



Full wwPDB X-ray Structure Validation Report ⓘ

Jun 25, 2024 – 07:18 AM EDT

PDB ID : 5X4Z
Title : RNA Polymerase II from Komagataella Pastoris (Type-1 crystal)
Authors : Ehara, H.; Umehara, T.; Sekine, S.; Yokoyama, S.
Deposited on : 2017-02-14
Resolution : 7.80 Å(reported)

This is a Full wwPDB X-ray Structure Validation Report for a publicly released PDB entry.

We welcome your comments at validation@mail.wwpdb.org

A user guide is available at

<https://www.wwpdb.org/validation/2017/XrayValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

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

MolProbity : 4.02b-467
Xtriage (Phenix) : 1.13
EDS : 2.37.1
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) : 2.37.1

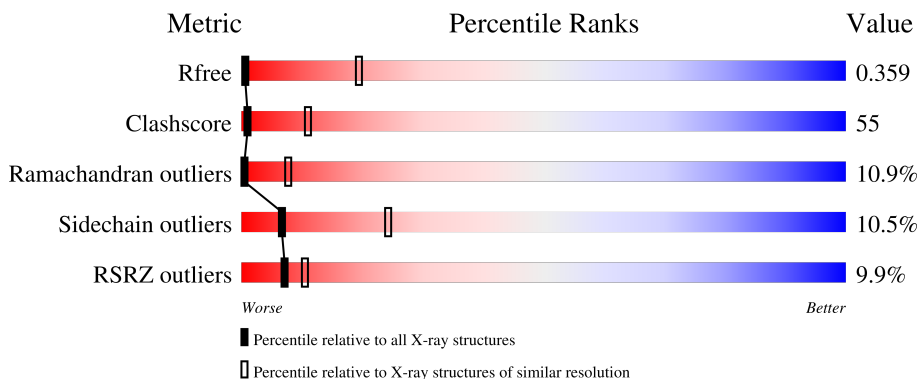
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 7.80 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 | 1005 (11.50-3.90) |
| Clashscore | 141614 | 1070 (11.50-3.90) |
| Ramachandran outliers | 138981 | 1003 (11.50-3.90) |
| Sidechain outliers | 138945 | 1003 (11.50-3.86) |
| RSRZ outliers | 127900 | 1004 (9.50-3.80) |

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$. 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 | 1743 | |
| 1 | M | 1743 | |
| 2 | B | 1227 | |
| 2 | N | 1227 | |
| 3 | C | 304 | |

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| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|------------------|
| 3 | O | 304 | |
| 4 | D | 186 | |
| 4 | P | 186 | |
| 5 | E | 214 | |
| 5 | Q | 214 | |
| 6 | F | 155 | |
| 6 | R | 155 | |
| 7 | G | 171 | |
| 7 | S | 171 | |
| 8 | H | 145 | |
| 8 | T | 145 | |
| 9 | I | 115 | |
| 9 | U | 115 | |
| 10 | J | 72 | |
| 10 | V | 72 | |
| 11 | K | 118 | |
| 11 | W | 118 | |
| 12 | L | 73 | |
| 12 | X | 73 | |

2 Entry composition

There are 13 unique types of molecules in this entry. The entry contains 56628 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.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|------|------|------|----|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 1 | A | 1384 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 10247 | 6499 | 1792 | 1902 | 54 | | | |
| 1 | M | 1387 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 10269 | 6512 | 1796 | 1907 | 54 | | | |

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

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|------|------|------|----|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 2 | B | 1070 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 8153 | 5184 | 1417 | 1506 | 46 | | | |
| 2 | N | 1074 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 8190 | 5208 | 1426 | 1510 | 46 | | | |

- Molecule 3 is a protein called RNA polymerase II third largest subunit B44, part of central core.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|---|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 3 | C | 265 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1863 | 1188 | 310 | 357 | 8 | | | |
| 3 | O | 265 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1863 | 1188 | 310 | 357 | 8 | | | |

- Molecule 4 is a protein called RNA polymerase II subunit B32.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 4 | D | 159 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1082 | 695 | 185 | 200 | 2 | | | |
| 4 | P | 164 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1113 | 712 | 191 | 208 | 2 | | | |

- Molecule 5 is a protein called RNA polymerase subunit ABC27, common to RNA polymerases I, II, and III.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|---|---------|---------|-------|
| 5 | E | 214 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1638 | 1045 | 288 | 297 | 8 | | | |
| 5 | Q | 214 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1638 | 1045 | 288 | 297 | 8 | | | |

- Molecule 6 is a protein called RNA polymerase subunit ABC23, common to RNA polymerases I, II, and III.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 6 | F | 84 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 637 | 406 | 109 | 119 | 3 | | | |
| 6 | R | 84 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 637 | 406 | 109 | 119 | 3 | | | |

- Molecule 7 is a protein called RNA polymerase II subunit.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 7 | G | 171 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1187 | 775 | 192 | 217 | 3 | | | |
| 7 | S | 171 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1187 | 775 | 192 | 217 | 3 | | | |

- Molecule 8 is a protein called RNA polymerase subunit ABC14.5, common to RNA polymerases I, II, and III.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 8 | H | 130 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 959 | 613 | 154 | 189 | 3 | | | |
| 8 | T | 131 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 965 | 616 | 155 | 191 | 3 | | | |

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

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|----|---------|---------|-------|
| 9 | I | 113 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 854 | 535 | 150 | 158 | 11 | | | |
| 9 | U | 113 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 854 | 535 | 150 | 158 | 11 | | | |

- Molecule 10 is a protein called RNA polymerase subunit ABC10-beta, common to RNA polymerases I, II, and III.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---|---------|---------|-------|
| 10 | J | 62 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 487 | 320 | 85 | 76 | 6 | | | |
| 10 | V | 62 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 487 | 320 | 85 | 76 | 6 | | | |

- Molecule 11 is a protein called RNA polymerase II subunit B12.5.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 11 | K | 114 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 832 | 543 | 139 | 148 | 2 | | | |
| 11 | W | 114 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 832 | 543 | 139 | 148 | 2 | | | |

- Molecule 12 is a protein called RNA polymerase subunit, found in RNA polymerase complexes I, II, and III.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---|---------|---------|-------|
| 12 | L | 46 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 319 | 196 | 64 | 55 | 4 | | | |
| 12 | X | 46 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 319 | 196 | 64 | 55 | 4 | | | |

- Molecule 13 is ZINC ION (three-letter code: ZN) (formula: Zn).

| Mol | Chain | Residues | Atoms | | ZeroOcc | AltConf |
|-----|-------|----------|-------|----|---------|---------|
| 13 | A | 2 | Total | Zn | 0 | 0 |
| | | | 2 | 2 | | |
| 13 | B | 1 | Total | Zn | 0 | 0 |
| | | | 1 | 1 | | |
| 13 | C | 1 | Total | Zn | 0 | 0 |
| | | | 1 | 1 | | |
| 13 | I | 2 | Total | Zn | 0 | 0 |
| | | | 2 | 2 | | |
| 13 | J | 1 | Total | Zn | 0 | 0 |
| | | | 1 | 1 | | |
| 13 | L | 1 | Total | Zn | 0 | 0 |
| | | | 1 | 1 | | |
| 13 | M | 2 | Total | Zn | 0 | 0 |
| | | | 2 | 2 | | |
| 13 | N | 1 | Total | Zn | 0 | 0 |
| | | | 1 | 1 | | |
| 13 | O | 1 | Total | Zn | 0 | 0 |
| | | | 1 | 1 | | |

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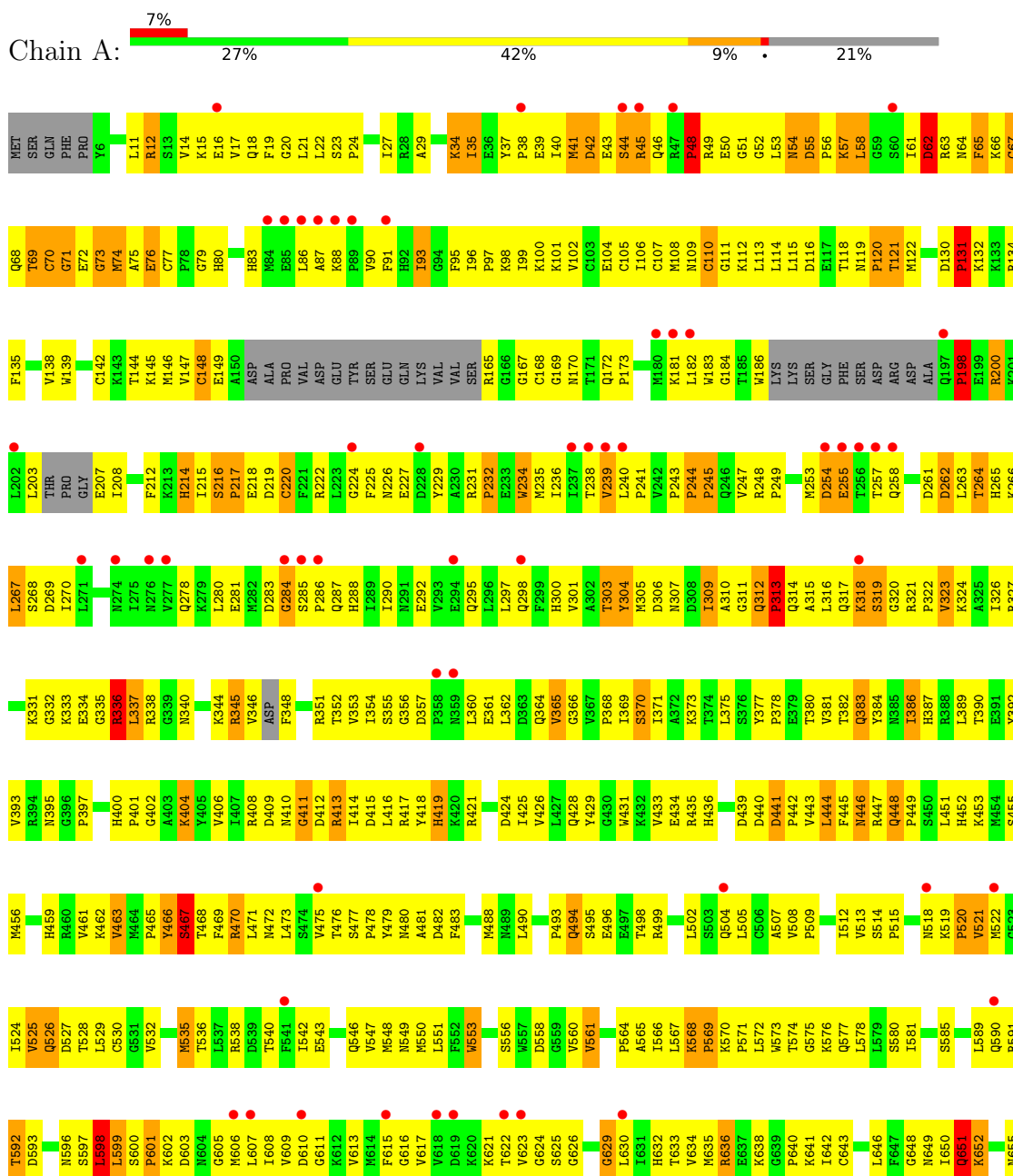
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| Mol | Chain | Residues | Atoms | | ZeroOcc | AltConf |
|------------|--------------|-----------------|--------------|---------|----------------|----------------|
| 13 | U | 2 | Total 2 | Zn 2 | 0 | 0 |
| 13 | V | 1 | Total 1 | Zn 1 | 0 | 0 |
| 13 | X | 1 | Total 1 | Zn 1 | 0 | 0 |

3 Residue-property plots

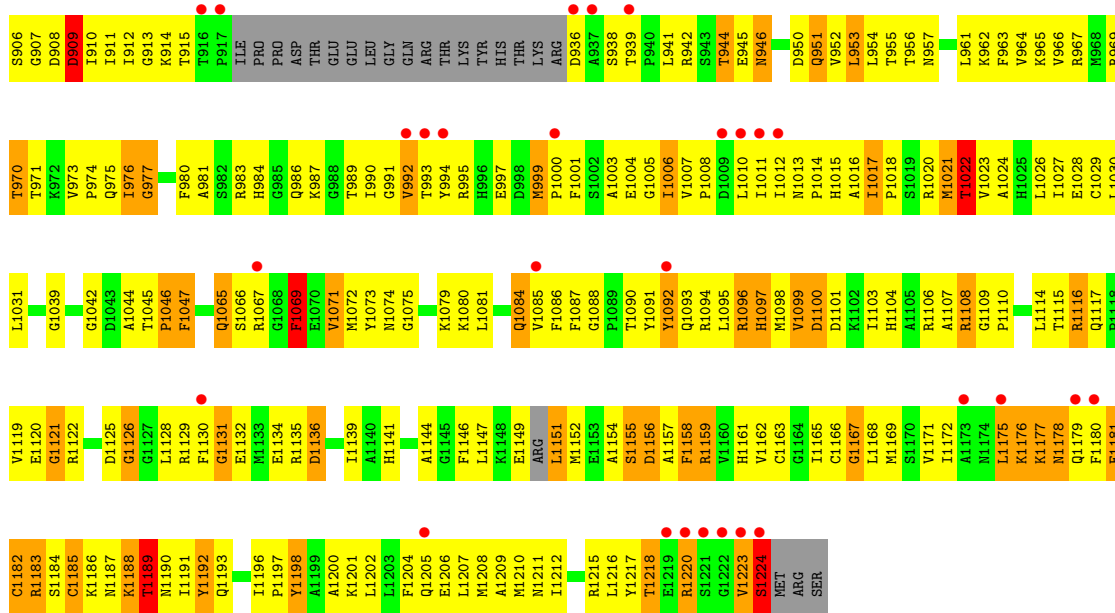
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density.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

• Molecule 1: DNA-directed RNA polymerase subunit

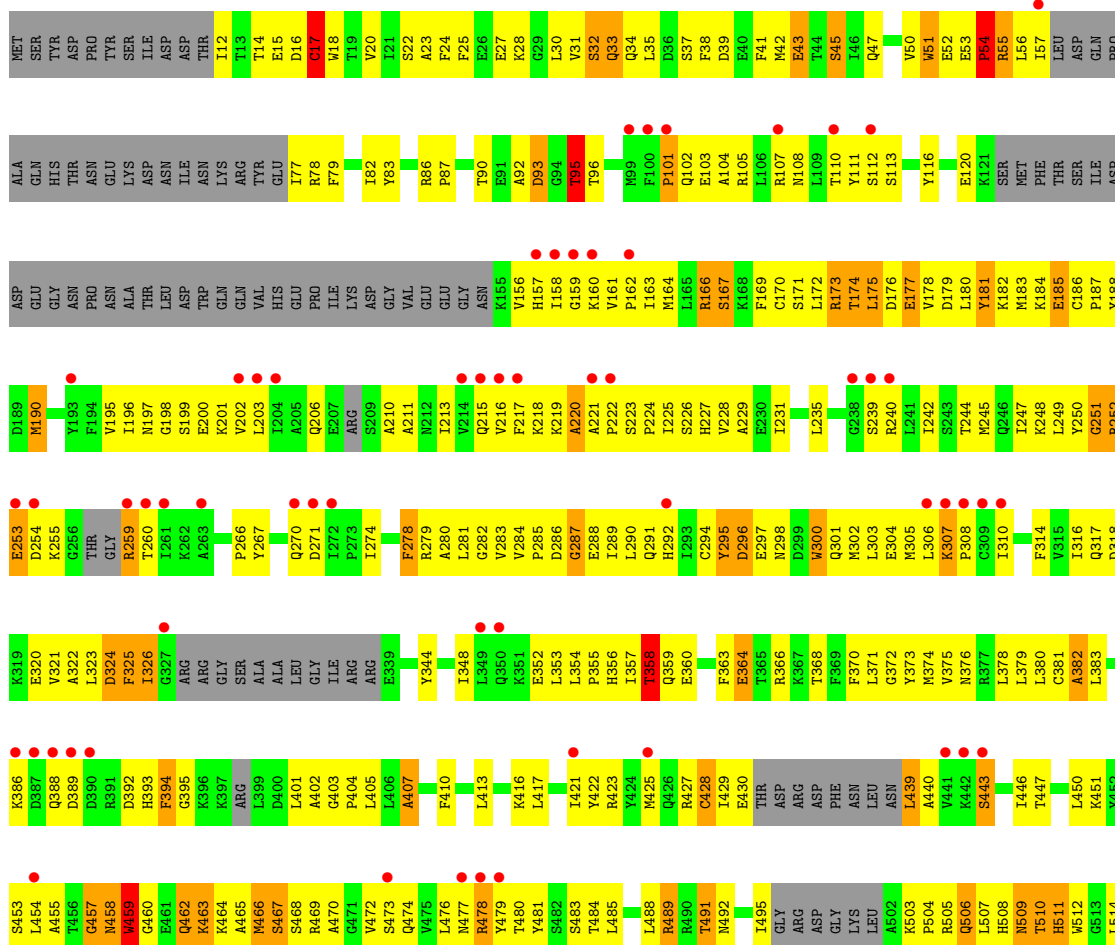


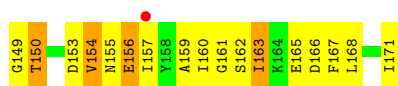


| | | | | | | | | | | | | | |
|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MET | ALA | ASP | M190 | D254 | A322 | D389 | T456 | P817 | L589 | H651 | LEU | G774 | M839 |
| SER | GLN | GLU | F194 | K255 | L323 | D392 | G457 | A518 | V590 | I652 | GLU | K715 | I840 |
| TYR | HIS | GLY | G256 | THR | D324 | D393 | G458 | E519 | S591 | R653 | GLN | Q776 | M841 |
| ASN | THR | ASN | F195 | THR | F325 | H393 | V459 | G523 | T592 | K654 | LYS | A777 | M842 |
| PRO | ASN | PRO | I196 | GLY | I326 | G394 | G460 | Q524 | M593 | L655 | GLU | M778 | Q843 |
| TYR | GLU | ASN | N197 | R259 | G395 | F395 | G461 | L528 | R594 | R656 | ILE | S844 | Q844 |
| SER | LYS | SER | G198 | T260 | K396 | LYS | K462 | L529 | D595 | D596 | ASP | F781 | S845 |
| ILE | ASP | ILE | S199 | P266 | ARG | ARG | K463 | V529 | L596 | L597 | GLY | L782 | I846 |
| ASP | ASP | LEU | E200 | Y267 | GLY | ARG | K464 | K530 | R597 | TYR | LEU | T783 | D847 |
| ASP | ASP | ASP | K201 | Y267 | ALA | ALA | A465 | R598 | R598 | ASP | ASN | D721 | R848 |
| THR | ASP | TRP | V202 | K201 | ALA | D400 | M466 | N531 | S599 | ASP | T722 | Y785 | G849 |
| THR | ASP | THR | L203 | L203 | LEU | L401 | S467 | L532 | G600 | ASP | A723 | N786 | L850 |
| I12 | LYS | GLN | L204 | D270 | LEU | A402 | S468 | S536 | A601 | ALA | K724 | V787 | R851 |
| T13 | ARG | GLN | A205 | D271 | GLY | G403 | S469 | G537 | I602 | MET | R725 | W787 | R852 |
| T14 | TYR | VAL | Q206 | I272 | ILE | P404 | A470 | G538 | S603 | ASN | I726 | M791 | S853 |
| E15 | GLU | HIS | E207 | I273 | ARG | L405 | G471 | I539 | E604 | ASP | K727 | L791 | F855 |
| D16 | L77 | GLU | E207 | I274 | ARG | A407 | S472 | I540 | V605 | ASP | P728 | M792 | F856 |
| C17 | R78 | PRO | S209 | F278 | ARG | A407 | Q474 | G541 | S607 | SER | GLU | T792 | R857 |
| W18 | F79 | ILE | S210 | R279 | E339 | F410 | Y475 | S542 | I608 | GLU | THR | L796 | S858 |
| T19 | LYS | ASP | A211 | A280 | Y344 | L413 | L476 | P543 | R609 | GLN | THR | Y797 | S859 |
| V20 | LYS | ASP | A212 | L281 | L348 | L413 | L476 | S544 | I610 | GLN | SER | Y798 | M860 |
| I21 | GLY | GLY | N212 | G282 | I349 | L416 | N477 | E545 | R611 | GLN | SER | P799 | M860 |
| A23 | VAL | VAL | V214 | V283 | L349 | K416 | R478 | L547 | D611 | GLN | HIS | Q800 | Q800 |
| F24 | GLU | GLU | Q215 | V284 | E352 | L417 | Y479 | I548 | I612 | ASP | HIS | K801 | K801 |
| F25 | GLY | GLY | V216 | D285 | L353 | L417 | T480 | I549 | R613 | V675 | HIS | P802 | P802 |
| E26 | ASN | ASN | F217 | D286 | L354 | L417 | Y481 | I549 | E614 | I676 | THR | T737 | P802 |
| E27 | E27 | K155 | K218 | G287 | L354 | I421 | S482 | M549 | R615 | G677 | SER | F738 | F738 |
| K28 | A92 | V156 | K219 | E288 | L355 | Y422 | S483 | F550 | R616 | W678 | THR | C741 | C741 |
| G29 | A220 | H157 | A220 | I289 | H356 | Y423 | L484 | E551 | E617 | L681 | SER | E742 | E742 |
| L30 | G94 | I158 | A221 | L290 | I357 | Y424 | T485 | E552 | K618 | L682 | SER | I743 | I743 |
| V31 | T96 | G159 | P222 | Q291 | I358 | M425 | Q426 | E553 | I619 | V682 | HIS | H744 | H744 |
| S32 | S32 | K160 | P223 | H292 | Q359 | Q426 | L488 | E554 | P620 | T683 | HIS | P745 | P745 |
| Q33 | Q33 | V161 | P224 | I293 | E360 | R427 | R489 | E556 | T621 | S684 | THR | S746 | S746 |
| Q34 | Q34 | P162 | I225 | C294 | E361 | R427 | R490 | M556 | D622 | V686 | THR | M747 | M747 |
| L35 | L35 | I163 | S226 | Y295 | G362 | L429 | N491 | L559 | V626 | V686 | THR | I748 | I748 |
| D36 | D36 | M164 | H227 | D296 | F363 | E430 | N492 | E560 | G627 | E688 | THR | V753 | V753 |
| S37 | S37 | A104 | V228 | E297 | E364 | THR | T493 | E561 | R628 | E688 | THR | A752 | A752 |
| F38 | F38 | R105 | A229 | M298 | T365 | ASP | P494 | Y622 | P629 | Y699 | THR | A753 | A753 |
| D39 | D39 | L106 | E230 | D299 | R366 | ASP | I495 | Y622 | L630 | D691 | THR | S754 | S754 |
| E40 | E40 | R107 | I231 | W300 | K367 | ASP | GLY | Q566 | F631 | E692 | THR | I755 | I755 |
| F41 | F41 | M108 | C170 | Q301 | T368 | ASP | ARG | H567 | I632 | G693 | THR | I756 | I756 |
| M42 | M42 | L109 | S171 | M302 | F369 | ASN | ASP | T568 | V633 | E694 | THR | P757 | P757 |
| E43 | E43 | T110 | L172 | K303 | F370 | LEU | GLY | L569 | B634 | E695 | THR | F758 | F758 |
| T44 | T44 | Y111 | R173 | E304 | L371 | ASN | LYS | R572 | D635 | E696 | THR | P759 | P759 |
| S45 | S45 | S112 | T174 | M305 | G372 | ASN | LEU | I573 | D636 | T697 | THR | I760 | I760 |
| I46 | I46 | S113 | L175 | L306 | Y373 | L439 | A502 | F574 | E637 | T697 | THR | M761 | M761 |
| Q47 | Q47 | R240 | D176 | K307 | V375 | A440 | V441 | V575 | S638 | M699 | THR | N762 | N762 |
| V50 | V50 | E177 | E178 | C369 | N376 | V441 | K503 | N576 | G639 | I700 | THR | I763 | I763 |
| W51 | W51 | D179 | D179 | I310 | N376 | S443 | P504 | M576 | K639 | A701 | THR | S764 | S764 |
| E52 | E52 | L180 | L180 | E311 | L378 | T444 | Q506 | W579 | M641 | K702 | THR | P765 | P765 |
| E53 | E53 | Y181 | Y181 | E311 | L379 | T446 | H508 | T580 | L642 | T703 | THR | R766 | R766 |
| P54 | P54 | X182 | X182 | F314 | L380 | T447 | N509 | G581 | GLY | F704 | THR | F766 | F766 |
| R55 | R55 | M183 | M183 | V315 | C381 | T447 | T510 | I582 | E644 | E705 | THR | N767 | N767 |
| L56 | L56 | K184 | K184 | I316 | A382 | T447 | T510 | H583 | L645 | D706 | THR | I768 | I768 |
| PHE | PHE | E185 | E185 | Q317 | L383 | T447 | H512 | H584 | R646 | L707 | THR | Y769 | Y769 |
| L57 | L57 | C186 | C186 | D318 | K386 | T446 | G513 | D585 | I647 | GLN | THR | Q770 | Q770 |
| LEU | LEU | P187 | P187 | R319 | L514 | T446 | L514 | P586 | T648 | THR | THR | S771 | S771 |
| ASP | ASP | R188 | R188 | R319 | E520 | T446 | L515 | P586 | R649 | ARG | THR | A772 | A772 |
| GLN | GLN | R252 | R252 | L454 | C388 | T446 | L515 | S587 | K649 | ARG | THR | M773 | M773 |
| PRO | PRO | E253 | E253 | A455 | Q388 | T446 | C516 | M588 | E650 | SER | SER | | |

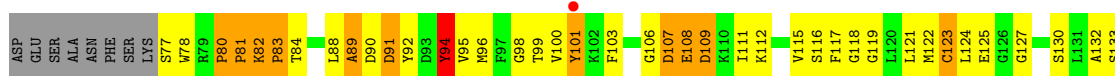
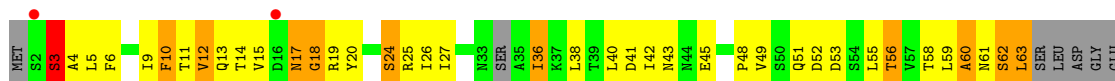


• Molecule 2: DNA-directed RNA polymerase subunit beta

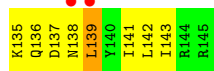
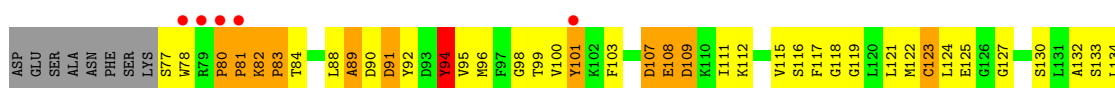
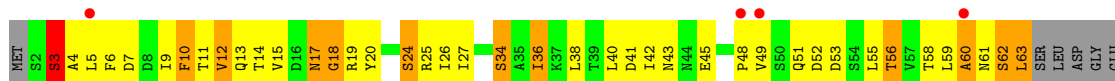




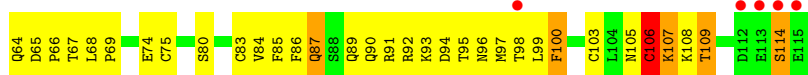
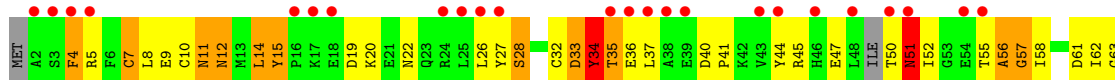
- Molecule 8: RNA polymerase subunit ABC14.5, common to RNA polymerases I, II, and III



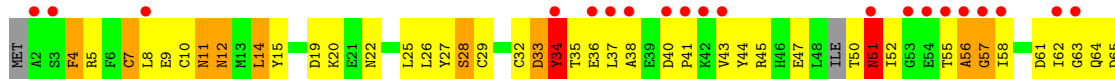
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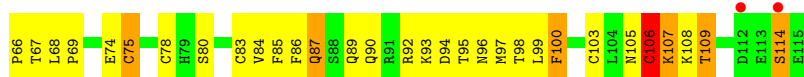


- Molecule 9: DNA-directed RNA polymerase subunit

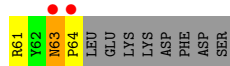
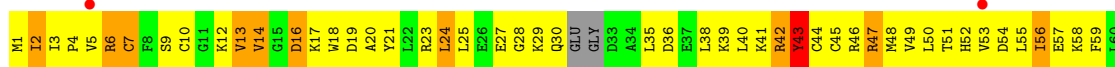
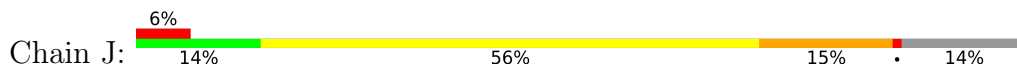


- Molecule 9: DNA-directed RNA polymerase subunit

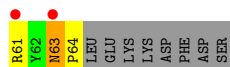
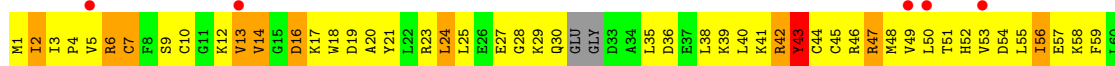
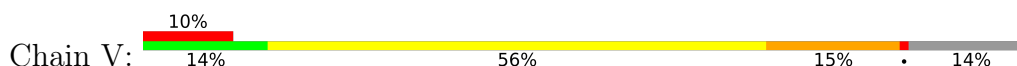




- Molecule 10: RNA polymerase subunit ABC10-beta, common to RNA polymerases I, II, and III



- Molecule 10: RNA polymerase subunit ABC10-beta, common to RNA polymerases I, II, and III



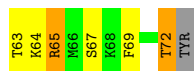
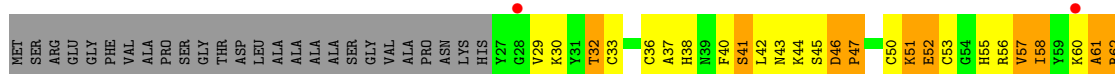
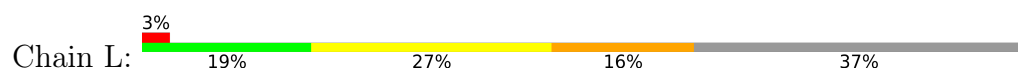
- Molecule 11: RNA polymerase II subunit B12.5



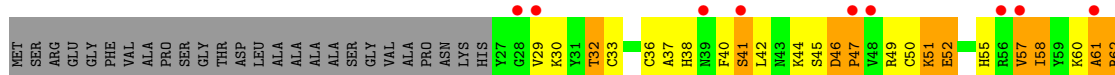
- Molecule 11: RNA polymerase II subunit B12.5



- Molecule 12: RNA polymerase subunit, found in RNA polymerase complexes I, II, and III



- Molecule 12: RNA polymerase subunit, found in RNA polymerase complexes I, II, and III



4 Data and refinement statistics

| Property | Value | Source |
|---|---|------------------|
| Space group | P 1 21 1 | Depositor |
| Cell constants a, b, c, α , β , γ | 155.05Å 160.35Å 254.35Å 90.00° 105.43° 90.00° | Depositor |
| Resolution (Å) | 49.82 – 7.80 49.82 – 7.73 | Depositor EDS |
| % Data completeness (in resolution range) | 99.7 (49.82-7.80) 80.4 (49.82-7.73) | Depositor EDS |
| R_{merge} | 0.38 | Depositor |
| R_{sym} | (Not available) | Depositor |
| $\langle I/\sigma(I) \rangle$ ¹ | 1.13 (at 7.37Å) | Xtrriage |
| Refinement program | PHENIX dev_2614 | Depositor |
| R, R_{free} | 0.353 , 0.357 0.354 , 0.359 | Depositor DCC |
| R_{free} test set | 1389 reflections (9.95%) | wwPDB-VP |
| Wilson B-factor (Å ²) | 174.0 | Xtrriage |
| Anisotropy | 0.345 | Xtrriage |
| Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²) | 0.32 , 329.8 | EDS |
| L-test for twinning ² | $\langle L \rangle = 0.41$, $\langle L^2 \rangle = 0.24$ | Xtrriage |
| Estimated twinning fraction | 0.136 for h,-k,-h-l | Xtrriage |
| F_o, F_c correlation | 0.58 | EDS |
| Total number of atoms | 56628 | wwPDB-VP |
| Average B, all atoms (Å ²) | 186.0 | wwPDB-VP |

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 11.35% 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

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 | 0.68 | 28/10399 (0.3%) | 0.81 | 17/14038 (0.1%) |
| 1 | M | 0.68 | 27/10421 (0.3%) | 0.81 | 19/14067 (0.1%) |
| 2 | B | 0.69 | 15/8294 (0.2%) | 0.77 | 4/11176 (0.0%) |
| 2 | N | 0.69 | 15/8331 (0.2%) | 0.77 | 4/11223 (0.0%) |
| 3 | C | 0.70 | 6/1888 (0.3%) | 0.83 | 8/2558 (0.3%) |
| 3 | O | 0.70 | 6/1888 (0.3%) | 0.83 | 8/2558 (0.3%) |
| 4 | D | 0.84 | 5/1086 (0.5%) | 0.76 | 4/1460 (0.3%) |
| 4 | P | 0.92 | 7/1117 (0.6%) | 0.76 | 4/1501 (0.3%) |
| 5 | E | 0.73 | 7/1668 (0.4%) | 0.69 | 4/2245 (0.2%) |
| 5 | Q | 0.72 | 7/1668 (0.4%) | 0.70 | 4/2245 (0.2%) |
| 6 | F | 0.84 | 1/646 (0.2%) | 0.82 | 2/873 (0.2%) |
| 6 | R | 0.84 | 1/646 (0.2%) | 0.82 | 2/873 (0.2%) |
| 7 | G | 1.07 | 7/1207 (0.6%) | 0.80 | 1/1629 (0.1%) |
| 7 | S | 1.08 | 8/1207 (0.7%) | 0.80 | 1/1629 (0.1%) |
| 8 | H | 1.37 | 7/973 (0.7%) | 0.75 | 2/1313 (0.2%) |
| 8 | T | 1.38 | 8/980 (0.8%) | 0.74 | 2/1324 (0.2%) |
| 9 | I | 0.92 | 4/868 (0.5%) | 0.70 | 0/1169 |
| 9 | U | 0.92 | 4/868 (0.5%) | 0.70 | 0/1169 |
| 10 | J | 0.55 | 0/495 | 0.79 | 0/664 |
| 10 | V | 0.55 | 0/495 | 0.80 | 0/664 |
| 11 | K | 0.65 | 3/848 (0.4%) | 0.85 | 5/1147 (0.4%) |
| 11 | W | 0.65 | 2/848 (0.2%) | 0.85 | 5/1147 (0.4%) |
| 12 | L | 0.83 | 3/321 (0.9%) | 0.96 | 2/425 (0.5%) |
| 12 | X | 0.83 | 3/321 (0.9%) | 0.96 | 2/425 (0.5%) |
| All | All | 0.76 | 174/57483 (0.3%) | 0.79 | 100/77522 (0.1%) |

All (174) bond length outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|-------|-------|-------------|----------|
| 8 | H | 24 | SER | CB-OG | 30.78 | 1.82 | 1.42 |
| 8 | T | 24 | SER | CB-OG | 30.77 | 1.82 | 1.42 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|--------|--------|-------------|----------|
| 2 | N | 17 | CYS | CB-SG | -23.57 | 1.42 | 1.82 |
| 2 | B | 17 | CYS | CB-SG | -23.55 | 1.42 | 1.82 |
| 2 | N | 428 | CYS | CB-SG | -22.62 | 1.43 | 1.82 |
| 2 | B | 428 | CYS | CB-SG | -22.59 | 1.43 | 1.82 |
| 1 | A | 220 | CYS | CB-SG | -19.28 | 1.49 | 1.82 |
| 1 | M | 220 | CYS | CB-SG | -19.27 | 1.49 | 1.82 |
| 8 | H | 123 | CYS | CB-SG | -18.26 | 1.51 | 1.82 |
| 7 | S | 150 | THR | CB-OG1 | 18.25 | 1.79 | 1.43 |
| 7 | G | 150 | THR | CB-OG1 | 18.20 | 1.79 | 1.43 |
| 8 | T | 123 | CYS | CB-SG | -18.19 | 1.51 | 1.82 |
| 1 | A | 996 | CYS | CB-SG | -18.00 | 1.51 | 1.82 |
| 1 | M | 996 | CYS | CB-SG | -17.96 | 1.51 | 1.82 |
| 9 | I | 83 | CYS | CB-SG | -17.82 | 1.51 | 1.82 |
| 9 | U | 83 | CYS | CB-SG | -17.80 | 1.51 | 1.82 |
| 7 | S | 47 | THR | CB-OG1 | 17.34 | 1.77 | 1.43 |
| 6 | F | 148 | CYS | CB-SG | -17.32 | 1.52 | 1.82 |
| 2 | B | 51 | TRP | CB-CG | 17.32 | 1.81 | 1.50 |
| 6 | R | 148 | CYS | CB-SG | -17.31 | 1.52 | 1.82 |
| 4 | P | 121 | CYS | CB-SG | -17.29 | 1.52 | 1.82 |
| 7 | G | 47 | THR | CB-OG1 | 17.27 | 1.77 | 1.43 |
| 2 | N | 51 | TRP | CB-CG | 17.26 | 1.81 | 1.50 |
| 5 | Q | 96 | CYS | CB-SG | -17.25 | 1.52 | 1.82 |
| 4 | D | 121 | CYS | CB-SG | -17.23 | 1.52 | 1.82 |
| 5 | E | 96 | CYS | CB-SG | -17.17 | 1.53 | 1.82 |
| 1 | A | 239 | VAL | CB-CG1 | 12.88 | 1.79 | 1.52 |
| 1 | M | 239 | VAL | CB-CG2 | 12.86 | 1.79 | 1.52 |
| 7 | S | 94 | VAL | CB-CG1 | 12.35 | 1.78 | 1.52 |
| 7 | G | 94 | VAL | CB-CG2 | 12.35 | 1.78 | 1.52 |
| 1 | A | 521 | VAL | CB-CG1 | 11.10 | 1.76 | 1.52 |
| 1 | M | 521 | VAL | CB-CG1 | 11.01 | 1.75 | 1.52 |
| 3 | C | 116 | SER | CB-OG | 9.99 | 1.55 | 1.42 |
| 3 | O | 116 | SER | CB-OG | 9.97 | 1.55 | 1.42 |
| 1 | A | 1021 | GLN | CB-CG | 9.95 | 1.79 | 1.52 |
| 1 | M | 1021 | GLN | CB-CG | 9.92 | 1.79 | 1.52 |
| 8 | H | 36 | ILE | CB-CG1 | 9.84 | 1.81 | 1.54 |
| 2 | N | 599 | SER | CB-OG | 9.82 | 1.55 | 1.42 |
| 8 | T | 36 | ILE | CB-CG1 | 9.81 | 1.81 | 1.54 |
| 2 | B | 599 | SER | CB-OG | 9.69 | 1.54 | 1.42 |
| 1 | M | 939 | SER | CB-OG | 9.32 | 1.54 | 1.42 |
| 1 | A | 939 | SER | CB-OG | 9.29 | 1.54 | 1.42 |
| 1 | A | 686 | SER | CB-OG | 9.09 | 1.54 | 1.42 |
| 4 | P | 80 | SER | CB-OG | 9.07 | 1.54 | 1.42 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|-------|------|-------------|----------|
| 1 | M | 686 | SER | CB-OG | 9.02 | 1.53 | 1.42 |
| 4 | D | 68 | SER | CB-OG | 8.87 | 1.53 | 1.42 |
| 4 | P | 68 | SER | CB-OG | 8.87 | 1.53 | 1.42 |
| 4 | P | 79 | SER | CB-OG | 8.77 | 1.53 | 1.42 |
| 1 | M | 932 | SER | CB-OG | 8.64 | 1.53 | 1.42 |
| 1 | A | 932 | SER | CB-OG | 8.63 | 1.53 | 1.42 |
| 2 | B | 591 | SER | CB-OG | 8.58 | 1.53 | 1.42 |
| 5 | E | 161 | SER | CB-OG | 8.57 | 1.53 | 1.42 |
| 1 | A | 729 | SER | CB-OG | 8.57 | 1.53 | 1.42 |
| 2 | N | 591 | SER | CB-OG | 8.55 | 1.53 | 1.42 |
| 1 | A | 1223 | SER | CB-OG | 8.53 | 1.53 | 1.42 |
| 1 | A | 1293 | SER | CB-OG | 8.52 | 1.53 | 1.42 |
| 3 | O | 245 | SER | CB-OG | 8.52 | 1.53 | 1.42 |
| 5 | Q | 161 | SER | CB-OG | 8.51 | 1.53 | 1.42 |
| 1 | M | 1223 | SER | CB-OG | 8.48 | 1.53 | 1.42 |
| 1 | M | 729 | SER | CB-OG | 8.46 | 1.53 | 1.42 |
| 3 | C | 245 | SER | CB-OG | 8.42 | 1.53 | 1.42 |
| 1 | M | 1293 | SER | CB-OG | 8.39 | 1.53 | 1.42 |
| 1 | M | 733 | SER | CB-OG | 8.35 | 1.53 | 1.42 |
| 2 | N | 684 | SER | CB-OG | 8.34 | 1.53 | 1.42 |
| 2 | B | 684 | SER | CB-OG | 8.33 | 1.53 | 1.42 |
| 1 | A | 733 | SER | CB-OG | 8.28 | 1.53 | 1.42 |
| 1 | A | 1283 | SER | CB-OG | 8.21 | 1.52 | 1.42 |
| 3 | C | 2 | SER | CB-OG | 8.20 | 1.52 | 1.42 |
| 8 | H | 130 | SER | CB-OG | 8.19 | 1.52 | 1.42 |
| 1 | M | 1150 | SER | CB-OG | 8.15 | 1.52 | 1.42 |
| 1 | M | 1283 | SER | CB-OG | 8.15 | 1.52 | 1.42 |
| 8 | T | 130 | SER | CB-OG | 8.13 | 1.52 | 1.42 |
| 3 | O | 2 | SER | CB-OG | 8.11 | 1.52 | 1.42 |
| 3 | C | 101 | SER | CB-OG | 8.08 | 1.52 | 1.42 |
| 7 | G | 126 | SER | CB-OG | 8.07 | 1.52 | 1.42 |
| 7 | S | 126 | SER | CB-OG | 8.06 | 1.52 | 1.42 |
| 1 | A | 1150 | SER | CB-OG | 8.06 | 1.52 | 1.42 |
| 4 | D | 52 | SER | CB-OG | 7.97 | 1.52 | 1.42 |
| 7 | S | 92 | SER | CB-OG | 7.97 | 1.52 | 1.42 |
| 3 | O | 101 | SER | CB-OG | 7.96 | 1.52 | 1.42 |
| 7 | G | 92 | SER | CB-OG | 7.96 | 1.52 | 1.42 |
| 8 | T | 34 | SER | CB-OG | 7.95 | 1.52 | 1.42 |
| 4 | P | 52 | SER | CB-OG | 7.87 | 1.52 | 1.42 |
| 1 | A | 1219 | SER | CB-OG | 7.84 | 1.52 | 1.42 |
| 7 | G | 65 | SER | CB-OG | 7.84 | 1.52 | 1.42 |
| 1 | M | 1219 | SER | CB-OG | 7.83 | 1.52 | 1.42 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|--------|-------|-------------|----------|
| 5 | E | 105 | SER | CB-OG | 7.82 | 1.52 | 1.42 |
| 5 | Q | 105 | SER | CB-OG | 7.76 | 1.52 | 1.42 |
| 7 | S | 65 | SER | CB-OG | 7.75 | 1.52 | 1.42 |
| 12 | X | 67 | SER | CB-OG | 7.72 | 1.52 | 1.42 |
| 12 | L | 67 | SER | CB-OG | 7.67 | 1.52 | 1.42 |
| 1 | A | 585 | SER | CB-OG | 7.64 | 1.52 | 1.42 |
| 1 | M | 749 | SER | CB-OG | 7.62 | 1.52 | 1.42 |
| 1 | M | 585 | SER | CB-OG | 7.61 | 1.52 | 1.42 |
| 9 | I | 114 | SER | CB-OG | 7.60 | 1.52 | 1.42 |
| 8 | H | 3 | SER | CB-OG | 7.56 | 1.52 | 1.42 |
| 1 | A | 749 | SER | CB-OG | 7.55 | 1.52 | 1.42 |
| 2 | B | 1224 | SER | CB-OG | 7.53 | 1.52 | 1.42 |
| 8 | T | 3 | SER | CB-OG | 7.49 | 1.51 | 1.42 |
| 9 | U | 114 | SER | CB-OG | 7.49 | 1.51 | 1.42 |
| 3 | C | 117 | SER | CB-OG | 7.45 | 1.51 | 1.42 |
| 2 | N | 1224 | SER | CB-OG | 7.45 | 1.51 | 1.42 |
| 3 | O | 117 | SER | CB-OG | 7.45 | 1.51 | 1.42 |
| 9 | U | 28 | SER | CB-OG | 7.22 | 1.51 | 1.42 |
| 9 | I | 28 | SER | CB-OG | 7.18 | 1.51 | 1.42 |
| 2 | B | 171 | SER | CB-OG | 7.11 | 1.51 | 1.42 |
| 2 | N | 171 | SER | CB-OG | 7.06 | 1.51 | 1.42 |
| 1 | A | 720 | SER | CB-OG | 6.87 | 1.51 | 1.42 |
| 1 | M | 720 | SER | CB-OG | 6.86 | 1.51 | 1.42 |
| 1 | M | 556 | SER | CB-OG | 6.83 | 1.51 | 1.42 |
| 1 | A | 556 | SER | CB-OG | 6.78 | 1.51 | 1.42 |
| 5 | Q | 37 | SER | CB-OG | 6.75 | 1.51 | 1.42 |
| 5 | E | 37 | SER | CB-OG | 6.74 | 1.51 | 1.42 |
| 8 | T | 133 | SER | CB-OG | 6.68 | 1.50 | 1.42 |
| 8 | H | 133 | SER | CB-OG | 6.67 | 1.50 | 1.42 |
| 1 | M | 1327 | SER | CB-OG | 6.67 | 1.50 | 1.42 |
| 1 | A | 1327 | SER | CB-OG | 6.60 | 1.50 | 1.42 |
| 1 | M | 1340 | SER | CB-OG | 6.42 | 1.50 | 1.42 |
| 1 | A | 1340 | SER | CB-OG | 6.37 | 1.50 | 1.42 |
| 2 | B | 603 | SER | CB-OG | 6.28 | 1.50 | 1.42 |
| 2 | N | 603 | SER | CB-OG | 6.24 | 1.50 | 1.42 |
| 1 | A | 916 | TYR | CB-CG | -6.23 | 1.42 | 1.51 |
| 1 | M | 916 | TYR | CB-CG | -6.19 | 1.42 | 1.51 |
| 3 | O | 265 | SER | CB-OG | 6.17 | 1.50 | 1.42 |
| 5 | E | 72 | SER | CB-OG | 6.12 | 1.50 | 1.42 |
| 3 | C | 265 | SER | CB-OG | 6.06 | 1.50 | 1.42 |
| 5 | Q | 72 | SER | CB-OG | 5.97 | 1.50 | 1.42 |
| 1 | A | 1161 | THR | CB-OG1 | 5.75 | 1.54 | 1.43 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|--------|-------|-------------|----------|
| 1 | M | 1161 | THR | CB-OG1 | 5.72 | 1.54 | 1.43 |
| 2 | B | 544 | SER | CB-OG | 5.62 | 1.49 | 1.42 |
| 1 | M | 1361 | PHE | CB-CG | -5.57 | 1.41 | 1.51 |
| 2 | B | 1189 | THR | CB-OG1 | 5.56 | 1.54 | 1.43 |
| 2 | N | 1189 | THR | CB-OG1 | 5.55 | 1.54 | 1.43 |
| 2 | N | 544 | SER | CB-OG | 5.55 | 1.49 | 1.42 |
| 2 | N | 552 | GLU | CB-CG | -5.54 | 1.41 | 1.52 |
| 1 | A | 1361 | PHE | CB-CG | -5.52 | 1.42 | 1.51 |
| 2 | B | 552 | GLU | CB-CG | -5.51 | 1.41 | 1.52 |
| 12 | X | 72 | THR | CB-OG1 | 5.50 | 1.54 | 1.43 |
| 12 | L | 72 | THR | CB-OG1 | 5.47 | 1.54 | 1.43 |
| 2 | N | 174 | THR | CB-OG1 | 5.42 | 1.54 | 1.43 |
| 11 | W | 22 | THR | CB-OG1 | 5.42 | 1.54 | 1.43 |
| 5 | E | 69 | GLU | CB-CG | -5.42 | 1.41 | 1.52 |
| 8 | H | 11 | THR | CB-OG1 | 5.39 | 1.54 | 1.43 |
| 11 | K | 22 | THR | CB-OG1 | 5.39 | 1.54 | 1.43 |
| 5 | Q | 69 | GLU | CB-CG | -5.36 | 1.42 | 1.52 |
| 1 | M | 257 | THR | CB-OG1 | 5.35 | 1.53 | 1.43 |
| 2 | B | 174 | THR | CB-OG1 | 5.34 | 1.53 | 1.43 |
| 1 | A | 1171 | THR | CB-OG1 | 5.34 | 1.53 | 1.43 |
| 4 | D | 168 | GLU | CB-CG | -5.33 | 1.42 | 1.52 |
| 4 | P | 168 | GLU | CB-CG | -5.32 | 1.42 | 1.52 |
| 8 | T | 11 | THR | CB-OG1 | 5.30 | 1.53 | 1.43 |
| 1 | A | 257 | THR | CB-OG1 | 5.29 | 1.53 | 1.43 |
| 1 | M | 1171 | THR | CB-OG1 | 5.25 | 1.53 | 1.43 |
| 7 | S | 156 | GLU | CB-CG | -5.24 | 1.42 | 1.52 |
| 1 | A | 121 | THR | CB-OG1 | 5.24 | 1.53 | 1.43 |
| 7 | G | 156 | GLU | CB-CG | -5.23 | 1.42 | 1.52 |
| 5 | E | 127 | SER | CB-OG | 5.23 | 1.49 | 1.42 |
| 1 | M | 121 | THR | CB-OG1 | 5.22 | 1.53 | 1.43 |
| 9 | I | 109 | THR | CB-OG1 | 5.17 | 1.53 | 1.43 |
| 9 | U | 109 | THR | CB-OG1 | 5.14 | 1.53 | 1.43 |
| 12 | X | 32 | THR | CB-OG1 | 5.12 | 1.53 | 1.43 |
| 7 | S | 112 | THR | CB-OG1 | 5.10 | 1.53 | 1.43 |
| 2 | B | 178 | VAL | CB-CG1 | -5.09 | 1.42 | 1.52 |
| 5 | Q | 127 | SER | CB-OG | 5.09 | 1.48 | 1.42 |
| 2 | B | 878 | THR | CB-OG1 | 5.09 | 1.53 | 1.43 |
| 2 | N | 178 | VAL | CB-CG1 | -5.08 | 1.42 | 1.52 |
| 11 | W | 57 | THR | CB-OG1 | 5.08 | 1.53 | 1.43 |
| 12 | L | 32 | THR | CB-OG1 | 5.07 | 1.53 | 1.43 |
| 2 | N | 878 | THR | CB-OG1 | 5.06 | 1.53 | 1.43 |
| 11 | K | 81 | THR | CB-OG1 | 5.05 | 1.53 | 1.43 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|--------|------|-------------|----------|
| 4 | D | 111 | THR | CB-OG1 | 5.05 | 1.53 | 1.43 |
| 11 | K | 57 | THR | CB-OG1 | 5.05 | 1.53 | 1.43 |
| 4 | P | 111 | THR | CB-OG1 | 5.02 | 1.53 | 1.43 |
| 1 | A | 675 | SER | CB-OG | 5.01 | 1.48 | 1.42 |

All (100) bond angle outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-----------|------|-------------|----------|
| 12 | L | 29 | VAL | CA-CB-CG1 | 9.64 | 125.37 | 110.90 |
| 12 | X | 29 | VAL | CA-CB-CG1 | 9.61 | 125.32 | 110.90 |
| 2 | N | 682 | VAL | CA-CB-CG1 | 7.32 | 121.89 | 110.90 |
| 2 | B | 682 | VAL | CA-CB-CG2 | 7.30 | 121.85 | 110.90 |
| 11 | K | 54 | PRO | N-CA-CB | 6.99 | 111.69 | 103.30 |
| 1 | A | 217 | PRO | N-CA-CB | 6.99 | 111.69 | 103.30 |
| 11 | W | 54 | PRO | N-CA-CB | 6.98 | 111.68 | 103.30 |
| 1 | M | 217 | PRO | N-CA-CB | 6.96 | 111.65 | 103.30 |
| 1 | A | 198 | PRO | N-CA-CB | 6.91 | 111.60 | 103.30 |
| 1 | M | 198 | PRO | N-CA-CB | 6.88 | 111.56 | 103.30 |
| 3 | O | 124 | PRO | CA-CB-CG | 6.87 | 117.84 | 104.80 |
| 3 | C | 124 | PRO | CA-CB-CG | 6.83 | 117.78 | 104.80 |
| 2 | N | 728 | PRO | N-CA-CB | 6.74 | 111.39 | 103.30 |
| 2 | B | 728 | PRO | N-CA-CB | 6.70 | 111.34 | 103.30 |
| 1 | M | 1024 | VAL | CA-CB-CG1 | 6.58 | 120.78 | 110.90 |
| 1 | A | 1024 | VAL | CA-CB-CG2 | 6.57 | 120.76 | 110.90 |
| 1 | A | 707 | PRO | N-CA-CB | 6.48 | 111.08 | 103.30 |
| 1 | M | 707 | PRO | N-CA-CB | 6.46 | 111.05 | 103.30 |
| 11 | W | 17 | PRO | N-CA-CB | 6.41 | 110.99 | 103.30 |
| 1 | M | 986 | PRO | N-CA-CB | 6.38 | 110.96 | 103.30 |
| 11 | K | 17 | PRO | N-CA-CB | 6.34 | 110.91 | 103.30 |
| 1 | M | 1280 | PRO | N-CA-CB | 6.28 | 110.84 | 103.30 |
| 1 | A | 48 | PRO | N-CA-CB | 6.26 | 110.82 | 103.30 |
| 1 | A | 986 | PRO | N-CA-CB | 6.24 | 110.79 | 103.30 |
| 4 | P | 32 | PRO | N-CA-CB | 6.22 | 110.77 | 103.30 |
| 3 | O | 124 | PRO | N-CA-CB | 6.21 | 110.76 | 103.30 |
| 1 | M | 48 | PRO | N-CA-CB | 6.21 | 110.75 | 103.30 |
| 3 | C | 124 | PRO | N-CA-CB | 6.17 | 110.70 | 103.30 |
| 4 | D | 32 | PRO | N-CA-CB | 6.16 | 110.69 | 103.30 |
| 1 | A | 1280 | PRO | N-CA-CB | 6.15 | 110.68 | 103.30 |
| 4 | P | 184 | PRO | N-CA-CB | 6.09 | 110.60 | 103.30 |
| 1 | A | 1280 | PRO | CA-CB-CG | 6.07 | 116.33 | 104.80 |
| 2 | B | 543 | PRO | N-CA-CB | 6.06 | 110.58 | 103.30 |
| 4 | D | 184 | PRO | N-CA-CB | 6.01 | 110.51 | 103.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-----------|-------|-------------|----------|
| 1 | M | 1280 | PRO | CA-CB-CG | 6.00 | 116.20 | 104.80 |
| 11 | K | 54 | PRO | CA-CB-CG | 5.99 | 116.18 | 104.80 |
| 2 | N | 543 | PRO | N-CA-CB | 5.99 | 110.48 | 103.30 |
| 11 | W | 54 | PRO | CA-CB-CG | 5.98 | 116.16 | 104.80 |
| 12 | X | 47 | PRO | N-CA-CB | 5.90 | 110.38 | 103.30 |
| 12 | L | 47 | PRO | N-CA-CB | 5.88 | 110.36 | 103.30 |
| 8 | T | 17 | ASN | CA-CB-CG | -5.88 | 100.47 | 113.40 |
| 8 | H | 17 | ASN | CA-CB-CG | -5.87 | 100.49 | 113.40 |
| 3 | O | 225 | PRO | N-CA-CB | 5.78 | 110.24 | 103.30 |
| 3 | C | 225 | PRO | N-CA-CB | 5.76 | 110.21 | 103.30 |
| 8 | H | 83 | PRO | N-CA-CB | 5.64 | 110.08 | 103.30 |
| 7 | G | 123 | PRO | N-CA-CB | 5.64 | 110.07 | 103.30 |
| 6 | F | 75 | LEU | CA-CB-CG | -5.63 | 102.34 | 115.30 |
| 11 | K | 11 | ILE | CA-CB-CG1 | 5.62 | 121.67 | 111.00 |
| 11 | W | 11 | ILE | CA-CB-CG1 | 5.62 | 121.67 | 111.00 |
| 1 | A | 120 | PRO | N-CA-CB | 5.61 | 110.03 | 103.30 |
| 6 | R | 75 | LEU | CA-CB-CG | -5.60 | 102.42 | 115.30 |
| 1 | M | 120 | PRO | N-CA-CB | 5.60 | 110.02 | 103.30 |
| 8 | T | 83 | PRO | N-CA-CB | 5.58 | 110.00 | 103.30 |
| 11 | W | 13 | PRO | N-CA-CB | 5.57 | 109.98 | 103.30 |
| 7 | S | 123 | PRO | N-CA-CB | 5.54 | 109.95 | 103.30 |
| 3 | O | 267 | PRO | CA-CB-CG | 5.54 | 115.32 | 104.80 |
| 3 | C | 267 | PRO | CA-CB-CG | 5.53 | 115.31 | 104.80 |
| 11 | K | 13 | PRO | N-CA-CB | 5.52 | 109.92 | 103.30 |
| 1 | A | 1124 | ARG | CA-CB-CG | -5.46 | 101.39 | 113.40 |
| 1 | M | 1124 | ARG | CA-CB-CG | -5.45 | 101.40 | 113.40 |
| 1 | M | 1135 | VAL | CA-CB-CG1 | 5.45 | 119.07 | 110.90 |
| 3 | C | 38 | ALA | N-CA-C | 5.44 | 125.69 | 111.00 |
| 1 | A | 986 | PRO | CA-CB-CG | 5.43 | 115.12 | 104.80 |
| 1 | M | 986 | PRO | CA-CB-CG | 5.42 | 115.11 | 104.80 |
| 1 | A | 1135 | VAL | CA-CB-CG2 | 5.41 | 119.02 | 110.90 |
| 3 | O | 38 | ALA | N-CA-C | 5.38 | 125.54 | 111.00 |
| 3 | O | 267 | PRO | N-CA-CB | 5.38 | 109.75 | 103.30 |
| 3 | C | 267 | PRO | N-CA-CB | 5.33 | 109.70 | 103.30 |
| 1 | M | 97 | PRO | N-CA-CB | 5.31 | 109.68 | 103.30 |
| 1 | A | 267 | LEU | N-CA-C | -5.28 | 96.74 | 111.00 |
| 1 | M | 267 | LEU | N-CA-C | -5.28 | 96.75 | 111.00 |
| 2 | B | 544 | SER | N-CA-CB | -5.25 | 102.62 | 110.50 |
| 4 | P | 184 | PRO | CA-CB-CG | 5.25 | 114.78 | 104.80 |
| 1 | A | 97 | PRO | N-CA-CB | 5.24 | 109.58 | 103.30 |
| 4 | D | 184 | PRO | CA-CB-CG | 5.22 | 114.72 | 104.80 |
| 2 | N | 544 | SER | N-CA-CB | -5.21 | 102.69 | 110.50 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-----------|-------|-------------|----------|
| 6 | F | 111 | ILE | CA-CB-CG1 | 5.20 | 120.87 | 111.00 |
| 4 | D | 32 | PRO | CA-CB-CG | 5.18 | 114.65 | 104.80 |
| 4 | P | 32 | PRO | CA-CB-CG | 5.17 | 114.63 | 104.80 |
| 1 | M | 980 | ALA | N-CA-CB | -5.17 | 102.86 | 110.10 |
| 6 | R | 111 | ILE | CA-CB-CG1 | 5.17 | 120.82 | 111.00 |
| 1 | M | 675 | SER | N-CA-CB | -5.16 | 102.76 | 110.50 |
| 1 | A | 675 | SER | N-CA-CB | -5.14 | 102.78 | 110.50 |
| 5 | E | 65 | PRO | CA-CB-CG | 5.14 | 114.56 | 104.80 |
| 3 | C | 215 | PRO | CA-CB-CG | 5.13 | 114.56 | 104.80 |
| 3 | O | 215 | PRO | CA-CB-CG | 5.12 | 114.52 | 104.80 |
| 5 | E | 65 | PRO | N-CA-CB | 5.11 | 109.44 | 103.30 |
| 5 | Q | 65 | PRO | CA-CB-CG | 5.10 | 114.49 | 104.80 |
| 5 | Q | 65 | PRO | N-CA-CB | 5.10 | 109.42 | 103.30 |
| 5 | Q | 127 | SER | N-CA-CB | -5.10 | 102.85 | 110.50 |
| 1 | A | 980 | ALA | N-CA-CB | -5.09 | 102.97 | 110.10 |
| 1 | A | 131 | PRO | N-CA-CB | 5.07 | 109.39 | 103.30 |
| 1 | M | 131 | PRO | N-CA-CB | 5.06 | 109.37 | 103.30 |
| 3 | O | 218 | VAL | CA-CB-CG1 | -5.06 | 103.31 | 110.90 |
| 5 | E | 127 | SER | N-CA-CB | -5.05 | 102.92 | 110.50 |
| 3 | C | 218 | VAL | CA-CB-CG1 | -5.04 | 103.34 | 110.90 |
| 5 | Q | 72 | SER | N-CA-CB | -5.03 | 102.96 | 110.50 |
| 5 | E | 72 | SER | N-CA-CB | -5.02 | 102.97 | 110.50 |
| 1 | M | 1178 | ILE | CA-CB-CG1 | 5.02 | 120.54 | 111.00 |
| 1 | M | 1297 | GLU | CA-CB-CG | -5.01 | 102.39 | 113.40 |

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts [i](#)

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

| Mol | Chain | Non-H | H(model) | H(added) | Clashes | Symm-Clashes |
|-----|-------|-------|----------|----------|---------|--------------|
| 1 | A | 10247 | 0 | 9725 | 1250 | 8 |
| 1 | M | 10269 | 0 | 9748 | 1200 | 0 |
| 2 | B | 8153 | 0 | 7831 | 1005 | 1 |
| 2 | N | 8190 | 0 | 7881 | 978 | 1 |
| 3 | C | 1863 | 0 | 1645 | 196 | 0 |

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| Mol | Chain | Non-H | H(model) | H(added) | Clashes | Symm-Clashes |
|-----|-------|-------|----------|----------|---------|--------------|
| 3 | O | 1863 | 0 | 1645 | 193 | 8 |
| 4 | D | 1082 | 0 | 945 | 110 | 1 |
| 4 | P | 1113 | 0 | 970 | 102 | 1 |
| 5 | E | 1638 | 0 | 1551 | 160 | 0 |
| 5 | Q | 1638 | 0 | 1551 | 163 | 0 |
| 6 | F | 637 | 0 | 620 | 59 | 1 |
| 6 | R | 637 | 0 | 620 | 78 | 1 |
| 7 | G | 1187 | 0 | 1092 | 161 | 2 |
| 7 | S | 1187 | 0 | 1092 | 148 | 1 |
| 8 | H | 959 | 0 | 858 | 127 | 2 |
| 8 | T | 965 | 0 | 864 | 123 | 2 |
| 9 | I | 854 | 0 | 763 | 84 | 0 |
| 9 | U | 854 | 0 | 763 | 82 | 1 |
| 10 | J | 487 | 0 | 492 | 116 | 0 |
| 10 | V | 487 | 0 | 492 | 115 | 0 |
| 11 | K | 832 | 0 | 727 | 89 | 0 |
| 11 | W | 832 | 0 | 727 | 90 | 0 |
| 12 | L | 319 | 0 | 287 | 30 | 1 |
| 12 | X | 319 | 0 | 287 | 30 | 1 |
| 13 | A | 2 | 0 | 0 | 0 | 0 |
| 13 | B | 1 | 0 | 0 | 1 | 0 |
| 13 | C | 1 | 0 | 0 | 0 | 0 |
| 13 | I | 2 | 0 | 0 | 0 | 0 |
| 13 | J | 1 | 0 | 0 | 0 | 0 |
| 13 | L | 1 | 0 | 0 | 0 | 0 |
| 13 | M | 2 | 0 | 0 | 0 | 0 |
| 13 | N | 1 | 0 | 0 | 0 | 0 |
| 13 | O | 1 | 0 | 0 | 0 | 0 |
| 13 | U | 2 | 0 | 0 | 0 | 0 |
| 13 | V | 1 | 0 | 0 | 0 | 0 |
| 13 | X | 1 | 0 | 0 | 0 | 0 |
| All | All | 56628 | 0 | 53176 | 6068 | 16 |

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 55.

All (6068) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-----------------|----------------|--------------------------|-------------------|
| 2:B:51:TRP:CG | 2:B:51:TRP:CB | 1.81 | 1.63 |
| 1:A:521:VAL:CG1 | 1:A:521:VAL:CB | 1.76 | 1.61 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 5:Q:123:ILE:CG1 | 5:Q:124:PRO:HD3 | 1.31 | 1.60 |
| 2:N:51:TRP:CB | 2:N:51:TRP:CG | 1.81 | 1.60 |
| 1:M:521:VAL:CG1 | 1:M:521:VAL:CB | 1.76 | 1.58 |
| 7:S:94:VAL:CG1 | 7:S:94:VAL:CB | 1.78 | 1.58 |
| 8:H:36:ILE:CG1 | 8:H:36:ILE:CB | 1.81 | 1.58 |
| 7:G:94:VAL:CB | 7:G:94:VAL:CG2 | 1.78 | 1.57 |
| 1:A:239:VAL:CB | 1:A:239:VAL:CG1 | 1.79 | 1.56 |
| 1:M:239:VAL:CB | 1:M:239:VAL:CG2 | 1.79 | 1.56 |
| 2:N:556:MET:CE | 2:N:573:ILE:HG21 | 1.34 | 1.56 |
| 2:N:556:MET:CE | 2:N:573:ILE:CG2 | 1.83 | 1.56 |
| 8:T:36:ILE:CB | 8:T:36:ILE:CG1 | 1.81 | 1.55 |
| 1:A:1021:GLN:CG | 1:A:1021:GLN:CB | 1.79 | 1.54 |
| 2:B:556:MET:CE | 2:B:573:ILE:HG21 | 1.36 | 1.54 |
| 1:M:1021:GLN:CB | 1:M:1021:GLN:CG | 1.79 | 1.54 |
| 2:B:556:MET:CE | 2:B:573:ILE:CG2 | 1.85 | 1.52 |
| 5:E:123:ILE:CG1 | 5:E:124:PRO:HD3 | 1.39 | 1.49 |
| 1:A:911:PRO:HA | 1:A:917:ALA:CB | 1.44 | 1.48 |
| 1:M:1279:ILE:HG23 | 1:M:1282:ILE:CD1 | 1.41 | 1.47 |
| 1:M:911:PRO:HA | 1:M:917:ALA:CB | 1.44 | 1.47 |
| 1:M:1279:ILE:CG2 | 1:M:1282:ILE:HD12 | 1.47 | 1.44 |
| 1:A:799:GLY:HA2 | 1:A:816:PHE:CD1 | 1.53 | 1.43 |
| 11:K:43:ALA:HB1 | 11:K:61:TYR:CD1 | 1.56 | 1.41 |
| 11:W:43:ALA:HB1 | 11:W:61:TYR:CD1 | 1.55 | 1.41 |
| 1:A:911:PRO:CB | 1:A:917:ALA:HB3 | 1.49 | 1.40 |
| 1:M:911:PRO:CB | 1:M:917:ALA:HB3 | 1.49 | 1.40 |
| 1:M:911:PRO:CA | 1:M:917:ALA:CB | 2.03 | 1.37 |
| 1:A:911:PRO:CA | 1:A:917:ALA:CB | 2.03 | 1.36 |
| 5:Q:123:ILE:CG1 | 5:Q:124:PRO:CD | 2.03 | 1.35 |
| 2:B:556:MET:HE3 | 2:B:573:ILE:CG2 | 1.50 | 1.34 |
| 3:C:47:LEU:HB3 | 3:C:158:ILE:CG2 | 1.58 | 1.33 |
| 3:O:47:LEU:HB3 | 3:O:158:ILE:CG2 | 1.59 | 1.30 |
| 7:S:47:THR:OG1 | 7:S:47:THR:CB | 1.77 | 1.30 |
| 1:M:1279:ILE:CG2 | 1:M:1282:ILE:CD1 | 2.06 | 1.30 |
| 7:S:89:ALA:HB1 | 7:S:102:ASP:O | 1.26 | 1.30 |
| 7:S:150:THR:OG1 | 7:S:150:THR:CB | 1.79 | 1.30 |
| 7:G:47:THR:OG1 | 7:G:47:THR:CB | 1.77 | 1.29 |
| 5:Q:89:ILE:HG23 | 5:Q:119:ALA:N | 1.47 | 1.29 |
| 5:E:123:ILE:CG1 | 5:E:124:PRO:CD | 2.09 | 1.29 |
| 7:G:150:THR:OG1 | 7:G:150:THR:CB | 1.79 | 1.29 |
| 11:W:43:ALA:HB1 | 11:W:61:TYR:CE1 | 1.68 | 1.29 |
| 5:E:89:ILE:HG23 | 5:E:119:ALA:N | 1.47 | 1.28 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 8:H:24:SER:OG | 8:H:24:SER:CB | 1.82 | 1.28 |
| 11:K:43:ALA:HB1 | 11:K:61:TYR:CE1 | 1.68 | 1.28 |
| 2:N:1165:ILE:HG23 | 4:P:13:ARG:O | 1.22 | 1.27 |
| 2:B:1114:LEU:CD1 | 2:B:1202:LEU:HD11 | 1.62 | 1.27 |
| 11:W:43:ALA:CB | 11:W:61:TYR:CE1 | 2.16 | 1.27 |
| 7:G:89:ALA:HB1 | 7:G:102:ASP:O | 1.26 | 1.26 |
| 11:K:43:ALA:CB | 11:K:61:TYR:CE1 | 2.16 | 1.26 |
| 5:Q:89:ILE:CG2 | 5:Q:119:ALA:N | 1.98 | 1.26 |
| 8:T:24:SER:OG | 8:T:24:SER:CB | 1.82 | 1.26 |
| 5:E:89:ILE:CG2 | 5:E:119:ALA:N | 1.99 | 1.25 |
| 1:A:801:VAL:HG11 | 1:A:809:LEU:CD1 | 1.64 | 1.25 |
| 5:Q:80:GLU:O | 5:Q:110:ILE:HG22 | 1.35 | 1.24 |
| 5:E:80:GLU:O | 5:E:110:ILE:HG22 | 1.36 | 1.23 |
| 2:B:1217:TYR:OH | 4:D:14:ARG:HA | 1.41 | 1.21 |
| 2:N:556:MET:HE3 | 2:N:573:ILE:CG2 | 1.55 | 1.19 |
| 1:A:578:LEU:O | 1:A:581:ILE:HG22 | 1.41 | 1.18 |
| 1:M:1279:ILE:HG21 | 1:M:1319:VAL:CG2 | 1.72 | 1.17 |
| 2:B:889:THR:O | 2:B:910:ILE:HG22 | 1.44 | 1.17 |
| 2:N:889:THR:O | 2:N:910:ILE:HG22 | 1.44 | 1.17 |
| 1:A:799:GLY:CA | 1:A:816:PHE:HD1 | 1.57 | 1.17 |
| 3:C:99:GLU:HB2 | 3:C:119:ILE:HG23 | 1.22 | 1.17 |
| 1:A:911:PRO:CB | 1:A:917:ALA:CB | 2.21 | 1.16 |
| 1:M:578:LEU:O | 1:M:581:ILE:HG22 | 1.42 | 1.16 |
| 1:A:799:GLY:CA | 1:A:816:PHE:CD1 | 2.29 | 1.15 |
| 1:A:1453:LEU:HD11 | 7:G:18:PHE:O | 1.47 | 1.14 |
| 1:M:384:TYR:HB3 | 6:R:115:THR:HG22 | 1.17 | 1.14 |
| 5:Q:89:ILE:HG22 | 5:Q:119:ALA:HA | 1.28 | 1.14 |
| 1:A:345:ARG:HA | 2:B:1129:ARG:HA | 1.24 | 1.13 |
| 1:A:776:ILE:HG13 | 1:A:816:PHE:CG | 1.81 | 1.13 |
| 3:O:99:GLU:HB2 | 3:O:119:ILE:CG1 | 1.78 | 1.13 |
| 3:C:99:GLU:HB2 | 3:C:119:ILE:CG2 | 1.76 | 1.13 |
| 1:M:40:ILE:HB | 1:M:41:MET:HE2 | 1.13 | 1.12 |
| 1:M:911:PRO:HB3 | 1:M:917:ALA:CB | 1.77 | 1.12 |
| 5:E:89:ILE:HG22 | 5:E:119:ALA:HA | 1.28 | 1.11 |
| 2:N:540:ILE:CG1 | 2:N:605:GLU:OE2 | 1.99 | 1.11 |
| 2:B:540:ILE:CG1 | 2:B:605:GLU:OE2 | 1.98 | 1.11 |
| 2:B:1114:LEU:HD12 | 2:B:1202:LEU:HD11 | 1.16 | 1.11 |
| 1:M:911:PRO:HA | 1:M:917:ALA:HB2 | 1.16 | 1.11 |
| 1:A:911:PRO:HA | 1:A:917:ALA:HB2 | 1.16 | 1.11 |
| 1:A:911:PRO:HB3 | 1:A:917:ALA:CB | 1.77 | 1.11 |
| 1:A:801:VAL:HG11 | 1:A:809:LEU:HD11 | 1.16 | 1.10 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 6:R:103:MET:HE1 | 7:S:65:SER:C | 1.71 | 1.10 |
| 2:N:582:ILE:CG1 | 2:N:583:HIS:H | 1.64 | 1.10 |
| 1:A:316:LEU:HD12 | 2:B:464:LYS:HB3 | 1.28 | 1.10 |
| 2:B:307:LYS:O | 2:B:310:ILE:HG22 | 1.49 | 1.10 |
| 6:F:109:VAL:HG12 | 6:F:110:ASP:H | 1.15 | 1.10 |
| 3:O:42:THR:HG22 | 3:O:43:LEU:H | 1.08 | 1.10 |
| 5:Q:89:ILE:CG2 | 5:Q:118:SER:C | 2.20 | 1.10 |
| 6:R:109:VAL:HG12 | 6:R:110:ASP:H | 1.15 | 1.10 |
| 1:A:911:PRO:HB3 | 1:A:917:ALA:HB3 | 1.15 | 1.09 |
| 2:N:556:MET:HE1 | 2:N:573:ILE:HG23 | 1.17 | 1.09 |
| 2:B:582:ILE:CG1 | 2:B:583:HIS:H | 1.64 | 1.09 |
| 5:E:89:ILE:CG2 | 5:E:118:SER:C | 2.21 | 1.09 |
| 3:C:47:LEU:HB3 | 3:C:158:ILE:HG21 | 1.29 | 1.09 |
| 1:M:911:PRO:HB3 | 1:M:917:ALA:HB3 | 1.15 | 1.08 |
| 1:M:1029:ALA:O | 1:M:1033:ILE:HG23 | 1.52 | 1.08 |
| 1:A:801:VAL:HA | 1:A:813:GLU:OE1 | 1.52 | 1.08 |
| 1:A:1142:TYR:HB2 | 1:A:1279:ILE:O | 1.53 | 1.08 |
| 1:A:988:ILE:HD13 | 1:A:1033:ILE:CG1 | 1.83 | 1.08 |
| 1:A:1441:THR:HB | 2:B:1144:ALA:CB | 1.84 | 1.08 |
| 1:M:988:ILE:HD13 | 1:M:1033:ILE:CG1 | 1.83 | 1.08 |
| 1:A:1279:ILE:CG1 | 1:A:1280:PRO:N | 2.17 | 1.08 |
| 2:N:1159:ARG:HH11 | 2:N:1159:ARG:HB3 | 1.14 | 1.08 |
| 2:N:556:MET:CE | 2:N:573:ILE:HG23 | 1.68 | 1.07 |
| 9:U:34:TYR:HD2 | 9:U:35:THR:N | 1.52 | 1.07 |
| 3:C:42:THR:HG22 | 3:C:43:LEU:H | 1.08 | 1.07 |
| 1:A:53:LEU:HD23 | 1:A:54:ASN:N | 1.68 | 1.07 |
| 1:A:1029:ALA:O | 1:A:1033:ILE:HG23 | 1.54 | 1.07 |
| 2:B:556:MET:HE1 | 2:B:573:ILE:HG23 | 1.21 | 1.07 |
| 7:G:88:ASP:HB3 | 7:G:144:ARG:HA | 1.35 | 1.07 |
| 1:M:53:LEU:HD23 | 1:M:54:ASN:H | 1.15 | 1.07 |
| 1:M:53:LEU:HD23 | 1:M:54:ASN:N | 1.68 | 1.07 |
| 2:B:1159:ARG:HB3 | 2:B:1159:ARG:HH11 | 1.14 | 1.07 |
| 1:M:384:TYR:HB3 | 6:R:115:THR:CG2 | 1.85 | 1.06 |
| 1:M:591:ARG:NH2 | 1:M:621:LYS:HB3 | 1.71 | 1.06 |
| 1:A:591:ARG:NH2 | 1:A:621:LYS:HB3 | 1.70 | 1.06 |
| 9:I:34:TYR:HD2 | 9:I:35:THR:N | 1.53 | 1.06 |
| 6:R:103:MET:HE1 | 7:S:65:SER:CA | 1.85 | 1.06 |
| 3:O:141:GLY:O | 3:O:142:ILE:CG1 | 2.03 | 1.06 |
| 1:A:801:VAL:HG22 | 1:A:813:GLU:HB3 | 1.26 | 1.06 |
| 3:C:141:GLY:O | 3:C:142:ILE:CG1 | 2.03 | 1.06 |
| 1:A:41:MET:HB3 | 1:A:49:ARG:HA | 1.36 | 1.05 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 3:O:47:LEU:HB3 | 3:O:158:ILE:HG21 | 1.29 | 1.05 |
| 1:A:53:LEU:HD23 | 1:A:54:ASN:H | 1.15 | 1.04 |
| 5:E:120:ASN:O | 5:E:123:ILE:HG23 | 1.54 | 1.04 |
| 1:A:1441:THR:CG2 | 2:B:1144:ALA:HB3 | 1.86 | 1.04 |
| 2:N:1007:VAL:HG22 | 2:N:1008:PRO:HD2 | 1.40 | 1.04 |
| 2:B:1007:VAL:HG22 | 2:B:1008:PRO:HD2 | 1.40 | 1.03 |
| 2:B:556:MET:CE | 2:B:573:ILE:HG23 | 1.69 | 1.03 |
| 1:A:333:LYS:H | 1:A:338:ARG:HB3 | 1.23 | 1.03 |
| 1:A:911:PRO:CA | 1:A:917:ALA:HB3 | 1.79 | 1.03 |
| 7:S:88:ASP:HB3 | 7:S:144:ARG:HA | 1.35 | 1.03 |
| 3:O:4:GLU:CB | 3:O:5:PRO:HD2 | 1.88 | 1.03 |
| 1:A:776:ILE:HG13 | 1:A:816:PHE:CB | 1.89 | 1.03 |
| 1:M:1279:ILE:HG21 | 1:M:1319:VAL:HG22 | 1.03 | 1.02 |
| 2:B:999:MET:HG3 | 2:B:1000:PRO:HD2 | 1.41 | 1.02 |
| 3:C:4:GLU:CB | 3:C:5:PRO:HD2 | 1.88 | 1.02 |
| 1:M:41:MET:HB3 | 1:M:49:ARG:HA | 1.36 | 1.02 |
| 1:M:553:TRP:HE1 | 11:W:62:LYS:HB2 | 1.24 | 1.02 |
| 1:A:780:PHE:HE1 | 1:A:786:PRO:HD3 | 1.25 | 1.02 |
| 1:M:780:PHE:HE1 | 1:M:786:PRO:HD3 | 1.25 | 1.02 |
| 11:K:43:ALA:HB3 | 11:K:61:TYR:CE1 | 1.92 | 1.02 |
| 1:M:911:PRO:CB | 1:M:917:ALA:CB | 2.22 | 1.02 |
| 1:M:333:LYS:H | 1:M:338:ARG:HB3 | 1.23 | 1.01 |
| 1:A:739:LYS:HB2 | 1:A:741:LEU:HD23 | 1.40 | 1.01 |
| 11:K:43:ALA:CB | 11:K:61:TYR:HE1 | 1.67 | 1.01 |
| 2:N:1116:ARG:NE | 2:N:1198:TYR:CE1 | 2.28 | 1.01 |
| 3:O:4:GLU:CB | 3:O:5:PRO:CD | 2.37 | 1.01 |
| 11:W:43:ALA:HB3 | 11:W:61:TYR:CE1 | 1.92 | 1.01 |
| 2:B:582:ILE:CG1 | 2:B:583:HIS:N | 2.22 | 1.01 |
| 3:O:31:SER:O | 3:O:35:THR:HG23 | 1.61 | 1.01 |
| 3:O:99:GLU:CB | 3:O:119:ILE:CG1 | 2.38 | 1.01 |
| 1:A:41:MET:H | 1:A:41:MET:HE2 | 1.23 | 1.01 |
| 2:N:999:MET:HG3 | 2:N:1000:PRO:HD2 | 1.41 | 1.01 |
| 5:Q:120:ASN:O | 5:Q:123:ILE:HG23 | 1.59 | 1.01 |
| 1:M:739:LYS:HB2 | 1:M:741:LEU:HD23 | 1.40 | 1.00 |
| 1:A:553:TRP:HE1 | 11:K:62:LYS:HB2 | 1.24 | 1.00 |
| 1:A:801:VAL:CG1 | 1:A:809:LEU:CD1 | 2.40 | 1.00 |
| 3:C:4:GLU:CB | 3:C:5:PRO:CD | 2.38 | 1.00 |
| 1:M:911:PRO:CA | 1:M:917:ALA:HB3 | 1.79 | 1.00 |
| 3:C:31:SER:O | 3:C:35:THR:HG23 | 1.61 | 1.00 |
| 1:M:444:LEU:HD11 | 1:M:456:MET:HB3 | 1.44 | 0.99 |
| 1:M:799:GLY:HA2 | 1:M:816:PHE:HD1 | 1.25 | 0.99 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 2:N:1165:ILE:CG2 | 4:P:13:ARG:O | 2.10 | 0.99 |
| 6:F:82:THR:HG22 | 6:F:84:TYR:H | 1.28 | 0.99 |
| 1:M:504:GLN:HE21 | 6:R:90:ARG:HH21 | 1.02 | 0.99 |
| 1:A:769:GLN:OE1 | 1:A:817:HIS:ND1 | 1.95 | 0.99 |
| 1:A:1013:GLN:O | 1:A:1017:THR:HG23 | 1.62 | 0.99 |
| 6:R:82:THR:HG22 | 6:R:84:TYR:H | 1.28 | 0.99 |
| 1:M:1279:ILE:HG23 | 1:M:1282:ILE:HD11 | 1.41 | 0.99 |
| 1:A:776:ILE:HG13 | 1:A:816:PHE:HB3 | 1.43 | 0.99 |
| 1:A:1441:THR:HB | 2:B:1144:ALA:HB2 | 1.44 | 0.99 |
| 11:W:43:ALA:CB | 11:W:61:TYR:HE1 | 1.67 | 0.98 |
| 1:A:444:LEU:HD11 | 1:A:456:MET:HB3 | 1.44 | 0.98 |
| 7:G:138:THR:HG22 | 7:G:139:LYS:N | 1.78 | 0.98 |
| 2:N:582:ILE:CG1 | 2:N:583:HIS:N | 2.22 | 0.98 |
| 5:Q:89:ILE:HG22 | 5:Q:119:ALA:CA | 1.94 | 0.98 |
| 2:B:1159:ARG:HB3 | 2:B:1159:ARG:NH1 | 1.78 | 0.98 |
| 5:E:89:ILE:HG22 | 5:E:119:ALA:CA | 1.94 | 0.98 |
| 1:A:1118:LEU:N | 1:A:1311:THR:HG22 | 1.79 | 0.98 |
| 3:O:47:LEU:HB3 | 3:O:158:ILE:HG23 | 1.41 | 0.98 |
| 5:E:89:ILE:CG2 | 5:E:119:ALA:CA | 2.42 | 0.98 |
| 1:A:776:ILE:CG1 | 1:A:816:PHE:HB3 | 1.94 | 0.97 |
| 1:M:1013:GLN:O | 1:M:1017:THR:HG23 | 1.62 | 0.97 |
| 2:N:1159:ARG:HB3 | 2:N:1159:ARG:NH1 | 1.78 | 0.97 |
| 2:B:1114:LEU:HD12 | 2:B:1202:LEU:CD1 | 1.92 | 0.97 |
| 7:S:138:THR:HG22 | 7:S:139:LYS:N | 1.79 | 0.97 |
| 5:Q:89:ILE:CG2 | 5:Q:119:ALA:CA | 2.42 | 0.97 |
| 1:M:1118:LEU:N | 1:M:1311:THR:HG22 | 1.79 | 0.97 |
| 1:A:55:ASP:C | 1:A:57:LYS:H | 1.68 | 0.97 |
| 7:S:89:ALA:HB1 | 7:S:102:ASP:C | 1.84 | 0.97 |
| 7:G:89:ALA:HB1 | 7:G:102:ASP:C | 1.83 | 0.97 |
| 7:G:138:THR:HG22 | 7:G:139:LYS:H | 1.28 | 0.97 |
| 1:M:799:GLY:HA2 | 1:M:816:PHE:CD1 | 1.99 | 0.97 |
| 10:J:43:TYR:HA | 10:J:46:ARG:HB2 | 1.45 | 0.96 |
| 3:C:47:LEU:HB3 | 3:C:158:ILE:HG23 | 1.41 | 0.96 |
| 10:V:43:TYR:HA | 10:V:46:ARG:HB2 | 1.44 | 0.96 |
| 1:M:1107:LEU:HD22 | 1:M:1387:ILE:HG21 | 1.48 | 0.96 |
| 6:R:103:MET:CE | 7:S:65:SER:C | 2.33 | 0.96 |
| 5:E:174:LEU:HD23 | 5:E:175:PRO:HD2 | 1.48 | 0.95 |
| 1:A:1107:LEU:HD22 | 1:A:1387:ILE:HG21 | 1.48 | 0.95 |
| 1:M:911:PRO:CA | 1:M:917:ALA:HB1 | 1.94 | 0.95 |
| 3:O:99:GLU:CG | 3:O:119:ILE:CG1 | 2.44 | 0.95 |
| 2:N:882:THR:HG1 | 2:N:934:LYS:N | 1.64 | 0.95 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 3:O:65:ARG:NH2 | 10:V:5:VAL:HG23 | 1.82 | 0.95 |
| 1:A:864:ILE:HG23 | 5:E:175:PRO:HD3 | 1.46 | 0.95 |
| 3:O:56:VAL:HG11 | 10:V:59:PHE:HB3 | 1.49 | 0.95 |
| 7:G:89:ALA:CB | 7:G:102:ASP:O | 2.14 | 0.94 |
| 7:S:34:VAL:HG12 | 7:S:45:ILE:HG21 | 1.48 | 0.94 |
| 1:M:864:ILE:HG23 | 5:Q:175:PRO:HD3 | 1.47 | 0.94 |
| 2:N:889:THR:O | 2:N:910:ILE:CG2 | 2.14 | 0.94 |
| 1:A:911:PRO:CA | 1:A:917:ALA:HB1 | 1.93 | 0.94 |
| 7:S:138:THR:HG22 | 7:S:139:LYS:H | 1.28 | 0.94 |
| 3:C:56:VAL:HG11 | 10:J:59:PHE:HB3 | 1.49 | 0.94 |
| 6:F:86:THR:OG1 | 6:F:89:GLU:HG3 | 1.66 | 0.94 |
| 10:V:63:ASN:HB3 | 10:V:64:PRO:CD | 1.98 | 0.94 |
| 2:B:1114:LEU:HD11 | 2:B:1202:LEU:HD11 | 1.48 | 0.94 |
| 8:H:134:LEU:HD13 | 8:H:136:GLN:NE2 | 1.83 | 0.94 |
| 1:M:55:ASP:C | 1:M:57:LYS:H | 1.68 | 0.94 |
| 2:B:1114:LEU:CD1 | 2:B:1202:LEU:CD1 | 2.45 | 0.93 |
| 10:J:63:ASN:HB3 | 10:J:64:PRO:CD | 1.98 | 0.93 |
| 2:N:1065:GLN:HG3 | 2:N:1067:ARG:H | 1.33 | 0.93 |
| 5:Q:174:LEU:HD23 | 5:Q:175:PRO:HD2 | 1.48 | 0.93 |
| 3:C:65:ARG:NH2 | 10:J:5:VAL:HG23 | 1.82 | 0.93 |
| 8:T:134:LEU:HD13 | 8:T:136:GLN:NE2 | 1.83 | 0.93 |
| 2:B:889:THR:O | 2:B:910:ILE:CG2 | 2.15 | 0.93 |
| 1:M:568:LYS:HD2 | 1:M:569:PRO:HD2 | 1.50 | 0.93 |
| 2:N:890:TYR:HA | 2:N:910:ILE:CG2 | 1.98 | 0.93 |
| 1:A:568:LYS:HD2 | 1:A:569:PRO:HD2 | 1.51 | 0.93 |
| 7:G:34:VAL:HG12 | 7:G:45:ILE:HG21 | 1.48 | 0.93 |
| 2:B:810:GLU:HA | 2:B:815:ARG:HH12 | 1.34 | 0.93 |
| 2:B:1065:GLN:HG3 | 2:B:1067:ARG:H | 1.33 | 0.93 |
| 5:E:83:ASP:O | 5:E:85:PRO:HD3 | 1.68 | 0.93 |
| 2:N:503:LYS:HG2 | 2:N:504:PRO:HD3 | 1.50 | 0.93 |
| 1:A:638:LYS:CB | 1:A:642:ILE:CG1 | 2.47 | 0.93 |
| 7:S:89:ALA:CB | 7:S:102:ASP:O | 2.14 | 0.93 |
| 2:B:503:LYS:HG2 | 2:B:504:PRO:HD3 | 1.51 | 0.93 |
| 1:M:988:ILE:CD1 | 1:M:1033:ILE:CG1 | 2.47 | 0.93 |
| 6:R:86:THR:OG1 | 6:R:89:GLU:HG3 | 1.67 | 0.93 |
| 2:B:890:TYR:HA | 2:B:910:ILE:CG2 | 1.99 | 0.92 |
| 5:E:89:ILE:HG21 | 5:E:118:SER:C | 1.90 | 0.92 |
| 10:J:1:MET:HB2 | 10:J:55:LEU:HD12 | 1.50 | 0.92 |
| 1:M:336:ARG:HA | 1:M:340:ASN:HD22 | 1.34 | 0.92 |
| 2:N:810:GLU:HA | 2:N:815:ARG:HH12 | 1.34 | 0.92 |
| 2:B:387:ASP:OD2 | 9:I:91:ARG:HG3 | 1.70 | 0.92 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:M:256:THR:CB | 2:N:918:ILE:HG21 | 2.00 | 0.92 |
| 2:B:1072:MET:HE3 | 2:B:1085:VAL:HB | 1.52 | 0.92 |
| 5:Q:83:ASP:O | 5:Q:85:PRO:HD3 | 1.68 | 0.92 |
| 7:S:89:ALA:CB | 7:S:102:ASP:C | 2.38 | 0.92 |
| 1:M:266:LYS:H | 1:M:266:LYS:HD2 | 1.34 | 0.92 |
| 1:M:638:LYS:CB | 1:M:642:ILE:CG1 | 2.47 | 0.92 |
| 1:M:1279:ILE:HG22 | 1:M:1282:ILE:HD12 | 1.52 | 0.92 |
| 5:Q:89:ILE:HG21 | 5:Q:118:SER:C | 1.89 | 0.92 |
| 1:M:710:THR:HB | 1:M:713:GLU:HG3 | 1.52 | 0.92 |
| 1:A:710:THR:HB | 1:A:713:GLU:HG3 | 1.52 | 0.92 |
| 1:A:1118:LEU:H | 1:A:1311:THR:HG22 | 1.31 | 0.92 |
| 2:B:352:GLU:O | 2:B:355:PRO:HD3 | 1.69 | 0.92 |
| 10:V:1:MET:HB2 | 10:V:55:LEU:HD12 | 1.50 | 0.92 |
| 2:B:387:ASP:OD2 | 9:I:91:ARG:CG | 2.17 | 0.91 |
| 5:E:89:ILE:HG21 | 5:E:118:SER:CB | 2.01 | 0.91 |
| 11:W:43:ALA:HB3 | 11:W:61:TYR:HE1 | 1.26 | 0.91 |
| 1:A:266:LYS:H | 1:A:266:LYS:HD2 | 1.34 | 0.91 |
| 2:B:556:MET:HE2 | 2:B:573:ILE:CG2 | 1.99 | 0.91 |
| 1:M:1118:LEU:H | 1:M:1311:THR:HG22 | 1.31 | 0.91 |
| 1:M:1279:ILE:O | 1:M:1280:PRO:O | 1.87 | 0.91 |
| 1:M:504:GLN:NE2 | 6:R:90:ARG:HH21 | 1.69 | 0.91 |
| 1:A:1453:LEU:CD1 | 7:G:18:PHE:O | 2.17 | 0.91 |
| 7:G:89:ALA:CB | 7:G:102:ASP:C | 2.38 | 0.91 |
| 2:N:766:ARG:HH22 | 2:N:1020:ARG:HH11 | 0.98 | 0.91 |
| 1:A:988:ILE:CD1 | 1:A:1033:ILE:CG1 | 2.47 | 0.91 |
| 11:W:49:GLU:HG3 | 11:W:94:ILE:HG12 | 1.53 | 0.91 |
| 1:A:336:ARG:HA | 1:A:340:ASN:HD22 | 1.34 | 0.91 |
| 3:C:164:ALA:HB2 | 3:C:171:SER:CB | 2.00 | 0.91 |
| 11:K:49:GLU:HG3 | 11:K:94:ILE:HG12 | 1.53 | 0.91 |
| 2:N:270:GLN:HG2 | 2:N:271:ASP:H | 1.37 | 0.90 |
| 2:B:941:LEU:HD21 | 2:B:946:ASN:HA | 1.53 | 0.90 |
| 2:B:766:ARG:HH22 | 2:B:1020:ARG:HH11 | 0.98 | 0.90 |
| 2:N:352:GLU:O | 2:N:355:PRO:HD3 | 1.69 | 0.90 |
| 2:B:865:ARG:CG | 2:B:871:VAL:HG22 | 2.02 | 0.90 |
| 10:V:63:ASN:HB3 | 10:V:64:PRO:HD3 | 1.54 | 0.90 |
| 1:M:1279:ILE:HG23 | 1:M:1282:ILE:HD12 | 0.91 | 0.90 |
| 2:N:865:ARG:CG | 2:N:871:VAL:HG22 | 2.02 | 0.90 |
| 3:O:164:ALA:HB2 | 3:O:171:SER:CB | 2.00 | 0.90 |
| 5:Q:89:ILE:HG21 | 5:Q:118:SER:CB | 2.01 | 0.90 |
| 1:A:769:GLN:HG3 | 1:A:817:HIS:CA | 2.01 | 0.90 |
| 5:Q:146:HIS:HB3 | 5:Q:149:VAL:HG23 | 1.53 | 0.90 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 10:J:63:ASN:HB3 | 10:J:64:PRO:HD3 | 1.54 | 0.90 |
| 1:A:638:LYS:HB3 | 1:A:642:ILE:CG1 | 2.02 | 0.90 |
| 1:A:1448:ILE:HG21 | 7:G:18:PHE:HE2 | 1.34 | 0.90 |
| 4:P:82:GLY:HA2 | 4:P:85:ASP:CG | 1.91 | 0.90 |
| 5:E:146:HIS:HB3 | 5:E:149:VAL:HG23 | 1.54 | 0.89 |
| 1:M:1279:ILE:CG2 | 1:M:1319:VAL:HG22 | 1.98 | 0.89 |
| 2:B:270:GLN:HG2 | 2:B:271:ASP:H | 1.37 | 0.89 |
| 1:M:638:LYS:HB3 | 1:M:642:ILE:CG1 | 2.02 | 0.89 |
| 2:N:821:GLN:HE22 | 2:N:851:PHE:H | 1.21 | 0.89 |
| 2:N:941:LEU:HD21 | 2:N:946:ASN:HA | 1.53 | 0.89 |
| 1:M:1441:THR:HB | 2:N:1144:ALA:CB | 2.02 | 0.89 |
| 5:E:81:PHE:HA | 5:E:110:ILE:CG2 | 2.02 | 0.89 |
| 1:M:345:ARG:HA | 2:N:1129:ARG:HA | 1.54 | 0.89 |
| 2:N:12:ILE:CD1 | 2:N:647:ILE:CG1 | 2.51 | 0.89 |
| 2:N:514:LEU:HD22 | 2:N:626:VAL:HG12 | 1.55 | 0.89 |
| 2:B:514:LEU:HD22 | 2:B:626:VAL:HG12 | 1.55 | 0.89 |
| 2:N:307:LYS:O | 2:N:310:ILE:HG23 | 1.72 | 0.89 |
| 1:A:801:VAL:CG1 | 1:A:809:LEU:HG | 2.03 | 0.88 |
| 2:B:821:GLN:HE22 | 2:B:851:PHE:H | 1.21 | 0.88 |
| 6:R:103:MET:CE | 7:S:65:SER:HA | 2.04 | 0.88 |
| 1:M:1006:ASN:ND2 | 5:Q:166:ARG:HD2 | 1.87 | 0.88 |
| 2:B:957:ASN:HD22 | 2:B:961:LEU:HD12 | 1.39 | 0.88 |
| 5:Q:81:PHE:HA | 5:Q:110:ILE:CG2 | 2.02 | 0.88 |
| 1:A:316:LEU:CD1 | 2:B:464:LYS:HB3 | 2.02 | 0.88 |
| 1:A:801:VAL:CA | 1:A:813:GLU:OE1 | 2.22 | 0.88 |
| 2:B:12:ILE:CD1 | 2:B:647:ILE:CG1 | 2.51 | 0.88 |
| 2:B:509:ASN:HD22 | 2:B:509:ASN:N | 1.70 | 0.88 |
| 2:N:158:ILE:HG22 | 2:N:446:ILE:HD12 | 1.56 | 0.88 |
| 2:N:1072:MET:HE3 | 2:N:1085:VAL:HB | 1.55 | 0.88 |
| 11:W:43:ALA:HB1 | 11:W:61:TYR:HD1 | 1.38 | 0.88 |
| 1:M:739:LYS:HD2 | 1:M:739:LYS:H | 1.39 | 0.88 |
| 1:A:797:SER:O | 1:A:816:PHE:CZ | 2.26 | 0.88 |
| 1:M:1339:LEU:HB2 | 1:M:1347:THR:CB | 2.04 | 0.88 |
| 3:O:74:GLU:HB3 | 3:O:128:ASN:HB3 | 1.55 | 0.88 |
| 2:B:1095:LEU:H | 2:B:1095:LEU:HD12 | 1.39 | 0.88 |
| 5:E:152:HIS:O | 5:E:153:ILE:HG13 | 1.73 | 0.88 |
| 10:J:1:MET:N | 10:J:55:LEU:H | 1.72 | 0.87 |
| 2:N:957:ASN:HD22 | 2:N:961:LEU:HD12 | 1.39 | 0.87 |
| 2:N:1095:LEU:H | 2:N:1095:LEU:HD12 | 1.40 | 0.87 |
| 1:M:902:LEU:H | 1:M:927:GLN:HE21 | 1.22 | 0.87 |
| 5:Q:152:HIS:O | 5:Q:153:ILE:HG13 | 1.73 | 0.87 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:B:158:ILE:HG22 | 2:B:446:ILE:HD12 | 1.56 | 0.87 |
| 2:N:556:MET:HE2 | 2:N:573:ILE:CG2 | 2.03 | 0.87 |
| 1:A:769:GLN:OE1 | 1:A:817:HIS:HA | 1.73 | 0.87 |
| 1:A:1006:ASN:ND2 | 5:E:166:ARG:HD2 | 1.88 | 0.87 |
| 2:N:509:ASN:HD22 | 2:N:509:ASN:N | 1.70 | 0.87 |
| 5:E:89:ILE:HG21 | 5:E:118:SER:HB2 | 1.55 | 0.87 |
| 1:M:266:LYS:HD2 | 1:M:266:LYS:N | 1.88 | 0.87 |
| 1:A:1339:LEU:HB2 | 1:A:1347:THR:CB | 2.04 | 0.87 |
| 2:B:1181:GLU:HA | 2:B:1187:ASN:O | 1.75 | 0.87 |
| 2:B:1165:ILE:HA | 4:D:13:ARG:O | 1.74 | 0.87 |
| 1:A:986:PRO:O | 1:A:990:HIS:HB2 | 1.74 | 0.87 |
| 1:A:1441:THR:HB | 2:B:1144:ALA:HB3 | 1.57 | 0.87 |
| 3:C:74:GLU:HB3 | 3:C:128:ASN:HB3 | 1.55 | 0.87 |
| 7:S:138:THR:CG2 | 7:S:139:LYS:H | 1.87 | 0.87 |
| 1:M:447:ARG:HB2 | 1:M:488:MET:SD | 2.15 | 0.86 |
| 10:V:1:MET:N | 10:V:55:LEU:H | 1.72 | 0.86 |
| 1:A:266:LYS:HD2 | 1:A:266:LYS:N | 1.88 | 0.86 |
| 7:G:138:THR:CG2 | 7:G:139:LYS:H | 1.87 | 0.86 |
| 5:Q:89:ILE:CG2 | 5:Q:119:ALA:HA | 2.04 | 0.86 |
| 1:A:69:THR:C | 1:A:71:GLY:H | 1.78 | 0.86 |
| 1:A:739:LYS:H | 1:A:739:LYS:HD2 | 1.39 | 0.86 |
| 1:M:986:PRO:O | 1:M:990:HIS:HB2 | 1.74 | 0.86 |
| 2:N:1181:GLU:HA | 2:N:1187:ASN:O | 1.75 | 0.86 |
| 1:A:316:LEU:HD12 | 2:B:464:LYS:CB | 2.05 | 0.86 |
| 11:K:43:ALA:HB3 | 11:K:61:TYR:HE1 | 1.26 | 0.86 |
| 3:O:42:THR:HG22 | 3:O:43:LEU:N | 1.90 | 0.86 |
| 1:A:1441:THR:CB | 2:B:1144:ALA:HB3 | 2.05 | 0.86 |
| 2:B:519:GLU:OE2 | 2:B:752:ALA:HB2 | 1.74 | 0.86 |
| 1:M:811:PRO:HB3 | 2:N:512:TRP:HH2 | 1.39 | 0.86 |
| 1:A:447:ARG:HB2 | 1:A:488:MET:SD | 2.15 | 0.85 |
| 3:C:42:THR:HG22 | 3:C:43:LEU:N | 1.90 | 0.85 |
| 3:O:9:ILE:HD11 | 11:W:108:GLU:HB3 | 1.58 | 0.85 |
| 1:A:776:ILE:CD1 | 1:A:816:PHE:HB3 | 2.05 | 0.85 |
| 1:A:1142:TYR:CB | 1:A:1279:ILE:O | 2.24 | 0.85 |
| 2:N:519:GLU:OE2 | 2:N:752:ALA:HB2 | 1.74 | 0.85 |
| 5:Q:89:ILE:HG21 | 5:Q:118:SER:HB2 | 1.55 | 0.85 |
| 7:S:80:LYS:HG2 | 7:S:80:LYS:O | 1.76 | 0.85 |
| 2:B:206:GLN:HE22 | 2:B:492:ASN:HB3 | 1.41 | 0.85 |
| 2:B:806:THR:HG22 | 2:B:808:ALA:H | 1.38 | 0.85 |
| 3:C:138:TYR:O | 3:C:139:ASP:CB | 2.25 | 0.85 |
| 1:A:902:LEU:H | 1:A:927:GLN:HE21 | 1.22 | 0.85 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:A:1450:GLU:CG | 7:G:22:MET:HB3 | 2.07 | 0.85 |
| 3:O:30:ASN:O | 3:O:33:ARG:HB3 | 1.75 | 0.85 |
| 2:N:206:GLN:HE22 | 2:N:492:ASN:HB3 | 1.41 | 0.85 |
| 2:N:806:THR:HG22 | 2:N:808:ALA:H | 1.38 | 0.85 |
| 3:O:138:TYR:O | 3:O:139:ASP:CB | 2.25 | 0.85 |
| 1:A:983:LEU:HD21 | 1:A:1041:ARG:HA | 1.58 | 0.85 |
| 1:A:788:PHE:CZ | 1:A:812:GLN:HG2 | 2.11 | 0.85 |
| 2:B:1207:LEU:HB3 | 2:B:1212:ILE:HG22 | 1.57 | 0.85 |
| 3:C:30:ASN:O | 3:C:33:ARG:HB3 | 1.75 | 0.85 |
| 2:B:766:ARG:NH2 | 2:B:1020:ARG:HH11 | 1.73 | 0.85 |
| 5:E:81:PHE:HA | 5:E:110:ILE:HG23 | 1.58 | 0.85 |
| 1:M:638:LYS:HB2 | 1:M:642:ILE:CG1 | 2.07 | 0.85 |
| 1:M:780:PHE:CE1 | 1:M:786:PRO:HD3 | 2.11 | 0.85 |
| 2:N:1207:LEU:HB3 | 2:N:1212:ILE:HG22 | 1.57 | 0.85 |
| 1:A:1388:THR:HG23 | 1:A:1390:HIS:H | 1.42 | 0.84 |
| 7:G:80:LYS:O | 7:G:80:LYS:HG2 | 1.76 | 0.84 |
| 1:M:316:LEU:HD12 | 2:N:464:LYS:HB3 | 1.56 | 0.84 |
| 1:M:1441:THR:HB | 2:N:1144:ALA:HB2 | 1.59 | 0.84 |
| 2:N:766:ARG:HH22 | 2:N:1020:ARG:NH1 | 1.75 | 0.84 |
| 2:N:766:ARG:NH2 | 2:N:1020:ARG:HH11 | 1.74 | 0.84 |
| 1:A:638:LYS:HB2 | 1:A:642:ILE:CG1 | 2.07 | 0.84 |
| 1:A:780:PHE:CE1 | 1:A:786:PRO:HD3 | 2.11 | 0.84 |
| 3:C:175:ALA:CB | 10:J:42:ARG:HH22 | 1.91 | 0.84 |
| 1:A:900:VAL:HB | 1:A:930:LEU:HD11 | 1.59 | 0.84 |
| 1:M:564:PRO:HG3 | 1:M:573:TRP:CZ2 | 2.12 | 0.84 |
| 5:Q:81:PHE:HA | 5:Q:110:ILE:HG23 | 1.57 | 0.84 |
| 3:C:9:ILE:HD11 | 11:K:108:GLU:HB3 | 1.59 | 0.84 |
| 7:G:1:MET:HE3 | 7:G:80:LYS:O | 1.76 | 0.84 |
| 1:M:1388:THR:HG23 | 1:M:1390:HIS:H | 1.41 | 0.84 |
| 2:N:287:GLY:H | 2:N:290:LEU:HD23 | 1.43 | 0.84 |
| 3:O:175:ALA:CB | 10:V:42:ARG:HH22 | 1.91 | 0.84 |
| 8:T:92:TYR:HB3 | 8:T:143:ILE:O | 1.78 | 0.84 |
| 1:M:900:VAL:HB | 1:M:930:LEU:HD11 | 1.59 | 0.84 |
| 2:N:1180:PHE:HB3 | 2:N:1191:ILE:HD13 | 1.57 | 0.84 |
| 1:A:493:PRO:HB3 | 1:A:502:LEU:HD12 | 1.59 | 0.84 |
| 1:A:564:PRO:HG3 | 1:A:573:TRP:CZ2 | 2.12 | 0.84 |
| 1:A:1441:THR:HG21 | 2:B:1144:ALA:HB3 | 1.60 | 0.84 |
| 2:B:766:ARG:HH22 | 2:B:1020:ARG:NH1 | 1.75 | 0.84 |
| 2:B:801:LYS:O | 10:J:51:THR:HG23 | 1.78 | 0.84 |
| 1:M:764:ALA:O | 1:M:804:SER:HB3 | 1.78 | 0.84 |
| 2:N:755:ILE:HA | 2:N:809:MET:HE2 | 1.59 | 0.84 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 3:C:5:PRO:HB3 | 3:C:24:VAL:HG12 | 1.58 | 0.84 |
| 3:C:257:ASN:HA | 3:C:260:PHE:HB3 | 1.60 | 0.84 |
| 1:M:69:THR:C | 1:M:71:GLY:H | 1.78 | 0.84 |
| 11:K:43:ALA:HB1 | 11:K:61:TYR:HD1 | 1.38 | 0.84 |
| 2:N:249:LEU:HB2 | 2:N:378:LEU:HD21 | 1.60 | 0.84 |
| 2:N:556:MET:HE1 | 2:N:573:ILE:CG2 | 1.73 | 0.84 |
| 2:B:755:ILE:HA | 2:B:809:MET:HE2 | 1.59 | 0.84 |
| 2:B:1180:PHE:HB3 | 2:B:1191:ILE:HD13 | 1.57 | 0.84 |
| 11:K:21:ILE:HG12 | 11:K:33:ILE:HG12 | 1.58 | 0.84 |
| 9:U:95:THR:HG22 | 9:U:96:ASN:H | 1.43 | 0.84 |
| 6:R:103:MET:CE | 7:S:65:SER:CA | 2.55 | 0.83 |
| 5:E:89:ILE:CG2 | 5:E:119:ALA:HA | 2.05 | 0.83 |
| 3:O:257:ASN:HA | 3:O:260:PHE:HB3 | 1.60 | 0.83 |
| 11:W:21:ILE:HG12 | 11:W:33:ILE:HG12 | 1.58 | 0.83 |
| 1:A:764:ALA:O | 1:A:804:SER:HB3 | 1.78 | 0.83 |
| 8:H:92:TYR:HB3 | 8:H:143:ILE:O | 1.78 | 0.83 |
| 1:M:493:PRO:HB3 | 1:M:502:LEU:HD12 | 1.59 | 0.83 |
| 1:M:1354:GLU:O | 1:M:1358:VAL:HG23 | 1.78 | 0.83 |
| 1:A:41:MET:HE2 | 1:A:41:MET:N | 1.94 | 0.83 |
| 2:B:287:GLY:H | 2:B:290:LEU:HD23 | 1.43 | 0.83 |
| 4:P:41:HIS:HB2 | 7:S:73:LYS:NZ | 1.94 | 0.83 |
| 1:A:1327:SER:HB2 | 5:E:141:VAL:HG11 | 1.59 | 0.83 |
| 1:M:983:LEU:HD21 | 1:M:1041:ARG:HA | 1.59 | 0.83 |
| 1:M:1327:SER:HB2 | 5:Q:141:VAL:HG11 | 1.59 | 0.83 |
| 2:N:801:LYS:O | 10:V:51:THR:HG23 | 1.78 | 0.83 |
| 1:A:51:GLY:O | 1:A:56:PRO:HB3 | 1.79 | 0.83 |
| 1:M:1241:ARG:HH22 | 1:M:1243:ARG:HH22 | 1.26 | 0.83 |
| 9:I:95:THR:HG22 | 9:I:96:ASN:H | 1.43 | 0.83 |
| 6:R:103:MET:HE1 | 7:S:65:SER:HA | 1.59 | 0.83 |
| 1:A:40:ILE:HB | 1:A:41:MET:CE | 2.08 | 0.83 |
| 1:A:1116:PRO:HB2 | 1:A:1314:ILE:HG23 | 1.61 | 0.83 |
| 1:A:1244:VAL:O | 1:A:1245:ILE:CG1 | 2.27 | 0.83 |
| 1:M:568:LYS:CD | 1:M:569:PRO:HD2 | 2.09 | 0.83 |
| 1:A:354:ILE:HG21 | 1:A:488:MET:HG3 | 1.61 | 0.82 |
| 4:D:41:HIS:HB2 | 7:G:73:LYS:NZ | 1.94 | 0.82 |
| 1:M:1116:PRO:HB2 | 1:M:1314:ILE:HG23 | 1.61 | 0.82 |
| 2:B:1217:TYR:OH | 4:D:14:ARG:CA | 2.27 | 0.82 |
| 1:M:51:GLY:O | 1:M:56:PRO:HB3 | 1.78 | 0.82 |
| 1:M:1244:VAL:O | 1:M:1245:ILE:CG1 | 2.27 | 0.82 |
| 1:A:568:LYS:CD | 1:A:569:PRO:HD2 | 2.09 | 0.82 |
| 1:A:769:GLN:HG3 | 1:A:817:HIS:N | 1.93 | 0.82 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:A:1354:GLU:O | 1:A:1358:VAL:HG23 | 1.78 | 0.82 |
| 9:I:34:TYR:CD2 | 9:I:35:THR:N | 2.44 | 0.82 |
| 1:A:776:ILE:HG21 | 1:A:816:PHE:CD2 | 2.13 | 0.82 |
| 2:B:249:LEU:HB2 | 2:B:378:LEU:HD21 | 1.60 | 0.82 |
| 1:M:1279:ILE:CG2 | 1:M:1282:ILE:HD11 | 2.02 | 0.82 |
| 1:M:354:ILE:HG21 | 1:M:488:MET:HG3 | 1.61 | 0.82 |
| 2:N:1065:GLN:HB2 | 3:O:201:TRP:CZ3 | 2.15 | 0.82 |
| 1:A:1013:GLN:O | 1:A:1017:THR:CG2 | 2.28 | 0.82 |
| 3:C:97:VAL:O | 3:C:98:LEU:HD23 | 1.80 | 0.82 |
| 1:A:1373:LEU:O | 1:A:1377:VAL:HG23 | 1.80 | 0.82 |
| 2:B:1065:GLN:HB2 | 3:C:201:TRP:CZ3 | 2.15 | 0.82 |
| 1:M:1373:LEU:O | 1:M:1377:VAL:HG23 | 1.80 | 0.82 |
| 7:S:1:MET:HE3 | 7:S:80:LYS:O | 1.78 | 0.82 |
| 4:D:105:THR:O | 4:D:109:LEU:HB2 | 1.80 | 0.82 |
| 2:N:567:HIS:HA | 2:N:584:ARG:HH22 | 1.44 | 0.82 |
| 3:O:97:VAL:O | 3:O:98:LEU:HD23 | 1.79 | 0.82 |
| 2:B:476:LEU:HD11 | 2:B:484:THR:HG23 | 1.61 | 0.81 |
| 9:U:14:LEU:HD12 | 9:U:27:TYR:HB3 | 1.63 | 0.81 |
| 1:A:1241:ARG:HH22 | 1:A:1243:ARG:HH22 | 1.27 | 0.81 |
| 3:O:5:PRO:HB3 | 3:O:24:VAL:HG12 | 1.58 | 0.81 |
| 4:P:105:THR:O | 4:P:109:LEU:HB2 | 1.80 | 0.81 |
| 1:A:568:LYS:HB2 | 1:A:569:PRO:CD | 2.11 | 0.81 |
| 1:A:1221:VAL:HG11 | 1:A:1274:ILE:HD11 | 1.62 | 0.81 |
| 2:B:1165:ILE:HG12 | 4:D:13:ARG:CB | 2.11 | 0.81 |
| 2:B:1217:TYR:HH | 4:D:14:ARG:HA | 1.41 | 0.81 |
| 3:C:100:LEU:HD13 | 3:C:118:LEU:HD23 | 1.62 | 0.81 |
| 5:E:89:ILE:CG2 | 5:E:118:SER:HB2 | 2.09 | 0.81 |
| 7:G:127:PRO:HG2 | 7:G:138:THR:HG21 | 1.63 | 0.81 |
| 1:M:568:LYS:HB3 | 8:T:94:TYR:HA | 1.61 | 0.81 |
| 3:O:100:LEU:HD13 | 3:O:118:LEU:HD23 | 1.63 | 0.81 |
| 5:Q:89:ILE:CG2 | 5:Q:118:SER:HB2 | 2.09 | 0.81 |
| 9:U:75:CYS:HG | 9:U:78:CYS:HG | 1.28 | 0.81 |
| 1:A:1191:SER:O | 1:A:1243:ARG:HD3 | 1.80 | 0.81 |
| 1:A:766:VAL:HG21 | 1:A:809:LEU:HD11 | 1.60 | 0.81 |
| 1:M:568:LYS:HB3 | 8:T:95:VAL:H | 1.46 | 0.81 |
| 1:M:1441:THR:CG2 | 2:N:1144:ALA:HB3 | 2.11 | 0.81 |
| 7:S:127:PRO:HG2 | 7:S:138:THR:HG21 | 1.63 | 0.81 |
| 1:M:37:TYR:HB2 | 1:M:52:GLY:HA3 | 1.63 | 0.81 |
| 8:T:40:LEU:HD22 | 8:T:122:MET:HE3 | 1.60 | 0.81 |
| 2:B:52:GLU:HG3 | 2:B:53:GLU:H | 1.46 | 0.81 |
| 2:B:899:ILE:HD11 | 2:B:911:ILE:HG23 | 1.62 | 0.81 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 1:M:447:ARG:HD2 | 1:M:481:ALA:HB2 | 1.62 | 0.81 |
| 1:M:1013:GLN:O | 1:M:1017:THR:CG2 | 2.28 | 0.81 |
| 2:N:1114:LEU:CD1 | 2:N:1202:LEU:HD11 | 2.10 | 0.81 |
| 1:A:568:LYS:HB3 | 8:H:95:VAL:H | 1.46 | 0.81 |
| 9:I:14:LEU:HD12 | 9:I:27:TYR:HB3 | 1.62 | 0.81 |
| 1:M:568:LYS:HB2 | 1:M:569:PRO:CD | 2.11 | 0.80 |
| 1:M:801:VAL:HG22 | 1:M:813:GLU:HB3 | 1.63 | 0.80 |
| 1:M:1191:SER:O | 1:M:1243:ARG:HD3 | 1.80 | 0.80 |
| 1:M:1447:MET:O | 6:R:133:VAL:HG23 | 1.82 | 0.80 |
| 2:N:942:ARG:HB2 | 2:N:945:GLU:HG3 | 1.62 | 0.80 |
| 1:A:529:LEU:O | 1:A:532:VAL:HG12 | 1.82 | 0.80 |
| 2:B:596:LEU:HD13 | 2:B:601:ALA:HB3 | 1.63 | 0.80 |
| 1:M:14:VAL:HG21 | 2:N:1216:LEU:HD12 | 1.64 | 0.80 |
| 2:N:52:GLU:HG3 | 2:N:53:GLU:H | 1.46 | 0.80 |
| 10:J:42:ARG:HD3 | 10:J:42:ARG:H | 1.45 | 0.80 |
| 2:N:476:LEU:HD11 | 2:N:484:THR:HG23 | 1.61 | 0.80 |
| 3:O:244:PHE:O | 3:O:248:ILE:HG13 | 1.81 | 0.80 |
| 9:U:34:TYR:CD2 | 9:U:35:THR:N | 2.44 | 0.80 |
| 1:A:710:THR:HG22 | 1:A:712:ARG:H | 1.46 | 0.80 |
| 3:C:104:HIS:CB | 3:C:148:ARG:O | 2.30 | 0.80 |
| 1:M:240:LEU:HD12 | 1:M:241:PRO:HD2 | 1.61 | 0.80 |
| 2:N:1223:VAL:O | 2:N:1224:SER:HB2 | 1.79 | 0.80 |
| 1:A:37:TYR:HB2 | 1:A:52:GLY:HA3 | 1.63 | 0.80 |
| 1:A:769:GLN:CG | 1:A:817:HIS:HA | 2.11 | 0.80 |
| 1:M:256:THR:H | 2:N:935:ARG:HH12 | 1.27 | 0.80 |
| 2:N:899:ILE:HD11 | 2:N:911:ILE:HG23 | 1.62 | 0.80 |
| 2:N:800:GLN:HG2 | 10:V:51:THR:HG22 | 1.64 | 0.80 |
| 10:V:16:ASP:OD1 | 10:V:17:LYS:HD2 | 1.81 | 0.80 |
| 2:B:567:HIS:HA | 2:B:584:ARG:HH22 | 1.44 | 0.80 |
| 2:B:1223:VAL:O | 2:B:1224:SER:HB2 | 1.79 | 0.80 |
| 10:J:16:ASP:OD1 | 10:J:17:LYS:HD2 | 1.81 | 0.80 |
| 1:A:568:LYS:HB3 | 8:H:94:TYR:HA | 1.61 | 0.80 |
| 2:B:575:VAL:HG22 | 2:B:619:ILE:HG21 | 1.64 | 0.80 |
| 2:B:852:ARG:HH22 | 12:L:72:THR:C | 1.86 | 0.80 |
| 6:F:109:VAL:HG12 | 6:F:110:ASP:N | 1.96 | 0.80 |
| 11:K:43:ALA:CB | 11:K:61:TYR:CD1 | 2.47 | 0.80 |
| 1:M:568:LYS:HB3 | 8:T:95:VAL:N | 1.97 | 0.80 |
| 2:N:206:GLN:NE2 | 2:N:492:ASN:HB3 | 1.96 | 0.80 |
| 2:N:575:VAL:HG22 | 2:N:619:ILE:HG21 | 1.64 | 0.80 |
| 3:O:104:HIS:CB | 3:O:148:ARG:O | 2.30 | 0.80 |
| 7:S:89:ALA:HB2 | 7:S:103:VAL:HA | 1.63 | 0.80 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:A:14:VAL:HG21 | 2:B:1216:LEU:HD12 | 1.63 | 0.80 |
| 1:A:24:PRO:O | 1:A:27:ILE:HG23 | 1.81 | 0.80 |
| 1:A:447:ARG:HD2 | 1:A:481:ALA:HB2 | 1.62 | 0.80 |
| 1:A:568:LYS:HB3 | 8:H:95:VAL:N | 1.97 | 0.80 |
| 1:A:1142:TYR:CG | 1:A:1279:ILE:O | 2.35 | 0.80 |
| 2:B:1215:ARG:NH1 | 4:D:15:ALA:HB2 | 1.97 | 0.80 |
| 12:L:51:LYS:O | 12:L:52:GLU:HB2 | 1.81 | 0.80 |
| 2:B:206:GLN:NE2 | 2:B:492:ASN:HB3 | 1.96 | 0.79 |
| 2:B:942:ARG:HB2 | 2:B:945:GLU:HG3 | 1.62 | 0.79 |
| 3:C:244:PHE:O | 3:C:248:ILE:HG13 | 1.81 | 0.79 |
| 5:E:134:PHE:HB3 | 5:E:139:LEU:HD11 | 1.64 | 0.79 |
| 1:M:822:ARG:NE | 2:N:505:ARG:O | 2.14 | 0.79 |
| 2:B:893:LEU:HD11 | 2:B:910:ILE:CG1 | 2.13 | 0.79 |
| 2:B:1166:CYS:HB3 | 4:D:15:ALA:HA | 1.63 | 0.79 |
| 2:B:371:LEU:O | 2:B:375:VAL:HG23 | 1.81 | 0.79 |
| 2:B:1004:GLU:HB2 | 2:B:1006:ILE:HG12 | 1.64 | 0.79 |
| 3:C:47:LEU:CB | 3:C:158:ILE:CG2 | 2.54 | 0.79 |
| 1:M:529:LEU:O | 1:M:532:VAL:HG12 | 1.82 | 0.79 |
| 1:M:1221:VAL:HG11 | 1:M:1274:ILE:HD11 | 1.62 | 0.79 |
| 2:N:325:PHE:O | 2:N:326:ILE:HG13 | 1.82 | 0.79 |
| 2:N:893:LEU:HD11 | 2:N:910:ILE:CG1 | 2.13 | 0.79 |
| 10:V:42:ARG:H | 10:V:42:ARG:HD3 | 1.45 | 0.79 |
| 1:M:710:THR:HG22 | 1:M:712:ARG:H | 1.46 | 0.79 |
| 1:A:1453:LEU:HD21 | 7:G:18:PHE:HB3 | 1.64 | 0.79 |
| 2:N:371:LEU:O | 2:N:375:VAL:HG23 | 1.81 | 0.79 |
| 6:R:109:VAL:HG12 | 6:R:110:ASP:N | 1.95 | 0.79 |
| 1:A:40:ILE:HB | 1:A:41:MET:HE1 | 1.65 | 0.79 |
| 1:A:41:MET:HB3 | 1:A:49:ARG:CA | 2.12 | 0.79 |
| 1:A:86:LEU:HD21 | 1:A:240:LEU:HB2 | 1.64 | 0.79 |
| 1:A:240:LEU:HD12 | 1:A:241:PRO:HD2 | 1.61 | 0.79 |
| 1:A:797:SER:O | 1:A:816:PHE:CE1 | 2.36 | 0.79 |
| 1:A:801:VAL:HG13 | 1:A:809:LEU:HG | 1.65 | 0.79 |
| 2:B:778:MET:CE | 2:B:1094:ARG:HD3 | 2.13 | 0.79 |
| 2:B:1207:LEU:HB3 | 2:B:1212:ILE:CG2 | 2.13 | 0.79 |
| 2:N:596:LEU:HD13 | 2:N:601:ALA:HB3 | 1.63 | 0.79 |
| 8:T:14:THR:O | 8:T:26:ILE:HG23 | 1.83 | 0.79 |
| 1:A:568:LYS:CB | 8:H:94:TYR:HA | 2.13 | 0.79 |
| 2:B:800:GLN:HG2 | 10:J:51:THR:HG22 | 1.64 | 0.79 |
| 3:C:65:ARG:NH1 | 10:J:2:ILE:HG21 | 1.98 | 0.79 |
| 2:N:1004:GLU:HB2 | 2:N:1006:ILE:HG12 | 1.64 | 0.79 |
| 5:Q:134:PHE:HB3 | 5:Q:139:LEU:HD11 | 1.64 | 0.79 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 7:G:89:ALA:HB2 | 7:G:103:VAL:HA | 1.64 | 0.79 |
| 1:M:61:ILE:HG22 | 1:M:62:ASP:H | 1.48 | 0.79 |
| 2:N:778:MET:CE | 2:N:1094:ARG:HD3 | 2.13 | 0.79 |
| 1:A:538:ARG:HH22 | 8:H:121:LEU:HD12 | 1.48 | 0.79 |
| 1:M:838:ILE:HA | 1:M:841:ARG:HD3 | 1.65 | 0.79 |
| 1:A:61:ILE:HG22 | 1:A:62:ASP:H | 1.47 | 0.78 |
| 1:A:985:ILE:O | 1:A:989:ILE:HG23 | 1.83 | 0.78 |
| 4:D:49:ILE:HG21 | 7:G:4:LEU:HB2 | 1.65 | 0.78 |
| 2:N:1129:ARG:HG2 | 2:N:1131:GLY:H | 1.47 | 0.78 |
| 12:X:51:LYS:O | 12:X:52:GLU:HB2 | 1.81 | 0.78 |
| 2:B:491:THR:HG22 | 2:B:530:LYS:H | 1.49 | 0.78 |
| 2:N:852:ARG:HH22 | 12:X:72:THR:C | 1.86 | 0.78 |
| 2:N:1207:LEU:HB3 | 2:N:1212:ILE:CG2 | 2.13 | 0.78 |
| 1:A:606:MET:HE3 | 1:A:607:LEU:H | 1.46 | 0.78 |
| 5:E:89:ILE:HG23 | 5:E:119:ALA:CA | 2.11 | 0.78 |
| 1:M:333:LYS:O | 1:M:334:GLU:HB2 | 1.83 | 0.78 |
| 1:M:568:LYS:CB | 8:T:94:TYR:HA | 2.13 | 0.78 |
| 5:E:25:ARG:HH22 | 5:E:132:GLU:CD | 1.87 | 0.78 |
| 1:M:413:ARG:HH22 | 2:N:1108:ARG:HH22 | 1.32 | 0.78 |
| 1:M:985:ILE:O | 1:M:989:ILE:HG23 | 1.83 | 0.78 |
| 2:N:491:THR:HG22 | 2:N:530:LYS:H | 1.49 | 0.78 |
| 5:Q:25:ARG:HH22 | 5:Q:132:GLU:CD | 1.87 | 0.78 |
| 7:G:111:SER:HB2 | 7:G:114:LEU:HD13 | 1.66 | 0.78 |
| 1:A:838:ILE:HA | 1:A:841:ARG:HD3 | 1.64 | 0.78 |
| 2:B:1129:ARG:HG2 | 2:B:1131:GLY:H | 1.47 | 0.78 |
| 8:H:14:THR:O | 8:H:26:ILE:HG23 | 1.83 | 0.78 |
| 4:P:49:ILE:HG21 | 7:S:4:LEU:HB2 | 1.65 | 0.78 |
| 1:A:684:ILE:HD13 | 1:A:802:GLU:HG3 | 1.65 | 0.78 |
| 2:B:325:PHE:O | 2:B:326:ILE:HG13 | 1.82 | 0.78 |
| 2:B:797:TYR:C | 2:B:798:TYR:HD2 | 1.87 | 0.78 |
| 1:M:1397:THR:CG2 | 1:M:1401:MET:SD | 2.72 | 0.78 |
| 1:A:373:LYS:HA | 1:A:436:HIS:ND1 | 1.99 | 0.78 |
| 1:M:41:MET:HB3 | 1:M:49:ARG:CA | 2.12 | 0.78 |
| 1:A:413:ARG:HH22 | 2:B:1108:ARG:HH22 | 1.32 | 0.78 |
| 1:A:568:LYS:CG | 1:A:569:PRO:HD2 | 2.13 | 0.78 |
| 1:A:1136:ILE:HG22 | 1:A:1140:ILE:HD11 | 1.66 | 0.78 |
| 3:C:99:GLU:CG | 3:C:121:VAL:CG2 | 2.62 | 0.78 |
| 7:G:45:ILE:HA | 7:G:78:VAL:HG12 | 1.66 | 0.78 |
| 1:M:24:PRO:O | 1:M:27:ILE:HG23 | 1.84 | 0.78 |
| 1:M:538:ARG:HH22 | 8:T:121:LEU:HD12 | 1.48 | 0.78 |
| 1:M:766:VAL:HG23 | 1:M:803:ASN:O | 1.84 | 0.78 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 2:N:758:PHE:HB2 | 2:N:1024:ALA:HB1 | 1.64 | 0.78 |
| 2:B:387:ASP:OD2 | 9:I:91:ARG:HB3 | 1.84 | 0.78 |
| 2:B:514:LEU:HB3 | 2:B:626:VAL:HG11 | 1.65 | 0.78 |
| 3:O:65:ARG:NH1 | 10:V:2:ILE:HG21 | 1.98 | 0.78 |
| 1:A:902:LEU:HB2 | 1:A:927:GLN:HG2 | 1.66 | 0.77 |
| 7:G:138:THR:CG2 | 7:G:139:LYS:N | 2.45 | 0.77 |
| 1:M:373:LYS:HA | 1:M:436:HIS:ND1 | 1.99 | 0.77 |
| 1:M:822:ARG:HH11 | 1:M:822:ARG:HB2 | 1.49 | 0.77 |
| 3:O:99:GLU:CG | 3:O:121:VAL:CG2 | 2.62 | 0.77 |
| 1:A:597:SER:O | 1:A:599:LEU:N | 2.18 | 0.77 |
| 1:A:766:VAL:HG23 | 1:A:803:ASN:O | 1.84 | 0.77 |
| 1:A:809:LEU:HD23 | 1:A:814:PHE:HA | 1.66 | 0.77 |
| 1:A:822:ARG:HB2 | 1:A:822:ARG:HH11 | 1.49 | 0.77 |
| 2:B:307:LYS:O | 2:B:310:ILE:CG2 | 2.30 | 0.77 |
| 2:B:890:TYR:CG | 2:B:910:ILE:HG21 | 2.20 | 0.77 |
| 3:C:99:GLU:CB | 3:C:119:ILE:HG23 | 2.10 | 0.77 |
| 5:Q:28:PHE:O | 5:Q:29:ILE:HG13 | 1.84 | 0.77 |
| 2:B:387:ASP:OD2 | 9:I:91:ARG:CB | 2.31 | 0.77 |
| 1:M:86:LEU:HD21 | 1:M:240:LEU:HB2 | 1.64 | 0.77 |
| 1:M:606:MET:HE3 | 1:M:607:LEU:H | 1.50 | 0.77 |
| 1:M:902:LEU:HB2 | 1:M:927:GLN:HG2 | 1.66 | 0.77 |
| 1:M:1163:THR:HG22 | 1:M:1165:ILE:H | 1.50 | 0.77 |
| 2:N:890:TYR:CG | 2:N:910:ILE:HG21 | 2.20 | 0.77 |
| 2:B:758:PHE:HB2 | 2:B:1024:ALA:HB1 | 1.64 | 0.77 |
| 11:W:43:ALA:CB | 11:W:61:TYR:CD1 | 2.47 | 0.77 |
| 11:W:47:ARG:HD3 | 11:W:59:VAL:O | 1.85 | 0.77 |
| 1:A:1453:LEU:HD21 | 7:G:18:PHE:CB | 2.14 | 0.77 |
| 1:M:400:HIS:HB3 | 1:M:401:PRO:HD3 | 1.67 | 0.77 |
| 1:M:597:SER:O | 1:M:599:LEU:N | 2.18 | 0.77 |
| 2:N:797:TYR:C | 2:N:798:TYR:HD2 | 1.87 | 0.77 |
| 2:N:899:ILE:HG22 | 2:N:903:VAL:HG21 | 1.66 | 0.77 |
| 1:A:1163:THR:HG22 | 1:A:1165:ILE:H | 1.50 | 0.77 |
| 2:B:357:ILE:O | 2:B:358:THR:HB | 1.83 | 0.77 |
| 2:B:701:ALA:HB2 | 2:B:738:PHE:CD2 | 2.19 | 0.77 |
| 1:M:568:LYS:CG | 1:M:569:PRO:HD2 | 2.13 | 0.77 |
| 1:A:1074:ILE:HD11 | 1:A:1371:MET:HA | 1.66 | 0.77 |
| 1:M:1155:TYR:HB2 | 1:M:1194:LEU:HD23 | 1.66 | 0.77 |
| 2:B:846:ILE:HG23 | 2:B:974:PRO:HG2 | 1.65 | 0.77 |
| 11:K:47:ARG:HD3 | 11:K:59:VAL:O | 1.85 | 0.77 |
| 1:M:1136:ILE:HG22 | 1:M:1140:ILE:HD11 | 1.66 | 0.77 |
| 2:N:357:ILE:O | 2:N:358:THR:HB | 1.83 | 0.77 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|------------------|--------------------------|-------------------|
| 1:M:710:THR:HG21 | 9:U:93:LYS:O | 1.85 | 0.77 |
| 1:M:809:LEU:HD23 | 1:M:814:PHE:HA | 1.66 | 0.77 |
| 2:N:514:LEU:HB3 | 2:N:626:VAL:HG11 | 1.66 | 0.77 |
| 5:Q:89:ILE:HG23 | 5:Q:119:ALA:H | 1.50 | 0.77 |
| 1:A:1448:ILE:HG21 | 7:G:18:PHE:CE2 | 2.18 | 0.77 |
| 3:C:44:ALA:HA | 3:C:71:LEU:HD12 | 1.66 | 0.77 |
| 4:D:140:PHE:HZ | 7:G:85:GLU:HG3 | 1.49 | 0.77 |
| 3:O:38:ALA:HA | 3:O:164:ALA:HB3 | 1.67 | 0.77 |
| 3:O:44:ALA:HA | 3:O:71:LEU:HD12 | 1.65 | 0.77 |
| 8:T:134:LEU:HD13 | 8:T:136:GLN:HE21 | 1.47 | 0.77 |
| 1:A:1450:GLU:HG3 | 7:G:22:MET:CG | 2.15 | 0.76 |
| 3:C:38:ALA:HA | 3:C:164:ALA:HB3 | 1.67 | 0.76 |
| 5:E:28:PHE:O | 5:E:29:ILE:HG13 | 1.84 | 0.76 |
| 8:H:63:LEU:C | 8:H:89:ALA:HB3 | 2.05 | 0.76 |
| 1:M:320:GLY:HA2 | 2:N:464:LYS:HG2 | 1.67 | 0.76 |
| 2:N:287:GLY:N | 2:N:290:LEU:HD23 | 1.99 | 0.76 |
| 1:A:333:LYS:O | 1:A:334:GLU:HB2 | 1.83 | 0.76 |
| 8:H:134:LEU:HD13 | 8:H:136:GLN:HE21 | 1.47 | 0.76 |
| 1:M:58:LEU:HD22 | 1:M:80:HIS:O | 1.85 | 0.76 |
| 7:S:111:SER:HB2 | 7:S:114:LEU:HD13 | 1.65 | 0.76 |
| 1:A:400:HIS:HB3 | 1:A:401:PRO:HD3 | 1.67 | 0.76 |
| 1:M:483:PHE:O | 2:N:989:THR:HG23 | 1.86 | 0.76 |
| 1:M:684:ILE:HD13 | 1:M:802:GLU:HG3 | 1.65 | 0.76 |
| 5:E:123:ILE:CG1 | 5:E:124:PRO:N | 2.43 | 0.76 |
| 1:M:309:ILE:HG22 | 1:M:310:ALA:H | 1.50 | 0.76 |
| 2:N:846:ILE:HG23 | 2:N:974:PRO:HG2 | 1.65 | 0.76 |
| 8:T:63:LEU:C | 8:T:89:ALA:HB3 | 2.05 | 0.76 |
| 1:A:710:THR:HG21 | 9:I:93:LYS:O | 1.85 | 0.76 |
| 2:B:33:GLN:HG3 | 2:B:34:GLN:H | 1.50 | 0.76 |
| 2:N:843:GLN:HA | 2:N:846:ILE:HD12 | 1.66 | 0.76 |
| 1:A:504:GLN:HE21 | 6:F:90:ARG:HH21 | 1.33 | 0.76 |
| 1:A:801:VAL:CG1 | 1:A:809:LEU:CG | 2.63 | 0.76 |
| 2:B:287:GLY:N | 2:B:290:LEU:HD23 | 1.99 | 0.76 |
| 2:N:1094:ARG:HH21 | 2:N:1098:MET:HG2 | 1.50 | 0.76 |
| 4:P:140:PHE:HZ | 7:S:85:GLU:HG3 | 1.49 | 0.76 |
| 5:Q:89:ILE:HG23 | 5:Q:119:ALA:CA | 2.10 | 0.76 |
| 7:S:45:ILE:HA | 7:S:78:VAL:HG12 | 1.66 | 0.76 |
| 7:S:138:THR:CG2 | 7:S:139:LYS:N | 2.45 | 0.76 |
| 2:B:899:ILE:HG22 | 2:B:903:VAL:HG21 | 1.66 | 0.76 |
| 2:B:1094:ARG:HH21 | 2:B:1098:MET:HG2 | 1.51 | 0.76 |
| 1:M:989:ILE:CG1 | 1:M:990:HIS:N | 2.49 | 0.76 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:A:900:VAL:HG22 | 1:A:1031:ARG:HG2 | 1.67 | 0.76 |
| 1:A:1441:THR:CB | 2:B:1144:ALA:CB | 2.62 | 0.76 |
| 3:C:104:HIS:CB | 3:C:149:ASN:O | 2.34 | 0.76 |
| 3:C:236:GLY:O | 3:C:238:LEU:N | 2.19 | 0.76 |
| 5:E:116:THR:HG22 | 5:E:118:SER:H | 1.51 | 0.76 |
| 1:M:55:ASP:CG | 1:M:55:ASP:O | 2.20 | 0.76 |
| 2:N:33:GLN:HG3 | 2:N:34:GLN:H | 1.50 | 0.76 |
| 3:O:104:HIS:CB | 3:O:149:ASN:O | 2.34 | 0.76 |
| 2:B:356:HIS:O | 2:B:357:ILE:HB | 1.86 | 0.76 |
| 1:M:1074:ILE:HD11 | 1:M:1371:MET:HA | 1.66 | 0.76 |
| 1:A:41:MET:HA | 1:A:50:GLU:H | 1.50 | 0.76 |
| 1:A:989:ILE:CG1 | 1:A:990:HIS:N | 2.49 | 0.76 |
| 1:A:1279:ILE:HG23 | 1:A:1282:ILE:HD12 | 1.68 | 0.76 |
| 2:B:24:PHE:HE1 | 2:B:28:LYS:HG3 | 1.51 | 0.76 |
| 2:B:279:ARG:HG2 | 2:B:284:VAL:HA | 1.67 | 0.76 |
| 2:N:24:PHE:HE1 | 2:N:28:LYS:HG3 | 1.51 | 0.76 |
| 1:A:309:ILE:HG22 | 1:A:310:ALA:H | 1.50 | 0.75 |
| 7:G:89:ALA:HB2 | 7:G:103:VAL:HG22 | 1.68 | 0.75 |
| 1:M:303:THR:HG22 | 1:M:304:TYR:N | 2.01 | 0.75 |
| 1:A:483:PHE:O | 2:B:989:THR:HG23 | 1.86 | 0.75 |
| 9:I:50:THR:HG22 | 9:I:51:ASN:H | 1.50 | 0.75 |
| 1:M:41:MET:HA | 1:M:50:GLU:H | 1.50 | 0.75 |
| 2:N:701:ALA:HB2 | 2:N:738:PHE:CD2 | 2.19 | 0.75 |
| 5:Q:123:ILE:CG1 | 5:Q:124:PRO:N | 2.48 | 0.75 |
| 9:U:50:THR:HG22 | 9:U:51:ASN:H | 1.50 | 0.75 |
| 10:V:35:LEU:HB2 | 10:V:46:ARG:HH12 | 1.51 | 0.75 |
| 2:B:392:ASP:OD2 | 2:B:503:LYS:HD2 | 1.86 | 0.75 |
| 2:B:843:GLN:HA | 2:B:846:ILE:HD12 | 1.66 | 0.75 |
| 2:N:744:HIS:HD2 | 2:N:746:SER:OG | 1.69 | 0.75 |
| 5:Q:116:THR:HG22 | 5:Q:118:SER:H | 1.51 | 0.75 |
| 1:M:383:GLN:HB3 | 1:M:429:TYR:HE2 | 1.51 | 0.75 |
| 1:A:55:ASP:CG | 1:A:55:ASP:O | 2.20 | 0.75 |
| 3:C:165:LYS:O | 11:K:6:ARG:NH1 | 2.19 | 0.75 |
| 1:M:1449:ASP:HB3 | 1:M:1452:LEU:CG | 2.16 | 0.75 |
| 3:O:236:GLY:O | 3:O:238:LEU:N | 2.19 | 0.75 |
| 2:B:251:GLY:O | 2:B:259:ARG:HD3 | 1.87 | 0.75 |
| 8:H:99:THR:HG23 | 8:H:137:ASP:HA | 1.67 | 0.75 |
| 3:O:47:LEU:CB | 3:O:158:ILE:CG2 | 2.54 | 0.75 |
| 10:V:42:ARG:HD3 | 10:V:42:ARG:N | 2.02 | 0.75 |
| 1:A:58:LEU:HD22 | 1:A:80:HIS:O | 1.85 | 0.75 |
| 1:A:1449:ASP:HB3 | 1:A:1452:LEU:CG | 2.16 | 0.75 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:M:859:ASN:ND2 | 1:M:861:LEU:H | 1.84 | 0.75 |
| 3:O:165:LYS:O | 11:W:6:ARG:NH1 | 2.19 | 0.75 |
| 7:S:88:ASP:HB3 | 7:S:144:ARG:CA | 2.15 | 0.75 |
| 1:A:383:GLN:HB3 | 1:A:429:TYR:HE2 | 1.51 | 0.75 |
| 1:A:444:LEU:HD23 | 1:A:502:LEU:HD21 | 1.69 | 0.75 |
| 1:A:1351:LEU:O | 1:A:1355:ILE:HG22 | 1.87 | 0.75 |
| 2:B:1016:ALA:O | 2:B:1020:ARG:HG3 | 1.87 | 0.75 |
| 7:G:13:LEU:HD21 | 7:G:17:TYR:HB2 | 1.69 | 0.75 |
| 1:A:1155:TYR:HB2 | 1:A:1194:LEU:HD23 | 1.66 | 0.75 |
| 2:B:980:PHE:CE2 | 2:B:1094:ARG:HG3 | 2.22 | 0.75 |
| 2:B:1166:CYS:SG | 13:B:1301:ZN:ZN | 1.75 | 0.75 |
| 10:J:35:LEU:HB2 | 10:J:46:ARG:HH12 | 1.51 | 0.75 |
| 1:M:63:ARG:HA | 1:M:74:MET:HE1 | 1.68 | 0.75 |
| 8:T:88:LEU:C | 8:T:90:ASP:H | 1.90 | 0.75 |
| 1:A:253:MET:O | 1:A:254:ASP:HB2 | 1.86 | 0.74 |
| 1:A:495:SER:O | 1:A:499:ARG:HG3 | 1.86 | 0.74 |
| 2:B:744:HIS:HD2 | 2:B:746:SER:OG | 1.69 | 0.74 |
| 10:J:42:ARG:HD3 | 10:J:42:ARG:N | 2.02 | 0.74 |
| 1:A:776:ILE:HD11 | 1:A:816:PHE:HB3 | 1.69 | 0.74 |
| 1:A:859:ASN:ND2 | 1:A:861:LEU:H | 1.84 | 0.74 |
| 2:B:1114:LEU:O | 2:B:1202:LEU:HD12 | 1.88 | 0.74 |
| 5:E:89:ILE:HG23 | 5:E:119:ALA:H | 1.51 | 0.74 |
| 1:M:1129:ASP:HB3 | 1:M:1132:LYS:HB3 | 1.69 | 0.74 |
| 2:N:356:HIS:O | 2:N:357:ILE:HB | 1.87 | 0.74 |
| 2:N:980:PHE:CE2 | 2:N:1094:ARG:HG3 | 2.22 | 0.74 |
| 1:A:35:ILE:HG22 | 1:A:35:ILE:O | 1.86 | 0.74 |
| 2:B:1220:ARG:NH1 | 2:B:1220:ARG:HB3 | 2.02 | 0.74 |
| 9:I:34:TYR:HD2 | 9:I:35:THR:H | 1.34 | 0.74 |
| 2:N:503:LYS:HG2 | 2:N:504:PRO:CD | 2.17 | 0.74 |
| 1:A:303:THR:HG22 | 1:A:304:TYR:N | 2.01 | 0.74 |
| 1:A:672:ALA:HB3 | 1:A:677:MET:HG2 | 1.70 | 0.74 |
| 1:A:801:VAL:HG11 | 1:A:809:LEU:CG | 2.16 | 0.74 |
| 1:A:1129:ASP:HB3 | 1:A:1132:LYS:HB3 | 1.69 | 0.74 |
| 11:K:56:VAL:HA | 11:K:77:THR:HG22 | 1.69 | 0.74 |
| 1:M:354:ILE:CG2 | 1:M:488:MET:HG3 | 2.17 | 0.74 |
| 2:N:484:THR:O | 2:N:488:LEU:HD12 | 1.86 | 0.74 |
| 3:O:65:ARG:HH21 | 10:V:5:VAL:HG23 | 1.52 | 0.74 |
| 6:R:109:VAL:HG11 | 6:R:123:LYS:HG2 | 1.70 | 0.74 |
| 7:S:89:ALA:HB2 | 7:S:103:VAL:HG22 | 1.68 | 0.74 |
| 1:A:1450:GLU:HG2 | 7:G:22:MET:HB3 | 1.70 | 0.74 |
| 2:B:1202:LEU:HD23 | 2:B:1206:GLU:HG3 | 1.70 | 0.74 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 8:H:40:LEU:HD22 | 8:H:122:MET:HE3 | 1.67 | 0.74 |
| 2:N:251:GLY:O | 2:N:259:ARG:HD3 | 1.87 | 0.74 |
| 2:N:1114:LEU:HD11 | 2:N:1202:LEU:HD11 | 1.66 | 0.74 |
| 2:N:1220:ARG:HB3 | 2:N:1220:ARG:NH1 | 2.02 | 0.74 |
| 5:Q:201:SER:OG | 5:Q:203:THR:HG22 | 1.87 | 0.74 |
| 7:S:89:ALA:HB2 | 7:S:103:VAL:CA | 2.17 | 0.74 |
| 1:M:253:MET:O | 1:M:254:ASP:HB2 | 1.86 | 0.74 |
| 1:M:495:SER:O | 1:M:499:ARG:HG3 | 1.86 | 0.74 |
| 2:N:457:GLY:O | 2:N:470:ALA:HA | 1.87 | 0.74 |
| 1:A:16:GLU:HG2 | 1:A:1421:LEU:HD11 | 1.70 | 0.74 |
| 1:A:318:LYS:O | 1:A:319:SER:HB3 | 1.88 | 0.74 |
| 1:A:1032:ARG:HG2 | 1:A:1036:GLU:OE2 | 1.88 | 0.74 |
| 2:B:810:GLU:HB2 | 2:B:815:ARG:HH22 | 1.53 | 0.74 |
| 3:C:65:ARG:HH21 | 10:J:5:VAL:HG23 | 1.52 | 0.74 |
| 1:M:900:VAL:HG22 | 1:M:1031:ARG:HG2 | 1.67 | 0.74 |
| 2:N:782:LEU:HD12 | 2:N:788:ARG:NH1 | 2.03 | 0.74 |
| 8:T:99:THR:HG23 | 8:T:137:ASP:HA | 1.67 | 0.74 |
| 1:A:1146:LYS:HB2 | 1:A:1271:LEU:O | 1.88 | 0.74 |
| 6:F:109:VAL:HG11 | 6:F:123:LYS:HG2 | 1.70 | 0.74 |
| 8:H:88:LEU:C | 8:H:90:ASP:H | 1.90 | 0.74 |
| 1:M:318:LYS:O | 1:M:319:SER:HB3 | 1.88 | 0.74 |
| 1:M:1351:LEU:O | 1:M:1355:ILE:HG22 | 1.87 | 0.74 |
| 1:A:536:THR:HG21 | 1:A:617:VAL:HA | 1.70 | 0.74 |
| 2:B:457:GLY:O | 2:B:470:ALA:HA | 1.87 | 0.74 |
| 5:E:201:SER:OG | 5:E:203:THR:HG22 | 1.86 | 0.74 |
| 9:I:61:ASP:O | 9:I:64:GLN:CG | 2.36 | 0.74 |
| 1:M:35:ILE:O | 1:M:35:ILE:HG22 | 1.86 | 0.74 |
| 1:M:1146:LYS:HB2 | 1:M:1271:LEU:O | 1.88 | 0.74 |
| 1:A:776:ILE:HG23 | 1:A:819:MET:SD | 2.27 | 0.74 |
| 1:A:1450:GLU:CG | 7:G:22:MET:SD | 2.76 | 0.74 |
| 2:B:1069:PHE:H | 2:B:1069:PHE:HD1 | 1.35 | 0.74 |
| 7:G:89:ALA:HB2 | 7:G:103:VAL:CA | 2.17 | 0.74 |
| 1:M:16:GLU:HG2 | 1:M:1421:LEU:HD11 | 1.70 | 0.74 |
| 2:N:229:ALA:HB3 | 2:N:247:ILE:HG23 | 1.68 | 0.74 |
| 2:B:782:LEU:HD12 | 2:B:788:ARG:NH1 | 2.03 | 0.73 |
| 1:M:357:ASP:HB2 | 1:M:470:ARG:HH11 | 1.53 | 0.73 |
| 1:M:444:LEU:HD23 | 1:M:502:LEU:HD21 | 1.69 | 0.73 |
| 1:M:1032:ARG:HG2 | 1:M:1036:GLU:OE2 | 1.88 | 0.73 |
| 2:N:35:LEU:HD23 | 2:N:164:MET:SD | 2.28 | 0.73 |
| 2:N:1016:ALA:O | 2:N:1020:ARG:HG3 | 1.87 | 0.73 |
| 2:N:1202:LEU:HD23 | 2:N:1206:GLU:HG3 | 1.70 | 0.73 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:A:322:PRO:O | 1:A:323:VAL:HB | 1.88 | 0.73 |
| 1:A:357:ASP:HB2 | 1:A:470:ARG:HH11 | 1.53 | 0.73 |
| 1:A:568:LYS:HD3 | 8:H:94:TYR:CG | 2.23 | 0.73 |
| 2:B:35:LEU:HD23 | 2:B:164:MET:SD | 2.28 | 0.73 |
| 2:B:882:THR:O | 2:B:883:LEU:HB2 | 1.87 | 0.73 |
| 1:M:444:LEU:HD23 | 1:M:502:LEU:CD2 | 2.19 | 0.73 |
| 1:M:568:LYS:HD3 | 8:T:94:TYR:CG | 2.24 | 0.73 |
| 1:M:672:ALA:HB3 | 1:M:677:MET:HG2 | 1.70 | 0.73 |
| 2:N:802:PRO:HA | 2:N:822:ASN:HD21 | 1.52 | 0.73 |
| 2:N:810:GLU:HB2 | 2:N:815:ARG:HH22 | 1.53 | 0.73 |
| 11:W:56:VAL:HA | 11:W:77:THR:HG22 | 1.69 | 0.73 |
| 1:A:354:ILE:CG2 | 1:A:488:MET:HG3 | 2.17 | 0.73 |
| 1:A:444:LEU:HD23 | 1:A:502:LEU:CD2 | 2.19 | 0.73 |
| 1:A:630:LEU:O | 1:A:633:THR:HG23 | 1.88 | 0.73 |
| 2:B:202:VAL:HG23 | 2:B:476:LEU:HB2 | 1.70 | 0.73 |
| 1:M:536:THR:HG21 | 1:M:617:VAL:HA | 1.70 | 0.73 |
| 1:M:568:LYS:HB3 | 8:T:94:TYR:CA | 2.18 | 0.73 |
| 1:M:1215:ALA:HB1 | 1:M:1230:TRP:CZ3 | 2.23 | 0.73 |
| 2:N:279:ARG:HG2 | 2:N:284:VAL:HA | 1.67 | 0.73 |
| 2:N:889:THR:HG22 | 2:N:891:GLU:H | 1.53 | 0.73 |
| 1:A:606:MET:HE3 | 1:A:607:LEU:N | 2.02 | 0.73 |
| 3:C:99:GLU:HB2 | 3:C:119:ILE:HG21 | 1.68 | 0.73 |
| 1:M:91:PHE:H | 1:M:298:GLN:HE22 | 1.37 | 0.73 |
| 1:M:738:LEU:HD13 | 1:M:742:ASN:OD1 | 1.88 | 0.73 |
| 1:M:1441:THR:HG21 | 2:N:1144:ALA:HB3 | 1.70 | 0.73 |
| 1:A:799:GLY:N | 1:A:816:PHE:CD1 | 2.56 | 0.73 |
| 1:A:856:THR:HG21 | 1:A:858:ARG:HE | 1.53 | 0.73 |
| 1:M:322:PRO:O | 1:M:323:VAL:HB | 1.88 | 0.73 |
| 4:P:53:LEU:O | 4:P:55:GLU:N | 2.20 | 0.73 |
| 7:S:13:LEU:HD21 | 7:S:17:TYR:HB2 | 1.69 | 0.73 |
| 9:U:61:ASP:O | 9:U:64:GLN:CG | 2.36 | 0.73 |
| 1:A:1367:ASN:HD22 | 1:A:1368:TYR:N | 1.87 | 0.73 |
| 2:B:503:LYS:HG2 | 2:B:504:PRO:CD | 2.17 | 0.73 |
| 11:K:53:TYR:C | 11:K:55:ASP:H | 1.92 | 0.73 |
| 1:M:856:THR:HG21 | 1:M:858:ARG:HE | 1.53 | 0.73 |
| 1:M:1316:LEU:HD23 | 1:M:1341:VAL:HG21 | 1.70 | 0.73 |
| 1:M:1423:ASP:O | 1:M:1424:CYS:HB2 | 1.88 | 0.73 |
| 1:A:512:ILE:HA | 1:A:522:MET:HE3 | 1.70 | 0.73 |
| 1:A:568:LYS:HB3 | 8:H:94:TYR:CA | 2.17 | 0.73 |
| 2:B:484:THR:O | 2:B:488:LEU:HD12 | 1.86 | 0.73 |
| 1:M:606:MET:HE3 | 1:M:607:LEU:N | 2.03 | 0.73 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|------------------|--------------------------|-------------------|
| 1:M:630:LEU:O | 1:M:633:THR:HG23 | 1.88 | 0.73 |
| 1:M:886:THR:O | 1:M:941:ARG:HD2 | 1.88 | 0.73 |
| 1:M:902:LEU:H | 1:M:927:GLN:NE2 | 1.87 | 0.73 |
| 1:A:91:PHE:H | 1:A:298:GLN:HE22 | 1.36 | 0.73 |
| 1:A:357:ASP:HB2 | 1:A:470:ARG:NH1 | 2.04 | 0.73 |
| 1:A:738:LEU:HD13 | 1:A:742:ASN:OD1 | 1.88 | 0.73 |
| 1:A:886:THR:O | 1:A:941:ARG:HD2 | 1.88 | 0.73 |
| 2:B:552:GLU:HA | 2:B:556:MET:HB3 | 1.71 | 0.73 |
| 2:B:1172:ILE:HG22 | 2:B:1172:ILE:O | 1.88 | 0.73 |
| 7:G:88:ASP:HB3 | 7:G:144:ARG:CA | 2.15 | 0.73 |
| 5:Q:47:ASP:CG | 5:Q:48:SER:H | 1.92 | 0.73 |
| 11:W:53:TYR:C | 11:W:55:ASP:H | 1.92 | 0.73 |
| 1:A:667:ILE:HD12 | 1:A:668:GLY:H | 1.53 | 0.73 |
| 2:B:229:ALA:HB3 | 2:B:247:ILE:HG23 | 1.68 | 0.73 |
| 2:B:882:THR:HG22 | 2:B:884:ARG:H | 1.53 | 0.73 |
| 2:B:1162:VAL:HG12 | 2:B:1163:CYS:N | 2.04 | 0.73 |
| 2:N:202:VAL:HG23 | 2:N:476:LEU:HB2 | 1.71 | 0.73 |
| 2:N:1116:ARG:CZ | 2:N:1198:TYR:HE1 | 2.01 | 0.73 |
| 1:M:671:ILE:HG23 | 1:M:806:LEU:HD21 | 1.71 | 0.73 |
| 6:R:97:ARG:O | 6:R:101:ILE:HG13 | 1.89 | 0.73 |
| 8:T:88:LEU:O | 8:T:90:ASP:N | 2.21 | 0.73 |
| 7:G:127:PRO:HG2 | 7:G:138:THR:CG2 | 2.19 | 0.72 |
| 1:M:357:ASP:HB2 | 1:M:470:ARG:NH1 | 2.04 | 0.72 |
| 1:M:1264:LYS:O | 1:M:1267:GLU:HB3 | 1.88 | 0.72 |
| 2:N:890:TYR:HA | 2:N:910:ILE:HG23 | 1.69 | 0.72 |
| 1:A:671:ILE:HG23 | 1:A:806:LEU:HD21 | 1.71 | 0.72 |
| 1:A:780:PHE:HE1 | 1:A:786:PRO:CD | 2.00 | 0.72 |
| 1:A:802:GLU:N | 1:A:813:GLU:OE1 | 2.22 | 0.72 |
| 1:A:1264:LYS:O | 1:A:1267:GLU:HB3 | 1.88 | 0.72 |
| 2:B:290:LEU:HD22 | 2:B:290:LEU:N | 2.04 | 0.72 |
| 2:B:889:THR:HG22 | 2:B:891:GLU:H | 1.53 | 0.72 |
| 2:B:890:TYR:HA | 2:B:910:ILE:HG23 | 1.69 | 0.72 |
| 5:E:47:ASP:CG | 5:E:48:SER:H | 1.92 | 0.72 |
| 1:M:1367:ASN:HD22 | 1:M:1368:TYR:N | 1.87 | 0.72 |
| 1:A:1215:ALA:HB1 | 1:A:1230:TRP:CZ3 | 2.23 | 0.72 |
| 1:A:1423:ASP:O | 1:A:1424:CYS:HB2 | 1.87 | 0.72 |
| 2:B:12:ILE:HD11 | 2:B:647:ILE:CG1 | 2.17 | 0.72 |
| 3:C:112:ASP:HB2 | 3:C:114:TYR:CE1 | 2.24 | 0.72 |
| 2:N:882:THR:O | 2:N:883:LEU:HB2 | 1.87 | 0.72 |
| 3:O:141:GLY:C | 3:O:142:ILE:CG1 | 2.56 | 0.72 |
| 9:U:34:TYR:HD2 | 9:U:35:THR:H | 1.34 | 0.72 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 3:C:175:ALA:HB2 | 10:J:10:CYS:HB2 | 1.72 | 0.72 |
| 6:F:97:ARG:O | 6:F:101:ILE:HG13 | 1.89 | 0.72 |
| 8:H:141:ILE:C | 8:H:142:LEU:HD12 | 2.10 | 0.72 |
| 1:M:134:ARG:O | 1:M:138:VAL:HG23 | 1.88 | 0.72 |
| 1:M:442:PRO:HD2 | 1:M:499:ARG:NH2 | 2.05 | 0.72 |
| 1:A:442:PRO:HD2 | 1:A:499:ARG:NH2 | 2.05 | 0.72 |
| 1:A:902:LEU:H | 1:A:927:GLN:NE2 | 1.87 | 0.72 |
| 2:N:859:TYR:OH | 2:N:941:LEU:HD12 | 1.89 | 0.72 |
| 3:O:175:ALA:HB2 | 10:V:10:CYS:HB2 | 1.72 | 0.72 |
| 1:A:134:ARG:O | 1:A:138:VAL:HG23 | 1.88 | 0.72 |
| 1:A:859:ASN:C | 1:A:859:ASN:HD22 | 1.91 | 0.72 |
| 7:G:14:HIS:CD2 | 7:G:16:SER:HB3 | 2.24 | 0.72 |
| 11:K:90:ALA:O | 11:K:94:ILE:HG13 | 1.90 | 0.72 |
| 2:N:12:ILE:HD11 | 2:N:647:ILE:CG1 | 2.17 | 0.72 |
| 2:B:266:PRO:CG | 2:B:352:GLU:HB3 | 2.20 | 0.72 |
| 2:B:802:PRO:HA | 2:B:822:ASN:HD21 | 1.52 | 0.72 |
| 1:M:780:PHE:HE1 | 1:M:786:PRO:CD | 2.00 | 0.72 |
| 2:N:552:GLU:HA | 2:N:556:MET:HB3 | 1.71 | 0.72 |
| 3:O:147:LEU:HD23 | 3:O:147:LEU:N | 2.04 | 0.72 |
| 3:O:155:ILE:O | 3:O:156:ARG:CG | 2.37 | 0.72 |
| 2:B:394:PHE:CD1 | 2:B:511:HIS:HE1 | 2.08 | 0.72 |
| 7:G:91:VAL:HB | 7:G:139:LYS:O | 1.89 | 0.72 |
| 2:N:1162:VAL:HG12 | 2:N:1163:CYS:N | 2.05 | 0.72 |
| 1:M:864:ILE:CG2 | 5:Q:175:PRO:HD3 | 2.18 | 0.72 |
| 7:S:14:HIS:CD2 | 7:S:16:SER:HB3 | 2.24 | 0.72 |
| 2:B:859:TYR:OH | 2:B:941:LEU:HD12 | 1.89 | 0.72 |
| 3:C:141:GLY:C | 3:C:142:ILE:CG1 | 2.58 | 0.72 |
| 1:M:12:ARG:HE | 2:N:1192:TYR:HE2 | 1.36 | 0.72 |
| 1:M:55:ASP:C | 1:M:57:LYS:N | 2.40 | 0.72 |
| 3:O:112:ASP:HB2 | 3:O:114:TYR:CE1 | 2.24 | 0.72 |
| 2:B:113:SER:OG | 2:B:163:ILE:HD11 | 1.90 | 0.71 |
| 3:C:99:GLU:CG | 3:C:121:VAL:HG21 | 2.20 | 0.71 |
| 10:J:1:MET:H1 | 10:J:56:ILE:H | 1.38 | 0.71 |
| 10:J:47:ARG:HE | 10:J:48:MET:HE2 | 1.54 | 0.71 |
| 7:S:80:LYS:HE2 | 7:S:80:LYS:N | 2.04 | 0.71 |
| 1:M:53:LEU:CD2 | 1:M:54:ASN:H | 1.97 | 0.71 |
| 1:M:336:ARG:NH1 | 2:N:1202:LEU:HD22 | 2.05 | 0.71 |
| 1:M:640:PRO:HG2 | 1:M:641:LYS:H | 1.55 | 0.71 |
| 1:M:667:ILE:HD12 | 1:M:668:GLY:H | 1.53 | 0.71 |
| 1:M:1070:ALA:HA | 1:M:1370:HIS:ND1 | 2.06 | 0.71 |
| 2:N:113:SER:OG | 2:N:163:ILE:HD11 | 1.90 | 0.71 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 2:B:551:LEU:C | 2:B:553:GLU:H | 1.94 | 0.71 |
| 3:C:147:LEU:N | 3:C:147:LEU:HD23 | 2.04 | 0.71 |
| 4:D:53:LEU:O | 4:D:55:GLU:N | 2.20 | 0.71 |
| 7:G:163:ILE:HG22 | 7:G:168:LEU:HB3 | 1.71 | 0.71 |
| 1:M:512:ILE:HA | 1:M:522:MET:HE3 | 1.70 | 0.71 |
| 1:M:859:ASN:HD22 | 1:M:859:ASN:C | 1.92 | 0.71 |
| 1:M:1097:THR:HG21 | 1:M:1114:LYS:HB2 | 1.72 | 0.71 |
| 2:N:1172:ILE:O | 2:N:1172:ILE:HG22 | 1.88 | 0.71 |
| 7:S:91:VAL:HB | 7:S:139:LYS:O | 1.89 | 0.71 |
| 8:T:41:ASP:O | 8:T:42:ILE:HG13 | 1.91 | 0.71 |
| 2:B:229:ALA:HB3 | 2:B:247:ILE:CG2 | 2.20 | 0.71 |
| 3:C:155:ILE:O | 3:C:156:ARG:CG | 2.37 | 0.71 |
| 8:H:41:ASP:O | 8:H:42:ILE:HG13 | 1.91 | 0.71 |
| 1:M:1096:VAL:HG13 | 1:M:1115:THR:HG21 | 1.72 | 0.71 |
| 2:N:266:PRO:CG | 2:N:352:GLU:HB3 | 2.20 | 0.71 |
| 2:N:290:LEU:HD22 | 2:N:290:LEU:N | 2.04 | 0.71 |
| 2:N:631:PHE:HB3 | 2:N:645:LEU:HD22 | 1.71 | 0.71 |
| 7:S:127:PRO:HG2 | 7:S:138:THR:CG2 | 2.20 | 0.71 |
| 1:A:336:ARG:NH1 | 2:B:1202:LEU:HD22 | 2.05 | 0.71 |
| 1:A:640:PRO:HG2 | 1:A:641:LYS:H | 1.54 | 0.71 |
| 2:B:631:PHE:HB3 | 2:B:645:LEU:HD22 | 1.71 | 0.71 |
| 2:N:1069:PHE:HD1 | 2:N:1069:PHE:H | 1.35 | 0.71 |
| 1:A:1244:VAL:HG12 | 1:A:1245:ILE:H | 1.56 | 0.71 |
| 4:D:160:ILE:HG22 | 4:D:163:LEU:HG | 1.72 | 0.71 |
| 2:N:1007:VAL:CG2 | 2:N:1008:PRO:HD2 | 2.20 | 0.71 |
| 3:O:99:GLU:CG | 3:O:121:VAL:HG21 | 2.20 | 0.71 |
| 8:T:141:ILE:C | 8:T:142:LEU:HD12 | 2.10 | 0.71 |
| 1:A:53:LEU:CD2 | 1:A:54:ASN:H | 1.97 | 0.71 |
| 1:A:799:GLY:HA2 | 1:A:816:PHE:HD1 | 0.67 | 0.71 |
| 1:M:565:ALA:HB2 | 1:M:577:GLN:OE1 | 1.91 | 0.71 |
| 1:M:599:LEU:HA | 8:T:121:LEU:HD13 | 1.72 | 0.71 |
| 2:N:324:ASP:O | 2:N:326:ILE:N | 2.23 | 0.71 |
| 7:S:1:MET:HE2 | 7:S:3:PHE:HE1 | 1.54 | 0.71 |
| 10:V:47:ARG:HE | 10:V:48:MET:HE2 | 1.54 | 0.71 |
| 11:W:90:ALA:O | 11:W:94:ILE:HG13 | 1.90 | 0.71 |
| 1:A:565:ALA:HB2 | 1:A:577:GLN:OE1 | 1.91 | 0.71 |
| 1:A:1316:LEU:HD23 | 1:A:1341:VAL:HG21 | 1.70 | 0.71 |
| 2:B:1116:ARG:HG3 | 2:B:1198:TYR:CE2 | 2.25 | 0.71 |
| 2:B:1116:ARG:HG3 | 2:B:1198:TYR:CD2 | 2.26 | 0.71 |
| 4:D:66:ALA:HA | 4:D:69:ARG:HD2 | 1.73 | 0.71 |
| 9:I:106:CYS:SG | 9:I:107:LYS:N | 2.64 | 0.71 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 2:N:1116:ARG:CZ | 2:N:1198:TYR:CE1 | 2.72 | 0.71 |
| 1:A:12:ARG:HE | 2:B:1192:TYR:HE2 | 1.36 | 0.71 |
| 1:A:226:ASN:HD22 | 1:A:229:TYR:H | 1.37 | 0.71 |
| 1:A:1107:LEU:CD2 | 1:A:1387:ILE:HG21 | 2.20 | 0.71 |
| 1:A:1244:VAL:C | 1:A:1245:ILE:CG1 | 2.60 | 0.71 |
| 7:G:80:LYS:HE2 | 7:G:80:LYS:N | 2.04 | 0.71 |
| 8:H:88:LEU:O | 8:H:90:ASP:N | 2.21 | 0.71 |
| 1:M:1244:VAL:HG12 | 1:M:1245:ILE:H | 1.56 | 0.71 |
| 2:N:229:ALA:HB3 | 2:N:247:ILE:CG2 | 2.20 | 0.71 |
| 2:N:404:PRO:O | 2:N:407:ALA:HB3 | 1.91 | 0.71 |
| 6:R:90:ARG:HG2 | 6:R:91:ALA:N | 2.05 | 0.71 |
| 10:V:1:MET:N | 10:V:55:LEU:N | 2.39 | 0.71 |
| 1:A:1070:ALA:HA | 1:A:1370:HIS:ND1 | 2.06 | 0.71 |
| 2:B:324:ASP:O | 2:B:326:ILE:N | 2.23 | 0.71 |
| 1:M:226:ASN:HD22 | 1:M:229:TYR:H | 1.36 | 0.71 |
| 2:N:882:THR:HG22 | 2:N:884:ARG:H | 1.53 | 0.71 |
| 4:P:160:ILE:HG22 | 4:P:163:LEU:HG | 1.72 | 0.71 |
| 2:B:166:ARG:HH11 | 2:B:166:ARG:HG3 | 1.56 | 0.70 |
| 2:B:354:LEU:HD21 | 2:B:370:PHE:CD2 | 2.26 | 0.70 |
| 1:M:858:ARG:HD3 | 1:M:862:GLY:O | 1.91 | 0.70 |
| 1:M:901:ASP:HA | 1:M:927:GLN:NE2 | 2.06 | 0.70 |
| 1:A:901:ASP:HA | 1:A:927:GLN:NE2 | 2.07 | 0.70 |
| 11:K:65:HIS:CD2 | 11:K:67:LEU:H | 2.10 | 0.70 |
| 1:M:570:LYS:O | 1:M:572:LEU:HD12 | 1.92 | 0.70 |
| 1:M:1453:LEU:HD21 | 7:S:18:PHE:O | 1.91 | 0.70 |
| 2:N:166:ARG:HG3 | 2:N:166:ARG:HH11 | 1.56 | 0.70 |
| 2:N:575:VAL:HG23 | 2:N:619:ILE:HD12 | 1.72 | 0.70 |
| 2:N:890:TYR:HA | 2:N:910:ILE:HG21 | 1.73 | 0.70 |
| 7:S:163:ILE:HG22 | 7:S:168:LEU:HB3 | 1.72 | 0.70 |
| 9:U:106:CYS:SG | 9:U:107:LYS:N | 2.64 | 0.70 |
| 1:A:858:ARG:HD3 | 1:A:862:GLY:O | 1.91 | 0.70 |
| 2:B:387:ASP:CG | 9:I:91:ARG:HB3 | 2.11 | 0.70 |
| 1:M:173:PRO:HB3 | 1:M:186:TRP:CE2 | 2.27 | 0.70 |
| 2:N:110:THR:HG21 | 2:N:451:LYS:HE2 | 1.73 | 0.70 |
| 1:A:599:LEU:HA | 8:H:121:LEU:HD13 | 1.72 | 0.70 |
| 2:B:404:PRO:O | 2:B:407:ALA:HB3 | 1.91 | 0.70 |
| 2:B:890:TYR:HA | 2:B:910:ILE:HG21 | 1.74 | 0.70 |
| 2:B:957:ASN:ND2 | 2:B:961:LEU:HD12 | 2.06 | 0.70 |
| 3:C:181:ASP:CG | 3:C:186:LEU:HD13 | 2.12 | 0.70 |
| 7:G:13:LEU:HD12 | 7:G:26:LEU:HD21 | 1.73 | 0.70 |
| 1:M:1393:ASN:OD1 | 1:M:1405:PHE:HD2 | 1.74 | 0.70 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 3:O:181:ASP:CG | 3:O:186:LEU:HD13 | 2.12 | 0.70 |
| 7:S:13:LEU:HD12 | 7:S:26:LEU:HD21 | 1.74 | 0.70 |
| 1:A:67:CYS:O | 1:A:70:CYS:SG | 2.50 | 0.70 |
| 1:A:173:PRO:HB3 | 1:A:186:TRP:CE2 | 2.27 | 0.70 |
| 1:A:822:ARG:HB2 | 1:A:822:ARG:NH1 | 2.06 | 0.70 |
| 2:B:110:THR:HG21 | 2:B:451:LYS:HE2 | 1.74 | 0.70 |
| 2:B:575:VAL:HG23 | 2:B:619:ILE:HD12 | 1.72 | 0.70 |
| 2:B:1007:VAL:CG2 | 2:B:1008:PRO:HD2 | 2.19 | 0.70 |
| 1:A:766:VAL:HG21 | 1:A:809:LEU:CD1 | 2.20 | 0.70 |
| 1:A:1096:VAL:HG13 | 1:A:1115:THR:HG21 | 1.72 | 0.70 |
| 1:A:1388:THR:CG2 | 1:A:1390:HIS:H | 2.05 | 0.70 |
| 2:B:953:LEU:HD21 | 2:B:965:LYS:HB2 | 1.73 | 0.70 |
| 10:J:1:MET:N | 10:J:55:LEU:N | 2.39 | 0.70 |
| 3:O:34:ARG:HD3 | 11:W:41:THR:OG1 | 1.91 | 0.70 |
| 1:A:1217:LYS:O | 1:A:1221:VAL:HG23 | 1.91 | 0.70 |
| 1:M:336:ARG:HH11 | 2:N:1202:LEU:HD22 | 1.57 | 0.70 |
| 1:M:822:ARG:HB2 | 1:M:822:ARG:NH1 | 2.06 | 0.70 |
| 1:M:1388:THR:CG2 | 1:M:1390:HIS:H | 2.05 | 0.70 |
| 1:M:1397:THR:HG21 | 1:M:1401:MET:SD | 2.31 | 0.70 |
| 2:N:354:LEU:HD21 | 2:N:370:PHE:CD2 | 2.26 | 0.70 |
| 2:N:944:THR:HG21 | 2:N:1122:ARG:NH2 | 2.07 | 0.70 |
| 11:W:65:HIS:CD2 | 11:W:67:LEU:H | 2.10 | 0.70 |
| 1:A:570:LYS:O | 1:A:572:LEU:HD12 | 1.91 | 0.70 |
| 2:B:14:THR:O | 2:B:17:CYS:SG | 2.49 | 0.70 |
| 2:B:376:ASN:O | 2:B:380:LEU:HD13 | 1.91 | 0.70 |
| 1:M:1107:LEU:CD2 | 1:M:1387:ILE:HG21 | 2.20 | 0.70 |
| 1:M:1244:VAL:C | 1:M:1245:ILE:CG1 | 2.60 | 0.70 |
| 1:A:284:GLY:O | 1:A:286:PRO:HD3 | 1.92 | 0.70 |
| 1:A:1097:THR:HG21 | 1:A:1114:LYS:HB2 | 1.72 | 0.70 |
| 2:N:376:ASN:O | 2:N:380:LEU:HD13 | 1.91 | 0.70 |
| 2:N:916:THR:HB | 2:N:935:ARG:HG3 | 1.74 | 0.70 |
| 1:A:417:ARG:HG3 | 1:A:418:TYR:CE2 | 2.27 | 0.70 |
| 2:B:1039:GLY:HA2 | 10:J:50:LEU:HD22 | 1.73 | 0.70 |
| 1:M:231:ARG:HG3 | 1:M:234:TRP:CZ3 | 2.27 | 0.70 |
| 1:M:386:ILE:HG22 | 1:M:387:HIS:N | 2.07 | 0.70 |
| 1:A:55:ASP:C | 1:A:57:LYS:N | 2.40 | 0.69 |
| 1:A:336:ARG:HH11 | 2:B:1202:LEU:HD22 | 1.57 | 0.69 |
| 2:B:77:ILE:HD12 | 2:B:425:MET:SD | 2.32 | 0.69 |
| 2:B:944:THR:HG21 | 2:B:1122:ARG:NH2 | 2.07 | 0.69 |
| 3:C:34:ARG:HD3 | 11:K:41:THR:OG1 | 1.91 | 0.69 |
| 3:C:35:THR:HG21 | 3:C:251:LEU:HD22 | 1.74 | 0.69 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 1:M:1006:ASN:CG | 5:Q:166:ARG:HD2 | 2.12 | 0.69 |
| 1:M:1217:LYS:O | 1:M:1221:VAL:HG23 | 1.91 | 0.69 |
| 3:O:35:THR:HG21 | 3:O:251:LEU:HD22 | 1.74 | 0.69 |
| 1:M:67:CYS:O | 1:M:70:CYS:SG | 2.50 | 0.69 |
| 1:M:1084:ASN:HB3 | 1:M:1086:PHE:HD1 | 1.57 | 0.69 |
| 4:P:66:ALA:HA | 4:P:69:ARG:HD2 | 1.73 | 0.69 |
| 5:Q:18:VAL:HG11 | 5:Q:79:VAL:HG11 | 1.73 | 0.69 |
| 6:R:89:GLU:O | 6:R:93:ILE:HG13 | 1.92 | 0.69 |
| 7:S:14:HIS:ND1 | 7:S:15:PRO:HD2 | 2.08 | 0.69 |
| 1:A:283:ASP:O | 1:A:285:SER:N | 2.26 | 0.69 |
| 2:B:609:ILE:N | 2:B:609:ILE:HD12 | 2.08 | 0.69 |
| 6:F:89:GLU:O | 6:F:93:ILE:HG13 | 1.92 | 0.69 |
| 1:M:284:GLY:O | 1:M:286:PRO:HD3 | 1.92 | 0.69 |
| 1:M:413:ARG:HH22 | 2:N:1108:ARG:NH2 | 1.90 | 0.69 |
| 1:M:817:HIS:CD2 | 2:N:764:SER:HB2 | 2.28 | 0.69 |
| 2:N:609:ILE:HD12 | 2:N:609:ILE:N | 2.08 | 0.69 |
| 1:A:943:PHE:HD2 | 1:A:944:LEU:HD23 | 1.57 | 0.69 |
| 1:A:1453:LEU:CG | 7:G:18:PHE:O | 2.41 | 0.69 |
| 1:M:283:ASP:O | 1:M:285:SER:N | 2.26 | 0.69 |
| 2:N:1159:ARG:HD3 | 2:N:1193:GLN:HG3 | 1.75 | 0.69 |
| 6:F:90:ARG:HG2 | 6:F:91:ALA:N | 2.05 | 0.69 |
| 2:N:953:LEU:HD21 | 2:N:965:LYS:HB2 | 1.73 | 0.69 |
| 4:P:35:ALA:O | 4:P:48:LEU:HD23 | 1.93 | 0.69 |
| 1:A:1006:ASN:CG | 5:E:166:ARG:HD2 | 2.12 | 0.69 |
| 1:A:1084:ASN:HB3 | 1:A:1086:PHE:HD1 | 1.58 | 0.69 |
| 2:B:288:GLU:O | 2:B:291:GLN:HB2 | 1.91 | 0.69 |
| 7:G:14:HIS:ND1 | 7:G:15:PRO:HD2 | 2.08 | 0.69 |
| 1:M:55:ASP:N | 1:M:56:PRO:HD3 | 2.07 | 0.69 |
| 1:M:417:ARG:HG3 | 1:M:418:TYR:CE2 | 2.27 | 0.69 |
| 1:M:943:PHE:HD2 | 1:M:944:LEU:HD23 | 1.57 | 0.69 |
| 2:N:14:THR:O | 2:N:17:CYS:SG | 2.49 | 0.69 |
| 1:A:413:ARG:HH22 | 2:B:1108:ARG:NH2 | 1.90 | 0.69 |
| 4:D:41:HIS:HB2 | 7:G:73:LYS:CE | 2.23 | 0.69 |
| 5:E:21:MET:HE3 | 5:E:25:ARG:HH21 | 1.55 | 0.69 |
| 2:N:288:GLU:O | 2:N:291:GLN:HB2 | 1.91 | 0.69 |
| 2:N:1072:MET:CE | 2:N:1085:VAL:HB | 2.22 | 0.69 |
| 10:V:1:MET:H1 | 10:V:56:ILE:H | 1.41 | 0.69 |
| 1:A:231:ARG:HG3 | 1:A:234:TRP:CZ3 | 2.27 | 0.69 |
| 1:A:352:THR:HG22 | 2:B:1103:ILE:HA | 1.75 | 0.69 |
| 1:A:636:ARG:HH11 | 1:A:636:ARG:HA | 1.57 | 0.69 |
| 2:B:992:VAL:HG22 | 2:B:993:THR:H | 1.58 | 0.69 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:B:1069:PHE:HA | 2:B:1085:VAL:O | 1.93 | 0.69 |
| 2:B:1116:ARG:HG3 | 2:B:1198:TYR:CZ | 2.28 | 0.69 |
| 2:B:1159:ARG:HD3 | 2:B:1193:GLN:HG3 | 1.75 | 0.69 |
| 5:E:196:LYS:HE2 | 5:E:198:ILE:HD11 | 1.75 | 0.69 |
| 1:M:352:THR:HG22 | 2:N:1103:ILE:HA | 1.75 | 0.69 |
| 1:M:553:TRP:NE1 | 11:W:62:LYS:HB2 | 2.03 | 0.69 |
| 1:M:598:LEU:HD12 | 1:M:598:LEU:N | 2.08 | 0.69 |
| 1:M:1441:THR:HB | 2:N:1144:ALA:HB3 | 1.75 | 0.69 |
| 2:N:695:GLU:O | 2:N:698:ILE:HG12 | 1.93 | 0.69 |
| 2:N:992:VAL:HG22 | 2:N:993:THR:H | 1.58 | 0.69 |
| 4:P:95:GLY:O | 4:P:96:ALA:HB3 | 1.92 | 0.69 |
| 5:Q:196:LYS:HE2 | 5:Q:198:ILE:HD11 | 1.75 | 0.69 |
| 1:A:368:PRO:HG2 | 1:A:371:ILE:HG13 | 1.75 | 0.69 |
| 1:A:598:LEU:HD12 | 1:A:598:LEU:N | 2.08 | 0.69 |
| 2:B:695:GLU:O | 2:B:698:ILE:HG12 | 1.93 | 0.69 |
| 1:M:368:PRO:HG2 | 1:M:371:ILE:HG13 | 1.75 | 0.69 |
| 1:M:598:LEU:O | 1:M:599:LEU:HB2 | 1.93 | 0.69 |
| 2:N:1039:GLY:HA2 | 10:V:50:LEU:CD2 | 2.22 | 0.69 |
| 2:N:1069:PHE:HA | 2:N:1085:VAL:O | 1.93 | 0.69 |
| 11:W:87:LEU:O | 11:W:91:CYS:HB2 | 1.93 | 0.69 |
| 1:A:838:ILE:HG12 | 1:A:841:ARG:NH1 | 2.08 | 0.69 |
| 2:N:1039:GLY:HA2 | 10:V:50:LEU:HD22 | 1.73 | 0.69 |
| 1:A:386:ILE:HG22 | 1:A:387:HIS:N | 2.07 | 0.68 |
| 1:A:838:ILE:HG12 | 1:A:841:ARG:HH11 | 1.59 | 0.68 |
| 4:D:35:ALA:O | 4:D:48:LEU:HD23 | 1.93 | 0.68 |
| 1:M:54:ASN:HB3 | 1:M:248:ARG:HH22 | 1.58 | 0.68 |
| 1:M:102:VAL:O | 1:M:106:ILE:HG22 | 1.92 | 0.68 |
| 1:M:838:ILE:HG12 | 1:M:841:ARG:NH1 | 2.08 | 0.68 |
| 1:A:54:ASN:HB3 | 1:A:248:ARG:HH22 | 1.59 | 0.68 |
| 1:A:102:VAL:O | 1:A:106:ILE:HG22 | 1.93 | 0.68 |
| 7:G:1:MET:HE2 | 7:G:3:PHE:HE1 | 1.56 | 0.68 |
| 2:N:763:GLN:HG2 | 2:N:765:PRO:HG2 | 1.74 | 0.68 |
| 2:N:1107:ALA:O | 2:N:1108:ARG:HG2 | 1.93 | 0.68 |
| 1:A:55:ASP:N | 1:A:56:PRO:HD3 | 2.07 | 0.68 |
| 2:N:77:ILE:HD12 | 2:N:425:MET:SD | 2.32 | 0.68 |
| 2:N:423:ARG:HB3 | 2:N:427:ARG:NH2 | 2.08 | 0.68 |
| 4:P:41:HIS:HB2 | 7:S:73:LYS:CE | 2.23 | 0.68 |
| 9:U:105:ASN:O | 9:U:106:CYS:HB3 | 1.92 | 0.68 |
| 1:A:962:LEU:HA | 1:A:965:ILE:HG22 | 1.75 | 0.68 |
| 1:A:1116:PRO:HB2 | 1:A:1314:ILE:CG2 | 2.23 | 0.68 |
| 2:B:181:TYR:CE2 | 10:J:61:ARG:HB3 | 2.28 | 0.68 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|------------------|--------------------------|-------------------|
| 2:B:394:PHE:CD1 | 2:B:511:HIS:CE1 | 2.82 | 0.68 |
| 2:B:556:MET:HE3 | 2:B:573:ILE:HG21 | 0.70 | 0.68 |
| 2:B:912:ILE:O | 2:B:938:SER:HB3 | 1.94 | 0.68 |
| 4:D:95:GLY:O | 4:D:96:ALA:HB3 | 1.92 | 0.68 |
| 1:M:1215:ALA:CB | 1:M:1230:TRP:CE3 | 2.76 | 0.68 |
| 1:M:1423:ASP:HB3 | 1:M:1425:ARG:HG3 | 1.76 | 0.68 |
| 2:N:509:ASN:HD22 | 2:N:509:ASN:H | 1.38 | 0.68 |
| 2:B:890:TYR:O | 2:B:893:LEU:HB2 | 1.93 | 0.68 |
| 1:M:63:ARG:HA | 1:M:74:MET:CE | 2.24 | 0.68 |
| 1:M:406:VAL:HG22 | 1:M:433:VAL:HG22 | 1.76 | 0.68 |
| 1:M:1116:PRO:HB2 | 1:M:1314:ILE:CG2 | 2.23 | 0.68 |
| 2:N:890:TYR:O | 2:N:893:LEU:HB2 | 1.93 | 0.68 |
| 4:P:166:LYS:O | 4:P:167:LYS:HB2 | 1.93 | 0.68 |
| 1:A:406:VAL:HG22 | 1:A:433:VAL:HG22 | 1.76 | 0.68 |
| 1:A:859:ASN:HD22 | 1:A:861:LEU:H | 1.40 | 0.68 |
| 2:B:423:ARG:HB3 | 2:B:427:ARG:NH2 | 2.08 | 0.68 |
| 2:B:509:ASN:HD22 | 2:B:509:ASN:H | 1.39 | 0.68 |
| 1:M:384:TYR:CB | 6:R:115:THR:HG22 | 2.11 | 0.68 |
| 1:M:962:LEU:HA | 1:M:965:ILE:HG22 | 1.74 | 0.68 |
| 2:N:184:LYS:HD3 | 2:N:787:VAL:HG11 | 1.76 | 0.68 |
| 2:N:392:ASP:OD2 | 2:N:503:LYS:HG3 | 1.94 | 0.68 |
| 2:N:551:LEU:C | 2:N:553:GLU:H | 1.94 | 0.68 |
| 2:N:1115:THR:O | 2:N:1116:ARG:HB2 | 1.93 | 0.68 |
| 12:X:30:LYS:HB2 | 12:X:41:SER:HA | 1.75 | 0.68 |
| 2:B:763:GLN:HG2 | 2:B:765:PRO:HG2 | 1.74 | 0.68 |
| 2:B:1166:CYS:CA | 4:D:15:ALA:HA | 2.24 | 0.68 |
| 1:M:636:ARG:HA | 1:M:636:ARG:HH11 | 1.57 | 0.68 |
| 1:M:838:ILE:HG12 | 1:M:841:ARG:HH11 | 1.59 | 0.68 |
| 1:A:470:ARG:NH2 | 2:B:991:GLY:O | 2.27 | 0.68 |
| 1:A:742:ASN:HD22 | 1:A:743:ASN:N | 1.92 | 0.68 |
| 1:A:1423:ASP:HB3 | 1:A:1425:ARG:HG3 | 1.76 | 0.68 |
| 3:C:47:LEU:CB | 3:C:158:ILE:HG23 | 2.20 | 0.68 |
| 9:I:105:ASN:O | 9:I:106:CYS:HB3 | 1.92 | 0.68 |
| 2:N:225:ILE:HG21 | 2:N:228:VAL:HG23 | 1.76 | 0.68 |
| 1:A:1423:ASP:OD1 | 1:A:1425:ARG:HD2 | 1.94 | 0.68 |
| 2:B:184:LYS:HD3 | 2:B:787:VAL:HG11 | 1.76 | 0.68 |
| 8:H:88:LEU:HB3 | 8:H:90:ASP:OD1 | 1.94 | 0.68 |
| 1:M:859:ASN:HD22 | 1:M:861:LEU:H | 1.40 | 0.68 |
| 1:M:1397:THR:HG22 | 1:M:1401:MET:SD | 2.33 | 0.68 |
| 9:U:56:ALA:HB3 | 9:U:89:GLN:HG3 | 1.76 | 0.68 |
| 1:A:527:ASP:HB2 | 2:B:835:GLN:OE1 | 1.94 | 0.68 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 1:A:598:LEU:O | 1:A:599:LEU:HB2 | 1.93 | 0.68 |
| 1:A:984:THR:O | 1:A:987:GLU:HB2 | 1.94 | 0.68 |
| 2:B:225:ILE:HG21 | 2:B:228:VAL:HG23 | 1.76 | 0.68 |
| 5:E:18:VAL:HG11 | 5:E:79:VAL:HG11 | 1.73 | 0.68 |
| 8:H:55:LEU:HD22 | 8:H:143:ILE:CG2 | 2.24 | 0.68 |
| 11:K:87:LEU:O | 11:K:91:CYS:HB2 | 1.93 | 0.68 |
| 1:M:40:ILE:HB | 1:M:41:MET:CE | 2.08 | 0.68 |
| 1:M:470:ARG:NH2 | 2:N:991:GLY:O | 2.27 | 0.68 |
| 2:N:912:ILE:O | 2:N:938:SER:HB3 | 1.94 | 0.68 |
| 8:T:88:LEU:HB3 | 8:T:90:ASP:OD1 | 1.94 | 0.68 |
| 1:A:63:ARG:HA | 1:A:74:MET:CE | 2.24 | 0.67 |
| 1:A:441:ASP:O | 1:A:461:VAL:HG23 | 1.94 | 0.67 |
| 1:A:1352:TYR:O | 1:A:1355:ILE:HG23 | 1.94 | 0.67 |
| 2:B:737:THR:CG2 | 9:I:66:PRO:HA | 2.25 | 0.67 |
| 2:B:875:GLU:HG3 | 2:B:877:PRO:HD3 | 1.75 | 0.67 |
| 2:B:1039:GLY:HA2 | 10:J:50:LEU:CD2 | 2.22 | 0.67 |
| 2:B:1072:MET:CE | 2:B:1085:VAL:HB | 2.22 | 0.67 |
| 10:J:56:ILE:HA | 10:J:59:PHE:HD2 | 1.59 | 0.67 |
| 1:M:476:THR:HG23 | 1:M:477:SER:N | 2.09 | 0.67 |
| 2:N:737:THR:CG2 | 9:U:66:PRO:HA | 2.24 | 0.67 |
| 2:N:957:ASN:ND2 | 2:N:961:LEU:HD12 | 2.06 | 0.67 |
| 3:O:175:ALA:HB1 | 10:V:42:ARG:HH12 | 1.59 | 0.67 |
| 2:B:20:VAL:O | 2:B:23:ALA:HB3 | 1.95 | 0.67 |
| 2:B:202:VAL:HG21 | 2:B:476:LEU:HD13 | 1.75 | 0.67 |
| 2:B:797:TYR:HB3 | 2:B:798:TYR:CD2 | 2.29 | 0.67 |
| 2:B:1107:ALA:O | 2:B:1108:ARG:HG2 | 1.94 | 0.67 |
| 4:D:48:LEU:CD1 | 4:D:49:ILE:H | 2.06 | 0.67 |
| 12:L:32:THR:O | 12:L:58:ILE:HA | 1.94 | 0.67 |
| 1:M:29:ALA:HB1 | 2:N:1184:SER:CB | 2.24 | 0.67 |
| 1:M:415:ASP:OD1 | 1:M:417:ARG:HG2 | 1.93 | 0.67 |
| 1:M:742:ASN:HD22 | 1:M:743:ASN:N | 1.92 | 0.67 |
| 1:M:1352:TYR:O | 1:M:1355:ILE:HG23 | 1.94 | 0.67 |
| 2:N:181:TYR:CE2 | 10:V:61:ARG:HB3 | 2.28 | 0.67 |
| 4:P:48:LEU:CD1 | 4:P:49:ILE:H | 2.06 | 0.67 |
| 5:Q:21:MET:HE3 | 5:Q:25:ARG:HH21 | 1.57 | 0.67 |
| 12:X:32:THR:O | 12:X:58:ILE:HA | 1.95 | 0.67 |
| 2:B:992:VAL:HG22 | 2:B:993:THR:N | 2.09 | 0.67 |
| 12:L:30:LYS:HB2 | 12:L:41:SER:HA | 1.75 | 0.67 |
| 1:A:415:ASP:OD1 | 1:A:417:ARG:HG2 | 1.93 | 0.67 |
| 1:A:476:THR:HG23 | 1:A:477:SER:N | 2.09 | 0.67 |
| 1:A:801:VAL:HA | 1:A:813:GLU:CD | 2.15 | 0.67 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|------------------|--------------------------|-------------------|
| 3:C:166:GLU:HG3 | 11:K:10:PHE:HZ | 1.60 | 0.67 |
| 4:D:166:LYS:O | 4:D:167:LYS:HB2 | 1.93 | 0.67 |
| 1:M:527:ASP:HB2 | 2:N:835:GLN:OE1 | 1.94 | 0.67 |
| 1:M:1197:LEU:HD11 | 1:M:1270:MET:CE | 2.25 | 0.67 |
| 1:M:1352:TYR:O | 1:M:1355:ILE:CG2 | 2.42 | 0.67 |
| 1:M:1423:ASP:OD1 | 1:M:1425:ARG:HD2 | 1.94 | 0.67 |
| 10:V:2:ILE:CG2 | 10:V:3:ILE:N | 2.57 | 0.67 |
| 1:A:1197:LEU:HD11 | 1:A:1270:MET:CE | 2.25 | 0.67 |
| 1:A:1215:ALA:CB | 1:A:1230:TRP:CE3 | 2.77 | 0.67 |
| 2:B:575:VAL:HA | 2:B:619:ILE:HB | 1.76 | 0.67 |
| 10:J:2:ILE:CG2 | 10:J:3:ILE:N | 2.57 | 0.67 |
| 2:N:20:VAL:O | 2:N:23:ALA:HB3 | 1.95 | 0.67 |
| 2:N:202:VAL:HG21 | 2:N:476:LEU:HD13 | 1.75 | 0.67 |
| 8:T:55:LEU:HD22 | 8:T:143:ILE:CG2 | 2.24 | 0.67 |
| 9:I:56:ALA:HB3 | 9:I:89:GLN:HG3 | 1.76 | 0.67 |
| 10:J:42:ARG:H | 10:J:42:ARG:CD | 2.07 | 0.67 |
| 1:M:441:ASP:O | 1:M:461:VAL:HG23 | 1.94 | 0.67 |
| 1:M:984:THR:O | 1:M:987:GLU:HB2 | 1.93 | 0.67 |
| 1:A:29:ALA:HB1 | 2:B:1184:SER:CB | 2.24 | 0.67 |
| 2:B:1115:THR:O | 2:B:1116:ARG:HB2 | 1.93 | 0.67 |
| 3:C:175:ALA:HB1 | 10:J:42:ARG:HH12 | 1.59 | 0.67 |
| 12:L:42:LEU:HD22 | 12:L:46:ASP:HB3 | 1.77 | 0.67 |
| 1:M:384:TYR:HB3 | 6:R:115:THR:CB | 2.24 | 0.67 |
| 1:M:400:HIS:O | 1:M:402:GLY:N | 2.27 | 0.67 |
| 3:O:47:LEU:CB | 3:O:158:ILE:HG23 | 2.20 | 0.67 |
| 3:O:166:GLU:HG3 | 11:W:10:PHE:HZ | 1.59 | 0.67 |
| 1:A:822:ARG:NE | 2:B:505:ARG:O | 2.25 | 0.67 |
| 2:N:797:TYR:HB3 | 2:N:798:TYR:CD2 | 2.28 | 0.67 |
| 1:A:1326:ASP:O | 1:A:1328:SER:N | 2.24 | 0.67 |
| 1:A:1352:TYR:O | 1:A:1355:ILE:CG2 | 2.42 | 0.67 |
| 2:B:798:TYR:HD1 | 10:J:4:PRO:HG3 | 1.60 | 0.67 |
| 4:D:139:PRO:HA | 4:D:142:ILE:CG2 | 2.25 | 0.67 |
| 6:F:118:LEU:O | 6:F:122:MET:HG3 | 1.95 | 0.67 |
| 2:N:509:ASN:N | 2:N:509:ASN:ND2 | 2.43 | 0.67 |
| 2:N:875:GLU:HG3 | 2:N:877:PRO:HD3 | 1.75 | 0.67 |
| 2:N:1176:LYS:C | 2:N:1178:ASN:H | 1.98 | 0.67 |
| 1:A:769:GLN:CD | 1:A:817:HIS:HA | 2.14 | 0.67 |
| 1:A:787:HIS:CD2 | 2:B:700:ILE:HB | 2.30 | 0.67 |
| 10:J:2:ILE:HG23 | 10:J:3:ILE:N | 2.10 | 0.67 |
| 4:P:57:ARG:HB2 | 4:P:109:LEU:HD22 | 1.77 | 0.67 |
| 10:V:2:ILE:HG23 | 10:V:3:ILE:N | 2.10 | 0.67 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:A:504:GLN:NE2 | 6:F:90:ARG:HH21 | 1.92 | 0.66 |
| 1:A:1450:GLU:HG3 | 7:G:22:MET:SD | 2.35 | 0.66 |
| 1:M:1410:GLU:CD | 1:M:1410:GLU:H | 1.98 | 0.66 |
| 1:A:41:MET:CB | 1:A:49:ARG:HA | 2.22 | 0.66 |
| 1:A:558:ASP:OD2 | 1:A:560:VAL:HB | 1.95 | 0.66 |
| 1:A:801:VAL:CG2 | 1:A:809:LEU:HG | 2.25 | 0.66 |
| 1:A:856:THR:HG21 | 1:A:858:ARG:NE | 2.10 | 0.66 |
| 4:D:48:LEU:HD13 | 4:D:49:ILE:H | 1.61 | 0.66 |
| 1:M:1215:ALA:HB1 | 1:M:1230:TRP:CE3 | 2.31 | 0.66 |
| 2:N:477:ASN:O | 2:N:478:ARG:HD2 | 1.95 | 0.66 |
| 2:N:992:VAL:HG22 | 2:N:993:THR:N | 2.09 | 0.66 |
| 2:N:1142:GLY:HA3 | 6:R:88:TYR:HE2 | 1.60 | 0.66 |
| 6:R:118:LEU:O | 6:R:122:MET:HG3 | 1.95 | 0.66 |
| 10:V:42:ARG:H | 10:V:42:ARG:CD | 2.07 | 0.66 |
| 2:B:477:ASN:O | 2:B:478:ARG:HD2 | 1.95 | 0.66 |
| 2:B:572:ARG:HB2 | 2:B:579:TRP:HE1 | 1.59 | 0.66 |
| 2:B:630:LEU:HD22 | 2:B:741:CYS:O | 1.95 | 0.66 |
| 2:B:737:THR:HG21 | 9:I:66:PRO:HA | 1.77 | 0.66 |
| 1:M:1154:ILE:HG23 | 1:M:1195:LEU:HD13 | 1.78 | 0.66 |
| 2:N:737:THR:HG21 | 9:U:66:PRO:HA | 1.77 | 0.66 |
| 2:N:798:TYR:HD1 | 10:V:4:PRO:HG3 | 1.60 | 0.66 |
| 10:V:51:THR:HG22 | 10:V:51:THR:O | 1.93 | 0.66 |
| 10:V:56:ILE:HA | 10:V:59:PHE:HD2 | 1.59 | 0.66 |
| 1:A:553:TRP:NE1 | 11:K:62:LYS:HB2 | 2.03 | 0.66 |
| 1:A:1200:ASP:O | 1:A:1204:MET:HG2 | 1.96 | 0.66 |
| 1:A:1215:ALA:HB1 | 1:A:1230:TRP:CE3 | 2.31 | 0.66 |
| 1:M:558:ASP:OD2 | 1:M:560:VAL:HB | 1.96 | 0.66 |
| 1:M:1376:ASP:HA | 1:M:1379:THR:HG22 | 1.77 | 0.66 |
| 2:N:95:THR:OG1 | 2:N:96:THR:N | 2.26 | 0.66 |
| 2:N:630:LEU:HD22 | 2:N:741:CYS:O | 1.95 | 0.66 |
| 5:Q:77:LEU:HD21 | 5:Q:79:VAL:HG23 | 1.78 | 0.66 |
| 1:A:1154:ILE:HG23 | 1:A:1195:LEU:HD13 | 1.77 | 0.66 |
| 1:A:1163:THR:HG22 | 1:A:1164:VAL:N | 2.10 | 0.66 |
| 1:M:446:ASN:HB2 | 1:M:456:MET:HG2 | 1.77 | 0.66 |
| 1:M:787:HIS:CD2 | 2:N:700:ILE:HB | 2.30 | 0.66 |
| 1:M:1200:ASP:O | 1:M:1204:MET:HG2 | 1.96 | 0.66 |
| 4:P:90:ALA:O | 4:P:92:VAL:N | 2.27 | 0.66 |
| 12:X:42:LEU:HD22 | 12:X:46:ASP:HB3 | 1.77 | 0.66 |
| 1:A:400:HIS:O | 1:A:402:GLY:N | 2.27 | 0.66 |
| 1:A:822:ARG:O | 1:A:826:ILE:HG13 | 1.95 | 0.66 |
| 1:A:903:MET:CG | 1:A:927:GLN:HG3 | 2.26 | 0.66 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 4:D:179:ASN:HA | 4:D:182:GLU:HB2 | 1.77 | 0.66 |
| 7:G:153:ASP:CG | 7:G:154:VAL:H | 1.98 | 0.66 |
| 10:J:51:THR:HG22 | 10:J:51:THR:O | 1.93 | 0.66 |
| 1:M:1136:ILE:O | 1:M:1140:ILE:HG13 | 1.96 | 0.66 |
| 2:N:575:VAL:HA | 2:N:619:ILE:HB | 1.77 | 0.66 |
| 4:P:139:PRO:HA | 4:P:142:ILE:CG2 | 2.25 | 0.66 |
| 1:A:801:VAL:CG1 | 1:A:809:LEU:HD12 | 2.26 | 0.66 |
| 1:A:983:LEU:CD2 | 1:A:1041:ARG:HA | 2.26 | 0.66 |
| 1:A:1136:ILE:O | 1:A:1140:ILE:HG13 | 1.95 | 0.66 |
| 5:E:77:LEU:HD21 | 5:E:79:VAL:HG23 | 1.78 | 0.66 |
| 1:M:326:ILE:HG21 | 2:N:1210:MET:HG3 | 1.77 | 0.66 |
| 2:N:572:ARG:HB2 | 2:N:579:TRP:HE1 | 1.59 | 0.66 |
| 2:N:830:TYR:CE2 | 2:N:1000:PRO:HD3 | 2.31 | 0.66 |
| 2:N:983:ARG:HD2 | 2:N:1091:TYR:HD2 | 1.60 | 0.66 |
| 1:A:568:LYS:CB | 1:A:569:PRO:CD | 2.74 | 0.66 |
| 2:B:225:ILE:HG21 | 2:B:228:VAL:CG2 | 2.26 | 0.66 |
| 2:B:286:ASP:O | 2:B:288:GLU:N | 2.29 | 0.66 |
| 1:M:1163:THR:HG22 | 1:M:1164:VAL:N | 2.10 | 0.66 |
| 4:P:179:ASN:HA | 4:P:182:GLU:HB2 | 1.77 | 0.66 |
| 1:A:357:ASP:OD2 | 11:K:65:HIS:HE1 | 1.78 | 0.66 |
| 1:A:1410:GLU:H | 1:A:1410:GLU:CD | 1.98 | 0.66 |
| 1:M:776:ILE:HG13 | 1:M:816:PHE:HB3 | 1.78 | 0.66 |
| 2:N:596:LEU:HD12 | 2:N:602:ILE:HG23 | 1.78 | 0.66 |
| 4:P:150:CYS:HB3 | 4:P:175:LEU:HD22 | 1.78 | 0.66 |
| 1:A:42:ASP:HA | 1:A:46:GLN:O | 1.96 | 0.66 |
| 1:A:181:LYS:NZ | 1:A:295:GLN:HB3 | 2.10 | 0.66 |
| 1:A:326:ILE:HG21 | 2:B:1210:MET:HG3 | 1.76 | 0.66 |
| 1:A:1322:VAL:O | 1:A:1325:VAL:HG22 | 1.96 | 0.66 |
| 2:B:160:LYS:HB2 | 2:B:447:THR:HG23 | 1.78 | 0.66 |
| 4:D:41:HIS:HB2 | 7:G:73:LYS:HE3 | 1.78 | 0.66 |
| 1:M:856:THR:HG21 | 1:M:858:ARG:NE | 2.10 | 0.66 |
| 2:N:270:GLN:HG2 | 2:N:271:ASP:N | 2.10 | 0.66 |
| 2:B:596:LEU:HD12 | 2:B:602:ILE:HG23 | 1.78 | 0.65 |
| 2:B:1114:LEU:O | 2:B:1202:LEU:CD1 | 2.43 | 0.65 |
| 4:D:54:SER:H | 4:D:109:LEU:CD2 | 2.09 | 0.65 |
| 1:M:1441:THR:CB | 2:N:1144:ALA:HB3 | 2.26 | 0.65 |
| 2:N:225:ILE:HG21 | 2:N:228:VAL:CG2 | 2.26 | 0.65 |
| 1:A:467:SER:HB2 | 2:B:1099:VAL:HG11 | 1.78 | 0.65 |
| 1:A:673:ASP:HB2 | 1:A:737:ASN:OD1 | 1.95 | 0.65 |
| 1:A:794:SER:HB2 | 1:A:795:PRO:HD2 | 1.79 | 0.65 |
| 2:B:983:ARG:HH11 | 2:B:1091:TYR:CB | 2.10 | 0.65 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 4:D:90:ALA:O | 4:D:92:VAL:N | 2.27 | 0.65 |
| 5:E:156:SER:C | 5:E:158:GLY:H | 1.99 | 0.65 |
| 8:H:80:PRO:CB | 8:H:81:PRO:HD2 | 2.26 | 0.65 |
| 1:M:42:ASP:HA | 1:M:46:GLN:O | 1.96 | 0.65 |
| 1:M:181:LYS:NZ | 1:M:295:GLN:HB3 | 2.10 | 0.65 |
| 1:M:822:ARG:O | 1:M:826:ILE:HG13 | 1.95 | 0.65 |
| 1:M:1326:ASP:O | 1:M:1328:SER:N | 2.25 | 0.65 |
| 2:N:983:ARG:HH11 | 2:N:1091:TYR:CB | 2.10 | 0.65 |
| 4:P:54:SER:H | 4:P:109:LEU:CD2 | 2.09 | 0.65 |
| 8:T:80:PRO:CB | 8:T:81:PRO:HD2 | 2.26 | 0.65 |
| 1:A:1132:LYS:O | 1:A:1136:ILE:HG13 | 1.96 | 0.65 |
| 2:B:83:TYR:HB2 | 2:B:116:TYR:HB2 | 1.79 | 0.65 |
| 2:B:981:ALA:HB3 | 2:B:1095:LEU:HD11 | 1.77 | 0.65 |
| 4:D:150:CYS:HB3 | 4:D:175:LEU:HD22 | 1.78 | 0.65 |
| 8:H:101:TYR:OH | 8:H:121:LEU:HD22 | 1.95 | 0.65 |
| 10:J:9:SER:CB | 10:J:44:CYS:HB2 | 2.26 | 0.65 |
| 1:M:357:ASP:OD2 | 11:W:65:HIS:HE1 | 1.78 | 0.65 |
| 1:M:673:ASP:HB2 | 1:M:737:ASN:OD1 | 1.95 | 0.65 |
| 1:M:776:ILE:HG13 | 1:M:816:PHE:CG | 2.31 | 0.65 |
| 4:P:41:HIS:HB2 | 7:S:73:LYS:HE3 | 1.78 | 0.65 |
| 1:A:795:PRO:HG2 | 1:A:796:GLU:OE2 | 1.97 | 0.65 |
| 1:A:870:GLY:O | 5:E:203:THR:HG21 | 1.97 | 0.65 |
| 2:B:555:GLY:HA3 | 2:B:583:HIS:CE1 | 2.31 | 0.65 |
| 2:B:830:TYR:CE2 | 2:B:1000:PRO:HD3 | 2.31 | 0.65 |
| 2:B:873:GLU:O | 2:B:914:LYS:HA | 1.96 | 0.65 |
| 4:D:57:ARG:HB2 | 4:D:109:LEU:HD22 | 1.77 | 0.65 |
| 1:M:114:LEU:HD13 | 1:M:172:GLN:HE22 | 1.60 | 0.65 |
| 1:M:1168:ASP:OD2 | 1:M:1241:ARG:HD2 | 1.96 | 0.65 |
| 2:N:884:ARG:HB2 | 2:N:935:ARG:HA | 1.78 | 0.65 |
| 5:Q:156:SER:C | 5:Q:158:GLY:H | 1.98 | 0.65 |
| 10:V:9:SER:CB | 10:V:44:CYS:HB2 | 2.26 | 0.65 |
| 10:V:35:LEU:CB | 10:V:46:ARG:HH12 | 2.10 | 0.65 |
| 1:A:115:LEU:HD12 | 1:A:142:CYS:SG | 2.37 | 0.65 |
| 1:A:1107:LEU:HB3 | 1:A:1387:ILE:CG2 | 2.26 | 0.65 |
| 2:B:681:LEU:O | 2:B:687:ILE:HG22 | 1.96 | 0.65 |
| 8:H:15:VAL:HG22 | 8:H:26:ILE:HD13 | 1.78 | 0.65 |
| 10:J:35:LEU:CB | 10:J:46:ARG:HH12 | 2.10 | 0.65 |
| 1:M:795:PRO:HG2 | 1:M:796:GLU:OE2 | 1.97 | 0.65 |
| 1:M:1118:LEU:HB2 | 1:M:1332:SER:OG | 1.96 | 0.65 |
| 1:M:1132:LYS:O | 1:M:1136:ILE:HG13 | 1.96 | 0.65 |
| 1:A:1168:ASP:OD2 | 1:A:1241:ARG:HD2 | 1.96 | 0.65 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 2:B:850:LEU:HD12 | 2:B:851:PHE:N | 2.11 | 0.65 |
| 2:B:860:MET:HB2 | 2:B:965:LYS:HG2 | 1.78 | 0.65 |
| 2:B:1116:ARG:HG3 | 2:B:1198:TYR:CG | 2.32 | 0.65 |
| 1:M:24:PRO:O | 1:M:27:ILE:CG2 | 2.45 | 0.65 |
| 1:M:1322:VAL:O | 1:M:1325:VAL:HG22 | 1.96 | 0.65 |
| 2:N:83:TYR:HB2 | 2:N:116:TYR:HB2 | 1.79 | 0.65 |
| 7:S:153:ASP:CG | 7:S:154:VAL:H | 1.98 | 0.65 |
| 1:A:1197:LEU:HD11 | 1:A:1270:MET:HE1 | 1.77 | 0.65 |
| 1:A:1328:SER:O | 5:E:147:GLU:HB2 | 1.96 | 0.65 |
| 2:B:95:THR:OG1 | 2:B:96:THR:N | 2.28 | 0.65 |
| 2:B:1072:MET:HE3 | 2:B:1085:VAL:CB | 2.24 | 0.65 |
| 5:E:90:LYS:C | 5:E:92:MET:H | 1.99 | 0.65 |
| 1:M:568:LYS:CB | 1:M:569:PRO:CD | 2.74 | 0.65 |
| 1:M:794:SER:HB2 | 1:M:795:PRO:HD2 | 1.79 | 0.65 |
| 1:M:903:MET:CG | 1:M:927:GLN:HG3 | 2.26 | 0.65 |
| 1:M:1027:ARG:O | 1:M:1028:LEU:HD23 | 1.97 | 0.65 |
| 6:R:109:VAL:CG1 | 6:R:110:ASP:H | 1.99 | 0.65 |
| 8:T:94:TYR:HE2 | 8:T:96:MET:HG3 | 1.61 | 0.65 |
| 8:T:101:TYR:OH | 8:T:121:LEU:HD22 | 1.96 | 0.65 |
| 1:A:320:GLY:HA2 | 2:B:464:LYS:HG2 | 1.78 | 0.65 |
| 1:A:864:ILE:HG22 | 5:E:173:GLN:O | 1.97 | 0.65 |
| 1:A:1118:LEU:HB2 | 1:A:1332:SER:OG | 1.96 | 0.65 |
| 2:B:47:GLN:OE1 | 2:B:82:ILE:HG22 | 1.96 | 0.65 |
| 1:M:467:SER:HB2 | 2:N:1099:VAL:HG11 | 1.78 | 0.65 |
| 2:N:47:GLN:OE1 | 2:N:82:ILE:HG22 | 1.96 | 0.65 |
| 2:N:286:ASP:O | 2:N:288:GLU:N | 2.29 | 0.65 |
| 2:N:824:ILE:HG22 | 2:N:1087:PHE:HE2 | 1.62 | 0.65 |
| 2:N:981:ALA:HB3 | 2:N:1095:LEU:HD11 | 1.78 | 0.65 |
| 1:A:446:ASN:HB2 | 1:A:456:MET:HG2 | 1.77 | 0.65 |
| 2:B:983:ARG:HD2 | 2:B:1091:TYR:HD2 | 1.61 | 0.65 |
| 1:M:115:LEU:HD12 | 1:M:142:CYS:SG | 2.37 | 0.65 |
| 1:M:1328:SER:O | 5:Q:147:GLU:HB2 | 1.96 | 0.65 |
| 1:M:1412:LEU:HD13 | 2:N:1207:LEU:HD11 | 1.78 | 0.65 |
| 2:N:850:LEU:HD12 | 2:N:851:PHE:N | 2.11 | 0.65 |
| 2:N:873:GLU:O | 2:N:914:LYS:HA | 1.96 | 0.65 |
| 1:A:1239:ILE:HG22 | 1:A:1240:ILE:N | 2.12 | 0.65 |
| 2:B:1166:CYS:CB | 4:D:15:ALA:HA | 2.26 | 0.65 |
| 2:B:1176:LYS:C | 2:B:1178:ASN:H | 1.98 | 0.65 |
| 3:C:62:ILE:HA | 3:C:65:ARG:HG3 | 1.78 | 0.65 |
| 5:E:120:ASN:O | 5:E:123:ILE:CG2 | 2.38 | 0.65 |
| 6:R:124:GLU:HB3 | 6:R:130:ILE:HG12 | 1.79 | 0.65 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:A:538:ARG:HH12 | 8:H:121:LEU:HG | 1.61 | 0.64 |
| 1:A:1154:ILE:CG1 | 9:I:44:TYR:HB3 | 2.27 | 0.64 |
| 12:L:63:THR:CG2 | 12:L:65:ARG:HG3 | 2.27 | 0.64 |
| 1:M:870:GLY:O | 5:Q:203:THR:HG21 | 1.97 | 0.64 |
| 2:N:681:LEU:O | 2:N:687:ILE:HG22 | 1.96 | 0.64 |
| 1:A:1004:GLY:HA3 | 1:A:1009:ILE:HG21 | 1.80 | 0.64 |
| 1:A:1027:ARG:O | 1:A:1028:LEU:HD23 | 1.97 | 0.64 |
| 1:A:1412:LEU:HD13 | 2:B:1207:LEU:HD11 | 1.78 | 0.64 |
| 1:M:1004:GLY:HA3 | 1:M:1009:ILE:HG21 | 1.80 | 0.64 |
| 1:M:1107:LEU:HB3 | 1:M:1387:ILE:CG2 | 2.26 | 0.64 |
| 3:O:62:ILE:HA | 3:O:65:ARG:HG3 | 1.78 | 0.64 |
| 6:R:103:MET:HE1 | 7:S:66:GLY:N | 2.11 | 0.64 |
| 10:V:9:SER:HB2 | 10:V:44:CYS:HB2 | 1.80 | 0.64 |
| 1:A:114:LEU:HD13 | 1:A:172:GLN:HE22 | 1.60 | 0.64 |
| 1:M:801:VAL:HG13 | 1:M:813:GLU:OE1 | 1.97 | 0.64 |
| 1:M:1239:ILE:HG22 | 1:M:1240:ILE:N | 2.12 | 0.64 |
| 1:M:1389:ARG:HB2 | 1:M:1406:GLU:OE1 | 1.98 | 0.64 |
| 2:N:1151:LEU:HD13 | 2:N:1151:LEU:N | 2.12 | 0.64 |
| 7:S:34:VAL:HG12 | 7:S:45:ILE:CG2 | 2.25 | 0.64 |
| 8:H:100:VAL:HA | 8:H:115:VAL:HA | 1.78 | 0.64 |
| 1:M:316:LEU:CD1 | 2:N:464:LYS:HB3 | 2.27 | 0.64 |
| 4:P:48:LEU:HD13 | 4:P:49:ILE:H | 1.61 | 0.64 |
| 1:A:1376:ASP:HA | 1:A:1379:THR:HG22 | 1.77 | 0.64 |
| 2:B:1151:LEU:HD13 | 2:B:1151:LEU:N | 2.13 | 0.64 |
| 2:B:1165:ILE:CA | 4:D:13:ARG:O | 2.44 | 0.64 |
| 1:M:333:LYS:N | 1:M:338:ARG:HB3 | 2.06 | 0.64 |
| 1:M:538:ARG:HH12 | 8:T:121:LEU:HG | 1.61 | 0.64 |
| 2:N:22:SER:HA | 2:N:811:TYR:HE2 | 1.63 | 0.64 |
| 2:N:1095:LEU:H | 2:N:1095:LEU:CD1 | 2.08 | 0.64 |
| 1:A:95:PHE:HE2 | 1:A:1413:PHE:HB3 | 1.63 | 0.64 |
| 2:B:190:MET:HE2 | 2:B:485:LEU:HD23 | 1.80 | 0.64 |
| 3:C:38:ALA:O | 3:C:164:ALA:HB3 | 1.98 | 0.64 |
| 4:D:114:ARG:HB3 | 4:D:115:PHE:CE1 | 2.32 | 0.64 |
| 1:M:871:GLU:HG2 | 5:Q:207:TYR:CG | 2.32 | 0.64 |
| 1:M:1154:ILE:CG1 | 9:U:44:TYR:HB3 | 2.27 | 0.64 |
| 2:N:160:LYS:HB2 | 2:N:447:THR:HG23 | 1.78 | 0.64 |
| 3:O:253:GLU:O | 3:O:256:ALA:HB3 | 1.97 | 0.64 |
| 12:X:63:THR:CG2 | 12:X:65:ARG:HG3 | 2.27 | 0.64 |
| 1:A:676:THR:OG1 | 1:A:737:ASN:ND2 | 2.30 | 0.64 |
| 1:A:871:GLU:HG2 | 5:E:207:TYR:CG | 2.32 | 0.64 |
| 2:B:1157:ALA:O | 2:B:1158:PHE:HB2 | 1.97 | 0.64 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|------------------|--------------------------|-------------------|
| 10:J:9:SER:HB2 | 10:J:44:CYS:HB2 | 1.80 | 0.64 |
| 1:M:95:PHE:HE2 | 1:M:1413:PHE:HB3 | 1.63 | 0.64 |
| 1:M:983:LEU:CD2 | 1:M:1041:ARG:HA | 2.26 | 0.64 |
| 1:M:1197:LEU:HD11 | 1:M:1270:MET:HE1 | 1.79 | 0.64 |
| 2:N:235:LEU:HD11 | 2:N:359:GLN:NE2 | 2.13 | 0.64 |
| 2:N:555:GLY:HA3 | 2:N:583:HIS:CE1 | 2.31 | 0.64 |
| 2:N:825:VAL:HG21 | 2:N:1090:THR:HB | 1.80 | 0.64 |
| 2:N:1157:ALA:O | 2:N:1158:PHE:HB2 | 1.97 | 0.64 |
| 3:O:167:HIS:HD2 | 3:O:168:ALA:H | 1.46 | 0.64 |
| 1:A:535:MET:HA | 1:A:540:THR:HG21 | 1.79 | 0.64 |
| 1:A:546:GLN:HG2 | 1:A:550:MET:HE2 | 1.80 | 0.64 |
| 2:B:847:ASP:C | 2:B:849:GLY:H | 2.00 | 0.64 |
| 4:D:25:ALA:C | 4:D:27:LEU:H | 2.02 | 0.64 |
| 6:R:110:ASP:O | 6:R:112:GLU:N | 2.31 | 0.64 |
| 8:T:15:VAL:HG22 | 8:T:26:ILE:HD13 | 1.78 | 0.64 |
| 2:B:824:ILE:HG22 | 2:B:1087:PHE:HE2 | 1.62 | 0.64 |
| 2:B:1095:LEU:H | 2:B:1095:LEU:CD1 | 2.08 | 0.64 |
| 3:C:42:THR:HB | 3:C:170:TRP:HD1 | 1.63 | 0.64 |
| 1:A:920:ILE:HG21 | 1:A:985:ILE:HD11 | 1.80 | 0.64 |
| 6:F:110:ASP:O | 6:F:112:GLU:N | 2.31 | 0.64 |
| 7:G:34:VAL:HG12 | 7:G:45:ILE:CG2 | 2.25 | 0.64 |
| 2:N:756:ILE:O | 2:N:759:PRO:HD3 | 1.98 | 0.64 |
| 3:O:42:THR:HB | 3:O:170:TRP:HD1 | 1.63 | 0.64 |
| 5:Q:15:PHE:CZ | 5:Q:19:LYS:HE2 | 2.33 | 0.64 |
| 1:A:1397:THR:CG2 | 1:A:1401:MET:SD | 2.86 | 0.63 |
| 2:B:756:ILE:O | 2:B:759:PRO:HD3 | 1.99 | 0.63 |
| 3:C:201:TRP:HE3 | 3:C:202:PRO:HD2 | 1.63 | 0.63 |
| 2:N:12:ILE:HG23 | 2:N:652:ILE:HD11 | 1.80 | 0.63 |
| 2:N:290:LEU:H | 2:N:290:LEU:CD2 | 2.11 | 0.63 |
| 2:N:782:LEU:HD12 | 2:N:788:ARG:HH11 | 1.62 | 0.63 |
| 2:N:1095:LEU:HD12 | 2:N:1095:LEU:N | 2.12 | 0.63 |
| 3:O:184:ASN:HD21 | 3:O:189:THR:HB | 1.63 | 0.63 |
| 1:A:24:PRO:O | 1:A:27:ILE:CG2 | 2.46 | 0.63 |
| 1:A:225:PHE:CG | 1:A:232:PRO:HG3 | 2.33 | 0.63 |
| 1:A:270:ILE:HD11 | 1:A:301:VAL:HA | 1.81 | 0.63 |
| 2:B:22:SER:HA | 2:B:811:TYR:HE2 | 1.63 | 0.63 |
| 2:B:290:LEU:CD2 | 2:B:290:LEU:H | 2.10 | 0.63 |
| 2:B:551:LEU:O | 2:B:553:GLU:N | 2.30 | 0.63 |
| 3:C:15:ASP:O | 3:C:16:GLU:CG | 2.46 | 0.63 |
| 2:N:1183:ARG:O | 2:N:1184:SER:CB | 2.47 | 0.63 |
| 5:Q:90:LYS:C | 5:Q:92:MET:H | 1.99 | 0.63 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 2:B:846:ILE:CG2 | 2:B:974:PRO:HG2 | 2.29 | 0.63 |
| 3:C:115:SER:OG | 3:C:142:ILE:CG1 | 2.46 | 0.63 |
| 3:C:167:HIS:HD2 | 3:C:168:ALA:H | 1.46 | 0.63 |
| 3:C:253:GLU:O | 3:C:256:ALA:HB3 | 1.97 | 0.63 |
| 4:D:68:SER:HB2 | 4:D:93:THR:HG21 | 1.80 | 0.63 |
| 7:G:1:MET:CE | 7:G:3:PHE:HE1 | 2.11 | 0.63 |
| 11:K:7:PHE:HA | 11:K:10:PHE:CE2 | 2.34 | 0.63 |
| 1:M:676:THR:OG1 | 1:M:737:ASN:ND2 | 2.30 | 0.63 |
| 3:O:38:ALA:O | 3:O:164:ALA:HB3 | 1.98 | 0.63 |
| 1:A:1367:ASN:HD22 | 1:A:1368:TYR:H | 1.47 | 0.63 |
| 1:M:256:THR:CB | 2:N:918:ILE:CG2 | 2.75 | 0.63 |
| 2:N:266:PRO:HG2 | 2:N:352:GLU:HB3 | 1.79 | 0.63 |
| 2:N:860:MET:HB2 | 2:N:965:LYS:HG2 | 1.78 | 0.63 |
| 2:N:1072:MET:HE3 | 2:N:1085:VAL:CB | 2.26 | 0.63 |
| 3:O:35:THR:HG21 | 3:O:251:LEU:CD2 | 2.28 | 0.63 |
| 7:S:51:GLY:O | 7:S:54:ILE:HG13 | 1.99 | 0.63 |
| 8:T:142:LEU:O | 8:T:143:ILE:HG13 | 1.98 | 0.63 |
| 9:U:14:LEU:HD13 | 9:U:28:SER:O | 1.99 | 0.63 |
| 11:W:7:PHE:HA | 11:W:10:PHE:CE2 | 2.34 | 0.63 |
| 1:A:845:ALA:O | 1:A:846:LEU:HD23 | 1.98 | 0.63 |
| 2:B:270:GLN:HG2 | 2:B:271:ASP:N | 2.10 | 0.63 |
| 2:B:290:LEU:HD22 | 2:B:290:LEU:H | 1.61 | 0.63 |
| 2:B:1096:ARG:O | 2:B:1097:HIS:HB2 | 1.99 | 0.63 |
| 5:E:15:PHE:CZ | 5:E:19:LYS:HE2 | 2.33 | 0.63 |
| 1:M:225:PHE:CG | 1:M:232:PRO:HG3 | 2.33 | 0.63 |
| 1:M:270:ILE:HD11 | 1:M:301:VAL:HA | 1.81 | 0.63 |
| 1:M:417:ARG:O | 1:M:418:TYR:HD2 | 1.82 | 0.63 |
| 1:M:630:LEU:O | 1:M:633:THR:CG2 | 2.47 | 0.63 |
| 3:O:201:TRP:HE3 | 3:O:202:PRO:HD2 | 1.63 | 0.63 |
| 6:R:103:MET:HE2 | 7:S:65:SER:HA | 1.79 | 0.63 |
| 8:T:100:VAL:HA | 8:T:115:VAL:HA | 1.78 | 0.63 |
| 12:X:63:THR:HG21 | 12:X:65:ARG:HG3 | 1.80 | 0.63 |
| 1:A:752:SER:O | 1:A:753:LYS:HG2 | 1.99 | 0.63 |
| 1:A:846:LEU:HD12 | 1:A:1071:ALA:HB2 | 1.80 | 0.63 |
| 2:B:92:ALA:O | 2:B:93:ASP:HB2 | 1.98 | 0.63 |
| 2:B:1114:LEU:HD11 | 2:B:1202:LEU:CD1 | 2.23 | 0.63 |
| 3:C:184:ASN:HD21 | 3:C:189:THR:HB | 1.63 | 0.63 |
| 9:I:62:ILE:O | 9:I:62:ILE:HG12 | 1.98 | 0.63 |
| 1:M:1044:PHE:CE2 | 1:M:1048:LEU:HD11 | 2.33 | 0.63 |
| 2:N:1159:ARG:CD | 2:N:1193:GLN:HE21 | 2.12 | 0.63 |
| 3:O:15:ASP:O | 3:O:16:GLU:CG | 2.46 | 0.63 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:A:321:ARG:HH22 | 1:A:324:LYS:HE3 | 1.64 | 0.63 |
| 1:A:591:ARG:HB3 | 1:A:606:MET:H | 1.64 | 0.63 |
| 1:A:1044:PHE:CE2 | 1:A:1048:LEU:HD11 | 2.33 | 0.63 |
| 1:A:1342:LEU:HD13 | 5:E:146:HIS:CD2 | 2.34 | 0.63 |
| 2:B:825:VAL:HG21 | 2:B:1090:THR:HB | 1.80 | 0.63 |
| 2:B:1094:ARG:NH2 | 2:B:1098:MET:HG2 | 2.13 | 0.63 |
| 6:F:99:LEU:HD11 | 7:G:65:SER:O | 1.98 | 0.63 |
| 7:G:51:GLY:O | 7:G:54:ILE:HG13 | 1.99 | 0.63 |
| 8:H:94:TYR:HE2 | 8:H:96:MET:HG3 | 1.62 | 0.63 |
| 1:M:920:ILE:HG21 | 1:M:985:ILE:HD11 | 1.80 | 0.63 |
| 2:N:1096:ARG:O | 2:N:1097:HIS:HB2 | 1.99 | 0.63 |
| 1:A:417:ARG:O | 1:A:418:TYR:HD2 | 1.82 | 0.63 |
| 1:A:788:PHE:CE1 | 1:A:797:SER:HA | 2.33 | 0.63 |
| 2:B:266:PRO:HG2 | 2:B:352:GLU:HB3 | 1.79 | 0.63 |
| 2:B:698:ILE:HD11 | 2:B:700:ILE:HD11 | 1.81 | 0.63 |
| 2:B:953:LEU:HD23 | 2:B:953:LEU:O | 1.99 | 0.63 |
| 2:B:1095:LEU:HD12 | 2:B:1095:LEU:N | 2.12 | 0.63 |
| 2:B:1116:ARG:HG3 | 2:B:1198:TYR:CD1 | 2.34 | 0.63 |
| 6:F:101:ILE:HD13 | 6:F:120:ILE:HG22 | 1.81 | 0.63 |
| 1:M:473:LEU:O | 1:M:476:THR:HB | 1.99 | 0.63 |
| 2:N:551:LEU:O | 2:N:553:GLU:N | 2.30 | 0.63 |
| 7:S:1:MET:CE | 7:S:3:PHE:HE1 | 2.12 | 0.63 |
| 1:A:473:LEU:O | 1:A:476:THR:HB | 1.99 | 0.63 |
| 2:B:12:ILE:HG23 | 2:B:652:ILE:HD11 | 1.79 | 0.63 |
| 6:F:124:GLU:HB3 | 6:F:130:ILE:HG12 | 1.79 | 0.63 |
| 1:M:535:MET:HA | 1:M:540:THR:HG21 | 1.79 | 0.63 |
| 1:M:819:MET:HG2 | 2:N:507:LEU:O | 1.99 | 0.63 |
| 2:N:846:ILE:CG2 | 2:N:974:PRO:HG2 | 2.29 | 0.63 |
| 2:N:1114:LEU:HD12 | 2:N:1202:LEU:HD11 | 1.80 | 0.63 |
| 2:N:1169:MET:CE | 2:N:1204:PHE:HB2 | 2.29 | 0.63 |
| 4:P:25:ALA:C | 4:P:27:LEU:H | 2.01 | 0.63 |
| 1:A:739:LYS:HD2 | 1:A:739:LYS:N | 2.13 | 0.62 |
| 1:A:846:LEU:HB3 | 1:A:849:ILE:HD12 | 1.81 | 0.62 |
| 1:A:1441:THR:CG2 | 2:B:1144:ALA:CB | 2.71 | 0.62 |
| 2:B:1169:MET:CE | 2:B:1204:PHE:HB2 | 2.29 | 0.62 |
| 3:C:35:THR:HG21 | 3:C:251:LEU:CD2 | 2.28 | 0.62 |
| 3:C:175:ALA:HB2 | 10:J:42:ARG:HH22 | 1.63 | 0.62 |
| 3:C:219:PHE:CD2 | 8:H:45:GLU:HG2 | 2.34 | 0.62 |
| 9:I:69:PRO:HB2 | 9:I:85:PHE:CZ | 2.34 | 0.62 |
| 1:M:739:LYS:HD2 | 1:M:739:LYS:N | 2.13 | 0.62 |
| 1:M:845:ALA:O | 1:M:846:LEU:HD23 | 1.98 | 0.62 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 2:N:698:ILE:HD11 | 2:N:700:ILE:HD11 | 1.81 | 0.62 |
| 4:P:114:ARG:HB3 | 4:P:115:PHE:CE1 | 2.32 | 0.62 |
| 2:B:344:TYR:CZ | 2:B:348:ILE:HD11 | 2.34 | 0.62 |
| 4:D:51:LEU:CD1 | 4:D:56:SER:HA | 2.29 | 0.62 |
| 9:I:14:LEU:HD13 | 9:I:28:SER:O | 1.99 | 0.62 |
| 1:M:591:ARG:HB3 | 1:M:606:MET:H | 1.64 | 0.62 |
| 4:P:56:SER:CB | 4:P:109:LEU:HD11 | 2.29 | 0.62 |
| 7:S:160:ILE:HG22 | 7:S:161:GLY:N | 2.14 | 0.62 |
| 2:B:766:ARG:NH2 | 2:B:1020:ARG:HD3 | 2.14 | 0.62 |
| 2:B:799:PRO:HB3 | 2:B:818:PRO:HG2 | 1.82 | 0.62 |
| 2:B:1220:ARG:HB3 | 2:B:1220:ARG:CZ | 2.29 | 0.62 |
| 1:M:352:THR:HG21 | 2:N:1103:ILE:HD12 | 1.81 | 0.62 |
| 1:M:739:LYS:HB2 | 1:M:741:LEU:CD2 | 2.24 | 0.62 |
| 1:M:788:PHE:CE1 | 1:M:797:SER:HA | 2.34 | 0.62 |
| 1:M:801:VAL:HA | 1:M:813:GLU:OE1 | 1.99 | 0.62 |
| 1:M:1342:LEU:HD13 | 5:Q:146:HIS:CD2 | 2.34 | 0.62 |
| 1:M:1367:ASN:HD22 | 1:M:1368:TYR:H | 1.47 | 0.62 |
| 2:N:92:ALA:O | 2:N:93:ASP:HB2 | 1.98 | 0.62 |
| 10:V:7:CYS:SG | 10:V:48:MET:HE3 | 2.39 | 0.62 |
| 1:A:402:GLY:C | 1:A:436:HIS:HD2 | 2.02 | 0.62 |
| 2:B:235:LEU:HD11 | 2:B:359:GLN:NE2 | 2.13 | 0.62 |
| 1:M:270:ILE:HD13 | 1:M:301:VAL:HG22 | 1.81 | 0.62 |
| 1:M:752:SER:O | 1:M:753:LYS:HG2 | 1.99 | 0.62 |
| 1:M:890:SER:HB3 | 1:M:1300:GLU:CG | 2.28 | 0.62 |
| 2:N:766:ARG:NH2 | 2:N:1020:ARG:HD3 | 2.14 | 0.62 |
| 9:U:19:ASP:OD1 | 9:U:22:ASN:HB2 | 2.00 | 0.62 |
| 9:U:69:PRO:HB2 | 9:U:85:PHE:CZ | 2.34 | 0.62 |
| 1:A:107:CYS:SG | 1:A:148:CYS:HB2 | 2.40 | 0.62 |
| 3:C:45:ILE:HG23 | 3:C:157:CYS:HB3 | 1.80 | 0.62 |
| 6:F:109:VAL:CG1 | 6:F:110:ASP:H | 1.99 | 0.62 |
| 7:G:89:ALA:HB2 | 7:G:103:VAL:CG2 | 2.28 | 0.62 |
| 8:H:142:LEU:O | 8:H:143:ILE:HG13 | 1.98 | 0.62 |
| 12:L:63:THR:HG21 | 12:L:65:ARG:HG3 | 1.79 | 0.62 |
| 2:N:953:LEU:O | 2:N:953:LEU:HD23 | 1.99 | 0.62 |
| 3:O:175:ALA:HB2 | 10:V:42:ARG:HH22 | 1.63 | 0.62 |
| 7:S:89:ALA:HB2 | 7:S:103:VAL:CG2 | 2.28 | 0.62 |
| 1:A:890:SER:HB3 | 1:A:1300:GLU:HG3 | 1.81 | 0.62 |
| 1:A:962:LEU:HA | 1:A:965:ILE:CG2 | 2.30 | 0.62 |
| 2:B:112:SER:HB2 | 2:B:161:VAL:C | 2.19 | 0.62 |
| 2:B:834:ASN:HA | 2:B:838:SER:O | 2.00 | 0.62 |
| 3:C:65:ARG:NH2 | 10:J:3:ILE:O | 2.33 | 0.62 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 1:M:402:GLY:C | 1:M:436:HIS:HD2 | 2.02 | 0.62 |
| 2:N:37:SER:OG | 2:N:404:PRO:HD3 | 2.00 | 0.62 |
| 2:N:112:SER:HB2 | 2:N:161:VAL:C | 2.19 | 0.62 |
| 2:N:270:GLN:CG | 2:N:271:ASP:H | 2.12 | 0.62 |
| 2:N:344:TYR:CZ | 2:N:348:ILE:HD11 | 2.34 | 0.62 |
| 2:N:799:PRO:HB3 | 2:N:818:PRO:HG2 | 1.82 | 0.62 |
| 4:P:51:LEU:CD1 | 4:P:56:SER:HA | 2.29 | 0.62 |
| 9:U:62:ILE:O | 9:U:62:ILE:HG12 | 1.98 | 0.62 |
| 1:A:263:LEU:C | 1:A:265:HIS:H | 2.03 | 0.62 |
| 1:A:630:LEU:O | 1:A:633:THR:CG2 | 2.47 | 0.62 |
| 1:A:890:SER:HB3 | 1:A:1300:GLU:CG | 2.28 | 0.62 |
| 2:B:1159:ARG:CD | 2:B:1193:GLN:HE21 | 2.12 | 0.62 |
| 3:C:184:ASN:ND2 | 3:C:189:THR:HB | 2.15 | 0.62 |
| 3:C:259:LEU:HD11 | 11:K:88:GLU:HA | 1.82 | 0.62 |
| 4:D:56:SER:CB | 4:D:109:LEU:HD11 | 2.29 | 0.62 |
| 9:I:19:ASP:OD1 | 9:I:22:ASN:HB2 | 2.00 | 0.62 |
| 1:M:107:CYS:SG | 1:M:148:CYS:HB2 | 2.40 | 0.62 |
| 1:M:371:ILE:HG22 | 1:M:375:LEU:HD12 | 1.80 | 0.62 |
| 1:M:864:ILE:HG22 | 5:Q:173:GLN:O | 2.00 | 0.62 |
| 2:N:847:ASP:C | 2:N:849:GLY:H | 2.00 | 0.62 |
| 2:B:401:LEU:HD13 | 2:B:538:ILE:HD12 | 1.80 | 0.62 |
| 2:N:220:ALA:HB1 | 2:N:222:PRO:HD2 | 1.82 | 0.62 |
| 2:N:401:LEU:HD13 | 2:N:538:ILE:HD12 | 1.80 | 0.62 |
| 2:N:758:PHE:CZ | 2:N:1044:ALA:HA | 2.35 | 0.62 |
| 2:N:1094:ARG:NH2 | 2:N:1098:MET:HG2 | 2.13 | 0.62 |
| 3:O:65:ARG:NH2 | 10:V:3:ILE:O | 2.33 | 0.62 |
| 9:U:26:LEU:HD23 | 9:U:37:LEU:HA | 1.82 | 0.62 |
| 1:A:1122:LEU:CD1 | 1:A:1122:LEU:H | 2.13 | 0.62 |
| 2:B:416:LYS:HB2 | 2:B:416:LYS:NZ | 2.15 | 0.62 |
| 3:C:221:TYR:CD1 | 3:C:222:LYS:HG3 | 2.35 | 0.62 |
| 5:E:41:PHE:HZ | 5:E:57:MET:HE1 | 1.64 | 0.62 |
| 8:H:58:THR:HG22 | 8:H:59:LEU:N | 2.15 | 0.62 |
| 9:I:26:LEU:HD23 | 9:I:37:LEU:HA | 1.81 | 0.62 |
| 1:M:846:LEU:HD12 | 1:M:1071:ALA:HB2 | 1.80 | 0.62 |
| 1:M:854:ASP:OD1 | 1:M:856:THR:HG22 | 2.00 | 0.62 |
| 1:M:962:LEU:HA | 1:M:965:ILE:CG2 | 2.30 | 0.62 |
| 2:N:883:LEU:O | 2:N:885:LEU:N | 2.33 | 0.62 |
| 2:B:37:SER:OG | 2:B:404:PRO:HD3 | 2.00 | 0.62 |
| 2:B:758:PHE:CZ | 2:B:1044:ALA:HA | 2.35 | 0.62 |
| 2:B:883:LEU:O | 2:B:885:LEU:N | 2.33 | 0.62 |
| 7:G:160:ILE:HG22 | 7:G:161:GLY:N | 2.15 | 0.62 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 1:M:256:THR:H | 2:N:935:ARG:NH1 | 1.97 | 0.62 |
| 1:M:321:ARG:HH22 | 1:M:324:LYS:HE3 | 1.64 | 0.62 |
| 1:M:505:LEU:HD11 | 6:R:91:ALA:CB | 2.30 | 0.62 |
| 1:M:981:SER:OG | 1:M:982:ASP:N | 2.32 | 0.62 |
| 2:N:480:THR:O | 2:N:483:SER:HB3 | 2.00 | 0.62 |
| 2:N:916:THR:HB | 2:N:935:ARG:CG | 2.29 | 0.62 |
| 3:O:219:PHE:CD2 | 8:T:45:GLU:HG2 | 2.35 | 0.62 |
| 4:P:68:SER:HB2 | 4:P:93:THR:HG21 | 1.80 | 0.62 |
| 1:A:270:ILE:HD13 | 1:A:301:VAL:HG22 | 1.81 | 0.61 |
| 1:A:521:VAL:CG1 | 1:A:521:VAL:CA | 2.73 | 0.61 |
| 2:B:782:LEU:HD12 | 2:B:788:ARG:HH11 | 1.62 | 0.61 |
| 2:B:842:ASN:ND2 | 2:B:845:SER:OG | 2.33 | 0.61 |
| 2:B:1196:ILE:HB | 2:B:1197:PRO:HD2 | 1.82 | 0.61 |
| 12:L:62:ARG:HG2 | 12:L:63:THR:H | 1.64 | 0.61 |
| 1:M:776:ILE:CD1 | 1:M:816:PHE:HB3 | 2.30 | 0.61 |
| 1:M:1122:LEU:CD1 | 1:M:1122:LEU:H | 2.13 | 0.61 |
| 2:N:446:ILE:O | 2:N:450:LEU:HG | 2.00 | 0.61 |
| 2:N:1196:ILE:HB | 2:N:1197:PRO:HD2 | 1.82 | 0.61 |
| 2:N:1220:ARG:HB3 | 2:N:1220:ARG:CZ | 2.29 | 0.61 |
| 3:O:184:ASN:ND2 | 3:O:189:THR:HB | 2.15 | 0.61 |
| 9:U:40:ASP:CG | 9:U:41:PRO:HD2 | 2.20 | 0.61 |
| 12:X:30:LYS:HG3 | 12:X:41:SER:OG | 1.99 | 0.61 |
| 1:A:854:ASP:OD1 | 1:A:856:THR:HG22 | 2.00 | 0.61 |
| 1:A:981:SER:OG | 1:A:982:ASP:N | 2.32 | 0.61 |
| 2:B:446:ILE:O | 2:B:450:LEU:HG | 2.01 | 0.61 |
| 7:G:7:LEU:HB2 | 7:G:74:TYR:CE2 | 2.34 | 0.61 |
| 9:I:40:ASP:CG | 9:I:41:PRO:HD2 | 2.20 | 0.61 |
| 1:M:846:LEU:HB3 | 1:M:849:ILE:HD12 | 1.81 | 0.61 |
| 2:N:290:LEU:HD12 | 2:N:306:LEU:HD13 | 1.81 | 0.61 |
| 2:N:416:LYS:HB2 | 2:N:416:LYS:NZ | 2.15 | 0.61 |
| 2:N:815:ARG:O | 10:V:53:VAL:HG21 | 2.00 | 0.61 |
| 2:N:955:THR:HG22 | 2:N:956:THR:N | 2.14 | 0.61 |
| 3:O:259:LEU:HD11 | 11:W:88:GLU:HA | 1.82 | 0.61 |
| 8:T:58:THR:HG22 | 8:T:59:LEU:N | 2.15 | 0.61 |
| 10:V:46:ARG:HG2 | 10:V:46:ARG:HH11 | 1.64 | 0.61 |
| 1:A:63:ARG:HA | 1:A:74:MET:HE1 | 1.81 | 0.61 |
| 1:A:352:THR:HG21 | 2:B:1103:ILE:HD12 | 1.81 | 0.61 |
| 1:A:848:ASP:O | 1:A:859:ASN:HA | 2.00 | 0.61 |
| 2:B:417:LEU:O | 2:B:421:ILE:HG13 | 2.00 | 0.61 |
| 2:B:983:ARG:HH11 | 2:B:1091:TYR:HB3 | 1.66 | 0.61 |
| 10:J:7:CYS:SG | 10:J:48:MET:HE3 | 2.39 | 0.61 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 10:J:46:ARG:HG2 | 10:J:46:ARG:HH11 | 1.64 | 0.61 |
| 1:M:19:PHE:HB3 | 1:M:1416:GLY:HA2 | 1.81 | 0.61 |
| 1:M:69:THR:C | 1:M:71:GLY:N | 2.50 | 0.61 |
| 1:M:263:LEU:C | 1:M:265:HIS:H | 2.03 | 0.61 |
| 2:N:417:LEU:O | 2:N:421:ILE:HG13 | 2.00 | 0.61 |
| 2:N:834:ASN:HA | 2:N:838:SER:O | 2.00 | 0.61 |
| 7:S:7:LEU:HB2 | 7:S:74:TYR:CE2 | 2.34 | 0.61 |
| 1:A:34:LYS:HD3 | 1:A:34:LYS:N | 2.15 | 0.61 |
| 1:A:371:ILE:HG22 | 1:A:375:LEU:HD12 | 1.80 | 0.61 |
| 1:A:1447:MET:HB3 | 7:G:59:GLY:O | 2.00 | 0.61 |
| 3:C:221:TYR:CE1 | 3:C:222:LYS:HG3 | 2.36 | 0.61 |
| 5:E:16:ARG:O | 5:E:20:GLU:HG3 | 2.00 | 0.61 |
| 7:G:7:LEU:CD1 | 7:G:45:ILE:HD11 | 2.30 | 0.61 |
| 7:G:34:VAL:HG11 | 7:G:74:TYR:OH | 2.01 | 0.61 |
| 8:H:38:LEU:HD13 | 8:H:124:LEU:HD13 | 1.82 | 0.61 |
| 1:M:34:LYS:HD3 | 1:M:34:LYS:N | 2.15 | 0.61 |
| 1:M:744:VAL:O | 1:M:748:VAL:HG23 | 2.01 | 0.61 |
| 1:M:960:VAL:HG22 | 1:M:1054:GLN:HB3 | 1.82 | 0.61 |
| 1:M:1331:TYR:CD1 | 1:M:1338:ILE:HD11 | 2.35 | 0.61 |
| 3:O:45:ILE:HG23 | 3:O:157:CYS:HB3 | 1.81 | 0.61 |
| 3:O:115:SER:OG | 3:O:142:ILE:CG1 | 2.48 | 0.61 |
| 1:A:561:VAL:HG23 | 8:H:78:TRP:H | 1.66 | 0.61 |
| 1:A:1331:TYR:CD1 | 1:A:1338:ILE:HD11 | 2.35 | 0.61 |
| 3:C:65:ARG:NH1 | 10:J:2:ILE:CG2 | 2.63 | 0.61 |
| 5:E:14:SER:O | 5:E:18:VAL:HG23 | 2.01 | 0.61 |
| 11:K:70:ASN:O | 11:K:71:PHE:HB3 | 2.00 | 0.61 |
| 2:N:744:HIS:CD2 | 2:N:746:SER:OG | 2.53 | 0.61 |
| 11:W:70:ASN:O | 11:W:71:PHE:HB3 | 2.00 | 0.61 |
| 1:A:1016:ALA:O | 1:A:1017:THR:HG22 | 2.00 | 0.61 |
| 2:B:1116:ARG:CG | 2:B:1198:TYR:CD1 | 2.72 | 0.61 |
| 1:M:546:GLN:HG2 | 1:M:550:MET:HE2 | 1.82 | 0.61 |
| 1:M:630:LEU:HA | 1:M:633:THR:CG2 | 2.30 | 0.61 |
| 2:N:1073:TYR:CE2 | 2:N:1080:LYS:HG2 | 2.36 | 0.61 |
| 6:R:101:ILE:HD13 | 6:R:120:ILE:HG22 | 1.81 | 0.61 |
| 11:W:40:HIS:HD1 | 11:W:61:TYR:HH | 1.48 | 0.61 |
| 1:A:699:GLN:HA | 9:I:97:MET:O | 2.01 | 0.61 |
| 1:A:827:ASP:O | 1:A:831:LYS:HG2 | 2.00 | 0.61 |
| 1:A:1326:ASP:OD1 | 1:A:1328:SER:HB2 | 2.01 | 0.61 |
| 2:B:270:GLN:CG | 2:B:271:ASP:H | 2.12 | 0.61 |
| 2:B:815:ARG:O | 10:J:53:VAL:HG21 | 2.00 | 0.61 |
| 2:B:1183:ARG:O | 2:B:1184:SER:CB | 2.46 | 0.61 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 6:F:82:THR:HG22 | 6:F:84:TYR:N | 2.10 | 0.61 |
| 1:M:775:ARG:HB2 | 1:M:798:LYS:HB3 | 1.83 | 0.61 |
| 1:M:848:ASP:O | 1:M:859:ASN:HA | 2.00 | 0.61 |
| 3:O:164:ALA:HA | 3:O:167:HIS:O | 1.99 | 0.61 |
| 3:O:221:TYR:CD1 | 3:O:222:LYS:HG3 | 2.35 | 0.61 |
| 5:Q:16:ARG:O | 5:Q:20:GLU:HG3 | 2.00 | 0.61 |
| 6:R:99:LEU:C | 6:R:99:LEU:HD12 | 2.21 | 0.61 |
| 7:S:7:LEU:CD1 | 7:S:45:ILE:HD11 | 2.30 | 0.61 |
| 8:T:80:PRO:HB2 | 8:T:81:PRO:HD2 | 1.83 | 0.61 |
| 12:X:62:ARG:HG2 | 12:X:63:THR:H | 1.64 | 0.61 |
| 1:A:203:LEU:CG | 1:A:207:GLU:HB2 | 2.31 | 0.61 |
| 1:A:801:VAL:HG22 | 1:A:813:GLU:CB | 2.17 | 0.61 |
| 2:B:211:ALA:O | 2:B:213:ILE:HG13 | 2.01 | 0.61 |
| 2:B:253:GLU:O | 2:B:253:GLU:HG2 | 2.00 | 0.61 |
| 2:B:480:THR:O | 2:B:483:SER:HB3 | 2.00 | 0.61 |
| 2:B:955:THR:HG22 | 2:B:956:THR:N | 2.14 | 0.61 |
| 7:G:34:VAL:CG1 | 7:G:45:ILE:HG21 | 2.29 | 0.61 |
| 1:M:70:CYS:O | 1:M:72:GLU:HG2 | 2.01 | 0.61 |
| 1:M:561:VAL:HG23 | 8:T:78:TRP:H | 1.66 | 0.61 |
| 2:N:253:GLU:HG2 | 2:N:253:GLU:O | 2.00 | 0.61 |
| 2:N:1142:GLY:HA3 | 6:R:88:TYR:CE2 | 2.35 | 0.61 |
| 7:S:34:VAL:CG1 | 7:S:45:ILE:HG21 | 2.29 | 0.61 |
| 8:T:61:ASN:O | 8:T:62:SER:HB2 | 2.01 | 0.61 |
| 9:U:7:CYS:HB2 | 9:U:34:TYR:CD1 | 2.36 | 0.61 |
| 1:A:967:GLN:HA | 1:A:970:GLN:CG | 2.30 | 0.61 |
| 2:B:220:ALA:HB1 | 2:B:222:PRO:HD2 | 1.82 | 0.61 |
| 3:C:164:ALA:HA | 3:C:167:HIS:O | 1.99 | 0.61 |
| 9:I:7:CYS:HB2 | 9:I:34:TYR:CD1 | 2.36 | 0.61 |
| 1:M:444:LEU:CD1 | 1:M:456:MET:HB3 | 2.27 | 0.61 |
| 1:M:667:ILE:HD11 | 2:N:1067:ARG:O | 2.00 | 0.61 |
| 1:M:699:GLN:HA | 9:U:97:MET:O | 2.01 | 0.61 |
| 1:M:827:ASP:O | 1:M:831:LYS:HG2 | 2.00 | 0.61 |
| 1:M:1163:THR:HG22 | 1:M:1165:ILE:N | 2.15 | 0.61 |
| 1:M:1326:ASP:OD1 | 1:M:1328:SER:HB2 | 2.01 | 0.61 |
| 2:N:556:MET:HE3 | 2:N:573:ILE:HG21 | 0.64 | 0.61 |
| 2:N:983:ARG:HH11 | 2:N:1091:TYR:HB3 | 1.66 | 0.61 |
| 5:Q:14:SER:O | 5:Q:18:VAL:HG23 | 2.01 | 0.61 |
| 1:A:630:LEU:HA | 1:A:633:THR:CG2 | 2.30 | 0.61 |
| 1:A:775:ARG:HB2 | 1:A:798:LYS:HB3 | 1.83 | 0.61 |
| 1:A:872:ASP:OD2 | 1:A:874:LEU:HB2 | 2.00 | 0.61 |
| 1:A:1293:SER:O | 1:A:1294:VAL:HG23 | 2.00 | 0.61 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 1:M:267:LEU:HD21 | 1:M:304:TYR:CE1 | 2.36 | 0.61 |
| 1:M:521:VAL:CG1 | 1:M:521:VAL:CA | 2.73 | 0.61 |
| 1:M:872:ASP:OD2 | 1:M:874:LEU:HB2 | 2.00 | 0.61 |
| 1:M:967:GLN:HA | 1:M:970:GLN:CG | 2.30 | 0.61 |
| 2:N:798:TYR:HD2 | 2:N:798:TYR:N | 1.98 | 0.61 |
| 3:O:221:TYR:CE1 | 3:O:222:LYS:HG3 | 2.36 | 0.61 |
| 7:S:34:VAL:HG11 | 7:S:74:TYR:OH | 2.01 | 0.61 |
| 10:V:13:VAL:O | 10:V:14:VAL:HG22 | 2.01 | 0.61 |
| 1:A:19:PHE:HB3 | 1:A:1416:GLY:HA2 | 1.81 | 0.60 |
| 1:A:538:ARG:HH22 | 8:H:121:LEU:CD1 | 2.14 | 0.60 |
| 2:B:387:ASP:OD1 | 9:I:91:ARG:HB3 | 2.01 | 0.60 |
| 10:J:13:VAL:O | 10:J:14:VAL:HG22 | 2.01 | 0.60 |
| 12:L:30:LYS:HG3 | 12:L:41:SER:OG | 1.99 | 0.60 |
| 1:M:108:MET:C | 1:M:110:CYS:H | 2.03 | 0.60 |
| 1:M:446:ASN:HB2 | 1:M:455:SER:O | 1.99 | 0.60 |
| 1:M:1016:ALA:O | 1:M:1017:THR:HG22 | 2.00 | 0.60 |
| 2:N:211:ALA:O | 2:N:213:ILE:HG13 | 2.01 | 0.60 |
| 2:N:842:ASN:ND2 | 2:N:845:SER:OG | 2.33 | 0.60 |
| 3:O:66:LEU:N | 3:O:66:LEU:HD23 | 2.16 | 0.60 |
| 1:A:417:ARG:HG3 | 1:A:418:TYR:CD2 | 2.36 | 0.60 |
| 1:A:744:VAL:O | 1:A:748:VAL:HG23 | 2.01 | 0.60 |
| 2:B:111:TYR:HE2 | 2:B:170:CYS:HG | 1.49 | 0.60 |
| 2:B:405:LEU:HB3 | 2:B:459:TRP:CZ2 | 2.36 | 0.60 |
| 3:C:31:SER:O | 3:C:35:THR:CG2 | 2.44 | 0.60 |
| 3:C:42:THR:CG2 | 3:C:43:LEU:H | 1.90 | 0.60 |
| 6:F:99:LEU:C | 6:F:99:LEU:HD12 | 2.21 | 0.60 |
| 1:M:691:VAL:O | 1:M:695:ILE:CG1 | 2.49 | 0.60 |
| 1:M:890:SER:HB3 | 1:M:1300:GLU:HG3 | 1.81 | 0.60 |
| 1:M:1293:SER:O | 1:M:1294:VAL:HG23 | 2.00 | 0.60 |
| 2:N:459:TRP:HA | 2:N:459:TRP:CE3 | 2.34 | 0.60 |
| 2:N:744:HIS:ND1 | 2:N:745:PRO:HD2 | 2.15 | 0.60 |
| 2:N:800:GLN:HG2 | 10:V:51:THR:CG2 | 2.30 | 0.60 |
| 10:V:1:MET:H1 | 10:V:55:LEU:N | 1.99 | 0.60 |
| 10:V:2:ILE:H | 10:V:56:ILE:HG22 | 1.66 | 0.60 |
| 1:A:267:LEU:HD21 | 1:A:304:TYR:CE1 | 2.36 | 0.60 |
| 1:A:446:ASN:HB2 | 1:A:455:SER:O | 1.99 | 0.60 |
| 2:B:556:MET:HE2 | 2:B:573:ILE:HG21 | 1.61 | 0.60 |
| 2:B:744:HIS:CD2 | 2:B:746:SER:OG | 2.53 | 0.60 |
| 2:B:872:GLU:OE1 | 2:B:914:LYS:HE3 | 2.01 | 0.60 |
| 9:I:95:THR:HG22 | 9:I:96:ASN:N | 2.15 | 0.60 |
| 10:J:1:MET:H1 | 10:J:55:LEU:N | 1.99 | 0.60 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|------------------|--------------------------|-------------------|
| 1:M:203:LEU:CG | 1:M:207:GLU:HB2 | 2.31 | 0.60 |
| 1:M:264:THR:O | 1:M:264:THR:HG22 | 2.01 | 0.60 |
| 1:M:417:ARG:HG3 | 1:M:418:TYR:CD2 | 2.36 | 0.60 |
| 1:M:535:MET:O | 1:M:575:GLY:HA3 | 2.02 | 0.60 |
| 2:N:405:LEU:HB3 | 2:N:459:TRP:CZ2 | 2.36 | 0.60 |
| 3:O:65:ARG:NH1 | 10:V:2:ILE:CG2 | 2.63 | 0.60 |
| 10:V:5:VAL:HG12 | 10:V:6:ARG:HG3 | 1.83 | 0.60 |
| 1:A:667:ILE:HD11 | 2:B:1067:ARG:O | 2.00 | 0.60 |
| 1:A:770:MET:H | 1:A:820:ALA:CB | 2.14 | 0.60 |
| 2:B:744:HIS:ND1 | 2:B:745:PRO:HD2 | 2.15 | 0.60 |
| 3:C:66:LEU:N | 3:C:66:LEU:HD23 | 2.16 | 0.60 |
| 5:E:174:LEU:HD23 | 5:E:175:PRO:CD | 2.28 | 0.60 |
| 8:H:61:ASN:O | 8:H:62:SER:HB2 | 2.01 | 0.60 |
| 4:P:139:PRO:O | 4:P:142:ILE:HG23 | 2.00 | 0.60 |
| 5:Q:21:MET:CE | 5:Q:25:ARG:HE | 2.15 | 0.60 |
| 9:U:95:THR:HG22 | 9:U:96:ASN:N | 2.15 | 0.60 |
| 1:A:108:MET:C | 1:A:110:CYS:H | 2.03 | 0.60 |
| 2:B:181:TYR:CD2 | 10:J:61:ARG:HB3 | 2.37 | 0.60 |
| 2:B:800:GLN:HG2 | 10:J:51:THR:CG2 | 2.30 | 0.60 |
| 1:M:801:VAL:HG11 | 1:M:809:LEU:HD11 | 1.83 | 0.60 |
| 1:M:911:PRO:CB | 1:M:917:ALA:HB1 | 2.22 | 0.60 |
| 1:M:1444:PHE:HA | 6:R:137:TYR:HD1 | 1.65 | 0.60 |
| 2:N:872:GLU:OE1 | 2:N:914:LYS:HE3 | 2.01 | 0.60 |
| 3:O:148:ARG:CG | 3:O:149:ASN:H | 2.12 | 0.60 |
| 1:A:70:CYS:O | 1:A:72:GLU:HG2 | 2.01 | 0.60 |
| 1:A:739:LYS:HB2 | 1:A:741:LEU:CD2 | 2.24 | 0.60 |
| 1:A:771:VAL:HG22 | 1:A:819:MET:O | 2.02 | 0.60 |
| 2:B:459:TRP:HA | 2:B:459:TRP:CE3 | 2.35 | 0.60 |
| 5:E:21:MET:CE | 5:E:25:ARG:HE | 2.15 | 0.60 |
| 2:N:847:ASP:HB3 | 3:O:167:HIS:NE2 | 2.16 | 0.60 |
| 3:O:42:THR:CG2 | 3:O:43:LEU:H | 1.90 | 0.60 |
| 3:O:167:HIS:HE1 | 12:X:72:THR:HA | 1.66 | 0.60 |
| 5:Q:16:ARG:HG3 | 5:Q:16:ARG:NH1 | 2.17 | 0.60 |
| 8:T:38:LEU:HD13 | 8:T:124:LEU:HD13 | 1.82 | 0.60 |
| 1:A:389:LEU:O | 1:A:393:VAL:HG23 | 2.02 | 0.60 |
| 1:A:691:VAL:O | 1:A:695:ILE:CG1 | 2.49 | 0.60 |
| 1:A:1163:THR:HG22 | 1:A:1165:ILE:N | 2.15 | 0.60 |
| 7:G:7:LEU:HB2 | 7:G:74:TYR:HE2 | 1.66 | 0.60 |
| 7:G:9:LEU:HG | 7:G:10:ILE:N | 2.16 | 0.60 |
| 10:J:2:ILE:H | 10:J:56:ILE:HG22 | 1.65 | 0.60 |
| 2:N:181:TYR:CD2 | 10:V:61:ARG:HB3 | 2.37 | 0.60 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 8:T:9:ILE:HG12 | 8:T:56:THR:HG23 | 1.84 | 0.60 |
| 1:A:525:VAL:HG12 | 1:A:526:GLN:H | 1.67 | 0.60 |
| 1:A:801:VAL:HG21 | 1:A:809:LEU:HD21 | 1.81 | 0.60 |
| 1:A:960:VAL:HG22 | 1:A:1054:GLN:HB3 | 1.82 | 0.60 |
| 1:A:967:GLN:HA | 1:A:970:GLN:HG3 | 1.83 | 0.60 |
| 2:B:290:LEU:HD12 | 2:B:306:LEU:HD13 | 1.82 | 0.60 |
| 2:B:798:TYR:CD2 | 2:B:798:TYR:N | 2.68 | 0.60 |
| 2:B:1073:TYR:CE2 | 2:B:1080:LYS:HG2 | 2.36 | 0.60 |
| 3:C:167:HIS:HE1 | 12:L:72:THR:HA | 1.66 | 0.60 |
| 10:J:5:VAL:HG12 | 10:J:6:ARG:HG3 | 1.83 | 0.60 |
| 1:M:41:MET:CB | 1:M:49:ARG:HA | 2.22 | 0.60 |
| 1:M:525:VAL:HG12 | 1:M:526:GLN:H | 1.67 | 0.60 |
| 2:N:111:TYR:HE2 | 2:N:170:CYS:HG | 1.49 | 0.60 |
| 1:A:493:PRO:CB | 1:A:498:THR:HG22 | 2.32 | 0.60 |
| 1:A:591:ARG:HD3 | 1:A:605:GLY:HA2 | 1.84 | 0.60 |
| 1:A:630:LEU:O | 1:A:634:VAL:HG23 | 2.02 | 0.60 |
| 2:B:770:GLN:HG2 | 2:B:983:ARG:O | 2.02 | 0.60 |
| 3:C:148:ARG:CG | 3:C:149:ASN:H | 2.13 | 0.60 |
| 4:D:139:PRO:O | 4:D:142:ILE:HG23 | 2.00 | 0.60 |
| 8:H:9:ILE:HG12 | 8:H:56:THR:HG23 | 1.84 | 0.60 |
| 1:M:538:ARG:HH22 | 8:T:121:LEU:CD1 | 2.14 | 0.60 |
| 1:M:630:LEU:O | 1:M:634:VAL:HG23 | 2.02 | 0.60 |
| 1:M:962:LEU:O | 1:M:965:ILE:HG22 | 2.00 | 0.60 |
| 1:M:967:GLN:O | 1:M:970:GLN:HB2 | 2.02 | 0.60 |
| 2:N:52:GLU:HG3 | 2:N:53:GLU:N | 2.15 | 0.60 |
| 2:N:1208:MET:O | 2:N:1211:ASN:N | 2.31 | 0.60 |
| 5:Q:107:GLY:HA3 | 5:Q:131:ILE:HG23 | 1.84 | 0.60 |
| 1:A:264:THR:O | 1:A:264:THR:HG22 | 2.01 | 0.60 |
| 1:A:410:ASN:O | 1:A:412:ASP:N | 2.35 | 0.60 |
| 1:A:568:LYS:CB | 1:A:569:PRO:HD2 | 2.31 | 0.60 |
| 1:A:642:ILE:CG1 | 1:A:643:CYS:N | 2.64 | 0.60 |
| 2:B:52:GLU:HG3 | 2:B:53:GLU:N | 2.15 | 0.60 |
| 2:B:634:GLU:C | 2:B:636:ASP:H | 2.05 | 0.60 |
| 1:M:389:LEU:O | 1:M:393:VAL:HG23 | 2.02 | 0.60 |
| 2:N:41:PHE:HA | 2:N:45:SER:HB2 | 1.83 | 0.60 |
| 2:N:634:GLU:C | 2:N:636:ASP:H | 2.05 | 0.60 |
| 3:O:74:GLU:O | 3:O:246:ARG:NH2 | 2.30 | 0.60 |
| 1:A:535:MET:O | 1:A:575:GLY:HA3 | 2.02 | 0.59 |
| 1:A:536:THR:CG2 | 1:A:617:VAL:HA | 2.32 | 0.59 |
| 1:A:770:MET:H | 1:A:820:ALA:HB2 | 1.66 | 0.59 |
| 1:A:776:ILE:CD1 | 1:A:816:PHE:CB | 2.79 | 0.59 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 1:A:869:TYR:HE1 | 1:A:1066:VAL:HG13 | 1.67 | 0.59 |
| 1:A:962:LEU:O | 1:A:965:ILE:HG22 | 2.01 | 0.59 |
| 2:B:30:LEU:HD13 | 2:B:485:LEU:HD13 | 1.84 | 0.59 |
| 2:B:41:PHE:HA | 2:B:45:SER:HB2 | 1.83 | 0.59 |
| 2:B:607:SER:OG | 2:B:620:PHE:HB2 | 2.02 | 0.59 |
| 2:B:798:TYR:HD2 | 2:B:798:TYR:N | 1.98 | 0.59 |
| 2:B:1096:ARG:O | 2:B:1097:HIS:CB | 2.50 | 0.59 |
| 1:M:173:PRO:HD3 | 1:M:186:TRP:NE1 | 2.17 | 0.59 |
| 1:M:568:LYS:CB | 1:M:569:PRO:HD2 | 2.31 | 0.59 |
| 1:M:967:GLN:HA | 1:M:970:GLN:HG3 | 1.82 | 0.59 |
| 7:S:7:LEU:HB2 | 7:S:74:TYR:HE2 | 1.66 | 0.59 |
| 1:A:831:LYS:O | 1:A:835:THR:HB | 2.02 | 0.59 |
| 1:A:1376:ASP:O | 1:A:1379:THR:HG22 | 2.02 | 0.59 |
| 2:B:266:PRO:O | 2:B:267:TYR:HB2 | 2.02 | 0.59 |
| 2:B:648:THR:H | 2:B:651:HIS:HD2 | 1.50 | 0.59 |
| 2:B:761:HIS:HB2 | 2:B:1024:ALA:HB2 | 1.84 | 0.59 |
| 2:B:1166:CYS:O | 2:B:1168:LEU:N | 2.35 | 0.59 |
| 5:E:107:GLY:HA3 | 5:E:131:ILE:HG23 | 1.84 | 0.59 |
| 1:M:86:LEU:HG | 1:M:238:THR:O | 2.02 | 0.59 |
| 1:M:591:ARG:HD3 | 1:M:605:GLY:HA2 | 1.84 | 0.59 |
| 1:M:681:THR:HG23 | 2:N:726:ILE:CD1 | 2.32 | 0.59 |
| 1:M:831:LYS:O | 1:M:835:THR:HB | 2.02 | 0.59 |
| 2:N:290:LEU:HD22 | 2:N:290:LEU:H | 1.62 | 0.59 |
| 2:N:648:THR:H | 2:N:651:HIS:HD2 | 1.50 | 0.59 |
| 2:N:761:HIS:HB2 | 2:N:1024:ALA:HB2 | 1.85 | 0.59 |
| 2:N:799:PRO:HG2 | 10:V:55:LEU:HD11 | 1.85 | 0.59 |
| 2:N:1096:ARG:O | 2:N:1097:HIS:CB | 2.50 | 0.59 |
| 1:A:72:GLU:OE2 | 2:B:1175:LEU:HB2 | 2.02 | 0.59 |
| 1:A:86:LEU:HG | 1:A:238:THR:O | 2.02 | 0.59 |
| 1:A:362:LEU:HA | 1:A:472:ASN:ND2 | 2.18 | 0.59 |
| 1:A:444:LEU:CD1 | 1:A:456:MET:HB3 | 2.28 | 0.59 |
| 1:A:505:LEU:HD11 | 6:F:91:ALA:CB | 2.32 | 0.59 |
| 1:A:681:THR:HG23 | 2:B:726:ILE:CD1 | 2.32 | 0.59 |
| 2:B:292:HIS:O | 2:B:295:TYR:HE2 | 1.86 | 0.59 |
| 2:B:572:ARG:HB2 | 2:B:579:TRP:NE1 | 2.16 | 0.59 |
| 8:H:142:LEU:C | 8:H:143:ILE:HG13 | 2.23 | 0.59 |
| 1:M:1444:PHE:HE2 | 6:R:89:GLU:HG2 | 1.66 | 0.59 |
| 2:N:344:TYR:CE2 | 2:N:348:ILE:HD11 | 2.37 | 0.59 |
| 2:N:572:ARG:HB2 | 2:N:579:TRP:NE1 | 2.16 | 0.59 |
| 2:N:770:GLN:HG2 | 2:N:983:ARG:O | 2.02 | 0.59 |
| 2:N:1120:GLU:HG2 | 2:N:1121:GLY:N | 2.16 | 0.59 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 2:N:1166:CYS:O | 2:N:1168:LEU:N | 2.36 | 0.59 |
| 8:T:142:LEU:C | 8:T:143:ILE:HG13 | 2.23 | 0.59 |
| 1:A:69:THR:O | 1:A:71:GLY:N | 2.35 | 0.59 |
| 1:A:493:PRO:HB3 | 1:A:502:LEU:CD1 | 2.31 | 0.59 |
| 1:A:1331:TYR:HD1 | 1:A:1338:ILE:HD11 | 1.66 | 0.59 |
| 2:B:344:TYR:CE2 | 2:B:348:ILE:HD11 | 2.38 | 0.59 |
| 1:M:69:THR:O | 1:M:71:GLY:N | 2.35 | 0.59 |
| 1:M:1085:THR:HG21 | 1:M:1097:THR:HA | 1.85 | 0.59 |
| 2:N:607:SER:OG | 2:N:620:PHE:HB2 | 2.02 | 0.59 |
| 3:O:167:HIS:CD2 | 3:O:168:ALA:H | 2.18 | 0.59 |
| 8:T:18:GLY:O | 8:T:19:ARG:HB2 | 2.02 | 0.59 |
| 1:A:53:LEU:CD2 | 1:A:54:ASN:N | 2.57 | 0.59 |
| 2:B:847:ASP:HB3 | 3:C:167:HIS:NE2 | 2.16 | 0.59 |
| 2:B:1120:GLU:HG2 | 2:B:1121:GLY:N | 2.16 | 0.59 |
| 3:C:119:ILE:CG1 | 3:C:121:VAL:HG22 | 2.33 | 0.59 |
| 3:C:167:HIS:CD2 | 3:C:168:ALA:H | 2.19 | 0.59 |
| 5:E:16:ARG:HG3 | 5:E:16:ARG:NH1 | 2.17 | 0.59 |
| 1:M:568:LYS:HD3 | 8:T:94:TYR:CD2 | 2.37 | 0.59 |
| 1:M:577:GLN:O | 1:M:580:SER:HB2 | 2.02 | 0.59 |
| 1:M:642:ILE:CG1 | 1:M:643:CYS:N | 2.64 | 0.59 |
| 1:M:1376:ASP:O | 1:M:1379:THR:HG22 | 2.02 | 0.59 |
| 2:N:292:HIS:O | 2:N:295:TYR:HE2 | 1.86 | 0.59 |
| 1:A:577:GLN:O | 1:A:580:SER:HB2 | 2.03 | 0.59 |
| 2:B:857:ARG:HG2 | 2:B:859:TYR:CE1 | 2.38 | 0.59 |
| 2:B:955:THR:CG2 | 2:B:956:THR:N | 2.65 | 0.59 |
| 11:K:40:HIS:HD1 | 11:K:61:TYR:HH | 1.48 | 0.59 |
| 1:M:362:LEU:HA | 1:M:472:ASN:ND2 | 2.18 | 0.59 |
| 1:M:493:PRO:CB | 1:M:498:THR:HG22 | 2.32 | 0.59 |
| 1:M:536:THR:CG2 | 1:M:617:VAL:HA | 2.32 | 0.59 |
| 2:N:266:PRO:O | 2:N:267:TYR:HB2 | 2.02 | 0.59 |
| 3:O:167:HIS:CE1 | 12:X:72:THR:HA | 2.38 | 0.59 |
| 1:A:173:PRO:HD3 | 1:A:186:TRP:NE1 | 2.17 | 0.59 |
| 1:A:568:LYS:HD3 | 8:H:94:TYR:CD2 | 2.37 | 0.59 |
| 1:A:967:GLN:O | 1:A:970:GLN:HB2 | 2.02 | 0.59 |
| 1:A:1371:MET:CE | 1:A:1371:MET:H | 2.16 | 0.59 |
| 2:B:587:SER:HA | 2:B:610:ARG:NH1 | 2.18 | 0.59 |
| 3:C:74:GLU:O | 3:C:246:ARG:NH2 | 2.31 | 0.59 |
| 3:C:167:HIS:CE1 | 12:L:72:THR:HA | 2.38 | 0.59 |
| 1:M:1348:ARG:NH1 | 1:M:1376:ASP:OD1 | 2.35 | 0.59 |
| 1:M:1444:PHE:HA | 6:R:137:TYR:CD1 | 2.38 | 0.59 |
| 2:N:804:ALA:HA | 2:N:1042:GLY:O | 2.02 | 0.59 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 2:N:955:THR:CG2 | 2:N:956:THR:N | 2.66 | 0.59 |
| 2:N:1152:MET:CE | 2:N:1157:ALA:HA | 2.32 | 0.59 |
| 1:A:776:ILE:CG1 | 1:A:816:PHE:CB | 2.65 | 0.59 |
| 2:B:650:GLU:O | 2:B:654:LYS:HB2 | 2.03 | 0.59 |
| 2:B:799:PRO:HG2 | 10:J:55:LEU:HD11 | 1.84 | 0.59 |
| 5:E:84:GLU:HB2 | 5:E:87:VAL:HG22 | 1.85 | 0.59 |
| 1:M:410:ASN:O | 1:M:412:ASP:N | 2.35 | 0.59 |
| 1:M:519:LYS:HE2 | 1:M:625:SER:O | 2.02 | 0.59 |
| 1:M:1215:ALA:HA | 1:M:1218:ILE:HD12 | 1.84 | 0.59 |
| 2:N:798:TYR:CD2 | 2:N:798:TYR:N | 2.68 | 0.59 |
| 2:N:857:ARG:HG2 | 2:N:859:TYR:CE1 | 2.38 | 0.59 |
| 3:O:226:ASN:O | 3:O:227:ARG:HB2 | 2.03 | 0.59 |
| 1:A:14:VAL:H | 1:A:1435:GLN:HE22 | 1.51 | 0.59 |
| 1:A:1215:ALA:HA | 1:A:1218:ILE:HD12 | 1.84 | 0.59 |
| 1:A:1348:ARG:NH1 | 1:A:1376:ASP:OD1 | 2.35 | 0.59 |
| 2:B:286:ASP:C | 2:B:288:GLU:H | 2.06 | 0.59 |
| 6:F:101:ILE:HD13 | 6:F:120:ILE:CG2 | 2.33 | 0.59 |
| 11:K:53:TYR:O | 11:K:55:ASP:N | 2.36 | 0.59 |
| 1:M:1016:ALA:O | 1:M:1017:THR:CG2 | 2.51 | 0.59 |
| 1:M:1214:VAL:O | 1:M:1218:ILE:HG13 | 2.03 | 0.59 |
| 1:M:1371:MET:CE | 1:M:1371:MET:H | 2.16 | 0.59 |
| 2:N:159:GLY:HA2 | 2:N:447:THR:OG1 | 2.02 | 0.59 |
| 5:Q:21:MET:CE | 5:Q:25:ARG:HH21 | 2.15 | 0.59 |
| 6:R:101:ILE:HD13 | 6:R:120:ILE:CG2 | 2.33 | 0.59 |
| 8:T:59:LEU:O | 8:T:60:ALA:CB | 2.50 | 0.59 |
| 1:A:519:LYS:HE2 | 1:A:625:SER:O | 2.02 | 0.59 |
| 1:A:576:LYS:HE2 | 1:A:616:GLY:O | 2.03 | 0.59 |
| 1:A:1034:LEU:O | 1:A:1038:ARG:HD3 | 2.02 | 0.59 |
| 1:A:1085:THR:HG21 | 1:A:1097:THR:HA | 1.85 | 0.59 |
| 1:A:1279:ILE:CG2 | 1:A:1282:ILE:HD12 | 2.32 | 0.59 |
| 2:B:86:ARG:HB3 | 2:B:87:PRO:HD2 | 1.85 | 0.59 |
| 2:B:394:PHE:CE1 | 2:B:511:HIS:CE1 | 2.91 | 0.59 |
| 2:B:950:ASP:O | 2:B:951:GLN:HB2 | 2.02 | 0.59 |
| 5:E:21:MET:CE | 5:E:25:ARG:HH21 | 2.15 | 0.59 |
| 1:M:14:VAL:H | 1:M:1435:GLN:HE22 | 1.51 | 0.59 |
| 1:M:984:THR:H | 1:M:987:GLU:CG | 2.16 | 0.59 |
| 1:M:1331:TYR:HD1 | 1:M:1338:ILE:HD11 | 1.66 | 0.59 |
| 5:Q:175:PRO:O | 5:Q:211:ARG:HA | 2.03 | 0.59 |
| 1:A:332:GLY:O | 1:A:333:LYS:HB3 | 2.03 | 0.58 |
| 1:A:926:LEU:HD13 | 1:A:985:ILE:HD12 | 1.85 | 0.58 |
| 1:A:1397:THR:HG21 | 1:A:1401:MET:SD | 2.43 | 0.58 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 2:B:1202:LEU:HD23 | 2:B:1206:GLU:CG | 2.32 | 0.58 |
| 1:M:332:GLY:O | 1:M:333:LYS:HB3 | 2.03 | 0.58 |
| 1:M:1154:ILE:HG13 | 9:U:44:TYR:HB3 | 1.85 | 0.58 |
| 2:N:650:GLU:O | 2:N:654:LYS:HB2 | 2.03 | 0.58 |
| 5:Q:25:ARG:NH2 | 5:Q:132:GLU:OE1 | 2.36 | 0.58 |
| 11:W:53:TYR:O | 11:W:55:ASP:N | 2.35 | 0.58 |
| 1:A:1214:VAL:O | 1:A:1218:ILE:HG13 | 2.03 | 0.58 |
| 3:C:251:LEU:O | 3:C:251:LEU:HD12 | 2.02 | 0.58 |
| 4:D:169:VAL:O | 4:D:172:GLN:HB2 | 2.03 | 0.58 |
| 8:H:18:GLY:O | 8:H:19:ARG:HB2 | 2.02 | 0.58 |
| 1:M:54:ASN:C | 1:M:56:PRO:HD3 | 2.24 | 0.58 |
| 1:M:72:GLU:OE2 | 2:N:1175:LEU:HB2 | 2.02 | 0.58 |
| 1:M:512:ILE:O | 1:M:520:PRO:HA | 2.03 | 0.58 |
| 1:M:864:ILE:HG23 | 5:Q:175:PRO:CD | 2.28 | 0.58 |
| 1:M:871:GLU:HB2 | 5:Q:203:THR:HG21 | 1.86 | 0.58 |
| 1:M:1326:ASP:C | 1:M:1328:SER:H | 2.05 | 0.58 |
| 2:N:30:LEU:HD13 | 2:N:485:LEU:HD13 | 1.84 | 0.58 |
| 2:N:286:ASP:C | 2:N:288:GLU:H | 2.06 | 0.58 |
| 8:T:94:TYR:CE2 | 8:T:96:MET:HG3 | 2.38 | 0.58 |
| 1:A:50:GLU:C | 1:A:52:GLY:H | 2.06 | 0.58 |
| 1:A:968:ASN:O | 1:A:972:ILE:CG1 | 2.51 | 0.58 |
| 1:A:1268:ALA:O | 1:A:1270:MET:N | 2.36 | 0.58 |
| 2:B:1115:THR:O | 2:B:1198:TYR:CD2 | 2.55 | 0.58 |
| 1:M:42:ASP:HB3 | 1:M:45:ARG:H | 1.68 | 0.58 |
| 1:M:55:ASP:N | 1:M:56:PRO:CD | 2.66 | 0.58 |
| 1:M:869:TYR:HE1 | 1:M:1066:VAL:HG13 | 1.67 | 0.58 |
| 1:M:900:VAL:HB | 1:M:930:LEU:CD1 | 2.31 | 0.58 |
| 3:O:243:VAL:O | 3:O:243:VAL:HG12 | 2.02 | 0.58 |
| 1:A:54:ASN:C | 1:A:56:PRO:HD3 | 2.24 | 0.58 |
| 1:A:55:ASP:N | 1:A:56:PRO:CD | 2.66 | 0.58 |
| 1:A:365:VAL:O | 1:A:365:VAL:HG13 | 2.02 | 0.58 |
| 1:A:791:ASP:OD2 | 9:I:87:GLN:HG3 | 2.03 | 0.58 |
| 1:A:1016:ALA:O | 1:A:1017:THR:CG2 | 2.51 | 0.58 |
| 1:A:1154:ILE:HG13 | 9:I:44:TYR:HB3 | 1.85 | 0.58 |
| 2:B:1208:MET:O | 2:B:1211:ASN:N | 2.31 | 0.58 |
| 3:C:243:VAL:O | 3:C:243:VAL:HG12 | 2.02 | 0.58 |
| 11:K:10:PHE:N | 11:K:10:PHE:CD2 | 2.72 | 0.58 |
| 1:M:365:VAL:HG13 | 1:M:365:VAL:O | 2.02 | 0.58 |
| 1:M:493:PRO:HB3 | 1:M:502:LEU:CD1 | 2.31 | 0.58 |
| 1:M:859:ASN:HD21 | 1:M:861:LEU:HB2 | 1.69 | 0.58 |
| 1:M:1426:GLY:O | 1:M:1429:GLU:HG2 | 2.03 | 0.58 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 2:N:278:PHE:CD1 | 2:N:289:ILE:HG23 | 2.39 | 0.58 |
| 2:N:594:ARG:O | 2:N:598:ARG:HG3 | 2.03 | 0.58 |
| 3:O:31:SER:O | 3:O:35:THR:CG2 | 2.44 | 0.58 |
| 3:O:111:THR:O | 3:O:147:LEU:HD23 | 2.04 | 0.58 |
| 1:A:887:ILE:HG13 | 1:A:944:LEU:HB2 | 1.84 | 0.58 |
| 1:A:984:THR:H | 1:A:987:GLU:CG | 2.17 | 0.58 |
| 2:B:278:PHE:CD1 | 2:B:289:ILE:HG23 | 2.39 | 0.58 |
| 3:C:226:ASN:O | 3:C:227:ARG:HB2 | 2.02 | 0.58 |
| 5:E:25:ARG:NH2 | 5:E:132:GLU:OE1 | 2.37 | 0.58 |
| 8:H:80:PRO:HB2 | 8:H:81:PRO:HD2 | 1.83 | 0.58 |
| 1:M:95:PHE:O | 1:M:99:ILE:HG13 | 2.03 | 0.58 |
| 1:M:786:PRO:CG | 2:N:700:ILE:HD12 | 2.34 | 0.58 |
| 1:M:1268:ALA:O | 1:M:1270:MET:N | 2.36 | 0.58 |
| 1:M:1403:CYS:SG | 1:M:1412:LEU:HD21 | 2.43 | 0.58 |
| 2:N:86:ARG:HB3 | 2:N:87:PRO:HD2 | 1.85 | 0.58 |
| 2:N:158:ILE:CG2 | 2:N:446:ILE:HD12 | 2.32 | 0.58 |
| 2:N:621:THR:O | 2:N:622:ASP:O | 2.21 | 0.58 |
| 7:S:9:LEU:HG | 7:S:10:ILE:N | 2.16 | 0.58 |
| 12:X:63:THR:HG22 | 12:X:64:LYS:N | 2.18 | 0.58 |
| 1:A:859:ASN:HD21 | 1:A:861:LEU:HB2 | 1.69 | 0.58 |
| 2:B:116:TYR:HA | 2:B:156:VAL:O | 2.04 | 0.58 |
| 2:B:594:ARG:O | 2:B:598:ARG:HG3 | 2.03 | 0.58 |
| 1:M:317:GLN:HB2 | 1:M:323:VAL:CG2 | 2.34 | 0.58 |
| 1:M:1122:LEU:H | 1:M:1122:LEU:HD13 | 1.68 | 0.58 |
| 2:N:587:SER:HA | 2:N:610:ARG:NH1 | 2.18 | 0.58 |
| 2:N:639:LYS:O | 2:N:640:ASP:CB | 2.52 | 0.58 |
| 3:O:251:LEU:HD12 | 3:O:251:LEU:O | 2.02 | 0.58 |
| 1:A:105:CYS:SG | 1:A:139:TRP:HA | 2.44 | 0.58 |
| 1:A:316:LEU:HD23 | 1:A:322:PRO:HA | 1.86 | 0.58 |
| 1:A:871:GLU:HB2 | 5:E:203:THR:HG21 | 1.86 | 0.58 |
| 1:A:1085:THR:HG23 | 1:A:1098:LEU:H | 1.69 | 0.58 |
| 2:B:1152:MET:HE3 | 2:B:1157:ALA:HA | 1.84 | 0.58 |
| 2:B:1165:ILE:HG23 | 4:D:13:ARG:O | 2.04 | 0.58 |
| 3:C:111:THR:O | 3:C:147:LEU:HD23 | 2.04 | 0.58 |
| 8:H:40:LEU:HD22 | 8:H:122:MET:CE | 2.34 | 0.58 |
| 1:M:181:LYS:HZ3 | 1:M:295:GLN:HB3 | 1.66 | 0.58 |
| 1:M:225:PHE:CD1 | 1:M:232:PRO:HG3 | 2.39 | 0.58 |
| 1:M:968:ASN:O | 1:M:972:ILE:CG1 | 2.51 | 0.58 |
| 2:N:846:ILE:HG23 | 2:N:974:PRO:CG | 2.33 | 0.58 |
| 5:Q:84:GLU:HB2 | 5:Q:87:VAL:HG22 | 1.85 | 0.58 |
| 8:T:36:ILE:HA | 8:T:125:GLU:O | 2.03 | 0.58 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|------------------|--------------------------|-------------------|
| 1:A:225:PHE:CD1 | 1:A:232:PRO:HG3 | 2.39 | 0.58 |
| 1:A:512:ILE:O | 1:A:520:PRO:HA | 2.03 | 0.58 |
| 1:A:786:PRO:CG | 2:B:700:ILE:HD12 | 2.34 | 0.58 |
| 1:A:900:VAL:HB | 1:A:930:LEU:CD1 | 2.31 | 0.58 |
| 1:A:1426:GLY:O | 1:A:1429:GLU:HG2 | 2.03 | 0.58 |
| 2:B:159:GLY:HA2 | 2:B:447:THR:OG1 | 2.02 | 0.58 |
| 2:B:596:LEU:CD1 | 2:B:601:ALA:HB3 | 2.32 | 0.58 |
| 3:C:115:SER:HB3 | 3:C:142:ILE:CG1 | 2.33 | 0.58 |
| 5:E:175:PRO:O | 5:E:211:ARG:HA | 2.03 | 0.58 |
| 8:H:59:LEU:O | 8:H:60:ALA:CB | 2.50 | 0.58 |
| 1:M:243:PRO:HB3 | 2:N:1209:ALA:HB2 | 1.85 | 0.58 |
| 2:N:280:ALA:HA | 2:N:323:LEU:HD12 | 1.86 | 0.58 |
| 2:N:1202:LEU:HD23 | 2:N:1206:GLU:CG | 2.33 | 0.58 |
| 4:P:169:VAL:O | 4:P:172:GLN:HB2 | 2.03 | 0.58 |
| 8:T:12:VAL:HG21 | 8:T:53:ASP:HB2 | 1.85 | 0.58 |
| 1:A:95:PHE:O | 1:A:99:ILE:HG13 | 2.03 | 0.58 |
| 1:A:100:LYS:O | 1:A:104:GLU:HG3 | 2.04 | 0.58 |
| 1:A:333:LYS:O | 1:A:334:GLU:CB | 2.52 | 0.58 |
| 1:A:1316:LEU:O | 1:A:1318:GLU:N | 2.36 | 0.58 |
| 2:B:392:ASP:CG | 2:B:503:LYS:HG3 | 2.24 | 0.58 |
| 3:C:175:ALA:HB3 | 10:J:42:ARG:HH22 | 1.69 | 0.58 |
| 3:C:189:THR:HG22 | 3:C:190:ASP:N | 2.19 | 0.58 |
| 4:D:38:GLN:HB2 | 7:G:5:LYS:HZ1 | 1.68 | 0.58 |
| 1:M:1021:GLN:CG | 1:M:1021:GLN:CA | 2.76 | 0.58 |
| 2:N:224:PRO:HG2 | 2:N:225:ILE:HD12 | 1.85 | 0.58 |
| 2:N:745:PRO:O | 2:N:748:ILE:HG12 | 2.04 | 0.58 |
| 7:S:1:MET:HE1 | 7:S:80:LYS:HE3 | 1.86 | 0.58 |
| 11:W:10:PHE:CD2 | 11:W:10:PHE:N | 2.72 | 0.58 |
| 1:A:243:PRO:HB3 | 2:B:1209:ALA:HB2 | 1.85 | 0.58 |
| 2:B:466:MET:HE3 | 2:B:467:SER:HA | 1.86 | 0.58 |
| 2:B:514:LEU:HB3 | 2:B:626:VAL:CG1 | 2.34 | 0.58 |
| 2:B:745:PRO:O | 2:B:748:ILE:HG12 | 2.04 | 0.58 |
| 2:B:804:ALA:HA | 2:B:1042:GLY:O | 2.02 | 0.58 |
| 2:B:976:ILE:O | 2:B:976:ILE:HG22 | 2.04 | 0.58 |
| 8:H:36:ILE:HA | 8:H:125:GLU:O | 2.03 | 0.58 |
| 8:H:40:LEU:HB2 | 8:H:122:MET:HE2 | 1.86 | 0.58 |
| 10:J:46:ARG:HG2 | 10:J:46:ARG:NH1 | 2.18 | 0.58 |
| 1:M:791:ASP:OD2 | 9:U:87:GLN:HG3 | 2.03 | 0.58 |
| 1:M:926:LEU:HD13 | 1:M:985:ILE:HD12 | 1.85 | 0.58 |
| 1:M:1034:LEU:O | 1:M:1038:ARG:HD3 | 2.02 | 0.58 |
| 1:M:1085:THR:HG23 | 1:M:1098:LEU:H | 1.69 | 0.58 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:M:1316:LEU:O | 1:M:1318:GLU:N | 2.36 | 0.58 |
| 2:N:681:LEU:O | 2:N:687:ILE:CG2 | 2.52 | 0.58 |
| 2:N:976:ILE:HG22 | 2:N:976:ILE:O | 2.04 | 0.58 |
| 5:Q:21:MET:HE3 | 5:Q:25:ARG:HE | 1.68 | 0.58 |
| 1:A:42:ASP:HB3 | 1:A:45:ARG:H | 1.68 | 0.57 |
| 1:A:353:VAL:O | 1:A:468:THR:HB | 2.04 | 0.57 |
| 1:A:1037:PHE:O | 1:A:1039:LEU:N | 2.37 | 0.57 |
| 1:A:1326:ASP:C | 1:A:1328:SER:H | 2.05 | 0.57 |
| 2:B:639:LYS:O | 2:B:640:ASP:CB | 2.52 | 0.57 |
| 2:B:824:ILE:HG12 | 10:J:47:ARG:HH12 | 1.69 | 0.57 |
| 1:M:105:CYS:SG | 1:M:139:TRP:HA | 2.44 | 0.57 |
| 1:M:1257:ALA:O | 1:M:1258:GLU:HB2 | 2.04 | 0.57 |
| 2:N:1096:ARG:HD2 | 2:N:1097:HIS:ND1 | 2.19 | 0.57 |
| 10:V:46:ARG:HG2 | 10:V:46:ARG:NH1 | 2.18 | 0.57 |
| 1:A:799:GLY:N | 1:A:816:PHE:CE1 | 2.72 | 0.57 |
| 1:A:1021:GLN:CG | 1:A:1021:GLN:CA | 2.76 | 0.57 |
| 2:B:573:ILE:HG23 | 2:B:581:GLY:O | 2.04 | 0.57 |
| 2:B:1152:MET:CE | 2:B:1157:ALA:HA | 2.33 | 0.57 |
| 5:E:104:PHE:O | 5:E:105:SER:CB | 2.52 | 0.57 |
| 8:H:94:TYR:CE2 | 8:H:96:MET:HG3 | 2.38 | 0.57 |
| 1:M:225:PHE:CE2 | 1:M:232:PRO:HA | 2.40 | 0.57 |
| 1:M:447:ARG:HB3 | 1:M:479:TYR:HB3 | 1.86 | 0.57 |
| 1:M:568:LYS:CB | 8:T:95:VAL:H | 2.16 | 0.57 |
| 2:N:116:TYR:HA | 2:N:156:VAL:O | 2.04 | 0.57 |
| 2:N:466:MET:HE3 | 2:N:467:SER:HA | 1.86 | 0.57 |
| 2:N:999:MET:CE | 2:N:1011:ILE:HD11 | 2.35 | 0.57 |
| 3:O:148:ARG:HG2 | 3:O:149:ASN:N | 2.19 | 0.57 |
| 3:O:189:THR:HG22 | 3:O:190:ASP:N | 2.19 | 0.57 |
| 7:S:89:ALA:CB | 7:S:103:VAL:HG22 | 2.34 | 0.57 |
| 7:G:1:MET:HE1 | 7:G:80:LYS:HE3 | 1.86 | 0.57 |
| 1:M:856:THR:CG2 | 1:M:858:ARG:HE | 2.17 | 0.57 |
| 1:M:1063:GLY:HA2 | 1:M:1440:GLY:HA2 | 1.86 | 0.57 |
| 2:N:216:VAL:HG12 | 2:N:229:ALA:HB2 | 1.86 | 0.57 |
| 2:N:290:LEU:N | 2:N:290:LEU:CD2 | 2.67 | 0.57 |
| 3:O:56:VAL:HG11 | 10:V:59:PHE:CB | 2.31 | 0.57 |
| 8:T:15:VAL:HG22 | 8:T:26:ILE:CD1 | 2.35 | 0.57 |
| 1:A:105:CYS:O | 1:A:114:LEU:HG | 2.04 | 0.57 |
| 1:A:1397:THR:HG22 | 1:A:1401:MET:SD | 2.44 | 0.57 |
| 2:B:1129:ARG:HG2 | 2:B:1131:GLY:N | 2.17 | 0.57 |
| 8:H:15:VAL:HG22 | 8:H:26:ILE:CD1 | 2.35 | 0.57 |
| 1:M:50:GLU:C | 1:M:52:GLY:H | 2.06 | 0.57 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 1:M:591:ARG:HB3 | 1:M:606:MET:N | 2.20 | 0.57 |
| 1:M:854:ASP:O | 1:M:1002:LEU:HD21 | 2.04 | 0.57 |
| 1:M:901:ASP:HA | 1:M:927:GLN:HE22 | 1.69 | 0.57 |
| 2:N:950:ASP:O | 2:N:951:GLN:HB2 | 2.03 | 0.57 |
| 5:Q:104:PHE:O | 5:Q:105:SER:CB | 2.52 | 0.57 |
| 1:A:317:GLN:OE1 | 1:A:321:ARG:HD3 | 2.05 | 0.57 |
| 1:A:901:ASP:HA | 1:A:927:GLN:HE22 | 1.70 | 0.57 |
| 1:A:1122:LEU:H | 1:A:1122:LEU:HD13 | 1.68 | 0.57 |
| 1:A:1403:CYS:SG | 1:A:1412:LEU:HD21 | 2.43 | 0.57 |
| 2:B:158:ILE:CG2 | 2:B:446:ILE:HD12 | 2.32 | 0.57 |
| 2:B:681:LEU:O | 2:B:687:ILE:CG2 | 2.52 | 0.57 |
| 2:B:995:ARG:O | 2:B:999:MET:HB2 | 2.03 | 0.57 |
| 10:J:1:MET:H3 | 10:J:55:LEU:H | 1.52 | 0.57 |
| 1:M:41:MET:CE | 1:M:41:MET:H | 2.17 | 0.57 |
| 1:M:100:LYS:O | 1:M:104:GLU:HG3 | 2.04 | 0.57 |
| 1:M:576:LYS:HE2 | 1:M:616:GLY:O | 2.03 | 0.57 |
| 8:T:40:LEU:HD22 | 8:T:122:MET:CE | 2.33 | 0.57 |
| 1:A:39:GLU:O | 1:A:53:LEU:HB3 | 2.04 | 0.57 |
| 1:A:63:ARG:HG2 | 1:A:74:MET:HE1 | 1.86 | 0.57 |
| 2:B:224:PRO:HG2 | 2:B:225:ILE:HD12 | 1.85 | 0.57 |
| 2:B:593:MET:O | 2:B:602:ILE:HD11 | 2.05 | 0.57 |
| 2:B:637:GLU:C | 2:B:639:LYS:H | 2.07 | 0.57 |
| 12:L:63:THR:HG22 | 12:L:64:LYS:N | 2.18 | 0.57 |
| 1:M:39:GLU:O | 1:M:53:LEU:HB3 | 2.04 | 0.57 |
| 1:M:887:ILE:HG13 | 1:M:944:LEU:HB2 | 1.84 | 0.57 |
| 1:M:1037:PHE:O | 1:M:1039:LEU:N | 2.38 | 0.57 |
| 2:N:593:MET:O | 2:N:602:ILE:HD11 | 2.04 | 0.57 |
| 2:N:634:GLU:O | 2:N:636:ASP:N | 2.35 | 0.57 |
| 2:N:839:MET:CE | 2:N:980:PHE:HB2 | 2.34 | 0.57 |
| 9:U:64:GLN:O | 9:U:66:PRO:HD3 | 2.04 | 0.57 |
| 1:A:447:ARG:HB3 | 1:A:479:TYR:HB3 | 1.86 | 0.57 |
| 1:A:591:ARG:HB3 | 1:A:606:MET:N | 2.20 | 0.57 |
| 2:B:82:ILE:HG13 | 2:B:116:TYR:O | 2.05 | 0.57 |
| 2:B:280:ALA:HA | 2:B:323:LEU:HD12 | 1.86 | 0.57 |
| 2:B:480:THR:HG22 | 2:B:481:TYR:N | 2.19 | 0.57 |
| 2:B:621:THR:O | 2:B:622:ASP:O | 2.21 | 0.57 |
| 8:H:81:PRO:O | 8:H:83:PRO:N | 2.38 | 0.57 |
| 1:M:317:GLN:OE1 | 1:M:321:ARG:HD3 | 2.05 | 0.57 |
| 1:M:1319:VAL:O | 1:M:1319:VAL:HG12 | 2.05 | 0.57 |
| 2:N:480:THR:HG22 | 2:N:481:TYR:N | 2.19 | 0.57 |
| 2:N:514:LEU:HB3 | 2:N:626:VAL:CG1 | 2.34 | 0.57 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:A:854:ASP:O | 1:A:1002:LEU:HD21 | 2.04 | 0.57 |
| 1:A:1210:THR:O | 1:A:1214:VAL:HG23 | 2.04 | 0.57 |
| 2:B:586:PRO:HG2 | 2:B:610:ARG:NH2 | 2.20 | 0.57 |
| 2:B:846:ILE:HG23 | 2:B:974:PRO:CG | 2.33 | 0.57 |
| 4:D:50:ALA:HB1 | 4:D:143:ALA:HB2 | 1.86 | 0.57 |
| 5:E:146:HIS:HB3 | 5:E:149:VAL:CG2 | 2.33 | 0.57 |
| 8:H:101:TYR:CE2 | 8:H:116:SER:HB2 | 2.40 | 0.57 |
| 1:M:1085:THR:O | 1:M:1085:THR:HG22 | 2.05 | 0.57 |
| 2:N:633:VAL:O | 2:N:634:GLU:O | 2.23 | 0.57 |
| 2:N:811:TYR:N | 2:N:811:TYR:CD1 | 2.73 | 0.57 |
| 2:N:918:ILE:HD12 | 2:N:935:ARG:NH1 | 2.19 | 0.57 |
| 3:O:242:GLN:C | 3:O:244:PHE:H | 2.08 | 0.57 |
| 1:A:225:PHE:CE2 | 1:A:232:PRO:HA | 2.40 | 0.57 |
| 1:A:318:LYS:O | 1:A:319:SER:CB | 2.52 | 0.57 |
| 1:A:769:GLN:OE1 | 1:A:817:HIS:CA | 2.49 | 0.57 |
| 1:A:1226:LEU:HD11 | 1:A:1242:CYS:HB2 | 1.87 | 0.57 |
| 2:B:831:SER:HB3 | 2:B:994:TYR:OH | 2.05 | 0.57 |
| 2:B:999:MET:CE | 2:B:1011:ILE:HD11 | 2.35 | 0.57 |
| 2:B:1096:ARG:HD2 | 2:B:1097:HIS:ND1 | 2.19 | 0.57 |
| 4:D:120:THR:O | 4:D:124:VAL:HG23 | 2.05 | 0.57 |
| 8:H:12:VAL:HG21 | 8:H:53:ASP:HB2 | 1.85 | 0.57 |
| 9:I:56:ALA:CB | 9:I:89:GLN:HG3 | 2.35 | 0.57 |
| 2:N:824:ILE:HG12 | 10:V:47:ARG:HH12 | 1.69 | 0.57 |
| 2:N:831:SER:HB3 | 2:N:994:TYR:OH | 2.05 | 0.57 |
| 2:N:945:GLU:O | 2:N:946:ASN:HB3 | 2.04 | 0.57 |
| 2:N:995:ARG:O | 2:N:999:MET:HB2 | 2.04 | 0.57 |
| 3:O:257:ASN:O | 3:O:261:GLU:N | 2.36 | 0.57 |
| 6:R:82:THR:HG22 | 6:R:84:TYR:N | 2.10 | 0.57 |
| 1:A:801:VAL:HG21 | 1:A:809:LEU:CD2 | 2.35 | 0.57 |
| 2:B:758:PHE:CE1 | 2:B:1027:ILE:HG22 | 2.40 | 0.57 |
| 3:C:242:GLN:C | 3:C:244:PHE:H | 2.08 | 0.57 |
| 1:M:353:VAL:O | 1:M:468:THR:HB | 2.04 | 0.57 |
| 1:M:898:TYR:CE2 | 1:M:1032:ARG:HD2 | 2.39 | 0.57 |
| 2:N:596:LEU:CD1 | 2:N:601:ALA:HB3 | 2.32 | 0.57 |
| 4:P:50:ALA:HB1 | 4:P:143:ALA:HB2 | 1.86 | 0.57 |
| 5:Q:146:HIS:HB3 | 5:Q:149:VAL:CG2 | 2.33 | 0.57 |
| 8:T:81:PRO:O | 8:T:83:PRO:N | 2.38 | 0.57 |
| 8:T:94:TYR:HE2 | 8:T:96:MET:CG | 2.18 | 0.57 |
| 1:A:333:LYS:N | 1:A:338:ARG:HB3 | 2.06 | 0.56 |
| 1:A:856:THR:CG2 | 1:A:858:ARG:HE | 2.17 | 0.56 |
| 1:A:1412:LEU:O | 1:A:1415:ALA:HB3 | 2.05 | 0.56 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 2:B:637:GLU:OE2 | 2:B:639:LYS:HB2 | 2.04 | 0.56 |
| 2:B:945:GLU:O | 2:B:946:ASN:HB3 | 2.04 | 0.56 |
| 3:C:56:VAL:HG11 | 10:J:59:PHE:CB | 2.30 | 0.56 |
| 1:M:988:ILE:HD11 | 1:M:1033:ILE:CG1 | 2.33 | 0.56 |
| 1:M:1210:THR:O | 1:M:1214:VAL:HG23 | 2.05 | 0.56 |
| 1:A:316:LEU:CD2 | 1:A:322:PRO:HA | 2.35 | 0.56 |
| 1:A:317:GLN:HB2 | 1:A:323:VAL:CG2 | 2.34 | 0.56 |
| 1:A:710:THR:HB | 1:A:713:GLU:CG | 2.32 | 0.56 |
| 2:B:882:THR:CG2 | 2:B:884:ARG:HB2 | 2.35 | 0.56 |
| 3:C:148:ARG:HG2 | 3:C:149:ASN:N | 2.19 | 0.56 |
| 4:D:53:LEU:CD2 | 4:D:108:TYR:HE2 | 2.19 | 0.56 |
| 8:H:98:GLY:HA3 | 8:H:117:PHE:HA | 1.87 | 0.56 |
| 8:H:101:TYR:HE2 | 8:H:116:SER:HB2 | 1.70 | 0.56 |
| 11:K:53:TYR:C | 11:K:55:ASP:N | 2.58 | 0.56 |
| 1:M:443:VAL:CG2 | 1:M:490:LEU:HD11 | 2.36 | 0.56 |
| 1:M:788:PHE:HE1 | 1:M:797:SER:HA | 1.69 | 0.56 |
| 2:N:637:GLU:OE2 | 2:N:639:LYS:HB2 | 2.04 | 0.56 |
| 2:N:637:GLU:HB2 | 2:N:641:ASN:O | 2.06 | 0.56 |
| 2:N:834:ASN:HB3 | 2:N:840:ILE:HG13 | 1.86 | 0.56 |
| 2:N:882:THR:CG2 | 2:N:884:ARG:HB2 | 2.35 | 0.56 |
| 2:N:1029:CYS:SG | 2:N:1088:GLY:HA3 | 2.45 | 0.56 |
| 9:U:106:CYS:SG | 9:U:108:LYS:HB2 | 2.45 | 0.56 |
| 1:A:107:CYS:N | 1:A:114:LEU:HD21 | 2.20 | 0.56 |
| 1:A:116:ASP:OD2 | 1:A:165:ARG:HD2 | 2.05 | 0.56 |
| 1:A:801:VAL:HA | 1:A:813:GLU:CG | 2.35 | 0.56 |
| 1:A:911:PRO:N | 1:A:917:ALA:HB1 | 2.19 | 0.56 |
| 1:A:1085:THR:HG22 | 1:A:1085:THR:O | 2.05 | 0.56 |
| 2:B:290:LEU:N | 2:B:290:LEU:CD2 | 2.67 | 0.56 |
| 2:B:811:TYR:N | 2:B:811:TYR:CD1 | 2.73 | 0.56 |
| 2:B:839:MET:CE | 2:B:980:PHE:HB2 | 2.34 | 0.56 |
| 2:B:1029:CYS:SG | 2:B:1088:GLY:HA3 | 2.45 | 0.56 |
| 2:B:1162:VAL:CG1 | 2:B:1163:CYS:N | 2.68 | 0.56 |
| 2:B:1207:LEU:HD13 | 2:B:1212:ILE:HG21 | 1.87 | 0.56 |
| 4:D:67:ARG:C | 4:D:69:ARG:H | 2.08 | 0.56 |
| 5:E:160:LYS:C | 5:E:162:GLN:H | 2.09 | 0.56 |
| 6:F:93:ILE:HD11 | 6:F:134:ILE:HD11 | 1.87 | 0.56 |
| 9:I:64:GLN:O | 9:I:66:PRO:HD3 | 2.04 | 0.56 |
| 9:I:106:CYS:SG | 9:I:108:LYS:HB2 | 2.45 | 0.56 |
| 10:J:10:CYS:SG | 10:J:42:ARG:NH2 | 2.79 | 0.56 |
| 11:K:42:LEU:O | 11:K:42:LEU:HD23 | 2.06 | 0.56 |
| 1:M:107:CYS:N | 1:M:114:LEU:HD21 | 2.20 | 0.56 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|------------------|--------------------------|-------------------|
| 1:M:200:ARG:CB | 1:M:200:ARG:HH11 | 2.19 | 0.56 |
| 1:M:318:LYS:O | 1:M:319:SER:CB | 2.52 | 0.56 |
| 1:M:1286:TYR:CG | 1:M:1287:MET:N | 2.74 | 0.56 |
| 2:N:422:TYR:HA | 2:N:425:MET:HE3 | 1.87 | 0.56 |
| 2:N:776:GLN:O | 2:N:1095:LEU:HA | 2.05 | 0.56 |
| 2:N:1117:GLN:HG2 | 2:N:1155:SER:OG | 2.05 | 0.56 |
| 4:P:38:GLN:HB2 | 7:S:5:LYS:NZ | 2.19 | 0.56 |
| 4:P:53:LEU:CD2 | 4:P:108:TYR:HE2 | 2.18 | 0.56 |
| 10:V:23:ARG:C | 10:V:25:LEU:H | 2.09 | 0.56 |
| 10:V:52:HIS:CD2 | 10:V:53:VAL:N | 2.73 | 0.56 |
| 1:A:568:LYS:CB | 8:H:95:VAL:H | 2.16 | 0.56 |
| 1:A:898:TYR:CE2 | 1:A:1032:ARG:HD2 | 2.39 | 0.56 |
| 1:A:1257:ALA:O | 1:A:1258:GLU:HB2 | 2.04 | 0.56 |
| 2:B:393:HIS:O | 2:B:395:GLY:N | 2.39 | 0.56 |
| 2:B:567:HIS:HA | 2:B:584:ARG:NH2 | 2.18 | 0.56 |
| 2:B:637:GLU:HB2 | 2:B:641:ASN:O | 2.06 | 0.56 |
| 2:B:860:MET:CG | 2:B:965:LYS:HG2 | 2.35 | 0.56 |
| 7:G:13:LEU:HD22 | 7:G:14:HIS:O | 2.06 | 0.56 |
| 1:M:105:CYS:O | 1:M:114:LEU:HG | 2.04 | 0.56 |
| 1:M:316:LEU:CD2 | 1:M:322:PRO:HA | 2.35 | 0.56 |
| 1:M:316:LEU:HD23 | 1:M:322:PRO:HA | 1.86 | 0.56 |
| 1:M:1226:LEU:HD11 | 1:M:1242:CYS:HB2 | 1.87 | 0.56 |
| 2:N:860:MET:CG | 2:N:965:LYS:HG2 | 2.35 | 0.56 |
| 11:W:42:LEU:O | 11:W:42:LEU:HD23 | 2.06 | 0.56 |
| 12:X:30:LYS:HG3 | 12:X:41:SER:CB | 2.36 | 0.56 |
| 1:A:776:ILE:HD12 | 1:A:816:PHE:HA | 1.87 | 0.56 |
| 1:A:1448:ILE:HG23 | 7:G:61:ILE:HD11 | 1.87 | 0.56 |
| 2:B:834:ASN:HB3 | 2:B:840:ILE:HG13 | 1.86 | 0.56 |
| 2:B:1132:GLU:O | 2:B:1135:ARG:HB3 | 2.05 | 0.56 |
| 1:M:911:PRO:N | 1:M:917:ALA:HB1 | 2.20 | 0.56 |
| 2:N:82:ILE:HG13 | 2:N:116:TYR:O | 2.05 | 0.56 |
| 2:N:393:HIS:O | 2:N:395:GLY:N | 2.39 | 0.56 |
| 2:N:1129:ARG:HG2 | 2:N:1131:GLY:N | 2.17 | 0.56 |
| 3:O:113:VAL:O | 3:O:144:LEU:HB2 | 2.05 | 0.56 |
| 4:P:120:THR:O | 4:P:124:VAL:HG23 | 2.05 | 0.56 |
| 1:A:788:PHE:HZ | 1:A:812:GLN:HE21 | 1.52 | 0.56 |
| 1:A:911:PRO:CB | 1:A:917:ALA:HB1 | 2.22 | 0.56 |
| 1:A:1166:GLU:O | 1:A:1168:ASP:N | 2.39 | 0.56 |
| 2:B:202:VAL:CG2 | 2:B:476:LEU:HD13 | 2.36 | 0.56 |
| 7:G:1:MET:O | 7:G:1:MET:SD | 2.64 | 0.56 |
| 8:H:94:TYR:HE2 | 8:H:96:MET:CG | 2.18 | 0.56 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 10:J:52:HIS:CD2 | 10:J:53:VAL:N | 2.73 | 0.56 |
| 12:L:40:PHE:O | 12:L:41:SER:CB | 2.53 | 0.56 |
| 1:M:858:ARG:CZ | 6:R:139:PRO:HG3 | 2.36 | 0.56 |
| 2:N:758:PHE:CE1 | 2:N:1027:ILE:HG22 | 2.40 | 0.56 |
| 2:N:839:MET:HE3 | 2:N:1010:LEU:HD11 | 1.86 | 0.56 |
| 2:N:864:LYS:N | 2:N:872:GLU:OE1 | 2.38 | 0.56 |
| 2:N:1207:LEU:HD13 | 2:N:1212:ILE:HG21 | 1.87 | 0.56 |
| 7:S:49:LEU:N | 7:S:49:LEU:HD23 | 2.21 | 0.56 |
| 7:S:88:ASP:CB | 7:S:144:ARG:HA | 2.23 | 0.56 |
| 7:S:145:LEU:CG | 7:S:146:LYS:N | 2.69 | 0.56 |
| 8:T:101:TYR:HE2 | 8:T:116:SER:HB2 | 1.71 | 0.56 |
| 9:U:56:ALA:CB | 9:U:89:GLN:HG3 | 2.35 | 0.56 |
| 10:V:10:CYS:SG | 10:V:42:ARG:NH2 | 2.79 | 0.56 |
| 12:X:40:PHE:O | 12:X:41:SER:CB | 2.53 | 0.56 |
| 2:B:206:GLN:HE22 | 2:B:492:ASN:CB | 2.15 | 0.56 |
| 2:B:216:VAL:HG12 | 2:B:229:ALA:HB2 | 1.86 | 0.56 |
| 1:M:116:ASP:OD2 | 1:M:165:ARG:HD2 | 2.05 | 0.56 |
| 1:M:842:LEU:O | 1:M:846:LEU:HG | 2.06 | 0.56 |
| 1:M:1096:VAL:HG13 | 1:M:1115:THR:CG2 | 2.36 | 0.56 |
| 1:M:1316:LEU:HD23 | 1:M:1341:VAL:CG2 | 2.34 | 0.56 |
| 2:N:744:HIS:CG | 2:N:745:PRO:HD2 | 2.41 | 0.56 |
| 2:N:892:LYS:O | 2:N:899:ILE:HG23 | 2.05 | 0.56 |
| 4:P:141:GLU:O | 4:P:143:ALA:N | 2.39 | 0.56 |
| 5:Q:160:LYS:C | 5:Q:162:GLN:H | 2.09 | 0.56 |
| 8:T:101:TYR:CE2 | 8:T:116:SER:HB2 | 2.40 | 0.56 |
| 8:T:142:LEU:HD12 | 8:T:142:LEU:N | 2.20 | 0.56 |
| 1:A:76:GLU:OE2 | 2:B:1159:ARG:NH1 | 2.38 | 0.56 |
| 1:A:200:ARG:HH11 | 1:A:200:ARG:CB | 2.19 | 0.56 |
| 1:A:380:THR:OG1 | 6:F:102:SER:O | 2.20 | 0.56 |
| 1:A:443:VAL:CG2 | 1:A:490:LEU:HD11 | 2.35 | 0.56 |
| 1:A:493:PRO:HB2 | 1:A:498:THR:HG22 | 1.88 | 0.56 |
| 1:A:538:ARG:HD2 | 8:H:20:TYR:HE1 | 1.71 | 0.56 |
| 1:A:858:ARG:CZ | 6:F:139:PRO:HG3 | 2.36 | 0.56 |
| 1:A:1215:ALA:CB | 1:A:1230:TRP:CZ3 | 2.89 | 0.56 |
| 1:A:1319:VAL:O | 1:A:1319:VAL:HG12 | 2.05 | 0.56 |
| 2:B:549:ASN:O | 2:B:551:LEU:N | 2.39 | 0.56 |
| 2:B:634:GLU:O | 2:B:636:ASP:N | 2.35 | 0.56 |
| 2:B:776:GLN:O | 2:B:1095:LEU:HA | 2.05 | 0.56 |
| 2:B:892:LYS:O | 2:B:899:ILE:HG23 | 2.05 | 0.56 |
| 2:B:1182:CYS:O | 2:B:1182:CYS:SG | 2.63 | 0.56 |
| 2:B:1202:LEU:O | 2:B:1206:GLU:HG3 | 2.05 | 0.56 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 4:D:38:GLN:HB2 | 7:G:5:LYS:NZ | 2.20 | 0.56 |
| 7:G:49:LEU:HD21 | 7:G:77:VAL:HG23 | 1.87 | 0.56 |
| 8:H:142:LEU:HD12 | 8:H:142:LEU:N | 2.20 | 0.56 |
| 1:M:538:ARG:HD2 | 8:T:20:TYR:HE1 | 1.71 | 0.56 |
| 1:M:542:ILE:HG22 | 1:M:547:VAL:HG23 | 1.88 | 0.56 |
| 1:M:989:ILE:CG1 | 1:M:990:HIS:H | 2.19 | 0.56 |
| 1:M:1412:LEU:O | 1:M:1415:ALA:HB3 | 2.05 | 0.56 |
| 2:N:549:ASN:O | 2:N:551:LEU:N | 2.39 | 0.56 |
| 2:N:1162:VAL:CG1 | 2:N:1163:CYS:N | 2.68 | 0.56 |
| 4:P:67:ARG:C | 4:P:69:ARG:H | 2.08 | 0.56 |
| 10:V:47:ARG:HE | 10:V:48:MET:CE | 2.19 | 0.56 |
| 1:A:392:TYR:HA | 1:A:395:ASN:HD22 | 1.71 | 0.56 |
| 1:A:842:LEU:O | 1:A:846:LEU:HG | 2.06 | 0.56 |
| 1:A:989:ILE:CG1 | 1:A:990:HIS:H | 2.18 | 0.56 |
| 2:B:304:GLU:O | 2:B:307:LYS:HB2 | 2.06 | 0.56 |
| 2:B:744:HIS:CG | 2:B:745:PRO:HD2 | 2.41 | 0.56 |
| 2:B:839:MET:HE3 | 2:B:1010:LEU:HD11 | 1.86 | 0.56 |
| 9:I:74:GLU:O | 9:I:74:GLU:HG3 | 2.06 | 0.56 |
| 10:J:47:ARG:HE | 10:J:48:MET:CE | 2.19 | 0.56 |
| 10:J:47:ARG:NE | 10:J:48:MET:HE2 | 2.21 | 0.56 |
| 2:N:101:PRO:HG3 | 2:N:172:LEU:HD21 | 1.88 | 0.56 |
| 2:N:202:VAL:CG2 | 2:N:476:LEU:HD13 | 2.36 | 0.56 |
| 2:N:304:GLU:O | 2:N:307:LYS:HB2 | 2.06 | 0.56 |
| 2:N:606:VAL:HG13 | 2:N:620:PHE:O | 2.06 | 0.56 |
| 2:N:824:ILE:HG22 | 2:N:1087:PHE:CE2 | 2.40 | 0.56 |
| 2:N:882:THR:HG22 | 2:N:884:ARG:N | 2.19 | 0.56 |
| 6:R:93:ILE:HD11 | 6:R:134:ILE:HD11 | 1.87 | 0.56 |
| 7:S:119:LEU:HD11 | 7:S:130:TYR:HB3 | 1.87 | 0.56 |
| 9:U:74:GLU:HG3 | 9:U:74:GLU:O | 2.06 | 0.56 |
| 1:A:73:GLY:O | 1:A:75:ALA:N | 2.38 | 0.56 |
| 1:A:459:HIS:CE1 | 1:A:508:VAL:HG21 | 2.41 | 0.56 |
| 1:A:547:VAL:HG21 | 1:A:573:TRP:CE3 | 2.41 | 0.56 |
| 1:A:770:MET:CG | 1:A:771:VAL:N | 2.68 | 0.56 |
| 1:A:788:PHE:HE1 | 1:A:797:SER:HA | 1.69 | 0.56 |
| 1:A:790:LYS:HG3 | 9:I:67:THR:O | 2.06 | 0.56 |
| 7:G:89:ALA:CB | 7:G:103:VAL:HG22 | 2.34 | 0.56 |
| 1:M:56:PRO:O | 1:M:57:LYS:CG | 2.54 | 0.56 |
| 1:M:231:ARG:HG3 | 1:M:234:TRP:CH2 | 2.41 | 0.56 |
| 1:M:591:ARG:HH22 | 1:M:621:LYS:HB3 | 1.68 | 0.56 |
| 1:M:1339:LEU:CB | 1:M:1347:THR:CB | 2.83 | 0.56 |
| 2:N:519:GLU:HA | 2:N:771:SER:HB3 | 1.88 | 0.56 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 7:S:1:MET:O | 7:S:1:MET:SD | 2.64 | 0.56 |
| 7:S:13:LEU:HD22 | 7:S:14:HIS:O | 2.06 | 0.56 |
| 8:T:62:SER:OG | 8:T:63:LEU:HG | 2.06 | 0.56 |
| 1:A:69:THR:C | 1:A:71:GLY:N | 2.50 | 0.55 |
| 1:A:107:CYS:HA | 1:A:172:GLN:OE1 | 2.06 | 0.55 |
| 1:A:1084:ASN:HB3 | 1:A:1086:PHE:CD1 | 2.41 | 0.55 |
| 1:A:1096:VAL:HG13 | 1:A:1115:THR:CG2 | 2.36 | 0.55 |
| 2:B:633:VAL:O | 2:B:634:GLU:O | 2.23 | 0.55 |
| 2:B:798:TYR:CD1 | 10:J:4:PRO:HG3 | 2.40 | 0.55 |
| 4:D:141:GLU:O | 4:D:143:ALA:N | 2.39 | 0.55 |
| 7:G:49:LEU:N | 7:G:49:LEU:HD23 | 2.21 | 0.55 |
| 12:L:30:LYS:HG3 | 12:L:41:SER:CB | 2.36 | 0.55 |
| 1:M:107:CYS:HA | 1:M:172:GLN:OE1 | 2.06 | 0.55 |
| 1:M:671:ILE:HG23 | 1:M:806:LEU:CD2 | 2.36 | 0.55 |
| 1:M:739:LYS:CB | 1:M:741:LEU:HD23 | 2.26 | 0.55 |
| 1:M:790:LYS:HG3 | 9:U:67:THR:O | 2.07 | 0.55 |
| 1:M:941:ARG:HG2 | 1:M:941:ARG:HH11 | 1.70 | 0.55 |
| 2:N:190:MET:HE2 | 2:N:485:LEU:HD23 | 1.88 | 0.55 |
| 2:N:1132:GLU:O | 2:N:1135:ARG:HB3 | 2.05 | 0.55 |
| 2:N:1182:CYS:O | 2:N:1182:CYS:SG | 2.63 | 0.55 |
| 8:T:98:GLY:HA3 | 8:T:117:PHE:HA | 1.87 | 0.55 |
| 10:V:47:ARG:NE | 10:V:48:MET:HE2 | 2.22 | 0.55 |
| 11:W:53:TYR:C | 11:W:55:ASP:N | 2.58 | 0.55 |
| 1:A:281:GLU:HG2 | 1:A:290:ILE:HD13 | 1.89 | 0.55 |
| 1:A:336:ARG:CA | 1:A:340:ASN:HD22 | 2.15 | 0.55 |
| 1:A:591:ARG:HG3 | 1:A:591:ARG:NH1 | 2.21 | 0.55 |
| 1:A:1286:TYR:CG | 1:A:1287:MET:N | 2.74 | 0.55 |
| 1:A:1343:GLY:HA3 | 5:E:183:VAL:HG23 | 1.89 | 0.55 |
| 2:B:231:ILE:HG23 | 2:B:231:ILE:O | 2.07 | 0.55 |
| 2:B:1079:LYS:HA | 3:C:26:LEU:HD21 | 1.89 | 0.55 |
| 1:M:102:VAL:HG11 | 1:M:212:PHE:CE2 | 2.41 | 0.55 |
| 1:M:896:LYS:O | 1:M:896:LYS:HG2 | 2.06 | 0.55 |
| 1:M:956:TRP:HB3 | 1:M:957:PRO:HD2 | 1.88 | 0.55 |
| 1:M:1148:VAL:HG11 | 1:M:1209:LEU:HD12 | 1.89 | 0.55 |
| 2:N:12:ILE:HD11 | 2:N:647:ILE:C | 2.27 | 0.55 |
| 2:N:586:PRO:HG2 | 2:N:610:ARG:NH2 | 2.20 | 0.55 |
| 3:O:212:PRO:HB3 | 3:O:213:PRO:HD2 | 1.89 | 0.55 |
| 7:S:94:VAL:CG1 | 7:S:94:VAL:CA | 2.78 | 0.55 |
| 8:T:12:VAL:CG2 | 8:T:53:ASP:HB2 | 2.37 | 0.55 |
| 9:U:106:CYS:O | 9:U:107:LYS:CB | 2.54 | 0.55 |
| 1:A:239:VAL:CG1 | 1:A:239:VAL:CA | 2.79 | 0.55 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:A:667:ILE:HD12 | 1:A:667:ILE:N | 2.22 | 0.55 |
| 1:A:896:LYS:HG2 | 1:A:896:LYS:O | 2.06 | 0.55 |
| 1:A:941:ARG:O | 1:A:945:ARG:HG3 | 2.06 | 0.55 |
| 2:B:606:VAL:HG13 | 2:B:620:PHE:O | 2.06 | 0.55 |
| 2:B:630:LEU:HD21 | 2:B:742:GLU:OE2 | 2.05 | 0.55 |
| 2:B:1103:ILE:HG23 | 2:B:1103:ILE:O | 2.06 | 0.55 |
| 2:B:1115:THR:O | 2:B:1116:ARG:CB | 2.55 | 0.55 |
| 3:C:47:LEU:CB | 3:C:158:ILE:HG21 | 2.20 | 0.55 |
| 7:G:145:LEU:CG | 7:G:146:LYS:N | 2.69 | 0.55 |
| 8:H:62:SER:OG | 8:H:63:LEU:HG | 2.07 | 0.55 |
| 9:I:106:CYS:O | 9:I:107:LYS:CB | 2.54 | 0.55 |
| 11:K:49:GLU:HG3 | 11:K:94:ILE:CG1 | 2.34 | 0.55 |
| 1:M:392:TYR:HA | 1:M:395:ASN:HD22 | 1.71 | 0.55 |
| 1:M:459:HIS:CE1 | 1:M:508:VAL:HG21 | 2.41 | 0.55 |
| 1:M:568:LYS:HB2 | 1:M:569:PRO:HD2 | 1.85 | 0.55 |
| 1:M:770:MET:CG | 1:M:771:VAL:N | 2.68 | 0.55 |
| 1:M:790:LYS:HE3 | 9:U:67:THR:OG1 | 2.07 | 0.55 |
| 1:M:941:ARG:O | 1:M:945:ARG:HG3 | 2.06 | 0.55 |
| 2:N:630:LEU:HD21 | 2:N:742:GLU:OE2 | 2.05 | 0.55 |
| 2:N:637:GLU:C | 2:N:639:LYS:H | 2.07 | 0.55 |
| 2:N:999:MET:HE2 | 2:N:1011:ILE:HD11 | 1.86 | 0.55 |
| 2:N:1079:LYS:HA | 3:O:26:LEU:HD21 | 1.88 | 0.55 |
| 3:O:47:LEU:CB | 3:O:158:ILE:HG21 | 2.21 | 0.55 |
| 1:A:130:ASP:O | 1:A:132:LYS:N | 2.40 | 0.55 |
| 1:A:941:ARG:HG2 | 1:A:941:ARG:HH11 | 1.70 | 0.55 |
| 2:B:785:TYR:HA | 2:B:788:ARG:HG3 | 1.89 | 0.55 |
| 3:C:213:PRO:O | 3:C:214:LYS:HB2 | 2.06 | 0.55 |
| 4:D:54:SER:HB3 | 4:D:113:ALA:HB1 | 1.89 | 0.55 |
| 1:M:73:GLY:O | 1:M:75:ALA:N | 2.38 | 0.55 |
| 1:M:90:VAL:HG12 | 1:M:91:PHE:N | 2.22 | 0.55 |
| 1:M:406:VAL:HG12 | 1:M:414:ILE:HD12 | 1.88 | 0.55 |
| 1:M:1215:ALA:CB | 1:M:1230:TRP:CZ3 | 2.89 | 0.55 |
| 1:M:1343:GLY:HA3 | 5:Q:183:VAL:HG23 | 1.89 | 0.55 |
| 1:M:1441:THR:CB | 2:N:1144:ALA:CB | 2.80 | 0.55 |
| 2:N:860:MET:HG3 | 2:N:965:LYS:HG2 | 1.88 | 0.55 |
| 3:O:213:PRO:O | 3:O:214:LYS:HB2 | 2.06 | 0.55 |
| 1:A:447:ARG:CD | 1:A:481:ALA:HB2 | 2.35 | 0.55 |
| 1:A:565:ALA:HB2 | 1:A:577:GLN:CD | 2.26 | 0.55 |
| 1:A:790:LYS:HE3 | 9:I:67:THR:OG1 | 2.07 | 0.55 |
| 1:A:956:TRP:HB3 | 1:A:957:PRO:HD2 | 1.88 | 0.55 |
| 1:A:1148:VAL:HG11 | 1:A:1209:LEU:HD12 | 1.89 | 0.55 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 2:B:422:TYR:HA | 2:B:425:MET:HE3 | 1.88 | 0.55 |
| 10:J:23:ARG:C | 10:J:25:LEU:H | 2.09 | 0.55 |
| 1:M:76:GLU:OE2 | 2:N:1159:ARG:NH1 | 2.38 | 0.55 |
| 1:M:591:ARG:HG3 | 1:M:591:ARG:NH1 | 2.21 | 0.55 |
| 1:M:766:VAL:HG21 | 1:M:809:LEU:HD11 | 1.89 | 0.55 |
| 2:N:206:GLN:HE22 | 2:N:492:ASN:CB | 2.15 | 0.55 |
| 4:P:108:TYR:C | 4:P:108:TYR:CD2 | 2.80 | 0.55 |
| 12:X:63:THR:HG22 | 12:X:64:LYS:H | 1.71 | 0.55 |
| 1:A:90:VAL:HG12 | 1:A:298:GLN:NE2 | 2.22 | 0.55 |
| 2:B:101:PRO:HG3 | 2:B:172:LEU:HD21 | 1.88 | 0.55 |
| 2:B:824:ILE:HG22 | 2:B:1087:PHE:CE2 | 2.40 | 0.55 |
| 3:C:212:PRO:HB3 | 3:C:213:PRO:HD2 | 1.89 | 0.55 |
| 5:E:134:PHE:HD2 | 5:E:139:LEU:HD21 | 1.72 | 0.55 |
| 1:M:256:THR:OG1 | 2:N:918:ILE:HG21 | 2.03 | 0.55 |
| 1:M:281:GLU:HG2 | 1:M:290:ILE:HD13 | 1.88 | 0.55 |
| 1:M:472:ASN:OD1 | 1:M:473:LEU:N | 2.40 | 0.55 |
| 1:M:504:GLN:HE21 | 6:R:90:ARG:NH2 | 1.87 | 0.55 |
| 1:M:799:GLY:CA | 1:M:816:PHE:CD1 | 2.84 | 0.55 |
| 1:M:1166:GLU:O | 1:M:1168:ASP:N | 2.39 | 0.55 |
| 2:N:12:ILE:CG2 | 2:N:652:ILE:HD11 | 2.36 | 0.55 |
| 2:N:1202:LEU:O | 2:N:1206:GLU:HG3 | 2.05 | 0.55 |
| 1:A:472:ASN:OD1 | 1:A:473:LEU:N | 2.40 | 0.55 |
| 1:A:1239:ILE:CG2 | 1:A:1240:ILE:N | 2.70 | 0.55 |
| 2:B:466:MET:CE | 2:B:467:SER:HA | 2.37 | 0.55 |
| 2:B:519:GLU:HA | 2:B:771:SER:HB3 | 1.88 | 0.55 |
| 2:B:882:THR:HG22 | 2:B:884:ARG:N | 2.19 | 0.55 |
| 2:B:999:MET:HE2 | 2:B:1011:ILE:HD11 | 1.87 | 0.55 |
| 1:M:130:ASP:O | 1:M:132:LYS:N | 2.40 | 0.55 |
| 1:M:547:VAL:HG21 | 1:M:573:TRP:CE3 | 2.41 | 0.55 |
| 1:M:710:THR:HB | 1:M:713:GLU:CG | 2.32 | 0.55 |
| 2:N:458:ASN:HD22 | 2:N:458:ASN:N | 2.03 | 0.55 |
| 2:N:882:THR:HG21 | 2:N:935:ARG:HA | 1.87 | 0.55 |
| 2:N:1021:MET:O | 2:N:1023:VAL:HG23 | 2.07 | 0.55 |
| 2:N:1115:THR:O | 2:N:1116:ARG:CB | 2.55 | 0.55 |
| 7:S:49:LEU:HD21 | 7:S:77:VAL:HG23 | 1.88 | 0.55 |
| 11:W:49:GLU:HG3 | 11:W:94:ILE:CG1 | 2.34 | 0.55 |
| 1:A:90:VAL:HG12 | 1:A:91:PHE:N | 2.21 | 0.55 |
| 1:A:1316:LEU:HD23 | 1:A:1341:VAL:CG2 | 2.34 | 0.55 |
| 1:A:1453:LEU:HD21 | 7:G:18:PHE:CA | 2.36 | 0.55 |
| 2:B:1021:MET:O | 2:B:1023:VAL:HG23 | 2.07 | 0.55 |
| 2:B:1166:CYS:HB3 | 4:D:15:ALA:CA | 2.35 | 0.55 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|------------------|--------------------------|-------------------|
| 3:C:113:VAL:O | 3:C:144:LEU:HB2 | 2.06 | 0.55 |
| 3:C:161:LYS:O | 3:C:170:TRP:NE1 | 2.40 | 0.55 |
| 1:M:90:VAL:HG12 | 1:M:298:GLN:NE2 | 2.22 | 0.55 |
| 1:M:565:ALA:HB2 | 1:M:577:GLN:CD | 2.26 | 0.55 |
| 2:N:878:THR:O | 2:N:879:ARG:C | 2.45 | 0.55 |
| 2:N:1151:LEU:N | 2:N:1151:LEU:CD1 | 2.70 | 0.55 |
| 3:O:167:HIS:CD2 | 3:O:168:ALA:N | 2.75 | 0.55 |
| 9:U:65:ASP:HB3 | 9:U:68:LEU:HD12 | 1.89 | 0.55 |
| 1:A:231:ARG:HG3 | 1:A:234:TRP:CH2 | 2.41 | 0.55 |
| 1:A:476:THR:CG2 | 1:A:477:SER:N | 2.70 | 0.55 |
| 1:A:858:ARG:HA | 1:A:865:ILE:HD12 | 1.89 | 0.55 |
| 1:A:859:ASN:ND2 | 1:A:859:ASN:C | 2.60 | 0.55 |
| 1:A:1450:GLU:HG3 | 7:G:22:MET:HG2 | 1.89 | 0.55 |
| 3:C:115:SER:CB | 3:C:142:ILE:CG1 | 2.84 | 0.55 |
| 3:C:167:HIS:CD2 | 3:C:168:ALA:N | 2.75 | 0.55 |
| 5:E:16:ARG:HG3 | 5:E:16:ARG:HH11 | 1.72 | 0.55 |
| 9:I:65:ASP:HB3 | 9:I:68:LEU:HD12 | 1.89 | 0.55 |
| 1:M:590:GLN:HG2 | 1:M:607:LEU:HD13 | 1.87 | 0.55 |
| 1:M:1344:ILE:HD12 | 1:M:1382:GLY:O | 2.06 | 0.55 |
| 2:N:51:TRP:CG | 2:N:51:TRP:CA | 2.85 | 0.55 |
| 2:N:785:TYR:HA | 2:N:788:ARG:HG3 | 1.89 | 0.55 |
| 2:N:798:TYR:CD1 | 10:V:4:PRO:HG3 | 2.39 | 0.55 |
| 3:O:97:VAL:C | 3:O:98:LEU:HD23 | 2.26 | 0.55 |
| 4:P:54:SER:HB3 | 4:P:113:ALA:HB1 | 1.89 | 0.55 |
| 5:Q:134:PHE:HD2 | 5:Q:139:LEU:HD21 | 1.72 | 0.55 |
| 1:A:56:PRO:O | 1:A:57:LYS:CG | 2.54 | 0.55 |
| 1:A:102:VAL:HG11 | 1:A:212:PHE:CE2 | 2.41 | 0.55 |
| 1:A:406:VAL:HG12 | 1:A:414:ILE:HD12 | 1.88 | 0.55 |
| 1:A:590:GLN:HG2 | 1:A:607:LEU:HD13 | 1.87 | 0.55 |
| 1:A:591:ARG:HH22 | 1:A:621:LYS:HB3 | 1.68 | 0.55 |
| 1:A:786:PRO:HB2 | 2:B:700:ILE:HD12 | 1.88 | 0.55 |
| 1:A:1006:ASN:ND2 | 5:E:166:ARG:CD | 2.67 | 0.55 |
| 2:B:871:VAL:HG12 | 2:B:872:GLU:N | 2.22 | 0.55 |
| 9:I:5:ARG:HD3 | 9:I:36:GLU:OE2 | 2.06 | 0.55 |
| 1:M:12:ARG:HG3 | 2:N:1192:TYR:HD2 | 1.72 | 0.55 |
| 1:M:333:LYS:O | 1:M:334:GLU:CB | 2.52 | 0.55 |
| 1:M:858:ARG:HA | 1:M:865:ILE:HD12 | 1.89 | 0.55 |
| 2:N:466:MET:CE | 2:N:467:SER:HA | 2.37 | 0.55 |
| 2:N:1004:GLU:HB2 | 2:N:1006:ILE:CG1 | 2.35 | 0.55 |
| 5:Q:16:ARG:HG3 | 5:Q:16:ARG:HH11 | 1.72 | 0.55 |
| 9:U:5:ARG:HD3 | 9:U:36:GLU:OE2 | 2.06 | 0.55 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:A:40:ILE:HB | 1:A:41:MET:HE2 | 1.89 | 0.54 |
| 1:A:148:CYS:O | 1:A:169:GLY:HA2 | 2.07 | 0.54 |
| 1:A:1122:LEU:CD1 | 1:A:1122:LEU:N | 2.69 | 0.54 |
| 1:A:1439:MET:O | 1:A:1440:GLY:C | 2.46 | 0.54 |
| 2:B:12:ILE:CG2 | 2:B:652:ILE:HD11 | 2.36 | 0.54 |
| 2:B:279:ARG:HA | 2:B:283:VAL:O | 2.07 | 0.54 |
| 2:B:828:ALA:O | 2:B:834:ASN:ND2 | 2.40 | 0.54 |
| 1:M:402:GLY:C | 1:M:436:HIS:CD2 | 2.80 | 0.54 |
| 1:M:493:PRO:HB2 | 1:M:498:THR:HG22 | 1.88 | 0.54 |
| 1:M:667:ILE:HD12 | 1:M:667:ILE:N | 2.22 | 0.54 |
| 1:M:1142:TYR:CG | 1:M:1280:PRO:HA | 2.42 | 0.54 |
| 1:M:1268:ALA:C | 1:M:1270:MET:N | 2.61 | 0.54 |
| 1:M:1427:VAL:O | 1:M:1431:VAL:HG23 | 2.08 | 0.54 |
| 2:N:231:ILE:O | 2:N:231:ILE:HG23 | 2.07 | 0.54 |
| 2:N:821:GLN:NE2 | 2:N:851:PHE:H | 1.98 | 0.54 |
| 1:A:739:LYS:H | 1:A:739:LYS:CD | 2.06 | 0.54 |
| 1:A:1335:PHE:N | 1:A:1335:PHE:CD2 | 2.76 | 0.54 |
| 1:A:1337:GLU:O | 1:A:1340:SER:N | 2.41 | 0.54 |
| 2:B:1168:LEU:HD13 | 2:B:1208:MET:CE | 2.37 | 0.54 |
| 2:B:1169:MET:HE2 | 2:B:1204:PHE:HB2 | 1.89 | 0.54 |
| 1:M:256:THR:N | 2:N:935:ARG:HH12 | 2.01 | 0.54 |
| 1:M:822:ARG:CD | 2:N:505:ARG:O | 2.55 | 0.54 |
| 1:M:843:VAL:C | 1:M:845:ALA:H | 2.10 | 0.54 |
| 1:M:1281:GLY:O | 1:M:1313:GLY:HA3 | 2.07 | 0.54 |
| 1:M:1393:ASN:CG | 1:M:1405:PHE:HD2 | 2.09 | 0.54 |
| 2:N:828:ALA:O | 2:N:834:ASN:ND2 | 2.40 | 0.54 |
| 3:O:161:LYS:O | 3:O:170:TRP:NE1 | 2.40 | 0.54 |
| 4:P:114:ARG:C | 4:P:115:PHE:CD1 | 2.81 | 0.54 |
| 7:S:132:SER:HB3 | 7:S:135:GLU:H | 1.72 | 0.54 |
| 1:A:340:ASN:O | 2:B:1117:GLN:NE2 | 2.37 | 0.54 |
| 1:A:542:ILE:HG22 | 1:A:547:VAL:HG23 | 1.88 | 0.54 |
| 1:A:549:ASN:HA | 11:K:60:ALA:HB1 | 1.90 | 0.54 |
| 1:A:656:TYR:O | 1:A:659:LEU:HB3 | 2.07 | 0.54 |
| 1:A:671:ILE:HG23 | 1:A:806:LEU:CD2 | 2.36 | 0.54 |
| 1:A:1075:GLY:O | 1:A:1078:ALA:HB3 | 2.07 | 0.54 |
| 1:A:1232:GLU:O | 1:A:1234:ASN:N | 2.41 | 0.54 |
| 2:B:12:ILE:HD11 | 2:B:647:ILE:C | 2.27 | 0.54 |
| 2:B:12:ILE:HD13 | 2:B:647:ILE:CG1 | 2.35 | 0.54 |
| 2:B:860:MET:HG3 | 2:B:965:LYS:HG2 | 1.89 | 0.54 |
| 3:C:97:VAL:C | 3:C:98:LEU:HD23 | 2.26 | 0.54 |
| 4:D:114:ARG:C | 4:D:115:PHE:CD1 | 2.81 | 0.54 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|------------------|--------------------------|-------------------|
| 8:H:12:VAL:CG2 | 8:H:53:ASP:HB2 | 2.37 | 0.54 |
| 1:M:786:PRO:HB2 | 2:N:700:ILE:HD12 | 1.88 | 0.54 |
| 1:M:934:TYR:O | 1:M:938:VAL:HG23 | 2.06 | 0.54 |
| 2:N:184:LYS:CD | 2:N:787:VAL:HG11 | 2.38 | 0.54 |
| 2:N:279:ARG:HA | 2:N:283:VAL:O | 2.07 | 0.54 |
| 2:N:1165:ILE:HG23 | 4:P:13:ARG:C | 2.18 | 0.54 |
| 5:Q:174:LEU:HD23 | 5:Q:175:PRO:CD | 2.28 | 0.54 |
| 10:V:13:VAL:O | 10:V:14:VAL:CG2 | 2.55 | 0.54 |
| 1:A:402:GLY:C | 1:A:436:HIS:CD2 | 2.81 | 0.54 |
| 1:A:561:VAL:CG2 | 8:H:77:SER:HB2 | 2.38 | 0.54 |
| 1:A:1118:LEU:N | 1:A:1311:THR:CG2 | 2.64 | 0.54 |
| 1:A:1344:ILE:HD12 | 1:A:1382:GLY:O | 2.06 | 0.54 |
| 2:B:847:ASP:HB3 | 3:C:167:HIS:CD2 | 2.43 | 0.54 |
| 7:G:132:SER:HB3 | 7:G:135:GLU:H | 1.73 | 0.54 |
| 1:M:561:VAL:CG2 | 8:T:77:SER:HB2 | 2.38 | 0.54 |
| 1:M:1268:ALA:C | 1:M:1270:MET:H | 2.11 | 0.54 |
| 1:M:1337:GLU:O | 1:M:1340:SER:N | 2.40 | 0.54 |
| 1:M:1371:MET:H | 1:M:1371:MET:HE3 | 1.73 | 0.54 |
| 1:M:1393:ASN:OD1 | 1:M:1405:PHE:CD2 | 2.58 | 0.54 |
| 2:N:92:ALA:O | 2:N:93:ASP:CB | 2.55 | 0.54 |
| 2:N:381:CYS:C | 2:N:383:LEU:H | 2.10 | 0.54 |
| 2:N:847:ASP:HB3 | 3:O:167:HIS:CD2 | 2.43 | 0.54 |
| 11:W:91:CYS:O | 11:W:94:ILE:HB | 2.08 | 0.54 |
| 1:A:244:PRO:O | 1:A:247:VAL:HB | 2.07 | 0.54 |
| 1:A:373:LYS:HA | 1:A:436:HIS:CE1 | 2.42 | 0.54 |
| 1:A:769:GLN:CG | 1:A:817:HIS:CA | 2.72 | 0.54 |
| 2:B:166:ARG:HG3 | 2:B:166:ARG:NH1 | 2.22 | 0.54 |
| 2:B:286:ASP:H | 9:I:12:ASN:ND2 | 2.05 | 0.54 |
| 2:B:381:CYS:C | 2:B:383:LEU:H | 2.10 | 0.54 |
| 2:B:458:ASN:HD22 | 2:B:458:ASN:N | 2.03 | 0.54 |
| 2:B:821:GLN:NE2 | 2:B:851:PHE:H | 1.98 | 0.54 |
| 3:C:38:ALA:CA | 3:C:164:ALA:HB3 | 2.35 | 0.54 |
| 3:C:252:GLN:CG | 11:K:95:ILE:HG23 | 2.38 | 0.54 |
| 5:E:21:MET:HE3 | 5:E:25:ARG:HE | 1.71 | 0.54 |
| 10:J:13:VAL:O | 10:J:14:VAL:CG2 | 2.55 | 0.54 |
| 1:M:148:CYS:O | 1:M:169:GLY:HA2 | 2.07 | 0.54 |
| 1:M:1075:GLY:O | 1:M:1078:ALA:HB3 | 2.07 | 0.54 |
| 2:N:1168:LEU:HD13 | 2:N:1208:MET:CE | 2.37 | 0.54 |
| 7:S:1:MET:HE1 | 7:S:80:LYS:H | 1.72 | 0.54 |
| 8:T:80:PRO:CB | 8:T:81:PRO:CD | 2.85 | 0.54 |
| 8:T:88:LEU:C | 8:T:90:ASP:N | 2.58 | 0.54 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|------------------|--------------------------|-------------------|
| 10:V:27:GLU:C | 10:V:29:LYS:H | 2.10 | 0.54 |
| 1:A:739:LYS:CB | 1:A:741:LEU:HD23 | 2.26 | 0.54 |
| 1:A:843:VAL:C | 1:A:845:ALA:H | 2.10 | 0.54 |
| 1:A:1281:GLY:O | 1:A:1313:GLY:HA3 | 2.07 | 0.54 |
| 2:B:519:GLU:CD | 2:B:752:ALA:HB2 | 2.27 | 0.54 |
| 2:B:573:ILE:CG2 | 2:B:581:GLY:O | 2.56 | 0.54 |
| 2:B:1151:LEU:N | 2:B:1151:LEU:CD1 | 2.70 | 0.54 |
| 3:C:114:TYR:HB3 | 3:C:140:GLN:O | 2.08 | 0.54 |
| 8:H:61:ASN:HB3 | 8:H:138:ASN:HB3 | 1.90 | 0.54 |
| 11:K:31:ILE:CG1 | 11:K:32:ILE:N | 2.71 | 0.54 |
| 12:L:60:LYS:O | 12:L:61:ALA:O | 2.26 | 0.54 |
| 1:M:822:ARG:HG2 | 2:N:507:LEU:N | 2.22 | 0.54 |
| 1:M:897:ARG:HD3 | 1:M:898:TYR:CE1 | 2.43 | 0.54 |
| 1:M:1239:ILE:CG2 | 1:M:1240:ILE:N | 2.70 | 0.54 |
| 2:N:797:TYR:HE1 | 2:N:854:LEU:HD23 | 1.73 | 0.54 |
| 2:N:981:ALA:HB2 | 2:N:987:LYS:HA | 1.90 | 0.54 |
| 3:O:38:ALA:CA | 3:O:164:ALA:HB3 | 2.35 | 0.54 |
| 3:O:114:TYR:HB3 | 3:O:140:GLN:O | 2.08 | 0.54 |
| 7:S:114:LEU:HB3 | 7:S:162:SER:HB3 | 1.89 | 0.54 |
| 1:A:12:ARG:HG3 | 2:B:1192:TYR:HD2 | 1.72 | 0.54 |
| 1:A:934:TYR:O | 1:A:938:VAL:HG23 | 2.06 | 0.54 |
| 1:A:1268:ALA:C | 1:A:1270:MET:H | 2.11 | 0.54 |
| 2:B:54:PRO:CG | 2:B:55:ARG:H | 2.21 | 0.54 |
| 2:B:550:PHE:O | 2:B:550:PHE:HD2 | 1.90 | 0.54 |
| 2:B:797:TYR:HE1 | 2:B:854:LEU:HD23 | 1.73 | 0.54 |
| 3:C:96:VAL:CG1 | 3:C:98:LEU:HD21 | 2.38 | 0.54 |
| 3:C:251:LEU:HD11 | 11:K:45:LEU:CD2 | 2.38 | 0.54 |
| 4:D:4:SER:O | 4:D:5:THR:CB | 2.56 | 0.54 |
| 8:H:58:THR:HG22 | 8:H:59:LEU:H | 1.72 | 0.54 |
| 8:H:80:PRO:CB | 8:H:81:PRO:CD | 2.85 | 0.54 |
| 1:M:373:LYS:HA | 1:M:436:HIS:CE1 | 2.42 | 0.54 |
| 1:M:496:GLU:CD | 6:R:117:PRO:HG2 | 2.27 | 0.54 |
| 1:M:1076:GLU:C | 1:M:1078:ALA:H | 2.10 | 0.54 |
| 1:M:1122:LEU:CD1 | 1:M:1122:LEU:N | 2.70 | 0.54 |
| 2:N:33:GLN:HB2 | 2:N:401:LEU:HD21 | 1.89 | 0.54 |
| 2:N:54:PRO:CG | 2:N:55:ARG:H | 2.21 | 0.54 |
| 2:N:1103:ILE:HG23 | 2:N:1103:ILE:O | 2.06 | 0.54 |
| 3:O:96:VAL:CG1 | 3:O:98:LEU:HD21 | 2.38 | 0.54 |
| 7:S:74:TYR:H | 7:S:74:TYR:HD2 | 1.56 | 0.54 |
| 7:S:153:ASP:HB3 | 7:S:156:GLU:O | 2.08 | 0.54 |
| 1:A:1076:GLU:C | 1:A:1078:ALA:H | 2.11 | 0.54 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:1268:ALA:C | 1:A:1270:MET:N | 2.61 | 0.54 |
| 1:A:1450:GLU:HG3 | 7:G:22:MET:CB | 2.38 | 0.54 |
| 2:B:33:GLN:HB2 | 2:B:401:LEU:HD21 | 1.89 | 0.54 |
| 2:B:612:ILE:C | 2:B:614:GLU:H | 2.12 | 0.54 |
| 2:B:878:THR:O | 2:B:879:ARG:C | 2.45 | 0.54 |
| 2:B:981:ALA:HB2 | 2:B:987:LYS:HA | 1.90 | 0.54 |
| 2:B:1099:VAL:O | 2:B:1101:ASP:N | 2.41 | 0.54 |
| 7:G:119:LEU:HD11 | 7:G:130:TYR:HB3 | 1.87 | 0.54 |
| 11:K:91:CYS:O | 11:K:94:ILE:HB | 2.08 | 0.54 |
| 1:M:312:GLN:O | 1:M:313:PRO:C | 2.46 | 0.54 |
| 1:M:1287:MET:HG2 | 1:M:1309:LEU:CD2 | 2.38 | 0.54 |
| 1:M:1439:MET:O | 1:M:1440:GLY:C | 2.46 | 0.54 |
| 2:N:244:THR:HG22 | 2:N:245:MET:N | 2.23 | 0.54 |
| 2:N:458:ASN:N | 2:N:458:ASN:ND2 | 2.55 | 0.54 |
| 3:O:114:TYR:CD2 | 3:O:140:GLN:HB2 | 2.43 | 0.54 |
| 3:O:175:ALA:HB3 | 10:V:42:ARG:HH22 | 1.69 | 0.54 |
| 4:P:38:GLN:HB2 | 7:S:5:LYS:HZ1 | 1.73 | 0.54 |
| 4:P:65:LYS:C | 4:P:67:ARG:H | 2.11 | 0.54 |
| 8:T:61:ASN:HB3 | 8:T:138:ASN:HB3 | 1.90 | 0.54 |
| 10:V:1:MET:H3 | 10:V:55:LEU:H | 1.53 | 0.54 |
| 11:W:29:ASN:O | 11:W:76:GLN:HG3 | 2.07 | 0.54 |
| 1:A:361:GLU:HB2 | 1:A:364:GLN:HG3 | 1.89 | 0.54 |
| 1:A:801:VAL:HG13 | 1:A:809:LEU:CG | 2.34 | 0.54 |
| 2:B:157:HIS:C | 2:B:158:ILE:HG13 | 2.28 | 0.54 |
| 2:B:458:ASN:N | 2:B:458:ASN:ND2 | 2.56 | 0.54 |
| 2:B:575:VAL:O | 2:B:575:VAL:HG12 | 2.08 | 0.54 |
| 2:B:704:PRO:HG2 | 2:B:705:GLU:H | 1.72 | 0.54 |
| 2:B:1156:ASP:O | 2:B:1157:ALA:HB3 | 2.07 | 0.54 |
| 4:D:53:LEU:H | 4:D:147:SER:HB3 | 1.73 | 0.54 |
| 4:D:108:TYR:CD2 | 4:D:108:TYR:C | 2.80 | 0.54 |
| 9:I:32:CYS:SG | 9:I:33:ASP:N | 2.81 | 0.54 |
| 11:K:29:ASN:O | 11:K:76:GLN:HG3 | 2.08 | 0.54 |
| 11:K:65:HIS:HD2 | 11:K:67:LEU:H | 1.54 | 0.54 |
| 1:M:400:HIS:CB | 1:M:401:PRO:HD3 | 2.36 | 0.54 |
| 1:M:447:ARG:CD | 1:M:481:ALA:HB2 | 2.35 | 0.54 |
| 1:M:656:TYR:O | 1:M:659:LEU:HB3 | 2.07 | 0.54 |
| 1:M:1118:LEU:N | 1:M:1311:THR:CG2 | 2.64 | 0.54 |
| 2:N:567:HIS:HA | 2:N:584:ARG:NH2 | 2.18 | 0.54 |
| 2:N:770:GLN:CD | 2:N:983:ARG:HA | 2.28 | 0.54 |
| 2:N:1099:VAL:O | 2:N:1101:ASP:N | 2.41 | 0.54 |
| 4:P:4:SER:O | 4:P:5:THR:CB | 2.56 | 0.54 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 7:S:77:VAL:O | 7:S:77:VAL:HG12 | 2.07 | 0.54 |
| 11:W:31:ILE:CG1 | 11:W:32:ILE:N | 2.71 | 0.54 |
| 1:A:11:LEU:HD12 | 1:A:12:ARG:N | 2.23 | 0.54 |
| 2:B:184:LYS:CD | 2:B:787:VAL:HG11 | 2.38 | 0.54 |
| 2:B:387:ASP:CG | 9:I:91:ARG:CB | 2.74 | 0.54 |
| 2:B:864:LYS:N | 2:B:872:GLU:OE1 | 2.38 | 0.54 |
| 5:E:77:LEU:HA | 5:E:106:THR:HB | 1.90 | 0.54 |
| 7:G:77:VAL:O | 7:G:77:VAL:HG12 | 2.07 | 0.54 |
| 10:J:27:GLU:C | 10:J:29:LYS:H | 2.10 | 0.54 |
| 12:L:63:THR:HG22 | 12:L:64:LYS:H | 1.71 | 0.54 |
| 1:M:344:LYS:HE3 | 2:N:1151:LEU:CA | 2.38 | 0.54 |
| 1:M:370:SER:HB3 | 11:W:2:ASN:HD21 | 1.72 | 0.54 |
| 1:M:476:THR:CG2 | 1:M:477:SER:N | 2.70 | 0.54 |
| 1:M:538:ARG:NH2 | 8:T:25:ARG:HH21 | 2.06 | 0.54 |
| 2:N:871:VAL:HG12 | 2:N:872:GLU:N | 2.22 | 0.54 |
| 3:O:252:GLN:CG | 11:W:95:ILE:HG23 | 2.38 | 0.54 |
| 5:Q:156:SER:C | 5:Q:158:GLY:N | 2.61 | 0.54 |
| 8:T:58:THR:HG22 | 8:T:59:LEU:H | 1.72 | 0.54 |
| 1:A:538:ARG:NH2 | 8:H:25:ARG:HH21 | 2.06 | 0.53 |
| 1:A:897:ARG:HD3 | 1:A:898:TYR:CE1 | 2.43 | 0.53 |
| 1:A:1222:PHE:O | 1:A:1223:SER:HB2 | 2.08 | 0.53 |
| 1:A:1427:VAL:O | 1:A:1431:VAL:HG23 | 2.08 | 0.53 |
| 5:E:123:ILE:HA | 5:E:131:ILE:HD12 | 1.91 | 0.53 |
| 7:G:74:TYR:H | 7:G:74:TYR:HD2 | 1.56 | 0.53 |
| 1:M:336:ARG:CA | 1:M:340:ASN:HD22 | 2.15 | 0.53 |
| 1:M:546:GLN:HG2 | 1:M:550:MET:CE | 2.39 | 0.53 |
| 1:M:1232:GLU:O | 1:M:1234:ASN:N | 2.40 | 0.53 |
| 1:M:1379:THR:HG23 | 1:M:1380:SER:N | 2.24 | 0.53 |
| 2:N:573:ILE:CG2 | 2:N:581:GLY:O | 2.56 | 0.53 |
| 9:U:106:CYS:O | 9:U:107:LYS:HB2 | 2.09 | 0.53 |
| 12:X:60:LYS:O | 12:X:61:ALA:O | 2.26 | 0.53 |
| 2:B:770:GLN:CD | 2:B:983:ARG:HA | 2.29 | 0.53 |
| 4:D:7:THR:CB | 7:G:42:PHE:HE2 | 2.21 | 0.53 |
| 9:I:106:CYS:O | 9:I:107:LYS:HB2 | 2.08 | 0.53 |
| 1:M:549:ASN:HA | 11:W:60:ALA:HB1 | 1.90 | 0.53 |
| 1:M:776:ILE:CG1 | 1:M:816:PHE:HB3 | 2.37 | 0.53 |
| 1:M:1163:THR:HG22 | 1:M:1164:VAL:H | 1.72 | 0.53 |
| 1:M:1343:GLY:O | 1:M:1345:GLU:N | 2.41 | 0.53 |
| 2:N:286:ASP:H | 9:U:12:ASN:ND2 | 2.05 | 0.53 |
| 2:N:612:ILE:C | 2:N:614:GLU:H | 2.12 | 0.53 |
| 2:N:975:GLN:O | 2:N:977:GLY:N | 2.40 | 0.53 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|------------------|--------------------------|-------------------|
| 2:N:1152:MET:HE3 | 2:N:1157:ALA:HA | 1.89 | 0.53 |
| 2:N:1169:MET:HE2 | 2:N:1204:PHE:HB2 | 1.90 | 0.53 |
| 1:A:312:GLN:O | 1:A:313:PRO:C | 2.46 | 0.53 |
| 1:A:370:SER:HB3 | 11:K:2:ASN:HD21 | 1.72 | 0.53 |
| 1:A:811:PRO:HB3 | 2:B:512:TRP:HH2 | 1.73 | 0.53 |
| 1:A:1376:ASP:HA | 1:A:1379:THR:CG2 | 2.38 | 0.53 |
| 2:B:201:LYS:HA | 2:B:474:GLN:O | 2.09 | 0.53 |
| 2:B:462:GLN:O | 2:B:463:LYS:O | 2.27 | 0.53 |
| 1:M:239:VAL:CG2 | 1:M:239:VAL:CA | 2.79 | 0.53 |
| 1:M:244:PRO:O | 1:M:247:VAL:HB | 2.07 | 0.53 |
| 1:M:361:GLU:HB2 | 1:M:364:GLN:HG3 | 1.89 | 0.53 |
| 1:M:448:GLN:HA | 1:M:449:PRO:C | 2.28 | 0.53 |
| 1:M:988:ILE:HG22 | 1:M:989:ILE:N | 2.23 | 0.53 |
| 1:M:1335:PHE:HD2 | 1:M:1335:PHE:N | 2.07 | 0.53 |
| 2:N:12:ILE:HD13 | 2:N:647:ILE:CG1 | 2.34 | 0.53 |
| 3:O:148:ARG:CG | 3:O:149:ASN:N | 2.71 | 0.53 |
| 3:O:251:LEU:HD11 | 11:W:45:LEU:CD2 | 2.38 | 0.53 |
| 1:A:406:VAL:CG1 | 1:A:414:ILE:HD12 | 2.39 | 0.53 |
| 1:A:1335:PHE:N | 1:A:1335:PHE:HD2 | 2.06 | 0.53 |
| 2:B:37:SER:O | 2:B:403:GLY:HA3 | 2.09 | 0.53 |
| 2:B:92:ALA:O | 2:B:93:ASP:CB | 2.56 | 0.53 |
| 2:B:745:PRO:C | 2:B:747:MET:H | 2.12 | 0.53 |
| 3:C:114:TYR:CG | 3:C:140:GLN:HB2 | 2.44 | 0.53 |
| 7:G:114:LEU:HB3 | 7:G:162:SER:HB3 | 1.89 | 0.53 |
| 8:H:88:LEU:C | 8:H:90:ASP:N | 2.58 | 0.53 |
| 1:M:11:LEU:HD12 | 1:M:12:ARG:N | 2.23 | 0.53 |
| 1:M:267:LEU:CD2 | 1:M:304:TYR:CE1 | 2.91 | 0.53 |
| 1:M:406:VAL:CG1 | 1:M:414:ILE:HD12 | 2.39 | 0.53 |
| 1:M:715:PHE:O | 1:M:719:VAL:HG23 | 2.08 | 0.53 |
| 1:M:1222:PHE:O | 1:M:1223:SER:HB2 | 2.08 | 0.53 |
| 1:M:1376:ASP:HA | 1:M:1379:THR:CG2 | 2.38 | 0.53 |
| 2:N:462:GLN:O | 2:N:463:LYS:O | 2.27 | 0.53 |
| 2:N:575:VAL:O | 2:N:575:VAL:HG12 | 2.08 | 0.53 |
| 2:N:858:SER:HA | 2:N:966:VAL:O | 2.09 | 0.53 |
| 2:N:1156:ASP:O | 2:N:1157:ALA:HB3 | 2.07 | 0.53 |
| 2:N:1165:ILE:HG12 | 4:P:13:ARG:CB | 2.38 | 0.53 |
| 2:N:1180:PHE:HB3 | 2:N:1191:ILE:CD1 | 2.32 | 0.53 |
| 10:V:52:HIS:HD2 | 10:V:53:VAL:N | 2.06 | 0.53 |
| 1:A:267:LEU:CD2 | 1:A:304:TYR:CE1 | 2.91 | 0.53 |
| 1:A:344:LYS:HE3 | 2:B:1151:LEU:CA | 2.38 | 0.53 |
| 2:B:609:ILE:HD13 | 2:B:618:LYS:HB2 | 1.91 | 0.53 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 2:B:955:THR:HG22 | 2:B:956:THR:O | 2.09 | 0.53 |
| 2:B:1180:PHE:HB3 | 2:B:1191:ILE:CD1 | 2.33 | 0.53 |
| 5:E:104:PHE:O | 5:E:105:SER:HB2 | 2.09 | 0.53 |
| 1:M:43:GLU:HB2 | 1:M:46:GLN:HB2 | 1.90 | 0.53 |
| 1:M:983:LEU:HD12 | 1:M:1034:LEU:HD21 | 1.90 | 0.53 |
| 1:M:1194:LEU:HG | 1:M:1195:LEU:N | 2.23 | 0.53 |
| 2:N:166:ARG:HG3 | 2:N:166:ARG:NH1 | 2.22 | 0.53 |
| 2:N:479:TYR:CE1 | 2:N:1096:ARG:NH2 | 2.77 | 0.53 |
| 2:N:704:PRO:HG2 | 2:N:705:GLU:H | 1.72 | 0.53 |
| 5:Q:77:LEU:HA | 5:Q:106:THR:HB | 1.90 | 0.53 |
| 1:A:114:LEU:O | 1:A:115:LEU:HG | 2.09 | 0.53 |
| 1:A:546:GLN:HG2 | 1:A:550:MET:CE | 2.39 | 0.53 |
| 1:A:568:LYS:HB2 | 1:A:569:PRO:HD2 | 1.85 | 0.53 |
| 1:A:983:LEU:HD12 | 1:A:1034:LEU:HD21 | 1.90 | 0.53 |
| 1:A:1076:GLU:HB3 | 1:A:1077:PRO:CD | 2.39 | 0.53 |
| 1:A:1287:MET:HG2 | 1:A:1309:LEU:CD2 | 2.38 | 0.53 |
| 1:A:1339:LEU:CB | 1:A:1347:THR:CB | 2.83 | 0.53 |
| 2:B:244:THR:HG22 | 2:B:245:MET:N | 2.23 | 0.53 |
| 2:B:318:ASP:OD2 | 2:B:320:GLU:HB2 | 2.09 | 0.53 |
| 2:B:392:ASP:OD1 | 2:B:503:LYS:HG3 | 2.08 | 0.53 |
| 2:B:630:LEU:HD22 | 2:B:742:GLU:HA | 1.90 | 0.53 |
| 2:B:1004:GLU:HB2 | 2:B:1006:ILE:CG1 | 2.35 | 0.53 |
| 1:M:524:ILE:CG2 | 1:M:528:THR:HB | 2.38 | 0.53 |
| 2:N:550:PHE:HD2 | 2:N:550:PHE:O | 1.91 | 0.53 |
| 2:N:745:PRO:C | 2:N:747:MET:H | 2.12 | 0.53 |
| 2:N:1010:LEU:CD2 | 2:N:1092:TYR:CE1 | 2.92 | 0.53 |
| 5:Q:104:PHE:O | 5:Q:105:SER:HB2 | 2.09 | 0.53 |
| 1:A:578:LEU:O | 1:A:581:ILE:CG2 | 2.35 | 0.53 |
| 1:A:712:ARG:O | 1:A:715:PHE:HB3 | 2.09 | 0.53 |
| 1:A:715:PHE:O | 1:A:719:VAL:HG23 | 2.07 | 0.53 |
| 1:A:771:VAL:CG2 | 1:A:819:MET:O | 2.57 | 0.53 |
| 1:A:787:HIS:HD2 | 2:B:700:ILE:HB | 1.71 | 0.53 |
| 1:A:1343:GLY:O | 1:A:1345:GLU:N | 2.41 | 0.53 |
| 1:A:1379:THR:HG23 | 1:A:1380:SER:N | 2.24 | 0.53 |
| 3:C:114:TYR:CD2 | 3:C:140:GLN:HB2 | 2.43 | 0.53 |
| 7:G:14:HIS:HD2 | 7:G:16:SER:HB3 | 1.70 | 0.53 |
| 7:G:15:PRO:HA | 7:G:18:PHE:CD1 | 2.44 | 0.53 |
| 7:G:153:ASP:HB3 | 7:G:156:GLU:O | 2.08 | 0.53 |
| 1:M:203:LEU:CG | 1:M:207:GLU:CB | 2.87 | 0.53 |
| 1:M:316:LEU:HD22 | 1:M:320:GLY:O | 2.08 | 0.53 |
| 1:M:712:ARG:O | 1:M:715:PHE:HB3 | 2.09 | 0.53 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:M:776:ILE:HG13 | 1:M:816:PHE:CB | 2.39 | 0.53 |
| 1:M:1279:ILE:HG21 | 1:M:1282:ILE:CD1 | 2.25 | 0.53 |
| 2:N:609:ILE:HD13 | 2:N:618:LYS:HB2 | 1.91 | 0.53 |
| 4:P:7:THR:CB | 7:S:42:PHE:HE2 | 2.21 | 0.53 |
| 10:V:51:THR:O | 10:V:51:THR:CG2 | 2.56 | 0.53 |
| 1:A:669:ASP:HB3 | 1:A:742:ASN:HD21 | 1.73 | 0.53 |
| 1:A:851:VAL:HG21 | 1:A:1060:VAL:HG11 | 1.90 | 0.53 |
| 1:A:988:ILE:HG22 | 1:A:989:ILE:N | 2.23 | 0.53 |
| 1:A:1194:LEU:HG | 1:A:1195:LEU:N | 2.23 | 0.53 |
| 2:B:782:LEU:HB3 | 2:B:784:ASN:OD1 | 2.08 | 0.53 |
| 2:B:821:GLN:HE22 | 2:B:851:PHE:N | 2.00 | 0.53 |
| 5:E:156:SER:C | 5:E:158:GLY:N | 2.62 | 0.53 |
| 10:J:2:ILE:HG23 | 10:J:3:ILE:H | 1.74 | 0.53 |
| 11:K:12:LEU:HD22 | 11:K:16:VAL:O | 2.08 | 0.53 |
| 1:M:669:ASP:HB3 | 1:M:742:ASN:HD21 | 1.74 | 0.53 |
| 1:M:1076:GLU:HB3 | 1:M:1077:PRO:CD | 2.39 | 0.53 |
| 2:N:318:ASP:OD2 | 2:N:320:GLU:HB2 | 2.09 | 0.53 |
| 2:N:1167:GLY:O | 2:N:1168:LEU:HD23 | 2.09 | 0.53 |
| 3:O:235:THR:OG1 | 10:V:13:VAL:HG22 | 2.09 | 0.53 |
| 7:S:47:THR:O | 7:S:76:ALA:HB1 | 2.09 | 0.53 |
| 9:U:32:CYS:SG | 9:U:33:ASP:N | 2.81 | 0.53 |
| 11:W:65:HIS:HD2 | 11:W:67:LEU:H | 1.54 | 0.53 |
| 1:A:316:LEU:HD22 | 1:A:320:GLY:O | 2.08 | 0.53 |
| 1:A:448:GLN:HA | 1:A:449:PRO:C | 2.27 | 0.53 |
| 1:A:1282:ILE:HG23 | 1:A:1311:THR:OG1 | 2.08 | 0.53 |
| 1:A:1450:GLU:HG3 | 7:G:22:MET:HB3 | 1.88 | 0.53 |
| 2:B:86:ARG:C | 2:B:113:SER:HB3 | 2.30 | 0.53 |
| 2:B:266:PRO:HG3 | 2:B:352:GLU:HB3 | 1.91 | 0.53 |
| 2:B:778:MET:HE2 | 2:B:1094:ARG:HD3 | 1.91 | 0.53 |
| 1:M:91:PHE:HB3 | 1:M:96:ILE:HG12 | 1.91 | 0.53 |
| 1:M:335:GLY:O | 1:M:337:LEU:N | 2.42 | 0.53 |
| 1:M:1166:GLU:C | 1:M:1168:ASP:H | 2.12 | 0.53 |
| 2:N:266:PRO:HG3 | 2:N:352:GLU:HB3 | 1.91 | 0.53 |
| 2:N:573:ILE:HG23 | 2:N:581:GLY:O | 2.07 | 0.53 |
| 2:N:859:TYR:CZ | 2:N:941:LEU:HD12 | 2.44 | 0.53 |
| 2:N:1169:MET:HE1 | 2:N:1201:LYS:O | 2.09 | 0.53 |
| 7:S:15:PRO:HA | 7:S:18:PHE:CD1 | 2.44 | 0.53 |
| 1:A:41:MET:O | 1:A:42:ASP:C | 2.47 | 0.53 |
| 1:A:494:GLN:H | 1:A:498:THR:HG21 | 1.74 | 0.53 |
| 1:A:542:ILE:HD13 | 1:A:550:MET:HE1 | 1.91 | 0.53 |
| 2:B:858:SER:HA | 2:B:966:VAL:O | 2.08 | 0.53 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 2:B:1007:VAL:HG22 | 2:B:1008:PRO:CD | 2.27 | 0.53 |
| 3:C:148:ARG:CG | 3:C:149:ASN:N | 2.72 | 0.53 |
| 1:M:352:THR:HG21 | 2:N:1103:ILE:CD1 | 2.38 | 0.53 |
| 1:M:822:ARG:CG | 2:N:506:GLN:HA | 2.39 | 0.53 |
| 1:M:1047:VAL:O | 1:M:1051:ILE:HG13 | 2.09 | 0.53 |
| 2:N:519:GLU:CD | 2:N:752:ALA:HB2 | 2.27 | 0.53 |
| 2:N:864:LYS:O | 2:N:872:GLU:HG3 | 2.09 | 0.53 |
| 3:O:114:TYR:CG | 3:O:140:GLN:HB2 | 2.44 | 0.53 |
| 4:P:53:LEU:H | 4:P:147:SER:HB3 | 1.73 | 0.53 |
| 5:Q:123:ILE:HA | 5:Q:131:ILE:HD12 | 1.91 | 0.53 |
| 7:S:88:ASP:OD2 | 7:S:88:ASP:N | 2.42 | 0.53 |
| 1:A:216:SER:O | 1:A:219:ASP:HB2 | 2.09 | 0.52 |
| 1:A:988:ILE:HD11 | 1:A:1033:ILE:CG1 | 2.34 | 0.52 |
| 2:B:857:ARG:HG3 | 2:B:858:SER:N | 2.24 | 0.52 |
| 2:B:859:TYR:CZ | 2:B:941:LEU:HD12 | 2.44 | 0.52 |
| 6:F:84:TYR:CE1 | 6:F:152:ILE:HD12 | 2.44 | 0.52 |
| 1:M:699:GLN:HE21 | 9:U:99:LEU:HD21 | 1.74 | 0.52 |
| 1:M:1006:ASN:ND2 | 5:Q:166:ARG:CD | 2.67 | 0.52 |
| 2:N:955:THR:HG22 | 2:N:956:THR:O | 2.09 | 0.52 |
| 3:O:81:TYR:CE2 | 3:O:161:LYS:HB3 | 2.44 | 0.52 |
| 8:T:26:ILE:HG22 | 8:T:27:ILE:N | 2.23 | 0.52 |
| 10:V:27:GLU:O | 10:V:29:LYS:N | 2.43 | 0.52 |
| 1:A:91:PHE:HB3 | 1:A:96:ILE:HG12 | 1.91 | 0.52 |
| 1:A:1016:ALA:C | 1:A:1017:THR:CG2 | 2.77 | 0.52 |
| 2:B:825:VAL:HG12 | 2:B:826:ALA:N | 2.24 | 0.52 |
| 7:G:1:MET:HE1 | 7:G:80:LYS:H | 1.74 | 0.52 |
| 7:G:27:ARG:O | 7:G:30:LEU:HB3 | 2.10 | 0.52 |
| 7:G:89:ALA:CB | 7:G:103:VAL:N | 2.71 | 0.52 |
| 7:G:94:VAL:CG2 | 7:G:94:VAL:CA | 2.78 | 0.52 |
| 8:H:111:ILE:HG22 | 8:H:112:LYS:N | 2.23 | 0.52 |
| 1:M:445:PHE:HB2 | 1:M:459:HIS:HD2 | 1.75 | 0.52 |
| 1:M:1016:ALA:C | 1:M:1017:THR:CG2 | 2.77 | 0.52 |
| 2:N:37:SER:O | 2:N:403:GLY:HA3 | 2.09 | 0.52 |
| 2:N:190:MET:CE | 2:N:485:LEU:HD23 | 2.39 | 0.52 |
| 2:N:825:VAL:HG12 | 2:N:826:ALA:N | 2.24 | 0.52 |
| 2:N:857:ARG:HG3 | 2:N:858:SER:N | 2.25 | 0.52 |
| 5:Q:77:LEU:C | 5:Q:77:LEU:HD23 | 2.30 | 0.52 |
| 7:S:50:ASP:OD1 | 7:S:50:ASP:O | 2.28 | 0.52 |
| 8:T:48:PRO:O | 8:T:49:VAL:HG23 | 2.09 | 0.52 |
| 1:A:203:LEU:CG | 1:A:207:GLU:CB | 2.87 | 0.52 |
| 1:A:400:HIS:CB | 1:A:401:PRO:HD3 | 2.36 | 0.52 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 1:A:505:LEU:HD11 | 6:F:91:ALA:HB1 | 1.91 | 0.52 |
| 1:A:1040:ASN:CG | 1:A:1043:ALA:H | 2.12 | 0.52 |
| 2:B:975:GLN:O | 2:B:977:GLY:N | 2.40 | 0.52 |
| 5:E:77:LEU:HD23 | 5:E:77:LEU:C | 2.29 | 0.52 |
| 10:J:52:HIS:HD2 | 10:J:53:VAL:N | 2.06 | 0.52 |
| 1:M:114:LEU:O | 1:M:115:LEU:HG | 2.08 | 0.52 |
| 1:M:216:SER:O | 1:M:219:ASP:HB2 | 2.09 | 0.52 |
| 1:M:498:THR:HG23 | 2:N:1146:PHE:HD1 | 1.74 | 0.52 |
| 1:M:776:ILE:HG21 | 1:M:816:PHE:CD2 | 2.45 | 0.52 |
| 1:M:1040:ASN:CG | 1:M:1043:ALA:H | 2.12 | 0.52 |
| 1:M:1393:ASN:CG | 1:M:1405:PHE:CD2 | 2.83 | 0.52 |
| 2:N:86:ARG:C | 2:N:113:SER:HB3 | 2.30 | 0.52 |
| 2:N:201:LYS:HA | 2:N:474:GLN:O | 2.09 | 0.52 |
| 2:N:545:GLU:C | 2:N:547:ILE:H | 2.13 | 0.52 |
| 2:N:782:LEU:HB3 | 2:N:784:ASN:OD1 | 2.08 | 0.52 |
| 2:N:986:GLN:OE1 | 2:N:986:GLN:HA | 2.09 | 0.52 |
| 7:S:1:MET:O | 7:S:3:PHE:CD1 | 2.62 | 0.52 |
| 10:V:2:ILE:HG23 | 10:V:3:ILE:H | 1.74 | 0.52 |
| 1:A:445:PHE:HB2 | 1:A:459:HIS:HD2 | 1.75 | 0.52 |
| 1:A:1440:GLY:O | 1:A:1442:GLY:N | 2.43 | 0.52 |
| 2:B:190:MET:CE | 2:B:485:LEU:HD23 | 2.39 | 0.52 |
| 2:B:472:VAL:O | 2:B:473:SER:HB3 | 2.08 | 0.52 |
| 2:B:551:LEU:HD11 | 2:B:619:ILE:HD11 | 1.92 | 0.52 |
| 2:B:702:MET:N | 2:B:707:LEU:HD12 | 2.25 | 0.52 |
| 2:B:1010:LEU:CD2 | 2:B:1092:TYR:CE1 | 2.92 | 0.52 |
| 7:G:47:THR:O | 7:G:76:ALA:HB1 | 2.09 | 0.52 |
| 7:G:88:ASP:OD2 | 7:G:88:ASP:N | 2.42 | 0.52 |
| 8:H:26:ILE:HG22 | 8:H:27:ILE:N | 2.23 | 0.52 |
| 10:J:27:GLU:O | 10:J:29:LYS:N | 2.42 | 0.52 |
| 11:K:84:LYS:O | 11:K:87:LEU:HB3 | 2.10 | 0.52 |
| 1:M:66:LYS:O | 1:M:67:CYS:HB2 | 2.09 | 0.52 |
| 1:M:1016:ALA:C | 1:M:1017:THR:HG23 | 2.29 | 0.52 |
| 2:N:157:HIS:C | 2:N:158:ILE:HG13 | 2.28 | 0.52 |
| 2:N:491:THR:HG22 | 2:N:530:LYS:N | 2.20 | 0.52 |
| 2:N:574:PHE:O | 2:N:619:ILE:HB | 2.08 | 0.52 |
| 2:N:778:MET:HE3 | 2:N:1094:ARG:HD3 | 1.90 | 0.52 |
| 5:Q:41:PHE:HZ | 5:Q:57:MET:CE | 2.22 | 0.52 |
| 7:S:111:SER:CB | 7:S:114:LEU:HD13 | 2.39 | 0.52 |
| 11:W:12:LEU:HD22 | 11:W:16:VAL:O | 2.09 | 0.52 |
| 1:A:327:ARG:NH2 | 1:A:331:LYS:HE3 | 2.25 | 0.52 |
| 1:A:352:THR:HG21 | 2:B:1103:ILE:CD1 | 2.39 | 0.52 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:A:699:GLN:HE21 | 9:I:99:LEU:HD21 | 1.74 | 0.52 |
| 2:B:366:ARG:HG2 | 2:B:559:LEU:HD23 | 1.91 | 0.52 |
| 2:B:479:TYR:CE1 | 2:B:1096:ARG:NH2 | 2.77 | 0.52 |
| 2:B:545:GLU:C | 2:B:547:ILE:H | 2.13 | 0.52 |
| 2:B:574:PHE:O | 2:B:619:ILE:HB | 2.09 | 0.52 |
| 2:B:1167:GLY:O | 2:B:1168:LEU:HD23 | 2.09 | 0.52 |
| 2:B:1215:ARG:NH1 | 4:D:15:ALA:CB | 2.72 | 0.52 |
| 7:G:1:MET:O | 7:G:3:PHE:CD1 | 2.62 | 0.52 |
| 9:I:14:LEU:HD22 | 9:I:28:SER:O | 2.10 | 0.52 |
| 1:M:44:SER:O | 1:M:45:ARG:HB2 | 2.10 | 0.52 |
| 1:M:494:GLN:H | 1:M:498:THR:HG21 | 1.75 | 0.52 |
| 1:M:542:ILE:HD13 | 1:M:550:MET:CE | 2.40 | 0.52 |
| 1:M:1032:ARG:HB3 | 1:M:1032:ARG:HH11 | 1.75 | 0.52 |
| 1:M:1282:ILE:HG23 | 1:M:1311:THR:OG1 | 2.08 | 0.52 |
| 2:N:637:GLU:HA | 2:N:637:GLU:OE1 | 2.10 | 0.52 |
| 7:S:27:ARG:O | 7:S:30:LEU:HB3 | 2.10 | 0.52 |
| 7:S:89:ALA:CB | 7:S:103:VAL:N | 2.71 | 0.52 |
| 1:A:1047:VAL:O | 1:A:1051:ILE:HG13 | 2.09 | 0.52 |
| 2:B:637:GLU:OE1 | 2:B:637:GLU:HA | 2.10 | 0.52 |
| 2:B:857:ARG:NH1 | 2:B:945:GLU:OE2 | 2.43 | 0.52 |
| 2:B:971:THR:OG1 | 3:C:60:GLU:HG3 | 2.10 | 0.52 |
| 3:C:81:TYR:CE2 | 3:C:161:LYS:HB3 | 2.44 | 0.52 |
| 4:D:65:LYS:C | 4:D:67:ARG:H | 2.12 | 0.52 |
| 7:G:50:ASP:OD1 | 7:G:50:ASP:O | 2.28 | 0.52 |
| 7:G:113:ARG:C | 7:G:114:LEU:HD12 | 2.30 | 0.52 |
| 10:J:51:THR:O | 10:J:51:THR:CG2 | 2.56 | 0.52 |
| 11:K:68:PHE:N | 11:K:68:PHE:CD2 | 2.76 | 0.52 |
| 1:M:173:PRO:HD3 | 1:M:186:TRP:HE1 | 1.74 | 0.52 |
| 1:M:504:GLN:NE2 | 6:R:90:ARG:NH2 | 2.49 | 0.52 |
| 1:M:1440:GLY:O | 1:M:1442:GLY:N | 2.43 | 0.52 |
| 2:N:472:VAL:O | 2:N:473:SER:HB3 | 2.08 | 0.52 |
| 2:N:857:ARG:NH1 | 2:N:945:GLU:OE2 | 2.43 | 0.52 |
| 3:O:115:SER:HB3 | 3:O:142:ILE:CG1 | 2.39 | 0.52 |
| 4:P:95:GLY:O | 4:P:96:ALA:CB | 2.58 | 0.52 |
| 10:V:20:ALA:O | 10:V:24:LEU:HG | 2.10 | 0.52 |
| 1:A:44:SER:O | 1:A:45:ARG:HB2 | 2.10 | 0.52 |
| 1:A:265:HIS:C | 1:A:267:LEU:H | 2.13 | 0.52 |
| 1:A:321:ARG:NH2 | 1:A:324:LYS:HE3 | 2.24 | 0.52 |
| 1:A:335:GLY:O | 1:A:337:LEU:N | 2.42 | 0.52 |
| 1:A:850:MET:HG3 | 1:A:850:MET:O | 2.09 | 0.52 |
| 1:A:1016:ALA:C | 1:A:1017:THR:HG23 | 2.29 | 0.52 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|------------------|--------------------------|-------------------|
| 2:B:1169:MET:HE1 | 2:B:1201:LYS:O | 2.10 | 0.52 |
| 3:C:257:ASN:O | 3:C:261:GLU:N | 2.36 | 0.52 |
| 8:H:48:PRO:O | 8:H:49:VAL:HG23 | 2.09 | 0.52 |
| 1:M:1405:PHE:CE2 | 1:M:1406:GLU:HG3 | 2.45 | 0.52 |
| 2:N:630:LEU:HD22 | 2:N:742:GLU:HA | 1.90 | 0.52 |
| 2:N:1116:ARG:HD2 | 2:N:1198:TYR:CD1 | 2.45 | 0.52 |
| 4:P:65:LYS:O | 4:P:69:ARG:HG3 | 2.10 | 0.52 |
| 7:S:44:TYR:O | 7:S:78:VAL:HG12 | 2.10 | 0.52 |
| 9:U:14:LEU:HD22 | 9:U:28:SER:O | 2.10 | 0.52 |
| 9:U:15:TYR:N | 9:U:15:TYR:CD1 | 2.77 | 0.52 |
| 9:U:50:THR:HG22 | 9:U:51:ASN:N | 2.21 | 0.52 |
| 1:A:23:SER:HB3 | 1:A:234:TRP:CZ2 | 2.45 | 0.52 |
| 1:A:43:GLU:HB2 | 1:A:46:GLN:HB2 | 1.90 | 0.52 |
| 1:A:66:LYS:O | 1:A:67:CYS:HB2 | 2.09 | 0.52 |
| 1:A:1101:PRO:O | 1:A:1104:LYS:HB3 | 2.10 | 0.52 |
| 1:A:1447:MET:CB | 7:G:59:GLY:O | 2.58 | 0.52 |
| 2:B:180:LEU:O | 2:B:183:MET:N | 2.41 | 0.52 |
| 2:B:200:GLU:OE2 | 2:B:476:LEU:HD23 | 2.10 | 0.52 |
| 2:B:810:GLU:HA | 2:B:815:ARG:NH1 | 2.16 | 0.52 |
| 2:B:847:ASP:OD2 | 11:K:6:ARG:NH2 | 2.43 | 0.52 |
| 5:E:41:PHE:HZ | 5:E:57:MET:CE | 2.22 | 0.52 |
| 5:E:90:LYS:C | 5:E:92:MET:N | 2.63 | 0.52 |
| 5:E:156:SER:OG | 5:E:159:GLU:HG3 | 2.10 | 0.52 |
| 7:G:44:TYR:O | 7:G:78:VAL:HG12 | 2.10 | 0.52 |
| 9:I:50:THR:HG22 | 9:I:51:ASN:N | 2.21 | 0.52 |
| 10:J:20:ALA:O | 10:J:24:LEU:HG | 2.10 | 0.52 |
| 1:M:1391:GLY:O | 1:M:1394:ARG:N | 2.41 | 0.52 |
| 2:N:702:MET:N | 2:N:707:LEU:HD12 | 2.25 | 0.52 |
| 7:S:113:ARG:C | 7:S:114:LEU:HD12 | 2.30 | 0.52 |
| 1:A:269:ASP:HB3 | 1:A:300:HIS:CE1 | 2.45 | 0.52 |
| 1:A:524:ILE:CG2 | 1:A:528:THR:HB | 2.39 | 0.52 |
| 1:A:542:ILE:HD13 | 1:A:550:MET:CE | 2.40 | 0.52 |
| 1:A:606:MET:HG2 | 1:A:622:THR:CG2 | 2.40 | 0.52 |
| 3:C:235:THR:OG1 | 10:J:13:VAL:HG22 | 2.10 | 0.52 |
| 1:M:41:MET:O | 1:M:42:ASP:C | 2.47 | 0.52 |
| 1:M:269:ASP:HB3 | 1:M:300:HIS:CE1 | 2.45 | 0.52 |
| 1:M:643:CYS:O | 1:M:646:LEU:HB3 | 2.10 | 0.52 |
| 1:M:769:GLN:OE1 | 1:M:817:HIS:HA | 2.08 | 0.52 |
| 1:M:857:THR:HB | 1:M:866:GLN:HB2 | 1.92 | 0.52 |
| 1:M:902:LEU:HD11 | 1:M:985:ILE:CD1 | 2.40 | 0.52 |
| 1:M:1210:THR:HG22 | 1:M:1212:ASN:H | 1.74 | 0.52 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 2:N:551:LEU:HD11 | 2:N:619:ILE:HD11 | 1.92 | 0.52 |
| 2:N:890:TYR:CA | 2:N:910:ILE:CG2 | 2.83 | 0.52 |
| 8:T:111:ILE:HG22 | 8:T:112:LYS:N | 2.23 | 0.52 |
| 11:W:53:TYR:HB3 | 11:W:56:VAL:HG23 | 1.92 | 0.52 |
| 1:A:219:ASP:HA | 1:A:222:ARG:CG | 2.39 | 0.52 |
| 1:A:801:VAL:C | 1:A:813:GLU:OE1 | 2.49 | 0.52 |
| 1:A:1294:VAL:HG13 | 1:A:1295:PRO:HD2 | 1.92 | 0.52 |
| 2:B:38:PHE:CD2 | 2:B:164:MET:HB3 | 2.45 | 0.52 |
| 2:B:324:ASP:O | 2:B:325:PHE:C | 2.48 | 0.52 |
| 2:B:986:GLN:OE1 | 2:B:986:GLN:HA | 2.09 | 0.52 |
| 2:B:1197:PRO:HG2 | 2:B:1200:ALA:CB | 2.40 | 0.52 |
| 5:E:120:ASN:C | 5:E:122:MET:H | 2.13 | 0.52 |
| 1:M:850:MET:HG3 | 1:M:850:MET:O | 2.09 | 0.52 |
| 2:N:576:ASN:HD21 | 2:N:621:THR:HB | 1.75 | 0.52 |
| 2:N:847:ASP:OD2 | 11:W:6:ARG:NH2 | 2.43 | 0.52 |
| 2:N:913:GLY:HA2 | 2:N:938:SER:OG | 2.10 | 0.52 |
| 7:S:1:MET:CE | 7:S:80:LYS:O | 2.54 | 0.52 |
| 9:U:34:TYR:CD2 | 9:U:34:TYR:C | 2.84 | 0.52 |
| 11:W:84:LYS:O | 11:W:87:LEU:HB3 | 2.10 | 0.52 |
| 1:A:316:LEU:HD13 | 1:A:320:GLY:O | 2.10 | 0.51 |
| 1:A:381:VAL:HG13 | 1:A:386:ILE:HG12 | 1.92 | 0.51 |
| 1:A:1163:THR:HG22 | 1:A:1164:VAL:H | 1.72 | 0.51 |
| 1:A:1166:GLU:C | 1:A:1168:ASP:H | 2.12 | 0.51 |
| 2:B:158:ILE:HA | 2:B:443:SER:CB | 2.40 | 0.51 |
| 2:B:859:TYR:HD1 | 2:B:859:TYR:H | 1.57 | 0.51 |
| 4:D:67:ARG:HD2 | 4:D:93:THR:HB | 1.92 | 0.51 |
| 1:M:327:ARG:NH2 | 1:M:331:LYS:HE3 | 2.24 | 0.51 |
| 1:M:851:VAL:HG21 | 1:M:1060:VAL:HG11 | 1.91 | 0.51 |
| 5:Q:156:SER:OG | 5:Q:159:GLU:HG3 | 2.10 | 0.51 |
| 6:R:84:TYR:CE1 | 6:R:152:ILE:HD12 | 2.44 | 0.51 |
| 1:A:50:GLU:C | 1:A:52:GLY:N | 2.63 | 0.51 |
| 1:A:857:THR:HB | 1:A:866:GLN:HB2 | 1.93 | 0.51 |
| 1:A:1032:ARG:HB3 | 1:A:1032:ARG:HH11 | 1.75 | 0.51 |
| 1:A:1068:VAL:O | 1:A:1072:GLN:HG3 | 2.10 | 0.51 |
| 1:A:1344:ILE:HG23 | 1:A:1345:GLU:N | 2.25 | 0.51 |
| 2:B:515:VAL:HG13 | 2:B:531:ASN:O | 2.10 | 0.51 |
| 2:B:864:LYS:O | 2:B:872:GLU:HG3 | 2.09 | 0.51 |
| 3:C:5:PRO:HB3 | 3:C:24:VAL:CG1 | 2.36 | 0.51 |
| 3:C:201:TRP:CE3 | 3:C:202:PRO:HD2 | 2.45 | 0.51 |
| 7:G:88:ASP:CB | 7:G:144:ARG:HA | 2.23 | 0.51 |
| 8:H:6:PHE:O | 8:H:58:THR:HG23 | 2.11 | 0.51 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 9:I:34:TYR:CD2 | 9:I:34:TYR:C | 2.84 | 0.51 |
| 1:M:219:ASP:HA | 1:M:222:ARG:CG | 2.40 | 0.51 |
| 1:M:445:PHE:CB | 1:M:459:HIS:CD2 | 2.94 | 0.51 |
| 1:M:606:MET:HG2 | 1:M:622:THR:CG2 | 2.41 | 0.51 |
| 1:M:1101:PRO:O | 1:M:1104:LYS:HB3 | 2.09 | 0.51 |
| 1:M:1294:VAL:HG13 | 1:M:1295:PRO:HD2 | 1.92 | 0.51 |
| 2:N:180:LEU:O | 2:N:183:MET:N | 2.41 | 0.51 |
| 2:N:515:VAL:HG13 | 2:N:531:ASN:O | 2.10 | 0.51 |
| 2:N:1158:PHE:HE2 | 2:N:1201:LYS:HD2 | 1.76 | 0.51 |
| 5:Q:81:PHE:CG | 5:Q:110:ILE:HG21 | 2.46 | 0.51 |
| 5:Q:95:PHE:CE2 | 5:Q:109:PHE:HB2 | 2.45 | 0.51 |
| 1:A:413:ARG:NH2 | 2:B:1108:ARG:NH2 | 2.59 | 0.51 |
| 1:A:498:THR:HG23 | 2:B:1146:PHE:HD1 | 1.74 | 0.51 |
| 1:A:801:VAL:HG22 | 1:A:809:LEU:HG | 1.91 | 0.51 |
| 1:A:936:GLN:O | 1:A:939:SER:N | 2.42 | 0.51 |
| 1:A:1367:ASN:ND2 | 1:A:1368:TYR:N | 2.55 | 0.51 |
| 2:B:551:LEU:C | 2:B:553:GLU:N | 2.63 | 0.51 |
| 2:B:1158:PHE:HE2 | 2:B:1201:LYS:HD2 | 1.75 | 0.51 |
| 5:E:16:ARG:HH11 | 5:E:16:ARG:CG | 2.23 | 0.51 |
| 6:F:96:THR:O | 6:F:100:GLN:HG3 | 2.11 | 0.51 |
| 9:I:15:TYR:N | 9:I:15:TYR:CD1 | 2.77 | 0.51 |
| 12:L:32:THR:HG22 | 12:L:33:CYS:N | 2.24 | 0.51 |
| 1:M:371:ILE:HD12 | 1:M:469:PHE:CE2 | 2.45 | 0.51 |
| 1:M:1344:ILE:HG23 | 1:M:1345:GLU:N | 2.26 | 0.51 |
| 1:M:1376:ASP:CA | 1:M:1379:THR:HG22 | 2.40 | 0.51 |
| 2:N:158:ILE:HA | 2:N:443:SER:CB | 2.40 | 0.51 |
| 5:Q:16:ARG:HH11 | 5:Q:16:ARG:CG | 2.23 | 0.51 |
| 7:S:14:HIS:CD2 | 7:S:16:SER:CB | 2.94 | 0.51 |
| 8:T:99:THR:HG22 | 8:T:100:VAL:N | 2.25 | 0.51 |
| 11:W:47:ARG:HB3 | 11:W:47:ARG:HH11 | 1.75 | 0.51 |
| 11:W:50:LEU:C | 11:W:52:LEU:H | 2.14 | 0.51 |
| 1:A:643:CYS:O | 1:A:646:LEU:HB3 | 2.10 | 0.51 |
| 1:A:769:GLN:OE1 | 1:A:817:HIS:CG | 2.63 | 0.51 |
| 1:A:1017:THR:OG1 | 1:A:1018:SER:N | 2.44 | 0.51 |
| 1:A:1210:THR:HG22 | 1:A:1212:ASN:H | 1.74 | 0.51 |
| 1:A:1391:GLY:O | 1:A:1394:ARG:N | 2.41 | 0.51 |
| 1:A:1405:PHE:CE2 | 1:A:1406:GLU:HG3 | 2.45 | 0.51 |
| 2:B:607:SER:HA | 2:B:694:GLU:OE1 | 2.11 | 0.51 |
| 2:B:801:LYS:O | 10:J:51:THR:CG2 | 2.56 | 0.51 |
| 11:K:47:ARG:HB3 | 11:K:47:ARG:HH11 | 1.75 | 0.51 |
| 11:K:50:LEU:C | 11:K:52:LEU:H | 2.14 | 0.51 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 1:M:471:LEU:HD12 | 1:M:471:LEU:C | 2.31 | 0.51 |
| 2:N:200:GLU:OE2 | 2:N:476:LEU:HD23 | 2.10 | 0.51 |
| 2:N:774:GLY:C | 2:N:776:GLN:H | 2.14 | 0.51 |
| 4:P:47:ASP:O | 4:P:48:LEU:O | 2.29 | 0.51 |
| 5:Q:89:ILE:HG21 | 5:Q:118:SER:CA | 2.40 | 0.51 |
| 11:W:5:ASP:HB3 | 11:W:7:PHE:CE2 | 2.46 | 0.51 |
| 11:W:68:PHE:CD2 | 11:W:68:PHE:N | 2.76 | 0.51 |
| 12:X:32:THR:HG22 | 12:X:33:CYS:N | 2.24 | 0.51 |
| 1:A:38:PRO:HG2 | 1:A:39:GLU:OE1 | 2.11 | 0.51 |
| 1:A:169:GLY:O | 1:A:170:ASN:C | 2.49 | 0.51 |
| 1:A:263:LEU:HD11 | 1:A:326:ILE:HG12 | 1.93 | 0.51 |
| 1:A:371:ILE:HD12 | 1:A:469:PHE:CE2 | 2.45 | 0.51 |
| 1:A:404:LYS:HG3 | 1:A:404:LYS:O | 2.10 | 0.51 |
| 1:A:902:LEU:HD11 | 1:A:985:ILE:CD1 | 2.41 | 0.51 |
| 2:B:913:GLY:HA2 | 2:B:938:SER:OG | 2.10 | 0.51 |
| 4:D:47:ASP:O | 4:D:48:LEU:O | 2.29 | 0.51 |
| 1:M:23:SER:HB3 | 1:M:234:TRP:CZ2 | 2.45 | 0.51 |
| 1:M:226:ASN:ND2 | 1:M:229:TYR:H | 2.04 | 0.51 |
| 1:M:316:LEU:HD13 | 1:M:320:GLY:O | 2.11 | 0.51 |
| 1:M:472:ASN:O | 1:M:475:VAL:HG12 | 2.10 | 0.51 |
| 1:M:859:ASN:ND2 | 1:M:859:ASN:C | 2.60 | 0.51 |
| 1:M:1068:VAL:O | 1:M:1072:GLN:HG3 | 2.10 | 0.51 |
| 1:M:1444:PHE:CE2 | 6:R:89:GLU:HG2 | 2.45 | 0.51 |
| 2:N:228:VAL:HG22 | 2:N:248:LYS:HA | 1.92 | 0.51 |
| 2:N:859:TYR:N | 2:N:859:TYR:CD1 | 2.78 | 0.51 |
| 2:N:971:THR:OG1 | 3:O:60:GLU:HG3 | 2.10 | 0.51 |
| 2:N:1197:PRO:HG2 | 2:N:1200:ALA:CB | 2.40 | 0.51 |
| 1:A:79:GLY:H | 2:B:1205:GLN:HE22 | 1.57 | 0.51 |
| 1:A:173:PRO:HD3 | 1:A:186:TRP:HE1 | 1.74 | 0.51 |
| 1:A:472:ASN:O | 1:A:475:VAL:HG12 | 2.10 | 0.51 |
| 2:B:201:LYS:HE2 | 2:B:455:ALA:O | 2.11 | 0.51 |
| 2:B:702:MET:H | 2:B:707:LEU:CD1 | 2.24 | 0.51 |
| 2:B:890:TYR:CA | 2:B:910:ILE:HG21 | 2.40 | 0.51 |
| 5:E:89:ILE:HG21 | 5:E:118:SER:CA | 2.40 | 0.51 |
| 6:F:82:THR:CG2 | 6:F:84:TYR:HB2 | 2.41 | 0.51 |
| 1:M:227:GLU:O | 1:M:227:GLU:HG2 | 2.10 | 0.51 |
| 1:M:303:THR:CG2 | 1:M:304:TYR:N | 2.71 | 0.51 |
| 1:M:787:HIS:HD2 | 2:N:700:ILE:HB | 1.71 | 0.51 |
| 1:M:815:PHE:O | 1:M:816:PHE:C | 2.49 | 0.51 |
| 1:M:1017:THR:OG1 | 1:M:1018:SER:N | 2.43 | 0.51 |
| 2:N:326:ILE:O | 2:N:326:ILE:HG22 | 2.10 | 0.51 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 2:N:1169:MET:HE1 | 2:N:1204:PHE:HB2 | 1.92 | 0.51 |
| 3:O:38:ALA:HA | 3:O:164:ALA:CB | 2.39 | 0.51 |
| 3:O:179:GLU:HG2 | 3:O:180:TYR:N | 2.26 | 0.51 |
| 6:R:82:THR:CG2 | 6:R:84:TYR:HB2 | 2.41 | 0.51 |
| 7:S:160:ILE:HG22 | 7:S:161:GLY:H | 1.75 | 0.51 |
| 1:A:110:CYS:SG | 1:A:111:GLY:N | 2.84 | 0.51 |
| 1:A:445:PHE:CB | 1:A:459:HIS:CD2 | 2.94 | 0.51 |
| 1:A:445:PHE:CB | 1:A:459:HIS:HD2 | 2.24 | 0.51 |
| 1:A:685:SER:O | 1:A:688:LYS:HB2 | 2.11 | 0.51 |
| 1:A:828:THR:HA | 1:A:831:LYS:HE2 | 1.93 | 0.51 |
| 1:A:1376:ASP:CA | 1:A:1379:THR:HG22 | 2.40 | 0.51 |
| 2:B:555:GLY:HA3 | 2:B:583:HIS:HE1 | 1.75 | 0.51 |
| 2:B:572:ARG:HG2 | 2:B:572:ARG:HH11 | 1.76 | 0.51 |
| 2:B:774:GLY:C | 2:B:776:GLN:H | 2.14 | 0.51 |
| 3:C:42:THR:CG2 | 3:C:43:LEU:N | 2.61 | 0.51 |
| 4:D:65:LYS:O | 4:D:69:ARG:HG3 | 2.10 | 0.51 |
| 5:E:81:PHE:CD2 | 5:E:110:ILE:HG21 | 2.46 | 0.51 |
| 5:E:146:HIS:CD2 | 5:E:148:LEU:H | 2.29 | 0.51 |
| 8:H:99:THR:HG22 | 8:H:100:VAL:N | 2.25 | 0.51 |
| 1:M:681:THR:HG23 | 2:N:726:ILE:HD11 | 1.91 | 0.51 |
| 1:M:936:GLN:O | 1:M:939:SER:N | 2.43 | 0.51 |
| 2:N:249:LEU:HG | 2:N:249:LEU:O | 2.10 | 0.51 |
| 2:N:702:MET:H | 2:N:707:LEU:CD1 | 2.24 | 0.51 |
| 2:N:1198:TYR:HE2 | 2:N:1202:LEU:HD12 | 1.75 | 0.51 |
| 3:O:201:TRP:CE3 | 3:O:202:PRO:HD2 | 2.45 | 0.51 |
| 4:P:53:LEU:HD22 | 4:P:108:TYR:HE2 | 1.75 | 0.51 |
| 8:T:36:ILE:CG1 | 8:T:36:ILE:CA | 2.82 | 0.51 |
| 1:A:218:GLU:O | 1:A:222:ARG:CG | 2.59 | 0.51 |
| 1:A:822:ARG:HH11 | 1:A:822:ARG:CB | 2.22 | 0.51 |
| 1:A:831:LYS:HD2 | 1:A:1081:MET:O | 2.11 | 0.51 |
| 1:A:887:ILE:CG2 | 1:A:888:PRO:N | 2.73 | 0.51 |
| 1:A:1450:GLU:CG | 7:G:22:MET:CB | 2.84 | 0.51 |
| 2:B:162:PRO:HD2 | 2:B:450:LEU:HD13 | 1.93 | 0.51 |
| 2:B:859:TYR:N | 2:B:859:TYR:CD1 | 2.78 | 0.51 |
| 2:B:1183:ARG:C | 2:B:1185:CYS:H | 2.15 | 0.51 |
| 3:C:38:ALA:HA | 3:C:164:ALA:CB | 2.39 | 0.51 |
| 4:D:53:LEU:HD22 | 4:D:108:TYR:HE2 | 1.75 | 0.51 |
| 7:G:111:SER:CB | 7:G:114:LEU:HD13 | 2.39 | 0.51 |
| 11:K:5:ASP:HB3 | 11:K:7:PHE:CE2 | 2.46 | 0.51 |
| 11:K:53:TYR:HB3 | 11:K:56:VAL:HG23 | 1.92 | 0.51 |
| 12:L:36:CYS:O | 12:L:38:HIS:N | 2.44 | 0.51 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 1:M:50:GLU:C | 1:M:52:GLY:N | 2.64 | 0.51 |
| 1:M:79:GLY:H | 2:N:1205:GLN:HE22 | 1.57 | 0.51 |
| 1:M:265:HIS:C | 1:M:267:LEU:H | 2.13 | 0.51 |
| 1:M:578:LEU:O | 1:M:581:ILE:CG2 | 2.36 | 0.51 |
| 1:M:648:GLY:O | 1:M:652:LYS:HG3 | 2.11 | 0.51 |
| 2:N:107:ARG:HG2 | 2:N:955:THR:HG21 | 1.92 | 0.51 |
| 2:N:162:PRO:HD2 | 2:N:450:LEU:HD13 | 1.93 | 0.51 |
| 2:N:1159:ARG:CG | 2:N:1193:GLN:HE21 | 2.23 | 0.51 |
| 3:O:166:GLU:CG | 11:W:10:PHE:HZ | 2.23 | 0.51 |
| 4:P:49:ILE:O | 4:P:49:ILE:HG22 | 2.11 | 0.51 |
| 8:T:6:PHE:O | 8:T:58:THR:HG23 | 2.11 | 0.51 |
| 10:V:47:ARG:HH21 | 10:V:48:MET:HE1 | 1.75 | 0.51 |
| 12:X:36:CYS:O | 12:X:38:HIS:N | 2.44 | 0.51 |
| 1:A:446:ASN:CB | 1:A:456:MET:HG2 | 2.41 | 0.51 |
| 1:A:1321:ALA:HB1 | 5:E:140:VAL:HG11 | 1.93 | 0.51 |
| 2:B:542:SER:O | 2:B:621:THR:HG21 | 2.11 | 0.51 |
| 2:B:542:SER:H | 2:B:621:THR:HG23 | 1.76 | 0.51 |
| 2:B:763:GLN:HG2 | 2:B:765:PRO:CG | 2.39 | 0.51 |
| 2:B:1106:ARG:CZ | 2:B:1109:GLY:H | 2.24 | 0.51 |
| 2:B:1198:TYR:HE2 | 2:B:1202:LEU:HD12 | 1.75 | 0.51 |
| 10:J:47:ARG:HH21 | 10:J:48:MET:HE1 | 1.76 | 0.51 |
| 1:M:249:PRO:O | 1:M:261:ASP:HB2 | 2.11 | 0.51 |
| 1:M:801:VAL:HG11 | 1:M:809:LEU:CD1 | 2.40 | 0.51 |
| 1:M:1084:ASN:HB3 | 1:M:1086:PHE:CD1 | 2.41 | 0.51 |
| 2:N:542:SER:O | 2:N:621:THR:HG21 | 2.11 | 0.51 |
| 2:N:607:SER:HA | 2:N:694:GLU:OE1 | 2.11 | 0.51 |
| 2:N:890:TYR:CA | 2:N:910:ILE:HG21 | 2.39 | 0.51 |
| 5:Q:47:ASP:CG | 5:Q:48:SER:N | 2.63 | 0.51 |
| 5:Q:164:LEU:HD22 | 5:Q:169:LEU:HB2 | 1.93 | 0.51 |
| 6:R:96:THR:O | 6:R:100:GLN:HG3 | 2.10 | 0.51 |
| 1:A:227:GLU:O | 1:A:227:GLU:HG2 | 2.10 | 0.51 |
| 1:A:249:PRO:O | 1:A:261:ASP:HB2 | 2.11 | 0.51 |
| 2:B:252:ARG:HB3 | 2:B:252:ARG:HH11 | 1.76 | 0.51 |
| 2:B:290:LEU:CD1 | 2:B:306:LEU:HD13 | 2.41 | 0.51 |
| 2:B:392:ASP:OD2 | 2:B:503:LYS:CD | 2.57 | 0.51 |
| 2:B:1117:GLN:HG2 | 2:B:1155:SER:OG | 2.11 | 0.51 |
| 2:B:1159:ARG:HD3 | 2:B:1193:GLN:CG | 2.41 | 0.51 |
| 4:D:49:ILE:HG22 | 4:D:49:ILE:O | 2.11 | 0.51 |
| 5:E:84:GLU:O | 5:E:86:SER:N | 2.39 | 0.51 |
| 1:M:38:PRO:HG2 | 1:M:39:GLU:OE1 | 2.11 | 0.51 |
| 1:M:629:GLY:O | 1:M:633:THR:HG22 | 2.11 | 0.51 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:M:685:SER:O | 1:M:688:LYS:HB2 | 2.11 | 0.51 |
| 1:M:822:ARG:HH11 | 1:M:822:ARG:CB | 2.22 | 0.51 |
| 1:M:1076:GLU:HB3 | 1:M:1077:PRO:HD3 | 1.93 | 0.51 |
| 2:N:38:PHE:CD2 | 2:N:164:MET:HB3 | 2.45 | 0.51 |
| 2:N:859:TYR:HD1 | 2:N:859:TYR:H | 1.57 | 0.51 |
| 2:N:976:ILE:HG12 | 2:N:993:THR:HG23 | 1.93 | 0.51 |
| 4:P:166:LYS:O | 4:P:167:LYS:CB | 2.59 | 0.51 |
| 5:Q:199:ARG:HG3 | 5:Q:199:ARG:HH11 | 1.76 | 0.51 |
| 7:S:1:MET:O | 7:S:3:PHE:CE1 | 2.64 | 0.51 |
| 8:T:40:LEU:HB2 | 8:T:122:MET:HE2 | 1.93 | 0.51 |
| 1:A:648:GLY:O | 1:A:652:LYS:HG3 | 2.11 | 0.50 |
| 1:A:681:THR:HG23 | 2:B:726:ILE:HD11 | 1.91 | 0.50 |
| 1:A:1076:GLU:HB3 | 1:A:1077:PRO:HD3 | 1.93 | 0.50 |
| 2:B:107:ARG:HG2 | 2:B:955:THR:HG21 | 1.92 | 0.50 |
| 2:B:326:ILE:HG22 | 2:B:326:ILE:O | 2.10 | 0.50 |
| 2:B:491:THR:HG22 | 2:B:530:LYS:N | 2.20 | 0.50 |
| 2:B:632:ILE:HG22 | 2:B:634:GLU:HG2 | 1.92 | 0.50 |
| 2:B:1005:GLY:O | 2:B:1006:ILE:C | 2.49 | 0.50 |
| 4:D:106:LEU:O | 4:D:110:ASN:HB2 | 2.12 | 0.50 |
| 4:D:166:LYS:O | 4:D:167:LYS:CB | 2.59 | 0.50 |
| 5:E:95:PHE:CE2 | 5:E:109:PHE:HB2 | 2.45 | 0.50 |
| 5:E:199:ARG:HH11 | 5:E:199:ARG:HG3 | 1.76 | 0.50 |
| 7:G:1:MET:CE | 7:G:80:LYS:O | 2.54 | 0.50 |
| 1:M:110:CYS:SG | 1:M:111:GLY:N | 2.84 | 0.50 |
| 1:M:218:GLU:O | 1:M:222:ARG:CG | 2.59 | 0.50 |
| 1:M:263:LEU:HD11 | 1:M:326:ILE:HG12 | 1.93 | 0.50 |
| 1:M:476:THR:HG23 | 1:M:477:SER:H | 1.76 | 0.50 |
| 1:M:591:ARG:HG3 | 1:M:591:ARG:HH11 | 1.76 | 0.50 |
| 1:M:810:THR:O | 1:M:811:PRO:C | 2.50 | 0.50 |
| 1:M:831:LYS:HD2 | 1:M:1081:MET:O | 2.11 | 0.50 |
| 1:M:1335:PHE:N | 1:M:1335:PHE:CD2 | 2.76 | 0.50 |
| 2:N:290:LEU:CD1 | 2:N:306:LEU:HD13 | 2.40 | 0.50 |
| 2:N:542:SER:H | 2:N:621:THR:HG23 | 1.76 | 0.50 |
| 2:N:806:THR:H | 2:N:809:MET:HG3 | 1.76 | 0.50 |
| 2:N:906:SER:O | 2:N:941:LEU:HD23 | 2.12 | 0.50 |
| 2:N:1106:ARG:CZ | 2:N:1109:GLY:H | 2.24 | 0.50 |
| 4:P:24:ASN:O | 7:S:83:LYS:HB2 | 2.10 | 0.50 |
| 1:A:667:ILE:CD1 | 1:A:668:GLY:H | 2.21 | 0.50 |
| 2:B:12:ILE:HG23 | 2:B:652:ILE:CD1 | 2.42 | 0.50 |
| 2:B:195:VAL:HG13 | 2:B:198:GLY:O | 2.12 | 0.50 |
| 2:B:249:LEU:O | 2:B:249:LEU:HG | 2.10 | 0.50 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 2:B:281:LEU:HD21 | 2:B:364:GLU:O | 2.11 | 0.50 |
| 2:B:906:SER:O | 2:B:941:LEU:HD23 | 2.11 | 0.50 |
| 2:B:1159:ARG:CG | 2:B:1193:GLN:HE21 | 2.24 | 0.50 |
| 3:C:251:LEU:HG | 11:K:98:LEU:HD11 | 1.92 | 0.50 |
| 5:E:81:PHE:CG | 5:E:110:ILE:HG21 | 2.46 | 0.50 |
| 7:G:114:LEU:HB3 | 7:G:162:SER:CB | 2.42 | 0.50 |
| 9:I:100:PHE:N | 9:I:100:PHE:CD1 | 2.79 | 0.50 |
| 10:J:19:ASP:O | 10:J:23:ARG:HB2 | 2.11 | 0.50 |
| 1:M:381:VAL:HG13 | 1:M:386:ILE:HG12 | 1.92 | 0.50 |
| 1:M:419:HIS:CG | 1:M:421:ARG:H | 2.29 | 0.50 |
| 1:M:473:LEU:HD11 | 2:N:835:GLN:NE2 | 2.26 | 0.50 |
| 1:M:667:ILE:CD1 | 1:M:668:GLY:H | 2.21 | 0.50 |
| 1:M:828:THR:HA | 1:M:831:LYS:HE2 | 1.93 | 0.50 |
| 1:M:1146:LYS:HA | 1:M:1271:LEU:HD22 | 1.93 | 0.50 |
| 2:N:370:PHE:O | 2:N:373:TYR:N | 2.44 | 0.50 |
| 2:N:1159:ARG:HD3 | 2:N:1193:GLN:CG | 2.41 | 0.50 |
| 5:Q:32:GLU:O | 5:Q:35:ASP:N | 2.44 | 0.50 |
| 5:Q:90:LYS:C | 5:Q:92:MET:N | 2.63 | 0.50 |
| 1:A:593:ASP:H | 1:A:596:ASN:CG | 2.13 | 0.50 |
| 1:A:607:LEU:HB3 | 1:A:615:PHE:CD2 | 2.46 | 0.50 |
| 1:A:684:ILE:O | 1:A:688:LYS:HG3 | 2.11 | 0.50 |
| 1:A:810:THR:O | 1:A:811:PRO:C | 2.50 | 0.50 |
| 1:A:815:PHE:O | 1:A:816:PHE:C | 2.49 | 0.50 |
| 2:B:806:THR:H | 2:B:809:MET:HG3 | 1.76 | 0.50 |
| 3:C:54:THR:O | 3:C:54:THR:HG22 | 2.10 | 0.50 |
| 4:D:24:ASN:O | 7:G:83:LYS:HB2 | 2.10 | 0.50 |
| 8:H:12:VAL:HG13 | 8:H:26:ILE:CG2 | 2.41 | 0.50 |
| 10:J:43:TYR:HD2 | 10:J:43:TYR:H | 1.58 | 0.50 |
| 1:M:404:LYS:HG3 | 1:M:404:LYS:O | 2.10 | 0.50 |
| 1:M:607:LEU:HB3 | 1:M:615:PHE:CD2 | 2.46 | 0.50 |
| 1:M:842:LEU:HD22 | 1:M:1374:LEU:HD22 | 1.94 | 0.50 |
| 1:M:1200:ASP:HB3 | 1:M:1203:ARG:CB | 2.41 | 0.50 |
| 2:N:324:ASP:O | 2:N:325:PHE:C | 2.48 | 0.50 |
| 2:N:572:ARG:HG2 | 2:N:572:ARG:HH11 | 1.76 | 0.50 |
| 2:N:632:ILE:HG22 | 2:N:634:GLU:HG2 | 1.92 | 0.50 |
| 2:N:812:LEU:O | 2:N:814:PHE:N | 2.44 | 0.50 |
| 2:N:954:LEU:HA | 2:N:964:VAL:HG22 | 1.93 | 0.50 |
| 3:O:31:SER:OG | 11:W:45:LEU:HD13 | 2.11 | 0.50 |
| 3:O:99:GLU:CG | 3:O:121:VAL:HG22 | 2.41 | 0.50 |
| 7:S:39:THR:O | 7:S:43:GLY:N | 2.32 | 0.50 |
| 8:T:12:VAL:HG13 | 8:T:26:ILE:HG21 | 1.93 | 0.50 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:A:253:MET:O | 1:A:254:ASP:CB | 2.59 | 0.50 |
| 1:A:471:LEU:C | 1:A:471:LEU:HD12 | 2.31 | 0.50 |
| 1:A:629:GLY:O | 1:A:633:THR:HG22 | 2.10 | 0.50 |
| 1:A:842:LEU:HD22 | 1:A:1374:LEU:HD22 | 1.94 | 0.50 |
| 1:A:854:ASP:CG | 1:A:856:THR:HG22 | 2.32 | 0.50 |
| 1:A:1352:TYR:O | 1:A:1355:ILE:HG22 | 2.11 | 0.50 |
| 2:B:228:VAL:HG22 | 2:B:248:LYS:HA | 1.93 | 0.50 |
| 2:B:370:PHE:O | 2:B:373:TYR:N | 2.44 | 0.50 |
| 2:B:576:ASN:HD21 | 2:B:621:THR:HB | 1.75 | 0.50 |
| 2:B:860:MET:CB | 2:B:965:LYS:HG2 | 2.42 | 0.50 |
| 7:G:160:ILE:HG22 | 7:G:161:GLY:H | 1.76 | 0.50 |
| 2:N:12:ILE:HG23 | 2:N:652:ILE:CD1 | 2.42 | 0.50 |
| 2:N:201:LYS:HE2 | 2:N:455:ALA:O | 2.11 | 0.50 |
| 2:N:252:ARG:NH1 | 2:N:252:ARG:HB3 | 2.27 | 0.50 |
| 3:O:54:THR:O | 3:O:54:THR:HG22 | 2.10 | 0.50 |
| 3:O:81:TYR:CD2 | 3:O:161:LYS:HB3 | 2.46 | 0.50 |
| 4:P:158:THR:HG22 | 4:P:159:LEU:HD23 | 1.94 | 0.50 |
| 5:Q:120:ASN:C | 5:Q:122:MET:H | 2.13 | 0.50 |
| 7:S:14:HIS:HD2 | 7:S:16:SER:HB3 | 1.71 | 0.50 |
| 1:A:591:ARG:HG3 | 1:A:591:ARG:HH11 | 1.76 | 0.50 |
| 1:A:615:PHE:HB3 | 8:H:121:LEU:HD21 | 1.94 | 0.50 |
| 2:B:587:SER:HA | 2:B:610:ARG:HH12 | 1.76 | 0.50 |
| 2:B:755:ILE:HG22 | 2:B:809:MET:CE | 2.41 | 0.50 |
| 4:D:65:LYS:C | 4:D:67:ARG:N | 2.65 | 0.50 |
| 6:F:72:LEU:O | 6:F:73:ALA:HB2 | 2.12 | 0.50 |
| 1:M:321:ARG:NH2 | 1:M:324:LYS:HE3 | 2.24 | 0.50 |
| 1:M:446:ASN:CB | 1:M:456:MET:HG2 | 2.41 | 0.50 |
| 1:M:593:ASP:H | 1:M:596:ASN:CG | 2.14 | 0.50 |
| 1:M:615:PHE:HB3 | 8:T:121:LEU:HD21 | 1.94 | 0.50 |
| 1:M:684:ILE:O | 1:M:688:LYS:HG3 | 2.11 | 0.50 |
| 1:M:887:ILE:CG2 | 1:M:888:PRO:N | 2.73 | 0.50 |
| 1:M:1413:PHE:C | 1:M:1415:ALA:H | 2.15 | 0.50 |
| 2:N:195:VAL:HG13 | 2:N:198:GLY:O | 2.12 | 0.50 |
| 2:N:281:LEU:HD21 | 2:N:364:GLU:O | 2.11 | 0.50 |
| 2:N:587:SER:HA | 2:N:610:ARG:HH12 | 1.76 | 0.50 |
| 2:N:763:GLN:HG2 | 2:N:765:PRO:CG | 2.39 | 0.50 |
| 2:N:821:GLN:HE22 | 2:N:851:PHE:N | 2.00 | 0.50 |
| 2:N:1162:VAL:HG12 | 2:N:1163:CYS:H | 1.77 | 0.50 |
| 4:P:51:LEU:HD12 | 4:P:56:SER:HA | 1.93 | 0.50 |
| 8:T:12:VAL:HG13 | 8:T:26:ILE:CG2 | 2.41 | 0.50 |
| 10:V:19:ASP:O | 10:V:23:ARG:HB2 | 2.11 | 0.50 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 1:A:15:LYS:HB3 | 2:B:1220:ARG:NH2 | 2.26 | 0.50 |
| 1:A:147:VAL:O | 1:A:149:GLU:N | 2.44 | 0.50 |
| 1:A:601:PRO:C | 1:A:603:ASP:H | 2.15 | 0.50 |
| 1:A:1200:ASP:HB3 | 1:A:1203:ARG:CB | 2.41 | 0.50 |
| 1:A:1386:ALA:O | 1:A:1391:GLY:HA3 | 2.12 | 0.50 |
| 1:A:1413:PHE:C | 1:A:1415:ALA:H | 2.15 | 0.50 |
| 1:A:1447:MET:N | 1:A:1447:MET:HE2 | 2.26 | 0.50 |
| 2:B:1169:MET:HE1 | 2:B:1204:PHE:HB2 | 1.93 | 0.50 |
| 3:C:81:TYR:CD2 | 3:C:161:LYS:HB3 | 2.46 | 0.50 |
| 5:E:32:GLU:O | 5:E:35:ASP:N | 2.44 | 0.50 |
| 6:F:97:ARG:HG2 | 6:F:130:ILE:HG23 | 1.93 | 0.50 |
| 7:G:1:MET:O | 7:G:3:PHE:CE1 | 2.64 | 0.50 |
| 7:G:14:HIS:CD2 | 7:G:16:SER:CB | 2.94 | 0.50 |
| 8:H:12:VAL:HG13 | 8:H:26:ILE:HG21 | 1.93 | 0.50 |
| 9:I:56:ALA:O | 9:I:57:GLY:C | 2.49 | 0.50 |
| 1:M:219:ASP:O | 1:M:220:CYS:C | 2.50 | 0.50 |
| 1:M:288:HIS:O | 1:M:292:GLU:OE2 | 2.30 | 0.50 |
| 1:M:528:THR:HG21 | 1:M:651:GLN:HG3 | 1.94 | 0.50 |
| 1:M:601:PRO:C | 1:M:603:ASP:H | 2.15 | 0.50 |
| 1:M:623:VAL:O | 1:M:623:VAL:HG13 | 2.11 | 0.50 |
| 1:M:646:LEU:HD11 | 1:M:650:ILE:HD11 | 1.94 | 0.50 |
| 2:N:997:GLU:HB3 | 3:O:34:ARG:HB3 | 1.93 | 0.50 |
| 2:N:1116:ARG:CD | 2:N:1198:TYR:CD1 | 2.95 | 0.50 |
| 3:O:251:LEU:HG | 11:W:98:LEU:HD11 | 1.92 | 0.50 |
| 4:P:106:LEU:O | 4:P:110:ASN:HB2 | 2.11 | 0.50 |
| 5:Q:81:PHE:CD2 | 5:Q:110:ILE:HG21 | 2.46 | 0.50 |
| 1:A:286:PRO:O | 1:A:288:HIS:N | 2.45 | 0.50 |
| 1:A:419:HIS:CG | 1:A:421:ARG:H | 2.29 | 0.50 |
| 1:A:755:SER:H | 1:A:758:ASN:HD22 | 1.60 | 0.50 |
| 1:A:1146:LYS:HA | 1:A:1271:LEU:HD22 | 1.93 | 0.50 |
| 2:B:778:MET:HE3 | 2:B:1094:ARG:HD3 | 1.90 | 0.50 |
| 2:B:976:ILE:HG12 | 2:B:993:THR:HG23 | 1.93 | 0.50 |
| 3:C:179:GLU:HG2 | 3:C:180:TYR:N | 2.26 | 0.50 |
| 5:E:92:MET:CE | 5:E:119:ALA:HB1 | 2.42 | 0.50 |
| 5:E:113:ASN:O | 5:E:114:ASN:HB3 | 2.12 | 0.50 |
| 1:M:72:GLU:O | 1:M:73:GLY:O | 2.30 | 0.50 |
| 1:M:333:LYS:HA | 1:M:338:ARG:HD2 | 1.94 | 0.50 |
| 1:M:445:PHE:CB | 1:M:459:HIS:HD2 | 2.24 | 0.50 |
| 1:M:606:MET:HE2 | 1:M:613:VAL:HG13 | 1.93 | 0.50 |
| 2:N:860:MET:CB | 2:N:965:LYS:HG2 | 2.42 | 0.50 |
| 2:N:1005:GLY:O | 2:N:1006:ILE:C | 2.49 | 0.50 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 3:O:115:SER:CB | 3:O:142:ILE:CG1 | 2.89 | 0.50 |
| 4:P:67:ARG:HD2 | 4:P:93:THR:HB | 1.92 | 0.50 |
| 1:A:72:GLU:O | 1:A:73:GLY:O | 2.30 | 0.50 |
| 1:A:219:ASP:O | 1:A:220:CYS:C | 2.50 | 0.50 |
| 1:A:513:VAL:HG13 | 1:A:513:VAL:O | 2.12 | 0.50 |
| 1:A:608:ILE:HG12 | 1:A:613:VAL:HA | 1.94 | 0.50 |
| 1:A:623:VAL:O | 1:A:623:VAL:HG13 | 2.11 | 0.50 |
| 1:A:772:GLU:H | 1:A:823:GLU:CD | 2.14 | 0.50 |
| 2:B:227:HIS:CE1 | 2:B:382:ALA:HA | 2.47 | 0.50 |
| 2:B:252:ARG:HB3 | 2:B:252:ARG:NH1 | 2.27 | 0.50 |
| 2:B:573:ILE:O | 2:B:579:TRP:HD1 | 1.95 | 0.50 |
| 2:B:705:GLU:HG3 | 2:B:706:ASP:H | 1.76 | 0.50 |
| 2:B:757:PRO:HG3 | 2:B:1028:GLU:OE2 | 2.12 | 0.50 |
| 2:B:812:LEU:O | 2:B:814:PHE:N | 2.44 | 0.50 |
| 2:B:826:ALA:HB2 | 2:B:1008:PRO:HB3 | 1.93 | 0.50 |
| 2:B:954:LEU:HA | 2:B:964:VAL:HG22 | 1.93 | 0.50 |
| 2:B:980:PHE:C | 2:B:1095:LEU:HD13 | 2.32 | 0.50 |
| 2:B:997:GLU:HB3 | 3:C:34:ARG:HB3 | 1.93 | 0.50 |
| 3:C:166:GLU:CG | 11:K:10:PHE:HZ | 2.24 | 0.50 |
| 5:E:47:ASP:CG | 5:E:48:SER:N | 2.63 | 0.50 |
| 11:K:87:LEU:O | 11:K:87:LEU:HD12 | 2.11 | 0.50 |
| 1:M:169:GLY:O | 1:M:170:ASN:C | 2.49 | 0.50 |
| 1:M:1352:TYR:O | 1:M:1355:ILE:HG22 | 2.11 | 0.50 |
| 1:M:1386:ALA:O | 1:M:1391:GLY:HA3 | 2.12 | 0.50 |
| 2:N:112:SER:HB2 | 2:N:161:VAL:O | 2.12 | 0.50 |
| 2:N:826:ALA:HB2 | 2:N:1008:PRO:HB3 | 1.92 | 0.50 |
| 2:N:980:PHE:C | 2:N:1095:LEU:HD13 | 2.32 | 0.50 |
| 2:N:1183:ARG:C | 2:N:1185:CYS:H | 2.15 | 0.50 |
| 7:S:114:LEU:HB3 | 7:S:162:SER:CB | 2.42 | 0.50 |
| 9:U:100:PHE:N | 9:U:100:PHE:CD1 | 2.79 | 0.50 |
| 12:X:61:ALA:O | 12:X:62:ARG:O | 2.30 | 0.50 |
| 1:A:528:THR:HG21 | 1:A:651:GLN:HG3 | 1.94 | 0.50 |
| 1:A:815:PHE:O | 1:A:818:ALA:N | 2.45 | 0.50 |
| 2:B:1023:VAL:O | 2:B:1026:LEU:N | 2.45 | 0.50 |
| 2:B:1114:LEU:O | 2:B:1198:TYR:HE2 | 1.95 | 0.50 |
| 2:B:1116:ARG:CG | 2:B:1198:TYR:CG | 2.93 | 0.50 |
| 2:B:1156:ASP:HB3 | 2:B:1197:PRO:HA | 1.94 | 0.50 |
| 2:B:1162:VAL:HG12 | 2:B:1163:CYS:H | 1.77 | 0.50 |
| 2:B:1163:CYS:HB3 | 2:B:1166:CYS:O | 2.12 | 0.50 |
| 7:G:38:CYS:SG | 7:G:157:ILE:HG13 | 2.52 | 0.50 |
| 1:M:40:ILE:HG22 | 1:M:41:MET:HG3 | 1.94 | 0.50 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:M:755:SER:H | 1:M:758:ASN:HD22 | 1.60 | 0.50 |
| 1:M:1172:VAL:HG12 | 1:M:1176:PHE:CE1 | 2.47 | 0.50 |
| 1:M:1437:ALA:O | 1:M:1439:MET:N | 2.45 | 0.50 |
| 2:N:252:ARG:HB3 | 2:N:252:ARG:HH11 | 1.76 | 0.50 |
| 2:N:882:THR:HB | 2:N:934:LYS:O | 2.12 | 0.50 |
| 5:Q:113:ASN:O | 5:Q:114:ASN:HB3 | 2.12 | 0.50 |
| 1:A:266:LYS:HE2 | 1:A:323:VAL:HG21 | 1.94 | 0.49 |
| 1:A:288:HIS:O | 1:A:292:GLU:OE2 | 2.30 | 0.49 |
| 1:A:1213:GLN:O | 1:A:1214:VAL:C | 2.51 | 0.49 |
| 1:A:1335:PHE:CE1 | 1:A:1351:LEU:HD13 | 2.47 | 0.49 |
| 2:B:206:GLN:NE2 | 2:B:206:GLN:HA | 2.26 | 0.49 |
| 2:B:1017:ILE:HB | 2:B:1018:PRO:HD3 | 1.94 | 0.49 |
| 3:C:31:SER:OG | 11:K:45:LEU:HD13 | 2.12 | 0.49 |
| 4:D:138:HIS:O | 4:D:140:PHE:N | 2.45 | 0.49 |
| 5:E:164:LEU:HD22 | 5:E:169:LEU:HB2 | 1.93 | 0.49 |
| 1:M:15:LYS:HB3 | 2:N:1220:ARG:NH2 | 2.26 | 0.49 |
| 1:M:64:ASN:O | 1:M:65:PHE:C | 2.51 | 0.49 |
| 1:M:635:MET:CG | 1:M:643:CYS:SG | 3.00 | 0.49 |
| 1:M:1367:ASN:ND2 | 1:M:1368:TYR:N | 2.56 | 0.49 |
| 2:N:27:GLU:OE1 | 2:N:678:TRP:HB3 | 2.11 | 0.49 |
| 2:N:755:ILE:HG22 | 2:N:809:MET:CE | 2.41 | 0.49 |
| 2:N:1023:VAL:O | 2:N:1026:LEU:N | 2.45 | 0.49 |
| 2:N:1178:ASN:O | 2:N:1179:GLN:C | 2.49 | 0.49 |
| 4:P:53:LEU:HD12 | 4:P:147:SER:HB2 | 1.93 | 0.49 |
| 4:P:65:LYS:C | 4:P:67:ARG:N | 2.65 | 0.49 |
| 4:P:94:SER:O | 4:P:96:ALA:N | 2.45 | 0.49 |
| 6:R:72:LEU:O | 6:R:73:ALA:HB2 | 2.11 | 0.49 |
| 1:A:473:LEU:HD11 | 2:B:835:GLN:NE2 | 2.26 | 0.49 |
| 1:A:476:THR:CG2 | 1:A:477:SER:H | 2.25 | 0.49 |
| 1:A:747:MET:HE1 | 2:B:1014:PRO:O | 2.12 | 0.49 |
| 1:A:770:MET:N | 1:A:820:ALA:HB2 | 2.27 | 0.49 |
| 1:A:1405:PHE:CZ | 1:A:1406:GLU:HG3 | 2.47 | 0.49 |
| 2:B:1001:PHE:O | 2:B:1072:MET:HA | 2.12 | 0.49 |
| 2:B:1178:ASN:O | 2:B:1179:GLN:C | 2.49 | 0.49 |
| 7:G:80:LYS:HE2 | 7:G:80:LYS:H | 1.76 | 0.49 |
| 1:M:776:ILE:HD11 | 1:M:816:PHE:HB3 | 1.94 | 0.49 |
| 1:M:1241:ARG:NH2 | 1:M:1243:ARG:HH22 | 2.02 | 0.49 |
| 1:M:1405:PHE:CZ | 1:M:1406:GLU:HG3 | 2.47 | 0.49 |
| 2:N:227:HIS:CE1 | 2:N:382:ALA:HA | 2.47 | 0.49 |
| 2:N:757:PRO:HG3 | 2:N:1028:GLU:OE2 | 2.12 | 0.49 |
| 7:S:38:CYS:SG | 7:S:157:ILE:HG13 | 2.52 | 0.49 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 9:U:56:ALA:O | 9:U:57:GLY:C | 2.50 | 0.49 |
| 1:A:90:VAL:CG1 | 1:A:298:GLN:NE2 | 2.75 | 0.49 |
| 1:A:101:LYS:HA | 1:A:104:GLU:OE1 | 2.12 | 0.49 |
| 1:A:635:MET:CG | 1:A:643:CYS:SG | 3.00 | 0.49 |
| 1:A:646:LEU:HD11 | 1:A:650:ILE:HD11 | 1.94 | 0.49 |
| 1:A:874:LEU:C | 1:A:1060:VAL:HG23 | 2.32 | 0.49 |
| 2:B:280:ALA:CA | 2:B:322:ALA:HB1 | 2.42 | 0.49 |
| 1:M:24:PRO:HD2 | 1:M:234:TRP:CD1 | 2.47 | 0.49 |
| 1:M:98:LYS:O | 1:M:99:ILE:C | 2.50 | 0.49 |
| 1:M:147:VAL:O | 1:M:149:GLU:HG3 | 2.13 | 0.49 |
| 1:M:513:VAL:O | 1:M:513:VAL:HG13 | 2.12 | 0.49 |
| 2:N:812:LEU:C | 2:N:814:PHE:N | 2.66 | 0.49 |
| 3:O:242:GLN:C | 3:O:244:PHE:N | 2.66 | 0.49 |
| 4:P:105:THR:OG1 | 7:S:105:PRO:HD3 | 2.13 | 0.49 |
| 4:P:138:HIS:O | 4:P:140:PHE:N | 2.45 | 0.49 |
| 5:Q:146:HIS:CD2 | 5:Q:148:LEU:H | 2.29 | 0.49 |
| 5:Q:152:HIS:O | 5:Q:153:ILE:CG1 | 2.54 | 0.49 |
| 11:W:87:LEU:O | 11:W:87:LEU:HD12 | 2.11 | 0.49 |
| 1:A:316:LEU:HD12 | 2:B:464:LYS:CG | 2.42 | 0.49 |
| 1:A:476:THR:HG23 | 1:A:477:SER:H | 1.76 | 0.49 |
| 1:A:574:THR:O | 1:A:577:GLN:HB2 | 2.13 | 0.49 |
| 1:A:1207:LYS:O | 1:A:1208:GLN:O | 2.30 | 0.49 |
| 2:B:27:GLU:OE1 | 2:B:678:TRP:HB3 | 2.11 | 0.49 |
| 2:B:519:GLU:HB2 | 2:B:752:ALA:HB3 | 1.94 | 0.49 |
| 3:C:33:ARG:HG2 | 3:C:34:ARG:N | 2.27 | 0.49 |
| 4:D:51:LEU:HD12 | 4:D:56:SER:HA | 1.93 | 0.49 |
| 5:E:21:MET:HB2 | 5:E:186:TYR:CE1 | 2.47 | 0.49 |
| 7:G:87:VAL:HG21 | 7:G:103:VAL:HG11 | 1.94 | 0.49 |
| 7:G:145:LEU:CG | 7:G:146:LYS:H | 2.26 | 0.49 |
| 11:K:10:PHE:N | 11:K:10:PHE:HD2 | 2.10 | 0.49 |
| 1:M:90:VAL:CG1 | 1:M:298:GLN:NE2 | 2.75 | 0.49 |
| 1:M:377:TYR:OH | 1:M:499:ARG:HD2 | 2.11 | 0.49 |
| 1:M:854:ASP:CG | 1:M:856:THR:HG22 | 2.32 | 0.49 |
| 1:M:1321:ALA:HB1 | 5:Q:140:VAL:HG11 | 1.93 | 0.49 |
| 2:N:1017:ILE:HB | 2:N:1018:PRO:HD3 | 1.94 | 0.49 |
| 2:N:1073:TYR:N | 2:N:1073:TYR:CD1 | 2.80 | 0.49 |
| 2:N:1130:PHE:O | 2:N:1131:GLY:O | 2.31 | 0.49 |
| 2:N:1159:ARG:HG3 | 2:N:1193:GLN:HE21 | 1.77 | 0.49 |
| 3:O:33:ARG:HG2 | 3:O:34:ARG:N | 2.28 | 0.49 |
| 5:Q:84:GLU:O | 5:Q:86:SER:N | 2.40 | 0.49 |
| 9:U:106:CYS:SG | 9:U:108:LYS:N | 2.85 | 0.49 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 11:W:21:ILE:HG23 | 11:W:31:ILE:CG1 | 2.42 | 0.49 |
| 1:A:630:LEU:HA | 1:A:633:THR:HG22 | 1.95 | 0.49 |
| 1:A:853:TYR:CD2 | 1:A:1062:PRO:HB2 | 2.47 | 0.49 |
| 1:A:870:GLY:O | 1:A:871:GLU:HB2 | 2.12 | 0.49 |
| 1:A:930:LEU:HD23 | 1:A:985:ILE:HG21 | 1.94 | 0.49 |
| 1:A:1410:GLU:CD | 1:A:1410:GLU:N | 2.65 | 0.49 |
| 2:B:439:LEU:O | 2:B:440:ALA:HB3 | 2.12 | 0.49 |
| 2:B:824:ILE:HG12 | 10:J:47:ARG:NH1 | 2.26 | 0.49 |
| 9:I:106:CYS:SG | 9:I:108:LYS:N | 2.85 | 0.49 |
| 11:K:21:ILE:HG23 | 11:K:31:ILE:CG1 | 2.42 | 0.49 |
| 12:L:61:ALA:O | 12:L:62:ARG:O | 2.30 | 0.49 |
| 1:M:19:PHE:O | 1:M:1419:ALA:HA | 2.13 | 0.49 |
| 1:M:101:LYS:HA | 1:M:104:GLU:OE1 | 2.12 | 0.49 |
| 1:M:135:PHE:HB2 | 1:M:224:GLY:H | 1.77 | 0.49 |
| 1:M:266:LYS:HE2 | 1:M:323:VAL:HG21 | 1.95 | 0.49 |
| 1:M:286:PRO:O | 1:M:288:HIS:N | 2.45 | 0.49 |
| 1:M:418:TYR:O | 1:M:419:HIS:C | 2.50 | 0.49 |
| 1:M:542:ILE:HD13 | 1:M:550:MET:HE1 | 1.94 | 0.49 |
| 1:M:853:TYR:CD1 | 6:R:136:ARG:HB3 | 2.47 | 0.49 |
| 1:M:874:LEU:C | 1:M:1060:VAL:HG23 | 2.32 | 0.49 |
| 2:N:705:GLU:HG3 | 2:N:706:ASP:H | 1.77 | 0.49 |
| 2:N:1106:ARG:HD3 | 2:N:1126:GLY:O | 2.12 | 0.49 |
| 7:S:122:ASN:OD1 | 7:S:125:ASN:HB3 | 2.13 | 0.49 |
| 1:A:40:ILE:HG22 | 1:A:41:MET:HG3 | 1.94 | 0.49 |
| 1:A:377:TYR:OH | 1:A:499:ARG:HD2 | 2.11 | 0.49 |
| 1:A:900:VAL:CG2 | 1:A:1031:ARG:HG2 | 2.41 | 0.49 |
| 1:A:1172:VAL:HG12 | 1:A:1176:PHE:CE1 | 2.47 | 0.49 |
| 1:A:1437:ALA:O | 1:A:1439:MET:N | 2.45 | 0.49 |
| 2:B:112:SER:HB2 | 2:B:161:VAL:O | 2.12 | 0.49 |
| 2:B:1130:PHE:O | 2:B:1131:GLY:O | 2.31 | 0.49 |
| 3:C:92:ASP:OD1 | 3:C:122:SER:HB2 | 2.12 | 0.49 |
| 4:D:53:LEU:HD12 | 4:D:147:SER:HB2 | 1.93 | 0.49 |
| 5:E:194:VAL:HG12 | 5:E:195:VAL:N | 2.27 | 0.49 |
| 1:M:147:VAL:O | 1:M:149:GLU:N | 2.44 | 0.49 |
| 1:M:253:MET:O | 1:M:254:ASP:CB | 2.59 | 0.49 |
| 1:M:608:ILE:HG12 | 1:M:613:VAL:HA | 1.94 | 0.49 |
| 1:M:630:LEU:CA | 1:M:633:THR:HG22 | 2.43 | 0.49 |
| 1:M:1335:PHE:CE1 | 1:M:1351:LEU:HD13 | 2.47 | 0.49 |
| 1:M:1444:PHE:CD1 | 1:M:1444:PHE:C | 2.86 | 0.49 |
| 2:N:196:ILE:HD11 | 2:N:454:LEU:HD23 | 1.94 | 0.49 |
| 2:N:231:ILE:CG2 | 2:N:245:MET:HB3 | 2.43 | 0.49 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 2:N:1001:PHE:O | 2:N:1072:MET:HA | 2.12 | 0.49 |
| 2:N:1007:VAL:HG22 | 2:N:1008:PRO:CD | 2.27 | 0.49 |
| 3:O:65:ARG:HH21 | 10:V:5:VAL:H | 1.60 | 0.49 |
| 3:O:174:SER:O | 3:O:175:ALA:HB3 | 2.13 | 0.49 |
| 4:P:41:HIS:HB2 | 7:S:73:LYS:HZ2 | 1.74 | 0.49 |
| 7:S:80:LYS:HE2 | 7:S:80:LYS:H | 1.76 | 0.49 |
| 7:S:117:ASP:C | 7:S:119:LEU:H | 2.16 | 0.49 |
| 7:S:145:LEU:CG | 7:S:146:LYS:H | 2.26 | 0.49 |
| 11:W:6:ARG:O | 11:W:9:LEU:HG | 2.13 | 0.49 |
| 1:A:226:ASN:ND2 | 1:A:229:TYR:H | 2.05 | 0.49 |
| 1:A:853:TYR:CD1 | 6:F:136:ARG:HB3 | 2.47 | 0.49 |
| 2:B:744:HIS:O | 2:B:747:MET:HB2 | 2.13 | 0.49 |
| 2:B:812:LEU:C | 2:B:814:PHE:N | 2.66 | 0.49 |
| 4:D:105:THR:OG1 | 7:G:105:PRO:HD3 | 2.13 | 0.49 |
| 5:E:152:HIS:O | 5:E:153:ILE:CG1 | 2.54 | 0.49 |
| 6:F:81:THR:HB | 6:F:136:ARG:HH11 | 1.78 | 0.49 |
| 7:G:117:ASP:C | 7:G:119:LEU:H | 2.16 | 0.49 |
| 8:H:25:ARG:HA | 8:H:41:ASP:HA | 1.95 | 0.49 |
| 8:H:51:GLN:O | 8:H:52:ASP:HB2 | 2.12 | 0.49 |
| 1:M:815:PHE:O | 1:M:818:ALA:N | 2.45 | 0.49 |
| 1:M:870:GLY:O | 1:M:871:GLU:HB2 | 2.12 | 0.49 |
| 2:N:206:GLN:NE2 | 2:N:206:GLN:HA | 2.26 | 0.49 |
| 2:N:280:ALA:CA | 2:N:322:ALA:HB1 | 2.42 | 0.49 |
| 2:N:613:ARG:NH2 | 9:U:89:GLN:NE2 | 2.61 | 0.49 |
| 2:N:768:THR:O | 2:N:771:SER:HB2 | 2.13 | 0.49 |
| 2:N:980:PHE:CA | 2:N:1095:LEU:HD13 | 2.43 | 0.49 |
| 6:R:97:ARG:HG2 | 6:R:130:ILE:HG23 | 1.93 | 0.49 |
| 8:T:51:GLN:O | 8:T:52:ASP:HB2 | 2.13 | 0.49 |
| 1:A:55:ASP:O | 1:A:57:LYS:N | 2.46 | 0.49 |
| 1:A:336:ARG:HH22 | 2:B:1114:LEU:HD21 | 1.78 | 0.49 |
| 1:A:1221:VAL:HG11 | 1:A:1274:ILE:CD1 | 2.39 | 0.49 |
| 2:B:1106:ARG:HD3 | 2:B:1126:GLY:O | 2.12 | 0.49 |
| 2:B:1135:ARG:O | 2:B:1136:ASP:C | 2.51 | 0.49 |
| 2:B:1176:LYS:C | 2:B:1178:ASN:N | 2.66 | 0.49 |
| 3:C:170:TRP:O | 3:C:171:SER:C | 2.51 | 0.49 |
| 3:C:242:GLN:C | 3:C:244:PHE:N | 2.66 | 0.49 |
| 5:E:148:LEU:O | 5:E:150:PRO:HD3 | 2.13 | 0.49 |
| 11:K:6:ARG:O | 11:K:9:LEU:HG | 2.13 | 0.49 |
| 1:M:377:TYR:CZ | 1:M:499:ARG:HD2 | 2.48 | 0.49 |
| 1:M:900:VAL:CG2 | 1:M:1031:ARG:HG2 | 2.41 | 0.49 |
| 1:M:1266:ILE:O | 1:M:1266:ILE:HG22 | 2.12 | 0.49 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 2:N:573:ILE:O | 2:N:579:TRP:HD1 | 1.95 | 0.49 |
| 2:N:782:LEU:CD1 | 2:N:788:ARG:NH1 | 2.75 | 0.49 |
| 2:N:801:LYS:O | 10:V:51:THR:CG2 | 2.56 | 0.49 |
| 2:N:816:GLU:O | 2:N:817:LEU:HD23 | 2.13 | 0.49 |
| 2:N:1114:LEU:CD1 | 2:N:1202:LEU:CD1 | 2.88 | 0.49 |
| 5:Q:194:VAL:HG12 | 5:Q:195:VAL:N | 2.27 | 0.49 |
| 7:S:35:GLU:OE2 | 7:S:48:VAL:HG23 | 2.12 | 0.49 |
| 11:W:10:PHE:N | 11:W:10:PHE:HD2 | 2.10 | 0.49 |
| 1:A:19:PHE:O | 1:A:1419:ALA:HA | 2.13 | 0.49 |
| 1:A:64:ASN:O | 1:A:65:PHE:C | 2.51 | 0.49 |
| 1:A:135:PHE:HB2 | 1:A:224:GLY:H | 1.77 | 0.49 |
| 1:A:333:LYS:HA | 1:A:338:ARG:HD2 | 1.94 | 0.49 |
| 1:A:344:LYS:HE3 | 2:B:1151:LEU:HA | 1.94 | 0.49 |
| 1:A:377:TYR:CZ | 1:A:499:ARG:HD2 | 2.48 | 0.49 |
| 1:A:439:ASP:O | 1:A:440:ASP:HB2 | 2.12 | 0.49 |
| 1:A:785:LEU:HD11 | 1:A:812:GLN:HA | 1.94 | 0.49 |
| 1:A:822:ARG:CG | 2:B:506:GLN:HA | 2.43 | 0.49 |
| 1:A:1444:PHE:HA | 6:F:137:TYR:CD1 | 2.48 | 0.49 |
| 2:B:980:PHE:CA | 2:B:1095:LEU:HD13 | 2.43 | 0.49 |
| 10:J:38:LEU:O | 10:J:39:LYS:CB | 2.61 | 0.49 |
| 1:M:1401:MET:HB2 | 1:M:1429:GLU:OE2 | 2.12 | 0.49 |
| 2:N:744:HIS:O | 2:N:747:MET:HB2 | 2.13 | 0.49 |
| 2:N:834:ASN:O | 2:N:1013:ASN:HB2 | 2.13 | 0.49 |
| 5:Q:21:MET:HB2 | 5:Q:186:TYR:CE1 | 2.47 | 0.49 |
| 8:T:4:ALA:HA | 8:T:60:ALA:HB2 | 1.95 | 0.49 |
| 8:T:138:ASN:O | 8:T:139:LEU:CB | 2.61 | 0.49 |
| 10:V:43:TYR:H | 10:V:43:TYR:HD2 | 1.58 | 0.49 |
| 1:A:98:LYS:O | 1:A:99:ILE:C | 2.50 | 0.49 |
| 1:A:630:LEU:CA | 1:A:633:THR:HG22 | 2.43 | 0.49 |
| 1:A:1276:LEU:HD12 | 1:A:1276:LEU:N | 2.28 | 0.49 |
| 1:A:1444:PHE:HD1 | 1:A:1444:PHE:C | 2.16 | 0.49 |
| 2:B:18:TRP:HA | 2:B:18:TRP:CE3 | 2.48 | 0.49 |
| 2:B:777:ALA:CB | 2:B:1093:GLN:HB3 | 2.42 | 0.49 |
| 2:B:834:ASN:O | 2:B:1013:ASN:HB2 | 2.13 | 0.49 |
| 2:B:976:ILE:HA | 2:B:990:ILE:CG2 | 2.43 | 0.49 |
| 8:H:36:ILE:CG1 | 8:H:36:ILE:CA | 2.82 | 0.49 |
| 8:H:138:ASN:O | 8:H:139:LEU:CB | 2.61 | 0.49 |
| 9:I:80:SER:HB2 | 9:I:103:CYS:SG | 2.53 | 0.49 |
| 12:L:57:VAL:HG23 | 12:L:58:ILE:H | 1.77 | 0.49 |
| 1:M:362:LEU:HA | 1:M:472:ASN:HD22 | 1.77 | 0.49 |
| 1:M:476:THR:CG2 | 1:M:477:SER:H | 2.25 | 0.49 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 1:M:853:TYR:CD2 | 1:M:1062:PRO:HB2 | 2.47 | 0.49 |
| 2:N:371:LEU:O | 2:N:371:LEU:HD12 | 2.12 | 0.49 |
| 5:Q:115:ILE:HG22 | 5:Q:119:ALA:HB3 | 1.94 | 0.49 |
| 6:R:81:THR:HB | 6:R:136:ARG:HH11 | 1.78 | 0.49 |
| 1:A:854:ASP:OD1 | 1:A:856:THR:N | 2.46 | 0.48 |
| 1:A:902:LEU:HD22 | 1:A:920:ILE:HG22 | 1.95 | 0.48 |
| 1:A:1444:PHE:HA | 6:F:137:TYR:HD1 | 1.77 | 0.48 |
| 1:A:1444:PHE:C | 1:A:1444:PHE:CD1 | 2.86 | 0.48 |
| 2:B:371:LEU:O | 2:B:371:LEU:HD12 | 2.12 | 0.48 |
| 2:B:421:ILE:O | 2:B:425:MET:HG3 | 2.13 | 0.48 |
| 2:B:768:THR:O | 2:B:771:SER:HB2 | 2.13 | 0.48 |
| 2:B:816:GLU:O | 2:B:817:LEU:HD23 | 2.13 | 0.48 |
| 2:B:1159:ARG:HG3 | 2:B:1193:GLN:HE21 | 1.77 | 0.48 |
| 4:D:158:THR:HG22 | 4:D:159:LEU:HD23 | 1.94 | 0.48 |
| 5:E:108:ILE:O | 5:E:108:ILE:HG22 | 2.12 | 0.48 |
| 6:F:105:ALA:HB1 | 6:F:106:PRO:CD | 2.43 | 0.48 |
| 7:G:89:ALA:CB | 7:G:103:VAL:CA | 2.91 | 0.48 |
| 8:H:4:ALA:HA | 8:H:60:ALA:HB2 | 1.95 | 0.48 |
| 1:M:382:THR:O | 1:M:384:TYR:N | 2.45 | 0.48 |
| 1:M:601:PRO:HG2 | 1:M:602:LYS:H | 1.77 | 0.48 |
| 1:M:702:GLU:O | 1:M:703:LEU:HG | 2.13 | 0.48 |
| 2:N:288:GLU:C | 2:N:291:GLN:HB2 | 2.34 | 0.48 |
| 2:N:519:GLU:HB2 | 2:N:752:ALA:HB3 | 1.94 | 0.48 |
| 2:N:824:ILE:HG12 | 10:V:47:ARG:NH1 | 2.26 | 0.48 |
| 2:N:1130:PHE:O | 2:N:1130:PHE:CD2 | 2.66 | 0.48 |
| 2:N:1156:ASP:HB3 | 2:N:1197:PRO:HA | 1.95 | 0.48 |
| 3:O:5:PRO:HB3 | 3:O:24:VAL:CG1 | 2.36 | 0.48 |
| 3:O:44:ALA:CA | 3:O:71:LEU:HD12 | 2.40 | 0.48 |
| 3:O:170:TRP:O | 3:O:171:SER:C | 2.51 | 0.48 |
| 7:S:87:VAL:HG21 | 7:S:103:VAL:HG11 | 1.94 | 0.48 |
| 8:T:25:ARG:HA | 8:T:41:ASP:HA | 1.95 | 0.48 |
| 9:U:80:SER:HB2 | 9:U:103:CYS:SG | 2.53 | 0.48 |
| 10:V:23:ARG:C | 10:V:25:LEU:N | 2.67 | 0.48 |
| 1:A:266:LYS:HE2 | 1:A:323:VAL:CG2 | 2.43 | 0.48 |
| 2:B:33:GLN:HG3 | 2:B:34:GLN:N | 2.24 | 0.48 |
| 2:B:231:ILE:CG2 | 2:B:245:MET:HB3 | 2.42 | 0.48 |
| 2:B:370:PHE:C | 2:B:372:GLY:N | 2.65 | 0.48 |
| 2:B:572:ARG:O | 2:B:616:GLU:HA | 2.13 | 0.48 |
| 3:C:9:ILE:H | 3:C:9:ILE:HG13 | 1.45 | 0.48 |
| 7:G:35:GLU:OE2 | 7:G:48:VAL:HG23 | 2.12 | 0.48 |
| 7:G:35:GLU:CG | 7:G:48:VAL:HG23 | 2.43 | 0.48 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 10:J:44:CYS:O | 10:J:47:ARG:HG3 | 2.13 | 0.48 |
| 1:M:574:THR:O | 1:M:577:GLN:HB2 | 2.13 | 0.48 |
| 1:M:630:LEU:HA | 1:M:633:THR:HG22 | 1.95 | 0.48 |
| 1:M:854:ASP:OD1 | 1:M:856:THR:N | 2.46 | 0.48 |
| 1:M:869:TYR:HE1 | 1:M:1066:VAL:CG1 | 2.26 | 0.48 |
| 1:M:874:LEU:C | 1:M:1060:VAL:CG2 | 2.81 | 0.48 |
| 1:M:999:LEU:HD13 | 1:M:1020:PHE:CE2 | 2.47 | 0.48 |
| 1:M:1283:SER:O | 1:M:1284:LYS:C | 2.51 | 0.48 |
| 2:N:777:ALA:CB | 2:N:1093:GLN:HB3 | 2.42 | 0.48 |
| 2:N:810:GLU:HA | 2:N:815:ARG:NH1 | 2.16 | 0.48 |
| 2:N:1135:ARG:O | 2:N:1136:ASP:C | 2.51 | 0.48 |
| 6:R:76:LYS:O | 6:R:79:ARG:HD3 | 2.13 | 0.48 |
| 1:A:24:PRO:HD2 | 1:A:234:TRP:CD1 | 2.47 | 0.48 |
| 1:A:147:VAL:O | 1:A:149:GLU:HG3 | 2.13 | 0.48 |
| 1:A:244:PRO:HB2 | 1:A:245:PRO:HD2 | 1.94 | 0.48 |
| 2:B:196:ILE:HD11 | 2:B:454:LEU:HD23 | 1.94 | 0.48 |
| 2:B:463:LYS:C | 2:B:465:ALA:H | 2.16 | 0.48 |
| 2:B:654:LYS:HD3 | 2:B:676:TYR:CE2 | 2.47 | 0.48 |
| 2:B:1073:TYR:N | 2:B:1073:TYR:CD1 | 2.81 | 0.48 |
| 2:B:1130:PHE:O | 2:B:1130:PHE:CD2 | 2.66 | 0.48 |
| 2:B:1135:ARG:HG2 | 2:B:1139:ILE:HD11 | 1.95 | 0.48 |
| 3:C:99:GLU:CG | 3:C:121:VAL:HG22 | 2.41 | 0.48 |
| 4:D:94:SER:O | 4:D:96:ALA:N | 2.45 | 0.48 |
| 1:M:266:LYS:HE2 | 1:M:323:VAL:CG2 | 2.43 | 0.48 |
| 1:M:948:VAL:HG13 | 5:Q:200:ARG:HB3 | 1.95 | 0.48 |
| 2:N:1100:ASP:OD2 | 11:W:1:MET:CB | 2.62 | 0.48 |
| 5:Q:108:ILE:HG22 | 5:Q:108:ILE:O | 2.12 | 0.48 |
| 5:Q:148:LEU:O | 5:Q:150:PRO:HD3 | 2.13 | 0.48 |
| 10:V:44:CYS:O | 10:V:47:ARG:HG3 | 2.14 | 0.48 |
| 12:X:57:VAL:HG23 | 12:X:58:ILE:H | 1.77 | 0.48 |
| 1:A:316:LEU:CD1 | 2:B:464:LYS:CB | 2.80 | 0.48 |
| 1:A:549:ASN:HD21 | 11:K:47:ARG:NH2 | 2.12 | 0.48 |
| 1:A:667:ILE:HD12 | 1:A:668:GLY:N | 2.27 | 0.48 |
| 1:A:874:LEU:C | 1:A:1060:VAL:CG2 | 2.82 | 0.48 |
| 1:A:899:TYR:HB2 | 1:A:934:TYR:CE1 | 2.48 | 0.48 |
| 1:A:1144:THR:O | 1:A:1147:ASN:CG | 2.52 | 0.48 |
| 2:B:609:ILE:HD13 | 2:B:618:LYS:CB | 2.43 | 0.48 |
| 2:B:693:GLU:O | 2:B:696:GLU:HB2 | 2.13 | 0.48 |
| 2:B:825:VAL:CG1 | 2:B:826:ALA:N | 2.76 | 0.48 |
| 3:C:44:ALA:CA | 3:C:71:LEU:HD12 | 2.40 | 0.48 |
| 6:F:76:LYS:O | 6:F:79:ARG:HD3 | 2.13 | 0.48 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:M:640:PRO:HG2 | 1:M:641:LYS:N | 2.25 | 0.48 |
| 1:M:651:GLN:HG2 | 1:M:655:ASN:HD21 | 1.78 | 0.48 |
| 1:M:823:GLU:O | 1:M:826:ILE:HB | 2.13 | 0.48 |
| 1:M:1163:THR:CG2 | 1:M:1165:ILE:H | 2.25 | 0.48 |
| 1:M:1207:LYS:O | 1:M:1208:GLN:O | 2.30 | 0.48 |
| 1:M:1213:GLN:O | 1:M:1214:VAL:C | 2.51 | 0.48 |
| 2:N:33:GLN:HG3 | 2:N:34:GLN:N | 2.25 | 0.48 |
| 2:N:163:ILE:HG22 | 2:N:164:MET:N | 2.29 | 0.48 |
| 2:N:463:LYS:C | 2:N:465:ALA:H | 2.16 | 0.48 |
| 2:N:654:LYS:HD3 | 2:N:676:TYR:CE2 | 2.48 | 0.48 |
| 2:N:1163:CYS:HB3 | 2:N:1166:CYS:O | 2.12 | 0.48 |
| 5:Q:92:MET:CE | 5:Q:119:ALA:HB1 | 2.42 | 0.48 |
| 1:A:181:LYS:HZ3 | 1:A:295:GLN:HB3 | 1.76 | 0.48 |
| 1:A:418:TYR:O | 1:A:419:HIS:C | 2.50 | 0.48 |
| 1:A:1412:LEU:CD1 | 2:B:1207:LEU:HD11 | 2.41 | 0.48 |
| 2:B:288:GLU:C | 2:B:291:GLN:HB2 | 2.34 | 0.48 |
| 2:B:613:ARG:NH2 | 9:I:89:GLN:NE2 | 2.61 | 0.48 |
| 3:C:174:SER:O | 3:C:175:ALA:HB3 | 2.13 | 0.48 |
| 10:J:1:MET:H1 | 10:J:56:ILE:N | 2.07 | 0.48 |
| 10:J:23:ARG:C | 10:J:25:LEU:N | 2.67 | 0.48 |
| 1:M:108:MET:O | 1:M:110:CYS:N | 2.47 | 0.48 |
| 1:M:549:ASN:HD21 | 11:W:47:ARG:NH2 | 2.12 | 0.48 |
| 1:M:899:TYR:HB2 | 1:M:934:TYR:CE1 | 2.48 | 0.48 |
| 1:M:930:LEU:HD23 | 1:M:985:ILE:HG21 | 1.94 | 0.48 |
| 1:M:943:PHE:CD2 | 1:M:944:LEU:HD23 | 2.44 | 0.48 |
| 1:M:1144:THR:O | 1:M:1147:ASN:CG | 2.52 | 0.48 |
| 1:M:1282:ILE:HD11 | 1:M:1319:VAL:HG21 | 1.96 | 0.48 |
| 2:N:797:TYR:O | 10:V:1:MET:HG2 | 2.13 | 0.48 |
| 2:N:847:ASP:C | 2:N:849:GLY:N | 2.67 | 0.48 |
| 6:R:105:ALA:HB1 | 6:R:106:PRO:CD | 2.43 | 0.48 |
| 1:A:108:MET:O | 1:A:110:CYS:N | 2.46 | 0.48 |
| 1:A:303:THR:HG22 | 1:A:304:TYR:H | 1.76 | 0.48 |
| 1:A:371:ILE:HD12 | 1:A:469:PHE:HE2 | 1.77 | 0.48 |
| 1:A:382:THR:O | 1:A:384:TYR:N | 2.45 | 0.48 |
| 1:A:439:ASP:OD1 | 1:A:463:VAL:HG23 | 2.14 | 0.48 |
| 1:A:601:PRO:HG2 | 1:A:602:LYS:H | 1.78 | 0.48 |
| 1:A:852:HIS:HB2 | 1:A:856:THR:HG23 | 1.96 | 0.48 |
| 1:A:999:LEU:HD13 | 1:A:1020:PHE:CE2 | 2.48 | 0.48 |
| 2:B:302:MET:O | 2:B:305:MET:HB2 | 2.14 | 0.48 |
| 2:B:401:LEU:O | 2:B:405:LEU:HG | 2.14 | 0.48 |
| 3:C:17:VAL:HG23 | 3:C:240:ALA:HB1 | 1.96 | 0.48 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 3:C:65:ARG:HH21 | 10:J:5:VAL:H | 1.60 | 0.48 |
| 7:G:27:ARG:CG | 7:G:54:ILE:HD12 | 2.44 | 0.48 |
| 1:M:100:LYS:HG3 | 1:M:182:LEU:HD22 | 1.95 | 0.48 |
| 1:M:114:LEU:HD13 | 1:M:172:GLN:NE2 | 2.28 | 0.48 |
| 1:M:244:PRO:HB2 | 1:M:245:PRO:HD2 | 1.94 | 0.48 |
| 1:M:439:ASP:O | 1:M:440:ASP:HB2 | 2.12 | 0.48 |
| 1:M:1448:ILE:HG12 | 7:S:18:PHE:CE2 | 2.49 | 0.48 |
| 2:N:572:ARG:O | 2:N:616:GLU:HA | 2.14 | 0.48 |
| 2:N:609:ILE:HD13 | 2:N:618:LYS:CB | 2.43 | 0.48 |
| 2:N:825:VAL:CG1 | 2:N:826:ALA:N | 2.76 | 0.48 |
| 2:N:983:ARG:HD2 | 2:N:1091:TYR:CD2 | 2.46 | 0.48 |
| 3:O:92:ASP:OD1 | 3:O:122:SER:HB2 | 2.12 | 0.48 |
| 3:O:142:ILE:H | 10:V:16:ASP:HB3 | 1.78 | 0.48 |
| 10:V:13:VAL:C | 10:V:14:VAL:CG2 | 2.82 | 0.48 |
| 10:V:38:LEU:O | 10:V:39:LYS:CB | 2.61 | 0.48 |
| 11:W:40:HIS:O | 11:W:41:THR:C | 2.52 | 0.48 |
| 1:A:22:LEU:HB2 | 2:B:1211:ASN:ND2 | 2.29 | 0.48 |
| 1:A:263:LEU:C | 1:A:265:HIS:N | 2.67 | 0.48 |
| 1:A:310:ALA:O | 1:A:312:GLN:N | 2.46 | 0.48 |
| 1:A:869:TYR:HE1 | 1:A:1066:VAL:CG1 | 2.26 | 0.48 |
| 1:A:1266:ILE:HG22 | 1:A:1266:ILE:O | 2.13 | 0.48 |
| 1:A:1401:MET:HB2 | 1:A:1429:GLU:OE2 | 2.12 | 0.48 |
| 2:B:395:GLY:H | 2:B:510:THR:HG21 | 1.79 | 0.48 |
| 2:B:876:LYS:HD2 | 2:B:893:LEU:O | 2.13 | 0.48 |
| 4:D:95:GLY:O | 4:D:96:ALA:CB | 2.58 | 0.48 |
| 5:E:115:ILE:HG22 | 5:E:119:ALA:HB3 | 1.94 | 0.48 |
| 8:H:15:VAL:HA | 8:H:26:ILE:HG12 | 1.95 | 0.48 |
| 1:M:413:ARG:NH2 | 2:N:1108:ARG:NH2 | 2.59 | 0.48 |
| 1:M:630:LEU:C | 1:M:633:THR:HG22 | 2.34 | 0.48 |
| 1:M:902:LEU:HD22 | 1:M:920:ILE:HG22 | 1.94 | 0.48 |
| 1:M:1006:ASN:O | 1:M:1010:LYS:CG | 2.62 | 0.48 |
| 1:M:1109:VAL:O | 1:M:1109:VAL:HG12 | 2.14 | 0.48 |
| 1:M:1129:ASP:CB | 1:M:1132:LYS:HB3 | 2.42 | 0.48 |
| 2:N:219:LYS:O | 2:N:220:ALA:O | 2.32 | 0.48 |
| 2:N:439:LEU:O | 2:N:440:ALA:HB3 | 2.12 | 0.48 |
| 2:N:976:ILE:HA | 2:N:990:ILE:CG2 | 2.43 | 0.48 |
| 2:N:1154:ALA:O | 2:N:1155:SER:HB2 | 2.14 | 0.48 |
| 7:S:27:ARG:CG | 7:S:54:ILE:HD12 | 2.44 | 0.48 |
| 1:A:93:ILE:HG21 | 1:A:305:MET:HB2 | 1.95 | 0.48 |
| 1:A:306:ASP:CG | 1:A:327:ARG:HD3 | 2.34 | 0.48 |
| 1:A:362:LEU:HA | 1:A:472:ASN:HD22 | 1.77 | 0.48 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 1:A:429:TYR:H | 1:A:429:TYR:HD1 | 1.62 | 0.48 |
| 1:A:1122:LEU:O | 1:A:1326:ASP:HB2 | 2.13 | 0.48 |
| 1:A:1156:TYR:CE2 | 1:A:1158:PRO:HD3 | 2.49 | 0.48 |
| 2:B:797:TYR:O | 10:J:1:MET:HG2 | 2.13 | 0.48 |
| 2:B:822:ASN:O | 10:J:47:ARG:NH1 | 2.46 | 0.48 |
| 10:J:13:VAL:C | 10:J:14:VAL:CG2 | 2.82 | 0.48 |
| 1:M:22:LEU:HB2 | 2:N:1211:ASN:ND2 | 2.29 | 0.48 |
| 1:M:429:TYR:H | 1:M:429:TYR:HD1 | 1.62 | 0.48 |
| 1:M:786:PRO:HG2 | 2:N:700:ILE:HD12 | 1.95 | 0.48 |
| 1:M:1276:LEU:N | 1:M:1276:LEU:HD12 | 2.28 | 0.48 |
| 1:M:1283:SER:O | 1:M:1284:LYS:O | 2.31 | 0.48 |
| 2:N:16:ASP:O | 2:N:18:TRP:N | 2.47 | 0.48 |
| 2:N:693:GLU:O | 2:N:696:GLU:HB2 | 2.13 | 0.48 |
| 5:Q:80:GLU:O | 5:Q:110:ILE:CG2 | 2.31 | 0.48 |
| 1:A:356:GLY:HA2 | 1:A:471:LEU:O | 2.14 | 0.48 |
| 1:A:1283:SER:O | 1:A:1284:LYS:C | 2.51 | 0.48 |
| 2:B:112:SER:HB3 | 2:B:162:PRO:HA | 1.96 | 0.48 |
| 2:B:889:THR:C | 2:B:910:ILE:HG22 | 2.29 | 0.48 |
| 3:C:164:ALA:CB | 3:C:171:SER:CB | 2.85 | 0.48 |
| 7:G:39:THR:O | 7:G:43:GLY:N | 2.33 | 0.48 |
| 7:G:122:ASN:OD1 | 7:G:125:ASN:HB3 | 2.13 | 0.48 |
| 1:M:93:ILE:HG21 | 1:M:305:MET:HB2 | 1.95 | 0.48 |
| 1:M:355:SER:HA | 1:M:483:PHE:CD2 | 2.49 | 0.48 |
| 1:M:439:ASP:OD1 | 1:M:463:VAL:HG23 | 2.14 | 0.48 |
| 1:M:456:MET:HE1 | 2:N:1134:GLU:HB3 | 1.96 | 0.48 |
| 1:M:566:ILE:HG22 | 1:M:570:LYS:O | 2.14 | 0.48 |
| 1:M:852:HIS:HB2 | 1:M:856:THR:HG23 | 1.96 | 0.48 |
| 1:M:1063:GLY:CA | 1:M:1440:GLY:HA2 | 2.43 | 0.48 |
| 2:N:18:TRP:HA | 2:N:18:TRP:CE3 | 2.48 | 0.48 |
| 2:N:112:SER:HB3 | 2:N:162:PRO:HA | 1.96 | 0.48 |
| 2:N:229:ALA:O | 2:N:247:ILE:HG22 | 2.14 | 0.48 |
| 2:N:370:PHE:C | 2:N:372:GLY:N | 2.65 | 0.48 |
| 2:N:421:ILE:O | 2:N:425:MET:HG3 | 2.13 | 0.48 |
| 2:N:822:ASN:O | 10:V:47:ARG:NH1 | 2.46 | 0.48 |
| 2:N:1187:ASN:OD1 | 2:N:1188:LYS:N | 2.47 | 0.48 |
| 5:Q:127:SER:HA | 5:Q:128:PRO:C | 2.34 | 0.48 |
| 7:S:35:GLU:CG | 7:S:48:VAL:HG23 | 2.43 | 0.48 |
| 10:V:7:CYS:CB | 10:V:48:MET:HE3 | 2.44 | 0.48 |
| 12:X:32:THR:HG22 | 12:X:33:CYS:H | 1.79 | 0.48 |
| 1:A:100:LYS:HG3 | 1:A:182:LEU:HD22 | 1.95 | 0.48 |
| 1:A:144:THR:O | 1:A:146:MET:HG3 | 2.14 | 0.48 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 1:A:355:SER:HA | 1:A:483:PHE:CD2 | 2.49 | 0.48 |
| 1:A:524:ILE:HD12 | 1:A:623:VAL:HG21 | 1.96 | 0.48 |
| 1:A:702:GLU:O | 1:A:703:LEU:HG | 2.13 | 0.48 |
| 1:A:823:GLU:O | 1:A:826:ILE:HB | 2.13 | 0.48 |
| 1:A:827:ASP:C | 1:A:829:ALA:N | 2.67 | 0.48 |
| 1:A:948:VAL:HG13 | 5:E:200:ARG:HB3 | 1.95 | 0.48 |
| 1:A:1337:GLU:O | 1:A:1338:ILE:C | 2.52 | 0.48 |
| 2:B:782:LEU:CD1 | 2:B:788:ARG:NH1 | 2.75 | 0.48 |
| 2:B:1100:ASP:OD2 | 11:K:1:MET:CB | 2.62 | 0.48 |
| 9:I:55:THR:O | 9:I:56:ALA:O | 2.32 | 0.48 |
| 1:M:34:LYS:HD3 | 1:M:34:LYS:H | 1.78 | 0.48 |
| 1:M:344:LYS:HE3 | 2:N:1151:LEU:HA | 1.94 | 0.48 |
| 1:M:356:GLY:HA2 | 1:M:471:LEU:O | 2.14 | 0.48 |
| 1:M:513:VAL:HA | 1:M:520:PRO:HA | 1.96 | 0.48 |
| 1:M:1122:LEU:O | 1:M:1326:ASP:HB2 | 2.13 | 0.48 |
| 1:M:1412:LEU:CD1 | 2:N:1207:LEU:HD11 | 2.41 | 0.48 |
| 1:M:1444:PHE:C | 1:M:1444:PHE:HD1 | 2.16 | 0.48 |
| 2:N:235:LEU:HD11 | 2:N:359:GLN:HE21 | 1.78 | 0.48 |
| 2:N:607:SER:HB2 | 2:N:691:ASP:OD1 | 2.14 | 0.48 |
| 3:O:17:VAL:HG23 | 3:O:240:ALA:HB1 | 1.96 | 0.48 |
| 9:U:55:THR:O | 9:U:56:ALA:O | 2.32 | 0.48 |
| 1:A:265:HIS:O | 1:A:268:SER:N | 2.47 | 0.47 |
| 1:A:383:GLN:HB3 | 1:A:429:TYR:CE2 | 2.41 | 0.47 |
| 1:A:1116:PRO:O | 1:A:1117:ALA:O | 2.32 | 0.47 |
| 1:A:1163:THR:CG2 | 1:A:1164:VAL:N | 2.77 | 0.47 |
| 1:A:1241:ARG:NH2 | 1:A:1243:ARG:HH22 | 2.03 | 0.47 |
| 2:B:163:ILE:HG22 | 2:B:164:MET:N | 2.29 | 0.47 |
| 2:B:301:GLN:O | 2:B:304:GLU:HB3 | 2.14 | 0.47 |
| 5:E:160:LYS:C | 5:E:162:GLN:N | 2.67 | 0.47 |
| 6:F:111:ILE:C | 6:F:113:GLY:H | 2.18 | 0.47 |
| 1:M:747:MET:HE1 | 2:N:1014:PRO:O | 2.14 | 0.47 |
| 1:M:1222:PHE:CE2 | 1:M:1266:ILE:HG23 | 2.49 | 0.47 |
| 2:N:86:ARG:HB3 | 2:N:87:PRO:CD | 2.44 | 0.47 |
| 2:N:195:VAL:O | 2:N:195:VAL:HG12 | 2.14 | 0.47 |
| 2:N:302:MET:O | 2:N:305:MET:HB2 | 2.14 | 0.47 |
| 2:N:401:LEU:O | 2:N:405:LEU:HG | 2.14 | 0.47 |
| 3:O:259:LEU:CD1 | 11:W:88:GLU:HA | 2.44 | 0.47 |
| 4:P:25:ALA:HB3 | 4:P:27:LEU:CG | 2.44 | 0.47 |
| 10:V:27:GLU:C | 10:V:29:LYS:N | 2.68 | 0.47 |
| 1:A:651:GLN:HG2 | 1:A:655:ASN:HD21 | 1.78 | 0.47 |
| 1:A:762:MET:HA | 1:A:805:TYR:HB2 | 1.97 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:A:1006:ASN:O | 1:A:1010:LYS:CG | 2.62 | 0.47 |
| 1:A:1015:ASN:O | 1:A:1017:THR:N | 2.42 | 0.47 |
| 1:A:1109:VAL:O | 1:A:1109:VAL:HG12 | 2.14 | 0.47 |
| 2:B:628:ARG:NH1 | 2:B:742:GLU:OE2 | 2.45 | 0.47 |
| 2:B:1198:TYR:CD2 | 2:B:1198:TYR:C | 2.88 | 0.47 |
| 1:M:306:ASP:CG | 1:M:327:ARG:HD3 | 2.34 | 0.47 |
| 1:M:1123:ASP:O | 1:M:1124:ARG:C | 2.53 | 0.47 |
| 1:M:1337:GLU:O | 1:M:1338:ILE:C | 2.53 | 0.47 |
| 2:N:1201:LYS:CE | 2:N:1205:GLN:OE1 | 2.62 | 0.47 |
| 3:O:129:VAL:HG22 | 3:O:130:GLY:N | 2.29 | 0.47 |
| 3:O:148:ARG:HG2 | 3:O:149:ASN:H | 1.78 | 0.47 |
| 5:Q:59:PHE:C | 5:Q:59:PHE:CD2 | 2.87 | 0.47 |
| 5:Q:89:ILE:HG22 | 5:Q:118:SER:C | 2.23 | 0.47 |
| 8:T:90:ASP:O | 8:T:92:TYR:N | 2.41 | 0.47 |
| 1:A:12:ARG:HG3 | 2:B:1192:TYR:CD2 | 2.48 | 0.47 |
| 1:A:640:PRO:HG2 | 1:A:641:LYS:N | 2.25 | 0.47 |
| 1:A:1282:ILE:HD11 | 1:A:1319:VAL:HG21 | 1.96 | 0.47 |
| 1:A:1388:THR:O | 1:A:1391:GLY:N | 2.48 | 0.47 |
| 2:B:195:VAL:O | 2:B:195:VAL:HG12 | 2.14 | 0.47 |
| 2:B:755:ILE:HG22 | 2:B:809:MET:HE2 | 1.95 | 0.47 |
| 2:B:797:TYR:HB3 | 2:B:798:TYR:HD2 | 1.79 | 0.47 |
| 3:C:129:VAL:HG22 | 3:C:130:GLY:N | 2.28 | 0.47 |
| 3:C:142:ILE:H | 10:J:16:ASP:HB3 | 1.78 | 0.47 |
| 4:D:25:ALA:HB3 | 4:D:27:LEU:CG | 2.45 | 0.47 |
| 10:J:23:ARG:O | 10:J:25:LEU:N | 2.48 | 0.47 |
| 1:M:144:THR:O | 1:M:146:MET:HG3 | 2.14 | 0.47 |
| 1:M:475:VAL:O | 1:M:475:VAL:HG22 | 2.14 | 0.47 |
| 1:M:667:ILE:HD12 | 1:M:668:GLY:N | 2.27 | 0.47 |
| 1:M:827:ASP:C | 1:M:829:ALA:N | 2.67 | 0.47 |
| 1:M:846:LEU:O | 1:M:847:GLU:C | 2.53 | 0.47 |
| 1:M:1061:HIS:ND1 | 6:R:86:THR:HA | 2.29 | 0.47 |
| 2:N:628:ARG:NH1 | 2:N:742:GLU:OE2 | 2.45 | 0.47 |
| 2:N:880:ALA:HB3 | 2:N:934:LYS:HD2 | 1.97 | 0.47 |
| 2:N:1168:LEU:HD13 | 2:N:1208:MET:HE3 | 1.96 | 0.47 |
| 1:A:566:ILE:HG22 | 1:A:570:LYS:O | 2.14 | 0.47 |
| 1:A:710:THR:HG23 | 9:I:94:ASP:HA | 1.96 | 0.47 |
| 1:A:1268:ALA:O | 1:A:1271:LEU:N | 2.47 | 0.47 |
| 2:B:83:TYR:N | 2:B:83:TYR:CD1 | 2.83 | 0.47 |
| 2:B:219:LYS:O | 2:B:220:ALA:O | 2.32 | 0.47 |
| 2:B:1114:LEU:O | 2:B:1198:TYR:CE2 | 2.68 | 0.47 |
| 2:B:1154:ALA:O | 2:B:1155:SER:HB2 | 2.14 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 2:B:1187:ASN:OD1 | 2:B:1188:LYS:N | 2.47 | 0.47 |
| 3:C:168:ALA:C | 3:C:170:TRP:H | 2.18 | 0.47 |
| 10:J:52:HIS:NE2 | 10:J:54:ASP:HA | 2.30 | 0.47 |
| 1:M:263:LEU:C | 1:M:265:HIS:N | 2.67 | 0.47 |
| 1:M:762:MET:HA | 1:M:805:TYR:HB2 | 1.96 | 0.47 |
| 1:M:931:ASN:O | 1:M:932:SER:C | 2.53 | 0.47 |
| 1:M:1156:TYR:CE2 | 1:M:1158:PRO:HD3 | 2.49 | 0.47 |
| 2:N:1013:ASN:OD1 | 2:N:1015:HIS:CD2 | 2.67 | 0.47 |
| 5:Q:142:ASN:ND2 | 5:Q:144:THR:OG1 | 2.48 | 0.47 |
| 8:T:58:THR:HB | 8:T:142:LEU:HB2 | 1.96 | 0.47 |
| 1:A:34:LYS:HD3 | 1:A:34:LYS:H | 1.78 | 0.47 |
| 1:A:591:ARG:HB2 | 1:A:606:MET:HB3 | 1.95 | 0.47 |
| 1:A:827:ASP:C | 1:A:829:ALA:H | 2.18 | 0.47 |
| 1:A:846:LEU:O | 1:A:847:GLU:C | 2.53 | 0.47 |
| 1:A:1342:LEU:HD23 | 5:E:143:ILE:HG22 | 1.96 | 0.47 |
| 2:B:16:ASP:O | 2:B:18:TRP:N | 2.47 | 0.47 |
| 2:B:489:ARG:NH1 | 2:B:532:LEU:HB2 | 2.30 | 0.47 |
| 2:B:491:THR:HG21 | 2:B:530:LYS:HB2 | 1.96 | 0.47 |
| 2:B:562:TYR:CE1 | 2:B:582:ILE:HG21 | 2.49 | 0.47 |
| 2:B:1201:LYS:CE | 2:B:1205:GLN:OE1 | 2.62 | 0.47 |
| 4:D:141:GLU:C | 4:D:143:ALA:N | 2.67 | 0.47 |
| 4:D:182:GLU:O | 4:D:183:ASP:C | 2.53 | 0.47 |
| 5:E:127:SER:HA | 5:E:128:PRO:C | 2.34 | 0.47 |
| 5:E:181:ASP:HB3 | 5:E:184:ALA:CB | 2.45 | 0.47 |
| 8:H:38:LEU:HD12 | 8:H:123:CYS:O | 2.14 | 0.47 |
| 12:L:32:THR:HG22 | 12:L:33:CYS:H | 1.79 | 0.47 |
| 1:M:265:HIS:O | 1:M:268:SER:N | 2.47 | 0.47 |
| 1:M:699:GLN:NE2 | 9:U:99:LEU:HD21 | 2.30 | 0.47 |
| 1:M:1197:LEU:HD11 | 1:M:1270:MET:HE3 | 1.95 | 0.47 |
| 1:M:1268:ALA:O | 1:M:1271:LEU:N | 2.47 | 0.47 |
| 2:N:305:MET:O | 2:N:308:PRO:HD2 | 2.15 | 0.47 |
| 2:N:1135:ARG:HG2 | 2:N:1139:ILE:HD11 | 1.96 | 0.47 |
| 2:N:1176:LYS:C | 2:N:1178:ASN:N | 2.66 | 0.47 |
| 3:O:168:ALA:C | 3:O:170:TRP:H | 2.18 | 0.47 |
| 8:T:40:LEU:HD12 | 8:T:41:ASP:N | 2.30 | 0.47 |
| 1:A:167:GLY:O | 1:A:168:CYS:SG | 2.72 | 0.47 |
| 1:A:786:PRO:HG2 | 2:B:700:ILE:HD12 | 1.95 | 0.47 |
| 1:A:931:ASN:O | 1:A:932:SER:C | 2.53 | 0.47 |
| 1:A:1263:LEU:HG | 1:A:1263:LEU:O | 2.15 | 0.47 |
| 2:B:199:SER:OG | 2:B:201:LYS:NZ | 2.48 | 0.47 |
| 2:B:224:PRO:HG2 | 2:B:225:ILE:CD1 | 2.44 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|------------------|--------------------------|-------------------|
| 2:B:607:SER:HB2 | 2:B:691:ASP:OD1 | 2.14 | 0.47 |
| 2:B:810:GLU:CB | 2:B:815:ARG:HH22 | 2.23 | 0.47 |
| 2:B:1013:ASN:OD1 | 2:B:1015:HIS:CD2 | 2.67 | 0.47 |
| 5:E:81:PHE:CD1 | 5:E:81:PHE:N | 2.83 | 0.47 |
| 8:H:40:LEU:HD12 | 8:H:41:ASP:N | 2.30 | 0.47 |
| 8:H:59:LEU:O | 8:H:60:ALA:HB3 | 2.14 | 0.47 |
| 1:M:371:ILE:HD12 | 1:M:469:PHE:HE2 | 1.77 | 0.47 |
| 1:M:666:GLY:O | 1:M:668:GLY:N | 2.48 | 0.47 |
| 1:M:853:TYR:CE2 | 1:M:1062:PRO:HB2 | 2.50 | 0.47 |
| 1:M:1015:ASN:O | 1:M:1017:THR:N | 2.43 | 0.47 |
| 1:M:1342:LEU:HD23 | 5:Q:143:ILE:HG22 | 1.96 | 0.47 |
| 2:N:279:ARG:NH1 | 2:N:316:ILE:O | 2.48 | 0.47 |
| 2:N:416:LYS:HB2 | 2:N:416:LYS:HZ2 | 1.76 | 0.47 |
| 2:N:491:THR:HG21 | 2:N:530:LYS:HB2 | 1.96 | 0.47 |
| 2:N:876:LYS:HD2 | 2:N:893:LEU:O | 2.14 | 0.47 |
| 2:N:1159:ARG:NH1 | 2:N:1159:ARG:CB | 2.66 | 0.47 |
| 5:Q:81:PHE:N | 5:Q:81:PHE:CD1 | 2.83 | 0.47 |
| 10:V:1:MET:H1 | 10:V:56:ILE:N | 2.08 | 0.47 |
| 1:A:63:ARG:HA | 1:A:74:MET:SD | 2.55 | 0.47 |
| 1:A:114:LEU:HD13 | 1:A:172:GLN:NE2 | 2.28 | 0.47 |
| 1:A:381:VAL:CG1 | 1:A:386:ILE:HG12 | 2.44 | 0.47 |
| 1:A:493:PRO:O | 1:A:494:GLN:NE2 | 2.48 | 0.47 |
| 1:A:513:VAL:HA | 1:A:520:PRO:HA | 1.96 | 0.47 |
| 1:A:890:SER:HB3 | 1:A:1300:GLU:HG2 | 1.96 | 0.47 |
| 1:A:984:THR:HB | 1:A:987:GLU:H | 1.80 | 0.47 |
| 1:A:1061:HIS:ND1 | 6:F:86:THR:HA | 2.29 | 0.47 |
| 1:A:1123:ASP:O | 1:A:1124:ARG:C | 2.53 | 0.47 |
| 1:A:1283:SER:O | 1:A:1284:LYS:O | 2.32 | 0.47 |
| 2:B:56:LEU:HB3 | 2:B:425:MET:HE1 | 1.97 | 0.47 |
| 2:B:203:LEU:HD13 | 2:B:405:LEU:HD12 | 1.95 | 0.47 |
| 2:B:305:MET:O | 2:B:308:PRO:HD2 | 2.15 | 0.47 |
| 2:B:316:ILE:HG23 | 2:B:321:VAL:HB | 1.97 | 0.47 |
| 2:B:457:GLY:HA2 | 2:B:472:VAL:O | 2.15 | 0.47 |
| 2:B:612:ILE:O | 2:B:614:GLU:N | 2.47 | 0.47 |
| 2:B:879:ARG:HA | 2:B:879:ARG:NE | 2.30 | 0.47 |
| 2:B:969:ARG:HG2 | 2:B:970:THR:N | 2.30 | 0.47 |
| 3:C:148:ARG:HG2 | 3:C:149:ASN:H | 1.78 | 0.47 |
| 3:C:259:LEU:CD1 | 11:K:88:GLU:HA | 2.44 | 0.47 |
| 5:E:144:THR:HG21 | 5:E:186:TYR:CE2 | 2.50 | 0.47 |
| 5:E:179:ARG:NH2 | 5:E:191:ARG:HB2 | 2.29 | 0.47 |
| 7:G:119:LEU:HD12 | 7:G:131:MET:O | 2.15 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 7:G:149:GLY:O | 7:G:159:ALA:HB1 | 2.15 | 0.47 |
| 9:I:7:CYS:HB3 | 9:I:14:LEU:HD21 | 1.97 | 0.47 |
| 1:M:12:ARG:HG3 | 2:N:1192:TYR:CD2 | 2.48 | 0.47 |
| 1:M:55:ASP:O | 1:M:57:LYS:N | 2.46 | 0.47 |
| 1:M:63:ARG:HA | 1:M:74:MET:SD | 2.55 | 0.47 |
| 1:M:67:CYS:O | 1:M:68:GLN:CB | 2.63 | 0.47 |
| 1:M:297:LEU:O | 1:M:301:VAL:HG23 | 2.15 | 0.47 |
| 1:M:383:GLN:HB3 | 1:M:429:TYR:CE2 | 2.41 | 0.47 |
| 1:M:397:PRO:HG3 | 1:M:417:ARG:HB3 | 1.95 | 0.47 |
| 1:M:493:PRO:O | 1:M:494:GLN:NE2 | 2.48 | 0.47 |
| 1:M:524:ILE:HD12 | 1:M:623:VAL:HG21 | 1.97 | 0.47 |
| 1:M:549:ASN:ND2 | 11:W:47:ARG:HH21 | 2.13 | 0.47 |
| 1:M:566:ILE:O | 1:M:571:PRO:HA | 2.14 | 0.47 |
| 1:M:591:ARG:HB2 | 1:M:606:MET:HB3 | 1.95 | 0.47 |
| 1:M:1241:ARG:HH12 | 1:M:1243:ARG:HH12 | 1.62 | 0.47 |
| 1:M:1275:ALA:C | 1:M:1276:LEU:HD12 | 2.35 | 0.47 |
| 2:N:83:TYR:N | 2:N:83:TYR:CD1 | 2.83 | 0.47 |
| 2:N:215:GLN:O | 2:N:229:ALA:HA | 2.15 | 0.47 |
| 2:N:244:THR:CG2 | 2:N:245:MET:N | 2.77 | 0.47 |
| 2:N:280:ALA:N | 2:N:322:ALA:HB1 | 2.30 | 0.47 |
| 2:N:301:GLN:O | 2:N:304:GLU:HB3 | 2.14 | 0.47 |
| 2:N:348:ILE:O | 2:N:348:ILE:HG22 | 2.15 | 0.47 |
| 2:N:489:ARG:NH1 | 2:N:532:LEU:HB2 | 2.30 | 0.47 |
| 2:N:555:GLY:HA3 | 2:N:583:HIS:HE1 | 1.75 | 0.47 |
| 2:N:778:MET:HE2 | 2:N:1094:ARG:HD3 | 1.93 | 0.47 |
| 2:N:889:THR:C | 2:N:910:ILE:HG22 | 2.28 | 0.47 |
| 2:N:1198:TYR:C | 2:N:1198:TYR:CD2 | 2.87 | 0.47 |
| 3:O:16:GLU:O | 3:O:17:VAL:HG23 | 2.15 | 0.47 |
| 3:O:112:ASP:HB2 | 3:O:114:TYR:HE1 | 1.76 | 0.47 |
| 5:Q:160:LYS:C | 5:Q:162:GLN:N | 2.67 | 0.47 |
| 5:Q:181:ASP:HB3 | 5:Q:184:ALA:CB | 2.45 | 0.47 |
| 7:S:119:LEU:HD12 | 7:S:131:MET:O | 2.15 | 0.47 |
| 9:U:100:PHE:N | 9:U:100:PHE:HD1 | 2.12 | 0.47 |
| 10:V:23:ARG:O | 10:V:25:LEU:N | 2.47 | 0.47 |
| 10:V:43:TYR:CD2 | 10:V:43:TYR:N | 2.83 | 0.47 |
| 11:W:63:VAL:O | 11:W:63:VAL:HG23 | 2.15 | 0.47 |
| 1:A:428:GLN:O | 1:A:429:TYR:C | 2.52 | 0.47 |
| 1:A:467:SER:HA | 11:K:2:ASN:HD22 | 1.79 | 0.47 |
| 1:A:475:VAL:HG22 | 1:A:475:VAL:O | 2.15 | 0.47 |
| 1:A:843:VAL:HG11 | 2:B:1136:ASP:OD2 | 2.14 | 0.47 |
| 1:A:1129:ASP:CB | 1:A:1132:LYS:HB3 | 2.42 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:A:1275:ALA:C | 1:A:1276:LEU:HD12 | 2.35 | 0.47 |
| 1:A:1352:TYR:HA | 1:A:1375:VAL:HG21 | 1.96 | 0.47 |
| 2:B:279:ARG:NH1 | 2:B:316:ILE:O | 2.48 | 0.47 |
| 2:B:466:MET:C | 2:B:468:SER:H | 2.18 | 0.47 |
| 5:E:77:LEU:HD21 | 5:E:79:VAL:CG2 | 2.44 | 0.47 |
| 8:H:4:ALA:HA | 8:H:60:ALA:CB | 2.45 | 0.47 |
| 10:J:7:CYS:CB | 10:J:48:MET:HE3 | 2.45 | 0.47 |
| 10:J:27:GLU:C | 10:J:29:LYS:N | 2.68 | 0.47 |
| 1:M:270:ILE:CD1 | 1:M:301:VAL:HG22 | 2.45 | 0.47 |
| 1:M:1116:PRO:O | 1:M:1117:ALA:O | 2.32 | 0.47 |
| 1:M:1169:PHE:O | 1:M:1172:VAL:HG23 | 2.15 | 0.47 |
| 2:N:457:GLY:HA2 | 2:N:472:VAL:O | 2.15 | 0.47 |
| 2:N:466:MET:C | 2:N:468:SER:H | 2.18 | 0.47 |
| 2:N:551:LEU:C | 2:N:553:GLU:N | 2.63 | 0.47 |
| 2:N:827:ILE:O | 2:N:827:ILE:HG22 | 2.14 | 0.47 |
| 6:R:111:ILE:C | 6:R:113:GLY:H | 2.18 | 0.47 |
| 11:W:7:PHE:HA | 11:W:10:PHE:HE2 | 1.76 | 0.47 |
| 1:A:67:CYS:O | 1:A:68:GLN:HB2 | 2.15 | 0.47 |
| 1:A:297:LEU:O | 1:A:301:VAL:HG23 | 2.15 | 0.47 |
| 1:A:850:MET:CE | 1:A:1063:GLY:HA2 | 2.45 | 0.47 |
| 1:A:1169:PHE:O | 1:A:1172:VAL:HG23 | 2.15 | 0.47 |
| 2:B:302:MET:HE2 | 2:B:379:LEU:HB2 | 1.96 | 0.47 |
| 2:B:770:GLN:OE1 | 2:B:983:ARG:HA | 2.15 | 0.47 |
| 2:B:839:MET:HE1 | 2:B:980:PHE:HB2 | 1.97 | 0.47 |
| 2:B:1161:HIS:CE1 | 2:B:1193:GLN:HB2 | 2.50 | 0.47 |
| 5:E:119:ALA:O | 5:E:121:LYS:N | 2.48 | 0.47 |
| 7:G:132:SER:HB3 | 7:G:135:GLU:HB2 | 1.97 | 0.47 |
| 8:H:58:THR:HB | 8:H:142:LEU:HB2 | 1.96 | 0.47 |
| 10:J:47:ARG:HD2 | 10:J:47:ARG:C | 2.36 | 0.47 |
| 1:M:843:VAL:C | 1:M:845:ALA:N | 2.68 | 0.47 |
| 1:M:1221:VAL:HG11 | 1:M:1274:ILE:CD1 | 2.39 | 0.47 |
| 2:N:549:ASN:C | 2:N:551:LEU:H | 2.18 | 0.47 |
| 2:N:797:TYR:C | 2:N:798:TYR:CD2 | 2.78 | 0.47 |
| 2:N:839:MET:HE2 | 2:N:980:PHE:CD1 | 2.49 | 0.47 |
| 2:N:1031:LEU:HD11 | 2:N:1042:GLY:HA3 | 1.96 | 0.47 |
| 2:N:1161:HIS:CE1 | 2:N:1193:GLN:HB2 | 2.50 | 0.47 |
| 4:P:182:GLU:O | 4:P:183:ASP:C | 2.53 | 0.47 |
| 7:S:149:GLY:O | 7:S:159:ALA:HB1 | 2.15 | 0.47 |
| 8:T:15:VAL:HA | 8:T:26:ILE:HG12 | 1.95 | 0.47 |
| 10:V:47:ARG:HD2 | 10:V:47:ARG:C | 2.35 | 0.47 |
| 1:A:397:PRO:HG3 | 1:A:417:ARG:HB3 | 1.95 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 1:A:549:ASN:ND2 | 11:K:47:ARG:HH21 | 2.13 | 0.47 |
| 1:A:630:LEU:C | 1:A:633:THR:HG22 | 2.35 | 0.47 |
| 1:A:1215:ALA:O | 1:A:1216:ASP:C | 2.53 | 0.47 |
| 2:B:702:MET:HA | 2:B:702:MET:CE | 2.45 | 0.47 |
| 2:B:983:ARG:HD2 | 2:B:1091:TYR:CD2 | 2.47 | 0.47 |
| 2:B:1039:GLY:HA2 | 10:J:50:LEU:HD21 | 1.96 | 0.47 |
| 4:D:56:SER:O | 4:D:60:ILE:HG13 | 2.15 | 0.47 |
| 4:D:160:ILE:HG22 | 4:D:160:ILE:O | 2.14 | 0.47 |
| 5:E:54:ARG:C | 5:E:56:LEU:N | 2.69 | 0.47 |
| 1:M:310:ALA:O | 1:M:312:GLN:N | 2.46 | 0.47 |
| 1:M:601:PRO:HA | 8:T:25:ARG:NH1 | 2.30 | 0.47 |
| 2:N:199:SER:OG | 2:N:201:LYS:NZ | 2.48 | 0.47 |
| 5:Q:144:THR:HG21 | 5:Q:186:TYR:CE2 | 2.50 | 0.47 |
| 7:S:1:MET:HE2 | 7:S:3:PHE:CE1 | 2.43 | 0.47 |
| 10:V:52:HIS:NE2 | 10:V:54:ASP:HA | 2.30 | 0.47 |
| 1:A:270:ILE:CD1 | 1:A:301:VAL:HG22 | 2.45 | 0.46 |
| 1:A:360:LEU:O | 1:A:361:GLU:C | 2.53 | 0.46 |
| 1:A:402:GLY:O | 1:A:436:HIS:CD2 | 2.68 | 0.46 |
| 1:A:601:PRO:HA | 8:H:25:ARG:NH1 | 2.30 | 0.46 |
| 1:A:666:GLY:O | 1:A:668:GLY:N | 2.48 | 0.46 |
| 1:A:689:GLU:C | 1:A:691:VAL:H | 2.18 | 0.46 |
| 1:A:699:GLN:NE2 | 9:I:99:LEU:HD21 | 2.29 | 0.46 |
| 1:A:853:TYR:CE2 | 1:A:1062:PRO:HB2 | 2.50 | 0.46 |
| 1:A:1282:ILE:CD1 | 1:A:1319:VAL:HG21 | 2.45 | 0.46 |
| 1:A:1343:GLY:O | 1:A:1344:ILE:C | 2.53 | 0.46 |
| 2:B:86:ARG:HB3 | 2:B:87:PRO:CD | 2.44 | 0.46 |
| 2:B:239:SER:O | 2:B:240:ARG:HB2 | 2.15 | 0.46 |
| 2:B:545:GLU:C | 2:B:547:ILE:N | 2.69 | 0.46 |
| 2:B:549:ASN:C | 2:B:551:LEU:H | 2.18 | 0.46 |
| 9:I:100:PHE:N | 9:I:100:PHE:HD1 | 2.12 | 0.46 |
| 10:J:6:ARG:HA | 10:J:12:LYS:O | 2.15 | 0.46 |
| 1:M:467:SER:HA | 11:W:2:ASN:HD22 | 1.79 | 0.46 |
| 1:M:519:LYS:HB2 | 1:M:520:PRO:HD2 | 1.96 | 0.46 |
| 1:M:684:ILE:HG21 | 1:M:802:GLU:HG3 | 1.96 | 0.46 |
| 1:M:742:ASN:HD22 | 1:M:742:ASN:C | 2.15 | 0.46 |
| 1:M:1163:THR:CG2 | 1:M:1164:VAL:N | 2.77 | 0.46 |
| 1:M:1195:LEU:HB2 | 1:M:1263:LEU:HD11 | 1.96 | 0.46 |
| 1:M:1282:ILE:CD1 | 1:M:1319:VAL:HG21 | 2.46 | 0.46 |
| 1:M:1388:THR:O | 1:M:1391:GLY:N | 2.47 | 0.46 |
| 2:N:203:LEU:HD13 | 2:N:405:LEU:HD12 | 1.96 | 0.46 |
| 2:N:286:ASP:HB2 | 9:U:12:ASN:HA | 1.97 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 2:N:545:GLU:C | 2:N:547:ILE:N | 2.69 | 0.46 |
| 2:N:702:MET:HA | 2:N:702:MET:CE | 2.45 | 0.46 |
| 2:N:831:SER:CB | 2:N:994:TYR:OH | 2.63 | 0.46 |
| 4:P:141:GLU:C | 4:P:143:ALA:N | 2.67 | 0.46 |
| 9:U:7:CYS:HB3 | 9:U:14:LEU:HD21 | 1.97 | 0.46 |
| 1:A:12:ARG:HB2 | 2:B:1218:THR:HG21 | 1.97 | 0.46 |
| 1:A:27:ILE:CG1 | 1:A:239:VAL:HG12 | 2.44 | 0.46 |
| 1:A:91:PHE:H | 1:A:298:GLN:NE2 | 2.10 | 0.46 |
| 1:A:519:LYS:HB2 | 1:A:520:PRO:HD2 | 1.96 | 0.46 |
| 1:A:940:ASP:O | 1:A:943:PHE:N | 2.48 | 0.46 |
| 1:A:1195:LEU:HB2 | 1:A:1263:LEU:HD11 | 1.96 | 0.46 |
| 1:A:1222:PHE:CE2 | 1:A:1266:ILE:HG23 | 2.49 | 0.46 |
| 2:B:830:TYR:CZ | 2:B:1000:PRO:HB3 | 2.51 | 0.46 |
| 2:B:1069:PHE:CD1 | 2:B:1069:PHE:N | 2.76 | 0.46 |
| 5:E:59:PHE:C | 5:E:59:PHE:CD2 | 2.87 | 0.46 |
| 5:E:92:MET:HE3 | 5:E:119:ALA:HB1 | 1.97 | 0.46 |
| 5:E:142:ASN:ND2 | 5:E:144:THR:OG1 | 2.48 | 0.46 |
| 8:H:90:ASP:O | 8:H:92:TYR:N | 2.41 | 0.46 |
| 11:K:63:VAL:HG23 | 11:K:63:VAL:O | 2.15 | 0.46 |
| 1:M:710:THR:HG23 | 9:U:94:ASP:HA | 1.96 | 0.46 |
| 1:M:850:MET:CE | 1:M:1063:GLY:HA2 | 2.45 | 0.46 |
| 1:M:1352:TYR:HA | 1:M:1375:VAL:HG21 | 1.96 | 0.46 |
| 2:N:354:LEU:N | 2:N:355:PRO:CD | 2.78 | 0.46 |
| 2:N:562:TYR:CE1 | 2:N:582:ILE:HG21 | 2.50 | 0.46 |
| 2:N:969:ARG:HG2 | 2:N:970:THR:N | 2.30 | 0.46 |
| 2:N:1010:LEU:HD22 | 2:N:1092:TYR:CE1 | 2.50 | 0.46 |
| 2:N:1172:ILE:O | 2:N:1172:ILE:CG2 | 2.58 | 0.46 |
| 2:N:1189:THR:CG2 | 2:N:1190:ASN:N | 2.78 | 0.46 |
| 3:O:183:HIS:O | 3:O:185:LYS:N | 2.49 | 0.46 |
| 4:P:160:ILE:HG22 | 4:P:160:ILE:O | 2.15 | 0.46 |
| 5:Q:179:ARG:NH2 | 5:Q:191:ARG:HB2 | 2.29 | 0.46 |
| 8:T:38:LEU:HD12 | 8:T:123:CYS:O | 2.14 | 0.46 |
| 10:V:6:ARG:HA | 10:V:12:LYS:O | 2.15 | 0.46 |
| 1:A:67:CYS:O | 1:A:68:GLN:CB | 2.63 | 0.46 |
| 1:A:566:ILE:O | 1:A:571:PRO:HA | 2.15 | 0.46 |
| 1:A:843:VAL:C | 1:A:845:ALA:N | 2.68 | 0.46 |
| 2:B:235:LEU:HD11 | 2:B:359:GLN:HE21 | 1.78 | 0.46 |
| 2:B:280:ALA:N | 2:B:322:ALA:HB1 | 2.30 | 0.46 |
| 2:B:1189:THR:CG2 | 2:B:1190:ASN:N | 2.78 | 0.46 |
| 4:D:54:SER:CB | 4:D:113:ALA:HB1 | 2.45 | 0.46 |
| 1:M:351:ARG:HD2 | 2:N:1128:LEU:CD2 | 2.45 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:M:739:LYS:H | 1:M:739:LYS:CD | 2.06 | 0.46 |
| 1:M:965:ILE:HD13 | 1:M:1051:ILE:HG12 | 1.96 | 0.46 |
| 2:N:363:PHE:O | 2:N:364:GLU:C | 2.54 | 0.46 |
| 2:N:777:ALA:HB1 | 2:N:1093:GLN:HB3 | 1.97 | 0.46 |
| 2:N:992:VAL:CG2 | 2:N:993:THR:N | 2.78 | 0.46 |
| 2:N:1012:ILE:HG21 | 2:N:1092:TYR:OH | 2.16 | 0.46 |
| 2:N:1116:ARG:CD | 2:N:1198:TYR:CE1 | 2.98 | 0.46 |
| 3:O:164:ALA:CB | 3:O:171:SER:CB | 2.84 | 0.46 |
| 5:Q:77:LEU:HD21 | 5:Q:79:VAL:CG2 | 2.44 | 0.46 |
| 1:A:20:GLY:C | 1:A:21:LEU:HD23 | 2.36 | 0.46 |
| 1:A:24:PRO:HA | 1:A:27:ILE:CG2 | 2.45 | 0.46 |
| 1:A:225:PHE:HZ | 1:A:235:MET:HE1 | 1.79 | 0.46 |
| 1:A:854:ASP:OD1 | 1:A:854:ASP:C | 2.53 | 0.46 |
| 1:A:1453:LEU:HG | 7:G:18:PHE:O | 2.15 | 0.46 |
| 2:B:51:TRP:CG | 2:B:51:TRP:CA | 2.85 | 0.46 |
| 2:B:218:LYS:HB2 | 2:B:388:GLN:OE1 | 2.15 | 0.46 |
| 2:B:758:PHE:HB2 | 2:B:1024:ALA:CB | 2.41 | 0.46 |
| 2:B:1010:LEU:HD22 | 2:B:1092:TYR:CE1 | 2.50 | 0.46 |
| 2:B:1031:LEU:HD11 | 2:B:1042:GLY:HA3 | 1.96 | 0.46 |
| 2:B:1162:VAL:CG1 | 2:B:1163:CYS:H | 2.28 | 0.46 |
| 4:D:41:HIS:HB2 | 7:G:73:LYS:HZ2 | 1.79 | 0.46 |
| 4:D:94:SER:C | 4:D:96:ALA:H | 2.19 | 0.46 |
| 5:E:154:ARG:O | 5:E:155:LEU:HG | 2.16 | 0.46 |
| 1:M:64:ASN:O | 1:M:66:LYS:N | 2.48 | 0.46 |
| 1:M:402:GLY:O | 1:M:436:HIS:CD2 | 2.68 | 0.46 |
| 1:M:822:ARG:HG2 | 2:N:507:LEU:H | 1.79 | 0.46 |
| 1:M:963:ARG:HG3 | 1:M:963:ARG:HH11 | 1.80 | 0.46 |
| 1:M:1263:LEU:HG | 1:M:1263:LEU:O | 2.14 | 0.46 |
| 2:N:280:ALA:O | 2:N:323:LEU:HD11 | 2.16 | 0.46 |
| 2:N:538:ILE:HG22 | 2:N:539:SER:O | 2.16 | 0.46 |
| 2:N:612:ILE:O | 2:N:614:GLU:N | 2.47 | 0.46 |
| 2:N:879:ARG:NE | 2:N:879:ARG:HA | 2.30 | 0.46 |
| 3:O:9:ILE:H | 3:O:9:ILE:HG13 | 1.45 | 0.46 |
| 4:P:41:HIS:ND1 | 4:P:41:HIS:C | 2.68 | 0.46 |
| 8:T:59:LEU:O | 8:T:60:ALA:HB3 | 2.14 | 0.46 |
| 1:A:624:GLY:C | 1:A:626:GLY:H | 2.18 | 0.46 |
| 1:A:666:GLY:O | 1:A:667:ILE:C | 2.54 | 0.46 |
| 1:A:965:ILE:HD13 | 1:A:1051:ILE:HG12 | 1.96 | 0.46 |
| 1:A:1153:GLU:HA | 9:I:44:TYR:O | 2.16 | 0.46 |
| 1:A:1197:LEU:HD11 | 1:A:1270:MET:HE3 | 1.97 | 0.46 |
| 1:A:1371:MET:H | 1:A:1371:MET:HE3 | 1.81 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 2:B:20:VAL:HG21 | 2:B:631:PHE:HZ | 1.81 | 0.46 |
| 2:B:280:ALA:O | 2:B:323:LEU:HD11 | 2.16 | 0.46 |
| 2:B:348:ILE:HG22 | 2:B:348:ILE:O | 2.15 | 0.46 |
| 2:B:466:MET:O | 2:B:468:SER:N | 2.40 | 0.46 |
| 2:B:509:ASN:H | 2:B:509:ASN:ND2 | 2.07 | 0.46 |
| 2:B:538:ILE:HG22 | 2:B:539:SER:O | 2.16 | 0.46 |
| 2:B:873:GLU:HB2 | 2:B:915:THR:OG1 | 2.15 | 0.46 |
| 2:B:980:PHE:HA | 2:B:1095:LEU:HD13 | 1.98 | 0.46 |
| 3:C:9:ILE:CD1 | 11:K:108:GLU:HB3 | 2.37 | 0.46 |
| 4:D:52:SER:HB2 | 4:D:147:SER:HB3 | 1.98 | 0.46 |
| 10:J:55:LEU:O | 10:J:58:LYS:N | 2.49 | 0.46 |
| 12:L:50:CYS:O | 12:L:52:GLU:N | 2.42 | 0.46 |
| 1:M:381:VAL:CG1 | 1:M:386:ILE:HG12 | 2.44 | 0.46 |
| 1:M:505:LEU:HD11 | 6:R:91:ALA:HB2 | 1.97 | 0.46 |
| 1:M:1215:ALA:O | 1:M:1216:ASP:C | 2.53 | 0.46 |
| 1:M:1450:GLU:HG3 | 7:S:22:MET:HB3 | 1.98 | 0.46 |
| 2:N:187:PRO:HG2 | 2:N:188:TYR:H | 1.80 | 0.46 |
| 2:N:316:ILE:HG23 | 2:N:321:VAL:HB | 1.97 | 0.46 |
| 2:N:540:ILE:H | 2:N:605:GLU:CD | 2.19 | 0.46 |
| 7:S:35:GLU:HG2 | 7:S:48:VAL:HG23 | 1.98 | 0.46 |
| 7:S:111:SER:C | 7:S:113:ARG:N | 2.68 | 0.46 |
| 7:S:132:SER:HB3 | 7:S:135:GLU:HB2 | 1.97 | 0.46 |
| 1:A:183:TRP:CG | 1:A:184:GLY:N | 2.84 | 0.46 |
| 1:A:384:TYR:HB3 | 6:F:115:THR:HG22 | 1.97 | 0.46 |
| 1:A:786:PRO:CB | 2:B:700:ILE:HD12 | 2.45 | 0.46 |
| 1:A:963:ARG:HH11 | 1:A:963:ARG:HG3 | 1.80 | 0.46 |
| 2:B:16:ASP:OD1 | 2:B:652:ILE:HD13 | 2.15 | 0.46 |
| 2:B:101:PRO:O | 2:B:103:GLU:N | 2.49 | 0.46 |
| 2:B:215:GLN:O | 2:B:229:ALA:HA | 2.15 | 0.46 |
| 2:B:752:ALA:O | 2:B:755:ILE:HG13 | 2.15 | 0.46 |
| 3:C:16:GLU:O | 3:C:17:VAL:HG23 | 2.15 | 0.46 |
| 4:D:122:THR:O | 4:D:126:GLN:HG3 | 2.16 | 0.46 |
| 7:G:35:GLU:HG2 | 7:G:48:VAL:HG23 | 1.98 | 0.46 |
| 10:J:43:TYR:CD2 | 10:J:43:TYR:N | 2.82 | 0.46 |
| 11:K:40:HIS:O | 11:K:41:THR:C | 2.52 | 0.46 |
| 1:M:67:CYS:O | 1:M:68:GLN:HB2 | 2.15 | 0.46 |
| 1:M:529:LEU:HD21 | 1:M:750:ALA:O | 2.16 | 0.46 |
| 2:N:108:ASN:OD1 | 2:N:963:PHE:HZ | 1.99 | 0.46 |
| 2:N:224:PRO:HG2 | 2:N:225:ILE:CD1 | 2.44 | 0.46 |
| 2:N:770:GLN:OE1 | 2:N:983:ARG:HA | 2.15 | 0.46 |
| 2:N:830:TYR:CZ | 2:N:1000:PRO:HB3 | 2.51 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|------------------|--------------------------|-------------------|
| 2:N:898:LEU:HD13 | 2:N:952:VAL:HG11 | 1.97 | 0.46 |
| 2:N:899:ILE:CD1 | 2:N:911:ILE:HG23 | 2.40 | 0.46 |
| 2:N:1047:PHE:CD1 | 2:N:1047:PHE:N | 2.80 | 0.46 |
| 5:Q:54:ARG:C | 5:Q:56:LEU:N | 2.69 | 0.46 |
| 5:Q:119:ALA:O | 5:Q:121:LYS:N | 2.48 | 0.46 |
| 8:T:4:ALA:HA | 8:T:60:ALA:CB | 2.45 | 0.46 |
| 1:A:112:LYS:HG2 | 1:A:113:LEU:N | 2.31 | 0.46 |
| 1:A:529:LEU:HD21 | 1:A:750:ALA:O | 2.16 | 0.46 |
| 1:A:1007:GLU:O | 1:A:1008:LEU:C | 2.54 | 0.46 |
| 2:B:244:THR:CG2 | 2:B:245:MET:N | 2.77 | 0.46 |
| 2:B:354:LEU:N | 2:B:355:PRO:CD | 2.78 | 0.46 |
| 2:B:540:ILE:H | 2:B:605:GLU:CD | 2.19 | 0.46 |
| 2:B:831:SER:CB | 2:B:994:TYR:OH | 2.63 | 0.46 |
| 2:B:839:MET:HE2 | 2:B:980:PHE:CD1 | 2.50 | 0.46 |
| 2:B:1012:ILE:HG21 | 2:B:1092:TYR:OH | 2.16 | 0.46 |
| 2:B:1085:VAL:HG12 | 2:B:1086:PHE:N | 2.31 | 0.46 |
| 3:C:26:LEU:O | 3:C:27:SER:C | 2.54 | 0.46 |
| 3:C:183:HIS:O | 3:C:185:LYS:N | 2.49 | 0.46 |
| 4:D:28:LEU:HD13 | 4:D:138:HIS:HD2 | 1.81 | 0.46 |
| 4:D:41:HIS:ND1 | 4:D:41:HIS:C | 2.68 | 0.46 |
| 5:E:62:ASN:HB3 | 5:E:63:PRO:HD2 | 1.97 | 0.46 |
| 5:E:178:GLN:O | 5:E:181:ASP:HB2 | 2.15 | 0.46 |
| 7:G:7:LEU:HD11 | 7:G:45:ILE:HD11 | 1.98 | 0.46 |
| 11:K:7:PHE:HA | 11:K:10:PHE:HE2 | 1.76 | 0.46 |
| 1:M:42:ASP:OD1 | 1:M:45:ARG:O | 2.34 | 0.46 |
| 1:M:53:LEU:CD2 | 1:M:54:ASN:N | 2.57 | 0.46 |
| 1:M:112:LYS:HG2 | 1:M:113:LEU:N | 2.31 | 0.46 |
| 1:M:567:LEU:O | 1:M:568:LYS:O | 2.34 | 0.46 |
| 1:M:624:GLY:C | 1:M:626:GLY:H | 2.18 | 0.46 |
| 1:M:689:GLU:C | 1:M:691:VAL:H | 2.18 | 0.46 |
| 1:M:771:VAL:O | 1:M:773:GLY:N | 2.49 | 0.46 |
| 1:M:802:GLU:OE1 | 2:N:726:ILE:HD12 | 2.16 | 0.46 |
| 1:M:827:ASP:C | 1:M:829:ALA:H | 2.18 | 0.46 |
| 1:M:1343:GLY:O | 1:M:1344:ILE:C | 2.53 | 0.46 |
| 2:N:221:ALA:N | 2:N:222:PRO:HD2 | 2.30 | 0.46 |
| 2:N:479:TYR:CD2 | 2:N:479:TYR:N | 2.83 | 0.46 |
| 2:N:602:ILE:HG13 | 2:N:602:ILE:O | 2.16 | 0.46 |
| 2:N:866:PHE:C | 2:N:868:ILE:N | 2.66 | 0.46 |
| 2:N:873:GLU:HB2 | 2:N:915:THR:OG1 | 2.15 | 0.46 |
| 2:N:1085:VAL:HG12 | 2:N:1086:PHE:N | 2.30 | 0.46 |
| 3:O:26:LEU:O | 3:O:27:SER:C | 2.53 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 4:P:56:SER:O | 4:P:60:ILE:HG13 | 2.15 | 0.46 |
| 10:V:55:LEU:O | 10:V:58:LYS:N | 2.49 | 0.46 |
| 1:A:453:LYS:HG2 | 2:B:1141:HIS:CE1 | 2.51 | 0.46 |
| 1:A:822:ARG:HG2 | 2:B:506:GLN:HA | 1.97 | 0.46 |
| 1:A:973:PHE:CD1 | 1:A:973:PHE:N | 2.83 | 0.46 |
| 1:A:1003:ARG:HG2 | 1:A:1003:ARG:HH11 | 1.81 | 0.46 |
| 1:A:1241:ARG:HH12 | 1:A:1243:ARG:HH12 | 1.62 | 0.46 |
| 1:A:1447:MET:HG2 | 7:G:59:GLY:O | 2.16 | 0.46 |
| 2:B:53:GLU:CG | 2:B:53:GLU:O | 2.63 | 0.46 |
| 2:B:221:ALA:N | 2:B:222:PRO:HD2 | 2.30 | 0.46 |
| 2:B:1181:GLU:HG2 | 2:B:1188:LYS:HG2 | 1.97 | 0.46 |
| 2:B:1201:LYS:HG2 | 2:B:1202:LEU:N | 2.28 | 0.46 |
| 3:C:186:LEU:N | 3:C:186:LEU:HD12 | 2.31 | 0.46 |
| 4:D:41:HIS:ND1 | 4:D:42:ASP:N | 2.64 | 0.46 |
| 11:K:6:ARG:O | 11:K:8:GLU:N | 2.49 | 0.46 |
| 1:M:303:THR:HG22 | 1:M:304:TYR:H | 1.75 | 0.46 |
| 1:M:397:PRO:HB3 | 1:M:404:LYS:HB2 | 1.97 | 0.46 |
| 1:M:453:LYS:HG2 | 2:N:1141:HIS:CE1 | 2.51 | 0.46 |
| 1:M:854:ASP:OD1 | 1:M:854:ASP:C | 2.53 | 0.46 |
| 1:M:962:LEU:CA | 1:M:965:ILE:HG22 | 2.44 | 0.46 |
| 2:N:53:GLU:CG | 2:N:53:GLU:O | 2.63 | 0.46 |
| 2:N:239:SER:O | 2:N:240:ARG:HB2 | 2.15 | 0.46 |
| 3:O:141:GLY:HA2 | 10:V:16:ASP:HB3 | 1.97 | 0.46 |
| 3:O:205:LYS:HG2 | 3:O:205:LYS:O | 2.16 | 0.46 |
| 5:Q:178:GLN:O | 5:Q:181:ASP:HB2 | 2.15 | 0.46 |
| 8:T:111:ILE:HG22 | 8:T:112:LYS:H | 1.81 | 0.46 |
| 1:A:397:PRO:HB3 | 1:A:404:LYS:HB2 | 1.97 | 0.46 |
| 2:B:187:PRO:HG2 | 2:B:188:TYR:H | 1.80 | 0.46 |
| 2:B:229:ALA:O | 2:B:247:ILE:HG22 | 2.15 | 0.46 |
| 2:B:596:LEU:HD12 | 2:B:602:ILE:HG12 | 1.97 | 0.46 |
| 2:B:827:ILE:HG22 | 2:B:827:ILE:O | 2.14 | 0.46 |
| 2:B:863:GLU:HG2 | 2:B:872:GLU:HB2 | 1.98 | 0.46 |
| 2:B:890:TYR:CD2 | 2:B:910:ILE:HG21 | 2.51 | 0.46 |
| 2:B:1132:GLU:O | 2:B:1135:ARG:N | 2.49 | 0.46 |
| 2:B:1168:LEU:HD13 | 2:B:1208:MET:HE1 | 1.98 | 0.46 |
| 3:C:141:GLY:HA2 | 10:J:16:ASP:HB3 | 1.97 | 0.46 |
| 5:E:201:SER:C | 5:E:203:THR:H | 2.19 | 0.46 |
| 1:M:80:HIS:O | 1:M:244:PRO:HB3 | 2.16 | 0.46 |
| 1:M:570:LYS:HB3 | 1:M:572:LEU:HD11 | 1.98 | 0.46 |
| 1:M:984:THR:HB | 1:M:987:GLU:H | 1.80 | 0.46 |
| 1:M:1118:LEU:HD23 | 1:M:1311:THR:HG21 | 1.98 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 2:N:176:ASP:H | 2:N:179:ASP:HB2 | 1.80 | 0.46 |
| 2:N:353:LEU:O | 2:N:354:LEU:C | 2.54 | 0.46 |
| 2:N:466:MET:O | 2:N:468:SER:N | 2.40 | 0.46 |
| 2:N:549:ASN:C | 2:N:551:LEU:N | 2.69 | 0.46 |
| 2:N:1039:GLY:HA2 | 10:V:50:LEU:HD21 | 1.96 | 0.46 |
| 2:N:1181:GLU:HG2 | 2:N:1188:LYS:HG2 | 1.97 | 0.46 |
| 2:N:1201:LYS:HG2 | 2:N:1202:LEU:N | 2.28 | 0.46 |
| 3:O:186:LEU:HD12 | 3:O:186:LEU:N | 2.31 | 0.46 |
| 4:P:54:SER:CB | 4:P:113:ALA:HB1 | 2.45 | 0.46 |
| 4:P:122:THR:O | 4:P:126:GLN:HG3 | 2.16 | 0.46 |
| 8:T:109:ASP:N | 8:T:109:ASP:OD1 | 2.49 | 0.46 |
| 1:A:42:ASP:OD1 | 1:A:45:ARG:O | 2.34 | 0.46 |
| 1:A:64:ASN:O | 1:A:66:LYS:N | 2.49 | 0.46 |
| 1:A:80:HIS:O | 1:A:244:PRO:HB3 | 2.16 | 0.46 |
| 1:A:640:PRO:CG | 1:A:641:LYS:H | 2.25 | 0.46 |
| 1:A:710:THR:HG22 | 1:A:712:ARG:N | 2.25 | 0.46 |
| 1:A:802:GLU:OE1 | 2:B:726:ILE:HD12 | 2.16 | 0.46 |
| 1:A:1376:ASP:C | 1:A:1379:THR:HG22 | 2.37 | 0.46 |
| 2:B:108:ASN:OD1 | 2:B:963:PHE:HZ | 1.99 | 0.46 |
| 2:B:203:LEU:HD12 | 2:B:402:ALA:HB1 | 1.98 | 0.46 |
| 2:B:597:ARG:HA | 2:B:602:ILE:HG13 | 1.98 | 0.46 |
| 2:B:777:ALA:HB1 | 2:B:1093:GLN:HB3 | 1.97 | 0.46 |
| 2:B:866:PHE:C | 2:B:868:ILE:N | 2.66 | 0.46 |
| 2:B:898:LEU:HD13 | 2:B:952:VAL:HG11 | 1.98 | 0.46 |
| 2:B:992:VAL:CG2 | 2:B:993:THR:N | 2.78 | 0.46 |
| 3:C:9:ILE:HG22 | 3:C:10:ILE:O | 2.16 | 0.46 |
| 5:E:54:ARG:O | 5:E:56:LEU:N | 2.49 | 0.46 |
| 5:E:89:ILE:HG22 | 5:E:118:SER:C | 2.23 | 0.46 |
| 12:L:62:ARG:HG2 | 12:L:63:THR:N | 2.30 | 0.46 |
| 1:M:24:PRO:HA | 1:M:27:ILE:CG2 | 2.46 | 0.46 |
| 1:M:41:MET:H | 1:M:41:MET:HE3 | 1.81 | 0.46 |
| 1:M:72:GLU:HB3 | 1:M:76:GLU:HB3 | 1.98 | 0.46 |
| 1:M:91:PHE:H | 1:M:298:GLN:NE2 | 2.10 | 0.46 |
| 1:M:444:LEU:O | 1:M:490:LEU:HD12 | 2.16 | 0.46 |
| 1:M:649:ASN:C | 1:M:651:GLN:N | 2.69 | 0.46 |
| 1:M:822:ARG:HD2 | 2:N:505:ARG:O | 2.14 | 0.46 |
| 1:M:890:SER:HB3 | 1:M:1300:GLU:HG2 | 1.96 | 0.46 |
| 1:M:960:VAL:HG11 | 1:M:1051:ILE:HG23 | 1.97 | 0.46 |
| 1:M:1342:LEU:HD13 | 5:Q:146:HIS:CG | 2.50 | 0.46 |
| 2:N:25:PHE:CD1 | 2:N:811:TYR:CD2 | 3.03 | 0.46 |
| 2:N:457:GLY:C | 2:N:458:ASN:HD22 | 2.20 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 2:N:596:LEU:HD12 | 2:N:602:ILE:HG12 | 1.97 | 0.46 |
| 2:N:752:ALA:O | 2:N:755:ILE:HG13 | 2.15 | 0.46 |
| 2:N:1162:VAL:CG1 | 2:N:1163:CYS:H | 2.28 | 0.46 |
| 4:P:94:SER:C | 4:P:96:ALA:H | 2.19 | 0.46 |
| 4:P:109:LEU:O | 4:P:113:ALA:HB2 | 2.16 | 0.46 |
| 5:Q:62:ASN:HB3 | 5:Q:63:PRO:HD2 | 1.97 | 0.46 |
| 1:A:351:ARG:HD2 | 2:B:1128:LEU:CD2 | 2.45 | 0.45 |
| 1:A:499:ARG:O | 1:A:502:LEU:HB2 | 2.16 | 0.45 |
| 1:A:567:LEU:O | 1:A:568:LYS:O | 2.34 | 0.45 |
| 1:A:771:VAL:O | 1:A:773:GLY:N | 2.49 | 0.45 |
| 2:B:225:ILE:HD12 | 2:B:225:ILE:N | 2.31 | 0.45 |
| 2:B:602:ILE:HG13 | 2:B:602:ILE:O | 2.16 | 0.45 |
| 2:B:839:MET:CE | 2:B:1010:LEU:HD21 | 2.45 | 0.45 |
| 2:B:1159:ARG:CD | 2:B:1193:GLN:NE2 | 2.79 | 0.45 |
| 6:F:97:ARG:HA | 6:F:100:GLN:HG3 | 1.98 | 0.45 |
| 1:M:12:ARG:HB2 | 2:N:1218:THR:HG21 | 1.97 | 0.45 |
| 1:M:254:ASP:HB3 | 2:N:935:ARG:HD3 | 1.97 | 0.45 |
| 1:M:314:GLN:O | 1:M:315:ALA:HB3 | 2.16 | 0.45 |
| 1:M:520:PRO:HD3 | 1:M:632:HIS:CG | 2.51 | 0.45 |
| 1:M:669:ASP:CG | 1:M:743:ASN:HD22 | 2.19 | 0.45 |
| 1:M:1279:ILE:HG21 | 1:M:1282:ILE:HD11 | 1.94 | 0.45 |
| 1:M:1318:GLU:C | 1:M:1320:MET:H | 2.19 | 0.45 |
| 2:N:20:VAL:HG21 | 2:N:631:PHE:HZ | 1.81 | 0.45 |
| 2:N:56:LEU:HB3 | 2:N:425:MET:HE1 | 1.98 | 0.45 |
| 2:N:101:PRO:O | 2:N:103:GLU:N | 2.49 | 0.45 |
| 2:N:509:ASN:O | 2:N:511:HIS:N | 2.49 | 0.45 |
| 8:T:82:LYS:C | 8:T:84:THR:H | 2.19 | 0.45 |
| 10:V:7:CYS:SG | 10:V:48:MET:CE | 3.04 | 0.45 |
| 1:A:87:ALA:O | 1:A:88:LYS:HG2 | 2.17 | 0.45 |
| 1:A:327:ARG:HH22 | 1:A:331:LYS:HE3 | 1.81 | 0.45 |
| 1:A:530:CYS:HA | 1:A:750:ALA:HB1 | 1.99 | 0.45 |
| 1:A:669:ASP:HB3 | 1:A:744:VAL:HG23 | 1.98 | 0.45 |
| 1:A:787:HIS:HE1 | 2:B:512:TRP:CZ2 | 2.34 | 0.45 |
| 2:B:176:ASP:H | 2:B:179:ASP:HB2 | 1.80 | 0.45 |
| 2:B:176:ASP:O | 2:B:177:GLU:C | 2.55 | 0.45 |
| 2:B:509:ASN:O | 2:B:511:HIS:N | 2.49 | 0.45 |
| 2:B:847:ASP:C | 2:B:849:GLY:N | 2.67 | 0.45 |
| 2:B:890:TYR:CA | 2:B:910:ILE:CG2 | 2.83 | 0.45 |
| 2:B:1001:PHE:CE2 | 3:C:33:ARG:NE | 2.85 | 0.45 |
| 3:C:47:LEU:O | 3:C:158:ILE:HG22 | 2.16 | 0.45 |
| 5:E:123:ILE:C | 5:E:125:THR:H | 2.19 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 10:J:7:CYS:SG | 10:J:48:MET:CE | 3.04 | 0.45 |
| 1:M:20:GLY:C | 1:M:21:LEU:HD23 | 2.36 | 0.45 |
| 1:M:68:GLN:C | 1:M:70:CYS:H | 2.19 | 0.45 |
| 1:M:87:ALA:O | 1:M:88:LYS:HG2 | 2.17 | 0.45 |
| 1:M:649:ASN:O | 1:M:650:ILE:C | 2.55 | 0.45 |
| 1:M:669:ASP:HB3 | 1:M:744:VAL:HG23 | 1.98 | 0.45 |
| 1:M:973:PHE:N | 1:M:973:PHE:CD1 | 2.83 | 0.45 |
| 2:N:176:ASP:O | 2:N:177:GLU:C | 2.55 | 0.45 |
| 2:N:217:PHE:HA | 2:N:388:GLN:HG3 | 1.99 | 0.45 |
| 2:N:890:TYR:CD2 | 2:N:910:ILE:HG21 | 2.51 | 0.45 |
| 2:N:977:GLY:HA3 | 2:N:1099:VAL:HG21 | 1.99 | 0.45 |
| 3:O:9:ILE:HG22 | 3:O:10:ILE:O | 2.16 | 0.45 |
| 4:P:52:SER:HB2 | 4:P:147:SER:HB3 | 1.98 | 0.45 |
| 5:Q:201:SER:C | 5:Q:203:THR:H | 2.19 | 0.45 |
| 7:S:6:ASP:HB3 | 7:S:73:LYS:HZ1 | 1.80 | 0.45 |
| 9:U:109:THR:HG22 | 9:U:109:THR:O | 2.17 | 0.45 |
| 1:A:314:GLN:O | 1:A:315:ALA:HB3 | 2.16 | 0.45 |
| 1:A:553:TRP:HE1 | 11:K:62:LYS:CB | 2.12 | 0.45 |
| 1:A:649:ASN:C | 1:A:651:GLN:N | 2.69 | 0.45 |
| 1:A:822:ARG:HG2 | 2:B:507:LEU:H | 1.81 | 0.45 |
| 1:A:850:MET:HE1 | 1:A:1063:GLY:HA2 | 1.99 | 0.45 |
| 1:A:1103:LEU:HD12 | 1:A:1103:LEU:O | 2.17 | 0.45 |
| 1:A:1318:GLU:C | 1:A:1320:MET:H | 2.19 | 0.45 |
| 1:A:1450:GLU:HG2 | 7:G:22:MET:SD | 2.53 | 0.45 |
| 2:B:25:PHE:CD1 | 2:B:811:TYR:CD2 | 3.03 | 0.45 |
| 2:B:39:ASP:O | 2:B:43:GLU:HB2 | 2.16 | 0.45 |
| 2:B:549:ASN:C | 2:B:551:LEU:N | 2.69 | 0.45 |
| 2:B:725:ARG:HH12 | 2:B:1047:PHE:HA | 1.81 | 0.45 |
| 2:B:1072:MET:CE | 2:B:1087:PHE:HB2 | 2.46 | 0.45 |
| 2:B:1200:ALA:O | 2:B:1201:LYS:C | 2.54 | 0.45 |
| 4:D:109:LEU:O | 4:D:113:ALA:HB2 | 2.16 | 0.45 |
| 8:H:17:ASN:O | 8:H:19:ARG:N | 2.50 | 0.45 |
| 8:H:82:LYS:C | 8:H:84:THR:H | 2.20 | 0.45 |
| 9:I:58:ILE:CG1 | 9:I:62:ILE:HG21 | 2.46 | 0.45 |
| 1:M:666:GLY:O | 1:M:667:ILE:C | 2.54 | 0.45 |
| 1:M:786:PRO:CB | 2:N:700:ILE:HD12 | 2.45 | 0.45 |
| 1:M:1072:GLN:O | 1:M:1074:ILE:N | 2.50 | 0.45 |
| 1:M:1376:ASP:C | 1:M:1379:THR:HG22 | 2.37 | 0.45 |
| 2:N:16:ASP:CG | 2:N:652:ILE:HD13 | 2.37 | 0.45 |
| 2:N:16:ASP:OD1 | 2:N:652:ILE:HD13 | 2.15 | 0.45 |
| 2:N:796:LEU:O | 2:N:797:TYR:C | 2.55 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 2:N:839:MET:CE | 2:N:1010:LEU:HD21 | 2.45 | 0.45 |
| 2:N:1116:ARG:NH2 | 2:N:1198:TYR:HE1 | 2.14 | 0.45 |
| 3:O:131:GLU:HA | 3:O:132:PRO:HD3 | 1.74 | 0.45 |
| 5:Q:154:ARG:O | 5:Q:155:LEU:HG | 2.16 | 0.45 |
| 7:S:166:ASP:O | 7:S:168:LEU:HG | 2.17 | 0.45 |
| 8:T:42:ILE:HG23 | 8:T:94:TYR:CE1 | 2.51 | 0.45 |
| 1:A:95:PHE:CD1 | 1:A:235:MET:HG2 | 2.52 | 0.45 |
| 1:A:568:LYS:HB3 | 8:H:94:TYR:C | 2.36 | 0.45 |
| 2:B:597:ARG:NH1 | 2:B:688:GLU:OE2 | 2.48 | 0.45 |
| 2:B:737:THR:HG22 | 9:I:66:PRO:HA | 1.98 | 0.45 |
| 2:B:977:GLY:HA3 | 2:B:1099:VAL:HG21 | 1.99 | 0.45 |
| 2:B:995:ARG:NH1 | 2:B:997:GLU:OE1 | 2.49 | 0.45 |
| 3:C:205:LYS:O | 3:C:205:LYS:HG2 | 2.16 | 0.45 |
| 6:F:95:GLY:O | 6:F:98:ALA:HB3 | 2.16 | 0.45 |
| 8:H:109:ASP:OD1 | 8:H:109:ASP:N | 2.49 | 0.45 |
| 1:M:267:LEU:HD23 | 1:M:267:LEU:HA | 1.86 | 0.45 |
| 1:M:382:THR:C | 1:M:384:TYR:H | 2.20 | 0.45 |
| 1:M:428:GLN:O | 1:M:429:TYR:C | 2.52 | 0.45 |
| 1:M:530:CYS:HA | 1:M:750:ALA:HB1 | 1.99 | 0.45 |
| 1:M:869:TYR:CE1 | 1:M:1066:VAL:CG1 | 3.00 | 0.45 |
| 1:M:1050:THR:O | 1:M:1051:ILE:C | 2.55 | 0.45 |
| 2:N:22:SER:HA | 2:N:811:TYR:CE2 | 2.49 | 0.45 |
| 2:N:54:PRO:O | 2:N:55:ARG:C | 2.55 | 0.45 |
| 2:N:810:GLU:CB | 2:N:815:ARG:HH22 | 2.23 | 0.45 |
| 2:N:1001:PHE:CE2 | 3:O:33:ARG:NE | 2.85 | 0.45 |
| 3:O:9:ILE:CD1 | 11:W:108:GLU:HB3 | 2.36 | 0.45 |
| 3:O:233:GLU:OE1 | 10:V:12:LYS:HE2 | 2.17 | 0.45 |
| 6:R:95:GLY:O | 6:R:98:ALA:HB3 | 2.16 | 0.45 |
| 6:R:97:ARG:HA | 6:R:100:GLN:HG3 | 1.98 | 0.45 |
| 9:U:10:CYS:O | 9:U:11:ASN:C | 2.55 | 0.45 |
| 1:A:72:GLU:HB3 | 1:A:76:GLU:HB3 | 1.99 | 0.45 |
| 1:A:382:THR:C | 1:A:384:TYR:H | 2.20 | 0.45 |
| 1:A:434:GLU:OE1 | 2:B:1108:ARG:NH1 | 2.50 | 0.45 |
| 1:A:684:ILE:HG21 | 1:A:802:GLU:HG3 | 1.96 | 0.45 |
| 1:A:780:PHE:O | 1:A:781:ALA:C | 2.55 | 0.45 |
| 1:A:943:PHE:CD2 | 1:A:944:LEU:HD23 | 2.44 | 0.45 |
| 2:B:286:ASP:HB2 | 9:I:12:ASN:HA | 1.97 | 0.45 |
| 2:B:442:LYS:O | 2:B:444:THR:N | 2.44 | 0.45 |
| 2:B:457:GLY:C | 2:B:458:ASN:HD22 | 2.20 | 0.45 |
| 3:C:74:GLU:CB | 3:C:128:ASN:HB3 | 2.38 | 0.45 |
| 3:C:233:GLU:OE1 | 10:J:12:LYS:HE2 | 2.17 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 8:H:111:ILE:HG22 | 8:H:112:LYS:H | 1.81 | 0.45 |
| 9:I:10:CYS:O | 9:I:11:ASN:C | 2.55 | 0.45 |
| 9:I:109:THR:O | 9:I:109:THR:HG22 | 2.17 | 0.45 |
| 1:M:261:ASP:OD1 | 1:M:262:ASP:N | 2.49 | 0.45 |
| 1:M:561:VAL:HG23 | 8:T:77:SER:HB2 | 1.98 | 0.45 |
| 1:M:757:ILE:O | 1:M:760:ALA:HB3 | 2.16 | 0.45 |
| 1:M:783:ARG:NH2 | 2:N:696:GLU:O | 2.47 | 0.45 |
| 1:M:976:ASP:C | 1:M:978:ALA:H | 2.20 | 0.45 |
| 1:M:1257:ALA:O | 1:M:1258:GLU:CB | 2.65 | 0.45 |
| 2:N:203:LEU:HD12 | 2:N:402:ALA:HB1 | 1.98 | 0.45 |
| 2:N:294:CYS:SG | 2:N:303:LEU:HD21 | 2.57 | 0.45 |
| 2:N:597:ARG:NH1 | 2:N:688:GLU:OE2 | 2.48 | 0.45 |
| 2:N:758:PHE:C | 2:N:760:ASP:H | 2.20 | 0.45 |
| 2:N:980:PHE:HA | 2:N:1095:LEU:HD13 | 1.98 | 0.45 |
| 5:Q:89:ILE:CG1 | 5:Q:118:SER:HB2 | 2.47 | 0.45 |
| 5:Q:92:MET:HE3 | 5:Q:119:ALA:HB1 | 1.97 | 0.45 |
| 5:Q:123:ILE:C | 5:Q:125:THR:H | 2.19 | 0.45 |
| 5:Q:177:ILE:HB | 5:Q:211:ARG:HD3 | 1.98 | 0.45 |
| 8:T:17:ASN:O | 8:T:19:ARG:N | 2.49 | 0.45 |
| 9:U:68:LEU:HB3 | 9:U:84:VAL:CG2 | 2.46 | 0.45 |
| 1:A:261:ASP:OD1 | 1:A:262:ASP:N | 2.49 | 0.45 |
| 1:A:444:LEU:O | 1:A:490:LEU:HD12 | 2.16 | 0.45 |
| 1:A:960:VAL:HG11 | 1:A:1051:ILE:HG23 | 1.97 | 0.45 |
| 1:A:984:THR:N | 1:A:987:GLU:HB2 | 2.31 | 0.45 |
| 1:A:999:LEU:HD13 | 1:A:1020:PHE:HE2 | 1.82 | 0.45 |
| 1:A:1030:THR:HG22 | 1:A:1034:LEU:HD12 | 1.98 | 0.45 |
| 1:A:1118:LEU:HD23 | 1:A:1311:THR:HG21 | 1.98 | 0.45 |
| 1:A:1228:VAL:HG22 | 1:A:1242:CYS:HB3 | 1.99 | 0.45 |
| 1:A:1257:ALA:O | 1:A:1258:GLU:CB | 2.65 | 0.45 |
| 1:A:1342:LEU:HD13 | 5:E:146:HIS:CG | 2.50 | 0.45 |
| 2:B:217:PHE:HA | 2:B:388:GLN:HG3 | 1.99 | 0.45 |
| 2:B:992:VAL:CG2 | 2:B:993:THR:H | 2.27 | 0.45 |
| 3:C:112:ASP:HB2 | 3:C:114:TYR:HE1 | 1.76 | 0.45 |
| 7:G:1:MET:HE2 | 7:G:3:PHE:CE1 | 2.46 | 0.45 |
| 8:H:42:ILE:HG23 | 8:H:94:TYR:CE1 | 2.52 | 0.45 |
| 12:L:63:THR:HG22 | 12:L:65:ARG:HG3 | 1.98 | 0.45 |
| 1:M:360:LEU:O | 1:M:361:GLU:C | 2.53 | 0.45 |
| 1:M:755:SER:O | 1:M:756:PHE:C | 2.55 | 0.45 |
| 1:M:780:PHE:O | 1:M:781:ALA:C | 2.55 | 0.45 |
| 1:M:787:HIS:HE1 | 2:N:512:TRP:CZ2 | 2.34 | 0.45 |
| 1:M:822:ARG:HG2 | 2:N:506:GLN:HA | 1.97 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:M:1030:THR:HG22 | 1:M:1034:LEU:HD12 | 1.98 | 0.45 |
| 1:M:1153:GLU:HA | 9:U:44:TYR:O | 2.16 | 0.45 |
| 2:N:200:GLU:OE1 | 2:N:788:ARG:NH2 | 2.50 | 0.45 |
| 2:N:405:LEU:HB3 | 2:N:459:TRP:HZ2 | 1.78 | 0.45 |
| 2:N:509:ASN:H | 2:N:509:ASN:ND2 | 2.07 | 0.45 |
| 2:N:737:THR:HG22 | 9:U:66:PRO:HA | 1.98 | 0.45 |
| 2:N:758:PHE:C | 2:N:760:ASP:N | 2.70 | 0.45 |
| 2:N:995:ARG:NH1 | 2:N:997:GLU:OE1 | 2.50 | 0.45 |
| 2:N:1072:MET:CE | 2:N:1087:PHE:HB2 | 2.46 | 0.45 |
| 3:O:74:GLU:CB | 3:O:128:ASN:HB3 | 2.38 | 0.45 |
| 4:P:28:LEU:HD13 | 4:P:138:HIS:HD2 | 1.81 | 0.45 |
| 4:P:41:HIS:ND1 | 4:P:42:ASP:N | 2.64 | 0.45 |
| 1:A:100:LYS:HG3 | 1:A:182:LEU:CD2 | 2.47 | 0.45 |
| 1:A:263:LEU:O | 1:A:265:HIS:N | 2.50 | 0.45 |
| 1:A:570:LYS:HB3 | 1:A:572:LEU:HD11 | 1.98 | 0.45 |
| 1:A:742:ASN:HD22 | 1:A:742:ASN:C | 2.15 | 0.45 |
| 1:A:1163:THR:CG2 | 1:A:1165:ILE:H | 2.25 | 0.45 |
| 2:B:294:CYS:SG | 2:B:303:LEU:HD21 | 2.57 | 0.45 |
| 2:B:495:ILE:HG12 | 2:B:528:LEU:HD13 | 1.99 | 0.45 |
| 6:F:74:ILE:O | 6:F:74:ILE:HG22 | 2.15 | 0.45 |
| 1:M:183:TRP:CG | 1:M:184:GLY:N | 2.84 | 0.45 |
| 1:M:940:ASP:O | 1:M:943:PHE:N | 2.48 | 0.45 |
| 1:M:1346:ALA:HB1 | 5:Q:148:LEU:HB2 | 1.99 | 0.45 |
| 2:N:57:ILE:HG22 | 2:N:57:ILE:O | 2.17 | 0.45 |
| 2:N:314:PHE:CD1 | 2:N:314:PHE:O | 2.70 | 0.45 |
| 2:N:555:GLY:O | 2:N:583:HIS:ND1 | 2.50 | 0.45 |
| 2:N:1132:GLU:O | 2:N:1135:ARG:N | 2.49 | 0.45 |
| 11:W:6:ARG:O | 11:W:8:GLU:N | 2.48 | 0.45 |
| 1:A:520:PRO:HD3 | 1:A:632:HIS:CG | 2.51 | 0.45 |
| 1:A:547:VAL:O | 1:A:551:LEU:HG | 2.17 | 0.45 |
| 1:A:669:ASP:CG | 1:A:743:ASN:HD22 | 2.19 | 0.45 |
| 2:B:479:TYR:N | 2:B:479:TYR:CD2 | 2.83 | 0.45 |
| 2:B:857:ARG:O | 2:B:967:ARG:HA | 2.17 | 0.45 |
| 2:B:1003:ALA:O | 3:C:177:ALA:HA | 2.17 | 0.45 |
| 3:C:113:VAL:HG23 | 3:C:145:CYS:O | 2.17 | 0.45 |
| 4:D:34:PHE:CE2 | 7:G:80:LYS:NZ | 2.78 | 0.45 |
| 5:E:80:GLU:O | 5:E:110:ILE:CG2 | 2.31 | 0.45 |
| 1:M:100:LYS:HG3 | 1:M:182:LEU:CD2 | 2.47 | 0.45 |
| 1:M:434:GLU:OE1 | 2:N:1108:ARG:NH1 | 2.49 | 0.45 |
| 1:M:640:PRO:CG | 1:M:641:LYS:H | 2.25 | 0.45 |
| 1:M:817:HIS:NE2 | 2:N:764:SER:HB2 | 2.32 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 1:M:984:THR:N | 1:M:987:GLU:HB2 | 2.31 | 0.45 |
| 1:M:1004:GLY:CA | 1:M:1009:ILE:HG21 | 2.45 | 0.45 |
| 2:N:725:ARG:HH12 | 2:N:1047:PHE:HA | 1.81 | 0.45 |
| 2:N:758:PHE:HB2 | 2:N:1024:ALA:CB | 2.40 | 0.45 |
| 2:N:1003:ALA:O | 3:O:177:ALA:HA | 2.17 | 0.45 |
| 3:O:99:GLU:H | 3:O:119:ILE:CG1 | 2.29 | 0.45 |
| 5:Q:58:SER:OG | 5:Q:80:GLU:HG3 | 2.17 | 0.45 |
| 5:Q:150:PRO:HB3 | 5:Q:199:ARG:HB3 | 1.98 | 0.45 |
| 6:R:74:ILE:O | 6:R:74:ILE:HG22 | 2.16 | 0.45 |
| 1:A:368:PRO:O | 1:A:369:ILE:C | 2.54 | 0.45 |
| 1:A:869:TYR:CE1 | 1:A:1066:VAL:CG1 | 3.00 | 0.45 |
| 1:A:916:TYR:CG | 1:A:920:ILE:CD1 | 3.00 | 0.45 |
| 1:A:941:ARG:HG2 | 1:A:941:ARG:NH1 | 2.32 | 0.45 |
| 1:A:1072:GLN:O | 1:A:1074:ILE:N | 2.50 | 0.45 |
| 1:A:1316:LEU:C | 1:A:1318:GLU:N | 2.70 | 0.45 |
| 2:B:105:ARG:NH2 | 2:B:185:GLU:HG2 | 2.31 | 0.45 |
| 2:B:200:GLU:OE1 | 2:B:788:ARG:NH2 | 2.50 | 0.45 |
| 2:B:489:ARG:HB3 | 2:B:489:ARG:HH11 | 1.82 | 0.45 |
| 2:B:559:LEU:O | 2:B:560:GLU:C | 2.55 | 0.45 |
| 2:B:821:GLN:NE2 | 2:B:850:LEU:HD12 | 2.32 | 0.45 |
| 2:B:1177:LYS:C | 2:B:1179:GLN:H | 2.21 | 0.45 |
| 3:C:10:ILE:O | 3:C:11:ASN:C | 2.55 | 0.45 |
| 3:C:168:ALA:O | 3:C:170:TRP:N | 2.50 | 0.45 |
| 3:C:251:LEU:HD12 | 3:C:251:LEU:C | 2.37 | 0.45 |
| 1:M:263:LEU:O | 1:M:265:HIS:N | 2.50 | 0.45 |
| 1:M:499:ARG:O | 1:M:502:LEU:HB2 | 2.16 | 0.45 |
| 2:N:203:LEU:HD23 | 2:N:203:LEU:HA | 1.84 | 0.45 |
| 2:N:225:ILE:HD12 | 2:N:225:ILE:N | 2.31 | 0.45 |
| 2:N:381:CYS:C | 2:N:383:LEU:N | 2.70 | 0.45 |
| 2:N:839:MET:HE1 | 2:N:980:PHE:HB2 | 1.98 | 0.45 |
| 2:N:863:GLU:HG2 | 2:N:872:GLU:HB2 | 1.98 | 0.45 |
| 3:O:46:ASP:HA | 3:O:169:LYS:NZ | 2.31 | 0.45 |
| 4:P:94:SER:C | 4:P:96:ALA:N | 2.69 | 0.45 |
| 9:U:106:CYS:O | 9:U:107:LYS:CG | 2.65 | 0.45 |
| 10:V:14:VAL:O | 10:V:14:VAL:HG12 | 2.16 | 0.45 |
| 12:X:62:ARG:HG2 | 12:X:63:THR:N | 2.30 | 0.45 |
| 1:A:261:ASP:CG | 1:A:262:ASP:N | 2.71 | 0.45 |
| 1:A:456:MET:HE3 | 2:B:1134:GLU:HG3 | 1.98 | 0.45 |
| 1:A:783:ARG:NH2 | 2:B:696:GLU:O | 2.47 | 0.45 |
| 1:A:1144:THR:HA | 1:A:1276:LEU:HD13 | 1.98 | 0.45 |
| 1:A:1208:GLN:O | 1:A:1209:LEU:HD23 | 2.17 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 2:B:31:VAL:O | 2:B:32:SER:C | 2.54 | 0.45 |
| 2:B:363:PHE:O | 2:B:364:GLU:C | 2.54 | 0.45 |
| 2:B:758:PHE:C | 2:B:760:ASP:H | 2.20 | 0.45 |
| 3:C:32:LEU:HG | 3:C:36:MET:HE2 | 1.99 | 0.45 |
| 3:C:147:LEU:N | 3:C:147:LEU:CD2 | 2.75 | 0.45 |
| 5:E:58:SER:OG | 5:E:80:GLU:HG3 | 2.17 | 0.45 |
| 5:E:115:ILE:HG22 | 5:E:116:THR:N | 2.32 | 0.45 |
| 5:E:150:PRO:HB3 | 5:E:199:ARG:HB3 | 1.98 | 0.45 |
| 5:E:177:ILE:HB | 5:E:211:ARG:HD3 | 1.98 | 0.45 |
| 7:G:153:ASP:CG | 7:G:154:VAL:N | 2.67 | 0.45 |
| 7:G:166:ASP:O | 7:G:168:LEU:HG | 2.17 | 0.45 |
| 1:M:208:ILE:HG23 | 1:M:212:PHE:CE1 | 2.52 | 0.45 |
| 1:M:368:PRO:O | 1:M:369:ILE:C | 2.54 | 0.45 |
| 1:M:568:LYS:HB3 | 8:T:94:TYR:C | 2.36 | 0.45 |
| 1:M:1007:GLU:O | 1:M:1008:LEU:C | 2.54 | 0.45 |
| 2:N:559:LEU:O | 2:N:560:GLU:C | 2.55 | 0.45 |
| 2:N:868:ILE:O | 2:N:870:ILE:HG13 | 2.17 | 0.45 |
| 2:N:997:GLU:H | 2:N:997:GLU:CD | 2.21 | 0.45 |
| 2:N:1200:ALA:O | 2:N:1201:LYS:C | 2.54 | 0.45 |
| 4:P:25:ALA:C | 4:P:27:LEU:N | 2.70 | 0.45 |
| 5:Q:54:ARG:O | 5:Q:56:LEU:N | 2.49 | 0.45 |
| 5:Q:133:THR:C | 5:Q:134:PHE:HD1 | 2.20 | 0.45 |
| 12:X:49:ARG:HB3 | 12:X:50:CYS:H | 1.70 | 0.45 |
| 1:A:757:ILE:O | 1:A:760:ALA:HB3 | 2.16 | 0.44 |
| 1:A:852:HIS:HB2 | 1:A:856:THR:CG2 | 2.47 | 0.44 |
| 1:A:962:LEU:CA | 1:A:965:ILE:HG22 | 2.45 | 0.44 |
| 1:A:1050:THR:O | 1:A:1051:ILE:C | 2.55 | 0.44 |
| 1:A:1448:ILE:HD12 | 1:A:1448:ILE:N | 2.32 | 0.44 |
| 2:B:542:SER:N | 2:B:621:THR:HG23 | 2.31 | 0.44 |
| 2:B:555:GLY:O | 2:B:583:HIS:ND1 | 2.50 | 0.44 |
| 2:B:796:LEU:O | 2:B:797:TYR:C | 2.55 | 0.44 |
| 2:B:797:TYR:CE1 | 2:B:854:LEU:HD23 | 2.53 | 0.44 |
| 2:B:908:ASP:O | 2:B:909:ASP:C | 2.55 | 0.44 |
| 2:B:999:MET:HG2 | 2:B:1007:VAL:HG22 | 1.99 | 0.44 |
| 3:C:46:ASP:HA | 3:C:169:LYS:NZ | 2.31 | 0.44 |
| 7:G:111:SER:C | 7:G:113:ARG:N | 2.68 | 0.44 |
| 7:G:132:SER:HB3 | 7:G:135:GLU:N | 2.32 | 0.44 |
| 9:I:106:CYS:O | 9:I:107:LYS:CG | 2.65 | 0.44 |
| 10:J:14:VAL:O | 10:J:14:VAL:HG12 | 2.16 | 0.44 |
| 1:M:95:PHE:CD1 | 1:M:235:MET:HG2 | 2.52 | 0.44 |
| 1:M:108:MET:C | 1:M:110:CYS:N | 2.69 | 0.44 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 1:M:547:VAL:O | 1:M:551:LEU:HG | 2.17 | 0.44 |
| 1:M:869:TYR:CD2 | 1:M:1060:VAL:HG21 | 2.52 | 0.44 |
| 1:M:1003:ARG:HG2 | 1:M:1003:ARG:HH11 | 1.81 | 0.44 |
| 1:M:1335:PHE:O | 1:M:1336:VAL:C | 2.56 | 0.44 |
| 2:N:108:ASN:HA | 2:N:198:GLY:CA | 2.47 | 0.44 |
| 2:N:218:LYS:HB2 | 2:N:388:GLN:OE1 | 2.16 | 0.44 |
| 2:N:356:HIS:C | 2:N:358:THR:H | 2.21 | 0.44 |
| 2:N:495:ILE:HG12 | 2:N:528:LEU:HD13 | 1.99 | 0.44 |
| 2:N:542:SER:N | 2:N:621:THR:HG23 | 2.31 | 0.44 |
| 2:N:597:ARG:HA | 2:N:602:ILE:HG13 | 1.98 | 0.44 |
| 2:N:758:PHE:N | 2:N:759:PRO:CD | 2.81 | 0.44 |
| 2:N:857:ARG:O | 2:N:967:ARG:HA | 2.17 | 0.44 |
| 3:O:45:ILE:HG13 | 3:O:71:LEU:HD11 | 1.99 | 0.44 |
| 3:O:168:ALA:O | 3:O:170:TRP:N | 2.50 | 0.44 |
| 3:O:251:LEU:HD12 | 3:O:251:LEU:C | 2.37 | 0.44 |
| 4:P:49:ILE:CG2 | 7:S:4:LEU:HB2 | 2.42 | 0.44 |
| 5:Q:81:PHE:CA | 5:Q:110:ILE:CG2 | 2.87 | 0.44 |
| 1:A:68:GLN:C | 1:A:70:CYS:H | 2.19 | 0.44 |
| 1:A:108:MET:C | 1:A:110:CYS:N | 2.69 | 0.44 |
| 1:A:549:ASN:HD21 | 11:K:47:ARG:CZ | 2.31 | 0.44 |
| 1:A:1107:LEU:HB3 | 1:A:1387:ILE:HG21 | 1.99 | 0.44 |
| 1:A:1208:GLN:O | 1:A:1277:ARG:NH1 | 2.51 | 0.44 |
| 1:A:1346:ALA:HB1 | 5:E:148:LEU:HB2 | 1.99 | 0.44 |
| 2:B:16:ASP:CG | 2:B:652:ILE:HD13 | 2.37 | 0.44 |
| 2:B:416:LYS:HB2 | 2:B:416:LYS:HZ2 | 1.80 | 0.44 |
| 2:B:758:PHE:N | 2:B:759:PRO:CD | 2.80 | 0.44 |
| 2:B:899:ILE:CD1 | 2:B:911:ILE:HG23 | 2.40 | 0.44 |
| 4:D:50:ALA:CB | 4:D:139:PRO:O | 2.65 | 0.44 |
| 4:D:94:SER:C | 4:D:96:ALA:N | 2.69 | 0.44 |
| 6:F:79:ARG:HG2 | 6:F:144:GLU:OE1 | 2.17 | 0.44 |
| 11:K:79:GLU:O | 11:K:81:THR:N | 2.50 | 0.44 |
| 1:M:27:ILE:CG1 | 1:M:239:VAL:HG22 | 2.47 | 0.44 |
| 1:M:63:ARG:HG2 | 1:M:74:MET:HE1 | 1.98 | 0.44 |
| 1:M:106:ILE:CG1 | 1:M:107:CYS:N | 2.80 | 0.44 |
| 1:M:173:PRO:HB3 | 1:M:186:TRP:CD2 | 2.52 | 0.44 |
| 1:M:327:ARG:HH22 | 1:M:331:LYS:HE3 | 1.81 | 0.44 |
| 1:M:916:TYR:CG | 1:M:920:ILE:CD1 | 3.00 | 0.44 |
| 1:M:1107:LEU:HB3 | 1:M:1387:ILE:HG21 | 1.99 | 0.44 |
| 1:M:1144:THR:HA | 1:M:1276:LEU:HD13 | 1.98 | 0.44 |
| 1:M:1208:GLN:O | 1:M:1277:ARG:NH1 | 2.50 | 0.44 |
| 2:N:16:ASP:HB3 | 2:N:652:ILE:HD13 | 1.99 | 0.44 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 2:N:752:ALA:O | 2:N:755:ILE:CG1 | 2.65 | 0.44 |
| 2:N:1012:ILE:HD13 | 2:N:1092:TYR:OH | 2.18 | 0.44 |
| 3:O:10:ILE:O | 3:O:11:ASN:C | 2.55 | 0.44 |
| 3:O:113:VAL:HG23 | 3:O:145:CYS:O | 2.17 | 0.44 |
| 9:U:58:ILE:CG1 | 9:U:62:ILE:HG21 | 2.47 | 0.44 |
| 11:W:79:GLU:O | 11:W:81:THR:N | 2.50 | 0.44 |
| 1:A:561:VAL:HG23 | 8:H:77:SER:HB2 | 1.98 | 0.44 |
| 1:A:716:GLU:O | 1:A:718:GLU:N | 2.50 | 0.44 |
| 1:A:1335:PHE:O | 1:A:1336:VAL:C | 2.56 | 0.44 |
| 2:B:314:PHE:O | 2:B:314:PHE:CD1 | 2.70 | 0.44 |
| 2:B:353:LEU:O | 2:B:354:LEU:C | 2.54 | 0.44 |
| 2:B:597:ARG:HH11 | 2:B:688:GLU:HG2 | 1.82 | 0.44 |
| 2:B:634:GLU:C | 2:B:636:ASP:N | 2.71 | 0.44 |
| 2:B:1012:ILE:HD13 | 2:B:1092:TYR:OH | 2.18 | 0.44 |
| 2:B:1117:GLN:HG3 | 2:B:1156:ASP:CG | 2.38 | 0.44 |
| 4:D:54:SER:HB3 | 4:D:113:ALA:CA | 2.47 | 0.44 |
| 5:E:12:TRP:O | 5:E:15:PHE:HB3 | 2.18 | 0.44 |
| 7:G:153:ASP:CG | 7:G:154:VAL:HG23 | 2.38 | 0.44 |
| 9:I:68:LEU:HB3 | 9:I:84:VAL:CG2 | 2.46 | 0.44 |
| 1:M:44:SER:O | 1:M:45:ARG:CB | 2.66 | 0.44 |
| 1:M:93:ILE:HG22 | 1:M:305:MET:CE | 2.47 | 0.44 |
| 1:M:225:PHE:HZ | 1:M:235:MET:HE1 | 1.82 | 0.44 |
| 1:M:465:PRO:O | 1:M:466:TYR:O | 2.35 | 0.44 |
| 1:M:549:ASN:HD21 | 11:W:47:ARG:CZ | 2.31 | 0.44 |
| 1:M:575:GLY:O | 1:M:576:LYS:C | 2.54 | 0.44 |
| 1:M:1195:LEU:HD12 | 1:M:1196:ARG:N | 2.32 | 0.44 |
| 1:M:1448:ILE:HD12 | 1:M:1448:ILE:N | 2.33 | 0.44 |
| 2:N:908:ASP:O | 2:N:909:ASP:C | 2.55 | 0.44 |
| 2:N:1177:LYS:C | 2:N:1179:GLN:H | 2.21 | 0.44 |
| 2:N:1192:TYR:N | 2:N:1192:TYR:CD1 | 2.86 | 0.44 |
| 3:O:175:ALA:CB | 10:V:42:ARG:NH2 | 2.71 | 0.44 |
| 5:Q:39:GLU:C | 5:Q:41:PHE:H | 2.20 | 0.44 |
| 11:W:24:ASP:OD1 | 11:W:26:ARG:HB2 | 2.18 | 0.44 |
| 11:W:85:GLN:O | 11:W:88:GLU:N | 2.50 | 0.44 |
| 1:A:116:ASP:C | 1:A:118:THR:N | 2.71 | 0.44 |
| 1:A:351:ARG:HD2 | 2:B:1128:LEU:HD21 | 2.00 | 0.44 |
| 1:A:456:MET:HE1 | 2:B:1134:GLU:HB3 | 1.99 | 0.44 |
| 1:A:549:ASN:ND2 | 11:K:47:ARG:NH2 | 2.65 | 0.44 |
| 1:A:755:SER:O | 1:A:756:PHE:C | 2.55 | 0.44 |
| 1:A:936:GLN:NE2 | 1:A:1025:ARG:NH1 | 2.66 | 0.44 |
| 1:A:1195:LEU:HD12 | 1:A:1196:ARG:N | 2.32 | 0.44 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:A:1274:ILE:O | 1:A:1274:ILE:HG22 | 2.18 | 0.44 |
| 1:A:1283:SER:O | 1:A:1285:VAL:HG23 | 2.18 | 0.44 |
| 1:A:1388:THR:O | 1:A:1390:HIS:N | 2.51 | 0.44 |
| 2:B:107:ARG:NH2 | 2:B:956:THR:HB | 2.33 | 0.44 |
| 2:B:108:ASN:HA | 2:B:198:GLY:CA | 2.47 | 0.44 |
| 2:B:752:ALA:O | 2:B:755:ILE:CG1 | 2.65 | 0.44 |
| 2:B:868:ILE:O | 2:B:870:ILE:HG13 | 2.17 | 0.44 |
| 2:B:1159:ARG:NH1 | 2:B:1159:ARG:CB | 2.66 | 0.44 |
| 3:C:45:ILE:HG13 | 3:C:71:LEU:HD11 | 1.99 | 0.44 |
| 6:F:73:ALA:O | 6:F:74:ILE:HB | 2.18 | 0.44 |
| 8:H:107:ASP:O | 8:H:108:GLU:C | 2.55 | 0.44 |
| 10:J:6:ARG:HG2 | 10:J:13:VAL:HA | 1.98 | 0.44 |
| 1:M:261:ASP:CG | 1:M:262:ASP:N | 2.71 | 0.44 |
| 1:M:417:ARG:C | 1:M:418:TYR:CD2 | 2.91 | 0.44 |
| 1:M:478:PRO:CG | 1:M:522:MET:HG2 | 2.48 | 0.44 |
| 1:M:739:LYS:C | 1:M:741:LEU:H | 2.20 | 0.44 |
| 1:M:936:GLN:NE2 | 1:M:1025:ARG:NH1 | 2.66 | 0.44 |
| 1:M:964:ARG:O | 1:M:967:GLN:N | 2.51 | 0.44 |
| 1:M:1392:ILE:C | 1:M:1394:ARG:H | 2.20 | 0.44 |
| 2:N:105:ARG:NH2 | 2:N:185:GLU:HG2 | 2.31 | 0.44 |
| 2:N:999:MET:HG2 | 2:N:1007:VAL:HG22 | 1.99 | 0.44 |
| 3:O:47:LEU:O | 3:O:158:ILE:HG22 | 2.16 | 0.44 |
| 4:P:34:PHE:CE2 | 7:S:80:LYS:NZ | 2.78 | 0.44 |
| 5:Q:12:TRP:O | 5:Q:15:PHE:HB3 | 2.18 | 0.44 |
| 7:S:7:LEU:HD11 | 7:S:45:ILE:HD11 | 1.98 | 0.44 |
| 7:S:132:SER:HB3 | 7:S:135:GLU:N | 2.32 | 0.44 |
| 1:A:40:ILE:C | 1:A:41:MET:HG3 | 2.38 | 0.44 |
| 1:A:44:SER:O | 1:A:45:ARG:CB | 2.65 | 0.44 |
| 1:A:478:PRO:CG | 1:A:522:MET:HG2 | 2.48 | 0.44 |
| 1:A:826:ILE:O | 1:A:830:VAL:HG23 | 2.17 | 0.44 |
| 1:A:902:LEU:N | 1:A:927:GLN:NE2 | 2.62 | 0.44 |
| 1:A:1004:GLY:CA | 1:A:1009:ILE:HG21 | 2.45 | 0.44 |
| 1:A:1392:ILE:C | 1:A:1394:ARG:H | 2.20 | 0.44 |
| 2:B:16:ASP:HB3 | 2:B:652:ILE:HD13 | 1.99 | 0.44 |
| 2:B:235:LEU:O | 2:B:240:ARG:HG2 | 2.17 | 0.44 |
| 5:E:39:GLU:C | 5:E:41:PHE:H | 2.20 | 0.44 |
| 11:K:85:GLN:O | 11:K:88:GLU:N | 2.50 | 0.44 |
| 1:M:354:ILE:HG23 | 1:M:488:MET:HG3 | 1.99 | 0.44 |
| 1:M:1228:VAL:HG22 | 1:M:1242:CYS:HB3 | 1.99 | 0.44 |
| 2:N:1110:PRO:HG2 | 2:N:1119:VAL:CG2 | 2.47 | 0.44 |
| 3:O:87:CYS:SG | 3:O:87:CYS:O | 2.75 | 0.44 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 3:O:241:ASN:HB3 | 11:W:109:TRP:CZ2 | 2.53 | 0.44 |
| 4:P:35:ALA:C | 4:P:37:LYS:N | 2.70 | 0.44 |
| 4:P:67:ARG:C | 4:P:69:ARG:N | 2.71 | 0.44 |
| 5:Q:41:PHE:HZ | 5:Q:57:MET:HE1 | 1.82 | 0.44 |
| 5:Q:179:ARG:HH21 | 5:Q:191:ARG:HB2 | 1.82 | 0.44 |
| 7:S:89:ALA:CB | 7:S:103:VAL:CA | 2.91 | 0.44 |
| 10:V:13:VAL:C | 10:V:14:VAL:HG23 | 2.38 | 0.44 |
| 1:A:106:ILE:CG1 | 1:A:107:CYS:N | 2.80 | 0.44 |
| 1:A:444:LEU:HD22 | 1:A:444:LEU:HA | 1.79 | 0.44 |
| 1:A:606:MET:HG2 | 1:A:622:THR:HG23 | 2.00 | 0.44 |
| 1:A:976:ASP:C | 1:A:978:ALA:H | 2.20 | 0.44 |
| 2:B:54:PRO:O | 2:B:55:ARG:C | 2.55 | 0.44 |
| 2:B:57:ILE:O | 2:B:57:ILE:HG22 | 2.17 | 0.44 |
| 2:B:167:SER:O | 2:B:173:ARG:HB3 | 2.18 | 0.44 |
| 2:B:758:PHE:C | 2:B:760:ASP:N | 2.70 | 0.44 |
| 2:B:997:GLU:CD | 2:B:997:GLU:H | 2.21 | 0.44 |
| 7:G:13:LEU:CD2 | 7:G:17:TYR:HB2 | 2.45 | 0.44 |
| 8:H:90:ASP:C | 8:H:92:TYR:H | 2.20 | 0.44 |
| 1:M:53:LEU:O | 1:M:54:ASN:C | 2.55 | 0.44 |
| 1:M:895:HIS:O | 1:M:899:TYR:HB3 | 2.17 | 0.44 |
| 1:M:1103:LEU:HD12 | 1:M:1103:LEU:O | 2.17 | 0.44 |
| 1:M:1208:GLN:O | 1:M:1209:LEU:HD23 | 2.17 | 0.44 |
| 1:M:1283:SER:O | 1:M:1285:VAL:HG23 | 2.18 | 0.44 |
| 2:N:39:ASP:O | 2:N:43:GLU:HB2 | 2.16 | 0.44 |
| 2:N:107:ARG:NH2 | 2:N:956:THR:HB | 2.33 | 0.44 |
| 2:N:287:GLY:CA | 2:N:290:LEU:HD23 | 2.48 | 0.44 |
| 2:N:758:PHE:CE2 | 2:N:1044:ALA:HA | 2.53 | 0.44 |
| 6:R:124:GLU:O | 6:R:130:ILE:HG13 | 2.18 | 0.44 |
| 7:S:117:ASP:O | 7:S:119:LEU:N | 2.51 | 0.44 |
| 1:A:17:VAL:HG23 | 1:A:1424:CYS:SG | 2.58 | 0.44 |
| 1:A:93:ILE:HG22 | 1:A:305:MET:CE | 2.47 | 0.44 |
| 1:A:575:GLY:O | 1:A:576:LYS:C | 2.54 | 0.44 |
| 1:A:738:LEU:HD23 | 1:A:738:LEU:HA | 1.79 | 0.44 |
| 1:A:819:MET:HG2 | 2:B:507:LEU:O | 2.18 | 0.44 |
| 1:A:859:ASN:ND2 | 1:A:861:LEU:N | 2.59 | 0.44 |
| 1:A:1449:ASP:HB2 | 6:F:133:VAL:CG2 | 2.48 | 0.44 |
| 2:B:281:LEU:HD13 | 2:B:368:THR:CB | 2.48 | 0.44 |
| 2:B:356:HIS:C | 2:B:358:THR:H | 2.21 | 0.44 |
| 2:B:405:LEU:HB3 | 2:B:459:TRP:HZ2 | 1.78 | 0.44 |
| 2:B:609:ILE:HG13 | 2:B:694:GLU:HA | 2.00 | 0.44 |
| 2:B:882:THR:HG21 | 2:B:884:ARG:HB2 | 1.99 | 0.44 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 2:B:1004:GLU:CB | 2:B:1006:ILE:HG12 | 2.44 | 0.44 |
| 2:B:1166:CYS:SG | 2:B:1185:CYS:SG | 3.09 | 0.44 |
| 2:B:1192:TYR:N | 2:B:1192:TYR:CD1 | 2.86 | 0.44 |
| 3:C:241:ASN:HB3 | 11:K:109:TRP:CZ2 | 2.52 | 0.44 |
| 4:D:176:ASP:O | 4:D:178:LEU:N | 2.51 | 0.44 |
| 8:H:12:VAL:HB | 8:H:52:ASP:H | 1.83 | 0.44 |
| 8:H:19:ARG:C | 8:H:20:TYR:HD2 | 2.21 | 0.44 |
| 9:I:32:CYS:O | 9:I:33:ASP:CG | 2.56 | 0.44 |
| 10:J:13:VAL:C | 10:J:14:VAL:HG23 | 2.38 | 0.44 |
| 1:M:17:VAL:HG23 | 1:M:1424:CYS:SG | 2.58 | 0.44 |
| 1:M:351:ARG:HD2 | 2:N:1128:LEU:HD21 | 2.00 | 0.44 |
| 1:M:850:MET:HE1 | 1:M:1063:GLY:HA2 | 2.00 | 0.44 |
| 1:M:859:ASN:ND2 | 1:M:861:LEU:N | 2.59 | 0.44 |
| 1:M:1129:ASP:O | 1:M:1132:LYS:HB3 | 2.18 | 0.44 |
| 1:M:1195:LEU:HD22 | 1:M:1263:LEU:HD11 | 2.00 | 0.44 |
| 2:N:235:LEU:O | 2:N:240:ARG:HG2 | 2.17 | 0.44 |
| 2:N:634:GLU:C | 2:N:636:ASP:N | 2.71 | 0.44 |
| 4:P:176:ASP:O | 4:P:178:LEU:N | 2.50 | 0.44 |
| 8:T:90:ASP:C | 8:T:92:TYR:H | 2.20 | 0.44 |
| 10:V:6:ARG:HG2 | 10:V:13:VAL:HA | 1.98 | 0.44 |
| 10:V:9:SER:OG | 10:V:47:ARG:NH2 | 2.51 | 0.44 |
| 12:X:57:VAL:O | 12:X:58:ILE:CB | 2.66 | 0.44 |
| 1:A:53:LEU:O | 1:A:54:ASN:C | 2.55 | 0.44 |
| 1:A:208:ILE:HG23 | 1:A:212:PHE:CE1 | 2.52 | 0.44 |
| 1:A:410:ASN:O | 1:A:411:GLY:C | 2.55 | 0.44 |
| 1:A:417:ARG:C | 1:A:418:TYR:CD2 | 2.91 | 0.44 |
| 1:A:739:LYS:C | 1:A:741:LEU:H | 2.20 | 0.44 |
| 1:A:895:HIS:O | 1:A:899:TYR:HB3 | 2.17 | 0.44 |
| 1:A:1294:VAL:HG13 | 1:A:1295:PRO:CD | 2.48 | 0.44 |
| 2:B:518:ALA:O | 2:B:768:THR:HG23 | 2.17 | 0.44 |
| 2:B:545:GLU:HA | 2:B:548:ILE:HB | 2.00 | 0.44 |
| 2:B:758:PHE:CE2 | 2:B:1044:ALA:HA | 2.53 | 0.44 |
| 2:B:843:GLN:O | 2:B:846:ILE:N | 2.51 | 0.44 |
| 2:B:956:THR:HG22 | 2:B:957:ASN:O | 2.17 | 0.44 |
| 3:C:87:CYS:O | 3:C:87:CYS:SG | 2.75 | 0.44 |
| 4:D:105:THR:O | 4:D:105:THR:HG22 | 2.17 | 0.44 |
| 5:E:133:THR:C | 5:E:134:PHE:HD1 | 2.20 | 0.44 |
| 7:G:45:ILE:HA | 7:G:78:VAL:CG1 | 2.44 | 0.44 |
| 10:J:9:SER:OG | 10:J:47:ARG:NH2 | 2.51 | 0.44 |
| 10:J:55:LEU:O | 10:J:56:ILE:C | 2.56 | 0.44 |
| 1:M:410:ASN:O | 1:M:411:GLY:C | 2.56 | 0.44 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:M:852:HIS:HB2 | 1:M:856:THR:CG2 | 2.47 | 0.44 |
| 1:M:1388:THR:O | 1:M:1390:HIS:N | 2.51 | 0.44 |
| 2:N:370:PHE:HD2 | 2:N:374:MET:HE3 | 1.83 | 0.44 |
| 2:N:489:ARG:HB3 | 2:N:489:ARG:HH11 | 1.82 | 0.44 |
| 2:N:605:GLU:O | 2:N:605:GLU:HG2 | 2.18 | 0.44 |
| 2:N:755:ILE:HG22 | 2:N:809:MET:HE2 | 1.98 | 0.44 |
| 2:N:773:MET:SD | 2:N:987:LYS:HB3 | 2.58 | 0.44 |
| 2:N:845:SER:O | 2:N:850:LEU:HB3 | 2.18 | 0.44 |
| 2:N:956:THR:HG22 | 2:N:957:ASN:O | 2.17 | 0.44 |
| 3:O:59:ASP:HB3 | 12:X:69:PHE:CZ | 2.53 | 0.44 |
| 5:Q:102:LYS:HB3 | 5:Q:104:PHE:CE2 | 2.53 | 0.44 |
| 6:R:73:ALA:O | 6:R:74:ILE:HB | 2.18 | 0.44 |
| 7:S:160:ILE:CG2 | 7:S:161:GLY:N | 2.81 | 0.44 |
| 8:T:19:ARG:C | 8:T:20:TYR:HD2 | 2.21 | 0.44 |
| 8:T:107:ASP:O | 8:T:108:GLU:C | 2.56 | 0.44 |
| 12:X:63:THR:HG22 | 12:X:65:ARG:HG3 | 1.98 | 0.44 |
| 1:A:333:LYS:CA | 1:A:338:ARG:HD2 | 2.48 | 0.44 |
| 1:A:465:PRO:O | 1:A:466:TYR:O | 2.36 | 0.44 |
| 1:A:479:TYR:O | 1:A:480:ASN:HB3 | 2.18 | 0.44 |
| 1:A:630:LEU:C | 1:A:630:LEU:HD23 | 2.38 | 0.44 |
| 1:A:801:VAL:HG13 | 1:A:809:LEU:CD1 | 2.43 | 0.44 |
| 2:B:845:SER:O | 2:B:850:LEU:HB3 | 2.18 | 0.44 |
| 5:E:89:ILE:CG2 | 5:E:118:SER:CB | 2.77 | 0.44 |
| 5:E:89:ILE:CG1 | 5:E:118:SER:HB2 | 2.48 | 0.44 |
| 1:M:40:ILE:C | 1:M:41:MET:HG3 | 2.38 | 0.44 |
| 1:M:62:ASP:O | 1:M:63:ARG:HB2 | 2.18 | 0.44 |
| 1:M:444:LEU:HD22 | 1:M:444:LEU:HA | 1.79 | 0.44 |
| 1:M:538:ARG:NH2 | 8:T:121:LEU:HD12 | 2.25 | 0.44 |
| 1:M:549:ASN:ND2 | 11:W:47:ARG:NH2 | 2.65 | 0.44 |
| 1:M:630:LEU:C | 1:M:630:LEU:HD23 | 2.38 | 0.44 |
| 1:M:835:THR:CG2 | 1:M:836:GLY:N | 2.81 | 0.44 |
| 2:N:518:ALA:O | 2:N:768:THR:HG23 | 2.17 | 0.44 |
| 2:N:821:GLN:NE2 | 2:N:850:LEU:HD12 | 2.32 | 0.44 |
| 2:N:859:TYR:OH | 2:N:941:LEU:CD1 | 2.64 | 0.44 |
| 2:N:882:THR:HG21 | 2:N:884:ARG:HB2 | 1.99 | 0.44 |
| 4:P:50:ALA:CB | 4:P:139:PRO:O | 2.65 | 0.44 |
| 5:Q:115:ILE:HG22 | 5:Q:116:THR:N | 2.32 | 0.44 |
| 10:V:55:LEU:O | 10:V:57:GLU:N | 2.51 | 0.44 |
| 11:W:13:PRO:O | 11:W:14:ASP:C | 2.56 | 0.44 |
| 1:A:312:GLN:CB | 1:A:313:PRO:CD | 2.96 | 0.43 |
| 1:A:776:ILE:CD1 | 1:A:816:PHE:CA | 2.96 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 1:A:869:TYR:CD2 | 1:A:1060:VAL:HG21 | 2.52 | 0.43 |
| 1:A:1129:ASP:O | 1:A:1132:LYS:HB3 | 2.18 | 0.43 |
| 1:A:1157:ASP:OD2 | 1:A:1163:THR:HA | 2.18 | 0.43 |
| 1:A:1294:VAL:HA | 1:A:1295:PRO:HD3 | 1.75 | 0.43 |
| 2:B:77:ILE:HA | 2:B:120:GLU:O | 2.17 | 0.43 |
| 2:B:376:ASN:C | 2:B:380:LEU:HD13 | 2.38 | 0.43 |
| 2:B:605:GLU:HG2 | 2:B:605:GLU:O | 2.18 | 0.43 |
| 2:B:812:LEU:C | 2:B:814:PHE:H | 2.21 | 0.43 |
| 4:D:140:PHE:CZ | 7:G:85:GLU:HG3 | 2.41 | 0.43 |
| 5:E:54:ARG:C | 5:E:56:LEU:H | 2.20 | 0.43 |
| 5:E:102:LYS:HB3 | 5:E:104:PHE:CE2 | 2.53 | 0.43 |
| 6:F:124:GLU:O | 6:F:130:ILE:HG13 | 2.18 | 0.43 |
| 8:H:42:ILE:CG2 | 8:H:43:ASN:N | 2.81 | 0.43 |
| 8:H:134:LEU:HD13 | 8:H:136:GLN:HE22 | 1.76 | 0.43 |
| 11:K:24:ASP:OD1 | 11:K:26:ARG:HB2 | 2.18 | 0.43 |
| 12:L:57:VAL:O | 12:L:58:ILE:CB | 2.66 | 0.43 |
| 1:M:200:ARG:HH11 | 1:M:200:ARG:HB3 | 1.82 | 0.43 |
| 1:M:1294:VAL:HA | 1:M:1295:PRO:HD3 | 1.75 | 0.43 |
| 2:N:31:VAL:O | 2:N:32:SER:C | 2.54 | 0.43 |
| 2:N:799:PRO:O | 2:N:800:GLN:HG3 | 2.17 | 0.43 |
| 2:N:898:LEU:HD13 | 2:N:952:VAL:CG1 | 2.48 | 0.43 |
| 2:N:1159:ARG:CD | 2:N:1193:GLN:NE2 | 2.79 | 0.43 |
| 2:N:1223:VAL:O | 2:N:1224:SER:CB | 2.59 | 0.43 |
| 4:P:88:GLU:C | 4:P:90:ALA:N | 2.71 | 0.43 |
| 7:S:22:MET:O | 7:S:23:ASN:C | 2.56 | 0.43 |
| 7:S:153:ASP:CG | 7:S:154:VAL:HG23 | 2.38 | 0.43 |
| 8:T:42:ILE:CG2 | 8:T:43:ASN:N | 2.81 | 0.43 |
| 1:A:39:GLU:O | 1:A:53:LEU:CB | 2.66 | 0.43 |
| 1:A:354:ILE:HG23 | 1:A:488:MET:HG3 | 1.99 | 0.43 |
| 1:A:498:THR:HG21 | 2:B:1149:GLU:OE1 | 2.17 | 0.43 |
| 2:B:54:PRO:HB2 | 2:B:79:PHE:CD1 | 2.53 | 0.43 |
| 2:B:287:GLY:CA | 2:B:290:LEU:HD23 | 2.48 | 0.43 |
| 2:B:381:CYS:C | 2:B:383:LEU:N | 2.70 | 0.43 |
| 2:B:898:LEU:HD13 | 2:B:952:VAL:CG1 | 2.48 | 0.43 |
| 2:B:956:THR:HG22 | 2:B:957:ASN:N | 2.34 | 0.43 |
| 2:B:1074:ASN:HB2 | 2:B:1081:LEU:HD21 | 2.00 | 0.43 |
| 2:B:1110:PRO:HG2 | 2:B:1119:VAL:CG2 | 2.47 | 0.43 |
| 5:E:134:PHE:CB | 5:E:139:LEU:HD11 | 2.42 | 0.43 |
| 7:G:117:ASP:O | 7:G:119:LEU:N | 2.51 | 0.43 |
| 8:H:19:ARG:O | 8:H:20:TYR:HD2 | 2.01 | 0.43 |
| 1:M:86:LEU:CG | 1:M:238:THR:O | 2.66 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|------------------|--------------------------|-------------------|
| 1:M:606:MET:HG2 | 1:M:622:THR:HG23 | 2.00 | 0.43 |
| 1:M:780:PHE:CE2 | 2:N:510:THR:HA | 2.54 | 0.43 |
| 1:M:1316:LEU:C | 1:M:1318:GLU:N | 2.70 | 0.43 |
| 2:N:77:ILE:HA | 2:N:120:GLU:O | 2.17 | 0.43 |
| 2:N:401:LEU:O | 2:N:404:PRO:HD2 | 2.18 | 0.43 |
| 2:N:812:LEU:C | 2:N:814:PHE:H | 2.21 | 0.43 |
| 2:N:1120:GLU:CG | 2:N:1121:GLY:N | 2.81 | 0.43 |
| 4:P:105:THR:O | 4:P:105:THR:HG22 | 2.17 | 0.43 |
| 5:Q:166:ARG:HD3 | 5:Q:166:ARG:HA | 1.77 | 0.43 |
| 6:R:79:ARG:HG2 | 6:R:144:GLU:OE1 | 2.17 | 0.43 |
| 6:R:83:PRO:HA | 6:R:146:TRP:CZ3 | 2.53 | 0.43 |
| 7:S:153:ASP:CG | 7:S:154:VAL:N | 2.67 | 0.43 |
| 8:T:12:VAL:HB | 8:T:52:ASP:H | 1.83 | 0.43 |
| 9:U:61:ASP:C | 9:U:63:GLY:H | 2.21 | 0.43 |
| 9:U:108:LYS:CG | 9:U:109:THR:H | 2.31 | 0.43 |
| 10:V:1:MET:N | 10:V:55:LEU:HB2 | 2.33 | 0.43 |
| 1:A:173:PRO:HB3 | 1:A:186:TRP:CD2 | 2.52 | 0.43 |
| 1:A:344:LYS:HB3 | 2:B:1117:GLN:OE1 | 2.17 | 0.43 |
| 1:A:496:GLU:HB3 | 6:F:99:LEU:HB3 | 1.99 | 0.43 |
| 1:A:568:LYS:HB2 | 1:A:569:PRO:HD3 | 1.96 | 0.43 |
| 1:A:887:ILE:HG22 | 1:A:888:PRO:N | 2.34 | 0.43 |
| 1:A:1122:LEU:HD23 | 1:A:1126:ILE:O | 2.18 | 0.43 |
| 1:A:1168:ASP:O | 1:A:1169:PHE:C | 2.57 | 0.43 |
| 1:A:1345:GLU:OE2 | 5:E:211:ARG:NH1 | 2.51 | 0.43 |
| 1:A:1353:LYS:O | 1:A:1357:ASN:ND2 | 2.51 | 0.43 |
| 2:B:799:PRO:O | 2:B:800:GLN:HG3 | 2.17 | 0.43 |
| 2:B:1010:LEU:HD23 | 2:B:1092:TYR:CE1 | 2.52 | 0.43 |
| 5:E:160:LYS:HD2 | 5:E:194:VAL:HG23 | 2.01 | 0.43 |
| 5:E:179:ARG:HH21 | 5:E:191:ARG:HB2 | 1.82 | 0.43 |
| 1:M:135:PHE:HB2 | 1:M:224:GLY:N | 2.34 | 0.43 |
| 1:M:267:LEU:HD21 | 1:M:304:TYR:CZ | 2.54 | 0.43 |
| 1:M:1279:ILE:O | 1:M:1280:PRO:C | 2.50 | 0.43 |
| 2:N:281:LEU:HD13 | 2:N:368:THR:CB | 2.48 | 0.43 |
| 2:N:523:GLY:O | 2:N:524:GLN:C | 2.56 | 0.43 |
| 2:N:1189:THR:HG22 | 2:N:1190:ASN:N | 2.33 | 0.43 |
| 3:O:128:ASN:O | 3:O:129:VAL:HB | 2.17 | 0.43 |
| 5:Q:84:GLU:OE2 | 5:Q:91:THR:HG21 | 2.19 | 0.43 |
| 9:U:32:CYS:O | 9:U:33:ASP:CG | 2.56 | 0.43 |
| 1:A:65:PHE:O | 1:A:66:LYS:C | 2.56 | 0.43 |
| 1:A:135:PHE:HB2 | 1:A:224:GLY:N | 2.34 | 0.43 |
| 1:A:267:LEU:HD21 | 1:A:304:TYR:CZ | 2.54 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 2:B:540:ILE:N | 2:B:605:GLU:OE2 | 2.51 | 0.43 |
| 2:B:1197:PRO:HG2 | 2:B:1200:ALA:HB2 | 2.00 | 0.43 |
| 3:C:32:LEU:CD1 | 3:C:36:MET:HE2 | 2.47 | 0.43 |
| 7:G:154:VAL:HB | 7:G:155:ASN:H | 1.56 | 0.43 |
| 11:K:13:PRO:O | 11:K:14:ASP:C | 2.56 | 0.43 |
| 1:M:65:PHE:O | 1:M:66:LYS:C | 2.56 | 0.43 |
| 1:M:356:GLY:N | 1:M:483:PHE:CZ | 2.87 | 0.43 |
| 1:M:456:MET:HE3 | 2:N:1134:GLU:HG3 | 2.01 | 0.43 |
| 1:M:498:THR:HG21 | 2:N:1149:GLU:OE1 | 2.18 | 0.43 |
| 1:M:710:THR:HG22 | 1:M:712:ARG:N | 2.25 | 0.43 |
| 1:M:716:GLU:O | 1:M:718:GLU:N | 2.51 | 0.43 |
| 1:M:1122:LEU:HD23 | 1:M:1126:ILE:O | 2.18 | 0.43 |
| 1:M:1168:ASP:O | 1:M:1169:PHE:C | 2.57 | 0.43 |
| 1:M:1222:PHE:CD1 | 1:M:1226:LEU:HD23 | 2.54 | 0.43 |
| 1:M:1353:LYS:O | 1:M:1357:ASN:ND2 | 2.51 | 0.43 |
| 2:N:103:GLU:O | 2:N:104:ALA:C | 2.56 | 0.43 |
| 2:N:532:LEU:HD22 | 2:N:536:SER:OG | 2.19 | 0.43 |
| 2:N:597:ARG:HH11 | 2:N:688:GLU:HG2 | 1.81 | 0.43 |
| 2:N:609:ILE:HG13 | 2:N:694:GLU:HA | 2.00 | 0.43 |
| 2:N:955:THR:N | 2:N:963:PHE:O | 2.51 | 0.43 |
| 2:N:1010:LEU:HD23 | 2:N:1092:TYR:CE1 | 2.52 | 0.43 |
| 5:Q:32:GLU:C | 5:Q:34:MET:N | 2.72 | 0.43 |
| 8:T:27:ILE:HA | 8:T:38:LEU:O | 2.18 | 0.43 |
| 8:T:58:THR:CG2 | 8:T:59:LEU:N | 2.82 | 0.43 |
| 1:A:62:ASP:O | 1:A:63:ARG:HB2 | 2.18 | 0.43 |
| 1:A:786:PRO:HG2 | 1:A:787:HIS:CD2 | 2.53 | 0.43 |
| 1:A:835:THR:CG2 | 1:A:836:GLY:N | 2.81 | 0.43 |
| 1:A:839:GLN:O | 1:A:843:VAL:HG23 | 2.19 | 0.43 |
| 2:B:103:GLU:O | 2:B:104:ALA:C | 2.56 | 0.43 |
| 2:B:317:GLN:O | 2:B:318:ASP:HB3 | 2.19 | 0.43 |
| 2:B:1013:ASN:OD1 | 2:B:1015:HIS:HB2 | 2.19 | 0.43 |
| 3:C:166:GLU:C | 11:K:6:ARG:NH1 | 2.72 | 0.43 |
| 5:E:84:GLU:OE2 | 5:E:91:THR:HG21 | 2.19 | 0.43 |
| 5:E:136:GLU:C | 5:E:138:ASP:H | 2.22 | 0.43 |
| 8:H:91:ASP:C | 8:H:92:TYR:CD1 | 2.91 | 0.43 |
| 9:I:108:LYS:CG | 9:I:109:THR:H | 2.31 | 0.43 |
| 11:K:10:PHE:HA | 11:K:37:ARG:HB3 | 2.01 | 0.43 |
| 1:M:786:PRO:HG2 | 1:M:787:HIS:CD2 | 2.53 | 0.43 |
| 1:M:999:LEU:HD13 | 1:M:1020:PHE:HE2 | 1.82 | 0.43 |
| 2:N:540:ILE:N | 2:N:605:GLU:OE2 | 2.51 | 0.43 |
| 2:N:633:VAL:O | 2:N:644:GLU:O | 2.37 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|------------------|--------------------------|-------------------|
| 2:N:956:THR:HG22 | 2:N:957:ASN:N | 2.33 | 0.43 |
| 2:N:1108:ARG:CG | 2:N:1108:ARG:O | 2.67 | 0.43 |
| 4:P:50:ALA:HB2 | 4:P:139:PRO:O | 2.18 | 0.43 |
| 4:P:54:SER:HB3 | 4:P:113:ALA:CA | 2.47 | 0.43 |
| 4:P:141:GLU:C | 4:P:143:ALA:H | 2.22 | 0.43 |
| 5:Q:160:LYS:HD2 | 5:Q:194:VAL:HG23 | 2.01 | 0.43 |
| 6:R:75:LEU:C | 6:R:77:GLU:N | 2.69 | 0.43 |
| 10:V:55:LEU:O | 10:V:56:ILE:C | 2.56 | 0.43 |
| 1:A:520:PRO:HD3 | 1:A:632:HIS:CD2 | 2.54 | 0.43 |
| 1:A:780:PHE:CE2 | 2:B:510:THR:HA | 2.54 | 0.43 |
| 2:B:22:SER:HA | 2:B:811:TYR:CE2 | 2.49 | 0.43 |
| 2:B:588:MET:O | 2:B:589:LEU:C | 2.56 | 0.43 |
| 2:B:702:MET:H | 2:B:707:LEU:HD12 | 1.83 | 0.43 |
| 2:B:838:SER:HA | 2:B:989:THR:O | 2.19 | 0.43 |
| 2:B:1106:ARG:HG3 | 2:B:1107:ALA:N | 2.33 | 0.43 |
| 2:B:1189:THR:HG22 | 2:B:1190:ASN:N | 2.33 | 0.43 |
| 2:B:1197:PRO:O | 2:B:1200:ALA:N | 2.50 | 0.43 |
| 3:C:16:GLU:O | 3:C:17:VAL:CG2 | 2.67 | 0.43 |
| 3:C:59:ASP:HB3 | 12:L:69:PHE:CZ | 2.52 | 0.43 |
| 4:D:41:HIS:HB2 | 7:G:73:LYS:HZ1 | 1.77 | 0.43 |
| 4:D:48:LEU:HD12 | 4:D:49:ILE:H | 1.82 | 0.43 |
| 4:D:50:ALA:HB2 | 4:D:139:PRO:O | 2.18 | 0.43 |
| 5:E:160:LYS:HG3 | 5:E:194:VAL:HG21 | 2.00 | 0.43 |
| 6:F:111:ILE:O | 6:F:113:GLY:N | 2.47 | 0.43 |
| 7:G:111:SER:C | 7:G:113:ARG:H | 2.21 | 0.43 |
| 8:H:27:ILE:HA | 8:H:38:LEU:O | 2.18 | 0.43 |
| 8:H:58:THR:CG2 | 8:H:59:LEU:N | 2.82 | 0.43 |
| 10:J:3:ILE:HA | 10:J:4:PRO:HD3 | 1.80 | 0.43 |
| 1:M:312:GLN:CB | 1:M:313:PRO:CD | 2.96 | 0.43 |
| 1:M:333:LYS:CA | 1:M:338:ARG:HD2 | 2.49 | 0.43 |
| 1:M:520:PRO:HD3 | 1:M:632:HIS:CD2 | 2.54 | 0.43 |
| 1:M:568:LYS:HB2 | 1:M:569:PRO:HD3 | 1.96 | 0.43 |
| 1:M:826:ILE:O | 1:M:830:VAL:HG23 | 2.18 | 0.43 |
| 1:M:1153:GLU:HG2 | 9:U:45:ARG:HG3 | 2.01 | 0.43 |
| 2:N:167:SER:O | 2:N:173:ARG:HB3 | 2.18 | 0.43 |
| 2:N:376:ASN:C | 2:N:380:LEU:HD13 | 2.38 | 0.43 |
| 2:N:459:TRP:HA | 2:N:459:TRP:HE3 | 1.82 | 0.43 |
| 2:N:586:PRO:O | 2:N:587:SER:C | 2.57 | 0.43 |
| 2:N:1100:ASP:OD2 | 11:W:1:MET:HB2 | 2.19 | 0.43 |
| 2:N:1202:LEU:CD2 | 2:N:1206:GLU:CD | 2.87 | 0.43 |
| 4:P:84:ILE:C | 4:P:86:ASP:H | 2.22 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|------------------|--------------------------|-------------------|
| 6:R:123:LYS:HE3 | 6:R:123:LYS:HB2 | 1.82 | 0.43 |
| 7:S:13:LEU:CD2 | 7:S:17:TYR:HB2 | 2.45 | 0.43 |
| 10:V:36:ASP:CG | 10:V:46:ARG:NH2 | 2.72 | 0.43 |
| 1:A:254:ASP:O | 1:A:255:GLU:HG3 | 2.19 | 0.43 |
| 1:A:306:ASP:OD2 | 1:A:327:ARG:HD3 | 2.18 | 0.43 |
| 1:A:356:GLY:N | 1:A:483:PHE:CZ | 2.87 | 0.43 |
| 1:A:630:LEU:CA | 1:A:633:THR:CG2 | 2.97 | 0.43 |
| 1:A:883:THR:HA | 1:A:954:HIS:O | 2.19 | 0.43 |
| 1:A:964:ARG:O | 1:A:967:GLN:N | 2.51 | 0.43 |
| 2:B:410:PHE:O | 2:B:413:LEU:HB2 | 2.19 | 0.43 |
| 2:B:508:HIS:HD2 | 2:B:510:THR:OG1 | 2.02 | 0.43 |
| 2:B:532:LEU:HD22 | 2:B:536:SER:OG | 2.19 | 0.43 |
| 2:B:874:PHE:HA | 2:B:913:GLY:O | 2.19 | 0.43 |
| 2:B:1120:GLU:CG | 2:B:1121:GLY:N | 2.81 | 0.43 |
| 2:B:1202:LEU:CD2 | 2:B:1206:GLU:CD | 2.87 | 0.43 |
| 3:C:131:GLU:HA | 3:C:132:PRO:HD3 | 1.74 | 0.43 |
| 5:E:21:MET:HE2 | 5:E:25:ARG:HE | 1.84 | 0.43 |
| 5:E:32:GLU:C | 5:E:34:MET:N | 2.72 | 0.43 |
| 5:E:163:LEU:HD13 | 5:E:210:TYR:CE2 | 2.54 | 0.43 |
| 6:F:83:PRO:HA | 6:F:146:TRP:CZ3 | 2.53 | 0.43 |
| 10:J:1:MET:N | 10:J:55:LEU:HB2 | 2.33 | 0.43 |
| 1:M:479:TYR:O | 1:M:480:ASN:HB3 | 2.18 | 0.43 |
| 1:M:591:ARG:O | 1:M:592:THR:CB | 2.66 | 0.43 |
| 1:M:1081:MET:HG2 | 1:M:1362:ASP:OD2 | 2.18 | 0.43 |
| 1:M:1294:VAL:HG13 | 1:M:1295:PRO:CD | 2.48 | 0.43 |
| 2:N:54:PRO:HB2 | 2:N:79:PHE:CD1 | 2.53 | 0.43 |
| 2:N:545:GLU:HA | 2:N:548:ILE:HB | 2.00 | 0.43 |
| 2:N:838:SER:HA | 2:N:989:THR:O | 2.19 | 0.43 |
| 2:N:969:ARG:NH1 | 3:O:60:GLU:OE1 | 2.51 | 0.43 |
| 2:N:1013:ASN:OD1 | 2:N:1015:HIS:HB2 | 2.19 | 0.43 |
| 2:N:1065:GLN:HE21 | 2:N:1067:ARG:N | 2.17 | 0.43 |
| 2:N:1106:ARG:HG3 | 2:N:1107:ALA:N | 2.33 | 0.43 |
| 3:O:99:GLU:N | 3:O:119:ILE:CG1 | 2.82 | 0.43 |
| 3:O:181:ASP:CG | 3:O:181:ASP:O | 2.57 | 0.43 |
| 6:R:73:ALA:O | 6:R:74:ILE:CB | 2.67 | 0.43 |
| 7:S:129:ALA:HB1 | 7:S:137:ILE:O | 2.18 | 0.43 |
| 10:V:3:ILE:HA | 10:V:4:PRO:HD3 | 1.80 | 0.43 |
| 1:A:90:VAL:O | 1:A:236:ILE:HG23 | 2.19 | 0.43 |
| 1:A:262:ASP:O | 1:A:265:HIS:HB2 | 2.18 | 0.43 |
| 1:A:346:VAL:CG1 | 2:B:1130:PHE:HB2 | 2.48 | 0.43 |
| 1:A:757:ILE:H | 1:A:757:ILE:HG13 | 1.58 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:A:1153:GLU:HG2 | 9:I:45:ARG:HG3 | 2.01 | 0.43 |
| 1:A:1371:MET:H | 1:A:1371:MET:HE2 | 1.82 | 0.43 |
| 2:B:586:PRO:O | 2:B:587:SER:C | 2.57 | 0.43 |
| 2:B:1162:VAL:HA | 2:B:1168:LEU:O | 2.19 | 0.43 |
| 3:C:68:LEU:N | 3:C:68:LEU:HD12 | 2.34 | 0.43 |
| 3:C:168:ALA:C | 3:C:170:TRP:N | 2.72 | 0.43 |
| 4:D:67:ARG:C | 4:D:69:ARG:N | 2.71 | 0.43 |
| 5:E:177:ILE:HG22 | 5:E:212:ILE:O | 2.19 | 0.43 |
| 7:G:153:ASP:O | 7:G:154:VAL:O | 2.37 | 0.43 |
| 1:M:116:ASP:C | 1:M:118:THR:N | 2.71 | 0.43 |
| 1:M:262:ASP:O | 1:M:265:HIS:HB2 | 2.18 | 0.43 |
| 1:M:306:ASP:OD1 | 1:M:307:ASN:N | 2.52 | 0.43 |
| 1:M:471:LEU:HD12 | 1:M:471:LEU:O | 2.19 | 0.43 |
| 1:M:553:TRP:HE1 | 11:W:62:LYS:CB | 2.13 | 0.43 |
| 1:M:667:ILE:CD1 | 1:M:668:GLY:N | 2.82 | 0.43 |
| 1:M:1044:PHE:CD2 | 1:M:1048:LEU:HD11 | 2.54 | 0.43 |
| 1:M:1157:ASP:OD2 | 1:M:1163:THR:HA | 2.18 | 0.43 |
| 5:Q:163:LEU:HD13 | 5:Q:210:TYR:CE2 | 2.54 | 0.43 |
| 5:Q:177:ILE:HG22 | 5:Q:212:ILE:O | 2.19 | 0.43 |
| 11:W:10:PHE:HA | 11:W:37:ARG:HB3 | 2.01 | 0.43 |
| 1:A:86:LEU:CG | 1:A:238:THR:O | 2.66 | 0.43 |
| 1:A:471:LEU:HD12 | 1:A:471:LEU:O | 2.19 | 0.43 |
| 1:A:689:GLU:C | 1:A:691:VAL:N | 2.71 | 0.43 |
| 1:A:1072:GLN:O | 1:A:1073:SER:C | 2.57 | 0.43 |
| 1:A:1081:MET:HG2 | 1:A:1362:ASP:OD2 | 2.18 | 0.43 |
| 1:A:1195:LEU:HD22 | 1:A:1263:LEU:HD11 | 2.00 | 0.43 |
| 1:A:1393:ASN:CG | 1:A:1405:PHE:HD2 | 2.22 | 0.43 |
| 1:A:1450:GLU:CG | 7:G:22:MET:CG | 2.93 | 0.43 |
| 2:B:180:LEU:O | 2:B:182:LYS:N | 2.52 | 0.43 |
| 2:B:773:MET:SD | 2:B:987:LYS:HB3 | 2.58 | 0.43 |
| 2:B:969:ARG:NH1 | 3:C:60:GLU:OE1 | 2.51 | 0.43 |
| 3:C:128:ASN:O | 3:C:129:VAL:HB | 2.17 | 0.43 |
| 3:C:221:TYR:CD1 | 3:C:222:LYS:N | 2.87 | 0.43 |
| 4:D:25:ALA:C | 4:D:27:LEU:N | 2.70 | 0.43 |
| 4:D:141:GLU:C | 4:D:143:ALA:H | 2.22 | 0.43 |
| 7:G:22:MET:O | 7:G:23:ASN:C | 2.56 | 0.43 |
| 7:G:22:MET:O | 7:G:25:TYR:N | 2.51 | 0.43 |
| 8:H:3:SER:O | 8:H:60:ALA:HB1 | 2.18 | 0.43 |
| 10:J:55:LEU:O | 10:J:57:GLU:N | 2.51 | 0.43 |
| 1:M:93:ILE:HG22 | 1:M:305:MET:HE3 | 2.01 | 0.43 |
| 1:M:505:LEU:HD11 | 6:R:91:ALA:HB1 | 1.99 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 1:M:518:ASN:HB2 | 1:M:879:VAL:O | 2.18 | 0.43 |
| 1:M:689:GLU:C | 1:M:691:VAL:N | 2.71 | 0.43 |
| 1:M:1345:GLU:OE2 | 5:Q:211:ARG:NH1 | 2.51 | 0.43 |
| 2:N:843:GLN:O | 2:N:846:ILE:N | 2.51 | 0.43 |
| 2:N:1085:VAL:CG1 | 2:N:1086:PHE:N | 2.81 | 0.43 |
| 2:N:1162:VAL:HA | 2:N:1168:LEU:O | 2.19 | 0.43 |
| 2:N:1177:LYS:O | 2:N:1179:GLN:N | 2.43 | 0.43 |
| 3:O:16:GLU:O | 3:O:17:VAL:CG2 | 2.67 | 0.43 |
| 5:Q:136:GLU:C | 5:Q:138:ASP:H | 2.22 | 0.43 |
| 1:A:75:ALA:O | 1:A:76:GLU:CB | 2.67 | 0.43 |
| 1:A:344:LYS:HB3 | 2:B:1117:GLN:CD | 2.39 | 0.43 |
| 1:A:417:ARG:O | 1:A:418:TYR:CD2 | 2.69 | 0.43 |
| 1:A:591:ARG:O | 1:A:592:THR:CB | 2.66 | 0.43 |
| 1:A:609:VAL:O | 1:A:611:GLY:N | 2.52 | 0.43 |
| 2:B:630:LEU:HA | 2:B:743:ILE:HD11 | 2.00 | 0.43 |
| 2:B:839:MET:HE3 | 2:B:1010:LEU:HD21 | 2.01 | 0.43 |
| 2:B:1108:ARG:O | 2:B:1108:ARG:CG | 2.67 | 0.43 |
| 2:B:1204:PHE:O | 2:B:1205:GLN:C | 2.57 | 0.43 |
| 3:C:119:ILE:CG1 | 3:C:120:LYS:N | 2.81 | 0.43 |
| 3:C:181:ASP:CG | 3:C:181:ASP:O | 2.57 | 0.43 |
| 8:H:10:PHE:N | 8:H:10:PHE:CD1 | 2.86 | 0.43 |
| 8:H:26:ILE:CG2 | 8:H:27:ILE:N | 2.82 | 0.43 |
| 9:I:50:THR:HG22 | 9:I:52:ILE:H | 1.83 | 0.43 |
| 10:J:21:TYR:C | 10:J:23:ARG:H | 2.23 | 0.43 |
| 1:M:839:GLN:O | 1:M:843:VAL:HG23 | 2.18 | 0.43 |
| 1:M:887:ILE:HG22 | 1:M:888:PRO:N | 2.34 | 0.43 |
| 1:M:902:LEU:N | 1:M:927:GLN:NE2 | 2.62 | 0.43 |
| 1:M:941:ARG:HG2 | 1:M:941:ARG:NH1 | 2.32 | 0.43 |
| 1:M:948:VAL:HG12 | 1:M:949:PHE:CD2 | 2.54 | 0.43 |
| 1:M:1449:ASP:OD1 | 1:M:1452:LEU:CG | 2.67 | 0.43 |
| 2:N:180:LEU:O | 2:N:182:LYS:N | 2.52 | 0.43 |
| 2:N:295:TYR:N | 2:N:295:TYR:CD2 | 2.87 | 0.43 |
| 2:N:777:ALA:HA | 2:N:1095:LEU:HA | 2.00 | 0.43 |
| 2:N:874:PHE:HA | 2:N:913:GLY:O | 2.19 | 0.43 |
| 2:N:1074:ASN:HB2 | 2:N:1081:LEU:HD21 | 2.00 | 0.43 |
| 3:O:96:VAL:HG12 | 3:O:98:LEU:HD21 | 2.00 | 0.43 |
| 4:P:48:LEU:HD12 | 4:P:49:ILE:H | 1.82 | 0.43 |
| 4:P:140:PHE:CZ | 7:S:85:GLU:HG3 | 2.41 | 0.43 |
| 7:S:111:SER:C | 7:S:113:ARG:H | 2.21 | 0.43 |
| 1:A:200:ARG:HH11 | 1:A:200:ARG:HB3 | 1.82 | 0.42 |
| 1:A:916:TYR:CG | 1:A:920:ILE:HD12 | 2.54 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|------------------|--------------------------|-------------------|
| 1:A:1415:ALA:HA | 1:A:1420:GLU:OE2 | 2.19 | 0.42 |
| 2:B:843:GLN:O | 2:B:846:ILE:HB | 2.19 | 0.42 |
| 2:B:954:LEU:O | 12:L:57:VAL:O | 2.37 | 0.42 |
| 2:B:984:HIS:HB3 | 2:B:1022:THR:OG1 | 2.18 | 0.42 |
| 2:B:1065:GLN:HE21 | 2:B:1067:ARG:N | 2.17 | 0.42 |
| 2:B:1100:ASP:OD2 | 11:K:1:MET:HB2 | 2.19 | 0.42 |
| 2:B:1166:CYS:HA | 4:D:15:ALA:CA | 2.49 | 0.42 |
| 3:C:96:VAL:HG12 | 3:C:98:LEU:HD21 | 2.00 | 0.42 |
| 7:G:125:ASN:CG | 7:G:128:PRO:HA | 2.40 | 0.42 |
| 12:L:42:LEU:HB3 | 12:L:43:ASN:H | 1.64 | 0.42 |
| 1:M:39:GLU:O | 1:M:53:LEU:CB | 2.66 | 0.42 |
| 1:M:265:HIS:C | 1:M:267:LEU:N | 2.72 | 0.42 |
| 1:M:609:VAL:O | 1:M:611:GLY:N | 2.52 | 0.42 |
| 1:M:764:ALA:C | 1:M:804:SER:HB3 | 2.38 | 0.42 |
| 2:N:508:HIS:HD2 | 2:N:510:THR:OG1 | 2.01 | 0.42 |
| 2:N:843:GLN:O | 2:N:846:ILE:HB | 2.19 | 0.42 |
| 2:N:899:ILE:HD11 | 2:N:911:ILE:CG2 | 2.42 | 0.42 |
| 2:N:1071:VAL:O | 2:N:1072:MET:HG2 | 2.19 | 0.42 |
| 2:N:1197:PRO:O | 2:N:1200:ALA:N | 2.49 | 0.42 |
| 3:O:166:GLU:C | 11:W:6:ARG:NH1 | 2.72 | 0.42 |
| 4:P:122:THR:CB | 4:P:126:GLN:HE21 | 2.32 | 0.42 |
| 5:Q:54:ARG:C | 5:Q:56:LEU:H | 2.21 | 0.42 |
| 7:S:89:ALA:CB | 7:S:103:VAL:CG2 | 2.96 | 0.42 |
| 7:S:129:ALA:HB2 | 7:S:138:THR:OG1 | 2.19 | 0.42 |
| 8:T:10:PHE:CD1 | 8:T:10:PHE:N | 2.86 | 0.42 |
| 8:T:19:ARG:O | 8:T:20:TYR:HD2 | 2.01 | 0.42 |
| 12:X:50:CYS:O | 12:X:52:GLU:N | 2.42 | 0.42 |
| 1:A:181:LYS:HZ1 | 1:A:295:GLN:HB3 | 1.80 | 0.42 |
| 1:A:321:ARG:HG3 | 1:A:321:ARG:HH11 | 1.83 | 0.42 |
| 1:A:538:ARG:NH2 | 8:H:121:LEU:HD12 | 2.25 | 0.42 |
| 1:A:649:ASN:O | 1:A:650:ILE:C | 2.55 | 0.42 |
| 1:A:776:ILE:CG2 | 1:A:819:MET:SD | 3.03 | 0.42 |
| 2:B:186:CYS:HB2 | 2:B:784:ASN:OD1 | 2.19 | 0.42 |
| 2:B:401:LEU:O | 2:B:404:PRO:HD2 | 2.18 | 0.42 |
| 2:B:523:GLY:O | 2:B:524:GLN:C | 2.56 | 0.42 |
| 2:B:1125:ASP:O | 2:B:1126:GLY:O | 2.37 | 0.42 |
| 3:C:28:LEU:HA | 11:K:45:LEU:CD1 | 2.49 | 0.42 |
| 3:C:236:GLY:O | 3:C:237:SER:C | 2.58 | 0.42 |
| 3:C:248:ILE:HG23 | 11:K:98:LEU:HD22 | 2.00 | 0.42 |
| 4:D:67:ARG:O | 4:D:71:ARG:HB2 | 2.19 | 0.42 |
| 4:D:122:THR:CB | 4:D:126:GLN:HE21 | 2.32 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 7:G:6:ASP:HB3 | 7:G:73:LYS:HZ1 | 1.84 | 0.42 |
| 7:G:80:LYS:HA | 7:G:81:PRO:HD2 | 1.88 | 0.42 |
| 7:G:129:ALA:HB1 | 7:G:137:ILE:O | 2.18 | 0.42 |
| 9:I:14:LEU:HD13 | 9:I:28:SER:N | 2.33 | 0.42 |
| 1:M:254:ASP:O | 1:M:255:GLU:HG3 | 2.19 | 0.42 |
| 1:M:548:MET:HB3 | 11:W:58:PHE:HE1 | 1.84 | 0.42 |
| 1:M:710:THR:CG2 | 9:U:94:ASP:HA | 2.49 | 0.42 |
| 1:M:761:GLN:HG2 | 1:M:766:VAL:O | 2.19 | 0.42 |
| 1:M:771:VAL:HG12 | 1:M:772:GLU:N | 2.34 | 0.42 |
| 1:M:1274:ILE:O | 1:M:1274:ILE:HG22 | 2.18 | 0.42 |
| 1:M:1276:LEU:N | 1:M:1276:LEU:CD1 | 2.82 | 0.42 |
| 1:M:1388:THR:C | 1:M:1390:HIS:N | 2.71 | 0.42 |
| 2:N:87:PRO:HG3 | 2:N:163:ILE:HD12 | 2.02 | 0.42 |
| 2:N:174:THR:O | 2:N:175:LEU:C | 2.58 | 0.42 |
| 2:N:317:GLN:O | 2:N:318:ASP:HB3 | 2.19 | 0.42 |
| 2:N:609:ILE:HD12 | 2:N:609:ILE:H | 1.83 | 0.42 |
| 2:N:1125:ASP:O | 2:N:1126:GLY:O | 2.37 | 0.42 |
| 3:O:28:LEU:HA | 11:W:45:LEU:CD1 | 2.49 | 0.42 |
| 1:A:265:HIS:C | 1:A:267:LEU:N | 2.72 | 0.42 |
| 1:A:306:ASP:OD1 | 1:A:307:ASN:N | 2.52 | 0.42 |
| 1:A:548:MET:HB3 | 11:K:58:PHE:HE1 | 1.84 | 0.42 |
| 1:A:1125:GLU:O | 1:A:1126:ILE:C | 2.57 | 0.42 |
| 1:A:1199:LEU:HD11 | 1:A:1240:ILE:HD11 | 2.01 | 0.42 |
| 2:B:633:VAL:O | 2:B:644:GLU:O | 2.37 | 0.42 |
| 2:B:800:GLN:CG | 10:J:51:THR:HG22 | 2.42 | 0.42 |
| 2:B:1085:VAL:CG1 | 2:B:1086:PHE:N | 2.82 | 0.42 |
| 3:C:189:THR:CG2 | 3:C:190:ASP:N | 2.82 | 0.42 |
| 6:F:75:LEU:C | 6:F:77:GLU:N | 2.69 | 0.42 |
| 10:J:36:ASP:CG | 10:J:46:ARG:NH2 | 2.72 | 0.42 |
| 1:M:20:GLY:HA2 | 1:M:1416:GLY:O | 2.19 | 0.42 |
| 1:M:212:PHE:HA | 1:M:215:ILE:CD1 | 2.49 | 0.42 |
| 1:M:882:GLN:NE2 | 1:M:961:ASN:HA | 2.35 | 0.42 |
| 1:M:883:THR:HA | 1:M:954:HIS:O | 2.19 | 0.42 |
| 1:M:1199:LEU:HD11 | 1:M:1240:ILE:HD11 | 2.01 | 0.42 |
| 1:M:1298:SER:O | 1:M:1298:SER:OG | 2.37 | 0.42 |
| 1:M:1410:GLU:CD | 1:M:1410:GLU:N | 2.65 | 0.42 |
| 2:N:363:PHE:HD2 | 2:N:366:ARG:HD2 | 1.84 | 0.42 |
| 2:N:381:CYS:O | 2:N:383:LEU:N | 2.52 | 0.42 |
| 2:N:428:CYS:C | 2:N:430:GLU:H | 2.22 | 0.42 |
| 2:N:799:PRO:CB | 2:N:818:PRO:HG2 | 2.49 | 0.42 |
| 2:N:916:THR:HG22 | 2:N:918:ILE:HG13 | 2.00 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 2:N:1084:GLN:NE2 | 2:N:1084:GLN:N | 2.67 | 0.42 |
| 3:O:236:GLY:O | 3:O:237:SER:C | 2.58 | 0.42 |
| 3:O:248:ILE:HG23 | 11:W:98:LEU:HD22 | 2.00 | 0.42 |
| 7:S:22:MET:O | 7:S:25:TYR:N | 2.51 | 0.42 |
| 7:S:125:ASN:CG | 7:S:128:PRO:HA | 2.40 | 0.42 |
| 10:V:21:TYR:C | 10:V:23:ARG:H | 2.23 | 0.42 |
| 11:W:40:HIS:ND1 | 11:W:61:TYR:OH | 2.38 | 0.42 |
| 1:A:54:ASN:HB3 | 1:A:248:ARG:NH2 | 2.31 | 0.42 |
| 1:A:1171:THR:O | 1:A:1171:THR:HG22 | 2.20 | 0.42 |
| 1:A:1222:PHE:CD1 | 1:A:1226:LEU:HD23 | 2.54 | 0.42 |
| 1:A:1298:SER:O | 1:A:1298:SER:OG | 2.37 | 0.42 |
| 1:A:1352:TYR:HA | 1:A:1355:ILE:CG2 | 2.50 | 0.42 |
| 2:B:630:LEU:CD2 | 2:B:742:GLU:HA | 2.49 | 0.42 |
| 2:B:955:THR:N | 2:B:963:PHE:O | 2.51 | 0.42 |
| 9:I:61:ASP:C | 9:I:63:GLY:H | 2.21 | 0.42 |
| 10:J:46:ARG:HH11 | 10:J:46:ARG:CG | 2.30 | 0.42 |
| 1:M:344:LYS:HE3 | 2:N:1151:LEU:CB | 2.50 | 0.42 |
| 2:N:410:PHE:O | 2:N:413:LEU:HB2 | 2.19 | 0.42 |
| 2:N:630:LEU:CD2 | 2:N:742:GLU:HA | 2.49 | 0.42 |
| 2:N:702:MET:H | 2:N:707:LEU:HD12 | 1.83 | 0.42 |
| 3:O:68:LEU:HD12 | 3:O:68:LEU:N | 2.34 | 0.42 |
| 3:O:189:THR:CG2 | 3:O:190:ASP:N | 2.82 | 0.42 |
| 7:S:154:VAL:HB | 7:S:155:ASN:H | 1.56 | 0.42 |
| 8:T:134:LEU:HD13 | 8:T:136:GLN:HE22 | 1.76 | 0.42 |
| 9:U:14:LEU:HD13 | 9:U:28:SER:N | 2.33 | 0.42 |
| 11:W:76:GLN:HE21 | 11:W:76:GLN:HB3 | 1.53 | 0.42 |
| 1:A:39:GLU:OE1 | 1:A:39:GLU:N | 2.53 | 0.42 |
| 1:A:344:LYS:HE3 | 2:B:1151:LEU:HB3 | 2.02 | 0.42 |
| 2:B:969:ARG:HG2 | 2:B:970:THR:H | 1.84 | 0.42 |
| 4:D:84:ILE:C | 4:D:86:ASP:H | 2.22 | 0.42 |
| 6:F:73:ALA:O | 6:F:74:ILE:CB | 2.67 | 0.42 |
| 9:I:40:ASP:CG | 9:I:41:PRO:CD | 2.88 | 0.42 |
| 1:M:90:VAL:O | 1:M:236:ILE:HG23 | 2.19 | 0.42 |
| 1:M:145:LYS:C | 1:M:146:MET:HG3 | 2.39 | 0.42 |
| 1:M:167:GLY:O | 1:M:168:CYS:SG | 2.72 | 0.42 |
| 1:M:203:LEU:CG | 1:M:207:GLU:N | 2.82 | 0.42 |
| 1:M:306:ASP:OD2 | 1:M:327:ARG:HD3 | 2.18 | 0.42 |
| 1:M:859:ASN:C | 1:M:861:LEU:H | 2.23 | 0.42 |
| 1:M:1072:GLN:O | 1:M:1073:SER:C | 2.57 | 0.42 |
| 1:M:1415:ALA:HA | 1:M:1420:GLU:OE2 | 2.19 | 0.42 |
| 2:N:480:THR:CG2 | 2:N:481:TYR:N | 2.82 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 2:N:781:PHE:O | 2:N:782:LEU:HD23 | 2.20 | 0.42 |
| 2:N:973:VAL:HG12 | 2:N:974:PRO:O | 2.19 | 0.42 |
| 3:O:221:TYR:CD1 | 3:O:222:LYS:N | 2.87 | 0.42 |
| 5:Q:160:LYS:HG3 | 5:Q:194:VAL:HG21 | 2.00 | 0.42 |
| 5:Q:185:ARG:O | 5:Q:188:GLY:N | 2.44 | 0.42 |
| 6:R:111:ILE:O | 6:R:113:GLY:N | 2.47 | 0.42 |
| 8:T:42:ILE:HG23 | 8:T:94:TYR:HE1 | 1.85 | 0.42 |
| 9:U:90:GLN:HE21 | 9:U:92:ARG:HD3 | 1.85 | 0.42 |
| 1:A:93:ILE:HG22 | 1:A:305:MET:HE3 | 2.01 | 0.42 |
| 1:A:781:ALA:O | 1:A:783:ARG:HG2 | 2.19 | 0.42 |
| 1:A:1044:PHE:CD2 | 1:A:1048:LEU:HD11 | 2.54 | 0.42 |
| 2:B:78:ARG:CG | 2:B:120:GLU:HB2 | 2.50 | 0.42 |
| 2:B:834:ASN:CA | 2:B:838:SER:O | 2.67 | 0.42 |
| 2:B:857:ARG:HH11 | 2:B:945:GLU:CD | 2.23 | 0.42 |
| 2:B:1084:GLN:N | 2:B:1084:GLN:NE2 | 2.67 | 0.42 |
| 3:C:146:LYS:HB2 | 10:J:56:ILE:HD11 | 2.02 | 0.42 |
| 8:H:117:PHE:O | 8:H:119:GLY:N | 2.53 | 0.42 |
| 1:M:75:ALA:O | 1:M:76:GLU:CB | 2.67 | 0.42 |
| 1:M:563:GLN:HA | 1:M:564:PRO:HD3 | 1.80 | 0.42 |
| 1:M:1352:TYR:HA | 1:M:1355:ILE:CG2 | 2.50 | 0.42 |
| 2:N:954:LEU:O | 12:X:57:VAL:O | 2.37 | 0.42 |
| 2:N:984:HIS:HB3 | 2:N:1022:THR:OG1 | 2.18 | 0.42 |
| 2:N:992:VAL:CG2 | 2:N:993:THR:H | 2.27 | 0.42 |
| 2:N:1104:HIS:CG | 2:N:1122:ARG:HB2 | 2.54 | 0.42 |
| 5:Q:189:LEU:C | 5:Q:190:LYS:HG3 | 2.40 | 0.42 |
| 6:R:82:THR:HG22 | 6:R:84:TYR:HB2 | 2.01 | 0.42 |
| 7:S:12:THR:HG22 | 7:S:67:SER:HB3 | 2.01 | 0.42 |
| 8:T:91:ASP:C | 8:T:92:TYR:CD1 | 2.92 | 0.42 |
| 8:T:112:LYS:HA | 8:T:124:LEU:O | 2.19 | 0.42 |
| 1:A:212:PHE:HA | 1:A:215:ILE:CD1 | 2.49 | 0.42 |
| 1:A:1263:LEU:O | 1:A:1263:LEU:CG | 2.68 | 0.42 |
| 2:B:87:PRO:HG3 | 2:B:163:ILE:HD12 | 2.01 | 0.42 |
| 2:B:777:ALA:HA | 2:B:1095:LEU:HA | 2.00 | 0.42 |
| 2:B:806:THR:HB | 2:B:809:MET:HG3 | 2.02 | 0.42 |
| 2:B:1104:HIS:CG | 2:B:1122:ARG:HB2 | 2.54 | 0.42 |
| 3:C:220:ASP:OD1 | 3:C:220:ASP:C | 2.58 | 0.42 |
| 4:D:35:ALA:C | 4:D:37:LYS:N | 2.70 | 0.42 |
| 5:E:90:LYS:O | 5:E:92:MET:N | 2.53 | 0.42 |
| 5:E:153:ILE:HG22 | 5:E:154:ARG:O | 2.20 | 0.42 |
| 5:E:189:LEU:C | 5:E:190:LYS:HG3 | 2.40 | 0.42 |
| 6:F:74:ILE:HD12 | 6:F:143:TYR:O | 2.20 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|------------------|--------------------------|-------------------|
| 7:G:40:GLY:HA2 | 7:G:157:ILE:HD11 | 2.02 | 0.42 |
| 11:K:43:ALA:O | 11:K:46:LEU:N | 2.52 | 0.42 |
| 1:M:67:CYS:O | 1:M:67:CYS:SG | 2.78 | 0.42 |
| 1:M:91:PHE:HB2 | 1:M:298:GLN:HE22 | 1.85 | 0.42 |
| 1:M:111:GLY:O | 1:M:215:ILE:HA | 2.20 | 0.42 |
| 3:O:220:ASP:OD1 | 3:O:220:ASP:C | 2.58 | 0.42 |
| 4:P:35:ALA:O | 4:P:37:LYS:N | 2.53 | 0.42 |
| 4:P:52:SER:O | 4:P:53:LEU:O | 2.38 | 0.42 |
| 5:Q:90:LYS:O | 5:Q:92:MET:N | 2.53 | 0.42 |
| 7:S:74:TYR:N | 7:S:74:TYR:CD2 | 2.87 | 0.42 |
| 7:S:153:ASP:O | 7:S:154:VAL:O | 2.37 | 0.42 |
| 8:T:5:LEU:N | 8:T:60:ALA:HB2 | 2.35 | 0.42 |
| 10:V:35:LEU:CD1 | 10:V:46:ARG:NH1 | 2.82 | 0.42 |
| 1:A:568:LYS:HZ1 | 8:H:43:ASN:HB3 | 1.85 | 0.42 |
| 1:A:600:SER:HA | 1:A:601:PRO:HD2 | 1.91 | 0.42 |
| 1:A:897:ARG:O | 1:A:1031:ARG:HB3 | 2.20 | 0.42 |
| 1:A:948:VAL:HG12 | 1:A:949:PHE:CD2 | 2.54 | 0.42 |
| 1:A:1059:LEU:CG | 1:A:1060:VAL:N | 2.82 | 0.42 |
| 1:A:1448:ILE:HD11 | 7:G:68:ALA:HB1 | 2.01 | 0.42 |
| 1:A:1449:ASP:OD1 | 1:A:1452:LEU:CG | 2.67 | 0.42 |
| 2:B:609:ILE:HD12 | 2:B:609:ILE:H | 1.83 | 0.42 |
| 2:B:792:MET:CE | 2:B:857:ARG:NH2 | 2.83 | 0.42 |
| 2:B:797:TYR:C | 2:B:798:TYR:CD2 | 2.78 | 0.42 |
| 2:B:879:ARG:HB3 | 2:B:880:ALA:H | 1.52 | 0.42 |
| 2:B:1031:LEU:HD11 | 2:B:1042:GLY:CA | 2.50 | 0.42 |
| 2:B:1071:VAL:O | 2:B:1072:MET:HG2 | 2.19 | 0.42 |
| 6:F:125:LEU:HA | 6:F:130:ILE:HD11 | 2.02 | 0.42 |
| 7:G:49:LEU:O | 7:G:50:ASP:C | 2.58 | 0.42 |
| 7:G:129:ALA:HB2 | 7:G:138:THR:OG1 | 2.19 | 0.42 |
| 8:H:5:LEU:HD22 | 8:H:132:ALA:O | 2.19 | 0.42 |
| 9:I:90:GLN:HE21 | 9:I:92:ARG:HD3 | 1.85 | 0.42 |
| 10:J:35:LEU:CD1 | 10:J:46:ARG:NH1 | 2.82 | 0.42 |
| 11:K:58:PHE:HE2 | 11:K:74:ARG:HD3 | 1.84 | 0.42 |
| 1:M:284:GLY:O | 1:M:286:PRO:CD | 2.65 | 0.42 |
| 1:M:321:ARG:HH11 | 1:M:321:ARG:HG3 | 1.83 | 0.42 |
| 1:M:664:SER:OG | 1:M:665:ILE:N | 2.52 | 0.42 |
| 1:M:911:PRO:HB3 | 1:M:917:ALA:HB1 | 1.84 | 0.42 |
| 1:M:1078:ALA:HA | 1:M:1081:MET:CE | 2.50 | 0.42 |
| 2:N:186:CYS:HB2 | 2:N:784:ASN:OD1 | 2.19 | 0.42 |
| 2:N:370:PHE:C | 2:N:372:GLY:H | 2.23 | 0.42 |
| 2:N:1197:PRO:HG2 | 2:N:1200:ALA:HB2 | 2.00 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 3:O:166:GLU:O | 11:W:6:ARG:NH1 | 2.53 | 0.42 |
| 6:R:125:LEU:HA | 6:R:130:ILE:HD11 | 2.02 | 0.42 |
| 8:T:3:SER:O | 8:T:60:ALA:HB1 | 2.18 | 0.42 |
| 8:T:5:LEU:HD22 | 8:T:132:ALA:O | 2.19 | 0.42 |
| 8:T:26:ILE:CG2 | 8:T:27:ILE:N | 2.82 | 0.42 |
| 1:A:67:CYS:O | 1:A:67:CYS:SG | 2.78 | 0.42 |
| 1:A:111:GLY:O | 1:A:215:ILE:HA | 2.20 | 0.42 |
| 1:A:459:HIS:CE1 | 1:A:508:VAL:CG2 | 3.03 | 0.42 |
| 1:A:664:SER:OG | 1:A:665:ILE:N | 2.52 | 0.42 |
| 1:A:1388:THR:C | 1:A:1390:HIS:N | 2.71 | 0.42 |
| 1:A:1393:ASN:OD1 | 1:A:1405:PHE:HD2 | 2.03 | 0.42 |
| 2:B:222:PRO:O | 2:B:223:SER:HB2 | 2.20 | 0.42 |
| 2:B:799:PRO:CB | 2:B:818:PRO:HG2 | 2.50 | 0.42 |
| 5:E:116:THR:HA | 5:E:117:PRO:HD3 | 1.95 | 0.42 |
| 7:G:89:ALA:CB | 7:G:103:VAL:CG2 | 2.96 | 0.42 |
| 8:H:101:TYR:CD2 | 8:H:101:TYR:N | 2.88 | 0.42 |
| 8:H:112:LYS:HA | 8:H:124:LEU:O | 2.19 | 0.42 |
| 11:K:49:GLU:OE1 | 11:K:97:LYS:HE3 | 2.20 | 0.42 |
| 1:M:41:MET:HE2 | 1:M:41:MET:H | 1.85 | 0.42 |
| 1:M:321:ARG:HA | 1:M:322:PRO:HD3 | 1.93 | 0.42 |
| 1:M:568:LYS:HD3 | 8:T:94:TYR:HA | 2.02 | 0.42 |
| 1:M:667:ILE:HG12 | 2:N:1030:LEU:HD22 | 2.02 | 0.42 |
| 1:M:1043:ALA:O | 1:M:1046:TRP:HB3 | 2.20 | 0.42 |
| 1:M:1125:GLU:O | 1:M:1126:ILE:C | 2.57 | 0.42 |
| 2:N:797:TYR:HB3 | 2:N:798:TYR:HD2 | 1.78 | 0.42 |
| 2:N:806:THR:HB | 2:N:809:MET:HG3 | 2.02 | 0.42 |
| 2:N:1106:ARG:CG | 2:N:1107:ALA:N | 2.83 | 0.42 |
| 3:O:116:SER:HB3 | 3:O:140:GLN:HA | 2.01 | 0.42 |
| 5:Q:136:GLU:O | 5:Q:138:ASP:N | 2.53 | 0.42 |
| 6:R:103:MET:CE | 7:S:65:SER:O | 2.67 | 0.42 |
| 7:S:40:GLY:HA2 | 7:S:157:ILE:HD11 | 2.02 | 0.42 |
| 9:U:50:THR:HG22 | 9:U:52:ILE:H | 1.83 | 0.42 |
| 11:W:58:PHE:HE2 | 11:W:74:ARG:HD3 | 1.83 | 0.42 |
| 1:A:344:LYS:HE3 | 2:B:1151:LEU:CB | 2.50 | 0.42 |
| 1:A:344:LYS:HD3 | 2:B:1117:GLN:NE2 | 2.35 | 0.42 |
| 1:A:344:LYS:CB | 2:B:1117:GLN:OE1 | 2.68 | 0.42 |
| 1:A:589:LEU:O | 1:A:607:LEU:HD12 | 2.20 | 0.42 |
| 1:A:606:MET:HG2 | 1:A:622:THR:HG21 | 2.02 | 0.42 |
| 2:B:174:THR:O | 2:B:175:LEU:C | 2.58 | 0.42 |
| 2:B:285:PRO:HD2 | 2:B:288:GLU:OE1 | 2.19 | 0.42 |
| 2:B:381:CYS:O | 2:B:383:LEU:N | 2.52 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 2:B:781:PHE:O | 2:B:782:LEU:HD23 | 2.20 | 0.42 |
| 2:B:912:ILE:CG2 | 2:B:913:GLY:N | 2.83 | 0.42 |
| 2:B:936:ASP:OD1 | 2:B:936:ASP:C | 2.58 | 0.42 |
| 3:C:100:LEU:HD12 | 3:C:100:LEU:HA | 1.87 | 0.42 |
| 4:D:88:GLU:C | 4:D:90:ALA:N | 2.71 | 0.42 |
| 7:G:30:LEU:HD22 | 7:G:72:VAL:HG11 | 2.01 | 0.42 |
| 7:G:74:TYR:N | 7:G:74:TYR:CD2 | 2.87 | 0.42 |
| 8:H:42:ILE:HG23 | 8:H:94:TYR:HE1 | 1.85 | 0.42 |
| 10:J:18:TRP:HZ3 | 10:J:49:VAL:HG13 | 1.85 | 0.42 |
| 1:M:781:ALA:O | 1:M:783:ARG:HG2 | 2.19 | 0.42 |
| 1:M:838:ILE:HD11 | 1:M:1104:LYS:HG3 | 2.02 | 0.42 |
| 1:M:916:TYR:CG | 1:M:920:ILE:HD12 | 2.54 | 0.42 |
| 1:M:1222:PHE:CG | 1:M:1226:LEU:HD23 | 2.55 | 0.42 |
| 2:N:78:ARG:CG | 2:N:120:GLU:HB2 | 2.50 | 0.42 |
| 2:N:231:ILE:HG21 | 2:N:374:MET:CE | 2.49 | 0.42 |
| 2:N:588:MET:O | 2:N:589:LEU:C | 2.56 | 0.42 |
| 2:N:630:LEU:HA | 2:N:743:ILE:HD11 | 2.00 | 0.42 |
| 2:N:857:ARG:HH11 | 2:N:945:GLU:CD | 2.23 | 0.42 |
| 8:T:122:MET:HG2 | 8:T:123:CYS:N | 2.34 | 0.42 |
| 10:V:12:LYS:O | 10:V:14:VAL:HG23 | 2.20 | 0.42 |
| 11:W:49:GLU:OE1 | 11:W:97:LYS:HE3 | 2.20 | 0.42 |
| 1:A:91:PHE:HB2 | 1:A:298:GLN:HE22 | 1.85 | 0.41 |
| 1:A:606:MET:CE | 1:A:613:VAL:HG13 | 2.50 | 0.41 |
| 1:A:756:PHE:O | 1:A:757:ILE:C | 2.58 | 0.41 |
| 1:A:859:ASN:C | 1:A:861:LEU:H | 2.23 | 0.41 |
| 1:A:861:LEU:HD23 | 1:A:861:LEU:HA | 1.92 | 0.41 |
| 1:A:1199:LEU:HD11 | 1:A:1240:ILE:CD1 | 2.50 | 0.41 |
| 2:B:363:PHE:HD2 | 2:B:366:ARG:HD2 | 1.84 | 0.41 |
| 2:B:428:CYS:C | 2:B:430:GLU:H | 2.22 | 0.41 |
| 2:B:798:TYR:CE2 | 3:C:61:PHE:CZ | 3.08 | 0.41 |
| 2:B:831:SER:HB2 | 2:B:833:TYR:CD1 | 2.55 | 0.41 |
| 2:B:945:GLU:O | 2:B:946:ASN:CB | 2.68 | 0.41 |
| 2:B:973:VAL:HG12 | 2:B:974:PRO:O | 2.19 | 0.41 |
| 2:B:1117:GLN:HG3 | 2:B:1156:ASP:OD2 | 2.20 | 0.41 |
| 5:E:142:ASN:O | 5:E:145:HIS:HB2 | 2.19 | 0.41 |
| 8:H:122:MET:HG2 | 8:H:123:CYS:N | 2.34 | 0.41 |
| 1:M:344:LYS:HE3 | 2:N:1151:LEU:HB3 | 2.02 | 0.41 |
| 1:M:1199:LEU:HD11 | 1:M:1240:ILE:CD1 | 2.50 | 0.41 |
| 2:N:969:ARG:HG2 | 2:N:970:THR:H | 1.84 | 0.41 |
| 2:N:1066:SER:O | 2:N:1067:ARG:HD3 | 2.20 | 0.41 |
| 2:N:1220:ARG:NH1 | 2:N:1220:ARG:CB | 2.77 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 3:O:252:GLN:HG3 | 11:W:95:ILE:HG23 | 2.02 | 0.41 |
| 4:P:67:ARG:O | 4:P:71:ARG:HB2 | 2.19 | 0.41 |
| 5:Q:146:HIS:HD2 | 5:Q:148:LEU:H | 1.68 | 0.41 |
| 10:V:35:LEU:HD11 | 10:V:50:LEU:HB2 | 2.02 | 0.41 |
| 11:W:43:ALA:O | 11:W:46:LEU:N | 2.52 | 0.41 |
| 1:A:203:LEU:CG | 1:A:207:GLU:N | 2.82 | 0.41 |
| 1:A:263:LEU:HD22 | 1:A:304:TYR:CE1 | 2.55 | 0.41 |
| 1:A:284:GLY:O | 1:A:286:PRO:CD | 2.65 | 0.41 |
| 1:A:710:THR:CG2 | 9:I:94:ASP:HA | 2.49 | 0.41 |
| 1:A:761:GLN:HG2 | 1:A:766:VAL:O | 2.19 | 0.41 |
| 1:A:771:VAL:HG12 | 1:A:772:GLU:N | 2.34 | 0.41 |
| 1:A:1078:ALA:HA | 1:A:1081:MET:CE | 2.50 | 0.41 |
| 1:A:1276:LEU:N | 1:A:1276:LEU:CD1 | 2.82 | 0.41 |
| 2:B:586:PRO:HG2 | 2:B:610:ARG:CZ | 2.50 | 0.41 |
| 2:B:587:SER:CA | 2:B:610:ARG:HH12 | 2.33 | 0.41 |
| 2:B:1030:LEU:HD12 | 2:B:1030:LEU:HA | 1.88 | 0.41 |
| 2:B:1116:ARG:CG | 2:B:1198:TYR:CZ | 3.01 | 0.41 |
| 3:C:80:LYS:O | 3:C:94:CYS:HB2 | 2.21 | 0.41 |
| 3:C:166:GLU:O | 11:K:6:ARG:NH1 | 2.53 | 0.41 |
| 3:C:252:GLN:HG3 | 11:K:95:ILE:HG23 | 2.02 | 0.41 |
| 6:F:107:VAL:HG12 | 6:F:108:LEU:N | 2.35 | 0.41 |
| 9:I:4:PHE:CD1 | 9:I:4:PHE:C | 2.94 | 0.41 |
| 10:J:35:LEU:HD11 | 10:J:50:LEU:HB2 | 2.02 | 0.41 |
| 11:K:48:GLU:O | 11:K:50:LEU:N | 2.54 | 0.41 |
| 1:M:23:SER:HA | 1:M:234:TRP:CD1 | 2.56 | 0.41 |
| 1:M:1171:THR:O | 1:M:1171:THR:HG22 | 2.19 | 0.41 |
| 1:M:1352:TYR:CD2 | 1:M:1353:LYS:N | 2.88 | 0.41 |
| 2:N:12:ILE:HD11 | 2:N:648:THR:N | 2.34 | 0.41 |
| 2:N:159:GLY:H | 2:N:443:SER:CB | 2.33 | 0.41 |
| 2:N:394:PHE:HB3 | 2:N:510:THR:HB | 2.02 | 0.41 |
| 2:N:831:SER:HB2 | 2:N:833:TYR:CD1 | 2.55 | 0.41 |
| 2:N:936:ASP:OD1 | 2:N:936:ASP:C | 2.58 | 0.41 |
| 3:O:147:LEU:N | 3:O:147:LEU:CD2 | 2.75 | 0.41 |
| 3:O:168:ALA:C | 3:O:170:TRP:N | 2.72 | 0.41 |
| 5:Q:142:ASN:O | 5:Q:145:HIS:HB2 | 2.20 | 0.41 |
| 6:R:107:VAL:HG12 | 6:R:108:LEU:N | 2.35 | 0.41 |
| 8:T:117:PHE:O | 8:T:119:GLY:N | 2.53 | 0.41 |
| 11:W:48:GLU:O | 11:W:50:LEU:N | 2.54 | 0.41 |
| 1:A:119:ASN:O | 1:A:122:MET:HB3 | 2.21 | 0.41 |
| 1:A:145:LYS:C | 1:A:146:MET:HG3 | 2.39 | 0.41 |
| 1:A:568:LYS:HD3 | 8:H:94:TYR:HA | 2.02 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:A:599:LEU:CA | 8:H:121:LEU:HD13 | 2.46 | 0.41 |
| 1:A:1143:THR:OG1 | 1:A:1207:LYS:HD3 | 2.20 | 0.41 |
| 2:B:12:ILE:HD11 | 2:B:648:THR:N | 2.34 | 0.41 |
| 2:B:159:GLY:H | 2:B:443:SER:CB | 2.33 | 0.41 |
| 2:B:231:ILE:HG21 | 2:B:374:MET:CE | 2.49 | 0.41 |
| 2:B:286:ASP:C | 2:B:288:GLU:N | 2.72 | 0.41 |
| 2:B:295:TYR:CD2 | 2:B:295:TYR:N | 2.87 | 0.41 |
| 2:B:374:MET:C | 2:B:376:ASN:N | 2.73 | 0.41 |
| 2:B:479:TYR:CZ | 2:B:1096:ARG:NH2 | 2.85 | 0.41 |
| 2:B:480:THR:CG2 | 2:B:481:TYR:N | 2.82 | 0.41 |
| 3:C:116:SER:HB3 | 3:C:140:GLN:HA | 2.01 | 0.41 |
| 5:E:11:LEU:HD12 | 5:E:11:LEU:O | 2.21 | 0.41 |
| 6:F:81:THR:HB | 6:F:136:ARG:NH1 | 2.35 | 0.41 |
| 7:G:12:THR:HG22 | 7:G:67:SER:HB3 | 2.01 | 0.41 |
| 8:H:5:LEU:N | 8:H:60:ALA:HB2 | 2.35 | 0.41 |
| 1:M:41:MET:CE | 1:M:41:MET:N | 2.83 | 0.41 |
| 1:M:408:ARG:HG2 | 1:M:431:TRP:CZ2 | 2.56 | 0.41 |
| 1:M:475:VAL:O | 1:M:475:VAL:HG13 | 2.20 | 0.41 |
| 1:M:599:LEU:O | 1:M:600:SER:C | 2.58 | 0.41 |
| 1:M:630:LEU:CA | 1:M:633:THR:CG2 | 2.96 | 0.41 |
| 1:M:843:VAL:HG11 | 2:N:1136:ASP:OD2 | 2.20 | 0.41 |
| 1:M:1104:LYS:O | 1:M:1105:GLU:C | 2.59 | 0.41 |
| 1:M:1143:THR:OG1 | 1:M:1207:LYS:HD3 | 2.20 | 0.41 |
| 1:M:1448:ILE:HG12 | 7:S:18:PHE:HE2 | 1.85 | 0.41 |
| 2:N:370:PHE:O | 2:N:372:GLY:N | 2.54 | 0.41 |
| 2:N:575:VAL:HG22 | 2:N:619:ILE:CG2 | 2.43 | 0.41 |
| 2:N:792:MET:CE | 2:N:857:ARG:NH2 | 2.83 | 0.41 |
| 2:N:912:ILE:CG2 | 2:N:913:GLY:N | 2.83 | 0.41 |
| 2:N:1159:ARG:HD3 | 2:N:1193:GLN:NE2 | 2.35 | 0.41 |
| 3:O:260:PHE:O | 3:O:261:GLU:C | 2.59 | 0.41 |
| 4:P:54:SER:HB3 | 4:P:113:ALA:CB | 2.50 | 0.41 |
| 5:Q:116:THR:HA | 5:Q:117:PRO:HD3 | 1.94 | 0.41 |
| 8:T:103:PHE:CE2 | 8:T:135:LYS:HG2 | 2.56 | 0.41 |
| 10:V:18:TRP:HZ3 | 10:V:49:VAL:HG13 | 1.85 | 0.41 |
| 1:A:20:GLY:HA2 | 1:A:1416:GLY:O | 2.20 | 0.41 |
| 1:A:351:ARG:HB3 | 2:B:1128:LEU:HD21 | 2.02 | 0.41 |
| 1:A:384:TYR:N | 1:A:384:TYR:CD2 | 2.87 | 0.41 |
| 1:A:475:VAL:O | 1:A:475:VAL:HG13 | 2.20 | 0.41 |
| 1:A:603:ASP:O | 1:A:617:VAL:HG23 | 2.20 | 0.41 |
| 1:A:916:TYR:O | 1:A:920:ILE:HB | 2.20 | 0.41 |
| 2:B:300:TRP:CH2 | 9:I:45:ARG:HD3 | 2.56 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 2:B:370:PHE:O | 2:B:372:GLY:N | 2.54 | 0.41 |
| 2:B:401:LEU:HD12 | 2:B:401:LEU:HA | 1.90 | 0.41 |
| 2:B:463:LYS:HB3 | 2:B:464:LYS:H | 1.77 | 0.41 |
| 5:E:153:ILE:H | 5:E:195:VAL:HG13 | 1.86 | 0.41 |
| 8:H:103:PHE:CE2 | 8:H:135:LYS:HG2 | 2.56 | 0.41 |
| 12:L:52:GLU:HB3 | 12:L:53:CYS:H | 1.68 | 0.41 |
| 1:M:39:GLU:OE1 | 1:M:39:GLU:N | 2.53 | 0.41 |
| 1:M:119:ASN:O | 1:M:122:MET:HB3 | 2.21 | 0.41 |
| 1:M:263:LEU:HD22 | 1:M:304:TYR:CE1 | 2.56 | 0.41 |
| 1:M:384:TYR:N | 1:M:384:TYR:CD2 | 2.87 | 0.41 |
| 1:M:459:HIS:CE1 | 1:M:508:VAL:CG2 | 3.03 | 0.41 |
| 1:M:467:SER:O | 2:N:1099:VAL:HG11 | 2.20 | 0.41 |
| 1:M:1122:LEU:N | 1:M:1122:LEU:HD12 | 2.35 | 0.41 |
| 1:M:1367:ASN:O | 1:M:1368:TYR:C | 2.59 | 0.41 |
| 1:M:1444:PHE:HB2 | 6:R:135:ARG:O | 2.20 | 0.41 |
| 2:N:177:GLU:HG2 | 10:V:61:ARG:HH22 | 1.85 | 0.41 |
| 2:N:316:ILE:HG12 | 2:N:321:VAL:HG11 | 2.01 | 0.41 |
| 2:N:632:ILE:HD12 | 2:N:685:GLY:O | 2.20 | 0.41 |
| 2:N:798:TYR:CE2 | 3:O:61:PHE:CZ | 3.08 | 0.41 |
| 2:N:878:THR:O | 2:N:879:ARG:O | 2.39 | 0.41 |
| 6:R:74:ILE:HD12 | 6:R:143:TYR:O | 2.19 | 0.41 |
| 6:R:81:THR:HB | 6:R:136:ARG:NH1 | 2.35 | 0.41 |
| 7:S:126:SER:HA | 7:S:127:PRO:HA | 1.73 | 0.41 |
| 10:V:35:LEU:HD22 | 10:V:40:LEU:HD12 | 2.02 | 0.41 |
| 1:A:348:PHE:CE2 | 1:A:494:GLN:OE1 | 2.74 | 0.41 |
| 1:A:445:PHE:CE2 | 1:A:488:MET:HE2 | 2.55 | 0.41 |
| 1:A:667:ILE:HG12 | 2:B:1030:LEU:HD22 | 2.02 | 0.41 |
| 1:A:1043:ALA:O | 1:A:1046:TRP:HB3 | 2.19 | 0.41 |
| 1:A:1166:GLU:CG | 1:A:1167:GLU:H | 2.34 | 0.41 |
| 1:A:1282:ILE:HD11 | 1:A:1319:VAL:CG2 | 2.50 | 0.41 |
| 2:B:632:ILE:HD12 | 2:B:685:GLY:O | 2.20 | 0.41 |
| 2:B:1066:SER:O | 2:B:1067:ARG:HD3 | 2.20 | 0.41 |
| 2:B:1080:LYS:HG3 | 3:C:180:TYR:CE2 | 2.55 | 0.41 |
| 2:B:1166:CYS:SG | 2:B:1166:CYS:O | 2.78 | 0.41 |
| 4:D:35:ALA:O | 4:D:37:LYS:N | 2.53 | 0.41 |
| 5:E:41:PHE:O | 5:E:42:ARG:C | 2.59 | 0.41 |
| 5:E:136:GLU:O | 5:E:138:ASP:N | 2.53 | 0.41 |
| 10:J:21:TYR:C | 10:J:23:ARG:N | 2.74 | 0.41 |
| 10:J:25:LEU:HD23 | 10:J:30:GLN:O | 2.20 | 0.41 |
| 10:J:52:HIS:CD2 | 10:J:52:HIS:C | 2.94 | 0.41 |
| 1:M:606:MET:CE | 1:M:613:VAL:HG13 | 2.50 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:M:916:TYR:O | 1:M:920:ILE:HB | 2.20 | 0.41 |
| 1:M:1103:LEU:HD11 | 1:M:1107:LEU:HD11 | 2.03 | 0.41 |
| 2:N:401:LEU:C | 2:N:404:PRO:HD2 | 2.41 | 0.41 |
| 2:N:586:PRO:O | 2:N:589:LEU:N | 2.53 | 0.41 |
| 2:N:596:LEU:HD12 | 2:N:602:ILE:CG2 | 2.49 | 0.41 |
| 2:N:839:MET:HE3 | 2:N:1010:LEU:HD21 | 2.03 | 0.41 |
| 2:N:882:THR:HG21 | 2:N:935:ARG:CA | 2.49 | 0.41 |
| 2:N:1031:LEU:HD11 | 2:N:1042:GLY:CA | 2.50 | 0.41 |
| 3:O:80:LYS:O | 3:O:94:CYS:HB2 | 2.21 | 0.41 |
| 5:Q:153:ILE:HG22 | 5:Q:154:ARG:O | 2.20 | 0.41 |
| 7:S:49:LEU:O | 7:S:50:ASP:C | 2.58 | 0.41 |
| 8:T:137:ASP:O | 8:T:138:ASN:C | 2.59 | 0.41 |
| 9:U:28:SER:HB2 | 9:U:29:CYS:H | 1.69 | 0.41 |
| 1:A:373:LYS:HA | 1:A:436:HIS:HD1 | 1.79 | 0.41 |
| 1:A:615:PHE:CB | 8:H:121:LEU:HD21 | 2.50 | 0.41 |
| 1:A:742:ASN:C | 1:A:742:ASN:ND2 | 2.74 | 0.41 |
| 1:A:776:ILE:HG13 | 1:A:816:PHE:CD2 | 2.47 | 0.41 |
| 1:A:882:GLN:NE2 | 1:A:961:ASN:HA | 2.35 | 0.41 |
| 1:A:1063:GLY:O | 1:A:1064:GLU:C | 2.59 | 0.41 |
| 1:A:1367:ASN:O | 1:A:1368:TYR:C | 2.59 | 0.41 |
| 2:B:57:ILE:H | 2:B:57:ILE:HG13 | 1.65 | 0.41 |
| 2:B:401:LEU:C | 2:B:404:PRO:HD2 | 2.41 | 0.41 |
| 2:B:763:GLN:HG2 | 2:B:765:PRO:HD2 | 2.03 | 0.41 |
| 2:B:871:VAL:CG1 | 2:B:872:GLU:N | 2.83 | 0.41 |
| 2:B:1106:ARG:CG | 2:B:1107:ALA:N | 2.82 | 0.41 |
| 2:B:1168:LEU:HD13 | 2:B:1208:MET:HE3 | 2.02 | 0.41 |
| 6:F:82:THR:HG22 | 6:F:84:TYR:HB2 | 2.01 | 0.41 |
| 6:F:100:GLN:O | 6:F:105:ALA:HB2 | 2.21 | 0.41 |
| 7:G:89:ALA:CB | 7:G:103:VAL:HA | 2.42 | 0.41 |
| 8:H:137:ASP:O | 8:H:138:ASN:C | 2.59 | 0.41 |
| 1:M:568:LYS:HZ1 | 8:T:43:ASN:HB3 | 1.85 | 0.41 |
| 1:M:756:PHE:O | 1:M:757:ILE:C | 2.58 | 0.41 |
| 1:M:957:PRO:O | 1:M:957:PRO:HG2 | 2.21 | 0.41 |
| 1:M:1033:ILE:CG1 | 1:M:1034:LEU:HG | 2.50 | 0.41 |
| 2:N:300:TRP:CH2 | 9:U:45:ARG:HD3 | 2.56 | 0.41 |
| 2:N:608:ILE:O | 2:N:694:GLU:HG3 | 2.21 | 0.41 |
| 2:N:763:GLN:HG2 | 2:N:765:PRO:HD2 | 2.03 | 0.41 |
| 2:N:1104:HIS:HB2 | 2:N:1122:ARG:HD2 | 2.02 | 0.41 |
| 2:N:1166:CYS:O | 2:N:1166:CYS:SG | 2.78 | 0.41 |
| 5:Q:11:LEU:HD12 | 5:Q:11:LEU:O | 2.21 | 0.41 |
| 5:Q:153:ILE:H | 5:Q:195:VAL:HG13 | 1.86 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 7:S:30:LEU:HD22 | 7:S:72:VAL:HG11 | 2.01 | 0.41 |
| 10:V:25:LEU:HD23 | 10:V:30:GLN:O | 2.20 | 0.41 |
| 10:V:52:HIS:CD2 | 10:V:52:HIS:C | 2.94 | 0.41 |
| 1:A:23:SER:HA | 1:A:234:TRP:CD1 | 2.56 | 0.41 |
| 1:A:54:ASN:HB3 | 1:A:248:ARG:HH12 | 1.86 | 0.41 |
| 2:B:310:ILE:HG23 | 2:B:311:GLU:N | 2.36 | 0.41 |
| 2:B:370:PHE:C | 2:B:372:GLY:H | 2.23 | 0.41 |
| 2:B:700:ILE:HG21 | 2:B:742:GLU:OE1 | 2.21 | 0.41 |
| 2:B:835:GLN:HE21 | 2:B:835:GLN:HB2 | 1.62 | 0.41 |
| 4:D:52:SER:O | 4:D:53:LEU:O | 2.38 | 0.41 |
| 4:D:148:LEU:HD23 | 4:D:148:LEU:HA | 1.87 | 0.41 |
| 5:E:150:PRO:CB | 5:E:199:ARG:HB3 | 2.51 | 0.41 |
| 8:H:40:LEU:HD12 | 8:H:41:ASP:H | 1.86 | 0.41 |
| 8:H:48:PRO:O | 8:H:49:VAL:CG2 | 2.69 | 0.41 |
| 1:M:54:ASN:HB3 | 1:M:248:ARG:HH12 | 1.86 | 0.41 |
| 1:M:317:GLN:O | 1:M:318:LYS:C | 2.59 | 0.41 |
| 1:M:603:ASP:O | 1:M:617:VAL:HG23 | 2.20 | 0.41 |
| 1:M:615:PHE:CB | 8:T:121:LEU:HD21 | 2.49 | 0.41 |
| 1:M:897:ARG:O | 1:M:1031:ARG:HB3 | 2.20 | 0.41 |
| 1:M:1063:GLY:O | 1:M:1064:GLU:C | 2.59 | 0.41 |
| 1:M:1218:ILE:HG13 | 1:M:1218:ILE:H | 1.70 | 0.41 |
| 1:M:1351:LEU:HG | 1:M:1375:VAL:HG22 | 2.03 | 0.41 |
| 2:N:222:PRO:O | 2:N:223:SER:HB2 | 2.20 | 0.41 |
| 2:N:285:PRO:HD2 | 2:N:288:GLU:OE1 | 2.19 | 0.41 |
| 2:N:288:GLU:HA | 2:N:291:GLN:CG | 2.51 | 0.41 |
| 2:N:945:GLU:O | 2:N:946:ASN:CB | 2.68 | 0.41 |
| 7:S:89:ALA:CB | 7:S:103:VAL:HA | 2.41 | 0.41 |
| 9:U:4:PHE:CD1 | 9:U:4:PHE:C | 2.94 | 0.41 |
| 9:U:33:ASP:O | 9:U:34:TYR:C | 2.59 | 0.41 |
| 9:U:58:ILE:HG23 | 9:U:58:ILE:O | 2.21 | 0.41 |
| 11:W:85:GLN:O | 11:W:88:GLU:HB2 | 2.21 | 0.41 |
| 1:A:90:VAL:HG12 | 1:A:91:PHE:H | 1.84 | 0.41 |
| 1:A:589:LEU:O | 1:A:607:LEU:HA | 2.21 | 0.41 |
| 1:A:764:ALA:C | 1:A:804:SER:HB3 | 2.38 | 0.41 |
| 1:A:838:ILE:HD11 | 1:A:1104:LYS:HG3 | 2.02 | 0.41 |
| 1:A:1006:ASN:OD1 | 1:A:1007:GLU:N | 2.54 | 0.41 |
| 1:A:1122:LEU:N | 1:A:1122:LEU:HD12 | 2.35 | 0.41 |
| 1:A:1352:TYR:CD2 | 1:A:1353:LYS:N | 2.88 | 0.41 |
| 1:A:1437:ALA:HA | 1:A:1438:PRO:HD3 | 1.96 | 0.41 |
| 2:B:392:ASP:O | 2:B:508:HIS:CE1 | 2.74 | 0.41 |
| 2:B:882:THR:HG22 | 2:B:884:ARG:HB2 | 2.03 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 2:B:1159:ARG:HD3 | 2:B:1193:GLN:NE2 | 2.35 | 0.41 |
| 5:E:27:TYR:C | 5:E:64:THR:HG23 | 2.41 | 0.41 |
| 5:E:60:LEU:HB2 | 5:E:78:TRP:CE3 | 2.56 | 0.41 |
| 5:E:84:GLU:C | 5:E:86:SER:H | 2.23 | 0.41 |
| 7:G:160:ILE:CG2 | 7:G:161:GLY:N | 2.81 | 0.41 |
| 10:J:12:LYS:O | 10:J:14:VAL:HG23 | 2.20 | 0.41 |
| 1:M:348:PHE:CE2 | 1:M:494:GLN:OE1 | 2.74 | 0.41 |
| 1:M:366:GLY:HA2 | 1:M:462:LYS:O | 2.21 | 0.41 |
| 1:M:589:LEU:O | 1:M:607:LEU:HD12 | 2.20 | 0.41 |
| 1:M:819:MET:HA | 2:N:507:LEU:HB3 | 2.03 | 0.41 |
| 1:M:1282:ILE:HD11 | 1:M:1319:VAL:CG2 | 2.50 | 0.41 |
| 2:N:586:PRO:HG2 | 2:N:610:ARG:CZ | 2.50 | 0.41 |
| 2:N:587:SER:CA | 2:N:610:ARG:HH12 | 2.34 | 0.41 |
| 2:N:589:LEU:O | 2:N:589:LEU:HD12 | 2.21 | 0.41 |
| 4:P:57:ARG:HA | 4:P:109:LEU:HD13 | 2.03 | 0.41 |
| 5:Q:32:GLU:C | 5:Q:34:MET:H | 2.24 | 0.41 |
| 6:R:73:ALA:O | 6:R:74:ILE:HG13 | 2.21 | 0.41 |
| 8:T:48:PRO:O | 8:T:49:VAL:CG2 | 2.69 | 0.41 |
| 8:T:101:TYR:CD2 | 8:T:101:TYR:N | 2.88 | 0.41 |
| 9:U:40:ASP:CG | 9:U:41:PRO:CD | 2.88 | 0.41 |
| 1:A:69:THR:O | 1:A:69:THR:HG22 | 2.21 | 0.41 |
| 1:A:267:LEU:HD23 | 1:A:267:LEU:HA | 1.86 | 0.41 |
| 1:A:345:ARG:H | 1:A:345:ARG:HG3 | 1.62 | 0.41 |
| 1:A:368:PRO:HG2 | 1:A:371:ILE:CG1 | 2.48 | 0.41 |
| 1:A:400:HIS:CB | 1:A:401:PRO:CD | 2.99 | 0.41 |
| 1:A:408:ARG:HG2 | 1:A:431:TRP:CZ2 | 2.56 | 0.41 |
| 1:A:443:VAL:HB | 1:A:490:LEU:HD11 | 2.02 | 0.41 |
| 1:A:467:SER:O | 2:B:1099:VAL:HG11 | 2.20 | 0.41 |
| 1:A:483:PHE:O | 2:B:989:THR:CG2 | 2.62 | 0.41 |
| 1:A:606:MET:HE2 | 1:A:613:VAL:HG13 | 2.02 | 0.41 |
| 1:A:669:ASP:OD1 | 1:A:742:ASN:ND2 | 2.54 | 0.41 |
| 1:A:769:GLN:HG3 | 1:A:817:HIS:CB | 2.50 | 0.41 |
| 1:A:957:PRO:O | 1:A:957:PRO:HG2 | 2.20 | 0.41 |
| 1:A:1033:ILE:CG1 | 1:A:1034:LEU:HG | 2.51 | 0.41 |
| 1:A:1103:LEU:HD11 | 1:A:1107:LEU:HD11 | 2.03 | 0.41 |
| 1:A:1222:PHE:CG | 1:A:1226:LEU:HD23 | 2.55 | 0.41 |
| 1:A:1335:PHE:CD2 | 1:A:1336:VAL:N | 2.89 | 0.41 |
| 2:B:370:PHE:HD2 | 2:B:374:MET:HE3 | 1.86 | 0.41 |
| 2:B:509:ASN:N | 2:B:509:ASN:ND2 | 2.43 | 0.41 |
| 2:B:540:ILE:CG1 | 2:B:605:GLU:CD | 2.84 | 0.41 |
| 2:B:608:ILE:O | 2:B:694:GLU:HG3 | 2.21 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|------------------|--------------------------|-------------------|
| 2:B:705:GLU:H | 2:B:705:GLU:HG2 | 1.66 | 0.41 |
| 2:B:1047:PHE:CD1 | 2:B:1047:PHE:N | 2.80 | 0.41 |
| 2:B:1069:PHE:O | 3:C:201:TRP:HH2 | 2.03 | 0.41 |
| 2:B:1100:ASP:OD2 | 11:K:1:MET:HB3 | 2.21 | 0.41 |
| 3:C:57:LEU:HD22 | 3:C:57:LEU:N | 2.36 | 0.41 |
| 3:C:175:ALA:CB | 10:J:42:ARG:NH2 | 2.72 | 0.41 |
| 3:C:186:LEU:N | 3:C:186:LEU:CD1 | 2.84 | 0.41 |
| 4:D:57:ARG:HA | 4:D:109:LEU:HD13 | 2.03 | 0.41 |
| 5:E:62:ASN:HB3 | 5:E:63:PRO:CD | 2.51 | 0.41 |
| 8:H:103:PHE:CZ | 8:H:135:LYS:HA | 2.56 | 0.41 |
| 9:I:90:GLN:HE21 | 9:I:92:ARG:CD | 2.34 | 0.41 |
| 1:M:344:LYS:HB3 | 2:N:1117:GLN:NE2 | 2.36 | 0.41 |
| 1:M:351:ARG:HA | 1:M:488:MET:O | 2.21 | 0.41 |
| 1:M:443:VAL:HB | 1:M:490:LEU:HD11 | 2.02 | 0.41 |
| 1:M:445:PHE:CE2 | 1:M:488:MET:HE2 | 2.56 | 0.41 |
| 1:M:497:GLU:O | 1:M:498:THR:C | 2.59 | 0.41 |
| 1:M:600:SER:HA | 1:M:601:PRO:HD2 | 1.91 | 0.41 |
| 1:M:742:ASN:C | 1:M:742:ASN:ND2 | 2.74 | 0.41 |
| 1:M:1215:ALA:HA | 1:M:1218:ILE:CD1 | 2.51 | 0.41 |
| 1:M:1423:ASP:O | 1:M:1424:CYS:CB | 2.61 | 0.41 |
| 1:M:1431:VAL:HG13 | 2:N:1151:LEU:CD2 | 2.51 | 0.41 |
| 1:M:1453:LEU:HD21 | 7:S:18:PHE:HB3 | 2.03 | 0.41 |
| 2:N:17:CYS:HB2 | 2:N:743:ILE:O | 2.21 | 0.41 |
| 2:N:111:TYR:HE2 | 2:N:170:CYS:SG | 2.42 | 0.41 |
| 2:N:183:MET:C | 2:N:185:GLU:H | 2.25 | 0.41 |
| 2:N:242:ILE:O | 2:N:242:ILE:HG22 | 2.21 | 0.41 |
| 2:N:514:LEU:HD13 | 2:N:626:VAL:HB | 2.02 | 0.41 |
| 2:N:598:ARG:NH1 | 2:N:632:ILE:HG21 | 2.36 | 0.41 |
| 2:N:705:GLU:H | 2:N:705:GLU:HG2 | 1.66 | 0.41 |
| 2:N:834:ASN:CA | 2:N:838:SER:O | 2.67 | 0.41 |
| 2:N:1080:LYS:HG3 | 3:O:180:TYR:CE2 | 2.55 | 0.41 |
| 2:N:1167:GLY:O | 2:N:1215:ARG:HA | 2.21 | 0.41 |
| 2:N:1204:PHE:O | 2:N:1205:GLN:C | 2.58 | 0.41 |
| 3:O:146:LYS:HB2 | 10:V:56:ILE:HD11 | 2.02 | 0.41 |
| 3:O:186:LEU:N | 3:O:186:LEU:CD1 | 2.84 | 0.41 |
| 3:O:218:VAL:H | 3:O:218:VAL:HG13 | 1.22 | 0.41 |
| 5:Q:41:PHE:O | 5:Q:42:ARG:C | 2.59 | 0.41 |
| 5:Q:62:ASN:HB3 | 5:Q:63:PRO:CD | 2.51 | 0.41 |
| 5:Q:134:PHE:CD2 | 5:Q:139:LEU:HD21 | 2.54 | 0.41 |
| 8:T:103:PHE:CZ | 8:T:135:LYS:HA | 2.56 | 0.41 |
| 9:U:25:LEU:HB3 | 9:U:38:ALA:HB2 | 2.02 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|------------------|--------------------------|-------------------|
| 9:U:55:THR:O | 9:U:55:THR:HG22 | 2.21 | 0.41 |
| 11:W:43:ALA:O | 11:W:45:LEU:N | 2.54 | 0.41 |
| 1:A:53:LEU:O | 1:A:54:ASN:O | 2.39 | 0.41 |
| 1:A:366:GLY:HA2 | 1:A:462:LYS:O | 2.21 | 0.41 |
| 1:A:667:ILE:CD1 | 1:A:668:GLY:N | 2.82 | 0.41 |
| 1:A:1104:LYS:O | 1:A:1105:GLU:C | 2.59 | 0.41 |
| 2:B:91:GLU:OE1 | 12:L:56:ARG:NH2 | 2.54 | 0.41 |
| 2:B:183:MET:C | 2:B:185:GLU:H | 2.25 | 0.41 |
| 2:B:584:ARG:O | 2:B:586:PRO:HD3 | 2.21 | 0.41 |
| 2:B:1177:LYS:O | 2:B:1179:GLN:N | 2.43 | 0.41 |
| 2:B:1220:ARG:NH1 | 2:B:1220:ARG:CB | 2.77 | 0.41 |
| 6:F:73:ALA:O | 6:F:74:ILE:HG13 | 2.21 | 0.41 |
| 6:F:123:LYS:C | 6:F:125:LEU:N | 2.74 | 0.41 |
| 7:G:126:SER:HA | 7:G:127:PRO:HA | 1.73 | 0.41 |
| 10:J:35:LEU:HD22 | 10:J:40:LEU:HD12 | 2.02 | 0.41 |
| 11:K:43:ALA:O | 11:K:45:LEU:N | 2.54 | 0.41 |
| 1:M:368:PRO:HG2 | 1:M:371:ILE:CG1 | 2.48 | 0.41 |
| 1:M:606:MET:HG2 | 1:M:622:THR:HG21 | 2.02 | 0.41 |
| 1:M:630:LEU:C | 1:M:633:THR:CG2 | 2.90 | 0.41 |
| 1:M:769:GLN:OE1 | 1:M:817:HIS:ND1 | 2.51 | 0.41 |
| 1:M:1265:ARG:O | 1:M:1269:HIS:CG | 2.74 | 0.41 |
| 2:N:221:ALA:N | 2:N:222:PRO:CD | 2.84 | 0.41 |
| 2:N:296:ASP:O | 2:N:298:ASN:N | 2.54 | 0.41 |
| 2:N:355:PRO:C | 2:N:356:HIS:O | 2.60 | 0.41 |
| 2:N:584:ARG:O | 2:N:586:PRO:HD3 | 2.21 | 0.41 |
| 2:N:700:ILE:HG21 | 2:N:742:GLU:OE1 | 2.21 | 0.41 |
| 4:P:26:THR:C | 4:P:28:LEU:H | 2.24 | 0.41 |
| 5:Q:27:TYR:C | 5:Q:64:THR:HG23 | 2.41 | 0.41 |
| 10:V:46:ARG:HH11 | 10:V:46:ARG:CG | 2.30 | 0.41 |
| 1:A:351:ARG:HA | 1:A:488:MET:O | 2.21 | 0.40 |
| 1:A:1387:ILE:HG23 | 1:A:1387:ILE:O | 2.21 | 0.40 |
| 2:B:216:VAL:HG22 | 2:B:389:ASP:OD2 | 2.21 | 0.40 |
| 2:B:221:ALA:N | 2:B:222:PRO:CD | 2.84 | 0.40 |
| 2:B:225:ILE:CG2 | 2:B:228:VAL:HG23 | 2.46 | 0.40 |
| 2:B:229:ALA:O | 2:B:247:ILE:CG2 | 2.69 | 0.40 |
| 2:B:316:ILE:HG12 | 2:B:321:VAL:HG11 | 2.01 | 0.40 |
| 2:B:575:VAL:CG2 | 2:B:619:ILE:HG21 | 2.45 | 0.40 |
| 2:B:586:PRO:O | 2:B:589:LEU:N | 2.53 | 0.40 |
| 2:B:878:THR:O | 2:B:879:ARG:O | 2.39 | 0.40 |
| 3:C:7:VAL:HG12 | 3:C:8:ASN:N | 2.36 | 0.40 |
| 4:D:54:SER:HB3 | 4:D:113:ALA:CB | 2.50 | 0.40 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 5:E:32:GLU:C | 5:E:34:MET:H | 2.24 | 0.40 |
| 11:K:85:GLN:O | 11:K:88:GLU:HB2 | 2.21 | 0.40 |
| 1:M:40:ILE:CB | 1:M:41:MET:HE2 | 2.09 | 0.40 |
| 1:M:589:LEU:O | 1:M:607:LEU:HA | 2.21 | 0.40 |
| 1:M:1059:LEU:CG | 1:M:1060:VAL:N | 2.82 | 0.40 |
| 1:M:1166:GLU:CG | 1:M:1167:GLU:H | 2.34 | 0.40 |
| 2:N:575:VAL:HG23 | 2:N:619:ILE:CD1 | 2.45 | 0.40 |
| 2:N:614:GLU:O | 2:N:615:ARG:HB2 | 2.21 | 0.40 |
| 2:N:830:TYR:HB3 | 2:N:831:SER:H | 1.69 | 0.40 |
| 2:N:882:THR:HG22 | 2:N:884:ARG:HB2 | 2.03 | 0.40 |
| 2:N:1006:ILE:HG22 | 10:V:44:CYS:HB3 | 2.03 | 0.40 |
| 2:N:1030:LEU:HD12 | 2:N:1030:LEU:HA | 1.88 | 0.40 |
| 2:N:1201:LYS:HE2 | 2:N:1205:GLN:OE1 | 2.21 | 0.40 |
| 3:O:57:LEU:HD22 | 3:O:57:LEU:N | 2.36 | 0.40 |
| 5:Q:162:GLN:O | 5:Q:163:LEU:C | 2.60 | 0.40 |
| 8:T:99:THR:O | 8:T:116:SER:N | 2.50 | 0.40 |
| 12:X:42:LEU:HD22 | 12:X:46:ASP:CB | 2.48 | 0.40 |
| 1:A:48:PRO:O | 1:A:49:ARG:CG | 2.70 | 0.40 |
| 1:A:317:GLN:O | 1:A:318:LYS:C | 2.59 | 0.40 |
| 1:A:371:ILE:HG22 | 1:A:375:LEU:CD1 | 2.50 | 0.40 |
| 1:A:400:HIS:HB3 | 1:A:401:PRO:CD | 2.46 | 0.40 |
| 1:A:651:GLN:O | 1:A:652:LYS:C | 2.60 | 0.40 |
| 1:A:910:LYS:C | 1:A:912:ASP:H | 2.25 | 0.40 |
| 1:A:1351:LEU:HG | 1:A:1375:VAL:HG22 | 2.03 | 0.40 |
| 1:A:1447:MET:HE2 | 1:A:1447:MET:H | 1.86 | 0.40 |
| 2:B:288:GLU:HA | 2:B:291:GLN:CG | 2.51 | 0.40 |
| 2:B:316:ILE:HD13 | 2:B:321:VAL:HG12 | 2.03 | 0.40 |
| 2:B:514:LEU:HD13 | 2:B:626:VAL:HB | 2.02 | 0.40 |
| 2:B:589:LEU:O | 2:B:589:LEU:HD12 | 2.21 | 0.40 |
| 2:B:1167:GLY:O | 2:B:1215:ARG:HA | 2.21 | 0.40 |
| 3:C:260:PHE:O | 3:C:261:GLU:C | 2.59 | 0.40 |
| 4:D:176:ASP:C | 4:D:178:LEU:N | 2.75 | 0.40 |
| 5:E:107:GLY:C | 5:E:108:ILE:HG13 | 2.41 | 0.40 |
| 7:G:43:GLY:HA3 | 7:G:80:LYS:HB3 | 2.02 | 0.40 |
| 8:H:13:GLN:CG | 8:H:27:ILE:O | 2.69 | 0.40 |
| 8:H:38:LEU:HD13 | 8:H:124:LEU:CD1 | 2.50 | 0.40 |
| 9:I:33:ASP:O | 9:I:34:TYR:C | 2.59 | 0.40 |
| 9:I:55:THR:O | 9:I:55:THR:HG22 | 2.21 | 0.40 |
| 1:M:54:ASN:HB3 | 1:M:248:ARG:NH2 | 2.30 | 0.40 |
| 1:M:69:THR:O | 1:M:69:THR:HG22 | 2.21 | 0.40 |
| 1:M:102:VAL:HG11 | 1:M:212:PHE:CZ | 2.57 | 0.40 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:M:243:PRO:HA | 1:M:244:PRO:HD3 | 1.99 | 0.40 |
| 1:M:688:LYS:O | 1:M:691:VAL:HB | 2.21 | 0.40 |
| 1:M:1154:ILE:HD11 | 9:U:44:TYR:CD2 | 2.56 | 0.40 |
| 1:M:1335:PHE:HD2 | 1:M:1335:PHE:H | 1.69 | 0.40 |
| 2:N:324:ASP:O | 2:N:326:ILE:HB | 2.22 | 0.40 |
| 2:N:1069:PHE:O | 3:O:201:TRP:HH2 | 2.03 | 0.40 |
| 2:N:1096:ARG:CG | 2:N:1096:ARG:HH11 | 2.34 | 0.40 |
| 2:N:1114:LEU:HD12 | 2:N:1202:LEU:CD1 | 2.46 | 0.40 |
| 2:N:1201:LYS:HE3 | 2:N:1205:GLN:OE1 | 2.21 | 0.40 |
| 3:O:7:VAL:HG12 | 3:O:8:ASN:N | 2.36 | 0.40 |
| 4:P:179:ASN:HA | 4:P:182:GLU:OE2 | 2.21 | 0.40 |
| 5:Q:84:GLU:C | 5:Q:86:SER:H | 2.24 | 0.40 |
| 5:Q:210:TYR:CD1 | 5:Q:210:TYR:N | 2.89 | 0.40 |
| 6:R:97:ARG:HA | 6:R:97:ARG:HD2 | 1.70 | 0.40 |
| 7:S:132:SER:C | 7:S:134:ASP:N | 2.75 | 0.40 |
| 8:T:13:GLN:CG | 8:T:27:ILE:O | 2.69 | 0.40 |
| 10:V:21:TYR:C | 10:V:23:ARG:N | 2.74 | 0.40 |
| 1:A:34:LYS:N | 1:A:34:LYS:CD | 2.83 | 0.40 |
| 1:A:95:PHE:CE2 | 1:A:1413:PHE:HB3 | 2.50 | 0.40 |
| 1:A:415:ASP:O | 1:A:417:ARG:N | 2.55 | 0.40 |
| 1:A:551:LEU:CD1 | 1:A:561:VAL:HG12 | 2.51 | 0.40 |
| 1:A:1265:ARG:O | 1:A:1269:HIS:CG | 2.74 | 0.40 |
| 2:B:111:TYR:HE2 | 2:B:170:CYS:SG | 2.42 | 0.40 |
| 2:B:614:GLU:O | 2:B:615:ARG:HB2 | 2.21 | 0.40 |
| 2:B:863:GLU:OE1 | 2:B:962:LYS:HB2 | 2.21 | 0.40 |
| 2:B:1006:ILE:HG22 | 10:J:44:CYS:HB3 | 2.03 | 0.40 |
| 2:B:1010:LEU:HD22 | 2:B:1092:TYR:CD1 | 2.57 | 0.40 |
| 2:B:1104:HIS:HB2 | 2:B:1122:ARG:HD2 | 2.02 | 0.40 |
| 2:B:1201:LYS:HE3 | 2:B:1205:GLN:OE1 | 2.22 | 0.40 |
| 8:H:80:PRO:HB3 | 8:H:81:PRO:HD2 | 2.02 | 0.40 |
| 10:J:43:TYR:CA | 10:J:46:ARG:HB2 | 2.32 | 0.40 |
| 1:M:442:PRO:O | 1:M:493:PRO:HG3 | 2.22 | 0.40 |
| 1:M:547:VAL:HG21 | 1:M:573:TRP:CD2 | 2.56 | 0.40 |
| 1:M:861:LEU:HD23 | 1:M:861:LEU:HA | 1.92 | 0.40 |
| 1:M:1006:ASN:OD1 | 1:M:1007:GLU:N | 2.54 | 0.40 |
| 1:M:1335:PHE:CD2 | 1:M:1336:VAL:N | 2.89 | 0.40 |
| 2:N:637:GLU:C | 2:N:639:LYS:N | 2.73 | 0.40 |
| 2:N:792:MET:HG2 | 2:N:855:PHE:HE1 | 1.87 | 0.40 |
| 2:N:1021:MET:O | 2:N:1023:VAL:N | 2.55 | 0.40 |
| 2:N:1069:PHE:CD1 | 2:N:1069:PHE:N | 2.76 | 0.40 |
| 2:N:1100:ASP:OD2 | 11:W:1:MET:HB3 | 2.21 | 0.40 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 2:N:1207:LEU:HD23 | 2:N:1207:LEU:HA | 1.84 | 0.40 |
| 4:P:176:ASP:C | 4:P:178:LEU:N | 2.75 | 0.40 |
| 5:Q:60:LEU:HB2 | 5:Q:78:TRP:CE3 | 2.56 | 0.40 |
| 5:Q:107:GLY:C | 5:Q:108:ILE:HG13 | 2.41 | 0.40 |
| 6:R:100:GLN:O | 6:R:105:ALA:HB2 | 2.21 | 0.40 |
| 6:R:123:LYS:C | 6:R:125:LEU:N | 2.74 | 0.40 |
| 8:T:40:LEU:HD12 | 8:T:41:ASP:H | 1.86 | 0.40 |
| 9:U:55:THR:O | 9:U:56:ALA:C | 2.60 | 0.40 |
| 9:U:103:CYS:C | 9:U:105:ASN:H | 2.25 | 0.40 |
| 1:A:214:HIS:O | 1:A:215:ILE:C | 2.60 | 0.40 |
| 1:A:278:GLN:C | 1:A:280:LEU:H | 2.25 | 0.40 |
| 1:A:323:VAL:O | 1:A:323:VAL:HG12 | 2.20 | 0.40 |
| 1:A:949:PHE:CD2 | 1:A:949:PHE:N | 2.88 | 0.40 |
| 1:A:1348:ARG:HG3 | 1:A:1375:VAL:HG12 | 2.03 | 0.40 |
| 1:A:1431:VAL:HG13 | 2:B:1151:LEU:CD2 | 2.50 | 0.40 |
| 2:B:792:MET:HG2 | 2:B:855:PHE:HE1 | 1.87 | 0.40 |
| 2:B:830:TYR:HB3 | 2:B:831:SER:H | 1.69 | 0.40 |
| 2:B:1000:PRO:O | 2:B:1007:VAL:HG23 | 2.21 | 0.40 |
| 2:B:1001:PHE:CD2 | 3:C:33:ARG:NH2 | 2.90 | 0.40 |
| 2:B:1093:GLN:O | 2:B:1095:LEU:HD12 | 2.22 | 0.40 |
| 2:B:1197:PRO:HG2 | 2:B:1200:ALA:HB3 | 2.02 | 0.40 |
| 2:B:1207:LEU:HD23 | 2:B:1207:LEU:HA | 1.84 | 0.40 |
| 4:D:179:ASN:HA | 4:D:182:GLU:OE2 | 2.21 | 0.40 |
| 5:E:181:ASP:HB3 | 5:E:184:ALA:HB2 | 2.03 | 0.40 |
| 8:H:62:SER:O | 8:H:63:LEU:O | 2.39 | 0.40 |
| 9:I:55:THR:O | 9:I:56:ALA:C | 2.60 | 0.40 |
| 1:M:34:LYS:N | 1:M:34:LYS:CD | 2.83 | 0.40 |
| 1:M:103:CYS:HA | 1:M:106:ILE:HG23 | 2.03 | 0.40 |
| 1:M:351:ARG:HB3 | 2:N:1128:LEU:HD21 | 2.02 | 0.40 |
| 1:M:400:HIS:CB | 1:M:401:PRO:CD | 2.99 | 0.40 |
| 1:M:443:VAL:HG12 | 1:M:493:PRO:HD2 | 2.04 | 0.40 |
| 1:M:1120:VAL:HG23 | 1:M:1120:VAL:O | 2.21 | 0.40 |
| 1:M:1154:ILE:O | 9:U:43:VAL:HB | 2.21 | 0.40 |
| 2:N:229:ALA:O | 2:N:247:ILE:CG2 | 2.69 | 0.40 |
| 2:N:379:LEU:C | 2:N:381:CYS:N | 2.75 | 0.40 |
| 2:N:540:ILE:CG1 | 2:N:605:GLU:CD | 2.84 | 0.40 |
| 2:N:871:VAL:CG1 | 2:N:872:GLU:N | 2.83 | 0.40 |
| 2:N:999:MET:HG3 | 2:N:1000:PRO:CD | 2.30 | 0.40 |
| 2:N:1010:LEU:HD22 | 2:N:1092:TYR:CD1 | 2.57 | 0.40 |
| 2:N:1060:ARG:HD2 | 2:N:1060:ARG:HA | 1.78 | 0.40 |
| 3:O:104:HIS:O | 3:O:149:ASN:O | 2.40 | 0.40 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 3:O:132:PRO:O | 3:O:133:VAL:C | 2.60 | 0.40 |
| 7:S:14:HIS:ND1 | 7:S:15:PRO:CD | 2.81 | 0.40 |
| 9:U:90:GLN:HE21 | 9:U:92:ARG:CD | 2.34 | 0.40 |
| 12:X:57:VAL:HG23 | 12:X:58:ILE:N | 2.36 | 0.40 |
| 1:A:90:VAL:HG13 | 1:A:298:GLN:HA | 2.04 | 0.40 |
| 1:A:443:VAL:HG12 | 1:A:493:PRO:HD2 | 2.04 | 0.40 |
| 1:A:507:ALA:HB1 | 1:A:509:PRO:HD2 | 2.04 | 0.40 |
| 1:A:514:SER:HA | 1:A:515:PRO:HD2 | 1.99 | 0.40 |
| 1:A:547:VAL:HG21 | 1:A:573:TRP:CD2 | 2.56 | 0.40 |
| 1:A:599:LEU:O | 1:A:600:SER:C | 2.58 | 0.40 |
| 1:A:1154:ILE:HD11 | 9:I:44:TYR:CD2 | 2.57 | 0.40 |
| 1:A:1393:ASN:CG | 1:A:1405:PHE:CD2 | 2.95 | 0.40 |
| 2:B:177:GLU:HG2 | 10:J:61:ARG:HH22 | 1.85 | 0.40 |
| 2:B:242:ILE:HG22 | 2:B:242:ILE:O | 2.21 | 0.40 |
| 2:B:296:ASP:O | 2:B:298:ASN:N | 2.54 | 0.40 |
| 2:B:575:VAL:HG23 | 2:B:619:ILE:CD1 | 2.45 | 0.40 |
| 2:B:596:LEU:HD12 | 2:B:602:ILE:CG2 | 2.49 | 0.40 |
| 2:B:899:ILE:HD11 | 2:B:911:ILE:CG2 | 2.42 | 0.40 |
| 2:B:1201:LYS:HE2 | 2:B:1205:GLN:OE1 | 2.21 | 0.40 |
| 3:C:212:PRO:CB | 3:C:213:PRO:HD2 | 2.52 | 0.40 |
| 5:E:134:PHE:CD2 | 5:E:139:LEU:HD21 | 2.54 | 0.40 |
| 6:F:84:TYR:N | 6:F:84:TYR:CD1 | 2.90 | 0.40 |
| 7:G:132:SER:C | 7:G:134:ASP:N | 2.75 | 0.40 |
| 8:H:106:GLY:O | 8:H:107:ASP:O | 2.40 | 0.40 |
| 9:I:58:ILE:O | 9:I:58:ILE:HG23 | 2.21 | 0.40 |
| 11:K:6:ARG:C | 11:K:8:GLU:H | 2.25 | 0.40 |
| 1:M:415:ASP:O | 1:M:417:ARG:N | 2.55 | 0.40 |
| 1:M:801:VAL:HG22 | 1:M:813:GLU:CB | 2.44 | 0.40 |
| 1:M:845:ALA:C | 1:M:846:LEU:HD23 | 2.42 | 0.40 |
| 1:M:882:GLN:NE2 | 1:M:960:VAL:O | 2.54 | 0.40 |
| 2:N:163:ILE:HD13 | 2:N:169:PHE:HB2 | 2.03 | 0.40 |
| 2:N:880:ALA:CB | 2:N:934:LYS:HD2 | 2.51 | 0.40 |
| 2:N:1001:PHE:CD2 | 3:O:33:ARG:NH2 | 2.90 | 0.40 |
| 2:N:1099:VAL:C | 2:N:1101:ASP:H | 2.24 | 0.40 |
| 2:N:1190:ASN:C | 2:N:1191:ILE:HG13 | 2.42 | 0.40 |
| 4:P:47:ASP:C | 4:P:48:LEU:O | 2.59 | 0.40 |
| 5:Q:150:PRO:CB | 5:Q:199:ARG:HB3 | 2.51 | 0.40 |
| 7:S:43:GLY:HA3 | 7:S:80:LYS:HB3 | 2.02 | 0.40 |
| 10:V:5:VAL:CG1 | 10:V:6:ARG:HG3 | 2.51 | 0.40 |

All (16) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-----------------|------------------------|--------------------------|-------------------|
| 1:A:1178:ILE:CB | 3:O:3:LYS:CB[2_555] | 1.48 | 0.72 |
| 1:A:1178:ILE:CA | 3:O:3:LYS:CB[2_555] | 1.51 | 0.69 |
| 1:A:1178:ILE:O | 3:O:3:LYS:CG[2_555] | 1.58 | 0.62 |
| 2:B:869:SER:O | 6:F:129:LYS:NZ[2_646] | 1.65 | 0.55 |
| 1:A:1178:ILE:C | 3:O:3:LYS:CG[2_555] | 1.66 | 0.54 |
| 2:N:869:SER:O | 6:R:129:LYS:NZ[2_655] | 1.81 | 0.39 |
| 4:P:69:ARG:CD | 12:X:52:GLU:CG[2_645] | 1.86 | 0.34 |
| 1:A:1178:ILE:C | 3:O:3:LYS:CB[2_555] | 1.90 | 0.30 |
| 7:G:96:PRO:CB | 8:H:144:ARG:NH2[2_646] | 1.97 | 0.23 |
| 1:A:1178:ILE:O | 3:O:3:LYS:CB[2_555] | 1.99 | 0.21 |
| 1:A:1178:ILE:O | 3:O:3:LYS:CA[2_555] | 2.06 | 0.14 |
| 4:D:69:ARG:NH1 | 12:L:52:GLU:CG[2_656] | 2.09 | 0.11 |
| 7:S:95:SER:OG | 8:T:7:ASP:OD2[2_655] | 2.11 | 0.09 |
| 7:G:96:PRO:CG | 8:H:144:ARG:NH2[2_646] | 2.17 | 0.03 |
| 1:A:1178:ILE:CB | 3:O:3:LYS:CG[2_555] | 2.18 | 0.02 |
| 8:T:34:SER:OG | 9:U:106:CYS:O[2_545] | 2.19 | 0.01 |

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 | 1358/1743 (78%) | 945 (70%) | 279 (20%) | 134 (10%) | 0 | 9 |
| 1 | M | 1361/1743 (78%) | 948 (70%) | 277 (20%) | 136 (10%) | 0 | 9 |
| 2 | B | 1040/1227 (85%) | 708 (68%) | 210 (20%) | 122 (12%) | 0 | 6 |
| 2 | N | 1044/1227 (85%) | 712 (68%) | 211 (20%) | 121 (12%) | 0 | 6 |
| 3 | C | 261/304 (86%) | 182 (70%) | 56 (22%) | 23 (9%) | 1 | 11 |
| 3 | O | 261/304 (86%) | 182 (70%) | 56 (22%) | 23 (9%) | 1 | 11 |
| 4 | D | 147/186 (79%) | 101 (69%) | 27 (18%) | 19 (13%) | 0 | 5 |
| 4 | P | 152/186 (82%) | 106 (70%) | 27 (18%) | 19 (12%) | 0 | 5 |
| 5 | E | 212/214 (99%) | 148 (70%) | 42 (20%) | 22 (10%) | 0 | 8 |
| 5 | Q | 212/214 (99%) | 148 (70%) | 43 (20%) | 21 (10%) | 0 | 9 |

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| Mol | Chain | Analysed | Favoured | Allowed | Outliers | Percentiles | |
|-----|-------|-----------------|------------|------------|-----------|-------------|----|
| 6 | F | 82/155 (53%) | 57 (70%) | 15 (18%) | 10 (12%) | 0 | 6 |
| 6 | R | 82/155 (53%) | 57 (70%) | 15 (18%) | 10 (12%) | 0 | 6 |
| 7 | G | 169/171 (99%) | 129 (76%) | 27 (16%) | 13 (8%) | 1 | 13 |
| 7 | S | 169/171 (99%) | 129 (76%) | 27 (16%) | 13 (8%) | 1 | 13 |
| 8 | H | 124/145 (86%) | 92 (74%) | 17 (14%) | 15 (12%) | 0 | 6 |
| 8 | T | 127/145 (88%) | 95 (75%) | 17 (13%) | 15 (12%) | 0 | 6 |
| 9 | I | 109/115 (95%) | 70 (64%) | 25 (23%) | 14 (13%) | 0 | 5 |
| 9 | U | 109/115 (95%) | 70 (64%) | 25 (23%) | 14 (13%) | 0 | 5 |
| 10 | J | 58/72 (81%) | 34 (59%) | 15 (26%) | 9 (16%) | 0 | 3 |
| 10 | V | 58/72 (81%) | 34 (59%) | 15 (26%) | 9 (16%) | 0 | 3 |
| 11 | K | 112/118 (95%) | 84 (75%) | 17 (15%) | 11 (10%) | 0 | 10 |
| 11 | W | 112/118 (95%) | 83 (74%) | 18 (16%) | 11 (10%) | 0 | 10 |
| 12 | L | 44/73 (60%) | 19 (43%) | 12 (27%) | 13 (30%) | 0 | 0 |
| 12 | X | 44/73 (60%) | 19 (43%) | 12 (27%) | 13 (30%) | 0 | 0 |
| All | All | 7447/9046 (82%) | 5152 (69%) | 1485 (20%) | 810 (11%) | 0 | 8 |

All (810) Ramachandran outliers are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | A | 42 | ASP |
| 1 | A | 48 | PRO |
| 1 | A | 54 | ASN |
| 1 | A | 57 | LYS |
| 1 | A | 67 | CYS |
| 1 | A | 73 | GLY |
| 1 | A | 74 | MET |
| 1 | A | 93 | ILE |
| 1 | A | 198 | PRO |
| 1 | A | 254 | ASP |
| 1 | A | 258 | GLN |
| 1 | A | 284 | GLY |
| 1 | A | 287 | GLN |
| 1 | A | 303 | THR |
| 1 | A | 304 | TYR |
| 1 | A | 312 | GLN |
| 1 | A | 313 | PRO |
| 1 | A | 336 | ARG |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | A | 365 | VAL |
| 1 | A | 383 | GLN |
| 1 | A | 411 | GLY |
| 1 | A | 425 | ILE |
| 1 | A | 466 | TYR |
| 1 | A | 526 | GLN |
| 1 | A | 568 | LYS |
| 1 | A | 598 | LEU |
| 1 | A | 599 | LEU |
| 1 | A | 776 | ILE |
| 1 | A | 1015 | ASN |
| 1 | A | 1018 | SER |
| 1 | A | 1038 | ARG |
| 1 | A | 1117 | ALA |
| 1 | A | 1125 | GLU |
| 1 | A | 1126 | ILE |
| 1 | A | 1167 | GLU |
| 1 | A | 1208 | GLN |
| 1 | A | 1233 | ASP |
| 1 | A | 1235 | ALA |
| 1 | A | 1258 | GLU |
| 1 | A | 1280 | PRO |
| 1 | A | 1284 | LYS |
| 1 | A | 1327 | SER |
| 1 | A | 1441 | THR |
| 2 | B | 54 | PRO |
| 2 | B | 93 | ASP |
| 2 | B | 95 | THR |
| 2 | B | 220 | ALA |
| 2 | B | 274 | ILE |
| 2 | B | 325 | PHE |
| 2 | B | 326 | ILE |
| 2 | B | 358 | THR |
| 2 | B | 360 | GLU |
| 2 | B | 394 | PHE |
| 2 | B | 463 | LYS |
| 2 | B | 613 | ARG |
| 2 | B | 622 | ASP |
| 2 | B | 634 | GLU |
| 2 | B | 640 | ASP |
| 2 | B | 705 | GLU |
| 2 | B | 813 | LYS |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 2 | B | 869 | SER |
| 2 | B | 879 | ARG |
| 2 | B | 881 | THR |
| 2 | B | 884 | ARG |
| 2 | B | 907 | GLY |
| 2 | B | 976 | ILE |
| 2 | B | 1046 | PRO |
| 2 | B | 1097 | HIS |
| 2 | B | 1100 | ASP |
| 2 | B | 1131 | GLY |
| 2 | B | 1155 | SER |
| 2 | B | 1156 | ASP |
| 2 | B | 1167 | GLY |
| 2 | B | 1171 | VAL |
| 2 | B | 1175 | LEU |
| 2 | B | 1182 | CYS |
| 2 | B | 1223 | VAL |
| 3 | C | 4 | GLU |
| 3 | C | 139 | ASP |
| 3 | C | 161 | LYS |
| 3 | C | 237 | SER |
| 4 | D | 5 | THR |
| 4 | D | 48 | LEU |
| 4 | D | 91 | LYS |
| 4 | D | 139 | PRO |
| 4 | D | 167 | LYS |
| 5 | E | 73 | ASP |
| 5 | E | 86 | SER |
| 5 | E | 105 | SER |
| 6 | F | 73 | ALA |
| 6 | F | 74 | ILE |
| 7 | G | 52 | MET |
| 7 | G | 118 | ASN |
| 7 | G | 123 | PRO |
| 7 | G | 139 | LYS |
| 7 | G | 154 | VAL |
| 8 | H | 60 | ALA |
| 8 | H | 82 | LYS |
| 8 | H | 107 | ASP |
| 8 | H | 139 | LEU |
| 9 | I | 20 | LYS |
| 9 | I | 51 | ASN |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 9 | I | 56 | ALA |
| 9 | I | 107 | LYS |
| 10 | J | 2 | ILE |
| 10 | J | 41 | LYS |
| 10 | J | 63 | ASN |
| 11 | K | 7 | PHE |
| 11 | K | 43 | ALA |
| 12 | L | 37 | ALA |
| 12 | L | 41 | SER |
| 12 | L | 44 | LYS |
| 12 | L | 46 | ASP |
| 12 | L | 47 | PRO |
| 12 | L | 52 | GLU |
| 12 | L | 61 | ALA |
| 12 | L | 62 | ARG |
| 1 | M | 42 | ASP |
| 1 | M | 48 | PRO |
| 1 | M | 54 | ASN |
| 1 | M | 57 | LYS |
| 1 | M | 67 | CYS |
| 1 | M | 73 | GLY |
| 1 | M | 74 | MET |
| 1 | M | 93 | ILE |
| 1 | M | 197 | GLN |
| 1 | M | 198 | PRO |
| 1 | M | 254 | ASP |
| 1 | M | 258 | GLN |
| 1 | M | 284 | GLY |
| 1 | M | 287 | GLN |
| 1 | M | 303 | THR |
| 1 | M | 304 | TYR |
| 1 | M | 312 | GLN |
| 1 | M | 313 | PRO |
| 1 | M | 336 | ARG |
| 1 | M | 365 | VAL |
| 1 | M | 383 | GLN |
| 1 | M | 411 | GLY |
| 1 | M | 425 | ILE |
| 1 | M | 466 | TYR |
| 1 | M | 526 | GLN |
| 1 | M | 568 | LYS |
| 1 | M | 598 | LEU |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | M | 599 | LEU |
| 1 | M | 776 | ILE |
| 1 | M | 1015 | ASN |
| 1 | M | 1018 | SER |
| 1 | M | 1038 | ARG |
| 1 | M | 1117 | ALA |
| 1 | M | 1125 | GLU |
| 1 | M | 1126 | ILE |
| 1 | M | 1167 | GLU |
| 1 | M | 1208 | GLN |
| 1 | M | 1233 | ASP |
| 1 | M | 1235 | ALA |
| 1 | M | 1258 | GLU |
| 1 | M | 1280 | PRO |
| 1 | M | 1284 | LYS |
| 1 | M | 1327 | SER |
| 1 | M | 1344 | ILE |
| 1 | M | 1441 | THR |
| 2 | N | 54 | PRO |
| 2 | N | 93 | ASP |
| 2 | N | 95 | THR |
| 2 | N | 220 | ALA |
| 2 | N | 274 | ILE |
| 2 | N | 325 | PHE |
| 2 | N | 326 | ILE |
| 2 | N | 358 | THR |
| 2 | N | 360 | GLU |
| 2 | N | 394 | PHE |
| 2 | N | 463 | LYS |
| 2 | N | 613 | ARG |
| 2 | N | 622 | ASP |
| 2 | N | 634 | GLU |
| 2 | N | 640 | ASP |
| 2 | N | 705 | GLU |
| 2 | N | 813 | LYS |
| 2 | N | 869 | SER |
| 2 | N | 879 | ARG |
| 2 | N | 881 | THR |
| 2 | N | 884 | ARG |
| 2 | N | 907 | GLY |
| 2 | N | 976 | ILE |
| 2 | N | 1046 | PRO |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 2 | N | 1097 | HIS |
| 2 | N | 1100 | ASP |
| 2 | N | 1131 | GLY |
| 2 | N | 1155 | SER |
| 2 | N | 1156 | ASP |
| 2 | N | 1167 | GLY |
| 2 | N | 1171 | VAL |
| 2 | N | 1175 | LEU |
| 2 | N | 1182 | CYS |
| 2 | N | 1223 | VAL |
| 3 | O | 4 | GLU |
| 3 | O | 139 | ASP |
| 3 | O | 161 | LYS |
| 3 | O | 237 | SER |
| 4 | P | 5 | THR |
| 4 | P | 48 | LEU |
| 4 | P | 91 | LYS |
| 4 | P | 139 | PRO |
| 4 | P | 167 | LYS |
| 5 | Q | 73 | ASP |
| 5 | Q | 86 | SER |
| 5 | Q | 105 | SER |
| 6 | R | 73 | ALA |
| 6 | R | 74 | ILE |
| 7 | S | 52 | MET |
| 7 | S | 118 | ASN |
| 7 | S | 123 | PRO |
| 7 | S | 139 | LYS |
| 7 | S | 154 | VAL |
| 8 | T | 60 | ALA |
| 8 | T | 82 | LYS |
| 8 | T | 107 | ASP |
| 8 | T | 139 | LEU |
| 9 | U | 20 | LYS |
| 9 | U | 51 | ASN |
| 9 | U | 56 | ALA |
| 9 | U | 107 | LYS |
| 10 | V | 2 | ILE |
| 10 | V | 41 | LYS |
| 10 | V | 63 | ASN |
| 11 | W | 7 | PHE |
| 11 | W | 43 | ALA |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 12 | X | 37 | ALA |
| 12 | X | 41 | SER |
| 12 | X | 44 | LYS |
| 12 | X | 46 | ASP |
| 12 | X | 47 | PRO |
| 12 | X | 52 | GLU |
| 12 | X | 61 | ALA |
| 12 | X | 62 | ARG |
| 1 | A | 35 | ILE |
| 1 | A | 55 | ASP |
| 1 | A | 58 | LEU |
| 1 | A | 62 | ASP |
| 1 | A | 69 | THR |
| 1 | A | 71 | GLY |
| 1 | A | 76 | GLU |
| 1 | A | 264 | THR |
| 1 | A | 319 | SER |
| 1 | A | 416 | LEU |
| 1 | A | 424 | ASP |
| 1 | A | 467 | SER |
| 1 | A | 518 | ASN |
| 1 | A | 535 | MET |
| 1 | A | 592 | THR |
| 1 | A | 610 | ASP |
| 1 | A | 629 | GLY |
| 1 | A | 673 | ASP |
| 1 | A | 700 | HIS |
| 1 | A | 717 | GLY |
| 1 | A | 772 | GLU |
| 1 | A | 847 | GLU |
| 1 | A | 848 | ASP |
| 1 | A | 853 | TYR |
| 1 | A | 974 | HIS |
| 1 | A | 988 | ILE |
| 1 | A | 1004 | GLY |
| 1 | A | 1016 | ALA |
| 1 | A | 1122 | LEU |
| 1 | A | 1124 | ARG |
| 1 | A | 1214 | VAL |
| 1 | A | 1223 | SER |
| 1 | A | 1264 | LYS |
| 1 | A | 1269 | HIS |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | A | 1317 | ALA |
| 1 | A | 1344 | ILE |
| 1 | A | 1408 | THR |
| 1 | A | 1424 | CYS |
| 2 | B | 17 | CYS |
| 2 | B | 45 | SER |
| 2 | B | 55 | ARG |
| 2 | B | 102 | GLN |
| 2 | B | 167 | SER |
| 2 | B | 177 | GLU |
| 2 | B | 197 | ASN |
| 2 | B | 210 | ALA |
| 2 | B | 250 | TYR |
| 2 | B | 251 | GLY |
| 2 | B | 255 | LYS |
| 2 | B | 287 | GLY |
| 2 | B | 297 | GLU |
| 2 | B | 459 | TRP |
| 2 | B | 460 | GLY |
| 2 | B | 510 | THR |
| 2 | B | 523 | GLY |
| 2 | B | 550 | PHE |
| 2 | B | 552 | GLU |
| 2 | B | 635 | ASP |
| 2 | B | 702 | MET |
| 2 | B | 706 | ASP |
| 2 | B | 792 | MET |
| 2 | B | 888 | GLY |
| 2 | B | 909 | ASP |
| 2 | B | 946 | ASN |
| 2 | B | 1006 | ILE |
| 2 | B | 1069 | PHE |
| 2 | B | 1075 | GLY |
| 2 | B | 1126 | GLY |
| 2 | B | 1176 | LYS |
| 2 | B | 1186 | LYS |
| 3 | C | 17 | VAL |
| 3 | C | 133 | VAL |
| 3 | C | 149 | ASN |
| 3 | C | 156 | ARG |
| 3 | C | 173 | CYS |
| 3 | C | 184 | ASN |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 4 | D | 53 | LEU |
| 4 | D | 92 | VAL |
| 4 | D | 142 | ILE |
| 4 | D | 163 | LEU |
| 4 | D | 177 | GLU |
| 5 | E | 29 | ILE |
| 5 | E | 44 | LYS |
| 5 | E | 87 | VAL |
| 5 | E | 119 | ALA |
| 5 | E | 120 | ASN |
| 5 | E | 129 | ALA |
| 5 | E | 137 | SER |
| 6 | F | 154 | ASP |
| 7 | G | 50 | ASP |
| 8 | H | 18 | GLY |
| 8 | H | 62 | SER |
| 8 | H | 80 | PRO |
| 8 | H | 81 | PRO |
| 8 | H | 89 | ALA |
| 9 | I | 11 | ASN |
| 9 | I | 34 | TYR |
| 9 | I | 57 | GLY |
| 9 | I | 106 | CYS |
| 10 | J | 6 | ARG |
| 10 | J | 14 | VAL |
| 11 | K | 14 | ASP |
| 11 | K | 15 | ASP |
| 11 | K | 44 | ASN |
| 11 | K | 49 | GLU |
| 11 | K | 59 | VAL |
| 11 | K | 80 | GLY |
| 12 | L | 55 | HIS |
| 12 | L | 57 | VAL |
| 12 | L | 58 | ILE |
| 1 | M | 35 | ILE |
| 1 | M | 55 | ASP |
| 1 | M | 58 | LEU |
| 1 | M | 62 | ASP |
| 1 | M | 69 | THR |
| 1 | M | 71 | GLY |
| 1 | M | 76 | GLU |
| 1 | M | 319 | SER |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | M | 416 | LEU |
| 1 | M | 424 | ASP |
| 1 | M | 467 | SER |
| 1 | M | 518 | ASN |
| 1 | M | 535 | MET |
| 1 | M | 592 | THR |
| 1 | M | 629 | GLY |
| 1 | M | 673 | ASP |
| 1 | M | 700 | HIS |
| 1 | M | 717 | GLY |
| 1 | M | 772 | GLU |
| 1 | M | 847 | GLU |
| 1 | M | 848 | ASP |
| 1 | M | 853 | TYR |
| 1 | M | 974 | HIS |
| 1 | M | 988 | ILE |
| 1 | M | 1004 | GLY |
| 1 | M | 1016 | ALA |
| 1 | M | 1122 | LEU |
| 1 | M | 1124 | ARG |
| 1 | M | 1214 | VAL |
| 1 | M | 1223 | SER |
| 1 | M | 1264 | LYS |
| 1 | M | 1269 | HIS |
| 1 | M | 1317 | ALA |
| 1 | M | 1408 | THR |
| 1 | M | 1424 | CYS |
| 2 | N | 17 | CYS |
| 2 | N | 45 | SER |
| 2 | N | 55 | ARG |
| 2 | N | 102 | GLN |
| 2 | N | 167 | SER |
| 2 | N | 177 | GLU |
| 2 | N | 197 | ASN |
| 2 | N | 210 | ALA |
| 2 | N | 250 | TYR |
| 2 | N | 251 | GLY |
| 2 | N | 255 | LYS |
| 2 | N | 287 | GLY |
| 2 | N | 297 | GLU |
| 2 | N | 459 | TRP |
| 2 | N | 460 | GLY |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 2 | N | 510 | THR |
| 2 | N | 523 | GLY |
| 2 | N | 550 | PHE |
| 2 | N | 552 | GLU |
| 2 | N | 635 | ASP |
| 2 | N | 702 | MET |
| 2 | N | 706 | ASP |
| 2 | N | 792 | MET |
| 2 | N | 883 | LEU |
| 2 | N | 888 | GLY |
| 2 | N | 909 | ASP |
| 2 | N | 946 | ASN |
| 2 | N | 1006 | ILE |
| 2 | N | 1069 | PHE |
| 2 | N | 1075 | GLY |
| 2 | N | 1126 | GLY |
| 2 | N | 1176 | LYS |
| 2 | N | 1186 | LYS |
| 3 | O | 17 | VAL |
| 3 | O | 133 | VAL |
| 3 | O | 149 | ASN |
| 3 | O | 156 | ARG |
| 3 | O | 173 | CYS |
| 3 | O | 184 | ASN |
| 4 | P | 53 | LEU |
| 4 | P | 80 | SER |
| 4 | P | 92 | VAL |
| 4 | P | 142 | ILE |
| 4 | P | 163 | LEU |
| 4 | P | 177 | GLU |
| 5 | Q | 29 | ILE |
| 5 | Q | 44 | LYS |
| 5 | Q | 87 | VAL |
| 5 | Q | 119 | ALA |
| 5 | Q | 120 | ASN |
| 5 | Q | 129 | ALA |
| 5 | Q | 137 | SER |
| 6 | R | 154 | ASP |
| 7 | S | 50 | ASP |
| 8 | T | 18 | GLY |
| 8 | T | 62 | SER |
| 8 | T | 80 | PRO |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 8 | T | 81 | PRO |
| 8 | T | 89 | ALA |
| 9 | U | 11 | ASN |
| 9 | U | 34 | TYR |
| 9 | U | 57 | GLY |
| 9 | U | 106 | CYS |
| 10 | V | 6 | ARG |
| 10 | V | 14 | VAL |
| 11 | W | 14 | ASP |
| 11 | W | 15 | ASP |
| 11 | W | 44 | ASN |
| 11 | W | 49 | GLU |
| 11 | W | 59 | VAL |
| 11 | W | 80 | GLY |
| 12 | X | 55 | HIS |
| 12 | X | 57 | VAL |
| 12 | X | 58 | ILE |
| 1 | A | 131 | PRO |
| 1 | A | 337 | LEU |
| 1 | A | 419 | HIS |
| 1 | A | 667 | ILE |
| 1 | A | 777 | ALA |
| 1 | A | 872 | ASP |
| 1 | A | 886 | THR |
| 1 | A | 1006 | ASN |
| 1 | A | 1226 | LEU |
| 1 | A | 1368 | TYR |
| 1 | A | 1369 | ARG |
| 1 | A | 1389 | ARG |
| 2 | B | 33 | GLN |
| 2 | B | 42 | MET |
| 2 | B | 43 | GLU |
| 2 | B | 173 | ARG |
| 2 | B | 253 | GLU |
| 2 | B | 300 | TRP |
| 2 | B | 324 | ASP |
| 2 | B | 382 | ALA |
| 2 | B | 407 | ALA |
| 2 | B | 443 | SER |
| 2 | B | 453 | SER |
| 2 | B | 467 | SER |
| 2 | B | 524 | GLN |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 2 | B | 584 | ARG |
| 2 | B | 603 | SER |
| 2 | B | 842 | ASN |
| 2 | B | 848 | ARG |
| 2 | B | 883 | LEU |
| 2 | B | 951 | GLN |
| 2 | B | 1022 | THR |
| 2 | B | 1108 | ARG |
| 2 | B | 1121 | GLY |
| 2 | B | 1158 | PHE |
| 2 | B | 1178 | ASN |
| 2 | B | 1181 | GLU |
| 3 | C | 89 | ASP |
| 3 | C | 132 | PRO |
| 4 | D | 13 | ARG |
| 4 | D | 15 | ALA |
| 4 | D | 22 | GLU |
| 4 | D | 54 | SER |
| 5 | E | 2 | GLU |
| 5 | E | 40 | GLU |
| 5 | E | 50 | GLY |
| 5 | E | 72 | SER |
| 6 | F | 81 | THR |
| 7 | G | 35 | GLU |
| 7 | G | 94 | VAL |
| 7 | G | 165 | GLU |
| 7 | G | 167 | PHE |
| 8 | H | 108 | GLU |
| 9 | I | 47 | GLU |
| 10 | J | 24 | LEU |
| 10 | J | 28 | GLY |
| 10 | J | 43 | TYR |
| 11 | K | 78 | GLU |
| 12 | L | 45 | SER |
| 12 | L | 51 | LYS |
| 1 | M | 131 | PRO |
| 1 | M | 264 | THR |
| 1 | M | 337 | LEU |
| 1 | M | 419 | HIS |
| 1 | M | 610 | ASP |
| 1 | M | 667 | ILE |
| 1 | M | 777 | ALA |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | M | 872 | ASP |
| 1 | M | 886 | THR |
| 1 | M | 1006 | ASN |
| 1 | M | 1226 | LEU |
| 1 | M | 1368 | TYR |
| 1 | M | 1369 | ARG |
| 1 | M | 1389 | ARG |
| 2 | N | 33 | GLN |
| 2 | N | 42 | MET |
| 2 | N | 43 | GLU |
| 2 | N | 173 | ARG |
| 2 | N | 253 | GLU |
| 2 | N | 300 | TRP |
| 2 | N | 324 | ASP |
| 2 | N | 382 | ALA |
| 2 | N | 407 | ALA |
| 2 | N | 443 | SER |
| 2 | N | 453 | SER |
| 2 | N | 467 | SER |
| 2 | N | 524 | GLN |
| 2 | N | 584 | ARG |
| 2 | N | 603 | SER |
| 2 | N | 842 | ASN |
| 2 | N | 848 | ARG |
| 2 | N | 951 | GLN |
| 2 | N | 1022 | THR |
| 2 | N | 1108 | ARG |
| 2 | N | 1121 | GLY |
| 2 | N | 1158 | PHE |
| 2 | N | 1178 | ASN |
| 2 | N | 1181 | GLU |
| 3 | O | 89 | ASP |
| 3 | O | 132 | PRO |
| 4 | P | 13 | ARG |
| 4 | P | 22 | GLU |
| 4 | P | 54 | SER |
| 5 | Q | 2 | GLU |
| 5 | Q | 40 | GLU |
| 5 | Q | 50 | GLY |
| 5 | Q | 72 | SER |
| 6 | R | 81 | THR |
| 7 | S | 35 | GLU |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 7 | S | 94 | VAL |
| 7 | S | 165 | GLU |
| 7 | S | 167 | PHE |
| 8 | T | 108 | GLU |
| 9 | U | 47 | GLU |
| 10 | V | 24 | LEU |
| 10 | V | 28 | GLY |
| 10 | V | 43 | TYR |
| 11 | W | 78 | GLU |
| 12 | X | 45 | SER |
| 12 | X | 51 | LYS |
| 1 | A | 44 | SER |
| 1 | A | 45 | ARG |
| 1 | A | 65 | PHE |
| 1 | A | 109 | ASN |
| 1 | A | 318 | LYS |
| 1 | A | 323 | VAL |
| 1 | A | 569 | PRO |
| 1 | A | 1017 | THR |
| 1 | A | 1073 | SER |
| 1 | A | 1116 | PRO |
| 1 | A | 1169 | PHE |
| 1 | A | 1283 | SER |
| 1 | A | 1338 | ILE |
| 1 | A | 1381 | ARG |
| 1 | A | 1406 | GLU |
| 2 | B | 101 | PRO |
| 2 | B | 181 | TYR |
| 2 | B | 568 | THR |
| 2 | B | 724 | LYS |
| 2 | B | 738 | PHE |
| 2 | B | 785 | TYR |
| 2 | B | 1116 | ARG |
| 2 | B | 1136 | ASP |
| 2 | B | 1177 | LYS |
| 3 | C | 106 | GLY |
| 3 | C | 148 | ARG |
| 3 | C | 153 | LEU |
| 3 | C | 240 | ALA |
| 5 | E | 37 | SER |
| 5 | E | 55 | LYS |
| 5 | E | 58 | SER |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 5 | E | 191 | ARG |
| 5 | E | 202 | GLU |
| 6 | F | 150 | GLU |
| 7 | G | 17 | TYR |
| 7 | G | 67 | SER |
| 8 | H | 91 | ASP |
| 8 | H | 127 | GLY |
| 9 | I | 9 | GLU |
| 9 | I | 86 | PHE |
| 11 | K | 54 | PRO |
| 11 | K | 111 | ILE |
| 1 | M | 44 | SER |
| 1 | M | 45 | ARG |
| 1 | M | 65 | PHE |
| 1 | M | 109 | ASN |
| 1 | M | 196 | ALA |
| 1 | M | 318 | LYS |
| 1 | M | 323 | VAL |
| 1 | M | 569 | PRO |
| 1 | M | 1017 | THR |
| 1 | M | 1116 | PRO |
| 1 | M | 1169 | PHE |
| 1 | M | 1283 | SER |
| 1 | M | 1338 | ILE |
| 1 | M | 1381 | ARG |
| 1 | M | 1406 | GLU |
| 1 | M | 1414 | GLU |
| 2 | N | 101 | PRO |
| 2 | N | 181 | TYR |
| 2 | N | 568 | THR |
| 2 | N | 724 | LYS |
| 2 | N | 738 | PHE |
| 2 | N | 785 | TYR |
| 2 | N | 1116 | ARG |
| 2 | N | 1136 | ASP |
| 2 | N | 1177 | LYS |
| 3 | O | 106 | GLY |
| 3 | O | 148 | ARG |
| 3 | O | 153 | LEU |
| 3 | O | 240 | ALA |
| 5 | Q | 55 | LYS |
| 5 | Q | 58 | SER |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 5 | Q | 202 | GLU |
| 6 | R | 150 | GLU |
| 7 | S | 67 | SER |
| 8 | T | 91 | ASP |
| 8 | T | 127 | GLY |
| 9 | U | 9 | GLU |
| 9 | U | 86 | PHE |
| 11 | W | 54 | PRO |
| 11 | W | 111 | ILE |
| 1 | A | 70 | CYS |
| 1 | A | 234 | TRP |
| 1 | A | 255 | GLU |
| 1 | A | 601 | PRO |
| 1 | A | 651 | GLN |
| 1 | A | 707 | PRO |
| 1 | A | 739 | LYS |
| 1 | A | 753 | LYS |
| 1 | A | 860 | SER |
| 1 | A | 960 | VAL |
| 1 | A | 981 | SER |
| 1 | A | 1064 | GLU |
| 1 | A | 1206 | ASP |
| 1 | A | 1401 | MET |
| 1 | A | 1414 | GLU |
| 2 | B | 15 | GLU |
| 2 | B | 32 | SER |
| 2 | B | 175 | LEU |
| 2 | B | 254 | ASP |
| 2 | B | 429 | ILE |
| 2 | B | 462 | GLN |
| 2 | B | 587 | SER |
| 2 | B | 1065 | GLN |
| 2 | B | 1183 | ARG |
| 2 | B | 1188 | LYS |
| 3 | C | 33 | ARG |
| 3 | C | 129 | VAL |
| 3 | C | 214 | LYS |
| 3 | C | 227 | ARG |
| 5 | E | 85 | PRO |
| 6 | F | 106 | PRO |
| 6 | F | 151 | LEU |
| 7 | G | 128 | PRO |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 8 | H | 12 | VAL |
| 8 | H | 94 | TYR |
| 8 | H | 118 | GLY |
| 9 | I | 33 | ASP |
| 1 | M | 70 | CYS |
| 1 | M | 234 | TRP |
| 1 | M | 255 | GLU |
| 1 | M | 601 | PRO |
| 1 | M | 651 | GLN |
| 1 | M | 707 | PRO |
| 1 | M | 739 | LYS |
| 1 | M | 753 | LYS |
| 1 | M | 860 | SER |
| 1 | M | 960 | VAL |
| 1 | M | 981 | SER |
| 1 | M | 1064 | GLU |
| 1 | M | 1073 | SER |
| 1 | M | 1206 | ASP |
| 1 | M | 1401 | MET |
| 2 | N | 15 | GLU |
| 2 | N | 32 | SER |
| 2 | N | 175 | LEU |
| 2 | N | 254 | ASP |
| 2 | N | 429 | ILE |
| 2 | N | 462 | GLN |
| 2 | N | 587 | SER |
| 2 | N | 1065 | GLN |
| 2 | N | 1183 | ARG |
| 2 | N | 1188 | LYS |
| 3 | O | 33 | ARG |
| 3 | O | 129 | VAL |
| 3 | O | 214 | LYS |
| 3 | O | 227 | ARG |
| 5 | Q | 37 | SER |
| 5 | Q | 39 | GLU |
| 5 | Q | 85 | PRO |
| 5 | Q | 191 | ARG |
| 6 | R | 106 | PRO |
| 6 | R | 151 | LEU |
| 7 | S | 17 | TYR |
| 7 | S | 128 | PRO |
| 8 | T | 12 | VAL |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 8 | T | 94 | TYR |
| 8 | T | 118 | GLY |
| 9 | U | 33 | ASP |
| 1 | A | 148 | CYS |
| 1 | A | 311 | GLY |
| 1 | A | 652 | LYS |
| 1 | A | 1013 | GLN |
| 2 | B | 118 | ASP |
| 2 | B | 296 | ASP |
| 3 | C | 59 | ASP |
| 3 | C | 142 | ILE |
| 3 | C | 169 | LYS |
| 4 | D | 8 | VAL |
| 4 | D | 95 | GLY |
| 4 | D | 183 | ASP |
| 5 | E | 39 | GLU |
| 5 | E | 157 | ASP |
| 9 | I | 8 | LEU |
| 1 | M | 148 | CYS |
| 1 | M | 311 | GLY |
| 1 | M | 652 | LYS |
| 1 | M | 1013 | GLN |
| 2 | N | 296 | ASP |
| 3 | O | 59 | ASP |
| 3 | O | 142 | ILE |
| 3 | O | 169 | LYS |
| 4 | P | 95 | GLY |
| 4 | P | 183 | ASP |
| 9 | U | 8 | LEU |
| 2 | B | 282 | GLY |
| 2 | B | 1017 | ILE |
| 4 | D | 161 | PRO |
| 6 | F | 109 | VAL |
| 9 | I | 75 | CYS |
| 2 | N | 282 | GLY |
| 2 | N | 1017 | ILE |
| 4 | P | 8 | VAL |
| 4 | P | 161 | PRO |
| 6 | R | 109 | VAL |
| 9 | U | 75 | CYS |
| 1 | A | 520 | PRO |
| 1 | A | 757 | ILE |

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| Mol | Chain | Res | Type |
|-----|-------|------|------|
| 6 | F | 111 | ILE |
| 10 | J | 56 | ILE |
| 1 | M | 520 | PRO |
| 1 | M | 757 | ILE |
| 6 | R | 105 | ALA |
| 6 | R | 111 | ILE |
| 10 | V | 56 | ILE |
| 1 | A | 245 | PRO |
| 1 | A | 1244 | VAL |
| 2 | B | 992 | VAL |
| 2 | B | 1099 | VAL |
| 6 | F | 105 | ALA |
| 1 | M | 245 | PRO |
| 1 | M | 1244 | VAL |
| 2 | N | 992 | VAL |
| 2 | N | 1099 | VAL |
| 1 | A | 232 | PRO |
| 2 | B | 457 | GLY |
| 2 | B | 543 | PRO |
| 2 | B | 629 | PRO |
| 2 | B | 977 | GLY |
| 4 | D | 31 | GLY |
| 1 | M | 232 | PRO |
| 2 | N | 457 | GLY |
| 2 | N | 543 | PRO |
| 2 | N | 629 | PRO |
| 2 | N | 977 | GLY |
| 4 | P | 31 | GLY |
| 1 | A | 378 | PRO |
| 1 | A | 1077 | PRO |
| 2 | B | 307 | LYS |
| 2 | B | 590 | VAL |
| 1 | M | 378 | PRO |
| 1 | M | 1077 | PRO |
| 2 | N | 307 | LYS |
| 2 | N | 590 | VAL |

5.3.2 Protein sidechains [i](#)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

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

| Mol | Chain | Analysed | Rotameric | Outliers | Percentiles | |
|-----|-------|-----------------|------------|-----------|-------------|----|
| 1 | A | 972/1528 (64%) | 877 (90%) | 95 (10%) | 8 | 26 |
| 1 | M | 974/1528 (64%) | 879 (90%) | 95 (10%) | 8 | 26 |
| 2 | B | 813/1077 (76%) | 730 (90%) | 83 (10%) | 7 | 25 |
| 2 | N | 817/1077 (76%) | 734 (90%) | 83 (10%) | 7 | 25 |
| 3 | C | 157/264 (60%) | 135 (86%) | 22 (14%) | 3 | 17 |
| 3 | O | 156/264 (59%) | 134 (86%) | 22 (14%) | 3 | 16 |
| 4 | D | 78/160 (49%) | 66 (85%) | 12 (15%) | 2 | 14 |
| 4 | P | 79/160 (49%) | 68 (86%) | 11 (14%) | 3 | 17 |
| 5 | E | 155/197 (79%) | 141 (91%) | 14 (9%) | 9 | 30 |
| 5 | Q | 155/197 (79%) | 141 (91%) | 14 (9%) | 9 | 30 |
| 6 | F | 60/137 (44%) | 54 (90%) | 6 (10%) | 7 | 26 |
| 6 | R | 60/137 (44%) | 54 (90%) | 6 (10%) | 7 | 26 |
| 7 | G | 102/148 (69%) | 93 (91%) | 9 (9%) | 10 | 31 |
| 7 | S | 104/148 (70%) | 95 (91%) | 9 (9%) | 10 | 31 |
| 8 | H | 89/130 (68%) | 82 (92%) | 7 (8%) | 12 | 35 |
| 8 | T | 91/130 (70%) | 84 (92%) | 7 (8%) | 13 | 37 |
| 9 | I | 81/109 (74%) | 68 (84%) | 13 (16%) | 2 | 13 |
| 9 | U | 81/109 (74%) | 70 (86%) | 11 (14%) | 3 | 17 |
| 10 | J | 47/66 (71%) | 40 (85%) | 7 (15%) | 3 | 15 |
| 10 | V | 47/66 (71%) | 40 (85%) | 7 (15%) | 3 | 15 |
| 11 | K | 67/109 (62%) | 56 (84%) | 11 (16%) | 2 | 12 |
| 11 | W | 68/109 (62%) | 56 (82%) | 12 (18%) | 2 | 11 |
| 12 | L | 26/58 (45%) | 25 (96%) | 1 (4%) | 33 | 57 |
| 12 | X | 26/58 (45%) | 25 (96%) | 1 (4%) | 33 | 57 |
| All | All | 5305/7966 (67%) | 4747 (90%) | 558 (10%) | 7 | 24 |

All (558) residues with a non-rotameric sidechain are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | A | 12 | ARG |
| 1 | A | 18 | GLN |
| 1 | A | 34 | LYS |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | A | 41 | MET |
| 1 | A | 62 | ASP |
| 1 | A | 77 | CYS |
| 1 | A | 83 | HIS |
| 1 | A | 110 | CYS |
| 1 | A | 120 | PRO |
| 1 | A | 121 | THR |
| 1 | A | 131 | PRO |
| 1 | A | 198 | PRO |
| 1 | A | 200 | ARG |
| 1 | A | 214 | HIS |
| 1 | A | 216 | SER |
| 1 | A | 217 | PRO |
| 1 | A | 244 | PRO |
| 1 | A | 262 | ASP |
| 1 | A | 309 | ILE |
| 1 | A | 313 | PRO |
| 1 | A | 336 | ARG |
| 1 | A | 345 | ARG |
| 1 | A | 370 | SER |
| 1 | A | 386 | ILE |
| 1 | A | 390 | THR |
| 1 | A | 404 | LYS |
| 1 | A | 409 | ASP |
| 1 | A | 413 | ARG |
| 1 | A | 426 | VAL |
| 1 | A | 435 | ARG |
| 1 | A | 441 | ASP |
| 1 | A | 444 | LEU |
| 1 | A | 446 | ASN |
| 1 | A | 448 | GLN |
| 1 | A | 451 | LEU |
| 1 | A | 452 | HIS |
| 1 | A | 463 | VAL |
| 1 | A | 467 | SER |
| 1 | A | 470 | ARG |
| 1 | A | 482 | ASP |
| 1 | A | 494 | GLN |
| 1 | A | 525 | VAL |
| 1 | A | 543 | GLU |
| 1 | A | 553 | TRP |
| 1 | A | 561 | VAL |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | A | 598 | LEU |
| 1 | A | 636 | ARG |
| 1 | A | 651 | GLN |
| 1 | A | 667 | ILE |
| 1 | A | 677 | MET |
| 1 | A | 707 | PRO |
| 1 | A | 712 | ARG |
| 1 | A | 728 | ASP |
| 1 | A | 732 | ARG |
| 1 | A | 739 | LYS |
| 1 | A | 740 | ASP |
| 1 | A | 741 | LEU |
| 1 | A | 742 | ASN |
| 1 | A | 765 | CYS |
| 1 | A | 775 | ARG |
| 1 | A | 822 | ARG |
| 1 | A | 840 | ARG |
| 1 | A | 859 | ASN |
| 1 | A | 887 | ILE |
| 1 | A | 930 | LEU |
| 1 | A | 941 | ARG |
| 1 | A | 986 | PRO |
| 1 | A | 1031 | ARG |
| 1 | A | 1032 | ARG |
| 1 | A | 1054 | GLN |
| 1 | A | 1118 | LEU |
| 1 | A | 1122 | LEU |
| 1 | A | 1148 | VAL |
| 1 | A | 1168 | ASP |
| 1 | A | 1196 | ARG |
| 1 | A | 1238 | LEU |
| 1 | A | 1244 | VAL |
| 1 | A | 1267 | GLU |
| 1 | A | 1270 | MET |
| 1 | A | 1280 | PRO |
| 1 | A | 1294 | VAL |
| 1 | A | 1300 | GLU |
| 1 | A | 1327 | SER |
| 1 | A | 1335 | PHE |
| 1 | A | 1367 | ASN |
| 1 | A | 1374 | LEU |
| 1 | A | 1388 | THR |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | A | 1403 | CYS |
| 1 | A | 1406 | GLU |
| 1 | A | 1429 | GLU |
| 1 | A | 1435 | GLN |
| 1 | A | 1444 | PHE |
| 1 | A | 1447 | MET |
| 1 | A | 1448 | ILE |
| 1 | A | 1450 | GLU |
| 2 | B | 17 | CYS |
| 2 | B | 50 | VAL |
| 2 | B | 54 | PRO |
| 2 | B | 90 | THR |
| 2 | B | 95 | THR |
| 2 | B | 166 | ARG |
| 2 | B | 185 | GLU |
| 2 | B | 190 | MET |
| 2 | B | 226 | SER |
| 2 | B | 252 | ARG |
| 2 | B | 259 | ARG |
| 2 | B | 260 | THR |
| 2 | B | 278 | PHE |
| 2 | B | 295 | TYR |
| 2 | B | 358 | THR |
| 2 | B | 364 | GLU |
| 2 | B | 386 | LYS |
| 2 | B | 389 | ASP |
| 2 | B | 439 | LEU |
| 2 | B | 458 | ASN |
| 2 | B | 459 | TRP |
| 2 | B | 466 | MET |
| 2 | B | 469 | ARG |
| 2 | B | 478 | ARG |
| 2 | B | 489 | ARG |
| 2 | B | 491 | THR |
| 2 | B | 506 | GLN |
| 2 | B | 509 | ASN |
| 2 | B | 511 | HIS |
| 2 | B | 543 | PRO |
| 2 | B | 550 | PHE |
| 2 | B | 584 | ARG |
| 2 | B | 596 | LEU |
| 2 | B | 603 | SER |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 2 | B | 607 | SER |
| 2 | B | 609 | ILE |
| 2 | B | 622 | ASP |
| 2 | B | 628 | ARG |
| 2 | B | 629 | PRO |
| 2 | B | 637 | GLU |
| 2 | B | 676 | TYR |
| 2 | B | 728 | PRO |
| 2 | B | 737 | THR |
| 2 | B | 786 | ASN |
| 2 | B | 790 | ASP |
| 2 | B | 791 | THR |
| 2 | B | 797 | TYR |
| 2 | B | 798 | TYR |
| 2 | B | 811 | TYR |
| 2 | B | 830 | TYR |
| 2 | B | 831 | SER |
| 2 | B | 835 | GLN |
| 2 | B | 845 | SER |
| 2 | B | 859 | TYR |
| 2 | B | 878 | THR |
| 2 | B | 887 | HIS |
| 2 | B | 899 | ILE |
| 2 | B | 909 | ASP |
| 2 | B | 939 | THR |
| 2 | B | 944 | THR |
| 2 | B | 953 | LEU |
| 2 | B | 970 | THR |
| 2 | B | 999 | MET |
| 2 | B | 1021 | MET |
| 2 | B | 1022 | THR |
| 2 | B | 1045 | THR |
| 2 | B | 1046 | PRO |
| 2 | B | 1047 | PHE |
| 2 | B | 1069 | PHE |
| 2 | B | 1071 | VAL |
| 2 | B | 1084 | GLN |
| 2 | B | 1092 | TYR |
| 2 | B | 1096 | ARG |
| 2 | B | 1147 | LEU |
| 2 | B | 1151 | LEU |
| 2 | B | 1159 | ARG |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 2 | B | 1185 | CYS |
| 2 | B | 1189 | THR |
| 2 | B | 1192 | TYR |
| 2 | B | 1198 | TYR |
| 2 | B | 1218 | THR |
| 2 | B | 1220 | ARG |
| 2 | B | 1224 | SER |
| 3 | C | 34 | ARG |
| 3 | C | 59 | ASP |
| 3 | C | 61 | PHE |
| 3 | C | 66 | LEU |
| 3 | C | 76 | VAL |
| 3 | C | 101 | SER |
| 3 | C | 111 | THR |
| 3 | C | 121 | VAL |
| 3 | C | 124 | PRO |
| 3 | C | 136 | ASP |
| 3 | C | 145 | CYS |
| 3 | C | 147 | LEU |
| 3 | C | 163 | ILE |
| 3 | C | 166 | GLU |
| 3 | C | 170 | TRP |
| 3 | C | 194 | GLU |
| 3 | C | 215 | PRO |
| 3 | C | 218 | VAL |
| 3 | C | 233 | GLU |
| 3 | C | 251 | LEU |
| 3 | C | 262 | LEU |
| 3 | C | 267 | PRO |
| 4 | D | 32 | PRO |
| 4 | D | 41 | HIS |
| 4 | D | 48 | LEU |
| 4 | D | 51 | LEU |
| 4 | D | 92 | VAL |
| 4 | D | 109 | LEU |
| 4 | D | 117 | ASP |
| 4 | D | 139 | PRO |
| 4 | D | 158 | THR |
| 4 | D | 171 | LEU |
| 4 | D | 184 | PRO |
| 4 | D | 185 | TYR |
| 5 | E | 8 | ILE |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 5 | E | 16 | ARG |
| 5 | E | 37 | SER |
| 5 | E | 59 | PHE |
| 5 | E | 65 | PRO |
| 5 | E | 72 | SER |
| 5 | E | 73 | ASP |
| 5 | E | 77 | LEU |
| 5 | E | 103 | ASN |
| 5 | E | 113 | ASN |
| 5 | E | 131 | ILE |
| 5 | E | 143 | ILE |
| 5 | E | 145 | HIS |
| 5 | E | 174 | LEU |
| 6 | F | 90 | ARG |
| 6 | F | 99 | LEU |
| 6 | F | 103 | MET |
| 6 | F | 116 | ASP |
| 6 | F | 138 | LEU |
| 6 | F | 140 | ASP |
| 7 | G | 1 | MET |
| 7 | G | 13 | LEU |
| 7 | G | 74 | TYR |
| 7 | G | 80 | LYS |
| 7 | G | 88 | ASP |
| 7 | G | 112 | THR |
| 7 | G | 128 | PRO |
| 7 | G | 163 | ILE |
| 7 | G | 171 | ILE |
| 8 | H | 3 | SER |
| 8 | H | 10 | PHE |
| 8 | H | 56 | THR |
| 8 | H | 63 | LEU |
| 8 | H | 94 | TYR |
| 8 | H | 101 | TYR |
| 8 | H | 109 | ASP |
| 9 | I | 4 | PHE |
| 9 | I | 7 | CYS |
| 9 | I | 12 | ASN |
| 9 | I | 14 | LEU |
| 9 | I | 15 | TYR |
| 9 | I | 34 | TYR |
| 9 | I | 35 | THR |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 9 | I | 51 | ASN |
| 9 | I | 87 | GLN |
| 9 | I | 98 | THR |
| 9 | I | 100 | PHE |
| 9 | I | 106 | CYS |
| 9 | I | 114 | SER |
| 10 | J | 7 | CYS |
| 10 | J | 13 | VAL |
| 10 | J | 16 | ASP |
| 10 | J | 42 | ARG |
| 10 | J | 43 | TYR |
| 10 | J | 45 | CYS |
| 10 | J | 47 | ARG |
| 11 | K | 1 | MET |
| 11 | K | 10 | PHE |
| 11 | K | 17 | PRO |
| 11 | K | 25 | SER |
| 11 | K | 47 | ARG |
| 11 | K | 54 | PRO |
| 11 | K | 57 | THR |
| 11 | K | 61 | TYR |
| 11 | K | 72 | VAL |
| 11 | K | 76 | GLN |
| 11 | K | 101 | LEU |
| 12 | L | 65 | ARG |
| 1 | M | 12 | ARG |
| 1 | M | 18 | GLN |
| 1 | M | 34 | LYS |
| 1 | M | 41 | MET |
| 1 | M | 62 | ASP |
| 1 | M | 77 | CYS |
| 1 | M | 83 | HIS |
| 1 | M | 110 | CYS |
| 1 | M | 120 | PRO |
| 1 | M | 121 | THR |
| 1 | M | 131 | PRO |
| 1 | M | 198 | PRO |
| 1 | M | 200 | ARG |
| 1 | M | 214 | HIS |
| 1 | M | 216 | SER |
| 1 | M | 217 | PRO |
| 1 | M | 244 | PRO |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | M | 262 | ASP |
| 1 | M | 309 | ILE |
| 1 | M | 313 | PRO |
| 1 | M | 336 | ARG |
| 1 | M | 345 | ARG |
| 1 | M | 370 | SER |
| 1 | M | 386 | ILE |
| 1 | M | 390 | THR |
| 1 | M | 404 | LYS |
| 1 | M | 409 | ASP |
| 1 | M | 413 | ARG |
| 1 | M | 426 | VAL |
| 1 | M | 435 | ARG |
| 1 | M | 441 | ASP |
| 1 | M | 444 | LEU |
| 1 | M | 446 | ASN |
| 1 | M | 448 | GLN |
| 1 | M | 451 | LEU |
| 1 | M | 452 | HIS |
| 1 | M | 463 | VAL |
| 1 | M | 467 | SER |
| 1 | M | 470 | ARG |
| 1 | M | 482 | ASP |
| 1 | M | 494 | GLN |
| 1 | M | 525 | VAL |
| 1 | M | 543 | GLU |
| 1 | M | 553 | TRP |
| 1 | M | 561 | VAL |
| 1 | M | 598 | LEU |
| 1 | M | 636 | ARG |
| 1 | M | 651 | GLN |
| 1 | M | 667 | ILE |
| 1 | M | 677 | MET |
| 1 | M | 707 | PRO |
| 1 | M | 712 | ARG |
| 1 | M | 728 | ASP |
| 1 | M | 732 | ARG |
| 1 | M | 739 | LYS |
| 1 | M | 740 | ASP |
| 1 | M | 741 | LEU |
| 1 | M | 742 | ASN |
| 1 | M | 765 | CYS |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | M | 775 | ARG |
| 1 | M | 822 | ARG |
| 1 | M | 840 | ARG |
| 1 | M | 859 | ASN |
| 1 | M | 887 | ILE |
| 1 | M | 930 | LEU |
| 1 | M | 941 | ARG |
| 1 | M | 986 | PRO |
| 1 | M | 1031 | ARG |
| 1 | M | 1032 | ARG |
| 1 | M | 1054 | GLN |
| 1 | M | 1118 | LEU |
| 1 | M | 1122 | LEU |
| 1 | M | 1148 | VAL |
| 1 | M | 1168 | ASP |
| 1 | M | 1196 | ARG |
| 1 | M | 1238 | LEU |
| 1 | M | 1244 | VAL |
| 1 | M | 1267 | GLU |
| 1 | M | 1270 | MET |
| 1 | M | 1280 | PRO |
| 1 | M | 1294 | VAL |
| 1 | M | 1300 | GLU |
| 1 | M | 1327 | SER |
| 1 | M | 1335 | PHE |
| 1 | M | 1367 | ASN |
| 1 | M | 1374 | LEU |
| 1 | M | 1388 | THR |
| 1 | M | 1403 | CYS |
| 1 | M | 1406 | GLU |
| 1 | M | 1429 | GLU |
| 1 | M | 1435 | GLN |
| 1 | M | 1444 | PHE |
| 1 | M | 1447 | MET |
| 1 | M | 1448 | ILE |
| 1 | M | 1450 | GLU |
| 2 | N | 17 | CYS |
| 2 | N | 50 | VAL |
| 2 | N | 54 | PRO |
| 2 | N | 90 | THR |
| 2 | N | 95 | THR |
| 2 | N | 166 | ARG |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 2 | N | 185 | GLU |
| 2 | N | 190 | MET |
| 2 | N | 226 | SER |
| 2 | N | 252 | ARG |
| 2 | N | 259 | ARG |
| 2 | N | 260 | THR |
| 2 | N | 278 | PHE |
| 2 | N | 295 | TYR |
| 2 | N | 358 | THR |
| 2 | N | 364 | GLU |
| 2 | N | 386 | LYS |
| 2 | N | 389 | ASP |
| 2 | N | 439 | LEU |
| 2 | N | 458 | ASN |
| 2 | N | 459 | TRP |
| 2 | N | 466 | MET |
| 2 | N | 469 | ARG |
| 2 | N | 478 | ARG |
| 2 | N | 489 | ARG |
| 2 | N | 491 | THR |
| 2 | N | 506 | GLN |
| 2 | N | 509 | ASN |
| 2 | N | 511 | HIS |
| 2 | N | 543 | PRO |
| 2 | N | 550 | PHE |
| 2 | N | 584 | ARG |
| 2 | N | 596 | LEU |
| 2 | N | 603 | SER |
| 2 | N | 607 | SER |
| 2 | N | 609 | ILE |
| 2 | N | 622 | ASP |
| 2 | N | 628 | ARG |
| 2 | N | 629 | PRO |
| 2 | N | 637 | GLU |
| 2 | N | 676 | TYR |
| 2 | N | 728 | PRO |
| 2 | N | 737 | THR |
| 2 | N | 786 | ASN |
| 2 | N | 790 | ASP |
| 2 | N | 791 | THR |
| 2 | N | 797 | TYR |
| 2 | N | 798 | TYR |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 2 | N | 811 | TYR |
| 2 | N | 830 | TYR |
| 2 | N | 831 | SER |
| 2 | N | 835 | GLN |
| 2 | N | 845 | SER |
| 2 | N | 859 | TYR |
| 2 | N | 878 | THR |
| 2 | N | 887 | HIS |
| 2 | N | 899 | ILE |
| 2 | N | 909 | ASP |
| 2 | N | 939 | THR |
| 2 | N | 944 | THR |
| 2 | N | 953 | LEU |
| 2 | N | 970 | THR |
| 2 | N | 999 | MET |
| 2 | N | 1021 | MET |
| 2 | N | 1022 | THR |
| 2 | N | 1045 | THR |
| 2 | N | 1046 | PRO |
| 2 | N | 1047 | PHE |
| 2 | N | 1069 | PHE |
| 2 | N | 1071 | VAL |
| 2 | N | 1084 | GLN |
| 2 | N | 1092 | TYR |
| 2 | N | 1096 | ARG |
| 2 | N | 1147 | LEU |
| 2 | N | 1151 | LEU |
| 2 | N | 1159 | ARG |
| 2 | N | 1185 | CYS |
| 2 | N | 1189 | THR |
| 2 | N | 1192 | TYR |
| 2 | N | 1198 | TYR |
| 2 | N | 1218 | THR |
| 2 | N | 1220 | ARG |
| 2 | N | 1224 | SER |
| 3 | O | 34 | ARG |
| 3 | O | 59 | ASP |
| 3 | O | 61 | PHE |
| 3 | O | 66 | LEU |
| 3 | O | 76 | VAL |
| 3 | O | 101 | SER |
| 3 | O | 111 | THR |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 3 | O | 121 | VAL |
| 3 | O | 124 | PRO |
| 3 | O | 136 | ASP |
| 3 | O | 145 | CYS |
| 3 | O | 147 | LEU |
| 3 | O | 163 | ILE |
| 3 | O | 166 | GLU |
| 3 | O | 170 | TRP |
| 3 | O | 194 | GLU |
| 3 | O | 215 | PRO |
| 3 | O | 218 | VAL |
| 3 | O | 233 | GLU |
| 3 | O | 251 | LEU |
| 3 | O | 262 | LEU |
| 3 | O | 267 | PRO |
| 4 | P | 32 | PRO |
| 4 | P | 41 | HIS |
| 4 | P | 48 | LEU |
| 4 | P | 51 | LEU |
| 4 | P | 109 | LEU |
| 4 | P | 117 | ASP |
| 4 | P | 139 | PRO |
| 4 | P | 158 | THR |
| 4 | P | 171 | LEU |
| 4 | P | 184 | PRO |
| 4 | P | 185 | TYR |
| 5 | Q | 8 | ILE |
| 5 | Q | 16 | ARG |
| 5 | Q | 37 | SER |
| 5 | Q | 59 | PHE |
| 5 | Q | 65 | PRO |
| 5 | Q | 72 | SER |
| 5 | Q | 73 | ASP |
| 5 | Q | 77 | LEU |
| 5 | Q | 103 | ASN |
| 5 | Q | 113 | ASN |
| 5 | Q | 131 | ILE |
| 5 | Q | 143 | ILE |
| 5 | Q | 145 | HIS |
| 5 | Q | 174 | LEU |
| 6 | R | 90 | ARG |
| 6 | R | 99 | LEU |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 6 | R | 103 | MET |
| 6 | R | 116 | ASP |
| 6 | R | 138 | LEU |
| 6 | R | 140 | ASP |
| 7 | S | 1 | MET |
| 7 | S | 13 | LEU |
| 7 | S | 74 | TYR |
| 7 | S | 80 | LYS |
| 7 | S | 88 | ASP |
| 7 | S | 112 | THR |
| 7 | S | 128 | PRO |
| 7 | S | 163 | ILE |
| 7 | S | 171 | ILE |
| 8 | T | 3 | SER |
| 8 | T | 10 | PHE |
| 8 | T | 56 | THR |
| 8 | T | 63 | LEU |
| 8 | T | 94 | TYR |
| 8 | T | 101 | TYR |
| 8 | T | 109 | ASP |
| 9 | U | 4 | PHE |
| 9 | U | 7 | CYS |
| 9 | U | 12 | ASN |
| 9 | U | 14 | LEU |
| 9 | U | 34 | TYR |
| 9 | U | 51 | ASN |
| 9 | U | 87 | GLN |
| 9 | U | 98 | THR |
| 9 | U | 100 | PHE |
| 9 | U | 106 | CYS |
| 9 | U | 114 | SER |
| 10 | V | 7 | CYS |
| 10 | V | 13 | VAL |
| 10 | V | 16 | ASP |
| 10 | V | 42 | ARG |
| 10 | V | 43 | TYR |
| 10 | V | 45 | CYS |
| 10 | V | 47 | ARG |
| 11 | W | 1 | MET |
| 11 | W | 10 | PHE |
| 11 | W | 16 | VAL |
| 11 | W | 17 | PRO |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 11 | W | 25 | SER |
| 11 | W | 47 | ARG |
| 11 | W | 54 | PRO |
| 11 | W | 57 | THR |
| 11 | W | 61 | TYR |
| 11 | W | 72 | VAL |
| 11 | W | 76 | GLN |
| 11 | W | 101 | LEU |
| 12 | X | 65 | ARG |

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (138) such sidechains are listed below:

| Mol | Chain | Res | Type |
|-----|-------|------|------|
| 1 | A | 54 | ASN |
| 1 | A | 83 | HIS |
| 1 | A | 119 | ASN |
| 1 | A | 226 | ASN |
| 1 | A | 298 | GLN |
| 1 | A | 340 | ASN |
| 1 | A | 359 | ASN |
| 1 | A | 395 | ASN |
| 1 | A | 436 | HIS |
| 1 | A | 494 | GLN |
| 1 | A | 504 | GLN |
| 1 | A | 699 | GLN |
| 1 | A | 737 | ASN |
| 1 | A | 742 | ASN |
| 1 | A | 758 | ASN |
| 1 | A | 787 | HIS |
| 1 | A | 852 | HIS |
| 1 | A | 859 | ASN |
| 1 | A | 882 | GLN |
| 1 | A | 927 | GLN |
| 1 | A | 936 | GLN |
| 1 | A | 967 | GLN |
| 1 | A | 1367 | ASN |
| 1 | A | 1390 | HIS |
| 1 | A | 1435 | GLN |
| 2 | B | 33 | GLN |
| 2 | B | 34 | GLN |
| 2 | B | 108 | ASN |
| 2 | B | 206 | GLN |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 2 | B | 227 | HIS |
| 2 | B | 376 | ASN |
| 2 | B | 458 | ASN |
| 2 | B | 492 | ASN |
| 2 | B | 508 | HIS |
| 2 | B | 509 | ASN |
| 2 | B | 511 | HIS |
| 2 | B | 744 | HIS |
| 2 | B | 821 | GLN |
| 2 | B | 822 | ASN |
| 2 | B | 835 | GLN |
| 2 | B | 842 | ASN |
| 2 | B | 957 | ASN |
| 2 | B | 975 | GLN |
| 2 | B | 1015 | HIS |
| 2 | B | 1065 | GLN |
| 2 | B | 1161 | HIS |
| 2 | B | 1179 | GLN |
| 2 | B | 1193 | GLN |
| 2 | B | 1211 | ASN |
| 3 | C | 167 | HIS |
| 4 | D | 126 | GLN |
| 4 | D | 138 | HIS |
| 4 | D | 144 | GLN |
| 5 | E | 31 | GLN |
| 5 | E | 100 | GLN |
| 5 | E | 103 | ASN |
| 5 | E | 113 | ASN |
| 5 | E | 146 | HIS |
| 7 | G | 53 | ASN |
| 8 | H | 136 | GLN |
| 8 | H | 138 | ASN |
| 9 | I | 12 | ASN |
| 9 | I | 46 | HIS |
| 9 | I | 51 | ASN |
| 9 | I | 90 | GLN |
| 10 | J | 52 | HIS |
| 11 | K | 65 | HIS |
| 11 | K | 76 | GLN |
| 1 | M | 54 | ASN |
| 1 | M | 83 | HIS |
| 1 | M | 119 | ASN |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | M | 226 | ASN |
| 1 | M | 298 | GLN |
| 1 | M | 340 | ASN |
| 1 | M | 359 | ASN |
| 1 | M | 395 | ASN |
| 1 | M | 436 | HIS |
| 1 | M | 494 | GLN |
| 1 | M | 504 | GLN |
| 1 | M | 699 | GLN |
| 1 | M | 737 | ASN |
| 1 | M | 742 | ASN |
| 1 | M | 743 | ASN |
| 1 | M | 758 | ASN |
| 1 | M | 787 | HIS |
| 1 | M | 852 | HIS |
| 1 | M | 859 | ASN |
| 1 | M | 882 | GLN |
| 1 | M | 927 | GLN |
| 1 | M | 936 | GLN |
| 1 | M | 967 | GLN |
| 1 | M | 1367 | ASN |
| 1 | M | 1390 | HIS |
| 1 | M | 1435 | GLN |
| 2 | N | 33 | GLN |
| 2 | N | 34 | GLN |
| 2 | N | 108 | ASN |
| 2 | N | 206 | GLN |
| 2 | N | 227 | HIS |
| 2 | N | 376 | ASN |
| 2 | N | 458 | ASN |
| 2 | N | 492 | ASN |
| 2 | N | 508 | HIS |
| 2 | N | 509 | ASN |
| 2 | N | 744 | HIS |
| 2 | N | 821 | GLN |
| 2 | N | 822 | ASN |
| 2 | N | 835 | GLN |
| 2 | N | 842 | ASN |
| 2 | N | 957 | ASN |
| 2 | N | 975 | GLN |
| 2 | N | 1015 | HIS |
| 2 | N | 1065 | GLN |

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| Mol | Chain | Res | Type |
|-----|-------|------|------|
| 2 | N | 1161 | HIS |
| 2 | N | 1179 | GLN |
| 2 | N | 1193 | GLN |
| 2 | N | 1211 | ASN |
| 3 | O | 167 | HIS |
| 4 | P | 99 | ASN |
| 4 | P | 126 | GLN |
| 4 | P | 138 | HIS |
| 4 | P | 144 | GLN |
| 5 | Q | 31 | GLN |
| 5 | Q | 100 | GLN |
| 5 | Q | 103 | ASN |
| 5 | Q | 113 | ASN |
| 5 | Q | 146 | HIS |
| 6 | R | 104 | ASN |
| 7 | S | 53 | ASN |
| 8 | T | 136 | GLN |
| 8 | T | 138 | ASN |
| 9 | U | 12 | ASN |
| 9 | U | 46 | HIS |
| 9 | U | 51 | ASN |
| 9 | U | 90 | GLN |
| 10 | V | 52 | HIS |
| 11 | W | 65 | HIS |
| 11 | W | 76 | GLN |

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 16 ligands modelled in this entry, 16 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

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 | 1384/1743 (79%) | 0.50 | 114 (8%) 11 14 | 125, 172, 223, 262 | 0 |
| 1 | M | 1387/1743 (79%) | 0.50 | 108 (7%) 13 15 | 134, 181, 232, 271 | 0 |
| 2 | B | 1070/1227 (87%) | 0.66 | 122 (11%) 5 9 | 123, 180, 233, 267 | 0 |
| 2 | N | 1074/1227 (87%) | 0.73 | 127 (11%) 4 8 | 133, 190, 242, 276 | 0 |
| 3 | C | 265/304 (87%) | 0.56 | 19 (7%) 15 16 | 135, 169, 204, 228 | 0 |
| 3 | O | 265/304 (87%) | 0.70 | 26 (9%) 7 10 | 144, 178, 213, 237 | 0 |
| 4 | D | 159/186 (85%) | 1.04 | 32 (20%) 1 3 | 153, 191, 228, 234 | 0 |
| 4 | P | 164/186 (88%) | 0.76 | 25 (15%) 2 5 | 162, 200, 239, 243 | 0 |
| 5 | E | 214/214 (100%) | 0.37 | 7 (3%) 46 41 | 152, 214, 258, 267 | 0 |
| 5 | Q | 214/214 (100%) | 0.50 | 18 (8%) 11 13 | 161, 223, 267, 276 | 0 |
| 6 | F | 84/155 (54%) | 0.72 | 10 (11%) 4 8 | 129, 155, 185, 192 | 0 |
| 6 | R | 84/155 (54%) | 0.73 | 12 (14%) 2 6 | 138, 164, 194, 201 | 0 |
| 7 | G | 171/171 (100%) | 0.83 | 23 (13%) 3 6 | 157, 176, 212, 222 | 0 |
| 7 | S | 171/171 (100%) | 0.66 | 13 (7%) 13 15 | 166, 185, 221, 231 | 0 |
| 8 | H | 130/145 (89%) | 0.44 | 3 (2%) 60 54 | 178, 210, 238, 254 | 0 |
| 8 | T | 131/145 (90%) | 0.61 | 11 (8%) 11 13 | 187, 219, 247, 263 | 0 |
| 9 | I | 113/115 (98%) | 0.97 | 29 (25%) 0 2 | 170, 210, 241, 250 | 0 |
| 9 | U | 113/115 (98%) | 0.85 | 22 (19%) 1 3 | 179, 219, 250, 259 | 0 |
| 10 | J | 62/72 (86%) | 0.57 | 4 (6%) 18 18 | 131, 160, 200, 214 | 0 |
| 10 | V | 62/72 (86%) | 0.62 | 7 (11%) 5 9 | 140, 169, 209, 223 | 0 |
| 11 | K | 114/118 (96%) | 0.31 | 6 (5%) 26 26 | 142, 170, 194, 220 | 0 |
| 11 | W | 114/118 (96%) | 0.53 | 7 (6%) 21 20 | 152, 179, 203, 230 | 0 |
| 12 | L | 46/73 (63%) | 0.40 | 2 (4%) 35 32 | 166, 238, 253, 255 | 0 |
| 12 | X | 46/73 (63%) | 1.02 | 9 (19%) 1 3 | 175, 248, 262, 265 | 0 |

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| Mol | Chain | Analysed | <RSRZ> | #RSRZ>2 | OWAB(Å ²) | Q<0.9 |
|-----|-------|-----------------|--------|-----------------------------|-----------------------|-------|
| All | All | 7637/9046 (84%) | 0.61 | 756 (9%) 7 10 | 123, 183, 240, 276 | 0 |

All (756) RSRZ outliers are listed below:

| Mol | Chain | Res | Type | RSRZ |
|-----|-------|------|------|------|
| 1 | A | 1115 | THR | 7.8 |
| 2 | N | 388 | GLN | 7.0 |
| 2 | N | 389 | ASP | 6.7 |
| 2 | N | 216 | VAL | 6.7 |
| 2 | N | 721 | ASP | 6.5 |
| 1 | A | 257 | THR | 6.4 |
| 1 | A | 38 | PRO | 6.4 |
| 12 | X | 28 | GLY | 6.4 |
| 2 | N | 1224 | SER | 6.4 |
| 9 | I | 3 | SER | 6.3 |
| 1 | M | 959 | PRO | 6.3 |
| 1 | A | 255 | GLU | 5.9 |
| 10 | J | 63 | ASN | 5.9 |
| 2 | B | 884 | ARG | 5.8 |
| 4 | D | 138 | HIS | 5.6 |
| 9 | I | 2 | ALA | 5.6 |
| 9 | U | 54 | GLU | 5.6 |
| 2 | N | 387 | ASP | 5.5 |
| 3 | C | 3 | LYS | 5.3 |
| 2 | N | 271 | ASP | 5.3 |
| 3 | C | 2 | SER | 5.3 |
| 9 | I | 114 | SER | 5.2 |
| 1 | M | 317 | GLN | 5.2 |
| 2 | N | 259 | ARG | 5.1 |
| 2 | N | 260 | THR | 5.1 |
| 3 | C | 145 | CYS | 5.0 |
| 2 | N | 877 | PRO | 4.9 |
| 5 | E | 202 | GLU | 4.9 |
| 1 | A | 256 | THR | 4.9 |
| 1 | M | 323 | VAL | 4.9 |
| 2 | B | 1224 | SER | 4.8 |
| 12 | X | 29 | VAL | 4.8 |
| 2 | N | 521 | PRO | 4.8 |
| 5 | Q | 202 | GLU | 4.7 |
| 9 | U | 55 | THR | 4.7 |
| 4 | D | 117 | ASP | 4.7 |
| 2 | B | 885 | LEU | 4.7 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 2 | B | 203 | LEU | 4.7 |
| 2 | B | 271 | ASP | 4.7 |
| 4 | D | 96 | ALA | 4.6 |
| 4 | P | 33 | GLU | 4.6 |
| 2 | B | 936 | ASP | 4.6 |
| 2 | N | 101 | PRO | 4.6 |
| 3 | C | 4 | GLU | 4.5 |
| 1 | A | 1097 | THR | 4.5 |
| 7 | G | 128 | PRO | 4.5 |
| 1 | A | 671 | ILE | 4.5 |
| 2 | B | 238 | GLY | 4.5 |
| 4 | P | 83 | GLU | 4.5 |
| 2 | N | 203 | LEU | 4.4 |
| 2 | N | 885 | LEU | 4.4 |
| 2 | N | 307 | LYS | 4.4 |
| 1 | A | 957 | PRO | 4.4 |
| 2 | N | 443 | SER | 4.4 |
| 2 | B | 1173 | ALA | 4.3 |
| 9 | U | 36 | GLU | 4.3 |
| 2 | B | 882 | THR | 4.3 |
| 2 | N | 520 | THR | 4.3 |
| 2 | N | 678 | TRP | 4.3 |
| 6 | F | 110 | ASP | 4.3 |
| 2 | B | 30 | LEU | 4.3 |
| 7 | G | 96 | PRO | 4.3 |
| 2 | N | 215 | GLN | 4.3 |
| 1 | A | 1114 | LYS | 4.3 |
| 2 | B | 752 | ALA | 4.2 |
| 1 | A | 1096 | VAL | 4.2 |
| 2 | B | 1222 | GLY | 4.2 |
| 2 | N | 1169 | MET | 4.2 |
| 9 | I | 113 | GLU | 4.2 |
| 1 | A | 1424 | CYS | 4.2 |
| 2 | B | 382 | ALA | 4.2 |
| 2 | B | 877 | PRO | 4.2 |
| 4 | D | 184 | PRO | 4.2 |
| 9 | I | 16 | PRO | 4.2 |
| 1 | A | 258 | GLN | 4.1 |
| 9 | I | 115 | GLU | 4.1 |
| 1 | A | 239 | VAL | 4.1 |
| 2 | N | 441 | VAL | 4.1 |
| 2 | B | 634 | GLU | 4.1 |

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| Mol | Chain | Res | Type | RSRZ |
|-----|-------|------|------|------|
| 2 | B | 239 | SER | 4.1 |
| 9 | I | 36 | GLU | 4.1 |
| 2 | B | 883 | LEU | 4.1 |
| 1 | A | 1425 | ARG | 4.0 |
| 2 | N | 522 | GLU | 4.0 |
| 9 | I | 51 | ASN | 4.0 |
| 1 | A | 286 | PRO | 4.0 |
| 9 | I | 25 | LEU | 4.0 |
| 2 | N | 689 | TYR | 4.0 |
| 3 | O | 258 | VAL | 4.0 |
| 3 | O | 133 | VAL | 4.0 |
| 2 | B | 721 | ASP | 4.0 |
| 4 | D | 137 | LEU | 4.0 |
| 4 | P | 94 | SER | 4.0 |
| 1 | M | 38 | PRO | 4.0 |
| 2 | B | 697 | THR | 4.0 |
| 2 | N | 1173 | ALA | 3.9 |
| 2 | B | 886 | LYS | 3.9 |
| 1 | M | 320 | GLY | 3.9 |
| 7 | G | 124 | SER | 3.9 |
| 2 | N | 308 | PRO | 3.9 |
| 2 | N | 1171 | VAL | 3.8 |
| 1 | A | 1257 | ALA | 3.8 |
| 1 | M | 886 | THR | 3.8 |
| 2 | B | 1221 | SER | 3.8 |
| 2 | N | 887 | HIS | 3.8 |
| 4 | P | 95 | GLY | 3.8 |
| 1 | A | 254 | ASP | 3.8 |
| 4 | P | 79 | SER | 3.8 |
| 4 | P | 81 | ASN | 3.8 |
| 2 | N | 1170 | SER | 3.7 |
| 7 | G | 94 | VAL | 3.7 |
| 1 | A | 238 | THR | 3.7 |
| 2 | B | 202 | VAL | 3.7 |
| 7 | G | 126 | SER | 3.7 |
| 9 | U | 56 | ALA | 3.7 |
| 1 | A | 1405 | PHE | 3.7 |
| 4 | P | 85 | ASP | 3.7 |
| 3 | O | 248 | ILE | 3.7 |
| 1 | A | 277 | VAL | 3.7 |
| 2 | N | 306 | LEU | 3.7 |
| 7 | S | 5 | LYS | 3.6 |

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| Mol | Chain | Res | Type | RSRZ |
|-----|-------|------|------|------|
| 3 | O | 194 | GLU | 3.6 |
| 4 | D | 118 | GLU | 3.6 |
| 4 | P | 82 | GLY | 3.6 |
| 1 | M | 876 | GLY | 3.6 |
| 2 | B | 887 | HIS | 3.6 |
| 1 | A | 86 | LEU | 3.6 |
| 3 | O | 268 | ALA | 3.6 |
| 2 | B | 348 | ILE | 3.6 |
| 6 | R | 107 | VAL | 3.6 |
| 1 | A | 1113 | ILE | 3.6 |
| 2 | N | 804 | ALA | 3.6 |
| 4 | D | 4 | SER | 3.6 |
| 2 | N | 204 | ILE | 3.5 |
| 12 | X | 48 | VAL | 3.5 |
| 1 | M | 1404 | SER | 3.5 |
| 9 | I | 112 | ASP | 3.5 |
| 1 | A | 1404 | SER | 3.5 |
| 1 | M | 1167 | GLU | 3.5 |
| 2 | N | 162 | PRO | 3.5 |
| 4 | P | 34 | PHE | 3.5 |
| 4 | D | 83 | GLU | 3.5 |
| 1 | A | 87 | ALA | 3.5 |
| 9 | I | 4 | PHE | 3.5 |
| 12 | X | 47 | PRO | 3.5 |
| 2 | B | 678 | TRP | 3.5 |
| 1 | M | 88 | LYS | 3.5 |
| 2 | N | 517 | PRO | 3.5 |
| 2 | N | 158 | ILE | 3.5 |
| 2 | N | 309 | CYS | 3.5 |
| 8 | H | 101 | TYR | 3.5 |
| 2 | B | 222 | PRO | 3.5 |
| 2 | B | 1223 | VAL | 3.5 |
| 2 | N | 479 | TYR | 3.5 |
| 1 | A | 618 | VAL | 3.5 |
| 1 | M | 884 | ILE | 3.5 |
| 10 | V | 61 | ARG | 3.4 |
| 2 | B | 229 | ALA | 3.4 |
| 1 | M | 319 | SER | 3.4 |
| 2 | B | 221 | ALA | 3.4 |
| 8 | T | 81 | PRO | 3.4 |
| 2 | N | 110 | THR | 3.4 |
| 2 | N | 238 | GLY | 3.4 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 12 | L | 28 | GLY | 3.4 |
| 2 | B | 209 | SER | 3.4 |
| 2 | N | 629 | PRO | 3.4 |
| 2 | N | 160 | LYS | 3.4 |
| 9 | I | 38 | ALA | 3.4 |
| 4 | D | 20 | ASP | 3.4 |
| 4 | D | 95 | GLY | 3.3 |
| 4 | P | 19 | VAL | 3.3 |
| 7 | S | 99 | PHE | 3.3 |
| 1 | A | 358 | PRO | 3.3 |
| 1 | M | 274 | ASN | 3.3 |
| 2 | B | 223 | SER | 3.3 |
| 9 | I | 17 | LYS | 3.3 |
| 1 | M | 87 | ALA | 3.3 |
| 2 | B | 542 | SER | 3.3 |
| 1 | M | 1113 | ILE | 3.3 |
| 1 | M | 627 | GLY | 3.3 |
| 1 | A | 274 | ASN | 3.3 |
| 2 | N | 253 | GLU | 3.3 |
| 2 | N | 884 | ARG | 3.3 |
| 2 | N | 272 | ILE | 3.3 |
| 8 | T | 80 | PRO | 3.3 |
| 2 | N | 956 | THR | 3.3 |
| 1 | M | 379 | GLU | 3.3 |
| 1 | A | 700 | HIS | 3.3 |
| 2 | B | 827 | ILE | 3.3 |
| 3 | C | 194 | GLU | 3.3 |
| 1 | A | 180 | MET | 3.3 |
| 2 | B | 155 | LYS | 3.3 |
| 7 | G | 161 | GLY | 3.3 |
| 2 | B | 899 | ILE | 3.3 |
| 2 | B | 629 | PRO | 3.2 |
| 2 | N | 214 | VAL | 3.2 |
| 2 | N | 239 | SER | 3.2 |
| 2 | N | 826 | ALA | 3.2 |
| 2 | N | 728 | PRO | 3.2 |
| 1 | A | 955 | ASN | 3.2 |
| 3 | O | 41 | PRO | 3.2 |
| 2 | N | 254 | ASP | 3.2 |
| 6 | F | 109 | VAL | 3.2 |
| 6 | R | 154 | ASP | 3.2 |
| 2 | B | 992 | VAL | 3.2 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 2 | N | 779 | GLY | 3.2 |
| 1 | A | 606 | MET | 3.2 |
| 3 | C | 144 | LEU | 3.1 |
| 2 | N | 912 | ILE | 3.1 |
| 1 | M | 1140 | ILE | 3.1 |
| 4 | D | 94 | SER | 3.1 |
| 5 | Q | 126 | VAL | 3.1 |
| 2 | B | 751 | VAL | 3.1 |
| 1 | A | 294 | GLU | 3.1 |
| 9 | U | 58 | ILE | 3.1 |
| 2 | N | 1174 | ASN | 3.1 |
| 8 | T | 79 | ARG | 3.1 |
| 1 | M | 885 | ASP | 3.1 |
| 1 | A | 1116 | PRO | 3.1 |
| 1 | A | 1147 | ASN | 3.1 |
| 3 | O | 56 | VAL | 3.1 |
| 3 | O | 74 | GLU | 3.1 |
| 9 | I | 44 | TYR | 3.1 |
| 1 | A | 959 | PRO | 3.1 |
| 2 | B | 177 | GLU | 3.1 |
| 2 | N | 688 | GLU | 3.1 |
| 1 | M | 518 | ASN | 3.1 |
| 9 | U | 53 | GLY | 3.1 |
| 1 | M | 1244 | VAL | 3.1 |
| 2 | B | 1179 | GLN | 3.1 |
| 3 | O | 128 | ASN | 3.1 |
| 9 | U | 3 | SER | 3.1 |
| 7 | S | 126 | SER | 3.1 |
| 9 | U | 2 | ALA | 3.0 |
| 2 | B | 636 | ASP | 3.0 |
| 2 | N | 217 | PHE | 3.0 |
| 2 | B | 381 | CYS | 3.0 |
| 2 | N | 722 | THR | 3.0 |
| 9 | U | 114 | SER | 3.0 |
| 5 | Q | 96 | CYS | 3.0 |
| 2 | B | 744 | HIS | 3.0 |
| 2 | B | 1180 | PHE | 3.0 |
| 2 | N | 543 | PRO | 3.0 |
| 1 | A | 1127 | ALA | 3.0 |
| 1 | M | 177 | LYS | 3.0 |
| 1 | M | 1386 | ALA | 3.0 |
| 7 | G | 39 | THR | 3.0 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 7 | S | 128 | PRO | 3.0 |
| 1 | M | 228 | ASP | 3.0 |
| 3 | C | 146 | LYS | 3.0 |
| 9 | U | 38 | ALA | 3.0 |
| 2 | N | 955 | THR | 3.0 |
| 3 | O | 251 | LEU | 3.0 |
| 4 | D | 150 | CYS | 3.0 |
| 2 | N | 327 | GLY | 3.0 |
| 6 | F | 96 | THR | 3.0 |
| 9 | I | 26 | LEU | 3.0 |
| 9 | U | 57 | GLY | 3.0 |
| 1 | M | 1408 | THR | 3.0 |
| 2 | B | 628 | ARG | 3.0 |
| 4 | P | 53 | LEU | 2.9 |
| 2 | B | 1220 | ARG | 2.9 |
| 1 | M | 1396 | ASP | 2.9 |
| 1 | M | 618 | VAL | 2.9 |
| 4 | D | 128 | LEU | 2.9 |
| 2 | N | 202 | VAL | 2.9 |
| 5 | Q | 91 | THR | 2.9 |
| 9 | U | 41 | PRO | 2.9 |
| 1 | M | 958 | LEU | 2.9 |
| 1 | M | 254 | ASP | 2.9 |
| 2 | N | 478 | ARG | 2.9 |
| 4 | P | 80 | SER | 2.9 |
| 6 | R | 155 | ASN | 2.9 |
| 1 | A | 240 | LEU | 2.9 |
| 2 | B | 292 | HIS | 2.9 |
| 2 | B | 1000 | PRO | 2.9 |
| 2 | N | 677 | GLY | 2.9 |
| 12 | X | 39 | ASN | 2.9 |
| 3 | O | 243 | VAL | 2.9 |
| 1 | M | 1085 | THR | 2.9 |
| 1 | A | 202 | LEU | 2.9 |
| 2 | N | 1172 | ILE | 2.9 |
| 3 | O | 107 | GLU | 2.9 |
| 1 | A | 956 | TRP | 2.9 |
| 2 | B | 210 | ALA | 2.8 |
| 6 | R | 153 | VAL | 2.8 |
| 3 | O | 237 | SER | 2.8 |
| 1 | M | 586 | GLY | 2.8 |
| 5 | Q | 169 | LEU | 2.8 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 2 | N | 310 | ILE | 2.8 |
| 6 | F | 93 | ILE | 2.8 |
| 10 | V | 5 | VAL | 2.8 |
| 4 | P | 93 | THR | 2.8 |
| 1 | M | 619 | ASP | 2.8 |
| 1 | A | 318 | LYS | 2.8 |
| 1 | M | 442 | PRO | 2.8 |
| 10 | J | 64 | PRO | 2.8 |
| 4 | D | 84 | ILE | 2.8 |
| 2 | B | 689 | TYR | 2.8 |
| 2 | N | 425 | MET | 2.8 |
| 2 | N | 743 | ILE | 2.8 |
| 12 | L | 60 | LYS | 2.8 |
| 2 | B | 1010 | LEU | 2.8 |
| 4 | D | 120 | THR | 2.8 |
| 1 | A | 1149 | THR | 2.8 |
| 1 | M | 515 | PRO | 2.8 |
| 1 | M | 417 | ARG | 2.8 |
| 1 | A | 85 | GLU | 2.8 |
| 1 | A | 1190 | GLN | 2.8 |
| 1 | M | 1190 | GLN | 2.8 |
| 2 | N | 544 | SER | 2.8 |
| 1 | M | 1399 | ALA | 2.8 |
| 5 | Q | 92 | MET | 2.8 |
| 2 | N | 107 | ARG | 2.8 |
| 1 | A | 1267 | GLU | 2.8 |
| 4 | D | 28 | LEU | 2.8 |
| 4 | D | 139 | PRO | 2.8 |
| 1 | A | 1406 | GLU | 2.8 |
| 5 | Q | 94 | ASN | 2.8 |
| 2 | N | 386 | LYS | 2.8 |
| 1 | A | 60 | SER | 2.7 |
| 2 | B | 728 | PRO | 2.7 |
| 4 | P | 41 | HIS | 2.7 |
| 2 | N | 1143 | ALA | 2.7 |
| 7 | G | 95 | SER | 2.7 |
| 2 | N | 221 | ALA | 2.7 |
| 1 | A | 1285 | VAL | 2.7 |
| 2 | B | 745 | PRO | 2.7 |
| 3 | O | 244 | PHE | 2.7 |
| 4 | D | 145 | LEU | 2.7 |
| 7 | G | 99 | PHE | 2.7 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 3 | O | 70 | PRO | 2.7 |
| 12 | X | 56 | ARG | 2.7 |
| 1 | M | 1257 | ALA | 2.7 |
| 2 | N | 1120 | GLU | 2.7 |
| 4 | P | 86 | ASP | 2.7 |
| 1 | M | 628 | GLY | 2.7 |
| 1 | M | 795 | PRO | 2.7 |
| 2 | B | 307 | LYS | 2.7 |
| 7 | G | 5 | LYS | 2.7 |
| 12 | X | 57 | VAL | 2.7 |
| 2 | B | 519 | GLU | 2.7 |
| 2 | B | 993 | THR | 2.7 |
| 1 | M | 960 | VAL | 2.7 |
| 2 | B | 237 | LYS | 2.7 |
| 1 | A | 1423 | ASP | 2.7 |
| 2 | N | 1009 | ASP | 2.7 |
| 1 | A | 1324 | GLY | 2.7 |
| 3 | O | 75 | ASP | 2.7 |
| 9 | U | 63 | GLY | 2.7 |
| 1 | M | 1324 | GLY | 2.7 |
| 2 | B | 425 | MET | 2.7 |
| 1 | A | 88 | LYS | 2.7 |
| 6 | R | 90 | ARG | 2.7 |
| 2 | N | 421 | ILE | 2.7 |
| 1 | A | 701 | ASN | 2.7 |
| 1 | M | 1406 | GLU | 2.7 |
| 2 | B | 635 | ASP | 2.7 |
| 9 | U | 40 | ASP | 2.7 |
| 3 | C | 232 | VAL | 2.7 |
| 1 | M | 588 | HIS | 2.7 |
| 4 | P | 150 | CYS | 2.7 |
| 9 | I | 24 | ARG | 2.7 |
| 1 | M | 322 | PRO | 2.7 |
| 4 | D | 115 | PHE | 2.6 |
| 1 | A | 670 | ALA | 2.6 |
| 2 | B | 454 | LEU | 2.6 |
| 1 | A | 909 | ILE | 2.6 |
| 7 | G | 123 | PRO | 2.6 |
| 1 | M | 719 | VAL | 2.6 |
| 11 | W | 10 | PHE | 2.6 |
| 2 | N | 744 | HIS | 2.6 |
| 4 | P | 84 | ILE | 2.6 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 8 | H | 16 | ASP | 2.6 |
| 1 | A | 182 | LEU | 2.6 |
| 2 | B | 831 | SER | 2.6 |
| 6 | R | 130 | ILE | 2.6 |
| 1 | M | 1384 | LEU | 2.6 |
| 2 | N | 157 | HIS | 2.6 |
| 4 | P | 78 | GLU | 2.6 |
| 1 | M | 806 | LEU | 2.6 |
| 3 | O | 235 | THR | 2.6 |
| 1 | A | 276 | ASN | 2.6 |
| 4 | P | 145 | LEU | 2.6 |
| 1 | M | 196 | ALA | 2.6 |
| 1 | M | 326 | ILE | 2.6 |
| 9 | I | 55 | THR | 2.6 |
| 6 | R | 87 | LYS | 2.6 |
| 2 | B | 272 | ILE | 2.6 |
| 1 | M | 195 | ASP | 2.6 |
| 1 | M | 1403 | CYS | 2.6 |
| 2 | N | 261 | ILE | 2.6 |
| 1 | M | 187 | LYS | 2.6 |
| 2 | N | 349 | LEU | 2.6 |
| 1 | M | 704 | GLU | 2.6 |
| 1 | M | 54 | ASN | 2.6 |
| 8 | T | 49 | VAL | 2.6 |
| 2 | B | 29 | GLY | 2.6 |
| 1 | A | 197 | GLN | 2.6 |
| 3 | O | 134 | ARG | 2.6 |
| 9 | U | 42 | LYS | 2.6 |
| 2 | B | 916 | THR | 2.6 |
| 5 | Q | 177 | ILE | 2.6 |
| 10 | V | 53 | VAL | 2.6 |
| 11 | K | 67 | LEU | 2.6 |
| 2 | B | 216 | VAL | 2.6 |
| 2 | B | 610 | ARG | 2.6 |
| 2 | N | 752 | ALA | 2.6 |
| 4 | D | 149 | GLY | 2.5 |
| 8 | T | 48 | PRO | 2.5 |
| 1 | A | 663 | PHE | 2.5 |
| 3 | O | 57 | LEU | 2.5 |
| 1 | A | 883 | THR | 2.5 |
| 1 | M | 622 | THR | 2.5 |
| 3 | C | 102 | ALA | 2.5 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 4 | D | 87 | ASP | 2.5 |
| 5 | Q | 173 | GLN | 2.5 |
| 1 | A | 1282 | ILE | 2.5 |
| 2 | B | 421 | ILE | 2.5 |
| 5 | Q | 125 | THR | 2.5 |
| 12 | X | 41 | SER | 2.5 |
| 3 | C | 188 | HIS | 2.5 |
| 3 | O | 151 | GLN | 2.5 |
| 2 | N | 100 | PHE | 2.5 |
| 1 | A | 861 | LEU | 2.5 |
| 2 | N | 1041 | GLU | 2.5 |
| 6 | F | 111 | ILE | 2.5 |
| 1 | M | 591 | ARG | 2.5 |
| 2 | N | 771 | SER | 2.5 |
| 2 | N | 1138 | MET | 2.5 |
| 5 | Q | 178 | GLN | 2.5 |
| 1 | A | 285 | SER | 2.5 |
| 1 | M | 324 | LYS | 2.5 |
| 1 | A | 619 | ASP | 2.5 |
| 2 | N | 57 | ILE | 2.5 |
| 2 | B | 361 | GLU | 2.5 |
| 1 | M | 208 | ILE | 2.5 |
| 4 | P | 5 | THR | 2.5 |
| 6 | R | 111 | ILE | 2.5 |
| 9 | I | 46 | HIS | 2.5 |
| 2 | B | 881 | THR | 2.5 |
| 1 | A | 1323 | PRO | 2.5 |
| 1 | M | 287 | GLN | 2.5 |
| 3 | O | 157 | CYS | 2.5 |
| 1 | M | 1178 | ILE | 2.5 |
| 2 | N | 911 | ILE | 2.5 |
| 9 | I | 37 | LEU | 2.5 |
| 1 | A | 181 | LYS | 2.5 |
| 12 | X | 61 | ALA | 2.5 |
| 1 | A | 16 | GLU | 2.5 |
| 2 | N | 530 | LYS | 2.5 |
| 4 | D | 141 | GLU | 2.5 |
| 2 | B | 493 | THR | 2.5 |
| 10 | V | 13 | VAL | 2.5 |
| 3 | C | 251 | LEU | 2.5 |
| 7 | G | 127 | PRO | 2.5 |
| 5 | Q | 199 | ARG | 2.5 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 9 | I | 43 | VAL | 2.5 |
| 2 | N | 442 | LYS | 2.5 |
| 11 | K | 66 | PRO | 2.5 |
| 1 | M | 321 | ARG | 2.5 |
| 2 | B | 176 | ASP | 2.5 |
| 3 | C | 41 | PRO | 2.4 |
| 1 | A | 699 | GLN | 2.4 |
| 1 | A | 89 | PRO | 2.4 |
| 2 | N | 774 | GLY | 2.4 |
| 9 | I | 39 | GLU | 2.4 |
| 9 | U | 62 | ILE | 2.4 |
| 1 | M | 590 | GLN | 2.4 |
| 2 | B | 994 | TYR | 2.4 |
| 9 | I | 50 | THR | 2.4 |
| 1 | A | 237 | ILE | 2.4 |
| 11 | W | 9 | LEU | 2.4 |
| 10 | J | 53 | VAL | 2.4 |
| 1 | A | 615 | PHE | 2.4 |
| 1 | M | 614 | MET | 2.4 |
| 1 | A | 1384 | LEU | 2.4 |
| 4 | D | 185 | TYR | 2.4 |
| 1 | M | 1149 | THR | 2.4 |
| 2 | B | 387 | ASP | 2.4 |
| 2 | N | 1222 | GLY | 2.4 |
| 2 | N | 958 | GLN | 2.4 |
| 2 | B | 349 | LEU | 2.4 |
| 1 | M | 433 | VAL | 2.4 |
| 1 | M | 1385 | MET | 2.4 |
| 1 | A | 884 | ILE | 2.4 |
| 1 | M | 793 | PHE | 2.4 |
| 4 | D | 16 | LYS | 2.4 |
| 2 | B | 698 | ILE | 2.4 |
| 9 | I | 27 | TYR | 2.4 |
| 5 | Q | 52 | PRO | 2.4 |
| 1 | A | 44 | SER | 2.4 |
| 1 | M | 875 | ASP | 2.4 |
| 2 | N | 292 | HIS | 2.4 |
| 2 | B | 566 | GLN | 2.4 |
| 3 | C | 134 | ARG | 2.4 |
| 2 | N | 772 | ALA | 2.4 |
| 1 | M | 286 | PRO | 2.4 |
| 2 | B | 826 | ALA | 2.4 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 11 | W | 78 | GLU | 2.4 |
| 2 | B | 536 | SER | 2.4 |
| 10 | V | 49 | VAL | 2.4 |
| 2 | B | 543 | PRO | 2.4 |
| 3 | C | 5 | PRO | 2.4 |
| 8 | T | 5 | LEU | 2.4 |
| 10 | V | 50 | LEU | 2.4 |
| 2 | B | 640 | ASP | 2.4 |
| 3 | C | 193 | PHE | 2.4 |
| 2 | N | 816 | GLU | 2.4 |
| 9 | U | 37 | LEU | 2.4 |
| 7 | G | 48 | VAL | 2.4 |
| 2 | N | 950 | ASP | 2.4 |
| 6 | R | 110 | ASP | 2.4 |
| 2 | N | 687 | ILE | 2.4 |
| 3 | O | 241 | ASN | 2.4 |
| 5 | Q | 45 | ILE | 2.4 |
| 7 | S | 101 | ALA | 2.4 |
| 9 | U | 34 | TYR | 2.4 |
| 1 | A | 1122 | LEU | 2.4 |
| 2 | N | 775 | LYS | 2.4 |
| 1 | A | 47 | ARG | 2.4 |
| 1 | A | 228 | ASP | 2.4 |
| 1 | A | 623 | VAL | 2.4 |
| 1 | A | 84 | MET | 2.4 |
| 5 | Q | 34 | MET | 2.4 |
| 1 | M | 954 | HIS | 2.3 |
| 1 | A | 284 | GLY | 2.3 |
| 7 | G | 42 | PHE | 2.3 |
| 2 | B | 1012 | ILE | 2.3 |
| 1 | A | 271 | LEU | 2.3 |
| 2 | N | 99 | MET | 2.3 |
| 1 | A | 860 | SER | 2.3 |
| 6 | F | 94 | LEU | 2.3 |
| 6 | R | 140 | ASP | 2.3 |
| 7 | S | 96 | PRO | 2.3 |
| 1 | M | 909 | ILE | 2.3 |
| 7 | S | 102 | ASP | 2.3 |
| 2 | N | 819 | ALA | 2.3 |
| 9 | I | 5 | ARG | 2.3 |
| 7 | G | 159 | ALA | 2.3 |
| 1 | M | 610 | ASP | 2.3 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 6 | F | 144 | GLU | 2.3 |
| 3 | O | 55 | SER | 2.3 |
| 1 | A | 522 | MET | 2.3 |
| 1 | M | 238 | THR | 2.3 |
| 1 | A | 45 | ARG | 2.3 |
| 5 | E | 60 | LEU | 2.3 |
| 1 | A | 1264 | LYS | 2.3 |
| 1 | A | 1140 | ILE | 2.3 |
| 1 | A | 630 | LEU | 2.3 |
| 2 | N | 1042 | GLY | 2.3 |
| 2 | N | 270 | GLN | 2.3 |
| 11 | K | 113 | ASN | 2.3 |
| 1 | A | 796 | GLU | 2.3 |
| 2 | B | 304 | GLU | 2.3 |
| 4 | D | 119 | GLU | 2.3 |
| 1 | A | 1236 | ASP | 2.3 |
| 1 | M | 272 | LYS | 2.3 |
| 2 | B | 823 | ALA | 2.3 |
| 1 | M | 212 | PHE | 2.3 |
| 8 | T | 78 | TRP | 2.3 |
| 2 | B | 639 | LYS | 2.3 |
| 2 | B | 1219 | GLU | 2.3 |
| 1 | A | 359 | ASN | 2.3 |
| 2 | N | 1127 | GLY | 2.3 |
| 10 | J | 5 | VAL | 2.3 |
| 11 | K | 65 | HIS | 2.3 |
| 8 | T | 60 | ALA | 2.3 |
| 9 | I | 48 | LEU | 2.3 |
| 11 | K | 55 | ASP | 2.3 |
| 1 | M | 427 | LEU | 2.3 |
| 2 | B | 236 | GLU | 2.3 |
| 2 | N | 159 | GLY | 2.3 |
| 2 | B | 517 | PRO | 2.3 |
| 1 | M | 818 | ALA | 2.3 |
| 1 | M | 1267 | GLU | 2.3 |
| 7 | G | 76 | ALA | 2.3 |
| 2 | B | 771 | SER | 2.3 |
| 2 | N | 878 | THR | 2.3 |
| 4 | P | 87 | ASP | 2.3 |
| 9 | I | 98 | THR | 2.3 |
| 5 | E | 156 | SER | 2.2 |
| 1 | A | 862 | GLY | 2.2 |

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| Mol | Chain | Res | Type | RSRZ |
|-----|-------|------|------|------|
| 1 | A | 1313 | GLY | 2.2 |
| 2 | B | 270 | GLN | 2.2 |
| 2 | N | 690 | VAL | 2.2 |
| 1 | M | 126 | ILE | 2.2 |
| 1 | M | 1218 | ILE | 2.2 |
| 1 | M | 39 | GLU | 2.2 |
| 2 | B | 1067 | ARG | 2.2 |
| 4 | P | 168 | GLU | 2.2 |
| 2 | B | 240 | ARG | 2.2 |
| 2 | N | 473 | SER | 2.2 |
| 11 | W | 11 | ILE | 2.2 |
| 5 | E | 61 | ALA | 2.2 |
| 1 | A | 298 | GLN | 2.2 |
| 1 | M | 89 | PRO | 2.2 |
| 2 | B | 220 | ALA | 2.2 |
| 4 | D | 121 | CYS | 2.2 |
| 1 | A | 812 | GLN | 2.2 |
| 1 | M | 318 | LYS | 2.2 |
| 3 | C | 250 | THR | 2.2 |
| 11 | K | 57 | THR | 2.2 |
| 1 | M | 671 | ILE | 2.2 |
| 2 | B | 512 | TRP | 2.2 |
| 2 | B | 613 | ARG | 2.2 |
| 3 | O | 204 | SER | 2.2 |
| 1 | A | 795 | PRO | 2.2 |
| 1 | A | 1300 | GLU | 2.2 |
| 7 | G | 47 | THR | 2.2 |
| 2 | N | 193 | TYR | 2.2 |
| 1 | A | 607 | LEU | 2.2 |
| 2 | B | 833 | TYR | 2.2 |
| 2 | N | 222 | PRO | 2.2 |
| 5 | E | 171 | GLU | 2.2 |
| 2 | N | 454 | LEU | 2.2 |
| 2 | B | 675 | VAL | 2.2 |
| 2 | N | 635 | ASP | 2.2 |
| 1 | A | 91 | PHE | 2.2 |
| 1 | A | 1152 | THR | 2.2 |
| 1 | A | 541 | PHE | 2.2 |
| 2 | N | 874 | PHE | 2.2 |
| 2 | N | 1218 | THR | 2.2 |
| 7 | S | 127 | PRO | 2.2 |
| 1 | M | 755 | SER | 2.2 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 2 | B | 1175 | LEU | 2.2 |
| 8 | T | 101 | TYR | 2.2 |
| 1 | M | 1096 | VAL | 2.2 |
| 1 | M | 1397 | THR | 2.2 |
| 2 | N | 1181 | GLU | 2.2 |
| 1 | A | 1107 | LEU | 2.2 |
| 9 | U | 43 | VAL | 2.2 |
| 1 | M | 519 | LYS | 2.2 |
| 1 | M | 243 | PRO | 2.2 |
| 9 | I | 54 | GLU | 2.2 |
| 1 | A | 1126 | ILE | 2.2 |
| 2 | N | 831 | SER | 2.2 |
| 7 | G | 141 | SER | 2.2 |
| 2 | B | 344 | TYR | 2.1 |
| 2 | B | 841 | MET | 2.1 |
| 2 | B | 828 | ALA | 2.1 |
| 9 | I | 35 | THR | 2.1 |
| 1 | M | 1325 | VAL | 2.1 |
| 2 | B | 194 | PHE | 2.1 |
| 2 | B | 1085 | VAL | 2.1 |
| 2 | N | 1039 | GLY | 2.1 |
| 1 | M | 1097 | THR | 2.1 |
| 2 | B | 722 | THR | 2.1 |
| 7 | G | 138 | THR | 2.1 |
| 4 | P | 54 | SER | 2.1 |
| 10 | V | 63 | ASN | 2.1 |
| 2 | B | 753 | ALA | 2.1 |
| 1 | A | 1402 | ARG | 2.1 |
| 2 | N | 112 | SER | 2.1 |
| 1 | M | 203 | LEU | 2.1 |
| 2 | B | 204 | ILE | 2.1 |
| 3 | C | 254 | LYS | 2.1 |
| 4 | P | 4 | SER | 2.1 |
| 2 | B | 939 | THR | 2.1 |
| 9 | U | 112 | ASP | 2.1 |
| 11 | W | 80 | GLY | 2.1 |
| 7 | S | 4 | LEU | 2.1 |
| 1 | M | 276 | ASN | 2.1 |
| 8 | T | 138 | ASN | 2.1 |
| 2 | B | 1205 | GLN | 2.1 |
| 3 | O | 173 | CYS | 2.1 |
| 2 | B | 1092 | TYR | 2.1 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 2 | N | 723 | ALA | 2.1 |
| 5 | E | 127 | SER | 2.1 |
| 5 | E | 174 | LEU | 2.1 |
| 4 | D | 91 | LYS | 2.1 |
| 1 | M | 224 | GLY | 2.1 |
| 1 | M | 1084 | ASN | 2.1 |
| 2 | B | 422 | TYR | 2.1 |
| 7 | G | 125 | ASN | 2.1 |
| 1 | M | 1345 | GLU | 2.1 |
| 9 | I | 18 | GLU | 2.1 |
| 1 | A | 1309 | LEU | 2.1 |
| 7 | S | 98 | GLY | 2.1 |
| 7 | S | 157 | ILE | 2.1 |
| 2 | N | 867 | GLY | 2.1 |
| 2 | N | 350 | GLN | 2.1 |
| 6 | F | 81 | THR | 2.1 |
| 2 | N | 240 | ARG | 2.1 |
| 1 | M | 1342 | LEU | 2.1 |
| 3 | C | 39 | GLU | 2.1 |
| 2 | N | 263 | ALA | 2.1 |
| 7 | G | 160 | ILE | 2.1 |
| 11 | W | 55 | ASP | 2.1 |
| 2 | B | 518 | ALA | 2.1 |
| 2 | B | 937 | ALA | 2.1 |
| 2 | N | 477 | ASN | 2.1 |
| 2 | N | 1067 | ARG | 2.1 |
| 6 | F | 80 | THR | 2.1 |
| 1 | M | 517 | SER | 2.1 |
| 1 | A | 622 | THR | 2.1 |
| 1 | A | 1085 | THR | 2.1 |
| 2 | N | 628 | ARG | 2.1 |
| 1 | M | 794 | SER | 2.1 |
| 1 | A | 224 | GLY | 2.1 |
| 1 | M | 1289 | LYS | 2.1 |
| 2 | B | 1130 | PHE | 2.1 |
| 2 | N | 778 | MET | 2.1 |
| 7 | S | 81 | PRO | 2.1 |
| 4 | D | 63 | ALA | 2.1 |
| 1 | A | 475 | VAL | 2.1 |
| 1 | A | 610 | ASP | 2.1 |
| 1 | A | 1418 | ALA | 2.1 |
| 6 | F | 112 | GLU | 2.1 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 4 | D | 60 | ILE | 2.1 |
| 2 | N | 1008 | PRO | 2.1 |
| 1 | A | 518 | ASN | 2.1 |
| 2 | B | 829 | CYS | 2.1 |
| 5 | Q | 98 | ARG | 2.1 |
| 1 | A | 1393 | ASN | 2.1 |
| 1 | M | 133 | LYS | 2.1 |
| 8 | H | 2 | SER | 2.1 |
| 2 | B | 495 | ILE | 2.1 |
| 2 | B | 1009 | ASP | 2.0 |
| 1 | A | 882 | GLN | 2.0 |
| 7 | G | 41 | GLN | 2.0 |
| 1 | M | 796 | GLU | 2.0 |
| 1 | M | 271 | LEU | 2.0 |
| 1 | M | 273 | ALA | 2.0 |
| 2 | B | 224 | PRO | 2.0 |
| 2 | B | 567 | HIS | 2.0 |
| 2 | N | 390 | ASP | 2.0 |
| 2 | B | 1011 | ILE | 2.0 |
| 4 | D | 56 | SER | 2.0 |
| 2 | N | 803 | LEU | 2.0 |
| 11 | W | 67 | LEU | 2.0 |
| 1 | A | 504 | GLN | 2.0 |
| 2 | B | 917 | PRO | 2.0 |
| 4 | D | 85 | ASP | 2.0 |
| 1 | M | 513 | VAL | 2.0 |
| 7 | G | 4 | LEU | 2.0 |
| 1 | A | 590 | GLN | 2.0 |
| 5 | Q | 127 | SER | 2.0 |
| 9 | U | 8 | LEU | 2.0 |
| 1 | M | 787 | HIS | 2.0 |
| 5 | Q | 152 | HIS | 2.0 |
| 2 | B | 473 | SER | 2.0 |
| 7 | S | 13 | LEU | 2.0 |
| 8 | T | 139 | LEU | 2.0 |
| 1 | M | 775 | ARG | 2.0 |
| 3 | C | 135 | ARG | 2.0 |
| 3 | O | 236 | GLY | 2.0 |
| 6 | R | 92 | ARG | 2.0 |
| 2 | B | 494 | PRO | 2.0 |
| 4 | D | 59 | LEU | 2.0 |
| 2 | B | 903 | VAL | 2.0 |

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| Mol | Chain | Res | Type | RSRZ |
|-----|-------|------|------|------|
| 6 | R | 139 | PRO | 2.0 |
| 9 | U | 51 | ASN | 2.0 |
| 4 | P | 42 | ASP | 2.0 |
| 2 | N | 1162 | VAL | 2.0 |
| 1 | A | 755 | SER | 2.0 |

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

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

6.3 Carbohydrates [i](#)

There are no monosaccharides in this entry.

6.4 Ligands [i](#)

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 | ZN | L | 101 | 1/1 | 0.56 | 0.21 | 194,194,194,194 | 0 |
| 13 | ZN | O | 401 | 1/1 | 0.78 | 0.17 | 163,163,163,163 | 0 |
| 13 | ZN | U | 201 | 1/1 | 0.79 | 0.21 | 191,191,191,191 | 0 |
| 13 | ZN | U | 202 | 1/1 | 0.81 | 0.15 | 239,239,239,239 | 0 |
| 13 | ZN | X | 101 | 1/1 | 0.81 | 0.24 | 203,203,203,203 | 0 |
| 13 | ZN | B | 1301 | 1/1 | 0.83 | 0.17 | 152,152,152,152 | 0 |
| 13 | ZN | M | 1802 | 1/1 | 0.84 | 0.20 | 149,149,149,149 | 0 |
| 13 | ZN | I | 201 | 1/1 | 0.85 | 0.13 | 182,182,182,182 | 0 |
| 13 | ZN | C | 401 | 1/1 | 0.86 | 0.16 | 154,154,154,154 | 0 |
| 13 | ZN | M | 1801 | 1/1 | 0.89 | 0.10 | 174,174,174,174 | 0 |
| 13 | ZN | A | 1801 | 1/1 | 0.91 | 0.06 | 165,165,165,165 | 0 |
| 13 | ZN | N | 1301 | 1/1 | 0.91 | 0.10 | 161,161,161,161 | 0 |
| 13 | ZN | A | 1802 | 1/1 | 0.92 | 0.09 | 140,140,140,140 | 0 |
| 13 | ZN | J | 101 | 1/1 | 0.94 | 0.13 | 158,158,158,158 | 0 |
| 13 | ZN | V | 101 | 1/1 | 0.95 | 0.10 | 167,167,167,167 | 0 |
| 13 | ZN | I | 202 | 1/1 | 0.95 | 0.09 | 230,230,230,230 | 0 |

6.5 Other polymers [i](#)

There are no such residues in this entry.