54 | 0.57 |
| 1:Q:431:MET:HE1 | 1:Q:482:VAL:HG13 | 1.86 | 0.57 |
| 3:R:160:VAL:HG21 | 3:R:426:LEU:HD23 | 1.86 | 0.57 |
| 5:T:127:ILE:HB | 5:T:136:ILE:HG13 | 1.85 | 0.57 |
| 1:A:238:LYS:HZ3 | 1:A:297:THR:HB | 1.63 | 0.57 |
| 1:A:853:ASP:OD1 | 1:A:864:LYS:HD3 | 2.05 | 0.57 |
| 4:D:22:LEU:C | 4:D:24:PHE:H | 2.07 | 0.57 |
| 2:G:54:LEU:O | 2:G:54:LEU:HD23 | 2.04 | 0.57 |
| 1:Q:427:ARG:H | 2:G:76:GLN:NE2 | 1.99 | 0.57 |
| 3:B:800:PRO:HG2 | 11:P:37:VAL:HA | 1.86 | 0.57 |
| 3:R:1071:ASP:C | 3:R:1073:ASN:H | 2.06 | 0.57 |
| 3:R:1054:ASP:HB3 | 3:R:1095:TYR:H | 1.69 | 0.57 |
| 4:S:98:ILE:HG12 | 4:S:114:ILE:HG12 | 1.87 | 0.57 |
| 6:U:18:LYS:CE | 6:U:41:LEU:HB3 | 2.32 | 0.57 |
| 1:A:480:MET:HG2 | 3:B:1039:PHE:CD1 | 2.40 | 0.57 |
| 3:B:361:PHE:C | 3:B:361:PHE:CD2 | 2.77 | 0.57 |
| 3:B:705:THR:HG22 | 3:B:706:ARG:N | 2.10 | 0.57 |
| 2:C:28:ILE:HD12 | 8:K:18:VAL:CG2 | 2.34 | 0.57 |
| 2:C:31:ASP:C | 2:C:31:ASP:OD1 | 2.42 | 0.57 |
| 6:F:51:SER:O | 6:F:54:LYS:HB3 | 2.03 | 0.57 |
| 2:G:323:THR:O | 2:G:323:THR:HG22 | 2.04 | 0.57 |
| 10:N:3:ILE:HD11 | 10:N:18:TRP:CE3 | 2.39 | 0.57 |
| 3:B:800:PRO:HG2 | 11:P:37:VAL:C | 2.24 | 0.57 |
| 3:R:1064:CYS:SG | 3:R:1064:CYS:O | 2.62 | 0.57 |
| 3:R:1060:VAL:C | 3:R:1088:LEU:HD23 | 2.25 | 0.57 |
| 3:R:230:LEU:HD13 | 3:R:312:ALA:HA | 1.84 | 0.57 |
| 3:R:338:TYR:HB2 | 3:R:448:THR:CG2 | 2.31 | 0.57 |
| 3:R:800:PRO:HD3 | 3:R:850:VAL:HG23 | 1.86 | 0.57 |
| 3:R:812:GLY:HA2 | 3:R:836:SER:CB | 2.34 | 0.57 |
| 4:S:222:VAL:HG11 | 4:S:225:LYS:CD | 2.35 | 0.57 |
| 10:Y:42:ARG:HG3 | 10:Y:43:TYR:N | 2.11 | 0.57 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 1:A:371:LYS:HD3 | 1:A:372:TRP:N | 2.18 | 0.57 |
| 1:A:378:VAL:CG1 | 1:A:388:LEU:HD12 | 2.35 | 0.57 |
| 1:A:825:ASN:O | 1:A:826:ALA:C | 2.43 | 0.57 |
| 3:B:235:ASP:O | 3:B:239:VAL:HG23 | 2.05 | 0.57 |
| 3:B:25:ARG:O | 3:B:29:ASP:HB2 | 2.05 | 0.57 |
| 3:B:629:GLU:HB3 | 3:B:630:PRO:HD2 | 1.87 | 0.57 |
| 6:F:60:SER:HB3 | 6:F:69:ARG:NH1 | 2.19 | 0.57 |
| 7:H:23:LEU:CD1 | 7:H:62:ILE:HG12 | 2.34 | 0.57 |
| 10:N:60:ILE:HG23 | 10:N:61:HIS:N | 2.17 | 0.57 |
| 11:P:24:VAL:O | 11:P:24:VAL:HG13 | 2.04 | 0.57 |
| 3:R:640:LEU:CD2 | 3:R:641:GLU:N | 2.52 | 0.57 |
| 3:R:963:LEU:HD12 | 3:R:967:THR:O | 2.05 | 0.57 |
| 4:S:175:ASN:CA | 4:S:195:LEU:HD21 | 2.34 | 0.57 |
| 6:U:31:SER:CA | 6:U:35:GLN:HE21 | 2.17 | 0.57 |
| 11:Z:26:CYS:CB | 11:Z:27:PRO:HD2 | 2.32 | 0.57 |
| 1:A:245:ILE:HD13 | 1:A:268:LEU:CD1 | 2.34 | 0.57 |
| 1:A:422:GLN:NE2 | 1:A:463:ASN:HD21 | 2.02 | 0.57 |
| 1:A:490:ARG:HG2 | 1:A:491:TYR:CD2 | 2.38 | 0.57 |
| 3:B:1049:LEU:O | 3:B:1049:LEU:HD12 | 2.03 | 0.57 |
| 3:B:473:MET:SD | 3:B:475:GLN:N | 2.77 | 0.57 |
| 3:B:64:ARG:NH1 | 3:B:64:ARG:HG2 | 2.19 | 0.57 |
| 3:B:658:PRO:O | 3:B:660:HIS:N | 2.35 | 0.57 |
| 3:B:98:LEU:HD11 | 3:B:100:MET:CG | 2.33 | 0.57 |
| 6:F:59:LEU:HD13 | 6:F:69:ARG:HG2 | 1.86 | 0.57 |
| 1:Q:867:ASP:HB2 | 2:G:39:LYS:HZ1 | 1.68 | 0.57 |
| 1:Q:866:VAL:HB | 1:Q:869:ASN:HB3 | 1.86 | 0.57 |
| 3:R:702:LEU:CD2 | 3:R:933:ALA:HB1 | 2.35 | 0.57 |
| 4:S:195:LEU:O | 4:S:196:SER:O | 2.22 | 0.57 |
| 6:U:65:ARG:O | 6:U:69:ARG:HG3 | 2.05 | 0.57 |
| 1:Q:839:ARG:NH2 | 8:W:83:PRO:HG3 | 2.20 | 0.57 |
| 9:X:29:ALA:HA | 9:X:32:LEU:HB2 | 1.85 | 0.57 |
| 1:A:638:PHE:CE2 | 1:A:642:GLN:HG3 | 2.40 | 0.57 |
| 3:B:1080:PRO:O | 3:B:1081:ILE:CG1 | 2.51 | 0.57 |
| 3:B:1095:TYR:CE1 | 3:B:1098:LYS:HD2 | 2.40 | 0.57 |
| 3:B:624:ALA:HB1 | 3:B:639:HIS:CD2 | 2.39 | 0.57 |
| 2:C:53:ASP:O | 2:C:57:LYS:HB2 | 2.04 | 0.57 |
| 4:D:134:GLY:O | 4:D:137:GLN:HG3 | 2.05 | 0.57 |
| 2:G:49:ASP:O | 2:G:52:PHE:N | 2.36 | 0.57 |
| 1:Q:352:ARG:HD3 | 1:Q:406:ILE:CD1 | 2.27 | 0.57 |
| 1:Q:522:GLN:NE2 | 9:X:33:ARG:HD3 | 2.20 | 0.57 |
| 1:Q:81:VAL:HG12 | 1:Q:270:GLN:CG | 2.34 | 0.57 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 3:R:368:GLN:HE22 | 3:R:386:ARG:NE | 2.03 | 0.57 |
| 3:R:662:GLN:CG | 3:R:664:PRO:HD2 | 2.34 | 0.57 |
| 1:Q:499:ALA:HB3 | 3:R:734:MET:HE3 | 1.86 | 0.57 |
| 3:R:781:ARG:HD3 | 3:R:782:GLY:N | 2.13 | 0.57 |
| 4:S:257:GLU:O | 4:S:260:LEU:HB3 | 2.04 | 0.57 |
| 11:Z:18:LEU:C | 11:Z:20:VAL:H | 2.08 | 0.57 |
| 1:A:422:GLN:HA | 1:A:424:SER:N | 2.20 | 0.57 |
| 3:B:600:GLY:C | 3:B:602:ILE:N | 2.58 | 0.57 |
| 3:B:676:ALA:HB1 | 3:B:718:ALA:HB1 | 1.87 | 0.57 |
| 3:B:749:MET:HG2 | 3:B:750:TYR:HD1 | 1.69 | 0.57 |
| 3:B:921:LEU:C | 3:B:923:GLN:H | 2.08 | 0.57 |
| 2:C:109:GLU:OE2 | 2:C:117:PRO:HA | 2.05 | 0.57 |
| 2:C:261:VAL:HG12 | 2:C:261:VAL:O | 2.05 | 0.57 |
| 6:F:52:ALA:HA | 6:F:55:VAL:CG2 | 2.35 | 0.57 |
| 6:F:65:ARG:O | 6:F:69:ARG:HG3 | 2.05 | 0.57 |
| 2:G:127:THR:HA | 2:G:266:GLY:O | 2.04 | 0.57 |
| 1:Q:334:ILE:HG22 | 1:Q:482:VAL:CG1 | 2.34 | 0.57 |
| 1:Q:368:GLY:O | 1:Q:374:GLY:HA3 | 2.05 | 0.57 |
| 1:Q:490:ARG:HA | 2:G:312:HIS:CE1 | 2.39 | 0.57 |
| 1:Q:791:LYS:HB2 | 1:Q:794:GLU:HG3 | 1.87 | 0.57 |
| 3:R:82:PRO:HG2 | 3:R:143:GLU:OE1 | 2.04 | 0.57 |
| 3:R:206:LYS:HE3 | 3:R:220:LYS:NZ | 2.18 | 0.57 |
| 1:A:877:GLY:CA | 3:R:377:ARG:NH1 | 2.67 | 0.57 |
| 4:S:111:SER:OG | 4:S:126:GLY:HA2 | 2.04 | 0.57 |
| 2:G:392:PRO:HB2 | 5:T:22:LEU:HD21 | 1.87 | 0.57 |
| 2:G:390:MET:CE | 5:T:66:THR:HG23 | 2.35 | 0.57 |
| 3:R:852:ILE:CD1 | 11:Z:35:PHE:HA | 2.35 | 0.57 |
| 1:A:529:ASP:HB3 | 1:A:626:TRP:NE1 | 2.20 | 0.57 |
| 1:A:691:THR:CG2 | 1:A:692:LEU:HD12 | 2.30 | 0.57 |
| 1:A:746:MET:H | 1:A:785:SER:HB3 | 1.69 | 0.57 |
| 3:B:1046:LYS:C | 3:B:1048:ARG:H | 2.08 | 0.57 |
| 3:B:243:SER:CB | 3:B:246:PRO:HG3 | 2.34 | 0.57 |
| 3:B:338:TYR:CZ | 3:B:341:LYS:NZ | 2.70 | 0.57 |
| 3:B:338:TYR:HB2 | 3:B:448:THR:CG2 | 2.32 | 0.57 |
| 3:B:544:ARG:NH2 | 3:B:614:GLU:OE1 | 2.38 | 0.57 |
| 3:B:672:MET:CG | 3:B:993:LEU:HD21 | 2.34 | 0.57 |
| 2:C:104:LEU:O | 2:C:108:ILE:HG12 | 2.05 | 0.57 |
| 2:C:115:LYS:C | 2:C:116:VAL:HG22 | 2.24 | 0.57 |
| 2:C:339:ASN:OD1 | 2:C:344:ARG:HD2 | 2.05 | 0.57 |
| 4:D:170:VAL:HG23 | 4:D:200:GLU:HG3 | 1.85 | 0.57 |
| 4:D:86:THR:O | 4:D:87:GLU:HB3 | 2.05 | 0.57 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 11:P:39:LYS:O | 11:P:41:THR:N | 2.38 | 0.57 |
| 1:Q:377:TYR:OH | 1:Q:385:ARG:HD2 | 2.04 | 0.57 |
| 1:Q:741:THR:O | 1:Q:742:GLN:C | 2.43 | 0.57 |
| 1:Q:749:GLN:CA | 1:Q:781:PHE:HA | 2.35 | 0.57 |
| 3:R:448:THR:HG22 | 3:R:449:GLN:H | 1.70 | 0.57 |
| 3:R:805:LYS:HG3 | 3:R:844:MET:HB2 | 1.87 | 0.57 |
| 10:Y:20:SER:O | 10:Y:24:ARG:HG3 | 2.05 | 0.57 |
| 1:A:279:ASN:HB2 | 1:A:297:THR:HG23 | 1.84 | 0.57 |
| 1:A:589:LYS:O | 1:A:592:ILE:HB | 2.05 | 0.57 |
| 3:B:324:GLU:O | 3:B:325:LEU:HB2 | 2.05 | 0.57 |
| 3:B:759:SER:HB3 | 3:B:863:LYS:HA | 1.86 | 0.57 |
| 3:B:764:LYS:HB3 | 3:B:815:SER:HB2 | 1.86 | 0.57 |
| 2:C:359:ALA:O | 2:C:361:GLY:N | 2.37 | 0.57 |
| 2:C:390:MET:C | 2:C:391:ARG:HD3 | 2.24 | 0.57 |
| 2:C:391:ARG:HB2 | 8:K:75:PRO:HB2 | 1.86 | 0.57 |
| 5:E:39:LEU:CD2 | 5:E:41:ASP:H | 2.18 | 0.57 |
| 2:C:392:PRO:HG3 | 5:E:68:HIS:HE1 | 1.70 | 0.57 |
| 2:G:241:ILE:CG2 | 2:G:242:VAL:N | 2.67 | 0.57 |
| 7:H:63:ILE:N | 7:H:63:ILE:HD12 | 2.20 | 0.57 |
| 1:A:534:LEU:HD23 | 9:L:39:SER:OG | 2.03 | 0.57 |
| 3:R:193:THR:HG21 | 3:R:197:ARG:H | 1.69 | 0.57 |
| 3:R:276:VAL:HG12 | 3:R:277:ALA:N | 2.15 | 0.57 |
| 4:S:36:VAL:HB | 4:S:158:PRO:HG3 | 1.87 | 0.57 |
| 4:S:250:ILE:CA | 4:S:253:ILE:HG22 | 2.35 | 0.57 |
| 1:A:620:SER:C | 1:A:622:GLU:H | 2.08 | 0.56 |
| 1:A:690:ARG:HD2 | 1:A:694:GLU:OE1 | 2.04 | 0.56 |
| 1:A:86:LEU:HB3 | 1:A:207:MET:HE1 | 1.86 | 0.56 |
| 3:B:691:ARG:HH12 | 3:B:756:ARG:NH2 | 2.03 | 0.56 |
| 2:G:384:GLY:HA2 | 5:T:61:PHE:CZ | 2.40 | 0.56 |
| 7:H:51:VAL:O | 7:H:54:SER:HB3 | 2.04 | 0.56 |
| 8:K:35:VAL:HG23 | 8:K:36:ILE:N | 2.19 | 0.56 |
| 10:N:22:ILE:CD1 | 10:N:22:ILE:H | 2.18 | 0.56 |
| 1:Q:412:ILE:O | 1:Q:415:ASP:HB2 | 2.05 | 0.56 |
| 1:Q:567:ASN:HD22 | 1:Q:731:THR:CA | 2.18 | 0.56 |
| 1:Q:847:GLN:OE1 | 1:Q:850:TYR:HA | 2.04 | 0.56 |
| 3:R:281:LYS:O | 3:R:285:ARG:HG3 | 2.05 | 0.56 |
| 3:R:800:PRO:HB2 | 11:Z:38:ARG:HA | 1.85 | 0.56 |
| 4:S:252:LYS:O | 4:S:255:GLU:N | 2.38 | 0.56 |
| 5:T:79:PRO:HG3 | 5:T:160:ILE:CD1 | 2.34 | 0.56 |
| 7:V:16:LEU:H | 7:V:16:LEU:HD12 | 1.70 | 0.56 |
| 7:V:51:VAL:O | 7:V:54:SER:HB3 | 2.04 | 0.56 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|------------------|--------------------------|-------------------|
| 9:X:70:LEU:HA | 9:X:73:ILE:HB | 1.87 | 0.56 |
| 11:Z:6:CYS:O | 11:Z:37:VAL:HG12 | 2.05 | 0.56 |
| 3:B:193:THR:HG21 | 3:B:197:ARG:H | 1.70 | 0.56 |
| 3:B:202:ILE:HG22 | 3:B:203:GLU:N | 2.20 | 0.56 |
| 3:B:699:GLN:HA | 10:N:51:SER:O | 2.06 | 0.56 |
| 3:B:70:VAL:HG11 | 3:B:90:LEU:HD23 | 1.86 | 0.56 |
| 2:C:115:LYS:HD2 | 2:C:276:ASN:ND2 | 2.20 | 0.56 |
| 4:D:194:LYS:C | 4:D:196:SER:H | 2.08 | 0.56 |
| 4:D:96:ILE:HD11 | 4:D:143:ALA:HB3 | 1.87 | 0.56 |
| 1:A:834:TYR:CE1 | 8:K:80:ARG:HD3 | 2.39 | 0.56 |
| 8:K:26:ARG:HG2 | 8:K:90:LEU:CB | 2.35 | 0.56 |
| 1:Q:245:ILE:HD13 | 1:Q:268:LEU:CB | 2.33 | 0.56 |
| 3:R:202:ILE:HG22 | 3:R:203:GLU:N | 2.19 | 0.56 |
| 3:R:298:LEU:C | 3:R:300:HIS:H | 2.08 | 0.56 |
| 4:S:16:VAL:HG13 | 4:S:167:TYR:CE1 | 2.40 | 0.56 |
| 4:S:18:GLU:HB2 | 4:S:225:LYS:HE3 | 1.85 | 0.56 |
| 2:G:284:PHE:HE2 | 7:V:14:HIS:HB2 | 1.70 | 0.56 |
| 9:X:35:ILE:O | 9:X:38:VAL:HG23 | 2.05 | 0.56 |
| 10:Y:21:PHE:CZ | 10:Y:38:LEU:HD13 | 2.40 | 0.56 |
| 1:A:245:ILE:HD13 | 1:A:268:LEU:CB | 2.34 | 0.56 |
| 3:B:1041:THR:HG23 | 3:B:1041:THR:O | 2.05 | 0.56 |
| 3:B:1061:CYS:HB3 | 3:B:1065:GLY:HA2 | 1.87 | 0.56 |
| 3:B:435:ARG:HH11 | 3:B:435:ARG:CG | 2.16 | 0.56 |
| 3:B:662:GLN:CG | 3:B:664:PRO:HD2 | 2.34 | 0.56 |
| 3:B:873:THR:CG2 | 3:B:874:ILE:H | 2.16 | 0.56 |
| 1:A:853:ASP:CB | 2:C:311:ARG:HH12 | 2.15 | 0.56 |
| 2:C:315:LEU:O | 2:C:319:VAL:HG23 | 2.05 | 0.56 |
| 4:D:169:LYS:HE2 | 4:D:222:VAL:HG22 | 1.86 | 0.56 |
| 10:N:21:PHE:HE2 | 10:N:35:LEU:HD23 | 1.70 | 0.56 |
| 1:Q:220:ARG:H | 1:Q:221:PRO:HD3 | 1.70 | 0.56 |
| 1:Q:237:HIS:HE1 | 1:Q:290:ARG:HH21 | 1.53 | 0.56 |
| 1:Q:775:SER:CB | 1:Q:777:GLU:HG2 | 2.34 | 0.56 |
| 1:Q:807:VAL:CG1 | 3:R:443:ARG:NH1 | 2.67 | 0.56 |
| 3:R:314:TYR:CD1 | 3:R:314:TYR:N | 2.73 | 0.56 |
| 3:R:475:GLN:HG2 | 3:R:476:ILE:N | 2.17 | 0.56 |
| 3:R:64:ARG:N | 3:R:97:TRP:HB2 | 2.21 | 0.56 |
| 4:S:169:LYS:O | 4:S:219:ILE:HA | 2.05 | 0.56 |
| 5:T:108:VAL:HG11 | 5:T:164:MET:SD | 2.45 | 0.56 |
| 6:U:30:SER:OG | 6:U:31:SER:N | 2.37 | 0.56 |
| 1:A:409:ARG:NH2 | 1:A:415:ASP:OD2 | 2.38 | 0.56 |
| 1:A:646:MET:SD | 3:B:915:LEU:HD23 | 2.45 | 0.56 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 3:B:1071:ASP:C | 3:B:1073:ASN:H | 2.08 | 0.56 |
| 2:C:354:LEU:O | 3:B:1109:ILE:HD12 | 2.06 | 0.56 |
| 3:B:270:ASP:C | 3:B:272:ILE:H | 2.09 | 0.56 |
| 3:B:298:LEU:O | 3:B:300:HIS:N | 2.37 | 0.56 |
| 3:B:63:ILE:HG13 | 3:B:98:LEU:HA | 1.86 | 0.56 |
| 3:B:780:VAL:HG12 | 3:B:831:ALA:N | 2.21 | 0.56 |
| 2:C:241:ILE:CG2 | 2:C:242:VAL:N | 2.68 | 0.56 |
| 2:C:80:GLU:HB3 | 2:C:81:PRO:CD | 2.34 | 0.56 |
| 4:D:21:PRO:HG2 | 4:D:24:PHE:HB2 | 1.88 | 0.56 |
| 5:E:179:LYS:HZ2 | 6:F:79:THR:HB | 1.70 | 0.56 |
| 2:C:391:ARG:HH21 | 8:K:42:GLN:CG | 2.19 | 0.56 |
| 10:N:60:ILE:HG23 | 10:N:61:HIS:ND1 | 2.21 | 0.56 |
| 1:Q:64:THR:HG22 | 1:Q:65:LEU:N | 2.19 | 0.56 |
| 3:R:145:PRO:C | 3:R:147:ASP:H | 2.09 | 0.56 |
| 3:R:21:LYS:HA | 3:R:25:ARG:NH1 | 2.21 | 0.56 |
| 3:R:687:ARG:CG | 3:R:687:ARG:HH11 | 2.18 | 0.56 |
| 3:R:850:VAL:HG13 | 3:R:864:VAL:HG22 | 1.87 | 0.56 |
| 5:T:2:TYR:CE2 | 6:U:41:LEU:HD11 | 2.40 | 0.56 |
| 8:W:50:LEU:CD1 | 8:W:50:LEU:H | 2.18 | 0.56 |
| 10:Y:21:PHE:CE1 | 10:Y:38:LEU:HD13 | 2.41 | 0.56 |
| 1:A:365:VAL:HG11 | 1:A:401:LEU:CD1 | 2.34 | 0.56 |
| 1:A:567:ASN:ND2 | 1:A:731:THR:N | 2.54 | 0.56 |
| 1:A:765:THR:O | 1:A:766:LEU:HD22 | 2.06 | 0.56 |
| 1:A:853:ASP:HB2 | 2:C:311:ARG:NH1 | 2.17 | 0.56 |
| 3:B:1004:ARG:HH11 | 3:B:1025:GLY:N | 1.97 | 0.56 |
| 3:B:589:VAL:HG12 | 3:B:590:THR:N | 2.20 | 0.56 |
| 3:B:12:ARG:HG3 | 3:B:596:LYS:HG2 | 1.87 | 0.56 |
| 3:B:982:ARG:O | 3:B:983:ILE:CG1 | 2.46 | 0.56 |
| 2:C:337:GLU:CG | 2:C:338:LYS:H | 2.13 | 0.56 |
| 1:A:831:ARG:NH2 | 2:C:385:MET:CG | 2.68 | 0.56 |
| 4:D:151:LYS:O | 4:D:152:GLU:O | 2.24 | 0.56 |
| 4:D:90:GLU:O | 4:D:92:CYS:N | 2.39 | 0.56 |
| 6:F:30:SER:HB2 | 6:F:34:LEU:CD1 | 2.34 | 0.56 |
| 1:Q:864:LYS:HE3 | 2:G:32:LEU:HD11 | 1.87 | 0.56 |
| 2:G:390:MET:C | 2:G:391:ARG:HD3 | 2.26 | 0.56 |
| 2:G:393:ILE:HG22 | 2:G:394:LEU:N | 2.19 | 0.56 |
| 2:G:63:LEU:C | 2:G:64:ILE:HD12 | 2.25 | 0.56 |
| 9:L:39:SER:HB3 | 9:L:58:LEU:O | 2.05 | 0.56 |
| 1:Q:238:LYS:HZ3 | 1:Q:297:THR:HB | 1.61 | 0.56 |
| 1:Q:529:ASP:HB3 | 1:Q:626:TRP:NE1 | 2.20 | 0.56 |
| 3:R:210:PHE:HE2 | 3:R:319:ILE:HG23 | 1.69 | 0.56 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 3:R:247:GLU:C | 3:R:249:GLN:N | 2.58 | 0.56 |
| 3:R:686:LEU:CD1 | 3:R:686:LEU:H | 2.13 | 0.56 |
| 3:R:63:ILE:HG13 | 3:R:98:LEU:HA | 1.87 | 0.56 |
| 2:G:286:ILE:HD11 | 7:V:46:ARG:H | 1.71 | 0.56 |
| 9:X:7:LYS:H | 9:X:14:GLU:HB3 | 1.70 | 0.56 |
| 1:A:727:VAL:O | 1:A:729:ALA:O | 2.23 | 0.56 |
| 3:B:1070:TYR:N | 3:B:1070:TYR:CD2 | 2.72 | 0.56 |
| 3:B:655:ILE:O | 3:B:658:PRO:HD3 | 2.06 | 0.56 |
| 3:B:895:VAL:HG23 | 3:B:896:ASP:OD1 | 2.05 | 0.56 |
| 2:C:41:ILE:HG22 | 2:C:42:ILE:HD12 | 1.87 | 0.56 |
| 4:D:203:CYS:SG | 4:D:204:THR:N | 2.78 | 0.56 |
| 6:F:59:LEU:HD23 | 6:F:59:LEU:O | 2.06 | 0.56 |
| 2:G:145:GLU:HG2 | 2:G:239:ARG:HA | 1.87 | 0.56 |
| 7:H:12:ARG:C | 7:H:13:ILE:HG22 | 2.26 | 0.56 |
| 7:H:18:PRO:CB | 7:H:67:ARG:HA | 2.35 | 0.56 |
| 1:Q:664:GLU:OE2 | 1:Q:667:ARG:HD3 | 2.05 | 0.56 |
| 3:R:130:ILE:HA | 3:R:133:TYR:CD1 | 2.41 | 0.56 |
| 3:R:157:SER:O | 3:R:158:GLU:CB | 2.54 | 0.56 |
| 3:R:386:ARG:CB | 3:R:389:ILE:HD11 | 2.35 | 0.56 |
| 3:R:537:ALA:HB2 | 3:R:557:HIS:HE2 | 1.67 | 0.56 |
| 3:R:699:GLN:HA | 10:Y:51:SER:O | 2.04 | 0.56 |
| 4:S:114:ILE:HD12 | 4:S:123:PRO:HG2 | 1.86 | 0.56 |
| 4:S:13:ILE:HG13 | 4:S:238:PRO:HB2 | 1.88 | 0.56 |
| 4:S:235:SER:C | 4:S:236:LEU:HD12 | 2.26 | 0.56 |
| 5:T:17:GLU:HG2 | 5:T:20:LYS:HZ3 | 1.68 | 0.56 |
| 7:V:80:TYR:O | 7:V:81:VAL:HB | 2.06 | 0.56 |
| 8:W:78:ILE:O | 8:W:89:LEU:HA | 2.05 | 0.56 |
| 1:A:308:ARG:HG3 | 1:A:312:ASN:ND2 | 2.21 | 0.56 |
| 1:A:679:TYR:OH | 1:A:693:GLU:HG2 | 2.06 | 0.56 |
| 1:A:833:GLU:OE2 | 1:A:839:ARG:HB2 | 2.04 | 0.56 |
| 3:B:1000:LYS:O | 3:B:1001:LEU:HB2 | 2.05 | 0.56 |
| 3:B:59:ARG:NH1 | 3:B:107:ILE:HD12 | 2.20 | 0.56 |
| 3:B:245:ASP:N | 3:B:246:PRO:CD | 2.69 | 0.56 |
| 3:B:230:LEU:HD13 | 3:B:312:ALA:HA | 1.86 | 0.56 |
| 3:B:397:ALA:O | 3:B:402:ASN:HA | 2.06 | 0.56 |
| 3:B:768:GLY:O | 3:B:769:GLN:HB2 | 2.06 | 0.56 |
| 2:C:331:ARG:HD3 | 2:C:348:GLU:CB | 2.35 | 0.56 |
| 4:D:36:VAL:HB | 4:D:158:PRO:HG3 | 1.87 | 0.56 |
| 4:D:237:LYS:O | 4:D:240:ARG:HB3 | 2.06 | 0.56 |
| 2:G:337:GLU:CG | 2:G:338:LYS:H | 2.18 | 0.56 |
| 2:G:391:ARG:H | 2:G:392:PRO:HD3 | 1.69 | 0.56 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 2:G:55:ALA:HA | 2:G:58:GLU:OE2 | 2.06 | 0.56 |
| 1:Q:528:ALA:O | 1:Q:530:VAL:N | 2.39 | 0.56 |
| 1:Q:647:ARG:NH2 | 3:R:982:ARG:HH12 | 2.04 | 0.56 |
| 3:R:34:PHE:HE1 | 3:R:351:ALA:HA | 1.71 | 0.56 |
| 3:R:727:MET:CE | 3:R:898:PRO:HG3 | 2.36 | 0.56 |
| 3:R:911:ASN:HD22 | 3:R:913:HIS:H | 1.52 | 0.56 |
| 1:A:354:THR:O | 1:A:355:PRO:O | 2.24 | 0.56 |
| 1:A:530:VAL:O | 1:A:530:VAL:CG1 | 2.54 | 0.56 |
| 1:A:567:ASN:HD22 | 1:A:731:THR:CA | 2.18 | 0.56 |
| 1:A:672:VAL:O | 1:A:673:ASP:C | 2.43 | 0.56 |
| 1:A:704:LEU:HD13 | 1:A:781:PHE:CD1 | 2.33 | 0.56 |
| 3:B:294:ASP:O | 3:B:303:THR:HG23 | 2.06 | 0.56 |
| 3:B:429:VAL:HG11 | 3:B:453:MET:HE1 | 1.87 | 0.56 |
| 3:B:855:THR:CG2 | 3:B:857:GLU:HG2 | 2.36 | 0.56 |
| 2:C:343:ALA:HB2 | 2:C:371:GLU:HG3 | 1.87 | 0.56 |
| 4:D:235:SER:C | 4:D:236:LEU:HD12 | 2.25 | 0.56 |
| 4:D:25:VAL:HG21 | 4:D:226:TYR:CD1 | 2.36 | 0.56 |
| 5:E:108:VAL:HG11 | 5:E:164:MET:SD | 2.45 | 0.56 |
| 6:F:41:LEU:O | 6:F:43:SER:N | 2.33 | 0.56 |
| 2:G:104:LEU:HB3 | 2:G:105:PRO:CD | 2.30 | 0.56 |
| 9:L:29:ALA:HA | 9:L:32:LEU:HB2 | 1.86 | 0.56 |
| 1:Q:354:THR:HB | 1:Q:355:PRO:CD | 2.29 | 0.56 |
| 1:Q:409:ARG:CB | 1:Q:409:ARG:HH11 | 2.19 | 0.56 |
| 1:Q:610:SER:O | 1:Q:613:HIS:HB3 | 2.06 | 0.56 |
| 1:Q:679:TYR:OH | 1:Q:693:GLU:HG2 | 2.06 | 0.56 |
| 3:R:12:ARG:HG3 | 3:R:596:LYS:HG2 | 1.88 | 0.56 |
| 3:R:541:ARG:NH2 | 3:R:557:HIS:HD2 | 2.03 | 0.56 |
| 4:S:7:HIS:ND1 | 4:S:8:LYS:N | 2.54 | 0.56 |
| 8:W:91:SER:O | 8:W:92:LEU:HB2 | 2.05 | 0.56 |
| 9:X:11:ASN:O | 9:X:58:LEU:HD12 | 2.06 | 0.56 |
| 1:A:245:ILE:HD12 | 1:A:272:HIS:CD2 | 2.40 | 0.56 |
| 1:A:647:ARG:NH2 | 3:B:982:ARG:HH12 | 2.03 | 0.56 |
| 3:B:1069:TRP:NE1 | 3:B:1088:LEU:HD22 | 2.21 | 0.56 |
| 3:B:702:LEU:HB2 | 3:B:721:ASN:ND2 | 2.21 | 0.56 |
| 3:B:784:LYS:HE3 | 3:B:834:ASP:HB3 | 1.88 | 0.56 |
| 3:B:877:LYS:HE3 | 3:B:885:LYS:HD2 | 1.88 | 0.56 |
| 3:B:749:MET:HE1 | 3:B:907:ASP:HB3 | 1.88 | 0.56 |
| 3:B:60:LEU:CD2 | 3:B:98:LEU:HD21 | 2.32 | 0.56 |
| 2:C:126:LEU:HD12 | 2:C:131:LYS:CG | 2.35 | 0.56 |
| 4:D:259:LYS:O | 4:D:263:VAL:HG23 | 2.05 | 0.56 |
| 2:C:68:GLU:HB3 | 8:K:30:TYR:CZ | 2.41 | 0.56 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 8:K:54:ASN:ND2 | 8:K:58:SER:H | 2.03 | 0.56 |
| 10:N:13:LEU:O | 10:N:14:ILE:HD13 | 2.05 | 0.56 |
| 1:Q:504:SER:O | 1:Q:508:LEU:HD12 | 2.05 | 0.56 |
| 1:Q:727:VAL:HG12 | 1:Q:728:MET:N | 2.21 | 0.56 |
| 3:R:270:ASP:C | 3:R:272:ILE:H | 2.08 | 0.56 |
| 3:R:699:GLN:HG3 | 3:R:720:ASN:ND2 | 2.20 | 0.56 |
| 3:R:851:LEU:HA | 11:Z:35:PHE:CB | 2.34 | 0.56 |
| 3:R:745:VAL:HG13 | 3:R:872:PRO:HG2 | 1.87 | 0.56 |
| 6:U:51:SER:O | 6:U:54:LYS:HB3 | 2.06 | 0.56 |
| 6:U:59:LEU:O | 6:U:59:LEU:HD23 | 2.06 | 0.56 |
| 8:W:26:ARG:HG2 | 8:W:90:LEU:CB | 2.36 | 0.56 |
| 1:A:194:ILE:HG22 | 1:A:194:ILE:O | 2.06 | 0.56 |
| 1:A:558:LYS:H | 1:A:558:LYS:CD | 2.13 | 0.56 |
| 3:B:247:GLU:C | 3:B:249:GLN:N | 2.58 | 0.56 |
| 3:B:314:TYR:N | 3:B:314:TYR:CD1 | 2.72 | 0.56 |
| 2:C:391:ARG:N | 2:C:392:PRO:HD3 | 2.21 | 0.56 |
| 5:E:17:GLU:HG2 | 5:E:20:LYS:HZ3 | 1.71 | 0.56 |
| 6:F:72:LEU:C | 6:F:74:SER:H | 2.07 | 0.56 |
| 2:G:41:ILE:HG22 | 2:G:42:ILE:HD12 | 1.87 | 0.56 |
| 7:H:45:ILE:CB | 7:H:79:ARG:HB3 | 2.35 | 0.56 |
| 3:B:904:VAL:CG2 | 10:N:42:ARG:HE | 2.14 | 0.56 |
| 1:Q:185:GLU:HA | 1:Q:205:GLU:HG2 | 1.88 | 0.56 |
| 1:Q:567:ASN:ND2 | 1:Q:731:THR:N | 2.54 | 0.56 |
| 1:Q:88:LYS:O | 1:Q:92:GLU:HG3 | 2.06 | 0.56 |
| 3:R:1070:TYR:N | 3:R:1070:TYR:CD2 | 2.71 | 0.56 |
| 3:R:111:PRO:O | 3:R:112:GLU:HB3 | 2.04 | 0.56 |
| 3:R:429:VAL:HG11 | 3:R:453:MET:HE1 | 1.88 | 0.56 |
| 3:R:764:LYS:HD3 | 3:R:815:SER:CA | 2.35 | 0.56 |
| 3:R:877:LYS:HE3 | 3:R:885:LYS:HD2 | 1.88 | 0.56 |
| 1:A:234:ASP:C | 1:A:236:THR:N | 2.58 | 0.56 |
| 1:A:866:VAL:HB | 1:A:869:ASN:HB3 | 1.87 | 0.56 |
| 3:B:116:ILE:HG22 | 3:B:390:VAL:HG21 | 1.88 | 0.56 |
| 1:A:807:VAL:CG1 | 3:B:443:ARG:HH11 | 2.18 | 0.56 |
| 3:B:654:ILE:HG22 | 3:B:881:ARG:HG2 | 1.88 | 0.56 |
| 3:B:804:VAL:C | 3:B:805:LYS:HD2 | 2.26 | 0.56 |
| 3:B:855:THR:C | 3:B:857:GLU:H | 2.08 | 0.56 |
| 3:B:870:ARG:NH2 | 3:B:996:MET:SD | 2.79 | 0.56 |
| 2:C:44:THR:HG22 | 2:C:46:ASP:OD2 | 2.06 | 0.56 |
| 4:D:190:LEU:HD23 | 4:D:190:LEU:N | 2.21 | 0.56 |
| 2:G:315:LEU:O | 2:G:319:VAL:HG23 | 2.06 | 0.56 |
| 1:Q:826:ALA:CB | 2:G:335:THR:HG23 | 2.26 | 0.56 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:Q:878:TRP:HZ3 | 2:G:50:LYS:HE2 | 1.68 | 0.56 |
| 7:H:35:LEU:O | 7:H:37:ILE:HG13 | 2.06 | 0.56 |
| 7:H:80:TYR:O | 7:H:81:VAL:HB | 2.04 | 0.56 |
| 8:K:50:LEU:H | 8:K:50:LEU:CD1 | 2.19 | 0.56 |
| 8:K:39:ARG:HH21 | 8:K:50:LEU:HD13 | 1.71 | 0.56 |
| 4:D:64:LEU:HD22 | 10:N:6:ARG:CD | 2.36 | 0.56 |
| 11:P:37:VAL:HG22 | 11:P:38:ARG:N | 2.21 | 0.56 |
| 4:D:45:TYR:CD1 | 11:P:44:ILE:HG12 | 2.41 | 0.56 |
| 1:Q:90:ILE:CG2 | 1:Q:208:ILE:HD11 | 2.35 | 0.56 |
| 1:Q:212:LEU:CD2 | 1:Q:242:ILE:HD13 | 2.36 | 0.56 |
| 1:Q:23:SER:OG | 1:Q:73:GLY:HA2 | 2.06 | 0.56 |
| 3:R:25:ARG:O | 3:R:29:ASP:HB2 | 2.05 | 0.56 |
| 3:R:624:ALA:HB1 | 3:R:639:HIS:CD2 | 2.39 | 0.56 |
| 3:R:800:PRO:O | 3:R:802:VAL:N | 2.33 | 0.56 |
| 1:Q:734:ARG:HG3 | 3:R:917:SER:HB3 | 1.87 | 0.56 |
| 4:S:125:SER:C | 4:S:127:ASP:H | 2.10 | 0.56 |
| 4:S:48:GLU:HB3 | 4:S:140:SER:HB3 | 1.86 | 0.56 |
| 4:S:6:LEU:HD13 | 4:S:16:VAL:CG2 | 2.35 | 0.56 |
| 6:U:35:GLN:O | 6:U:38:TYR:HB2 | 2.06 | 0.56 |
| 6:U:72:LEU:HD23 | 6:U:86:ILE:CD1 | 2.36 | 0.56 |
| 5:T:18:PHE:HE2 | 8:W:42:GLN:HG2 | 1.70 | 0.56 |
| 10:Y:22:ILE:HD13 | 10:Y:23:THR:H | 1.71 | 0.56 |
| 1:A:377:TYR:CE1 | 1:A:385:ARG:HG2 | 2.41 | 0.55 |
| 3:B:188:LYS:HA | 3:B:203:GLU:O | 2.06 | 0.55 |
| 3:B:587:PRO:C | 3:B:588:LEU:HG | 2.25 | 0.55 |
| 3:B:849:LEU:HB3 | 3:B:865:ARG:HG2 | 1.87 | 0.55 |
| 2:C:126:LEU:HD12 | 2:C:131:LYS:HA | 1.86 | 0.55 |
| 2:G:245:LYS:HD2 | 2:G:250:ILE:HD12 | 1.87 | 0.55 |
| 2:G:53:ASP:O | 2:G:57:LYS:HB2 | 2.06 | 0.55 |
| 1:Q:732:GLY:O | 1:Q:733:ALA:C | 2.43 | 0.55 |
| 1:Q:489:PRO:CB | 1:Q:858:MET:HG3 | 2.36 | 0.55 |
| 3:R:164:GLN:CG | 3:R:349:LEU:HD21 | 2.36 | 0.55 |
| 3:R:245:ASP:N | 3:R:246:PRO:CD | 2.69 | 0.55 |
| 3:R:17:TYR:OH | 3:R:474:ALA:HA | 2.05 | 0.55 |
| 3:R:474:ALA:HB2 | 3:R:578:PRO:HG3 | 1.86 | 0.55 |
| 3:R:930:GLY:HA2 | 10:Y:47:ARG:NH2 | 2.20 | 0.55 |
| 4:S:177:GLU:HB2 | 4:S:178:LYS:HZ3 | 1.69 | 0.55 |
| 4:S:96:ILE:HD11 | 4:S:143:ALA:HB3 | 1.88 | 0.55 |
| 5:T:97:ILE:HD12 | 5:T:113:ILE:CD1 | 2.36 | 0.55 |
| 5:T:64:GLY:H | 8:W:41:LEU:HD23 | 1.72 | 0.55 |
| 1:A:325:VAL:O | 1:A:442:THR:HB | 2.06 | 0.55 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:A:488:THR:HG22 | 1:A:490:ARG:H | 1.71 | 0.55 |
| 1:A:765:THR:HG21 | 1:A:797:PHE:CE2 | 2.39 | 0.55 |
| 3:B:130:ILE:HA | 3:B:133:TYR:CD1 | 2.40 | 0.55 |
| 3:B:248:VAL:HG21 | 3:B:329:ARG:NH2 | 2.17 | 0.55 |
| 3:B:377:ARG:O | 3:B:378:LYS:HB2 | 2.05 | 0.55 |
| 3:B:562:PHE:CD1 | 3:B:562:PHE:N | 2.73 | 0.55 |
| 3:B:867:ARG:NH2 | 4:D:54:TYR:CE2 | 2.73 | 0.55 |
| 2:C:132:ARG:HA | 2:C:249:TYR:HD1 | 1.71 | 0.55 |
| 2:C:277:ILE:HG22 | 2:C:278:ARG:N | 2.19 | 0.55 |
| 2:C:286:ILE:HD13 | 2:C:324:GLY:O | 2.06 | 0.55 |
| 2:C:393:ILE:HG21 | 2:C:395:ARG:NH2 | 2.16 | 0.55 |
| 4:D:48:GLU:HB3 | 4:D:140:SER:HB3 | 1.88 | 0.55 |
| 4:D:7:HIS:ND1 | 4:D:8:LYS:N | 2.53 | 0.55 |
| 5:E:171:LYS:HG2 | 5:E:172:LEU:N | 2.21 | 0.55 |
| 1:Q:827:LEU:HD13 | 2:G:319:VAL:HG21 | 1.88 | 0.55 |
| 2:G:331:ARG:HD3 | 2:G:348:GLU:CB | 2.35 | 0.55 |
| 7:H:16:LEU:H | 7:H:16:LEU:HD12 | 1.71 | 0.55 |
| 7:H:65:ILE:H | 7:H:65:ILE:CD1 | 2.18 | 0.55 |
| 8:K:71:ARG:HB2 | 8:K:71:ARG:NH1 | 2.20 | 0.55 |
| 10:N:22:ILE:HD13 | 10:N:22:ILE:H | 1.71 | 0.55 |
| 1:Q:279:ASN:HB2 | 1:Q:297:THR:HG23 | 1.88 | 0.55 |
| 1:Q:746:MET:N | 1:Q:785:SER:HB3 | 2.20 | 0.55 |
| 1:Q:787:ARG:NH2 | 1:Q:788:THR:HA | 2.21 | 0.55 |
| 1:Q:864:LYS:HE3 | 2:G:32:LEU:CD1 | 2.35 | 0.55 |
| 3:R:1012:LEU:C | 3:R:1012:LEU:HD13 | 2.26 | 0.55 |
| 3:R:1067:ILE:HG12 | 3:R:1068:GLY:N | 2.21 | 0.55 |
| 3:R:296:TYR:N | 3:R:296:TYR:CD1 | 2.72 | 0.55 |
| 3:R:895:VAL:HG23 | 3:R:896:ASP:OD1 | 2.05 | 0.55 |
| 4:S:160:SER:HB3 | 4:S:233:VAL:HG12 | 1.87 | 0.55 |
| 8:W:50:LEU:O | 8:W:51:ILE:C | 2.44 | 0.55 |
| 1:A:334:ILE:HG22 | 1:A:482:VAL:CG1 | 2.36 | 0.55 |
| 1:A:417:VAL:HG11 | 1:A:464:LEU:CD1 | 2.36 | 0.55 |
| 1:A:606:GLN:HE21 | 1:A:608:PRO:HG2 | 1.72 | 0.55 |
| 3:B:319:ILE:C | 3:B:321:LYS:H | 2.09 | 0.55 |
| 3:B:148:PRO:HG3 | 3:B:422:MET:CE | 2.37 | 0.55 |
| 3:B:577:ARG:HE | 3:B:578:PRO:HD2 | 1.71 | 0.55 |
| 3:B:5:LEU:HA | 3:B:9:GLU:OE2 | 2.06 | 0.55 |
| 3:B:769:GLN:O | 3:B:770:GLU:CB | 2.51 | 0.55 |
| 3:B:881:ARG:NH1 | 3:B:989:TYR:CB | 2.70 | 0.55 |
| 1:A:490:ARG:HA | 2:C:312:HIS:CE1 | 2.41 | 0.55 |
| 2:C:366:PHE:O | 2:C:368:GLY:N | 2.39 | 0.55 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 4:D:98:ILE:HG13 | 4:D:114:ILE:HA | 1.88 | 0.55 |
| 4:D:240:ARG:O | 4:D:243:LEU:HB3 | 2.07 | 0.55 |
| 2:G:359:ALA:O | 2:G:361:GLY:N | 2.38 | 0.55 |
| 10:N:55:ILE:CD1 | 10:N:55:ILE:H | 2.20 | 0.55 |
| 1:Q:369:PRO:HG3 | 1:Q:389:ARG:HA | 1.88 | 0.55 |
| 1:Q:759:ARG:H | 1:Q:779:ARG:HH21 | 1.54 | 0.55 |
| 3:R:324:GLU:O | 3:R:325:LEU:HB2 | 2.06 | 0.55 |
| 3:R:978:LYS:HG2 | 4:S:166:TYR:HE2 | 1.71 | 0.55 |
| 4:S:182:VAL:O | 4:S:184:PRO:HD3 | 2.06 | 0.55 |
| 4:S:21:PRO:HG2 | 4:S:24:PHE:HB2 | 1.87 | 0.55 |
| 6:U:14:TYR:C | 6:U:18:LYS:HE3 | 2.27 | 0.55 |
| 6:U:56:ILE:HG23 | 6:U:69:ARG:CB | 2.36 | 0.55 |
| 10:Y:55:ILE:CD1 | 10:Y:55:ILE:H | 2.19 | 0.55 |
| 1:A:64:THR:HG22 | 1:A:65:LEU:H | 1.71 | 0.55 |
| 3:B:107:ILE:HG12 | 3:B:110:GLU:OE2 | 2.06 | 0.55 |
| 3:B:92:TYR:OH | 3:B:128:ASP:OD2 | 2.24 | 0.55 |
| 4:D:18:GLU:HB2 | 4:D:225:LYS:HE3 | 1.88 | 0.55 |
| 5:E:147:ILE:CG1 | 5:E:163:THR:HB | 2.37 | 0.55 |
| 2:G:380:LYS:HA | 2:G:380:LYS:HE2 | 1.87 | 0.55 |
| 1:Q:407:ILE:HD12 | 1:Q:407:ILE:C | 2.26 | 0.55 |
| 1:Q:525:LEU:CD1 | 1:Q:530:VAL:HG11 | 2.35 | 0.55 |
| 1:Q:588:ILE:HA | 1:Q:592:ILE:O | 2.06 | 0.55 |
| 1:Q:485:ASN:ND2 | 3:R:1039:PHE:HE2 | 2.02 | 0.55 |
| 3:R:800:PRO:HG2 | 11:Z:37:VAL:C | 2.26 | 0.55 |
| 3:R:902:LYS:HB3 | 10:Y:42:ARG:CD | 2.35 | 0.55 |
| 3:R:935:LEU:HD23 | 10:Y:43:TYR:HB3 | 1.88 | 0.55 |
| 3:R:64:ARG:H | 3:R:97:TRP:CB | 2.18 | 0.55 |
| 6:U:30:SER:HB2 | 6:U:34:LEU:CD1 | 2.36 | 0.55 |
| 7:V:12:ARG:C | 7:V:13:ILE:HG22 | 2.26 | 0.55 |
| 9:X:39:SER:HB3 | 9:X:58:LEU:O | 2.07 | 0.55 |
| 10:Y:22:ILE:CD1 | 10:Y:22:ILE:H | 2.19 | 0.55 |
| 1:A:847:GLN:OE1 | 1:A:850:TYR:HA | 2.05 | 0.55 |
| 3:B:340:ASN:O | 3:B:340:ASN:CG | 2.43 | 0.55 |
| 3:B:373:LYS:HG3 | 3:B:375:ARG:HB2 | 1.89 | 0.55 |
| 3:B:781:ARG:HD3 | 3:B:782:GLY:N | 2.12 | 0.55 |
| 2:C:39:LYS:O | 2:C:43:VAL:HG23 | 2.06 | 0.55 |
| 4:D:13:ILE:HG13 | 4:D:238:PRO:HB2 | 1.89 | 0.55 |
| 5:E:39:LEU:HD23 | 5:E:41:ASP:N | 2.21 | 0.55 |
| 2:G:70:ILE:HD13 | 2:G:71:GLY:N | 2.21 | 0.55 |
| 9:L:7:LYS:HE3 | 9:L:12:TYR:HE2 | 1.72 | 0.55 |
| 3:B:800:PRO:HB2 | 11:P:38:ARG:HA | 1.87 | 0.55 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 3:R:294:ASP:O | 3:R:303:THR:HG23 | 2.06 | 0.55 |
| 3:R:352:SER:O | 3:R:404:VAL:HG11 | 2.06 | 0.55 |
| 3:R:461:GLY:O | 3:R:464:SER:HB3 | 2.05 | 0.55 |
| 4:S:133:LEU:HD21 | 4:S:139:ILE:CD1 | 2.37 | 0.55 |
| 4:S:190:LEU:N | 4:S:190:LEU:HD23 | 2.22 | 0.55 |
| 4:S:86:THR:O | 4:S:87:GLU:HB3 | 2.07 | 0.55 |
| 6:U:48:ASP:H | 6:U:51:SER:HG | 1.53 | 0.55 |
| 8:W:50:LEU:H | 8:W:50:LEU:HD12 | 1.72 | 0.55 |
| 1:A:258:PRO:C | 1:A:260:LEU:H | 2.09 | 0.55 |
| 1:A:30:PRO:HB2 | 1:A:244:ARG:HG3 | 1.87 | 0.55 |
| 1:A:588:ILE:HA | 1:A:592:ILE:O | 2.07 | 0.55 |
| 3:B:1004:ARG:NH1 | 3:B:1024:GLY:HA2 | 2.21 | 0.55 |
| 3:B:157:SER:O | 3:B:158:GLU:CB | 2.54 | 0.55 |
| 3:B:368:GLN:HE22 | 3:B:386:ARG:NE | 2.04 | 0.55 |
| 3:B:154:VAL:HG21 | 3:B:399:ALA:HB2 | 1.87 | 0.55 |
| 3:B:480:ILE:HD11 | 3:B:550:SER:CB | 2.36 | 0.55 |
| 3:B:764:LYS:HB3 | 3:B:815:SER:CB | 2.36 | 0.55 |
| 3:B:88:ARG:HG2 | 11:P:33:ILE:HD11 | 1.88 | 0.55 |
| 2:C:60:SER:O | 2:C:63:LEU:HB3 | 2.06 | 0.55 |
| 4:D:170:VAL:CG2 | 4:D:200:GLU:HG3 | 2.36 | 0.55 |
| 2:G:349:VAL:CG2 | 2:G:352:LYS:HB2 | 2.36 | 0.55 |
| 1:Q:838:VAL:HG13 | 2:G:70:ILE:HD11 | 1.89 | 0.55 |
| 1:Q:486:ILE:HG23 | 1:Q:487:ILE:HG13 | 1.88 | 0.55 |
| 1:Q:558:LYS:H | 1:Q:558:LYS:CD | 2.16 | 0.55 |
| 3:R:373:LYS:HE2 | 3:R:378:LYS:HE3 | 1.88 | 0.55 |
| 3:R:784:LYS:HE3 | 3:R:834:ASP:HB3 | 1.88 | 0.55 |
| 8:W:18:VAL:CG1 | 8:W:22:LEU:HD12 | 2.34 | 0.55 |
| 3:B:27:HIS:O | 3:B:30:SER:HB3 | 2.07 | 0.55 |
| 3:B:691:ARG:HB3 | 3:B:754:PHE:CZ | 2.41 | 0.55 |
| 3:B:855:THR:HB | 3:B:857:GLU:CG | 2.36 | 0.55 |
| 2:G:31:ASP:OD1 | 2:G:31:ASP:C | 2.44 | 0.55 |
| 3:B:702:LEU:HD13 | 10:N:47:ARG:HD2 | 1.88 | 0.55 |
| 10:N:62:TYR:O | 10:N:63:THR:OG1 | 2.21 | 0.55 |
| 3:R:296:TYR:O | 3:R:297:PHE:HB2 | 2.07 | 0.55 |
| 3:R:298:LEU:N | 3:R:299:PRO:HD3 | 2.22 | 0.55 |
| 3:R:397:ALA:O | 3:R:402:ASN:HA | 2.06 | 0.55 |
| 3:R:691:ARG:HH12 | 3:R:756:ARG:NH2 | 2.04 | 0.55 |
| 4:S:47:ILE:HB | 4:S:140:SER:O | 2.07 | 0.55 |
| 4:S:64:LEU:HD22 | 10:Y:6:ARG:HD3 | 1.89 | 0.55 |
| 1:A:13:ILE:CD1 | 1:A:86:LEU:HD13 | 2.37 | 0.55 |
| 1:A:90:ILE:CG2 | 1:A:208:ILE:HD11 | 2.37 | 0.55 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|------------------|--------------------------|-------------------|
| 1:A:352:ARG:HA | 1:A:406:ILE:HA | 1.88 | 0.55 |
| 1:A:47:PRO:HG2 | 1:A:48:ARG:CD | 2.37 | 0.55 |
| 1:A:537:PRO:HB2 | 1:A:540:LEU:CD2 | 2.36 | 0.55 |
| 3:B:1036:LEU:HD12 | 3:B:1045:LEU:HB2 | 1.87 | 0.55 |
| 2:C:238:LYS:O | 2:C:239:ARG:HB2 | 2.07 | 0.55 |
| 4:D:134:GLY:O | 4:D:135:THR:O | 2.25 | 0.55 |
| 4:D:26:ASN:O | 4:D:29:ARG:HB3 | 2.07 | 0.55 |
| 5:E:79:PRO:HG3 | 5:E:160:ILE:CD1 | 2.32 | 0.55 |
| 5:E:179:LYS:CE | 6:F:81:ASP:HB2 | 2.35 | 0.55 |
| 2:G:138:LEU:O | 2:G:142:ARG:HG3 | 2.07 | 0.55 |
| 2:G:301:LEU:HA | 2:G:304:GLN:CG | 2.37 | 0.55 |
| 7:H:46:ARG:O | 7:H:49:ASP:HB2 | 2.07 | 0.55 |
| 11:P:37:VAL:HG22 | 11:P:38:ARG:H | 1.71 | 0.55 |
| 1:Q:13:ILE:CD1 | 1:Q:86:LEU:HD13 | 2.37 | 0.55 |
| 1:Q:507:TYR:HB2 | 1:Q:511:VAL:CG1 | 2.36 | 0.55 |
| 1:Q:334:ILE:CD1 | 1:Q:628:MET:HB3 | 2.37 | 0.55 |
| 1:Q:724:PHE:O | 1:Q:727:VAL:HB | 2.06 | 0.55 |
| 1:Q:503:ILE:HD11 | 1:Q:732:GLY:C | 2.26 | 0.55 |
| 3:R:231:GLY:O | 3:R:232:ILE:HD13 | 2.06 | 0.55 |
| 3:R:316:ALA:C | 3:R:318:ALA:H | 2.09 | 0.55 |
| 3:R:530:TYR:OH | 3:R:536:LEU:HG | 2.07 | 0.55 |
| 4:S:21:PRO:HG3 | 9:X:79:MET:CE | 2.37 | 0.55 |
| 4:S:69:SER:O | 4:S:70:GLU:C | 2.46 | 0.55 |
| 5:T:145:ARG:HB2 | 5:T:145:ARG:CZ | 2.37 | 0.55 |
| 5:T:145:ARG:HB2 | 5:T:145:ARG:NH1 | 2.21 | 0.55 |
| 6:U:51:SER:O | 6:U:55:VAL:HG23 | 2.07 | 0.55 |
| 7:V:46:ARG:O | 7:V:49:ASP:HB2 | 2.06 | 0.55 |
| 3:B:265:VAL:O | 3:B:269:LEU:HG | 2.07 | 0.55 |
| 3:B:69:ARG:O | 3:B:70:VAL:HG13 | 2.06 | 0.55 |
| 3:B:813:LYS:H | 3:B:836:SER:HB3 | 1.72 | 0.55 |
| 3:B:873:THR:HG22 | 3:B:874:ILE:H | 1.71 | 0.55 |
| 2:C:241:ILE:HG22 | 2:C:242:VAL:H | 1.69 | 0.55 |
| 2:C:393:ILE:HG22 | 2:C:394:LEU:N | 2.22 | 0.55 |
| 4:D:226:TYR:C | 4:D:227:ILE:HG13 | 2.27 | 0.55 |
| 5:E:81:VAL:O | 5:E:82:GLN:HB2 | 2.06 | 0.55 |
| 8:K:50:LEU:O | 8:K:51:ILE:C | 2.45 | 0.55 |
| 11:P:18:LEU:C | 11:P:20:VAL:H | 2.09 | 0.55 |
| 1:Q:47:PRO:HG2 | 1:Q:48:ARG:CD | 2.36 | 0.55 |
| 3:R:167:LEU:O | 3:R:341:LYS:HA | 2.06 | 0.55 |
| 3:R:380:ALA:O | 3:R:383:ALA:N | 2.37 | 0.55 |
| 3:R:63:ILE:HG13 | 3:R:98:LEU:HB2 | 1.88 | 0.55 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 3:R:655:ILE:O | 3:R:658:PRO:HD3 | 2.06 | 0.55 |
| 6:U:72:LEU:HD23 | 6:U:86:ILE:HD13 | 1.88 | 0.55 |
| 7:V:43:PRO:HB2 | 7:V:78:TYR:O | 2.06 | 0.55 |
| 8:W:15:PHE:O | 8:W:19:PHE:HB2 | 2.07 | 0.55 |
| 1:A:301:ARG:NH1 | 1:A:308:ARG:NH1 | 2.54 | 0.55 |
| 1:A:409:ARG:HE | 1:A:412:ILE:HG12 | 1.70 | 0.55 |
| 1:A:876:VAL:C | 1:A:878:TRP:N | 2.59 | 0.55 |
| 3:B:34:PHE:HE1 | 3:B:351:ALA:HA | 1.72 | 0.55 |
| 3:B:386:ARG:HB2 | 3:B:389:ILE:CD1 | 2.35 | 0.55 |
| 3:B:544:ARG:NH2 | 3:B:620:GLU:OE2 | 2.40 | 0.55 |
| 3:B:89:ASN:HD21 | 3:B:863:LYS:HZ3 | 1.52 | 0.55 |
| 2:C:380:LYS:HA | 2:C:380:LYS:HE2 | 1.88 | 0.55 |
| 2:G:126:LEU:HD12 | 2:G:131:LYS:HA | 1.89 | 0.55 |
| 10:N:22:ILE:CD1 | 10:N:22:ILE:N | 2.70 | 0.55 |
| 1:Q:214:VAL:O | 1:Q:214:VAL:HG12 | 2.06 | 0.55 |
| 1:Q:238:LYS:CE | 1:Q:276:TYR:HA | 2.36 | 0.55 |
| 1:Q:374:GLY:O | 1:Q:410:HIS:HB2 | 2.07 | 0.55 |
| 1:Q:377:TYR:H | 1:Q:388:LEU:CB | 2.18 | 0.55 |
| 1:Q:505:GLY:O | 1:Q:506:ALA:C | 2.44 | 0.55 |
| 1:Q:567:ASN:N | 1:Q:599:ASP:OD2 | 2.39 | 0.55 |
| 1:Q:872:PHE:HA | 1:Q:876:VAL:HB | 1.88 | 0.55 |
| 3:R:248:VAL:CG1 | 3:R:329:ARG:HH12 | 2.18 | 0.55 |
| 3:R:388:ASP:C | 3:R:390:VAL:N | 2.55 | 0.55 |
| 3:R:478:VAL:HA | 3:R:572:SER:CB | 2.37 | 0.55 |
| 3:R:562:PHE:N | 3:R:562:PHE:CD1 | 2.75 | 0.55 |
| 3:R:921:LEU:C | 3:R:923:GLN:H | 2.10 | 0.55 |
| 3:R:906:PRO:HD3 | 3:R:985:PHE:CZ | 2.42 | 0.55 |
| 4:S:177:GLU:HB2 | 4:S:178:LYS:HZ2 | 1.71 | 0.55 |
| 5:T:147:ILE:HD11 | 5:T:163:THR:HB | 1.88 | 0.55 |
| 7:V:37:ILE:HD12 | 7:V:37:ILE:O | 2.07 | 0.55 |
| 2:G:65:ALA:HB1 | 8:W:19:PHE:CZ | 2.41 | 0.55 |
| 9:X:5:ILE:HD13 | 9:X:5:ILE:O | 2.07 | 0.55 |
| 10:Y:22:ILE:CD1 | 10:Y:22:ILE:N | 2.70 | 0.55 |
| 1:A:242:ILE:HD13 | 1:A:273:VAL:HG22 | 1.88 | 0.54 |
| 1:A:505:GLY:O | 1:A:506:ALA:C | 2.45 | 0.54 |
| 3:B:1022:ARG:O | 3:B:1022:ARG:HG2 | 2.08 | 0.54 |
| 3:B:134:THR:O | 3:B:135:LEU:C | 2.45 | 0.54 |
| 3:B:871:ILE:HG22 | 3:B:872:PRO:HD2 | 1.88 | 0.54 |
| 2:C:138:LEU:O | 2:C:142:ARG:HG3 | 2.06 | 0.54 |
| 2:C:63:LEU:HD21 | 8:K:23:TRP:CZ3 | 2.43 | 0.54 |
| 2:C:63:LEU:C | 2:C:64:ILE:HD12 | 2.27 | 0.54 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 4:D:38:ILE:O | 4:D:147:LEU:HD23 | 2.06 | 0.54 |
| 4:D:66:PRO:HG2 | 10:N:13:LEU:HD21 | 1.89 | 0.54 |
| 6:F:56:ILE:HG23 | 6:F:69:ARG:CB | 2.36 | 0.54 |
| 2:G:26:GLN:C | 2:G:28:ILE:H | 2.09 | 0.54 |
| 1:Q:853:ASP:CB | 2:G:311:ARG:HH12 | 2.18 | 0.54 |
| 2:G:44:THR:HG22 | 2:G:46:ASP:OD2 | 2.07 | 0.54 |
| 9:L:35:ILE:O | 9:L:38:VAL:HG23 | 2.07 | 0.54 |
| 11:P:26:CYS:HB2 | 11:P:27:PRO:CD | 2.32 | 0.54 |
| 1:Q:422:GLN:HA | 1:Q:424:SER:N | 2.22 | 0.54 |
| 1:Q:480:MET:HG2 | 3:R:1039:PHE:CD1 | 2.42 | 0.54 |
| 1:Q:4:LYS:HD2 | 3:R:1089:PHE:CB | 2.36 | 0.54 |
| 1:Q:572:PRO:HG2 | 1:Q:573:ARG:HD3 | 1.89 | 0.54 |
| 3:R:1014:ARG:HD2 | 3:R:1095:TYR:CD1 | 2.43 | 0.54 |
| 1:Q:8:GLY:O | 3:R:1114:VAL:HG13 | 2.07 | 0.54 |
| 3:R:183:ILE:H | 3:R:183:ILE:HD13 | 1.72 | 0.54 |
| 1:A:877:GLY:C | 3:R:377:ARG:NH1 | 2.61 | 0.54 |
| 3:R:587:PRO:C | 3:R:588:LEU:HG | 2.27 | 0.54 |
| 3:R:656:PRO:HD3 | 3:R:881:ARG:HH21 | 1.71 | 0.54 |
| 3:R:657:TYR:HA | 3:R:659:GLU:OE2 | 2.06 | 0.54 |
| 3:R:855:THR:CG2 | 3:R:857:GLU:HG2 | 2.37 | 0.54 |
| 4:S:247:LYS:HA | 4:S:250:ILE:HD12 | 1.87 | 0.54 |
| 7:V:55:ILE:O | 7:V:56:ASN:C | 2.44 | 0.54 |
| 1:A:65:LEU:O | 1:A:67:ASN:N | 2.40 | 0.54 |
| 1:A:86:LEU:HB3 | 1:A:207:MET:CE | 2.36 | 0.54 |
| 3:B:145:PRO:C | 3:B:147:ASP:H | 2.10 | 0.54 |
| 3:B:386:ARG:CB | 3:B:389:ILE:HD11 | 2.35 | 0.54 |
| 3:B:971:TYR:O | 3:B:973:GLY:N | 2.40 | 0.54 |
| 2:C:26:GLN:C | 2:C:28:ILE:H | 2.09 | 0.54 |
| 4:D:26:ASN:O | 4:D:30:ARG:HG3 | 2.06 | 0.54 |
| 2:G:80:GLU:CB | 2:G:81:PRO:HD3 | 2.27 | 0.54 |
| 1:Q:19:ILE:HA | 1:Q:22:MET:CE | 2.37 | 0.54 |
| 1:Q:308:ARG:HG3 | 1:Q:312:ASN:ND2 | 2.21 | 0.54 |
| 1:Q:375:ALA:CB | 1:Q:409:ARG:HA | 2.37 | 0.54 |
| 1:Q:428:ILE:HG23 | 1:Q:452:PRO:HB2 | 1.88 | 0.54 |
| 1:Q:417:VAL:HG11 | 1:Q:464:LEU:HD11 | 1.88 | 0.54 |
| 1:Q:720:ASP:C | 1:Q:722:PHE:H | 2.10 | 0.54 |
| 1:Q:765:THR:HG21 | 1:Q:797:PHE:CE2 | 2.40 | 0.54 |
| 2:G:358:ALA:HB2 | 3:R:1109:ILE:HD12 | 1.88 | 0.54 |
| 3:R:85:ALA:CB | 3:R:92:TYR:HB2 | 2.37 | 0.54 |
| 1:A:13:ILE:O | 1:A:13:ILE:HG22 | 2.05 | 0.54 |
| 1:A:336:GLU:OE2 | 1:A:436:ARG:HD3 | 2.07 | 0.54 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 1:A:656:ASP:O | 1:A:659:LYS:HB2 | 2.07 | 0.54 |
| 3:B:1054:ASP:HB3 | 3:B:1095:TYR:H | 1.72 | 0.54 |
| 3:B:1101:ILE:O | 3:B:1105:MET:HG3 | 2.07 | 0.54 |
| 3:B:183:ILE:HD13 | 3:B:183:ILE:H | 1.72 | 0.54 |
| 3:B:530:TYR:OH | 3:B:536:LEU:HG | 2.06 | 0.54 |
| 3:B:800:PRO:O | 3:B:802:VAL:N | 2.34 | 0.54 |
| 2:C:331:ARG:HH11 | 2:C:331:ARG:HB3 | 1.72 | 0.54 |
| 4:D:111:SER:OG | 4:D:126:GLY:HA2 | 2.07 | 0.54 |
| 4:D:250:ILE:CA | 4:D:253:ILE:HG22 | 2.37 | 0.54 |
| 2:G:104:LEU:O | 2:G:108:ILE:HG12 | 2.07 | 0.54 |
| 2:G:126:LEU:HD12 | 2:G:131:LYS:CG | 2.37 | 0.54 |
| 2:G:241:ILE:CG2 | 2:G:242:VAL:H | 2.21 | 0.54 |
| 2:G:287:GLU:OE1 | 7:V:67:ARG:NH2 | 2.40 | 0.54 |
| 2:G:321:THR:HB | 2:G:322:ARG:HH11 | 1.72 | 0.54 |
| 2:G:354:LEU:HD13 | 3:R:1104:LEU:HD21 | 1.90 | 0.54 |
| 2:G:391:ARG:N | 2:G:392:PRO:HD3 | 2.22 | 0.54 |
| 2:C:292:ILE:HD13 | 7:H:16:LEU:HD21 | 1.90 | 0.54 |
| 1:Q:807:VAL:HG11 | 3:R:443:ARG:HH11 | 1.71 | 0.54 |
| 3:R:469:ASN:HD22 | 3:R:469:ASN:N | 2.04 | 0.54 |
| 3:R:740:MET:O | 3:R:891:LEU:HA | 2.07 | 0.54 |
| 3:R:972:ASP:HB3 | 3:R:975:THR:HG23 | 1.89 | 0.54 |
| 4:S:170:VAL:HG23 | 4:S:200:GLU:HG3 | 1.88 | 0.54 |
| 4:S:250:ILE:HD11 | 9:X:84:ILE:HD11 | 1.89 | 0.54 |
| 4:S:66:PRO:CG | 10:Y:13:LEU:HD21 | 2.37 | 0.54 |
| 10:Y:60:ILE:HG23 | 10:Y:61:HIS:N | 2.19 | 0.54 |
| 1:A:13:ILE:HD11 | 1:A:86:LEU:CD1 | 2.37 | 0.54 |
| 1:A:184:LEU:HD22 | 1:A:204:PRO:HB2 | 1.89 | 0.54 |
| 1:A:220:ARG:H | 1:A:221:PRO:HD3 | 1.72 | 0.54 |
| 1:A:238:LYS:CE | 1:A:276:TYR:HA | 2.37 | 0.54 |
| 1:A:746:MET:N | 1:A:785:SER:HB3 | 2.23 | 0.54 |
| 1:A:308:ARG:HH22 | 3:B:1012:LEU:HD11 | 1.71 | 0.54 |
| 1:A:4:LYS:HD2 | 3:B:1089:PHE:C | 2.27 | 0.54 |
| 3:B:244:LEU:HD13 | 3:B:500:VAL:CG1 | 2.38 | 0.54 |
| 3:B:582:VAL:CG1 | 3:B:586:ASN:H | 2.08 | 0.54 |
| 3:B:691:ARG:NH1 | 3:B:756:ARG:HH21 | 2.05 | 0.54 |
| 3:B:727:MET:CB | 3:B:983:ILE:HD12 | 2.37 | 0.54 |
| 1:A:447:LEU:HD13 | 3:B:734:MET:SD | 2.47 | 0.54 |
| 3:B:740:MET:O | 3:B:891:LEU:HA | 2.07 | 0.54 |
| 3:B:91:THR:HA | 3:B:155:ASN:H | 1.72 | 0.54 |
| 3:B:943:THR:CG2 | 3:B:944:PRO:HD2 | 2.34 | 0.54 |
| 3:B:950:ILE:O | 3:B:952:GLN:N | 2.40 | 0.54 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|------------------|--------------------------|-------------------|
| 2:C:258:LEU:HD21 | 2:C:284:PHE:CE1 | 2.42 | 0.54 |
| 4:D:158:PRO:O | 4:D:233:VAL:HG22 | 2.08 | 0.54 |
| 6:F:14:TYR:C | 6:F:18:LYS:HE3 | 2.28 | 0.54 |
| 2:G:361:GLY:O | 2:G:362:ASP:O | 2.25 | 0.54 |
| 7:H:55:ILE:O | 7:H:56:ASN:C | 2.46 | 0.54 |
| 1:Q:316:LYS:HE2 | 3:R:1054:ASP:OD2 | 2.06 | 0.54 |
| 1:Q:378:VAL:CG1 | 1:Q:388:LEU:HD12 | 2.37 | 0.54 |
| 1:Q:65:LEU:O | 1:Q:67:ASN:N | 2.40 | 0.54 |
| 1:Q:672:VAL:HG11 | 1:Q:776:PRO:HD3 | 1.89 | 0.54 |
| 3:R:104:GLU:O | 3:R:105:ASN:CB | 2.56 | 0.54 |
| 3:R:319:ILE:C | 3:R:321:LYS:H | 2.11 | 0.54 |
| 3:R:629:GLU:HB3 | 3:R:630:PRO:HD2 | 1.89 | 0.54 |
| 3:R:749:MET:HG2 | 3:R:750:TYR:HD1 | 1.71 | 0.54 |
| 8:W:71:ARG:HB2 | 8:W:71:ARG:NH1 | 2.22 | 0.54 |
| 1:A:64:THR:HG22 | 1:A:65:LEU:N | 2.22 | 0.54 |
| 1:A:763:THR:HG22 | 1:A:772:TYR:H | 1.72 | 0.54 |
| 1:A:475:GLU:OE1 | 3:B:1043:MET:HB2 | 2.08 | 0.54 |
| 3:B:1067:ILE:HG12 | 3:B:1068:GLY:N | 2.23 | 0.54 |
| 3:B:231:GLY:O | 3:B:232:ILE:HD13 | 2.08 | 0.54 |
| 3:B:669:GLN:HE21 | 3:B:669:GLN:HA | 1.71 | 0.54 |
| 3:B:921:LEU:O | 3:B:923:GLN:N | 2.41 | 0.54 |
| 3:B:974:ARG:O | 9:L:22:HIS:HB3 | 2.08 | 0.54 |
| 2:C:111:VAL:HG13 | 2:C:329:ILE:CD1 | 2.38 | 0.54 |
| 2:C:386:VAL:HG13 | 8:K:34:ARG:HG2 | 1.90 | 0.54 |
| 5:E:140:ASP:O | 5:E:142:VAL:HG13 | 2.07 | 0.54 |
| 5:E:145:ARG:CZ | 5:E:145:ARG:HB2 | 2.37 | 0.54 |
| 5:E:93:ASP:CG | 5:E:94:ASN:N | 2.61 | 0.54 |
| 6:F:46:LYS:HE3 | 6:F:75:ILE:O | 2.08 | 0.54 |
| 2:G:389:THR:HG21 | 8:W:79:ARG:HH12 | 1.71 | 0.54 |
| 1:Q:288:LYS:HD3 | 1:Q:294:PRO:HG3 | 1.89 | 0.54 |
| 1:Q:312:ASN:HA | 1:Q:315:GLY:O | 2.08 | 0.54 |
| 3:R:298:LEU:O | 3:R:300:HIS:N | 2.40 | 0.54 |
| 3:R:5:LEU:HA | 3:R:9:GLU:OE2 | 2.08 | 0.54 |
| 3:R:963:LEU:HD13 | 3:R:982:ARG:NH2 | 2.23 | 0.54 |
| 3:R:727:MET:CB | 3:R:983:ILE:HD12 | 2.37 | 0.54 |
| 4:S:39:MET:N | 4:S:69:SER:OG | 2.40 | 0.54 |
| 8:W:54:ASN:ND2 | 8:W:58:SER:H | 2.06 | 0.54 |
| 3:R:904:VAL:HG13 | 10:Y:44:CYS:HB3 | 1.89 | 0.54 |
| 1:A:507:TYR:O | 1:A:508:LEU:CB | 2.56 | 0.54 |
| 1:A:63:ASN:O | 1:A:64:THR:O | 2.25 | 0.54 |
| 1:A:807:VAL:HG21 | 3:B:443:ARG:CD | 2.35 | 0.54 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 3:B:305:ALA:O | 3:B:308:ARG:HG3 | 2.08 | 0.54 |
| 3:B:687:ARG:HG3 | 3:B:687:ARG:NH1 | 2.22 | 0.54 |
| 3:B:773:ILE:HG12 | 3:B:813:LYS:CG | 2.36 | 0.54 |
| 2:C:323:THR:O | 2:C:323:THR:HG22 | 2.07 | 0.54 |
| 2:C:70:ILE:HA | 2:C:73:VAL:CG2 | 2.36 | 0.54 |
| 4:D:97:TYR:HB2 | 4:D:115:LYS:HB2 | 1.90 | 0.54 |
| 5:E:64:GLY:H | 8:K:41:LEU:CD2 | 2.19 | 0.54 |
| 5:E:87:GLY:O | 5:E:88:GLU:HB2 | 2.07 | 0.54 |
| 8:K:82:LEU:HD12 | 8:K:84:ASN:HB2 | 1.89 | 0.54 |
| 8:K:91:SER:OG | 8:K:92:LEU:N | 2.40 | 0.54 |
| 10:N:60:ILE:O | 10:N:62:TYR:N | 2.40 | 0.54 |
| 3:B:800:PRO:HG2 | 11:P:37:VAL:CA | 2.38 | 0.54 |
| 1:Q:326:ILE:HG21 | 1:Q:462:MET:HG3 | 1.90 | 0.54 |
| 1:Q:765:THR:O | 1:Q:766:LEU:HD22 | 2.07 | 0.54 |
| 1:Q:781:PHE:C | 1:Q:781:PHE:HD2 | 2.11 | 0.54 |
| 3:R:369:LEU:CD2 | 3:R:384:LEU:HD13 | 2.38 | 0.54 |
| 1:Q:761:TYR:HB3 | 3:R:622:GLU:OE1 | 2.07 | 0.54 |
| 3:R:764:LYS:HB3 | 3:R:815:SER:HB2 | 1.90 | 0.54 |
| 3:R:974:ARG:O | 9:X:22:HIS:HB3 | 2.07 | 0.54 |
| 4:S:97:TYR:HB2 | 4:S:115:LYS:HB2 | 1.89 | 0.54 |
| 5:T:171:LYS:HG2 | 5:T:172:LEU:N | 2.23 | 0.54 |
| 5:T:58:ILE:N | 5:T:58:ILE:HD12 | 2.23 | 0.54 |
| 6:U:60:SER:HB3 | 6:U:69:ARG:NH1 | 2.23 | 0.54 |
| 10:Y:21:PHE:O | 10:Y:25:VAL:HG23 | 2.08 | 0.54 |
| 3:R:139:ILE:HD12 | 10:Y:61:HIS:CD2 | 2.42 | 0.54 |
| 11:Z:39:LYS:O | 11:Z:41:THR:N | 2.40 | 0.54 |
| 1:A:527:VAL:CG1 | 1:A:530:VAL:HB | 2.38 | 0.54 |
| 1:A:541:ALA:CB | 1:A:542:PRO:CD | 2.85 | 0.54 |
| 1:A:724:PHE:O | 1:A:727:VAL:HB | 2.07 | 0.54 |
| 1:A:739:ASN:O | 3:B:919:MET:HE3 | 2.08 | 0.54 |
| 3:B:123:LEU:HD21 | 3:B:153:ILE:HD11 | 1.88 | 0.54 |
| 3:B:291:GLN:C | 3:B:293:ILE:H | 2.10 | 0.54 |
| 3:B:537:ALA:HB2 | 3:B:557:HIS:HE2 | 1.67 | 0.54 |
| 3:B:801:GLU:HG3 | 11:P:38:ARG:NH2 | 2.22 | 0.54 |
| 3:B:963:LEU:HD12 | 3:B:967:THR:O | 2.08 | 0.54 |
| 2:C:42:ILE:HG22 | 2:C:43:VAL:N | 2.22 | 0.54 |
| 4:D:18:GLU:HG3 | 4:D:225:LYS:HG2 | 1.90 | 0.54 |
| 4:D:31:ALA:HA | 4:D:35:TYR:CD2 | 2.43 | 0.54 |
| 4:D:78:TRP:CD1 | 4:D:78:TRP:N | 2.75 | 0.54 |
| 3:R:243:SER:CB | 3:R:246:PRO:HG3 | 2.37 | 0.54 |
| 3:R:265:VAL:O | 3:R:269:LEU:HG | 2.07 | 0.54 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 3:R:64:ARG:HG2 | 3:R:97:TRP:CG | 2.43 | 0.54 |
| 8:W:39:ARG:HH21 | 8:W:50:LEU:HD13 | 1.71 | 0.54 |
| 8:W:53:ILE:HG22 | 8:W:54:ASN:N | 2.23 | 0.54 |
| 1:A:289:HIS:HB2 | 1:A:295:LEU:CD2 | 2.36 | 0.54 |
| 1:A:572:PRO:HG2 | 1:A:573:ARG:HD3 | 1.90 | 0.54 |
| 3:B:1077:TYR:O | 3:B:1077:TYR:CD1 | 2.61 | 0.54 |
| 3:B:28:LEU:O | 3:B:30:SER:N | 2.34 | 0.54 |
| 2:C:276:ASN:O | 2:C:279:GLU:HB3 | 2.08 | 0.54 |
| 4:D:12:ARG:NH2 | 4:D:14:ASP:OD2 | 2.40 | 0.54 |
| 4:D:222:VAL:HG11 | 4:D:225:LYS:CD | 2.37 | 0.54 |
| 6:F:30:SER:HB2 | 6:F:34:LEU:HD12 | 1.88 | 0.54 |
| 2:G:133:ASP:C | 2:G:135:ASP:H | 2.11 | 0.54 |
| 11:P:22:PRO:HG2 | 11:P:23:GLY:H | 1.72 | 0.54 |
| 1:Q:609:GLU:CD | 1:Q:614:TRP:HZ2 | 2.10 | 0.54 |
| 1:Q:343:ILE:HD11 | 3:R:1001:LEU:CD1 | 2.37 | 0.54 |
| 3:R:544:ARG:NH2 | 3:R:614:GLU:OE1 | 2.41 | 0.54 |
| 3:R:993:LEU:HD12 | 3:R:993:LEU:N | 2.23 | 0.54 |
| 4:S:117:GLU:O | 4:S:119:PRO:HD3 | 2.08 | 0.54 |
| 4:S:94:THR:CG2 | 4:S:145:LEU:HB2 | 2.38 | 0.54 |
| 5:T:174:TRP:CE3 | 5:T:174:TRP:HA | 2.42 | 0.54 |
| 5:T:53:THR:HG22 | 5:T:70:VAL:HA | 1.90 | 0.54 |
| 6:U:18:LYS:HG2 | 6:U:41:LEU:HB3 | 1.90 | 0.54 |
| 8:W:36:ILE:O | 8:W:40:ALA:HB2 | 2.07 | 0.54 |
| 1:A:352:ARG:HD3 | 1:A:406:ILE:CD1 | 2.33 | 0.54 |
| 1:A:540:LEU:O | 1:A:541:ALA:O | 2.25 | 0.54 |
| 3:B:1064:CYS:SG | 3:B:1064:CYS:O | 2.65 | 0.54 |
| 3:B:106:ASN:O | 3:B:108:GLU:HG3 | 2.08 | 0.54 |
| 3:B:452:ARG:HH11 | 3:B:452:ARG:HG3 | 1.73 | 0.54 |
| 3:B:88:ARG:HB3 | 3:B:90:LEU:HD13 | 1.89 | 0.54 |
| 2:C:115:LYS:O | 2:C:115:LYS:HG3 | 2.08 | 0.54 |
| 5:E:117:THR:HG21 | 5:E:130:GLU:CG | 2.38 | 0.54 |
| 7:H:42:LEU:HD13 | 7:H:79:ARG:O | 2.08 | 0.54 |
| 1:Q:409:ARG:HE | 1:Q:412:ILE:HG12 | 1.71 | 0.54 |
| 1:Q:646:MET:HE2 | 1:Q:725:ALA:HB2 | 1.90 | 0.54 |
| 1:Q:830:LEU:HD22 | 1:Q:846:VAL:HG21 | 1.89 | 0.54 |
| 3:R:59:ARG:NH1 | 3:R:107:ILE:HD12 | 2.23 | 0.54 |
| 3:R:1054:ASP:HB3 | 3:R:1095:TYR:N | 2.23 | 0.54 |
| 3:R:181:SER:O | 3:R:182:ASN:HB2 | 2.08 | 0.54 |
| 3:R:198:VAL:HG12 | 3:R:198:VAL:O | 2.08 | 0.54 |
| 3:R:215:PRO:O | 3:R:216:ALA:HB3 | 2.08 | 0.54 |
| 3:R:739:ILE:O | 3:R:739:ILE:HG12 | 2.07 | 0.54 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 3:R:764:LYS:HB3 | 3:R:815:SER:CB | 2.38 | 0.54 |
| 4:S:2:SER:N | 9:X:86:GLU:OE1 | 2.41 | 0.54 |
| 4:S:68:MET:HE1 | 4:S:234:GLY:O | 2.08 | 0.54 |
| 5:T:38:ILE:HD13 | 5:T:153:VAL:O | 2.08 | 0.54 |
| 1:A:185:GLU:HA | 1:A:205:GLU:HG2 | 1.90 | 0.54 |
| 1:A:308:ARG:HH11 | 1:A:308:ARG:HB2 | 1.73 | 0.54 |
| 1:A:692:LEU:H | 1:A:692:LEU:HD12 | 1.73 | 0.54 |
| 1:A:856:PHE:CD1 | 1:A:858:MET:HB2 | 2.43 | 0.54 |
| 3:B:1036:LEU:HD13 | 3:B:1044:LEU:HD23 | 1.88 | 0.54 |
| 3:B:1074:LYS:CB | 3:B:1076:LYS:HE2 | 2.31 | 0.54 |
| 3:B:182:ASN:HD22 | 3:B:182:ASN:N | 2.06 | 0.54 |
| 3:B:295:LYS:HG3 | 3:B:296:TYR:CD1 | 2.43 | 0.54 |
| 2:C:258:LEU:HB2 | 2:C:279:GLU:OE2 | 2.07 | 0.54 |
| 2:C:55:ALA:O | 2:C:58:GLU:N | 2.41 | 0.54 |
| 1:Q:276:TYR:HD2 | 1:Q:277:PHE:CD1 | 2.25 | 0.54 |
| 1:Q:727:VAL:O | 1:Q:729:ALA:O | 2.26 | 0.54 |
| 1:Q:26:ALA:HA | 1:Q:74:HIS:CE1 | 2.43 | 0.54 |
| 1:Q:833:GLU:OE2 | 1:Q:839:ARG:HB2 | 2.08 | 0.54 |
| 3:R:1095:TYR:CE1 | 3:R:1098:LYS:HD2 | 2.42 | 0.54 |
| 3:R:354:PHE:O | 3:R:355:ARG:C | 2.46 | 0.54 |
| 3:R:353:LEU:HA | 3:R:404:VAL:HG11 | 1.90 | 0.54 |
| 3:R:696:HIS:HE2 | 3:R:753:THR:HG1 | 1.54 | 0.54 |
| 3:R:814:VAL:HA | 3:R:834:ASP:O | 2.08 | 0.54 |
| 3:R:677:LEU:HD12 | 3:R:992:LYS:HD3 | 1.88 | 0.54 |
| 4:S:125:SER:O | 4:S:127:ASP:N | 2.37 | 0.54 |
| 4:S:42:ASP:OD2 | 4:S:146:ARG:NE | 2.38 | 0.54 |
| 5:T:109:HIS:HD2 | 5:T:111:SER:OG | 1.91 | 0.54 |
| 1:A:239:LEU:HD12 | 1:A:276:TYR:HE1 | 1.73 | 0.53 |
| 1:A:288:LYS:HD3 | 1:A:294:PRO:HG3 | 1.89 | 0.53 |
| 1:A:332:ILE:HD12 | 1:A:332:ILE:N | 2.23 | 0.53 |
| 1:A:369:PRO:HB3 | 1:A:376:ASN:CB | 2.28 | 0.53 |
| 1:A:541:ALA:HB1 | 1:A:542:PRO:CD | 2.37 | 0.53 |
| 1:A:732:GLY:O | 1:A:733:ALA:C | 2.45 | 0.53 |
| 1:A:747:LEU:CD1 | 1:A:790:LEU:HD11 | 2.38 | 0.53 |
| 1:A:74:HIS:O | 1:A:75:ILE:HD12 | 2.08 | 0.53 |
| 3:B:130:ILE:HA | 3:B:133:TYR:CE1 | 2.43 | 0.53 |
| 3:B:910:LEU:CD2 | 3:B:911:ASN:N | 2.71 | 0.53 |
| 2:C:297:ILE:O | 2:C:301:LEU:HG | 2.08 | 0.53 |
| 4:D:125:SER:C | 4:D:127:ASP:H | 2.11 | 0.53 |
| 4:D:34:LEU:O | 4:D:150:GLY:N | 2.41 | 0.53 |
| 2:G:109:GLU:O | 2:G:113:ALA:CA | 2.56 | 0.53 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 2:G:28:ILE:HD13 | 8:W:14:HIS:CG | 2.42 | 0.53 |
| 8:K:78:ILE:O | 8:K:89:LEU:HA | 2.07 | 0.53 |
| 10:N:21:PHE:O | 10:N:25:VAL:HG23 | 2.08 | 0.53 |
| 1:Q:234:ASP:C | 1:Q:236:THR:N | 2.62 | 0.53 |
| 1:Q:548:GLY:C | 1:Q:550:GLN:N | 2.61 | 0.53 |
| 3:R:1022:ARG:O | 3:R:1022:ARG:HG2 | 2.08 | 0.53 |
| 3:R:1041:THR:HG23 | 3:R:1041:THR:O | 2.08 | 0.53 |
| 3:R:588:LEU:HD22 | 3:R:612:LYS:HG2 | 1.90 | 0.53 |
| 3:R:800:PRO:HG2 | 11:Z:37:VAL:CA | 2.37 | 0.53 |
| 3:R:803:GLU:HB3 | 3:R:805:LYS:HZ2 | 1.71 | 0.53 |
| 7:V:25:ILE:N | 7:V:25:ILE:HD12 | 2.23 | 0.53 |
| 9:X:3:ILE:CD1 | 9:X:17:ILE:HG23 | 2.37 | 0.53 |
| 1:A:238:LYS:O | 1:A:242:ILE:HG13 | 2.09 | 0.53 |
| 1:A:316:LYS:HZ3 | 3:B:1049:LEU:HD12 | 1.72 | 0.53 |
| 1:A:358:ILE:O | 1:A:362:ARG:HG3 | 2.08 | 0.53 |
| 1:A:632:PHE:HA | 1:A:635:PHE:CE1 | 2.42 | 0.53 |
| 1:A:763:THR:CG2 | 1:A:772:TYR:HA | 2.39 | 0.53 |
| 1:A:775:SER:OG | 1:A:777:GLU:HG2 | 2.07 | 0.53 |
| 3:B:246:PRO:O | 3:B:248:VAL:N | 2.35 | 0.53 |
| 3:B:489:LEU:HB3 | 3:B:494:VAL:HG21 | 1.89 | 0.53 |
| 3:B:81:SER:H | 3:B:84:GLU:HB2 | 1.74 | 0.53 |
| 2:C:103:GLY:HA2 | 2:C:106:ARG:HB3 | 1.90 | 0.53 |
| 2:C:109:GLU:O | 2:C:113:ALA:CA | 2.56 | 0.53 |
| 2:C:349:VAL:CG2 | 2:C:352:LYS:HB2 | 2.38 | 0.53 |
| 5:E:145:ARG:NH1 | 5:E:145:ARG:HB2 | 2.23 | 0.53 |
| 6:F:18:LYS:HD2 | 6:F:45:GLU:HG2 | 1.90 | 0.53 |
| 6:F:31:SER:CA | 6:F:35:GLN:HE21 | 2.20 | 0.53 |
| 2:G:64:ILE:HG22 | 2:G:65:ALA:N | 2.22 | 0.53 |
| 7:H:13:ILE:HG23 | 7:H:14:HIS:N | 2.23 | 0.53 |
| 1:Q:416:ILE:HG12 | 1:Q:477:LYS:HB2 | 1.90 | 0.53 |
| 1:Q:540:LEU:O | 1:Q:541:ALA:O | 2.26 | 0.53 |
| 1:Q:670:VAL:HG23 | 1:Q:671:GLU:N | 2.24 | 0.53 |
| 3:R:588:LEU:CD1 | 3:R:612:LYS:HB3 | 2.32 | 0.53 |
| 3:R:691:ARG:NH1 | 3:R:756:ARG:HH21 | 2.06 | 0.53 |
| 3:R:737:SER:HA | 3:R:886:GLY:HA3 | 1.90 | 0.53 |
| 3:R:940:VAL:HG21 | 3:R:953:LEU:HD11 | 1.90 | 0.53 |
| 4:S:170:VAL:CG2 | 4:S:200:GLU:HG3 | 2.39 | 0.53 |
| 4:S:18:GLU:HG3 | 4:S:225:LYS:HG2 | 1.90 | 0.53 |
| 5:T:117:THR:HG21 | 5:T:130:GLU:CG | 2.39 | 0.53 |
| 7:V:15:TYR:HD2 | 7:V:16:LEU:HD12 | 1.73 | 0.53 |
| 7:V:44:TRP:O | 7:V:79:ARG:HD3 | 2.07 | 0.53 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 2:G:285:GLY:HA2 | 7:V:50:PRO:HD2 | 1.89 | 0.53 |
| 3:R:904:VAL:CG2 | 10:Y:42:ARG:HE | 2.21 | 0.53 |
| 1:A:539:ILE:CB | 1:A:545:TYR:HB2 | 2.35 | 0.53 |
| 1:A:609:GLU:CD | 1:A:614:TRP:HZ2 | 2.11 | 0.53 |
| 1:A:84:VAL:O | 1:A:87:VAL:HG12 | 2.09 | 0.53 |
| 3:B:1069:TRP:CD1 | 3:B:1088:LEU:HD13 | 2.42 | 0.53 |
| 3:B:291:GLN:HB3 | 3:B:295:LYS:CE | 2.38 | 0.53 |
| 3:B:419:TRP:HZ3 | 3:B:712:GLY:CA | 2.21 | 0.53 |
| 3:B:906:PRO:HD3 | 3:B:985:PHE:CZ | 2.42 | 0.53 |
| 2:C:390:MET:HA | 2:C:390:MET:HE2 | 1.89 | 0.53 |
| 6:F:14:TYR:HE2 | 6:F:40:TYR:HH | 1.56 | 0.53 |
| 2:G:24:LEU:N | 2:G:25:PRO:HD2 | 2.24 | 0.53 |
| 2:G:392:PRO:O | 2:G:393:ILE:O | 2.26 | 0.53 |
| 7:H:38:ARG:NH1 | 7:H:38:ARG:HG2 | 2.23 | 0.53 |
| 8:K:53:ILE:HG22 | 8:K:54:ASN:N | 2.22 | 0.53 |
| 1:Q:358:ILE:HD12 | 1:Q:403:PRO:HD3 | 1.91 | 0.53 |
| 1:Q:763:THR:HG22 | 1:Q:772:TYR:H | 1.71 | 0.53 |
| 3:R:1061:CYS:N | 3:R:1088:LEU:HD23 | 2.24 | 0.53 |
| 3:R:1087:ASN:C | 3:R:1088:LEU:HG | 2.28 | 0.53 |
| 3:R:153:ILE:O | 3:R:153:ILE:HG22 | 2.07 | 0.53 |
| 3:R:198:VAL:N | 3:R:199:PRO:CD | 2.71 | 0.53 |
| 3:R:669:GLN:C | 3:R:671:ALA:H | 2.10 | 0.53 |
| 3:R:680:TYR:CE2 | 3:R:692:ALA:HB1 | 2.43 | 0.53 |
| 3:R:696:HIS:CG | 4:S:57:ILE:HD11 | 2.42 | 0.53 |
| 3:R:804:VAL:HG23 | 3:R:847:VAL:HG23 | 1.90 | 0.53 |
| 3:R:926:GLU:HB3 | 3:R:988:VAL:HG22 | 1.90 | 0.53 |
| 4:S:34:LEU:O | 4:S:150:GLY:N | 2.40 | 0.53 |
| 5:T:81:VAL:O | 5:T:82:GLN:HB2 | 2.09 | 0.53 |
| 1:A:838:VAL:HG13 | 2:C:70:ILE:HD11 | 1.91 | 0.53 |
| 3:B:541:ARG:NH2 | 3:B:557:HIS:HD2 | 2.06 | 0.53 |
| 3:B:558:ILE:HG12 | 3:B:567:HIS:HD2 | 1.72 | 0.53 |
| 3:B:557:HIS:ND1 | 3:B:566:VAL:HG13 | 2.23 | 0.53 |
| 3:B:63:ILE:HG13 | 3:B:98:LEU:HB2 | 1.90 | 0.53 |
| 3:B:657:TYR:HA | 3:B:659:GLU:OE2 | 2.07 | 0.53 |
| 3:B:895:VAL:HG11 | 4:D:34:LEU:CD2 | 2.39 | 0.53 |
| 1:A:728:MET:HE3 | 3:B:913:HIS:ND1 | 2.23 | 0.53 |
| 3:B:85:ALA:CB | 3:B:92:TYR:HB2 | 2.39 | 0.53 |
| 2:C:120:PRO:CB | 2:C:256:SER:HB3 | 2.37 | 0.53 |
| 2:C:349:VAL:HG13 | 2:C:353:HIS:CD2 | 2.44 | 0.53 |
| 4:D:42:ASP:OD2 | 4:D:146:ARG:NE | 2.39 | 0.53 |
| 4:D:169:LYS:O | 4:D:219:ILE:HA | 2.08 | 0.53 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 4:D:16:VAL:HG13 | 4:D:167:TYR:CE1 | 2.44 | 0.53 |
| 2:G:31:ASP:C | 2:G:33:LYS:N | 2.61 | 0.53 |
| 2:G:374:ILE:HG22 | 2:G:375:ILE:N | 2.22 | 0.53 |
| 2:G:64:ILE:CG2 | 2:G:65:ALA:N | 2.72 | 0.53 |
| 1:Q:220:ARG:N | 1:Q:221:PRO:CD | 2.70 | 0.53 |
| 1:Q:417:VAL:CG1 | 1:Q:464:LEU:CD1 | 2.86 | 0.53 |
| 1:Q:537:PRO:HB2 | 1:Q:540:LEU:CD2 | 2.38 | 0.53 |
| 1:Q:647:ARG:NH2 | 4:S:211:ARG:HH12 | 2.07 | 0.53 |
| 3:R:188:LYS:HA | 3:R:203:GLU:O | 2.09 | 0.53 |
| 3:R:214:PHE:HZ | 3:R:297:PHE:CA | 2.20 | 0.53 |
| 3:R:480:ILE:HD11 | 3:R:550:SER:CB | 2.38 | 0.53 |
| 4:S:96:ILE:HG22 | 4:S:116:SER:HA | 1.90 | 0.53 |
| 4:S:13:ILE:CG1 | 4:S:238:PRO:HB2 | 2.37 | 0.53 |
| 1:A:220:ARG:N | 1:A:221:PRO:CD | 2.72 | 0.53 |
| 1:A:18:GLU:O | 1:A:22:MET:HB3 | 2.09 | 0.53 |
| 1:A:245:ILE:CD1 | 1:A:268:LEU:HD13 | 2.38 | 0.53 |
| 1:A:878:TRP:CE2 | 3:R:377:ARG:HD3 | 2.44 | 0.53 |
| 3:B:1054:ASP:HB3 | 3:B:1095:TYR:N | 2.24 | 0.53 |
| 3:B:737:SER:HA | 3:B:886:GLY:HA3 | 1.89 | 0.53 |
| 3:B:739:ILE:HG12 | 3:B:739:ILE:O | 2.08 | 0.53 |
| 4:D:69:SER:O | 4:D:70:GLU:C | 2.46 | 0.53 |
| 2:G:42:ILE:HG22 | 2:G:43:VAL:N | 2.23 | 0.53 |
| 2:G:57:LYS:CE | 2:G:57:LYS:HA | 2.35 | 0.53 |
| 8:K:46:GLY:O | 8:K:47:ALA:O | 2.26 | 0.53 |
| 11:P:42:ILE:O | 11:P:42:ILE:HG23 | 2.09 | 0.53 |
| 1:Q:489:PRO:CA | 1:Q:858:MET:HG3 | 2.37 | 0.53 |
| 1:Q:539:ILE:CB | 1:Q:545:TYR:HB2 | 2.36 | 0.53 |
| 3:R:88:ARG:HB3 | 3:R:90:LEU:HD13 | 1.91 | 0.53 |
| 4:S:107:ARG:N | 4:S:133:LEU:O | 2.32 | 0.53 |
| 6:U:49:ALA:O | 6:U:53:GLN:HB2 | 2.09 | 0.53 |
| 6:U:55:VAL:O | 6:U:59:LEU:HB2 | 2.08 | 0.53 |
| 10:Y:22:ILE:HD13 | 10:Y:22:ILE:H | 1.73 | 0.53 |
| 3:R:747:ARG:HD3 | 10:Y:8:PHE:HA | 1.91 | 0.53 |
| 1:A:331:ASN:O | 1:A:332:ILE:CB | 2.47 | 0.53 |
| 1:A:407:ILE:C | 1:A:407:ILE:HD12 | 2.29 | 0.53 |
| 3:B:1046:LYS:NZ | 3:B:1051:ASP:OD2 | 2.38 | 0.53 |
| 3:B:1061:CYS:HB2 | 3:B:1079:CYS:SG | 2.49 | 0.53 |
| 3:B:167:LEU:HD12 | 3:B:190:ILE:HD12 | 1.90 | 0.53 |
| 3:B:356:VAL:HG13 | 3:B:357:ALA:N | 2.24 | 0.53 |
| 4:D:195:LEU:O | 4:D:196:SER:O | 2.26 | 0.53 |
| 6:F:57:GLU:C | 6:F:59:LEU:H | 2.12 | 0.53 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 2:G:238:LYS:O | 2:G:239:ARG:HB2 | 2.08 | 0.53 |
| 7:H:15:TYR:HD2 | 7:H:16:LEU:HD12 | 1.74 | 0.53 |
| 2:C:388:LEU:CD1 | 8:K:34:ARG:HG3 | 2.38 | 0.53 |
| 8:K:50:LEU:H | 8:K:50:LEU:HD12 | 1.73 | 0.53 |
| 1:Q:249:LEU:HD12 | 1:Q:269:LEU:HD11 | 1.91 | 0.53 |
| 1:Q:308:ARG:HH11 | 1:Q:308:ARG:HB2 | 1.73 | 0.53 |
| 1:Q:475:GLU:OE1 | 3:R:1043:MET:N | 2.40 | 0.53 |
| 1:Q:87:VAL:HG13 | 1:Q:88:LYS:H | 1.73 | 0.53 |
| 1:Q:206:TRP:CZ3 | 3:R:1108:ILE:HG21 | 2.44 | 0.53 |
| 3:R:537:ALA:HB1 | 3:R:541:ARG:CZ | 2.38 | 0.53 |
| 3:R:768:GLY:O | 3:R:769:GLN:HB2 | 2.08 | 0.53 |
| 3:R:975:THR:O | 4:S:26:ASN:ND2 | 2.41 | 0.53 |
| 4:S:153:HIS:O | 4:S:155:LYS:N | 2.36 | 0.53 |
| 4:S:194:LYS:C | 4:S:196:SER:H | 2.10 | 0.53 |
| 3:R:978:LYS:HZ1 | 4:S:205:LEU:HD13 | 1.73 | 0.53 |
| 3:R:895:VAL:HG11 | 4:S:34:LEU:CG | 2.39 | 0.53 |
| 4:S:78:TRP:N | 4:S:78:TRP:CD1 | 2.76 | 0.53 |
| 5:T:174:TRP:HE3 | 5:T:174:TRP:HA | 1.73 | 0.53 |
| 2:G:390:MET:HG3 | 5:T:56:GLU:HG2 | 1.89 | 0.53 |
| 6:U:23:ASP:O | 6:U:26:ARG:HB2 | 2.09 | 0.53 |
| 1:A:237:HIS:HE1 | 1:A:290:ARG:HH21 | 1.57 | 0.53 |
| 1:A:532:ILE:HD12 | 9:L:12:TYR:OH | 2.09 | 0.53 |
| 1:A:664:GLU:OE2 | 1:A:667:ARG:HD3 | 2.09 | 0.53 |
| 1:A:820:GLN:O | 1:A:824:ILE:HG12 | 2.09 | 0.53 |
| 3:B:1012:LEU:HD13 | 3:B:1012:LEU:C | 2.28 | 0.53 |
| 3:B:134:THR:HG22 | 3:B:137:LYS:HG3 | 1.89 | 0.53 |
| 3:B:904:VAL:HG21 | 10:N:42:ARG:HG2 | 1.89 | 0.53 |
| 2:C:70:ILE:HD13 | 2:C:71:GLY:N | 2.24 | 0.53 |
| 4:D:117:GLU:O | 4:D:119:PRO:HD3 | 2.08 | 0.53 |
| 5:E:168:TYR:O | 5:E:175:ILE:HD13 | 2.09 | 0.53 |
| 5:E:87:GLY:HA2 | 6:F:40:TYR:HE1 | 1.73 | 0.53 |
| 9:L:38:VAL:O | 9:L:40:PHE:N | 2.42 | 0.53 |
| 9:L:61:GLY:O | 9:L:62:SER:C | 2.46 | 0.53 |
| 3:R:167:LEU:HD12 | 3:R:190:ILE:HD12 | 1.91 | 0.53 |
| 3:R:91:THR:HA | 3:R:155:ASN:H | 1.73 | 0.53 |
| 4:S:3:ILE:CD1 | 9:X:83:TYR:HA | 2.39 | 0.53 |
| 4:S:80:GLU:O | 4:S:83:ILE:HB | 2.09 | 0.53 |
| 5:T:102:GLY:HA2 | 6:U:40:TYR:CB | 2.39 | 0.53 |
| 7:V:42:LEU:HD13 | 7:V:79:ARG:O | 2.08 | 0.53 |
| 9:X:38:VAL:O | 9:X:40:PHE:N | 2.42 | 0.53 |
| 9:X:92:LYS:HD2 | 9:X:92:LYS:N | 2.24 | 0.53 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 1:A:369:PRO:HG3 | 1:A:389:ARG:HA | 1.90 | 0.53 |
| 1:A:656:ASP:HA | 1:A:659:LYS:CD | 2.39 | 0.53 |
| 1:A:872:PHE:HA | 1:A:876:VAL:CG2 | 2.39 | 0.53 |
| 3:B:282:ARG:HD3 | 3:B:285:ARG:CD | 2.39 | 0.53 |
| 3:B:286:ILE:O | 3:B:289:ALA:HB3 | 2.09 | 0.53 |
| 3:B:707:ALA:C | 3:B:709:ASP:H | 2.12 | 0.53 |
| 2:C:16:LYS:HZ3 | 3:R:75:ARG:HH12 | 1.56 | 0.53 |
| 4:D:94:THR:OG1 | 4:D:95:LYS:N | 2.42 | 0.53 |
| 5:E:141:LYS:HB2 | 5:E:172:LEU:CD1 | 2.38 | 0.53 |
| 6:F:55:VAL:O | 6:F:59:LEU:HB2 | 2.08 | 0.53 |
| 2:G:109:GLU:O | 2:G:113:ALA:N | 2.41 | 0.53 |
| 2:G:30:ASP:O | 2:G:31:ASP:HB3 | 2.09 | 0.53 |
| 7:H:42:LEU:HD22 | 7:H:79:ARG:O | 2.09 | 0.53 |
| 9:L:3:ILE:CD1 | 9:L:17:ILE:HG23 | 2.38 | 0.53 |
| 4:D:21:PRO:HG3 | 9:L:79:MET:CE | 2.39 | 0.53 |
| 11:P:8:LYS:HD3 | 11:P:13:PHE:HB3 | 1.91 | 0.53 |
| 1:Q:352:ARG:HA | 1:Q:406:ILE:HA | 1.91 | 0.53 |
| 1:Q:377:TYR:CE1 | 1:Q:385:ARG:HG2 | 2.43 | 0.53 |
| 1:Q:525:LEU:C | 1:Q:527:VAL:N | 2.63 | 0.53 |
| 1:Q:637:ARG:HD3 | 1:Q:640:GLU:OE1 | 2.08 | 0.53 |
| 3:R:1061:CYS:HA | 3:R:1088:LEU:HD23 | 1.91 | 0.53 |
| 3:R:1061:CYS:HB3 | 3:R:1064:CYS:C | 2.30 | 0.53 |
| 3:R:1077:TYR:CD1 | 3:R:1077:TYR:O | 2.62 | 0.53 |
| 3:R:220:LYS:O | 3:R:275:ARG:NH1 | 2.42 | 0.53 |
| 3:R:52:GLU:CB | 3:R:56:LEU:HB3 | 2.38 | 0.53 |
| 3:R:592:GLU:O | 3:R:596:LYS:HG3 | 2.09 | 0.53 |
| 4:S:33:MET:O | 4:S:150:GLY:HA3 | 2.09 | 0.53 |
| 5:T:134:LYS:HD3 | 5:T:174:TRP:HE1 | 1.74 | 0.53 |
| 5:T:88:GLU:H | 5:T:99:VAL:CG1 | 2.22 | 0.53 |
| 10:Y:13:LEU:O | 10:Y:14:ILE:HD13 | 2.08 | 0.53 |
| 10:Y:62:TYR:O | 10:Y:63:THR:OG1 | 2.15 | 0.53 |
| 1:A:342:ILE:N | 1:A:342:ILE:HD13 | 2.24 | 0.53 |
| 1:A:345:LYS:HG2 | 1:A:410:HIS:CD2 | 2.44 | 0.53 |
| 1:A:552:ILE:C | 1:A:554:ALA:H | 2.11 | 0.53 |
| 1:A:607:GLN:O | 1:A:609:GLU:N | 2.42 | 0.53 |
| 1:A:667:ARG:HH11 | 1:A:667:ARG:HG2 | 1.74 | 0.53 |
| 1:A:820:GLN:HA | 1:A:823:LEU:HD11 | 1.90 | 0.53 |
| 1:A:828:SER:O | 1:A:830:LEU:N | 2.37 | 0.53 |
| 3:B:104:GLU:O | 3:B:105:ASN:CB | 2.57 | 0.53 |
| 3:B:1061:CYS:HB3 | 3:B:1065:GLY:CA | 2.39 | 0.53 |
| 3:B:461:GLY:O | 3:B:464:SER:HB3 | 2.09 | 0.53 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 3:B:474:ALA:HB2 | 3:B:578:PRO:HG3 | 1.91 | 0.53 |
| 3:B:555:VAL:CG2 | 3:B:568:VAL:HG22 | 2.39 | 0.53 |
| 6:F:23:ASP:O | 6:F:26:ARG:HB2 | 2.09 | 0.53 |
| 7:H:65:ILE:N | 7:H:65:ILE:CD1 | 2.72 | 0.53 |
| 2:C:287:GLU:OE1 | 7:H:67:ARG:NH2 | 2.41 | 0.53 |
| 1:Q:249:LEU:HD21 | 1:Q:265:LEU:CB | 2.39 | 0.53 |
| 1:Q:365:VAL:HG11 | 1:Q:401:LEU:CD1 | 2.30 | 0.53 |
| 1:Q:469:SER:O | 1:Q:473:ILE:HG13 | 2.09 | 0.53 |
| 1:Q:626:TRP:O | 1:Q:627:LEU:C | 2.47 | 0.53 |
| 1:Q:825:ASN:O | 1:Q:828:SER:HB3 | 2.08 | 0.53 |
| 3:R:555:VAL:CG2 | 3:R:568:VAL:HG22 | 2.38 | 0.53 |
| 3:R:5:LEU:N | 3:R:5:LEU:HD13 | 2.23 | 0.53 |
| 3:R:669:GLN:HE21 | 3:R:669:GLN:HA | 1.73 | 0.53 |
| 3:R:725:ALA:CB | 3:R:906:PRO:HB3 | 2.38 | 0.53 |
| 8:W:77:THR:HG23 | 8:W:90:LEU:O | 2.08 | 0.53 |
| 10:Y:7:CYS:CB | 10:Y:45:CYS:SG | 2.96 | 0.53 |
| 1:A:26:ALA:HA | 1:A:74:HIS:CE1 | 2.43 | 0.53 |
| 1:A:575:CYS:SG | 1:A:584:SER:HB3 | 2.49 | 0.53 |
| 1:A:451:PRO:HG2 | 1:A:605:ASN:OD1 | 2.09 | 0.53 |
| 1:A:612:LEU:C | 1:A:612:LEU:HD23 | 2.29 | 0.53 |
| 3:B:354:PHE:O | 3:B:355:ARG:C | 2.47 | 0.53 |
| 3:B:592:GLU:O | 3:B:596:LYS:HG3 | 2.08 | 0.53 |
| 3:B:628:LEU:CD2 | 3:B:628:LEU:H | 2.08 | 0.53 |
| 3:B:64:ARG:N | 3:B:97:TRP:HB2 | 2.24 | 0.53 |
| 2:C:368:GLY:O | 2:C:372:ASN:HB2 | 2.08 | 0.53 |
| 2:C:382:GLY:C | 2:C:384:GLY:H | 2.12 | 0.53 |
| 7:H:69:SER:HB2 | 7:H:75:VAL:CG2 | 2.38 | 0.53 |
| 3:B:853:THR:OG1 | 11:P:33:ILE:HD13 | 2.08 | 0.53 |
| 11:P:6:CYS:O | 11:P:37:VAL:HG12 | 2.09 | 0.53 |
| 1:Q:93:PHE:CE2 | 1:Q:204:PRO:HB3 | 2.44 | 0.53 |
| 1:Q:649:GLU:HA | 1:Q:652:SER:OG | 2.09 | 0.53 |
| 1:Q:781:PHE:CD2 | 1:Q:781:PHE:C | 2.82 | 0.53 |
| 1:Q:819:MET:HA | 1:Q:822:ARG:HE | 1.74 | 0.53 |
| 1:Q:828:SER:O | 1:Q:830:LEU:N | 2.39 | 0.53 |
| 3:R:1069:TRP:NE1 | 3:R:1088:LEU:HD13 | 2.23 | 0.53 |
| 3:R:92:TYR:OH | 3:R:128:ASP:OD2 | 2.26 | 0.53 |
| 3:R:14:ILE:HG23 | 3:R:15:GLU:N | 2.24 | 0.53 |
| 3:R:234:THR:O | 3:R:237:ASP:HB2 | 2.09 | 0.53 |
| 3:R:355:ARG:CB | 3:R:355:ARG:HH11 | 2.19 | 0.53 |
| 3:R:433:LEU:HD12 | 3:R:435:ARG:HH22 | 1.71 | 0.53 |
| 3:R:545:ARG:CZ | 3:R:581:ILE:HG21 | 2.39 | 0.53 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 3:R:804:VAL:C | 3:R:805:LYS:HD2 | 2.29 | 0.53 |
| 4:S:80:GLU:HA | 4:S:83:ILE:CD1 | 2.39 | 0.53 |
| 6:U:47:CYS:HB2 | 6:U:52:ALA:HB2 | 1.90 | 0.53 |
| 4:S:66:PRO:HG2 | 10:Y:13:LEU:HD11 | 1.91 | 0.53 |
| 3:B:1074:LYS:HB2 | 3:B:1076:LYS:HG3 | 1.91 | 0.52 |
| 3:B:198:VAL:N | 3:B:199:PRO:CD | 2.73 | 0.52 |
| 3:B:854:GLU:HG3 | 11:P:24:VAL:HG11 | 1.90 | 0.52 |
| 3:B:904:VAL:HG21 | 10:N:42:ARG:NE | 2.20 | 0.52 |
| 3:B:978:LYS:HG2 | 4:D:166:TYR:HE2 | 1.75 | 0.52 |
| 4:D:174:ALA:O | 4:D:195:LEU:HD13 | 2.08 | 0.52 |
| 6:F:18:LYS:HG2 | 6:F:41:LEU:HB3 | 1.90 | 0.52 |
| 2:G:120:PRO:CA | 2:G:275:ASN:ND2 | 2.67 | 0.52 |
| 2:G:38:ASN:N | 2:G:38:ASN:ND2 | 2.56 | 0.52 |
| 8:K:90:LEU:N | 8:K:90:LEU:CD2 | 2.56 | 0.52 |
| 9:L:5:ILE:O | 9:L:5:ILE:HD13 | 2.10 | 0.52 |
| 9:L:64:THR:CG2 | 9:L:65:PRO:HD2 | 2.32 | 0.52 |
| 1:Q:184:LEU:HD22 | 1:Q:204:PRO:HB2 | 1.90 | 0.52 |
| 1:Q:279:ASN:HB2 | 1:Q:297:THR:HG21 | 1.92 | 0.52 |
| 1:Q:672:VAL:O | 1:Q:673:ASP:C | 2.48 | 0.52 |
| 3:R:305:ALA:O | 3:R:308:ARG:HG3 | 2.08 | 0.52 |
| 3:R:27:HIS:O | 3:R:30:SER:HB3 | 2.09 | 0.52 |
| 3:R:895:VAL:HG11 | 4:S:34:LEU:CD2 | 2.39 | 0.52 |
| 3:R:898:PRO:HB2 | 3:R:970:VAL:HG21 | 1.91 | 0.52 |
| 4:S:237:LYS:O | 4:S:240:ARG:HB3 | 2.08 | 0.52 |
| 4:S:38:ILE:O | 4:S:147:LEU:HD23 | 2.09 | 0.52 |
| 4:S:98:ILE:HB | 4:S:141:LEU:HD11 | 1.90 | 0.52 |
| 5:T:77:TYR:O | 5:T:78:VAL:HG23 | 2.09 | 0.52 |
| 1:A:308:ARG:NH2 | 3:B:1012:LEU:HD11 | 2.23 | 0.52 |
| 1:A:335:ASP:OD1 | 1:A:482:VAL:HB | 2.09 | 0.52 |
| 1:A:646:MET:HE2 | 1:A:725:ALA:HB2 | 1.90 | 0.52 |
| 3:B:1080:PRO:C | 3:B:1081:ILE:HG13 | 2.30 | 0.52 |
| 3:B:537:ALA:CB | 3:B:557:HIS:NE2 | 2.66 | 0.52 |
| 2:C:352:LYS:O | 2:C:354:LEU:N | 2.42 | 0.52 |
| 4:D:39:MET:N | 4:D:69:SER:OG | 2.42 | 0.52 |
| 5:E:46:LEU:HD11 | 5:E:77:TYR:HB2 | 1.91 | 0.52 |
| 2:G:115:LYS:O | 2:G:115:LYS:HG3 | 2.08 | 0.52 |
| 2:G:111:VAL:HG13 | 2:G:329:ILE:CD1 | 2.38 | 0.52 |
| 3:R:245:ASP:CG | 3:R:515:LEU:HG | 2.29 | 0.52 |
| 3:R:590:THR:O | 3:R:593:ASP:HB2 | 2.10 | 0.52 |
| 3:R:64:ARG:HB2 | 3:R:97:TRP:CD1 | 2.43 | 0.52 |
| 3:R:855:THR:HB | 3:R:857:GLU:CG | 2.39 | 0.52 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 4:S:240:ARG:O | 4:S:243:LEU:HB3 | 2.09 | 0.52 |
| 11:Z:20:VAL:C | 11:Z:21:LEU:HD23 | 2.30 | 0.52 |
| 1:A:301:ARG:O | 1:A:302:LEU:CG | 2.56 | 0.52 |
| 1:A:759:ARG:H | 1:A:779:ARG:HH21 | 1.56 | 0.52 |
| 1:A:807:VAL:HG13 | 3:B:443:ARG:NH1 | 2.24 | 0.52 |
| 1:A:856:PHE:HB3 | 1:A:859:TYR:CD1 | 2.43 | 0.52 |
| 3:B:165:GLU:O | 3:B:432:SER:HB2 | 2.09 | 0.52 |
| 3:B:17:TYR:HB2 | 3:B:604:PHE:CD1 | 2.45 | 0.52 |
| 3:B:181:SER:O | 3:B:182:ASN:HB2 | 2.09 | 0.52 |
| 3:B:184:THR:N | 3:B:207:ASP:O | 2.42 | 0.52 |
| 3:B:174:VAL:HG11 | 3:B:325:LEU:HD23 | 1.90 | 0.52 |
| 3:B:380:ALA:O | 3:B:383:ALA:N | 2.42 | 0.52 |
| 3:B:432:SER:O | 3:B:435:ARG:NE | 2.43 | 0.52 |
| 3:B:935:LEU:HD23 | 10:N:43:TYR:HB3 | 1.91 | 0.52 |
| 1:A:859:TYR:HB2 | 2:C:64:ILE:HG13 | 1.91 | 0.52 |
| 4:D:98:ILE:HB | 4:D:141:LEU:HD11 | 1.91 | 0.52 |
| 4:D:165:ARG:HE | 4:D:227:ILE:HB | 1.74 | 0.52 |
| 2:C:383:THR:O | 5:E:61:PHE:HZ | 1.92 | 0.52 |
| 6:F:30:SER:OG | 6:F:31:SER:N | 2.42 | 0.52 |
| 2:G:132:ARG:HA | 2:G:249:TYR:HD1 | 1.71 | 0.52 |
| 7:H:43:PRO:HB2 | 7:H:78:TYR:O | 2.09 | 0.52 |
| 1:Q:203:ARG:NH1 | 1:Q:203:ARG:HG3 | 2.16 | 0.52 |
| 1:Q:409:ARG:HH21 | 1:Q:412:ILE:CG1 | 2.22 | 0.52 |
| 1:Q:856:PHE:HD1 | 1:Q:858:MET:HB2 | 1.73 | 0.52 |
| 1:Q:872:PHE:CD2 | 1:Q:876:VAL:HG21 | 2.43 | 0.52 |
| 3:R:1061:CYS:HB2 | 3:R:1079:CYS:SG | 2.49 | 0.52 |
| 1:Q:206:TRP:CH2 | 3:R:1108:ILE:HG21 | 2.45 | 0.52 |
| 3:R:193:THR:HG21 | 3:R:197:ARG:N | 2.24 | 0.52 |
| 3:R:196:TYR:CE2 | 3:R:303:THR:HG21 | 2.44 | 0.52 |
| 3:R:582:VAL:CG1 | 3:R:586:ASN:H | 2.08 | 0.52 |
| 3:R:603:THR:O | 3:R:604:PHE:C | 2.46 | 0.52 |
| 3:R:688:THR:O | 3:R:688:THR:HG23 | 2.10 | 0.52 |
| 3:R:840:ARG:HH11 | 3:R:1021:ALA:HB2 | 1.73 | 0.52 |
| 4:S:106:PRO:HA | 4:S:134:GLY:HA2 | 1.90 | 0.52 |
| 4:S:206:CYS:O | 4:S:207:GLU:CB | 2.57 | 0.52 |
| 4:S:30:ARG:NH1 | 9:X:21:ASP:OD1 | 2.42 | 0.52 |
| 6:U:30:SER:HB2 | 6:U:34:LEU:HD12 | 1.90 | 0.52 |
| 6:U:46:LYS:HE3 | 6:U:75:ILE:O | 2.10 | 0.52 |
| 2:G:288:ALA:HA | 7:V:16:LEU:O | 2.10 | 0.52 |
| 10:Y:35:LEU:O | 10:Y:38:LEU:O | 2.27 | 0.52 |
| 1:A:19:ILE:HA | 1:A:22:MET:CE | 2.39 | 0.52 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:52:ILE:H | 1:A:52:ILE:HD13 | 1.74 | 0.52 |
| 3:B:112:GLU:O | 3:B:114:VAL:HG23 | 2.10 | 0.52 |
| 3:B:28:LEU:C | 3:B:30:SER:H | 2.11 | 0.52 |
| 3:B:551:ASP:OD2 | 3:B:551:ASP:N | 2.42 | 0.52 |
| 1:A:734:ARG:HG3 | 3:B:917:SER:HB3 | 1.92 | 0.52 |
| 2:C:374:ILE:HG22 | 2:C:375:ILE:N | 2.23 | 0.52 |
| 4:D:160:SER:HB3 | 4:D:233:VAL:HG12 | 1.90 | 0.52 |
| 4:D:80:GLU:O | 4:D:83:ILE:HB | 2.10 | 0.52 |
| 5:E:174:TRP:CE3 | 5:E:174:TRP:HA | 2.44 | 0.52 |
| 6:F:48:ASP:H | 6:F:51:SER:HG | 1.56 | 0.52 |
| 2:G:337:GLU:OE2 | 2:G:339:ASN:ND2 | 2.42 | 0.52 |
| 2:G:368:GLY:O | 2:G:372:ASN:HB2 | 2.10 | 0.52 |
| 2:C:311:ARG:NH1 | 7:H:71:LEU:HD13 | 2.24 | 0.52 |
| 2:C:386:VAL:HG21 | 8:K:31:GLU:HA | 1.91 | 0.52 |
| 9:L:24:LEU:O | 9:L:28:ILE:HG12 | 2.09 | 0.52 |
| 3:B:930:GLY:HA2 | 10:N:47:ARG:NH2 | 2.24 | 0.52 |
| 1:Q:354:THR:O | 1:Q:355:PRO:O | 2.28 | 0.52 |
| 1:Q:414:GLY:HA2 | 1:Q:434:ARG:NE | 2.24 | 0.52 |
| 1:Q:49:LEU:HD22 | 1:Q:71:HIS:O | 2.09 | 0.52 |
| 1:Q:607:GLN:O | 1:Q:609:GLU:N | 2.42 | 0.52 |
| 1:Q:761:TYR:O | 3:R:622:GLU:OE1 | 2.28 | 0.52 |
| 3:R:1059:TYR:CD2 | 3:R:1090:PRO:HG3 | 2.44 | 0.52 |
| 3:R:94:ALA:O | 3:R:119:LEU:N | 2.43 | 0.52 |
| 3:R:643:TRP:CZ3 | 3:R:645:PRO:HB2 | 2.44 | 0.52 |
| 3:R:852:ILE:HD12 | 11:Z:35:PHE:HA | 1.91 | 0.52 |
| 3:R:871:ILE:HG22 | 3:R:872:PRO:HD2 | 1.90 | 0.52 |
| 3:R:749:MET:HE1 | 3:R:907:ASP:HB3 | 1.92 | 0.52 |
| 4:S:22:LEU:C | 4:S:24:PHE:H | 2.13 | 0.52 |
| 5:T:17:GLU:CB | 5:T:20:LYS:HD2 | 2.39 | 0.52 |
| 1:A:420:ASN:HD22 | 1:A:421:ARG:N | 2.07 | 0.52 |
| 1:A:563:HIS:CD2 | 1:A:587:VAL:HG13 | 2.44 | 0.52 |
| 1:A:720:ASP:C | 1:A:722:PHE:H | 2.12 | 0.52 |
| 3:B:215:PRO:O | 3:B:216:ALA:HB3 | 2.09 | 0.52 |
| 3:B:221:ILE:CG2 | 3:B:226:LEU:HG | 2.30 | 0.52 |
| 3:B:530:TYR:CD2 | 3:B:530:TYR:O | 2.62 | 0.52 |
| 3:B:869:LEU:HD11 | 4:D:56:GLU:CB | 2.32 | 0.52 |
| 3:B:64:ARG:H | 3:B:97:TRP:CB | 2.22 | 0.52 |
| 2:C:392:PRO:HB3 | 5:E:22:LEU:CD1 | 2.37 | 0.52 |
| 4:D:172:ILE:HG21 | 4:D:195:LEU:HD13 | 1.90 | 0.52 |
| 5:E:113:ILE:O | 5:E:164:MET:HB2 | 2.09 | 0.52 |
| 6:F:14:TYR:H | 6:F:14:TYR:HD1 | 1.57 | 0.52 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 6:F:78:THR:HB | 6:F:82:GLU:OE2 | 2.09 | 0.52 |
| 2:G:311:ARG:HG3 | 2:G:311:ARG:HH11 | 1.74 | 0.52 |
| 2:G:42:ILE:H | 2:G:42:ILE:CD1 | 2.21 | 0.52 |
| 1:Q:249:LEU:HD21 | 1:Q:265:LEU:HB2 | 1.90 | 0.52 |
| 1:A:558:LYS:HE3 | 3:R:106:ASN:H | 1.74 | 0.52 |
| 3:R:1085:LYS:C | 3:R:1087:ASN:H | 2.11 | 0.52 |
| 3:R:834:ASP:O | 3:R:835:THR:HB | 2.10 | 0.52 |
| 4:S:133:LEU:HD21 | 4:S:139:ILE:HD11 | 1.91 | 0.52 |
| 4:S:250:ILE:O | 4:S:254:GLU:HB2 | 2.10 | 0.52 |
| 1:A:94:LEU:HD11 | 1:A:180:ILE:HG23 | 1.91 | 0.52 |
| 1:A:212:LEU:CD2 | 1:A:242:ILE:HD13 | 2.40 | 0.52 |
| 1:A:791:LYS:HB2 | 1:A:794:GLU:HG3 | 1.91 | 0.52 |
| 3:B:1014:ARG:HG3 | 3:B:1095:TYR:CE2 | 2.43 | 0.52 |
| 3:B:222:PRO:HD2 | 3:B:225:ILE:HD12 | 1.90 | 0.52 |
| 3:B:391:THR:O | 3:B:394:ILE:HG22 | 2.09 | 0.52 |
| 5:E:127:ILE:H | 5:E:136:ILE:HB | 1.74 | 0.52 |
| 5:E:17:GLU:HG2 | 5:E:20:LYS:HZ2 | 1.74 | 0.52 |
| 2:G:42:ILE:HD12 | 2:G:42:ILE:N | 2.25 | 0.52 |
| 10:N:21:PHE:CZ | 10:N:38:LEU:HD13 | 2.44 | 0.52 |
| 3:B:717:PRO:HD3 | 10:N:53:VAL:HG11 | 1.92 | 0.52 |
| 1:Q:417:VAL:CG1 | 1:Q:464:LEU:HD13 | 2.39 | 0.52 |
| 3:R:112:GLU:O | 3:R:114:VAL:HG23 | 2.09 | 0.52 |
| 3:R:407:ARG:NH2 | 3:R:433:LEU:HG | 2.24 | 0.52 |
| 3:R:544:ARG:NH2 | 3:R:620:GLU:OE2 | 2.43 | 0.52 |
| 1:A:420:ASN:ND2 | 1:A:421:ARG:N | 2.58 | 0.52 |
| 1:A:465:HIS:HD2 | 3:B:1048:ARG:HD2 | 1.75 | 0.52 |
| 1:A:487:ILE:O | 1:A:858:MET:HE2 | 2.10 | 0.52 |
| 1:A:785:SER:H | 1:A:788:THR:HB | 1.75 | 0.52 |
| 3:B:625:TYR:N | 3:B:625:TYR:CD1 | 2.78 | 0.52 |
| 3:B:683:ASN:C | 3:B:685:GLN:H | 2.13 | 0.52 |
| 3:B:680:TYR:CE2 | 3:B:692:ALA:HB1 | 2.45 | 0.52 |
| 2:C:331:ARG:HH11 | 2:C:331:ARG:CB | 2.22 | 0.52 |
| 2:C:38:ASN:ND2 | 2:C:38:ASN:N | 2.57 | 0.52 |
| 4:D:134:GLY:O | 4:D:135:THR:C | 2.48 | 0.52 |
| 4:D:69:SER:HB2 | 4:D:236:LEU:HD11 | 1.91 | 0.52 |
| 2:C:65:ALA:HB1 | 8:K:19:PHE:CZ | 2.45 | 0.52 |
| 1:Q:319:ASP:HB3 | 3:R:1005:ALA:O | 2.10 | 0.52 |
| 1:Q:372:TRP:HB3 | 1:Q:373:PRO:HD3 | 1.91 | 0.52 |
| 1:Q:507:TYR:O | 1:Q:508:LEU:HB2 | 2.08 | 0.52 |
| 1:Q:687:ILE:CG1 | 1:Q:695:SER:HB3 | 2.40 | 0.52 |
| 1:Q:763:THR:CG2 | 1:Q:772:TYR:HA | 2.40 | 0.52 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 1:Q:468:GLN:HB2 | 3:R:1047:ASP:OD2 | 2.10 | 0.52 |
| 3:R:291:GLN:HB3 | 3:R:295:LYS:CE | 2.39 | 0.52 |
| 3:R:708:LEU:CD1 | 3:R:713:TYR:HB3 | 2.38 | 0.52 |
| 3:R:799:SER:O | 3:R:802:VAL:HG23 | 2.10 | 0.52 |
| 1:Q:739:ASN:HB2 | 3:R:919:MET:SD | 2.49 | 0.52 |
| 4:S:133:LEU:HD21 | 4:S:139:ILE:HG12 | 1.90 | 0.52 |
| 4:S:172:ILE:N | 4:S:172:ILE:HD12 | 2.25 | 0.52 |
| 4:S:203:CYS:O | 4:S:204:THR:HG23 | 2.09 | 0.52 |
| 5:T:39:LEU:HD23 | 5:T:41:ASP:N | 2.24 | 0.52 |
| 9:X:8:SER:HB2 | 9:X:13:LEU:CD1 | 2.39 | 0.52 |
| 1:A:374:GLY:O | 1:A:410:HIS:HB2 | 2.10 | 0.52 |
| 1:A:428:ILE:HG23 | 1:A:452:PRO:HB2 | 1.92 | 0.52 |
| 1:A:830:LEU:HD22 | 1:A:846:VAL:HG21 | 1.91 | 0.52 |
| 3:B:1047:ASP:HA | 3:B:1051:ASP:CB | 2.39 | 0.52 |
| 1:A:6:ILE:HD13 | 3:B:1113:LEU:HD22 | 1.91 | 0.52 |
| 3:B:234:THR:O | 3:B:237:ASP:HB2 | 2.10 | 0.52 |
| 3:B:321:LYS:HD2 | 3:B:330:ARG:NE | 2.24 | 0.52 |
| 3:B:64:ARG:HG2 | 3:B:97:TRP:CG | 2.45 | 0.52 |
| 3:B:713:TYR:OH | 3:B:718:ALA:HB3 | 2.08 | 0.52 |
| 3:B:81:SER:O | 3:B:84:GLU:N | 2.37 | 0.52 |
| 3:B:814:VAL:HA | 3:B:834:ASP:O | 2.10 | 0.52 |
| 3:B:911:ASN:HD22 | 3:B:913:HIS:H | 1.55 | 0.52 |
| 3:B:959:ARG:HG2 | 3:B:959:ARG:NH1 | 2.25 | 0.52 |
| 3:B:993:LEU:N | 3:B:993:LEU:HD12 | 2.24 | 0.52 |
| 2:C:132:ARG:HH11 | 2:C:132:ARG:HG3 | 1.75 | 0.52 |
| 2:C:327:ARG:CZ | 2:C:334:VAL:HG23 | 2.39 | 0.52 |
| 2:C:337:GLU:OE2 | 2:C:339:ASN:CG | 2.47 | 0.52 |
| 4:D:96:ILE:HG22 | 4:D:116:SER:HA | 1.91 | 0.52 |
| 5:E:17:GLU:CB | 5:E:20:LYS:HD2 | 2.39 | 0.52 |
| 1:Q:13:ILE:HD11 | 1:Q:86:LEU:CD1 | 2.40 | 0.52 |
| 3:R:214:PHE:CZ | 3:R:297:PHE:HA | 2.40 | 0.52 |
| 3:R:544:ARG:NH1 | 3:R:544:ARG:HG3 | 2.18 | 0.52 |
| 5:T:88:GLU:HA | 5:T:141:LYS:HA | 1.92 | 0.52 |
| 8:W:38:ALA:HB1 | 8:W:42:GLN:HE22 | 1.75 | 0.52 |
| 1:A:687:ILE:CG1 | 1:A:695:SER:HB3 | 2.40 | 0.52 |
| 1:A:741:THR:O | 1:A:743:MET:N | 2.43 | 0.52 |
| 3:B:448:THR:HG22 | 3:B:449:GLN:H | 1.74 | 0.52 |
| 3:B:708:LEU:CD1 | 3:B:713:TYR:HB3 | 2.38 | 0.52 |
| 2:C:240:ALA:O | 2:C:241:ILE:HG13 | 2.10 | 0.52 |
| 2:C:383:THR:CG2 | 3:B:1042:ALA:H | 2.21 | 0.52 |
| 4:D:187:VAL:HG21 | 14:D:1001:F3S:S4 | 2.50 | 0.52 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 5:E:13:ILE:HG23 | 5:E:25:ILE:HG21 | 1.91 | 0.52 |
| 2:G:132:ARG:HH11 | 2:G:132:ARG:HG3 | 1.74 | 0.52 |
| 2:G:366:PHE:CZ | 2:G:375:ILE:HD12 | 2.45 | 0.52 |
| 1:Q:332:ILE:HD12 | 1:Q:332:ILE:N | 2.25 | 0.52 |
| 4:S:174:ALA:O | 4:S:195:LEU:HD13 | 2.09 | 0.52 |
| 4:S:180:VAL:HG21 | 4:S:190:LEU:HG | 1.90 | 0.52 |
| 4:S:50:ASN:ND2 | 10:Y:64:ARG:NH1 | 2.57 | 0.52 |
| 11:Z:37:VAL:HG22 | 11:Z:38:ARG:H | 1.74 | 0.52 |
| 11:Z:37:VAL:HG22 | 11:Z:38:ARG:N | 2.25 | 0.52 |
| 1:A:500:GLN:CG | 1:A:501:ASP:H | 2.22 | 0.52 |
| 1:A:741:THR:O | 1:A:742:GLN:C | 2.48 | 0.52 |
| 1:A:749:GLN:HA | 1:A:781:PHE:HA | 1.92 | 0.52 |
| 3:B:256:LEU:C | 3:B:258:GLN:H | 2.13 | 0.52 |
| 3:B:603:THR:O | 3:B:604:PHE:C | 2.49 | 0.52 |
| 3:B:729:PHE:CD2 | 3:B:730:THR:HG23 | 2.45 | 0.52 |
| 2:C:145:GLU:HG2 | 2:C:240:ALA:N | 2.21 | 0.52 |
| 2:C:389:THR:HG22 | 8:K:77:THR:HB | 1.92 | 0.52 |
| 2:C:42:ILE:CD1 | 2:C:42:ILE:H | 2.23 | 0.52 |
| 4:D:112:LYS:HB3 | 4:D:126:GLY:O | 2.08 | 0.52 |
| 4:D:182:VAL:O | 4:D:184:PRO:HD3 | 2.09 | 0.52 |
| 5:E:108:VAL:HG22 | 5:E:162:LEU:HB2 | 1.91 | 0.52 |
| 2:G:390:MET:HA | 2:G:390:MET:HE2 | 1.91 | 0.52 |
| 9:L:69:LEU:HD23 | 9:L:69:LEU:C | 2.30 | 0.52 |
| 1:Q:27:ILE:HB | 1:Q:75:ILE:HD12 | 1.91 | 0.52 |
| 1:Q:785:SER:O | 1:Q:787:ARG:N | 2.43 | 0.52 |
| 1:Q:820:GLN:HA | 1:Q:823:LEU:HD11 | 1.91 | 0.52 |
| 3:R:1101:ILE:O | 3:R:1105:MET:HG3 | 2.10 | 0.52 |
| 3:R:345:LEU:O | 3:R:346:ALA:C | 2.48 | 0.52 |
| 3:R:582:VAL:HG11 | 3:R:633:LEU:HD11 | 1.91 | 0.52 |
| 3:R:658:PRO:O | 3:R:660:HIS:N | 2.41 | 0.52 |
| 3:R:69:ARG:O | 3:R:70:VAL:HG13 | 2.10 | 0.52 |
| 3:R:959:ARG:NH1 | 3:R:959:ARG:HG2 | 2.25 | 0.52 |
| 3:R:63:ILE:HA | 3:R:98:LEU:HA | 1.91 | 0.52 |
| 4:S:254:GLU:HG3 | 9:X:77:ARG:HH12 | 1.75 | 0.52 |
| 5:T:39:LEU:CD2 | 5:T:41:ASP:H | 2.20 | 0.52 |
| 8:W:35:VAL:CG2 | 8:W:36:ILE:N | 2.73 | 0.52 |
| 8:W:82:LEU:CD1 | 8:W:84:ASN:HB2 | 2.39 | 0.52 |
| 10:Y:60:ILE:O | 10:Y:62:TYR:N | 2.42 | 0.52 |
| 1:A:387:ASP:OD2 | 1:A:389:ARG:N | 2.43 | 0.51 |
| 1:A:575:CYS:SG | 1:A:582:HIS:HB2 | 2.51 | 0.51 |
| 1:A:647:ARG:HB2 | 1:A:650:ASP:CG | 2.30 | 0.51 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 1:A:206:TRP:CH2 | 3:B:1108:ILE:HG21 | 2.45 | 0.51 |
| 3:B:206:LYS:HE3 | 3:B:220:LYS:HZ2 | 1.75 | 0.51 |
| 3:B:160:VAL:HG21 | 3:B:426:LEU:HD23 | 1.91 | 0.51 |
| 3:B:457:GLU:N | 3:B:457:GLU:OE1 | 2.43 | 0.51 |
| 3:B:852:ILE:HD12 | 11:P:35:PHE:HA | 1.92 | 0.51 |
| 3:B:963:LEU:HD13 | 3:B:982:ARG:NH2 | 2.24 | 0.51 |
| 4:D:133:LEU:HD21 | 4:D:139:ILE:CD1 | 2.40 | 0.51 |
| 4:D:177:GLU:HB2 | 4:D:178:LYS:HZ2 | 1.71 | 0.51 |
| 4:D:35:TYR:HE2 | 9:L:23:THR:HG21 | 1.74 | 0.51 |
| 5:E:9:SER:HB3 | 6:F:3:SER:HB2 | 1.92 | 0.51 |
| 3:B:139:ILE:HD12 | 10:N:61:HIS:NE2 | 2.25 | 0.51 |
| 1:Q:245:ILE:HD12 | 1:Q:272:HIS:CD2 | 2.44 | 0.51 |
| 1:Q:74:HIS:O | 1:Q:75:ILE:HD12 | 2.10 | 0.51 |
| 3:R:1080:PRO:O | 3:R:1081:ILE:CG1 | 2.54 | 0.51 |
| 3:R:557:HIS:ND1 | 3:R:566:VAL:HG13 | 2.25 | 0.51 |
| 3:R:625:TYR:N | 3:R:625:TYR:CD1 | 2.77 | 0.51 |
| 3:R:688:THR:CG2 | 3:R:863:LYS:HZ2 | 2.23 | 0.51 |
| 3:R:6:THR:HB | 3:R:9:GLU:H | 1.74 | 0.51 |
| 3:R:813:LYS:H | 3:R:836:SER:HB3 | 1.74 | 0.51 |
| 3:R:910:LEU:CD2 | 3:R:911:ASN:N | 2.72 | 0.51 |
| 3:R:870:ARG:NH2 | 3:R:996:MET:SD | 2.83 | 0.51 |
| 7:V:43:PRO:O | 7:V:44:TRP:HB2 | 2.10 | 0.51 |
| 7:V:42:LEU:HD22 | 7:V:79:ARG:O | 2.10 | 0.51 |
| 10:Y:44:CYS:SG | 10:Y:45:CYS:N | 2.83 | 0.51 |
| 1:A:276:TYR:HD2 | 1:A:277:PHE:HE1 | 1.51 | 0.51 |
| 1:A:289:HIS:ND1 | 1:A:290:ARG:HG3 | 2.26 | 0.51 |
| 1:A:316:LYS:HE2 | 3:B:1094:SER:HG | 1.75 | 0.51 |
| 1:A:368:GLY:O | 1:A:374:GLY:HA3 | 2.10 | 0.51 |
| 1:A:349:VAL:HG21 | 1:A:409:ARG:NH2 | 2.25 | 0.51 |
| 1:A:471:GLU:OE1 | 8:K:41:LEU:HD13 | 2.10 | 0.51 |
| 1:A:473:ILE:HD12 | 1:A:474:ALA:H | 1.72 | 0.51 |
| 1:A:488:THR:OG1 | 1:A:495:ILE:HD12 | 2.11 | 0.51 |
| 3:B:1060:VAL:C | 3:B:1088:LEU:HD23 | 2.30 | 0.51 |
| 3:B:764:LYS:HD2 | 3:B:771:ASP:CB | 2.40 | 0.51 |
| 2:C:109:GLU:O | 2:C:113:ALA:N | 2.43 | 0.51 |
| 2:C:241:ILE:CG2 | 2:C:242:VAL:H | 2.22 | 0.51 |
| 2:G:258:LEU:HB2 | 2:G:279:GLU:OE2 | 2.11 | 0.51 |
| 2:G:352:LYS:O | 2:G:354:LEU:N | 2.43 | 0.51 |
| 7:H:42:LEU:HB2 | 7:H:43:PRO:HD2 | 1.93 | 0.51 |
| 1:Q:376:ASN:HD22 | 1:Q:376:ASN:N | 2.08 | 0.51 |
| 1:Q:422:GLN:NE2 | 1:Q:463:ASN:HD21 | 2.08 | 0.51 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:Q:575:CYS:SG | 1:Q:582:HIS:HB2 | 2.51 | 0.51 |
| 1:Q:747:LEU:CD1 | 1:Q:790:LEU:HD11 | 2.41 | 0.51 |
| 3:R:116:ILE:HG22 | 3:R:390:VAL:HG21 | 1.91 | 0.51 |
| 3:R:780:VAL:HG12 | 3:R:831:ALA:N | 2.25 | 0.51 |
| 3:R:950:ILE:O | 3:R:952:GLN:N | 2.43 | 0.51 |
| 3:R:98:LEU:HD13 | 3:R:98:LEU:C | 2.31 | 0.51 |
| 3:R:992:LYS:HE3 | 3:R:996:MET:SD | 2.50 | 0.51 |
| 4:S:159:VAL:HG23 | 4:S:231:GLU:O | 2.10 | 0.51 |
| 3:R:963:LEU:CD2 | 4:S:208:GLU:HG3 | 2.40 | 0.51 |
| 9:X:64:THR:CG2 | 9:X:65:PRO:HD2 | 2.33 | 0.51 |
| 10:Y:22:ILE:O | 10:Y:26:ASN:ND2 | 2.42 | 0.51 |
| 1:A:312:ASN:HA | 1:A:315:GLY:O | 2.10 | 0.51 |
| 1:A:491:TYR:HD1 | 1:A:607:GLN:NE2 | 2.08 | 0.51 |
| 1:A:504:SER:O | 1:A:508:LEU:HD12 | 2.10 | 0.51 |
| 3:B:352:SER:O | 3:B:404:VAL:HG11 | 2.11 | 0.51 |
| 3:B:64:ARG:HB2 | 3:B:97:TRP:CD1 | 2.45 | 0.51 |
| 3:B:705:THR:CG2 | 3:B:706:ARG:H | 2.12 | 0.51 |
| 3:B:834:ASP:O | 3:B:835:THR:HB | 2.10 | 0.51 |
| 2:C:106:ARG:HH11 | 2:C:106:ARG:HG2 | 1.76 | 0.51 |
| 6:F:14:TYR:CD1 | 6:F:74:SER:CB | 2.93 | 0.51 |
| 2:G:120:PRO:CB | 2:G:256:SER:HB3 | 2.39 | 0.51 |
| 2:G:70:ILE:HD13 | 2:G:71:GLY:H | 1.75 | 0.51 |
| 9:L:35:ILE:CD1 | 9:L:75:ASN:ND2 | 2.73 | 0.51 |
| 1:Q:301:ARG:O | 1:Q:302:LEU:CG | 2.57 | 0.51 |
| 1:Q:543:ARG:CG | 1:Q:544:GLU:H | 2.24 | 0.51 |
| 1:Q:638:PHE:CE2 | 1:Q:642:GLN:HG3 | 2.46 | 0.51 |
| 1:Q:782:ILE:HG22 | 1:Q:784:SER:N | 2.25 | 0.51 |
| 1:Q:826:ALA:HB1 | 2:G:334:VAL:CG1 | 2.37 | 0.51 |
| 1:Q:831:ARG:NH2 | 2:G:385:MET:CG | 2.74 | 0.51 |
| 3:R:170:ASN:O | 3:R:171:ARG:O | 2.29 | 0.51 |
| 3:R:457:GLU:OE1 | 3:R:652:ALA:HB2 | 2.09 | 0.51 |
| 3:R:541:ARG:NH2 | 3:R:557:HIS:CD2 | 2.77 | 0.51 |
| 4:S:134:GLY:O | 4:S:135:THR:C | 2.48 | 0.51 |
| 4:S:226:TYR:C | 4:S:227:ILE:HG13 | 2.30 | 0.51 |
| 4:S:34:LEU:HD22 | 4:S:151:LYS:CB | 2.37 | 0.51 |
| 4:S:90:GLU:C | 4:S:92:CYS:N | 2.64 | 0.51 |
| 7:V:42:LEU:HB2 | 7:V:43:PRO:HD2 | 1.93 | 0.51 |
| 1:A:312:ASN:HB3 | 3:B:1015:GLN:OE1 | 2.11 | 0.51 |
| 1:A:475:GLU:OE1 | 3:B:1043:MET:N | 2.40 | 0.51 |
| 1:A:552:ILE:C | 1:A:552:ILE:HD12 | 2.30 | 0.51 |
| 1:A:64:THR:CG2 | 1:A:65:LEU:H | 2.22 | 0.51 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:723:ASN:O | 1:A:724:PHE:C | 2.48 | 0.51 |
| 3:B:198:VAL:HG12 | 3:B:198:VAL:O | 2.10 | 0.51 |
| 3:B:245:ASP:CG | 3:B:515:LEU:HG | 2.30 | 0.51 |
| 3:B:291:GLN:O | 3:B:295:LYS:HG2 | 2.10 | 0.51 |
| 3:B:694:LEU:HD13 | 3:B:694:LEU:C | 2.31 | 0.51 |
| 3:B:63:ILE:HA | 3:B:98:LEU:HA | 1.92 | 0.51 |
| 2:C:292:ILE:CG2 | 2:C:293:ILE:N | 2.74 | 0.51 |
| 5:E:174:TRP:HE3 | 5:E:174:TRP:HA | 1.76 | 0.51 |
| 5:E:58:ILE:HD12 | 5:E:58:ILE:N | 2.25 | 0.51 |
| 2:G:331:ARG:CB | 2:G:331:ARG:HH11 | 2.24 | 0.51 |
| 7:H:44:TRP:O | 7:H:79:ARG:HD3 | 2.11 | 0.51 |
| 1:Q:242:ILE:HD13 | 1:Q:273:VAL:HG22 | 1.92 | 0.51 |
| 1:Q:491:TYR:HD1 | 1:Q:607:GLN:NE2 | 2.09 | 0.51 |
| 1:Q:620:SER:C | 1:Q:622:GLU:H | 2.12 | 0.51 |
| 1:Q:647:ARG:HB2 | 1:Q:650:ASP:CG | 2.31 | 0.51 |
| 3:R:457:GLU:OE1 | 3:R:457:GLU:N | 2.43 | 0.51 |
| 3:R:89:ASN:HD21 | 3:R:863:LYS:HZ3 | 1.58 | 0.51 |
| 4:S:79:PRO:HB2 | 4:S:149:TYR:HE1 | 1.75 | 0.51 |
| 5:T:173:GLU:O | 5:T:177:GLN:OE1 | 2.29 | 0.51 |
| 6:U:57:GLU:C | 6:U:59:LEU:H | 2.13 | 0.51 |
| 5:T:64:GLY:O | 8:W:42:GLN:HG3 | 2.10 | 0.51 |
| 9:X:43:TYR:O | 9:X:44:TYR:HB3 | 2.11 | 0.51 |
| 1:A:486:ILE:HG23 | 1:A:487:ILE:HG13 | 1.92 | 0.51 |
| 1:A:68:CYS:SG | 1:A:71:HIS:CE1 | 3.03 | 0.51 |
| 3:B:227:MET:O | 3:B:232:ILE:HB | 2.11 | 0.51 |
| 3:B:353:LEU:O | 3:B:356:VAL:HG12 | 2.11 | 0.51 |
| 3:B:5:LEU:N | 3:B:5:LEU:HD13 | 2.26 | 0.51 |
| 3:B:871:ILE:CG2 | 3:B:872:PRO:HD2 | 2.41 | 0.51 |
| 3:B:887:VAL:HG12 | 3:B:888:ILE:N | 2.25 | 0.51 |
| 2:C:24:LEU:N | 2:C:25:PRO:HD2 | 2.25 | 0.51 |
| 1:A:812:ARG:HG3 | 2:C:86:THR:HG23 | 1.93 | 0.51 |
| 4:D:206:CYS:HB3 | 14:D:1001:F3S:S3 | 2.51 | 0.51 |
| 6:F:30:SER:CB | 6:F:38:TYR:HE1 | 2.24 | 0.51 |
| 6:F:68:VAL:O | 6:F:72:LEU:HG | 2.11 | 0.51 |
| 9:L:45:GLN:HE22 | 9:L:48:PRO:CD | 2.23 | 0.51 |
| 10:N:33:LYS:HA | 10:N:36:ASP:OD2 | 2.11 | 0.51 |
| 1:Q:345:LYS:HG2 | 1:Q:410:HIS:CD2 | 2.45 | 0.51 |
| 1:Q:52:ILE:HD13 | 1:Q:52:ILE:H | 1.75 | 0.51 |
| 1:Q:527:VAL:CG1 | 1:Q:530:VAL:HB | 2.40 | 0.51 |
| 1:Q:63:ASN:O | 1:Q:64:THR:O | 2.29 | 0.51 |
| 1:Q:656:ASP:HA | 1:Q:659:LYS:CD | 2.40 | 0.51 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 3:R:297:PHE:O | 3:R:298:LEU:HB2 | 2.10 | 0.51 |
| 3:R:869:LEU:HD21 | 4:S:56:GLU:HB2 | 1.92 | 0.51 |
| 1:Q:742:GLN:HB2 | 3:R:919:MET:CE | 2.39 | 0.51 |
| 3:R:94:ALA:O | 3:R:118:ASP:HA | 2.11 | 0.51 |
| 9:X:15:LEU:O | 9:X:54:ILE:HA | 2.10 | 0.51 |
| 1:A:414:GLY:HA2 | 1:A:434:ARG:NE | 2.26 | 0.51 |
| 1:A:503:ILE:HD11 | 1:A:732:GLY:C | 2.31 | 0.51 |
| 3:B:1061:CYS:HA | 3:B:1088:LEU:HD23 | 1.93 | 0.51 |
| 3:B:1081:ILE:HG21 | 3:B:1085:LYS:HZ2 | 1.76 | 0.51 |
| 3:B:193:THR:HG21 | 3:B:197:ARG:N | 2.26 | 0.51 |
| 3:B:346:ALA:O | 3:B:350:PHE:N | 2.44 | 0.51 |
| 3:B:672:MET:CE | 3:B:885:LYS:HD3 | 2.40 | 0.51 |
| 2:C:126:LEU:HG | 2:C:249:TYR:O | 2.10 | 0.51 |
| 3:B:963:LEU:HD22 | 4:D:208:GLU:HG3 | 1.91 | 0.51 |
| 4:D:13:ILE:CG1 | 4:D:238:PRO:HB2 | 2.40 | 0.51 |
| 5:E:179:LYS:HZ1 | 6:F:82:GLU:N | 2.06 | 0.51 |
| 2:C:393:ILE:HB | 5:E:18:PHE:O | 2.10 | 0.51 |
| 2:G:297:ILE:O | 2:G:301:LEU:HG | 2.10 | 0.51 |
| 2:G:343:ALA:HB2 | 2:G:371:GLU:HG3 | 1.92 | 0.51 |
| 7:H:16:LEU:N | 7:H:16:LEU:HD12 | 2.26 | 0.51 |
| 10:N:21:PHE:CE1 | 10:N:38:LEU:HD13 | 2.46 | 0.51 |
| 1:Q:289:HIS:HB2 | 1:Q:295:LEU:CD2 | 2.38 | 0.51 |
| 1:Q:488:THR:HG22 | 1:Q:491:TYR:H | 1.76 | 0.51 |
| 1:Q:27:ILE:CG2 | 1:Q:75:ILE:HD11 | 2.41 | 0.51 |
| 1:Q:853:ASP:HB2 | 2:G:311:ARG:NH1 | 2.21 | 0.51 |
| 1:Q:856:PHE:HB3 | 1:Q:859:TYR:CD1 | 2.45 | 0.51 |
| 3:R:1046:LYS:NZ | 3:R:1051:ASP:OD2 | 2.40 | 0.51 |
| 3:R:109:ALA:O | 3:R:110:GLU:O | 2.29 | 0.51 |
| 3:R:165:GLU:O | 3:R:432:SER:HB2 | 2.10 | 0.51 |
| 3:R:291:GLN:O | 3:R:295:LYS:HG2 | 2.10 | 0.51 |
| 3:R:654:ILE:N | 3:R:654:ILE:HD12 | 2.22 | 0.51 |
| 3:R:679:LEU:HD23 | 3:R:716:ARG:HG2 | 1.93 | 0.51 |
| 4:S:67:PHE:HD2 | 4:S:121:VAL:CG1 | 2.23 | 0.51 |
| 6:U:31:SER:HA | 6:U:35:GLN:NE2 | 2.26 | 0.51 |
| 7:V:73:GLY:O | 7:V:74:GLU:HG3 | 2.10 | 0.51 |
| 9:X:61:GLY:O | 9:X:63:ILE:N | 2.44 | 0.51 |
| 3:R:702:LEU:HD13 | 10:Y:47:ARG:CD | 2.41 | 0.51 |
| 1:A:49:LEU:HD22 | 1:A:71:HIS:O | 2.11 | 0.51 |
| 1:A:665:ILE:HG13 | 1:A:666:ASP:N | 2.25 | 0.51 |
| 1:A:768:HIS:NE2 | 3:B:450:TRP:CZ2 | 2.79 | 0.51 |
| 1:A:785:SER:O | 1:A:787:ARG:N | 2.43 | 0.51 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|------------------|--------------------------|-------------------|
| 3:B:247:GLU:C | 3:B:249:GLN:H | 2.13 | 0.51 |
| 3:B:325:LEU:HD21 | 3:B:332:PRO:CD | 2.36 | 0.51 |
| 3:B:248:VAL:CG2 | 3:B:329:ARG:HH22 | 2.20 | 0.51 |
| 1:A:796:PHE:CZ | 3:B:445:LEU:HB3 | 2.46 | 0.51 |
| 3:B:840:ARG:HH11 | 3:B:1021:ALA:HB2 | 1.76 | 0.51 |
| 2:C:55:ALA:HA | 2:C:58:GLU:OE2 | 2.10 | 0.51 |
| 4:D:204:THR:O | 4:D:206:CYS:N | 2.44 | 0.51 |
| 5:E:134:LYS:HD3 | 5:E:174:TRP:HE1 | 1.76 | 0.51 |
| 2:G:287:GLU:OE2 | 7:V:79:ARG:CZ | 2.59 | 0.51 |
| 10:N:18:TRP:CH2 | 10:N:54:ASP:OD1 | 2.64 | 0.51 |
| 1:Q:181:ARG:HG2 | 1:Q:181:ARG:HH11 | 1.75 | 0.51 |
| 3:R:1047:ASP:HA | 3:R:1051:ASP:CB | 2.38 | 0.51 |
| 3:R:1061:CYS:H | 3:R:1065:GLY:HA2 | 1.76 | 0.51 |
| 3:R:193:THR:CB | 3:R:197:ARG:O | 2.59 | 0.51 |
| 3:R:247:GLU:C | 3:R:249:GLN:H | 2.13 | 0.51 |
| 3:R:262:ILE:N | 3:R:262:ILE:HD12 | 2.25 | 0.51 |
| 3:R:278:ILE:HG23 | 3:R:285:ARG:HH22 | 1.75 | 0.51 |
| 3:R:70:VAL:CG1 | 3:R:90:LEU:HD23 | 2.41 | 0.51 |
| 3:R:88:ARG:HG2 | 11:Z:33:ILE:HD11 | 1.93 | 0.51 |
| 4:S:165:ARG:HE | 4:S:227:ILE:HB | 1.74 | 0.51 |
| 4:S:90:GLU:O | 4:S:92:CYS:N | 2.39 | 0.51 |
| 6:U:78:THR:HB | 6:U:82:GLU:OE2 | 2.10 | 0.51 |
| 7:V:69:SER:HB2 | 7:V:75:VAL:CG2 | 2.38 | 0.51 |
| 2:G:391:ARG:HH21 | 8:W:42:GLN:HG2 | 1.76 | 0.51 |
| 1:A:525:LEU:C | 1:A:527:VAL:N | 2.62 | 0.51 |
| 1:A:548:GLY:C | 1:A:550:GLN:N | 2.63 | 0.51 |
| 1:A:607:GLN:O | 1:A:608:PRO:C | 2.49 | 0.51 |
| 1:A:661:ILE:HD11 | 1:A:714:ILE:HB | 1.93 | 0.51 |
| 1:A:748:GLY:HA2 | 1:A:781:PHE:CD2 | 2.45 | 0.51 |
| 3:B:1004:ARG:HH11 | 3:B:1004:ARG:HG3 | 1.76 | 0.51 |
| 3:B:587:PRO:O | 3:B:588:LEU:CD2 | 2.54 | 0.51 |
| 1:A:761:TYR:HB3 | 3:B:622:GLU:OE1 | 2.10 | 0.51 |
| 3:B:669:GLN:C | 3:B:671:ALA:H | 2.13 | 0.51 |
| 3:B:804:VAL:HG23 | 3:B:847:VAL:HG23 | 1.91 | 0.51 |
| 2:C:301:LEU:HA | 2:C:304:GLN:CG | 2.41 | 0.51 |
| 2:C:54:LEU:O | 2:C:58:GLU:N | 2.44 | 0.51 |
| 1:A:859:TYR:HB2 | 2:C:64:ILE:HG12 | 1.93 | 0.51 |
| 4:D:3:ILE:CD1 | 9:L:83:TYR:HA | 2.41 | 0.51 |
| 5:E:109:HIS:HD2 | 5:E:111:SER:OG | 1.94 | 0.51 |
| 2:G:24:LEU:O | 2:G:29:VAL:HG23 | 2.11 | 0.51 |
| 8:K:18:VAL:CG1 | 8:K:22:LEU:HD12 | 2.39 | 0.51 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 8:K:31:GLU:O | 8:K:35:VAL:HG13 | 2.10 | 0.51 |
| 1:Q:15:SER:HA | 1:Q:203:ARG:HH21 | 1.74 | 0.51 |
| 1:Q:238:LYS:O | 1:Q:242:ILE:HG13 | 2.11 | 0.51 |
| 1:Q:340:PRO:HB2 | 1:Q:343:ILE:HG12 | 1.91 | 0.51 |
| 1:Q:334:ILE:CG2 | 1:Q:482:VAL:HG11 | 2.40 | 0.51 |
| 1:Q:612:LEU:C | 1:Q:612:LEU:HD23 | 2.32 | 0.51 |
| 1:Q:691:THR:O | 1:Q:694:GLU:HB2 | 2.10 | 0.51 |
| 1:Q:764:ARG:NH1 | 1:Q:769:PHE:O | 2.42 | 0.51 |
| 1:Q:872:PHE:HA | 1:Q:876:VAL:CG2 | 2.40 | 0.51 |
| 3:R:343:LEU:HD11 | 3:R:575:VAL:CG2 | 2.41 | 0.51 |
| 3:R:81:SER:H | 3:R:84:GLU:HB2 | 1.75 | 0.51 |
| 3:R:855:THR:C | 3:R:857:GLU:H | 2.12 | 0.51 |
| 3:R:871:ILE:CG2 | 3:R:872:PRO:HD2 | 2.41 | 0.51 |
| 3:R:972:ASP:HB3 | 3:R:975:THR:CG2 | 2.41 | 0.51 |
| 4:S:21:PRO:HB2 | 4:S:23:GLU:OE1 | 2.11 | 0.51 |
| 4:S:71:GLU:O | 4:S:73:LEU:N | 2.44 | 0.51 |
| 5:T:127:ILE:HG22 | 5:T:127:ILE:O | 2.10 | 0.51 |
| 5:T:147:ILE:O | 5:T:148:SER:CB | 2.58 | 0.51 |
| 5:T:87:GLY:O | 5:T:88:GLU:HB2 | 2.11 | 0.51 |
| 7:V:23:LEU:CD2 | 7:V:64:ARG:HB2 | 2.40 | 0.51 |
| 7:V:45:ILE:CG2 | 7:V:79:ARG:HB3 | 2.41 | 0.51 |
| 1:Q:470:GLU:HB2 | 8:W:41:LEU:HD12 | 1.93 | 0.51 |
| 8:W:79:ARG:NH1 | 8:W:79:ARG:HG3 | 2.25 | 0.51 |
| 10:Y:18:TRP:O | 10:Y:20:SER:N | 2.44 | 0.51 |
| 10:Y:40:VAL:HG11 | 10:Y:46:ARG:HG3 | 1.93 | 0.51 |
| 10:Y:60:ILE:HG23 | 10:Y:61:HIS:ND1 | 2.25 | 0.51 |
| 11:Z:16:GLU:CD | 11:Z:26:CYS:HB2 | 2.31 | 0.51 |
| 1:A:375:ALA:CB | 1:A:409:ARG:HA | 2.41 | 0.51 |
| 1:A:759:ARG:NH2 | 1:A:763:THR:HG23 | 2.26 | 0.51 |
| 1:A:851:GLY:C | 1:A:853:ASP:H | 2.13 | 0.51 |
| 1:A:323:ARG:HB2 | 3:B:1026:LEU:HD12 | 1.92 | 0.51 |
| 3:B:1014:ARG:HD2 | 3:B:1095:TYR:CD1 | 2.46 | 0.51 |
| 3:B:94:ALA:O | 3:B:119:LEU:N | 2.44 | 0.51 |
| 3:B:355:ARG:HG2 | 3:B:356:VAL:N | 2.26 | 0.51 |
| 3:B:393:ARG:O | 3:B:393:ARG:HG2 | 2.11 | 0.51 |
| 3:B:52:GLU:CG | 3:B:56:LEU:HD23 | 2.40 | 0.51 |
| 3:B:972:ASP:HB3 | 3:B:975:THR:HG23 | 1.93 | 0.51 |
| 2:C:16:LYS:HZ3 | 3:R:75:ARG:NH1 | 2.09 | 0.51 |
| 5:E:2:TYR:CE2 | 6:F:41:LEU:HD11 | 2.45 | 0.51 |
| 1:Q:859:TYR:HB2 | 2:G:64:ILE:HG13 | 1.92 | 0.51 |
| 1:Q:728:MET:HE3 | 3:R:913:HIS:HA | 1.92 | 0.51 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 3:R:1004:ARG:HG3 | 3:R:1004:ARG:HH11 | 1.75 | 0.51 |
| 3:R:1081:ILE:HG21 | 3:R:1085:LYS:HZ2 | 1.76 | 0.51 |
| 3:R:17:TYR:HB2 | 3:R:604:PHE:CD1 | 2.45 | 0.51 |
| 3:R:452:ARG:HG3 | 3:R:452:ARG:HH11 | 1.76 | 0.51 |
| 1:Q:330:PRO:HG3 | 3:R:731:GLY:O | 2.10 | 0.51 |
| 3:R:879:ALA:HA | 3:R:884:GLN:O | 2.10 | 0.51 |
| 3:R:60:LEU:CD2 | 3:R:98:LEU:HD21 | 2.34 | 0.51 |
| 4:S:66:PRO:CG | 10:Y:13:LEU:HD11 | 2.40 | 0.51 |
| 11:Z:24:VAL:HG13 | 11:Z:24:VAL:O | 2.09 | 0.51 |
| 3:B:226:LEU:C | 3:B:228:ARG:H | 2.14 | 0.51 |
| 3:B:687:ARG:HH11 | 3:B:687:ARG:HB3 | 1.76 | 0.51 |
| 4:D:106:PRO:HA | 4:D:134:GLY:HA2 | 1.92 | 0.51 |
| 3:B:975:THR:O | 4:D:26:ASN:ND2 | 2.44 | 0.51 |
| 5:E:38:ILE:HD13 | 5:E:153:VAL:O | 2.11 | 0.51 |
| 5:E:43:GLY:HA3 | 5:E:76:THR:HG21 | 1.93 | 0.51 |
| 2:G:331:ARG:HH11 | 2:G:331:ARG:HB3 | 1.75 | 0.51 |
| 2:G:51:ILE:O | 2:G:55:ALA:HB2 | 2.11 | 0.51 |
| 7:H:80:TYR:O | 7:H:81:VAL:CB | 2.59 | 0.51 |
| 1:Q:353:ILE:CD1 | 1:Q:407:ILE:HG23 | 2.40 | 0.51 |
| 1:Q:552:ILE:HD12 | 1:Q:552:ILE:C | 2.32 | 0.51 |
| 3:R:282:ARG:HD3 | 3:R:285:ARG:CD | 2.41 | 0.51 |
| 3:R:679:LEU:HD23 | 3:R:716:ARG:HD3 | 1.92 | 0.51 |
| 5:T:119:LYS:HE3 | 5:T:130:GLU:OE2 | 2.11 | 0.51 |
| 9:X:1:MET:SD | 9:X:3:ILE:HD11 | 2.51 | 0.51 |
| 10:Y:20:SER:HA | 10:Y:23:THR:HB | 1.92 | 0.51 |
| 11:Z:17:GLN:O | 11:Z:19:LYS:N | 2.44 | 0.51 |
| 11:Z:46:LYS:NZ | 11:Z:46:LYS:HB3 | 2.26 | 0.51 |
| 1:A:334:ILE:CD1 | 1:A:628:MET:HB3 | 2.38 | 0.50 |
| 3:B:123:LEU:HD22 | 3:B:151:TYR:CE1 | 2.46 | 0.50 |
| 3:B:227:MET:HE3 | 3:B:312:ALA:HB1 | 1.92 | 0.50 |
| 3:B:339:ALA:HB2 | 3:B:618:ALA:CB | 2.34 | 0.50 |
| 3:B:372:SER:O | 3:B:373:LYS:HB2 | 2.10 | 0.50 |
| 3:B:771:ASP:CG | 3:B:816:PRO:HD3 | 2.31 | 0.50 |
| 4:D:124:ILE:HG13 | 4:D:124:ILE:O | 2.11 | 0.50 |
| 6:F:54:LYS:HZ2 | 6:F:54:LYS:HB2 | 1.75 | 0.50 |
| 4:D:30:ARG:NH1 | 9:L:21:ASP:OD1 | 2.43 | 0.50 |
| 1:Q:308:ARG:NH2 | 3:R:1012:LEU:CD1 | 2.74 | 0.50 |
| 1:Q:500:GLN:CG | 1:Q:501:ASP:H | 2.24 | 0.50 |
| 1:Q:27:ILE:HB | 1:Q:75:ILE:CD1 | 2.40 | 0.50 |
| 1:Q:86:LEU:HB3 | 1:Q:207:MET:CE | 2.40 | 0.50 |
| 3:R:108:GLU:OE2 | 3:R:108:GLU:C | 2.50 | 0.50 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 3:R:22:GLY:O | 3:R:23:LEU:C | 2.49 | 0.50 |
| 3:R:521:ILE:HB | 3:R:567:HIS:ND1 | 2.26 | 0.50 |
| 3:R:644:SER:O | 3:R:647:ILE:HG13 | 2.11 | 0.50 |
| 3:R:724:LEU:HD13 | 3:R:990:TYR:CE2 | 2.46 | 0.50 |
| 1:A:626:TRP:O | 1:A:627:LEU:C | 2.49 | 0.50 |
| 3:B:301:LEU:HD22 | 3:B:483:ARG:NH2 | 2.24 | 0.50 |
| 3:B:433:LEU:HD12 | 3:B:435:ARG:HH22 | 1.75 | 0.50 |
| 3:B:537:ALA:HB1 | 3:B:541:ARG:CZ | 2.41 | 0.50 |
| 3:B:537:ALA:CB | 3:B:557:HIS:HE2 | 2.24 | 0.50 |
| 3:B:687:ARG:CG | 3:B:687:ARG:NH1 | 2.73 | 0.50 |
| 3:B:727:MET:HB3 | 3:B:983:ILE:HG23 | 1.92 | 0.50 |
| 2:C:104:LEU:C | 2:C:104:LEU:CD2 | 2.80 | 0.50 |
| 2:C:253:THR:C | 2:C:255:GLY:H | 2.14 | 0.50 |
| 2:C:30:ASP:O | 2:C:31:ASP:HB3 | 2.12 | 0.50 |
| 2:C:390:MET:O | 2:C:391:ARG:HB3 | 2.11 | 0.50 |
| 5:E:147:ILE:O | 5:E:148:SER:CB | 2.59 | 0.50 |
| 5:E:173:GLU:O | 5:E:177:GLN:OE1 | 2.29 | 0.50 |
| 2:G:269:VAL:CA | 2:G:272:VAL:HG23 | 2.39 | 0.50 |
| 2:G:331:ARG:HB2 | 2:G:348:GLU:HG3 | 1.92 | 0.50 |
| 7:H:49:ASP:O | 7:H:53:ARG:HB3 | 2.11 | 0.50 |
| 9:L:61:GLY:O | 9:L:63:ILE:N | 2.43 | 0.50 |
| 9:L:92:LYS:HD2 | 9:L:92:LYS:N | 2.26 | 0.50 |
| 11:P:20:VAL:C | 11:P:21:LEU:HD23 | 2.32 | 0.50 |
| 1:Q:365:VAL:HG22 | 1:Q:365:VAL:O | 2.11 | 0.50 |
| 1:Q:665:ILE:HG13 | 1:Q:666:ASP:N | 2.26 | 0.50 |
| 1:Q:667:ARG:O | 1:Q:670:VAL:CG2 | 2.56 | 0.50 |
| 1:Q:748:GLY:HA2 | 1:Q:781:PHE:CD2 | 2.46 | 0.50 |
| 1:Q:785:SER:C | 1:Q:787:ARG:H | 2.15 | 0.50 |
| 3:R:1083:GLY:C | 3:R:1085:LYS:N | 2.64 | 0.50 |
| 3:R:345:LEU:HD11 | 3:R:476:ILE:HG13 | 1.92 | 0.50 |
| 3:R:530:TYR:CD2 | 3:R:530:TYR:O | 2.64 | 0.50 |
| 2:C:16:LYS:NZ | 3:R:75:ARG:HH12 | 2.09 | 0.50 |
| 3:R:778:ALA:HA | 3:R:783:TYR:CZ | 2.46 | 0.50 |
| 3:R:764:LYS:NZ | 3:R:814:VAL:N | 2.47 | 0.50 |
| 3:R:881:ARG:NH1 | 3:R:989:TYR:HB3 | 2.27 | 0.50 |
| 4:S:134:GLY:O | 4:S:135:THR:O | 2.29 | 0.50 |
| 4:S:167:TYR:HB2 | 4:S:225:LYS:O | 2.11 | 0.50 |
| 4:S:27:ALA:HB1 | 9:X:23:THR:HG22 | 1.92 | 0.50 |
| 5:T:140:ASP:O | 5:T:142:VAL:HG13 | 2.11 | 0.50 |
| 5:T:46:LEU:HD11 | 5:T:77:TYR:HB2 | 1.93 | 0.50 |
| 3:B:237:ASP:O | 3:B:241:ALA:HB2 | 2.11 | 0.50 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 3:B:368:GLN:NE2 | 3:B:386:ARG:HE | 2.07 | 0.50 |
| 3:B:373:LYS:CD | 3:B:375:ARG:HD2 | 2.42 | 0.50 |
| 1:A:807:VAL:CG2 | 3:B:443:ARG:HD3 | 2.39 | 0.50 |
| 3:B:45:GLU:HG3 | 3:B:46:GLN:N | 2.26 | 0.50 |
| 1:A:742:GLN:HB2 | 3:B:919:MET:CE | 2.41 | 0.50 |
| 4:D:79:PRO:HB2 | 4:D:149:TYR:HE1 | 1.76 | 0.50 |
| 4:D:6:LEU:HB3 | 4:D:14:ASP:HB2 | 1.93 | 0.50 |
| 5:E:43:GLY:HA3 | 5:E:76:THR:CG2 | 2.42 | 0.50 |
| 6:F:51:SER:O | 6:F:55:VAL:HG23 | 2.12 | 0.50 |
| 2:G:55:ALA:O | 2:G:58:GLU:HB2 | 2.11 | 0.50 |
| 8:K:50:LEU:O | 8:K:52:ASP:N | 2.44 | 0.50 |
| 10:N:35:LEU:O | 10:N:38:LEU:O | 2.29 | 0.50 |
| 1:Q:607:GLN:HB2 | 1:Q:608:PRO:CD | 2.40 | 0.50 |
| 1:Q:723:ASN:O | 1:Q:724:PHE:C | 2.49 | 0.50 |
| 3:R:662:GLN:O | 3:R:663:SER:C | 2.50 | 0.50 |
| 3:R:759:SER:CB | 3:R:863:LYS:HA | 2.40 | 0.50 |
| 4:S:106:PRO:HD3 | 4:S:135:THR:HG23 | 1.93 | 0.50 |
| 4:S:59:ALA:O | 4:S:62:LEU:HB2 | 2.11 | 0.50 |
| 5:T:126:ILE:CG2 | 5:T:136:ILE:H | 2.23 | 0.50 |
| 6:U:30:SER:HB3 | 6:U:38:TYR:HE1 | 1.76 | 0.50 |
| 11:Z:22:PRO:HG2 | 11:Z:23:GLY:H | 1.76 | 0.50 |
| 1:A:93:PHE:CE2 | 1:A:204:PRO:HB3 | 2.46 | 0.50 |
| 1:A:19:ILE:HA | 1:A:22:MET:HE1 | 1.94 | 0.50 |
| 1:A:234:ASP:O | 1:A:236:THR:N | 2.44 | 0.50 |
| 1:A:277:PHE:HD1 | 1:A:277:PHE:N | 2.09 | 0.50 |
| 1:A:409:ARG:HH11 | 1:A:409:ARG:CB | 2.24 | 0.50 |
| 1:A:469:SER:O | 1:A:473:ILE:HG13 | 2.12 | 0.50 |
| 3:B:369:LEU:HD21 | 3:B:379:LEU:HD22 | 1.94 | 0.50 |
| 3:B:846:ILE:O | 3:B:846:ILE:HG22 | 2.11 | 0.50 |
| 2:C:336:GLY:C | 2:C:337:GLU:OE1 | 2.50 | 0.50 |
| 2:C:331:ARG:HB2 | 2:C:348:GLU:HG3 | 1.93 | 0.50 |
| 4:D:18:GLU:OE1 | 4:D:225:LYS:HD2 | 2.11 | 0.50 |
| 3:B:895:VAL:HG11 | 4:D:34:LEU:CG | 2.41 | 0.50 |
| 5:E:101:LEU:HD11 | 5:E:160:ILE:HG21 | 1.93 | 0.50 |
| 5:E:147:ILE:HD11 | 5:E:163:THR:HB | 1.94 | 0.50 |
| 5:E:53:THR:HG22 | 5:E:70:VAL:HA | 1.93 | 0.50 |
| 7:H:43:PRO:O | 7:H:44:TRP:HB2 | 2.09 | 0.50 |
| 8:K:35:VAL:CG2 | 8:K:36:ILE:N | 2.73 | 0.50 |
| 1:Q:420:ASN:ND2 | 1:Q:421:ARG:N | 2.60 | 0.50 |
| 1:Q:563:HIS:CD2 | 1:Q:587:VAL:HG13 | 2.47 | 0.50 |
| 1:Q:589:LYS:O | 1:Q:592:ILE:HB | 2.10 | 0.50 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:Q:775:SER:OG | 1:Q:777:GLU:HG2 | 2.12 | 0.50 |
| 1:Q:489:PRO:HA | 1:Q:858:MET:HG3 | 1.93 | 0.50 |
| 3:R:134:THR:HG22 | 3:R:137:LYS:HG3 | 1.93 | 0.50 |
| 3:R:184:THR:N | 3:R:207:ASP:O | 2.44 | 0.50 |
| 3:R:252:LEU:CD1 | 3:R:323:ILE:HB | 2.41 | 0.50 |
| 3:R:340:ASN:CG | 3:R:340:ASN:O | 2.50 | 0.50 |
| 3:R:358:PHE:C | 3:R:360:ALA:N | 2.65 | 0.50 |
| 3:R:448:THR:HG22 | 3:R:452:ARG:HD2 | 1.94 | 0.50 |
| 3:R:930:GLY:O | 10:Y:47:ARG:NH1 | 2.45 | 0.50 |
| 7:V:16:LEU:HD12 | 7:V:16:LEU:N | 2.27 | 0.50 |
| 7:V:43:PRO:O | 7:V:44:TRP:CB | 2.60 | 0.50 |
| 1:A:203:ARG:HG3 | 1:A:203:ARG:NH1 | 2.21 | 0.50 |
| 1:A:277:PHE:CD1 | 1:A:277:PHE:N | 2.79 | 0.50 |
| 1:A:489:PRO:CA | 1:A:858:MET:HG3 | 2.41 | 0.50 |
| 1:A:649:GLU:HA | 1:A:652:SER:OG | 2.12 | 0.50 |
| 3:B:1066:TYR:CD2 | 3:B:1105:MET:HE3 | 2.46 | 0.50 |
| 3:B:111:PRO:O | 3:B:112:GLU:CB | 2.60 | 0.50 |
| 3:B:369:LEU:CD2 | 3:B:384:LEU:HD13 | 2.41 | 0.50 |
| 3:B:688:THR:O | 3:B:688:THR:HG23 | 2.10 | 0.50 |
| 3:B:6:THR:HB | 3:B:9:GLU:H | 1.76 | 0.50 |
| 4:D:112:LYS:C | 4:D:114:ILE:H | 2.14 | 0.50 |
| 4:D:252:LYS:O | 4:D:255:GLU:N | 2.44 | 0.50 |
| 4:D:66:PRO:O | 4:D:123:PRO:HA | 2.11 | 0.50 |
| 6:F:40:TYR:O | 6:F:43:SER:OG | 2.29 | 0.50 |
| 3:B:904:VAL:HG13 | 10:N:44:CYS:HB3 | 1.94 | 0.50 |
| 1:Q:220:ARG:H | 1:Q:221:PRO:CD | 2.25 | 0.50 |
| 1:Q:785:SER:H | 1:Q:788:THR:HB | 1.76 | 0.50 |
| 1:Q:791:LYS:H | 1:Q:794:GLU:HB2 | 1.76 | 0.50 |
| 1:Q:485:ASN:ND2 | 3:R:1039:PHE:CE2 | 2.79 | 0.50 |
| 3:R:184:THR:HG22 | 3:R:185:HIS:N | 2.27 | 0.50 |
| 3:R:360:ALA:HB2 | 3:R:393:ARG:HH12 | 1.77 | 0.50 |
| 3:R:419:TRP:HZ3 | 3:R:712:GLY:CA | 2.24 | 0.50 |
| 3:R:672:MET:CE | 3:R:885:LYS:HD3 | 2.42 | 0.50 |
| 3:R:97:TRP:O | 3:R:98:LEU:HB3 | 2.11 | 0.50 |
| 4:S:6:LEU:HB3 | 4:S:14:ASP:HB2 | 1.93 | 0.50 |
| 5:T:108:VAL:HG22 | 5:T:162:LEU:HB2 | 1.93 | 0.50 |
| 5:T:113:ILE:O | 5:T:164:MET:HB2 | 2.12 | 0.50 |
| 7:V:38:ARG:HG2 | 7:V:38:ARG:NH1 | 2.25 | 0.50 |
| 8:W:82:LEU:N | 8:W:82:LEU:HD23 | 2.26 | 0.50 |
| 10:Y:33:LYS:HA | 10:Y:36:ASP:OD2 | 2.11 | 0.50 |
| 1:A:420:ASN:HD22 | 1:A:421:ARG:H | 1.60 | 0.50 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:764:ARG:NH1 | 1:A:769:PHE:O | 2.44 | 0.50 |
| 1:A:872:PHE:CD2 | 1:A:876:VAL:HG21 | 2.46 | 0.50 |
| 3:B:265:VAL:O | 3:B:268:ALA:HB3 | 2.12 | 0.50 |
| 3:B:412:GLN:NE2 | 3:B:425:HIS:HE1 | 2.09 | 0.50 |
| 3:B:799:SER:O | 3:B:802:VAL:HG23 | 2.12 | 0.50 |
| 2:C:379:ILE:HD13 | 2:C:379:ILE:N | 2.26 | 0.50 |
| 4:D:47:ILE:HB | 4:D:140:SER:O | 2.11 | 0.50 |
| 4:D:90:GLU:C | 4:D:92:CYS:N | 2.63 | 0.50 |
| 5:E:93:ASP:CG | 5:E:94:ASN:H | 2.14 | 0.50 |
| 7:H:25:ILE:H | 7:H:25:ILE:HD12 | 1.76 | 0.50 |
| 7:H:73:GLY:O | 7:H:74:GLU:HG3 | 2.11 | 0.50 |
| 10:N:20:SER:HA | 10:N:23:THR:HB | 1.92 | 0.50 |
| 4:D:45:TYR:HE1 | 11:P:44:ILE:HD13 | 1.77 | 0.50 |
| 1:Q:289:HIS:ND1 | 1:Q:290:ARG:HG3 | 2.27 | 0.50 |
| 1:Q:396:GLU:C | 1:Q:398:ALA:H | 2.15 | 0.50 |
| 1:Q:692:LEU:HD12 | 1:Q:692:LEU:H | 1.76 | 0.50 |
| 1:Q:756:ARG:HH22 | 1:Q:776:PRO:HA | 1.75 | 0.50 |
| 3:R:369:LEU:HD21 | 3:R:379:LEU:HD22 | 1.92 | 0.50 |
| 3:R:432:SER:O | 3:R:435:ARG:NE | 2.44 | 0.50 |
| 3:R:532:ASP:OD1 | 3:R:535:GLU:HB2 | 2.11 | 0.50 |
| 3:R:741:ASN:O | 3:R:745:VAL:HG23 | 2.12 | 0.50 |
| 5:T:43:GLY:HA3 | 5:T:76:THR:HG21 | 1.92 | 0.50 |
| 11:Z:21:LEU:HD23 | 11:Z:21:LEU:N | 2.25 | 0.50 |
| 1:A:340:PRO:HB2 | 1:A:343:ILE:HG12 | 1.92 | 0.50 |
| 1:A:584:SER:OG | 1:A:585:TYR:N | 2.43 | 0.50 |
| 1:A:761:TYR:CB | 1:A:764:ARG:HG3 | 2.40 | 0.50 |
| 1:A:830:LEU:HD13 | 1:A:846:VAL:HG21 | 1.92 | 0.50 |
| 3:B:1087:ASN:C | 3:B:1088:LEU:HG | 2.32 | 0.50 |
| 3:B:254:PRO:O | 3:B:257:GLU:N | 2.44 | 0.50 |
| 3:B:358:PHE:C | 3:B:360:ALA:N | 2.65 | 0.50 |
| 3:B:373:LYS:HE2 | 3:B:378:LYS:HE3 | 1.94 | 0.50 |
| 3:B:407:ARG:NH2 | 3:B:433:LEU:HG | 2.26 | 0.50 |
| 3:B:763:VAL:HG22 | 3:B:770:GLU:HG3 | 1.92 | 0.50 |
| 3:B:780:VAL:HG11 | 3:B:831:ALA:CB | 2.41 | 0.50 |
| 3:B:661:ASN:ND2 | 3:B:921:LEU:O | 2.42 | 0.50 |
| 2:C:15:GLU:HA | 2:C:18:LYS:HD2 | 1.92 | 0.50 |
| 5:E:123:VAL:C | 5:E:125:GLY:N | 2.65 | 0.50 |
| 5:E:126:ILE:CG2 | 5:E:136:ILE:H | 2.23 | 0.50 |
| 2:G:365:GLU:HG2 | 2:G:366:PHE:N | 2.27 | 0.50 |
| 9:L:14:GLU:OE1 | 9:L:56:LYS:HG2 | 2.11 | 0.50 |
| 10:N:16:ASP:OD2 | 10:N:17:LYS:HG3 | 2.11 | 0.50 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 1:Q:220:ARG:HD2 | 1:Q:236:THR:OG1 | 2.11 | 0.50 |
| 1:Q:304:GLY:C | 1:Q:310:ARG:HD2 | 2.32 | 0.50 |
| 1:Q:464:LEU:CD1 | 1:Q:465:HIS:N | 2.72 | 0.50 |
| 1:Q:486:ILE:CD1 | 1:Q:628:MET:HE2 | 2.42 | 0.50 |
| 1:Q:64:THR:CG2 | 1:Q:65:LEU:H | 2.20 | 0.50 |
| 1:Q:859:TYR:HB2 | 2:G:64:ILE:HG12 | 1.94 | 0.50 |
| 3:R:221:ILE:CG2 | 3:R:226:LEU:HG | 2.36 | 0.50 |
| 3:R:295:LYS:HG3 | 3:R:296:TYR:CD1 | 2.47 | 0.50 |
| 3:R:28:LEU:C | 3:R:30:SER:H | 2.15 | 0.50 |
| 3:R:368:GLN:NE2 | 3:R:386:ARG:HE | 2.07 | 0.50 |
| 3:R:393:ARG:NE | 3:R:403:TRP:HZ3 | 2.07 | 0.50 |
| 3:R:764:LYS:HD2 | 3:R:771:ASP:CB | 2.41 | 0.50 |
| 3:R:903:GLY:HA3 | 4:S:161:LEU:HD12 | 1.92 | 0.50 |
| 4:S:172:ILE:HG21 | 4:S:195:LEU:HD13 | 1.92 | 0.50 |
| 5:T:13:ILE:HG23 | 5:T:25:ILE:HG21 | 1.93 | 0.50 |
| 5:T:15:PRO:HG2 | 8:W:45:MET:CB | 2.42 | 0.50 |
| 2:G:390:MET:SD | 5:T:57:GLY:C | 2.90 | 0.50 |
| 6:U:35:GLN:HA | 6:U:38:TYR:HD1 | 1.71 | 0.50 |
| 8:W:91:SER:OG | 8:W:92:LEU:N | 2.45 | 0.50 |
| 1:A:203:ARG:CG | 1:A:203:ARG:NH1 | 2.70 | 0.50 |
| 3:B:345:LEU:N | 3:B:345:LEU:HD12 | 2.27 | 0.50 |
| 3:B:345:LEU:O | 3:B:346:ALA:C | 2.50 | 0.50 |
| 3:B:388:ASP:O | 3:B:391:THR:N | 2.45 | 0.50 |
| 3:B:532:ASP:OD1 | 3:B:535:GLU:HB2 | 2.11 | 0.50 |
| 1:A:330:PRO:HG3 | 3:B:731:GLY:O | 2.12 | 0.50 |
| 3:B:70:VAL:CG1 | 3:B:80:ILE:HD13 | 2.41 | 0.50 |
| 2:C:133:ASP:C | 2:C:135:ASP:H | 2.13 | 0.50 |
| 1:Q:668:ALA:CB | 1:Q:707:LEU:HD13 | 2.41 | 0.50 |
| 1:Q:720:ASP:O | 1:Q:722:PHE:N | 2.45 | 0.50 |
| 1:Q:749:GLN:HA | 1:Q:781:PHE:HA | 1.94 | 0.50 |
| 3:R:1033:ARG:HD2 | 3:R:1037:ILE:HD11 | 1.94 | 0.50 |
| 3:R:1080:PRO:C | 3:R:1081:ILE:HG13 | 2.32 | 0.50 |
| 3:R:50:PRO:CG | 3:R:51:THR:H | 2.16 | 0.50 |
| 1:Q:447:LEU:HD13 | 3:R:734:MET:SD | 2.51 | 0.50 |
| 3:R:6:THR:O | 3:R:7:ILE:HD13 | 2.12 | 0.50 |
| 3:R:965:ASP:C | 3:R:967:THR:H | 2.14 | 0.50 |
| 1:A:785:SER:C | 1:A:787:ARG:H | 2.16 | 0.50 |
| 3:B:1033:ARG:HG3 | 3:B:1034:ASP:N | 2.26 | 0.50 |
| 3:B:1085:LYS:C | 3:B:1087:ASN:H | 2.16 | 0.50 |
| 3:B:97:TRP:HZ3 | 3:B:113:GLU:CD | 2.16 | 0.50 |
| 3:B:167:LEU:HD12 | 3:B:190:ILE:CD1 | 2.41 | 0.50 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|------------------|--------------------------|-------------------|
| 3:B:189:ILE:CB | 3:B:203:GLU:HB2 | 2.38 | 0.50 |
| 3:B:214:PHE:HZ | 3:B:297:PHE:CA | 2.22 | 0.50 |
| 3:B:52:GLU:O | 3:B:53:ILE:C | 2.51 | 0.50 |
| 3:B:545:ARG:CZ | 3:B:581:ILE:HG21 | 2.41 | 0.50 |
| 4:D:69:SER:CA | 4:D:72:ALA:HB3 | 2.42 | 0.50 |
| 4:D:94:THR:CG2 | 4:D:145:LEU:HB2 | 2.42 | 0.50 |
| 4:D:98:ILE:HG12 | 4:D:114:ILE:HG12 | 1.93 | 0.50 |
| 6:F:23:ASP:HA | 6:F:26:ARG:NE | 2.27 | 0.50 |
| 6:F:49:ALA:O | 6:F:53:GLN:HB2 | 2.11 | 0.50 |
| 2:G:349:VAL:HG13 | 2:G:353:HIS:CD2 | 2.47 | 0.50 |
| 2:G:386:VAL:HG11 | 8:W:34:ARG:HB2 | 1.94 | 0.50 |
| 7:H:80:TYR:CE1 | 7:H:82:ILE:HD11 | 2.47 | 0.50 |
| 8:K:26:ARG:CG | 8:K:90:LEU:HD13 | 2.42 | 0.50 |
| 1:Q:508:LEU:HB3 | 1:Q:638:PHE:HE2 | 1.77 | 0.50 |
| 1:Q:87:VAL:HG13 | 1:Q:88:LYS:N | 2.26 | 0.50 |
| 3:R:1085:LYS:O | 3:R:1086:SER:OG | 2.22 | 0.50 |
| 3:R:111:PRO:O | 3:R:112:GLU:CB | 2.60 | 0.50 |
| 3:R:237:ASP:O | 3:R:241:ALA:HB2 | 2.12 | 0.50 |
| 3:R:489:LEU:HB3 | 3:R:494:VAL:HG21 | 1.94 | 0.50 |
| 1:Q:532:ILE:HD12 | 9:X:12:TYR:OH | 2.12 | 0.50 |
| 3:B:1047:ASP:CG | 3:B:1047:ASP:O | 2.50 | 0.49 |
| 3:B:184:THR:HG22 | 3:B:185:HIS:N | 2.27 | 0.49 |
| 3:B:22:GLY:O | 3:B:23:LEU:C | 2.49 | 0.49 |
| 3:B:481:ASN:O | 3:B:482:GLU:O | 2.29 | 0.49 |
| 2:C:286:ILE:HD11 | 7:H:46:ARG:H | 1.76 | 0.49 |
| 2:C:57:LYS:HA | 2:C:57:LYS:CE | 2.39 | 0.49 |
| 4:D:205:LEU:O | 4:D:207:GLU:N | 2.45 | 0.49 |
| 5:E:147:ILE:HG12 | 5:E:163:THR:HB | 1.93 | 0.49 |
| 2:G:133:ASP:C | 2:G:135:ASP:N | 2.65 | 0.49 |
| 2:G:326:VAL:HG13 | 2:G:326:VAL:O | 2.11 | 0.49 |
| 4:D:64:LEU:HD13 | 10:N:6:ARG:HB2 | 1.92 | 0.49 |
| 1:Q:4:LYS:HZ2 | 3:R:1115:LEU:CB | 2.23 | 0.49 |
| 3:R:1063:GLN:HE22 | 3:R:1085:LYS:HD2 | 1.76 | 0.49 |
| 3:R:1098:LYS:O | 3:R:1102:GLN:HG3 | 2.12 | 0.49 |
| 3:R:97:TRP:HZ3 | 3:R:113:GLU:CD | 2.15 | 0.49 |
| 3:R:226:LEU:C | 3:R:228:ARG:H | 2.16 | 0.49 |
| 3:R:248:VAL:CG2 | 3:R:329:ARG:HH22 | 2.18 | 0.49 |
| 3:R:430:ILE:HG22 | 3:R:431:SER:O | 2.12 | 0.49 |
| 3:R:707:ALA:C | 3:R:709:ASP:H | 2.15 | 0.49 |
| 3:R:926:GLU:CD | 3:R:988:VAL:HG22 | 2.33 | 0.49 |
| 1:Q:647:ARG:HH21 | 4:S:211:ARG:HH12 | 1.59 | 0.49 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:G:389:THR:HG22 | 8:W:77:THR:HB | 1.93 | 0.49 |
| 4:S:256:LEU:HD12 | 9:X:3:ILE:HG13 | 1.94 | 0.49 |
| 10:Y:40:VAL:HG12 | 10:Y:40:VAL:O | 2.11 | 0.49 |
| 1:A:543:ARG:CG | 1:A:544:GLU:H | 2.24 | 0.49 |
| 1:A:691:THR:HG22 | 1:A:692:LEU:N | 2.27 | 0.49 |
| 1:A:781:PHE:HD2 | 1:A:781:PHE:C | 2.15 | 0.49 |
| 1:A:87:VAL:HG13 | 1:A:88:LYS:H | 1.78 | 0.49 |
| 3:B:14:ILE:HG23 | 3:B:15:GLU:N | 2.27 | 0.49 |
| 3:B:789:TYR:CD2 | 3:B:789:TYR:N | 2.69 | 0.49 |
| 3:B:792:LEU:HD11 | 3:B:809:VAL:HG11 | 1.94 | 0.49 |
| 3:B:879:ALA:HA | 3:B:884:GLN:O | 2.13 | 0.49 |
| 3:B:97:TRP:O | 3:B:98:LEU:HB3 | 2.11 | 0.49 |
| 2:C:42:ILE:HD12 | 2:C:42:ILE:N | 2.27 | 0.49 |
| 3:B:978:LYS:HD2 | 4:D:205:LEU:HD22 | 1.95 | 0.49 |
| 4:D:250:ILE:O | 4:D:254:GLU:HB2 | 2.12 | 0.49 |
| 4:D:53:LEU:HD22 | 4:D:57:ILE:CG2 | 2.40 | 0.49 |
| 2:G:391:ARG:NH2 | 5:T:18:PHE:HE2 | 2.11 | 0.49 |
| 2:C:287:GLU:OE2 | 7:H:79:ARG:CZ | 2.61 | 0.49 |
| 1:A:534:LEU:HD23 | 9:L:39:SER:O | 2.12 | 0.49 |
| 1:Q:199:PRO:O | 1:Q:200:THR:OG1 | 2.22 | 0.49 |
| 1:Q:392:LYS:O | 1:Q:394:ARG:N | 2.45 | 0.49 |
| 1:Q:533:ASP:O | 1:Q:534:LEU:O | 2.31 | 0.49 |
| 3:R:254:PRO:O | 3:R:257:GLU:N | 2.44 | 0.49 |
| 3:R:174:VAL:HG11 | 3:R:325:LEU:HD23 | 1.93 | 0.49 |
| 3:R:70:VAL:CG1 | 3:R:80:ILE:HD13 | 2.41 | 0.49 |
| 3:R:727:MET:HB3 | 3:R:983:ILE:HG23 | 1.94 | 0.49 |
| 4:S:69:SER:HB2 | 4:S:236:LEU:HD11 | 1.94 | 0.49 |
| 6:U:23:ASP:HA | 6:U:26:ARG:NE | 2.27 | 0.49 |
| 6:U:54:LYS:NZ | 6:U:54:LYS:HB2 | 2.27 | 0.49 |
| 5:T:18:PHE:CD2 | 8:W:47:ALA:CB | 2.94 | 0.49 |
| 1:A:214:VAL:O | 1:A:214:VAL:HG12 | 2.12 | 0.49 |
| 1:A:81:VAL:HG12 | 1:A:270:GLN:CG | 2.40 | 0.49 |
| 1:A:365:VAL:O | 1:A:365:VAL:HG22 | 2.12 | 0.49 |
| 1:A:555:PHE:HD1 | 1:A:626:TRP:CH2 | 2.30 | 0.49 |
| 1:A:582:HIS:C | 1:A:584:SER:H | 2.15 | 0.49 |
| 1:A:702:ASP:O | 1:A:703:THR:C | 2.49 | 0.49 |
| 1:A:814:SER:O | 1:A:818:TYR:HB2 | 2.11 | 0.49 |
| 1:A:465:HIS:CD2 | 3:B:1048:ARG:HD2 | 2.47 | 0.49 |
| 3:B:1086:SER:C | 3:B:1087:ASN:O | 2.49 | 0.49 |
| 3:B:358:PHE:C | 3:B:360:ALA:H | 2.16 | 0.49 |
| 3:B:521:ILE:HB | 3:B:567:HIS:ND1 | 2.27 | 0.49 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 3:B:570:CYS:O | 3:B:571:ASP:O | 2.31 | 0.49 |
| 3:B:686:LEU:H | 3:B:686:LEU:CD1 | 2.14 | 0.49 |
| 3:B:852:ILE:HG23 | 3:B:862:VAL:CG2 | 2.39 | 0.49 |
| 2:C:392:PRO:O | 2:C:393:ILE:O | 2.30 | 0.49 |
| 2:C:55:ALA:O | 2:C:58:GLU:HB2 | 2.11 | 0.49 |
| 4:D:133:LEU:HD21 | 4:D:139:ILE:HG12 | 1.93 | 0.49 |
| 4:D:203:CYS:O | 4:D:204:THR:HG23 | 2.12 | 0.49 |
| 4:D:206:CYS:O | 4:D:207:GLU:CB | 2.61 | 0.49 |
| 5:E:127:ILE:HG22 | 5:E:127:ILE:O | 2.12 | 0.49 |
| 2:G:35:LEU:O | 2:G:39:LYS:HE3 | 2.11 | 0.49 |
| 1:Q:854:GLY:O | 2:G:65:ALA:HA | 2.12 | 0.49 |
| 8:K:50:LEU:CD2 | 8:K:74:LEU:HA | 2.42 | 0.49 |
| 8:K:91:SER:O | 8:K:92:LEU:HB2 | 2.12 | 0.49 |
| 3:B:902:LYS:CB | 10:N:42:ARG:HD3 | 2.42 | 0.49 |
| 11:P:21:LEU:N | 11:P:21:LEU:HD23 | 2.28 | 0.49 |
| 3:B:852:ILE:CD1 | 11:P:35:PHE:HA | 2.43 | 0.49 |
| 1:Q:464:LEU:HD13 | 1:Q:465:HIS:H | 1.75 | 0.49 |
| 1:Q:851:GLY:C | 1:Q:853:ASP:H | 2.15 | 0.49 |
| 3:R:1014:ARG:HG3 | 3:R:1095:TYR:CE2 | 2.46 | 0.49 |
| 3:R:1086:SER:C | 3:R:1087:ASN:O | 2.50 | 0.49 |
| 3:R:256:LEU:C | 3:R:258:GLN:H | 2.15 | 0.49 |
| 3:R:34:PHE:CE1 | 3:R:351:ALA:HA | 2.47 | 0.49 |
| 3:R:45:GLU:HG3 | 3:R:46:GLN:N | 2.26 | 0.49 |
| 3:R:727:MET:HE3 | 3:R:898:PRO:HG3 | 1.93 | 0.49 |
| 4:S:4:ASN:HA | 9:X:90:LEU:CD2 | 2.40 | 0.49 |
| 5:T:127:ILE:H | 5:T:136:ILE:HB | 1.76 | 0.49 |
| 5:T:43:GLY:HA3 | 5:T:76:THR:CG2 | 2.42 | 0.49 |
| 4:S:108:MET:CE | 10:Y:2:LEU:HD21 | 2.41 | 0.49 |
| 1:A:323:ARG:HD2 | 3:B:1026:LEU:HD11 | 1.95 | 0.49 |
| 3:B:1074:LYS:CB | 3:B:1076:LYS:HG3 | 2.42 | 0.49 |
| 3:B:1069:TRP:CZ3 | 3:B:1077:TYR:CB | 2.95 | 0.49 |
| 3:B:343:LEU:N | 3:B:343:LEU:CD1 | 2.74 | 0.49 |
| 3:B:146:LYS:HB2 | 3:B:716:ARG:HH22 | 1.78 | 0.49 |
| 3:B:805:LYS:O | 3:B:806:GLY:O | 2.31 | 0.49 |
| 6:F:30:SER:OG | 6:F:38:TYR:HE1 | 1.92 | 0.49 |
| 2:G:276:ASN:O | 2:G:279:GLU:HB3 | 2.11 | 0.49 |
| 2:G:55:ALA:O | 2:G:58:GLU:N | 2.45 | 0.49 |
| 7:H:47:ALA:C | 7:H:49:ASP:H | 2.15 | 0.49 |
| 1:Q:517:THR:CG2 | 1:Q:518:LYS:N | 2.75 | 0.49 |
| 1:Q:821:ARG:O | 1:Q:825:ASN:ND2 | 2.41 | 0.49 |
| 1:Q:827:LEU:HD12 | 1:Q:830:LEU:HD12 | 1.94 | 0.49 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 1:Q:830:LEU:HD13 | 1:Q:846:VAL:HG21 | 1.94 | 0.49 |
| 3:R:1033:ARG:NH1 | 3:R:1033:ARG:CG | 2.71 | 0.49 |
| 3:R:325:LEU:HD21 | 3:R:332:PRO:CD | 2.37 | 0.49 |
| 3:R:52:GLU:CG | 3:R:56:LEU:HD23 | 2.42 | 0.49 |
| 3:R:530:TYR:OH | 3:R:536:LEU:CB | 2.60 | 0.49 |
| 6:U:14:TYR:HD1 | 6:U:14:TYR:H | 1.60 | 0.49 |
| 7:V:49:ASP:O | 7:V:53:ARG:HB3 | 2.12 | 0.49 |
| 9:X:45:GLN:HE22 | 9:X:48:PRO:CD | 2.24 | 0.49 |
| 10:Y:55:ILE:N | 10:Y:55:ILE:HD13 | 2.26 | 0.49 |
| 1:A:181:ARG:HG2 | 1:A:181:ARG:HH11 | 1.78 | 0.49 |
| 1:A:188:PRO:O | 1:A:192:VAL:HG23 | 2.12 | 0.49 |
| 1:A:353:ILE:CD1 | 1:A:407:ILE:HG23 | 2.42 | 0.49 |
| 1:A:396:GLU:C | 1:A:398:ALA:H | 2.15 | 0.49 |
| 1:A:418:LEU:CD1 | 3:B:1044:LEU:HD11 | 2.42 | 0.49 |
| 1:A:431:MET:HE1 | 1:A:482:VAL:HG13 | 1.93 | 0.49 |
| 1:A:720:ASP:O | 1:A:722:PHE:N | 2.45 | 0.49 |
| 3:B:278:ILE:HG23 | 3:B:285:ARG:HH22 | 1.78 | 0.49 |
| 3:B:292:ILE:O | 3:B:293:ILE:HD13 | 2.11 | 0.49 |
| 3:B:191:SER:CA | 3:B:300:HIS:NE2 | 2.72 | 0.49 |
| 3:B:252:LEU:CD1 | 3:B:323:ILE:HB | 2.41 | 0.49 |
| 3:B:563:ILE:HG22 | 3:B:564:ASN:N | 2.28 | 0.49 |
| 3:B:683:ASN:C | 3:B:685:GLN:N | 2.63 | 0.49 |
| 2:C:104:LEU:CB | 2:C:105:PRO:HD3 | 2.31 | 0.49 |
| 4:D:33:MET:O | 4:D:150:GLY:HA3 | 2.13 | 0.49 |
| 4:D:68:MET:HE1 | 4:D:234:GLY:O | 2.12 | 0.49 |
| 4:D:85:CYS:O | 4:D:89:CYS:SG | 2.70 | 0.49 |
| 5:E:166:GLN:HB2 | 5:E:169:LEU:CD1 | 2.30 | 0.49 |
| 5:E:81:VAL:O | 5:E:82:GLN:CB | 2.61 | 0.49 |
| 2:G:366:PHE:O | 2:G:368:GLY:N | 2.45 | 0.49 |
| 2:G:391:ARG:CB | 8:W:75:PRO:HB2 | 2.43 | 0.49 |
| 7:H:15:TYR:CD2 | 7:H:16:LEU:HD12 | 2.48 | 0.49 |
| 1:Q:18:GLU:O | 1:Q:22:MET:HB3 | 2.12 | 0.49 |
| 1:Q:390:TYR:O | 1:Q:391:VAL:HB | 2.12 | 0.49 |
| 1:Q:500:GLN:O | 1:Q:501:ASP:C | 2.50 | 0.49 |
| 1:Q:515:LEU:HD11 | 1:Q:539:ILE:HG13 | 1.93 | 0.49 |
| 1:Q:608:PRO:O | 1:Q:609:GLU:CG | 2.61 | 0.49 |
| 1:Q:11:PHE:HA | 3:R:1110:SER:O | 2.12 | 0.49 |
| 3:R:294:ASP:O | 3:R:303:THR:HA | 2.13 | 0.49 |
| 3:R:341:LYS:HZ2 | 3:R:341:LYS:HB3 | 1.77 | 0.49 |
| 3:R:854:GLU:OE2 | 11:Z:24:VAL:HB | 2.12 | 0.49 |
| 3:R:887:VAL:HG12 | 3:R:888:ILE:N | 2.26 | 0.49 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 4:S:206:CYS:HB3 | 14:S:1001:F3S:S3 | 2.52 | 0.49 |
| 4:S:134:GLY:O | 4:S:137:GLN:HG3 | 2.11 | 0.49 |
| 4:S:66:PRO:HB2 | 4:S:124:ILE:CG1 | 2.38 | 0.49 |
| 5:T:53:THR:OG1 | 5:T:71:GLU:HB2 | 2.12 | 0.49 |
| 6:U:41:LEU:O | 6:U:43:SER:N | 2.33 | 0.49 |
| 6:U:52:ALA:C | 6:U:54:LYS:H | 2.16 | 0.49 |
| 1:A:341:GLU:O | 1:A:345:LYS:HG3 | 2.13 | 0.49 |
| 1:A:533:ASP:O | 1:A:534:LEU:O | 2.31 | 0.49 |
| 1:A:752:VAL:C | 1:A:754:GLY:N | 2.66 | 0.49 |
| 1:A:756:ARG:HH22 | 1:A:776:PRO:HA | 1.78 | 0.49 |
| 1:A:781:PHE:CD2 | 1:A:781:PHE:C | 2.86 | 0.49 |
| 3:B:1029:GLY:O | 3:B:1030:GLU:C | 2.50 | 0.49 |
| 3:B:221:ILE:HD12 | 3:B:221:ILE:N | 2.27 | 0.49 |
| 3:B:296:TYR:O | 3:B:297:PHE:HB2 | 2.11 | 0.49 |
| 3:B:564:ASN:O | 3:B:564:ASN:ND2 | 2.45 | 0.49 |
| 3:B:589:VAL:O | 3:B:590:THR:C | 2.50 | 0.49 |
| 3:B:144:ASP:HB3 | 3:B:682:ALA:HB3 | 1.94 | 0.49 |
| 3:B:851:LEU:HA | 11:P:35:PHE:CB | 2.34 | 0.49 |
| 3:B:943:THR:CG2 | 3:B:944:PRO:CD | 2.90 | 0.49 |
| 6:F:18:LYS:NZ | 6:F:41:LEU:O | 2.41 | 0.49 |
| 8:K:61:VAL:C | 8:K:63:SER:H | 2.16 | 0.49 |
| 1:Q:13:ILE:HG22 | 1:Q:13:ILE:O | 2.10 | 0.49 |
| 1:Q:94:LEU:HD11 | 1:Q:180:ILE:HG23 | 1.94 | 0.49 |
| 1:Q:397:LEU:HD23 | 1:Q:400:THR:OG1 | 2.13 | 0.49 |
| 1:Q:759:ARG:N | 1:Q:779:ARG:HH21 | 2.10 | 0.49 |
| 3:R:1069:TRP:CE3 | 3:R:1070:TYR:O | 2.65 | 0.49 |
| 3:R:292:ILE:O | 3:R:293:ILE:HD13 | 2.12 | 0.49 |
| 3:R:330:ARG:CG | 3:R:330:ARG:HH11 | 2.25 | 0.49 |
| 3:R:416:ARG:CZ | 3:R:687:ARG:NH2 | 2.75 | 0.49 |
| 3:R:690:THR:O | 3:R:691:ARG:O | 2.30 | 0.49 |
| 3:R:738:ILE:HG12 | 3:R:739:ILE:N | 2.28 | 0.49 |
| 4:S:68:MET:HA | 4:S:68:MET:CE | 2.43 | 0.49 |
| 7:V:15:TYR:CD2 | 7:V:16:LEU:HD12 | 2.48 | 0.49 |
| 10:Y:18:TRP:CZ2 | 10:Y:22:ILE:HG21 | 2.47 | 0.49 |
| 1:A:249:LEU:HD21 | 1:A:265:LEU:CB | 2.41 | 0.49 |
| 1:A:428:ILE:CG2 | 1:A:428:ILE:O | 2.61 | 0.49 |
| 3:B:282:ARG:HD3 | 3:B:285:ARG:HD2 | 1.95 | 0.49 |
| 3:B:448:THR:HG22 | 3:B:452:ARG:HD2 | 1.93 | 0.49 |
| 3:B:448:THR:O | 3:B:450:TRP:N | 2.46 | 0.49 |
| 3:B:644:SER:C | 3:B:646:ALA:H | 2.16 | 0.49 |
| 3:B:662:GLN:O | 3:B:663:SER:C | 2.50 | 0.49 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 3:B:696:HIS:CG | 4:D:57:ILE:HD11 | 2.47 | 0.49 |
| 3:B:794:ASP:N | 3:B:794:ASP:OD1 | 2.43 | 0.49 |
| 3:B:800:PRO:HD3 | 3:B:850:VAL:CG2 | 2.42 | 0.49 |
| 3:B:899:TYR:O | 3:B:971:TYR:N | 2.39 | 0.49 |
| 3:B:898:PRO:HB2 | 3:B:970:VAL:HG21 | 1.94 | 0.49 |
| 2:C:12:TYR:N | 2:C:12:TYR:CD1 | 2.81 | 0.49 |
| 4:D:108:MET:HG3 | 4:D:110:TYR:CE1 | 2.46 | 0.49 |
| 4:D:67:PHE:HD2 | 4:D:121:VAL:CG1 | 2.24 | 0.49 |
| 2:G:258:LEU:HD21 | 2:G:284:PHE:CE1 | 2.48 | 0.49 |
| 2:G:379:ILE:N | 2:G:379:ILE:HD13 | 2.26 | 0.49 |
| 9:L:8:SER:HB2 | 9:L:13:LEU:CD1 | 2.42 | 0.49 |
| 11:P:31:TYR:HE2 | 11:P:33:ILE:CG1 | 2.26 | 0.49 |
| 1:Q:357:ASN:O | 1:Q:359:GLU:N | 2.46 | 0.49 |
| 3:R:97:TRP:HZ3 | 3:R:113:GLU:OE2 | 1.95 | 0.49 |
| 3:R:221:ILE:N | 3:R:221:ILE:HD12 | 2.27 | 0.49 |
| 3:R:278:ILE:CG2 | 3:R:279:GLY:N | 2.76 | 0.49 |
| 3:R:353:LEU:HD13 | 3:R:404:VAL:HG22 | 1.94 | 0.49 |
| 3:R:355:ARG:HG2 | 3:R:356:VAL:N | 2.26 | 0.49 |
| 3:R:52:GLU:O | 3:R:53:ILE:C | 2.51 | 0.49 |
| 3:R:757:LEU:HD23 | 3:R:758:TYR:H | 1.76 | 0.49 |
| 3:R:763:VAL:HG22 | 3:R:770:GLU:HG3 | 1.94 | 0.49 |
| 3:R:759:SER:CB | 3:R:862:VAL:O | 2.51 | 0.49 |
| 3:R:903:GLY:HA3 | 4:S:161:LEU:CD1 | 2.43 | 0.49 |
| 4:S:80:GLU:HA | 4:S:83:ILE:HD12 | 1.95 | 0.49 |
| 5:T:31:ARG:C | 5:T:33:GLN:N | 2.64 | 0.49 |
| 6:U:30:SER:CB | 6:U:38:TYR:HE1 | 2.24 | 0.49 |
| 7:V:20:HIS:HB3 | 7:V:63:ILE:HG21 | 1.95 | 0.49 |
| 7:V:35:LEU:O | 7:V:37:ILE:HG13 | 2.13 | 0.49 |
| 1:A:397:LEU:HD23 | 1:A:400:THR:OG1 | 2.13 | 0.49 |
| 3:B:214:PHE:CZ | 3:B:297:PHE:HA | 2.42 | 0.49 |
| 3:B:655:ILE:HG12 | 3:B:669:GLN:HG2 | 1.94 | 0.49 |
| 2:C:330:GLY:O | 2:C:335:THR:OG1 | 2.31 | 0.49 |
| 2:C:64:ILE:HG22 | 2:C:65:ALA:N | 2.28 | 0.49 |
| 6:F:17:ALA:O | 6:F:21:LEU:HG | 2.12 | 0.49 |
| 6:F:52:ALA:C | 6:F:54:LYS:H | 2.16 | 0.49 |
| 8:K:51:ILE:O | 8:K:51:ILE:HG22 | 2.13 | 0.49 |
| 1:Q:728:MET:HE2 | 3:R:916:PRO:HG3 | 1.95 | 0.49 |
| 3:R:167:LEU:HD12 | 3:R:190:ILE:CD1 | 2.43 | 0.49 |
| 3:R:286:ILE:O | 3:R:289:ALA:HB3 | 2.13 | 0.49 |
| 3:R:563:ILE:HG22 | 3:R:564:ASN:N | 2.28 | 0.49 |
| 3:R:564:ASN:ND2 | 3:R:564:ASN:O | 2.46 | 0.49 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 3:R:644:SER:C | 3:R:646:ALA:H | 2.15 | 0.49 |
| 3:R:801:GLU:HG3 | 11:Z:38:ARG:CZ | 2.43 | 0.49 |
| 1:A:558:LYS:NZ | 3:R:108:GLU:CG | 2.76 | 0.49 |
| 1:A:855:VAL:O | 1:A:855:VAL:HG12 | 2.12 | 0.49 |
| 1:A:489:PRO:CB | 1:A:858:MET:HG3 | 2.42 | 0.49 |
| 3:B:1069:TRP:CE3 | 3:B:1070:TYR:O | 2.66 | 0.49 |
| 3:B:109:ALA:O | 3:B:110:GLU:O | 2.31 | 0.49 |
| 3:B:153:ILE:HG22 | 3:B:153:ILE:O | 2.13 | 0.49 |
| 3:B:353:LEU:HD13 | 3:B:404:VAL:HG22 | 1.95 | 0.49 |
| 3:B:690:THR:O | 3:B:691:ARG:C | 2.51 | 0.49 |
| 2:C:337:GLU:HG2 | 2:C:338:LYS:N | 2.18 | 0.49 |
| 2:C:354:LEU:HD13 | 3:B:1104:LEU:HD21 | 1.95 | 0.49 |
| 5:E:88:GLU:HA | 5:E:141:LYS:HA | 1.95 | 0.49 |
| 5:E:31:ARG:C | 5:E:33:GLN:N | 2.65 | 0.49 |
| 6:F:57:GLU:O | 6:F:59:LEU:N | 2.46 | 0.49 |
| 7:H:37:ILE:HD12 | 7:H:37:ILE:O | 2.12 | 0.49 |
| 2:C:389:THR:HG22 | 8:K:77:THR:O | 2.12 | 0.49 |
| 1:Q:353:ILE:O | 1:Q:403:PRO:HA | 2.13 | 0.49 |
| 1:Q:552:ILE:C | 1:Q:554:ALA:H | 2.15 | 0.49 |
| 1:Q:702:ASP:O | 1:Q:703:THR:C | 2.51 | 0.49 |
| 1:Q:704:LEU:HD22 | 1:Q:781:PHE:CD1 | 2.48 | 0.49 |
| 3:R:238:ILE:HA | 3:R:241:ALA:HB3 | 1.94 | 0.49 |
| 3:R:478:VAL:HA | 3:R:572:SER:HA | 1.95 | 0.49 |
| 3:R:536:LEU:O | 3:R:539:LYS:N | 2.46 | 0.49 |
| 3:R:604:PHE:O | 3:R:607:LEU:HB2 | 2.13 | 0.49 |
| 3:R:854:GLU:HG3 | 11:Z:24:VAL:HG11 | 1.94 | 0.49 |
| 4:S:180:VAL:HG22 | 4:S:190:LEU:HG | 1.95 | 0.49 |
| 5:T:166:GLN:HB2 | 5:T:169:LEU:CD1 | 2.29 | 0.49 |
| 7:V:80:TYR:O | 7:V:81:VAL:CB | 2.61 | 0.49 |
| 8:W:19:PHE:O | 8:W:20:ILE:C | 2.52 | 0.49 |
| 3:R:717:PRO:HD3 | 10:Y:53:VAL:HG11 | 1.93 | 0.49 |
| 1:A:525:LEU:HD12 | 9:L:56:LYS:HE3 | 1.95 | 0.49 |
| 3:B:147:ASP:OD2 | 3:B:148:PRO:CD | 2.59 | 0.49 |
| 3:B:239:VAL:HG12 | 3:B:249:GLN:HE22 | 1.77 | 0.49 |
| 3:B:530:TYR:OH | 3:B:536:LEU:CB | 2.59 | 0.49 |
| 3:B:958:LEU:O | 3:B:958:LEU:HD23 | 2.13 | 0.49 |
| 2:C:258:LEU:O | 2:C:262:LEU:HG | 2.13 | 0.49 |
| 2:C:326:VAL:O | 2:C:326:VAL:HG13 | 2.12 | 0.49 |
| 2:C:389:THR:O | 2:C:389:THR:HG23 | 2.12 | 0.49 |
| 4:D:4:ASN:HA | 9:L:90:LEU:CD2 | 2.41 | 0.49 |
| 5:E:96:GLY:HA2 | 5:E:110:ILE:CD1 | 2.43 | 0.49 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:G:390:MET:O | 2:G:391:ARG:HB3 | 2.12 | 0.49 |
| 10:N:18:TRP:CZ2 | 10:N:22:ILE:HG21 | 2.48 | 0.49 |
| 11:P:16:GLU:CD | 11:P:26:CYS:HB2 | 2.32 | 0.49 |
| 11:P:46:LYS:HB3 | 11:P:46:LYS:NZ | 2.27 | 0.49 |
| 1:Q:261:ILE:O | 1:Q:261:ILE:HG22 | 2.13 | 0.49 |
| 1:Q:297:THR:O | 1:Q:298:LEU:C | 2.51 | 0.49 |
| 3:R:181:SER:O | 3:R:182:ASN:CB | 2.61 | 0.49 |
| 3:R:435:ARG:NH1 | 3:R:435:ARG:CG | 2.75 | 0.49 |
| 3:R:620:GLU:C | 3:R:622:GLU:N | 2.64 | 0.49 |
| 3:R:690:THR:O | 3:R:691:ARG:C | 2.51 | 0.49 |
| 3:R:691:ARG:HB3 | 3:R:754:PHE:CZ | 2.48 | 0.49 |
| 3:R:764:LYS:NZ | 3:R:814:VAL:O | 2.41 | 0.49 |
| 4:S:112:LYS:C | 4:S:114:ILE:H | 2.15 | 0.49 |
| 4:S:26:ASN:O | 4:S:29:ARG:HB3 | 2.13 | 0.49 |
| 5:T:113:ILE:CG2 | 5:T:114:THR:H | 2.25 | 0.49 |
| 5:T:102:GLY:HA2 | 6:U:40:TYR:CG | 2.48 | 0.49 |
| 1:A:15:SER:HA | 1:A:203:ARG:HH21 | 1.77 | 0.48 |
| 1:A:75:ILE:HG23 | 1:A:75:ILE:O | 2.12 | 0.48 |
| 3:B:1061:CYS:H | 3:B:1065:GLY:HA2 | 1.78 | 0.48 |
| 3:B:1094:SER:O | 3:B:1096:ALA:N | 2.46 | 0.48 |
| 3:B:20:SER:O | 3:B:25:ARG:NH2 | 2.45 | 0.48 |
| 3:B:368:GLN:O | 3:B:372:SER:HB3 | 2.12 | 0.48 |
| 3:B:555:VAL:O | 3:B:620:GLU:HG3 | 2.13 | 0.48 |
| 3:B:644:SER:O | 3:B:647:ILE:HG13 | 2.13 | 0.48 |
| 3:B:867:ARG:O | 3:B:868:ASP:HB2 | 2.13 | 0.48 |
| 3:B:696:HIS:HE1 | 3:B:869:LEU:HD23 | 1.78 | 0.48 |
| 3:B:99:THR:O | 3:B:99:THR:HG22 | 2.13 | 0.48 |
| 2:C:262:LEU:CD2 | 2:C:269:VAL:HG13 | 2.36 | 0.48 |
| 2:C:285:GLY:HA2 | 7:H:50:PRO:HD2 | 1.94 | 0.48 |
| 2:C:288:ALA:HB2 | 7:H:17:VAL:HB | 1.95 | 0.48 |
| 2:C:311:ARG:HH11 | 2:C:311:ARG:HG3 | 1.77 | 0.48 |
| 5:E:103:PRO:HB3 | 6:F:37:THR:OG1 | 2.13 | 0.48 |
| 5:E:77:TYR:O | 5:E:78:VAL:HG23 | 2.12 | 0.48 |
| 6:F:54:LYS:NZ | 6:F:54:LYS:HB2 | 2.27 | 0.48 |
| 6:F:72:LEU:HD23 | 6:F:86:ILE:CD1 | 2.42 | 0.48 |
| 4:D:24:PHE:CZ | 9:L:80:THR:HA | 2.47 | 0.48 |
| 1:Q:212:LEU:HD21 | 1:Q:242:ILE:HD13 | 1.95 | 0.48 |
| 1:Q:582:HIS:C | 1:Q:584:SER:H | 2.15 | 0.48 |
| 3:R:1013:THR:HB | 3:R:1015:GLN:HG3 | 1.93 | 0.48 |
| 3:R:1047:ASP:O | 3:R:1047:ASP:CG | 2.51 | 0.48 |
| 3:R:130:ILE:HA | 3:R:133:TYR:CE1 | 2.47 | 0.48 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 3:R:189:ILE:CB | 3:R:203:GLU:HB2 | 2.39 | 0.48 |
| 3:R:481:ASN:O | 3:R:482:GLU:O | 2.31 | 0.48 |
| 3:R:537:ALA:CB | 3:R:557:HIS:HE2 | 2.24 | 0.48 |
| 3:R:551:ASP:OD2 | 3:R:551:ASP:N | 2.42 | 0.48 |
| 3:R:634:THR:HB | 3:R:635:PRO:HD3 | 1.95 | 0.48 |
| 3:R:911:ASN:O | 3:R:913:HIS:N | 2.46 | 0.48 |
| 3:R:971:TYR:O | 3:R:973:GLY:N | 2.43 | 0.48 |
| 4:S:216:SER:C | 4:S:217:ILE:HD12 | 2.34 | 0.48 |
| 5:T:123:VAL:C | 5:T:125:GLY:N | 2.65 | 0.48 |
| 5:T:15:PRO:HA | 5:T:18:PHE:CD1 | 2.48 | 0.48 |
| 5:T:96:GLY:HA2 | 5:T:110:ILE:CD1 | 2.43 | 0.48 |
| 2:G:388:LEU:CD1 | 8:W:34:ARG:HG3 | 2.43 | 0.48 |
| 8:W:87:ILE:HD12 | 8:W:87:ILE:N | 2.27 | 0.48 |
| 9:X:14:GLU:OE1 | 9:X:56:LYS:HG2 | 2.12 | 0.48 |
| 1:A:407:ILE:HD12 | 1:A:407:ILE:O | 2.13 | 0.48 |
| 1:A:564:GLY:O | 1:A:586:VAL:N | 2.42 | 0.48 |
| 1:A:637:ARG:HD3 | 1:A:640:GLU:OE1 | 2.13 | 0.48 |
| 1:A:670:VAL:HG23 | 1:A:671:GLU:N | 2.27 | 0.48 |
| 1:A:734:ARG:HG2 | 3:B:913:HIS:O | 2.12 | 0.48 |
| 1:A:468:GLN:HB2 | 3:B:1047:ASP:OD2 | 2.13 | 0.48 |
| 3:B:148:PRO:HG3 | 3:B:422:MET:HE1 | 1.94 | 0.48 |
| 3:B:292:ILE:O | 3:B:292:ILE:HG22 | 2.13 | 0.48 |
| 3:B:591:ILE:O | 3:B:594:ILE:HG13 | 2.13 | 0.48 |
| 3:B:65:ILE:HG22 | 3:B:66:GLY:H | 1.78 | 0.48 |
| 3:B:733:ASN:HB3 | 3:B:739:ILE:HG22 | 1.95 | 0.48 |
| 3:B:778:ALA:HA | 3:B:783:TYR:CZ | 2.48 | 0.48 |
| 2:C:104:LEU:O | 2:C:104:LEU:HD23 | 2.13 | 0.48 |
| 2:C:31:ASP:C | 2:C:33:LYS:N | 2.63 | 0.48 |
| 2:G:12:TYR:CD1 | 2:G:12:TYR:N | 2.81 | 0.48 |
| 2:G:15:GLU:HA | 2:G:18:LYS:CG | 2.43 | 0.48 |
| 2:C:388:LEU:CG | 8:K:34:ARG:HG3 | 2.43 | 0.48 |
| 8:K:60:ASP:O | 8:K:61:VAL:O | 2.31 | 0.48 |
| 1:Q:335:ASP:OD1 | 1:Q:482:VAL:HB | 2.13 | 0.48 |
| 1:Q:349:VAL:HG21 | 1:Q:409:ARG:NH2 | 2.28 | 0.48 |
| 1:Q:417:VAL:HG11 | 1:Q:464:LEU:CD2 | 2.43 | 0.48 |
| 1:Q:632:PHE:HA | 1:Q:635:PHE:HD1 | 1.75 | 0.48 |
| 3:R:134:THR:O | 3:R:135:LEU:C | 2.50 | 0.48 |
| 3:R:11:TRP:O | 3:R:14:ILE:HG22 | 2.13 | 0.48 |
| 3:R:173:LEU:HD22 | 3:R:333:ASP:HB3 | 1.95 | 0.48 |
| 3:R:402:ASN:O | 3:R:403:TRP:HB2 | 2.13 | 0.48 |
| 3:R:569:ASN:HB3 | 3:R:574:ARG:CZ | 2.43 | 0.48 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 3:R:555:VAL:O | 3:R:620:GLU:HG3 | 2.12 | 0.48 |
| 3:R:687:ARG:HB3 | 3:R:687:ARG:HH11 | 1.78 | 0.48 |
| 3:R:943:THR:CG2 | 3:R:944:PRO:HD2 | 2.36 | 0.48 |
| 1:A:369:PRO:HA | 1:A:410:HIS:CE1 | 2.48 | 0.48 |
| 1:A:485:ASN:ND2 | 3:B:1039:PHE:HE2 | 2.11 | 0.48 |
| 3:B:1061:CYS:N | 3:B:1088:LEU:HD23 | 2.29 | 0.48 |
| 3:B:204:ARG:HB2 | 3:B:213:SER:HG | 1.75 | 0.48 |
| 3:B:247:GLU:HA | 3:B:250:ASN:HD22 | 1.78 | 0.48 |
| 3:B:395:ARG:O | 3:B:399:ALA:CB | 2.62 | 0.48 |
| 3:B:699:GLN:NE2 | 10:N:48:MET:CE | 2.74 | 0.48 |
| 3:B:97:TRP:O | 3:B:114:VAL:O | 2.31 | 0.48 |
| 2:C:64:ILE:CG2 | 2:C:65:ALA:N | 2.77 | 0.48 |
| 4:D:153:HIS:O | 4:D:155:LYS:N | 2.36 | 0.48 |
| 4:D:69:SER:HA | 4:D:72:ALA:CB | 2.42 | 0.48 |
| 6:F:41:LEU:C | 6:F:43:SER:H | 2.15 | 0.48 |
| 2:G:258:LEU:O | 2:G:262:LEU:HG | 2.12 | 0.48 |
| 2:G:327:ARG:CZ | 2:G:334:VAL:HG23 | 2.43 | 0.48 |
| 2:G:349:VAL:HG21 | 2:G:352:LYS:HB2 | 1.94 | 0.48 |
| 11:P:17:GLN:O | 11:P:19:LYS:N | 2.46 | 0.48 |
| 1:Q:353:ILE:HD12 | 1:Q:353:ILE:N | 2.28 | 0.48 |
| 1:Q:752:VAL:C | 1:Q:754:GLY:N | 2.66 | 0.48 |
| 3:R:144:ASP:HB3 | 3:R:682:ALA:HB3 | 1.96 | 0.48 |
| 3:R:694:LEU:C | 3:R:694:LEU:HD13 | 2.34 | 0.48 |
| 3:R:75:ARG:HD3 | 3:R:75:ARG:N | 2.28 | 0.48 |
| 3:R:958:LEU:C | 3:R:958:LEU:HD23 | 2.34 | 0.48 |
| 4:S:24:PHE:CZ | 9:X:80:THR:HA | 2.46 | 0.48 |
| 5:T:171:LYS:HB3 | 5:T:174:TRP:CD1 | 2.49 | 0.48 |
| 9:X:61:GLY:O | 9:X:62:SER:C | 2.51 | 0.48 |
| 11:Z:31:TYR:HE2 | 11:Z:33:ILE:CG1 | 2.26 | 0.48 |
| 11:Z:42:ILE:O | 11:Z:42:ILE:HG23 | 2.13 | 0.48 |
| 1:A:387:ASP:CG | 1:A:388:LEU:N | 2.66 | 0.48 |
| 1:A:851:GLY:O | 1:A:853:ASP:N | 2.46 | 0.48 |
| 1:A:89:HIS:O | 1:A:93:PHE:HD1 | 1.97 | 0.48 |
| 3:B:1083:GLY:C | 3:B:1085:LYS:N | 2.66 | 0.48 |
| 3:B:170:ASN:O | 3:B:171:ARG:O | 2.32 | 0.48 |
| 3:B:94:ALA:O | 3:B:118:ASP:HA | 2.13 | 0.48 |
| 3:B:979:ILE:CD1 | 3:B:981:SER:H | 2.26 | 0.48 |
| 3:B:724:LEU:HD13 | 3:B:990:TYR:CE2 | 2.48 | 0.48 |
| 3:B:676:ALA:HB2 | 3:B:991:GLN:NE2 | 2.29 | 0.48 |
| 3:B:978:LYS:HE2 | 4:D:205:LEU:HD13 | 1.94 | 0.48 |
| 4:D:34:LEU:O | 4:D:36:VAL:N | 2.46 | 0.48 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 5:E:97:ILE:HD11 | 5:E:136:ILE:HG21 | 1.95 | 0.48 |
| 2:G:330:GLY:O | 2:G:335:THR:OG1 | 2.31 | 0.48 |
| 1:Q:870:ARG:NH2 | 2:G:57:LYS:O | 2.47 | 0.48 |
| 8:K:70:ARG:C | 8:K:72:GLY:N | 2.67 | 0.48 |
| 1:Q:507:TYR:O | 1:Q:508:LEU:CB | 2.60 | 0.48 |
| 1:Q:86:LEU:HB3 | 1:Q:207:MET:HE1 | 1.93 | 0.48 |
| 1:Q:84:VAL:O | 1:Q:87:VAL:HG12 | 2.13 | 0.48 |
| 3:R:1036:LEU:O | 3:R:1039:PHE:O | 2.31 | 0.48 |
| 3:R:239:VAL:HG12 | 3:R:249:GLN:HE22 | 1.78 | 0.48 |
| 3:R:278:ILE:HG23 | 3:R:285:ARG:NH2 | 2.28 | 0.48 |
| 3:R:479:GLY:C | 3:R:480:ILE:HG13 | 2.34 | 0.48 |
| 3:R:579:LEU:HD12 | 3:R:616:LEU:CD1 | 2.39 | 0.48 |
| 4:S:112:LYS:HB3 | 4:S:126:GLY:O | 2.13 | 0.48 |
| 4:S:131:VAL:CG2 | 4:S:132:LEU:N | 2.63 | 0.48 |
| 5:T:147:ILE:HG12 | 5:T:163:THR:HB | 1.95 | 0.48 |
| 8:W:43:LEU:C | 8:W:45:MET:H | 2.16 | 0.48 |
| 9:X:8:SER:HB2 | 9:X:13:LEU:HD13 | 1.95 | 0.48 |
| 1:A:392:LYS:O | 1:A:394:ARG:N | 2.46 | 0.48 |
| 1:A:418:LEU:HD23 | 1:A:430:MET:CE | 2.44 | 0.48 |
| 1:A:833:GLU:CG | 1:A:839:ARG:HG3 | 2.43 | 0.48 |
| 3:B:478:VAL:HA | 3:B:572:SER:HA | 1.95 | 0.48 |
| 3:B:544:ARG:NH1 | 3:B:544:ARG:HG3 | 2.25 | 0.48 |
| 3:B:52:GLU:CB | 3:B:56:LEU:HB3 | 2.42 | 0.48 |
| 3:B:643:TRP:CZ3 | 3:B:645:PRO:HB2 | 2.49 | 0.48 |
| 3:B:75:ARG:N | 3:B:75:ARG:HD3 | 2.29 | 0.48 |
| 3:B:764:LYS:NZ | 3:B:814:VAL:N | 2.50 | 0.48 |
| 1:A:827:LEU:HD13 | 2:C:319:VAL:HG21 | 1.95 | 0.48 |
| 4:D:106:PRO:HD3 | 4:D:135:THR:HG23 | 1.95 | 0.48 |
| 4:D:98:ILE:HD11 | 4:D:114:ILE:CG2 | 2.32 | 0.48 |
| 5:E:149:VAL:HG11 | 5:E:160:ILE:HD12 | 1.96 | 0.48 |
| 2:G:126:LEU:HG | 2:G:249:TYR:O | 2.14 | 0.48 |
| 2:G:389:THR:HG23 | 2:G:389:THR:O | 2.12 | 0.48 |
| 8:K:26:ARG:HG2 | 8:K:90:LEU:HD13 | 1.96 | 0.48 |
| 9:L:33:ARG:HG2 | 9:L:41:ALA:HB3 | 1.94 | 0.48 |
| 10:N:22:ILE:O | 10:N:26:ASN:ND2 | 2.45 | 0.48 |
| 10:N:55:ILE:N | 10:N:55:ILE:HD13 | 2.27 | 0.48 |
| 1:Q:189:ASP:O | 1:Q:199:PRO:HG3 | 2.13 | 0.48 |
| 1:Q:402:ALA:O | 1:Q:403:PRO:C | 2.51 | 0.48 |
| 1:Q:428:ILE:HG21 | 1:Q:495:ILE:HD13 | 1.95 | 0.48 |
| 1:Q:551:VAL:HG13 | 1:Q:552:ILE:HG23 | 1.94 | 0.48 |
| 3:R:1029:GLY:O | 3:R:1030:GLU:C | 2.52 | 0.48 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 1:Q:475:GLU:OE1 | 3:R:1043:MET:HB2 | 2.13 | 0.48 |
| 3:R:1076:LYS:O | 3:R:1078:VAL:HG23 | 2.13 | 0.48 |
| 3:R:107:ILE:HG12 | 3:R:110:GLU:OE2 | 2.14 | 0.48 |
| 3:R:292:ILE:O | 3:R:292:ILE:HG22 | 2.14 | 0.48 |
| 3:R:38:LYS:CG | 3:R:39:LEU:H | 2.16 | 0.48 |
| 3:R:84:GLU:O | 3:R:88:ARG:N | 2.38 | 0.48 |
| 4:S:12:ARG:NH2 | 4:S:14:ASP:OD2 | 2.46 | 0.48 |
| 4:S:205:LEU:O | 4:S:207:GLU:N | 2.47 | 0.48 |
| 5:T:141:LYS:HB2 | 5:T:172:LEU:CD1 | 2.43 | 0.48 |
| 5:T:96:GLY:HA2 | 5:T:110:ILE:HG12 | 1.95 | 0.48 |
| 1:A:17:ASP:O | 1:A:21:LYS:HG3 | 2.14 | 0.48 |
| 1:A:249:LEU:HD12 | 1:A:269:LEU:HD11 | 1.95 | 0.48 |
| 1:A:402:ALA:O | 1:A:403:PRO:C | 2.50 | 0.48 |
| 1:A:417:VAL:HG13 | 1:A:465:HIS:O | 2.14 | 0.48 |
| 1:A:700:ILE:O | 1:A:704:LEU:HG | 2.14 | 0.48 |
| 3:B:478:VAL:HA | 3:B:572:SER:CB | 2.43 | 0.48 |
| 3:B:301:LEU:CD2 | 3:B:483:ARG:HH21 | 2.22 | 0.48 |
| 3:B:687:ARG:CB | 3:B:687:ARG:HH11 | 2.25 | 0.48 |
| 2:C:238:LYS:C | 2:C:239:ARG:HD3 | 2.33 | 0.48 |
| 5:E:2:TYR:CZ | 6:F:41:LEU:HD21 | 2.49 | 0.48 |
| 7:H:23:LEU:CD2 | 7:H:64:ARG:HB2 | 2.41 | 0.48 |
| 8:K:30:TYR:N | 8:K:30:TYR:CD1 | 2.81 | 0.48 |
| 1:Q:363:GLN:O | 1:Q:366:ILE:CG2 | 2.62 | 0.48 |
| 3:R:1014:ARG:HD2 | 3:R:1095:TYR:CE1 | 2.48 | 0.48 |
| 3:R:122:MET:HB2 | 3:R:152:PHE:CE1 | 2.48 | 0.48 |
| 3:R:290:GLN:NE2 | 3:R:308:ARG:HH12 | 2.12 | 0.48 |
| 3:R:325:LEU:O | 3:R:326:TYR:C | 2.51 | 0.48 |
| 3:R:373:LYS:CG | 3:R:375:ARG:HB2 | 2.43 | 0.48 |
| 3:R:448:THR:O | 3:R:450:TRP:N | 2.46 | 0.48 |
| 3:R:520:VAL:C | 3:R:521:ILE:HD12 | 2.34 | 0.48 |
| 3:R:952:GLN:O | 3:R:953:LEU:C | 2.51 | 0.48 |
| 4:S:167:TYR:HD2 | 4:S:222:VAL:HG21 | 1.78 | 0.48 |
| 5:T:123:VAL:C | 5:T:125:GLY:H | 2.17 | 0.48 |
| 1:A:294:PRO:O | 1:A:295:LEU:O | 2.30 | 0.48 |
| 1:A:417:VAL:HG11 | 1:A:464:LEU:CD2 | 2.43 | 0.48 |
| 3:B:1033:ARG:NH1 | 3:B:1033:ARG:CG | 2.72 | 0.48 |
| 3:B:102:PRO:C | 3:B:108:GLU:OE1 | 2.52 | 0.48 |
| 3:B:229:ALA:HB1 | 3:B:269:LEU:HD23 | 1.96 | 0.48 |
| 3:B:658:PRO:C | 3:B:660:HIS:N | 2.67 | 0.48 |
| 3:B:724:LEU:CD1 | 3:B:908:ILE:HG22 | 2.41 | 0.48 |
| 2:C:135:ASP:C | 2:C:137:ALA:H | 2.17 | 0.48 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 4:D:63:ALA:HB1 | 4:D:155:LYS:NZ | 2.27 | 0.48 |
| 2:G:145:GLU:HG2 | 2:G:240:ALA:N | 2.24 | 0.48 |
| 2:G:238:LYS:C | 2:G:239:ARG:HD3 | 2.33 | 0.48 |
| 2:G:253:THR:C | 2:G:255:GLY:H | 2.17 | 0.48 |
| 2:G:55:ALA:HA | 2:G:58:GLU:CD | 2.33 | 0.48 |
| 7:H:43:PRO:O | 7:H:44:TRP:CB | 2.60 | 0.48 |
| 2:C:286:ILE:CD1 | 7:H:45:ILE:HG13 | 2.33 | 0.48 |
| 1:Q:192:VAL:CG1 | 1:Q:199:PRO:HD3 | 2.43 | 0.48 |
| 1:Q:89:HIS:O | 1:Q:93:PHE:HD1 | 1.95 | 0.48 |
| 1:Q:4:LYS:HZ1 | 3:R:1115:LEU:HB3 | 1.75 | 0.48 |
| 3:R:191:SER:OG | 3:R:299:PRO:HD2 | 2.14 | 0.48 |
| 3:R:282:ARG:HD3 | 3:R:285:ARG:HD2 | 1.94 | 0.48 |
| 3:R:346:ALA:O | 3:R:350:PHE:N | 2.46 | 0.48 |
| 3:R:497:VAL:HG12 | 3:R:498:GLU:H | 1.72 | 0.48 |
| 3:R:577:ARG:HE | 3:R:578:PRO:HD2 | 1.78 | 0.48 |
| 3:R:63:ILE:HG13 | 3:R:98:LEU:CA | 2.43 | 0.48 |
| 3:R:146:LYS:HE2 | 3:R:715:ASN:OD1 | 2.13 | 0.48 |
| 5:T:101:LEU:HD11 | 5:T:160:ILE:HG21 | 1.95 | 0.48 |
| 7:V:45:ILE:HG22 | 7:V:80:TYR:N | 2.23 | 0.48 |
| 9:X:7:LYS:HE3 | 9:X:12:TYR:HE2 | 1.77 | 0.48 |
| 9:X:87:ILE:O | 9:X:91:THR:HG23 | 2.13 | 0.48 |
| 1:A:507:TYR:HB2 | 1:A:511:VAL:CG1 | 2.40 | 0.48 |
| 1:A:647:ARG:NH2 | 4:D:211:ARG:HH12 | 2.12 | 0.48 |
| 1:A:854:GLY:O | 2:C:65:ALA:HA | 2.12 | 0.48 |
| 3:B:1070:TYR:O | 3:B:1071:ASP:C | 2.51 | 0.48 |
| 3:B:134:THR:N | 3:B:137:LYS:HB2 | 2.29 | 0.48 |
| 3:B:294:ASP:O | 3:B:303:THR:HA | 2.14 | 0.48 |
| 3:B:457:GLU:O | 3:B:458:THR:OG1 | 2.30 | 0.48 |
| 3:B:480:ILE:CG2 | 3:B:481:ASN:N | 2.77 | 0.48 |
| 3:B:741:ASN:O | 3:B:745:VAL:HG23 | 2.13 | 0.48 |
| 3:B:926:GLU:CD | 3:B:988:VAL:HG22 | 2.34 | 0.48 |
| 2:G:15:GLU:HA | 2:G:18:LYS:HG3 | 1.96 | 0.48 |
| 2:G:278:ARG:O | 2:G:282:GLU:HG3 | 2.14 | 0.48 |
| 8:K:87:ILE:N | 8:K:87:ILE:HD12 | 2.28 | 0.48 |
| 4:D:45:TYR:CE1 | 11:P:44:ILE:HG23 | 2.49 | 0.48 |
| 1:Q:358:ILE:O | 1:Q:362:ARG:HG3 | 2.14 | 0.48 |
| 1:Q:407:ILE:HD12 | 1:Q:407:ILE:O | 2.13 | 0.48 |
| 1:Q:600:LYS:HE3 | 1:Q:732:GLY:CA | 2.33 | 0.48 |
| 1:Q:607:GLN:O | 1:Q:608:PRO:C | 2.52 | 0.48 |
| 3:R:128:ASP:OD1 | 3:R:130:ILE:HG13 | 2.14 | 0.48 |
| 1:Q:807:VAL:CG2 | 3:R:443:ARG:HD3 | 2.35 | 0.48 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 3:R:850:VAL:O | 11:Z:35:PHE:HB2 | 2.14 | 0.48 |
| 3:R:921:LEU:O | 3:R:923:GLN:N | 2.46 | 0.48 |
| 3:R:97:TRP:O | 3:R:114:VAL:O | 2.32 | 0.48 |
| 3:R:724:LEU:HD13 | 3:R:990:TYR:HE2 | 1.78 | 0.48 |
| 4:S:108:MET:HG3 | 4:S:110:TYR:CE1 | 2.48 | 0.48 |
| 8:W:50:LEU:CD2 | 8:W:74:LEU:HA | 2.43 | 0.48 |
| 1:A:551:VAL:HG13 | 1:A:552:ILE:HG23 | 1.95 | 0.48 |
| 1:A:87:VAL:HG13 | 1:A:88:LYS:N | 2.28 | 0.48 |
| 3:B:1014:ARG:HD2 | 3:B:1095:TYR:CE1 | 2.48 | 0.48 |
| 3:B:122:MET:HB2 | 3:B:152:PHE:CE1 | 2.49 | 0.48 |
| 3:B:248:VAL:CG1 | 3:B:329:ARG:HH12 | 2.20 | 0.48 |
| 3:B:526:LEU:HD23 | 3:B:526:LEU:C | 2.34 | 0.48 |
| 3:B:690:THR:O | 3:B:691:ARG:O | 2.31 | 0.48 |
| 3:B:700:ARG:HB3 | 10:N:51:SER:HA | 1.96 | 0.48 |
| 3:B:735:GLU:O | 3:B:736:ASP:O | 2.32 | 0.48 |
| 3:B:940:VAL:HG23 | 3:B:947:LYS:HD3 | 1.95 | 0.48 |
| 4:D:129:PRO:CG | 10:N:15:ALA:HB1 | 2.44 | 0.48 |
| 4:D:71:GLU:O | 4:D:73:LEU:N | 2.46 | 0.48 |
| 5:E:123:VAL:C | 5:E:125:GLY:H | 2.16 | 0.48 |
| 2:G:331:ARG:CD | 2:G:348:GLU:HB3 | 2.42 | 0.48 |
| 2:G:382:GLY:C | 2:G:384:GLY:H | 2.16 | 0.48 |
| 8:K:71:ARG:HB3 | 8:K:73:VAL:HG13 | 1.96 | 0.48 |
| 1:Q:23:SER:OG | 1:Q:24:VAL:N | 2.45 | 0.48 |
| 1:Q:420:ASN:HD22 | 1:Q:421:ARG:H | 1.62 | 0.48 |
| 3:R:412:GLN:NE2 | 3:R:425:HIS:HE1 | 2.12 | 0.48 |
| 3:R:683:ASN:C | 3:R:685:GLN:N | 2.65 | 0.48 |
| 3:R:840:ARG:HB2 | 3:R:843:GLU:CB | 2.44 | 0.48 |
| 3:R:890:MET:HG2 | 3:R:892:ILE:HD11 | 1.96 | 0.48 |
| 3:R:904:VAL:HG22 | 10:Y:44:CYS:HB3 | 1.96 | 0.48 |
| 3:R:727:MET:HA | 3:R:912:PRO:HG2 | 1.96 | 0.48 |
| 4:S:203:CYS:SG | 4:S:204:THR:N | 2.87 | 0.48 |
| 6:U:16:VAL:C | 6:U:18:LYS:N | 2.67 | 0.48 |
| 6:U:18:LYS:HD2 | 6:U:45:GLU:HG2 | 1.96 | 0.48 |
| 6:U:56:ILE:O | 6:U:59:LEU:HB3 | 2.14 | 0.48 |
| 1:A:294:PRO:O | 1:A:295:LEU:C | 2.52 | 0.48 |
| 1:A:648:LEU:HD23 | 1:A:648:LEU:C | 2.34 | 0.48 |
| 3:B:24:VAL:HG21 | 3:B:426:LEU:HD12 | 1.95 | 0.48 |
| 3:B:360:ALA:HB2 | 3:B:393:ARG:HH12 | 1.79 | 0.48 |
| 3:B:430:ILE:HG22 | 3:B:431:SER:O | 2.14 | 0.48 |
| 3:B:557:HIS:N | 3:B:623:ASN:ND2 | 2.43 | 0.48 |
| 3:B:723:ILE:HD12 | 10:N:43:TYR:CE1 | 2.43 | 0.48 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 3:B:724:LEU:HD13 | 3:B:990:TYR:HE2 | 1.79 | 0.48 |
| 2:C:269:VAL:CA | 2:C:272:VAL:HG23 | 2.38 | 0.48 |
| 2:C:46:ASP:O | 2:C:50:LYS:NZ | 2.46 | 0.48 |
| 2:C:55:ALA:C | 2:C:57:LYS:N | 2.64 | 0.48 |
| 4:D:180:VAL:HG21 | 4:D:190:LEU:HG | 1.93 | 0.48 |
| 4:D:167:TYR:HD2 | 4:D:222:VAL:HG21 | 1.78 | 0.48 |
| 5:E:171:LYS:HB3 | 5:E:174:TRP:CD1 | 2.49 | 0.48 |
| 2:G:262:LEU:CD2 | 2:G:269:VAL:HG13 | 2.38 | 0.48 |
| 2:G:373:ILE:CD1 | 3:R:1049:LEU:HD22 | 2.44 | 0.48 |
| 7:H:45:ILE:HB | 7:H:79:ARG:CB | 2.42 | 0.48 |
| 10:N:22:ILE:HD13 | 10:N:23:THR:H | 1.78 | 0.48 |
| 1:Q:194:ILE:O | 1:Q:194:ILE:HG22 | 2.12 | 0.48 |
| 1:Q:316:LYS:HZ3 | 3:R:1049:LEU:HD12 | 1.79 | 0.48 |
| 1:Q:387:ASP:OD2 | 1:Q:389:ARG:N | 2.47 | 0.48 |
| 1:Q:87:VAL:O | 1:Q:91:TYR:HB2 | 2.14 | 0.48 |
| 3:R:373:LYS:HE3 | 3:R:375:ARG:CD | 2.37 | 0.48 |
| 1:Q:764:ARG:NH2 | 3:R:624:ALA:O | 2.47 | 0.48 |
| 5:T:170:GLY:H | 5:T:175:ILE:HD11 | 1.76 | 0.48 |
| 2:G:390:MET:CE | 5:T:58:ILE:C | 2.82 | 0.48 |
| 6:U:30:SER:HB3 | 6:U:38:TYR:CE1 | 2.49 | 0.48 |
| 8:W:71:ARG:HB3 | 8:W:73:VAL:HG13 | 1.96 | 0.48 |
| 9:X:83:TYR:O | 9:X:87:ILE:HB | 2.14 | 0.48 |
| 4:S:61:ARG:HH21 | 10:Y:2:LEU:HD13 | 1.78 | 0.48 |
| 1:A:390:TYR:O | 1:A:391:VAL:HB | 2.14 | 0.47 |
| 1:A:415:ASP:H | 1:A:435:VAL:HG12 | 1.79 | 0.47 |
| 1:A:27:ILE:HB | 1:A:75:ILE:CD1 | 2.44 | 0.47 |
| 1:A:747:LEU:HG | 1:A:784:SER:O | 2.14 | 0.47 |
| 1:A:872:PHE:CD2 | 1:A:876:VAL:HG11 | 2.49 | 0.47 |
| 1:A:87:VAL:O | 1:A:91:TYR:HB2 | 2.14 | 0.47 |
| 3:B:541:ARG:NH2 | 3:B:557:HIS:CD2 | 2.82 | 0.47 |
| 3:B:589:VAL:C | 3:B:591:ILE:HD12 | 2.34 | 0.47 |
| 3:B:579:LEU:CD1 | 3:B:616:LEU:HD12 | 2.38 | 0.47 |
| 3:B:911:ASN:O | 3:B:913:HIS:N | 2.47 | 0.47 |
| 2:C:349:VAL:HG21 | 2:C:352:LYS:HB2 | 1.96 | 0.47 |
| 2:C:35:LEU:O | 2:C:39:LYS:HE3 | 2.14 | 0.47 |
| 4:D:131:VAL:HA | 10:N:2:LEU:HD11 | 1.94 | 0.47 |
| 4:D:175:ASN:OD1 | 4:D:195:LEU:HG | 2.14 | 0.47 |
| 4:D:216:SER:C | 4:D:217:ILE:HD12 | 2.32 | 0.47 |
| 4:D:250:ILE:H | 4:D:250:ILE:HG13 | 1.42 | 0.47 |
| 2:G:298:SER:O | 2:G:302:ALA:HB2 | 2.14 | 0.47 |
| 1:Q:196:GLY:HA3 | 2:G:360:ARG:HH21 | 1.78 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|------------------|--------------------------|-------------------|
| 2:G:390:MET:H | 2:G:390:MET:HE3 | 1.79 | 0.47 |
| 2:G:60:SER:O | 2:G:63:LEU:HB3 | 2.14 | 0.47 |
| 7:H:45:ILE:CG2 | 7:H:79:ARG:HB3 | 2.43 | 0.47 |
| 2:C:28:ILE:HG21 | 8:K:14:HIS:HB3 | 1.96 | 0.47 |
| 8:K:21:SER:C | 8:K:23:TRP:H | 2.17 | 0.47 |
| 3:B:974:ARG:HB2 | 9:L:22:HIS:CD2 | 2.48 | 0.47 |
| 1:Q:203:ARG:N | 1:Q:203:ARG:HD3 | 2.29 | 0.47 |
| 1:Q:648:LEU:HD23 | 1:Q:648:LEU:C | 2.33 | 0.47 |
| 1:Q:713:ASP:O | 1:Q:717:LYS:HD2 | 2.14 | 0.47 |
| 1:Q:734:ARG:HG2 | 3:R:913:HIS:O | 2.14 | 0.47 |
| 3:R:1070:TYR:O | 3:R:1071:ASP:C | 2.53 | 0.47 |
| 3:R:238:ILE:HA | 3:R:241:ALA:CB | 2.44 | 0.47 |
| 3:R:476:ILE:N | 3:R:476:ILE:CD1 | 2.76 | 0.47 |
| 3:R:569:ASN:HB3 | 3:R:574:ARG:HH12 | 1.79 | 0.47 |
| 3:R:591:ILE:CD1 | 3:R:612:LYS:HZ3 | 2.25 | 0.47 |
| 6:U:21:LEU:HA | 6:U:24:VAL:HG23 | 1.96 | 0.47 |
| 8:W:26:ARG:CG | 8:W:90:LEU:HD13 | 2.44 | 0.47 |
| 10:Y:18:TRP:CH2 | 10:Y:54:ASP:OD1 | 2.67 | 0.47 |
| 1:A:551:VAL:CG1 | 1:A:552:ILE:N | 2.72 | 0.47 |
| 1:A:870:ARG:NH2 | 2:C:57:LYS:O | 2.47 | 0.47 |
| 3:B:1059:TYR:CD2 | 3:B:1090:PRO:HG3 | 2.50 | 0.47 |
| 3:B:18:PHE:C | 3:B:20:SER:H | 2.18 | 0.47 |
| 3:B:238:ILE:HA | 3:B:241:ALA:HB3 | 1.95 | 0.47 |
| 3:B:579:LEU:HD12 | 3:B:616:LEU:CD1 | 2.38 | 0.47 |
| 3:B:604:PHE:O | 3:B:607:LEU:HB2 | 2.14 | 0.47 |
| 3:B:620:GLU:C | 3:B:622:GLU:N | 2.66 | 0.47 |
| 3:B:663:SER:CB | 3:B:664:PRO:CD | 2.92 | 0.47 |
| 3:B:419:TRP:HZ3 | 3:B:712:GLY:C | 2.17 | 0.47 |
| 3:B:922:GLY:O | 3:B:926:GLU:N | 2.39 | 0.47 |
| 3:B:950:ILE:O | 3:B:951:GLU:C | 2.52 | 0.47 |
| 3:B:972:ASP:O | 3:B:974:ARG:N | 2.48 | 0.47 |
| 3:B:972:ASP:HB3 | 3:B:975:THR:CG2 | 2.44 | 0.47 |
| 2:C:112:ASP:O | 2:C:113:ALA:CB | 2.62 | 0.47 |
| 4:D:21:PRO:HB2 | 4:D:23:GLU:OE1 | 2.14 | 0.47 |
| 3:B:1119:VAL:HG13 | 5:E:10:ILE:CD1 | 2.44 | 0.47 |
| 5:E:82:GLN:CA | 5:E:145:ARG:HG3 | 2.40 | 0.47 |
| 2:G:311:ARG:CD | 2:G:311:ARG:N | 2.77 | 0.47 |
| 2:G:392:PRO:HB3 | 5:T:22:LEU:CD2 | 2.44 | 0.47 |
| 4:D:66:PRO:CG | 10:N:13:LEU:HD11 | 2.45 | 0.47 |
| 1:Q:342:ILE:HD13 | 1:Q:342:ILE:N | 2.29 | 0.47 |
| 1:Q:573:ARG:HA | 1:Q:582:HIS:CD2 | 2.49 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:Q:782:ILE:HG22 | 1:Q:784:SER:H | 1.77 | 0.47 |
| 1:Q:814:SER:O | 1:Q:818:TYR:HB2 | 2.15 | 0.47 |
| 3:R:86:ARG:HA | 3:R:156:GLY:HA3 | 1.95 | 0.47 |
| 3:R:206:LYS:HE3 | 3:R:220:LYS:HZ2 | 1.79 | 0.47 |
| 3:R:244:LEU:HD13 | 3:R:500:VAL:CB | 2.42 | 0.47 |
| 3:R:416:ARG:NH1 | 3:R:687:ARG:HH22 | 2.04 | 0.47 |
| 3:R:446:HIS:O | 3:R:447:GLY:C | 2.51 | 0.47 |
| 3:R:724:LEU:CD1 | 3:R:908:ILE:HG22 | 2.42 | 0.47 |
| 4:S:159:VAL:HG23 | 4:S:231:GLU:C | 2.35 | 0.47 |
| 9:X:35:ILE:CD1 | 9:X:75:ASN:ND2 | 2.77 | 0.47 |
| 1:A:525:LEU:HG | 9:L:40:PHE:HZ | 1.79 | 0.47 |
| 1:A:747:LEU:HD12 | 1:A:790:LEU:HD11 | 1.96 | 0.47 |
| 1:A:316:LYS:HE2 | 3:B:1094:SER:OG | 2.14 | 0.47 |
| 3:B:1099:LEU:O | 3:B:1102:GLN:HB2 | 2.14 | 0.47 |
| 3:B:249:GLN:HB2 | 3:B:253:PHE:CE1 | 2.49 | 0.47 |
| 3:B:297:PHE:O | 3:B:298:LEU:HB2 | 2.15 | 0.47 |
| 3:B:309:LYS:C | 3:B:311:LYS:H | 2.17 | 0.47 |
| 3:B:402:ASN:O | 3:B:403:TRP:HB2 | 2.12 | 0.47 |
| 3:B:407:ARG:HE | 3:B:407:ARG:CA | 2.28 | 0.47 |
| 3:B:53:ILE:HB | 3:B:54:PRO:HD3 | 1.96 | 0.47 |
| 3:B:654:ILE:HD12 | 3:B:654:ILE:N | 2.26 | 0.47 |
| 3:B:65:ILE:CD1 | 3:B:65:ILE:H | 2.05 | 0.47 |
| 3:B:146:LYS:HE2 | 3:B:715:ASN:OD1 | 2.14 | 0.47 |
| 3:B:679:LEU:HD23 | 3:B:716:ARG:CD | 2.45 | 0.47 |
| 2:C:15:GLU:HA | 2:C:18:LYS:CG | 2.44 | 0.47 |
| 5:E:119:LYS:HE3 | 5:E:130:GLU:OE2 | 2.14 | 0.47 |
| 5:E:168:TYR:CE2 | 6:F:81:ASP:HB3 | 2.49 | 0.47 |
| 5:E:90:LEU:O | 5:E:91:GLN:HB2 | 2.15 | 0.47 |
| 2:G:131:LYS:O | 2:G:249:TYR:N | 2.47 | 0.47 |
| 1:Q:8:GLY:HA2 | 2:G:365:GLU:HA | 1.95 | 0.47 |
| 1:Q:390:TYR:O | 1:Q:391:VAL:CB | 2.62 | 0.47 |
| 1:Q:421:ARG:HG3 | 1:Q:462:MET:HG2 | 1.96 | 0.47 |
| 1:Q:524:ILE:O | 1:Q:524:ILE:HG22 | 2.14 | 0.47 |
| 1:Q:563:HIS:ND1 | 1:Q:876:VAL:HG13 | 2.29 | 0.47 |
| 1:Q:764:ARG:NH1 | 1:Q:764:ARG:CB | 2.77 | 0.47 |
| 3:R:430:ILE:HG12 | 3:R:467:VAL:CG2 | 2.40 | 0.47 |
| 3:R:683:ASN:C | 3:R:685:GLN:H | 2.17 | 0.47 |
| 3:R:771:ASP:CG | 3:R:816:PRO:HD3 | 2.34 | 0.47 |
| 3:R:80:ILE:HD11 | 3:R:92:TYR:HA | 1.95 | 0.47 |
| 4:S:247:LYS:HA | 4:S:250:ILE:CD1 | 2.44 | 0.47 |
| 4:S:94:THR:O | 4:S:95:LYS:HG3 | 2.15 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|------------------|--------------------------|-------------------|
| 5:T:81:VAL:O | 5:T:82:GLN:CB | 2.62 | 0.47 |
| 6:U:33:LEU:O | 6:U:34:LEU:HD23 | 2.15 | 0.47 |
| 9:X:33:ARG:HG2 | 9:X:41:ALA:HB3 | 1.95 | 0.47 |
| 1:A:196:GLY:HA3 | 2:C:360:ARG:HH21 | 1.80 | 0.47 |
| 1:A:208:ILE:HD12 | 1:A:208:ILE:N | 2.30 | 0.47 |
| 1:A:220:ARG:H | 1:A:221:PRO:CD | 2.27 | 0.47 |
| 1:A:276:TYR:CD2 | 1:A:277:PHE:HE1 | 2.31 | 0.47 |
| 1:A:353:ILE:O | 1:A:403:PRO:HA | 2.13 | 0.47 |
| 1:A:431:MET:HB2 | 1:A:453:TYR:OH | 2.14 | 0.47 |
| 1:A:867:ASP:HB2 | 2:C:39:LYS:HZ2 | 1.79 | 0.47 |
| 3:B:1051:ASP:HA | 3:B:1055:ARG:HG2 | 1.96 | 0.47 |
| 3:B:34:PHE:CE1 | 3:B:351:ALA:HA | 2.48 | 0.47 |
| 3:B:393:ARG:NE | 3:B:403:TRP:HZ3 | 2.06 | 0.47 |
| 3:B:590:THR:O | 3:B:593:ASP:HB2 | 2.14 | 0.47 |
| 3:B:63:ILE:CD1 | 3:B:63:ILE:N | 2.75 | 0.47 |
| 3:B:669:GLN:NE2 | 3:B:669:GLN:HA | 2.30 | 0.47 |
| 3:B:759:SER:CB | 3:B:863:LYS:HA | 2.44 | 0.47 |
| 3:B:958:LEU:C | 3:B:958:LEU:HD23 | 2.34 | 0.47 |
| 2:C:311:ARG:CD | 2:C:311:ARG:N | 2.77 | 0.47 |
| 2:C:51:ILE:O | 2:C:55:ALA:HB2 | 2.13 | 0.47 |
| 4:D:254:GLU:HG3 | 9:L:77:ARG:HH12 | 1.79 | 0.47 |
| 2:G:37:LEU:O | 2:G:39:LYS:N | 2.47 | 0.47 |
| 1:Q:181:ARG:NH1 | 1:Q:185:GLU:OE2 | 2.47 | 0.47 |
| 1:Q:305:LYS:N | 1:Q:310:ARG:HD2 | 2.28 | 0.47 |
| 1:Q:59:PRO:HG2 | 1:Q:61:CYS:SG | 2.54 | 0.47 |
| 1:Q:667:ARG:HG2 | 1:Q:667:ARG:HH11 | 1.80 | 0.47 |
| 1:Q:864:LYS:HE2 | 7:V:71:LEU:O | 2.14 | 0.47 |
| 3:R:1066:TYR:CD2 | 3:R:1105:MET:HE3 | 2.49 | 0.47 |
| 3:R:393:ARG:O | 3:R:393:ARG:HG2 | 2.14 | 0.47 |
| 5:T:114:THR:C | 5:T:165:ARG:HE | 2.18 | 0.47 |
| 2:G:386:VAL:HG21 | 8:W:31:GLU:HA | 1.95 | 0.47 |
| 9:X:24:LEU:O | 9:X:28:ILE:HG12 | 2.14 | 0.47 |
| 9:X:12:TYR:HA | 9:X:57:ILE:O | 2.14 | 0.47 |
| 1:A:500:GLN:O | 1:A:501:ASP:C | 2.51 | 0.47 |
| 1:A:607:GLN:HB2 | 1:A:608:PRO:CD | 2.43 | 0.47 |
| 1:A:664:GLU:OE1 | 1:A:707:LEU:HD22 | 2.14 | 0.47 |
| 1:A:727:VAL:O | 1:A:728:MET:C | 2.52 | 0.47 |
| 3:B:1040:GLY:HA3 | 8:K:30:TYR:HE2 | 1.80 | 0.47 |
| 3:B:56:LEU:CD1 | 3:B:104:GLU:HG2 | 2.45 | 0.47 |
| 3:B:1078:VAL:HG11 | 3:B:1082:HIS:HB3 | 1.96 | 0.47 |
| 3:B:330:ARG:CG | 3:B:330:ARG:HH11 | 2.22 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 3:B:462:PRO:C | 3:B:464:SER:H | 2.17 | 0.47 |
| 3:B:594:ILE:C | 3:B:599:SER:HB3 | 2.35 | 0.47 |
| 3:B:633:LEU:O | 3:B:635:PRO:HD2 | 2.15 | 0.47 |
| 3:B:669:GLN:CA | 3:B:669:GLN:NE2 | 2.78 | 0.47 |
| 4:D:133:LEU:HD21 | 4:D:139:ILE:HD11 | 1.96 | 0.47 |
| 4:D:96:ILE:CG1 | 4:D:143:ALA:HB3 | 2.44 | 0.47 |
| 2:C:390:MET:CE | 5:E:58:ILE:C | 2.83 | 0.47 |
| 5:E:168:TYR:CZ | 6:F:81:ASP:HB3 | 2.49 | 0.47 |
| 2:G:277:ILE:HG22 | 2:G:278:ARG:N | 2.25 | 0.47 |
| 9:L:47:HIS:NE2 | 9:L:49:LEU:HB2 | 2.30 | 0.47 |
| 1:Q:206:TRP:C | 1:Q:208:ILE:H | 2.18 | 0.47 |
| 1:Q:244:ARG:O | 1:Q:248:ARG:HG3 | 2.14 | 0.47 |
| 1:Q:282:PRO:O | 1:Q:283:GLY:O | 2.32 | 0.47 |
| 1:Q:449:VAL:O | 1:Q:452:PRO:HG2 | 2.14 | 0.47 |
| 1:Q:828:SER:C | 1:Q:830:LEU:N | 2.68 | 0.47 |
| 3:R:669:GLN:HG2 | 3:R:881:ARG:O | 2.15 | 0.47 |
| 3:R:687:ARG:NH1 | 3:R:687:ARG:HG3 | 2.28 | 0.47 |
| 3:R:70:VAL:CG1 | 3:R:80:ILE:HG21 | 2.45 | 0.47 |
| 3:R:81:SER:O | 3:R:84:GLU:N | 2.37 | 0.47 |
| 4:S:47:ILE:HB | 4:S:140:SER:OG | 2.14 | 0.47 |
| 5:T:29:GLU:OE1 | 5:T:29:GLU:HA | 2.15 | 0.47 |
| 8:W:16:ASN:O | 8:W:19:PHE:HB3 | 2.14 | 0.47 |
| 5:T:18:PHE:CZ | 8:W:42:GLN:HG2 | 2.49 | 0.47 |
| 1:A:219:ILE:CD1 | 1:A:219:ILE:N | 2.78 | 0.47 |
| 1:A:304:GLY:C | 1:A:310:ARG:HD2 | 2.35 | 0.47 |
| 1:A:807:VAL:CG1 | 3:B:443:ARG:NH1 | 2.77 | 0.47 |
| 3:B:1036:LEU:O | 3:B:1039:PHE:O | 2.33 | 0.47 |
| 3:B:1079:CYS:SG | 3:B:1080:PRO:CD | 3.03 | 0.47 |
| 3:B:538:ASN:O | 3:B:542:GLU:HG3 | 2.14 | 0.47 |
| 3:B:956:GLU:C | 3:B:958:LEU:H | 2.17 | 0.47 |
| 2:C:12:TYR:H | 2:C:12:TYR:HD1 | 1.62 | 0.47 |
| 2:C:275:ASN:O | 2:C:275:ASN:OD1 | 2.33 | 0.47 |
| 2:C:365:GLU:HG2 | 2:C:366:PHE:N | 2.30 | 0.47 |
| 5:E:97:ILE:CD1 | 5:E:136:ILE:HG21 | 2.44 | 0.47 |
| 6:F:54:LYS:HZ2 | 6:F:54:LYS:CB | 2.28 | 0.47 |
| 6:F:72:LEU:HD23 | 6:F:86:ILE:HD13 | 1.95 | 0.47 |
| 2:G:86:THR:O | 2:G:104:LEU:CD1 | 2.62 | 0.47 |
| 2:G:12:TYR:HD1 | 2:G:12:TYR:H | 1.63 | 0.47 |
| 2:G:132:ARG:H | 2:G:132:ARG:NE | 2.11 | 0.47 |
| 2:G:15:GLU:HA | 2:G:18:LYS:HD2 | 1.95 | 0.47 |
| 2:G:275:ASN:O | 2:G:275:ASN:OD1 | 2.33 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 1:Q:490:ARG:CZ | 2:G:80:GLU:HG3 | 2.45 | 0.47 |
| 1:Q:208:ILE:HD12 | 1:Q:208:ILE:N | 2.28 | 0.47 |
| 1:Q:341:GLU:O | 1:Q:345:LYS:HG3 | 2.14 | 0.47 |
| 1:Q:415:ASP:O | 1:Q:435:VAL:HG12 | 2.13 | 0.47 |
| 1:Q:444:ARG:HG3 | 1:Q:444:ARG:HH11 | 1.79 | 0.47 |
| 1:Q:551:VAL:CG1 | 1:Q:552:ILE:N | 2.75 | 0.47 |
| 1:Q:696:LEU:C | 1:Q:696:LEU:HD13 | 2.34 | 0.47 |
| 1:Q:757:ILE:O | 1:Q:779:ARG:HA | 2.15 | 0.47 |
| 3:R:1033:ARG:HG3 | 3:R:1034:ASP:N | 2.28 | 0.47 |
| 2:G:379:ILE:CD1 | 3:R:1045:LEU:HD22 | 2.44 | 0.47 |
| 3:R:1069:TRP:NE1 | 3:R:1088:LEU:HD22 | 2.27 | 0.47 |
| 3:R:457:GLU:O | 3:R:458:THR:OG1 | 2.31 | 0.47 |
| 3:R:536:LEU:CD2 | 3:R:540:ILE:HG13 | 2.44 | 0.47 |
| 3:R:633:LEU:O | 3:R:635:PRO:N | 2.48 | 0.47 |
| 4:S:101:GLU:HG2 | 4:S:102:ALA:N | 2.28 | 0.47 |
| 10:Y:22:ILE:HG12 | 10:Y:23:THR:N | 2.29 | 0.47 |
| 1:A:217:ILE:O | 1:A:221:PRO:HD3 | 2.14 | 0.47 |
| 1:A:820:GLN:O | 1:A:823:LEU:HD12 | 2.14 | 0.47 |
| 3:B:97:TRP:HZ3 | 3:B:113:GLU:OE2 | 1.97 | 0.47 |
| 3:B:248:VAL:HA | 3:B:251:GLU:CD | 2.34 | 0.47 |
| 3:B:381:LEU:O | 3:B:385:VAL:HG23 | 2.15 | 0.47 |
| 3:B:702:LEU:HD22 | 10:N:47:ARG:NH1 | 2.29 | 0.47 |
| 3:B:63:ILE:HG13 | 3:B:98:LEU:CA | 2.44 | 0.47 |
| 2:C:133:ASP:C | 2:C:135:ASP:N | 2.67 | 0.47 |
| 4:D:263:VAL:O | 4:D:263:VAL:HG12 | 2.15 | 0.47 |
| 4:D:94:THR:O | 4:D:95:LYS:HG3 | 2.15 | 0.47 |
| 2:G:146:TYR:HB2 | 2:G:238:LYS:HD3 | 1.96 | 0.47 |
| 2:G:124:ILE:HG12 | 2:G:272:VAL:HG13 | 1.97 | 0.47 |
| 8:K:49:ALA:O | 8:K:50:LEU:O | 2.32 | 0.47 |
| 1:Q:428:ILE:CG2 | 1:Q:452:PRO:HB2 | 2.44 | 0.47 |
| 1:Q:488:THR:HG22 | 1:Q:490:ARG:N | 2.29 | 0.47 |
| 1:Q:498:ALA:HB3 | 1:Q:503:ILE:HG22 | 1.96 | 0.47 |
| 1:Q:551:VAL:CG1 | 1:Q:552:ILE:H | 2.26 | 0.47 |
| 1:Q:747:LEU:HG | 1:Q:784:SER:O | 2.15 | 0.47 |
| 3:R:56:LEU:CD1 | 3:R:104:GLU:HG2 | 2.44 | 0.47 |
| 3:R:1069:TRP:CD1 | 3:R:1088:LEU:HD13 | 2.50 | 0.47 |
| 3:R:102:PRO:C | 3:R:108:GLU:OE1 | 2.53 | 0.47 |
| 3:R:17:TYR:HA | 3:R:604:PHE:CB | 2.44 | 0.47 |
| 3:R:227:MET:O | 3:R:232:ILE:HB | 2.15 | 0.47 |
| 3:R:537:ALA:CB | 3:R:557:HIS:NE2 | 2.66 | 0.47 |
| 3:R:587:PRO:O | 3:R:588:LEU:CD2 | 2.56 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 3:R:63:ILE:N | 3:R:63:ILE:CD1 | 2.76 | 0.47 |
| 3:R:661:ASN:ND2 | 3:R:921:LEU:O | 2.43 | 0.47 |
| 4:S:151:LYS:O | 4:S:152:GLU:O | 2.33 | 0.47 |
| 4:S:38:ILE:HD12 | 4:S:39:MET:C | 2.34 | 0.47 |
| 5:T:123:VAL:O | 5:T:125:GLY:N | 2.48 | 0.47 |
| 5:T:23:ASN:HA | 5:T:26:ALA:HB3 | 1.96 | 0.47 |
| 5:T:38:ILE:HG22 | 5:T:39:LEU:N | 2.24 | 0.47 |
| 6:U:68:VAL:O | 6:U:72:LEU:HG | 2.14 | 0.47 |
| 1:A:214:VAL:HG22 | 1:A:239:LEU:HD21 | 1.95 | 0.47 |
| 1:A:23:SER:OG | 1:A:24:VAL:N | 2.46 | 0.47 |
| 1:A:27:ILE:HB | 1:A:75:ILE:HD12 | 1.96 | 0.47 |
| 1:A:557:PRO:HD3 | 1:A:623:TYR:OH | 2.15 | 0.47 |
| 1:A:759:ARG:HH21 | 1:A:763:THR:HG23 | 1.80 | 0.47 |
| 1:A:757:ILE:O | 1:A:779:ARG:HA | 2.15 | 0.47 |
| 1:A:819:MET:HA | 1:A:822:ARG:HE | 1.80 | 0.47 |
| 3:B:244:LEU:HD13 | 3:B:500:VAL:CB | 2.43 | 0.47 |
| 3:B:560:THR:HG22 | 3:B:563:ILE:H | 1.80 | 0.47 |
| 4:D:101:GLU:CG | 4:D:102:ALA:H | 2.28 | 0.47 |
| 4:D:172:ILE:HD12 | 4:D:172:ILE:N | 2.30 | 0.47 |
| 4:D:247:LYS:HA | 4:D:250:ILE:CD1 | 2.45 | 0.47 |
| 4:D:34:LEU:HD22 | 4:D:151:LYS:CB | 2.43 | 0.47 |
| 4:D:80:GLU:HA | 4:D:83:ILE:CD1 | 2.45 | 0.47 |
| 5:E:123:VAL:O | 5:E:125:GLY:N | 2.48 | 0.47 |
| 5:E:21:PRO:HG2 | 5:E:24:GLU:OE2 | 2.15 | 0.47 |
| 7:H:81:VAL:O | 7:H:82:ILE:CG1 | 2.63 | 0.47 |
| 8:K:41:LEU:HD23 | 8:K:45:MET:HG3 | 1.96 | 0.47 |
| 8:K:43:LEU:C | 8:K:45:MET:H | 2.18 | 0.47 |
| 8:K:71:ARG:O | 8:K:72:GLY:C | 2.51 | 0.47 |
| 9:L:15:LEU:O | 9:L:54:ILE:HA | 2.15 | 0.47 |
| 1:Q:17:ASP:O | 1:Q:21:LYS:HG3 | 2.15 | 0.47 |
| 1:Q:217:ILE:O | 1:Q:221:PRO:HD3 | 2.15 | 0.47 |
| 1:Q:415:ASP:H | 1:Q:435:VAL:HG12 | 1.79 | 0.47 |
| 1:Q:532:ILE:HG22 | 1:Q:532:ILE:O | 2.15 | 0.47 |
| 1:Q:700:ILE:O | 1:Q:704:LEU:HG | 2.15 | 0.47 |
| 1:Q:830:LEU:CD2 | 1:Q:846:VAL:HG21 | 2.44 | 0.47 |
| 3:R:1071:ASP:C | 3:R:1073:ASN:N | 2.68 | 0.47 |
| 3:R:321:LYS:HD2 | 3:R:330:ARG:NE | 2.27 | 0.47 |
| 3:R:407:ARG:HE | 3:R:407:ARG:HA | 1.80 | 0.47 |
| 3:R:589:VAL:O | 3:R:590:THR:C | 2.53 | 0.47 |
| 3:R:589:VAL:C | 3:R:591:ILE:HD12 | 2.34 | 0.47 |
| 5:T:41:ASP:O | 5:T:42:LEU:HD23 | 2.14 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:G:390:MET:HE1 | 5:T:58:ILE:O | 2.14 | 0.47 |
| 6:U:36:ARG:O | 6:U:40:TYR:N | 2.43 | 0.47 |
| 8:W:26:ARG:HB3 | 8:W:27:LEU:CD1 | 2.43 | 0.47 |
| 3:B:97:TRP:CE3 | 3:B:113:GLU:HB3 | 2.50 | 0.47 |
| 3:B:183:ILE:HB | 3:B:207:ASP:O | 2.14 | 0.47 |
| 3:B:17:TYR:HA | 3:B:604:PHE:HB2 | 1.96 | 0.47 |
| 3:B:762:GLU:OE2 | 3:B:773:ILE:HG13 | 2.15 | 0.47 |
| 1:A:647:ARG:HH21 | 4:D:211:ARG:HH12 | 1.62 | 0.47 |
| 4:D:256:LEU:HD12 | 9:L:3:ILE:HG13 | 1.96 | 0.47 |
| 5:E:96:GLY:HA2 | 5:E:110:ILE:HG12 | 1.96 | 0.47 |
| 5:E:113:ILE:CG2 | 5:E:114:THR:H | 2.26 | 0.47 |
| 2:G:124:ILE:CG2 | 2:G:267:VAL:HG13 | 2.44 | 0.47 |
| 10:N:48:MET:HE3 | 10:N:48:MET:HA | 1.97 | 0.47 |
| 4:D:50:ASN:HD22 | 10:N:64:ARG:NH1 | 2.12 | 0.47 |
| 1:Q:418:LEU:HD23 | 1:Q:430:MET:HE2 | 1.97 | 0.47 |
| 1:Q:532:ILE:HG23 | 9:X:40:PHE:CD1 | 2.50 | 0.47 |
| 3:R:1076:LYS:O | 3:R:1078:VAL:N | 2.48 | 0.47 |
| 3:R:193:THR:HG1 | 3:R:198:VAL:HA | 1.80 | 0.47 |
| 3:R:343:LEU:N | 3:R:343:LEU:CD1 | 2.77 | 0.47 |
| 3:R:490:TYR:OH | 3:R:527:ILE:HG23 | 2.14 | 0.47 |
| 3:R:474:ALA:HB3 | 3:R:578:PRO:HD3 | 1.96 | 0.47 |
| 3:R:800:PRO:HG2 | 11:Z:38:ARG:N | 2.30 | 0.47 |
| 1:Q:645:THR:HA | 3:R:912:PRO:HG2 | 1.97 | 0.47 |
| 4:S:176:CYS:H | 4:S:195:LEU:CD2 | 2.27 | 0.47 |
| 1:A:363:GLN:O | 1:A:366:ILE:CG2 | 2.62 | 0.47 |
| 1:A:336:GLU:OE1 | 1:A:436:ARG:NH1 | 2.48 | 0.47 |
| 1:A:469:SER:HB2 | 1:A:472:ALA:H | 1.80 | 0.47 |
| 1:A:488:THR:HG22 | 1:A:491:TYR:H | 1.78 | 0.47 |
| 1:A:552:ILE:C | 1:A:554:ALA:N | 2.68 | 0.47 |
| 3:B:291:GLN:O | 3:B:295:LYS:HE2 | 2.14 | 0.47 |
| 3:B:320:SER:O | 3:B:324:GLU:OE2 | 2.32 | 0.47 |
| 3:B:669:GLN:HG2 | 3:B:881:ARG:O | 2.15 | 0.47 |
| 3:B:725:ALA:HB1 | 3:B:985:PHE:CE1 | 2.50 | 0.47 |
| 2:C:310:ILE:CD1 | 2:C:310:ILE:N | 2.67 | 0.47 |
| 2:C:37:LEU:O | 2:C:39:LYS:N | 2.47 | 0.47 |
| 2:C:55:ALA:HA | 2:C:58:GLU:CD | 2.34 | 0.47 |
| 2:C:70:ILE:HD13 | 2:C:71:GLY:H | 1.79 | 0.47 |
| 6:F:9:GLU:O | 6:F:10:HIS:ND1 | 2.47 | 0.47 |
| 2:G:106:ARG:HG2 | 2:G:106:ARG:HH11 | 1.79 | 0.47 |
| 8:K:74:LEU:N | 8:K:74:LEU:HD12 | 2.29 | 0.47 |
| 10:N:24:ARG:HD2 | 10:N:34:VAL:CG1 | 2.44 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 10:N:28:GLY:O | 10:N:29:GLU:O | 2.32 | 0.47 |
| 1:Q:561:ASN:HD22 | 1:Q:589:LYS:HA | 1.79 | 0.47 |
| 1:Q:674:ASN:OD1 | 1:Q:675:LEU:N | 2.48 | 0.47 |
| 1:Q:68:CYS:SG | 1:Q:71:HIS:CE1 | 3.08 | 0.47 |
| 1:Q:757:ILE:HG22 | 1:Q:757:ILE:O | 2.15 | 0.47 |
| 1:Q:758:LYS:HB2 | 1:Q:759:ARG:HD2 | 1.96 | 0.47 |
| 3:R:1061:CYS:CA | 3:R:1088:LEU:HD23 | 2.45 | 0.47 |
| 3:R:1073:ASN:C | 3:R:1075:ASN:N | 2.67 | 0.47 |
| 3:R:366:THR:O | 3:R:370:GLU:HB2 | 2.15 | 0.47 |
| 3:R:814:VAL:O | 3:R:814:VAL:HG12 | 2.15 | 0.47 |
| 1:Q:646:MET:SD | 3:R:915:LEU:HD23 | 2.55 | 0.47 |
| 3:R:950:ILE:C | 3:R:952:GLN:N | 2.68 | 0.47 |
| 4:S:125:SER:C | 4:S:127:ASP:N | 2.68 | 0.47 |
| 7:V:62:ILE:H | 7:V:62:ILE:CD1 | 2.27 | 0.47 |
| 1:A:193:GLU:C | 1:A:195:LEU:H | 2.18 | 0.47 |
| 1:A:23:SER:O | 1:A:24:VAL:CG1 | 2.63 | 0.47 |
| 1:A:305:LYS:N | 1:A:310:ARG:HD2 | 2.29 | 0.47 |
| 1:A:353:ILE:CG1 | 1:A:361:LEU:HD23 | 2.44 | 0.47 |
| 1:A:481:LEU:CD2 | 1:A:482:VAL:N | 2.75 | 0.47 |
| 1:A:61:CYS:HB3 | 1:A:63:ASN:HD21 | 1.80 | 0.47 |
| 1:A:667:ARG:NH1 | 1:A:667:ARG:HG2 | 2.29 | 0.47 |
| 1:A:675:LEU:CD2 | 1:A:684:LEU:HD11 | 2.45 | 0.47 |
| 1:A:752:VAL:O | 1:A:753:ARG:HB3 | 2.14 | 0.47 |
| 1:A:4:LYS:HE2 | 3:B:1060:VAL:HG23 | 1.97 | 0.47 |
| 3:B:86:ARG:HA | 3:B:156:GLY:HA3 | 1.96 | 0.47 |
| 3:B:446:HIS:O | 3:B:447:GLY:C | 2.54 | 0.47 |
| 3:B:582:VAL:HG11 | 3:B:633:LEU:HD11 | 1.97 | 0.47 |
| 3:B:11:TRP:CZ2 | 3:B:706:ARG:HG2 | 2.49 | 0.47 |
| 3:B:80:ILE:HD11 | 3:B:92:TYR:HA | 1.97 | 0.47 |
| 3:B:935:LEU:O | 10:N:46:ARG:NH1 | 2.48 | 0.47 |
| 2:C:337:GLU:N | 2:C:337:GLU:CD | 2.68 | 0.47 |
| 2:C:366:PHE:CZ | 2:C:375:ILE:HD12 | 2.50 | 0.47 |
| 2:C:52:PHE:O | 2:C:56:ILE:HG12 | 2.15 | 0.47 |
| 2:C:72:ILE:HG22 | 2:C:76:GLN:OE1 | 2.15 | 0.47 |
| 4:D:66:PRO:HB2 | 4:D:124:ILE:CG1 | 2.41 | 0.47 |
| 5:E:109:HIS:CD2 | 5:E:111:SER:H | 2.33 | 0.47 |
| 2:C:392:PRO:CB | 5:E:22:LEU:HD21 | 2.45 | 0.47 |
| 5:E:38:ILE:H | 5:E:38:ILE:HD12 | 1.80 | 0.47 |
| 5:E:97:ILE:HD12 | 5:E:113:ILE:CD1 | 2.43 | 0.47 |
| 2:G:366:PHE:HB3 | 2:G:372:ASN:OD1 | 2.14 | 0.47 |
| 2:G:42:ILE:HD12 | 2:G:42:ILE:H | 1.79 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:G:65:ALA:HB1 | 8:W:19:PHE:CE1 | 2.50 | 0.47 |
| 2:C:65:ALA:HB1 | 8:K:19:PHE:CE1 | 2.50 | 0.47 |
| 1:Q:517:THR:HG22 | 1:Q:518:LYS:H | 1.80 | 0.47 |
| 1:Q:564:GLY:O | 1:Q:586:VAL:N | 2.45 | 0.47 |
| 1:Q:579:ASP:O | 1:Q:580:CYS:SG | 2.70 | 0.47 |
| 1:Q:594:LEU:O | 1:Q:595:GLU:O | 2.32 | 0.47 |
| 3:R:116:ILE:HD12 | 3:R:361:PHE:HZ | 1.79 | 0.47 |
| 3:R:655:ILE:HG12 | 3:R:669:GLN:HG2 | 1.98 | 0.47 |
| 3:R:725:ALA:HB1 | 3:R:985:PHE:CE1 | 2.50 | 0.47 |
| 4:S:101:GLU:CG | 4:S:102:ALA:H | 2.28 | 0.47 |
| 5:T:151:SER:HB3 | 5:T:158:PRO:HB3 | 1.97 | 0.47 |
| 8:W:28:THR:O | 8:W:31:GLU:N | 2.48 | 0.47 |
| 8:W:50:LEU:O | 8:W:52:ASP:N | 2.48 | 0.47 |
| 8:W:61:VAL:C | 8:W:63:SER:H | 2.18 | 0.47 |
| 9:X:65:PRO:HG2 | 9:X:66:LYS:H | 1.79 | 0.47 |
| 1:A:297:THR:O | 1:A:300:GLN:HB3 | 2.14 | 0.46 |
| 1:A:490:ARG:HG3 | 2:C:308:VAL:HG23 | 1.96 | 0.46 |
| 1:A:674:ASN:O | 1:A:677:GLN:N | 2.48 | 0.46 |
| 1:A:749:GLN:HA | 1:A:781:PHE:CA | 2.45 | 0.46 |
| 1:A:837:THR:HG23 | 1:A:847:GLN:O | 2.15 | 0.46 |
| 1:A:830:LEU:CD2 | 1:A:846:VAL:HG21 | 2.46 | 0.46 |
| 3:B:1013:THR:HB | 3:B:1015:GLN:HG3 | 1.96 | 0.46 |
| 3:B:1083:GLY:O | 3:B:1085:LYS:N | 2.48 | 0.46 |
| 3:B:243:SER:O | 3:B:249:GLN:OE1 | 2.32 | 0.46 |
| 3:B:278:ILE:CG2 | 3:B:279:GLY:N | 2.78 | 0.46 |
| 3:B:344:ARG:C | 3:B:345:LEU:HD12 | 2.36 | 0.46 |
| 3:B:38:LYS:CG | 3:B:39:LEU:H | 2.19 | 0.46 |
| 3:B:50:PRO:CG | 3:B:51:THR:H | 2.19 | 0.46 |
| 3:B:536:LEU:O | 3:B:539:LYS:N | 2.48 | 0.46 |
| 3:B:569:ASN:HB3 | 3:B:574:ARG:HH12 | 1.80 | 0.46 |
| 3:B:64:ARG:N | 3:B:64:ARG:HD3 | 2.30 | 0.46 |
| 3:B:793:GLU:HB3 | 3:B:794:ASP:H | 1.62 | 0.46 |
| 1:A:8:GLY:HA2 | 2:C:365:GLU:HA | 1.97 | 0.46 |
| 6:F:16:VAL:C | 6:F:18:LYS:N | 2.65 | 0.46 |
| 6:F:57:GLU:C | 6:F:59:LEU:N | 2.67 | 0.46 |
| 2:G:65:ALA:CB | 8:W:19:PHE:CE1 | 2.98 | 0.46 |
| 1:Q:262:ILE:CD1 | 1:Q:266:TRP:HE1 | 2.27 | 0.46 |
| 1:Q:276:TYR:CD2 | 1:Q:277:PHE:CD1 | 3.03 | 0.46 |
| 1:Q:302:LEU:HA | 1:Q:308:ARG:H | 1.80 | 0.46 |
| 1:Q:387:ASP:CG | 1:Q:388:LEU:N | 2.68 | 0.46 |
| 1:Q:759:ARG:NH2 | 1:Q:763:THR:HG23 | 2.30 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 3:R:1036:LEU:HD13 | 3:R:1044:LEU:HD23 | 1.97 | 0.46 |
| 3:R:252:LEU:C | 3:R:254:PRO:HD2 | 2.35 | 0.46 |
| 3:R:699:GLN:HE22 | 10:Y:48:MET:HE3 | 1.81 | 0.46 |
| 3:R:902:LYS:O | 3:R:904:VAL:HG23 | 2.15 | 0.46 |
| 4:S:167:TYR:CD1 | 4:S:227:ILE:HD11 | 2.50 | 0.46 |
| 8:W:80:ARG:O | 8:W:82:LEU:HD23 | 2.15 | 0.46 |
| 4:S:21:PRO:HG3 | 9:X:79:MET:HE1 | 1.96 | 0.46 |
| 1:A:357:ASN:O | 1:A:359:GLU:N | 2.48 | 0.46 |
| 1:A:376:ASN:N | 1:A:376:ASN:HD22 | 2.13 | 0.46 |
| 1:A:390:TYR:O | 1:A:391:VAL:CB | 2.63 | 0.46 |
| 1:A:691:THR:O | 1:A:694:GLU:HB2 | 2.15 | 0.46 |
| 3:B:1076:LYS:O | 3:B:1078:VAL:N | 2.48 | 0.46 |
| 3:B:1098:LYS:O | 3:B:1102:GLN:HG3 | 2.15 | 0.46 |
| 3:B:1113:LEU:HD12 | 3:B:1113:LEU:H | 1.79 | 0.46 |
| 3:B:262:ILE:HD12 | 3:B:262:ILE:N | 2.29 | 0.46 |
| 3:B:28:LEU:C | 3:B:30:SER:N | 2.68 | 0.46 |
| 3:B:226:LEU:HD13 | 3:B:297:PHE:HE1 | 1.81 | 0.46 |
| 3:B:407:ARG:HA | 3:B:407:ARG:HE | 1.80 | 0.46 |
| 3:B:725:ALA:CB | 3:B:906:PRO:HB3 | 2.42 | 0.46 |
| 3:B:768:GLY:O | 3:B:769:GLN:CB | 2.63 | 0.46 |
| 3:B:915:LEU:HB3 | 3:B:916:PRO:CD | 2.45 | 0.46 |
| 2:C:54:LEU:HD23 | 2:C:54:LEU:O | 2.15 | 0.46 |
| 3:B:978:LYS:NZ | 4:D:205:LEU:HD13 | 2.29 | 0.46 |
| 5:E:170:GLY:H | 5:E:175:ILE:HD11 | 1.79 | 0.46 |
| 2:G:292:ILE:CG2 | 2:G:293:ILE:N | 2.78 | 0.46 |
| 2:G:41:ILE:CG2 | 2:G:42:ILE:HD12 | 2.45 | 0.46 |
| 2:G:55:ALA:C | 2:G:57:LYS:N | 2.66 | 0.46 |
| 8:K:19:PHE:O | 8:K:20:ILE:C | 2.53 | 0.46 |
| 1:Q:212:LEU:HD23 | 1:Q:242:ILE:HG21 | 1.97 | 0.46 |
| 3:R:1074:LYS:CB | 3:R:1076:LYS:HE2 | 2.36 | 0.46 |
| 3:R:1061:CYS:HA | 3:R:1088:LEU:CD2 | 2.45 | 0.46 |
| 3:R:123:LEU:HD22 | 3:R:151:TYR:CE1 | 2.50 | 0.46 |
| 3:R:247:GLU:HA | 3:R:250:ASN:HD22 | 1.80 | 0.46 |
| 3:R:227:MET:HE3 | 3:R:312:ALA:HB1 | 1.96 | 0.46 |
| 3:R:591:ILE:CG1 | 3:R:612:LYS:HZ3 | 2.29 | 0.46 |
| 3:R:659:GLU:O | 3:R:660:HIS:CD2 | 2.68 | 0.46 |
| 3:R:867:ARG:O | 3:R:868:ASP:HB2 | 2.15 | 0.46 |
| 3:R:946:TYR:HD2 | 3:R:947:LYS:H | 0.81 | 0.46 |
| 3:R:972:ASP:O | 3:R:975:THR:HG23 | 2.15 | 0.46 |
| 3:R:63:ILE:HA | 3:R:98:LEU:H | 1.81 | 0.46 |
| 4:S:30:ARG:O | 4:S:34:LEU:HG | 2.16 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 5:T:147:ILE:CD1 | 5:T:163:THR:HB | 2.45 | 0.46 |
| 7:V:80:TYR:CE1 | 7:V:82:ILE:HD11 | 2.49 | 0.46 |
| 10:Y:7:CYS:SG | 10:Y:45:CYS:SG | 3.13 | 0.46 |
| 1:A:218:THR:CG2 | 3:B:1098:LYS:NZ | 2.78 | 0.46 |
| 1:A:316:LYS:HE2 | 3:B:1054:ASP:OD2 | 2.15 | 0.46 |
| 1:A:487:ILE:HG22 | 1:A:493:GLY:C | 2.35 | 0.46 |
| 1:A:58:CYS:CB | 1:A:59:PRO:CD | 2.93 | 0.46 |
| 1:A:757:ILE:O | 1:A:757:ILE:HG22 | 2.15 | 0.46 |
| 1:A:759:ARG:N | 1:A:779:ARG:HH21 | 2.12 | 0.46 |
| 1:A:750:GLN:HG3 | 1:A:782:ILE:HD11 | 1.97 | 0.46 |
| 1:A:839:ARG:NH2 | 8:K:83:PRO:HG3 | 2.30 | 0.46 |
| 1:A:841:LEU:C | 1:A:843:GLY:H | 2.18 | 0.46 |
| 3:B:1011:ILE:H | 3:B:1011:ILE:CD1 | 2.12 | 0.46 |
| 3:B:1069:TRP:CH2 | 3:B:1077:TYR:CB | 2.94 | 0.46 |
| 1:A:218:THR:HG21 | 3:B:1098:LYS:NZ | 2.31 | 0.46 |
| 3:B:23:LEU:H | 3:B:23:LEU:HD22 | 1.80 | 0.46 |
| 3:B:341:LYS:HZ2 | 3:B:341:LYS:HB3 | 1.80 | 0.46 |
| 3:B:707:ALA:O | 3:B:709:ASP:N | 2.48 | 0.46 |
| 3:B:797:VAL:HG12 | 3:B:798:VAL:O | 2.15 | 0.46 |
| 3:B:903:GLY:HA3 | 4:D:161:LEU:HD12 | 1.98 | 0.46 |
| 3:B:910:LEU:HD12 | 3:B:923:GLN:HE21 | 1.80 | 0.46 |
| 3:B:940:VAL:HG21 | 3:B:953:LEU:HD11 | 1.96 | 0.46 |
| 2:C:390:MET:HG3 | 5:E:56:GLU:HG2 | 1.96 | 0.46 |
| 4:D:66:PRO:CG | 10:N:13:LEU:HD21 | 2.45 | 0.46 |
| 6:F:30:SER:HB3 | 6:F:38:TYR:HE1 | 1.80 | 0.46 |
| 2:G:135:ASP:C | 2:G:137:ALA:H | 2.18 | 0.46 |
| 4:D:128:ILE:CG1 | 10:N:16:ASP:HB3 | 2.45 | 0.46 |
| 1:Q:434:ARG:HB3 | 1:Q:434:ARG:HE | 1.47 | 0.46 |
| 1:Q:691:THR:HG22 | 1:Q:692:LEU:N | 2.30 | 0.46 |
| 3:R:128:ASP:OD1 | 3:R:130:ILE:CG1 | 2.63 | 0.46 |
| 3:R:250:ASN:O | 3:R:252:LEU:N | 2.48 | 0.46 |
| 3:R:274:SER:C | 3:R:276:VAL:H | 2.19 | 0.46 |
| 3:R:482:GLU:O | 3:R:483:ARG:C | 2.53 | 0.46 |
| 3:R:669:GLN:NE2 | 3:R:669:GLN:HA | 2.30 | 0.46 |
| 3:R:963:LEU:HA | 3:R:964:PRO:HD3 | 1.80 | 0.46 |
| 4:S:105:GLU:N | 4:S:135:THR:CG2 | 2.79 | 0.46 |
| 4:S:173:LEU:O | 4:S:174:ALA:CB | 2.64 | 0.46 |
| 4:S:182:VAL:HG11 | 4:S:212:TYR:CG | 2.51 | 0.46 |
| 8:W:61:VAL:CG1 | 8:W:62:ILE:H | 2.24 | 0.46 |
| 1:A:249:LEU:HD21 | 1:A:265:LEU:HB2 | 1.98 | 0.46 |
| 1:A:361:LEU:HD11 | 1:A:407:ILE:HD11 | 1.98 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:529:ASP:O | 1:A:530:VAL:C | 2.54 | 0.46 |
| 1:A:541:ALA:CB | 1:A:542:PRO:HD3 | 2.40 | 0.46 |
| 1:A:551:VAL:CG1 | 1:A:552:ILE:H | 2.24 | 0.46 |
| 1:A:631:LEU:HG | 1:A:635:PHE:HE1 | 1.80 | 0.46 |
| 1:A:752:VAL:HG11 | 1:A:800:ALA:O | 2.16 | 0.46 |
| 3:B:173:LEU:HD22 | 3:B:333:ASP:HB3 | 1.97 | 0.46 |
| 3:B:251:GLU:C | 3:B:252:LEU:HG | 2.35 | 0.46 |
| 3:B:280:GLN:O | 3:B:281:LYS:C | 2.53 | 0.46 |
| 3:B:196:TYR:CE2 | 3:B:303:THR:HG21 | 2.50 | 0.46 |
| 3:B:345:LEU:HD11 | 3:B:476:ILE:HG13 | 1.97 | 0.46 |
| 3:B:545:ARG:HE | 3:B:581:ILE:HD13 | 1.80 | 0.46 |
| 3:B:80:ILE:HD12 | 3:B:92:TYR:HA | 1.97 | 0.46 |
| 3:B:963:LEU:CD2 | 4:D:208:GLU:HG3 | 2.46 | 0.46 |
| 5:E:175:ILE:HA | 5:E:178:THR:OG1 | 2.16 | 0.46 |
| 5:E:1:MET:HB2 | 5:E:78:VAL:O | 2.15 | 0.46 |
| 5:E:85:VAL:HG11 | 5:E:101:LEU:HD13 | 1.97 | 0.46 |
| 2:G:297:ILE:C | 2:G:299:LYS:N | 2.68 | 0.46 |
| 9:L:87:ILE:HG22 | 9:L:88:LYS:H | 1.80 | 0.46 |
| 11:P:20:VAL:HG23 | 11:P:20:VAL:O | 2.15 | 0.46 |
| 1:Q:212:LEU:HD21 | 1:Q:242:ILE:CD1 | 2.46 | 0.46 |
| 1:Q:505:GLY:O | 1:Q:506:ALA:O | 2.34 | 0.46 |
| 1:Q:529:ASP:O | 1:Q:530:VAL:C | 2.54 | 0.46 |
| 1:Q:575:CYS:SG | 1:Q:584:SER:HB3 | 2.55 | 0.46 |
| 1:Q:528:ALA:N | 1:Q:630:ASN:OD1 | 2.36 | 0.46 |
| 3:R:1074:LYS:HB2 | 3:R:1076:LYS:HG3 | 1.97 | 0.46 |
| 3:R:21:LYS:HD3 | 3:R:25:ARG:CZ | 2.45 | 0.46 |
| 3:R:229:ALA:HB1 | 3:R:269:LEU:HD23 | 1.97 | 0.46 |
| 3:R:356:VAL:HG13 | 3:R:357:ALA:N | 2.29 | 0.46 |
| 3:R:358:PHE:C | 3:R:360:ALA:H | 2.18 | 0.46 |
| 3:R:372:SER:O | 3:R:373:LYS:HB2 | 2.14 | 0.46 |
| 3:R:46:GLN:O | 3:R:47:GLY:O | 2.33 | 0.46 |
| 3:R:526:LEU:HD23 | 3:R:526:LEU:C | 2.36 | 0.46 |
| 3:R:526:LEU:HD23 | 3:R:527:ILE:N | 2.30 | 0.46 |
| 3:R:663:SER:CB | 3:R:664:PRO:CD | 2.93 | 0.46 |
| 1:Q:647:ARG:HD2 | 3:R:965:ASP:HB3 | 1.97 | 0.46 |
| 7:V:45:ILE:HB | 7:V:79:ARG:CB | 2.41 | 0.46 |
| 7:V:12:ARG:HD2 | 7:V:51:VAL:HG13 | 1.97 | 0.46 |
| 1:A:307:GLY:O | 1:A:311:GLY:HA3 | 2.14 | 0.46 |
| 1:A:584:SER:O | 1:A:585:TYR:C | 2.54 | 0.46 |
| 1:A:608:PRO:O | 1:A:609:GLU:CG | 2.63 | 0.46 |
| 3:B:17:TYR:HA | 3:B:604:PHE:CB | 2.45 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 3:B:290:GLN:NE2 | 3:B:308:ARG:HH12 | 2.13 | 0.46 |
| 3:B:482:GLU:O | 3:B:483:ARG:C | 2.53 | 0.46 |
| 2:C:106:ARG:O | 2:C:107:LEU:C | 2.51 | 0.46 |
| 4:D:105:GLU:N | 4:D:135:THR:CG2 | 2.79 | 0.46 |
| 2:G:106:ARG:O | 2:G:109:GLU:N | 2.48 | 0.46 |
| 2:G:112:ASP:O | 2:G:113:ALA:CB | 2.62 | 0.46 |
| 2:G:130:TYR:HB3 | 2:G:136:LYS:HG3 | 1.98 | 0.46 |
| 1:Q:425:LEU:CD2 | 2:G:83:THR:HG21 | 2.45 | 0.46 |
| 8:K:79:ARG:HG3 | 8:K:79:ARG:NH1 | 2.27 | 0.46 |
| 1:Q:584:SER:O | 1:Q:585:TYR:C | 2.53 | 0.46 |
| 1:Q:75:ILE:HG23 | 1:Q:75:ILE:O | 2.14 | 0.46 |
| 3:R:1069:TRP:CZ3 | 3:R:1077:TYR:CB | 2.98 | 0.46 |
| 3:R:95:PRO:HB2 | 3:R:115:TYR:CD2 | 2.51 | 0.46 |
| 3:R:251:GLU:C | 3:R:252:LEU:HG | 2.36 | 0.46 |
| 3:R:480:ILE:CG2 | 3:R:481:ASN:N | 2.78 | 0.46 |
| 3:R:65:ILE:HG22 | 3:R:66:GLY:H | 1.80 | 0.46 |
| 3:R:935:LEU:CD2 | 10:Y:43:TYR:HB3 | 2.45 | 0.46 |
| 3:R:955:ASN:O | 3:R:958:LEU:HB3 | 2.14 | 0.46 |
| 4:S:187:VAL:HG21 | 14:S:1001:F3S:S4 | 2.56 | 0.46 |
| 5:T:117:THR:HG21 | 5:T:130:GLU:HG3 | 1.98 | 0.46 |
| 2:G:269:VAL:HG12 | 7:V:14:HIS:CD2 | 2.51 | 0.46 |
| 9:X:69:LEU:HD23 | 9:X:69:LEU:C | 2.36 | 0.46 |
| 1:A:506:ALA:N | 1:A:635:PHE:HD2 | 2.12 | 0.46 |
| 1:A:782:ILE:HG22 | 1:A:784:SER:N | 2.31 | 0.46 |
| 3:B:134:THR:O | 3:B:137:LYS:N | 2.49 | 0.46 |
| 2:C:131:LYS:O | 2:C:249:TYR:N | 2.49 | 0.46 |
| 2:C:24:LEU:O | 2:C:29:VAL:HG23 | 2.15 | 0.46 |
| 5:E:15:PRO:HA | 5:E:18:PHE:CD1 | 2.50 | 0.46 |
| 2:G:104:LEU:CD2 | 2:G:104:LEU:C | 2.84 | 0.46 |
| 9:L:83:TYR:O | 9:L:87:ILE:HB | 2.15 | 0.46 |
| 1:Q:325:VAL:CG2 | 1:Q:442:THR:HG22 | 2.46 | 0.46 |
| 1:Q:872:PHE:CD2 | 1:Q:876:VAL:HG11 | 2.51 | 0.46 |
| 1:Q:8:GLY:H | 2:G:366:PHE:HE1 | 1.62 | 0.46 |
| 3:R:265:VAL:O | 3:R:268:ALA:HB3 | 2.16 | 0.46 |
| 3:R:28:LEU:O | 3:R:30:SER:N | 2.38 | 0.46 |
| 3:R:309:LYS:C | 3:R:311:LYS:H | 2.18 | 0.46 |
| 1:A:590:ASN:OD1 | 3:R:377:ARG:HD2 | 2.16 | 0.46 |
| 3:R:764:LYS:CD | 3:R:815:SER:HA | 2.43 | 0.46 |
| 3:R:790:ARG:C | 3:R:792:LEU:N | 2.69 | 0.46 |
| 3:R:655:ILE:HG23 | 3:R:881:ARG:O | 2.14 | 0.46 |
| 3:R:875:GLY:HA2 | 3:R:887:VAL:HG11 | 1.98 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|------------------|--------------------------|-------------------|
| 3:R:931:LYS:HB3 | 3:R:957:ILE:HG21 | 1.98 | 0.46 |
| 5:T:85:VAL:HG11 | 5:T:101:LEU:HD13 | 1.98 | 0.46 |
| 6:U:80:SER:O | 6:U:84:ARG:HB2 | 2.15 | 0.46 |
| 8:W:70:ARG:C | 8:W:72:GLY:N | 2.67 | 0.46 |
| 3:R:902:LYS:CB | 10:Y:42:ARG:NH1 | 2.75 | 0.46 |
| 10:Y:3:ILE:HA | 10:Y:52:HIS:NE2 | 2.30 | 0.46 |
| 1:A:206:TRP:C | 1:A:208:ILE:H | 2.19 | 0.46 |
| 1:A:282:PRO:O | 1:A:283:GLY:O | 2.34 | 0.46 |
| 1:A:4:LYS:HB3 | 3:B:1090:PRO:O | 2.15 | 0.46 |
| 1:A:498:ALA:HB3 | 1:A:503:ILE:HG22 | 1.98 | 0.46 |
| 1:A:704:LEU:HD22 | 1:A:781:PHE:CD1 | 2.50 | 0.46 |
| 1:A:841:LEU:CD2 | 2:C:367:LYS:HB2 | 2.46 | 0.46 |
| 3:B:1063:GLN:HE22 | 3:B:1085:LYS:HD2 | 1.80 | 0.46 |
| 3:B:220:LYS:O | 3:B:275:ARG:NH1 | 2.48 | 0.46 |
| 3:B:343:LEU:HD11 | 3:B:575:VAL:CG2 | 2.45 | 0.46 |
| 3:B:727:MET:HA | 3:B:912:PRO:HG2 | 1.97 | 0.46 |
| 2:C:289:ALA:O | 2:C:290:ARG:C | 2.54 | 0.46 |
| 4:D:134:GLY:HA3 | 10:N:60:ILE:HD11 | 1.98 | 0.46 |
| 10:N:3:ILE:HG22 | 10:N:4:PRO:CD | 2.46 | 0.46 |
| 4:D:50:ASN:ND2 | 10:N:64:ARG:NH1 | 2.63 | 0.46 |
| 1:Q:364:PHE:HD2 | 1:Q:373:PRO:O | 1.99 | 0.46 |
| 1:Q:418:LEU:HD23 | 1:Q:430:MET:CE | 2.46 | 0.46 |
| 1:Q:449:VAL:O | 1:Q:449:VAL:HG12 | 2.16 | 0.46 |
| 1:Q:761:TYR:CB | 1:Q:764:ARG:HG3 | 2.45 | 0.46 |
| 3:R:1079:CYS:SG | 3:R:1080:PRO:CD | 3.02 | 0.46 |
| 3:R:1113:LEU:HD12 | 3:R:1113:LEU:H | 1.79 | 0.46 |
| 3:R:353:LEU:O | 3:R:354:PHE:C | 2.54 | 0.46 |
| 3:R:699:GLN:CA | 10:Y:51:SER:O | 2.63 | 0.46 |
| 3:R:789:TYR:CD2 | 3:R:789:TYR:N | 2.68 | 0.46 |
| 3:R:846:ILE:HG22 | 3:R:846:ILE:O | 2.15 | 0.46 |
| 1:A:276:TYR:CD2 | 1:A:277:PHE:CD1 | 3.01 | 0.46 |
| 1:A:573:ARG:HA | 1:A:582:HIS:CD2 | 2.51 | 0.46 |
| 1:A:667:ARG:O | 1:A:670:VAL:CG2 | 2.62 | 0.46 |
| 1:A:827:LEU:HD11 | 2:C:315:LEU:CD1 | 2.44 | 0.46 |
| 1:A:853:ASP:HB3 | 1:A:855:VAL:HB | 1.97 | 0.46 |
| 1:A:489:PRO:HA | 1:A:858:MET:HG3 | 1.96 | 0.46 |
| 3:B:225:ILE:HD13 | 3:B:271:PHE:HB3 | 1.97 | 0.46 |
| 3:B:429:VAL:CG1 | 3:B:453:MET:HE1 | 2.46 | 0.46 |
| 3:B:435:ARG:NH1 | 3:B:435:ARG:CG | 2.75 | 0.46 |
| 3:B:482:GLU:OE2 | 3:B:525:ARG:NH1 | 2.49 | 0.46 |
| 3:B:814:VAL:O | 3:B:814:VAL:HG12 | 2.15 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 3:B:926:GLU:HB3 | 3:B:988:VAL:HG22 | 1.98 | 0.46 |
| 3:B:992:LYS:HE3 | 3:B:996:MET:SD | 2.56 | 0.46 |
| 2:C:120:PRO:CA | 2:C:275:ASN:ND2 | 2.67 | 0.46 |
| 4:D:101:GLU:HG2 | 4:D:102:ALA:N | 2.29 | 0.46 |
| 4:D:182:VAL:HG11 | 4:D:212:TYR:CG | 2.50 | 0.46 |
| 9:L:7:LYS:HE3 | 9:L:12:TYR:CE2 | 2.50 | 0.46 |
| 10:N:63:THR:HB | 10:N:64:ARG:HD3 | 1.96 | 0.46 |
| 1:Q:820:GLN:O | 1:Q:823:LEU:HD12 | 2.15 | 0.46 |
| 3:R:441:GLU:HG2 | 3:R:441:GLU:O | 2.16 | 0.46 |
| 3:R:54:PRO:O | 3:R:56:LEU:N | 2.49 | 0.46 |
| 3:R:687:ARG:CB | 3:R:687:ARG:HH11 | 2.29 | 0.46 |
| 3:R:979:ILE:C | 3:R:979:ILE:HD12 | 2.36 | 0.46 |
| 4:S:178:LYS:HA | 4:S:181:ASN:HD22 | 1.81 | 0.46 |
| 4:S:158:PRO:O | 4:S:233:VAL:HG22 | 2.15 | 0.46 |
| 5:T:38:ILE:HD12 | 5:T:38:ILE:H | 1.81 | 0.46 |
| 6:U:63:VAL:HG12 | 6:U:63:VAL:O | 2.16 | 0.46 |
| 5:T:168:TYR:CE2 | 6:U:81:ASP:HB3 | 2.51 | 0.46 |
| 10:Y:24:ARG:HD2 | 10:Y:34:VAL:CG1 | 2.45 | 0.46 |
| 1:A:212:LEU:HD23 | 1:A:242:ILE:HG21 | 1.98 | 0.46 |
| 1:A:391:VAL:O | 1:A:392:LYS:O | 2.34 | 0.46 |
| 1:A:532:ILE:O | 1:A:532:ILE:HG22 | 2.16 | 0.46 |
| 3:B:13:VAL:HG22 | 3:B:592:GLU:OE2 | 2.16 | 0.46 |
| 3:B:274:SER:C | 3:B:276:VAL:H | 2.20 | 0.46 |
| 3:B:543:ARG:NH2 | 3:B:548:GLU:OE2 | 2.48 | 0.46 |
| 3:B:754:PHE:CE2 | 3:B:756:ARG:HB2 | 2.47 | 0.46 |
| 3:B:814:VAL:HA | 3:B:833:ARG:O | 2.15 | 0.46 |
| 3:B:904:VAL:CG2 | 10:N:42:ARG:NE | 2.78 | 0.46 |
| 4:D:167:TYR:CD1 | 4:D:227:ILE:HD11 | 2.50 | 0.46 |
| 5:E:124:ARG:NH2 | 5:E:137:GLN:OE1 | 2.49 | 0.46 |
| 2:G:103:GLY:HA3 | 2:G:300:VAL:CG1 | 2.45 | 0.46 |
| 2:G:117:PRO:HD2 | 2:G:120:PRO:HG3 | 1.98 | 0.46 |
| 2:G:70:ILE:HA | 2:G:73:VAL:CG2 | 2.42 | 0.46 |
| 9:L:69:LEU:HD23 | 9:L:73:ILE:HG12 | 1.97 | 0.46 |
| 9:L:87:ILE:HG23 | 9:L:88:LYS:N | 2.31 | 0.46 |
| 10:N:23:THR:HG22 | 10:N:24:ARG:N | 2.30 | 0.46 |
| 1:Q:451:PRO:HG2 | 1:Q:605:ASN:OD1 | 2.16 | 0.46 |
| 1:Q:524:ILE:HG23 | 1:Q:634:VAL:HG13 | 1.98 | 0.46 |
| 1:Q:675:LEU:CD2 | 1:Q:684:LEU:HD11 | 2.46 | 0.46 |
| 1:Q:752:VAL:HG11 | 1:Q:800:ALA:O | 2.15 | 0.46 |
| 3:R:1083:GLY:O | 3:R:1085:LYS:N | 2.49 | 0.46 |
| 3:R:249:GLN:O | 3:R:250:ASN:C | 2.55 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 3:R:226:LEU:HD13 | 3:R:297:PHE:HE1 | 1.81 | 0.46 |
| 3:R:5:LEU:HB2 | 3:R:630:PRO:HG3 | 1.97 | 0.46 |
| 3:R:657:TYR:O | 3:R:658:PRO:C | 2.53 | 0.46 |
| 3:R:80:ILE:HD12 | 3:R:92:TYR:HA | 1.97 | 0.46 |
| 1:Q:441:LEU:HD12 | 3:R:873:THR:HG21 | 1.97 | 0.46 |
| 1:Q:728:MET:HE3 | 3:R:913:HIS:ND1 | 2.30 | 0.46 |
| 3:R:656:PRO:HG3 | 3:R:926:GLU:HG3 | 1.97 | 0.46 |
| 3:R:97:TRP:CE3 | 3:R:113:GLU:HB3 | 2.51 | 0.46 |
| 4:S:141:LEU:C | 4:S:141:LEU:HD12 | 2.37 | 0.46 |
| 4:S:52:PRO:CG | 10:Y:56:ILE:HD11 | 2.46 | 0.46 |
| 5:T:163:THR:C | 5:T:164:MET:HG3 | 2.35 | 0.46 |
| 6:U:18:LYS:HZ2 | 6:U:45:GLU:HG2 | 1.80 | 0.46 |
| 6:U:13:PRO:HB2 | 6:U:73:ALA:O | 2.15 | 0.46 |
| 11:Z:9:CYS:SG | 11:Z:10:TRP:O | 2.74 | 0.46 |
| 1:A:759:ARG:HH21 | 1:A:763:THR:HA | 1.81 | 0.46 |
| 3:B:238:ILE:HA | 3:B:241:ALA:CB | 2.46 | 0.46 |
| 3:B:252:LEU:C | 3:B:254:PRO:HD2 | 2.36 | 0.46 |
| 3:B:54:PRO:O | 3:B:55:GLY:C | 2.55 | 0.46 |
| 3:B:519:LYS:HD2 | 3:B:565:GLU:HG2 | 1.98 | 0.46 |
| 3:B:804:VAL:CG1 | 3:B:805:LYS:N | 2.79 | 0.46 |
| 2:C:41:ILE:CG2 | 2:C:42:ILE:HD12 | 2.45 | 0.46 |
| 8:K:28:THR:O | 8:K:31:GLU:N | 2.48 | 0.46 |
| 9:L:45:GLN:HE22 | 9:L:48:PRO:N | 2.13 | 0.46 |
| 10:N:53:VAL:O | 10:N:54:ASP:HB3 | 2.16 | 0.46 |
| 3:B:139:ILE:CG2 | 10:N:61:HIS:HD2 | 2.26 | 0.46 |
| 4:D:155:LYS:NZ | 11:P:47:ALA:O | 2.48 | 0.46 |
| 1:Q:19:ILE:HA | 1:Q:22:MET:HE2 | 1.98 | 0.46 |
| 1:Q:12:GLY:HA3 | 1:Q:201:THR:O | 2.16 | 0.46 |
| 1:Q:552:ILE:C | 1:Q:554:ALA:N | 2.69 | 0.46 |
| 1:Q:569:SER:HB2 | 1:Q:584:SER:HG | 1.78 | 0.46 |
| 1:Q:665:ILE:O | 1:Q:669:LYS:HG3 | 2.15 | 0.46 |
| 3:R:202:ILE:CG2 | 3:R:203:GLU:N | 2.79 | 0.46 |
| 3:R:248:VAL:HA | 3:R:251:GLU:CD | 2.35 | 0.46 |
| 3:R:367:TYR:HD2 | 3:R:367:TYR:C | 2.19 | 0.46 |
| 3:R:790:ARG:HG3 | 3:R:791:LEU:HD23 | 1.98 | 0.46 |
| 3:R:813:LYS:HE2 | 3:R:835:THR:HG21 | 1.98 | 0.46 |
| 3:R:867:ARG:CZ | 4:S:54:TYR:CE2 | 2.99 | 0.46 |
| 3:R:898:PRO:HA | 3:R:971:TYR:O | 2.15 | 0.46 |
| 4:S:204:THR:O | 4:S:206:CYS:N | 2.48 | 0.46 |
| 4:S:63:ALA:HB1 | 4:S:155:LYS:NZ | 2.28 | 0.46 |
| 5:T:10:ILE:HD12 | 5:T:10:ILE:N | 2.30 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 5:T:113:ILE:CG2 | 5:T:114:THR:N | 2.78 | 0.46 |
| 5:T:179:LYS:NZ | 6:U:82:GLU:HG3 | 2.31 | 0.46 |
| 7:V:28:ALA:C | 7:V:30:LYS:H | 2.20 | 0.46 |
| 9:X:45:GLN:OE1 | 9:X:45:GLN:O | 2.34 | 0.46 |
| 10:Y:23:THR:HG22 | 10:Y:24:ARG:N | 2.31 | 0.46 |
| 1:A:302:LEU:HA | 1:A:308:ARG:H | 1.82 | 0.45 |
| 1:A:440:GLY:HA3 | 1:A:444:ARG:NH2 | 2.31 | 0.45 |
| 1:A:552:ILE:HD12 | 1:A:553:SER:N | 2.31 | 0.45 |
| 1:A:94:LEU:C | 1:A:96:ALA:H | 2.18 | 0.45 |
| 3:B:1073:ASN:C | 3:B:1075:ASN:N | 2.67 | 0.45 |
| 1:A:313:LEU:CD2 | 3:B:1100:LEU:HD22 | 2.46 | 0.45 |
| 3:B:577:ARG:HG2 | 3:B:579:LEU:HD21 | 1.98 | 0.45 |
| 3:B:633:LEU:O | 3:B:635:PRO:N | 2.49 | 0.45 |
| 3:B:651:THR:CG2 | 3:B:670:SER:HA | 2.45 | 0.45 |
| 3:B:705:THR:HB | 3:B:708:LEU:HB2 | 1.98 | 0.45 |
| 3:B:719:GLY:O | 3:B:989:TYR:CE1 | 2.69 | 0.45 |
| 3:B:952:GLN:O | 3:B:953:LEU:C | 2.55 | 0.45 |
| 3:B:965:ASP:C | 3:B:967:THR:H | 2.16 | 0.45 |
| 3:B:975:THR:CG2 | 3:B:977:GLN:HG2 | 2.46 | 0.45 |
| 2:C:146:TYR:HB2 | 2:C:238:LYS:HD3 | 1.99 | 0.45 |
| 2:C:311:ARG:HD3 | 2:C:311:ARG:N | 2.29 | 0.45 |
| 4:D:107:ARG:N | 4:D:133:LEU:O | 2.32 | 0.45 |
| 4:D:133:LEU:HD11 | 4:D:139:ILE:HG12 | 1.98 | 0.45 |
| 2:G:240:ALA:O | 2:G:241:ILE:HG13 | 2.16 | 0.45 |
| 2:G:365:GLU:CG | 2:G:366:PHE:H | 2.29 | 0.45 |
| 2:G:384:GLY:HA2 | 5:T:61:PHE:HZ | 1.80 | 0.45 |
| 4:D:27:ALA:HB1 | 9:L:23:THR:CG2 | 2.46 | 0.45 |
| 1:A:522:GLN:HG2 | 9:L:40:PHE:CD1 | 2.51 | 0.45 |
| 11:P:9:CYS:SG | 11:P:10:TRP:O | 2.74 | 0.45 |
| 1:Q:234:ASP:O | 1:Q:236:THR:N | 2.49 | 0.45 |
| 1:Q:369:PRO:HB3 | 1:Q:376:ASN:CB | 2.26 | 0.45 |
| 1:Q:397:LEU:O | 1:Q:400:THR:HB | 2.16 | 0.45 |
| 1:Q:532:ILE:CG2 | 1:Q:532:ILE:O | 2.64 | 0.45 |
| 1:Q:555:PHE:CD2 | 1:Q:631:LEU:HD13 | 2.50 | 0.45 |
| 3:R:147:ASP:OD2 | 3:R:148:PRO:CD | 2.63 | 0.45 |
| 3:R:18:PHE:C | 3:R:20:SER:H | 2.19 | 0.45 |
| 3:R:248:VAL:HG21 | 3:R:329:ARG:HH12 | 1.81 | 0.45 |
| 3:R:278:ILE:HG22 | 3:R:279:GLY:H | 1.79 | 0.45 |
| 3:R:373:LYS:CD | 3:R:375:ARG:HD2 | 2.46 | 0.45 |
| 3:R:391:THR:O | 3:R:394:ILE:HG22 | 2.16 | 0.45 |
| 3:R:474:ALA:HB1 | 3:R:615:TYR:CE2 | 2.52 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|------------------|--------------------------|-------------------|
| 3:R:744:SER:HB3 | 10:Y:8:PHE:HB3 | 1.98 | 0.45 |
| 4:S:178:LYS:O | 4:S:179:ALA:C | 2.54 | 0.45 |
| 4:S:34:LEU:O | 4:S:36:VAL:N | 2.49 | 0.45 |
| 5:T:149:VAL:HG21 | 5:T:160:ILE:HG13 | 1.98 | 0.45 |
| 6:U:20:LEU:O | 6:U:24:VAL:HG23 | 2.16 | 0.45 |
| 6:U:40:TYR:O | 6:U:43:SER:OG | 2.30 | 0.45 |
| 7:V:54:SER:O | 7:V:56:ASN:N | 2.49 | 0.45 |
| 3:R:934:ALA:HB2 | 10:Y:47:ARG:HH11 | 1.80 | 0.45 |
| 1:A:184:LEU:HB3 | 1:A:204:PRO:HB2 | 1.97 | 0.45 |
| 1:A:415:ASP:O | 1:A:435:VAL:HG12 | 2.17 | 0.45 |
| 1:A:821:ARG:O | 1:A:825:ASN:ND2 | 2.43 | 0.45 |
| 3:B:1061:CYS:HB3 | 3:B:1064:CYS:C | 2.36 | 0.45 |
| 3:B:457:GLU:C | 3:B:458:THR:OG1 | 2.55 | 0.45 |
| 3:B:790:ARG:C | 3:B:792:LEU:N | 2.69 | 0.45 |
| 2:C:124:ILE:CG2 | 2:C:267:VAL:HG13 | 2.46 | 0.45 |
| 2:C:130:TYR:HB3 | 2:C:136:LYS:HG3 | 1.98 | 0.45 |
| 2:C:315:LEU:HA | 2:C:315:LEU:HD23 | 1.85 | 0.45 |
| 4:D:149:TYR:O | 4:D:150:GLY:C | 2.54 | 0.45 |
| 4:D:178:LYS:O | 4:D:179:ALA:C | 2.54 | 0.45 |
| 4:D:187:VAL:HG21 | 4:D:203:CYS:HB2 | 1.99 | 0.45 |
| 4:D:204:THR:O | 4:D:205:LEU:C | 2.54 | 0.45 |
| 4:D:2:SER:N | 9:L:86:GLU:OE1 | 2.49 | 0.45 |
| 5:E:10:ILE:HD12 | 5:E:10:ILE:N | 2.32 | 0.45 |
| 5:E:179:LYS:HZ1 | 6:F:82:GLU:CG | 2.24 | 0.45 |
| 2:C:395:ARG:HG2 | 5:E:19:GLY:HA3 | 1.98 | 0.45 |
| 6:F:18:LYS:HZ2 | 6:F:45:GLU:HG2 | 1.81 | 0.45 |
| 1:Q:474:ALA:C | 1:Q:476:ALA:N | 2.70 | 0.45 |
| 1:Q:631:LEU:HG | 1:Q:635:PHE:HE1 | 1.81 | 0.45 |
| 1:Q:861:ALA:O | 1:Q:862:HIS:CD2 | 2.69 | 0.45 |
| 3:R:1078:VAL:HG11 | 3:R:1082:HIS:HB3 | 1.97 | 0.45 |
| 3:R:249:GLN:HB2 | 3:R:253:PHE:CE1 | 2.51 | 0.45 |
| 3:R:367:TYR:CD2 | 3:R:367:TYR:C | 2.90 | 0.45 |
| 3:R:549:ILE:HD13 | 3:R:549:ILE:HA | 1.84 | 0.45 |
| 3:R:654:ILE:CD1 | 3:R:654:ILE:H | 2.24 | 0.45 |
| 3:R:808:ASP:O | 3:R:838:VAL:HG13 | 2.17 | 0.45 |
| 4:S:176:CYS:N | 4:S:195:LEU:CD2 | 2.79 | 0.45 |
| 4:S:52:PRO:HB2 | 10:Y:56:ILE:HD11 | 1.98 | 0.45 |
| 1:A:12:GLY:HA3 | 1:A:201:THR:O | 2.17 | 0.45 |
| 1:A:394:ARG:O | 1:A:398:ALA:HB2 | 2.17 | 0.45 |
| 1:A:529:ASP:OD2 | 1:A:529:ASP:O | 2.33 | 0.45 |
| 1:A:589:LYS:O | 1:A:592:ILE:CB | 2.65 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 1:A:508:LEU:HB3 | 1:A:638:PHE:HE2 | 1.82 | 0.45 |
| 1:A:764:ARG:CB | 1:A:764:ARG:NH1 | 2.78 | 0.45 |
| 3:B:110:GLU:HA | 3:B:111:PRO:HA | 1.72 | 0.45 |
| 3:B:193:THR:CB | 3:B:197:ARG:O | 2.64 | 0.45 |
| 3:B:702:LEU:HD22 | 3:B:933:ALA:HB1 | 1.96 | 0.45 |
| 3:B:790:ARG:HG3 | 3:B:791:LEU:HD23 | 1.99 | 0.45 |
| 3:B:804:VAL:O | 3:B:805:LYS:HD2 | 2.16 | 0.45 |
| 3:B:805:LYS:O | 3:B:806:GLY:C | 2.55 | 0.45 |
| 3:B:979:ILE:HD13 | 3:B:981:SER:H | 1.82 | 0.45 |
| 2:C:137:ALA:O | 2:C:140:VAL:N | 2.40 | 0.45 |
| 4:D:145:LEU:HD12 | 4:D:145:LEU:N | 2.30 | 0.45 |
| 4:D:213:CYS:CB | 4:D:217:ILE:HD13 | 2.46 | 0.45 |
| 5:E:117:THR:HG21 | 5:E:130:GLU:HG3 | 1.98 | 0.45 |
| 5:E:18:PHE:CE2 | 8:K:42:GLN:HG2 | 2.51 | 0.45 |
| 6:F:88:VAL:HG12 | 6:F:89:MET:N | 2.31 | 0.45 |
| 2:G:337:GLU:CD | 2:G:337:GLU:N | 2.69 | 0.45 |
| 2:G:369:VAL:HG11 | 2:G:381:LEU:HD21 | 1.98 | 0.45 |
| 1:Q:175:LEU:HD23 | 1:Q:176:THR:N | 2.10 | 0.45 |
| 1:Q:23:SER:O | 1:Q:24:VAL:CG1 | 2.64 | 0.45 |
| 1:Q:309:PHE:HA | 1:Q:313:LEU:HB2 | 1.97 | 0.45 |
| 1:Q:361:LEU:HG | 1:Q:407:ILE:HG12 | 1.97 | 0.45 |
| 1:Q:375:ALA:HB2 | 1:Q:409:ARG:HA | 1.98 | 0.45 |
| 1:Q:464:LEU:C | 1:Q:464:LEU:CD1 | 2.85 | 0.45 |
| 1:Q:506:ALA:N | 1:Q:635:PHE:HD2 | 2.15 | 0.45 |
| 1:Q:418:LEU:CD1 | 3:R:1044:LEU:HD11 | 2.44 | 0.45 |
| 3:R:232:ILE:HG23 | 3:R:237:ASP:HB3 | 1.98 | 0.45 |
| 3:R:330:ARG:O | 3:R:331:GLU:CB | 2.60 | 0.45 |
| 3:R:589:VAL:O | 3:R:592:GLU:N | 2.46 | 0.45 |
| 3:R:651:THR:CG2 | 3:R:670:SER:HA | 2.45 | 0.45 |
| 3:R:6:THR:CB | 3:R:9:GLU:CB | 2.95 | 0.45 |
| 2:C:16:LYS:NZ | 3:R:75:ARG:NH1 | 2.64 | 0.45 |
| 3:R:899:TYR:OH | 4:S:164:VAL:HB | 2.16 | 0.45 |
| 3:R:935:LEU:O | 10:Y:46:ARG:NH1 | 2.49 | 0.45 |
| 3:R:974:ARG:HB2 | 9:X:22:HIS:CD2 | 2.50 | 0.45 |
| 4:S:110:TYR:HA | 4:S:128:ILE:O | 2.16 | 0.45 |
| 4:S:39:MET:O | 4:S:67:PHE:HB2 | 2.17 | 0.45 |
| 5:T:114:THR:CG2 | 5:T:115:ASP:N | 2.80 | 0.45 |
| 5:T:27:LEU:HD23 | 5:T:28:ASN:N | 2.31 | 0.45 |
| 8:W:61:VAL:CG1 | 8:W:62:ILE:N | 2.76 | 0.45 |
| 9:X:45:GLN:HE22 | 9:X:48:PRO:HD3 | 1.82 | 0.45 |
| 1:A:498:ALA:CB | 1:A:503:ILE:HG22 | 2.46 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 3:B:103:VAL:HG13 | 3:B:106:ASN:C | 2.37 | 0.45 |
| 3:B:1076:LYS:O | 3:B:1078:VAL:HG23 | 2.16 | 0.45 |
| 3:B:128:ASP:OD1 | 3:B:130:ILE:HG13 | 2.16 | 0.45 |
| 3:B:250:ASN:O | 3:B:252:LEU:N | 2.50 | 0.45 |
| 3:B:62:LYS:C | 3:B:63:ILE:HD12 | 2.35 | 0.45 |
| 3:B:757:LEU:HD23 | 3:B:758:TYR:H | 1.77 | 0.45 |
| 3:B:921:LEU:C | 3:B:923:GLN:N | 2.69 | 0.45 |
| 3:B:934:ALA:HB1 | 10:N:43:TYR:HB2 | 1.99 | 0.45 |
| 2:C:104:LEU:HD23 | 2:C:104:LEU:C | 2.37 | 0.45 |
| 2:C:65:ALA:CB | 8:K:19:PHE:CE1 | 2.99 | 0.45 |
| 4:D:52:PRO:CB | 10:N:56:ILE:HD11 | 2.46 | 0.45 |
| 5:E:39:LEU:HD13 | 5:E:42:LEU:CD1 | 2.47 | 0.45 |
| 2:G:311:ARG:NH1 | 7:V:71:LEU:HD13 | 2.32 | 0.45 |
| 7:H:20:HIS:HB3 | 7:H:63:ILE:HG21 | 1.98 | 0.45 |
| 1:Q:58:CYS:CB | 1:Q:59:PRO:CD | 2.94 | 0.45 |
| 1:Q:750:GLN:HG3 | 1:Q:782:ILE:HD11 | 1.98 | 0.45 |
| 1:Q:487:ILE:O | 1:Q:858:MET:HE2 | 2.15 | 0.45 |
| 1:Q:796:PHE:CZ | 3:R:445:LEU:HB3 | 2.51 | 0.45 |
| 3:R:489:LEU:O | 3:R:492:MET:N | 2.46 | 0.45 |
| 3:R:654:ILE:O | 3:R:654:ILE:HG22 | 2.16 | 0.45 |
| 3:R:940:VAL:HG23 | 3:R:947:LYS:HD3 | 1.98 | 0.45 |
| 3:R:946:TYR:CE1 | 3:R:949:PRO:HA | 2.51 | 0.45 |
| 4:S:175:ASN:OD1 | 4:S:195:LEU:HG | 2.15 | 0.45 |
| 4:S:93:TYR:CE1 | 4:S:144:ARG:NH2 | 2.84 | 0.45 |
| 5:T:39:LEU:HD13 | 5:T:42:LEU:CD1 | 2.46 | 0.45 |
| 6:U:57:GLU:C | 6:U:59:LEU:N | 2.68 | 0.45 |
| 6:U:57:GLU:O | 6:U:59:LEU:N | 2.50 | 0.45 |
| 8:W:30:TYR:N | 8:W:30:TYR:CD1 | 2.84 | 0.45 |
| 1:A:206:TRP:CZ3 | 1:A:209:LEU:HD23 | 2.52 | 0.45 |
| 1:A:417:VAL:CG1 | 1:A:464:LEU:HD13 | 2.47 | 0.45 |
| 1:A:529:ASP:HB3 | 1:A:626:TRP:CD1 | 2.51 | 0.45 |
| 1:A:550:GLN:O | 1:A:553:SER:N | 2.49 | 0.45 |
| 1:A:672:VAL:CG1 | 1:A:700:ILE:HD12 | 2.35 | 0.45 |
| 3:B:181:SER:O | 3:B:182:ASN:CB | 2.64 | 0.45 |
| 3:B:278:ILE:HG23 | 3:B:285:ARG:NH2 | 2.31 | 0.45 |
| 3:B:304:SER:O | 3:B:305:ALA:C | 2.55 | 0.45 |
| 3:B:367:TYR:HD2 | 3:B:367:TYR:C | 2.20 | 0.45 |
| 3:B:526:LEU:HD23 | 3:B:527:ILE:N | 2.31 | 0.45 |
| 3:B:707:ALA:C | 3:B:709:ASP:N | 2.70 | 0.45 |
| 3:B:745:VAL:CG1 | 3:B:872:PRO:HG2 | 2.45 | 0.45 |
| 3:B:950:ILE:C | 3:B:952:GLN:N | 2.69 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:C:359:ALA:C | 2:C:361:GLY:H | 2.20 | 0.45 |
| 4:D:173:LEU:O | 4:D:174:ALA:CB | 2.63 | 0.45 |
| 4:D:38:ILE:HD12 | 4:D:39:MET:C | 2.37 | 0.45 |
| 6:F:14:TYR:O | 6:F:18:LYS:HE3 | 2.17 | 0.45 |
| 6:F:30:SER:HB3 | 6:F:38:TYR:CE1 | 2.51 | 0.45 |
| 2:G:281:GLU:OE1 | 2:G:326:VAL:CG1 | 2.62 | 0.45 |
| 1:Q:490:ARG:HG3 | 2:G:308:VAL:HG23 | 1.97 | 0.45 |
| 1:Q:490:ARG:HD3 | 2:G:77:SER:O | 2.17 | 0.45 |
| 8:K:27:LEU:N | 8:K:27:LEU:HD12 | 2.31 | 0.45 |
| 9:L:12:TYR:HA | 9:L:57:ILE:O | 2.17 | 0.45 |
| 1:Q:394:ARG:O | 1:Q:398:ALA:HB2 | 2.16 | 0.45 |
| 1:Q:431:MET:HE3 | 1:Q:482:VAL:HA | 1.98 | 0.45 |
| 1:Q:51:VAL:HG23 | 1:Q:58:CYS:HB3 | 1.98 | 0.45 |
| 1:Q:664:GLU:OE1 | 1:Q:707:LEU:HD22 | 2.16 | 0.45 |
| 1:Q:651:VAL:HG21 | 1:Q:743:MET:HB3 | 1.97 | 0.45 |
| 3:R:13:VAL:HG22 | 3:R:592:GLU:OE2 | 2.17 | 0.45 |
| 3:R:33:ASP:OD1 | 3:R:33:ASP:C | 2.54 | 0.45 |
| 3:R:51:THR:HG21 | 3:R:370:GLU:OE1 | 2.17 | 0.45 |
| 3:R:804:VAL:HG12 | 3:R:805:LYS:N | 2.31 | 0.45 |
| 3:R:805:LYS:O | 3:R:806:GLY:C | 2.55 | 0.45 |
| 3:R:950:ILE:O | 3:R:951:GLU:C | 2.54 | 0.45 |
| 4:S:133:LEU:HD21 | 4:S:139:ILE:CG1 | 2.46 | 0.45 |
| 4:S:134:GLY:HA3 | 10:Y:60:ILE:HD11 | 1.99 | 0.45 |
| 4:S:159:VAL:CG2 | 4:S:160:SER:N | 2.78 | 0.45 |
| 5:T:3:LYS:CA | 6:U:12:ILE:HG13 | 2.46 | 0.45 |
| 2:G:321:THR:CG2 | 7:V:79:ARG:HH12 | 2.28 | 0.45 |
| 8:W:26:ARG:HG2 | 8:W:90:LEU:HD13 | 1.99 | 0.45 |
| 8:W:43:LEU:HD13 | 8:W:64:ILE:HD11 | 1.98 | 0.45 |
| 1:A:326:ILE:O | 1:A:326:ILE:HG13 | 2.16 | 0.45 |
| 1:A:527:VAL:HG11 | 1:A:530:VAL:HB | 1.97 | 0.45 |
| 1:A:665:ILE:O | 1:A:669:LYS:HG3 | 2.17 | 0.45 |
| 1:A:828:SER:C | 1:A:830:LEU:N | 2.70 | 0.45 |
| 1:A:830:LEU:CD1 | 1:A:846:VAL:HG21 | 2.47 | 0.45 |
| 1:A:852:ASP:HB2 | 7:H:71:LEU:HD12 | 1.99 | 0.45 |
| 1:A:88:LYS:O | 1:A:92:GLU:HG3 | 2.16 | 0.45 |
| 3:B:463:ASN:HB3 | 3:B:467:VAL:CG1 | 2.45 | 0.45 |
| 3:B:462:PRO:O | 3:B:464:SER:N | 2.49 | 0.45 |
| 3:B:764:LYS:CD | 3:B:815:SER:HA | 2.41 | 0.45 |
| 3:B:978:LYS:NZ | 4:D:205:LEU:HD22 | 2.32 | 0.45 |
| 2:C:341:VAL:HG13 | 2:C:364:GLU:HG2 | 1.98 | 0.45 |
| 4:D:190:LEU:HD11 | 4:D:195:LEU:HD23 | 1.98 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 5:E:64:GLY:N | 8:K:41:LEU:CD2 | 2.79 | 0.45 |
| 6:F:16:VAL:O | 6:F:18:LYS:N | 2.49 | 0.45 |
| 2:G:103:GLY:O | 2:G:105:PRO:HD3 | 2.17 | 0.45 |
| 2:G:32:LEU:O | 2:G:36:ILE:HG13 | 2.17 | 0.45 |
| 8:K:34:ARG:C | 8:K:37:SER:HB2 | 2.36 | 0.45 |
| 8:K:55:ASN:O | 8:K:56:LEU:CB | 2.65 | 0.45 |
| 10:N:40:VAL:HG11 | 10:N:46:ARG:HG3 | 1.98 | 0.45 |
| 1:Q:30:PRO:CB | 1:Q:244:ARG:HA | 2.46 | 0.45 |
| 1:Q:550:GLN:O | 1:Q:553:SER:N | 2.49 | 0.45 |
| 3:R:353:LEU:O | 3:R:356:VAL:HG12 | 2.16 | 0.45 |
| 3:R:800:PRO:HD3 | 3:R:850:VAL:CG2 | 2.45 | 0.45 |
| 4:S:68:MET:HA | 4:S:68:MET:HE3 | 1.99 | 0.45 |
| 4:S:69:SER:HA | 4:S:72:ALA:CB | 2.47 | 0.45 |
| 5:T:1:MET:HB2 | 5:T:78:VAL:O | 2.16 | 0.45 |
| 7:V:20:HIS:HB3 | 7:V:63:ILE:CG2 | 2.46 | 0.45 |
| 8:W:70:ARG:O | 8:W:72:GLY:N | 2.49 | 0.45 |
| 10:Y:28:GLY:O | 10:Y:29:GLU:O | 2.34 | 0.45 |
| 10:Y:5:ILE:O | 10:Y:6:ARG:HB2 | 2.16 | 0.45 |
| 1:A:220:ARG:NH1 | 1:A:236:THR:HG23 | 2.32 | 0.45 |
| 1:A:261:ILE:O | 1:A:261:ILE:HG22 | 2.16 | 0.45 |
| 1:A:358:ILE:HD12 | 1:A:403:PRO:HD3 | 1.99 | 0.45 |
| 1:A:361:LEU:HG | 1:A:407:ILE:HG12 | 1.98 | 0.45 |
| 1:A:649:GLU:HG3 | 3:B:965:ASP:OD1 | 2.17 | 0.45 |
| 1:A:872:PHE:HA | 1:A:876:VAL:CB | 2.45 | 0.45 |
| 3:B:1071:ASP:C | 3:B:1073:ASN:N | 2.69 | 0.45 |
| 3:B:337:HIS:CD2 | 3:B:339:ALA:HB3 | 2.52 | 0.45 |
| 3:B:395:ARG:O | 3:B:399:ALA:HB3 | 2.16 | 0.45 |
| 2:C:132:ARG:NE | 2:C:132:ARG:H | 2.14 | 0.45 |
| 2:C:320:MET:HA | 2:C:327:ARG:HG2 | 1.99 | 0.45 |
| 1:A:841:LEU:HD23 | 2:C:367:LYS:HB2 | 1.99 | 0.45 |
| 1:A:823:LEU:HD13 | 2:C:75:ALA:O | 2.16 | 0.45 |
| 4:D:125:SER:C | 4:D:127:ASP:N | 2.70 | 0.45 |
| 5:E:113:ILE:CG2 | 5:E:114:THR:N | 2.79 | 0.45 |
| 5:E:147:ILE:O | 5:E:148:SER:HB3 | 2.17 | 0.45 |
| 5:E:114:THR:C | 5:E:165:ARG:HE | 2.20 | 0.45 |
| 6:F:80:SER:O | 6:F:84:ARG:HB2 | 2.16 | 0.45 |
| 2:G:328:GLN:O | 2:G:333:GLY:HA3 | 2.16 | 0.45 |
| 2:G:52:PHE:CA | 2:G:55:ALA:HB3 | 2.46 | 0.45 |
| 3:B:854:GLU:OE2 | 11:P:24:VAL:HB | 2.17 | 0.45 |
| 1:Q:217:ILE:HD13 | 1:Q:220:ARG:CZ | 2.46 | 0.45 |
| 1:Q:238:LYS:HZ3 | 1:Q:297:THR:CB | 2.21 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:Q:488:THR:OG1 | 1:Q:495:ILE:HD12 | 2.16 | 0.45 |
| 1:Q:529:ASP:O | 1:Q:529:ASP:OD2 | 2.34 | 0.45 |
| 1:Q:555:PHE:HD1 | 1:Q:626:TRP:CH2 | 2.34 | 0.45 |
| 1:Q:661:ILE:HD12 | 1:Q:711:ALA:HB1 | 1.98 | 0.45 |
| 3:R:270:ASP:C | 3:R:272:ILE:N | 2.70 | 0.45 |
| 3:R:330:ARG:NH2 | 3:R:565:GLU:OE2 | 2.50 | 0.45 |
| 3:R:368:GLN:O | 3:R:372:SER:HB3 | 2.15 | 0.45 |
| 3:R:17:TYR:HA | 3:R:604:PHE:HB2 | 1.97 | 0.45 |
| 3:R:768:GLY:O | 3:R:769:GLN:CB | 2.64 | 0.45 |
| 4:S:50:ASN:ND2 | 10:Y:64:ARG:CZ | 2.80 | 0.45 |
| 4:S:39:MET:CB | 4:S:69:SER:OG | 2.65 | 0.45 |
| 5:T:147:ILE:O | 5:T:148:SER:HB3 | 2.17 | 0.45 |
| 8:W:41:LEU:HD23 | 8:W:45:MET:HG3 | 1.99 | 0.45 |
| 10:Y:43:TYR:CD1 | 10:Y:44:CYS:N | 2.85 | 0.45 |
| 1:A:181:ARG:NH1 | 1:A:185:GLU:OE2 | 2.50 | 0.45 |
| 1:A:474:ALA:C | 1:A:476:ALA:N | 2.69 | 0.45 |
| 1:A:594:LEU:O | 1:A:595:GLU:O | 2.34 | 0.45 |
| 3:B:1069:TRP:HB2 | 3:B:1070:TYR:H | 1.59 | 0.45 |
| 3:B:230:LEU:HD13 | 3:B:312:ALA:CA | 2.47 | 0.45 |
| 3:B:303:THR:HG22 | 3:B:303:THR:O | 2.16 | 0.45 |
| 3:B:661:ASN:OD1 | 3:B:882:HIS:HB3 | 2.17 | 0.45 |
| 3:B:688:THR:CG2 | 3:B:863:LYS:HZ2 | 2.30 | 0.45 |
| 3:B:766:PRO:O | 3:B:768:GLY:N | 2.49 | 0.45 |
| 2:C:124:ILE:HG12 | 2:C:272:VAL:HG13 | 1.98 | 0.45 |
| 1:A:831:ARG:NH2 | 2:C:385:MET:HG3 | 2.30 | 0.45 |
| 2:C:52:PHE:O | 2:C:56:ILE:N | 2.28 | 0.45 |
| 4:D:228:LEU:CD1 | 4:D:230:ILE:HD11 | 2.44 | 0.45 |
| 2:G:130:TYR:CD1 | 2:G:136:LYS:HE3 | 2.52 | 0.45 |
| 2:G:285:GLY:N | 7:V:50:PRO:HG3 | 2.31 | 0.45 |
| 2:G:390:MET:O | 2:G:391:ARG:CD | 2.64 | 0.45 |
| 7:H:20:HIS:HB3 | 7:H:63:ILE:CG2 | 2.46 | 0.45 |
| 8:K:13:LEU:HD23 | 8:K:15:PHE:HE1 | 1.82 | 0.45 |
| 8:K:77:THR:HG23 | 8:K:90:LEU:O | 2.17 | 0.45 |
| 9:L:45:GLN:HE22 | 9:L:48:PRO:HD3 | 1.82 | 0.45 |
| 10:N:22:ILE:HG12 | 10:N:23:THR:N | 2.32 | 0.45 |
| 10:N:21:PHE:HE2 | 10:N:35:LEU:CD2 | 2.29 | 0.45 |
| 3:B:749:MET:CB | 10:N:8:PHE:CD1 | 2.98 | 0.45 |
| 3:B:798:VAL:O | 11:P:36:MET:SD | 2.75 | 0.45 |
| 1:Q:184:LEU:HB3 | 1:Q:204:PRO:HB2 | 1.98 | 0.45 |
| 1:Q:297:THR:O | 1:Q:300:GLN:N | 2.50 | 0.45 |
| 1:Q:524:ILE:O | 1:Q:525:LEU:CD2 | 2.65 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:Q:749:GLN:HA | 1:Q:781:PHE:CA | 2.47 | 0.45 |
| 3:R:223:PHE:CD2 | 3:R:256:LEU:HD22 | 2.52 | 0.45 |
| 3:R:281:LYS:HB2 | 3:R:284:ASN:HB2 | 1.99 | 0.45 |
| 3:R:462:PRO:C | 3:R:464:SER:H | 2.19 | 0.45 |
| 3:R:618:ALA:C | 3:R:620:GLU:N | 2.68 | 0.45 |
| 3:R:64:ARG:HD3 | 3:R:64:ARG:N | 2.32 | 0.45 |
| 3:R:6:THR:CB | 3:R:9:GLU:HB3 | 2.47 | 0.45 |
| 3:R:419:TRP:HZ3 | 3:R:712:GLY:C | 2.20 | 0.45 |
| 3:R:679:LEU:HD23 | 3:R:716:ARG:CG | 2.46 | 0.45 |
| 6:U:14:TYR:CD1 | 6:U:74:SER:CB | 2.96 | 0.45 |
| 4:S:132:LEU:HD12 | 10:Y:60:ILE:HD13 | 1.97 | 0.45 |
| 1:A:79:ARG:CB | 1:A:266:TRP:CE3 | 2.86 | 0.45 |
| 1:A:430:MET:HB2 | 3:B:1035:CYS:SG | 2.57 | 0.45 |
| 1:A:517:THR:CG2 | 1:A:518:LYS:N | 2.79 | 0.45 |
| 1:A:541:ALA:O | 1:A:542:PRO:C | 2.54 | 0.45 |
| 1:A:635:PHE:O | 1:A:639:VAL:HG23 | 2.17 | 0.45 |
| 1:A:807:VAL:HG11 | 3:B:443:ARG:HH11 | 1.80 | 0.45 |
| 3:B:137:LYS:O | 3:B:140:GLU:HB2 | 2.17 | 0.45 |
| 3:B:453:MET:CG | 3:B:468:LYS:HD2 | 2.40 | 0.45 |
| 3:B:479:GLY:C | 3:B:480:ILE:HG13 | 2.36 | 0.45 |
| 3:B:538:ASN:O | 3:B:542:GLU:CG | 2.65 | 0.45 |
| 3:B:804:VAL:HG12 | 3:B:805:LYS:N | 2.31 | 0.45 |
| 1:A:645:THR:HA | 3:B:912:PRO:HG2 | 1.98 | 0.45 |
| 3:B:956:GLU:C | 3:B:958:LEU:N | 2.70 | 0.45 |
| 4:D:75:THR:OG1 | 4:D:76:TYR:CD1 | 2.70 | 0.45 |
| 2:G:130:TYR:CB | 2:G:136:LYS:HG3 | 2.47 | 0.45 |
| 2:G:320:MET:HA | 2:G:327:ARG:HG2 | 1.98 | 0.45 |
| 1:Q:826:ALA:H | 2:G:335:THR:HG22 | 1.81 | 0.45 |
| 1:Q:218:THR:O | 1:Q:218:THR:HG22 | 2.17 | 0.45 |
| 1:Q:84:VAL:HG11 | 1:Q:274:ALA:HB1 | 1.98 | 0.45 |
| 1:Q:428:ILE:HD13 | 1:Q:428:ILE:HA | 1.82 | 0.45 |
| 1:Q:498:ALA:CB | 1:Q:503:ILE:HG22 | 2.47 | 0.45 |
| 1:Q:678:LYS:HD2 | 1:Q:684:LEU:HG | 1.99 | 0.45 |
| 1:Q:72:PHE:CD2 | 1:Q:72:PHE:N | 2.85 | 0.45 |
| 3:R:1040:GLY:HA3 | 8:W:30:TYR:CE2 | 2.50 | 0.45 |
| 1:Q:465:HIS:HD2 | 3:R:1048:ARG:HD2 | 1.81 | 0.45 |
| 3:R:230:LEU:HD13 | 3:R:312:ALA:CA | 2.46 | 0.45 |
| 3:R:388:ASP:O | 3:R:391:THR:N | 2.50 | 0.45 |
| 3:R:405:GLY:O | 3:R:407:ARG:N | 2.50 | 0.45 |
| 3:R:53:ILE:HB | 3:R:54:PRO:HD3 | 1.98 | 0.45 |
| 4:S:129:PRO:HG2 | 10:Y:15:ALA:HB1 | 1.99 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 5:T:63:ASP:OD2 | 5:T:65:ALA:CB | 2.63 | 0.45 |
| 1:A:187:ILE:HA | 1:A:188:PRO:HD3 | 1.75 | 0.45 |
| 1:A:84:VAL:HG11 | 1:A:274:ALA:HB1 | 1.99 | 0.45 |
| 1:A:326:ILE:HG21 | 1:A:462:MET:HG3 | 1.98 | 0.45 |
| 1:A:353:ILE:N | 1:A:353:ILE:HD12 | 2.31 | 0.45 |
| 1:A:46:ASP:OD1 | 1:A:46:ASP:O | 2.35 | 0.45 |
| 1:A:579:ASP:O | 1:A:580:CYS:SG | 2.75 | 0.45 |
| 1:A:580:CYS:HA | 1:A:581:PRO:HD2 | 1.77 | 0.45 |
| 1:A:728:MET:HG2 | 3:B:913:HIS:CE1 | 2.52 | 0.45 |
| 3:B:95:PRO:HB2 | 3:B:115:TYR:CD2 | 2.52 | 0.45 |
| 3:B:116:ILE:HD12 | 3:B:361:PHE:HZ | 1.75 | 0.45 |
| 3:B:353:LEU:O | 3:B:354:PHE:C | 2.55 | 0.45 |
| 3:B:483:ARG:HA | 3:B:486:GLU:HG2 | 1.99 | 0.45 |
| 3:B:489:LEU:O | 3:B:492:MET:N | 2.49 | 0.45 |
| 3:B:657:TYR:O | 3:B:658:PRO:C | 2.55 | 0.45 |
| 3:B:955:ASN:O | 3:B:958:LEU:HB3 | 2.17 | 0.45 |
| 3:B:988:VAL:CG1 | 3:B:989:TYR:N | 2.80 | 0.45 |
| 2:C:130:TYR:CB | 2:C:136:LYS:HG3 | 2.47 | 0.45 |
| 6:F:63:VAL:O | 6:F:63:VAL:HG12 | 2.17 | 0.45 |
| 2:G:285:GLY:N | 7:V:50:PRO:CG | 2.80 | 0.45 |
| 2:G:365:GLU:C | 2:G:366:PHE:CD1 | 2.90 | 0.45 |
| 7:H:25:ILE:N | 7:H:25:ILE:HD12 | 2.32 | 0.45 |
| 2:C:285:GLY:N | 7:H:50:PRO:HG3 | 2.32 | 0.45 |
| 10:N:1:MET:O | 10:N:2:LEU:HB2 | 2.17 | 0.45 |
| 4:D:52:PRO:CG | 10:N:56:ILE:HD11 | 2.47 | 0.45 |
| 1:Q:364:PHE:HA | 1:Q:373:PRO:O | 2.17 | 0.45 |
| 1:Q:674:ASN:O | 1:Q:677:GLN:N | 2.50 | 0.45 |
| 1:Q:782:ILE:HG12 | 1:Q:790:LEU:HD11 | 1.98 | 0.45 |
| 1:Q:852:ASP:HB2 | 7:V:71:LEU:HD12 | 1.99 | 0.45 |
| 3:R:280:GLN:O | 3:R:281:LYS:C | 2.54 | 0.45 |
| 3:R:301:LEU:HD22 | 3:R:483:ARG:NH2 | 2.26 | 0.45 |
| 3:R:49:ILE:H | 3:R:49:ILE:HG13 | 1.57 | 0.45 |
| 3:R:560:THR:HG22 | 3:R:563:ILE:H | 1.82 | 0.45 |
| 3:R:50:PRO:HB3 | 3:R:57:LYS:HG2 | 1.98 | 0.45 |
| 3:R:735:GLU:O | 3:R:736:ASP:O | 2.34 | 0.45 |
| 3:R:696:HIS:HE1 | 3:R:869:LEU:HD23 | 1.82 | 0.45 |
| 3:R:87:LEU:HD22 | 3:R:851:LEU:CD1 | 2.47 | 0.45 |
| 3:R:988:VAL:CG1 | 3:R:989:TYR:N | 2.80 | 0.45 |
| 4:S:145:LEU:N | 4:S:145:LEU:HD12 | 2.32 | 0.45 |
| 3:R:978:LYS:NZ | 4:S:205:LEU:HD13 | 2.32 | 0.45 |
| 5:T:175:ILE:O | 5:T:175:ILE:HG22 | 2.17 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 5:T:90:LEU:O | 5:T:91:GLN:HB2 | 2.17 | 0.45 |
| 6:U:9:GLU:O | 6:U:10:HIS:ND1 | 2.50 | 0.45 |
| 7:V:47:ALA:HB2 | 7:V:81:VAL:HG13 | 1.98 | 0.45 |
| 8:W:39:ARG:NE | 8:W:68:GLU:OE1 | 2.50 | 0.45 |
| 1:A:364:PHE:HD2 | 1:A:373:PRO:O | 2.00 | 0.44 |
| 1:A:409:ARG:HH21 | 1:A:412:ILE:HG13 | 1.81 | 0.44 |
| 1:A:486:ILE:CD1 | 1:A:628:MET:HE2 | 2.47 | 0.44 |
| 1:A:785:SER:C | 1:A:787:ARG:N | 2.70 | 0.44 |
| 3:B:202:ILE:CG2 | 3:B:203:GLU:N | 2.80 | 0.44 |
| 3:B:388:ASP:OD1 | 3:B:391:THR:OG1 | 2.21 | 0.44 |
| 3:B:569:ASN:HB3 | 3:B:574:ARG:CZ | 2.45 | 0.44 |
| 3:B:92:TYR:CD2 | 3:B:92:TYR:O | 2.70 | 0.44 |
| 3:B:947:LYS:HG2 | 3:B:948:THR:OG1 | 2.16 | 0.44 |
| 2:C:365:GLU:C | 2:C:366:PHE:CD1 | 2.90 | 0.44 |
| 1:A:490:ARG:CG | 2:C:77:SER:HB3 | 2.47 | 0.44 |
| 4:D:167:TYR:HB2 | 4:D:225:LYS:O | 2.17 | 0.44 |
| 5:E:115:ASP:O | 5:E:116:ASP:HB2 | 2.18 | 0.44 |
| 5:E:179:LYS:NZ | 6:F:81:ASP:HB2 | 2.32 | 0.44 |
| 5:E:41:ASP:O | 5:E:42:LEU:HD23 | 2.17 | 0.44 |
| 5:E:58:ILE:HG22 | 5:E:59:LEU:N | 2.32 | 0.44 |
| 6:F:56:ILE:O | 6:F:59:LEU:HB3 | 2.17 | 0.44 |
| 2:G:104:LEU:HD23 | 2:G:104:LEU:O | 2.17 | 0.44 |
| 2:G:284:PHE:CD1 | 2:G:284:PHE:N | 2.85 | 0.44 |
| 2:G:388:LEU:CG | 8:W:34:ARG:HG3 | 2.47 | 0.44 |
| 2:G:67:GLY:HA2 | 2:G:385:MET:HE1 | 1.98 | 0.44 |
| 8:K:28:THR:O | 8:K:29:ARG:C | 2.55 | 0.44 |
| 10:N:44:CYS:SG | 10:N:45:CYS:N | 2.90 | 0.44 |
| 3:B:930:GLY:O | 10:N:47:ARG:NH1 | 2.50 | 0.44 |
| 1:Q:188:PRO:O | 1:Q:192:VAL:HG23 | 2.17 | 0.44 |
| 1:Q:206:TRP:C | 1:Q:208:ILE:N | 2.70 | 0.44 |
| 1:Q:219:ILE:CD1 | 1:Q:219:ILE:N | 2.80 | 0.44 |
| 1:Q:301:ARG:NH1 | 1:Q:308:ARG:NH1 | 2.65 | 0.44 |
| 1:Q:308:ARG:HH22 | 3:R:1012:LEU:CD1 | 2.29 | 0.44 |
| 1:Q:330:PRO:HG2 | 3:R:730:THR:O | 2.17 | 0.44 |
| 1:Q:487:ILE:HG22 | 1:Q:493:GLY:C | 2.38 | 0.44 |
| 1:Q:659:LYS:O | 1:Q:663:ASN:HB2 | 2.17 | 0.44 |
| 1:Q:72:PHE:HD2 | 1:Q:72:PHE:N | 2.16 | 0.44 |
| 1:A:558:LYS:CD | 3:R:104:GLU:HB2 | 2.47 | 0.44 |
| 3:R:344:ARG:C | 3:R:345:LEU:HD12 | 2.37 | 0.44 |
| 3:R:51:THR:O | 3:R:51:THR:HG22 | 2.17 | 0.44 |
| 3:R:569:ASN:CG | 3:R:574:ARG:HH22 | 2.21 | 0.44 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 3:R:633:LEU:O | 3:R:635:PRO:HD2 | 2.17 | 0.44 |
| 3:R:633:LEU:C | 3:R:635:PRO:HD2 | 2.38 | 0.44 |
| 3:R:669:GLN:CA | 3:R:669:GLN:NE2 | 2.79 | 0.44 |
| 3:R:702:LEU:HD22 | 3:R:933:ALA:HB1 | 1.99 | 0.44 |
| 3:R:705:THR:HB | 3:R:708:LEU:HB2 | 1.99 | 0.44 |
| 3:R:85:ALA:O | 3:R:90:LEU:N | 2.48 | 0.44 |
| 3:R:724:LEU:HD11 | 3:R:910:LEU:HB2 | 1.99 | 0.44 |
| 3:R:972:ASP:O | 3:R:974:ARG:N | 2.50 | 0.44 |
| 4:S:149:TYR:O | 4:S:150:GLY:C | 2.55 | 0.44 |
| 2:G:383:THR:O | 5:T:61:PHE:HZ | 2.00 | 0.44 |
| 5:T:1:MET:HE2 | 6:U:11:TYR:CD2 | 2.53 | 0.44 |
| 9:X:67:ASP:C | 9:X:69:LEU:N | 2.70 | 0.44 |
| 9:X:70:LEU:HD12 | 9:X:70:LEU:N | 2.33 | 0.44 |
| 3:B:249:GLN:C | 3:B:253:PHE:CE1 | 2.90 | 0.44 |
| 3:B:281:LYS:HB2 | 3:B:284:ASN:HB2 | 1.98 | 0.44 |
| 3:B:530:TYR:OH | 3:B:536:LEU:CG | 2.65 | 0.44 |
| 3:B:536:LEU:O | 3:B:539:LYS:HB2 | 2.17 | 0.44 |
| 3:B:602:ILE:HB | 3:B:606:ASP:HB2 | 2.00 | 0.44 |
| 3:B:724:LEU:HD11 | 3:B:910:LEU:HB2 | 1.99 | 0.44 |
| 3:B:946:TYR:CE1 | 3:B:949:PRO:HA | 2.53 | 0.44 |
| 3:B:979:ILE:HD12 | 3:B:979:ILE:C | 2.37 | 0.44 |
| 4:D:178:LYS:HA | 4:D:181:ASN:HD22 | 1.82 | 0.44 |
| 5:E:86:GLU:OE1 | 6:F:75:ILE:HG23 | 2.17 | 0.44 |
| 2:G:301:LEU:O | 2:G:304:GLN:HB2 | 2.17 | 0.44 |
| 1:Q:827:LEU:CD1 | 2:G:315:LEU:HD13 | 2.43 | 0.44 |
| 2:G:52:PHE:O | 2:G:56:ILE:HG12 | 2.17 | 0.44 |
| 10:N:60:ILE:HG13 | 10:N:61:HIS:N | 2.31 | 0.44 |
| 1:Q:362:ARG:HA | 1:Q:365:VAL:HG12 | 1.99 | 0.44 |
| 1:Q:649:GLU:HG3 | 3:R:965:ASP:OD1 | 2.16 | 0.44 |
| 1:Q:687:ILE:CD1 | 1:Q:695:SER:HB3 | 2.47 | 0.44 |
| 1:Q:785:SER:C | 1:Q:787:ARG:N | 2.70 | 0.44 |
| 1:Q:853:ASP:HB3 | 1:Q:855:VAL:HB | 1.99 | 0.44 |
| 3:R:320:SER:O | 3:R:324:GLU:OE2 | 2.35 | 0.44 |
| 3:R:388:ASP:OD1 | 3:R:391:THR:OG1 | 2.25 | 0.44 |
| 3:R:536:LEU:O | 3:R:537:ALA:C | 2.55 | 0.44 |
| 1:Q:501:ASP:HB2 | 3:R:734:MET:SD | 2.57 | 0.44 |
| 3:R:872:PRO:HA | 3:R:876:ASP:OD2 | 2.17 | 0.44 |
| 4:S:98:ILE:HD11 | 4:S:114:ILE:HG12 | 1.99 | 0.44 |
| 3:R:895:VAL:HG11 | 4:S:34:LEU:HG | 1.99 | 0.44 |
| 5:T:42:LEU:O | 5:T:76:THR:HG21 | 2.17 | 0.44 |
| 6:U:17:ALA:O | 6:U:21:LEU:HG | 2.16 | 0.44 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 6:U:18:LYS:NZ | 6:U:41:LEU:O | 2.43 | 0.44 |
| 8:W:60:ASP:O | 8:W:61:VAL:O | 2.35 | 0.44 |
| 10:Y:18:TRP:O | 10:Y:21:PHE:HD1 | 2.00 | 0.44 |
| 1:A:219:ILE:HG22 | 3:B:1099:LEU:HD23 | 2.00 | 0.44 |
| 1:A:432:ALA:O | 1:A:481:LEU:HD23 | 2.18 | 0.44 |
| 1:A:697:GLU:OE1 | 1:A:756:ARG:CD | 2.64 | 0.44 |
| 3:B:490:TYR:OH | 3:B:527:ILE:HG23 | 2.16 | 0.44 |
| 3:B:474:ALA:HB1 | 3:B:615:TYR:CE2 | 2.52 | 0.44 |
| 3:B:855:THR:HB | 3:B:857:GLU:H | 1.81 | 0.44 |
| 2:C:15:GLU:O | 2:C:19:GLN:N | 2.51 | 0.44 |
| 2:C:278:ARG:O | 2:C:282:GLU:HG3 | 2.17 | 0.44 |
| 2:C:369:VAL:HG11 | 2:C:381:LEU:HD21 | 1.99 | 0.44 |
| 2:C:80:GLU:CB | 2:C:81:PRO:HD3 | 2.33 | 0.44 |
| 4:D:59:ALA:O | 4:D:62:LEU:HB2 | 2.17 | 0.44 |
| 5:E:163:THR:C | 5:E:164:MET:HG3 | 2.37 | 0.44 |
| 5:E:175:ILE:HG22 | 5:E:175:ILE:O | 2.17 | 0.44 |
| 6:F:60:SER:HA | 6:F:69:ARG:NH2 | 2.33 | 0.44 |
| 2:G:115:LYS:O | 2:G:116:VAL:CG1 | 2.56 | 0.44 |
| 2:G:391:ARG:HH22 | 8:W:39:ARG:HH12 | 1.62 | 0.44 |
| 8:K:16:ASN:O | 8:K:19:PHE:HB3 | 2.17 | 0.44 |
| 9:L:65:PRO:HG2 | 9:L:66:LYS:H | 1.81 | 0.44 |
| 1:Q:376:ASN:HA | 1:Q:388:LEU:HD22 | 1.98 | 0.44 |
| 1:Q:541:ALA:CB | 1:Q:542:PRO:HD3 | 2.39 | 0.44 |
| 3:R:840:ARG:NH1 | 3:R:1021:ALA:HB2 | 2.33 | 0.44 |
| 3:R:1059:TYR:CE2 | 3:R:1090:PRO:HG3 | 2.52 | 0.44 |
| 3:R:137:LYS:O | 3:R:140:GLU:HB2 | 2.18 | 0.44 |
| 3:R:191:SER:CA | 3:R:300:HIS:NE2 | 2.72 | 0.44 |
| 3:R:545:ARG:HE | 3:R:581:ILE:HD13 | 1.81 | 0.44 |
| 6:U:14:TYR:HE2 | 6:U:40:TYR:OH | 2.00 | 0.44 |
| 6:U:21:LEU:HA | 6:U:24:VAL:CG2 | 2.48 | 0.44 |
| 7:V:24:ASN:O | 7:V:27:GLU:HG2 | 2.17 | 0.44 |
| 8:W:13:LEU:HD23 | 8:W:15:PHE:HE1 | 1.82 | 0.44 |
| 8:W:27:LEU:HD12 | 8:W:27:LEU:N | 2.33 | 0.44 |
| 10:Y:63:THR:HB | 10:Y:64:ARG:HD3 | 2.00 | 0.44 |
| 1:A:217:ILE:HD13 | 1:A:220:ARG:CZ | 2.47 | 0.44 |
| 1:A:532:ILE:O | 1:A:532:ILE:CG2 | 2.66 | 0.44 |
| 1:A:747:LEU:HB2 | 1:A:782:ILE:HB | 1.99 | 0.44 |
| 1:A:77:LEU:HD13 | 1:A:81:VAL:CG2 | 2.47 | 0.44 |
| 3:B:108:GLU:C | 3:B:108:GLU:OE2 | 2.56 | 0.44 |
| 3:B:1091:VAL:O | 3:B:1091:VAL:HG13 | 2.17 | 0.44 |
| 3:B:1108:ILE:O | 3:B:1108:ILE:HG22 | 2.17 | 0.44 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 3:B:430:ILE:HG12 | 3:B:467:VAL:CG2 | 2.42 | 0.44 |
| 3:B:472:LEU:HD12 | 3:B:646:ALA:HA | 1.99 | 0.44 |
| 3:B:563:ILE:HG23 | 3:B:565:GLU:OE1 | 2.18 | 0.44 |
| 3:B:805:LYS:O | 3:B:808:ASP:CG | 2.56 | 0.44 |
| 3:B:881:ARG:NH1 | 3:B:989:TYR:HB3 | 2.31 | 0.44 |
| 3:B:655:ILE:HG23 | 3:B:881:ARG:O | 2.17 | 0.44 |
| 1:A:647:ARG:HD2 | 3:B:965:ASP:HB3 | 1.99 | 0.44 |
| 2:G:106:ARG:O | 2:G:107:LEU:C | 2.55 | 0.44 |
| 2:G:21:SER:O | 2:G:33:LYS:HE3 | 2.18 | 0.44 |
| 8:K:80:ARG:O | 8:K:82:LEU:HD23 | 2.17 | 0.44 |
| 1:Q:203:ARG:CG | 1:Q:203:ARG:NH1 | 2.68 | 0.44 |
| 1:Q:215:PRO:HB3 | 3:R:1106:SER:HB3 | 1.99 | 0.44 |
| 1:Q:369:PRO:HA | 1:Q:410:HIS:CE1 | 2.47 | 0.44 |
| 1:Q:488:THR:HG23 | 1:Q:490:ARG:H | 1.82 | 0.44 |
| 1:Q:495:ILE:O | 1:Q:495:ILE:HG12 | 2.18 | 0.44 |
| 1:Q:523:GLN:O | 1:Q:525:LEU:N | 2.51 | 0.44 |
| 1:Q:720:ASP:C | 1:Q:722:PHE:N | 2.71 | 0.44 |
| 1:Q:737:VAL:HA | 1:Q:740:ILE:HB | 1.98 | 0.44 |
| 1:Q:752:VAL:O | 1:Q:753:ARG:HB3 | 2.18 | 0.44 |
| 3:R:457:GLU:C | 3:R:458:THR:OG1 | 2.56 | 0.44 |
| 3:R:519:LYS:HD2 | 3:R:565:GLU:HG2 | 1.98 | 0.44 |
| 3:R:702:LEU:HD13 | 10:Y:47:ARG:HD2 | 2.00 | 0.44 |
| 3:R:766:PRO:O | 3:R:768:GLY:N | 2.51 | 0.44 |
| 5:T:164:MET:HA | 5:T:169:LEU:HB3 | 1.99 | 0.44 |
| 8:W:74:LEU:N | 8:W:74:LEU:HD12 | 2.32 | 0.44 |
| 4:S:50:ASN:HD22 | 10:Y:64:ARG:NH1 | 2.15 | 0.44 |
| 1:A:220:ARG:HD2 | 1:A:236:THR:OG1 | 2.17 | 0.44 |
| 1:A:362:ARG:HA | 1:A:365:VAL:HG12 | 2.00 | 0.44 |
| 1:A:487:ILE:CD1 | 1:A:487:ILE:N | 2.80 | 0.44 |
| 1:A:687:ILE:CD1 | 1:A:695:SER:HB3 | 2.47 | 0.44 |
| 3:B:18:PHE:C | 3:B:20:SER:N | 2.71 | 0.44 |
| 3:B:325:LEU:HD13 | 3:B:331:GLU:H | 1.82 | 0.44 |
| 3:B:367:TYR:C | 3:B:367:TYR:CD2 | 2.90 | 0.44 |
| 3:B:413:LEU:O | 3:B:414:LEU:C | 2.54 | 0.44 |
| 3:B:46:GLN:O | 3:B:47:GLY:O | 2.35 | 0.44 |
| 3:B:634:THR:HB | 3:B:635:PRO:HD3 | 1.99 | 0.44 |
| 3:B:902:LYS:HB3 | 10:N:42:ARG:CD | 2.46 | 0.44 |
| 3:B:932:TYR:HB2 | 3:B:957:ILE:HG23 | 1.99 | 0.44 |
| 5:E:149:VAL:HG13 | 5:E:159:ARG:C | 2.37 | 0.44 |
| 2:G:309:ASP:OD2 | 2:G:310:ILE:N | 2.51 | 0.44 |
| 7:H:54:SER:HB3 | 7:H:55:ILE:H | 1.64 | 0.44 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 7:H:9:ILE:O | 7:H:9:ILE:CG2 | 2.63 | 0.44 |
| 8:K:26:ARG:HB3 | 8:K:27:LEU:CD1 | 2.46 | 0.44 |
| 9:L:83:TYR:CZ | 9:L:87:ILE:HD12 | 2.52 | 0.44 |
| 10:N:18:TRP:O | 10:N:20:SER:N | 2.49 | 0.44 |
| 10:N:42:ARG:CG | 10:N:43:TYR:N | 2.76 | 0.44 |
| 11:P:31:TYR:HE2 | 11:P:33:ILE:HG13 | 1.82 | 0.44 |
| 1:Q:262:ILE:O | 1:Q:266:TRP:CD1 | 2.71 | 0.44 |
| 1:Q:431:MET:HB2 | 1:Q:453:TYR:OH | 2.18 | 0.44 |
| 3:R:193:THR:HG21 | 3:R:197:ARG:C | 2.38 | 0.44 |
| 3:R:640:LEU:HD22 | 3:R:641:GLU:O | 2.17 | 0.44 |
| 3:R:797:VAL:HG12 | 3:R:798:VAL:O | 2.17 | 0.44 |
| 3:R:839:THR:O | 3:R:840:ARG:C | 2.56 | 0.44 |
| 4:S:190:LEU:HD11 | 4:S:195:LEU:HD23 | 2.00 | 0.44 |
| 5:T:109:HIS:CD2 | 5:T:111:SER:H | 2.35 | 0.44 |
| 5:T:135:VAL:N | 5:T:174:TRP:HZ2 | 2.09 | 0.44 |
| 7:V:42:LEU:O | 7:V:43:PRO:C | 2.56 | 0.44 |
| 7:V:47:ALA:C | 7:V:49:ASP:H | 2.19 | 0.44 |
| 8:W:14:HIS:O | 8:W:15:PHE:C | 2.55 | 0.44 |
| 1:A:189:ASP:O | 1:A:199:PRO:HG3 | 2.17 | 0.44 |
| 1:A:206:TRP:CE3 | 1:A:206:TRP:O | 2.71 | 0.44 |
| 3:B:1041:THR:OG1 | 3:B:1044:LEU:HB3 | 2.18 | 0.44 |
| 3:B:119:LEU:HD11 | 3:B:350:PHE:HE2 | 1.83 | 0.44 |
| 3:B:235:ASP:C | 3:B:237:ASP:H | 2.19 | 0.44 |
| 3:B:119:LEU:HD11 | 3:B:350:PHE:CE2 | 2.52 | 0.44 |
| 3:B:405:GLY:O | 3:B:407:ARG:N | 2.51 | 0.44 |
| 3:B:54:PRO:O | 3:B:56:LEU:N | 2.50 | 0.44 |
| 3:B:895:VAL:CG1 | 4:D:34:LEU:HD21 | 2.44 | 0.44 |
| 4:D:80:GLU:HA | 4:D:83:ILE:HD12 | 2.00 | 0.44 |
| 2:C:390:MET:CB | 5:E:56:GLU:HG3 | 2.35 | 0.44 |
| 2:G:311:ARG:HD3 | 2:G:311:ARG:N | 2.30 | 0.44 |
| 2:G:359:ALA:C | 2:G:361:GLY:H | 2.21 | 0.44 |
| 8:K:32:ILE:O | 8:K:36:ILE:HG13 | 2.17 | 0.44 |
| 8:K:61:VAL:CG1 | 8:K:62:ILE:H | 2.29 | 0.44 |
| 3:B:747:ARG:HD3 | 10:N:8:PHE:HA | 1.99 | 0.44 |
| 11:P:22:PRO:HG2 | 11:P:23:GLY:N | 2.32 | 0.44 |
| 1:Q:321:SER:O | 1:Q:322:SER:HB2 | 2.18 | 0.44 |
| 1:Q:377:TYR:N | 1:Q:388:LEU:HB3 | 2.28 | 0.44 |
| 1:Q:394:ARG:HB3 | 1:Q:395:LYS:H | 1.66 | 0.44 |
| 1:Q:82:ILE:HG23 | 1:Q:82:ILE:O | 2.18 | 0.44 |
| 2:G:379:ILE:HD12 | 3:R:1045:LEU:HD22 | 1.99 | 0.44 |
| 3:R:1094:SER:O | 3:R:1096:ALA:N | 2.51 | 0.44 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 3:R:54:PRO:O | 3:R:55:GLY:C | 2.55 | 0.44 |
| 3:R:11:TRP:CZ2 | 3:R:706:ARG:HG2 | 2.53 | 0.44 |
| 3:R:707:ALA:C | 3:R:709:ASP:N | 2.71 | 0.44 |
| 3:R:972:ASP:CG | 3:R:974:ARG:HG2 | 2.38 | 0.44 |
| 3:R:899:TYR:HE2 | 4:S:29:ARG:CZ | 2.31 | 0.44 |
| 4:S:48:GLU:HB3 | 4:S:140:SER:CB | 2.48 | 0.44 |
| 6:U:41:LEU:C | 6:U:43:SER:H | 2.16 | 0.44 |
| 7:V:47:ALA:HB2 | 7:V:81:VAL:CG1 | 2.48 | 0.44 |
| 8:W:34:ARG:C | 8:W:37:SER:HB2 | 2.38 | 0.44 |
| 8:W:71:ARG:O | 8:W:72:GLY:C | 2.56 | 0.44 |
| 1:A:309:PHE:HA | 1:A:313:LEU:HB2 | 1.99 | 0.44 |
| 1:A:505:GLY:O | 1:A:506:ALA:O | 2.36 | 0.44 |
| 1:A:696:LEU:HD13 | 1:A:696:LEU:C | 2.38 | 0.44 |
| 3:B:1061:CYS:CA | 3:B:1088:LEU:HD23 | 2.48 | 0.44 |
| 3:B:633:LEU:C | 3:B:635:PRO:HD2 | 2.38 | 0.44 |
| 3:B:83:MET:CE | 3:B:686:LEU:HB2 | 2.48 | 0.44 |
| 2:C:130:TYR:CG | 2:C:136:LYS:HG3 | 2.52 | 0.44 |
| 2:C:67:GLY:HA2 | 2:C:385:MET:HE1 | 2.00 | 0.44 |
| 4:D:125:SER:O | 4:D:127:ASP:N | 2.41 | 0.44 |
| 4:D:178:LYS:O | 4:D:181:ASN:N | 2.51 | 0.44 |
| 5:E:44:LEU:HG | 5:E:44:LEU:O | 2.16 | 0.44 |
| 6:F:20:LEU:O | 6:F:24:VAL:HG23 | 2.18 | 0.44 |
| 2:G:21:SER:O | 2:G:33:LYS:CE | 2.66 | 0.44 |
| 8:K:82:LEU:HB2 | 8:K:83:PRO:CD | 2.46 | 0.44 |
| 3:B:699:GLN:CA | 10:N:51:SER:O | 2.65 | 0.44 |
| 10:N:5:ILE:O | 10:N:6:ARG:HB2 | 2.18 | 0.44 |
| 1:Q:30:PRO:HD3 | 1:Q:247:GLU:OE1 | 2.18 | 0.44 |
| 1:Q:530:VAL:O | 1:Q:530:VAL:CG1 | 2.58 | 0.44 |
| 1:Q:778:ALA:O | 1:Q:780:GLY:N | 2.50 | 0.44 |
| 1:Q:465:HIS:CD2 | 3:R:1048:ARG:HD2 | 2.53 | 0.44 |
| 3:R:1069:TRP:HH2 | 3:R:1072:LYS:HE3 | 1.82 | 0.44 |
| 3:R:228:ARG:NH2 | 3:R:233:LEU:O | 2.51 | 0.44 |
| 3:R:287:GLU:C | 3:R:289:ALA:N | 2.71 | 0.44 |
| 3:R:371:LYS:HB2 | 3:R:372:SER:H | 1.65 | 0.44 |
| 3:R:396:HIS:C | 3:R:400:THR:HG22 | 2.38 | 0.44 |
| 3:R:163:THR:CG2 | 3:R:428:ARG:O | 2.63 | 0.44 |
| 3:R:462:PRO:O | 3:R:464:SER:N | 2.51 | 0.44 |
| 3:R:745:VAL:CG1 | 3:R:872:PRO:HG2 | 2.48 | 0.44 |
| 4:S:213:CYS:CB | 4:S:217:ILE:HD13 | 2.48 | 0.44 |
| 4:S:96:ILE:CG1 | 4:S:143:ALA:HB3 | 2.47 | 0.44 |
| 6:U:16:VAL:O | 6:U:18:LYS:N | 2.51 | 0.44 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:192:VAL:CG1 | 1:A:199:PRO:HD3 | 2.47 | 0.44 |
| 1:A:196:GLY:C | 1:A:197:TYR:CD1 | 2.92 | 0.44 |
| 1:A:313:LEU:HD21 | 3:B:1100:LEU:CD2 | 2.47 | 0.44 |
| 1:A:331:ASN:ND2 | 3:B:732:TYR:OH | 2.48 | 0.44 |
| 1:A:376:ASN:HA | 1:A:388:LEU:HD22 | 2.00 | 0.44 |
| 1:A:491:TYR:HD2 | 2:C:308:VAL:HA | 1.83 | 0.44 |
| 1:A:524:ILE:HG23 | 1:A:634:VAL:HG13 | 1.99 | 0.44 |
| 1:A:727:VAL:O | 1:A:729:ALA:N | 2.51 | 0.44 |
| 3:B:138:LEU:O | 3:B:141:ILE:HB | 2.18 | 0.44 |
| 3:B:366:THR:O | 3:B:370:GLU:HB2 | 2.18 | 0.44 |
| 3:B:379:LEU:HA | 3:B:379:LEU:HD23 | 1.80 | 0.44 |
| 3:B:520:VAL:C | 3:B:521:ILE:HD12 | 2.38 | 0.44 |
| 3:B:569:ASN:CG | 3:B:574:ARG:HH22 | 2.20 | 0.44 |
| 3:B:679:LEU:HD23 | 3:B:716:ARG:HG2 | 2.00 | 0.44 |
| 3:B:687:ARG:HG3 | 3:B:687:ARG:HH11 | 1.77 | 0.44 |
| 3:B:416:ARG:HH12 | 3:B:687:ARG:NH2 | 1.99 | 0.44 |
| 3:B:738:ILE:HG12 | 3:B:739:ILE:N | 2.32 | 0.44 |
| 3:B:789:TYR:HA | 3:B:792:LEU:HD12 | 1.98 | 0.44 |
| 1:A:500:GLN:HB2 | 3:B:913:HIS:CD2 | 2.52 | 0.44 |
| 2:C:103:GLY:HA3 | 2:C:300:VAL:CG1 | 2.47 | 0.44 |
| 2:C:134:ARG:O | 2:C:138:LEU:HB2 | 2.17 | 0.44 |
| 2:C:145:GLU:O | 2:C:146:TYR:O | 2.36 | 0.44 |
| 2:C:301:LEU:O | 2:C:304:GLN:HB2 | 2.17 | 0.44 |
| 2:C:386:VAL:HG13 | 2:C:386:VAL:O | 2.18 | 0.44 |
| 2:C:82:GLY:C | 2:C:84:GLN:H | 2.21 | 0.44 |
| 4:D:161:LEU:HG | 4:D:163:VAL:HG23 | 2.00 | 0.44 |
| 2:G:37:LEU:C | 2:G:39:LYS:H | 2.21 | 0.44 |
| 2:G:54:LEU:O | 2:G:58:GLU:N | 2.51 | 0.44 |
| 7:H:47:ALA:HB2 | 7:H:81:VAL:HG13 | 1.99 | 0.44 |
| 9:L:46:PRO:CD | 9:L:52:LYS:O | 2.65 | 0.44 |
| 1:Q:216:PRO:HG2 | 1:Q:219:ILE:CD1 | 2.44 | 0.44 |
| 1:Q:444:ARG:NH1 | 1:Q:444:ARG:HG3 | 2.33 | 0.44 |
| 3:R:138:LEU:O | 3:R:141:ILE:HB | 2.17 | 0.44 |
| 3:R:146:LYS:HB2 | 3:R:716:ARG:HH22 | 1.82 | 0.44 |
| 3:R:193:THR:OG1 | 3:R:197:ARG:O | 2.36 | 0.44 |
| 3:R:20:SER:O | 3:R:25:ARG:NH2 | 2.51 | 0.44 |
| 3:R:388:ASP:O | 3:R:389:ILE:C | 2.56 | 0.44 |
| 3:R:407:ARG:HE | 3:R:407:ARG:CA | 2.31 | 0.44 |
| 3:R:448:THR:C | 3:R:450:TRP:N | 2.71 | 0.44 |
| 3:R:63:ILE:HG13 | 3:R:98:LEU:CD2 | 2.46 | 0.44 |
| 4:S:64:LEU:O | 10:Y:6:ARG:HD2 | 2.17 | 0.44 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 8:W:21:SER:C | 8:W:23:TRP:H | 2.21 | 0.44 |
| 2:G:386:VAL:HG11 | 8:W:34:ARG:CB | 2.47 | 0.44 |
| 9:X:69:LEU:HD23 | 9:X:73:ILE:HG12 | 2.00 | 0.44 |
| 1:A:218:THR:HG22 | 1:A:218:THR:O | 2.17 | 0.44 |
| 1:A:30:PRO:HD3 | 1:A:247:GLU:OE1 | 2.18 | 0.44 |
| 1:A:275:THR:HA | 1:A:278:ASP:O | 2.18 | 0.44 |
| 1:A:512:LYS:N | 1:A:583:ASP:OD2 | 2.50 | 0.44 |
| 1:A:752:VAL:O | 1:A:753:ARG:CB | 2.65 | 0.44 |
| 1:A:761:TYR:HB2 | 1:A:764:ARG:HG3 | 2.00 | 0.44 |
| 1:A:770:LYS:CG | 1:A:771:PRO:HD2 | 2.48 | 0.44 |
| 3:B:51:THR:HG21 | 3:B:370:GLU:OE1 | 2.16 | 0.44 |
| 3:B:618:ALA:C | 3:B:620:GLU:N | 2.71 | 0.44 |
| 3:B:735:GLU:OE2 | 3:B:735:GLU:HA | 2.18 | 0.44 |
| 3:B:778:ALA:HB2 | 3:B:786:LYS:HE2 | 2.00 | 0.44 |
| 3:B:898:PRO:HA | 3:B:971:TYR:O | 2.17 | 0.44 |
| 3:B:988:VAL:HG13 | 3:B:989:TYR:N | 2.33 | 0.44 |
| 2:C:42:ILE:HD12 | 2:C:42:ILE:H | 1.82 | 0.44 |
| 4:D:55:ASP:O | 4:D:59:ALA:HB2 | 2.18 | 0.44 |
| 4:D:78:TRP:HB3 | 4:D:79:PRO:HD2 | 2.00 | 0.44 |
| 5:E:36:GLU:OE2 | 6:F:34:LEU:HD11 | 2.18 | 0.44 |
| 2:G:130:TYR:CG | 2:G:136:LYS:HG3 | 2.52 | 0.44 |
| 2:G:25:PRO:O | 2:G:28:ILE:HA | 2.18 | 0.44 |
| 8:K:12:ASP:O | 8:K:13:LEU:CB | 2.63 | 0.44 |
| 11:P:17:GLN:C | 11:P:19:LYS:N | 2.70 | 0.44 |
| 1:Q:19:ILE:HA | 1:Q:22:MET:HE1 | 1.98 | 0.44 |
| 1:Q:366:ILE:HD13 | 1:Q:395:LYS:HA | 2.00 | 0.44 |
| 1:Q:47:PRO:CG | 1:Q:48:ARG:HD3 | 2.46 | 0.44 |
| 3:R:1014:ARG:CG | 3:R:1014:ARG:HH11 | 2.22 | 0.44 |
| 3:R:134:THR:O | 3:R:137:LYS:N | 2.50 | 0.44 |
| 3:R:14:ILE:HG12 | 3:R:18:PHE:CE2 | 2.52 | 0.44 |
| 3:R:235:ASP:C | 3:R:237:ASP:H | 2.21 | 0.44 |
| 3:R:799:SER:HB2 | 3:R:800:PRO:HD2 | 1.99 | 0.44 |
| 3:R:853:THR:OG1 | 11:Z:33:ILE:HD13 | 2.17 | 0.44 |
| 3:R:947:LYS:HG2 | 3:R:948:THR:OG1 | 2.17 | 0.44 |
| 4:S:178:LYS:O | 4:S:181:ASN:N | 2.50 | 0.44 |
| 4:S:263:VAL:HG12 | 4:S:263:VAL:O | 2.18 | 0.44 |
| 8:W:32:ILE:O | 8:W:36:ILE:HG13 | 2.17 | 0.44 |
| 10:Y:20:SER:CA | 10:Y:23:THR:HB | 2.47 | 0.44 |
| 1:A:206:TRP:C | 1:A:208:ILE:N | 2.71 | 0.43 |
| 1:A:331:ASN:C | 1:A:332:ILE:CD1 | 2.86 | 0.43 |
| 1:A:418:LEU:HD23 | 1:A:430:MET:HE1 | 2.00 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:A:598:PHE:O | 1:A:599:ASP:HB3 | 2.18 | 0.43 |
| 1:A:713:ASP:O | 1:A:717:LYS:HD2 | 2.18 | 0.43 |
| 1:A:782:ILE:HG21 | 1:A:790:LEU:HD13 | 2.00 | 0.43 |
| 3:B:1062:ASP:N | 3:B:1062:ASP:OD1 | 2.51 | 0.43 |
| 3:B:227:MET:HE2 | 3:B:232:ILE:HG13 | 2.00 | 0.43 |
| 3:B:325:LEU:O | 3:B:326:TYR:C | 2.57 | 0.43 |
| 3:B:24:VAL:HG21 | 3:B:426:LEU:CD1 | 2.48 | 0.43 |
| 3:B:533:GLY:C | 3:B:535:GLU:H | 2.21 | 0.43 |
| 3:B:84:GLU:O | 3:B:88:ARG:N | 2.45 | 0.43 |
| 3:B:890:MET:HG2 | 3:B:892:ILE:HD11 | 2.00 | 0.43 |
| 3:B:978:LYS:HZ3 | 4:D:205:LEU:HD22 | 1.82 | 0.43 |
| 3:B:63:ILE:HA | 3:B:98:LEU:H | 1.83 | 0.43 |
| 2:C:298:SER:O | 2:C:302:ALA:HB2 | 2.18 | 0.43 |
| 2:C:331:ARG:CD | 2:C:348:GLU:HB3 | 2.45 | 0.43 |
| 2:C:365:GLU:CG | 2:C:366:PHE:H | 2.31 | 0.43 |
| 9:L:87:ILE:HG22 | 9:L:88:LYS:N | 2.32 | 0.43 |
| 1:Q:219:ILE:HG22 | 3:R:1099:LEU:HD23 | 2.00 | 0.43 |
| 1:Q:558:LYS:HA | 1:Q:590:ASN:O | 2.17 | 0.43 |
| 1:Q:563:HIS:CE1 | 1:Q:876:VAL:HG13 | 2.51 | 0.43 |
| 1:Q:572:PRO:HG2 | 1:Q:573:ARG:CD | 2.47 | 0.43 |
| 3:R:1074:LYS:CB | 3:R:1076:LYS:HG3 | 2.48 | 0.43 |
| 3:R:1108:ILE:HD12 | 3:R:1108:ILE:N | 2.32 | 0.43 |
| 3:R:723:ILE:HD12 | 10:Y:43:TYR:CE1 | 2.48 | 0.43 |
| 4:S:204:THR:O | 4:S:205:LEU:C | 2.56 | 0.43 |
| 5:T:42:LEU:N | 5:T:42:LEU:HD23 | 2.33 | 0.43 |
| 6:U:14:TYR:O | 6:U:18:LYS:HE3 | 2.17 | 0.43 |
| 7:V:32:LEU:HD23 | 7:V:37:ILE:CD1 | 2.48 | 0.43 |
| 4:S:128:ILE:HG12 | 10:Y:16:ASP:HB3 | 2.00 | 0.43 |
| 11:Z:31:TYR:HE2 | 11:Z:33:ILE:HG13 | 1.83 | 0.43 |
| 1:A:324:THR:CG2 | 1:A:325:VAL:H | 2.26 | 0.43 |
| 1:A:574:LEU:CD2 | 1:A:575:CYS:N | 2.80 | 0.43 |
| 1:A:821:ARG:HG2 | 1:A:821:ARG:NH1 | 2.32 | 0.43 |
| 1:A:870:ARG:NH1 | 2:C:58:GLU:HA | 2.33 | 0.43 |
| 3:B:228:ARG:NH1 | 3:B:262:ILE:O | 2.51 | 0.43 |
| 3:B:249:GLN:O | 3:B:250:ASN:C | 2.56 | 0.43 |
| 3:B:191:SER:HB3 | 3:B:298:LEU:HA | 1.99 | 0.43 |
| 3:B:393:ARG:NH2 | 3:B:403:TRP:HH2 | 2.13 | 0.43 |
| 3:B:39:LEU:O | 3:B:43:ILE:HG12 | 2.16 | 0.43 |
| 3:B:441:GLU:O | 3:B:441:GLU:HG2 | 2.18 | 0.43 |
| 3:B:469:ASN:ND2 | 3:B:469:ASN:N | 2.66 | 0.43 |
| 3:B:536:LEU:CD2 | 3:B:540:ILE:HG13 | 2.49 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 3:B:580:ILE:HG12 | 3:B:642:ILE:HG12 | 2.00 | 0.43 |
| 3:B:617:ASP:O | 3:B:618:ALA:HB2 | 2.18 | 0.43 |
| 3:B:339:ALA:HB1 | 3:B:619:GLU:HB2 | 2.00 | 0.43 |
| 3:B:627:ALA:O | 3:B:628:LEU:C | 2.56 | 0.43 |
| 2:C:40:GLU:O | 2:C:45:ARG:CG | 2.65 | 0.43 |
| 4:D:108:MET:HE1 | 10:N:2:LEU:CD2 | 2.48 | 0.43 |
| 4:D:44:VAL:HB | 4:D:46:PHE:CE1 | 2.54 | 0.43 |
| 4:D:78:TRP:HD1 | 4:D:78:TRP:N | 2.16 | 0.43 |
| 5:E:149:VAL:HG22 | 5:E:160:ILE:HA | 1.99 | 0.43 |
| 5:E:18:PHE:HB2 | 8:K:48:PRO:HD2 | 2.00 | 0.43 |
| 5:E:29:GLU:HA | 5:E:29:GLU:OE1 | 2.18 | 0.43 |
| 1:Q:661:ILE:HD11 | 1:Q:714:ILE:HB | 1.99 | 0.43 |
| 1:Q:782:ILE:HG21 | 1:Q:790:LEU:HD13 | 2.01 | 0.43 |
| 1:Q:823:LEU:HD13 | 2:G:75:ALA:O | 2.17 | 0.43 |
| 3:R:128:ASP:OD1 | 3:R:130:ILE:N | 2.51 | 0.43 |
| 3:R:290:GLN:HE21 | 3:R:308:ARG:HH12 | 1.66 | 0.43 |
| 3:R:303:THR:HG22 | 3:R:303:THR:O | 2.18 | 0.43 |
| 3:R:356:VAL:HG11 | 3:R:404:VAL:HG13 | 2.00 | 0.43 |
| 3:R:482:GLU:OE2 | 3:R:525:ARG:NH1 | 2.51 | 0.43 |
| 3:R:602:ILE:HB | 3:R:606:ASP:HB2 | 2.00 | 0.43 |
| 3:R:804:VAL:CG1 | 3:R:805:LYS:N | 2.80 | 0.43 |
| 3:R:805:LYS:O | 3:R:808:ASP:CG | 2.56 | 0.43 |
| 6:U:71:ILE:O | 6:U:71:ILE:HG22 | 2.18 | 0.43 |
| 8:W:82:LEU:HD12 | 8:W:84:ASN:HD22 | 1.83 | 0.43 |
| 11:Z:17:GLN:C | 11:Z:19:LYS:N | 2.71 | 0.43 |
| 1:A:23:SER:C | 1:A:24:VAL:HG13 | 2.38 | 0.43 |
| 1:A:262:ILE:HG23 | 1:A:266:TRP:CD1 | 2.53 | 0.43 |
| 1:A:30:PRO:CB | 1:A:244:ARG:HA | 2.48 | 0.43 |
| 1:A:330:PRO:HG2 | 3:B:730:THR:O | 2.19 | 0.43 |
| 1:A:334:ILE:HD11 | 1:A:628:MET:CB | 2.43 | 0.43 |
| 1:A:449:VAL:O | 1:A:449:VAL:HG12 | 2.17 | 0.43 |
| 1:A:515:LEU:HD11 | 1:A:539:ILE:HG13 | 2.00 | 0.43 |
| 1:A:532:ILE:O | 1:A:533:ASP:C | 2.57 | 0.43 |
| 1:A:638:PHE:CZ | 1:A:642:GLN:HG3 | 2.52 | 0.43 |
| 3:B:279:GLY:H | 3:B:285:ARG:HH22 | 1.66 | 0.43 |
| 3:B:412:GLN:NE2 | 3:B:425:HIS:CE1 | 2.87 | 0.43 |
| 3:B:654:ILE:H | 3:B:654:ILE:CD1 | 2.27 | 0.43 |
| 3:B:669:GLN:CA | 3:B:669:GLN:HE21 | 2.29 | 0.43 |
| 3:B:70:VAL:CG1 | 3:B:80:ILE:HG21 | 2.48 | 0.43 |
| 3:B:797:VAL:HG22 | 3:B:811:ILE:HG12 | 2.01 | 0.43 |
| 3:B:869:LEU:HD21 | 4:D:56:GLU:HB2 | 1.99 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 3:B:963:LEU:HA | 3:B:964:PRO:HD3 | 1.81 | 0.43 |
| 2:C:106:ARG:O | 2:C:109:GLU:N | 2.52 | 0.43 |
| 2:C:85:MET:H | 2:C:85:MET:HG3 | 1.65 | 0.43 |
| 4:D:141:LEU:HD12 | 4:D:141:LEU:C | 2.38 | 0.43 |
| 4:D:148:GLY:HA2 | 4:D:152:GLU:OE1 | 2.19 | 0.43 |
| 4:D:159:VAL:CG2 | 4:D:160:SER:N | 2.81 | 0.43 |
| 5:E:164:MET:HA | 5:E:169:LEU:HB3 | 1.99 | 0.43 |
| 1:Q:491:TYR:HD2 | 2:G:308:VAL:HA | 1.83 | 0.43 |
| 2:G:42:ILE:N | 2:G:42:ILE:CD1 | 2.81 | 0.43 |
| 1:Q:832:ALA:CB | 2:G:66:PRO:HB2 | 2.48 | 0.43 |
| 7:H:20:HIS:CD2 | 7:H:20:HIS:N | 2.86 | 0.43 |
| 1:A:864:LYS:HE2 | 7:H:71:LEU:O | 2.18 | 0.43 |
| 8:K:61:VAL:CG1 | 8:K:62:ILE:N | 2.80 | 0.43 |
| 1:Q:206:TRP:CZ3 | 1:Q:209:LEU:HD23 | 2.53 | 0.43 |
| 1:Q:316:LYS:HE2 | 3:R:1094:SER:OG | 2.17 | 0.43 |
| 1:Q:635:PHE:O | 1:Q:639:VAL:HG23 | 2.19 | 0.43 |
| 1:Q:759:ARG:HH21 | 1:Q:763:THR:HG23 | 1.83 | 0.43 |
| 1:Q:79:ARG:HD2 | 1:Q:266:TRP:CE3 | 2.53 | 0.43 |
| 3:R:34:PHE:HD1 | 3:R:351:ALA:HB2 | 1.83 | 0.43 |
| 3:R:749:MET:CE | 3:R:907:ASP:HB3 | 2.48 | 0.43 |
| 3:R:81:SER:HB3 | 3:R:84:GLU:CG | 2.46 | 0.43 |
| 5:T:149:VAL:HG13 | 5:T:159:ARG:C | 2.38 | 0.43 |
| 5:T:179:LYS:HZ1 | 6:U:82:GLU:HG3 | 1.83 | 0.43 |
| 9:X:25:GLY:O | 9:X:43:TYR:CG | 2.71 | 0.43 |
| 1:A:238:LYS:NZ | 1:A:276:TYR:CA | 2.66 | 0.43 |
| 1:A:258:PRO:HB2 | 1:A:261:ILE:HD12 | 2.00 | 0.43 |
| 1:A:572:PRO:HG2 | 1:A:573:ARG:CD | 2.47 | 0.43 |
| 1:A:620:SER:C | 1:A:622:GLU:N | 2.72 | 0.43 |
| 1:A:758:LYS:HB2 | 1:A:759:ARG:HD2 | 1.99 | 0.43 |
| 3:B:214:PHE:CE2 | 3:B:296:TYR:O | 2.71 | 0.43 |
| 3:B:727:MET:CE | 3:B:898:PRO:CG | 2.94 | 0.43 |
| 3:B:958:LEU:C | 3:B:958:LEU:CD2 | 2.87 | 0.43 |
| 2:C:103:GLY:CA | 2:C:300:VAL:HG13 | 2.47 | 0.43 |
| 2:C:37:LEU:C | 2:C:39:LYS:H | 2.21 | 0.43 |
| 4:D:205:LEU:O | 4:D:206:CYS:C | 2.54 | 0.43 |
| 4:D:68:MET:HA | 4:D:68:MET:CE | 2.49 | 0.43 |
| 6:F:25:ILE:HA | 6:F:28:GLY:O | 2.18 | 0.43 |
| 6:F:33:LEU:O | 6:F:34:LEU:HD23 | 2.18 | 0.43 |
| 2:G:285:GLY:H | 7:V:50:PRO:HG3 | 1.83 | 0.43 |
| 1:Q:557:PRO:HD3 | 1:Q:623:TYR:OH | 2.18 | 0.43 |
| 1:Q:573:ARG:O | 1:Q:574:LEU:C | 2.56 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:Q:606:GLN:HE21 | 1:Q:608:PRO:HG2 | 1.82 | 0.43 |
| 1:Q:830:LEU:CD1 | 1:Q:846:VAL:HG21 | 2.48 | 0.43 |
| 1:Q:851:GLY:O | 1:Q:853:ASP:N | 2.50 | 0.43 |
| 3:R:1100:LEU:O | 3:R:1101:ILE:C | 2.57 | 0.43 |
| 3:R:246:PRO:O | 3:R:248:VAL:N | 2.37 | 0.43 |
| 3:R:249:GLN:C | 3:R:253:PHE:CE1 | 2.92 | 0.43 |
| 3:R:291:GLN:C | 3:R:293:ILE:N | 2.71 | 0.43 |
| 3:R:291:GLN:O | 3:R:293:ILE:N | 2.50 | 0.43 |
| 3:R:429:VAL:CG1 | 3:R:453:MET:HE1 | 2.48 | 0.43 |
| 3:R:569:ASN:HB3 | 3:R:574:ARG:NH1 | 2.33 | 0.43 |
| 3:R:343:LEU:HD11 | 3:R:575:VAL:HG23 | 2.01 | 0.43 |
| 3:R:5:LEU:N | 3:R:5:LEU:CD1 | 2.82 | 0.43 |
| 3:R:707:ALA:O | 3:R:709:ASP:N | 2.52 | 0.43 |
| 3:R:790:ARG:C | 3:R:792:LEU:H | 2.22 | 0.43 |
| 4:S:148:GLY:HA2 | 4:S:152:GLU:OE1 | 2.18 | 0.43 |
| 4:S:52:PRO:O | 4:S:53:LEU:HD23 | 2.18 | 0.43 |
| 5:T:14:PRO:HA | 5:T:15:PRO:HD3 | 1.90 | 0.43 |
| 4:S:5:LEU:HD11 | 9:X:90:LEU:O | 2.18 | 0.43 |
| 10:Y:3:ILE:HG22 | 10:Y:4:PRO:CD | 2.48 | 0.43 |
| 1:A:377:TYR:O | 1:A:408:GLU:HB2 | 2.19 | 0.43 |
| 1:A:364:PHE:HE1 | 1:A:409:ARG:HD2 | 1.80 | 0.43 |
| 1:A:417:VAL:CG1 | 1:A:464:LEU:CD1 | 2.96 | 0.43 |
| 1:A:524:ILE:O | 1:A:525:LEU:CD2 | 2.66 | 0.43 |
| 1:A:558:LYS:HD2 | 3:R:104:GLU:HB2 | 2.00 | 0.43 |
| 1:A:697:GLU:O | 1:A:700:ILE:N | 2.51 | 0.43 |
| 1:A:872:PHE:CD1 | 1:A:876:VAL:HG21 | 2.53 | 0.43 |
| 3:B:316:ALA:C | 3:B:318:ALA:N | 2.71 | 0.43 |
| 3:B:345:LEU:N | 3:B:345:LEU:CD1 | 2.82 | 0.43 |
| 3:B:373:LYS:CG | 3:B:375:ARG:HB2 | 2.48 | 0.43 |
| 3:B:343:LEU:HD11 | 3:B:575:VAL:HG23 | 2.01 | 0.43 |
| 3:B:589:VAL:O | 3:B:592:GLU:N | 2.46 | 0.43 |
| 3:B:5:LEU:HB2 | 3:B:630:PRO:HG3 | 2.00 | 0.43 |
| 3:B:790:ARG:C | 3:B:792:LEU:H | 2.21 | 0.43 |
| 3:B:70:VAL:CG1 | 3:B:90:LEU:HD23 | 2.47 | 0.43 |
| 2:C:271:LYS:O | 2:C:272:VAL:C | 2.57 | 0.43 |
| 2:C:359:ALA:C | 2:C:361:GLY:N | 2.72 | 0.43 |
| 3:B:899:TYR:CE2 | 4:D:29:ARG:CZ | 3.02 | 0.43 |
| 5:E:114:THR:CG2 | 5:E:115:ASP:N | 2.81 | 0.43 |
| 5:E:23:ASN:HA | 5:E:26:ALA:HB3 | 2.00 | 0.43 |
| 5:E:51:VAL:C | 5:E:53:THR:H | 2.20 | 0.43 |
| 2:G:134:ARG:O | 2:G:138:LEU:HB2 | 2.18 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:G:286:ILE:HG13 | 7:V:49:ASP:CG | 2.39 | 0.43 |
| 7:H:32:LEU:HD23 | 7:H:37:ILE:CD1 | 2.48 | 0.43 |
| 8:K:28:THR:O | 8:K:30:TYR:N | 2.52 | 0.43 |
| 8:K:41:LEU:O | 8:K:42:GLN:C | 2.55 | 0.43 |
| 1:Q:245:ILE:HG22 | 1:Q:245:ILE:O | 2.18 | 0.43 |
| 1:Q:550:GLN:O | 1:Q:553:SER:HB3 | 2.19 | 0.43 |
| 1:Q:651:VAL:CG2 | 1:Q:743:MET:HB3 | 2.48 | 0.43 |
| 3:R:687:ARG:HG3 | 3:R:687:ARG:HH11 | 1.83 | 0.43 |
| 3:R:700:ARG:HB3 | 10:Y:51:SER:HA | 2.00 | 0.43 |
| 3:R:972:ASP:OD2 | 3:R:974:ARG:CG | 2.66 | 0.43 |
| 4:S:69:SER:CA | 4:S:72:ALA:HB3 | 2.45 | 0.43 |
| 5:T:1:MET:CE | 6:U:11:TYR:HD2 | 2.31 | 0.43 |
| 6:U:54:LYS:HA | 6:U:57:GLU:OE1 | 2.19 | 0.43 |
| 6:U:59:LEU:CD1 | 6:U:69:ARG:HG2 | 2.47 | 0.43 |
| 7:V:45:ILE:HG22 | 7:V:81:VAL:N | 2.33 | 0.43 |
| 5:T:18:PHE:HB2 | 8:W:47:ALA:HA | 2.01 | 0.43 |
| 10:Y:3:ILE:HG22 | 10:Y:4:PRO:HD2 | 1.99 | 0.43 |
| 1:A:195:LEU:HD12 | 1:A:195:LEU:N | 2.34 | 0.43 |
| 1:A:394:ARG:O | 1:A:395:LYS:C | 2.57 | 0.43 |
| 1:A:325:VAL:CG2 | 1:A:442:THR:HG22 | 2.49 | 0.43 |
| 1:A:72:PHE:CD2 | 1:A:72:PHE:N | 2.86 | 0.43 |
| 1:A:761:TYR:O | 3:B:622:GLU:OE1 | 2.36 | 0.43 |
| 3:B:1041:THR:OG1 | 3:B:1044:LEU:CB | 2.67 | 0.43 |
| 3:B:1088:LEU:C | 3:B:1089:PHE:HD2 | 2.22 | 0.43 |
| 3:B:191:SER:OG | 3:B:299:PRO:HD2 | 2.18 | 0.43 |
| 3:B:270:ASP:C | 3:B:272:ILE:N | 2.71 | 0.43 |
| 3:B:535:GLU:O | 3:B:536:LEU:C | 2.57 | 0.43 |
| 3:B:691:ARG:HB3 | 3:B:754:PHE:HZ | 1.82 | 0.43 |
| 3:B:89:ASN:ND2 | 3:B:863:LYS:NZ | 2.63 | 0.43 |
| 2:C:130:TYR:CD1 | 2:C:136:LYS:HE3 | 2.53 | 0.43 |
| 2:C:240:ALA:HB1 | 2:C:251:ILE:HG23 | 2.01 | 0.43 |
| 2:C:390:MET:SD | 5:E:57:GLY:C | 2.96 | 0.43 |
| 2:C:391:ARG:HH21 | 8:K:42:GLN:HG2 | 1.82 | 0.43 |
| 3:B:903:GLY:H | 4:D:163:VAL:HG22 | 1.84 | 0.43 |
| 4:D:217:ILE:N | 4:D:217:ILE:CD1 | 2.78 | 0.43 |
| 4:D:93:TYR:CE1 | 4:D:144:ARG:NH2 | 2.86 | 0.43 |
| 6:F:30:SER:HB2 | 6:F:34:LEU:CB | 2.49 | 0.43 |
| 2:G:103:GLY:O | 2:G:104:LEU:CB | 2.65 | 0.43 |
| 2:G:250:ILE:CG2 | 2:G:251:ILE:H | 2.29 | 0.43 |
| 2:G:322:ARG:HA | 7:V:43:PRO:O | 2.18 | 0.43 |
| 9:L:43:TYR:O | 9:L:44:TYR:HB3 | 2.17 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:Q:353:ILE:CG1 | 1:Q:361:LEU:HD23 | 2.44 | 0.43 |
| 1:Q:770:LYS:CG | 1:Q:771:PRO:HD2 | 2.49 | 0.43 |
| 1:Q:837:THR:HG23 | 1:Q:847:GLN:O | 2.18 | 0.43 |
| 1:Q:92:GLU:O | 1:Q:95:LYS:HB2 | 2.18 | 0.43 |
| 3:R:28:LEU:C | 3:R:30:SER:N | 2.72 | 0.43 |
| 3:R:433:LEU:HD12 | 3:R:435:ARG:HH12 | 1.83 | 0.43 |
| 3:R:474:ALA:CB | 3:R:578:PRO:HD3 | 2.49 | 0.43 |
| 3:R:533:GLY:C | 3:R:535:GLU:H | 2.22 | 0.43 |
| 3:R:591:ILE:O | 3:R:594:ILE:HG13 | 2.19 | 0.43 |
| 3:R:733:ASN:HB3 | 3:R:739:ILE:HG22 | 2.01 | 0.43 |
| 3:R:838:VAL:CG1 | 3:R:839:THR:N | 2.82 | 0.43 |
| 3:R:852:ILE:HD12 | 3:R:852:ILE:N | 2.33 | 0.43 |
| 3:R:911:ASN:ND2 | 3:R:913:HIS:H | 2.16 | 0.43 |
| 6:U:30:SER:OG | 6:U:38:TYR:HE1 | 1.98 | 0.43 |
| 8:W:50:LEU:HD23 | 8:W:74:LEU:HA | 2.01 | 0.43 |
| 1:A:272:HIS:O | 1:A:275:THR:HB | 2.18 | 0.43 |
| 1:A:313:LEU:HD12 | 1:A:313:LEU:HA | 1.86 | 0.43 |
| 1:A:481:LEU:HD23 | 1:A:482:VAL:N | 2.28 | 0.43 |
| 1:A:761:TYR:HB3 | 1:A:764:ARG:HG3 | 2.00 | 0.43 |
| 1:A:827:LEU:HD12 | 1:A:830:LEU:HD12 | 1.99 | 0.43 |
| 1:A:864:LYS:O | 1:A:864:LYS:CG | 2.58 | 0.43 |
| 3:B:1062:ASP:OD1 | 3:B:1087:ASN:O | 2.37 | 0.43 |
| 3:B:369:LEU:HA | 3:B:369:LEU:HD23 | 1.84 | 0.43 |
| 3:B:490:TYR:CE1 | 3:B:527:ILE:CG2 | 2.99 | 0.43 |
| 3:B:479:GLY:CA | 3:B:552:GLU:HB3 | 2.30 | 0.43 |
| 3:B:595:GLU:CA | 3:B:599:SER:HB3 | 2.49 | 0.43 |
| 3:B:416:ARG:CZ | 3:B:687:ARG:NH2 | 2.82 | 0.43 |
| 3:B:708:LEU:CD1 | 3:B:708:LEU:O | 2.61 | 0.43 |
| 3:B:691:ARG:CZ | 3:B:756:ARG:HH21 | 2.32 | 0.43 |
| 3:B:952:GLN:O | 3:B:955:ASN:N | 2.52 | 0.43 |
| 2:C:382:GLY:C | 2:C:384:GLY:N | 2.72 | 0.43 |
| 4:D:52:PRO:O | 4:D:53:LEU:HD23 | 2.18 | 0.43 |
| 4:D:61:ARG:HH11 | 4:D:61:ARG:HG2 | 1.83 | 0.43 |
| 5:E:27:LEU:HD23 | 5:E:28:ASN:N | 2.34 | 0.43 |
| 6:F:21:LEU:HA | 6:F:24:VAL:HG23 | 2.01 | 0.43 |
| 2:G:359:ALA:C | 2:G:361:GLY:N | 2.71 | 0.43 |
| 8:K:74:LEU:HA | 8:K:75:PRO:HD3 | 1.81 | 0.43 |
| 1:Q:238:LYS:HD3 | 1:Q:276:TYR:CA | 2.46 | 0.43 |
| 1:Q:294:PRO:O | 1:Q:295:LEU:O | 2.37 | 0.43 |
| 1:Q:522:GLN:HG2 | 9:X:40:PHE:CD1 | 2.53 | 0.43 |
| 1:Q:7:LYS:HD3 | 3:R:1116:GLU:CD | 2.39 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 3:R:393:ARG:NH2 | 3:R:403:TRP:HH2 | 2.15 | 0.43 |
| 3:R:543:ARG:NH2 | 3:R:548:GLU:OE2 | 2.49 | 0.43 |
| 3:R:62:LYS:C | 3:R:63:ILE:HD12 | 2.38 | 0.43 |
| 3:R:779:GLY:O | 3:R:780:VAL:HG22 | 2.19 | 0.43 |
| 3:R:892:ILE:CG2 | 3:R:897:MET:HE2 | 2.48 | 0.43 |
| 3:R:932:TYR:HB2 | 3:R:957:ILE:HG23 | 2.00 | 0.43 |
| 3:R:988:VAL:HG13 | 3:R:989:TYR:N | 2.33 | 0.43 |
| 4:S:205:LEU:O | 4:S:206:CYS:C | 2.57 | 0.43 |
| 5:T:93:ASP:CG | 5:T:94:ASN:N | 2.71 | 0.43 |
| 7:V:20:HIS:CD2 | 7:V:20:HIS:N | 2.86 | 0.43 |
| 9:X:80:THR:O | 9:X:83:TYR:HB3 | 2.18 | 0.43 |
| 1:A:193:GLU:C | 1:A:195:LEU:N | 2.71 | 0.43 |
| 1:A:233:ASP:O | 1:A:236:THR:HB | 2.18 | 0.43 |
| 1:A:247:GLU:O | 1:A:251:GLU:HG3 | 2.19 | 0.43 |
| 1:A:467:PRO:HA | 3:B:1047:ASP:OD1 | 2.19 | 0.43 |
| 1:A:573:ARG:O | 1:A:574:LEU:C | 2.57 | 0.43 |
| 1:A:606:GLN:NE2 | 1:A:608:PRO:HG2 | 2.33 | 0.43 |
| 1:A:72:PHE:HD2 | 1:A:72:PHE:N | 2.17 | 0.43 |
| 1:A:748:GLY:HA2 | 1:A:781:PHE:CE2 | 2.54 | 0.43 |
| 2:C:379:ILE:CD1 | 3:B:1045:LEU:HD22 | 2.49 | 0.43 |
| 1:A:218:THR:HG21 | 3:B:1098:LYS:HZ1 | 1.83 | 0.43 |
| 3:B:358:PHE:O | 3:B:360:ALA:N | 2.52 | 0.43 |
| 3:B:433:LEU:HD12 | 3:B:435:ARG:HH12 | 1.84 | 0.43 |
| 3:B:591:ILE:CG1 | 3:B:612:LYS:HZ3 | 2.32 | 0.43 |
| 3:B:813:LYS:HE2 | 3:B:835:THR:HG21 | 2.01 | 0.43 |
| 2:C:322:ARG:N | 2:C:322:ARG:CD | 2.78 | 0.43 |
| 2:C:25:PRO:HG3 | 2:C:33:LYS:NZ | 2.34 | 0.43 |
| 4:D:217:ILE:O | 4:D:219:ILE:HG13 | 2.19 | 0.43 |
| 4:D:44:VAL:HB | 4:D:46:PHE:HE1 | 1.82 | 0.43 |
| 5:E:63:ASP:OD2 | 5:E:65:ALA:CB | 2.66 | 0.43 |
| 2:G:146:TYR:CD1 | 2:G:146:TYR:N | 2.72 | 0.43 |
| 8:K:54:ASN:ND2 | 8:K:58:SER:HB2 | 2.34 | 0.43 |
| 9:L:8:SER:HB2 | 9:L:13:LEU:HD13 | 2.00 | 0.43 |
| 10:N:43:TYR:CD1 | 10:N:44:CYS:N | 2.87 | 0.43 |
| 11:P:26:CYS:CB | 11:P:27:PRO:CD | 2.93 | 0.43 |
| 1:Q:193:GLU:C | 1:Q:195:LEU:H | 2.22 | 0.43 |
| 1:Q:79:ARG:CB | 1:Q:266:TRP:CE3 | 2.88 | 0.43 |
| 1:Q:697:GLU:OE1 | 1:Q:756:ARG:CD | 2.65 | 0.43 |
| 1:Q:870:ARG:NH1 | 2:G:58:GLU:HA | 2.34 | 0.43 |
| 1:Q:874:ARG:HD3 | 1:Q:874:ARG:HA | 1.72 | 0.43 |
| 3:R:1020:ARG:O | 3:R:1021:ALA:C | 2.56 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 3:R:1099:LEU:O | 3:R:1102:GLN:HB2 | 2.19 | 0.43 |
| 2:G:354:LEU:HD13 | 3:R:1104:LEU:CD2 | 2.48 | 0.43 |
| 3:R:304:SER:O | 3:R:305:ALA:C | 2.56 | 0.43 |
| 3:R:381:LEU:O | 3:R:385:VAL:HG23 | 2.19 | 0.43 |
| 3:R:789:TYR:HA | 3:R:792:LEU:HD12 | 2.01 | 0.43 |
| 3:R:915:LEU:HB3 | 3:R:916:PRO:CD | 2.48 | 0.43 |
| 4:S:182:VAL:HG23 | 4:S:183:CYS:N | 2.34 | 0.43 |
| 5:T:38:ILE:CG2 | 5:T:39:LEU:H | 2.17 | 0.43 |
| 6:U:88:VAL:HG12 | 6:U:89:MET:N | 2.32 | 0.43 |
| 8:W:35:VAL:C | 8:W:37:SER:N | 2.72 | 0.43 |
| 1:A:212:LEU:HD21 | 1:A:242:ILE:HD13 | 2.00 | 0.43 |
| 1:A:302:LEU:HD12 | 1:A:302:LEU:O | 2.19 | 0.43 |
| 1:A:381:PRO:HB3 | 1:A:404:GLY:O | 2.19 | 0.43 |
| 1:A:47:PRO:HG2 | 1:A:48:ARG:N | 2.32 | 0.43 |
| 1:A:61:CYS:HB3 | 1:A:63:ASN:ND2 | 2.33 | 0.43 |
| 1:A:694:GLU:O | 1:A:697:GLU:HB2 | 2.19 | 0.43 |
| 1:A:782:ILE:HG22 | 1:A:784:SER:H | 1.82 | 0.43 |
| 3:B:1081:ILE:CG2 | 3:B:1085:LYS:NZ | 2.82 | 0.43 |
| 3:B:430:ILE:HG22 | 3:B:431:SER:N | 2.33 | 0.43 |
| 3:B:51:THR:HG22 | 3:B:51:THR:O | 2.17 | 0.43 |
| 3:B:536:LEU:O | 3:B:537:ALA:C | 2.57 | 0.43 |
| 3:B:679:LEU:HD23 | 3:B:716:ARG:CG | 2.49 | 0.43 |
| 2:C:318:ASP:OD2 | 2:C:322:ARG:NH1 | 2.51 | 0.43 |
| 4:D:98:ILE:HD11 | 4:D:114:ILE:HG12 | 2.00 | 0.43 |
| 5:E:23:ASN:O | 5:E:24:GLU:C | 2.58 | 0.43 |
| 5:E:38:ILE:CG2 | 5:E:39:LEU:H | 2.20 | 0.43 |
| 5:E:3:LYS:HE2 | 6:F:9:GLU:OE2 | 2.19 | 0.43 |
| 2:G:82:GLY:C | 2:G:84:GLN:H | 2.22 | 0.43 |
| 7:H:58:LYS:HA | 7:H:59:PRO:HD3 | 1.87 | 0.43 |
| 10:N:21:PHE:CE2 | 10:N:49:LEU:HD13 | 2.54 | 0.43 |
| 1:Q:747:LEU:HD12 | 1:Q:782:ILE:HG12 | 2.01 | 0.43 |
| 1:Q:825:ASN:O | 1:Q:827:LEU:N | 2.51 | 0.43 |
| 3:R:191:SER:HB3 | 3:R:298:LEU:HA | 2.01 | 0.43 |
| 3:R:395:ARG:O | 3:R:399:ALA:CB | 2.67 | 0.43 |
| 3:R:428:ARG:HG2 | 3:R:469:ASN:ND2 | 2.34 | 0.43 |
| 3:R:463:ASN:HB3 | 3:R:467:VAL:CG1 | 2.49 | 0.43 |
| 3:R:50:PRO:HG2 | 3:R:51:THR:N | 2.25 | 0.43 |
| 3:R:658:PRO:C | 3:R:660:HIS:N | 2.71 | 0.43 |
| 3:R:790:ARG:HG3 | 3:R:791:LEU:N | 2.34 | 0.43 |
| 4:S:228:LEU:CD1 | 4:S:230:ILE:HD11 | 2.44 | 0.43 |
| 5:T:100:ASN:ND2 | 6:U:36:ARG:HD3 | 2.32 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 5:T:104:MET:HE1 | 5:T:158:PRO:O | 2.19 | 0.43 |
| 5:T:23:ASN:O | 5:T:24:GLU:C | 2.57 | 0.43 |
| 5:T:21:PRO:HG2 | 5:T:24:GLU:OE2 | 2.19 | 0.43 |
| 6:U:31:SER:O | 6:U:35:GLN:HG3 | 2.19 | 0.43 |
| 6:U:79:THR:C | 6:U:81:ASP:H | 2.22 | 0.43 |
| 8:W:12:ASP:O | 8:W:13:LEU:CB | 2.63 | 0.43 |
| 10:Y:14:ILE:HG22 | 10:Y:49:LEU:HD21 | 2.01 | 0.43 |
| 10:Y:60:ILE:HG13 | 10:Y:61:HIS:N | 2.34 | 0.43 |
| 1:A:245:ILE:O | 1:A:245:ILE:HG22 | 2.18 | 0.43 |
| 1:A:84:VAL:HG11 | 1:A:281:ILE:HD12 | 2.01 | 0.43 |
| 1:A:334:ILE:HG23 | 1:A:449:VAL:CG2 | 2.48 | 0.43 |
| 1:A:425:LEU:O | 1:A:425:LEU:HD13 | 2.19 | 0.43 |
| 1:A:506:ALA:HB1 | 1:A:598:PHE:CB | 2.49 | 0.43 |
| 1:A:782:ILE:HG12 | 1:A:790:LEU:HD11 | 2.00 | 0.43 |
| 1:A:791:LYS:H | 1:A:794:GLU:HB2 | 1.84 | 0.43 |
| 1:A:856:PHE:HB3 | 1:A:859:TYR:CE1 | 2.54 | 0.43 |
| 3:B:276:VAL:CG1 | 3:B:277:ALA:H | 2.19 | 0.43 |
| 3:B:31:TYR:O | 3:B:34:PHE:HB3 | 2.19 | 0.43 |
| 3:B:529:TYR:CD1 | 3:B:529:TYR:N | 2.87 | 0.43 |
| 3:B:569:ASN:HB3 | 3:B:574:ARG:NH1 | 2.34 | 0.43 |
| 3:B:50:PRO:HB3 | 3:B:57:LYS:HG2 | 2.00 | 0.43 |
| 3:B:586:ASN:HA | 3:B:587:PRO:HD3 | 1.75 | 0.43 |
| 3:B:771:ASP:OD1 | 3:B:816:PRO:HG3 | 2.19 | 0.43 |
| 3:B:774:VAL:O | 3:B:775:MET:C | 2.57 | 0.43 |
| 3:B:749:MET:CE | 3:B:907:ASP:HB3 | 2.47 | 0.43 |
| 3:B:9:GLU:HA | 3:B:592:GLU:OE1 | 2.19 | 0.43 |
| 4:D:182:VAL:HG23 | 4:D:183:CYS:N | 2.34 | 0.43 |
| 5:E:88:GLU:H | 5:E:99:VAL:HG12 | 1.81 | 0.43 |
| 2:G:132:ARG:CD | 2:G:132:ARG:H | 2.32 | 0.43 |
| 2:G:271:LYS:O | 2:G:272:VAL:C | 2.57 | 0.43 |
| 1:Q:827:LEU:CG | 2:G:75:ALA:HB2 | 2.46 | 0.43 |
| 2:G:85:MET:HG3 | 2:G:85:MET:H | 1.68 | 0.43 |
| 8:K:82:LEU:HD23 | 8:K:82:LEU:N | 2.30 | 0.43 |
| 10:N:3:ILE:HG22 | 10:N:4:PRO:HD2 | 1.99 | 0.43 |
| 1:Q:242:ILE:HD11 | 1:Q:273:VAL:HA | 2.00 | 0.43 |
| 1:Q:364:PHE:CE2 | 1:Q:373:PRO:HB3 | 2.53 | 0.43 |
| 1:Q:420:ASN:HD22 | 1:Q:421:ARG:N | 2.16 | 0.43 |
| 1:Q:481:LEU:CD2 | 1:Q:482:VAL:N | 2.81 | 0.43 |
| 1:Q:839:ARG:NH1 | 7:V:37:ILE:HG23 | 2.34 | 0.43 |
| 3:R:214:PHE:CE2 | 3:R:296:TYR:O | 2.72 | 0.43 |
| 3:R:345:LEU:HD12 | 3:R:345:LEU:N | 2.34 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 3:R:459:PRO:HD2 | 3:R:467:VAL:HG13 | 2.01 | 0.43 |
| 3:R:301:LEU:CD2 | 3:R:483:ARG:HH21 | 2.24 | 0.43 |
| 3:R:805:LYS:O | 3:R:806:GLY:O | 2.37 | 0.43 |
| 3:R:83:MET:CE | 3:R:686:LEU:HB2 | 2.49 | 0.43 |
| 3:R:890:MET:HG3 | 3:R:891:LEU:N | 2.34 | 0.43 |
| 3:R:921:LEU:C | 3:R:923:GLN:N | 2.72 | 0.43 |
| 3:R:958:LEU:O | 3:R:958:LEU:HD23 | 2.18 | 0.43 |
| 4:S:133:LEU:HD11 | 4:S:139:ILE:HG12 | 2.00 | 0.43 |
| 4:S:175:ASN:C | 4:S:195:LEU:HD21 | 2.39 | 0.43 |
| 4:S:217:ILE:O | 4:S:219:ILE:HG13 | 2.18 | 0.43 |
| 8:W:28:THR:O | 8:W:29:ARG:C | 2.57 | 0.43 |
| 10:Y:21:PHE:HE2 | 10:Y:35:LEU:CD2 | 2.30 | 0.43 |
| 11:Z:20:VAL:O | 11:Z:20:VAL:HG23 | 2.19 | 0.43 |
| 1:A:297:THR:O | 1:A:300:GLN:N | 2.52 | 0.42 |
| 1:A:343:ILE:HD11 | 3:B:1001:LEU:HG | 2.01 | 0.42 |
| 1:A:345:LYS:O | 1:A:346:THR:C | 2.56 | 0.42 |
| 1:A:364:PHE:CE2 | 1:A:373:PRO:HB3 | 2.54 | 0.42 |
| 1:A:417:VAL:HG11 | 1:A:464:LEU:HD11 | 2.00 | 0.42 |
| 1:A:675:LEU:HD23 | 1:A:684:LEU:HD11 | 2.01 | 0.42 |
| 1:A:79:ARG:HD2 | 1:A:266:TRP:CE3 | 2.53 | 0.42 |
| 3:B:1073:ASN:O | 3:B:1074:LYS:HB2 | 2.19 | 0.42 |
| 3:B:321:LYS:HB3 | 3:B:321:LYS:HE3 | 1.81 | 0.42 |
| 3:B:559:VAL:O | 3:B:563:ILE:O | 2.37 | 0.42 |
| 3:B:672:MET:HE2 | 3:B:885:LYS:HD3 | 2.00 | 0.42 |
| 3:B:87:LEU:HD22 | 3:B:851:LEU:CD1 | 2.48 | 0.42 |
| 5:E:147:ILE:CD1 | 5:E:163:THR:HB | 2.49 | 0.42 |
| 6:F:52:ALA:C | 6:F:54:LYS:N | 2.72 | 0.42 |
| 2:G:140:VAL:O | 2:G:144:LEU:HG | 2.18 | 0.42 |
| 2:G:336:GLY:C | 2:G:337:GLU:OE1 | 2.57 | 0.42 |
| 2:G:379:ILE:HD12 | 3:R:1045:LEU:CD2 | 2.48 | 0.42 |
| 8:K:26:ARG:HG2 | 8:K:90:LEU:CD1 | 2.49 | 0.42 |
| 9:L:47:HIS:O | 9:L:48:PRO:C | 2.57 | 0.42 |
| 9:L:87:ILE:O | 9:L:91:THR:HG23 | 2.19 | 0.42 |
| 3:B:697:TYR:CD1 | 10:N:4:PRO:HG3 | 2.54 | 0.42 |
| 10:N:3:ILE:HA | 10:N:52:HIS:NE2 | 2.33 | 0.42 |
| 1:Q:220:ARG:NH1 | 1:Q:236:THR:HG23 | 2.34 | 0.42 |
| 1:Q:294:PRO:O | 1:Q:295:LEU:C | 2.56 | 0.42 |
| 1:Q:377:TYR:HE1 | 1:Q:385:ARG:CG | 2.32 | 0.42 |
| 3:R:1081:ILE:CG2 | 3:R:1085:LYS:NZ | 2.80 | 0.42 |
| 3:R:708:LEU:O | 3:R:708:LEU:CD1 | 2.65 | 0.42 |
| 3:R:679:LEU:HD23 | 3:R:716:ARG:CD | 2.49 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 3:R:932:TYR:O | 3:R:933:ALA:CB | 2.66 | 0.42 |
| 2:G:390:MET:CG | 5:T:56:GLU:HG2 | 2.49 | 0.42 |
| 11:Z:13:PHE:CD1 | 11:Z:13:PHE:N | 2.87 | 0.42 |
| 1:A:283:GLY:C | 1:A:285:PRO:CD | 2.79 | 0.42 |
| 1:A:377:TYR:HE1 | 1:A:385:ARG:CG | 2.30 | 0.42 |
| 1:A:651:VAL:HG21 | 1:A:743:MET:HB3 | 2.01 | 0.42 |
| 1:A:206:TRP:CZ3 | 3:B:1108:ILE:HG21 | 2.54 | 0.42 |
| 3:B:287:GLU:C | 3:B:289:ALA:N | 2.70 | 0.42 |
| 3:B:838:VAL:CG1 | 3:B:839:THR:H | 2.31 | 0.42 |
| 2:C:15:GLU:HA | 2:C:18:LYS:HG3 | 2.00 | 0.42 |
| 2:C:267:VAL:HG12 | 2:C:267:VAL:O | 2.19 | 0.42 |
| 2:C:297:ILE:C | 2:C:299:LYS:N | 2.72 | 0.42 |
| 4:D:176:CYS:H | 4:D:195:LEU:CD2 | 2.31 | 0.42 |
| 6:F:54:LYS:HA | 6:F:57:GLU:OE1 | 2.19 | 0.42 |
| 6:F:79:THR:C | 6:F:81:ASP:H | 2.22 | 0.42 |
| 7:H:62:ILE:CD1 | 7:H:62:ILE:H | 2.31 | 0.42 |
| 8:K:49:ALA:O | 8:K:50:LEU:C | 2.57 | 0.42 |
| 8:K:50:LEU:HD23 | 8:K:74:LEU:HA | 2.00 | 0.42 |
| 4:D:66:PRO:HG2 | 10:N:13:LEU:HD11 | 2.01 | 0.42 |
| 1:Q:737:VAL:HG23 | 1:Q:738:LEU:N | 2.34 | 0.42 |
| 1:Q:759:ARG:HH21 | 1:Q:763:THR:HA | 1.85 | 0.42 |
| 3:R:1105:MET:HG3 | 3:R:1111:PRO:HG3 | 2.01 | 0.42 |
| 3:R:134:THR:N | 3:R:137:LYS:HB2 | 2.34 | 0.42 |
| 3:R:243:SER:O | 3:R:249:GLN:OE1 | 2.37 | 0.42 |
| 3:R:253:PHE:HA | 3:R:256:LEU:CD1 | 2.49 | 0.42 |
| 3:R:39:LEU:O | 3:R:43:ILE:HG12 | 2.19 | 0.42 |
| 3:R:50:PRO:CG | 3:R:51:THR:N | 2.81 | 0.42 |
| 3:R:530:TYR:OH | 3:R:536:LEU:CG | 2.67 | 0.42 |
| 3:R:580:ILE:HG12 | 3:R:642:ILE:HG12 | 2.00 | 0.42 |
| 3:R:882:HIS:HE1 | 3:R:926:GLU:OE1 | 2.02 | 0.42 |
| 3:R:899:TYR:O | 3:R:971:TYR:N | 2.42 | 0.42 |
| 3:R:958:LEU:C | 3:R:958:LEU:CD2 | 2.88 | 0.42 |
| 4:S:250:ILE:HG13 | 4:S:250:ILE:H | 1.43 | 0.42 |
| 3:R:895:VAL:CG1 | 4:S:34:LEU:HD21 | 2.47 | 0.42 |
| 5:T:97:ILE:HD11 | 5:T:136:ILE:HG21 | 2.01 | 0.42 |
| 8:W:31:GLU:O | 8:W:35:VAL:HG13 | 2.20 | 0.42 |
| 9:X:45:GLN:HE22 | 9:X:48:PRO:N | 2.16 | 0.42 |
| 1:A:249:LEU:HD21 | 1:A:265:LEU:HB3 | 2.02 | 0.42 |
| 1:A:25:THR:HG22 | 1:A:26:ALA:N | 2.35 | 0.42 |
| 1:A:737:VAL:HG23 | 1:A:738:LEU:N | 2.34 | 0.42 |
| 3:B:243:SER:OG | 3:B:246:PRO:HG3 | 2.18 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 3:B:21:LYS:CA | 3:B:25:ARG:NH1 | 2.82 | 0.42 |
| 3:B:789:TYR:HB2 | 3:B:790:ARG:H | 1.74 | 0.42 |
| 3:B:97:TRP:CZ3 | 3:B:113:GLU:HB3 | 2.54 | 0.42 |
| 2:C:117:PRO:HD2 | 2:C:120:PRO:HG3 | 2.00 | 0.42 |
| 2:C:60:SER:OG | 2:C:61:GLU:N | 2.51 | 0.42 |
| 4:D:165:ARG:HH11 | 4:D:165:ARG:HG2 | 1.83 | 0.42 |
| 4:D:167:TYR:HB3 | 4:D:222:VAL:HB | 2.01 | 0.42 |
| 3:B:899:TYR:HE2 | 4:D:29:ARG:CZ | 2.32 | 0.42 |
| 4:D:39:MET:HG2 | 4:D:121:VAL:HG11 | 2.01 | 0.42 |
| 4:D:48:GLU:HB3 | 4:D:140:SER:CB | 2.49 | 0.42 |
| 4:D:79:PRO:HG2 | 4:D:149:TYR:CE1 | 2.54 | 0.42 |
| 7:H:49:ASP:CG | 7:H:50:PRO:HD2 | 2.39 | 0.42 |
| 8:K:90:LEU:CD2 | 8:K:90:LEU:H | 2.25 | 0.42 |
| 1:Q:670:VAL:CG2 | 1:Q:671:GLU:N | 2.82 | 0.42 |
| 1:Q:675:LEU:HD23 | 1:Q:684:LEU:HD11 | 2.01 | 0.42 |
| 3:R:1059:TYR:HA | 3:R:1089:PHE:O | 2.20 | 0.42 |
| 3:R:1105:MET:HG2 | 3:R:1111:PRO:CD | 2.50 | 0.42 |
| 3:R:234:THR:HB | 3:R:237:ASP:OD2 | 2.19 | 0.42 |
| 3:R:234:THR:CG2 | 3:R:236:ARG:HB2 | 2.49 | 0.42 |
| 3:R:325:LEU:HD13 | 3:R:331:GLU:H | 1.84 | 0.42 |
| 3:R:381:LEU:C | 3:R:383:ALA:H | 2.21 | 0.42 |
| 3:R:435:ARG:C | 3:R:437:GLN:H | 2.23 | 0.42 |
| 3:R:536:LEU:O | 3:R:539:LYS:HB2 | 2.19 | 0.42 |
| 3:R:5:LEU:HG | 3:R:630:PRO:HB2 | 2.00 | 0.42 |
| 3:R:705:THR:CG2 | 3:R:706:ARG:H | 2.06 | 0.42 |
| 3:R:957:ILE:HG12 | 3:R:957:ILE:H | 1.46 | 0.42 |
| 3:R:98:LEU:HD22 | 3:R:99:THR:N | 2.33 | 0.42 |
| 4:S:123:PRO:C | 4:S:125:SER:H | 2.23 | 0.42 |
| 4:S:131:VAL:HA | 10:Y:2:LEU:HD11 | 2.01 | 0.42 |
| 5:T:134:LYS:HD3 | 5:T:174:TRP:CD1 | 2.53 | 0.42 |
| 5:T:31:ARG:HG2 | 5:T:35:GLN:OE1 | 2.19 | 0.42 |
| 1:A:268:LEU:HA | 1:A:268:LEU:HD23 | 1.94 | 0.42 |
| 1:A:488:THR:HG23 | 1:A:490:ARG:H | 1.84 | 0.42 |
| 1:A:523:GLN:O | 1:A:525:LEU:N | 2.53 | 0.42 |
| 1:A:638:PHE:CD1 | 1:A:641:LEU:HD11 | 2.54 | 0.42 |
| 3:B:128:ASP:OD1 | 3:B:130:ILE:CG1 | 2.67 | 0.42 |
| 3:B:269:LEU:HD13 | 3:B:290:GLN:HG3 | 2.01 | 0.42 |
| 3:B:381:LEU:C | 3:B:383:ALA:H | 2.22 | 0.42 |
| 3:B:435:ARG:C | 3:B:437:GLN:H | 2.21 | 0.42 |
| 3:B:574:ARG:O | 3:B:574:ARG:HG3 | 2.19 | 0.42 |
| 3:B:640:LEU:HD22 | 3:B:641:GLU:O | 2.19 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 3:B:744:SER:HB3 | 10:N:8:PHE:HB3 | 2.01 | 0.42 |
| 3:B:963:LEU:HD22 | 3:B:982:ARG:NH2 | 2.34 | 0.42 |
| 1:A:649:GLU:HG3 | 3:B:965:ASP:OD2 | 2.19 | 0.42 |
| 2:C:115:LYS:O | 2:C:116:VAL:CG1 | 2.54 | 0.42 |
| 2:C:390:MET:O | 2:C:391:ARG:CD | 2.66 | 0.42 |
| 2:C:65:ALA:HB2 | 8:K:19:PHE:HE1 | 1.84 | 0.42 |
| 4:D:108:MET:CG | 4:D:110:TYR:CE1 | 3.03 | 0.42 |
| 4:D:178:LYS:HA | 4:D:181:ASN:ND2 | 2.34 | 0.42 |
| 5:E:92:VAL:CG1 | 5:E:127:ILE:HG12 | 2.49 | 0.42 |
| 5:E:134:LYS:HD3 | 5:E:174:TRP:CD1 | 2.55 | 0.42 |
| 5:E:46:LEU:O | 5:E:47:ALA:HB2 | 2.18 | 0.42 |
| 1:Q:427:ARG:NH1 | 2:G:73:VAL:HG11 | 2.34 | 0.42 |
| 7:H:54:SER:O | 7:H:56:ASN:N | 2.52 | 0.42 |
| 9:L:66:LYS:O | 9:L:70:LEU:CD1 | 2.67 | 0.42 |
| 9:L:74:GLU:O | 9:L:77:ARG:HB3 | 2.20 | 0.42 |
| 1:Q:272:HIS:O | 1:Q:275:THR:HB | 2.18 | 0.42 |
| 1:Q:525:LEU:HG | 9:X:40:PHE:CZ | 2.52 | 0.42 |
| 1:Q:527:VAL:HG11 | 1:Q:530:VAL:HB | 1.99 | 0.42 |
| 1:Q:759:ARG:HB3 | 1:Q:759:ARG:HE | 1.56 | 0.42 |
| 1:Q:782:ILE:HG23 | 1:Q:794:GLU:CD | 2.39 | 0.42 |
| 3:R:1071:ASP:O | 3:R:1073:ASN:N | 2.46 | 0.42 |
| 3:R:369:LEU:HG | 3:R:384:LEU:HD13 | 2.01 | 0.42 |
| 3:R:339:ALA:HB1 | 3:R:619:GLU:HB2 | 2.00 | 0.42 |
| 3:R:451:GLY:N | 3:R:647:ILE:HG23 | 2.22 | 0.42 |
| 3:R:657:TYR:N | 3:R:658:PRO:CD | 2.83 | 0.42 |
| 3:R:943:THR:CG2 | 3:R:944:PRO:CD | 2.94 | 0.42 |
| 4:S:53:LEU:HD22 | 4:S:57:ILE:CG2 | 2.40 | 0.42 |
| 5:T:142:VAL:CG1 | 5:T:171:LYS:HA | 2.43 | 0.42 |
| 5:T:51:VAL:C | 5:T:53:THR:H | 2.23 | 0.42 |
| 8:W:41:LEU:O | 8:W:42:GLN:C | 2.57 | 0.42 |
| 9:X:47:HIS:NE2 | 9:X:49:LEU:HB2 | 2.34 | 0.42 |
| 9:X:7:LYS:HE3 | 9:X:12:TYR:CE2 | 2.53 | 0.42 |
| 1:A:13:ILE:HD12 | 1:A:207:MET:HG2 | 2.01 | 0.42 |
| 1:A:212:LEU:HD21 | 1:A:242:ILE:CD1 | 2.49 | 0.42 |
| 1:A:30:PRO:HB2 | 1:A:244:ARG:CG | 2.48 | 0.42 |
| 1:A:316:LYS:HD2 | 3:B:1049:LEU:O | 2.19 | 0.42 |
| 1:A:607:GLN:N | 1:A:608:PRO:HD2 | 2.34 | 0.42 |
| 1:A:613:HIS:O | 1:A:615:LEU:N | 2.53 | 0.42 |
| 1:A:659:LYS:O | 1:A:663:ASN:HB2 | 2.19 | 0.42 |
| 1:A:672:VAL:O | 1:A:674:ASN:N | 2.52 | 0.42 |
| 3:B:1004:ARG:CZ | 3:B:1007:GLY:H | 2.32 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 3:B:1108:ILE:N | 3:B:1108:ILE:HD12 | 2.34 | 0.42 |
| 3:B:138:LEU:O | 3:B:139:ILE:C | 2.58 | 0.42 |
| 3:B:269:LEU:HD13 | 3:B:286:ILE:HG23 | 2.01 | 0.42 |
| 3:B:34:PHE:HD1 | 3:B:351:ALA:HB2 | 1.84 | 0.42 |
| 3:B:388:ASP:C | 3:B:390:VAL:H | 2.23 | 0.42 |
| 3:B:459:PRO:HD2 | 3:B:467:VAL:HG13 | 2.00 | 0.42 |
| 3:B:840:ARG:HB2 | 3:B:843:GLU:CB | 2.49 | 0.42 |
| 3:B:941:ASP:OD1 | 3:B:941:ASP:C | 2.57 | 0.42 |
| 2:C:126:LEU:CD1 | 2:C:131:LYS:HA | 2.50 | 0.42 |
| 1:A:425:LEU:CD2 | 2:C:83:THR:HG21 | 2.50 | 0.42 |
| 4:D:111:SER:O | 4:D:114:ILE:HG13 | 2.19 | 0.42 |
| 4:D:165:ARG:HG2 | 4:D:165:ARG:NH1 | 2.34 | 0.42 |
| 4:D:203:CYS:HA | 14:D:1001:F3S:S4 | 2.59 | 0.42 |
| 4:D:7:HIS:O | 4:D:8:LYS:HB2 | 2.20 | 0.42 |
| 5:E:151:SER:HB3 | 5:E:158:PRO:HB3 | 2.00 | 0.42 |
| 2:C:393:ILE:HB | 5:E:19:GLY:HA2 | 2.02 | 0.42 |
| 5:E:42:LEU:O | 5:E:76:THR:HG21 | 2.19 | 0.42 |
| 2:G:358:ALA:HB2 | 3:R:1109:ILE:CD1 | 2.49 | 0.42 |
| 2:G:365:GLU:CG | 2:G:366:PHE:N | 2.83 | 0.42 |
| 2:G:389:THR:HG22 | 8:W:77:THR:O | 2.20 | 0.42 |
| 2:C:388:LEU:HD21 | 8:K:34:ARG:HG3 | 2.02 | 0.42 |
| 9:L:1:MET:HA | 9:L:18:GLU:O | 2.19 | 0.42 |
| 1:Q:187:ILE:HA | 1:Q:188:PRO:HD3 | 1.75 | 0.42 |
| 1:Q:233:ASP:O | 1:Q:236:THR:HB | 2.19 | 0.42 |
| 1:Q:336:GLU:OE1 | 1:Q:436:ARG:NH1 | 2.52 | 0.42 |
| 1:Q:377:TYR:O | 1:Q:408:GLU:HB2 | 2.19 | 0.42 |
| 1:Q:548:GLY:C | 1:Q:550:GLN:H | 2.23 | 0.42 |
| 1:Q:687:ILE:HD11 | 1:Q:695:SER:HB3 | 2.01 | 0.42 |
| 1:Q:750:GLN:OE1 | 1:Q:801:GLY:HA3 | 2.19 | 0.42 |
| 1:Q:833:GLU:CG | 1:Q:839:ARG:HG3 | 2.48 | 0.42 |
| 3:R:108:GLU:HB2 | 3:R:109:ALA:H | 1.69 | 0.42 |
| 3:R:24:VAL:HG21 | 3:R:426:LEU:HD12 | 2.01 | 0.42 |
| 3:R:439:ASN:C | 3:R:440:PHE:HD1 | 2.21 | 0.42 |
| 3:R:57:LYS:O | 3:R:103:VAL:HB | 2.20 | 0.42 |
| 3:R:5:LEU:HD23 | 3:R:630:PRO:HG2 | 2.00 | 0.42 |
| 3:R:963:LEU:HD13 | 3:R:982:ARG:CZ | 2.50 | 0.42 |
| 3:R:972:ASP:OD2 | 3:R:974:ARG:CD | 2.68 | 0.42 |
| 6:U:52:ALA:C | 6:U:54:LYS:N | 2.72 | 0.42 |
| 8:W:28:THR:O | 8:W:30:TYR:N | 2.52 | 0.42 |
| 9:X:74:GLU:O | 9:X:75:ASN:C | 2.57 | 0.42 |
| 1:A:643:GLY:O | 1:A:644:PHE:CB | 2.67 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 1:A:737:VAL:HA | 1:A:740:ILE:HB | 2.01 | 0.42 |
| 1:A:747:LEU:HD12 | 1:A:782:ILE:HG12 | 2.01 | 0.42 |
| 1:A:316:LYS:NZ | 3:B:1049:LEU:HD12 | 2.34 | 0.42 |
| 3:B:1105:MET:HG3 | 3:B:1111:PRO:HG3 | 2.01 | 0.42 |
| 3:B:253:PHE:HA | 3:B:256:LEU:CD1 | 2.49 | 0.42 |
| 3:B:290:GLN:HE21 | 3:B:308:ARG:HH12 | 1.66 | 0.42 |
| 3:B:855:THR:O | 3:B:858:GLY:N | 2.53 | 0.42 |
| 3:B:656:PRO:HG3 | 3:B:926:GLU:HG3 | 2.00 | 0.42 |
| 3:B:6:THR:CB | 3:B:9:GLU:CB | 2.97 | 0.42 |
| 2:C:52:PHE:CA | 2:C:55:ALA:HB3 | 2.46 | 0.42 |
| 2:C:65:ALA:CB | 8:K:19:PHE:HE1 | 2.32 | 0.42 |
| 4:D:78:TRP:O | 4:D:80:GLU:N | 2.52 | 0.42 |
| 1:Q:859:TYR:CD1 | 2:G:64:ILE:HG23 | 2.53 | 0.42 |
| 11:P:9:CYS:SG | 11:P:10:TRP:N | 2.93 | 0.42 |
| 1:Q:219:ILE:HA | 3:R:1012:LEU:CD2 | 2.49 | 0.42 |
| 1:Q:246:ASN:OD1 | 1:Q:269:LEU:HD13 | 2.19 | 0.42 |
| 1:Q:268:LEU:O | 1:Q:272:HIS:HD2 | 2.03 | 0.42 |
| 1:Q:396:GLU:C | 1:Q:398:ALA:N | 2.73 | 0.42 |
| 1:Q:457:PHE:HB2 | 3:R:737:SER:HB2 | 2.00 | 0.42 |
| 1:Q:782:ILE:H | 1:Q:782:ILE:HD12 | 1.81 | 0.42 |
| 1:Q:842:TYR:O | 7:V:41:GLN:NE2 | 2.52 | 0.42 |
| 1:Q:94:LEU:C | 1:Q:96:ALA:H | 2.23 | 0.42 |
| 3:R:1069:TRP:HB2 | 3:R:1070:TYR:H | 1.59 | 0.42 |
| 3:R:1012:LEU:CD1 | 3:R:1099:LEU:HD13 | 2.49 | 0.42 |
| 3:R:123:LEU:HD12 | 3:R:123:LEU:N | 2.35 | 0.42 |
| 3:R:484:ILE:H | 3:R:484:ILE:HG13 | 1.29 | 0.42 |
| 4:S:108:MET:CG | 4:S:110:TYR:CE1 | 3.02 | 0.42 |
| 4:S:129:PRO:CG | 10:Y:15:ALA:HB1 | 2.49 | 0.42 |
| 4:S:94:THR:O | 4:S:144:ARG:HG3 | 2.20 | 0.42 |
| 3:R:982:ARG:NH2 | 4:S:208:GLU:HG2 | 2.34 | 0.42 |
| 5:T:136:ILE:HG22 | 5:T:136:ILE:O | 2.19 | 0.42 |
| 5:T:82:GLN:CA | 5:T:145:ARG:HG3 | 2.41 | 0.42 |
| 6:U:30:SER:HB2 | 6:U:34:LEU:CB | 2.49 | 0.42 |
| 8:W:15:PHE:HD1 | 8:W:16:ASN:H | 1.68 | 0.42 |
| 8:W:66:GLU:O | 8:W:70:ARG:HG3 | 2.19 | 0.42 |
| 9:X:47:HIS:O | 9:X:48:PRO:C | 2.58 | 0.42 |
| 10:Y:22:ILE:CG1 | 10:Y:23:THR:N | 2.82 | 0.42 |
| 1:A:215:PRO:HD2 | 1:A:276:TYR:OH | 2.19 | 0.42 |
| 1:A:450:CYS:N | 1:A:451:PRO:CD | 2.83 | 0.42 |
| 1:A:490:ARG:CD | 1:A:491:TYR:CE2 | 3.03 | 0.42 |
| 3:B:1105:MET:HG2 | 3:B:1111:PRO:CD | 2.50 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 3:B:448:THR:C | 3:B:450:TRP:N | 2.71 | 0.42 |
| 3:B:582:VAL:HG13 | 3:B:586:ASN:O | 2.20 | 0.42 |
| 3:B:719:GLY:N | 3:B:989:TYR:OH | 2.52 | 0.42 |
| 4:D:111:SER:O | 4:D:114:ILE:CG1 | 2.67 | 0.42 |
| 4:D:110:TYR:HA | 4:D:128:ILE:O | 2.19 | 0.42 |
| 4:D:51:SER:HB2 | 4:D:52:PRO:CD | 2.47 | 0.42 |
| 5:E:35:GLN:HE21 | 5:E:47:ALA:HA | 1.84 | 0.42 |
| 2:C:390:MET:HE3 | 5:E:58:ILE:C | 2.40 | 0.42 |
| 2:G:133:ASP:O | 2:G:135:ASP:N | 2.52 | 0.42 |
| 2:G:337:GLU:OE2 | 2:G:339:ASN:CG | 2.58 | 0.42 |
| 7:H:15:TYR:HD2 | 7:H:16:LEU:HD11 | 1.84 | 0.42 |
| 7:H:45:ILE:HB | 7:H:79:ARG:CD | 2.49 | 0.42 |
| 7:H:47:ALA:HB2 | 7:H:81:VAL:CG1 | 2.50 | 0.42 |
| 9:L:70:LEU:N | 9:L:70:LEU:HD12 | 2.35 | 0.42 |
| 11:P:11:LYS:O | 11:P:12:THR:HG23 | 2.20 | 0.42 |
| 1:Q:46:ASP:OD1 | 1:Q:46:ASP:O | 2.37 | 0.42 |
| 1:Q:672:VAL:O | 1:Q:675:LEU:N | 2.53 | 0.42 |
| 1:Q:872:PHE:HA | 1:Q:876:VAL:CB | 2.48 | 0.42 |
| 3:R:103:VAL:HG13 | 3:R:106:ASN:C | 2.40 | 0.42 |
| 1:A:558:LYS:HZ3 | 3:R:108:GLU:HG2 | 1.85 | 0.42 |
| 3:R:1091:VAL:HG13 | 3:R:1091:VAL:O | 2.19 | 0.42 |
| 3:R:18:PHE:C | 3:R:20:SER:N | 2.72 | 0.42 |
| 3:R:279:GLY:H | 3:R:285:ARG:HH22 | 1.66 | 0.42 |
| 3:R:574:ARG:HG3 | 3:R:574:ARG:O | 2.19 | 0.42 |
| 3:R:797:VAL:HG22 | 3:R:811:ILE:HG12 | 2.00 | 0.42 |
| 3:R:814:VAL:HA | 3:R:833:ARG:O | 2.19 | 0.42 |
| 3:R:81:SER:O | 3:R:82:PRO:C | 2.58 | 0.42 |
| 3:R:963:LEU:HD22 | 3:R:982:ARG:NH2 | 2.35 | 0.42 |
| 4:S:79:PRO:HG2 | 4:S:149:TYR:CE1 | 2.54 | 0.42 |
| 4:S:18:GLU:HG3 | 4:S:225:LYS:CG | 2.50 | 0.42 |
| 7:V:45:ILE:O | 7:V:81:VAL:CA | 2.63 | 0.42 |
| 9:X:69:LEU:O | 9:X:72:ALA:HB3 | 2.20 | 0.42 |
| 1:A:203:ARG:HD3 | 1:A:203:ARG:N | 2.34 | 0.42 |
| 1:A:480:MET:C | 1:A:481:LEU:O | 2.56 | 0.42 |
| 1:A:539:ILE:HB | 1:A:545:TYR:CB | 2.44 | 0.42 |
| 1:A:563:HIS:CE1 | 1:A:876:VAL:HG13 | 2.55 | 0.42 |
| 1:A:27:ILE:CG2 | 1:A:75:ILE:HD11 | 2.50 | 0.42 |
| 1:A:786:PHE:CE2 | 1:A:790:LEU:HD21 | 2.55 | 0.42 |
| 1:A:831:ARG:NH2 | 2:C:385:MET:SD | 2.92 | 0.42 |
| 1:A:856:PHE:HD1 | 1:A:858:MET:HB2 | 1.81 | 0.42 |
| 3:B:1064:CYS:SG | 3:B:1081:ILE:HD12 | 2.59 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|------------------|--------------------------|-------------------|
| 3:B:1101:ILE:HG23 | 3:B:1111:PRO:HB2 | 2.02 | 0.42 |
| 3:B:282:ARG:HD3 | 3:B:285:ARG:HD3 | 2.01 | 0.42 |
| 3:B:792:LEU:HD21 | 3:B:809:VAL:O | 2.20 | 0.42 |
| 2:C:118:SER:O | 2:C:119:THR:CB | 2.68 | 0.42 |
| 4:D:111:SER:OG | 4:D:125:SER:O | 2.37 | 0.42 |
| 4:D:251:ARG:HG3 | 4:D:251:ARG:NH1 | 2.35 | 0.42 |
| 4:D:256:LEU:O | 4:D:257:GLU:C | 2.58 | 0.42 |
| 4:D:61:ARG:HH21 | 10:N:2:LEU:HD13 | 1.85 | 0.42 |
| 5:E:53:THR:OG1 | 5:E:71:GLU:HB2 | 2.19 | 0.42 |
| 2:G:145:GLU:O | 2:G:146:TYR:O | 2.38 | 0.42 |
| 2:G:63:LEU:HD21 | 8:W:23:TRP:CH2 | 2.55 | 0.42 |
| 7:H:28:ALA:C | 7:H:30:LYS:H | 2.23 | 0.42 |
| 1:Q:329:ASP:HA | 1:Q:330:PRO:HD3 | 1.80 | 0.42 |
| 1:Q:486:ILE:HA | 1:Q:496:ILE:HD12 | 2.02 | 0.42 |
| 1:Q:759:ARG:N | 1:Q:779:ARG:NH2 | 2.68 | 0.42 |
| 3:R:1011:ILE:H | 3:R:1011:ILE:CD1 | 2.13 | 0.42 |
| 3:R:1061:CYS:N | 3:R:1065:GLY:HA2 | 2.35 | 0.42 |
| 3:R:1064:CYS:O | 3:R:1066:TYR:N | 2.53 | 0.42 |
| 3:R:21:LYS:HD3 | 3:R:25:ARG:NE | 2.35 | 0.42 |
| 3:R:227:MET:HE2 | 3:R:232:ILE:HG13 | 2.01 | 0.42 |
| 3:R:254:PRO:HG2 | 3:R:255:SER:H | 1.84 | 0.42 |
| 3:R:316:ALA:C | 3:R:318:ALA:N | 2.72 | 0.42 |
| 3:R:644:SER:N | 3:R:645:PRO:CD | 2.82 | 0.42 |
| 3:R:763:VAL:HG23 | 3:R:859:ASN:CG | 2.39 | 0.42 |
| 3:R:838:VAL:CG1 | 3:R:839:THR:H | 2.30 | 0.42 |
| 4:S:98:ILE:CD1 | 4:S:114:ILE:HG12 | 2.49 | 0.42 |
| 4:S:124:ILE:O | 4:S:125:SER:CB | 2.66 | 0.42 |
| 4:S:13:ILE:CD1 | 4:S:239:GLU:N | 2.82 | 0.42 |
| 5:T:90:LEU:CD1 | 5:T:100:ASN:HB2 | 2.49 | 0.42 |
| 5:T:115:ASP:O | 5:T:116:ASP:HB2 | 2.18 | 0.42 |
| 5:T:67:TYR:N | 5:T:67:TYR:CD1 | 2.88 | 0.42 |
| 7:V:75:VAL:HG13 | 8:W:15:PHE:HE2 | 1.85 | 0.42 |
| 9:X:46:PRO:CD | 9:X:52:LYS:O | 2.67 | 0.42 |
| 1:A:364:PHE:CD1 | 1:A:409:ARG:HD2 | 2.55 | 0.42 |
| 1:A:563:HIS:ND1 | 1:A:876:VAL:HG13 | 2.35 | 0.42 |
| 1:A:856:PHE:HB3 | 1:A:859:TYR:HD1 | 1.84 | 0.42 |
| 3:B:1059:TYR:HA | 3:B:1089:PHE:O | 2.20 | 0.42 |
| 3:B:298:LEU:C | 3:B:300:HIS:N | 2.73 | 0.42 |
| 3:B:882:HIS:HE1 | 3:B:926:GLU:OE1 | 2.03 | 0.42 |
| 3:B:92:TYR:HD2 | 3:B:92:TYR:O | 2.03 | 0.42 |
| 2:C:144:LEU:O | 2:C:145:GLU:C | 2.58 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 4:D:11:THR:HA | 4:D:238:PRO:HD3 | 2.02 | 0.42 |
| 3:B:978:LYS:CE | 4:D:205:LEU:HD13 | 2.50 | 0.42 |
| 5:E:149:VAL:HG21 | 5:E:160:ILE:HG13 | 2.00 | 0.42 |
| 2:G:292:ILE:HB | 7:V:16:LEU:HD22 | 2.02 | 0.42 |
| 2:G:310:ILE:CD1 | 2:G:310:ILE:N | 2.70 | 0.42 |
| 2:G:322:ARG:HH21 | 7:V:43:PRO:HG3 | 1.85 | 0.42 |
| 8:K:36:ILE:HG13 | 8:K:36:ILE:H | 1.60 | 0.42 |
| 8:K:70:ARG:O | 8:K:72:GLY:N | 2.52 | 0.42 |
| 8:K:82:LEU:CD1 | 8:K:84:ASN:HB2 | 2.49 | 0.42 |
| 1:Q:195:LEU:N | 1:Q:195:LEU:HD12 | 2.35 | 0.42 |
| 1:Q:199:PRO:C | 1:Q:201:THR:H | 2.23 | 0.42 |
| 1:Q:237:HIS:O | 1:Q:240:VAL:HB | 2.19 | 0.42 |
| 1:Q:541:ALA:O | 1:Q:542:PRO:C | 2.55 | 0.42 |
| 1:Q:611:ILE:O | 1:Q:615:LEU:HG | 2.20 | 0.42 |
| 1:Q:672:VAL:O | 1:Q:674:ASN:N | 2.53 | 0.42 |
| 1:Q:687:ILE:HD11 | 1:Q:695:SER:CB | 2.50 | 0.42 |
| 1:Q:320:PHE:HA | 3:R:1005:ALA:HA | 2.02 | 0.42 |
| 3:R:123:LEU:CD1 | 3:R:123:LEU:N | 2.83 | 0.42 |
| 3:R:661:ASN:OD1 | 3:R:882:HIS:HB3 | 2.20 | 0.42 |
| 3:R:83:MET:HE3 | 3:R:686:LEU:HB2 | 2.01 | 0.42 |
| 3:R:922:GLY:CA | 3:R:925:MET:HB2 | 2.39 | 0.42 |
| 3:R:98:LEU:HD13 | 3:R:98:LEU:O | 2.19 | 0.42 |
| 4:S:116:SER:O | 4:S:118:ASP:N | 2.53 | 0.42 |
| 4:S:66:PRO:O | 4:S:123:PRO:HA | 2.20 | 0.42 |
| 4:S:124:ILE:HG13 | 4:S:124:ILE:O | 2.18 | 0.42 |
| 4:S:251:ARG:NH1 | 4:S:251:ARG:HG3 | 2.35 | 0.42 |
| 5:T:1:MET:HG3 | 5:T:80:VAL:HG21 | 2.02 | 0.42 |
| 5:T:92:VAL:HG11 | 5:T:127:ILE:HG12 | 2.01 | 0.42 |
| 11:Z:25:ARG:HD2 | 11:Z:30:GLY:HA2 | 2.02 | 0.42 |
| 1:A:47:PRO:CG | 1:A:48:ARG:H | 2.31 | 0.42 |
| 1:A:556:LEU:HA | 1:A:557:PRO:HD3 | 1.86 | 0.42 |
| 1:A:59:PRO:HG2 | 1:A:61:CYS:SG | 2.60 | 0.42 |
| 1:A:562:PHE:CD2 | 1:A:611:ILE:HG12 | 2.55 | 0.42 |
| 1:A:343:ILE:HD11 | 3:B:1001:LEU:CD1 | 2.49 | 0.42 |
| 3:B:338:TYR:CE2 | 3:B:341:LYS:NZ | 2.88 | 0.42 |
| 3:B:407:ARG:HE | 3:B:407:ARG:N | 2.18 | 0.42 |
| 3:B:725:ALA:CB | 3:B:985:PHE:CE1 | 3.03 | 0.42 |
| 3:B:838:VAL:CG1 | 3:B:839:THR:N | 2.83 | 0.42 |
| 3:B:935:LEU:CD2 | 10:N:43:TYR:HB3 | 2.49 | 0.42 |
| 2:C:102:LEU:CD2 | 2:C:103:GLY:N | 2.67 | 0.42 |
| 2:C:146:TYR:CD1 | 2:C:146:TYR:N | 2.72 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:C:21:SER:O | 2:C:33:LYS:HE3 | 2.20 | 0.42 |
| 2:C:240:ALA:C | 2:C:241:ILE:HG13 | 2.40 | 0.42 |
| 1:A:826:ALA:CB | 2:C:335:THR:HG23 | 2.33 | 0.42 |
| 2:C:55:ALA:C | 2:C:58:GLU:H | 2.23 | 0.42 |
| 5:E:30:LEU:HD11 | 5:E:72:PHE:CE2 | 2.54 | 0.42 |
| 2:G:322:ARG:CD | 2:G:322:ARG:N | 2.78 | 0.42 |
| 1:Q:841:LEU:CD2 | 2:G:367:LYS:HB2 | 2.49 | 0.42 |
| 7:H:17:VAL:HG13 | 7:H:17:VAL:O | 2.20 | 0.42 |
| 7:H:45:ILE:HG22 | 7:H:81:VAL:N | 2.35 | 0.42 |
| 2:C:386:VAL:HG11 | 8:K:34:ARG:HB2 | 2.01 | 0.42 |
| 10:N:20:SER:CA | 10:N:23:THR:HB | 2.50 | 0.42 |
| 1:Q:428:ILE:CG2 | 1:Q:428:ILE:O | 2.68 | 0.42 |
| 1:Q:481:LEU:HD23 | 1:Q:482:VAL:N | 2.30 | 0.42 |
| 1:Q:530:VAL:O | 1:Q:532:ILE:N | 2.52 | 0.42 |
| 1:Q:658:LYS:O | 1:Q:662:TYR:HB2 | 2.20 | 0.42 |
| 1:Q:9:ILE:HD12 | 2:G:342:LEU:HD11 | 2.02 | 0.42 |
| 3:R:338:TYR:CE2 | 3:R:341:LYS:NZ | 2.88 | 0.42 |
| 3:R:413:LEU:O | 3:R:414:LEU:C | 2.59 | 0.42 |
| 3:R:472:LEU:HD12 | 3:R:646:ALA:HA | 2.02 | 0.42 |
| 3:R:485:VAL:C | 3:R:487:LYS:H | 2.23 | 0.42 |
| 3:R:533:GLY:O | 3:R:536:LEU:N | 2.52 | 0.42 |
| 3:R:570:CYS:O | 3:R:571:ASP:O | 2.38 | 0.42 |
| 3:R:595:GLU:CA | 3:R:599:SER:HB3 | 2.47 | 0.42 |
| 3:R:702:LEU:HD12 | 10:Y:51:SER:HB3 | 2.02 | 0.42 |
| 3:R:956:GLU:C | 3:R:958:LEU:H | 2.24 | 0.42 |
| 4:S:67:PHE:CD2 | 4:S:121:VAL:HG12 | 2.47 | 0.42 |
| 4:S:72:ALA:C | 4:S:74:ASP:H | 2.23 | 0.42 |
| 4:S:85:CYS:O | 4:S:89:CYS:SG | 2.77 | 0.42 |
| 5:T:88:GLU:H | 5:T:99:VAL:HG12 | 1.85 | 0.42 |
| 7:V:81:VAL:O | 7:V:82:ILE:CG1 | 2.68 | 0.42 |
| 10:Y:20:SER:H | 10:Y:22:ILE:CD1 | 2.32 | 0.42 |
| 3:R:702:LEU:HD22 | 10:Y:47:ARG:NH1 | 2.35 | 0.42 |
| 1:A:297:THR:O | 1:A:298:LEU:C | 2.58 | 0.41 |
| 1:A:363:GLN:HA | 1:A:366:ILE:CG2 | 2.50 | 0.41 |
| 1:A:558:LYS:HG3 | 3:R:104:GLU:CB | 2.39 | 0.41 |
| 1:A:697:GLU:O | 1:A:698:ASN:C | 2.58 | 0.41 |
| 1:A:727:VAL:C | 1:A:729:ALA:N | 2.72 | 0.41 |
| 2:C:379:ILE:CD1 | 3:B:1042:ALA:HA | 2.45 | 0.41 |
| 3:B:183:ILE:O | 3:B:184:THR:O | 2.38 | 0.41 |
| 3:B:353:LEU:HA | 3:B:404:VAL:CG1 | 2.46 | 0.41 |
| 3:B:39:LEU:HD11 | 3:B:354:PHE:CZ | 2.55 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 3:B:485:VAL:C | 3:B:487:LYS:H | 2.23 | 0.41 |
| 3:B:517:TRP:CD1 | 3:B:531:GLN:N | 2.81 | 0.41 |
| 3:B:533:GLY:O | 3:B:536:LEU:N | 2.49 | 0.41 |
| 3:B:582:VAL:CG1 | 3:B:586:ASN:N | 2.75 | 0.41 |
| 3:B:626:VAL:HA | 3:B:639:HIS:O | 2.20 | 0.41 |
| 2:C:108:ILE:O | 2:C:109:GLU:C | 2.57 | 0.41 |
| 2:C:250:ILE:CG2 | 2:C:251:ILE:H | 2.30 | 0.41 |
| 6:F:59:LEU:C | 6:F:61:ASN:H | 2.23 | 0.41 |
| 2:G:129:GLU:O | 2:G:131:LYS:N | 2.53 | 0.41 |
| 2:G:117:PRO:HD3 | 2:G:276:ASN:HD21 | 1.85 | 0.41 |
| 8:K:15:PHE:HD1 | 8:K:16:ASN:OD1 | 2.03 | 0.41 |
| 4:D:64:LEU:HB3 | 10:N:6:ARG:HD2 | 2.01 | 0.41 |
| 1:Q:275:THR:HA | 1:Q:278:ASP:O | 2.20 | 0.41 |
| 1:Q:286:PRO:O | 1:Q:287:SER:CB | 2.66 | 0.41 |
| 1:Q:298:LEU:O | 1:Q:301:ARG:N | 2.52 | 0.41 |
| 1:Q:334:ILE:CG2 | 1:Q:482:VAL:CG1 | 2.97 | 0.41 |
| 1:Q:363:GLN:HA | 1:Q:366:ILE:CG2 | 2.50 | 0.41 |
| 1:Q:440:GLY:HA3 | 1:Q:444:ARG:NH2 | 2.34 | 0.41 |
| 1:Q:508:LEU:O | 1:Q:638:PHE:CE2 | 2.73 | 0.41 |
| 1:Q:667:ARG:NH1 | 1:Q:667:ARG:HG2 | 2.34 | 0.41 |
| 3:R:1012:LEU:O | 3:R:1095:TYR:CE2 | 2.68 | 0.41 |
| 3:R:165:GLU:OE2 | 3:R:338:TYR:OH | 2.31 | 0.41 |
| 3:R:337:HIS:CD2 | 3:R:339:ALA:HB3 | 2.55 | 0.41 |
| 3:R:453:MET:CG | 3:R:468:LYS:HD2 | 2.39 | 0.41 |
| 3:R:64:ARG:CG | 3:R:64:ARG:NH1 | 2.81 | 0.41 |
| 3:R:691:ARG:CZ | 3:R:756:ARG:HH21 | 2.33 | 0.41 |
| 5:T:149:VAL:HG22 | 5:T:160:ILE:HA | 2.01 | 0.41 |
| 5:T:27:LEU:HB2 | 5:T:51:VAL:HG21 | 2.02 | 0.41 |
| 5:T:30:LEU:HD11 | 5:T:72:PHE:CE2 | 2.55 | 0.41 |
| 6:U:72:LEU:C | 6:U:74:SER:N | 2.72 | 0.41 |
| 8:W:49:ALA:O | 8:W:50:LEU:O | 2.38 | 0.41 |
| 8:W:53:ILE:O | 8:W:54:ASN:HB2 | 2.20 | 0.41 |
| 10:Y:16:ASP:OD2 | 10:Y:17:LYS:HG3 | 2.19 | 0.41 |
| 1:A:428:ILE:HG21 | 1:A:495:ILE:HD13 | 2.01 | 0.41 |
| 1:A:334:ILE:CG2 | 1:A:482:VAL:HG11 | 2.47 | 0.41 |
| 1:A:51:VAL:HG23 | 1:A:58:CYS:HB3 | 2.01 | 0.41 |
| 1:A:558:LYS:NZ | 3:R:108:GLU:HG2 | 2.34 | 0.41 |
| 1:A:569:SER:HB2 | 1:A:584:SER:HG | 1.85 | 0.41 |
| 1:A:668:ALA:CB | 1:A:707:LEU:HD13 | 2.49 | 0.41 |
| 3:B:1069:TRP:NE1 | 3:B:1088:LEU:CB | 2.79 | 0.41 |
| 3:B:1097:PHE:O | 3:B:1098:LYS:C | 2.57 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 3:B:234:THR:HB | 3:B:237:ASP:OD2 | 2.20 | 0.41 |
| 3:B:247:GLU:N | 3:B:249:GLN:HG2 | 2.35 | 0.41 |
| 3:B:53:ILE:HB | 3:B:54:PRO:CD | 2.50 | 0.41 |
| 3:B:740:MET:HE1 | 3:B:888:ILE:HD11 | 2.02 | 0.41 |
| 3:B:759:SER:CB | 3:B:862:VAL:O | 2.57 | 0.41 |
| 3:B:83:MET:O | 3:B:87:LEU:HD12 | 2.20 | 0.41 |
| 1:A:827:LEU:CD1 | 2:C:315:LEU:HD13 | 2.44 | 0.41 |
| 4:D:123:PRO:C | 4:D:125:SER:H | 2.23 | 0.41 |
| 4:D:253:ILE:HG23 | 4:D:254:GLU:N | 2.34 | 0.41 |
| 2:G:40:GLU:O | 2:G:45:ARG:CG | 2.64 | 0.41 |
| 2:G:64:ILE:O | 2:G:65:ALA:HB2 | 2.20 | 0.41 |
| 8:K:39:ARG:NE | 8:K:68:GLU:OE1 | 2.53 | 0.41 |
| 8:K:78:ILE:CD1 | 8:K:92:LEU:HD12 | 2.50 | 0.41 |
| 9:L:25:GLY:O | 9:L:43:TYR:CG | 2.74 | 0.41 |
| 9:L:69:LEU:CD2 | 9:L:73:ILE:HG12 | 2.50 | 0.41 |
| 11:P:13:PHE:CD1 | 11:P:13:PHE:N | 2.88 | 0.41 |
| 1:Q:357:ASN:HD22 | 1:Q:361:LEU:HD22 | 1.85 | 0.41 |
| 1:Q:394:ARG:O | 1:Q:395:LYS:C | 2.58 | 0.41 |
| 1:Q:512:LYS:HE3 | 1:Q:583:ASP:HA | 2.02 | 0.41 |
| 1:Q:715:ALA:C | 1:Q:717:LYS:H | 2.23 | 0.41 |
| 1:Q:727:VAL:O | 1:Q:728:MET:C | 2.57 | 0.41 |
| 3:R:228:ARG:NH1 | 3:R:262:ILE:O | 2.52 | 0.41 |
| 3:R:31:TYR:O | 3:R:34:PHE:HB3 | 2.20 | 0.41 |
| 3:R:490:TYR:CE1 | 3:R:527:ILE:CG2 | 2.99 | 0.41 |
| 3:R:557:HIS:N | 3:R:623:ASN:ND2 | 2.47 | 0.41 |
| 3:R:627:ALA:O | 3:R:628:LEU:C | 2.58 | 0.41 |
| 3:R:774:VAL:O | 3:R:775:MET:C | 2.57 | 0.41 |
| 3:R:992:LYS:CE | 3:R:996:MET:SD | 3.08 | 0.41 |
| 4:S:18:GLU:HA | 4:S:225:LYS:HG2 | 2.01 | 0.41 |
| 4:S:253:ILE:CG2 | 4:S:254:GLU:N | 2.83 | 0.41 |
| 6:U:46:LYS:HD2 | 6:U:74:SER:O | 2.20 | 0.41 |
| 6:U:59:LEU:HD23 | 6:U:59:LEU:C | 2.41 | 0.41 |
| 1:A:550:GLN:O | 1:A:553:SER:HB3 | 2.21 | 0.41 |
| 3:B:82:PRO:CG | 3:B:143:GLU:OE1 | 2.67 | 0.41 |
| 3:B:14:ILE:HG12 | 3:B:18:PHE:CE2 | 2.55 | 0.41 |
| 3:B:227:MET:CE | 3:B:312:ALA:O | 2.68 | 0.41 |
| 3:B:338:TYR:OH | 3:B:468:LYS:HE3 | 2.20 | 0.41 |
| 3:B:477:ALA:HB2 | 3:B:576:ARG:NE | 2.34 | 0.41 |
| 3:B:591:ILE:CD1 | 3:B:612:LYS:HZ3 | 2.32 | 0.41 |
| 2:C:391:ARG:HH11 | 2:C:391:ARG:CG | 2.14 | 0.41 |
| 4:D:107:ARG:O | 4:D:133:LEU:N | 2.48 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 5:E:112:GLN:HB3 | 5:E:112:GLN:HE21 | 1.67 | 0.41 |
| 5:E:51:VAL:O | 5:E:53:THR:N | 2.48 | 0.41 |
| 5:E:92:VAL:HG11 | 5:E:127:ILE:HG12 | 2.01 | 0.41 |
| 2:G:125:TYR:HA | 2:G:250:ILE:HG23 | 2.02 | 0.41 |
| 7:H:32:LEU:HD22 | 7:H:39:PRO:HD3 | 2.02 | 0.41 |
| 9:L:66:LYS:H | 9:L:66:LYS:HG3 | 1.60 | 0.41 |
| 3:B:902:LYS:CB | 10:N:42:ARG:NH1 | 2.79 | 0.41 |
| 3:B:933:ALA:CB | 10:N:47:ARG:HH12 | 2.22 | 0.41 |
| 10:N:7:CYS:SG | 10:N:45:CYS:SG | 3.18 | 0.41 |
| 1:Q:432:ALA:HB3 | 1:Q:480:MET:O | 2.20 | 0.41 |
| 3:R:119:LEU:HD11 | 3:R:350:PHE:HE2 | 1.85 | 0.41 |
| 3:R:125:SER:O | 3:R:128:ASP:N | 2.53 | 0.41 |
| 3:R:139:ILE:HD12 | 10:Y:61:HIS:NE2 | 2.35 | 0.41 |
| 3:R:234:THR:HG21 | 3:R:236:ARG:HB2 | 2.02 | 0.41 |
| 3:R:321:LYS:HA | 3:R:324:GLU:HB3 | 2.01 | 0.41 |
| 3:R:321:LYS:HE3 | 3:R:321:LYS:HB3 | 1.79 | 0.41 |
| 3:R:373:LYS:HG3 | 3:R:375:ARG:CB | 2.47 | 0.41 |
| 3:R:497:VAL:O | 3:R:498:GLU:C | 2.58 | 0.41 |
| 3:R:745:VAL:C | 3:R:747:ARG:H | 2.24 | 0.41 |
| 3:R:756:ARG:CG | 3:R:757:LEU:N | 2.82 | 0.41 |
| 3:R:810:LEU:HD13 | 3:R:864:VAL:HG11 | 2.02 | 0.41 |
| 3:R:97:TRP:CZ3 | 3:R:113:GLU:HB3 | 2.55 | 0.41 |
| 4:S:111:SER:OG | 4:S:125:SER:O | 2.37 | 0.41 |
| 4:S:11:THR:HA | 4:S:238:PRO:HD3 | 2.02 | 0.41 |
| 4:S:78:TRP:N | 4:S:78:TRP:HD1 | 2.16 | 0.41 |
| 11:Z:22:PRO:HG2 | 11:Z:23:GLY:N | 2.34 | 0.41 |
| 1:A:308:ARG:O | 1:A:308:ARG:HG2 | 2.20 | 0.41 |
| 1:A:363:GLN:O | 1:A:367:ASN:OD1 | 2.39 | 0.41 |
| 1:A:396:GLU:C | 1:A:398:ALA:N | 2.73 | 0.41 |
| 1:A:589:LYS:O | 1:A:592:ILE:HG13 | 2.19 | 0.41 |
| 1:A:589:LYS:O | 1:A:592:ILE:CG1 | 2.68 | 0.41 |
| 1:A:720:ASP:C | 1:A:722:PHE:N | 2.73 | 0.41 |
| 3:B:1046:LYS:HG2 | 3:B:1050:LEU:HD21 | 2.02 | 0.41 |
| 1:A:71:HIS:ND1 | 3:B:1070:TYR:CE2 | 2.89 | 0.41 |
| 3:B:183:ILE:CG1 | 3:B:206:LYS:HB3 | 2.49 | 0.41 |
| 3:B:388:ASP:O | 3:B:389:ILE:C | 2.58 | 0.41 |
| 3:B:756:ARG:CG | 3:B:757:LEU:N | 2.83 | 0.41 |
| 3:B:790:ARG:HG3 | 3:B:791:LEU:N | 2.36 | 0.41 |
| 3:B:978:LYS:HZ1 | 4:D:205:LEU:CD1 | 2.31 | 0.41 |
| 2:C:284:PHE:N | 2:C:284:PHE:CD1 | 2.87 | 0.41 |
| 2:C:86:THR:O | 2:C:104:LEU:CD1 | 2.68 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 4:D:260:LEU:CD2 | 4:D:264:VAL:HG21 | 2.51 | 0.41 |
| 2:G:289:ALA:O | 2:G:290:ARG:C | 2.56 | 0.41 |
| 4:D:64:LEU:HB3 | 10:N:5:ILE:HG13 | 2.02 | 0.41 |
| 3:B:797:VAL:CB | 11:P:36:MET:HE1 | 2.40 | 0.41 |
| 1:Q:424:SER:HB3 | 3:R:1032:GLU:OE2 | 2.20 | 0.41 |
| 1:Q:532:ILE:O | 1:Q:533:ASP:C | 2.59 | 0.41 |
| 1:Q:607:GLN:N | 1:Q:608:PRO:HD2 | 2.35 | 0.41 |
| 3:R:21:LYS:CA | 3:R:25:ARG:NH1 | 2.82 | 0.41 |
| 3:R:269:LEU:HD13 | 3:R:286:ILE:HG23 | 2.02 | 0.41 |
| 3:R:119:LEU:HD11 | 3:R:350:PHE:CE2 | 2.55 | 0.41 |
| 3:R:536:LEU:O | 3:R:536:LEU:HD22 | 2.20 | 0.41 |
| 3:R:558:ILE:HG21 | 3:R:563:ILE:HG21 | 2.02 | 0.41 |
| 3:R:648:LEU:HD22 | 3:R:652:ALA:HB1 | 2.02 | 0.41 |
| 3:R:668:TYR:O | 3:R:671:ALA:HB3 | 2.20 | 0.41 |
| 3:R:703:VAL:HG21 | 3:R:930:GLY:N | 2.35 | 0.41 |
| 3:R:82:PRO:C | 3:R:84:GLU:H | 2.24 | 0.41 |
| 3:R:87:LEU:HD22 | 3:R:851:LEU:HD11 | 2.02 | 0.41 |
| 3:R:83:MET:O | 3:R:87:LEU:HD12 | 2.20 | 0.41 |
| 4:S:165:ARG:HH11 | 4:S:165:ARG:HG2 | 1.85 | 0.41 |
| 4:S:187:VAL:HG21 | 4:S:203:CYS:HB2 | 2.00 | 0.41 |
| 4:S:252:LYS:O | 4:S:256:LEU:N | 2.47 | 0.41 |
| 4:S:38:ILE:HD12 | 4:S:38:ILE:C | 2.41 | 0.41 |
| 5:T:114:THR:HG22 | 5:T:115:ASP:N | 2.36 | 0.41 |
| 5:T:179:LYS:HZ2 | 6:U:79:THR:CB | 2.26 | 0.41 |
| 6:U:59:LEU:C | 6:U:61:ASN:H | 2.23 | 0.41 |
| 2:G:286:ILE:HG13 | 7:V:49:ASP:OD2 | 2.19 | 0.41 |
| 1:A:301:ARG:NH1 | 1:A:308:ARG:HH12 | 2.18 | 0.41 |
| 1:A:364:PHE:HA | 1:A:373:PRO:O | 2.21 | 0.41 |
| 1:A:375:ALA:HB2 | 1:A:409:ARG:HA | 2.02 | 0.41 |
| 1:A:438:LEU:C | 1:A:438:LEU:HD23 | 2.40 | 0.41 |
| 1:A:532:ILE:HG23 | 9:L:40:PHE:CD1 | 2.55 | 0.41 |
| 1:A:555:PHE:CD2 | 1:A:631:LEU:HD13 | 2.56 | 0.41 |
| 3:B:840:ARG:NH1 | 3:B:1021:ALA:HB2 | 2.35 | 0.41 |
| 1:A:485:ASN:ND2 | 3:B:1039:PHE:CE2 | 2.88 | 0.41 |
| 3:B:1089:PHE:HA | 3:B:1090:PRO:HD3 | 1.80 | 0.41 |
| 3:B:211:HIS:HD1 | 3:B:222:PRO:HG3 | 1.86 | 0.41 |
| 3:B:232:ILE:HG23 | 3:B:237:ASP:HB3 | 2.03 | 0.41 |
| 3:B:369:LEU:HD21 | 3:B:379:LEU:CD2 | 2.49 | 0.41 |
| 3:B:50:PRO:CG | 3:B:51:THR:N | 2.84 | 0.41 |
| 3:B:668:TYR:O | 3:B:671:ALA:HB3 | 2.20 | 0.41 |
| 3:B:83:MET:HG2 | 3:B:86:ARG:NH2 | 2.35 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 3:B:875:GLY:HA2 | 3:B:887:VAL:HG11 | 2.03 | 0.41 |
| 2:C:299:LYS:O | 2:C:302:ALA:HB3 | 2.21 | 0.41 |
| 2:C:309:ASP:OD2 | 2:C:310:ILE:N | 2.53 | 0.41 |
| 2:C:21:SER:O | 2:C:33:LYS:CE | 2.69 | 0.41 |
| 2:C:391:ARG:O | 2:C:391:ARG:HG2 | 2.20 | 0.41 |
| 4:D:18:GLU:CG | 4:D:225:LYS:HG2 | 2.50 | 0.41 |
| 6:F:13:PRO:HG2 | 6:F:16:VAL:HG23 | 2.02 | 0.41 |
| 6:F:71:ILE:O | 6:F:71:ILE:HG22 | 2.20 | 0.41 |
| 2:G:117:PRO:CD | 2:G:276:ASN:OD1 | 2.69 | 0.41 |
| 1:Q:426:HIS:O | 1:Q:429:SER:HB2 | 2.19 | 0.41 |
| 1:Q:444:ARG:N | 1:Q:444:ARG:HD3 | 2.36 | 0.41 |
| 1:Q:512:LYS:N | 1:Q:583:ASP:OD2 | 2.54 | 0.41 |
| 1:Q:708:ARG:HG3 | 1:Q:709:SER:H | 1.84 | 0.41 |
| 1:Q:739:ASN:O | 3:R:919:MET:HE3 | 2.20 | 0.41 |
| 1:Q:747:LEU:HD12 | 1:Q:790:LEU:HD11 | 2.01 | 0.41 |
| 1:Q:823:LEU:HD12 | 1:Q:824:ILE:H | 1.84 | 0.41 |
| 3:R:346:ALA:O | 3:R:347:GLY:C | 2.59 | 0.41 |
| 3:R:358:PHE:O | 3:R:360:ALA:N | 2.53 | 0.41 |
| 3:R:244:LEU:CD1 | 3:R:500:VAL:HB | 2.50 | 0.41 |
| 3:R:696:HIS:NE2 | 3:R:752:SER:O | 2.53 | 0.41 |
| 4:S:18:GLU:OE1 | 4:S:225:LYS:HD2 | 2.21 | 0.41 |
| 4:S:253:ILE:HG23 | 4:S:254:GLU:N | 2.35 | 0.41 |
| 4:S:61:ARG:HH11 | 4:S:61:ARG:HG2 | 1.86 | 0.41 |
| 6:U:13:PRO:HG2 | 6:U:16:VAL:HG23 | 2.02 | 0.41 |
| 9:X:77:ARG:HB2 | 9:X:77:ARG:CZ | 2.50 | 0.41 |
| 11:Z:33:ILE:O | 11:Z:34:ILE:C | 2.59 | 0.41 |
| 1:A:262:ILE:CD1 | 1:A:266:TRP:HE1 | 2.33 | 0.41 |
| 1:A:687:ILE:HD11 | 1:A:695:SER:HB3 | 2.02 | 0.41 |
| 1:A:759:ARG:HE | 1:A:759:ARG:HB3 | 1.58 | 0.41 |
| 3:B:223:PHE:CD2 | 3:B:256:LEU:HD22 | 2.55 | 0.41 |
| 3:B:228:ARG:NH2 | 3:B:233:LEU:O | 2.54 | 0.41 |
| 3:B:578:PRO:HB3 | 3:B:615:TYR:CE1 | 2.55 | 0.41 |
| 3:B:5:LEU:CD1 | 3:B:5:LEU:N | 2.84 | 0.41 |
| 3:B:617:ASP:C | 3:B:617:ASP:OD2 | 2.59 | 0.41 |
| 3:B:5:LEU:HD23 | 3:B:630:PRO:HG2 | 2.02 | 0.41 |
| 3:B:633:LEU:O | 3:B:635:PRO:CD | 2.68 | 0.41 |
| 3:B:707:ALA:HA | 3:B:710:ILE:HD12 | 2.03 | 0.41 |
| 3:B:81:SER:HB3 | 3:B:84:GLU:CG | 2.43 | 0.41 |
| 2:C:131:LYS:HG2 | 2:C:248:GLU:C | 2.41 | 0.41 |
| 2:C:249:TYR:HD1 | 2:C:249:TYR:H | 1.67 | 0.41 |
| 2:C:390:MET:HE1 | 5:E:58:ILE:O | 2.21 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 6:F:13:PRO:O | 6:F:14:TYR:C | 2.59 | 0.41 |
| 2:G:373:ILE:O | 3:R:1049:LEU:HD21 | 2.21 | 0.41 |
| 2:G:391:ARG:HH21 | 8:W:42:GLN:NE2 | 2.19 | 0.41 |
| 1:A:842:TYR:O | 7:H:41:GLN:NE2 | 2.53 | 0.41 |
| 7:H:42:LEU:O | 7:H:43:PRO:C | 2.58 | 0.41 |
| 8:K:54:ASN:ND2 | 8:K:58:SER:N | 2.68 | 0.41 |
| 9:L:67:ASP:C | 9:L:69:LEU:N | 2.73 | 0.41 |
| 4:D:129:PRO:HD2 | 10:N:16:ASP:N | 2.36 | 0.41 |
| 1:Q:25:THR:HG22 | 1:Q:26:ALA:N | 2.36 | 0.41 |
| 1:Q:293:ARG:HA | 1:Q:294:PRO:HD3 | 1.87 | 0.41 |
| 1:Q:313:LEU:HA | 1:Q:313:LEU:HD12 | 1.86 | 0.41 |
| 3:R:145:PRO:O | 3:R:147:ASP:N | 2.53 | 0.41 |
| 3:R:183:ILE:CG1 | 3:R:206:LYS:HB3 | 2.50 | 0.41 |
| 3:R:226:LEU:HD13 | 3:R:297:PHE:CE1 | 2.56 | 0.41 |
| 3:R:247:GLU:N | 3:R:249:GLN:HG2 | 2.34 | 0.41 |
| 3:R:291:GLN:O | 3:R:295:LYS:HE2 | 2.20 | 0.41 |
| 3:R:31:TYR:O | 3:R:35:VAL:HG12 | 2.21 | 0.41 |
| 3:R:55:GLY:O | 3:R:105:ASN:N | 2.53 | 0.41 |
| 3:R:958:LEU:HA | 3:R:962:TYR:O | 2.21 | 0.41 |
| 4:S:63:ALA:CB | 4:S:155:LYS:HZ3 | 2.30 | 0.41 |
| 5:T:23:ASN:O | 5:T:26:ALA:N | 2.53 | 0.41 |
| 6:U:79:THR:CG2 | 6:U:80:SER:N | 2.82 | 0.41 |
| 7:V:49:ASP:CG | 7:V:50:PRO:HD2 | 2.41 | 0.41 |
| 10:Y:21:PHE:CE2 | 10:Y:49:LEU:HD13 | 2.56 | 0.41 |
| 1:A:216:PRO:O | 1:A:219:ILE:HD11 | 2.20 | 0.41 |
| 1:A:712:GLY:C | 1:A:714:ILE:H | 2.23 | 0.41 |
| 1:A:839:ARG:NH1 | 7:H:37:ILE:HG23 | 2.36 | 0.41 |
| 1:A:874:ARG:HD3 | 1:A:874:ARG:HA | 1.73 | 0.41 |
| 3:B:1036:LEU:HB3 | 3:B:1041:THR:HG23 | 2.02 | 0.41 |
| 3:B:1069:TRP:HH2 | 3:B:1072:LYS:HE3 | 1.85 | 0.41 |
| 3:B:121:ILE:CG2 | 3:B:128:ASP:HB2 | 2.51 | 0.41 |
| 3:B:128:ASP:OD1 | 3:B:130:ILE:N | 2.53 | 0.41 |
| 3:B:291:GLN:C | 3:B:293:ILE:N | 2.74 | 0.41 |
| 3:B:162:VAL:HG23 | 3:B:428:ARG:O | 2.20 | 0.41 |
| 3:B:536:LEU:O | 3:B:536:LEU:HD22 | 2.20 | 0.41 |
| 1:A:764:ARG:NH2 | 3:B:624:ALA:O | 2.53 | 0.41 |
| 3:B:6:THR:O | 3:B:7:ILE:HD13 | 2.21 | 0.41 |
| 1:A:647:ARG:HD2 | 3:B:965:ASP:CB | 2.51 | 0.41 |
| 4:D:176:CYS:N | 4:D:195:LEU:CD2 | 2.83 | 0.41 |
| 5:E:127:ILE:HB | 5:E:136:ILE:CG1 | 2.49 | 0.41 |
| 6:F:79:THR:CG2 | 6:F:80:SER:H | 2.32 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:Q:853:ASP:OD2 | 2:G:311:ARG:NH1 | 2.54 | 0.41 |
| 1:Q:841:LEU:HD23 | 2:G:367:LYS:HB2 | 2.03 | 0.41 |
| 7:H:12:ARG:O | 7:H:13:ILE:CB | 2.69 | 0.41 |
| 8:K:25:ASN:O | 8:K:26:ARG:O | 2.38 | 0.41 |
| 1:Q:361:LEU:HA | 1:Q:361:LEU:HD12 | 1.93 | 0.41 |
| 1:Q:447:LEU:HA | 1:Q:450:CYS:SG | 2.61 | 0.41 |
| 1:Q:551:VAL:O | 1:Q:554:ALA:HB3 | 2.21 | 0.41 |
| 1:Q:601:LYS:HA | 1:Q:601:LYS:HD3 | 1.89 | 0.41 |
| 1:Q:759:ARG:H | 1:Q:779:ARG:NH2 | 2.19 | 0.41 |
| 1:Q:827:LEU:HD11 | 2:G:315:LEU:CD1 | 2.43 | 0.41 |
| 1:Q:82:ILE:HD11 | 1:Q:90:ILE:CD1 | 2.51 | 0.41 |
| 3:R:1012:LEU:C | 3:R:1012:LEU:CD1 | 2.89 | 0.41 |
| 3:R:1017:THR:O | 3:R:1024:GLY:HA3 | 2.20 | 0.41 |
| 3:R:1062:ASP:OD1 | 3:R:1062:ASP:N | 2.54 | 0.41 |
| 3:R:253:PHE:HA | 3:R:256:LEU:HD12 | 2.02 | 0.41 |
| 3:R:343:LEU:HB3 | 3:R:344:ARG:H | 1.71 | 0.41 |
| 3:R:560:THR:CG2 | 3:R:561:ASP:H | 2.32 | 0.41 |
| 3:R:578:PRO:HB3 | 3:R:615:TYR:CE1 | 2.56 | 0.41 |
| 3:R:792:LEU:HD11 | 3:R:809:VAL:HG11 | 1.99 | 0.41 |
| 3:R:941:ASP:C | 3:R:941:ASP:OD1 | 2.59 | 0.41 |
| 3:R:676:ALA:HB2 | 3:R:991:GLN:NE2 | 2.35 | 0.41 |
| 4:S:108:MET:SD | 4:S:131:VAL:O | 2.79 | 0.41 |
| 4:S:178:LYS:HA | 4:S:181:ASN:ND2 | 2.35 | 0.41 |
| 4:S:22:LEU:HD13 | 4:S:226:TYR:CE1 | 2.55 | 0.41 |
| 4:S:27:ALA:HB1 | 9:X:23:THR:CG2 | 2.51 | 0.41 |
| 6:U:48:ASP:O | 6:U:52:ALA:N | 2.37 | 0.41 |
| 2:G:63:LEU:HD11 | 8:W:25:ASN:HD22 | 1.85 | 0.41 |
| 1:A:258:PRO:CB | 1:A:261:ILE:HD12 | 2.51 | 0.41 |
| 1:A:321:SER:O | 1:A:322:SER:HB2 | 2.20 | 0.41 |
| 1:A:495:ILE:O | 1:A:495:ILE:HG12 | 2.21 | 0.41 |
| 1:A:674:ASN:OD1 | 1:A:675:LEU:N | 2.54 | 0.41 |
| 1:A:822:ARG:O | 1:A:823:LEU:C | 2.58 | 0.41 |
| 3:B:758:TYR:HB3 | 3:B:837:ILE:HG21 | 2.02 | 0.41 |
| 2:C:106:ARG:HH11 | 2:C:106:ARG:CG | 2.33 | 0.41 |
| 2:C:131:LYS:HD3 | 2:C:248:GLU:CG | 2.51 | 0.41 |
| 4:D:67:PHE:CD2 | 4:D:121:VAL:HG12 | 2.46 | 0.41 |
| 4:D:175:ASN:C | 4:D:195:LEU:HD21 | 2.40 | 0.41 |
| 4:D:39:MET:HG3 | 4:D:145:LEU:HD23 | 2.02 | 0.41 |
| 4:D:39:MET:O | 4:D:67:PHE:HB2 | 2.21 | 0.41 |
| 2:G:117:PRO:O | 2:G:120:PRO:HG3 | 2.20 | 0.41 |
| 2:G:18:LYS:HB2 | 2:G:19:GLN:H | 1.67 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:G:267:VAL:O | 2:G:267:VAL:HG12 | 2.21 | 0.41 |
| 1:Q:285:PRO:HA | 1:Q:286:PRO:HD3 | 1.80 | 0.41 |
| 1:Q:315:GLY:HA2 | 3:R:1029:GLY:HA2 | 2.02 | 0.41 |
| 1:Q:331:ASN:C | 1:Q:332:ILE:CD1 | 2.89 | 0.41 |
| 1:Q:422:GLN:HA | 1:Q:423:PRO:C | 2.41 | 0.41 |
| 1:Q:482:VAL:O | 1:Q:484:LYS:N | 2.53 | 0.41 |
| 1:Q:495:ILE:HG23 | 1:Q:496:ILE:HG13 | 2.02 | 0.41 |
| 1:Q:507:TYR:O | 1:Q:507:TYR:CD2 | 2.74 | 0.41 |
| 3:R:119:LEU:HD12 | 3:R:120:PRO:N | 2.35 | 0.41 |
| 3:R:59:ARG:CZ | 3:R:107:ILE:HD12 | 2.51 | 0.41 |
| 3:R:92:TYR:CD2 | 3:R:92:TYR:O | 2.73 | 0.41 |
| 1:Q:649:GLU:HG3 | 3:R:965:ASP:OD2 | 2.20 | 0.41 |
| 3:R:899:TYR:CE2 | 4:S:29:ARG:CZ | 3.03 | 0.41 |
| 4:S:35:TYR:O | 4:S:37:PRO:HD3 | 2.21 | 0.41 |
| 4:S:48:GLU:N | 4:S:140:SER:HB3 | 2.35 | 0.41 |
| 5:T:17:GLU:CD | 5:T:25:ILE:HD12 | 2.41 | 0.41 |
| 5:T:36:GLU:HG2 | 6:U:34:LEU:HG | 2.03 | 0.41 |
| 7:V:45:ILE:HB | 7:V:79:ARG:CD | 2.50 | 0.41 |
| 8:W:51:ILE:HG22 | 8:W:51:ILE:O | 2.19 | 0.41 |
| 10:Y:42:ARG:CG | 10:Y:43:TYR:N | 2.76 | 0.41 |
| 10:Y:8:PHE:CD2 | 10:Y:8:PHE:N | 2.87 | 0.41 |
| 11:Z:11:LYS:O | 11:Z:12:THR:HG23 | 2.21 | 0.41 |
| 3:R:795:ASN:ND2 | 11:Z:36:MET:CE | 2.82 | 0.41 |
| 1:A:615:LEU:O | 1:A:619:TYR:HD1 | 2.03 | 0.41 |
| 1:A:651:VAL:CG2 | 1:A:743:MET:HB3 | 2.51 | 0.41 |
| 1:A:678:LYS:HD2 | 1:A:684:LEU:HG | 2.02 | 0.41 |
| 3:B:145:PRO:O | 3:B:147:ASP:N | 2.54 | 0.41 |
| 3:B:234:THR:CG2 | 3:B:236:ARG:HB2 | 2.51 | 0.41 |
| 3:B:472:LEU:O | 3:B:473:MET:O | 2.39 | 0.41 |
| 3:B:800:PRO:HG2 | 11:P:38:ARG:N | 2.36 | 0.41 |
| 2:C:13:LEU:HD22 | 2:C:16:LYS:HZ2 | 1.85 | 0.41 |
| 2:C:63:LEU:HD23 | 2:C:63:LEU:C | 2.41 | 0.41 |
| 4:D:131:VAL:CG2 | 4:D:132:LEU:N | 2.61 | 0.41 |
| 4:D:151:LYS:O | 4:D:152:GLU:C | 2.59 | 0.41 |
| 2:C:288:ALA:HA | 7:H:16:LEU:O | 2.21 | 0.41 |
| 8:K:21:SER:C | 8:K:23:TRP:N | 2.73 | 0.41 |
| 8:K:66:GLU:O | 8:K:70:ARG:HG3 | 2.21 | 0.41 |
| 1:Q:80:PRO:HD2 | 1:Q:178:SER:HB3 | 2.03 | 0.41 |
| 1:Q:23:SER:C | 1:Q:24:VAL:HG13 | 2.40 | 0.41 |
| 1:Q:58:CYS:O | 1:Q:60:THR:N | 2.52 | 0.41 |
| 1:Q:752:VAL:HG22 | 1:Q:757:ILE:HD13 | 2.03 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:Q:855:VAL:O | 1:Q:855:VAL:HG12 | 2.21 | 0.41 |
| 1:Q:317:ARG:HB2 | 3:R:1016:PRO:HB2 | 2.03 | 0.41 |
| 3:R:1062:ASP:OD1 | 3:R:1087:ASN:O | 2.39 | 0.41 |
| 3:R:183:ILE:HB | 3:R:207:ASP:O | 2.20 | 0.41 |
| 3:R:237:ASP:O | 3:R:241:ALA:N | 2.54 | 0.41 |
| 3:R:38:LYS:O | 3:R:39:LEU:HB3 | 2.21 | 0.41 |
| 3:R:53:ILE:HB | 3:R:54:PRO:CD | 2.51 | 0.41 |
| 3:R:725:ALA:CB | 3:R:985:PHE:CE1 | 3.04 | 0.41 |
| 3:R:725:ALA:O | 3:R:909:ILE:HG23 | 2.20 | 0.41 |
| 3:R:904:VAL:HG21 | 10:Y:42:ARG:NE | 2.29 | 0.41 |
| 4:S:68:MET:CE | 4:S:124:ILE:HG22 | 2.51 | 0.41 |
| 4:S:31:ALA:HA | 4:S:35:TYR:HD2 | 1.85 | 0.41 |
| 3:R:895:VAL:HG21 | 4:S:34:LEU:HD21 | 2.03 | 0.41 |
| 5:T:58:ILE:HG22 | 5:T:59:LEU:N | 2.35 | 0.41 |
| 5:T:97:ILE:CD1 | 5:T:136:ILE:HG21 | 2.51 | 0.41 |
| 6:U:60:SER:HA | 6:U:69:ARG:NH2 | 2.36 | 0.41 |
| 7:V:17:VAL:O | 7:V:17:VAL:HG13 | 2.20 | 0.41 |
| 9:X:74:GLU:O | 9:X:77:ARG:N | 2.54 | 0.41 |
| 3:R:935:LEU:HD21 | 10:Y:43:TYR:HD2 | 1.85 | 0.41 |
| 1:A:380:ARG:HB3 | 1:A:381:PRO:HD2 | 2.03 | 0.41 |
| 1:A:490:ARG:HD2 | 1:A:491:TYR:CE2 | 2.56 | 0.41 |
| 1:A:826:ALA:HB1 | 2:C:334:VAL:CG1 | 2.45 | 0.41 |
| 1:A:8:GLY:H | 2:C:366:PHE:HE1 | 1.68 | 0.41 |
| 1:A:92:GLU:O | 1:A:95:LYS:HB2 | 2.21 | 0.41 |
| 3:B:278:ILE:HG22 | 3:B:279:GLY:H | 1.82 | 0.41 |
| 3:B:34:PHE:HA | 3:B:38:LYS:HB3 | 2.02 | 0.41 |
| 3:B:19:LYS:HD3 | 3:B:603:THR:CG2 | 2.51 | 0.41 |
| 2:C:135:ASP:O | 2:C:137:ALA:N | 2.53 | 0.41 |
| 2:C:270:ALA:HA | 7:H:14:HIS:CE1 | 2.52 | 0.41 |
| 2:C:375:ILE:HG23 | 2:C:377:HIS:H | 1.86 | 0.41 |
| 1:A:832:ALA:CB | 2:C:66:PRO:HB2 | 2.51 | 0.41 |
| 4:D:133:LEU:HD21 | 4:D:139:ILE:CG1 | 2.50 | 0.41 |
| 4:D:21:PRO:O | 4:D:24:PHE:HB3 | 2.21 | 0.41 |
| 4:D:35:TYR:O | 4:D:149:TYR:HD2 | 2.04 | 0.41 |
| 2:G:144:LEU:O | 2:G:145:GLU:C | 2.59 | 0.41 |
| 2:G:341:VAL:HG13 | 2:G:364:GLU:HG2 | 2.02 | 0.41 |
| 2:G:384:GLY:HA2 | 5:T:61:PHE:CE1 | 2.56 | 0.41 |
| 4:D:27:ALA:HA | 9:L:23:THR:HG23 | 2.03 | 0.41 |
| 10:N:53:VAL:HG23 | 10:N:54:ASP:N | 2.36 | 0.41 |
| 1:Q:269:LEU:O | 1:Q:273:VAL:HG23 | 2.21 | 0.41 |
| 1:Q:30:PRO:HB2 | 1:Q:244:ARG:HA | 2.02 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 1:Q:618:GLU:HG3 | 2:G:61:GLU:OE2 | 2.21 | 0.41 |
| 1:Q:672:VAL:CG1 | 1:Q:700:ILE:HD12 | 2.36 | 0.41 |
| 1:Q:70:GLY:HA3 | 1:Q:216:PRO:HG3 | 2.03 | 0.41 |
| 1:Q:786:PHE:CE2 | 1:Q:790:LEU:HD21 | 2.55 | 0.41 |
| 1:Q:841:LEU:C | 1:Q:843:GLY:H | 2.24 | 0.41 |
| 1:Q:866:VAL:CG1 | 1:Q:869:ASN:H | 2.09 | 0.41 |
| 3:R:1046:LYS:C | 3:R:1048:ARG:N | 2.74 | 0.41 |
| 3:R:128:ASP:OD1 | 3:R:130:ILE:CB | 2.68 | 0.41 |
| 3:R:104:GLU:OE2 | 3:R:379:LEU:HD12 | 2.20 | 0.41 |
| 3:R:535:GLU:O | 3:R:536:LEU:C | 2.58 | 0.41 |
| 3:R:555:VAL:HG21 | 3:R:568:VAL:HG22 | 2.03 | 0.41 |
| 3:R:702:LEU:O | 3:R:703:VAL:HB | 2.21 | 0.41 |
| 3:R:762:GLU:OE2 | 3:R:773:ILE:HG13 | 2.21 | 0.41 |
| 3:R:920:THR:C | 3:R:921:LEU:O | 2.57 | 0.41 |
| 5:T:92:VAL:CG1 | 5:T:127:ILE:HG12 | 2.49 | 0.41 |
| 5:T:51:VAL:O | 5:T:53:THR:N | 2.49 | 0.41 |
| 5:T:75:ILE:HD12 | 6:U:20:LEU:HD12 | 2.03 | 0.41 |
| 8:W:15:PHE:HD1 | 8:W:16:ASN:OD1 | 2.04 | 0.41 |
| 8:W:79:ARG:CG | 8:W:79:ARG:NH1 | 2.84 | 0.41 |
| 1:A:422:GLN:HA | 1:A:423:PRO:C | 2.41 | 0.41 |
| 1:A:426:HIS:CE1 | 1:A:490:ARG:HH22 | 2.39 | 0.41 |
| 1:A:563:HIS:HD2 | 1:A:587:VAL:HG13 | 1.85 | 0.41 |
| 1:A:70:GLY:O | 3:B:1067:ILE:HD11 | 2.21 | 0.41 |
| 1:A:697:GLU:CD | 1:A:756:ARG:HD3 | 2.41 | 0.41 |
| 1:A:778:ALA:O | 1:A:780:GLY:N | 2.54 | 0.41 |
| 3:B:59:ARG:CZ | 3:B:107:ILE:HD12 | 2.51 | 0.41 |
| 3:B:1100:LEU:O | 3:B:1101:ILE:C | 2.59 | 0.41 |
| 3:B:849:LEU:HD12 | 3:B:850:VAL:H | 1.86 | 0.41 |
| 2:C:125:TYR:HA | 2:C:250:ILE:HG23 | 2.03 | 0.41 |
| 2:C:140:VAL:O | 2:C:144:LEU:HG | 2.20 | 0.41 |
| 2:C:25:PRO:O | 2:C:28:ILE:HA | 2.21 | 0.41 |
| 4:D:31:ALA:HB3 | 4:D:245:ALA:HB1 | 2.03 | 0.41 |
| 4:D:30:ARG:O | 4:D:34:LEU:HG | 2.20 | 0.41 |
| 5:E:90:LEU:HD12 | 5:E:100:ASN:HB2 | 2.03 | 0.41 |
| 1:Q:826:ALA:CB | 2:G:334:VAL:HG13 | 2.44 | 0.41 |
| 2:G:68:GLU:HB3 | 8:W:30:TYR:OH | 2.21 | 0.41 |
| 2:G:80:GLU:OE1 | 2:G:80:GLU:C | 2.59 | 0.41 |
| 7:H:13:ILE:HG13 | 7:H:14:HIS:N | 2.36 | 0.41 |
| 8:K:78:ILE:HD11 | 8:K:92:LEU:HD12 | 2.03 | 0.41 |
| 9:L:76:ILE:O | 9:L:79:MET:HB3 | 2.21 | 0.41 |
| 4:D:66:PRO:CD | 10:N:13:LEU:HD21 | 2.51 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 1:Q:297:THR:O | 1:Q:300:GLN:HB3 | 2.20 | 0.41 |
| 1:Q:344:ALA:O | 1:Q:411:LEU:HB2 | 2.21 | 0.41 |
| 1:Q:469:SER:HB2 | 1:Q:472:ALA:H | 1.85 | 0.41 |
| 1:Q:500:GLN:HB2 | 3:R:913:HIS:CD2 | 2.56 | 0.41 |
| 1:Q:517:THR:CG2 | 1:Q:518:LYS:H | 2.34 | 0.41 |
| 1:Q:529:ASP:HB3 | 1:Q:626:TRP:CD1 | 2.55 | 0.41 |
| 1:Q:620:SER:C | 1:Q:622:GLU:N | 2.74 | 0.41 |
| 1:Q:649:GLU:HG3 | 3:R:965:ASP:CG | 2.42 | 0.41 |
| 1:Q:674:ASN:CG | 1:Q:675:LEU:N | 2.75 | 0.41 |
| 3:R:183:ILE:O | 3:R:184:THR:O | 2.39 | 0.41 |
| 3:R:368:GLN:O | 3:R:372:SER:N | 2.54 | 0.41 |
| 3:R:412:GLN:NE2 | 3:R:425:HIS:CE1 | 2.89 | 0.41 |
| 3:R:624:ALA:CB | 3:R:639:HIS:CD2 | 3.04 | 0.41 |
| 3:R:729:PHE:C | 3:R:731:GLY:N | 2.72 | 0.41 |
| 1:Q:329:ASP:OD2 | 3:R:732:TYR:CE2 | 2.74 | 0.41 |
| 3:R:740:MET:HB3 | 3:R:891:LEU:CD1 | 2.51 | 0.41 |
| 3:R:9:GLU:O | 3:R:10:ARG:C | 2.59 | 0.41 |
| 2:G:390:MET:SD | 5:T:67:TYR:O | 2.79 | 0.41 |
| 9:X:87:ILE:HG23 | 9:X:88:LYS:N | 2.35 | 0.41 |
| 1:A:361:LEU:HD12 | 1:A:361:LEU:HA | 1.96 | 0.40 |
| 1:A:495:ILE:HG23 | 1:A:496:ILE:HG13 | 2.02 | 0.40 |
| 1:A:58:CYS:O | 1:A:60:THR:N | 2.50 | 0.40 |
| 1:A:750:GLN:OE1 | 1:A:801:GLY:HA3 | 2.21 | 0.40 |
| 1:A:92:GLU:HA | 1:A:95:LYS:HG3 | 2.03 | 0.40 |
| 3:B:1046:LYS:O | 3:B:1050:LEU:HD23 | 2.22 | 0.40 |
| 3:B:334:ASP:OD1 | 3:B:446:HIS:CE1 | 2.73 | 0.40 |
| 3:B:439:ASN:C | 3:B:440:PHE:HD1 | 2.24 | 0.40 |
| 3:B:497:VAL:HG12 | 3:B:498:GLU:H | 1.74 | 0.40 |
| 3:B:624:ALA:CB | 3:B:639:HIS:CD2 | 3.04 | 0.40 |
| 3:B:654:ILE:O | 3:B:654:ILE:HG22 | 2.20 | 0.40 |
| 3:B:808:ASP:O | 3:B:838:VAL:HG13 | 2.20 | 0.40 |
| 3:B:6:THR:CB | 3:B:9:GLU:HB3 | 2.50 | 0.40 |
| 2:C:131:LYS:HD3 | 2:C:248:GLU:HB3 | 2.01 | 0.40 |
| 2:C:247:ASP:O | 2:C:248:GLU:HG3 | 2.21 | 0.40 |
| 2:C:32:LEU:O | 2:C:36:ILE:HG13 | 2.21 | 0.40 |
| 4:D:180:VAL:HG22 | 4:D:190:LEU:HG | 2.00 | 0.40 |
| 4:D:58:LEU:O | 4:D:59:ALA:C | 2.59 | 0.40 |
| 5:E:42:LEU:HD23 | 5:E:42:LEU:N | 2.36 | 0.40 |
| 2:G:393:ILE:HB | 5:T:19:GLY:HA2 | 2.03 | 0.40 |
| 2:G:65:ALA:HA | 2:G:66:PRO:HD3 | 1.84 | 0.40 |
| 1:Q:16:PRO:HD3 | 1:Q:203:ARG:HH22 | 1.86 | 0.40 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:Q:215:PRO:O | 1:Q:216:PRO:O | 2.39 | 0.40 |
| 1:Q:562:PHE:CD2 | 1:Q:611:ILE:HG12 | 2.56 | 0.40 |
| 1:Q:615:LEU:O | 1:Q:619:TYR:HD1 | 2.04 | 0.40 |
| 3:R:1051:ASP:HA | 3:R:1055:ARG:HG2 | 2.02 | 0.40 |
| 3:R:323:ILE:HG13 | 3:R:324:GLU:N | 2.36 | 0.40 |
| 3:R:483:ARG:HA | 3:R:486:GLU:HG2 | 2.03 | 0.40 |
| 3:R:898:PRO:HB2 | 3:R:970:VAL:CG2 | 2.51 | 0.40 |
| 3:R:726:VAL:HG23 | 3:R:984:TYR:HD1 | 1.86 | 0.40 |
| 4:S:35:TYR:O | 4:S:149:TYR:HD2 | 2.04 | 0.40 |
| 5:T:175:ILE:HA | 5:T:178:THR:OG1 | 2.21 | 0.40 |
| 5:T:31:ARG:HG2 | 5:T:35:GLN:CD | 2.41 | 0.40 |
| 9:X:6:LEU:HB2 | 9:X:14:GLU:O | 2.21 | 0.40 |
| 11:Z:13:PHE:HD1 | 11:Z:13:PHE:N | 2.19 | 0.40 |
| 4:S:45:TYR:HD1 | 11:Z:44:ILE:HG12 | 1.86 | 0.40 |
| 1:A:176:THR:HA | 1:A:177:PRO:HD3 | 1.88 | 0.40 |
| 1:A:388:LEU:O | 1:A:389:ARG:C | 2.59 | 0.40 |
| 1:A:474:ALA:C | 1:A:476:ALA:H | 2.24 | 0.40 |
| 1:A:540:LEU:HD23 | 1:A:540:LEU:HA | 1.77 | 0.40 |
| 1:A:656:ASP:HA | 1:A:659:LYS:CG | 2.51 | 0.40 |
| 1:A:672:VAL:O | 1:A:675:LEU:N | 2.54 | 0.40 |
| 1:A:740:ILE:HD13 | 1:A:740:ILE:HA | 1.95 | 0.40 |
| 1:A:782:ILE:HG13 | 1:A:794:GLU:HB3 | 2.02 | 0.40 |
| 3:B:1098:LYS:HD3 | 3:B:1098:LYS:C | 2.41 | 0.40 |
| 3:B:254:PRO:HG2 | 3:B:255:SER:H | 1.86 | 0.40 |
| 3:B:191:SER:CB | 3:B:298:LEU:HA | 2.52 | 0.40 |
| 3:B:402:ASN:O | 3:B:403:TRP:CB | 2.70 | 0.40 |
| 3:B:452:ARG:NH1 | 3:B:452:ARG:HG3 | 2.36 | 0.40 |
| 3:B:462:PRO:C | 3:B:464:SER:N | 2.75 | 0.40 |
| 3:B:474:ALA:HB3 | 3:B:578:PRO:HD3 | 2.04 | 0.40 |
| 3:B:87:LEU:HD22 | 3:B:851:LEU:HD11 | 2.03 | 0.40 |
| 3:B:91:THR:HA | 3:B:155:ASN:N | 2.35 | 0.40 |
| 6:F:31:SER:HA | 6:F:35:GLN:NE2 | 2.30 | 0.40 |
| 2:G:106:ARG:CG | 2:G:106:ARG:HH11 | 2.35 | 0.40 |
| 2:G:118:SER:O | 2:G:119:THR:CB | 2.69 | 0.40 |
| 2:G:131:LYS:HD3 | 2:G:248:GLU:HB3 | 2.02 | 0.40 |
| 2:G:135:ASP:O | 2:G:137:ALA:N | 2.54 | 0.40 |
| 2:G:269:VAL:O | 7:V:14:HIS:CG | 2.75 | 0.40 |
| 2:G:286:ILE:O | 2:G:289:ALA:N | 2.50 | 0.40 |
| 2:G:25:PRO:HG3 | 2:G:33:LYS:NZ | 2.37 | 0.40 |
| 2:G:352:LYS:O | 2:G:353:HIS:C | 2.59 | 0.40 |
| 2:G:379:ILE:CD1 | 2:G:379:ILE:H | 2.31 | 0.40 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 3:B:935:LEU:HD21 | 10:N:43:TYR:HD2 | 1.85 | 0.40 |
| 1:Q:380:ARG:C | 1:Q:382:ASP:H | 2.23 | 0.40 |
| 1:Q:470:GLU:O | 1:Q:473:ILE:HD11 | 2.21 | 0.40 |
| 1:Q:24:VAL:HG22 | 1:Q:72:PHE:O | 2.20 | 0.40 |
| 1:Q:84:VAL:HG11 | 1:Q:281:ILE:HD12 | 2.03 | 0.40 |
| 3:R:1069:TRP:HE3 | 3:R:1070:TYR:O | 2.04 | 0.40 |
| 3:R:1069:TRP:NE1 | 3:R:1088:LEU:CB | 2.80 | 0.40 |
| 3:R:1066:TYR:HB3 | 3:R:1105:MET:CE | 2.51 | 0.40 |
| 3:R:707:ALA:HA | 3:R:710:ILE:HD12 | 2.03 | 0.40 |
| 3:R:738:ILE:CG1 | 3:R:739:ILE:N | 2.84 | 0.40 |
| 3:R:771:ASP:OD1 | 3:R:816:PRO:HG3 | 2.20 | 0.40 |
| 3:R:92:TYR:HD2 | 3:R:92:TYR:O | 2.05 | 0.40 |
| 4:S:78:TRP:O | 4:S:80:GLU:N | 2.54 | 0.40 |
| 5:T:70:VAL:HG12 | 5:T:71:GLU:N | 2.35 | 0.40 |
| 6:U:3:SER:O | 6:U:4:VAL:CG2 | 2.69 | 0.40 |
| 2:G:65:ALA:CB | 8:W:19:PHE:HE1 | 2.35 | 0.40 |
| 8:W:54:ASN:ND2 | 8:W:58:SER:HB2 | 2.36 | 0.40 |
| 1:A:15:SER:CA | 1:A:203:ARG:NH2 | 2.80 | 0.40 |
| 1:A:249:LEU:HD23 | 1:A:249:LEU:HA | 1.92 | 0.40 |
| 1:A:30:PRO:HG3 | 1:A:247:GLU:OE1 | 2.22 | 0.40 |
| 1:A:4:LYS:NZ | 3:B:1060:VAL:HB | 2.36 | 0.40 |
| 1:A:567:ASN:ND2 | 1:A:731:THR:CA | 2.84 | 0.40 |
| 1:A:782:ILE:CD1 | 1:A:782:ILE:N | 2.83 | 0.40 |
| 1:A:82:ILE:HD11 | 1:A:90:ILE:CD1 | 2.52 | 0.40 |
| 1:A:856:PHE:H | 2:C:64:ILE:CG2 | 2.34 | 0.40 |
| 1:A:859:TYR:CD1 | 2:C:64:ILE:HG23 | 2.56 | 0.40 |
| 3:B:1061:CYS:HA | 3:B:1088:LEU:CD2 | 2.50 | 0.40 |
| 3:B:97:TRP:HZ3 | 3:B:113:GLU:CB | 2.34 | 0.40 |
| 3:B:154:VAL:O | 3:B:155:ASN:C | 2.60 | 0.40 |
| 1:A:796:PHE:CE1 | 3:B:445:LEU:HD13 | 2.56 | 0.40 |
| 3:B:657:TYR:N | 3:B:658:PRO:CD | 2.84 | 0.40 |
| 3:B:83:MET:HE3 | 3:B:686:LEU:HB2 | 2.02 | 0.40 |
| 3:B:71:ARG:HG2 | 3:B:74:ASP:HB3 | 2.03 | 0.40 |
| 3:B:9:GLU:O | 3:B:10:ARG:C | 2.59 | 0.40 |
| 4:D:86:THR:O | 4:D:87:GLU:CB | 2.69 | 0.40 |
| 5:E:135:VAL:N | 5:E:174:TRP:HZ2 | 2.08 | 0.40 |
| 5:E:90:LEU:CD1 | 5:E:100:ASN:HB2 | 2.52 | 0.40 |
| 2:G:317:ALA:C | 2:G:319:VAL:N | 2.74 | 0.40 |
| 7:H:39:PRO:HB3 | 7:H:80:TYR:CE2 | 2.57 | 0.40 |
| 10:N:30:ASN:O | 10:N:31:PRO:C | 2.60 | 0.40 |
| 1:Q:13:ILE:HD12 | 1:Q:207:MET:HG2 | 2.03 | 0.40 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:Q:247:GLU:O | 1:Q:251:GLU:HG3 | 2.20 | 0.40 |
| 1:Q:273:VAL:O | 1:Q:276:TYR:HB3 | 2.22 | 0.40 |
| 1:Q:326:ILE:HG21 | 1:Q:462:MET:CG | 2.51 | 0.40 |
| 1:Q:589:LYS:O | 1:Q:592:ILE:CB | 2.70 | 0.40 |
| 1:Q:668:ALA:O | 1:Q:671:GLU:N | 2.55 | 0.40 |
| 1:Q:681:ASN:O | 1:Q:683:GLU:N | 2.54 | 0.40 |
| 1:Q:710:THR:HG22 | 1:Q:710:THR:O | 2.20 | 0.40 |
| 1:Q:795:LEU:HD23 | 1:Q:795:LEU:O | 2.21 | 0.40 |
| 3:R:145:PRO:C | 3:R:147:ASP:N | 2.74 | 0.40 |
| 3:R:369:LEU:HD21 | 3:R:379:LEU:CD2 | 2.51 | 0.40 |
| 3:R:375:ARG:H | 3:R:375:ARG:HG3 | 1.70 | 0.40 |
| 3:R:579:LEU:CD1 | 3:R:616:LEU:HD12 | 2.41 | 0.40 |
| 3:R:726:VAL:HG23 | 3:R:984:TYR:CD1 | 2.56 | 0.40 |
| 3:R:795:ASN:ND2 | 11:Z:36:MET:HE1 | 2.36 | 0.40 |
| 4:S:171:GLU:C | 4:S:172:ILE:HD12 | 2.40 | 0.40 |
| 4:S:217:ILE:CD1 | 4:S:217:ILE:N | 2.81 | 0.40 |
| 8:W:25:ASN:O | 8:W:26:ARG:O | 2.39 | 0.40 |
| 10:Y:22:ILE:CD1 | 10:Y:23:THR:H | 2.34 | 0.40 |
| 10:Y:54:ASP:C | 10:Y:54:ASP:OD2 | 2.60 | 0.40 |
| 1:A:432:ALA:HB3 | 1:A:481:LEU:HA | 2.04 | 0.40 |
| 1:A:488:THR:HG22 | 1:A:490:ARG:N | 2.35 | 0.40 |
| 1:A:853:ASP:OD2 | 2:C:311:ARG:NH1 | 2.54 | 0.40 |
| 3:B:1050:LEU:CD2 | 3:B:1051:ASP:N | 2.81 | 0.40 |
| 3:B:183:ILE:HB | 3:B:208:GLY:N | 2.35 | 0.40 |
| 3:B:325:LEU:CD1 | 3:B:331:GLU:H | 2.34 | 0.40 |
| 3:B:450:TRP:O | 3:B:450:TRP:CE3 | 2.75 | 0.40 |
| 3:B:63:ILE:HG13 | 3:B:98:LEU:CD2 | 2.47 | 0.40 |
| 2:C:103:GLY:O | 2:C:104:LEU:CB | 2.69 | 0.40 |
| 2:C:126:LEU:HD11 | 2:C:249:TYR:CB | 2.50 | 0.40 |
| 2:C:286:ILE:O | 2:C:289:ALA:N | 2.54 | 0.40 |
| 4:D:260:LEU:HD23 | 4:D:260:LEU:C | 2.41 | 0.40 |
| 5:E:14:PRO:HA | 5:E:15:PRO:HD3 | 1.89 | 0.40 |
| 5:E:17:GLU:CD | 5:E:25:ILE:HD12 | 2.42 | 0.40 |
| 5:E:64:GLY:O | 8:K:42:GLN:HG3 | 2.21 | 0.40 |
| 5:E:67:TYR:CD1 | 5:E:67:TYR:N | 2.88 | 0.40 |
| 2:G:104:LEU:HD23 | 2:G:104:LEU:C | 2.41 | 0.40 |
| 2:G:131:LYS:HD3 | 2:G:248:GLU:CG | 2.51 | 0.40 |
| 2:G:249:TYR:HD1 | 2:G:249:TYR:H | 1.68 | 0.40 |
| 7:H:35:LEU:HD23 | 7:H:35:LEU:HA | 1.94 | 0.40 |
| 8:K:54:ASN:ND2 | 8:K:58:SER:CB | 2.84 | 0.40 |
| 10:N:20:SER:H | 10:N:22:ILE:CD1 | 2.34 | 0.40 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 10:N:43:TYR:CD1 | 10:N:43:TYR:C | 2.94 | 0.40 |
| 1:Q:432:ALA:HB3 | 1:Q:480:MET:C | 2.41 | 0.40 |
| 1:Q:491:TYR:OH | 2:G:81:PRO:HG3 | 2.21 | 0.40 |
| 1:Q:548:GLY:O | 1:Q:550:GLN:N | 2.54 | 0.40 |
| 1:Q:552:ILE:HD12 | 1:Q:553:SER:N | 2.37 | 0.40 |
| 1:Q:618:GLU:O | 1:Q:619:TYR:CG | 2.75 | 0.40 |
| 1:Q:656:ASP:HA | 1:Q:659:LYS:CG | 2.51 | 0.40 |
| 1:Q:715:ALA:C | 1:Q:717:LYS:N | 2.75 | 0.40 |
| 3:R:1013:THR:HA | 3:R:1099:LEU:HD11 | 2.03 | 0.40 |
| 1:Q:463:ASN:ND2 | 3:R:1026:LEU:HD13 | 2.37 | 0.40 |
| 3:R:162:VAL:HG23 | 3:R:428:ARG:O | 2.21 | 0.40 |
| 3:R:182:ASN:N | 3:R:182:ASN:ND2 | 2.67 | 0.40 |
| 3:R:24:VAL:HG21 | 3:R:426:LEU:CD1 | 2.50 | 0.40 |
| 3:R:433:LEU:HD12 | 3:R:435:ARG:NH2 | 2.37 | 0.40 |
| 3:R:536:LEU:HD21 | 3:R:540:ILE:HD11 | 2.03 | 0.40 |
| 3:R:644:SER:HB2 | 3:R:645:PRO:HD3 | 2.03 | 0.40 |
| 3:R:700:ARG:HE | 3:R:939:ILE:CD1 | 2.34 | 0.40 |
| 3:R:91:THR:HA | 3:R:155:ASN:N | 2.36 | 0.40 |
| 3:R:994:HIS:H | 3:R:994:HIS:CD2 | 2.39 | 0.40 |
| 5:T:124:ARG:NH2 | 5:T:137:GLN:OE1 | 2.53 | 0.40 |
| 6:U:72:LEU:HD21 | 6:U:86:ILE:HG21 | 2.03 | 0.40 |
| 7:V:15:TYR:HD2 | 7:V:16:LEU:HD11 | 1.84 | 0.40 |
| 7:V:79:ARG:O | 7:V:80:TYR:HB2 | 2.21 | 0.40 |
| 2:G:386:VAL:CG1 | 8:W:34:ARG:HB2 | 2.51 | 0.40 |
| 8:W:49:ALA:O | 8:W:50:LEU:C | 2.59 | 0.40 |
| 8:W:91:SER:O | 8:W:92:LEU:HB3 | 2.20 | 0.40 |
| 3:R:721:ASN:HD22 | 10:Y:51:SER:CB | 2.34 | 0.40 |
| 1:A:199:PRO:C | 1:A:201:THR:H | 2.25 | 0.40 |
| 1:A:290:ARG:C | 1:A:292:GLY:N | 2.74 | 0.40 |
| 1:A:352:ARG:HB3 | 1:A:406:ILE:HD13 | 2.03 | 0.40 |
| 1:A:426:HIS:O | 1:A:429:SER:HB2 | 2.21 | 0.40 |
| 1:A:47:PRO:CG | 1:A:48:ARG:HD3 | 2.47 | 0.40 |
| 1:A:503:ILE:HG13 | 1:A:503:ILE:O | 2.21 | 0.40 |
| 1:A:530:VAL:O | 1:A:532:ILE:N | 2.55 | 0.40 |
| 1:A:75:ILE:HD13 | 1:A:214:VAL:CG2 | 2.51 | 0.40 |
| 1:A:763:THR:HG22 | 1:A:772:TYR:HA | 2.03 | 0.40 |
| 3:B:1064:CYS:O | 3:B:1066:TYR:N | 2.55 | 0.40 |
| 3:B:165:GLU:OE2 | 3:B:338:TYR:OH | 2.34 | 0.40 |
| 3:B:461:GLY:HA3 | 3:B:462:PRO:HD3 | 1.95 | 0.40 |
| 3:B:50:PRO:HG2 | 3:B:51:THR:N | 2.29 | 0.40 |
| 3:B:729:PHE:C | 3:B:731:GLY:N | 2.73 | 0.40 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 3:B:839:THR:O | 3:B:840:ARG:C | 2.59 | 0.40 |
| 3:B:855:THR:HB | 3:B:857:GLU:CB | 2.52 | 0.40 |
| 2:C:317:ALA:C | 2:C:319:VAL:N | 2.75 | 0.40 |
| 4:D:116:SER:O | 4:D:118:ASP:N | 2.55 | 0.40 |
| 4:D:13:ILE:CD1 | 4:D:239:GLU:N | 2.84 | 0.40 |
| 6:F:21:LEU:HA | 6:F:24:VAL:CG2 | 2.51 | 0.40 |
| 5:E:179:LYS:CE | 6:F:82:GLU:HG3 | 2.51 | 0.40 |
| 1:Q:864:LYS:O | 2:G:32:LEU:CD1 | 2.69 | 0.40 |
| 9:L:60:ASP:CG | 9:L:60:ASP:O | 2.60 | 0.40 |
| 3:B:146:LYS:HD2 | 10:N:58:GLU:OE2 | 2.21 | 0.40 |
| 11:P:13:PHE:HD1 | 11:P:13:PHE:N | 2.19 | 0.40 |
| 11:P:27:PRO:O | 11:P:28:TYR:HB2 | 2.20 | 0.40 |
| 1:Q:490:ARG:NH1 | 2:G:80:GLU:HG3 | 2.36 | 0.40 |
| 1:Q:738:LEU:H | 1:Q:738:LEU:CD2 | 2.35 | 0.40 |
| 1:Q:831:ARG:NH2 | 2:G:385:MET:SD | 2.95 | 0.40 |
| 3:R:1033:ARG:O | 3:R:1037:ILE:HG13 | 2.21 | 0.40 |
| 2:G:379:ILE:CD1 | 3:R:1042:ALA:HA | 2.43 | 0.40 |
| 3:R:94:ALA:HB2 | 3:R:121:ILE:CG1 | 2.51 | 0.40 |
| 3:R:223:PHE:CE2 | 3:R:256:LEU:HD13 | 2.56 | 0.40 |
| 1:A:590:ASN:HD21 | 3:R:377:ARG:HB2 | 1.76 | 0.40 |
| 3:R:37:ASN:O | 3:R:41:GLU:HG3 | 2.22 | 0.40 |
| 3:R:9:GLU:HA | 3:R:592:GLU:OE1 | 2.21 | 0.40 |
| 3:R:855:THR:O | 3:R:858:GLY:N | 2.55 | 0.40 |
| 3:R:932:TYR:CE1 | 3:R:936:SER:CB | 3.04 | 0.40 |
| 3:R:952:GLN:O | 3:R:955:ASN:N | 2.53 | 0.40 |
| 3:R:983:ILE:O | 3:R:984:TYR:C | 2.59 | 0.40 |
| 4:S:22:LEU:HD22 | 4:S:166:TYR:HE1 | 1.87 | 0.40 |
| 4:S:18:GLU:CG | 4:S:225:LYS:HG2 | 2.51 | 0.40 |
| 5:T:53:THR:CG2 | 5:T:70:VAL:HA | 2.51 | 0.40 |
| 7:V:15:TYR:HB3 | 7:V:16:LEU:H | 1.65 | 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 | 768/880 (87%) | 513 (67%) | 136 (18%) | 119 (16%) | 0 | 0 |
| 1 | Q | 768/880 (87%) | 509 (66%) | 141 (18%) | 118 (15%) | 0 | 0 |
| 2 | C | 273/392 (70%) | 158 (58%) | 66 (24%) | 49 (18%) | 0 | 0 |
| 2 | G | 273/392 (70%) | 161 (59%) | 61 (22%) | 51 (19%) | 0 | 0 |
| 3 | B | 1084/1124 (96%) | 698 (64%) | 238 (22%) | 148 (14%) | 0 | 1 |
| 3 | R | 1084/1124 (96%) | 698 (64%) | 237 (22%) | 149 (14%) | 0 | 1 |
| 4 | D | 262/265 (99%) | 166 (63%) | 69 (26%) | 27 (10%) | 0 | 3 |
| 4 | S | 262/265 (99%) | 167 (64%) | 66 (25%) | 29 (11%) | 0 | 3 |
| 5 | E | 172/180 (96%) | 123 (72%) | 31 (18%) | 18 (10%) | 0 | 3 |
| 5 | T | 172/180 (96%) | 122 (71%) | 32 (19%) | 18 (10%) | 0 | 3 |
| 6 | F | 87/113 (77%) | 56 (64%) | 22 (25%) | 9 (10%) | 0 | 3 |
| 6 | U | 87/113 (77%) | 56 (64%) | 23 (26%) | 8 (9%) | 1 | 4 |
| 7 | H | 72/84 (86%) | 46 (64%) | 13 (18%) | 13 (18%) | 0 | 0 |
| 7 | V | 72/84 (86%) | 44 (61%) | 15 (21%) | 13 (18%) | 0 | 0 |
| 8 | K | 80/95 (84%) | 44 (55%) | 19 (24%) | 17 (21%) | 0 | 0 |
| 8 | W | 80/95 (84%) | 44 (55%) | 20 (25%) | 16 (20%) | 0 | 0 |
| 9 | L | 90/92 (98%) | 64 (71%) | 19 (21%) | 7 (8%) | 1 | 6 |
| 9 | X | 90/92 (98%) | 66 (73%) | 17 (19%) | 7 (8%) | 1 | 6 |
| 10 | N | 62/66 (94%) | 30 (48%) | 18 (29%) | 14 (23%) | 0 | 0 |
| 10 | Y | 62/66 (94%) | 31 (50%) | 18 (29%) | 13 (21%) | 0 | 0 |
| 11 | P | 41/48 (85%) | 24 (58%) | 10 (24%) | 7 (17%) | 0 | 0 |
| 11 | Z | 41/48 (85%) | 23 (56%) | 11 (27%) | 7 (17%) | 0 | 0 |
| All | All | 5982/6678 (90%) | 3843 (64%) | 1282 (21%) | 857 (14%) | 0 | 1 |

All (857) Ramachandran outliers are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | A | 56 | GLN |
| 1 | A | 58 | CYS |
| 1 | A | 64 | THR |
| 1 | A | 65 | LEU |
| 1 | A | 194 | ILE |
| 1 | A | 207 | MET |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | A | 216 | PRO |
| 1 | A | 259 | GLN |
| 1 | A | 287 | SER |
| 1 | A | 295 | LEU |
| 1 | A | 298 | LEU |
| 1 | A | 303 | LYS |
| 1 | A | 377 | TYR |
| 1 | A | 387 | ASP |
| 1 | A | 392 | LYS |
| 1 | A | 403 | PRO |
| 1 | A | 447 | LEU |
| 1 | A | 454 | ASN |
| 1 | A | 506 | ALA |
| 1 | A | 514 | THR |
| 1 | A | 528 | ALA |
| 1 | A | 529 | ASP |
| 1 | A | 530 | VAL |
| 1 | A | 532 | ILE |
| 1 | A | 534 | LEU |
| 1 | A | 541 | ALA |
| 1 | A | 584 | SER |
| 1 | A | 595 | GLU |
| 1 | A | 608 | PRO |
| 1 | A | 733 | ALA |
| 1 | A | 746 | MET |
| 1 | A | 759 | ARG |
| 1 | A | 764 | ARG |
| 1 | A | 826 | ALA |
| 1 | A | 842 | TYR |
| 1 | A | 864 | LYS |
| 1 | A | 876 | VAL |
| 2 | C | 38 | ASN |
| 2 | C | 42 | ILE |
| 2 | C | 48 | ILE |
| 2 | C | 60 | SER |
| 2 | C | 66 | PRO |
| 2 | C | 104 | LEU |
| 2 | C | 113 | ALA |
| 2 | C | 126 | LEU |
| 2 | C | 128 | ASP |
| 2 | C | 130 | TYR |
| 2 | C | 145 | GLU |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 2 | C | 248 | GLU |
| 2 | C | 281 | GLU |
| 2 | C | 306 | LEU |
| 2 | C | 353 | HIS |
| 2 | C | 362 | ASP |
| 2 | C | 365 | GLU |
| 2 | C | 390 | MET |
| 2 | C | 391 | ARG |
| 2 | C | 393 | ILE |
| 3 | B | 47 | GLY |
| 3 | B | 50 | PRO |
| 3 | B | 97 | TRP |
| 3 | B | 110 | GLU |
| 3 | B | 111 | PRO |
| 3 | B | 112 | GLU |
| 3 | B | 158 | GLU |
| 3 | B | 171 | ARG |
| 3 | B | 184 | THR |
| 3 | B | 210 | PHE |
| 3 | B | 242 | VAL |
| 3 | B | 297 | PHE |
| 3 | B | 303 | THR |
| 3 | B | 325 | LEU |
| 3 | B | 331 | GLU |
| 3 | B | 372 | SER |
| 3 | B | 378 | LYS |
| 3 | B | 402 | ASN |
| 3 | B | 403 | TRP |
| 3 | B | 448 | THR |
| 3 | B | 473 | MET |
| 3 | B | 482 | GLU |
| 3 | B | 483 | ARG |
| 3 | B | 530 | TYR |
| 3 | B | 534 | GLY |
| 3 | B | 571 | ASP |
| 3 | B | 587 | PRO |
| 3 | B | 590 | THR |
| 3 | B | 602 | ILE |
| 3 | B | 618 | ALA |
| 3 | B | 635 | PRO |
| 3 | B | 691 | ARG |
| 3 | B | 769 | GLN |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 3 | B | 770 | GLU |
| 3 | B | 790 | ARG |
| 3 | B | 800 | PRO |
| 3 | B | 801 | GLU |
| 3 | B | 814 | VAL |
| 3 | B | 933 | ALA |
| 3 | B | 945 | PHE |
| 3 | B | 946 | TYR |
| 3 | B | 966 | ALA |
| 3 | B | 983 | ILE |
| 3 | B | 1030 | GLU |
| 3 | B | 1056 | THR |
| 3 | B | 1071 | ASP |
| 3 | B | 1077 | TYR |
| 3 | B | 1081 | ILE |
| 3 | B | 1082 | HIS |
| 3 | B | 1111 | PRO |
| 3 | B | 1114 | VAL |
| 4 | D | 35 | TYR |
| 4 | D | 72 | ALA |
| 4 | D | 103 | PRO |
| 4 | D | 125 | SER |
| 4 | D | 135 | THR |
| 4 | D | 152 | GLU |
| 4 | D | 154 | ALA |
| 4 | D | 162 | SER |
| 4 | D | 177 | GLU |
| 4 | D | 195 | LEU |
| 4 | D | 196 | SER |
| 4 | D | 203 | CYS |
| 4 | D | 205 | LEU |
| 5 | E | 22 | LEU |
| 5 | E | 39 | LEU |
| 5 | E | 81 | VAL |
| 5 | E | 82 | GLN |
| 5 | E | 123 | VAL |
| 5 | E | 146 | VAL |
| 5 | E | 148 | SER |
| 5 | E | 151 | SER |
| 7 | H | 13 | ILE |
| 7 | H | 25 | ILE |
| 7 | H | 28 | ALA |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 7 | H | 56 | ASN |
| 8 | K | 26 | ARG |
| 8 | K | 27 | LEU |
| 8 | K | 47 | ALA |
| 8 | K | 50 | LEU |
| 8 | K | 51 | ILE |
| 8 | K | 58 | SER |
| 8 | K | 60 | ASP |
| 8 | K | 61 | VAL |
| 9 | L | 28 | ILE |
| 9 | L | 39 | SER |
| 10 | N | 19 | GLN |
| 10 | N | 20 | SER |
| 10 | N | 29 | GLU |
| 10 | N | 48 | MET |
| 10 | N | 60 | ILE |
| 10 | N | 61 | HIS |
| 11 | P | 25 | ARG |
| 1 | Q | 56 | GLN |
| 1 | Q | 58 | CYS |
| 1 | Q | 64 | THR |
| 1 | Q | 65 | LEU |
| 1 | Q | 194 | ILE |
| 1 | Q | 207 | MET |
| 1 | Q | 216 | PRO |
| 1 | Q | 259 | GLN |
| 1 | Q | 287 | SER |
| 1 | Q | 295 | LEU |
| 1 | Q | 298 | LEU |
| 1 | Q | 303 | LYS |
| 1 | Q | 356 | TRP |
| 1 | Q | 377 | TYR |
| 1 | Q | 387 | ASP |
| 1 | Q | 392 | LYS |
| 1 | Q | 403 | PRO |
| 1 | Q | 447 | LEU |
| 1 | Q | 454 | ASN |
| 1 | Q | 506 | ALA |
| 1 | Q | 514 | THR |
| 1 | Q | 528 | ALA |
| 1 | Q | 529 | ASP |
| 1 | Q | 530 | VAL |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | Q | 532 | ILE |
| 1 | Q | 534 | LEU |
| 1 | Q | 541 | ALA |
| 1 | Q | 584 | SER |
| 1 | Q | 595 | GLU |
| 1 | Q | 608 | PRO |
| 1 | Q | 645 | THR |
| 1 | Q | 733 | ALA |
| 1 | Q | 746 | MET |
| 1 | Q | 759 | ARG |
| 1 | Q | 764 | ARG |
| 1 | Q | 826 | ALA |
| 1 | Q | 842 | TYR |
| 1 | Q | 864 | LYS |
| 1 | Q | 876 | VAL |
| 2 | G | 38 | ASN |
| 2 | G | 42 | ILE |
| 2 | G | 48 | ILE |
| 2 | G | 60 | SER |
| 2 | G | 66 | PRO |
| 2 | G | 104 | LEU |
| 2 | G | 113 | ALA |
| 2 | G | 126 | LEU |
| 2 | G | 128 | ASP |
| 2 | G | 145 | GLU |
| 2 | G | 248 | GLU |
| 2 | G | 281 | GLU |
| 2 | G | 306 | LEU |
| 2 | G | 353 | HIS |
| 2 | G | 362 | ASP |
| 2 | G | 365 | GLU |
| 2 | G | 390 | MET |
| 2 | G | 391 | ARG |
| 2 | G | 393 | ILE |
| 3 | R | 47 | GLY |
| 3 | R | 50 | PRO |
| 3 | R | 97 | TRP |
| 3 | R | 109 | ALA |
| 3 | R | 110 | GLU |
| 3 | R | 111 | PRO |
| 3 | R | 112 | GLU |
| 3 | R | 158 | GLU |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 3 | R | 171 | ARG |
| 3 | R | 184 | THR |
| 3 | R | 210 | PHE |
| 3 | R | 242 | VAL |
| 3 | R | 297 | PHE |
| 3 | R | 303 | THR |
| 3 | R | 325 | LEU |
| 3 | R | 331 | GLU |
| 3 | R | 372 | SER |
| 3 | R | 378 | LYS |
| 3 | R | 402 | ASN |
| 3 | R | 403 | TRP |
| 3 | R | 473 | MET |
| 3 | R | 482 | GLU |
| 3 | R | 483 | ARG |
| 3 | R | 530 | TYR |
| 3 | R | 571 | ASP |
| 3 | R | 587 | PRO |
| 3 | R | 590 | THR |
| 3 | R | 602 | ILE |
| 3 | R | 618 | ALA |
| 3 | R | 635 | PRO |
| 3 | R | 691 | ARG |
| 3 | R | 769 | GLN |
| 3 | R | 770 | GLU |
| 3 | R | 789 | TYR |
| 3 | R | 790 | ARG |
| 3 | R | 800 | PRO |
| 3 | R | 801 | GLU |
| 3 | R | 814 | VAL |
| 3 | R | 933 | ALA |
| 3 | R | 945 | PHE |
| 3 | R | 946 | TYR |
| 3 | R | 966 | ALA |
| 3 | R | 983 | ILE |
| 3 | R | 1030 | GLU |
| 3 | R | 1056 | THR |
| 3 | R | 1071 | ASP |
| 3 | R | 1077 | TYR |
| 3 | R | 1081 | ILE |
| 3 | R | 1082 | HIS |
| 3 | R | 1111 | PRO |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 3 | R | 1114 | VAL |
| 4 | S | 35 | TYR |
| 4 | S | 72 | ALA |
| 4 | S | 103 | PRO |
| 4 | S | 125 | SER |
| 4 | S | 135 | THR |
| 4 | S | 152 | GLU |
| 4 | S | 154 | ALA |
| 4 | S | 162 | SER |
| 4 | S | 177 | GLU |
| 4 | S | 195 | LEU |
| 4 | S | 196 | SER |
| 4 | S | 203 | CYS |
| 4 | S | 205 | LEU |
| 5 | T | 22 | LEU |
| 5 | T | 23 | ASN |
| 5 | T | 39 | LEU |
| 5 | T | 81 | VAL |
| 5 | T | 82 | GLN |
| 5 | T | 123 | VAL |
| 5 | T | 146 | VAL |
| 5 | T | 148 | SER |
| 5 | T | 151 | SER |
| 7 | V | 13 | ILE |
| 7 | V | 25 | ILE |
| 7 | V | 28 | ALA |
| 8 | W | 26 | ARG |
| 8 | W | 27 | LEU |
| 8 | W | 47 | ALA |
| 8 | W | 50 | LEU |
| 8 | W | 51 | ILE |
| 8 | W | 58 | SER |
| 8 | W | 60 | ASP |
| 8 | W | 61 | VAL |
| 9 | X | 28 | ILE |
| 9 | X | 39 | SER |
| 10 | Y | 19 | GLN |
| 10 | Y | 20 | SER |
| 10 | Y | 29 | GLU |
| 10 | Y | 48 | MET |
| 10 | Y | 60 | ILE |
| 10 | Y | 61 | HIS |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | A | 23 | SER |
| 1 | A | 24 | VAL |
| 1 | A | 27 | ILE |
| 1 | A | 47 | PRO |
| 1 | A | 66 | GLY |
| 1 | A | 255 | ALA |
| 1 | A | 282 | PRO |
| 1 | A | 283 | GLY |
| 1 | A | 307 | GLY |
| 1 | A | 355 | PRO |
| 1 | A | 356 | TRP |
| 1 | A | 358 | ILE |
| 1 | A | 376 | ASN |
| 1 | A | 391 | VAL |
| 1 | A | 426 | HIS |
| 1 | A | 482 | VAL |
| 1 | A | 508 | LEU |
| 1 | A | 537 | PRO |
| 1 | A | 543 | ARG |
| 1 | A | 558 | LYS |
| 1 | A | 585 | TYR |
| 1 | A | 605 | ASN |
| 1 | A | 645 | THR |
| 1 | A | 682 | GLY |
| 1 | A | 684 | LEU |
| 1 | A | 691 | THR |
| 1 | A | 724 | PHE |
| 1 | A | 731 | THR |
| 1 | A | 786 | PHE |
| 1 | A | 805 | GLY |
| 1 | A | 829 | ASP |
| 1 | A | 841 | LEU |
| 1 | A | 852 | ASP |
| 1 | A | 877 | GLY |
| 2 | C | 28 | ILE |
| 2 | C | 30 | ASP |
| 2 | C | 44 | THR |
| 2 | C | 45 | ARG |
| 2 | C | 50 | LYS |
| 2 | C | 249 | TYR |
| 2 | C | 264 | VAL |
| 2 | C | 330 | GLY |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 2 | C | 337 | GLU |
| 2 | C | 360 | ARG |
| 2 | C | 364 | GLU |
| 2 | C | 367 | LYS |
| 2 | C | 368 | GLY |
| 3 | B | 21 | LYS |
| 3 | B | 23 | LEU |
| 3 | B | 55 | GLY |
| 3 | B | 71 | ARG |
| 3 | B | 105 | ASN |
| 3 | B | 109 | ALA |
| 3 | B | 166 | ASP |
| 3 | B | 179 | THR |
| 3 | B | 185 | HIS |
| 3 | B | 223 | PHE |
| 3 | B | 231 | GLY |
| 3 | B | 251 | GLU |
| 3 | B | 281 | LYS |
| 3 | B | 292 | ILE |
| 3 | B | 328 | GLY |
| 3 | B | 332 | PRO |
| 3 | B | 338 | TYR |
| 3 | B | 347 | GLY |
| 3 | B | 373 | LYS |
| 3 | B | 445 | LEU |
| 3 | B | 462 | PRO |
| 3 | B | 463 | ASN |
| 3 | B | 479 | GLY |
| 3 | B | 497 | VAL |
| 3 | B | 574 | ARG |
| 3 | B | 617 | ASP |
| 3 | B | 659 | GLU |
| 3 | B | 663 | SER |
| 3 | B | 684 | TYR |
| 3 | B | 730 | THR |
| 3 | B | 736 | ASP |
| 3 | B | 767 | GLY |
| 3 | B | 785 | GLY |
| 3 | B | 789 | TYR |
| 3 | B | 793 | GLU |
| 3 | B | 806 | GLY |
| 3 | B | 840 | ARG |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 3 | B | 919 | MET |
| 3 | B | 921 | LEU |
| 3 | B | 951 | GLU |
| 3 | B | 1095 | TYR |
| 3 | B | 1118 | LYS |
| 4 | D | 8 | LYS |
| 4 | D | 17 | PHE |
| 4 | D | 174 | ALA |
| 4 | D | 178 | LYS |
| 4 | D | 223 | GLU |
| 5 | E | 23 | ASN |
| 5 | E | 32 | GLN |
| 5 | E | 52 | LYS |
| 6 | F | 42 | ASN |
| 7 | H | 48 | SER |
| 7 | H | 55 | ILE |
| 7 | H | 80 | TYR |
| 7 | H | 81 | VAL |
| 8 | K | 13 | LEU |
| 9 | L | 44 | TYR |
| 9 | L | 62 | SER |
| 10 | N | 15 | ALA |
| 10 | N | 63 | THR |
| 11 | P | 18 | LEU |
| 11 | P | 20 | VAL |
| 11 | P | 34 | ILE |
| 1 | Q | 23 | SER |
| 1 | Q | 24 | VAL |
| 1 | Q | 27 | ILE |
| 1 | Q | 47 | PRO |
| 1 | Q | 66 | GLY |
| 1 | Q | 255 | ALA |
| 1 | Q | 282 | PRO |
| 1 | Q | 283 | GLY |
| 1 | Q | 307 | GLY |
| 1 | Q | 355 | PRO |
| 1 | Q | 358 | ILE |
| 1 | Q | 376 | ASN |
| 1 | Q | 391 | VAL |
| 1 | Q | 426 | HIS |
| 1 | Q | 482 | VAL |
| 1 | Q | 483 | HIS |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | Q | 508 | LEU |
| 1 | Q | 537 | PRO |
| 1 | Q | 543 | ARG |
| 1 | Q | 558 | LYS |
| 1 | Q | 585 | TYR |
| 1 | Q | 605 | ASN |
| 1 | Q | 610 | SER |
| 1 | Q | 682 | GLY |
| 1 | Q | 684 | LEU |
| 1 | Q | 724 | PHE |
| 1 | Q | 731 | THR |
| 1 | Q | 742 | GLN |
| 1 | Q | 786 | PHE |
| 1 | Q | 805 | GLY |
| 1 | Q | 841 | LEU |
| 1 | Q | 877 | GLY |
| 2 | G | 28 | ILE |
| 2 | G | 30 | ASP |
| 2 | G | 44 | THR |
| 2 | G | 50 | LYS |
| 2 | G | 130 | TYR |
| 2 | G | 249 | TYR |
| 2 | G | 330 | GLY |
| 2 | G | 337 | GLU |
| 2 | G | 360 | ARG |
| 2 | G | 364 | GLU |
| 2 | G | 367 | LYS |
| 2 | G | 368 | GLY |
| 3 | R | 21 | LYS |
| 3 | R | 23 | LEU |
| 3 | R | 55 | GLY |
| 3 | R | 71 | ARG |
| 3 | R | 105 | ASN |
| 3 | R | 179 | THR |
| 3 | R | 185 | HIS |
| 3 | R | 223 | PHE |
| 3 | R | 231 | GLY |
| 3 | R | 251 | GLU |
| 3 | R | 281 | LYS |
| 3 | R | 292 | ILE |
| 3 | R | 328 | GLY |
| 3 | R | 332 | PRO |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 3 | R | 338 | TYR |
| 3 | R | 347 | GLY |
| 3 | R | 448 | THR |
| 3 | R | 462 | PRO |
| 3 | R | 463 | ASN |
| 3 | R | 479 | GLY |
| 3 | R | 497 | VAL |
| 3 | R | 534 | GLY |
| 3 | R | 574 | ARG |
| 3 | R | 598 | GLU |
| 3 | R | 617 | ASP |
| 3 | R | 663 | SER |
| 3 | R | 684 | TYR |
| 3 | R | 730 | THR |
| 3 | R | 736 | ASP |
| 3 | R | 767 | GLY |
| 3 | R | 785 | GLY |
| 3 | R | 793 | GLU |
| 3 | R | 806 | GLY |
| 3 | R | 840 | ARG |
| 3 | R | 919 | MET |
| 3 | R | 921 | LEU |
| 3 | R | 1065 | GLY |
| 3 | R | 1095 | TYR |
| 3 | R | 1118 | LYS |
| 4 | S | 17 | PHE |
| 4 | S | 174 | ALA |
| 4 | S | 178 | LYS |
| 4 | S | 223 | GLU |
| 5 | T | 32 | GLN |
| 5 | T | 52 | LYS |
| 6 | U | 42 | ASN |
| 7 | V | 55 | ILE |
| 7 | V | 56 | ASN |
| 7 | V | 80 | TYR |
| 7 | V | 81 | VAL |
| 8 | W | 13 | LEU |
| 8 | W | 15 | PHE |
| 8 | W | 29 | ARG |
| 8 | W | 71 | ARG |
| 9 | X | 44 | TYR |
| 9 | X | 48 | PRO |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 9 | X | 62 | SER |
| 10 | Y | 15 | ALA |
| 10 | Y | 63 | THR |
| 11 | Z | 18 | LEU |
| 11 | Z | 20 | VAL |
| 11 | Z | 25 | ARG |
| 11 | Z | 34 | ILE |
| 1 | A | 76 | GLU |
| 1 | A | 95 | LYS |
| 1 | A | 483 | HIS |
| 1 | A | 531 | LYS |
| 1 | A | 551 | VAL |
| 1 | A | 610 | SER |
| 1 | A | 614 | TRP |
| 1 | A | 688 | PRO |
| 1 | A | 742 | GLN |
| 1 | A | 749 | GLN |
| 1 | A | 779 | ARG |
| 1 | A | 862 | HIS |
| 1 | A | 865 | THR |
| 2 | C | 115 | LYS |
| 2 | C | 117 | PRO |
| 2 | C | 136 | LYS |
| 2 | C | 274 | THR |
| 2 | C | 275 | ASN |
| 3 | B | 30 | SER |
| 3 | B | 103 | VAL |
| 3 | B | 146 | LYS |
| 3 | B | 182 | ASN |
| 3 | B | 246 | PRO |
| 3 | B | 264 | ASN |
| 3 | B | 310 | LYS |
| 3 | B | 346 | ALA |
| 3 | B | 355 | ARG |
| 3 | B | 449 | GLN |
| 3 | B | 598 | GLU |
| 3 | B | 605 | ASP |
| 3 | B | 634 | THR |
| 3 | B | 670 | SER |
| 3 | B | 708 | LEU |
| 3 | B | 779 | GLY |
| 3 | B | 798 | VAL |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 3 | B | 950 | ILE |
| 3 | B | 972 | ASP |
| 3 | B | 973 | GLY |
| 3 | B | 1065 | GLY |
| 3 | B | 1080 | PRO |
| 3 | B | 1084 | ASP |
| 4 | D | 55 | ASP |
| 4 | D | 79 | PRO |
| 4 | D | 91 | LYS |
| 4 | D | 124 | ILE |
| 4 | D | 206 | CYS |
| 5 | E | 116 | ASP |
| 6 | F | 7 | VAL |
| 6 | F | 17 | ALA |
| 6 | F | 58 | GLU |
| 6 | F | 64 | SER |
| 7 | H | 29 | TYR |
| 8 | K | 15 | PHE |
| 8 | K | 29 | ARG |
| 8 | K | 71 | ARG |
| 9 | L | 48 | PRO |
| 9 | L | 50 | SER |
| 10 | N | 40 | VAL |
| 1 | Q | 76 | GLU |
| 1 | Q | 388 | LEU |
| 1 | Q | 531 | LYS |
| 1 | Q | 688 | PRO |
| 1 | Q | 691 | THR |
| 1 | Q | 749 | GLN |
| 1 | Q | 765 | THR |
| 1 | Q | 779 | ARG |
| 1 | Q | 829 | ASP |
| 1 | Q | 852 | ASP |
| 1 | Q | 865 | THR |
| 2 | G | 45 | ARG |
| 2 | G | 61 | GLU |
| 2 | G | 115 | LYS |
| 2 | G | 117 | PRO |
| 2 | G | 264 | VAL |
| 2 | G | 275 | ASN |
| 3 | R | 30 | SER |
| 3 | R | 103 | VAL |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 3 | R | 146 | LYS |
| 3 | R | 166 | ASP |
| 3 | R | 182 | ASN |
| 3 | R | 246 | PRO |
| 3 | R | 264 | ASN |
| 3 | R | 310 | LYS |
| 3 | R | 346 | ALA |
| 3 | R | 373 | LYS |
| 3 | R | 445 | LEU |
| 3 | R | 449 | GLN |
| 3 | R | 605 | ASP |
| 3 | R | 634 | THR |
| 3 | R | 659 | GLU |
| 3 | R | 670 | SER |
| 3 | R | 708 | LEU |
| 3 | R | 779 | GLY |
| 3 | R | 903 | GLY |
| 3 | R | 950 | ILE |
| 3 | R | 951 | GLU |
| 3 | R | 972 | ASP |
| 3 | R | 973 | GLY |
| 3 | R | 1080 | PRO |
| 4 | S | 8 | LYS |
| 4 | S | 91 | LYS |
| 4 | S | 124 | ILE |
| 4 | S | 206 | CYS |
| 5 | T | 116 | ASP |
| 6 | U | 7 | VAL |
| 6 | U | 17 | ALA |
| 6 | U | 64 | SER |
| 7 | V | 29 | TYR |
| 7 | V | 74 | GLU |
| 8 | W | 16 | ASN |
| 9 | X | 50 | SER |
| 10 | Y | 40 | VAL |
| 1 | A | 235 | LEU |
| 1 | A | 333 | SER |
| 1 | A | 388 | LEU |
| 1 | A | 394 | ARG |
| 1 | A | 423 | PRO |
| 1 | A | 524 | ILE |
| 1 | A | 609 | GLU |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | A | 626 | TRP |
| 1 | A | 721 | PRO |
| 1 | A | 760 | GLY |
| 1 | A | 765 | THR |
| 2 | C | 61 | GLU |
| 2 | C | 67 | GLY |
| 2 | C | 239 | ARG |
| 2 | C | 324 | GLY |
| 2 | C | 392 | PRO |
| 3 | B | 34 | PHE |
| 3 | B | 74 | ASP |
| 3 | B | 299 | PRO |
| 3 | B | 418 | ASN |
| 3 | B | 433 | LEU |
| 3 | B | 550 | SER |
| 3 | B | 560 | THR |
| 3 | B | 759 | SER |
| 3 | B | 781 | ARG |
| 3 | B | 915 | LEU |
| 3 | B | 979 | ILE |
| 3 | B | 1053 | SER |
| 4 | D | 117 | GLU |
| 4 | D | 207 | GLU |
| 5 | E | 88 | GLU |
| 5 | E | 133 | LYS |
| 6 | F | 4 | VAL |
| 7 | H | 74 | GLU |
| 8 | K | 16 | ASN |
| 8 | K | 34 | ARG |
| 8 | K | 62 | ILE |
| 10 | N | 32 | GLY |
| 1 | Q | 95 | LYS |
| 1 | Q | 220 | ARG |
| 1 | Q | 235 | LEU |
| 1 | Q | 333 | SER |
| 1 | Q | 394 | ARG |
| 1 | Q | 551 | VAL |
| 1 | Q | 609 | GLU |
| 1 | Q | 626 | TRP |
| 1 | Q | 721 | PRO |
| 1 | Q | 760 | GLY |
| 2 | G | 136 | LYS |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 2 | G | 239 | ARG |
| 2 | G | 274 | THR |
| 2 | G | 282 | GLU |
| 2 | G | 298 | SER |
| 2 | G | 392 | PRO |
| 3 | R | 74 | ASP |
| 3 | R | 299 | PRO |
| 3 | R | 306 | GLU |
| 3 | R | 355 | ARG |
| 3 | R | 418 | ASN |
| 3 | R | 433 | LEU |
| 3 | R | 457 | GLU |
| 3 | R | 560 | THR |
| 3 | R | 759 | SER |
| 3 | R | 781 | ARG |
| 3 | R | 798 | VAL |
| 3 | R | 915 | LEU |
| 3 | R | 1084 | ASP |
| 4 | S | 55 | ASP |
| 4 | S | 79 | PRO |
| 4 | S | 117 | GLU |
| 4 | S | 207 | GLU |
| 5 | T | 133 | LYS |
| 5 | T | 137 | GLN |
| 6 | U | 4 | VAL |
| 6 | U | 58 | GLU |
| 7 | V | 48 | SER |
| 10 | Y | 18 | TRP |
| 10 | Y | 23 | THR |
| 10 | Y | 32 | GLY |
| 1 | A | 80 | PRO |
| 1 | A | 196 | GLY |
| 1 | A | 220 | ARG |
| 1 | A | 332 | ILE |
| 1 | A | 369 | PRO |
| 1 | A | 533 | ASP |
| 1 | A | 599 | ASP |
| 1 | A | 607 | GLN |
| 1 | A | 617 | LYS |
| 1 | A | 644 | PHE |
| 1 | A | 788 | THR |
| 1 | A | 822 | ARG |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | A | 875 | VAL |
| 2 | C | 129 | GLU |
| 2 | C | 282 | GLU |
| 2 | C | 298 | SER |
| 3 | B | 98 | LEU |
| 3 | B | 124 | LYS |
| 3 | B | 306 | GLU |
| 3 | B | 868 | ASP |
| 3 | B | 912 | PRO |
| 3 | B | 944 | PRO |
| 5 | E | 124 | ARG |
| 5 | E | 137 | GLN |
| 5 | E | 142 | VAL |
| 6 | F | 43 | SER |
| 6 | F | 76 | CYS |
| 7 | H | 15 | TYR |
| 8 | K | 20 | ILE |
| 10 | N | 6 | ARG |
| 10 | N | 23 | THR |
| 10 | N | 41 | LYS |
| 1 | Q | 80 | PRO |
| 1 | Q | 196 | GLY |
| 1 | Q | 332 | ILE |
| 1 | Q | 423 | PRO |
| 1 | Q | 524 | ILE |
| 1 | Q | 533 | ASP |
| 1 | Q | 583 | ASP |
| 1 | Q | 599 | ASP |
| 1 | Q | 607 | GLN |
| 1 | Q | 614 | TRP |
| 1 | Q | 617 | LYS |
| 1 | Q | 644 | PHE |
| 1 | Q | 788 | THR |
| 1 | Q | 862 | HIS |
| 2 | G | 14 | GLU |
| 2 | G | 67 | GLY |
| 2 | G | 129 | GLU |
| 2 | G | 279 | GLU |
| 3 | R | 868 | ASP |
| 3 | R | 912 | PRO |
| 3 | R | 944 | PRO |
| 3 | R | 979 | ILE |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 3 | R | 1001 | LEU |
| 3 | R | 1053 | SER |
| 5 | T | 88 | GLU |
| 5 | T | 124 | ARG |
| 5 | T | 142 | VAL |
| 6 | U | 76 | CYS |
| 7 | V | 15 | TYR |
| 8 | W | 20 | ILE |
| 8 | W | 34 | ARG |
| 10 | Y | 6 | ARG |
| 1 | A | 209 | LEU |
| 1 | A | 583 | ASP |
| 1 | A | 686 | PRO |
| 2 | C | 300 | VAL |
| 3 | B | 404 | VAL |
| 5 | E | 125 | GLY |
| 6 | F | 34 | LEU |
| 7 | H | 11 | PRO |
| 8 | K | 54 | ASN |
| 9 | L | 38 | VAL |
| 10 | N | 18 | TRP |
| 1 | Q | 209 | LEU |
| 1 | Q | 369 | PRO |
| 1 | Q | 686 | PRO |
| 1 | Q | 781 | PHE |
| 1 | Q | 875 | VAL |
| 2 | G | 324 | GLY |
| 3 | R | 404 | VAL |
| 3 | R | 477 | ALA |
| 3 | R | 1048 | ARG |
| 4 | S | 73 | LEU |
| 4 | S | 87 | GLU |
| 5 | T | 125 | GLY |
| 6 | U | 60 | SER |
| 7 | V | 11 | PRO |
| 1 | A | 404 | GLY |
| 2 | C | 119 | THR |
| 3 | B | 406 | GLY |
| 7 | H | 10 | ASP |
| 11 | P | 26 | CYS |
| 1 | Q | 404 | GLY |
| 2 | G | 119 | THR |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 2 | G | 300 | VAL |
| 3 | R | 401 | GLY |
| 3 | R | 780 | VAL |
| 3 | R | 916 | PRO |
| 7 | V | 10 | ASP |
| 8 | W | 62 | ILE |
| 1 | A | 53 | GLU |
| 3 | B | 589 | VAL |
| 3 | B | 657 | TYR |
| 3 | B | 780 | VAL |
| 3 | B | 916 | PRO |
| 4 | D | 238 | PRO |
| 1 | Q | 16 | PRO |
| 1 | Q | 54 | PRO |
| 3 | R | 589 | VAL |
| 3 | R | 657 | TYR |
| 3 | R | 1016 | PRO |
| 11 | Z | 26 | CYS |
| 1 | A | 54 | PRO |
| 1 | A | 372 | TRP |
| 1 | A | 767 | PRO |
| 2 | C | 116 | VAL |
| 3 | B | 76 | GLY |
| 3 | B | 401 | GLY |
| 3 | B | 703 | VAL |
| 4 | D | 119 | PRO |
| 1 | Q | 177 | PRO |
| 2 | G | 116 | VAL |
| 3 | R | 76 | GLY |
| 3 | R | 437 | GLN |
| 3 | R | 703 | VAL |
| 3 | R | 763 | VAL |
| 4 | S | 238 | PRO |
| 9 | X | 38 | VAL |
| 1 | A | 16 | PRO |
| 1 | A | 177 | PRO |
| 3 | B | 578 | PRO |
| 3 | B | 701 | PRO |
| 3 | B | 763 | VAL |
| 11 | P | 40 | PRO |
| 1 | Q | 50 | GLY |
| 1 | Q | 53 | GLU |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 3 | R | 578 | PRO |
| 3 | R | 775 | MET |
| 11 | Z | 40 | PRO |
| 1 | A | 437 | VAL |
| 3 | B | 43 | ILE |
| 3 | B | 775 | MET |
| 1 | Q | 437 | VAL |
| 3 | R | 406 | GLY |
| 4 | S | 119 | PRO |
| 11 | P | 22 | PRO |
| 11 | Z | 22 | PRO |

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 | 675/766 (88%) | 580 (86%) | 95 (14%) | 3 13 |
| 1 | Q | 675/766 (88%) | 583 (86%) | 92 (14%) | 3 14 |
| 2 | C | 237/338 (70%) | 201 (85%) | 36 (15%) | 3 11 |
| 2 | G | 237/338 (70%) | 199 (84%) | 38 (16%) | 2 10 |
| 3 | B | 937/965 (97%) | 807 (86%) | 130 (14%) | 3 13 |
| 3 | R | 937/965 (97%) | 810 (86%) | 127 (14%) | 3 14 |
| 4 | D | 241/242 (100%) | 224 (93%) | 17 (7%) | 14 44 |
| 4 | S | 241/242 (100%) | 223 (92%) | 18 (8%) | 13 41 |
| 5 | E | 156/159 (98%) | 142 (91%) | 14 (9%) | 9 32 |
| 5 | T | 156/159 (98%) | 142 (91%) | 14 (9%) | 9 32 |
| 6 | F | 82/106 (77%) | 79 (96%) | 3 (4%) | 34 62 |
| 6 | U | 82/106 (77%) | 79 (96%) | 3 (4%) | 34 62 |
| 7 | H | 67/75 (89%) | 54 (81%) | 13 (19%) | 1 4 |
| 7 | V | 67/75 (89%) | 55 (82%) | 12 (18%) | 2 6 |
| 8 | K | 72/84 (86%) | 57 (79%) | 15 (21%) | 1 3 |

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| Mol | Chain | Analysed | Rotameric | Outliers | Percentiles | |
|-----|-------|-----------------|------------|-----------|-------------|----|
| 8 | W | 72/84 (86%) | 57 (79%) | 15 (21%) | 1 | 3 |
| 9 | L | 81/81 (100%) | 75 (93%) | 6 (7%) | 13 | 42 |
| 9 | X | 81/81 (100%) | 75 (93%) | 6 (7%) | 13 | 42 |
| 10 | N | 58/60 (97%) | 50 (86%) | 8 (14%) | 3 | 14 |
| 10 | Y | 58/60 (97%) | 49 (84%) | 9 (16%) | 2 | 11 |
| 11 | P | 39/43 (91%) | 31 (80%) | 8 (20%) | 1 | 3 |
| 11 | Z | 39/43 (91%) | 31 (80%) | 8 (20%) | 1 | 3 |
| All | All | 5290/5838 (91%) | 4603 (87%) | 687 (13%) | 4 | 16 |

All (687) residues with a non-rotameric sidechain are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | A | 30 | PRO |
| 1 | A | 45 | MET |
| 1 | A | 48 | ARG |
| 1 | A | 52 | ILE |
| 1 | A | 56 | GLN |
| 1 | A | 71 | HIS |
| 1 | A | 75 | ILE |
| 1 | A | 84 | VAL |
| 1 | A | 175 | LEU |
| 1 | A | 176 | THR |
| 1 | A | 179 | ASP |
| 1 | A | 203 | ARG |
| 1 | A | 219 | ILE |
| 1 | A | 232 | GLU |
| 1 | A | 238 | LYS |
| 1 | A | 239 | LEU |
| 1 | A | 253 | ILE |
| 1 | A | 278 | ASP |
| 1 | A | 282 | PRO |
| 1 | A | 287 | SER |
| 1 | A | 297 | THR |
| 1 | A | 298 | LEU |
| 1 | A | 301 | ARG |
| 1 | A | 306 | GLU |
| 1 | A | 308 | ARG |
| 1 | A | 312 | ASN |
| 1 | A | 313 | LEU |
| 1 | A | 314 | SER |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | A | 346 | THR |
| 1 | A | 349 | VAL |
| 1 | A | 356 | TRP |
| 1 | A | 366 | ILE |
| 1 | A | 369 | PRO |
| 1 | A | 376 | ASN |
| 1 | A | 377 | TYR |
| 1 | A | 378 | VAL |
| 1 | A | 410 | HIS |
| 1 | A | 421 | ARG |
| 1 | A | 425 | LEU |
| 1 | A | 427 | ARG |
| 1 | A | 428 | ILE |
| 1 | A | 434 | ARG |
| 1 | A | 438 | LEU |
| 1 | A | 439 | LYS |
| 1 | A | 446 | ASN |
| 1 | A | 464 | LEU |
| 1 | A | 471 | GLU |
| 1 | A | 481 | LEU |
| 1 | A | 487 | ILE |
| 1 | A | 500 | GLN |
| 1 | A | 503 | ILE |
| 1 | A | 507 | TYR |
| 1 | A | 518 | LYS |
| 1 | A | 525 | LEU |
| 1 | A | 537 | PRO |
| 1 | A | 546 | TYR |
| 1 | A | 550 | GLN |
| 1 | A | 558 | LYS |
| 1 | A | 559 | ASP |
| 1 | A | 573 | ARG |
| 1 | A | 574 | LEU |
| 1 | A | 593 | LEU |
| 1 | A | 597 | VAL |
| 1 | A | 608 | PRO |
| 1 | A | 612 | LEU |
| 1 | A | 622 | GLU |
| 1 | A | 633 | ARG |
| 1 | A | 637 | ARG |
| 1 | A | 641 | LEU |
| 1 | A | 642 | GLN |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | A | 656 | ASP |
| 1 | A | 662 | TYR |
| 1 | A | 675 | LEU |
| 1 | A | 684 | LEU |
| 1 | A | 687 | ILE |
| 1 | A | 692 | LEU |
| 1 | A | 702 | ASP |
| 1 | A | 705 | ASP |
| 1 | A | 708 | ARG |
| 1 | A | 714 | ILE |
| 1 | A | 723 | ASN |
| 1 | A | 755 | GLU |
| 1 | A | 759 | ARG |
| 1 | A | 764 | ARG |
| 1 | A | 777 | GLU |
| 1 | A | 781 | PHE |
| 1 | A | 787 | ARG |
| 1 | A | 797 | PHE |
| 1 | A | 803 | ARG |
| 1 | A | 821 | ARG |
| 1 | A | 823 | LEU |
| 1 | A | 828 | SER |
| 1 | A | 858 | MET |
| 1 | A | 859 | TYR |
| 1 | A | 871 | ILE |
| 2 | C | 36 | ILE |
| 2 | C | 37 | LEU |
| 2 | C | 38 | ASN |
| 2 | C | 43 | VAL |
| 2 | C | 45 | ARG |
| 2 | C | 57 | LYS |
| 2 | C | 70 | ILE |
| 2 | C | 83 | THR |
| 2 | C | 85 | MET |
| 2 | C | 104 | LEU |
| 2 | C | 107 | LEU |
| 2 | C | 116 | VAL |
| 2 | C | 132 | ARG |
| 2 | C | 133 | ASP |
| 2 | C | 146 | TYR |
| 2 | C | 239 | ARG |
| 2 | C | 275 | ASN |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 2 | C | 276 | ASN |
| 2 | C | 310 | ILE |
| 2 | C | 311 | ARG |
| 2 | C | 315 | LEU |
| 2 | C | 318 | ASP |
| 2 | C | 320 | MET |
| 2 | C | 331 | ARG |
| 2 | C | 335 | THR |
| 2 | C | 337 | GLU |
| 2 | C | 344 | ARG |
| 2 | C | 351 | VAL |
| 2 | C | 360 | ARG |
| 2 | C | 364 | GLU |
| 2 | C | 370 | VAL |
| 2 | C | 379 | ILE |
| 2 | C | 380 | LYS |
| 2 | C | 381 | LEU |
| 2 | C | 390 | MET |
| 2 | C | 391 | ARG |
| 3 | B | 5 | LEU |
| 3 | B | 6 | THR |
| 3 | B | 33 | ASP |
| 3 | B | 64 | ARG |
| 3 | B | 65 | ILE |
| 3 | B | 83 | MET |
| 3 | B | 105 | ASN |
| 3 | B | 108 | GLU |
| 3 | B | 118 | ASP |
| 3 | B | 128 | ASP |
| 3 | B | 162 | VAL |
| 3 | B | 163 | THR |
| 3 | B | 171 | ARG |
| 3 | B | 183 | ILE |
| 3 | B | 193 | THR |
| 3 | B | 227 | MET |
| 3 | B | 245 | ASP |
| 3 | B | 296 | TYR |
| 3 | B | 313 | TYR |
| 3 | B | 322 | VAL |
| 3 | B | 327 | LEU |
| 3 | B | 332 | PRO |
| 3 | B | 348 | ASP |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 3 | B | 355 | ARG |
| 3 | B | 361 | PHE |
| 3 | B | 367 | TYR |
| 3 | B | 368 | GLN |
| 3 | B | 382 | LYS |
| 3 | B | 391 | THR |
| 3 | B | 394 | ILE |
| 3 | B | 404 | VAL |
| 3 | B | 407 | ARG |
| 3 | B | 416 | ARG |
| 3 | B | 418 | ASN |
| 3 | B | 429 | VAL |
| 3 | B | 453 | MET |
| 3 | B | 457 | GLU |
| 3 | B | 469 | ASN |
| 3 | B | 476 | ILE |
| 3 | B | 478 | VAL |
| 3 | B | 484 | ILE |
| 3 | B | 501 | ILE |
| 3 | B | 529 | TYR |
| 3 | B | 530 | TYR |
| 3 | B | 536 | LEU |
| 3 | B | 544 | ARG |
| 3 | B | 551 | ASP |
| 3 | B | 561 | ASP |
| 3 | B | 562 | PHE |
| 3 | B | 570 | CYS |
| 3 | B | 577 | ARG |
| 3 | B | 588 | LEU |
| 3 | B | 603 | THR |
| 3 | B | 606 | ASP |
| 3 | B | 608 | VAL |
| 3 | B | 625 | TYR |
| 3 | B | 628 | LEU |
| 3 | B | 634 | THR |
| 3 | B | 638 | THR |
| 3 | B | 643 | TRP |
| 3 | B | 644 | SER |
| 3 | B | 650 | ILE |
| 3 | B | 655 | ILE |
| 3 | B | 659 | GLU |
| 3 | B | 667 | THR |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 3 | B | 669 | GLN |
| 3 | B | 672 | MET |
| 3 | B | 685 | GLN |
| 3 | B | 686 | LEU |
| 3 | B | 687 | ARG |
| 3 | B | 691 | ARG |
| 3 | B | 702 | LEU |
| 3 | B | 708 | LEU |
| 3 | B | 710 | ILE |
| 3 | B | 714 | THR |
| 3 | B | 715 | ASN |
| 3 | B | 770 | GLU |
| 3 | B | 781 | ARG |
| 3 | B | 783 | TYR |
| 3 | B | 787 | GLU |
| 3 | B | 788 | TYR |
| 3 | B | 789 | TYR |
| 3 | B | 794 | ASP |
| 3 | B | 800 | PRO |
| 3 | B | 850 | VAL |
| 3 | B | 867 | ARG |
| 3 | B | 874 | ILE |
| 3 | B | 890 | MET |
| 3 | B | 895 | VAL |
| 3 | B | 896 | ASP |
| 3 | B | 910 | LEU |
| 3 | B | 915 | LEU |
| 3 | B | 926 | GLU |
| 3 | B | 941 | ASP |
| 3 | B | 945 | PHE |
| 3 | B | 946 | TYR |
| 3 | B | 950 | ILE |
| 3 | B | 951 | GLU |
| 3 | B | 957 | ILE |
| 3 | B | 958 | LEU |
| 3 | B | 959 | ARG |
| 3 | B | 967 | THR |
| 3 | B | 975 | THR |
| 3 | B | 982 | ARG |
| 3 | B | 985 | PHE |
| 3 | B | 988 | VAL |
| 3 | B | 990 | TYR |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 3 | B | 991 | GLN |
| 3 | B | 992 | LYS |
| 3 | B | 994 | HIS |
| 3 | B | 1000 | LYS |
| 3 | B | 1002 | HIS |
| 3 | B | 1004 | ARG |
| 3 | B | 1018 | GLU |
| 3 | B | 1026 | LEU |
| 3 | B | 1030 | GLU |
| 3 | B | 1031 | MET |
| 3 | B | 1033 | ARG |
| 3 | B | 1035 | CYS |
| 3 | B | 1039 | PHE |
| 3 | B | 1045 | LEU |
| 3 | B | 1049 | LEU |
| 3 | B | 1054 | ASP |
| 3 | B | 1057 | MET |
| 3 | B | 1062 | ASP |
| 3 | B | 1080 | PRO |
| 3 | B | 1097 | PHE |
| 3 | B | 1111 | PRO |
| 3 | B | 1113 | LEU |
| 3 | B | 1115 | LEU |
| 4 | D | 55 | ASP |
| 4 | D | 56 | GLU |
| 4 | D | 57 | ILE |
| 4 | D | 80 | GLU |
| 4 | D | 89 | CYS |
| 4 | D | 113 | ASP |
| 4 | D | 132 | LEU |
| 4 | D | 155 | LYS |
| 4 | D | 162 | SER |
| 4 | D | 165 | ARG |
| 4 | D | 167 | TYR |
| 4 | D | 190 | LEU |
| 4 | D | 192 | ASP |
| 4 | D | 195 | LEU |
| 4 | D | 214 | ASN |
| 4 | D | 250 | ILE |
| 4 | D | 251 | ARG |
| 5 | E | 4 | LEU |
| 5 | E | 12 | ARG |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 5 | E | 18 | PHE |
| 5 | E | 22 | LEU |
| 5 | E | 30 | LEU |
| 5 | E | 38 | ILE |
| 5 | E | 41 | ASP |
| 5 | E | 42 | LEU |
| 5 | E | 51 | VAL |
| 5 | E | 58 | ILE |
| 5 | E | 60 | VAL |
| 5 | E | 101 | LEU |
| 5 | E | 112 | GLN |
| 5 | E | 174 | TRP |
| 6 | F | 5 | TYR |
| 6 | F | 12 | ILE |
| 6 | F | 39 | ASP |
| 7 | H | 12 | ARG |
| 7 | H | 13 | ILE |
| 7 | H | 15 | TYR |
| 7 | H | 24 | ASN |
| 7 | H | 26 | ASP |
| 7 | H | 38 | ARG |
| 7 | H | 42 | LEU |
| 7 | H | 44 | TRP |
| 7 | H | 46 | ARG |
| 7 | H | 62 | ILE |
| 7 | H | 64 | ARG |
| 7 | H | 72 | TYR |
| 7 | H | 76 | VAL |
| 8 | K | 12 | ASP |
| 8 | K | 15 | PHE |
| 8 | K | 23 | TRP |
| 8 | K | 39 | ARG |
| 8 | K | 41 | LEU |
| 8 | K | 42 | GLN |
| 8 | K | 52 | ASP |
| 8 | K | 60 | ASP |
| 8 | K | 67 | GLU |
| 8 | K | 71 | ARG |
| 8 | K | 73 | VAL |
| 8 | K | 74 | LEU |
| 8 | K | 82 | LEU |
| 8 | K | 89 | LEU |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 8 | K | 90 | LEU |
| 9 | L | 5 | ILE |
| 9 | L | 24 | LEU |
| 9 | L | 44 | TYR |
| 9 | L | 45 | GLN |
| 9 | L | 48 | PRO |
| 9 | L | 57 | ILE |
| 10 | N | 3 | ILE |
| 10 | N | 5 | ILE |
| 10 | N | 10 | CYS |
| 10 | N | 20 | SER |
| 10 | N | 22 | ILE |
| 10 | N | 48 | MET |
| 10 | N | 55 | ILE |
| 10 | N | 64 | ARG |
| 11 | P | 10 | TRP |
| 11 | P | 15 | ASP |
| 11 | P | 21 | LEU |
| 11 | P | 24 | VAL |
| 11 | P | 31 | TYR |
| 11 | P | 35 | PHE |
| 11 | P | 41 | THR |
| 11 | P | 46 | LYS |
| 1 | Q | 30 | PRO |
| 1 | Q | 45 | MET |
| 1 | Q | 48 | ARG |
| 1 | Q | 52 | ILE |
| 1 | Q | 56 | GLN |
| 1 | Q | 71 | HIS |
| 1 | Q | 75 | ILE |
| 1 | Q | 84 | VAL |
| 1 | Q | 175 | LEU |
| 1 | Q | 176 | THR |
| 1 | Q | 179 | ASP |
| 1 | Q | 191 | ASP |
| 1 | Q | 203 | ARG |
| 1 | Q | 219 | ILE |
| 1 | Q | 232 | GLU |
| 1 | Q | 238 | LYS |
| 1 | Q | 239 | LEU |
| 1 | Q | 253 | ILE |
| 1 | Q | 278 | ASP |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | Q | 282 | PRO |
| 1 | Q | 287 | SER |
| 1 | Q | 297 | THR |
| 1 | Q | 298 | LEU |
| 1 | Q | 301 | ARG |
| 1 | Q | 306 | GLU |
| 1 | Q | 308 | ARG |
| 1 | Q | 312 | ASN |
| 1 | Q | 313 | LEU |
| 1 | Q | 314 | SER |
| 1 | Q | 346 | THR |
| 1 | Q | 349 | VAL |
| 1 | Q | 356 | TRP |
| 1 | Q | 366 | ILE |
| 1 | Q | 369 | PRO |
| 1 | Q | 376 | ASN |
| 1 | Q | 377 | TYR |
| 1 | Q | 378 | VAL |
| 1 | Q | 410 | HIS |
| 1 | Q | 421 | ARG |
| 1 | Q | 425 | LEU |
| 1 | Q | 427 | ARG |
| 1 | Q | 428 | ILE |
| 1 | Q | 438 | LEU |
| 1 | Q | 439 | LYS |
| 1 | Q | 446 | ASN |
| 1 | Q | 464 | LEU |
| 1 | Q | 471 | GLU |
| 1 | Q | 481 | LEU |
| 1 | Q | 487 | ILE |
| 1 | Q | 500 | GLN |
| 1 | Q | 503 | ILE |
| 1 | Q | 507 | TYR |
| 1 | Q | 518 | LYS |
| 1 | Q | 525 | LEU |
| 1 | Q | 537 | PRO |
| 1 | Q | 546 | TYR |
| 1 | Q | 550 | GLN |
| 1 | Q | 558 | LYS |
| 1 | Q | 559 | ASP |
| 1 | Q | 573 | ARG |
| 1 | Q | 574 | LEU |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | Q | 593 | LEU |
| 1 | Q | 597 | VAL |
| 1 | Q | 608 | PRO |
| 1 | Q | 612 | LEU |
| 1 | Q | 622 | GLU |
| 1 | Q | 633 | ARG |
| 1 | Q | 637 | ARG |
| 1 | Q | 641 | LEU |
| 1 | Q | 642 | GLN |
| 1 | Q | 656 | ASP |
| 1 | Q | 662 | TYR |
| 1 | Q | 675 | LEU |
| 1 | Q | 684 | LEU |
| 1 | Q | 687 | ILE |
| 1 | Q | 692 | LEU |
| 1 | Q | 702 | ASP |
| 1 | Q | 705 | ASP |
| 1 | Q | 708 | ARG |
| 1 | Q | 723 | ASN |
| 1 | Q | 755 | GLU |
| 1 | Q | 759 | ARG |
| 1 | Q | 764 | ARG |
| 1 | Q | 777 | GLU |
| 1 | Q | 781 | PHE |
| 1 | Q | 787 | ARG |
| 1 | Q | 797 | PHE |
| 1 | Q | 821 | ARG |
| 1 | Q | 823 | LEU |
| 1 | Q | 828 | SER |
| 1 | Q | 858 | MET |
| 1 | Q | 871 | ILE |
| 2 | G | 36 | ILE |
| 2 | G | 37 | LEU |
| 2 | G | 38 | ASN |
| 2 | G | 43 | VAL |
| 2 | G | 45 | ARG |
| 2 | G | 57 | LYS |
| 2 | G | 70 | ILE |
| 2 | G | 83 | THR |
| 2 | G | 85 | MET |
| 2 | G | 104 | LEU |
| 2 | G | 107 | LEU |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 2 | G | 116 | VAL |
| 2 | G | 132 | ARG |
| 2 | G | 133 | ASP |
| 2 | G | 146 | TYR |
| 2 | G | 239 | ARG |
| 2 | G | 267 | VAL |
| 2 | G | 275 | ASN |
| 2 | G | 276 | ASN |
| 2 | G | 284 | PHE |
| 2 | G | 310 | ILE |
| 2 | G | 311 | ARG |
| 2 | G | 315 | LEU |
| 2 | G | 318 | ASP |
| 2 | G | 320 | MET |
| 2 | G | 331 | ARG |
| 2 | G | 335 | THR |
| 2 | G | 337 | GLU |
| 2 | G | 344 | ARG |
| 2 | G | 351 | VAL |
| 2 | G | 360 | ARG |
| 2 | G | 364 | GLU |
| 2 | G | 370 | VAL |
| 2 | G | 379 | ILE |
| 2 | G | 380 | LYS |
| 2 | G | 381 | LEU |
| 2 | G | 390 | MET |
| 2 | G | 391 | ARG |
| 3 | R | 5 | LEU |
| 3 | R | 6 | THR |
| 3 | R | 33 | ASP |
| 3 | R | 64 | ARG |
| 3 | R | 65 | ILE |
| 3 | R | 83 | MET |
| 3 | R | 105 | ASN |
| 3 | R | 108 | GLU |
| 3 | R | 118 | ASP |
| 3 | R | 128 | ASP |
| 3 | R | 163 | THR |
| 3 | R | 171 | ARG |
| 3 | R | 182 | ASN |
| 3 | R | 183 | ILE |
| 3 | R | 193 | THR |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 3 | R | 227 | MET |
| 3 | R | 245 | ASP |
| 3 | R | 296 | TYR |
| 3 | R | 313 | TYR |
| 3 | R | 322 | VAL |
| 3 | R | 327 | LEU |
| 3 | R | 332 | PRO |
| 3 | R | 348 | ASP |
| 3 | R | 355 | ARG |
| 3 | R | 361 | PHE |
| 3 | R | 367 | TYR |
| 3 | R | 382 | LYS |
| 3 | R | 391 | THR |
| 3 | R | 394 | ILE |
| 3 | R | 404 | VAL |
| 3 | R | 407 | ARG |
| 3 | R | 416 | ARG |
| 3 | R | 418 | ASN |
| 3 | R | 419 | TRP |
| 3 | R | 429 | VAL |
| 3 | R | 453 | MET |
| 3 | R | 457 | GLU |
| 3 | R | 476 | ILE |
| 3 | R | 478 | VAL |
| 3 | R | 484 | ILE |
| 3 | R | 501 | ILE |
| 3 | R | 529 | TYR |
| 3 | R | 530 | TYR |
| 3 | R | 536 | LEU |
| 3 | R | 544 | ARG |
| 3 | R | 551 | ASP |
| 3 | R | 561 | ASP |
| 3 | R | 562 | PHE |
| 3 | R | 570 | CYS |
| 3 | R | 577 | ARG |
| 3 | R | 588 | LEU |
| 3 | R | 603 | THR |
| 3 | R | 606 | ASP |
| 3 | R | 625 | TYR |
| 3 | R | 628 | LEU |
| 3 | R | 634 | THR |
| 3 | R | 638 | THR |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 3 | R | 643 | TRP |
| 3 | R | 644 | SER |
| 3 | R | 650 | ILE |
| 3 | R | 655 | ILE |
| 3 | R | 659 | GLU |
| 3 | R | 669 | GLN |
| 3 | R | 672 | MET |
| 3 | R | 685 | GLN |
| 3 | R | 686 | LEU |
| 3 | R | 687 | ARG |
| 3 | R | 691 | ARG |
| 3 | R | 702 | LEU |
| 3 | R | 708 | LEU |
| 3 | R | 710 | ILE |
| 3 | R | 714 | THR |
| 3 | R | 715 | ASN |
| 3 | R | 739 | ILE |
| 3 | R | 770 | GLU |
| 3 | R | 781 | ARG |
| 3 | R | 783 | TYR |
| 3 | R | 787 | GLU |
| 3 | R | 788 | TYR |
| 3 | R | 789 | TYR |
| 3 | R | 794 | ASP |
| 3 | R | 800 | PRO |
| 3 | R | 850 | VAL |
| 3 | R | 867 | ARG |
| 3 | R | 874 | ILE |
| 3 | R | 890 | MET |
| 3 | R | 895 | VAL |
| 3 | R | 896 | ASP |
| 3 | R | 910 | LEU |
| 3 | R | 915 | LEU |
| 3 | R | 926 | GLU |
| 3 | R | 941 | ASP |
| 3 | R | 945 | PHE |
| 3 | R | 946 | TYR |
| 3 | R | 950 | ILE |
| 3 | R | 951 | GLU |
| 3 | R | 957 | ILE |
| 3 | R | 958 | LEU |
| 3 | R | 959 | ARG |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 3 | R | 967 | THR |
| 3 | R | 975 | THR |
| 3 | R | 982 | ARG |
| 3 | R | 985 | PHE |
| 3 | R | 990 | TYR |
| 3 | R | 991 | GLN |
| 3 | R | 992 | LYS |
| 3 | R | 994 | HIS |
| 3 | R | 1000 | LYS |
| 3 | R | 1002 | HIS |
| 3 | R | 1004 | ARG |
| 3 | R | 1018 | GLU |
| 3 | R | 1026 | LEU |
| 3 | R | 1030 | GLU |
| 3 | R | 1031 | MET |
| 3 | R | 1033 | ARG |
| 3 | R | 1035 | CYS |
| 3 | R | 1039 | PHE |
| 3 | R | 1045 | LEU |
| 3 | R | 1049 | LEU |
| 3 | R | 1054 | ASP |
| 3 | R | 1057 | MET |
| 3 | R | 1062 | ASP |
| 3 | R | 1080 | PRO |
| 3 | R | 1097 | PHE |
| 3 | R | 1111 | PRO |
| 3 | R | 1113 | LEU |
| 3 | R | 1115 | LEU |
| 4 | S | 54 | TYR |
| 4 | S | 55 | ASP |
| 4 | S | 56 | GLU |
| 4 | S | 57 | ILE |
| 4 | S | 80 | GLU |
| 4 | S | 89 | CYS |
| 4 | S | 113 | ASP |
| 4 | S | 132 | LEU |
| 4 | S | 155 | LYS |
| 4 | S | 162 | SER |
| 4 | S | 165 | ARG |
| 4 | S | 167 | TYR |
| 4 | S | 190 | LEU |
| 4 | S | 192 | ASP |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 4 | S | 195 | LEU |
| 4 | S | 214 | ASN |
| 4 | S | 250 | ILE |
| 4 | S | 251 | ARG |
| 5 | T | 4 | LEU |
| 5 | T | 12 | ARG |
| 5 | T | 18 | PHE |
| 5 | T | 22 | LEU |
| 5 | T | 30 | LEU |
| 5 | T | 38 | ILE |
| 5 | T | 41 | ASP |
| 5 | T | 42 | LEU |
| 5 | T | 51 | VAL |
| 5 | T | 58 | ILE |
| 5 | T | 60 | VAL |
| 5 | T | 101 | LEU |
| 5 | T | 112 | GLN |
| 5 | T | 174 | TRP |
| 6 | U | 5 | TYR |
| 6 | U | 12 | ILE |
| 6 | U | 39 | ASP |
| 7 | V | 12 | ARG |
| 7 | V | 13 | ILE |
| 7 | V | 15 | TYR |
| 7 | V | 24 | ASN |
| 7 | V | 26 | ASP |
| 7 | V | 38 | ARG |
| 7 | V | 42 | LEU |
| 7 | V | 44 | TRP |
| 7 | V | 46 | ARG |
| 7 | V | 62 | ILE |
| 7 | V | 64 | ARG |
| 7 | V | 72 | TYR |
| 8 | W | 12 | ASP |
| 8 | W | 15 | PHE |
| 8 | W | 23 | TRP |
| 8 | W | 39 | ARG |
| 8 | W | 41 | LEU |
| 8 | W | 42 | GLN |
| 8 | W | 52 | ASP |
| 8 | W | 60 | ASP |
| 8 | W | 67 | GLU |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 8 | W | 71 | ARG |
| 8 | W | 73 | VAL |
| 8 | W | 74 | LEU |
| 8 | W | 82 | LEU |
| 8 | W | 89 | LEU |
| 8 | W | 90 | LEU |
| 9 | X | 5 | ILE |
| 9 | X | 24 | LEU |
| 9 | X | 44 | TYR |
| 9 | X | 45 | GLN |
| 9 | X | 48 | PRO |
| 9 | X | 57 | ILE |
| 10 | Y | 3 | ILE |
| 10 | Y | 5 | ILE |
| 10 | Y | 7 | CYS |
| 10 | Y | 10 | CYS |
| 10 | Y | 20 | SER |
| 10 | Y | 22 | ILE |
| 10 | Y | 48 | MET |
| 10 | Y | 55 | ILE |
| 10 | Y | 64 | ARG |
| 11 | Z | 10 | TRP |
| 11 | Z | 15 | ASP |
| 11 | Z | 21 | LEU |
| 11 | Z | 24 | VAL |
| 11 | Z | 31 | TYR |
| 11 | Z | 35 | PHE |
| 11 | Z | 41 | THR |
| 11 | Z | 46 | LYS |

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (175) such sidechains are listed below:

| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | A | 5 | ASN |
| 1 | A | 56 | GLN |
| 1 | A | 67 | ASN |
| 1 | A | 237 | HIS |
| 1 | A | 259 | GLN |
| 1 | A | 270 | GLN |
| 1 | A | 272 | HIS |
| 1 | A | 312 | ASN |
| 1 | A | 331 | ASN |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | A | 367 | ASN |
| 1 | A | 376 | ASN |
| 1 | A | 410 | HIS |
| 1 | A | 420 | ASN |
| 1 | A | 422 | GLN |
| 1 | A | 446 | ASN |
| 1 | A | 468 | GLN |
| 1 | A | 483 | HIS |
| 1 | A | 485 | ASN |
| 1 | A | 522 | GLN |
| 1 | A | 561 | ASN |
| 1 | A | 563 | HIS |
| 1 | A | 567 | ASN |
| 1 | A | 582 | HIS |
| 1 | A | 606 | GLN |
| 1 | A | 677 | GLN |
| 1 | A | 723 | ASN |
| 2 | C | 22 | ASN |
| 2 | C | 38 | ASN |
| 2 | C | 76 | GLN |
| 2 | C | 275 | ASN |
| 2 | C | 312 | HIS |
| 2 | C | 328 | GLN |
| 3 | B | 40 | GLN |
| 3 | B | 89 | ASN |
| 3 | B | 182 | ASN |
| 3 | B | 249 | GLN |
| 3 | B | 250 | ASN |
| 3 | B | 337 | HIS |
| 3 | B | 340 | ASN |
| 3 | B | 368 | GLN |
| 3 | B | 396 | HIS |
| 3 | B | 412 | GLN |
| 3 | B | 418 | ASN |
| 3 | B | 425 | HIS |
| 3 | B | 439 | ASN |
| 3 | B | 446 | HIS |
| 3 | B | 554 | ASN |
| 3 | B | 564 | ASN |
| 3 | B | 623 | ASN |
| 3 | B | 639 | HIS |
| 3 | B | 660 | HIS |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 3 | B | 661 | ASN |
| 3 | B | 669 | GLN |
| 3 | B | 685 | GLN |
| 3 | B | 715 | ASN |
| 3 | B | 721 | ASN |
| 3 | B | 882 | HIS |
| 3 | B | 884 | GLN |
| 3 | B | 911 | ASN |
| 3 | B | 913 | HIS |
| 3 | B | 977 | GLN |
| 3 | B | 991 | GLN |
| 3 | B | 994 | HIS |
| 3 | B | 995 | HIS |
| 3 | B | 1063 | GLN |
| 3 | B | 1087 | ASN |
| 3 | B | 1102 | GLN |
| 4 | D | 4 | ASN |
| 4 | D | 50 | ASN |
| 4 | D | 181 | ASN |
| 4 | D | 214 | ASN |
| 5 | E | 33 | GLN |
| 5 | E | 35 | GLN |
| 5 | E | 109 | HIS |
| 5 | E | 112 | GLN |
| 5 | E | 166 | GLN |
| 5 | E | 177 | GLN |
| 6 | F | 35 | GLN |
| 7 | H | 20 | HIS |
| 7 | H | 41 | GLN |
| 8 | K | 24 | GLN |
| 8 | K | 42 | GLN |
| 8 | K | 54 | ASN |
| 9 | L | 75 | ASN |
| 10 | N | 19 | GLN |
| 10 | N | 26 | ASN |
| 10 | N | 57 | ASN |
| 1 | Q | 5 | ASN |
| 1 | Q | 56 | GLN |
| 1 | Q | 67 | ASN |
| 1 | Q | 237 | HIS |
| 1 | Q | 259 | GLN |
| 1 | Q | 270 | GLN |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | Q | 272 | HIS |
| 1 | Q | 312 | ASN |
| 1 | Q | 331 | ASN |
| 1 | Q | 367 | ASN |
| 1 | Q | 376 | ASN |
| 1 | Q | 410 | HIS |
| 1 | Q | 420 | ASN |
| 1 | Q | 422 | GLN |
| 1 | Q | 446 | ASN |
| 1 | Q | 468 | GLN |
| 1 | Q | 483 | HIS |
| 1 | Q | 485 | ASN |
| 1 | Q | 522 | GLN |
| 1 | Q | 561 | ASN |
| 1 | Q | 567 | ASN |
| 1 | Q | 582 | HIS |
| 1 | Q | 606 | GLN |
| 1 | Q | 677 | GLN |
| 1 | Q | 723 | ASN |
| 2 | G | 22 | ASN |
| 2 | G | 38 | ASN |
| 2 | G | 76 | GLN |
| 2 | G | 275 | ASN |
| 2 | G | 312 | HIS |
| 2 | G | 328 | GLN |
| 3 | R | 40 | GLN |
| 3 | R | 89 | ASN |
| 3 | R | 182 | ASN |
| 3 | R | 249 | GLN |
| 3 | R | 250 | ASN |
| 3 | R | 337 | HIS |
| 3 | R | 340 | ASN |
| 3 | R | 368 | GLN |
| 3 | R | 396 | HIS |
| 3 | R | 412 | GLN |
| 3 | R | 418 | ASN |
| 3 | R | 425 | HIS |
| 3 | R | 439 | ASN |
| 3 | R | 446 | HIS |
| 3 | R | 469 | ASN |
| 3 | R | 523 | ASN |
| 3 | R | 554 | ASN |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 3 | R | 564 | ASN |
| 3 | R | 623 | ASN |
| 3 | R | 639 | HIS |
| 3 | R | 660 | HIS |
| 3 | R | 661 | ASN |
| 3 | R | 669 | GLN |
| 3 | R | 685 | GLN |
| 3 | R | 715 | ASN |
| 3 | R | 721 | ASN |
| 3 | R | 882 | HIS |
| 3 | R | 884 | GLN |
| 3 | R | 911 | ASN |
| 3 | R | 913 | HIS |
| 3 | R | 977 | GLN |
| 3 | R | 991 | GLN |
| 3 | R | 994 | HIS |
| 3 | R | 995 | HIS |
| 3 | R | 1010 | GLN |
| 3 | R | 1063 | GLN |
| 3 | R | 1087 | ASN |
| 3 | R | 1102 | GLN |
| 4 | S | 4 | ASN |
| 4 | S | 50 | ASN |
| 4 | S | 181 | ASN |
| 4 | S | 214 | ASN |
| 5 | T | 33 | GLN |
| 5 | T | 109 | HIS |
| 5 | T | 112 | GLN |
| 5 | T | 166 | GLN |
| 5 | T | 177 | GLN |
| 6 | U | 35 | GLN |
| 7 | V | 20 | HIS |
| 8 | W | 24 | GLN |
| 8 | W | 25 | ASN |
| 8 | W | 42 | GLN |
| 8 | W | 54 | ASN |
| 9 | X | 75 | ASN |
| 10 | Y | 19 | GLN |
| 10 | Y | 26 | ASN |
| 10 | Y | 57 | 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 carbohydrates in this entry.

5.6 Ligand geometry [i](#)

Of 12 ligands modelled in this entry, 10 are monoatomic - leaving 2 for Mogul analysis.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. 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 $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

| Mol | Type | Chain | Res | Link | Bond lengths | | | Bond angles | | |
|-----|------|-------|------|------|--------------|------|-------------|-------------|------|-------------|
| | | | | | Counts | RMSZ | $\# Z > 2$ | Counts | RMSZ | $\# Z > 2$ |
| 14 | F3S | D | 1001 | 4 | 0,9,9 | 0.00 | - | - | | |
| 14 | F3S | S | 1001 | 4 | 0,9,9 | 0.00 | - | - | | |

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

| Mol | Type | Chain | Res | Link | Chirals | Torsions | Rings |
|-----|------|-------|------|------|---------|----------|---------|
| 14 | F3S | D | 1001 | 4 | - | - | 0/3/3/3 |
| 14 | F3S | S | 1001 | 4 | - | - | 0/3/3/3 |

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

2 monomers are involved in 7 short contacts:

| Mol | Chain | Res | Type | Clashes | Symm-Clashes |
|-----|-------|------|------|---------|--------------|
| 14 | D | 1001 | F3S | 4 | 0 |
| 14 | S | 1001 | F3S | 3 | 0 |

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 [i](#)

6.1 Protein, DNA and RNA chains [i](#)

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, 95th 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 | 776/880 (88%) | -0.17 | 17 (2%) 62 60 | 23, 75, 132, 186 | 0 |
| 1 | Q | 776/880 (88%) | -0.03 | 26 (3%) 45 44 | 29, 87, 145, 202 | 0 |
| 2 | C | 279/392 (71%) | -0.05 | 10 (3%) 42 42 | 29, 81, 153, 190 | 0 |
| 2 | G | 279/392 (71%) | 0.00 | 12 (4%) 35 35 | 42, 97, 153, 181 | 0 |
| 3 | B | 1090/1124 (96%) | -0.19 | 17 (1%) 72 70 | 24, 78, 145, 196 | 0 |
| 3 | R | 1090/1124 (96%) | -0.10 | 33 (3%) 50 49 | 36, 84, 149, 196 | 0 |
| 4 | D | 264/265 (99%) | 0.09 | 12 (4%) 33 33 | 44, 94, 144, 179 | 0 |
| 4 | S | 264/265 (99%) | 0.22 | 15 (5%) 23 24 | 61, 111, 157, 192 | 0 |
| 5 | E | 176/180 (97%) | 0.38 | 16 (9%) 9 10 | 39, 112, 189, 202 | 0 |
| 5 | T | 176/180 (97%) | 0.35 | 14 (7%) 12 13 | 57, 113, 176, 202 | 0 |
| 6 | F | 89/113 (78%) | 0.36 | 12 (13%) 3 4 | 73, 142, 182, 196 | 0 |
| 6 | U | 89/113 (78%) | 0.60 | 10 (11%) 5 6 | 93, 141, 184, 201 | 0 |
| 7 | H | 74/84 (88%) | 0.22 | 3 (4%) 37 36 | 46, 90, 137, 165 | 0 |
| 7 | V | 74/84 (88%) | 0.20 | 5 (6%) 17 19 | 70, 101, 159, 198 | 0 |
| 8 | K | 82/95 (86%) | -0.25 | 1 (1%) 79 77 | 30, 72, 118, 154 | 0 |
| 8 | W | 82/95 (86%) | 0.03 | 3 (3%) 41 40 | 47, 82, 139, 189 | 0 |
| 9 | L | 92/92 (100%) | 0.01 | 2 (2%) 62 60 | 42, 81, 125, 200 | 0 |
| 9 | X | 92/92 (100%) | 0.31 | 9 (9%) 7 9 | 52, 102, 140, 159 | 0 |
| 10 | N | 64/66 (96%) | -0.23 | 0 100 100 | 60, 90, 124, 174 | 0 |
| 10 | Y | 64/66 (96%) | -0.02 | 2 (3%) 49 48 | 61, 98, 145, 185 | 0 |
| 11 | P | 43/48 (89%) | -0.03 | 2 (4%) 31 31 | 48, 101, 137, 155 | 0 |
| 11 | Z | 43/48 (89%) | -0.12 | 0 100 100 | 64, 100, 144, 180 | 0 |
| All | All | 6058/6678 (90%) | -0.03 | 221 (3%) 42 42 | 23, 88, 153, 202 | 0 |

All (221) RSRZ outliers are listed below:

| Mol | Chain | Res | Type | RSRZ |
|-----|-------|------|------|------|
| 3 | R | 434 | ALA | 8.3 |
| 5 | T | 135 | VAL | 6.6 |
| 6 | U | 33 | LEU | 6.2 |
| 4 | D | 217 | ILE | 5.8 |
| 6 | U | 2 | SER | 5.7 |
| 7 | V | 57 | ALA | 5.7 |
| 1 | A | 255 | ALA | 5.6 |
| 5 | E | 131 | LYS | 5.6 |
| 3 | R | 596 | LYS | 5.5 |
| 1 | Q | 255 | ALA | 5.3 |
| 3 | B | 1069 | TRP | 5.1 |
| 5 | E | 128 | PHE | 5.1 |
| 5 | E | 135 | VAL | 5.0 |
| 3 | B | 1078 | VAL | 5.0 |
| 6 | U | 5 | TYR | 4.9 |
| 5 | T | 117 | THR | 4.9 |
| 4 | S | 172 | ILE | 4.8 |
| 6 | U | 89 | MET | 4.8 |
| 5 | E | 127 | ILE | 4.7 |
| 1 | Q | 807 | VAL | 4.7 |
| 5 | E | 153 | VAL | 4.7 |
| 5 | T | 179 | LYS | 4.6 |
| 3 | R | 277 | ALA | 4.6 |
| 3 | R | 245 | ASP | 4.6 |
| 4 | D | 190 | LEU | 4.6 |
| 3 | B | 625 | TYR | 4.5 |
| 3 | R | 1079 | CYS | 4.4 |
| 6 | F | 32 | ASN | 4.4 |
| 3 | R | 765 | TYR | 4.4 |
| 3 | R | 1069 | TRP | 4.4 |
| 1 | Q | 292 | GLY | 4.3 |
| 6 | F | 5 | TYR | 4.3 |
| 8 | K | 51 | ILE | 4.2 |
| 3 | B | 434 | ALA | 4.0 |
| 1 | A | 62 | GLY | 4.0 |
| 5 | T | 177 | GLN | 4.0 |
| 2 | C | 137 | ALA | 3.9 |
| 2 | G | 395 | ARG | 3.9 |
| 6 | U | 4 | VAL | 3.9 |
| 1 | A | 247 | GLU | 3.9 |
| 3 | R | 831 | ALA | 3.9 |
| 2 | C | 259 | SER | 3.8 |
| 4 | D | 88 | ASN | 3.8 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 9 | L | 89 | GLY | 3.8 |
| 7 | V | 82 | ILE | 3.8 |
| 3 | R | 781 | ARG | 3.8 |
| 5 | E | 130 | GLU | 3.7 |
| 3 | R | 597 | LEU | 3.7 |
| 6 | F | 2 | SER | 3.6 |
| 1 | A | 60 | THR | 3.6 |
| 2 | C | 394 | LEU | 3.6 |
| 5 | T | 178 | THR | 3.6 |
| 1 | Q | 60 | THR | 3.6 |
| 3 | R | 272 | ILE | 3.6 |
| 7 | V | 58 | LYS | 3.6 |
| 6 | U | 32 | ASN | 3.5 |
| 1 | Q | 254 | ASP | 3.5 |
| 2 | G | 250 | ILE | 3.5 |
| 2 | C | 138 | LEU | 3.5 |
| 3 | B | 53 | ILE | 3.5 |
| 5 | E | 32 | GLN | 3.4 |
| 5 | E | 111 | SER | 3.2 |
| 3 | B | 182 | ASN | 3.2 |
| 3 | R | 224 | VAL | 3.2 |
| 5 | T | 180 | LYS | 3.2 |
| 5 | T | 130 | GLU | 3.2 |
| 4 | D | 188 | PHE | 3.2 |
| 3 | R | 306 | GLU | 3.2 |
| 7 | V | 14 | HIS | 3.2 |
| 4 | D | 187 | VAL | 3.1 |
| 3 | R | 256 | LEU | 3.1 |
| 6 | F | 77 | PRO | 3.1 |
| 6 | U | 61 | ASN | 3.1 |
| 3 | R | 778 | ALA | 3.1 |
| 7 | H | 57 | ALA | 3.1 |
| 3 | R | 278 | ILE | 3.0 |
| 4 | D | 189 | GLU | 3.0 |
| 3 | R | 766 | PRO | 3.0 |
| 5 | T | 171 | LYS | 3.0 |
| 3 | B | 779 | GLY | 3.0 |
| 5 | E | 178 | THR | 3.0 |
| 4 | S | 193 | GLY | 2.9 |
| 3 | R | 194 | ALA | 2.9 |
| 1 | Q | 10 | LYS | 2.9 |
| 6 | F | 53 | GLN | 2.9 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 4 | S | 188 | PHE | 2.9 |
| 4 | D | 175 | ASN | 2.9 |
| 4 | S | 88 | ASN | 2.9 |
| 4 | S | 201 | LEU | 2.9 |
| 5 | E | 180 | LYS | 2.9 |
| 2 | G | 394 | LEU | 2.9 |
| 1 | Q | 183 | ARG | 2.8 |
| 2 | C | 126 | LEU | 2.8 |
| 6 | F | 4 | VAL | 2.8 |
| 1 | A | 810 | ALA | 2.8 |
| 3 | B | 766 | PRO | 2.8 |
| 3 | R | 1077 | TYR | 2.8 |
| 4 | S | 214 | ASN | 2.8 |
| 11 | P | 16 | GLU | 2.8 |
| 3 | R | 433 | LEU | 2.7 |
| 4 | S | 217 | ILE | 2.7 |
| 1 | A | 266 | TRP | 2.7 |
| 3 | R | 774 | VAL | 2.7 |
| 7 | H | 62 | ILE | 2.7 |
| 2 | C | 395 | ARG | 2.7 |
| 3 | B | 831 | ALA | 2.7 |
| 1 | Q | 808 | ASP | 2.7 |
| 3 | B | 433 | LEU | 2.7 |
| 3 | B | 245 | ASP | 2.6 |
| 4 | S | 213 | CYS | 2.6 |
| 6 | F | 62 | ILE | 2.6 |
| 3 | R | 271 | PHE | 2.6 |
| 2 | G | 251 | ILE | 2.6 |
| 10 | Y | 27 | ALA | 2.6 |
| 9 | X | 90 | LEU | 2.6 |
| 2 | G | 126 | LEU | 2.6 |
| 2 | G | 338 | LYS | 2.6 |
| 9 | X | 84 | ILE | 2.6 |
| 6 | U | 85 | SER | 2.5 |
| 3 | B | 225 | ILE | 2.5 |
| 5 | E | 129 | GLY | 2.5 |
| 5 | T | 136 | ILE | 2.5 |
| 3 | R | 244 | LEU | 2.5 |
| 9 | X | 32 | LEU | 2.5 |
| 5 | E | 137 | GLN | 2.5 |
| 1 | A | 284 | LEU | 2.5 |
| 6 | U | 78 | THR | 2.5 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 1 | A | 61 | CYS | 2.4 |
| 3 | R | 601 | ALA | 2.4 |
| 1 | Q | 177 | PRO | 2.4 |
| 5 | E | 123 | VAL | 2.4 |
| 9 | X | 35 | ILE | 2.4 |
| 4 | D | 216 | SER | 2.4 |
| 5 | T | 119 | LYS | 2.4 |
| 9 | X | 4 | ARG | 2.4 |
| 6 | F | 45 | GLU | 2.4 |
| 1 | Q | 62 | GLY | 2.4 |
| 4 | D | 87 | GLU | 2.4 |
| 1 | A | 807 | VAL | 2.4 |
| 3 | B | 255 | SER | 2.4 |
| 6 | F | 63 | VAL | 2.4 |
| 2 | G | 256 | SER | 2.4 |
| 3 | R | 280 | GLN | 2.4 |
| 1 | Q | 192 | VAL | 2.3 |
| 7 | H | 14 | HIS | 2.3 |
| 8 | W | 52 | ASP | 2.3 |
| 3 | B | 264 | ASN | 2.3 |
| 2 | G | 258 | LEU | 2.3 |
| 2 | C | 245 | LYS | 2.3 |
| 9 | X | 5 | ILE | 2.3 |
| 1 | A | 254 | ASP | 2.3 |
| 1 | Q | 686 | PRO | 2.3 |
| 3 | B | 584 | ASN | 2.3 |
| 3 | R | 832 | LYS | 2.3 |
| 2 | G | 121 | MET | 2.3 |
| 5 | T | 118 | LEU | 2.3 |
| 4 | S | 176 | CYS | 2.3 |
| 3 | R | 1063 | GLN | 2.3 |
| 1 | A | 842 | TYR | 2.3 |
| 3 | R | 263 | ALA | 2.3 |
| 2 | G | 245 | LYS | 2.3 |
| 1 | Q | 657 | VAL | 2.3 |
| 10 | Y | 21 | PHE | 2.3 |
| 4 | S | 199 | ASN | 2.3 |
| 2 | C | 251 | ILE | 2.3 |
| 1 | Q | 263 | GLU | 2.2 |
| 1 | Q | 48 | ARG | 2.2 |
| 6 | F | 33 | LEU | 2.2 |
| 1 | A | 252 | SER | 2.2 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 5 | E | 115 | ASP | 2.2 |
| 5 | E | 117 | THR | 2.2 |
| 3 | R | 789 | TYR | 2.2 |
| 1 | Q | 395 | LYS | 2.2 |
| 1 | A | 48 | ARG | 2.2 |
| 7 | V | 56 | ASN | 2.2 |
| 4 | S | 200 | GLU | 2.2 |
| 4 | S | 190 | LEU | 2.2 |
| 11 | P | 28 | TYR | 2.2 |
| 1 | Q | 253 | ILE | 2.2 |
| 5 | T | 11 | VAL | 2.2 |
| 6 | U | 64 | SER | 2.2 |
| 6 | F | 61 | ASN | 2.2 |
| 2 | G | 125 | TYR | 2.2 |
| 2 | C | 136 | LYS | 2.2 |
| 1 | Q | 260 | LEU | 2.1 |
| 5 | T | 174 | TRP | 2.1 |
| 1 | Q | 80 | PRO | 2.1 |
| 4 | S | 84 | GLU | 2.1 |
| 8 | W | 51 | ILE | 2.1 |
| 3 | R | 195 | GLY | 2.1 |
| 1 | Q | 257 | ALA | 2.1 |
| 1 | A | 50 | GLY | 2.1 |
| 1 | Q | 289 | HIS | 2.1 |
| 1 | Q | 288 | LYS | 2.1 |
| 4 | S | 192 | ASP | 2.1 |
| 6 | F | 76 | CYS | 2.1 |
| 9 | X | 3 | ILE | 2.1 |
| 9 | X | 87 | ILE | 2.1 |
| 1 | Q | 545 | TYR | 2.1 |
| 4 | D | 76 | TYR | 2.1 |
| 3 | R | 767 | GLY | 2.1 |
| 9 | X | 89 | GLY | 2.1 |
| 1 | A | 93 | PHE | 2.1 |
| 1 | A | 683 | GLU | 2.1 |
| 3 | R | 609 | ARG | 2.1 |
| 1 | A | 175 | LEU | 2.1 |
| 8 | W | 11 | GLN | 2.1 |
| 3 | B | 224 | VAL | 2.1 |
| 4 | D | 197 | VAL | 2.1 |
| 3 | R | 771 | ASP | 2.1 |
| 5 | E | 92 | VAL | 2.1 |

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| Mol | Chain | Res | Type | RSRZ |
|-----|-------|-----|------|------|
| 4 | D | 167 | TYR | 2.1 |
| 1 | Q | 397 | LEU | 2.1 |
| 5 | T | 128 | PHE | 2.0 |
| 4 | S | 143 | ALA | 2.0 |
| 2 | G | 298 | SER | 2.0 |
| 1 | Q | 252 | SER | 2.0 |
| 2 | C | 265 | LYS | 2.0 |
| 3 | B | 367 | TYR | 2.0 |
| 9 | L | 85 | ASP | 2.0 |
| 1 | Q | 708 | ARG | 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 carbohydrates in this entry.

6.4 Ligands [i](#)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q<0.9' lists the number of atoms with occupancy less than 0.9.

| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(\AA^2) | Q<0.9 |
|-----|------|-------|------|-------|------|------|-----------------------------|-------|
| 13 | MG | A | 1003 | 1/1 | 0.92 | 0.18 | 57,57,57,57 | 0 |
| 13 | MG | Q | 1003 | 1/1 | 0.97 | 0.25 | 60,60,60,60 | 0 |
| 12 | ZN | B | 2001 | 1/1 | 0.97 | 0.12 | 91,91,91,91 | 0 |
| 14 | F3S | D | 1001 | 7/7 | 0.97 | 0.12 | 79,80,80,80 | 0 |
| 12 | ZN | R | 2001 | 1/1 | 0.97 | 0.06 | 101,101,101,101 | 0 |
| 14 | F3S | S | 1001 | 7/7 | 0.98 | 0.11 | 111,111,112,113 | 0 |
| 12 | ZN | A | 1002 | 1/1 | 0.99 | 0.06 | 87,87,87,87 | 0 |
| 12 | ZN | P | 1001 | 1/1 | 0.99 | 0.10 | 103,103,103,103 | 0 |
| 12 | ZN | N | 1001 | 1/1 | 0.99 | 0.17 | 93,93,93,93 | 0 |
| 12 | ZN | Z | 1001 | 1/1 | 0.99 | 0.12 | 106,106,106,106 | 0 |
| 12 | ZN | Q | 1002 | 1/1 | 0.99 | 0.05 | 89,89,89,89 | 0 |
| 12 | ZN | Y | 1001 | 1/1 | 0.99 | 0.17 | 93,93,93,93 | 0 |

6.5 Other polymers [i](#)

There are no such residues in this entry.