# Full wwPDB EM Validation Report ⓘ

Nov 20, 2022 – 04:31 pm GMT

| | | |
|---|---|---|
| PDB ID | : | 4A0O |
| EMDB ID | : | EMD-1960 |
| Title | : | Symmetry-free cryo-EM map of TRiC in the nucleotide-free (apo) state |
| Authors | : | Cong, Y.; Schroder, G.F.; Meyer, A.S.; Jakana, J.; Ma, B.; Dougherty, M.T.; Schmid, M.F.; Reissmann, S.; Levitt, M.; Ludtke, S.L.; Frydman, J.; Chiu, W. |
| Deposited on | : | 2011-09-10 |
| Resolution | : | 10.50 Å(reported) |

This is a Full wwPDB EM Validation Report for a publicly released PDB entry.

We welcome your comments at *validation@mail.wwpdb.org*
A user guide is available at
https://www.wwpdb.org/validation/2017/EMValidationReportHelp
with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at
http://www.wwpdb.org/validation/2017/FAQs#types.

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

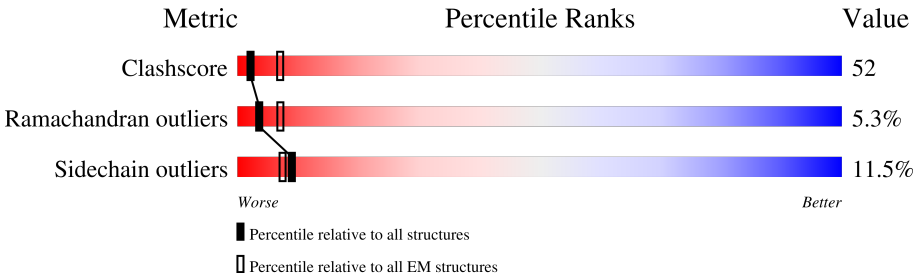
| | | |
|---|---|---|
| EMDB validation analysis | : | 0.0.1.dev43 |
| MolProbity | : | 4.02b-467 |
| Percentile statistics | : | 20191225.v01 (using entries in the PDB archive December 25th 2019) |
| MapQ | : | 1.9.9 |
| Ideal geometry (proteins) | : | Engh & Huber (2001) |
| Ideal geometry (DNA, RNA) | : | Parkinson et al. (1996) |
| Validation Pipeline (wwPDB-VP) | : | 2.31.2 |

# 1 Overall quality at a glance (i)

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

The reported resolution of this entry is 10.50 Å.

Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.




| Metric | Whole archive (#Entries) | EM structures (#Entries) |
|---|---|---|
| Clashscore | 158937 | 4297 |
| Ramachandran outliers | 154571 | 4023 |
| Sidechain outliers | 154315 | 3826 |

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions <=5% The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion < 40%). The numeric value is given above the bar.

| Mol | Chain | Length | Quality of chain |
|---|---|---|---|
| 1 | A | 513 | 19% 27% 33% 6% • 34% |
| 1 | B | 513 | 25% 38% 49% 8% • • |
| 1 | C | 513 | 23% 35% 50% 8% • 6% |
| 1 | D | 513 | 14% 35% 50% 9% • 5% |
| 1 | E | 513 | 22% 41% 45% 9% • • |
| 1 | F | 513 | 14% 37% 48% 10% 5% |
| 1 | G | 513 | 18% 36% 50% 14% |
| 1 | H | 513 | 30% 33% 52% 11% • • |

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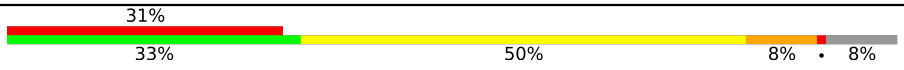
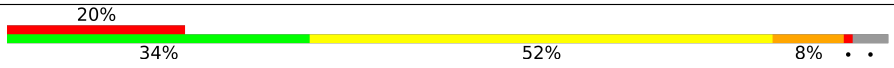
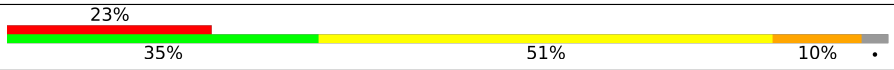
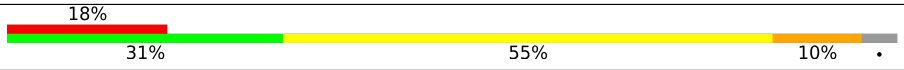
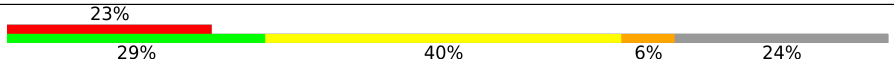
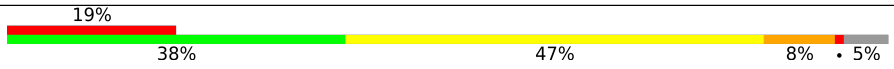
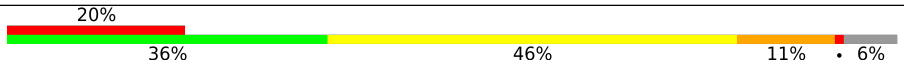
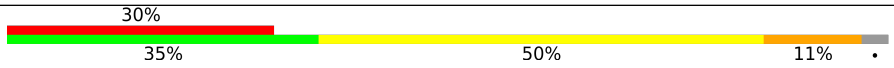
| Mol | Chain | Length | Quality of chain |
|---|---|---|---|
| 1 | I | 513 |   |
| 1 | J | 513 |   |
| 1 | K | 513 |   |
| 1 | L | 513 |   |
| 1 | M | 513 |   |
| 1 | N | 513 |   |
| 1 | O | 513 |   |
| 1 | P | 513 |   |

# 2 Entry composition (i)

There is only 1 type of molecule in this entry. The entry contains 56830 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called T-COMPLEX PROTEIN 1 SUBUNIT BETA.

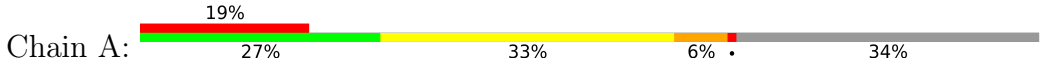
| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| 1 | A | 339 | Total | C | N | O | S | 0 | 0 |
| | | | 2510 | 1552 | 449 | 496 | 13 | | |
| 1 | B | 490 | Total | C | N | O | S | 0 | 0 |
| | | | 3677 | 2299 | 647 | 713 | 18 | | |
| 1 | C | 482 | Total | C | N | O | S | 0 | 0 |
| | | | 3608 | 2255 | 634 | 701 | 18 | | |
| 1 | D | 489 | Total | C | N | O | S | 0 | 0 |
| | | | 3666 | 2291 | 644 | 712 | 19 | | |
| 1 | E | 492 | Total | C | N | O | S | 0 | 0 |
| | | | 3693 | 2308 | 649 | 717 | 19 | | |
| 1 | F | 488 | Total | C | N | O | S | 0 | 0 |
| | | | 3661 | 2288 | 643 | 711 | 19 | | |
| 1 | G | 513 | Total | C | N | O | S | 0 | 0 |
| | | | 3855 | 2409 | 679 | 748 | 19 | | |
| 1 | H | 493 | Total | C | N | O | S | 0 | 0 |
| | | | 3702 | 2313 | 650 | 720 | 19 | | |
| 1 | I | 473 | Total | C | N | O | S | 0 | 0 |
| | | | 3530 | 2206 | 620 | 686 | 18 | | |
| 1 | J | 490 | Total | C | N | O | S | 0 | 0 |
| | | | 3673 | 2295 | 645 | 714 | 19 | | |
| 1 | K | 496 | Total | C | N | O | S | 0 | 0 |
| | | | 3723 | 2327 | 654 | 723 | 19 | | |
| 1 | L | 491 | Total | C | N | O | S | 0 | 0 |
| | | | 3685 | 2304 | 648 | 714 | 19 | | |
| 1 | M | 388 | Total | C | N | O | S | 0 | 0 |
| | | | 2881 | 1792 | 506 | 569 | 14 | | |
| 1 | N | 486 | Total | C | N | O | S | 0 | 0 |
| | | | 3643 | 2277 | 640 | 707 | 19 | | |
| 1 | O | 481 | Total | C | N | O | S | 0 | 0 |
| | | | 3600 | 2251 | 633 | 698 | 18 | | |
| 1 | P | 496 | Total | C | N | O | S | 0 | 0 |
| | | | 3723 | 2327 | 654 | 723 | 19 | | |

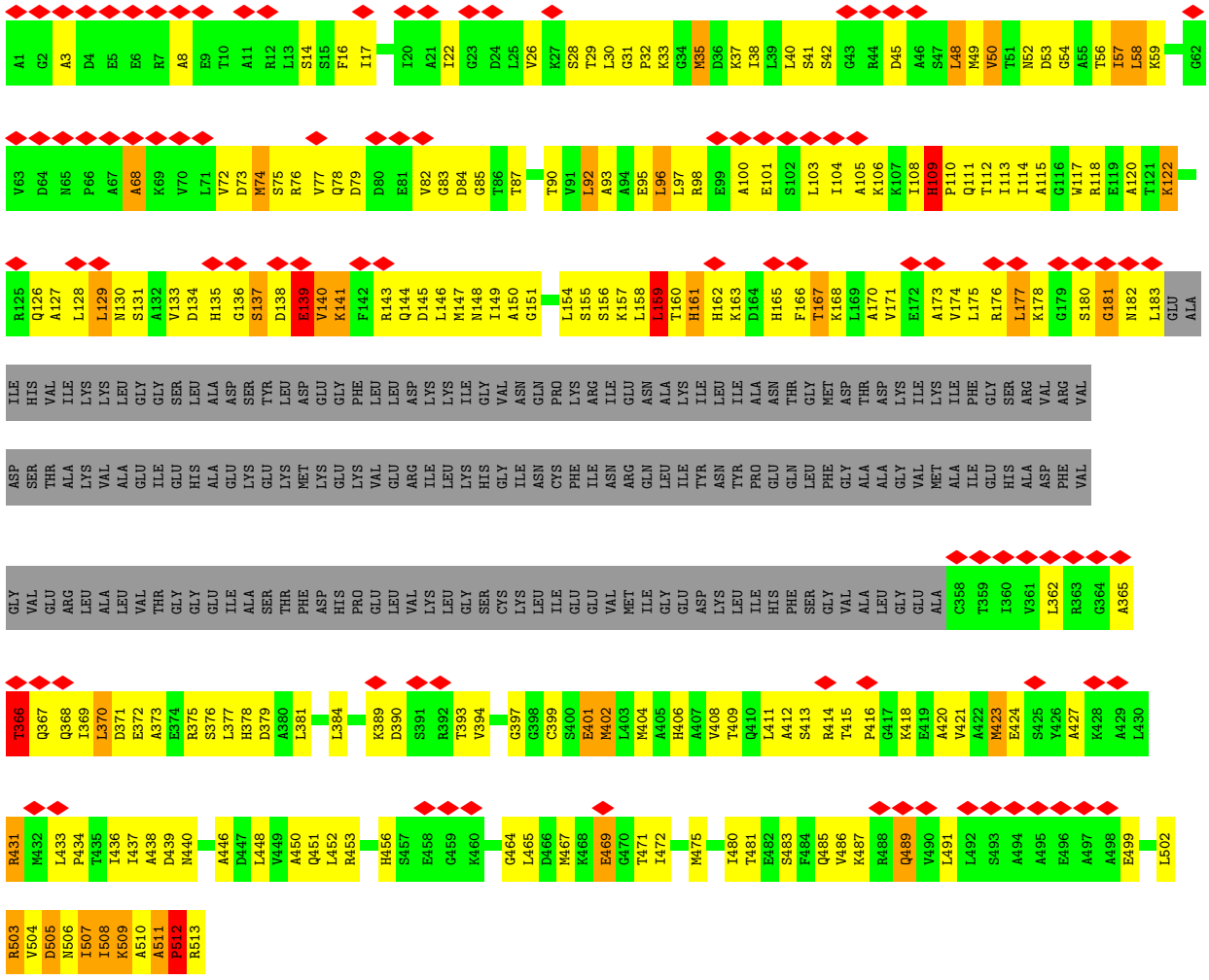
# 3 Residue-property plots (i)

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

• Molecule 1: T-COMPLEX PROTEIN 1 SUBUNIT BETA

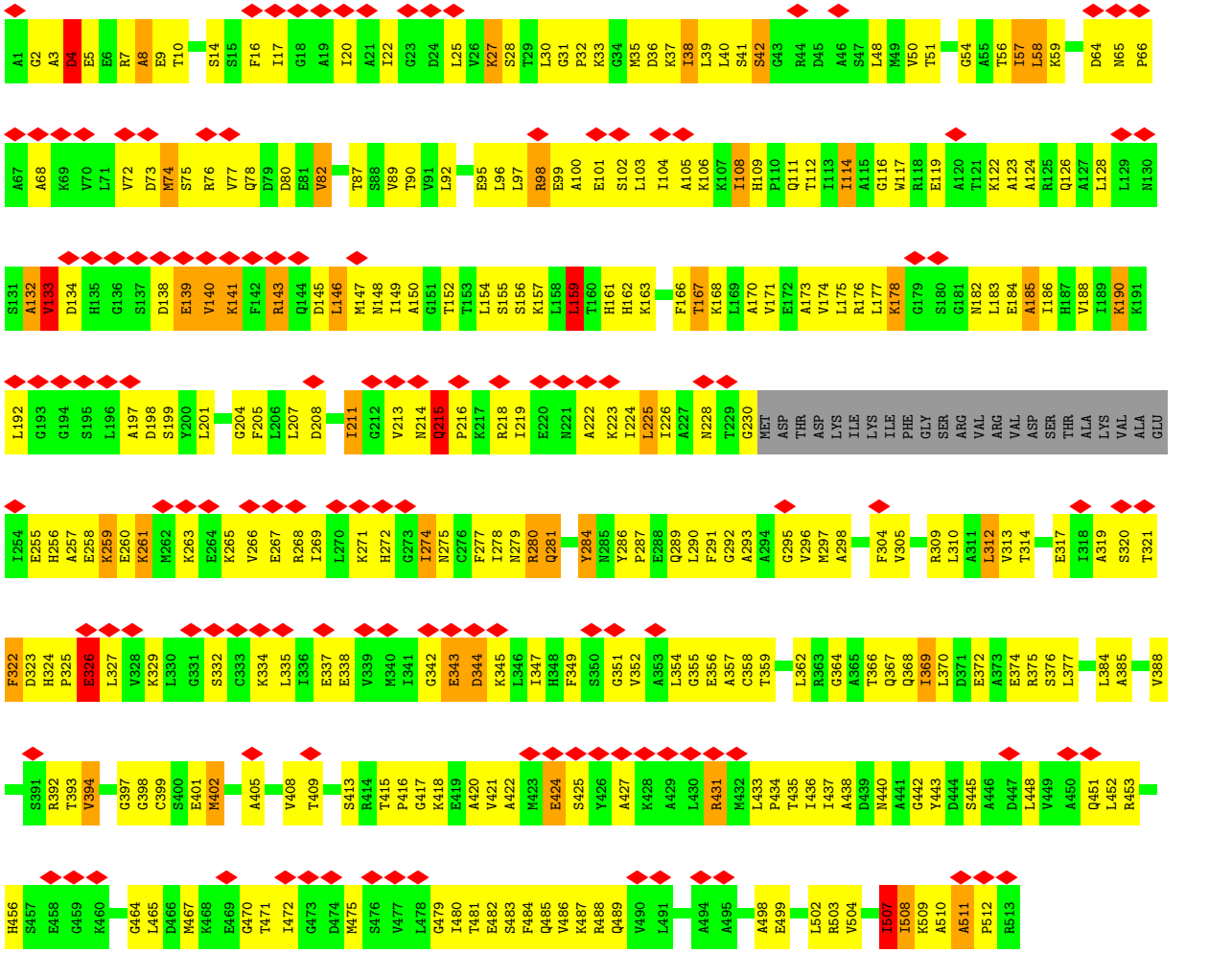
Chain A:



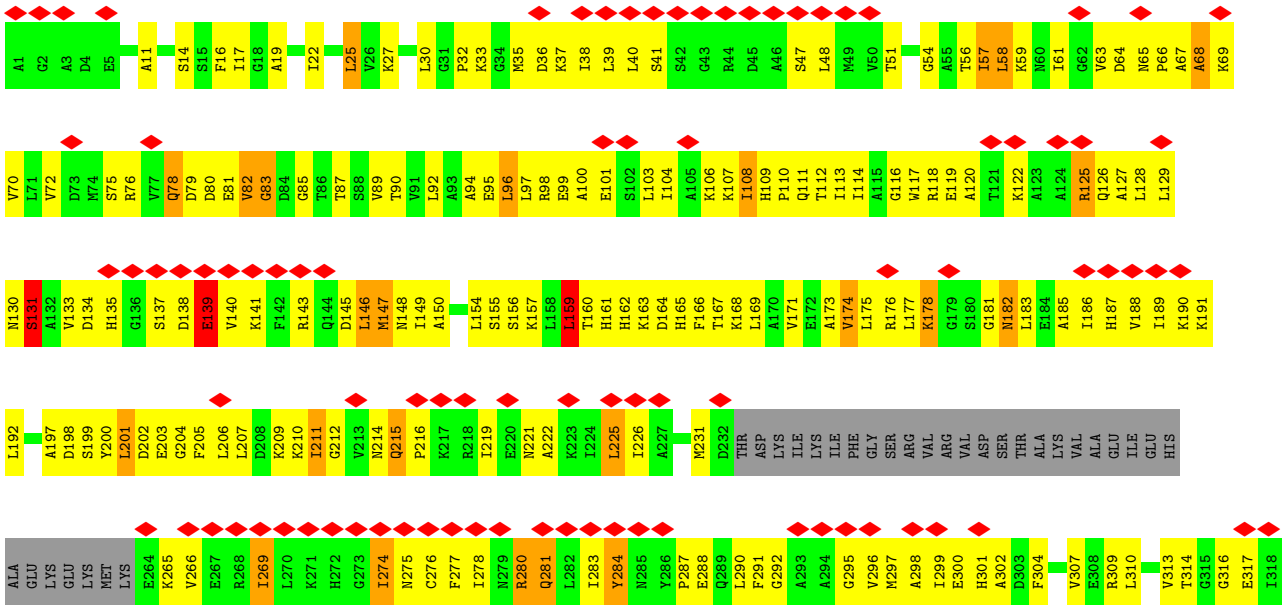

• Molecule 1: T-COMPLEX PROTEIN 1 SUBUNIT BETA

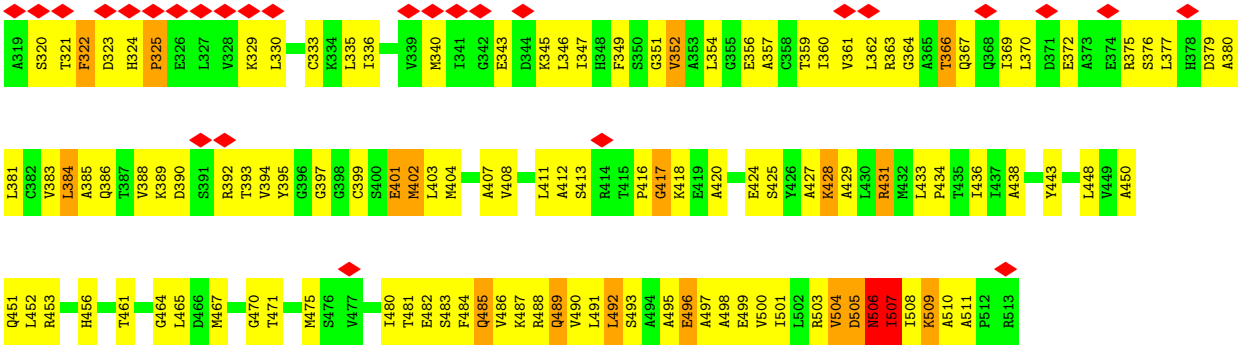
Chain B:



• Molecule 1: T-COMPLEX PROTEIN 1 SUBUNIT BETA

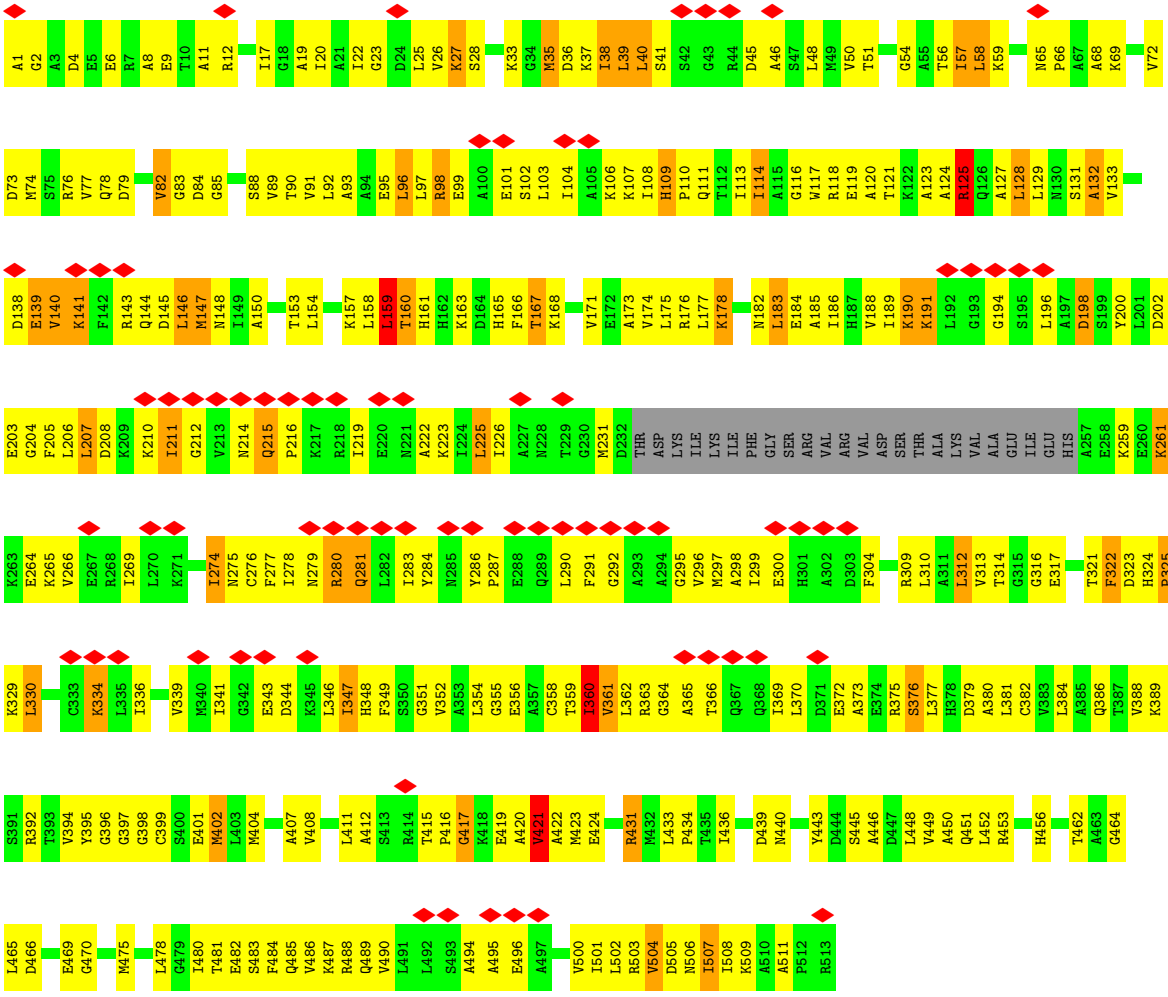
Chain C:



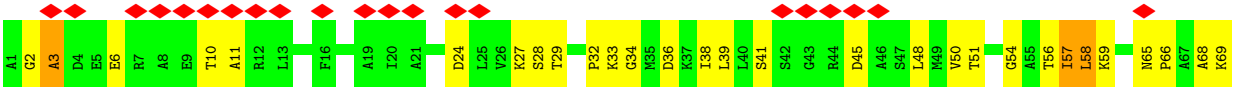
• Molecule 1: T-COMPLEX PROTEIN 1 SUBUNIT BETA

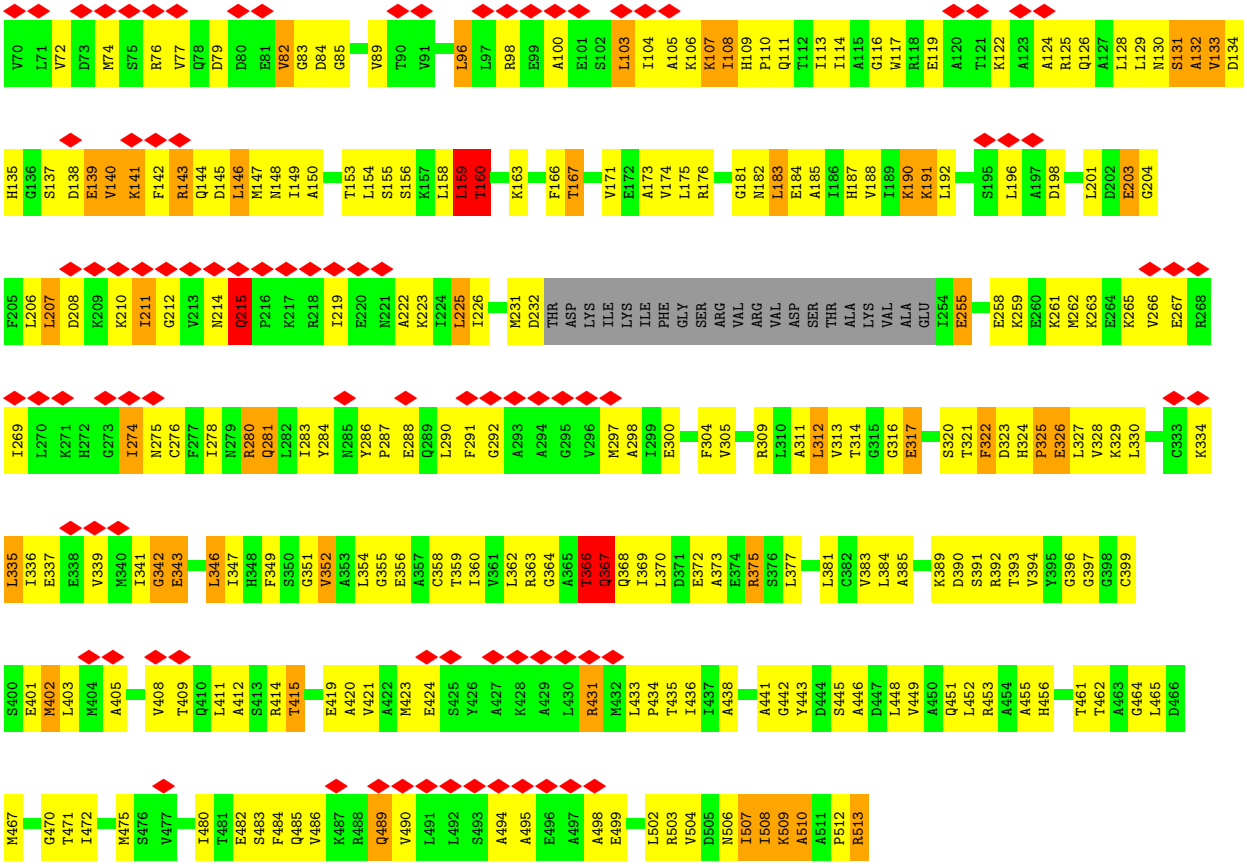
Chain D:

• Molecule 1: T-COMPLEX PROTEIN 1 SUBUNIT BETA

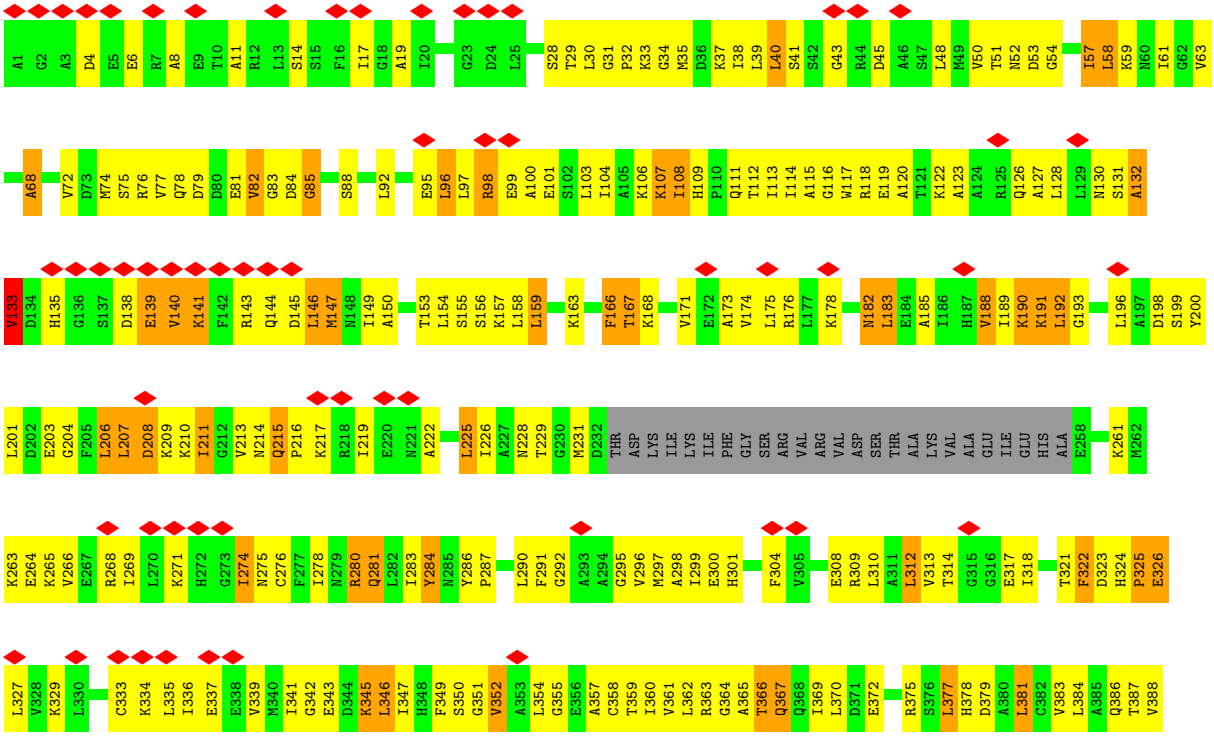
Chain E:

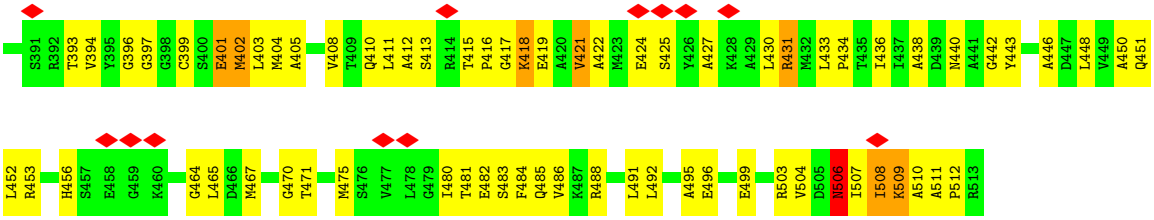





• Molecule 1: T-COMPLEX PROTEIN 1 SUBUNIT BETA

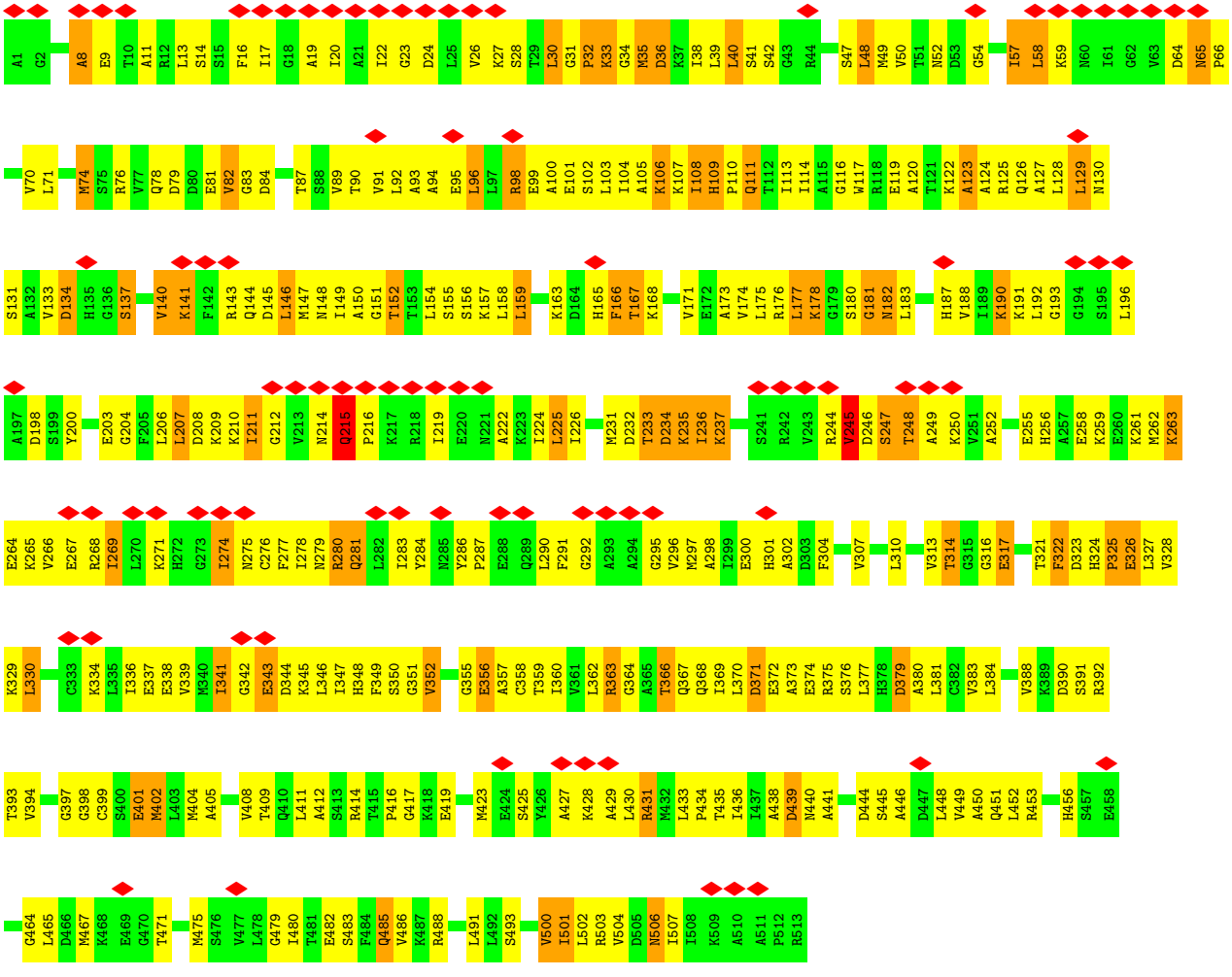
Chain F:



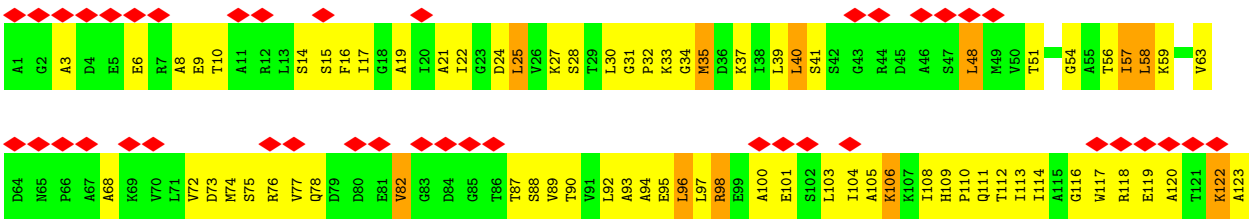
• Molecule 1: T-COMPLEX PROTEIN 1 SUBUNIT BETA

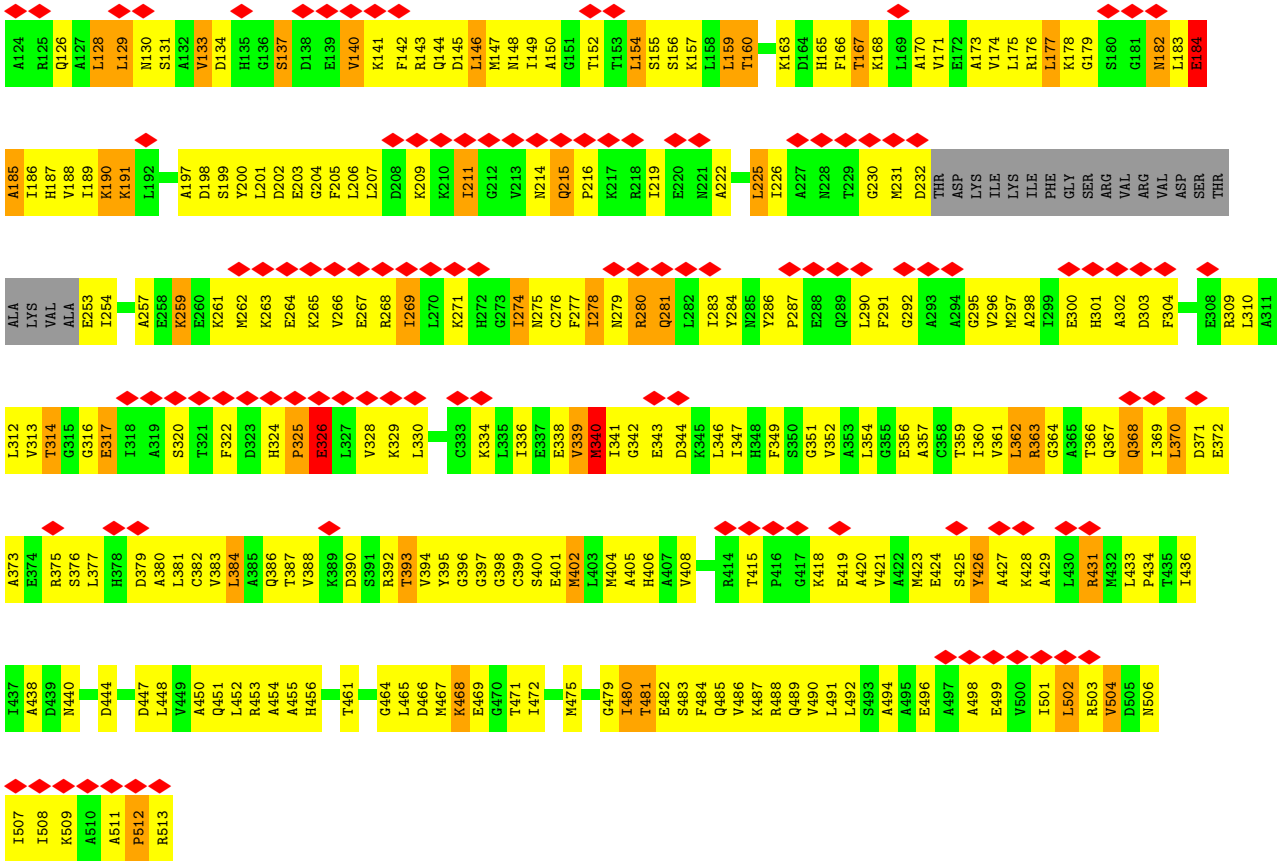
Chain G:

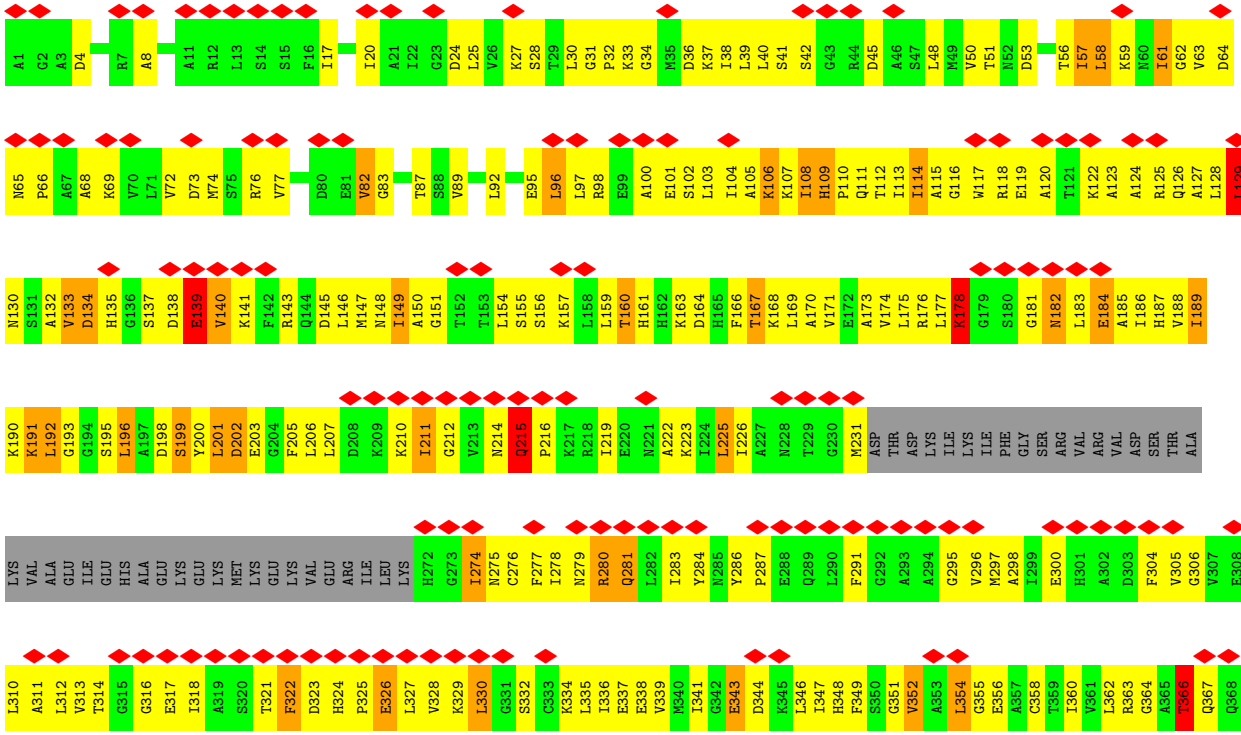
• Molecule 1: T-COMPLEX PROTEIN 1 SUBUNIT BETA

Chain H:



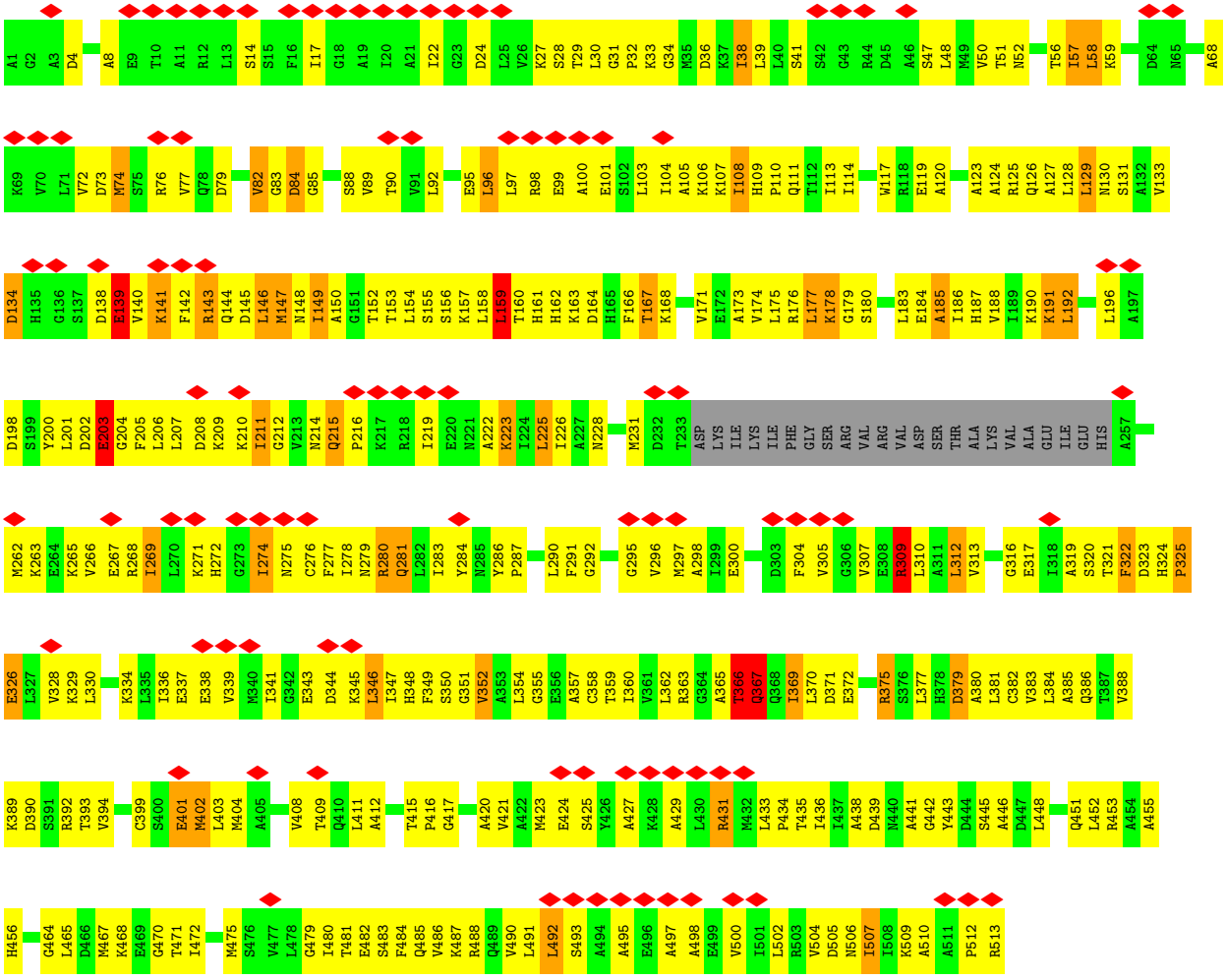

- Molecule 1: T-COMPLEX PROTEIN 1 SUBUNIT BETA



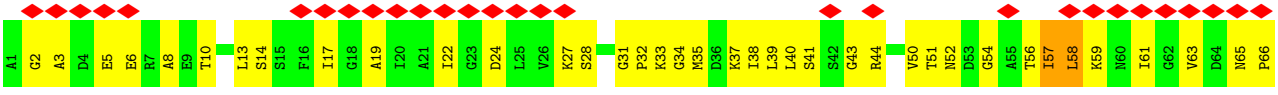
• Molecule 1: T-COMPLEX PROTEIN 1 SUBUNIT BETA

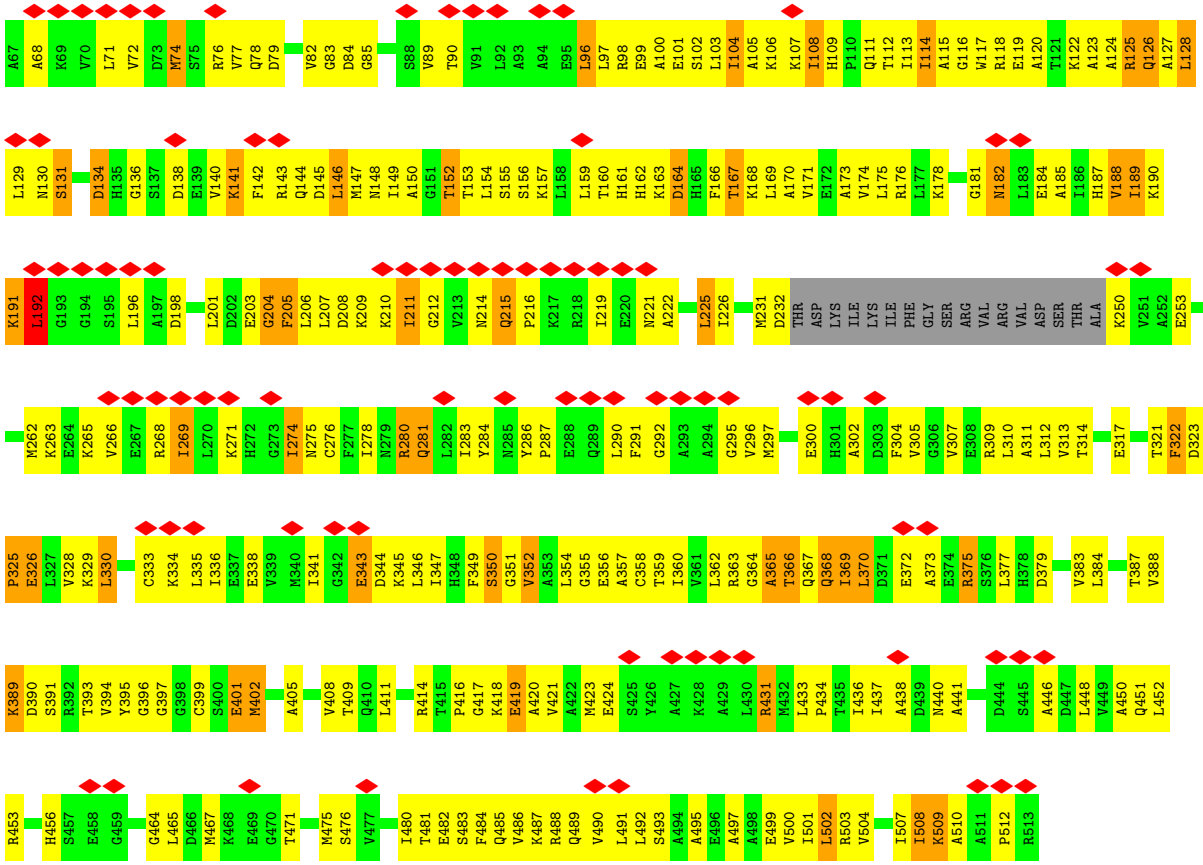
Chain J:

• Molecule 1: T-COMPLEX PROTEIN 1 SUBUNIT BETA

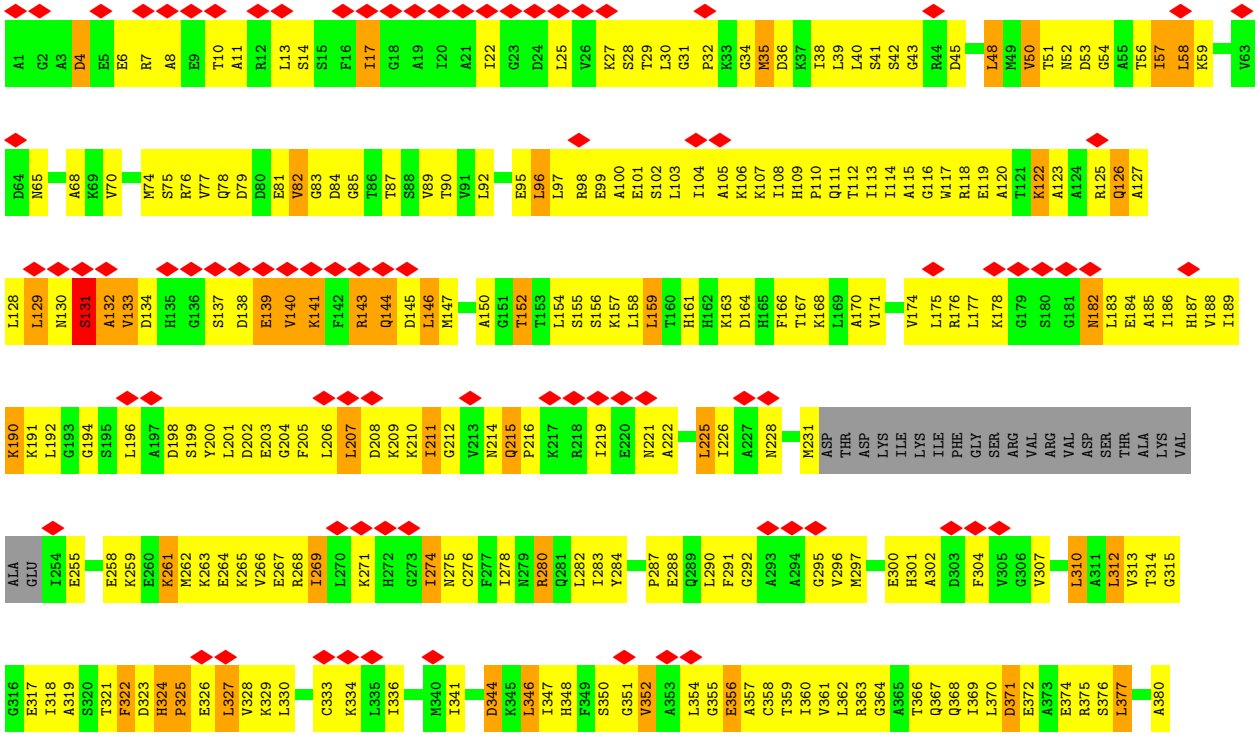
Chain K:

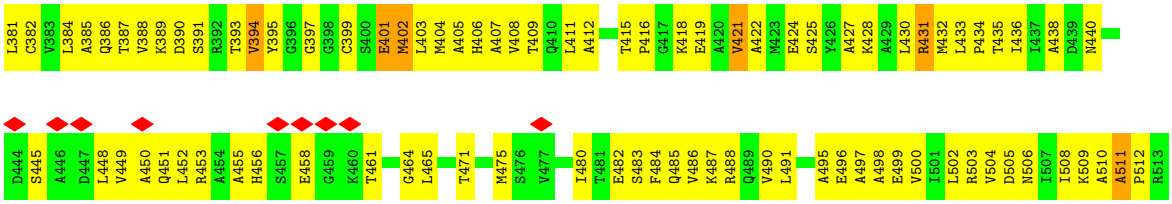





• Molecule 1: T-COMPLEX PROTEIN 1 SUBUNIT BETA

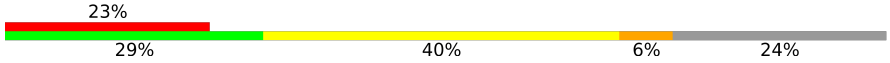
Chain L:

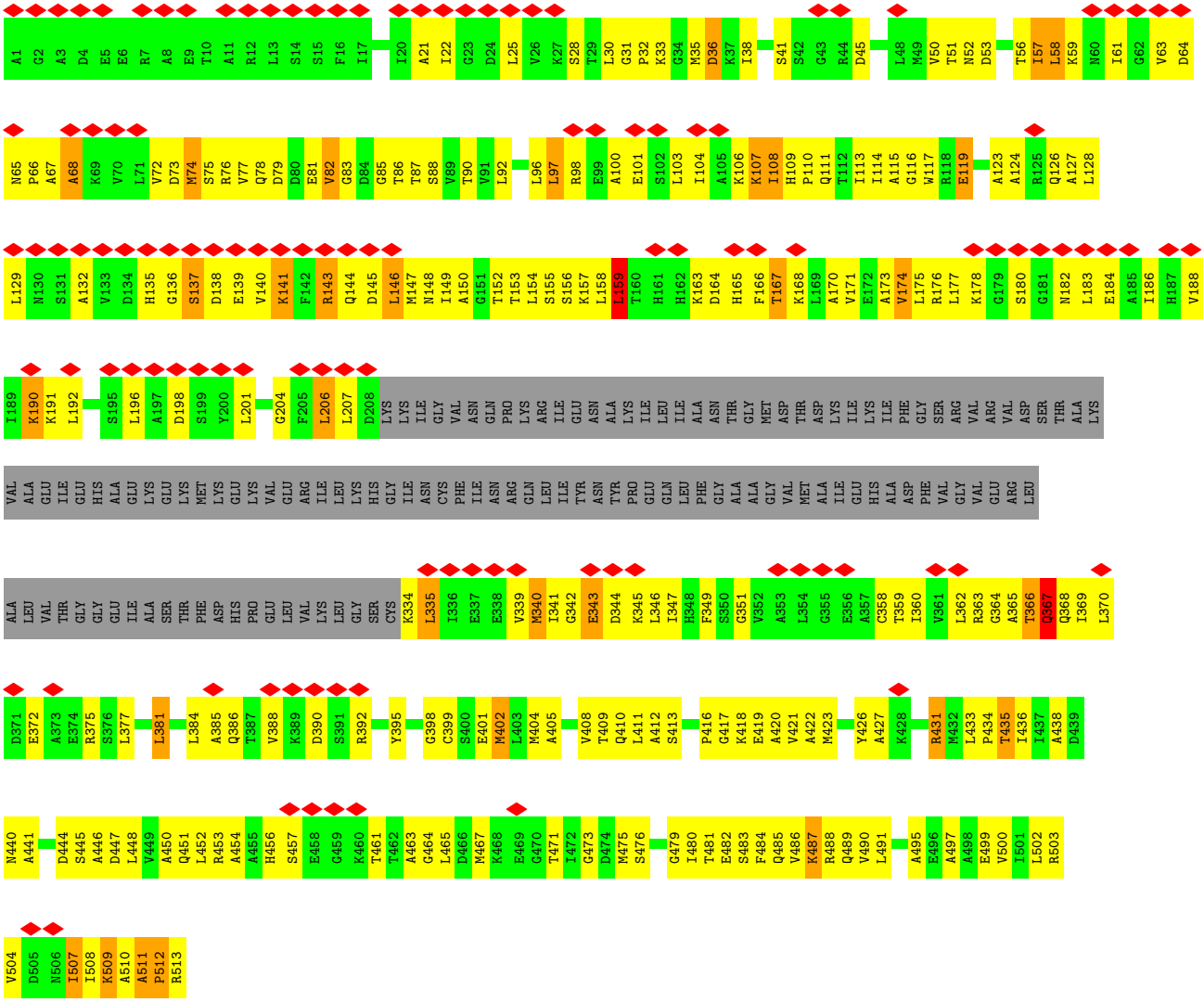



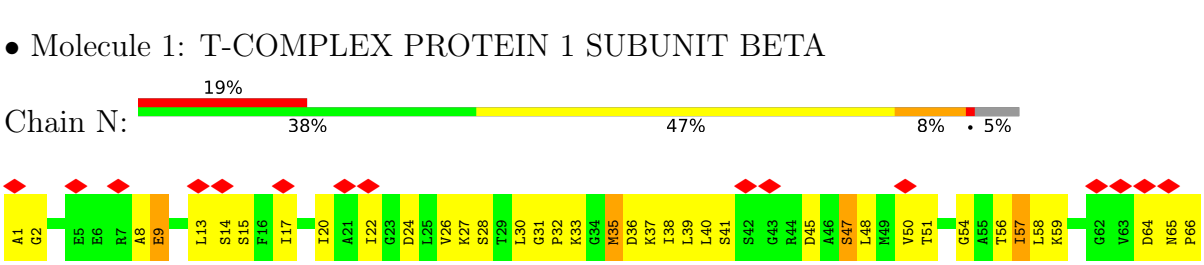


• Molecule 1: T-COMPLEX PROTEIN 1 SUBUNIT BETA

Chain M:

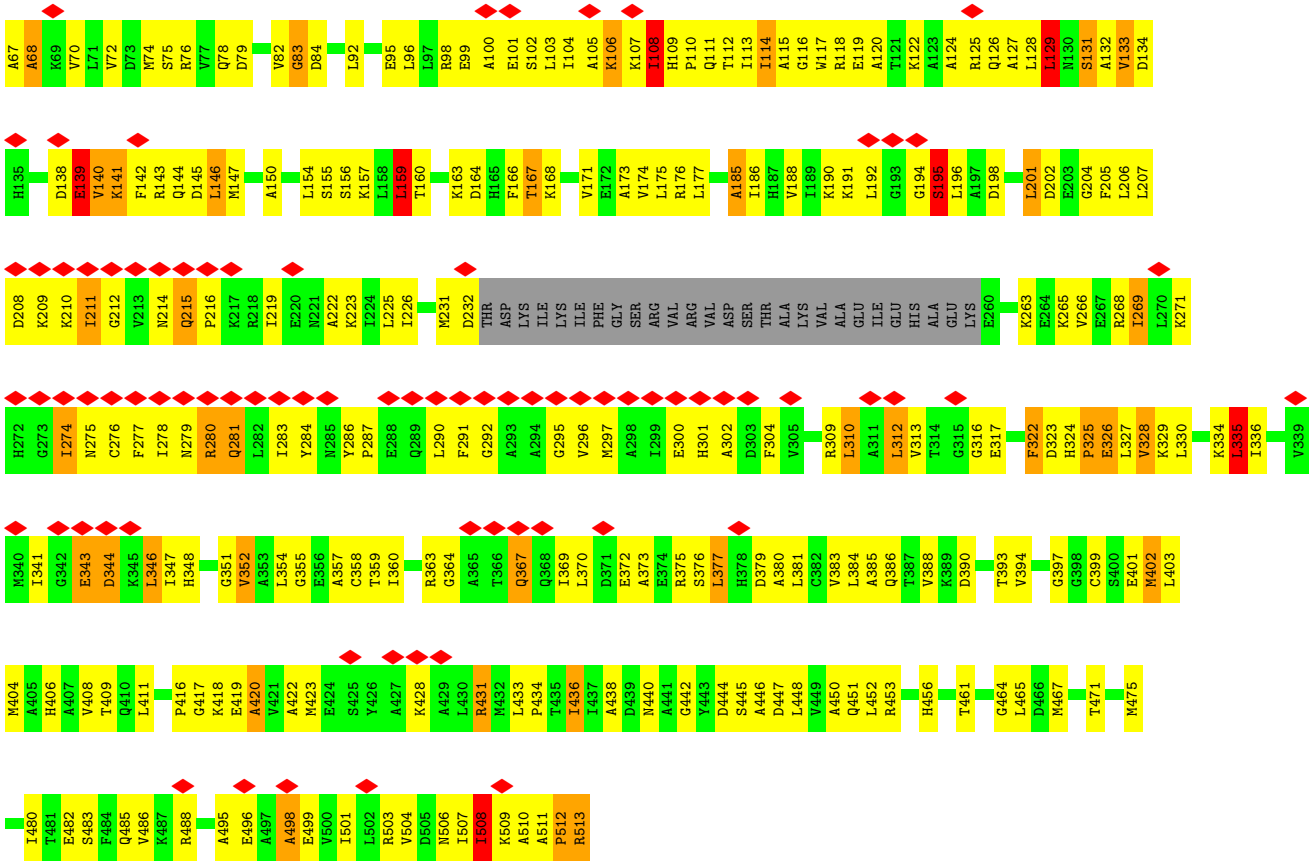




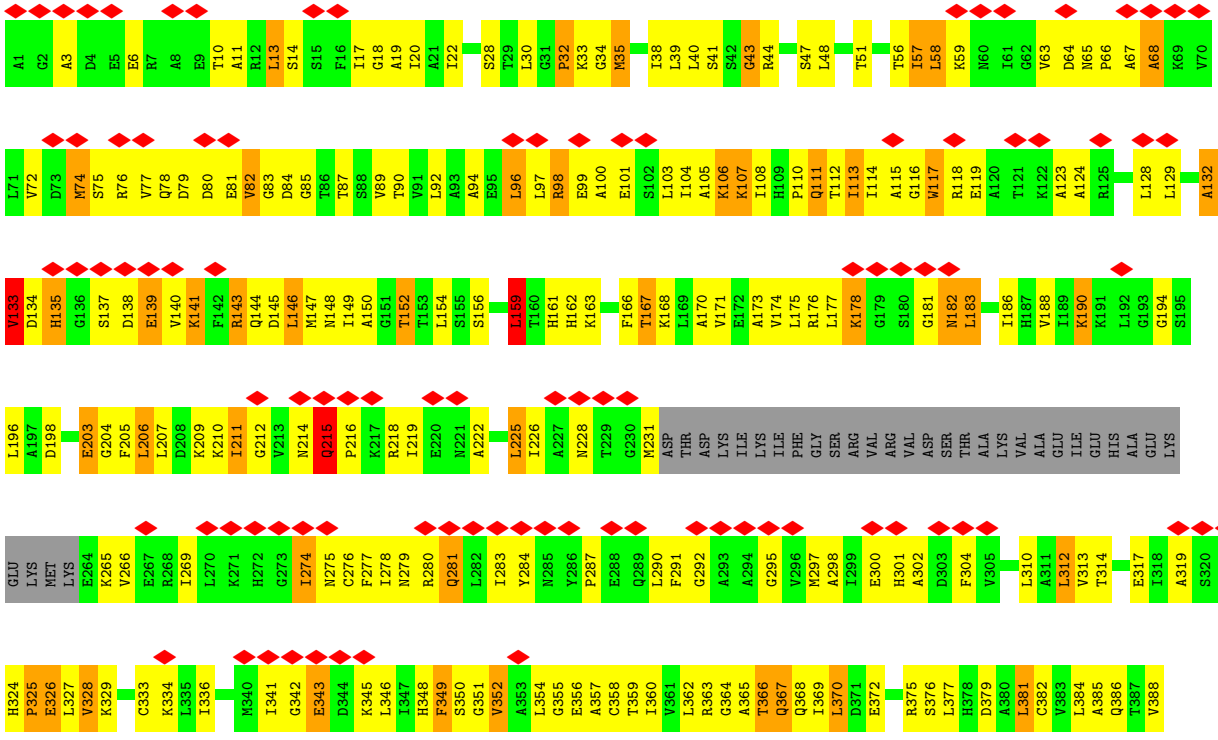
• Molecule 1: T-COMPLEX PROTEIN 1 SUBUNIT BETA

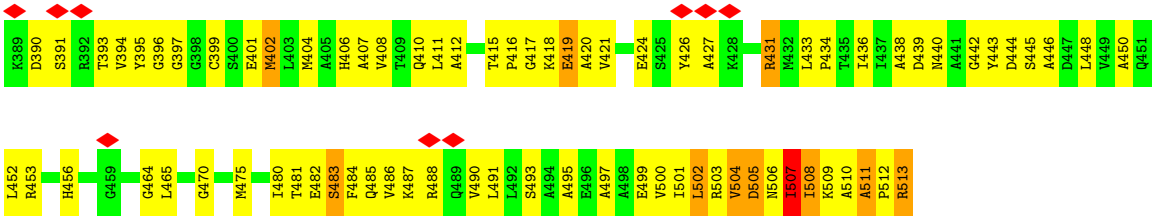
Chain N:



• Molecule 1: T-COMPLEX PROTEIN 1 SUBUNIT BETA

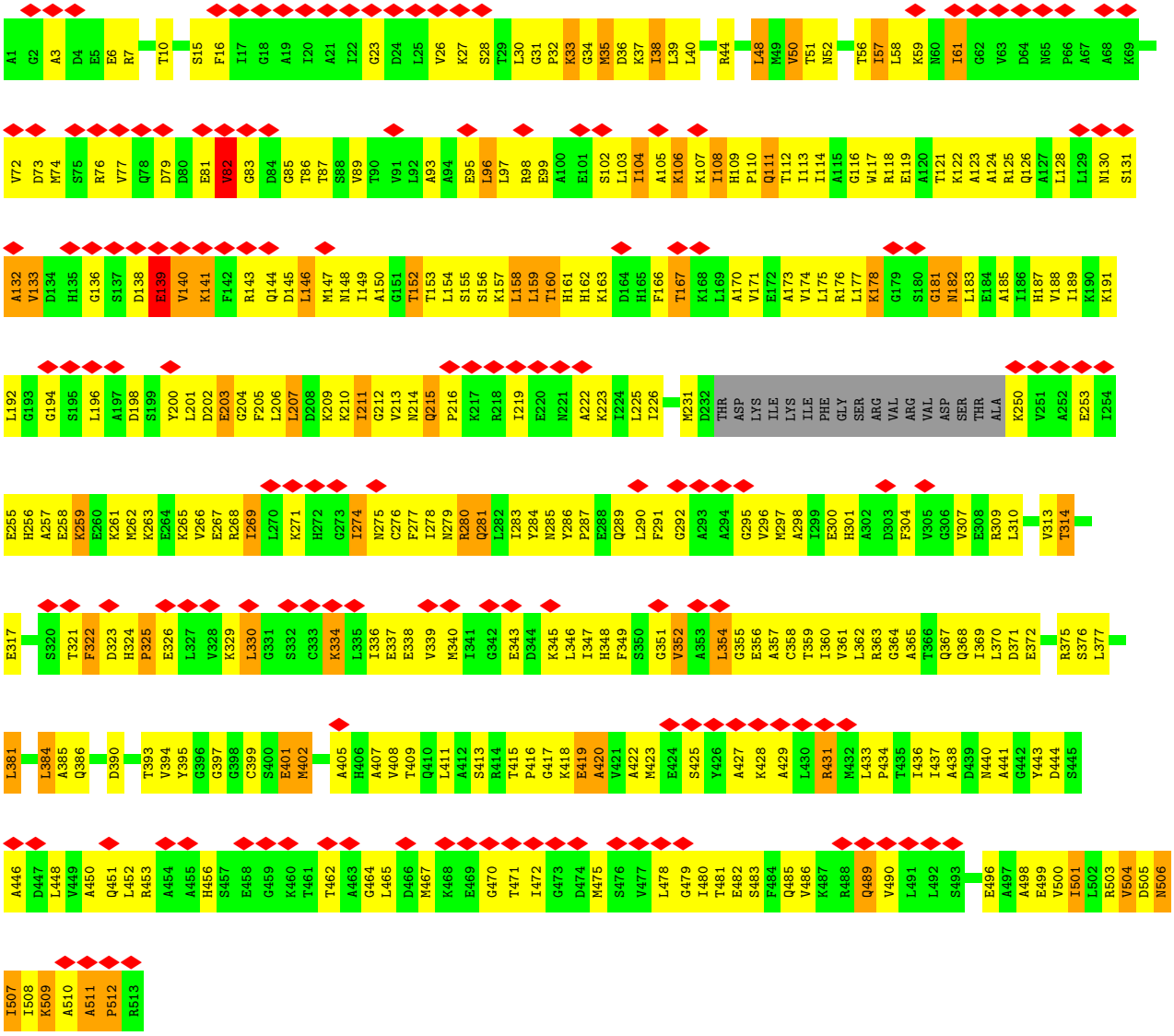
Chain O:




• Molecule 1: T-COMPLEX PROTEIN 1 SUBUNIT BETA

Chain P:

# 4 Experimental information (i)

| Property | Value | Source |
|---|---|---|
| EM reconstruction method | SINGLE PARTICLE | Depositor |
| Imposed symmetry | POINT, C1 | Depositor |
| Number of particles used | 47151 | Depositor |
| Resolution determination method | Not provided | |
| CTF correction method | Not provided | |
| Microscope | JEOL 3200FSC | Depositor |
| Voltage (kV) | 300 | Depositor |
| Electron dose ($e^-/Å^2$) | 18 | Depositor |
| Minimum defocus (nm) | 1200 | Depositor |
| Maximum defocus (nm) | 3000 | Depositor |
| Magnification | 50000 | Depositor |
| Image detector | KODAK SO-163 FILM | Depositor |
| Maximum map value | 2.515 | Depositor |
| Minimum map value | -0.425 | Depositor |
| Average map value | 0.075 | Depositor |
| Map value standard deviation | 0.283 | Depositor |
| Recommended contour level | 1.13 | Depositor |
| Map size (Å) | 345.6, 345.6, 345.6 | wwPDB |
| Map dimensions | 144, 144, 144 | wwPDB |
| Map angles (°) | 90.0, 90.0, 90.0 | wwPDB |
| Pixel spacing (Å) | 2.4, 2.4, 2.4 | Depositor |

# 5 Model quality (i)

## 5.1 Standard geometry (i)

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 | 0.51 | 0/2531 | 0.81 | 1/3415 (0.0%) |
| 1 | B | 0.46 | 0/3716 | 0.77 | 1/5007 (0.0%) |
| 1 | C | 0.46 | 0/3646 | 0.80 | 2/4916 (0.0%) |
| 1 | D | 0.47 | 0/3704 | 0.80 | 3/4990 (0.1%) |
| 1 | E | 0.44 | 0/3732 | 0.75 | 0/5028 |
| 1 | F | 0.45 | 0/3699 | 0.80 | 3/4983 (0.1%) |
| 1 | G | 0.48 | 0/3896 | 0.80 | 0/5249 |
| 1 | H | 0.46 | 0/3741 | 0.83 | 1/5040 (0.0%) |
| 1 | I | 0.47 | 0/3568 | 0.79 | 1/4813 (0.0%) |
| 1 | J | 0.45 | 0/3711 | 0.76 | 1/5000 (0.0%) |
| 1 | K | 0.47 | 0/3762 | 0.77 | 0/5068 |
| 1 | L | 0.45 | 0/3724 | 0.80 | 1/5017 (0.0%) |
| 1 | M | 0.47 | 0/2907 | 0.79 | 0/3920 |
| 1 | N | 0.45 | 0/3681 | 0.77 | 0/4960 |
| 1 | O | 0.48 | 0/3638 | 0.79 | 2/4905 (0.0%) |
| 1 | P | 0.48 | 0/3762 | 0.80 | 2/5068 (0.0%) |
| All | All | 0.46 | 0/57418 | 0.79 | 18/77379 (0.0%) |

There are no bond length outliers.

All (18) bond angle outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | J | 309 | ARG | NE-CZ-NH1 | 7.46 | 124.03 | 120.30 |
| 1 | D | 125 | ARG | NE-CZ-NH1 | 7.40 | 124.00 | 120.30 |
| 1 | A | 512 | PRO | CA-N-CD | -6.87 | 101.88 | 111.50 |
| 1 | B | 326 | GLU | N-CA-CB | 6.65 | 122.56 | 110.60 |
| 1 | C | 125 | ARG | CB-CA-C | -6.35 | 97.70 | 110.40 |
| 1 | O | 419 | GLU | N-CA-CB | -6.08 | 99.65 | 110.60 |
| 1 | P | 419 | GLU | N-CA-CB | -6.06 | 99.69 | 110.60 |
| 1 | L | 7 | ARG | N-CA-CB | -5.64 | 100.44 | 110.60 |
| 1 | F | 85 | GLY | N-CA-C | -5.38 | 99.64 | 113.10 |
| 1 | H | 340 | MET | N-CA-C | 5.35 | 125.45 | 111.00 |
| 1 | P | 420 | ALA | CB-CA-C | -5.23 | 102.25 | 110.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | O | 117 | TRP | CA-CB-CG | -5.22 | 103.78 | 113.70 |
| 1 | C | 147 | MET | N-CA-CB | -5.21 | 101.23 | 110.60 |
| 1 | F | 284 | TYR | CB-CG-CD1 | -5.18 | 117.89 | 121.00 |
| 1 | D | 183 | LEU | N-CA-C | 5.12 | 124.82 | 111.00 |
| 1 | I | 203 | GLU | N-CA-CB | -5.05 | 101.52 | 110.60 |
| 1 | F | 166 | PHE | CB-CA-C | -5.03 | 100.33 | 110.40 |
| 1 | D | 131 | SER | CA-C-N | -5.03 | 106.14 | 117.20 |

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 | 2510 | 0 | 2583 | 272 | 0 |
| 1 | B | 3677 | 0 | 3782 | 401 | 0 |
| 1 | C | 3608 | 0 | 3706 | 388 | 0 |
| 1 | D | 3666 | 0 | 3771 | 394 | 0 |
| 1 | E | 3693 | 0 | 3795 | 373 | 0 |
| 1 | F | 3661 | 0 | 3766 | 436 | 0 |
| 1 | G | 3855 | 0 | 3970 | 419 | 0 |
| 1 | H | 3702 | 0 | 3801 | 405 | 0 |
| 1 | I | 3530 | 0 | 3620 | 431 | 0 |
| 1 | J | 3673 | 0 | 3778 | 410 | 0 |
| 1 | K | 3723 | 0 | 3828 | 437 | 0 |
| 1 | L | 3685 | 0 | 3791 | 434 | 0 |
| 1 | M | 2881 | 0 | 2960 | 316 | 0 |
| 1 | N | 3643 | 0 | 3747 | 395 | 0 |
| 1 | O | 3600 | 0 | 3702 | 447 | 0 |
| 1 | P | 3723 | 0 | 3828 | 445 | 0 |
| All | All | 56830 | 0 | 58428 | 6005 | 0 |

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 52.

All (6005) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:E:11:ALA:HB1 | 1:E:506:ASN:HB3 | 1.23 | 1.18 |
| 1:G:146:LEU:HD12 | 1:G:171:VAL:HG13 | 1.25 | 1.17 |
| 1:C:146:LEU:HD12 | 1:C:171:VAL:HG13 | 1.24 | 1.17 |
| 1:H:146:LEU:HD12 | 1:H:171:VAL:HG13 | 1.14 | 1.14 |
| 1:P:146:LEU:HD12 | 1:P:171:VAL:HG13 | 1.23 | 1.13 |
| 1:B:152:THR:HB | 1:B:480:ILE:HG23 | 1.29 | 1.12 |
| 1:I:159:LEU:HB2 | 1:I:369:ILE:HG23 | 1.29 | 1.11 |
| 1:H:450:ALA:HB2 | 1:P:420:ALA:HB2 | 1.19 | 1.11 |
| 1:F:146:LEU:HD12 | 1:F:171:VAL:HG13 | 1.29 | 1.09 |
| 1:E:269:ILE:HG23 | 1:E:274:ILE:HG21 | 1.31 | 1.09 |
| 1:A:450:ALA:HB2 | 1:M:420:ALA:HB2 | 1.33 | 1.08 |
| 1:M:116:GLY:HA2 | 1:M:422:ALA:HB1 | 1.34 | 1.08 |
| 1:D:39:LEU:HA | 1:E:507:ILE:HG23 | 1.36 | 1.08 |
| 1:N:1:ALA:HA | 1:N:510:ALA:HB3 | 1.27 | 1.08 |
| 1:L:38:ILE:HG22 | 1:L:50:VAL:HB | 1.35 | 1.07 |
| 1:K:188:VAL:HG13 | 1:K:377:LEU:HD21 | 1.30 | 1.07 |
| 1:E:266:VAL:HB | 1:E:290:LEU:HD21 | 1.34 | 1.06 |
| 1:A:146:LEU:HD12 | 1:A:171:VAL:HG13 | 1.38 | 1.05 |
| 1:G:82:VAL:HG11 | 1:G:486:VAL:HG12 | 1.38 | 1.05 |
| 1:J:146:LEU:HD12 | 1:J:171:VAL:HG13 | 1.34 | 1.05 |
| 1:C:266:VAL:HB | 1:C:290:LEU:HD21 | 1.34 | 1.04 |
| 1:A:511:ALA:HB1 | 1:A:512:PRO:HD2 | 1.37 | 1.02 |
| 1:B:146:LEU:HD23 | 1:B:147:MET:H | 1.24 | 1.02 |
| 1:A:146:LEU:HD21 | 1:A:150:ALA:HB3 | 1.38 | 1.02 |
| 1:D:146:LEU:HD21 | 1:D:150:ALA:HB3 | 1.42 | 1.02 |
| 1:M:82:VAL:HG11 | 1:M:486:VAL:HA | 1.37 | 1.02 |
| 1:C:108:ILE:HD12 | 1:C:418:LYS:HE3 | 1.42 | 1.02 |
| 1:I:61:ILE:HG21 | 1:N:511:ALA:HB1 | 1.36 | 1.02 |
| 1:D:146:LEU:HD12 | 1:D:171:VAL:HG13 | 1.42 | 1.01 |
| 1:K:150:ALA:HB2 | 1:K:384:LEU:HD11 | 1.41 | 1.01 |
| 1:J:129:LEU:HD22 | 1:J:129:LEU:H | 1.25 | 1.01 |
| 1:B:32:PRO:HD2 | 1:B:467:MET:SD | 2.01 | 1.00 |
| 1:P:266:VAL:HB | 1:P:290:LEU:HD21 | 1.39 | 1.00 |
| 1:O:146:LEU:HD12 | 1:O:171:VAL:HG13 | 1.43 | 1.00 |
| 1:J:146:LEU:HD21 | 1:J:150:ALA:HB3 | 1.42 | 1.00 |
| 1:K:146:LEU:HD12 | 1:K:171:VAL:HG13 | 1.43 | 1.00 |
| 1:A:32:PRO:HG2 | 1:A:467:MET:SD | 2.01 | 1.00 |
| 1:M:146:LEU:HD22 | 1:M:168:LYS:HA | 1.44 | 1.00 |
| 1:B:114:ILE:HD11 | 1:B:502:LEU:HD22 | 1.43 | 1.00 |
| 1:L:39:LEU:HD22 | 1:M:508:ILE:HB | 1.44 | 1.00 |
| 1:H:186:ILE:HG22 | 1:H:377:LEU:HD11 | 1.44 | 0.99 |
| 1:D:211:ILE:HD11 | 1:D:297:MET:HG3 | 1.43 | 0.99 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:E:173:ALA:HB2 | 1:E:360:ILE:HD11 | 1.45 | 0.98 |
| 1:E:140:VAL:HA | 1:E:175:LEU:HD22 | 1.43 | 0.98 |
| 1:O:133:VAL:HG11 | 1:O:394:VAL:HA | 1.45 | 0.98 |
| 1:C:453:ARG:HH22 | 1:L:421:VAL:HG22 | 1.22 | 0.98 |
| 1:B:504:VAL:HG11 | 1:B:507:ILE:HG23 | 1.43 | 0.98 |
| 1:K:266:VAL:HB | 1:K:290:LEU:HD21 | 1.43 | 0.98 |
| 1:C:122:LYS:HE2 | 1:C:411:LEU:HD13 | 1.46 | 0.98 |
| 1:F:448:LEU:HD21 | 1:F:465:LEU:HD12 | 1.46 | 0.97 |
| 1:N:146:LEU:HD12 | 1:N:171:VAL:HG13 | 1.44 | 0.97 |
| 1:P:174:VAL:HG11 | 1:P:384:LEU:HB3 | 1.44 | 0.97 |
| 1:B:420:ALA:HB3 | 1:I:450:ALA:HB1 | 1.42 | 0.97 |
| 1:G:266:VAL:HB | 1:G:290:LEU:HD21 | 1.47 | 0.97 |
| 1:N:103:LEU:HG | 1:N:113:ILE:HD13 | 1.47 | 0.97 |
| 1:I:38:ILE:HG12 | 1:N:504:VAL:HG11 | 1.45 | 0.97 |
| 1:A:448:LEU:HD21 | 1:A:465:LEU:HD12 | 1.46 | 0.96 |
| 1:F:183:LEU:HD21 | 1:F:381:LEU:HD11 | 1.46 | 0.96 |
| 1:N:211:ILE:HD11 | 1:N:297:MET:HG3 | 1.47 | 0.96 |
| 1:C:173:ALA:HB2 | 1:C:360:ILE:HD11 | 1.47 | 0.95 |
| 1:N:146:LEU:HD21 | 1:N:150:ALA:HB3 | 1.46 | 0.95 |
| 1:B:27:LYS:HA | 1:B:436:ILE:HD11 | 1.47 | 0.95 |
| 1:H:174:VAL:HG12 | 1:H:381:LEU:HG | 1.48 | 0.95 |
| 1:E:38:ILE:HG22 | 1:E:50:VAL:HB | 1.49 | 0.95 |
| 1:H:448:LEU:HD21 | 1:H:465:LEU:HD12 | 1.49 | 0.94 |
| 1:I:186:ILE:HD13 | 1:I:381:LEU:HG | 1.49 | 0.94 |
| 1:I:133:VAL:HA | 1:I:393:THR:O | 1.67 | 0.94 |
| 1:D:171:VAL:HG12 | 1:D:384:LEU:HG | 1.46 | 0.94 |
| 1:K:201:LEU:HD13 | 1:K:360:ILE:HG22 | 1.48 | 0.94 |
| 1:J:128:LEU:HD13 | 1:J:487:LYS:HB3 | 1.49 | 0.94 |
| 1:E:146:LEU:HD21 | 1:E:150:ALA:HB3 | 1.48 | 0.94 |
| 1:O:38:ILE:HD13 | 1:O:48:LEU:HD23 | 1.47 | 0.94 |
| 1:B:325:PRO:O | 1:B:326:GLU:HG3 | 1.67 | 0.94 |
| 1:P:163:LYS:HA | 1:P:166:PHE:CD1 | 2.03 | 0.93 |
| 1:H:154:LEU:HD21 | 1:H:163:LYS:HG3 | 1.51 | 0.93 |
| 1:P:140:VAL:HA | 1:P:175:LEU:HD22 | 1.50 | 0.93 |
| 1:D:206:LEU:HD11 | 1:D:346:LEU:HD23 | 1.51 | 0.93 |
| 1:F:446:ALA:HB1 | 1:O:418:LYS:HD2 | 1.51 | 0.92 |
| 1:P:269:ILE:HG23 | 1:P:274:ILE:HG21 | 1.51 | 0.92 |
| 1:A:100:ALA:HA | 1:A:103:LEU:HD13 | 1.51 | 0.92 |
| 1:B:146:LEU:HD12 | 1:B:171:VAL:HG13 | 1.50 | 0.92 |
| 1:G:211:ILE:HD11 | 1:G:297:MET:HG3 | 1.52 | 0.92 |
| 1:K:211:ILE:HD11 | 1:K:297:MET:HG3 | 1.51 | 0.92 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:N:38:ILE:HD13 | 1:N:48:LEU:HD23 | 1.50 | 0.92 |
| 1:N:109:HIS:CE1 | 1:N:111:GLN:HB2 | 2.04 | 0.92 |
| 1:M:128:LEU:HD11 | 1:M:491:LEU:HD12 | 1.49 | 0.92 |
| 1:H:450:ALA:CB | 1:P:420:ALA:HB2 | 1.99 | 0.92 |
| 1:F:133:VAL:HA | 1:F:393:THR:O | 1.69 | 0.92 |
| 1:M:79:ASP:HA | 1:M:83:GLY:CA | 2.00 | 0.92 |
| 1:C:117:TRP:HE1 | 1:C:498:ALA:HB3 | 1.33 | 0.92 |
| 1:G:150:ALA:HB2 | 1:G:384:LEU:HD21 | 1.48 | 0.91 |
| 1:K:38:ILE:HG22 | 1:K:50:VAL:HB | 1.50 | 0.91 |
| 1:O:269:ILE:HG23 | 1:O:274:ILE:CG2 | 2.01 | 0.91 |
| 1:B:146:LEU:HD21 | 1:B:167:THR:HG23 | 1.50 | 0.91 |
| 1:F:81:GLU:O | 1:F:386:GLN:HG3 | 1.71 | 0.91 |
| 1:O:82:VAL:HG13 | 1:O:83:GLY:H | 1.35 | 0.91 |
| 1:K:39:LEU:HD22 | 1:P:508:ILE:HD11 | 1.50 | 0.91 |
| 1:O:146:LEU:HD21 | 1:O:150:ALA:HB3 | 1.52 | 0.91 |
| 1:A:446:ALA:CB | 1:M:421:VAL:HB | 2.01 | 0.91 |
| 1:A:40:LEU:HD12 | 1:A:48:LEU:HG | 1.53 | 0.90 |
| 1:C:161:HIS:CE1 | 1:C:369:ILE:HD13 | 2.06 | 0.90 |
| 1:J:111:GLN:HE21 | 1:J:114:ILE:HD11 | 1.33 | 0.90 |
| 1:L:146:LEU:HD21 | 1:L:167:THR:HG23 | 1.53 | 0.90 |
| 1:O:269:ILE:HG23 | 1:O:274:ILE:HG21 | 1.52 | 0.90 |
| 1:J:128:LEU:HD12 | 1:J:491:LEU:HD11 | 1.53 | 0.90 |
| 1:C:146:LEU:HD23 | 1:C:147:MET:H | 1.35 | 0.90 |
| 1:A:28:SER:HB2 | 1:A:35:MET:SD | 2.11 | 0.90 |
| 1:I:159:LEU:CB | 1:I:369:ILE:HG23 | 2.01 | 0.89 |
| 1:H:364:GLY:HA3 | 1:H:370:LEU:HD21 | 1.55 | 0.89 |
| 1:G:146:LEU:HD21 | 1:G:150:ALA:HB3 | 1.55 | 0.89 |
| 1:H:174:VAL:HG11 | 1:H:384:LEU:HG | 1.52 | 0.88 |
| 1:N:133:VAL:HG12 | 1:N:394:VAL:HG12 | 1.54 | 0.88 |
| 1:O:188:VAL:HG11 | 1:O:377:LEU:HD22 | 1.55 | 0.88 |
| 1:F:146:LEU:HD23 | 1:F:147:MET:H | 1.37 | 0.88 |
| 1:I:448:LEU:HD21 | 1:I:465:LEU:HD12 | 1.53 | 0.88 |
| 1:A:158:LEU:HD22 | 1:C:503:ARG:HH22 | 1.38 | 0.88 |
| 1:O:140:VAL:HA | 1:O:175:LEU:HD22 | 1.56 | 0.88 |
| 1:P:499:GLU:HG2 | 1:P:503:ARG:NH1 | 1.89 | 0.88 |
| 1:H:188:VAL:HB | 1:H:377:LEU:HD13 | 1.56 | 0.88 |
| 1:O:448:LEU:HD21 | 1:O:465:LEU:HD12 | 1.56 | 0.88 |
| 1:F:174:VAL:HG11 | 1:F:384:LEU:HB2 | 1.56 | 0.88 |
| 1:M:128:LEU:HD22 | 1:M:487:LYS:HB3 | 1.54 | 0.88 |
| 1:N:126:GLN:HG2 | 1:N:411:LEU:HD11 | 1.56 | 0.88 |
| 1:F:211:ILE:HD11 | 1:F:297:MET:HG3 | 1.54 | 0.87 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:D:401:GLU:HG2 | 1:D:433:LEU:HD22 | 1.56 | 0.87 |
| 1:M:146:LEU:HD21 | 1:M:150:ALA:HB3 | 1.55 | 0.87 |
| 1:O:161:HIS:HE1 | 1:O:369:ILE:HD13 | 1.36 | 0.87 |
| 1:F:418:LYS:HD2 | 1:O:450:ALA:HB2 | 1.56 | 0.87 |
| 1:F:450:ALA:CB | 1:O:417:GLY:HA2 | 2.05 | 0.87 |
| 1:L:158:LEU:HB3 | 1:M:503:ARG:NH2 | 1.89 | 0.87 |
| 1:J:201:LEU:HD23 | 1:J:360:ILE:HD13 | 1.53 | 0.87 |
| 1:K:146:LEU:HD23 | 1:K:147:MET:H | 1.37 | 0.87 |
| 1:I:126:GLN:HG3 | 1:I:411:LEU:HD11 | 1.54 | 0.87 |
| 1:O:82:VAL:HG21 | 1:O:485:GLN:HB2 | 1.55 | 0.87 |
| 1:O:149:ILE:HD13 | 1:O:482:GLU:HA | 1.57 | 0.87 |
| 1:D:40:LEU:HD23 | 1:E:507:ILE:HG21 | 1.58 | 0.86 |
| 1:A:56:THR:CG2 | 1:A:372:GLU:HG3 | 2.05 | 0.86 |
| 1:C:133:VAL:HG11 | 1:C:394:VAL:HA | 1.57 | 0.86 |
| 1:G:108:ILE:HG22 | 1:G:109:HIS:H | 1.40 | 0.86 |
| 1:I:475:MET:SD | 1:I:480:ILE:HB | 2.16 | 0.86 |
| 1:G:364:GLY:HA3 | 1:G:370:LEU:HD11 | 1.56 | 0.86 |
| 1:I:154:LEU:HD11 | 1:I:163:LYS:HG2 | 1.58 | 0.86 |
| 1:M:448:LEU:HD21 | 1:M:465:LEU:HD12 | 1.56 | 0.86 |
| 1:E:79:ASP:HA | 1:E:83:GLY:CA | 2.05 | 0.86 |
| 1:L:312:LEU:HA | 1:P:213:VAL:HG11 | 1.58 | 0.86 |
| 1:H:313:VAL:HG22 | 1:H:357:ALA:HB1 | 1.56 | 0.85 |
| 1:L:283:ILE:HG22 | 1:L:300:GLU:HG3 | 1.57 | 0.85 |
| 1:N:58:LEU:HB3 | 1:N:72:VAL:HG13 | 1.56 | 0.85 |
| 1:N:266:VAL:HB | 1:N:290:LEU:HD21 | 1.56 | 0.85 |
| 1:P:174:VAL:HG11 | 1:P:384:LEU:CB | 2.05 | 0.85 |
| 1:B:401:GLU:HG2 | 1:B:433:LEU:HD22 | 1.55 | 0.85 |
| 1:F:269:ILE:HG23 | 1:F:274:ILE:HG22 | 1.58 | 0.85 |
| 1:D:140:VAL:HA | 1:D:175:LEU:HD22 | 1.59 | 0.85 |
| 1:F:364:GLY:HA3 | 1:F:370:LEU:HD13 | 1.56 | 0.85 |
| 1:H:490:VAL:HG13 | 1:H:491:LEU:HD12 | 1.56 | 0.85 |
| 1:L:510:ALA:HB1 | 1:P:61:ILE:HD13 | 1.59 | 0.85 |
| 1:P:32:PRO:HA | 1:P:156:SER:HA | 1.57 | 0.85 |
| 1:P:265:LYS:O | 1:P:269:ILE:HB | 1.74 | 0.85 |
| 1:B:174:VAL:HG11 | 1:B:384:LEU:HB3 | 1.55 | 0.85 |
| 1:H:178:LYS:HD3 | 1:H:388:VAL:HG11 | 1.58 | 0.85 |
| 1:K:448:LEU:HD21 | 1:K:465:LEU:HD12 | 1.58 | 0.85 |
| 1:K:31:GLY:O | 1:K:156:SER:HA | 1.74 | 0.85 |
| 1:N:146:LEU:HD23 | 1:N:147:MET:H | 1.41 | 0.85 |
| 1:A:420:ALA:HB3 | 1:M:450:ALA:HB1 | 1.57 | 0.85 |
| 1:A:421:VAL:HG21 | 1:M:446:ALA:HB1 | 1.56 | 0.85 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:F:146:LEU:HD22 | 1:F:168:LYS:HA | 1.59 | 0.84 |
| 1:L:82:VAL:HA | 1:L:386:GLN:HG3 | 1.59 | 0.84 |
| 1:F:109:HIS:CE1 | 1:F:111:GLN:HB2 | 2.12 | 0.84 |
| 1:J:109:HIS:CE1 | 1:N:35:MET:HE1 | 2.12 | 0.84 |
| 1:E:283:ILE:HG22 | 1:E:300:GLU:HG3 | 1.59 | 0.84 |
| 1:I:128:LEU:O | 1:I:129:LEU:HD22 | 1.77 | 0.84 |
| 1:B:504:VAL:HG13 | 1:G:369:ILE:HD12 | 1.60 | 0.84 |
| 1:G:163:LYS:HG3 | 1:G:166:PHE:CD2 | 2.11 | 0.84 |
| 1:B:33:LYS:HB2 | 1:B:440:ASN:O | 1.77 | 0.84 |
| 1:G:283:ILE:HG22 | 1:G:300:GLU:HG3 | 1.60 | 0.84 |
| 1:I:38:ILE:HG22 | 1:I:50:VAL:HB | 1.59 | 0.84 |
| 1:N:513:ARG:CZ | 1:N:513:ARG:HA | 2.08 | 0.84 |
| 1:J:79:ASP:HA | 1:J:83:GLY:CA | 2.08 | 0.84 |
| 1:M:114:ILE:HD11 | 1:M:502:LEU:HD22 | 1.59 | 0.84 |
| 1:O:504:VAL:HG12 | 1:O:505:ASP:H | 1.43 | 0.84 |
| 1:F:79:ASP:HA | 1:F:83:GLY:CA | 2.08 | 0.83 |
| 1:P:166:PHE:CZ | 1:P:198:ASP:HB3 | 2.13 | 0.83 |
| 1:E:269:ILE:HG23 | 1:E:274:ILE:CG2 | 2.06 | 0.83 |
| 1:H:109:HIS:CE1 | 1:H:111:GLN:HB2 | 2.13 | 0.83 |
| 1:H:187:HIS:HA | 1:H:377:LEU:HD21 | 1.60 | 0.83 |
| 1:J:211:ILE:HD11 | 1:J:297:MET:HG3 | 1.60 | 0.83 |
| 1:L:394:VAL:HG23 | 1:L:482:GLU:HB2 | 1.60 | 0.83 |
| 1:G:107:LYS:O | 1:G:108:ILE:HG13 | 1.78 | 0.83 |
| 1:K:109:HIS:CE1 | 1:K:111:GLN:HB2 | 2.13 | 0.83 |
| 1:E:146:LEU:HD12 | 1:E:171:VAL:HG13 | 1.60 | 0.83 |
| 1:J:188:VAL:HG12 | 1:J:377:LEU:HD22 | 1.60 | 0.83 |
| 1:P:154:LEU:HD23 | 1:P:163:LYS:HG3 | 1.60 | 0.83 |
| 1:C:416:PRO:HA | 1:L:450:ALA:HB2 | 1.60 | 0.83 |
| 1:F:163:LYS:HA | 1:F:166:PHE:CD1 | 2.13 | 0.83 |
| 1:P:198:ASP:HA | 1:P:364:GLY:CA | 2.09 | 0.83 |
| 1:P:211:ILE:HD11 | 1:P:297:MET:HG3 | 1.60 | 0.83 |
| 1:I:173:ALA:HA | 1:I:176:ARG:NH1 | 1.92 | 0.83 |
| 1:A:511:ALA:HB2 | 1:F:63:VAL:HA | 1.60 | 0.83 |
| 1:E:448:LEU:HD21 | 1:E:465:LEU:HD12 | 1.58 | 0.83 |
| 1:J:109:HIS:HE1 | 1:N:35:MET:HE1 | 1.44 | 0.83 |
| 1:J:448:LEU:HD21 | 1:J:465:LEU:HD12 | 1.60 | 0.83 |
| 1:D:194:GLY:HA2 | 1:D:364:GLY:O | 1.79 | 0.83 |
| 1:G:159:LEU:HD13 | 1:G:159:LEU:H | 1.44 | 0.83 |
| 1:H:269:ILE:HG23 | 1:H:274:ILE:HG21 | 1.60 | 0.83 |
| 1:L:204:GLY:O | 1:L:359:THR:HB | 1.79 | 0.83 |
| 1:M:92:LEU:HD21 | 1:M:433:LEU:HD11 | 1.58 | 0.83 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:A:362:LEU:HD11 | 1:A:377:LEU:HD22 | 1.59 | 0.82 |
| 1:G:108:ILE:HG22 | 1:G:109:HIS:N | 1.94 | 0.82 |
| 1:F:265:LYS:HE2 | 1:F:322:PHE:CE1 | 2.14 | 0.82 |
| 1:B:442:GLY:HA3 | 1:F:112:THR:OG1 | 1.79 | 0.82 |
| 1:F:38:ILE:HG22 | 1:F:50:VAL:HB | 1.60 | 0.82 |
| 1:H:146:LEU:HD12 | 1:H:171:VAL:CG1 | 2.05 | 0.82 |
| 1:K:123:ALA:HA | 1:K:126:GLN:OE1 | 1.78 | 0.82 |
| 1:C:117:TRP:NE1 | 1:C:498:ALA:HB3 | 1.94 | 0.82 |
| 1:N:448:LEU:HD21 | 1:N:465:LEU:HD12 | 1.61 | 0.82 |
| 1:H:283:ILE:HG22 | 1:H:300:GLU:HG3 | 1.60 | 0.82 |
| 1:M:140:VAL:HA | 1:M:175:LEU:HD22 | 1.61 | 0.82 |
| 1:C:133:VAL:HG23 | 1:C:134:ASP:H | 1.44 | 0.82 |
| 1:C:126:GLN:HE22 | 1:C:411:LEU:HD12 | 1.45 | 0.81 |
| 1:L:70:VAL:HG21 | 1:P:48:LEU:HD11 | 1.62 | 0.81 |
| 1:H:438:ALA:HB2 | 1:H:448:LEU:HG | 1.63 | 0.81 |
| 1:M:339:VAL:O | 1:M:340:MET:HG3 | 1.80 | 0.81 |
| 1:N:110:PRO:HA | 1:N:113:ILE:HD12 | 1.61 | 0.81 |
| 1:P:146:LEU:HD12 | 1:P:171:VAL:CG1 | 2.09 | 0.81 |
| 1:B:39:LEU:O | 1:B:48:LEU:HA | 1.81 | 0.81 |
| 1:O:161:HIS:CE1 | 1:O:369:ILE:HD13 | 2.15 | 0.81 |
| 1:I:226:ILE:HD12 | 1:I:317:GLU:HG3 | 1.62 | 0.81 |
| 1:I:510:ALA:H | 1:O:38:ILE:HD11 | 1.43 | 0.81 |
| 1:K:136:GLY:HA2 | 1:K:391:SER:O | 1.80 | 0.81 |
| 1:P:122:LYS:O | 1:P:125:ARG:HG2 | 1.80 | 0.81 |
| 1:H:51:THR:HG21 | 1:H:56:THR:HB | 1.60 | 0.81 |
| 1:L:146:LEU:HD22 | 1:L:168:LYS:HA | 1.61 | 0.81 |
| 1:O:211:ILE:HD11 | 1:O:297:MET:HG3 | 1.62 | 0.81 |
| 1:B:368:GLN:HB3 | 1:F:496:GLU:HB2 | 1.62 | 0.81 |
| 1:E:11:ALA:CB | 1:E:506:ASN:HB3 | 2.08 | 0.81 |
| 1:G:324:HIS:O | 1:G:329:LYS:HG2 | 1.80 | 0.81 |
| 1:N:174:VAL:HG21 | 1:N:384:LEU:CB | 2.11 | 0.81 |
| 1:E:166:PHE:CZ | 1:E:198:ASP:HB3 | 2.16 | 0.81 |
| 1:H:324:HIS:O | 1:H:329:LYS:HG2 | 1.81 | 0.80 |
| 1:M:100:ALA:HA | 1:M:103:LEU:HD13 | 1.62 | 0.80 |
| 1:G:146:LEU:HD12 | 1:G:171:VAL:CG1 | 2.10 | 0.80 |
| 1:H:32:PRO:HA | 1:H:155:SER:O | 1.80 | 0.80 |
| 1:H:89:VAL:HG12 | 1:H:490:VAL:HG23 | 1.61 | 0.80 |
| 1:L:133:VAL:HG23 | 1:L:393:THR:O | 1.80 | 0.80 |
| 1:O:183:LEU:O | 1:O:183:LEU:HD13 | 1.81 | 0.80 |
| 1:E:109:HIS:CE1 | 1:E:111:GLN:HB2 | 2.16 | 0.80 |
| 1:E:206:LEU:HD11 | 1:E:346:LEU:HD22 | 1.63 | 0.80 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:F:192:LEU:H | 1:F:192:LEU:HD13 | 1.46 | 0.80 |
| 1:G:154:LEU:HD21 | 1:G:163:LYS:NZ | 1.96 | 0.80 |
| 1:O:266:VAL:HB | 1:O:290:LEU:HD21 | 1.60 | 0.80 |
| 1:P:149:ILE:HB | 1:P:481:THR:O | 1.81 | 0.80 |
| 1:P:226:ILE:HD13 | 1:P:307:VAL:HG13 | 1.63 | 0.80 |
| 1:K:71:LEU:HD12 | 1:K:501:ILE:HG13 | 1.63 | 0.80 |
| 1:M:124:ALA:HB1 | 1:M:491:LEU:HD13 | 1.62 | 0.80 |
| 1:M:174:VAL:HG11 | 1:M:384:LEU:HB3 | 1.63 | 0.80 |
| 1:O:100:ALA:HA | 1:O:103:LEU:HD12 | 1.64 | 0.80 |
| 1:O:317:GLU:HB2 | 1:O:329:LYS:HG2 | 1.64 | 0.80 |
| 1:A:29:THR:O | 1:A:156:SER:HB2 | 1.82 | 0.80 |
| 1:G:148:ASN:HA | 1:G:479:GLY:O | 1.81 | 0.80 |
| 1:L:352:VAL:HG22 | 1:L:355:GLY:H | 1.47 | 0.80 |
| 1:N:140:VAL:HA | 1:N:175:LEU:HD22 | 1.63 | 0.80 |
| 1:F:159:LEU:HB3 | 1:F:369:ILE:HG23 | 1.64 | 0.80 |
| 1:J:160:THR:HG23 | 1:J:164:ASP:HB3 | 1.64 | 0.79 |
| 1:J:269:ILE:HG23 | 1:J:274:ILE:HG21 | 1.62 | 0.79 |
| 1:C:146:LEU:HD21 | 1:C:150:ALA:HB3 | 1.63 | 0.79 |
| 1:H:211:ILE:CD1 | 1:H:211:ILE:H | 1.93 | 0.79 |
| 1:C:89:VAL:HA | 1:C:490:VAL:HG23 | 1.61 | 0.79 |
| 1:D:280:ARG:O | 1:D:280:ARG:HG3 | 1.82 | 0.79 |
| 1:E:100:ALA:HA | 1:E:103:LEU:HD22 | 1.65 | 0.79 |
| 1:G:40:LEU:HD22 | 1:G:48:LEU:HB3 | 1.63 | 0.79 |
| 1:B:146:LEU:HD23 | 1:B:147:MET:N | 1.96 | 0.79 |
| 1:G:174:VAL:HA | 1:G:177:LEU:HD23 | 1.65 | 0.79 |
| 1:K:283:ILE:HG22 | 1:K:300:GLU:HG3 | 1.64 | 0.79 |
| 1:N:138:ASP:O | 1:N:139:GLU:HB3 | 1.81 | 0.79 |
| 1:B:402:MET:SD | 1:B:456:HIS:HB2 | 2.22 | 0.79 |
| 1:D:183:LEU:HD12 | 1:D:186:ILE:HD12 | 1.64 | 0.79 |
| 1:J:166:PHE:CZ | 1:J:198:ASP:HB3 | 2.18 | 0.79 |
| 1:O:111:GLN:HA | 1:O:114:ILE:HD12 | 1.64 | 0.79 |
| 1:B:176:ARG:HH12 | 1:B:201:LEU:HD21 | 1.48 | 0.79 |
| 1:D:402:MET:SD | 1:D:453:ARG:HA | 2.23 | 0.79 |
| 1:H:177:LEU:HA | 1:H:356:GLU:O | 1.83 | 0.79 |
| 1:I:367:GLN:CG | 1:I:369:ILE:HB | 2.13 | 0.79 |
| 1:K:265:LYS:O | 1:K:269:ILE:HB | 1.82 | 0.79 |
| 1:E:163:LYS:HA | 1:E:166:PHE:CD1 | 2.18 | 0.79 |
| 1:N:174:VAL:HG21 | 1:N:384:LEU:HB2 | 1.65 | 0.79 |
| 1:E:27:LYS:HB2 | 1:E:436:ILE:HD11 | 1.63 | 0.79 |
| 1:F:79:ASP:HA | 1:F:83:GLY:HA3 | 1.64 | 0.79 |
| 1:K:325:PRO:O | 1:K:326:GLU:HG3 | 1.83 | 0.79 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:B:39:LEU:HD22 | 1:F:510:ALA:HB2 | 1.65 | 0.79 |
| 1:C:206:LEU:HD21 | 1:C:346:LEU:HB3 | 1.65 | 0.79 |
| 1:F:269:ILE:HG23 | 1:F:274:ILE:CG2 | 2.13 | 0.79 |
| 1:O:149:ILE:HB | 1:O:481:THR:O | 1.82 | 0.79 |
| 1:A:111:GLN:HA | 1:A:114:ILE:HD12 | 1.64 | 0.78 |
| 1:P:146:LEU:HD21 | 1:P:150:ALA:HB3 | 1.64 | 0.78 |
| 1:P:219:ILE:HD11 | 1:P:336:ILE:HB | 1.65 | 0.78 |
| 1:A:163:LYS:HG3 | 1:A:166:PHE:CZ | 2.19 | 0.78 |
| 1:B:511:ALA:HB3 | 1:B:512:PRO:HD3 | 1.65 | 0.78 |
| 1:C:131:SER:HB2 | 1:C:461:THR:HG22 | 1.66 | 0.78 |
| 1:C:483:SER:HB2 | 1:C:486:VAL:HG13 | 1.66 | 0.78 |
| 1:F:127:ALA:HB2 | 1:F:404:MET:SD | 2.23 | 0.78 |
| 1:C:61:ILE:HG23 | 1:C:63:VAL:HG23 | 1.63 | 0.78 |
| 1:E:174:VAL:HG12 | 1:E:381:LEU:HD22 | 1.64 | 0.78 |
| 1:F:362:LEU:HD11 | 1:F:377:LEU:HD23 | 1.65 | 0.78 |
| 1:L:188:VAL:HG11 | 1:L:377:LEU:HD21 | 1.64 | 0.78 |
| 1:M:475:MET:SD | 1:M:480:ILE:HB | 2.22 | 0.78 |
| 1:P:79:ASP:HA | 1:P:83:GLY:CA | 2.13 | 0.78 |
| 1:D:399:CYS:SG | 1:D:464:GLY:HA3 | 2.24 | 0.78 |
| 1:I:148:ASN:HB3 | 1:I:479:GLY:O | 1.83 | 0.78 |
| 1:K:146:LEU:HD21 | 1:K:167:THR:HG23 | 1.63 | 0.78 |
| 1:O:66:PRO:HB3 | 1:O:508:ILE:O | 1.83 | 0.78 |
| 1:G:313:VAL:HG22 | 1:G:357:ALA:HB3 | 1.65 | 0.78 |
| 1:I:283:ILE:HG22 | 1:I:300:GLU:HG3 | 1.64 | 0.78 |
| 1:B:38:ILE:O | 1:F:507:ILE:HG21 | 1.84 | 0.78 |
| 1:L:166:PHE:CZ | 1:L:198:ASP:HB3 | 2.18 | 0.78 |
| 1:L:504:VAL:HG22 | 1:P:36:ASP:O | 1.83 | 0.78 |
| 1:M:173:ALA:HB2 | 1:M:360:ILE:HD11 | 1.64 | 0.78 |
| 1:A:84:ASP:CG | 1:A:379:ASP:HB3 | 2.04 | 0.78 |
| 1:C:497:ALA:O | 1:C:500:VAL:HG22 | 1.83 | 0.78 |
| 1:E:402:MET:SD | 1:E:456:HIS:HB2 | 2.23 | 0.78 |
| 1:H:313:VAL:HG12 | 1:H:352:VAL:HG21 | 1.64 | 0.78 |
| 1:H:450:ALA:HB1 | 1:P:415:THR:O | 1.84 | 0.78 |
| 1:M:32:PRO:HA | 1:M:155:SER:O | 1.82 | 0.78 |
| 1:O:133:VAL:CG1 | 1:O:394:VAL:HA | 2.13 | 0.78 |
| 1:A:31:GLY:O | 1:A:156:SER:HA | 1.83 | 0.78 |
| 1:J:214:ASN:O | 1:J:215:GLN:HB2 | 1.84 | 0.78 |
| 1:M:116:GLY:CA | 1:M:422:ALA:HB1 | 2.13 | 0.78 |
| 1:M:163:LYS:HA | 1:M:166:PHE:CD1 | 2.19 | 0.78 |
| 1:K:89:VAL:HG12 | 1:K:490:VAL:HG23 | 1.63 | 0.78 |
| 1:L:100:ALA:HA | 1:L:103:LEU:HD22 | 1.64 | 0.78 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:L:38:ILE:HG12 | 1:M:504:VAL:HG11 | 1.63 | 0.77 |
| 1:L:146:LEU:CD2 | 1:L:167:THR:HG23 | 2.14 | 0.77 |
| 1:G:30:LEU:HD22 | 1:G:436:ILE:HD13 | 1.65 | 0.77 |
| 1:J:38:ILE:HB | 1:J:48:LEU:HD11 | 1.65 | 0.77 |
| 1:C:146:LEU:HD12 | 1:C:171:VAL:CG1 | 2.11 | 0.77 |
| 1:F:146:LEU:HD21 | 1:F:167:THR:HG23 | 1.65 | 0.77 |
| 1:H:148:ASN:HB3 | 1:H:481:THR:HG22 | 1.67 | 0.77 |
| 1:I:211:ILE:HD11 | 1:I:297:MET:HG3 | 1.67 | 0.77 |
| 1:M:116:GLY:HA2 | 1:M:422:ALA:CB | 2.14 | 0.77 |
| 1:N:402:MET:SD | 1:N:456:HIS:HB2 | 2.24 | 0.77 |
| 1:O:116:GLY:O | 1:O:119:GLU:HB2 | 1.84 | 0.77 |
| 1:C:453:ARG:NH2 | 1:L:421:VAL:HG22 | 1.99 | 0.77 |
| 1:B:146:LEU:CD2 | 1:B:147:MET:H | 1.97 | 0.77 |
| 1:C:354:LEU:HD23 | 1:C:356:GLU:H | 1.49 | 0.77 |
| 1:C:130:ASN:ND2 | 1:C:404:MET:HA | 2.00 | 0.77 |
| 1:D:38:ILE:HG23 | 1:D:50:VAL:HB | 1.66 | 0.77 |
| 1:J:442:GLY:HA2 | 1:K:109:HIS:CG | 2.19 | 0.77 |
| 1:K:163:LYS:HA | 1:K:166:PHE:CD1 | 2.20 | 0.77 |
| 1:O:399:CYS:SG | 1:O:464:GLY:HA3 | 2.24 | 0.77 |
| 1:H:120:ALA:HA | 1:H:123:ALA:HB3 | 1.65 | 0.77 |
| 1:I:200:TYR:CD1 | 1:I:363:ARG:HD2 | 2.19 | 0.77 |
| 1:A:154:LEU:HD21 | 1:A:163:LYS:NZ | 2.00 | 0.77 |
| 1:D:508:ILE:HD12 | 1:H:63:VAL:HG22 | 1.67 | 0.77 |
| 1:G:448:LEU:HD21 | 1:G:465:LEU:HD12 | 1.66 | 0.77 |
| 1:M:146:LEU:HD12 | 1:M:171:VAL:HG13 | 1.65 | 0.77 |
| 1:B:438:ALA:HB2 | 1:B:448:LEU:HG | 1.68 | 0.76 |
| 1:K:149:ILE:HD12 | 1:K:483:SER:H | 1.49 | 0.76 |
| 1:L:324:HIS:HB2 | 1:L:329:LYS:NZ | 2.01 | 0.76 |
| 1:L:178:LYS:NZ | 1:L:388:VAL:HG13 | 2.00 | 0.76 |
| 1:P:448:LEU:HD11 | 1:P:465:LEU:HD11 | 1.67 | 0.76 |
| 1:D:269:ILE:HG23 | 1:D:274:ILE:CG2 | 2.16 | 0.76 |
| 1:G:265:LYS:O | 1:G:269:ILE:HB | 1.86 | 0.76 |
| 1:J:154:LEU:HD22 | 1:J:167:THR:HB | 1.66 | 0.76 |
| 1:K:166:PHE:CD2 | 1:K:362:LEU:HD22 | 2.20 | 0.76 |
| 1:M:31:GLY:O | 1:M:156:SER:HA | 1.86 | 0.76 |
| 1:D:36:ASP:O | 1:E:504:VAL:HG22 | 1.85 | 0.76 |
| 1:K:190:LYS:HA | 1:K:362:LEU:O | 1.85 | 0.76 |
| 1:D:59:LYS:HE2 | 1:D:76:ARG:HB2 | 1.68 | 0.76 |
| 1:J:110:PRO:HA | 1:J:113:ILE:HD12 | 1.68 | 0.76 |
| 1:L:219:ILE:HD11 | 1:L:336:ILE:HB | 1.68 | 0.76 |
| 1:D:121:THR:O | 1:D:125:ARG:HB2 | 1.86 | 0.76 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:D:145:ASP:OD1 | 1:D:171:VAL:HB | 1.86 | 0.76 |
| 1:G:32:PRO:HB2 | 1:G:467:MET:SD | 2.25 | 0.76 |
| 1:J:79:ASP:HA | 1:J:83:GLY:HA3 | 1.68 | 0.76 |
| 1:J:399:CYS:SG | 1:J:464:GLY:HA3 | 2.25 | 0.76 |
| 1:L:159:LEU:HD23 | 1:L:163:LYS:HB3 | 1.67 | 0.76 |
| 1:B:140:VAL:HA | 1:B:175:LEU:HD22 | 1.68 | 0.76 |
| 1:C:364:GLY:HA3 | 1:C:370:LEU:HD13 | 1.68 | 0.76 |
| 1:I:438:ALA:HB2 | 1:I:448:LEU:HG | 1.66 | 0.76 |
| 1:A:79:ASP:HA | 1:A:83:GLY:CA | 2.16 | 0.76 |
| 1:B:176:ARG:NE | 1:B:358:CYS:HB2 | 2.01 | 0.76 |
| 1:C:131:SER:CB | 1:C:461:THR:HG22 | 2.16 | 0.76 |
| 1:P:214:ASN:O | 1:P:215:GLN:HB2 | 1.85 | 0.76 |
| 1:B:214:ASN:O | 1:B:215:GLN:HB2 | 1.85 | 0.75 |
| 1:K:146:LEU:HD21 | 1:K:150:ALA:HB3 | 1.68 | 0.75 |
| 1:G:95:GLU:OE1 | 1:G:429:ALA:HA | 1.85 | 0.75 |
| 1:I:39:LEU:HD13 | 1:N:512:PRO:HA | 1.69 | 0.75 |
| 1:I:109:HIS:CE1 | 1:I:111:GLN:HB2 | 2.21 | 0.75 |
| 1:A:402:MET:SD | 1:A:456:HIS:HB2 | 2.27 | 0.75 |
| 1:E:79:ASP:HA | 1:E:83:GLY:HA3 | 1.66 | 0.75 |
| 1:M:124:ALA:HB1 | 1:M:491:LEU:HB3 | 1.69 | 0.75 |
| 1:D:35:MET:SD | 1:E:111:GLN:HB3 | 2.27 | 0.75 |
| 1:G:36:ASP:HB3 | 1:G:372:GLU:OE1 | 1.86 | 0.75 |
| 1:G:79:ASP:HA | 1:G:83:GLY:HA3 | 1.67 | 0.75 |
| 1:I:364:GLY:HA3 | 1:I:370:LEU:CD1 | 2.16 | 0.75 |
| 1:N:214:ASN:O | 1:N:215:GLN:HB2 | 1.86 | 0.75 |
| 1:P:146:LEU:HD23 | 1:P:147:MET:N | 2.01 | 0.75 |
| 1:C:166:PHE:CZ | 1:C:198:ASP:HB3 | 2.21 | 0.75 |
| 1:E:433:LEU:O | 1:E:436:ILE:HG22 | 1.86 | 0.75 |
| 1:J:109:HIS:CD2 | 1:N:440:ASN:HA | 2.21 | 0.75 |
| 1:L:484:PHE:CE2 | 1:L:488:ARG:HD3 | 2.21 | 0.75 |
| 1:L:346:LEU:H | 1:L:346:LEU:HD22 | 1.51 | 0.75 |
| 1:I:92:LEU:HD21 | 1:I:433:LEU:HD21 | 1.69 | 0.75 |
| 1:J:114:ILE:HA | 1:J:117:TRP:CE3 | 2.22 | 0.75 |
| 1:M:148:ASN:HB3 | 1:M:481:THR:HG22 | 1.66 | 0.75 |
| 1:B:211:ILE:HD11 | 1:B:297:MET:HG3 | 1.69 | 0.75 |
| 1:C:154:LEU:HD22 | 1:C:167:THR:HB | 1.68 | 0.75 |
| 1:I:40:LEU:HB2 | 1:I:48:LEU:HD23 | 1.67 | 0.75 |
| 1:I:163:LYS:HA | 1:I:166:PHE:CD1 | 2.22 | 0.75 |
| 1:I:325:PRO:O | 1:I:326:GLU:HG2 | 1.86 | 0.75 |
| 1:J:438:ALA:HB2 | 1:J:448:LEU:HG | 1.69 | 0.75 |
| 1:O:59:LYS:HE3 | 1:O:72:VAL:O | 1.87 | 0.75 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:I:418:LYS:HD3 | 1:O:442:GLY:O | 1.87 | 0.75 |
| 1:P:149:ILE:HD13 | 1:P:482:GLU:HA | 1.69 | 0.75 |
| 1:A:399:CYS:SG | 1:A:464:GLY:HA3 | 2.27 | 0.74 |
| 1:I:32:PRO:HA | 1:I:155:SER:O | 1.87 | 0.74 |
| 1:P:32:PRO:HD2 | 1:P:467:MET:SD | 2.27 | 0.74 |
| 1:C:37:LYS:HD2 | 1:H:506:ASN:HB3 | 1.69 | 0.74 |
| 1:P:32:PRO:CA | 1:P:156:SER:HA | 2.16 | 0.74 |
| 1:K:500:VAL:O | 1:K:503:ARG:HG2 | 1.87 | 0.74 |
| 1:E:324:HIS:O | 1:E:329:LYS:HG2 | 1.87 | 0.74 |
| 1:G:127:ALA:HB2 | 1:G:404:MET:SD | 2.28 | 0.74 |
| 1:J:159:LEU:HD23 | 1:J:163:LYS:HG2 | 1.66 | 0.74 |
| 1:P:187:HIS:O | 1:P:359:THR:HG23 | 1.88 | 0.74 |
| 1:A:159:LEU:HD13 | 1:A:159:LEU:H | 1.53 | 0.74 |
| 1:F:145:ASP:O | 1:F:171:VAL:HG11 | 1.88 | 0.74 |
| 1:A:52:ASN:CG | 1:A:157:LYS:HG2 | 2.07 | 0.74 |
| 1:I:38:ILE:HD12 | 1:I:48:LEU:HD13 | 1.70 | 0.74 |
| 1:K:140:VAL:HA | 1:K:175:LEU:HD22 | 1.69 | 0.74 |
| 1:E:159:LEU:HD23 | 1:E:163:LYS:HG2 | 1.70 | 0.74 |
| 1:F:450:ALA:HB2 | 1:O:417:GLY:HA2 | 1.68 | 0.74 |
| 1:J:106:LYS:HD3 | 1:J:108:ILE:HD12 | 1.68 | 0.74 |
| 1:L:28:SER:O | 1:L:34:GLY:HA2 | 1.87 | 0.74 |
| 1:J:309:ARG:HH11 | 1:J:309:ARG:HG3 | 1.52 | 0.74 |
| 1:O:128:LEU:HD22 | 1:O:484:PHE:CZ | 2.21 | 0.74 |
| 1:P:146:LEU:HD23 | 1:P:147:MET:H | 1.53 | 0.74 |
| 1:C:39:LEU:HD21 | 1:H:508:ILE:HD12 | 1.68 | 0.74 |
| 1:D:324:HIS:HB2 | 1:D:329:LYS:NZ | 2.03 | 0.74 |
| 1:J:140:VAL:HA | 1:J:175:LEU:HD22 | 1.70 | 0.74 |
| 1:N:188:VAL:HG21 | 1:N:377:LEU:HD21 | 1.69 | 0.74 |
| 1:A:511:ALA:CB | 1:A:512:PRO:HD2 | 2.16 | 0.73 |
| 1:E:383:VAL:HG23 | 1:E:384:LEU:HD22 | 1.68 | 0.73 |
| 1:I:74:MET:SD | 1:I:493:SER:HB2 | 2.28 | 0.73 |
| 1:C:413:SER:HA | 1:L:453:ARG:NH1 | 2.03 | 0.73 |
| 1:H:269:ILE:HG23 | 1:H:274:ILE:CG2 | 2.18 | 0.73 |
| 1:I:33:LYS:HB3 | 1:N:109:HIS:CE1 | 2.22 | 0.73 |
| 1:J:188:VAL:CG1 | 1:J:377:LEU:HD22 | 2.17 | 0.73 |
| 1:J:433:LEU:O | 1:J:436:ILE:HG22 | 1.87 | 0.73 |
| 1:L:500:VAL:O | 1:L:504:VAL:HG23 | 1.89 | 0.73 |
| 1:C:146:LEU:CD2 | 1:C:147:MET:H | 1.99 | 0.73 |
| 1:F:140:VAL:HA | 1:F:175:LEU:HD22 | 1.70 | 0.73 |
| 1:O:19:ALA:HB1 | 1:O:94:ALA:HA | 1.69 | 0.73 |
| 1:P:501:ILE:HA | 1:P:504:VAL:HG12 | 1.69 | 0.73 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:E:188:VAL:CG1 | 1:E:377:LEU:HD22 | 2.17 | 0.73 |
| 1:F:128:LEU:HD21 | 1:F:488:ARG:HG2 | 1.69 | 0.73 |
| 1:F:399:CYS:SG | 1:F:464:GLY:HA3 | 2.28 | 0.73 |
| 1:H:128:LEU:O | 1:H:129:LEU:HG | 1.89 | 0.73 |
| 1:B:32:PRO:HA | 1:B:156:SER:HA | 1.69 | 0.73 |
| 1:K:402:MET:SD | 1:K:456:HIS:HB2 | 2.29 | 0.73 |
| 1:P:188:VAL:CG2 | 1:P:377:LEU:HD21 | 2.19 | 0.73 |
| 1:H:175:LEU:HD23 | 1:H:178:LYS:HE2 | 1.70 | 0.73 |
| 1:H:394:VAL:HG23 | 1:H:482:GLU:HB2 | 1.69 | 0.73 |
| 1:J:204:GLY:HA3 | 1:J:349:PHE:O | 1.88 | 0.73 |
| 1:K:40:LEU:O | 1:P:508:ILE:HB | 1.87 | 0.73 |
| 1:C:161:HIS:HE1 | 1:C:369:ILE:HD13 | 1.51 | 0.73 |
| 1:F:100:ALA:HA | 1:F:103:LEU:HD13 | 1.68 | 0.73 |
| 1:J:266:VAL:HB | 1:J:290:LEU:HD21 | 1.70 | 0.73 |
| 1:D:82:VAL:HG22 | 1:D:386:GLN:HG3 | 1.70 | 0.73 |
| 1:D:125:ARG:HH11 | 1:D:125:ARG:HG3 | 1.53 | 0.73 |
| 1:F:214:ASN:O | 1:F:215:GLN:HB2 | 1.88 | 0.73 |
| 1:G:438:ALA:HB2 | 1:G:448:LEU:HG | 1.70 | 0.73 |
| 1:K:176:ARG:HH22 | 1:K:360:ILE:HG23 | 1.53 | 0.73 |
| 1:A:127:ALA:HB1 | 1:A:491:LEU:HD13 | 1.70 | 0.73 |
| 1:A:438:ALA:HB2 | 1:A:448:LEU:HG | 1.71 | 0.73 |
| 1:D:448:LEU:HD11 | 1:D:465:LEU:HD11 | 1.71 | 0.73 |
| 1:L:146:LEU:HD23 | 1:L:147:MET:H | 1.51 | 0.73 |
| 1:A:420:ALA:CB | 1:M:450:ALA:HB1 | 2.19 | 0.72 |
| 1:F:106:LYS:HE2 | 1:F:421:VAL:HG21 | 1.69 | 0.72 |
| 1:J:126:GLN:HE22 | 1:J:411:LEU:HD21 | 1.54 | 0.72 |
| 1:J:185:ALA:HA | 1:J:309:ARG:HD2 | 1.71 | 0.72 |
| 1:A:451:GLN:NE2 | 1:A:471:THR:HA | 2.04 | 0.72 |
| 1:H:185:ALA:HB1 | 1:H:357:ALA:HB1 | 1.71 | 0.72 |
| 1:L:6:GLU:HB2 | 1:L:506:ASN:ND2 | 2.04 | 0.72 |
| 1:D:175:LEU:O | 1:D:178:LYS:HG2 | 1.89 | 0.72 |
| 1:E:132:ALA:O | 1:E:133:VAL:HG22 | 1.89 | 0.72 |
| 1:I:178:LYS:HD3 | 1:I:388:VAL:HG21 | 1.71 | 0.72 |
| 1:I:186:ILE:HD13 | 1:I:381:LEU:CG | 2.19 | 0.72 |
| 1:L:397:GLY:O | 1:L:465:LEU:HD23 | 1.88 | 0.72 |
| 1:N:116:GLY:O | 1:N:119:GLU:HB2 | 1.89 | 0.72 |
| 1:B:503:ARG:HD2 | 1:G:367:GLN:OE1 | 1.89 | 0.72 |
| 1:H:451:GLN:NE2 | 1:H:471:THR:HA | 2.04 | 0.72 |
| 1:J:366:THR:HB | 1:K:77:VAL:HG11 | 1.72 | 0.72 |
| 1:N:58:LEU:HB3 | 1:N:72:VAL:CG1 | 2.20 | 0.72 |
| 1:E:324:HIS:HB2 | 1:E:329:LYS:NZ | 2.04 | 0.72 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:E:499:GLU:O | 1:E:503:ARG:HG3 | 1.89 | 0.72 |
| 1:F:84:ASP:OD2 | 1:F:379:ASP:HB3 | 1.90 | 0.72 |
| 1:F:166:PHE:CZ | 1:F:198:ASP:HB3 | 2.25 | 0.72 |
| 1:J:283:ILE:HG22 | 1:J:300:GLU:HG3 | 1.71 | 0.72 |
| 1:L:38:ILE:HG22 | 1:L:50:VAL:CB | 2.18 | 0.72 |
| 1:B:117:TRP:HE1 | 1:B:498:ALA:HB3 | 1.53 | 0.72 |
| 1:B:293:ALA:HB2 | 1:F:318:ILE:HG13 | 1.71 | 0.72 |
| 1:B:435:THR:HG23 | 1:B:445:SER:HB2 | 1.72 | 0.72 |
| 1:D:450:ALA:HB3 | 1:K:417:GLY:CA | 2.20 | 0.72 |
| 1:J:325:PRO:O | 1:J:326:GLU:HG3 | 1.88 | 0.72 |
| 1:K:214:ASN:O | 1:K:215:GLN:HB2 | 1.87 | 0.72 |
| 1:L:79:ASP:HA | 1:L:83:GLY:HA2 | 1.69 | 0.72 |
| 1:P:32:PRO:HA | 1:P:156:SER:CA | 2.19 | 0.72 |
| 1:B:148:ASN:HA | 1:B:479:GLY:O | 1.89 | 0.72 |
| 1:B:269:ILE:HG23 | 1:B:274:ILE:CG2 | 2.20 | 0.72 |
| 1:C:214:ASN:O | 1:C:215:GLN:HB2 | 1.89 | 0.72 |
| 1:C:265:LYS:O | 1:C:269:ILE:HB | 1.89 | 0.72 |
| 1:F:450:ALA:CA | 1:O:417:GLY:HA2 | 2.20 | 0.72 |
| 1:N:1:ALA:CA | 1:N:510:ALA:HB3 | 2.14 | 0.72 |
| 1:C:138:ASP:O | 1:C:139:GLU:HB2 | 1.89 | 0.72 |
| 1:I:148:ASN:HA | 1:I:480:ILE:HA | 1.71 | 0.72 |
| 1:J:146:LEU:HD12 | 1:J:171:VAL:CG1 | 2.17 | 0.72 |
| 1:L:82:VAL:HA | 1:L:386:GLN:CG | 2.18 | 0.72 |
| 1:L:157:LYS:HB3 | 1:L:159:LEU:HD13 | 1.70 | 0.72 |
| 1:M:79:ASP:HA | 1:M:83:GLY:HA3 | 1.71 | 0.72 |
| 1:A:79:ASP:HA | 1:A:83:GLY:HA2 | 1.71 | 0.72 |
| 1:D:323:ASP:OD2 | 1:H:254:ILE:HD12 | 1.89 | 0.72 |
| 1:L:216:PRO:HG2 | 1:L:295:GLY:HA2 | 1.72 | 0.72 |
| 1:M:31:GLY:HA3 | 1:M:440:ASN:ND2 | 2.05 | 0.72 |
| 1:P:112:THR:HG22 | 1:P:418:LYS:HG3 | 1.71 | 0.72 |
| 1:P:176:ARG:NE | 1:P:358:CYS:HB2 | 2.04 | 0.72 |
| 1:O:74:MET:SD | 1:O:493:SER:HB2 | 2.30 | 0.72 |
| 1:O:82:VAL:N | 1:O:386:GLN:HG3 | 2.05 | 0.72 |
| 1:O:214:ASN:O | 1:O:215:GLN:HB2 | 1.90 | 0.72 |
| 1:P:145:ASP:OD1 | 1:P:171:VAL:HB | 1.90 | 0.72 |
| 1:I:205:PHE:O | 1:I:348:HIS:HA | 1.90 | 0.71 |
| 1:J:146:LEU:CD2 | 1:J:147:MET:H | 2.02 | 0.71 |
| 1:M:146:LEU:HD23 | 1:M:147:MET:H | 1.55 | 0.71 |
| 1:N:133:VAL:HB | 1:N:393:THR:O | 1.90 | 0.71 |
| 1:N:163:LYS:HA | 1:N:166:PHE:CD1 | 2.25 | 0.71 |
| 1:B:504:VAL:HG13 | 1:G:369:ILE:CD1 | 2.20 | 0.71 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:E:135:HIS:O | 1:E:392:ARG:HA | 1.89 | 0.71 |
| 1:G:32:PRO:HA | 1:G:155:SER:C | 2.11 | 0.71 |
| 1:H:265:LYS:HZ2 | 1:H:287:PRO:HG3 | 1.56 | 0.71 |
| 1:H:324:HIS:O | 1:H:328:VAL:HG23 | 1.90 | 0.71 |
| 1:K:51:THR:HG21 | 1:K:56:THR:HB | 1.71 | 0.71 |
| 1:M:128:LEU:HD21 | 1:M:491:LEU:CD1 | 2.20 | 0.71 |
| 1:N:163:LYS:CE | 1:N:373:ALA:HA | 2.20 | 0.71 |
| 1:B:364:GLY:HA3 | 1:B:370:LEU:HD13 | 1.72 | 0.71 |
| 1:C:82:VAL:HG11 | 1:C:485:GLN:HG2 | 1.70 | 0.71 |
| 1:I:188:VAL:HG13 | 1:I:374:GLU:HA | 1.72 | 0.71 |
| 1:K:32:PRO:HG2 | 1:K:467:MET:HE1 | 1.71 | 0.71 |
| 1:P:33:LYS:HB2 | 1:P:440:ASN:O | 1.89 | 0.71 |
| 1:P:176:ARG:CZ | 1:P:358:CYS:HB2 | 2.21 | 0.71 |
| 1:P:369:ILE:O | 1:P:372:GLU:HB3 | 1.90 | 0.71 |
| 1:B:37:LYS:O | 1:B:50:VAL:HA | 1.89 | 0.71 |
| 1:C:89:VAL:HA | 1:C:490:VAL:CG2 | 2.19 | 0.71 |
| 1:D:139:GLU:O | 1:D:140:VAL:HB | 1.90 | 0.71 |
| 1:D:283:ILE:HG22 | 1:D:300:GLU:HG3 | 1.72 | 0.71 |
| 1:G:325:PRO:O | 1:G:326:GLU:HG3 | 1.89 | 0.71 |
| 1:H:508:ILE:HG22 | 1:H:509:LYS:HG2 | 1.69 | 0.71 |
| 1:K:149:ILE:HA | 1:K:481:THR:O | 1.89 | 0.71 |
| 1:N:283:ILE:HG22 | 1:N:300:GLU:HG3 | 1.73 | 0.71 |
| 1:O:128:LEU:HD21 | 1:O:488:ARG:HB3 | 1.72 | 0.71 |
| 1:E:214:ASN:O | 1:E:215:GLN:HB2 | 1.90 | 0.71 |
| 1:G:82:VAL:HG12 | 1:G:84:ASP:H | 1.55 | 0.71 |
| 1:H:214:ASN:O | 1:H:215:GLN:HB2 | 1.89 | 0.71 |
| 1:J:208:ASP:O | 1:J:209:LYS:HG3 | 1.91 | 0.71 |
| 1:N:399:CYS:SG | 1:N:464:GLY:HA3 | 2.30 | 0.71 |
| 1:H:146:LEU:HB2 | 1:H:171:VAL:CG2 | 2.19 | 0.71 |
| 1:H:313:VAL:HG22 | 1:H:357:ALA:CB | 2.21 | 0.71 |
| 1:I:109:HIS:HB2 | 1:O:439:ASP:O | 1.89 | 0.71 |
| 1:I:324:HIS:HB2 | 1:I:329:LYS:NZ | 2.06 | 0.71 |
| 1:J:129:LEU:HD22 | 1:J:129:LEU:N | 2.04 | 0.71 |
| 1:K:324:HIS:ND1 | 1:K:325:PRO:HD3 | 2.06 | 0.71 |
| 1:P:58:LEU:HB3 | 1:P:72:VAL:HG11 | 1.71 | 0.71 |
| 1:P:79:ASP:HA | 1:P:83:GLY:HA3 | 1.71 | 0.71 |
| 1:C:51:THR:HG21 | 1:C:56:THR:HB | 1.72 | 0.71 |
| 1:C:483:SER:O | 1:C:486:VAL:HG22 | 1.90 | 0.71 |
| 1:F:154:LEU:HD11 | 1:F:163:LYS:HG2 | 1.71 | 0.71 |
| 1:G:352:VAL:HG22 | 1:G:355:GLY:H | 1.56 | 0.71 |
| 1:H:334:LYS:CD | 1:H:351:GLY:HA3 | 2.21 | 0.71 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:I:188:VAL:HG21 | 1:I:362:LEU:HD12 | 1.72 | 0.71 |
| 1:K:399:CYS:SG | 1:K:464:GLY:HA3 | 2.30 | 0.71 |
| 1:O:168:LYS:O | 1:O:171:VAL:HG22 | 1.90 | 0.71 |
| 1:F:402:MET:SD | 1:F:456:HIS:HB2 | 2.31 | 0.71 |
| 1:H:171:VAL:O | 1:H:174:VAL:HG22 | 1.91 | 0.71 |
| 1:K:324:HIS:O | 1:K:329:LYS:HG2 | 1.90 | 0.71 |
| 1:O:163:LYS:HA | 1:O:166:PHE:CD1 | 2.25 | 0.71 |
| 1:F:508:ILE:HD12 | 1:F:508:ILE:N | 2.05 | 0.71 |
| 1:G:27:LYS:O | 1:G:436:ILE:HD11 | 1.90 | 0.71 |
| 1:G:31:GLY:O | 1:G:156:SER:HA | 1.90 | 0.71 |
| 1:J:372:GLU:HG3 | 1:J:375:ARG:NH1 | 2.05 | 0.71 |
| 1:M:52:ASN:H | 1:M:375:ARG:NH2 | 1.89 | 0.71 |
| 1:O:438:ALA:HB2 | 1:O:448:LEU:HG | 1.71 | 0.71 |
| 1:E:32:PRO:HA | 1:E:155:SER:CB | 2.21 | 0.71 |
| 1:F:146:LEU:HD21 | 1:F:150:ALA:HB3 | 1.72 | 0.71 |
| 1:G:203:GLU:HG2 | 1:G:350:SER:HB2 | 1.71 | 0.71 |
| 1:I:438:ALA:CB | 1:I:448:LEU:HG | 2.21 | 0.71 |
| 1:K:313:VAL:HG22 | 1:K:357:ALA:HB3 | 1.72 | 0.71 |
| 1:L:140:VAL:HA | 1:L:175:LEU:HD22 | 1.71 | 0.71 |
| 1:O:32:PRO:HA | 1:O:156:SER:O | 1.90 | 0.71 |
| 1:B:475:MET:SD | 1:B:480:ILE:HB | 2.31 | 0.70 |
| 1:C:433:LEU:O | 1:C:436:ILE:HG22 | 1.91 | 0.70 |
| 1:G:214:ASN:O | 1:G:215:GLN:HB2 | 1.91 | 0.70 |
| 1:H:159:LEU:H | 1:H:159:LEU:HD13 | 1.56 | 0.70 |
| 1:N:146:LEU:HD23 | 1:N:147:MET:N | 2.06 | 0.70 |
| 1:P:511:ALA:N | 1:P:512:PRO:HD2 | 2.05 | 0.70 |
| 1:A:475:MET:SD | 1:A:480:ILE:HB | 2.31 | 0.70 |
| 1:F:32:PRO:HG2 | 1:F:467:MET:CE | 2.21 | 0.70 |
| 1:I:146:LEU:HD13 | 1:I:171:VAL:HG13 | 1.72 | 0.70 |
| 1:J:401:GLU:HG2 | 1:J:433:LEU:HD22 | 1.72 | 0.70 |
| 1:L:200:TYR:CD1 | 1:L:363:ARG:HD2 | 2.26 | 0.70 |
| 1:A:146:LEU:HD23 | 1:A:148:ASN:H | 1.55 | 0.70 |
| 1:J:59:LYS:HE2 | 1:J:76:ARG:HB2 | 1.73 | 0.70 |
| 1:J:163:LYS:HA | 1:J:166:PHE:CD1 | 2.25 | 0.70 |
| 1:O:166:PHE:CZ | 1:O:198:ASP:HB3 | 2.25 | 0.70 |
| 1:P:133:VAL:HG11 | 1:P:394:VAL:HG12 | 1.73 | 0.70 |
| 1:A:38:ILE:HG22 | 1:A:50:VAL:HB | 1.72 | 0.70 |
| 1:A:56:THR:HG21 | 1:A:372:GLU:HG3 | 1.73 | 0.70 |
| 1:B:32:PRO:HA | 1:B:155:SER:O | 1.91 | 0.70 |
| 1:C:81:GLU:C | 1:C:386:GLN:HG3 | 2.10 | 0.70 |
| 1:E:415:THR:O | 1:E:420:ALA:HB2 | 1.91 | 0.70 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:F:438:ALA:HB2 | 1:F:448:LEU:HG | 1.73 | 0.70 |
| 1:K:166:PHE:HD2 | 1:K:362:LEU:HD22 | 1.56 | 0.70 |
| 1:P:39:LEU:HD11 | 1:P:57:ILE:HG13 | 1.73 | 0.70 |
| 1:A:450:ALA:HB2 | 1:M:420:ALA:CB | 2.17 | 0.70 |
| 1:C:324:HIS:ND1 | 1:C:325:PRO:HD3 | 2.06 | 0.70 |
| 1:D:398:GLY:HA2 | 1:D:401:GLU:OE1 | 1.91 | 0.70 |
| 1:E:421:VAL:HG11 | 1:J:446:ALA:HB1 | 1.73 | 0.70 |
| 1:G:146:LEU:CD2 | 1:G:147:MET:H | 2.05 | 0.70 |
| 1:H:185:ALA:HA | 1:H:309:ARG:HB2 | 1.72 | 0.70 |
| 1:J:110:PRO:HB2 | 1:J:502:LEU:HD21 | 1.73 | 0.70 |
| 1:J:148:ASN:HA | 1:J:479:GLY:O | 1.92 | 0.70 |
| 1:K:27:LYS:O | 1:K:436:ILE:HD11 | 1.91 | 0.70 |
| 1:N:269:ILE:HG23 | 1:N:274:ILE:CG2 | 2.22 | 0.70 |
| 1:N:377:LEU:HA | 1:N:380:ALA:HB3 | 1.73 | 0.70 |
| 1:O:18:GLY:HA2 | 1:O:509:LYS:HG3 | 1.70 | 0.70 |
| 1:D:417:GLY:HA2 | 1:K:450:ALA:HB3 | 1.72 | 0.70 |
| 1:H:31:GLY:O | 1:H:156:SER:HA | 1.91 | 0.70 |
| 1:K:146:LEU:HD23 | 1:K:147:MET:N | 2.07 | 0.70 |
| 1:L:266:VAL:HB | 1:L:290:LEU:HD21 | 1.73 | 0.70 |
| 1:O:475:MET:SD | 1:O:480:ILE:HB | 2.32 | 0.70 |
| 1:B:424:GLU:HG2 | 1:B:425:SER:N | 2.06 | 0.70 |
| 1:D:188:VAL:HG21 | 1:D:377:LEU:HD13 | 1.74 | 0.70 |
| 1:D:214:ASN:O | 1:D:215:GLN:HB2 | 1.89 | 0.70 |
| 1:I:154:LEU:HD22 | 1:I:167:THR:HB | 1.73 | 0.70 |
| 1:K:149:ILE:HD12 | 1:K:483:SER:N | 2.06 | 0.70 |
| 1:L:133:VAL:HG22 | 1:L:134:ASP:O | 1.92 | 0.70 |
| 1:B:399:CYS:SG | 1:B:464:GLY:HA3 | 2.30 | 0.70 |
| 1:D:186:ILE:HD13 | 1:D:381:LEU:HD21 | 1.74 | 0.70 |
| 1:E:312:LEU:O | 1:E:354:LEU:HD22 | 1.92 | 0.70 |
| 1:H:475:MET:SD | 1:H:480:ILE:HB | 2.31 | 0.70 |
| 1:H:512:PRO:O | 1:H:513:ARG:HG2 | 1.91 | 0.70 |
| 1:I:146:LEU:HD22 | 1:I:167:THR:O | 1.92 | 0.70 |
| 1:K:33:LYS:HG3 | 1:K:441:ALA:HA | 1.73 | 0.70 |
| 1:M:438:ALA:HB2 | 1:M:448:LEU:HG | 1.72 | 0.70 |
| 1:N:146:LEU:CD2 | 1:N:147:MET:H | 2.04 | 0.70 |
| 1:A:146:LEU:CD1 | 1:A:171:VAL:HG13 | 2.20 | 0.70 |
| 1:E:38:ILE:HD12 | 1:E:48:LEU:HD22 | 1.73 | 0.70 |
| 1:G:145:ASP:O | 1:G:171:VAL:HG11 | 1.91 | 0.70 |
| 1:J:32:PRO:N | 1:J:155:SER:HB3 | 2.07 | 0.70 |
| 1:K:146:LEU:HD12 | 1:K:171:VAL:CG1 | 2.17 | 0.70 |
| 1:L:315:GLY:O | 1:P:214:ASN:HB3 | 1.92 | 0.70 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:M:74:MET:O | 1:M:77:VAL:HG12 | 1.92 | 0.70 |
| 1:N:38:ILE:HG22 | 1:N:50:VAL:HB | 1.74 | 0.70 |
| 1:N:324:HIS:HB2 | 1:N:329:LYS:NZ | 2.07 | 0.70 |
| 1:C:475:MET:SD | 1:C:480:ILE:HB | 2.32 | 0.70 |
| 1:D:402:MET:SD | 1:D:456:HIS:HB2 | 2.32 | 0.70 |
| 1:D:506:ASN:N | 1:H:25:LEU:HG | 2.07 | 0.70 |
| 1:E:51:THR:HG21 | 1:E:56:THR:HB | 1.73 | 0.70 |
| 1:G:417:GLY:HA2 | 1:N:450:ALA:HB1 | 1.72 | 0.70 |
| 1:H:483:SER:O | 1:H:486:VAL:HG22 | 1.91 | 0.70 |
| 1:J:206:LEU:HD11 | 1:J:346:LEU:HG | 1.72 | 0.70 |
| 1:K:184:GLU:OE2 | 1:K:312:LEU:HG | 1.92 | 0.70 |
| 1:M:146:LEU:HD22 | 1:M:168:LYS:CA | 2.21 | 0.70 |
| 1:N:146:LEU:HD21 | 1:N:167:THR:HG23 | 1.74 | 0.70 |
| 1:F:317:GLU:HB2 | 1:F:329:LYS:HG2 | 1.74 | 0.69 |
| 1:H:206:LEU:HD11 | 1:H:346:LEU:HG | 1.71 | 0.69 |
| 1:I:434:PRO:HB3 | 1:I:452:LEU:CD2 | 2.22 | 0.69 |
| 1:L:111:GLN:O | 1:L:114:ILE:HB | 1.90 | 0.69 |
| 1:M:178:LYS:CD | 1:M:388:VAL:HG21 | 2.21 | 0.69 |
| 1:M:483:SER:O | 1:M:486:VAL:HG22 | 1.92 | 0.69 |
| 1:C:146:LEU:HD23 | 1:C:147:MET:N | 2.07 | 0.69 |
| 1:C:211:ILE:HD11 | 1:C:297:MET:HG3 | 1.74 | 0.69 |
| 1:C:402:MET:SD | 1:C:456:HIS:HB2 | 2.32 | 0.69 |
| 1:D:4:ASP:O | 1:D:507:ILE:HD12 | 1.92 | 0.69 |
| 1:N:78:GLN:HG3 | 1:N:83:GLY:HA2 | 1.74 | 0.69 |
| 1:N:507:ILE:HG22 | 1:N:508:ILE:HG23 | 1.74 | 0.69 |
| 1:N:513:ARG:HA | 1:N:513:ARG:NE | 2.07 | 0.69 |
| 1:C:131:SER:HB2 | 1:C:461:THR:CG2 | 2.23 | 0.69 |
| 1:C:489:GLN:HA | 1:C:492:LEU:HG | 1.74 | 0.69 |
| 1:H:32:PRO:HA | 1:H:155:SER:C | 2.12 | 0.69 |
| 1:M:159:LEU:HD12 | 1:M:369:ILE:HG23 | 1.74 | 0.69 |
| 1:M:500:VAL:HA | 1:M:503:ARG:HH11 | 1.57 | 0.69 |
| 1:F:38:ILE:HD12 | 1:F:48:LEU:HD22 | 1.73 | 0.69 |
| 1:G:146:LEU:HD23 | 1:G:147:MET:H | 1.55 | 0.69 |
| 1:G:402:MET:SD | 1:G:456:HIS:HB2 | 2.32 | 0.69 |
| 1:I:74:MET:O | 1:I:77:VAL:HG12 | 1.92 | 0.69 |
| 1:M:128:LEU:HD22 | 1:M:487:LYS:CB | 2.22 | 0.69 |
| 1:O:313:VAL:HG22 | 1:O:357:ALA:HB3 | 1.73 | 0.69 |
| 1:B:32:PRO:N | 1:B:156:SER:HA | 2.07 | 0.69 |
| 1:B:402:MET:SD | 1:B:453:ARG:HA | 2.31 | 0.69 |
| 1:K:114:ILE:HA | 1:K:117:TRP:CE3 | 2.28 | 0.69 |
| 1:N:216:PRO:CG | 1:N:295:GLY:HA2 | 2.22 | 0.69 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:O:324:HIS:HB2 | 1:O:329:LYS:NZ | 2.06 | 0.69 |
| 1:D:159:LEU:HD23 | 1:D:163:LYS:HD3 | 1.74 | 0.69 |
| 1:H:402:MET:SD | 1:H:456:HIS:HB2 | 2.33 | 0.69 |
| 1:H:452:LEU:HA | 1:H:472:ILE:HG21 | 1.74 | 0.69 |
| 1:I:157:LYS:HB3 | 1:I:372:GLU:OE2 | 1.92 | 0.69 |
| 1:K:146:LEU:CD2 | 1:K:147:MET:H | 2.05 | 0.69 |
| 1:K:173:ALA:HA | 1:K:176:ARG:NE | 2.08 | 0.69 |
| 1:O:402:MET:SD | 1:O:456:HIS:HB2 | 2.33 | 0.69 |
| 1:P:402:MET:SD | 1:P:453:ARG:HA | 2.33 | 0.69 |
| 1:B:128:LEU:CD2 | 1:B:488:ARG:HA | 2.22 | 0.69 |
| 1:G:71:LEU:HB2 | 1:G:501:ILE:HG13 | 1.74 | 0.69 |
| 1:I:146:LEU:HD21 | 1:I:167:THR:HG23 | 1.74 | 0.69 |
| 1:J:191:LYS:HE2 | 1:J:191:LYS:HA | 1.75 | 0.69 |
| 1:P:216:PRO:CG | 1:P:295:GLY:HA2 | 2.22 | 0.69 |
| 1:B:313:VAL:HG13 | 1:B:352:VAL:HB | 1.75 | 0.69 |
| 1:C:206:LEU:HD11 | 1:C:346:LEU:HD23 | 1.74 | 0.69 |
| 1:E:32:PRO:O | 1:E:155:SER:HB3 | 1.93 | 0.69 |
| 1:F:157:LYS:HE3 | 1:F:375:ARG:HD2 | 1.74 | 0.69 |
| 1:G:190:LYS:HA | 1:G:362:LEU:O | 1.91 | 0.69 |
| 1:I:146:LEU:CD2 | 1:I:167:THR:HG23 | 2.22 | 0.69 |
| 1:J:505:ASP:HB3 | 1:N:37:LYS:NZ | 2.07 | 0.69 |
| 1:L:36:ASP:O | 1:M:504:VAL:HG22 | 1.92 | 0.69 |
| 1:L:214:ASN:O | 1:L:215:GLN:HB2 | 1.92 | 0.69 |
| 1:N:364:GLY:HA3 | 1:N:370:LEU:HD13 | 1.74 | 0.69 |
| 1:D:146:LEU:CD1 | 1:D:171:VAL:HG13 | 2.21 | 0.69 |
| 1:J:27:LYS:HB2 | 1:J:436:ILE:HD11 | 1.75 | 0.69 |
| 1:O:150:ALA:HB2 | 1:O:384:LEU:HD21 | 1.75 | 0.69 |
| 1:C:171:VAL:CG1 | 1:C:384:LEU:HG | 2.23 | 0.69 |
| 1:D:274:ILE:O | 1:D:296:VAL:HG22 | 1.93 | 0.69 |
| 1:E:176:ARG:HH12 | 1:E:201:LEU:HD21 | 1.56 | 0.69 |
| 1:J:110:PRO:O | 1:J:113:ILE:HB | 1.92 | 0.69 |
| 1:M:132:ALA:HB3 | 1:M:461:THR:OG1 | 1.93 | 0.69 |
| 1:P:188:VAL:HG22 | 1:P:377:LEU:HD21 | 1.73 | 0.69 |
| 1:A:59:LYS:HE2 | 1:A:76:ARG:HB2 | 1.75 | 0.68 |
| 1:F:283:ILE:HG22 | 1:F:300:GLU:HG3 | 1.74 | 0.68 |
| 1:G:154:LEU:HD21 | 1:G:163:LYS:HZ2 | 1.58 | 0.68 |
| 1:I:199:SER:HA | 1:I:363:ARG:H | 1.59 | 0.68 |
| 1:L:52:ASN:ND2 | 1:L:157:LYS:HG3 | 2.08 | 0.68 |
| 1:N:508:ILE:O | 1:N:508:ILE:HG13 | 1.93 | 0.68 |
| 1:O:206:LEU:O | 1:O:206:LEU:HD13 | 1.93 | 0.68 |
| 1:P:269:ILE:HG23 | 1:P:274:ILE:CG2 | 2.21 | 0.68 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:A:506:ASN:O | 1:A:507:ILE:HG12 | 1.93 | 0.68 |
| 1:B:32:PRO:CA | 1:B:156:SER:HA | 2.22 | 0.68 |
| 1:B:103:LEU:O | 1:B:106:LYS:HB3 | 1.93 | 0.68 |
| 1:B:274:ILE:O | 1:B:296:VAL:HG22 | 1.92 | 0.68 |
| 1:D:58:LEU:HB3 | 1:D:72:VAL:HG11 | 1.74 | 0.68 |
| 1:E:190:LYS:HD3 | 1:E:370:LEU:O | 1.93 | 0.68 |
| 1:K:185:ALA:HB3 | 1:K:357:ALA:CB | 2.23 | 0.68 |
| 1:O:138:ASP:O | 1:O:139:GLU:HB2 | 1.93 | 0.68 |
| 1:O:146:LEU:HD12 | 1:O:171:VAL:CG1 | 2.23 | 0.68 |
| 1:D:483:SER:O | 1:D:486:VAL:HG22 | 1.94 | 0.68 |
| 1:E:58:LEU:HB3 | 1:E:72:VAL:CG1 | 2.22 | 0.68 |
| 1:E:188:VAL:HG13 | 1:E:377:LEU:HD22 | 1.72 | 0.68 |
| 1:E:393:THR:HG22 | 1:E:483:SER:HA | 1.74 | 0.68 |
| 1:F:146:LEU:CD2 | 1:F:147:MET:H | 2.06 | 0.68 |
| 1:H:173:ALA:O | 1:H:176:ARG:HG2 | 1.93 | 0.68 |
| 1:L:496:GLU:OE1 | 1:P:369:ILE:HG13 | 1.94 | 0.68 |
| 1:N:82:VAL:HG13 | 1:N:83:GLY:H | 1.58 | 0.68 |
| 1:O:159:LEU:HG | 1:O:163:LYS:HG2 | 1.75 | 0.68 |
| 1:O:171:VAL:O | 1:O:175:LEU:HG | 1.93 | 0.68 |
| 1:A:158:LEU:HD22 | 1:C:503:ARG:NH2 | 2.08 | 0.68 |
| 1:A:452:LEU:HD13 | 1:A:465:LEU:HD13 | 1.73 | 0.68 |
| 1:C:191:LYS:HB3 | 1:C:363:ARG:CB | 2.22 | 0.68 |
| 1:E:54:GLY:O | 1:E:58:LEU:HD23 | 1.94 | 0.68 |
| 1:F:146:LEU:HD23 | 1:F:147:MET:N | 2.06 | 0.68 |
| 1:F:438:ALA:CB | 1:F:448:LEU:HG | 2.23 | 0.68 |
| 1:I:216:PRO:HG2 | 1:I:295:GLY:HA2 | 1.75 | 0.68 |
| 1:M:364:GLY:HA3 | 1:M:370:LEU:HD13 | 1.73 | 0.68 |
| 1:B:146:LEU:HD11 | 1:B:150:ALA:CB | 2.23 | 0.68 |
| 1:B:188:VAL:HG21 | 1:B:377:LEU:HD22 | 1.74 | 0.68 |
| 1:D:27:LYS:HD2 | 1:D:436:ILE:HD11 | 1.76 | 0.68 |
| 1:D:324:HIS:ND1 | 1:D:325:PRO:HD3 | 2.08 | 0.68 |
| 1:H:394:VAL:HG21 | 1:H:487:LYS:HG3 | 1.75 | 0.68 |
| 1:K:39:LEU:HB3 | 1:P:508:ILE:HD12 | 1.75 | 0.68 |
| 1:K:368:GLN:HG3 | 1:K:369:ILE:N | 2.09 | 0.68 |
| 1:B:448:LEU:HD21 | 1:B:465:LEU:HD12 | 1.74 | 0.68 |
| 1:G:27:LYS:HA | 1:G:30:LEU:HD13 | 1.76 | 0.68 |
| 1:G:411:LEU:HB3 | 1:G:423:MET:SD | 2.34 | 0.68 |
| 1:H:257:ALA:O | 1:H:261:LYS:HD2 | 1.93 | 0.68 |
| 1:K:176:ARG:NH2 | 1:K:360:ILE:HG23 | 2.09 | 0.68 |
| 1:M:32:PRO:HD2 | 1:M:467:MET:SD | 2.34 | 0.68 |
| 1:A:511:ALA:HB1 | 1:A:512:PRO:CD | 2.19 | 0.68 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:D:324:HIS:O | 1:D:328:VAL:HG13 | 1.93 | 0.68 |
| 1:D:324:HIS:O | 1:D:329:LYS:HG2 | 1.93 | 0.68 |
| 1:J:146:LEU:CD1 | 1:J:171:VAL:HG13 | 2.18 | 0.68 |
| 1:A:402:MET:SD | 1:A:453:ARG:HA | 2.33 | 0.68 |
| 1:C:146:LEU:HD13 | 1:C:168:LYS:HA | 1.76 | 0.68 |
| 1:C:313:VAL:HG22 | 1:C:357:ALA:HB3 | 1.75 | 0.68 |
| 1:F:146:LEU:O | 1:F:147:MET:HG2 | 1.94 | 0.68 |
| 1:F:417:GLY:HA3 | 1:O:450:ALA:HA | 1.75 | 0.68 |
| 1:H:399:CYS:SG | 1:H:464:GLY:HA3 | 2.34 | 0.68 |
| 1:I:185:ALA:HA | 1:I:309:ARG:HD2 | 1.76 | 0.68 |
| 1:J:324:HIS:O | 1:J:329:LYS:HG2 | 1.94 | 0.68 |
| 1:K:231:MET:HG3 | 1:K:283:ILE:HG13 | 1.76 | 0.68 |
| 1:L:103:LEU:HD23 | 1:L:502:LEU:HD11 | 1.75 | 0.68 |
| 1:B:154:LEU:HD22 | 1:B:167:THR:HB | 1.76 | 0.68 |
| 1:H:259:LYS:O | 1:H:263:LYS:HG2 | 1.94 | 0.68 |
| 1:M:106:LYS:O | 1:M:107:LYS:HD2 | 1.94 | 0.68 |
| 1:M:190:LYS:HA | 1:M:362:LEU:O | 1.94 | 0.68 |
| 1:P:226:ILE:HG12 | 1:P:278:ILE:HG23 | 1.76 | 0.68 |
| 1:B:5:GLU:O | 1:B:5:GLU:HG2 | 1.94 | 0.68 |
| 1:H:415:THR:O | 1:H:420:ALA:HB2 | 1.94 | 0.68 |
| 1:J:100:ALA:O | 1:J:103:LEU:HB3 | 1.94 | 0.68 |
| 1:M:149:ILE:HD12 | 1:M:483:SER:H | 1.58 | 0.68 |
| 1:P:133:VAL:HG22 | 1:P:395:TYR:H | 1.59 | 0.68 |
| 1:E:231:MET:HB2 | 1:E:284:TYR:H | 1.59 | 0.67 |
| 1:F:51:THR:HA | 1:F:375:ARG:NH1 | 2.08 | 0.67 |
| 1:G:96:LEU:HD11 | 1:G:117:TRP:HZ2 | 1.59 | 0.67 |
| 1:G:145:ASP:OD1 | 1:G:171:VAL:HB | 1.94 | 0.67 |
| 1:E:369:ILE:O | 1:E:372:GLU:HG2 | 1.93 | 0.67 |
| 1:G:114:ILE:HA | 1:G:117:TRP:CE3 | 2.29 | 0.67 |
| 1:I:139:GLU:O | 1:I:140:VAL:HB | 1.94 | 0.67 |
| 1:I:184:GLU:O | 1:I:186:ILE:HD12 | 1.94 | 0.67 |
| 1:N:101:GLU:O | 1:N:104:ILE:HG22 | 1.94 | 0.67 |
| 1:O:174:VAL:HB | 1:O:385:ALA:HA | 1.76 | 0.67 |
| 1:P:159:LEU:HD23 | 1:P:163:LYS:HG2 | 1.76 | 0.67 |
| 1:B:364:GLY:HA3 | 1:B:370:LEU:CD1 | 2.24 | 0.67 |
| 1:F:225:LEU:HD13 | 1:F:329:LYS:HE3 | 1.76 | 0.67 |
| 1:G:371:ASP:O | 1:G:374:GLU:HB3 | 1.94 | 0.67 |
| 1:I:25:LEU:HG | 1:N:513:ARG:NH2 | 2.09 | 0.67 |
| 1:K:507:ILE:O | 1:K:508:ILE:HD13 | 1.94 | 0.67 |
| 1:P:198:ASP:HA | 1:P:364:GLY:HA2 | 1.73 | 0.67 |
| 1:A:109:HIS:CE1 | 1:A:111:GLN:HB2 | 2.29 | 0.67 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:B:269:ILE:HG23 | 1:B:274:ILE:HG21 | 1.76 | 0.67 |
| 1:B:420:ALA:CB | 1:I:450:ALA:HB1 | 2.23 | 0.67 |
| 1:C:130:ASN:HB3 | 1:C:403:LEU:HD23 | 1.77 | 0.67 |
| 1:D:138:ASP:O | 1:D:139:GLU:HB2 | 1.93 | 0.67 |
| 1:D:433:LEU:O | 1:D:436:ILE:HG22 | 1.93 | 0.67 |
| 1:H:188:VAL:HG21 | 1:H:362:LEU:HD12 | 1.76 | 0.67 |
| 1:I:396:GLY:HA3 | 1:I:480:ILE:HG22 | 1.75 | 0.67 |
| 1:K:203:GLU:CB | 1:K:350:SER:HB2 | 2.24 | 0.67 |
| 1:O:438:ALA:CB | 1:O:448:LEU:HG | 2.24 | 0.67 |
| 1:C:154:LEU:CD2 | 1:C:167:THR:HB | 2.24 | 0.67 |
| 1:C:280:ARG:HG3 | 1:C:280:ARG:O | 1.95 | 0.67 |
| 1:F:146:LEU:CD1 | 1:F:171:VAL:HG13 | 2.17 | 0.67 |
| 1:F:377:LEU:HD12 | 1:F:378:HIS:N | 2.10 | 0.67 |
| 1:H:309:ARG:O | 1:H:313:VAL:HG23 | 1.93 | 0.67 |
| 1:I:394:VAL:HG23 | 1:I:482:GLU:HB2 | 1.76 | 0.67 |
| 1:L:128:LEU:O | 1:L:129:LEU:HD22 | 1.94 | 0.67 |
| 1:N:219:ILE:HD11 | 1:N:336:ILE:HB | 1.77 | 0.67 |
| 1:P:204:GLY:HA3 | 1:P:349:PHE:O | 1.95 | 0.67 |
| 1:E:414:ARG:CZ | 1:E:414:ARG:HA | 2.25 | 0.67 |
| 1:L:146:LEU:CD1 | 1:L:171:VAL:HG13 | 2.25 | 0.67 |
| 1:N:173:ALA:O | 1:N:176:ARG:HG2 | 1.95 | 0.67 |
| 1:D:51:THR:HG21 | 1:D:56:THR:HB | 1.75 | 0.67 |
| 1:D:161:HIS:HE1 | 1:D:369:ILE:HG21 | 1.58 | 0.67 |
| 1:D:176:ARG:HE | 1:D:358:CYS:CB | 2.07 | 0.67 |
| 1:E:32:PRO:HA | 1:E:155:SER:HB3 | 1.76 | 0.67 |
| 1:E:185:ALA:HA | 1:E:309:ARG:CD | 2.25 | 0.67 |
| 1:F:452:LEU:HD13 | 1:F:465:LEU:HD13 | 1.74 | 0.67 |
| 1:I:106:LYS:HD3 | 1:I:113:ILE:HD11 | 1.77 | 0.67 |
| 1:L:341:ILE:HB | 1:L:346:LEU:HD21 | 1.75 | 0.67 |
| 1:C:159:LEU:HD12 | 1:C:372:GLU:HG3 | 1.77 | 0.67 |
| 1:C:434:PRO:HB3 | 1:C:452:LEU:CD2 | 2.25 | 0.67 |
| 1:D:35:MET:CE | 1:E:111:GLN:HB3 | 2.25 | 0.67 |
| 1:F:421:VAL:HG13 | 1:O:453:ARG:HH22 | 1.58 | 0.67 |
| 1:H:126:GLN:O | 1:H:130:ASN:HB2 | 1.95 | 0.67 |
| 1:K:185:ALA:HB3 | 1:K:357:ALA:HB1 | 1.75 | 0.67 |
| 1:M:145:ASP:OD1 | 1:M:171:VAL:HB | 1.95 | 0.67 |
| 1:P:59:LYS:HE2 | 1:P:76:ARG:HB2 | 1.77 | 0.67 |
| 1:P:313:VAL:HG13 | 1:P:352:VAL:HB | 1.77 | 0.67 |
| 1:P:452:LEU:HD13 | 1:P:465:LEU:HD13 | 1.77 | 0.67 |
| 1:B:152:THR:CB | 1:B:480:ILE:HG23 | 2.18 | 0.67 |
| 1:C:145:ASP:O | 1:C:171:VAL:HG11 | 1.95 | 0.67 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:F:219:ILE:HD11 | 1:F:336:ILE:HB | 1.77 | 0.67 |
| 1:H:166:PHE:CZ | 1:H:198:ASP:HB3 | 2.30 | 0.67 |
| 1:I:166:PHE:CZ | 1:I:198:ASP:HB3 | 2.30 | 0.67 |
| 1:J:159:LEU:HD13 | 1:J:159:LEU:H | 1.60 | 0.67 |
| 1:J:269:ILE:HG23 | 1:J:274:ILE:CG2 | 2.25 | 0.67 |
| 1:L:157:LYS:HB3 | 1:L:159:LEU:CD1 | 2.25 | 0.67 |
| 1:L:402:MET:SD | 1:L:456:HIS:HB2 | 2.35 | 0.67 |
| 1:A:408:VAL:HA | 1:A:411:LEU:HD12 | 1.75 | 0.67 |
| 1:B:163:LYS:HA | 1:B:166:PHE:CD1 | 2.30 | 0.67 |
| 1:F:141:LYS:HG2 | 1:F:144:GLN:HB2 | 1.77 | 0.67 |
| 1:I:40:LEU:HB2 | 1:I:48:LEU:CD2 | 2.25 | 0.67 |
| 1:I:147:MET:HB3 | 1:I:478:LEU:O | 1.94 | 0.67 |
| 1:J:28:SER:O | 1:J:34:GLY:HA2 | 1.94 | 0.67 |
| 1:J:146:LEU:HD23 | 1:J:147:MET:H | 1.60 | 0.67 |
| 1:K:475:MET:SD | 1:K:480:ILE:HB | 2.34 | 0.67 |
| 1:N:54:GLY:O | 1:N:58:LEU:HD23 | 1.95 | 0.67 |
| 1:O:324:HIS:ND1 | 1:O:325:PRO:HD3 | 2.10 | 0.67 |
| 1:C:191:LYS:HB3 | 1:C:363:ARG:HB3 | 1.76 | 0.66 |
| 1:E:191:LYS:HA | 1:E:191:LYS:HE3 | 1.75 | 0.66 |
| 1:H:128:LEU:CD1 | 1:H:488:ARG:HA | 2.24 | 0.66 |
| 1:H:159:LEU:HD23 | 1:H:163:LYS:HG2 | 1.77 | 0.66 |
| 1:J:192:LEU:HB3 | 1:J:366:THR:HG21 | 1.76 | 0.66 |
| 1:K:276:CYS:HA | 1:K:297:MET:O | 1.94 | 0.66 |
| 1:L:364:GLY:HA3 | 1:L:370:LEU:HD13 | 1.76 | 0.66 |
| 1:M:163:LYS:HG3 | 1:M:166:PHE:CG | 2.29 | 0.66 |
| 1:F:416:PRO:HD2 | 1:F:419:GLU:OE1 | 1.95 | 0.66 |
| 1:G:140:VAL:HA | 1:G:175:LEU:HD22 | 1.76 | 0.66 |
| 1:L:164:ASP:O | 1:L:167:THR:HG22 | 1.95 | 0.66 |
| 1:L:341:ILE:HG23 | 1:L:363:ARG:HE | 1.59 | 0.66 |
| 1:N:163:LYS:HG3 | 1:N:166:PHE:CG | 2.30 | 0.66 |
| 1:N:265:LYS:HE2 | 1:N:322:PHE:CE1 | 2.31 | 0.66 |
| 1:A:483:SER:O | 1:A:486:VAL:HG22 | 1.94 | 0.66 |
| 1:B:433:LEU:O | 1:B:436:ILE:HG22 | 1.96 | 0.66 |
| 1:D:364:GLY:HA3 | 1:D:370:LEU:HD22 | 1.77 | 0.66 |
| 1:I:206:LEU:HD11 | 1:I:346:LEU:HD22 | 1.78 | 0.66 |
| 1:I:367:GLN:HG2 | 1:I:369:ILE:HB | 1.76 | 0.66 |
| 1:J:27:LYS:CB | 1:J:436:ILE:HD11 | 2.26 | 0.66 |
| 1:M:59:LYS:HE2 | 1:M:76:ARG:HB2 | 1.77 | 0.66 |
| 1:N:110:PRO:O | 1:N:113:ILE:HB | 1.96 | 0.66 |
| 1:O:225:LEU:HD13 | 1:O:329:LYS:CE | 2.25 | 0.66 |
| 1:O:225:LEU:HD13 | 1:O:329:LYS:HE3 | 1.77 | 0.66 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:P:415:THR:HG21 | 1:P:423:MET:HE3 | 1.76 | 0.66 |
| 1:B:289:GLN:O | 1:F:318:ILE:HD12 | 1.95 | 0.66 |
| 1:E:324:HIS:ND1 | 1:E:325:PRO:HD3 | 2.10 | 0.66 |
| 1:K:191:LYS:H | 1:K:363:ARG:HA | 1.59 | 0.66 |
| 1:K:209:LYS:HE3 | 1:K:302:ALA:HA | 1.77 | 0.66 |
| 1:N:28:SER:HB2 | 1:N:35:MET:SD | 2.35 | 0.66 |
| 1:O:181:GLY:HA3 | 1:O:356:GLU:OE1 | 1.96 | 0.66 |
| 1:P:124:ALA:O | 1:P:128:LEU:HG | 1.95 | 0.66 |
| 1:H:134:ASP:HB3 | 1:H:395:TYR:CE2 | 2.30 | 0.66 |
| 1:I:317:GLU:OE1 | 1:I:329:LYS:HD2 | 1.95 | 0.66 |
| 1:K:191:LYS:HG3 | 1:K:343:GLU:OE2 | 1.95 | 0.66 |
| 1:M:411:LEU:HB3 | 1:M:423:MET:SD | 2.35 | 0.66 |
| 1:P:157:LYS:HB3 | 1:P:159:LEU:HD11 | 1.78 | 0.66 |
| 1:B:114:ILE:CD1 | 1:B:502:LEU:HD22 | 2.23 | 0.66 |
| 1:B:438:ALA:CB | 1:B:448:LEU:HG | 2.26 | 0.66 |
| 1:J:128:LEU:CD1 | 1:J:491:LEU:HD11 | 2.25 | 0.66 |
| 1:J:372:GLU:HA | 1:J:375:ARG:HD3 | 1.78 | 0.66 |
| 1:C:226:ILE:HD11 | 1:C:310:LEU:HD12 | 1.77 | 0.66 |
| 1:H:146:LEU:HD23 | 1:H:147:MET:H | 1.60 | 0.66 |
| 1:L:216:PRO:CG | 1:L:295:GLY:HA2 | 2.26 | 0.66 |
| 1:N:163:LYS:HE2 | 1:N:373:ALA:HA | 1.78 | 0.66 |
| 1:B:74:MET:O | 1:B:77:VAL:HG12 | 1.96 | 0.66 |
| 1:G:173:ALA:CB | 1:G:360:ILE:HD11 | 2.26 | 0.66 |
| 1:K:483:SER:O | 1:K:486:VAL:HG22 | 1.95 | 0.66 |
| 1:M:57:ILE:HG23 | 1:M:58:LEU:HD23 | 1.77 | 0.66 |
| 1:M:146:LEU:HD12 | 1:M:171:VAL:CG1 | 2.25 | 0.66 |
| 1:B:266:VAL:HB | 1:B:290:LEU:HD21 | 1.78 | 0.66 |
| 1:C:145:ASP:OD1 | 1:C:171:VAL:HB | 1.95 | 0.66 |
| 1:I:219:ILE:HD12 | 1:I:275:ASN:HB3 | 1.77 | 0.66 |
| 1:J:84:ASP:OD2 | 1:J:379:ASP:HA | 1.96 | 0.66 |
| 1:L:146:LEU:HD12 | 1:L:171:VAL:HG13 | 1.75 | 0.66 |
| 1:P:32:PRO:HA | 1:P:155:SER:O | 1.94 | 0.66 |
| 1:D:37:LYS:HD3 | 1:E:504:VAL:HG13 | 1.79 | 0.66 |
| 1:D:79:ASP:HA | 1:D:83:GLY:HA3 | 1.78 | 0.66 |
| 1:M:398:GLY:HA2 | 1:M:401:GLU:OE1 | 1.94 | 0.66 |
| 1:N:32:PRO:O | 1:N:156:SER:HA | 1.96 | 0.66 |
| 1:P:32:PRO:HA | 1:P:155:SER:C | 2.15 | 0.66 |
| 1:P:106:LYS:O | 1:P:107:LYS:HG2 | 1.96 | 0.66 |
| 1:A:175:LEU:O | 1:A:178:LYS:HG2 | 1.96 | 0.65 |
| 1:B:25:LEU:HD22 | 1:F:508:ILE:CD1 | 2.26 | 0.65 |
| 1:D:54:GLY:O | 1:D:58:LEU:HD23 | 1.96 | 0.65 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:J:216:PRO:HG2 | 1:J:295:GLY:HA2 | 1.77 | 0.65 |
| 1:K:146:LEU:CD2 | 1:K:167:THR:HG23 | 2.27 | 0.65 |
| 1:M:82:VAL:CG1 | 1:M:486:VAL:HA | 2.19 | 0.65 |
| 1:P:185:ALA:HA | 1:P:309:ARG:CG | 2.26 | 0.65 |
| 1:B:159:LEU:HD13 | 1:B:159:LEU:H | 1.60 | 0.65 |
| 1:B:216:PRO:HG2 | 1:B:295:GLY:HA2 | 1.78 | 0.65 |
| 1:B:312:LEU:O | 1:B:354:LEU:HD22 | 1.96 | 0.65 |
| 1:N:324:HIS:ND1 | 1:N:325:PRO:HD3 | 2.12 | 0.65 |
| 1:B:483:SER:O | 1:B:486:VAL:HG22 | 1.95 | 0.65 |
| 1:G:163:LYS:HA | 1:G:166:PHE:CE1 | 2.32 | 0.65 |
| 1:G:206:LEU:HD21 | 1:G:346:LEU:HB3 | 1.78 | 0.65 |
| 1:G:216:PRO:CG | 1:G:295:GLY:HA2 | 2.26 | 0.65 |
| 1:J:369:ILE:O | 1:J:372:GLU:HB3 | 1.96 | 0.65 |
| 1:K:96:LEU:HD21 | 1:K:117:TRP:HZ2 | 1.61 | 0.65 |
| 1:K:163:LYS:HG3 | 1:K:166:PHE:CG | 2.30 | 0.65 |
| 1:C:163:LYS:HA | 1:C:166:PHE:CD1 | 2.31 | 0.65 |
| 1:D:171:VAL:CG1 | 1:D:384:LEU:HG | 2.22 | 0.65 |
| 1:G:399:CYS:SG | 1:G:464:GLY:HA3 | 2.36 | 0.65 |
| 1:J:324:HIS:HB2 | 1:J:329:LYS:NZ | 2.11 | 0.65 |
| 1:O:82:VAL:CG2 | 1:O:485:GLN:HB2 | 2.24 | 0.65 |
| 1:O:174:VAL:HB | 1:O:385:ALA:CA | 2.26 | 0.65 |
| 1:F:111:GLN:O | 1:F:114:ILE:HB | 1.96 | 0.65 |
| 1:G:146:LEU:HD23 | 1:G:147:MET:N | 2.10 | 0.65 |
| 1:J:32:PRO:CA | 1:J:155:SER:HB3 | 2.26 | 0.65 |
| 1:L:205:PHE:O | 1:L:348:HIS:HA | 1.97 | 0.65 |
| 1:P:368:GLN:O | 1:P:371:ASP:HB3 | 1.96 | 0.65 |
| 1:P:437:ILE:HG22 | 1:P:467:MET:SD | 2.36 | 0.65 |
| 1:A:163:LYS:HG3 | 1:A:166:PHE:CE2 | 2.31 | 0.65 |
| 1:A:163:LYS:HA | 1:A:166:PHE:CE1 | 2.32 | 0.65 |
| 1:B:106:LYS:HD3 | 1:I:446:ALA:HB3 | 1.78 | 0.65 |
| 1:F:362:LEU:CD1 | 1:F:377:LEU:HD23 | 2.26 | 0.65 |
| 1:H:185:ALA:HB1 | 1:H:357:ALA:CB | 2.26 | 0.65 |
| 1:I:171:VAL:O | 1:I:174:VAL:HG22 | 1.96 | 0.65 |
| 1:L:401:GLU:HG2 | 1:L:433:LEU:HD22 | 1.77 | 0.65 |
| 1:D:58:LEU:HB3 | 1:D:72:VAL:CG1 | 2.27 | 0.65 |
| 1:F:372:GLU:O | 1:F:375:ARG:HB3 | 1.96 | 0.65 |
| 1:H:190:LYS:HD3 | 1:H:370:LEU:HD23 | 1.79 | 0.65 |
| 1:I:399:CYS:SG | 1:I:464:GLY:HA3 | 2.36 | 0.65 |
| 1:K:188:VAL:CG1 | 1:K:377:LEU:HD21 | 2.18 | 0.65 |
| 1:P:146:LEU:CD2 | 1:P:147:MET:H | 2.08 | 0.65 |
| 1:P:171:VAL:O | 1:P:174:VAL:HG22 | 1.97 | 0.65 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:B:312:LEU:HD13 | 1:B:354:LEU:HD21 | 1.79 | 0.65 |
| 1:C:78:GLN:HG3 | 1:C:83:GLY:HA2 | 1.77 | 0.65 |
| 1:F:117:TRP:HA | 1:F:120:ALA:HB2 | 1.79 | 0.65 |
| 1:I:452:LEU:HD13 | 1:I:465:LEU:CD1 | 2.27 | 0.65 |
| 1:J:108:ILE:HD13 | 1:N:442:GLY:O | 1.97 | 0.65 |
| 1:L:269:ILE:HG23 | 1:L:274:ILE:CG2 | 2.27 | 0.65 |
| 1:L:433:LEU:O | 1:L:436:ILE:HG22 | 1.97 | 0.65 |
| 1:M:110:PRO:HA | 1:M:113:ILE:HD12 | 1.76 | 0.65 |
| 1:M:173:ALA:CB | 1:M:360:ILE:HD11 | 2.27 | 0.65 |
| 1:N:411:LEU:HB3 | 1:N:423:MET:SD | 2.37 | 0.65 |
| 1:O:14:SER:HB3 | 1:O:507:ILE:C | 2.15 | 0.65 |
| 1:O:18:GLY:HA2 | 1:O:509:LYS:CG | 2.27 | 0.65 |
| 1:O:111:GLN:O | 1:O:114:ILE:HB | 1.96 | 0.65 |
| 1:A:369:ILE:O | 1:A:372:GLU:HB3 | 1.97 | 0.65 |
| 1:C:173:ALA:HA | 1:C:176:ARG:NH1 | 2.12 | 0.65 |
| 1:D:505:ASP:O | 1:H:39:LEU:HD21 | 1.97 | 0.65 |
| 1:E:163:LYS:O | 1:E:166:PHE:HB2 | 1.97 | 0.65 |
| 1:E:190:LYS:HA | 1:E:362:LEU:O | 1.97 | 0.65 |
| 1:G:334:LYS:HD3 | 1:G:351:GLY:HA3 | 1.78 | 0.65 |
| 1:H:219:ILE:HD11 | 1:H:336:ILE:HB | 1.79 | 0.65 |
| 1:K:269:ILE:HG23 | 1:K:274:ILE:HG21 | 1.79 | 0.65 |
| 1:L:211:ILE:HG22 | 1:L:288:GLU:OE1 | 1.97 | 0.65 |
| 1:L:483:SER:O | 1:L:486:VAL:HG22 | 1.96 | 0.65 |
| 1:M:426:TYR:OH | 1:M:491:LEU:HD22 | 1.97 | 0.65 |
| 1:M:500:VAL:O | 1:M:503:ARG:HB3 | 1.97 | 0.65 |
| 1:P:324:HIS:O | 1:P:329:LYS:HG2 | 1.97 | 0.65 |
| 1:E:106:LYS:O | 1:E:107:LYS:HD2 | 1.97 | 0.65 |
| 1:H:170:ALA:HB1 | 1:H:380:ALA:HB1 | 1.79 | 0.65 |
| 1:H:390:ASP:HB3 | 1:H:485:GLN:NE2 | 2.12 | 0.65 |
| 1:I:57:ILE:HG23 | 1:I:58:LEU:HD23 | 1.79 | 0.65 |
| 1:K:338:GLU:OE2 | 1:K:345:LYS:HE2 | 1.97 | 0.65 |
| 1:O:283:ILE:HG22 | 1:O:300:GLU:HG3 | 1.79 | 0.65 |
| 1:B:171:VAL:HA | 1:B:174:VAL:HG22 | 1.79 | 0.64 |
| 1:B:216:PRO:CG | 1:B:295:GLY:HA2 | 2.27 | 0.64 |
| 1:C:399:CYS:SG | 1:C:464:GLY:HA3 | 2.36 | 0.64 |
| 1:D:117:TRP:NE1 | 1:D:495:ALA:HB3 | 2.12 | 0.64 |
| 1:F:446:ALA:CB | 1:O:418:LYS:HD2 | 2.27 | 0.64 |
| 1:G:475:MET:SD | 1:G:480:ILE:HB | 2.36 | 0.64 |
| 1:H:59:LYS:HE2 | 1:H:76:ARG:HB2 | 1.79 | 0.64 |
| 1:H:265:LYS:O | 1:H:269:ILE:HB | 1.96 | 0.64 |
| 1:J:492:LEU:HD13 | 1:J:493:SER:H | 1.63 | 0.64 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:K:395:TYR:HE1 | 1:K:476:SER:HG | 1.43 | 0.64 |
| 1:L:163:LYS:HE3 | 1:L:376:SER:HB3 | 1.78 | 0.64 |
| 1:L:185:ALA:HB3 | 1:L:357:ALA:HB1 | 1.76 | 0.64 |
| 1:L:334:LYS:HB2 | 1:L:351:GLY:HA3 | 1.79 | 0.64 |
| 1:M:128:LEU:HD21 | 1:M:491:LEU:HD11 | 1.77 | 0.64 |
| 1:A:35:MET:HG3 | 1:C:111:GLN:HG2 | 1.79 | 0.64 |
| 1:A:509:LYS:HG2 | 1:A:510:ALA:H | 1.62 | 0.64 |
| 1:H:157:LYS:HG2 | 1:H:372:GLU:OE2 | 1.96 | 0.64 |
| 1:H:324:HIS:HB2 | 1:H:329:LYS:NZ | 2.13 | 0.64 |
| 1:K:32:PRO:HA | 1:K:155:SER:O | 1.96 | 0.64 |
| 1:N:324:HIS:O | 1:N:329:LYS:HG2 | 1.98 | 0.64 |
| 1:P:126:GLN:O | 1:P:130:ASN:HB2 | 1.97 | 0.64 |
| 1:C:82:VAL:HG13 | 1:C:83:GLY:N | 2.12 | 0.64 |
| 1:F:128:LEU:CD2 | 1:F:488:ARG:HG2 | 2.27 | 0.64 |
| 1:G:176:ARG:HE | 1:G:358:CYS:HB3 | 1.61 | 0.64 |
| 1:L:207:LEU:O | 1:L:347:ILE:HG22 | 1.97 | 0.64 |
| 1:N:107:LYS:O | 1:N:107:LYS:HG2 | 1.97 | 0.64 |
| 1:O:63:VAL:HG21 | 1:O:513:ARG:HB2 | 1.79 | 0.64 |
| 1:P:475:MET:SD | 1:P:480:ILE:HB | 2.37 | 0.64 |
| 1:B:159:LEU:HB3 | 1:B:369:ILE:HG22 | 1.79 | 0.64 |
| 1:C:219:ILE:HD11 | 1:C:336:ILE:HB | 1.78 | 0.64 |
| 1:D:39:LEU:O | 1:D:48:LEU:HA | 1.98 | 0.64 |
| 1:D:74:MET:O | 1:D:77:VAL:HG12 | 1.96 | 0.64 |
| 1:D:145:ASP:O | 1:D:171:VAL:HG11 | 1.97 | 0.64 |
| 1:F:446:ALA:HB2 | 1:O:108:ILE:HG23 | 1.78 | 0.64 |
| 1:L:258:GLU:OE2 | 1:L:284:TYR:HE2 | 1.81 | 0.64 |
| 1:N:59:LYS:CE | 1:N:76:ARG:HB2 | 2.28 | 0.64 |
| 1:O:206:LEU:HD12 | 1:O:359:THR:HG21 | 1.78 | 0.64 |
| 1:P:202:ASP:OD2 | 1:P:361:VAL:HG21 | 1.97 | 0.64 |
| 1:B:205:PHE:HA | 1:B:359:THR:OG1 | 1.98 | 0.64 |
| 1:C:106:LYS:HG3 | 1:C:418:LYS:HZ2 | 1.63 | 0.64 |
| 1:D:6:GLU:OE1 | 1:D:11:ALA:HA | 1.98 | 0.64 |
| 1:F:206:LEU:HD23 | 1:F:361:VAL:HG21 | 1.80 | 0.64 |
| 1:F:443:TYR:CE2 | 1:F:470:GLY:HA3 | 2.32 | 0.64 |
| 1:H:186:ILE:HG22 | 1:H:377:LEU:CD1 | 2.23 | 0.64 |
| 1:H:447:ASP:HB2 | 1:P:418:LYS:NZ | 2.11 | 0.64 |
| 1:I:174:VAL:HG21 | 1:I:384:LEU:HG | 1.78 | 0.64 |
| 1:L:226:ILE:HG12 | 1:L:278:ILE:HG23 | 1.78 | 0.64 |
| 1:M:497:ALA:O | 1:M:500:VAL:HG12 | 1.97 | 0.64 |
| 1:O:112:THR:CG2 | 1:O:418:LYS:HE2 | 2.26 | 0.64 |
| 1:O:173:ALA:HA | 1:O:176:ARG:CZ | 2.27 | 0.64 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:P:119:GLU:OE1 | 1:P:119:GLU:HA | 1.98 | 0.64 |
| 1:F:216:PRO:HG2 | 1:F:295:GLY:HA2 | 1.77 | 0.64 |
| 1:H:484:PHE:CE2 | 1:H:488:ARG:HD3 | 2.33 | 0.64 |
| 1:I:483:SER:O | 1:I:486:VAL:HG22 | 1.98 | 0.64 |
| 1:L:42:SER:O | 1:M:512:PRO:HB2 | 1.96 | 0.64 |
| 1:M:401:GLU:HG2 | 1:M:433:LEU:HD22 | 1.78 | 0.64 |
| 1:M:483:SER:HB2 | 1:M:486:VAL:HG13 | 1.79 | 0.64 |
| 1:P:157:LYS:HB2 | 1:P:159:LEU:HD21 | 1.78 | 0.64 |
| 1:P:399:CYS:SG | 1:P:464:GLY:HA3 | 2.38 | 0.64 |
| 1:P:402:MET:SD | 1:P:456:HIS:HB2 | 2.38 | 0.64 |
| 1:D:88:SER:O | 1:D:92:LEU:HD13 | 1.97 | 0.64 |
| 1:H:74:MET:O | 1:H:77:VAL:HG12 | 1.98 | 0.64 |
| 1:I:140:VAL:HA | 1:I:175:LEU:HD13 | 1.78 | 0.64 |
| 1:I:176:ARG:HH22 | 1:I:360:ILE:HG13 | 1.62 | 0.64 |
| 1:I:199:SER:HA | 1:I:363:ARG:N | 2.11 | 0.64 |
| 1:J:190:LYS:HE2 | 1:J:371:ASP:OD1 | 1.97 | 0.64 |
| 1:K:108:ILE:HG22 | 1:K:109:HIS:N | 2.12 | 0.64 |
| 1:L:324:HIS:ND1 | 1:L:325:PRO:HD3 | 2.13 | 0.64 |
| 1:M:159:LEU:HD13 | 1:M:159:LEU:H | 1.63 | 0.64 |
| 1:O:174:VAL:HG11 | 1:O:384:LEU:HB2 | 1.80 | 0.64 |
| 1:D:190:LYS:O | 1:D:190:LYS:HD3 | 1.96 | 0.64 |
| 1:E:191:LYS:HA | 1:E:191:LYS:CE | 2.27 | 0.64 |
| 1:F:193:GLY:HA3 | 1:F:343:GLU:OE1 | 1.98 | 0.64 |
| 1:F:446:ALA:HB1 | 1:O:418:LYS:CD | 2.25 | 0.64 |
| 1:G:438:ALA:CB | 1:G:448:LEU:HG | 2.27 | 0.64 |
| 1:H:32:PRO:HG2 | 1:H:467:MET:SD | 2.37 | 0.64 |
| 1:H:148:ASN:HB3 | 1:H:481:THR:CG2 | 2.28 | 0.64 |
| 1:J:57:ILE:HG23 | 1:J:58:LEU:HD23 | 1.80 | 0.64 |
| 1:J:316:GLY:O | 1:J:330:LEU:HB2 | 1.98 | 0.64 |
| 1:J:483:SER:O | 1:J:486:VAL:HG22 | 1.98 | 0.64 |
| 1:K:103:LEU:O | 1:K:106:LYS:HB3 | 1.97 | 0.64 |
| 1:L:59:LYS:HE3 | 1:L:76:ARG:HB2 | 1.80 | 0.64 |
| 1:M:341:ILE:HG23 | 1:M:363:ARG:NH2 | 2.13 | 0.64 |
| 1:P:154:LEU:HD21 | 1:P:163:LYS:NZ | 2.12 | 0.64 |
| 1:C:417:GLY:HA3 | 1:L:449:VAL:HB | 1.79 | 0.64 |
| 1:D:163:LYS:HG3 | 1:D:166:PHE:CG | 2.33 | 0.64 |
| 1:J:207:LEU:O | 1:J:347:ILE:HG22 | 1.98 | 0.64 |
| 1:L:371:ASP:O | 1:L:374:GLU:HB3 | 1.98 | 0.64 |
| 1:A:128:LEU:O | 1:A:129:LEU:HB3 | 1.97 | 0.64 |
| 1:A:450:ALA:HA | 1:M:413:SER:HA | 1.80 | 0.64 |
| 1:F:364:GLY:HA3 | 1:F:370:LEU:CD1 | 2.28 | 0.64 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:F:483:SER:O | 1:F:486:VAL:HG22 | 1.98 | 0.64 |
| 1:G:244:ARG:HG2 | 1:G:245:VAL:N | 2.12 | 0.64 |
| 1:L:59:LYS:CE | 1:L:76:ARG:HB2 | 2.28 | 0.64 |
| 1:L:111:GLN:HA | 1:L:114:ILE:HG12 | 1.79 | 0.64 |
| 1:L:120:ALA:HA | 1:L:123:ALA:HB3 | 1.80 | 0.64 |
| 1:L:312:LEU:HA | 1:P:213:VAL:CG1 | 2.28 | 0.64 |
| 1:O:74:MET:O | 1:O:77:VAL:HG12 | 1.97 | 0.64 |
| 1:P:345:LYS:O | 1:P:346:LEU:HD12 | 1.97 | 0.64 |
| 1:A:41:SER:HB3 | 1:A:45:ASP:OD2 | 1.99 | 0.63 |
| 1:D:325:PRO:C | 1:D:326:GLU:HG3 | 2.17 | 0.63 |
| 1:F:334:LYS:HG2 | 1:F:351:GLY:HA3 | 1.80 | 0.63 |
| 1:I:364:GLY:HA3 | 1:I:370:LEU:HD13 | 1.80 | 0.63 |
| 1:J:204:GLY:O | 1:J:359:THR:HB | 1.97 | 0.63 |
| 1:N:139:GLU:O | 1:N:140:VAL:HB | 1.97 | 0.63 |
| 1:B:338:GLU:OE1 | 1:B:345:LYS:HE2 | 1.98 | 0.63 |
| 1:C:89:VAL:HG12 | 1:C:490:VAL:HB | 1.78 | 0.63 |
| 1:E:131:SER:HA | 1:E:403:LEU:HD23 | 1.80 | 0.63 |
| 1:G:216:PRO:HG2 | 1:G:295:GLY:HA2 | 1.80 | 0.63 |
| 1:I:58:LEU:HD22 | 1:N:513:ARG:HG3 | 1.79 | 0.63 |
| 1:J:191:LYS:HA | 1:J:191:LYS:CE | 2.28 | 0.63 |
| 1:J:231:MET:HE1 | 1:J:265:LYS:HD3 | 1.80 | 0.63 |
| 1:K:79:ASP:HA | 1:K:83:GLY:HA2 | 1.81 | 0.63 |
| 1:K:101:GLU:O | 1:K:104:ILE:HG23 | 1.98 | 0.63 |
| 1:K:171:VAL:HA | 1:K:174:VAL:HG22 | 1.80 | 0.63 |
| 1:K:452:LEU:HD13 | 1:K:465:LEU:HD13 | 1.80 | 0.63 |
| 1:O:133:VAL:HG11 | 1:O:394:VAL:CA | 2.25 | 0.63 |
| 1:B:32:PRO:HA | 1:B:156:SER:CA | 2.27 | 0.63 |
| 1:F:475:MET:SD | 1:F:480:ILE:HB | 2.38 | 0.63 |
| 1:H:390:ASP:HB3 | 1:H:485:GLN:HE22 | 1.62 | 0.63 |
| 1:I:138:ASP:O | 1:I:139:GLU:HB2 | 1.97 | 0.63 |
| 1:I:199:SER:HB2 | 1:I:362:LEU:HD22 | 1.81 | 0.63 |
| 1:I:201:LEU:C | 1:I:201:LEU:HD13 | 2.19 | 0.63 |
| 1:J:32:PRO:HA | 1:J:155:SER:HB3 | 1.79 | 0.63 |
| 1:J:305:VAL:O | 1:J:309:ARG:HG2 | 1.99 | 0.63 |
| 1:J:309:ARG:HH11 | 1:J:309:ARG:CG | 2.12 | 0.63 |
| 1:K:39:LEU:HD12 | 1:K:57:ILE:HG13 | 1.79 | 0.63 |
| 1:K:222:ALA:HA | 1:K:275:ASN:OD1 | 1.99 | 0.63 |
| 1:M:399:CYS:SG | 1:M:464:GLY:HA3 | 2.38 | 0.63 |
| 1:P:401:GLU:HG2 | 1:P:433:LEU:HD22 | 1.78 | 0.63 |
| 1:F:114:ILE:HA | 1:F:117:TRP:CE3 | 2.34 | 0.63 |
| 1:F:408:VAL:HA | 1:F:411:LEU:HD12 | 1.80 | 0.63 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:F:421:VAL:HG13 | 1:O:453:ARG:NH2 | 2.13 | 0.63 |
| 1:M:166:PHE:CZ | 1:M:198:ASP:HB3 | 2.33 | 0.63 |
| 1:N:146:LEU:CD1 | 1:N:171:VAL:HG13 | 2.25 | 0.63 |
| 1:O:83:GLY:CA | 1:O:486:VAL:HG12 | 2.28 | 0.63 |
| 1:O:506:ASN:O | 1:O:507:ILE:HG23 | 1.98 | 0.63 |
| 1:D:231:MET:HB2 | 1:D:284:TYR:H | 1.64 | 0.63 |
| 1:E:508:ILE:HG23 | 1:E:509:LYS:N | 2.13 | 0.63 |
| 1:F:145:ASP:OD1 | 1:F:171:VAL:HB | 1.98 | 0.63 |
| 1:F:173:ALA:CB | 1:F:360:ILE:HD11 | 2.29 | 0.63 |
| 1:G:433:LEU:O | 1:G:436:ILE:HG22 | 1.99 | 0.63 |
| 1:O:96:LEU:HA | 1:O:99:GLU:OE1 | 1.97 | 0.63 |
| 1:A:154:LEU:HD22 | 1:A:167:THR:HB | 1.80 | 0.63 |
| 1:B:166:PHE:CZ | 1:B:198:ASP:HB3 | 2.33 | 0.63 |
| 1:C:159:LEU:HG | 1:C:163:LYS:HG2 | 1.79 | 0.63 |
| 1:H:128:LEU:HD13 | 1:H:488:ARG:HA | 1.81 | 0.63 |
| 1:H:140:VAL:HA | 1:H:175:LEU:HD22 | 1.80 | 0.63 |
| 1:I:505:ASP:HB3 | 1:O:35:MET:HB3 | 1.80 | 0.63 |
| 1:K:269:ILE:HG23 | 1:K:274:ILE:CG2 | 2.28 | 0.63 |
| 1:L:27:LYS:HB2 | 1:L:436:ILE:HD11 | 1.81 | 0.63 |
| 1:D:159:LEU:HD12 | 1:D:372:GLU:CD | 2.19 | 0.63 |
| 1:E:226:ILE:HG12 | 1:E:278:ILE:HG23 | 1.80 | 0.63 |
| 1:H:147:MET:O | 1:H:479:GLY:HA2 | 1.99 | 0.63 |
| 1:K:341:ILE:HG13 | 1:K:346:LEU:HD13 | 1.80 | 0.63 |
| 1:K:364:GLY:HA3 | 1:K:370:LEU:HD21 | 1.80 | 0.63 |
| 1:L:194:GLY:HA2 | 1:L:364:GLY:O | 1.98 | 0.63 |
| 1:N:142:PHE:O | 1:N:143:ARG:HG3 | 1.99 | 0.63 |
| 1:O:124:ALA:O | 1:O:128:LEU:HG | 1.98 | 0.63 |
| 1:B:152:THR:HB | 1:B:480:ILE:CG2 | 2.18 | 0.63 |
| 1:C:173:ALA:HB2 | 1:C:360:ILE:CD1 | 2.26 | 0.63 |
| 1:D:2:GLY:H | 1:D:509:LYS:HA | 1.63 | 0.63 |
| 1:D:204:GLY:HA3 | 1:D:349:PHE:O | 1.98 | 0.63 |
| 1:F:207:LEU:O | 1:F:208:ASP:HB2 | 1.98 | 0.63 |
| 1:G:225:LEU:HD13 | 1:G:329:LYS:HE2 | 1.81 | 0.63 |
| 1:H:219:ILE:HD12 | 1:H:275:ASN:HB3 | 1.79 | 0.63 |
| 1:I:40:LEU:HD12 | 1:N:508:ILE:HB | 1.81 | 0.63 |
| 1:K:154:LEU:HD22 | 1:K:167:THR:HB | 1.80 | 0.63 |
| 1:N:173:ALA:HA | 1:N:176:ARG:NH1 | 2.14 | 0.63 |
| 1:P:59:LYS:HE3 | 1:P:73:ASP:HA | 1.81 | 0.63 |
| 1:A:140:VAL:HA | 1:A:175:LEU:HD22 | 1.81 | 0.63 |
| 1:D:125:ARG:HH11 | 1:D:125:ARG:CG | 2.11 | 0.63 |
| 1:I:341:ILE:HD11 | 1:I:348:HIS:CE1 | 2.34 | 0.63 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:J:146:LEU:HD23 | 1:J:147:MET:N | 2.12 | 0.63 |
| 1:L:50:VAL:O | 1:L:375:ARG:HD2 | 1.99 | 0.63 |
| 1:M:369:ILE:O | 1:M:372:GLU:HB3 | 1.98 | 0.63 |
| 1:P:317:GLU:HB2 | 1:P:329:LYS:HD3 | 1.79 | 0.63 |
| 1:P:448:LEU:HD21 | 1:P:465:LEU:HD12 | 1.81 | 0.63 |
| 1:A:146:LEU:HB2 | 1:A:171:VAL:HG21 | 1.81 | 0.62 |
| 1:B:146:LEU:HD22 | 1:B:168:LYS:HA | 1.80 | 0.62 |
| 1:C:126:GLN:NE2 | 1:C:411:LEU:HD12 | 2.12 | 0.62 |
| 1:C:126:GLN:HA | 1:C:129:LEU:HB2 | 1.79 | 0.62 |
| 1:E:150:ALA:HB2 | 1:E:384:LEU:HD11 | 1.80 | 0.62 |
| 1:F:209:LYS:HE2 | 1:F:301:HIS:O | 1.99 | 0.62 |
| 1:G:14:SER:O | 1:G:17:ILE:HG22 | 1.98 | 0.62 |
| 1:G:269:ILE:HG23 | 1:G:274:ILE:HG21 | 1.81 | 0.62 |
| 1:J:88:SER:O | 1:J:92:LEU:HD13 | 1.99 | 0.62 |
| 1:L:219:ILE:HB | 1:L:275:ASN:HB3 | 1.81 | 0.62 |
| 1:N:316:GLY:O | 1:N:330:LEU:HB2 | 1.99 | 0.62 |
| 1:N:343:GLU:HG3 | 1:N:344:ASP:N | 2.13 | 0.62 |
| 1:B:3:ALA:HB3 | 1:G:40:LEU:HG | 1.81 | 0.62 |
| 1:B:146:LEU:CD1 | 1:B:171:VAL:HG13 | 2.26 | 0.62 |
| 1:C:154:LEU:HD23 | 1:C:163:LYS:HG3 | 1.81 | 0.62 |
| 1:C:417:GLY:CA | 1:L:449:VAL:HB | 2.28 | 0.62 |
| 1:E:41:SER:O | 1:E:45:ASP:HB2 | 1.99 | 0.62 |
| 1:F:216:PRO:CG | 1:F:295:GLY:HA2 | 2.29 | 0.62 |
| 1:H:209:LYS:HE2 | 1:H:301:HIS:O | 1.99 | 0.62 |
| 1:J:145:ASP:O | 1:J:171:VAL:HG11 | 1.98 | 0.62 |
| 1:L:106:LYS:HD2 | 1:L:113:ILE:HD11 | 1.81 | 0.62 |
| 1:O:18:GLY:HA2 | 1:O:509:LYS:HB2 | 1.81 | 0.62 |
| 1:O:421:VAL:O | 1:O:424:GLU:HG2 | 1.98 | 0.62 |
| 1:P:146:LEU:HB2 | 1:P:171:VAL:HG21 | 1.80 | 0.62 |
| 1:P:148:ASN:HA | 1:P:479:GLY:O | 1.99 | 0.62 |
| 1:P:159:LEU:HB2 | 1:P:163:LYS:CB | 2.28 | 0.62 |
| 1:P:216:PRO:HG2 | 1:P:295:GLY:HA2 | 1.81 | 0.62 |
| 1:P:283:ILE:HG22 | 1:P:300:GLU:HG3 | 1.80 | 0.62 |
| 1:A:127:ALA:CB | 1:A:491:LEU:HD13 | 2.28 | 0.62 |
| 1:D:22:ILE:HD12 | 1:D:90:THR:HG22 | 1.80 | 0.62 |
| 1:D:111:GLN:O | 1:D:114:ILE:HB | 1.99 | 0.62 |
| 1:F:154:LEU:HD11 | 1:F:159:LEU:HD21 | 1.82 | 0.62 |
| 1:F:450:ALA:HA | 1:O:417:GLY:HA2 | 1.81 | 0.62 |
| 1:H:184:GLU:HG2 | 1:H:184:GLU:O | 1.99 | 0.62 |
| 1:J:129:LEU:H | 1:J:129:LEU:CD2 | 2.08 | 0.62 |
| 1:J:171:VAL:HA | 1:J:174:VAL:HG22 | 1.80 | 0.62 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:N:159:LEU:HA | 1:N:369:ILE:HD12 | 1.81 | 0.62 |
| 1:A:452:LEU:HD13 | 1:A:465:LEU:CD1 | 2.30 | 0.62 |
| 1:D:22:ILE:HD12 | 1:D:90:THR:CG2 | 2.30 | 0.62 |
| 1:F:352:VAL:HG22 | 1:F:355:GLY:H | 1.64 | 0.62 |
| 1:G:126:GLN:HE22 | 1:G:411:LEU:HD11 | 1.62 | 0.62 |
| 1:H:187:HIS:O | 1:H:359:THR:HG23 | 2.00 | 0.62 |
| 1:H:266:VAL:HB | 1:H:290:LEU:HD21 | 1.81 | 0.62 |
| 1:J:442:GLY:HA3 | 1:K:112:THR:OG1 | 1.99 | 0.62 |
| 1:K:207:LEU:HD11 | 1:K:209:LYS:HE2 | 1.80 | 0.62 |
| 1:L:158:LEU:HB3 | 1:M:503:ARG:CZ | 2.28 | 0.62 |
| 1:N:146:LEU:CD2 | 1:N:167:THR:HG23 | 2.30 | 0.62 |
| 1:O:57:ILE:HG23 | 1:O:58:LEU:HD23 | 1.80 | 0.62 |
| 1:O:82:VAL:HG21 | 1:O:485:GLN:CB | 2.27 | 0.62 |
| 1:D:191:LYS:HA | 1:D:191:LYS:NZ | 2.15 | 0.62 |
| 1:E:183:LEU:O | 1:E:183:LEU:HG | 2.00 | 0.62 |
| 1:G:434:PRO:HB3 | 1:G:452:LEU:CD2 | 2.29 | 0.62 |
| 1:H:119:GLU:CD | 1:H:419:GLU:HG2 | 2.19 | 0.62 |
| 1:J:341:ILE:HG23 | 1:J:363:ARG:NH1 | 2.15 | 0.62 |
| 1:L:116:GLY:HA3 | 1:L:422:ALA:HB1 | 1.82 | 0.62 |
| 1:M:109:HIS:CE1 | 1:M:111:GLN:HB2 | 2.33 | 0.62 |
| 1:P:108:ILE:HG22 | 1:P:109:HIS:N | 2.14 | 0.62 |
| 1:C:61:ILE:CG2 | 1:C:63:VAL:HG23 | 2.30 | 0.62 |
| 1:E:489:GLN:HE21 | 1:E:489:GLN:H | 1.46 | 0.62 |
| 1:F:138:ASP:O | 1:F:139:GLU:HB2 | 1.97 | 0.62 |
| 1:G:82:VAL:HG21 | 1:G:485:GLN:HG2 | 1.80 | 0.62 |
| 1:I:40:LEU:HB3 | 1:N:508:ILE:HA | 1.82 | 0.62 |
| 1:K:269:ILE:HG12 | 1:K:274:ILE:HG21 | 1.80 | 0.62 |
| 1:L:82:VAL:CA | 1:L:386:GLN:HG3 | 2.28 | 0.62 |
| 1:L:188:VAL:CG1 | 1:L:377:LEU:HD21 | 2.30 | 0.62 |
| 1:M:111:GLN:O | 1:M:114:ILE:HB | 2.00 | 0.62 |
| 1:N:31:GLY:O | 1:N:156:SER:HB3 | 1.99 | 0.62 |
| 1:O:415:THR:O | 1:O:420:ALA:HB2 | 2.00 | 0.62 |
| 1:P:159:LEU:HD13 | 1:P:159:LEU:N | 2.14 | 0.62 |
| 1:A:157:LYS:HB3 | 1:A:159:LEU:HD21 | 1.80 | 0.62 |
| 1:D:146:LEU:HD12 | 1:D:171:VAL:CG1 | 2.25 | 0.62 |
| 1:D:159:LEU:HD12 | 1:D:372:GLU:HG2 | 1.82 | 0.62 |
| 1:D:364:GLY:HA3 | 1:D:370:LEU:CD2 | 2.29 | 0.62 |
| 1:E:32:PRO:C | 1:E:155:SER:HB3 | 2.20 | 0.62 |
| 1:K:59:LYS:HE3 | 1:K:72:VAL:O | 1.99 | 0.62 |
| 1:L:115:ALA:O | 1:L:118:ARG:HB3 | 2.00 | 0.62 |
| 1:N:174:VAL:HG21 | 1:N:384:LEU:HB3 | 1.82 | 0.62 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:O:83:GLY:HA2 | 1:O:486:VAL:HG12 | 1.80 | 0.62 |
| 1:P:38:ILE:HG22 | 1:P:48:LEU:HD13 | 1.81 | 0.62 |
| 1:A:485:GLN:HB3 | 1:A:489:GLN:HE22 | 1.65 | 0.62 |
| 1:A:504:VAL:HG12 | 1:A:505:ASP:OD1 | 1.99 | 0.62 |
| 1:B:38:ILE:H | 1:F:507:ILE:HG12 | 1.64 | 0.62 |
| 1:C:372:GLU:O | 1:C:375:ARG:HB3 | 2.00 | 0.62 |
| 1:C:416:PRO:CA | 1:L:450:ALA:HB2 | 2.30 | 0.62 |
| 1:E:39:LEU:O | 1:E:48:LEU:HA | 2.00 | 0.62 |
| 1:E:145:ASP:O | 1:E:171:VAL:HG11 | 2.00 | 0.62 |
| 1:E:154:LEU:CD2 | 1:E:163:LYS:HG3 | 2.29 | 0.62 |
| 1:H:146:LEU:HD23 | 1:H:147:MET:N | 2.12 | 0.62 |
| 1:H:154:LEU:HD22 | 1:H:167:THR:HB | 1.81 | 0.62 |
| 1:K:191:LYS:NZ | 1:K:346:LEU:HD11 | 2.15 | 0.62 |
| 1:K:205:PHE:H | 1:K:359:THR:HB | 1.65 | 0.62 |
| 1:L:117:TRP:HD1 | 1:L:495:ALA:HB1 | 1.63 | 0.62 |
| 1:L:408:VAL:HA | 1:L:411:LEU:HD12 | 1.82 | 0.62 |
| 1:M:174:VAL:CG1 | 1:M:384:LEU:HB3 | 2.29 | 0.62 |
| 1:P:194:GLY:HA2 | 1:P:364:GLY:O | 2.00 | 0.62 |
| 1:P:325:PRO:O | 1:P:326:GLU:HG3 | 1.98 | 0.62 |
| 1:A:483:SER:HB2 | 1:A:486:VAL:HG13 | 1.80 | 0.62 |
| 1:G:310:LEU:O | 1:G:313:VAL:HB | 2.00 | 0.62 |
| 1:J:145:ASP:OD1 | 1:J:171:VAL:HB | 2.00 | 0.62 |
| 1:L:40:LEU:HB2 | 1:L:48:LEU:HD23 | 1.81 | 0.62 |
| 1:L:334:LYS:CB | 1:L:351:GLY:HA3 | 2.30 | 0.62 |
| 1:L:496:GLU:HB3 | 1:P:369:ILE:HG12 | 1.80 | 0.62 |
| 1:P:32:PRO:HG2 | 1:P:467:MET:SD | 2.40 | 0.62 |
| 1:C:133:VAL:HG21 | 1:C:393:THR:O | 1.99 | 0.62 |
| 1:C:186:ILE:HD13 | 1:C:381:LEU:HG | 1.82 | 0.62 |
| 1:E:452:LEU:HD13 | 1:E:465:LEU:HD13 | 1.81 | 0.62 |
| 1:G:8:ALA:O | 1:G:11:ALA:HB3 | 2.00 | 0.62 |
| 1:G:33:LYS:O | 1:G:440:ASN:HB2 | 2.00 | 0.62 |
| 1:H:177:LEU:C | 1:H:177:LEU:HD13 | 2.19 | 0.62 |
| 1:I:173:ALA:HB2 | 1:I:360:ILE:HD12 | 1.81 | 0.62 |
| 1:J:176:ARG:HD2 | 1:J:358:CYS:HB2 | 1.81 | 0.62 |
| 1:J:372:GLU:HG3 | 1:J:375:ARG:CZ | 2.29 | 0.62 |
| 1:K:117:TRP:CZ2 | 1:K:502:LEU:HD12 | 2.35 | 0.62 |
| 1:L:231:MET:HG3 | 1:L:283:ILE:HG13 | 1.82 | 0.62 |
| 1:N:401:GLU:HG2 | 1:N:433:LEU:HD22 | 1.81 | 0.62 |
| 1:O:228:ASN:OD1 | 1:O:319:ALA:HB3 | 1.99 | 0.62 |
| 1:P:58:LEU:HB3 | 1:P:72:VAL:CG1 | 2.29 | 0.62 |
| 1:C:226:ILE:HG12 | 1:C:278:ILE:HG23 | 1.81 | 0.61 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:D:445:SER:OG | 1:K:108:ILE:HD13 | 1.99 | 0.61 |
| 1:E:132:ALA:HB2 | 1:E:461:THR:HG21 | 1.82 | 0.61 |
| 1:H:145:ASP:O | 1:H:171:VAL:HG11 | 2.00 | 0.61 |
| 1:I:31:GLY:C | 1:I:156:SER:HA | 2.21 | 0.61 |
| 1:J:149:ILE:HG23 | 1:J:383:VAL:HG12 | 1.82 | 0.61 |
| 1:K:192:LEU:N | 1:K:365:ALA:HB3 | 2.16 | 0.61 |
| 1:N:154:LEU:HD21 | 1:N:163:LYS:HZ2 | 1.65 | 0.61 |
| 1:O:115:ALA:O | 1:O:118:ARG:HB3 | 2.00 | 0.61 |
| 1:D:59:LYS:CE | 1:D:76:ARG:HB2 | 2.30 | 0.61 |
| 1:E:74:MET:O | 1:E:77:VAL:HG12 | 2.00 | 0.61 |
| 1:F:146:LEU:HD12 | 1:F:171:VAL:CG1 | 2.18 | 0.61 |
| 1:H:206:LEU:HB2 | 1:H:361:VAL:HG22 | 1.82 | 0.61 |
| 1:I:145:ASP:OD1 | 1:I:171:VAL:HB | 2.01 | 0.61 |
| 1:I:154:LEU:HD11 | 1:I:163:LYS:CG | 2.29 | 0.61 |
| 1:I:154:LEU:HD21 | 1:I:163:LYS:HG3 | 1.82 | 0.61 |
| 1:N:159:LEU:HD23 | 1:N:160:THR:N | 2.15 | 0.61 |
| 1:O:204:GLY:O | 1:O:359:THR:HB | 2.01 | 0.61 |
| 1:P:114:ILE:HA | 1:P:117:TRP:CE3 | 2.34 | 0.61 |
| 1:A:146:LEU:CD2 | 1:A:147:MET:H | 2.13 | 0.61 |
| 1:D:110:PRO:HG2 | 1:D:502:LEU:CD1 | 2.29 | 0.61 |
| 1:E:191:LYS:HE3 | 1:E:191:LYS:CA | 2.30 | 0.61 |
| 1:G:380:ALA:O | 1:G:384:LEU:HD23 | 1.99 | 0.61 |
| 1:H:150:ALA:O | 1:H:154:LEU:HB2 | 1.99 | 0.61 |
| 1:K:38:ILE:HG22 | 1:K:50:VAL:CB | 2.28 | 0.61 |
| 1:K:203:GLU:HB2 | 1:K:350:SER:HB2 | 1.82 | 0.61 |
| 1:K:369:ILE:O | 1:K:372:GLU:HG2 | 2.00 | 0.61 |
| 1:L:159:LEU:HD12 | 1:L:372:GLU:HG2 | 1.83 | 0.61 |
| 1:L:274:ILE:O | 1:L:296:VAL:HG22 | 1.99 | 0.61 |
| 1:N:133:VAL:HG12 | 1:N:394:VAL:CG1 | 2.29 | 0.61 |
| 1:P:31:GLY:HA3 | 1:P:440:ASN:HD21 | 1.66 | 0.61 |
| 1:P:185:ALA:HA | 1:P:309:ARG:HG2 | 1.82 | 0.61 |
| 1:A:42:SER:OG | 1:C:509:LYS:HE3 | 2.00 | 0.61 |
| 1:B:442:GLY:HA2 | 1:F:109:HIS:ND1 | 2.15 | 0.61 |
| 1:E:219:ILE:HD11 | 1:E:336:ILE:HB | 1.82 | 0.61 |
| 1:F:334:LYS:HG3 | 1:F:335:LEU:N | 2.15 | 0.61 |
| 1:G:324:HIS:HB2 | 1:G:329:LYS:NZ | 2.15 | 0.61 |
| 1:J:184:GLU:HG2 | 1:J:309:ARG:CD | 2.31 | 0.61 |
| 1:K:324:HIS:HB2 | 1:K:329:LYS:NZ | 2.14 | 0.61 |
| 1:L:312:LEU:HD22 | 1:P:213:VAL:CG2 | 2.30 | 0.61 |
| 1:L:448:LEU:HD11 | 1:L:465:LEU:HD11 | 1.81 | 0.61 |
| 1:M:207:LEU:O | 1:M:347:ILE:HG22 | 2.00 | 0.61 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:N:114:ILE:HG21 | 1:N:503:ARG:HH21 | 1.65 | 0.61 |
| 1:A:74:MET:O | 1:A:77:VAL:HG22 | 1.99 | 0.61 |
| 1:A:114:ILE:HG12 | 1:A:502:LEU:HB3 | 1.81 | 0.61 |
| 1:A:145:ASP:OD1 | 1:A:171:VAL:HB | 2.01 | 0.61 |
| 1:H:108:ILE:HD12 | 1:P:444:ASP:HB2 | 1.82 | 0.61 |
| 1:H:317:GLU:HB3 | 1:H:329:LYS:HD3 | 1.82 | 0.61 |
| 1:L:327:LEU:HD13 | 1:L:327:LEU:H | 1.66 | 0.61 |
| 1:M:438:ALA:CB | 1:M:448:LEU:HG | 2.29 | 0.61 |
| 1:N:166:PHE:CZ | 1:N:198:ASP:HB3 | 2.36 | 0.61 |
| 1:N:352:VAL:HG22 | 1:N:355:GLY:H | 1.66 | 0.61 |
| 1:O:181:GLY:O | 1:O:182:ASN:HB3 | 2.00 | 0.61 |
| 1:P:39:LEU:HD11 | 1:P:57:ILE:CG1 | 2.30 | 0.61 |
| 1:P:141:LYS:HG2 | 1:P:144:GLN:HB2 | 1.80 | 0.61 |
| 1:C:225:LEU:HD12 | 1:C:226:ILE:N | 2.16 | 0.61 |
| 1:C:324:HIS:O | 1:C:329:LYS:HG2 | 2.00 | 0.61 |
| 1:F:171:VAL:HG12 | 1:F:384:LEU:CD1 | 2.30 | 0.61 |
| 1:G:219:ILE:HD11 | 1:G:336:ILE:HB | 1.82 | 0.61 |
| 1:G:367:GLN:HG2 | 1:G:370:LEU:HB2 | 1.81 | 0.61 |
| 1:H:58:LEU:HB3 | 1:H:72:VAL:CG1 | 2.30 | 0.61 |
| 1:H:211:ILE:H | 1:H:211:ILE:HD12 | 1.62 | 0.61 |
| 1:H:402:MET:SD | 1:H:453:ARG:HA | 2.40 | 0.61 |
| 1:I:186:ILE:HD13 | 1:I:381:LEU:CD1 | 2.30 | 0.61 |
| 1:J:154:LEU:HD21 | 1:J:163:LYS:HG3 | 1.82 | 0.61 |
| 1:K:250:LYS:O | 1:K:253:GLU:HG2 | 1.99 | 0.61 |
| 1:L:117:TRP:CD1 | 1:L:495:ALA:HB1 | 2.36 | 0.61 |
| 1:M:158:LEU:HD23 | 1:M:369:ILE:HD11 | 1.82 | 0.61 |
| 1:M:500:VAL:HA | 1:M:503:ARG:HD2 | 1.82 | 0.61 |
| 1:P:109:HIS:NE2 | 1:P:111:GLN:HG2 | 2.15 | 0.61 |
| 1:D:35:MET:HB3 | 1:E:503:ARG:HB3 | 1.82 | 0.61 |
| 1:E:334:LYS:HD3 | 1:E:351:GLY:HA3 | 1.82 | 0.61 |
| 1:G:446:ALA:HB1 | 1:N:418:LYS:HE2 | 1.83 | 0.61 |
| 1:K:152:THR:HG21 | 1:K:482:GLU:HG2 | 1.83 | 0.61 |
| 1:L:163:LYS:HG3 | 1:L:166:PHE:CD1 | 2.36 | 0.61 |
| 1:L:511:ALA:HB1 | 1:L:512:PRO:CD | 2.31 | 0.61 |
| 1:M:64:ASP:HB3 | 1:M:66:PRO:HD2 | 1.83 | 0.61 |
| 1:M:141:LYS:HG2 | 1:M:144:GLN:HB2 | 1.82 | 0.61 |
| 1:M:511:ALA:N | 1:M:512:PRO:HD2 | 2.15 | 0.61 |
| 1:O:497:ALA:O | 1:O:501:ILE:HG12 | 2.01 | 0.61 |
| 1:C:265:LYS:HE2 | 1:C:322:PHE:CE1 | 2.36 | 0.61 |
| 1:E:59:LYS:HE2 | 1:E:76:ARG:HB2 | 1.81 | 0.61 |
| 1:E:106:LYS:HD3 | 1:E:113:ILE:HD11 | 1.83 | 0.61 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:F:188:VAL:HG21 | 1:F:377:LEU:HD21 | 1.83 | 0.61 |
| 1:H:324:HIS:ND1 | 1:H:325:PRO:HD3 | 2.16 | 0.61 |
| 1:J:177:LEU:HG | 1:J:186:ILE:HD11 | 1.83 | 0.61 |
| 1:M:176:ARG:HH22 | 1:M:360:ILE:HG13 | 1.64 | 0.61 |
| 1:C:150:ALA:HB2 | 1:C:384:LEU:HD21 | 1.82 | 0.61 |
| 1:C:161:HIS:HE1 | 1:C:369:ILE:HG21 | 1.65 | 0.61 |
| 1:C:216:PRO:HG2 | 1:C:295:GLY:HA2 | 1.83 | 0.61 |
| 1:F:204:GLY:O | 1:F:359:THR:HB | 2.01 | 0.61 |
| 1:H:401:GLU:OE1 | 1:H:433:LEU:HB3 | 2.00 | 0.61 |
| 1:I:341:ILE:HD11 | 1:I:348:HIS:NE2 | 2.16 | 0.61 |
| 1:J:74:MET:O | 1:J:77:VAL:HG12 | 1.99 | 0.61 |
| 1:J:369:ILE:HG12 | 1:K:500:VAL:CG2 | 2.31 | 0.61 |
| 1:K:148:ASN:HB3 | 1:K:481:THR:HG22 | 1.83 | 0.61 |
| 1:L:399:CYS:SG | 1:L:464:GLY:HA3 | 2.40 | 0.61 |
| 1:N:59:LYS:HE2 | 1:N:76:ARG:HB2 | 1.83 | 0.61 |
| 1:N:145:ASP:O | 1:N:171:VAL:HG11 | 2.01 | 0.61 |
| 1:P:114:ILE:HG13 | 1:P:503:ARG:HD2 | 1.81 | 0.61 |
| 1:B:39:LEU:CD2 | 1:F:510:ALA:HB2 | 2.31 | 0.61 |
| 1:C:174:VAL:HG11 | 1:C:384:LEU:HB2 | 1.83 | 0.61 |
| 1:C:448:LEU:HD21 | 1:C:465:LEU:HD12 | 1.82 | 0.61 |
| 1:G:66:PRO:HA | 1:G:507:ILE:HD11 | 1.83 | 0.61 |
| 1:G:284:TYR:O | 1:G:287:PRO:HD2 | 2.00 | 0.61 |
| 1:I:324:HIS:O | 1:I:329:LYS:HG2 | 1.99 | 0.61 |
| 1:J:205:PHE:CE2 | 1:J:207:LEU:HB2 | 2.36 | 0.61 |
| 1:J:402:MET:SD | 1:J:456:HIS:HB2 | 2.40 | 0.61 |
| 1:K:433:LEU:O | 1:K:436:ILE:HG22 | 2.01 | 0.61 |
| 1:L:59:LYS:NZ | 1:L:76:ARG:HB2 | 2.16 | 0.61 |
| 1:P:416:PRO:O | 1:P:419:GLU:HB2 | 2.01 | 0.61 |
| 1:D:190:LYS:HD3 | 1:D:190:LYS:C | 2.22 | 0.60 |
| 1:D:420:ALA:HB3 | 1:K:450:ALA:HB2 | 1.82 | 0.60 |
| 1:D:450:ALA:HB2 | 1:D:453:ARG:HH21 | 1.66 | 0.60 |
| 1:D:484:PHE:HE2 | 1:D:488:ARG:NE | 1.98 | 0.60 |
| 1:E:33:LYS:HD2 | 1:G:111:GLN:HG3 | 1.84 | 0.60 |
| 1:E:312:LEU:HD13 | 1:E:354:LEU:HD21 | 1.83 | 0.60 |
| 1:F:59:LYS:HD3 | 1:F:76:ARG:HB2 | 1.83 | 0.60 |
| 1:K:334:LYS:HB3 | 1:K:351:GLY:HA3 | 1.81 | 0.60 |
| 1:L:171:VAL:O | 1:L:174:VAL:HG22 | 2.01 | 0.60 |
| 1:M:126:GLN:NE2 | 1:M:411:LEU:HD11 | 2.15 | 0.60 |
| 1:O:133:VAL:HG22 | 1:O:134:ASP:N | 2.15 | 0.60 |
| 1:O:434:PRO:HB3 | 1:O:452:LEU:CD2 | 2.31 | 0.60 |
| 1:O:507:ILE:O | 1:O:508:ILE:HB | 2.00 | 0.60 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:P:152:THR:OG1 | 1:P:480:ILE:HG21 | 2.01 | 0.60 |
| 1:A:84:ASP:CG | 1:A:85:GLY:H | 2.05 | 0.60 |
| 1:B:398:GLY:HA2 | 1:B:401:GLU:OE1 | 2.00 | 0.60 |
| 1:C:109:HIS:ND1 | 1:C:112:THR:HG23 | 2.15 | 0.60 |
| 1:C:498:ALA:HA | 1:C:501:ILE:HG12 | 1.83 | 0.60 |
| 1:E:146:LEU:CD1 | 1:E:171:VAL:HG13 | 2.29 | 0.60 |
| 1:H:28:SER:O | 1:H:34:GLY:HA2 | 2.01 | 0.60 |
| 1:H:163:LYS:O | 1:H:166:PHE:HB2 | 2.02 | 0.60 |
| 1:H:211:ILE:HD11 | 1:H:297:MET:HG3 | 1.83 | 0.60 |
| 1:I:148:ASN:HB2 | 1:I:481:THR:H | 1.65 | 0.60 |
| 1:I:159:LEU:HG | 1:I:163:LYS:CB | 2.31 | 0.60 |
| 1:I:352:VAL:CG2 | 1:I:355:GLY:H | 2.14 | 0.60 |
| 1:M:58:LEU:HB3 | 1:M:72:VAL:HG13 | 1.83 | 0.60 |
| 1:N:377:LEU:HD23 | 1:N:377:LEU:H | 1.66 | 0.60 |
| 1:O:176:ARG:HD2 | 1:O:358:CYS:SG | 2.41 | 0.60 |
| 1:O:500:VAL:O | 1:O:504:VAL:HG23 | 2.00 | 0.60 |
| 1:P:159:LEU:HB2 | 1:P:163:LYS:HB2 | 1.83 | 0.60 |
| 1:P:390:ASP:HB3 | 1:P:485:GLN:OE1 | 2.01 | 0.60 |
| 1:A:146:LEU:HB2 | 1:A:171:VAL:CG2 | 2.31 | 0.60 |
| 1:B:117:TRP:HE1 | 1:B:498:ALA:CB | 2.14 | 0.60 |
| 1:E:117:TRP:HD1 | 1:E:495:ALA:O | 1.85 | 0.60 |
| 1:F:451:GLN:HE22 | 1:F:471:THR:HA | 1.66 | 0.60 |
| 1:G:111:GLN:O | 1:G:114:ILE:HB | 2.01 | 0.60 |
| 1:I:134:ASP:OD1 | 1:I:392:ARG:HA | 2.01 | 0.60 |
| 1:J:101:GLU:O | 1:J:104:ILE:HG12 | 2.01 | 0.60 |
| 1:K:219:ILE:HD12 | 1:K:275:ASN:HB3 | 1.82 | 0.60 |
| 1:M:148:ASN:HA | 1:M:479:GLY:O | 2.02 | 0.60 |
| 1:N:139:GLU:OE2 | 1:N:140:VAL:HG23 | 2.00 | 0.60 |
| 1:N:216:PRO:HG2 | 1:N:295:GLY:HA2 | 1.81 | 0.60 |
| 1:O:18:GLY:HA2 | 1:O:509:LYS:CB | 2.31 | 0.60 |
| 1:O:502:LEU:HG | 1:O:502:LEU:O | 2.01 | 0.60 |
| 1:B:215:GLN:HG3 | 1:B:292:GLY:CA | 2.32 | 0.60 |
| 1:B:324:HIS:HB2 | 1:B:329:LYS:NZ | 2.17 | 0.60 |
| 1:E:33:LYS:HG3 | 1:G:109:HIS:NE2 | 2.16 | 0.60 |
| 1:I:122:LYS:O | 1:I:126:GLN:HG2 | 2.01 | 0.60 |
| 1:I:367:GLN:HG2 | 1:I:369:ILE:H | 1.66 | 0.60 |
| 1:J:176:ARG:CD | 1:J:358:CYS:HB2 | 2.30 | 0.60 |
| 1:J:334:LYS:CB | 1:J:351:GLY:HA3 | 2.31 | 0.60 |
| 1:K:187:HIS:O | 1:K:359:THR:HG23 | 2.02 | 0.60 |
| 1:L:168:LYS:O | 1:L:171:VAL:HG22 | 2.01 | 0.60 |
| 1:L:364:GLY:HA3 | 1:L:370:LEU:CD1 | 2.31 | 0.60 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:N:131:SER:HA | 1:N:403:LEU:HD23 | 1.83 | 0.60 |
| 1:O:372:GLU:O | 1:O:375:ARG:HB3 | 2.02 | 0.60 |
| 1:B:259:LYS:HE2 | 1:F:321:THR:OG1 | 2.00 | 0.60 |
| 1:B:413:SER:CA | 1:I:454:ALA:HA | 2.32 | 0.60 |
| 1:C:25:LEU:HG | 1:H:508:ILE:HG12 | 1.84 | 0.60 |
| 1:C:225:LEU:HD11 | 1:C:324:HIS:ND1 | 2.17 | 0.60 |
| 1:E:132:ALA:CB | 1:E:461:THR:HG21 | 2.31 | 0.60 |
| 1:G:137:SER:HB3 | 1:G:391:SER:HA | 1.83 | 0.60 |
| 1:H:188:VAL:CG1 | 1:H:377:LEU:HB2 | 2.32 | 0.60 |
| 1:I:159:LEU:HG | 1:I:163:LYS:HG2 | 1.83 | 0.60 |
| 1:K:37:LYS:O | 1:K:50:VAL:HG23 | 2.01 | 0.60 |
| 1:K:418:LYS:HB3 | 1:K:418:LYS:HZ2 | 1.67 | 0.60 |
| 1:L:146:LEU:HD22 | 1:L:168:LYS:CA | 2.30 | 0.60 |
| 1:O:210:LYS:HE3 | 1:O:212:GLY:O | 2.02 | 0.60 |
| 1:A:33:LYS:HB2 | 1:A:440:ASN:HB2 | 1.83 | 0.60 |
| 1:C:116:GLY:O | 1:C:119:GLU:HB2 | 2.02 | 0.60 |
| 1:C:231:MET:HB2 | 1:C:284:TYR:H | 1.65 | 0.60 |
| 1:C:283:ILE:HG22 | 1:C:300:GLU:HG3 | 1.84 | 0.60 |
| 1:E:366:THR:HG21 | 1:G:74:MET:HG2 | 1.83 | 0.60 |
| 1:H:334:LYS:HD3 | 1:H:351:GLY:HA3 | 1.83 | 0.60 |
| 1:I:112:THR:OG1 | 1:O:442:GLY:HA3 | 2.01 | 0.60 |
| 1:J:59:LYS:HE3 | 1:J:73:ASP:HA | 1.82 | 0.60 |
| 1:K:159:LEU:HB3 | 1:K:163:LYS:HD3 | 1.83 | 0.60 |
| 1:M:28:SER:HB2 | 1:M:35:MET:SD | 2.41 | 0.60 |
| 1:O:81:GLU:O | 1:O:82:VAL:HB | 2.00 | 0.60 |
| 1:O:211:ILE:HB | 1:O:215:GLN:OE1 | 2.01 | 0.60 |
| 1:O:396:GLY:HA3 | 1:O:480:ILE:HG22 | 1.82 | 0.60 |
| 1:A:154:LEU:HD22 | 1:A:167:THR:CB | 2.32 | 0.60 |
| 1:C:154:LEU:HD23 | 1:C:163:LYS:CG | 2.32 | 0.60 |
| 1:C:500:VAL:O | 1:C:504:VAL:HG23 | 2.02 | 0.60 |
| 1:D:163:LYS:HG3 | 1:D:166:PHE:CD1 | 2.36 | 0.60 |
| 1:F:154:LEU:HD22 | 1:F:167:THR:HB | 1.83 | 0.60 |
| 1:G:106:LYS:C | 1:N:446:ALA:HB2 | 2.21 | 0.60 |
| 1:J:146:LEU:HD13 | 1:J:168:LYS:HA | 1.83 | 0.60 |
| 1:J:161:HIS:CD2 | 1:J:162:HIS:H | 2.19 | 0.60 |
| 1:M:402:MET:SD | 1:M:456:HIS:HB2 | 2.42 | 0.60 |
| 1:N:274:ILE:O | 1:N:296:VAL:HG22 | 2.01 | 0.60 |
| 1:N:402:MET:SD | 1:N:453:ARG:HA | 2.42 | 0.60 |
| 1:O:79:ASP:OD1 | 1:O:84:ASP:HB3 | 2.02 | 0.60 |
| 1:P:163:LYS:HD2 | 1:P:166:PHE:CG | 2.37 | 0.60 |
| 1:C:175:LEU:O | 1:C:178:LYS:HG2 | 2.02 | 0.60 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:E:126:GLN:HG3 | 1:E:411:LEU:HD11 | 1.84 | 0.60 |
| 1:M:485:GLN:HB3 | 1:M:489:GLN:HE22 | 1.65 | 0.60 |
| 1:P:173:ALA:HA | 1:P:176:ARG:CZ | 2.31 | 0.60 |
| 1:P:185:ALA:O | 1:P:357:ALA:HB1 | 2.02 | 0.60 |
| 1:B:377:LEU:O | 1:B:377:LEU:HD23 | 2.02 | 0.60 |
| 1:G:324:HIS:O | 1:G:328:VAL:HG23 | 2.01 | 0.60 |
| 1:H:390:ASP:HB3 | 1:H:485:GLN:OE1 | 2.02 | 0.60 |
| 1:J:41:SER:HB2 | 1:K:509:LYS:NZ | 2.17 | 0.60 |
| 1:L:39:LEU:HD22 | 1:M:508:ILE:CB | 2.28 | 0.60 |
| 1:L:117:TRP:HA | 1:L:120:ALA:HB3 | 1.84 | 0.60 |
| 1:L:166:PHE:CE1 | 1:L:198:ASP:HB3 | 2.37 | 0.60 |
| 1:L:178:LYS:HZ3 | 1:L:388:VAL:HG13 | 1.66 | 0.60 |
| 1:M:150:ALA:HB1 | 1:M:167:THR:OG1 | 2.02 | 0.60 |
| 1:M:402:MET:SD | 1:M:453:ARG:HA | 2.42 | 0.60 |
| 1:O:367:GLN:CG | 1:O:369:ILE:HB | 2.32 | 0.60 |
| 1:A:509:LYS:HB3 | 1:F:39:LEU:HD22 | 1.83 | 0.60 |
| 1:B:59:LYS:HE2 | 1:B:76:ARG:HB2 | 1.84 | 0.60 |
| 1:G:268:ARG:O | 1:G:271:LYS:HG2 | 2.02 | 0.60 |
| 1:H:146:LEU:HB2 | 1:H:171:VAL:HG22 | 1.84 | 0.60 |
| 1:K:143:ARG:NE | 1:K:143:ARG:HA | 2.17 | 0.60 |
| 1:K:500:VAL:HA | 1:K:503:ARG:NE | 2.15 | 0.60 |
| 1:L:448:LEU:HD21 | 1:L:465:LEU:CD1 | 2.32 | 0.60 |
| 1:N:204:GLY:O | 1:N:359:THR:HB | 2.02 | 0.60 |
| 1:O:39:LEU:HD12 | 1:O:57:ILE:HG13 | 1.83 | 0.60 |
| 1:O:231:MET:HG3 | 1:O:283:ILE:HG13 | 1.83 | 0.60 |
| 1:P:505:ASP:O | 1:P:506:ASN:HB3 | 2.02 | 0.60 |
| 1:B:39:LEU:HD11 | 1:B:57:ILE:CG1 | 2.32 | 0.59 |
| 1:B:41:SER:HB2 | 1:F:510:ALA:O | 2.02 | 0.59 |
| 1:D:159:LEU:HD13 | 1:D:159:LEU:H | 1.67 | 0.59 |
| 1:G:106:LYS:HG3 | 1:G:106:LYS:O | 2.01 | 0.59 |
| 1:I:61:ILE:HG13 | 1:I:62:GLY:N | 2.16 | 0.59 |
| 1:I:74:MET:CE | 1:I:493:SER:HB2 | 2.33 | 0.59 |
| 1:I:324:HIS:O | 1:I:328:VAL:HG23 | 2.01 | 0.59 |
| 1:J:124:ALA:HB1 | 1:J:491:LEU:HD13 | 1.83 | 0.59 |
| 1:N:133:VAL:HG23 | 1:N:134:ASP:H | 1.66 | 0.59 |
| 1:O:39:LEU:CD1 | 1:O:57:ILE:HG13 | 2.32 | 0.59 |
| 1:P:343:GLU:CD | 1:P:343:GLU:H | 2.05 | 0.59 |
| 1:A:509:LYS:HG2 | 1:A:510:ALA:N | 2.16 | 0.59 |
| 1:B:4:ASP:OD1 | 1:B:508:ILE:HG23 | 2.02 | 0.59 |
| 1:B:146:LEU:HB2 | 1:B:171:VAL:HG21 | 1.84 | 0.59 |
| 1:D:188:VAL:HG11 | 1:D:377:LEU:HD22 | 1.84 | 0.59 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:D:219:ILE:HD11 | 1:D:336:ILE:HB | 1.84 | 0.59 |
| 1:E:159:LEU:HD22 | 1:E:159:LEU:N | 2.17 | 0.59 |
| 1:F:132:ALA:O | 1:F:133:VAL:HG13 | 2.02 | 0.59 |
| 1:F:171:VAL:O | 1:F:174:VAL:HG22 | 2.02 | 0.59 |
| 1:G:128:LEU:CD2 | 1:G:488:ARG:HG2 | 2.32 | 0.59 |
| 1:G:193:GLY:H | 1:G:343:GLU:CD | 2.05 | 0.59 |
| 1:G:206:LEU:HD23 | 1:G:348:HIS:CD2 | 2.36 | 0.59 |
| 1:G:269:ILE:HG23 | 1:G:274:ILE:CG2 | 2.32 | 0.59 |
| 1:H:434:PRO:HB3 | 1:H:452:LEU:CD2 | 2.31 | 0.59 |
| 1:I:126:GLN:HG3 | 1:I:411:LEU:CD1 | 2.28 | 0.59 |
| 1:J:324:HIS:ND1 | 1:J:325:PRO:HD3 | 2.17 | 0.59 |
| 1:K:74:MET:O | 1:K:77:VAL:HG12 | 2.02 | 0.59 |
| 1:K:334:LYS:CB | 1:K:351:GLY:HA3 | 2.32 | 0.59 |
| 1:L:96:LEU:C | 1:L:96:LEU:HD13 | 2.22 | 0.59 |
| 1:M:178:LYS:HD3 | 1:M:388:VAL:HG21 | 1.82 | 0.59 |
| 1:N:483:SER:O | 1:N:486:VAL:HG22 | 2.02 | 0.59 |
| 1:P:163:LYS:HA | 1:P:166:PHE:CE1 | 2.37 | 0.59 |
| 1:C:99:GLU:CG | 1:C:425:SER:HB3 | 2.32 | 0.59 |
| 1:C:210:LYS:HE2 | 1:C:212:GLY:O | 2.01 | 0.59 |
| 1:E:58:LEU:HB3 | 1:E:72:VAL:HG13 | 1.82 | 0.59 |
| 1:F:28:SER:O | 1:F:34:GLY:HA2 | 2.02 | 0.59 |
| 1:F:114:ILE:HG23 | 1:F:499:GLU:HG3 | 1.83 | 0.59 |
| 1:F:190:LYS:HA | 1:F:362:LEU:O | 2.02 | 0.59 |
| 1:F:324:HIS:O | 1:F:329:LYS:HG3 | 2.01 | 0.59 |
| 1:G:30:LEU:HG | 1:G:87:THR:O | 2.03 | 0.59 |
| 1:G:159:LEU:HG | 1:G:163:LYS:CD | 2.32 | 0.59 |
| 1:K:159:LEU:HD23 | 1:K:163:LYS:CD | 2.32 | 0.59 |
| 1:L:6:GLU:HB2 | 1:L:506:ASN:HD21 | 1.67 | 0.59 |
| 1:N:32:PRO:HG3 | 1:N:467:MET:HE3 | 1.84 | 0.59 |
| 1:N:82:VAL:HG13 | 1:N:83:GLY:N | 2.18 | 0.59 |
| 1:O:75:SER:O | 1:O:78:GLN:HB3 | 2.02 | 0.59 |
| 1:O:324:HIS:O | 1:O:328:VAL:HG22 | 2.02 | 0.59 |
| 1:A:173:ALA:O | 1:A:176:ARG:HG2 | 2.02 | 0.59 |
| 1:A:505:ASP:HB3 | 1:F:37:LYS:CD | 2.32 | 0.59 |
| 1:B:82:VAL:HG21 | 1:B:486:VAL:N | 2.16 | 0.59 |
| 1:B:99:GLU:HG3 | 1:B:425:SER:HB2 | 1.85 | 0.59 |
| 1:D:127:ALA:HB2 | 1:D:404:MET:HG3 | 1.84 | 0.59 |
| 1:D:415:THR:HB | 1:D:419:GLU:HB3 | 1.83 | 0.59 |
| 1:F:114:ILE:HG13 | 1:F:503:ARG:CB | 2.33 | 0.59 |
| 1:F:168:LYS:O | 1:F:171:VAL:HG22 | 2.03 | 0.59 |
| 1:L:310:LEU:O | 1:L:314:THR:HG22 | 2.01 | 0.59 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:O:188:VAL:HG21 | 1:O:377:LEU:HD22 | 1.84 | 0.59 |
| 1:O:433:LEU:O | 1:O:436:ILE:HG22 | 2.01 | 0.59 |
| 1:P:205:PHE:HA | 1:P:359:THR:OG1 | 2.02 | 0.59 |
| 1:P:433:LEU:O | 1:P:437:ILE:HG12 | 2.03 | 0.59 |
| 1:B:284:TYR:O | 1:B:287:PRO:HD2 | 2.03 | 0.59 |
| 1:E:154:LEU:HD22 | 1:E:167:THR:HB | 1.82 | 0.59 |
| 1:E:185:ALA:HA | 1:E:309:ARG:NE | 2.17 | 0.59 |
| 1:H:190:LYS:HB2 | 1:H:370:LEU:HG | 1.84 | 0.59 |
| 1:I:110:PRO:O | 1:I:113:ILE:HB | 2.02 | 0.59 |
| 1:L:225:LEU:HD11 | 1:L:324:HIS:CE1 | 2.36 | 0.59 |
| 1:L:287:PRO:O | 1:L:291:PHE:HD1 | 1.86 | 0.59 |
| 1:L:321:THR:HG21 | 1:P:255:GLU:OE1 | 2.02 | 0.59 |
| 1:M:96:LEU:HD21 | 1:M:117:TRP:CZ2 | 2.38 | 0.59 |
| 1:P:173:ALA:O | 1:P:176:ARG:HG2 | 2.02 | 0.59 |
| 1:B:485:GLN:HG2 | 1:B:488:ARG:HH21 | 1.67 | 0.59 |
| 1:C:161:HIS:CE1 | 1:C:369:ILE:HG21 | 2.38 | 0.59 |
| 1:E:325:PRO:C | 1:E:326:GLU:HG3 | 2.21 | 0.59 |
| 1:E:408:VAL:HA | 1:E:411:LEU:HD12 | 1.83 | 0.59 |
| 1:F:159:LEU:HG | 1:F:163:LYS:HG2 | 1.84 | 0.59 |
| 1:G:82:VAL:CG2 | 1:G:485:GLN:HG2 | 2.32 | 0.59 |
| 1:G:324:HIS:ND1 | 1:G:325:PRO:HD3 | 2.18 | 0.59 |
| 1:H:284:TYR:O | 1:H:287:PRO:HD2 | 2.03 | 0.59 |
| 1:I:201:LEU:HD23 | 1:I:360:ILE:HG12 | 1.84 | 0.59 |
| 1:J:150:ALA:HB2 | 1:J:384:LEU:HD21 | 1.84 | 0.59 |
| 1:M:154:LEU:HD21 | 1:M:163:LYS:NZ | 2.17 | 0.59 |
| 1:M:171:VAL:O | 1:M:174:VAL:HG22 | 2.02 | 0.59 |
| 1:O:92:LEU:HD11 | 1:O:433:LEU:HD21 | 1.83 | 0.59 |
| 1:O:226:ILE:HG12 | 1:O:278:ILE:HG23 | 1.83 | 0.59 |
| 1:B:452:LEU:HD13 | 1:B:465:LEU:HD13 | 1.83 | 0.59 |
| 1:C:187:HIS:HB3 | 1:C:359:THR:HG23 | 1.84 | 0.59 |
| 1:C:324:HIS:HB2 | 1:C:329:LYS:NZ | 2.17 | 0.59 |
| 1:C:369:ILE:HA | 1:C:372:GLU:HG2 | 1.84 | 0.59 |
| 1:D:478:LEU:HB3 | 1:D:480:ILE:HD12 | 1.84 | 0.59 |
| 1:E:24:ASP:O | 1:E:27:LYS:HG2 | 2.02 | 0.59 |
| 1:E:159:LEU:HB2 | 1:E:163:LYS:HB2 | 1.84 | 0.59 |
| 1:E:506:ASN:ND2 | 1:E:507:ILE:HG12 | 2.18 | 0.59 |
| 1:F:96:LEU:HD13 | 1:F:97:LEU:N | 2.17 | 0.59 |
| 1:F:107:LYS:O | 1:F:107:LYS:HG2 | 2.02 | 0.59 |
| 1:F:116:GLY:HA3 | 1:F:422:ALA:CB | 2.33 | 0.59 |
| 1:F:503:ARG:HG3 | 1:F:504:VAL:HG23 | 1.83 | 0.59 |
| 1:G:129:LEU:C | 1:G:129:LEU:HD23 | 2.22 | 0.59 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:H:393:THR:HG22 | 1:H:483:SER:HA | 1.85 | 0.59 |
| 1:I:168:LYS:O | 1:I:171:VAL:HG22 | 2.02 | 0.59 |
| 1:I:186:ILE:CD1 | 1:I:381:LEU:HG | 2.30 | 0.59 |
| 1:I:188:VAL:HG21 | 1:I:362:LEU:CD1 | 2.32 | 0.59 |
| 1:I:219:ILE:HB | 1:I:275:ASN:HB3 | 1.84 | 0.59 |
| 1:J:154:LEU:HD22 | 1:J:167:THR:CB | 2.33 | 0.59 |
| 1:J:173:ALA:HB2 | 1:J:360:ILE:HD11 | 1.85 | 0.59 |
| 1:K:128:LEU:HD11 | 1:K:492:LEU:HD11 | 1.84 | 0.59 |
| 1:K:146:LEU:HD13 | 1:K:167:THR:O | 2.03 | 0.59 |
| 1:N:39:LEU:CD1 | 1:N:57:ILE:HD11 | 2.32 | 0.59 |
| 1:N:216:PRO:HG3 | 1:N:295:GLY:HA2 | 1.84 | 0.59 |
| 1:O:110:PRO:HA | 1:O:113:ILE:HG13 | 1.85 | 0.59 |
| 1:O:368:GLN:O | 1:O:372:GLU:HB2 | 2.03 | 0.59 |
| 1:P:206:LEU:HD21 | 1:P:348:HIS:CD2 | 2.38 | 0.59 |
| 1:A:390:ASP:HB3 | 1:A:485:GLN:OE1 | 2.03 | 0.59 |
| 1:C:150:ALA:HB1 | 1:C:167:THR:OG1 | 2.03 | 0.59 |
| 1:D:269:ILE:HG23 | 1:D:274:ILE:HG21 | 1.84 | 0.59 |
| 1:D:364:GLY:HA3 | 1:D:370:LEU:HD13 | 1.85 | 0.59 |
| 1:E:158:LEU:HD11 | 1:G:503:ARG:NE | 2.18 | 0.59 |
| 1:E:342:GLY:O | 1:E:343:GLU:HB2 | 2.03 | 0.59 |
| 1:F:345:LYS:O | 1:F:346:LEU:HD13 | 2.01 | 0.59 |
| 1:H:372:GLU:O | 1:H:375:ARG:HG2 | 2.03 | 0.59 |
| 1:H:433:LEU:O | 1:H:436:ILE:HG22 | 2.03 | 0.59 |
| 1:I:178:LYS:HD3 | 1:I:388:VAL:CG2 | 2.32 | 0.59 |
| 1:K:402:MET:CE | 1:K:453:ARG:HG2 | 2.32 | 0.59 |
| 1:L:32:PRO:HA | 1:L:155:SER:HB3 | 1.84 | 0.59 |
| 1:L:210:LYS:HE2 | 1:L:212:GLY:O | 2.03 | 0.59 |
| 1:M:146:LEU:HD21 | 1:M:167:THR:HG23 | 1.85 | 0.59 |
| 1:M:178:LYS:HD2 | 1:M:388:VAL:HG21 | 1.84 | 0.59 |
| 1:O:114:ILE:CG2 | 1:O:499:GLU:HG3 | 2.32 | 0.59 |
| 1:O:188:VAL:HG11 | 1:O:377:LEU:CD2 | 2.30 | 0.59 |
| 1:B:31:GLY:C | 1:B:156:SER:HA | 2.23 | 0.59 |
| 1:B:106:LYS:HD3 | 1:I:446:ALA:CB | 2.33 | 0.59 |
| 1:C:176:ARG:HH22 | 1:C:360:ILE:HG13 | 1.66 | 0.59 |
| 1:C:207:LEU:O | 1:C:347:ILE:HG22 | 2.02 | 0.59 |
| 1:H:149:ILE:HD13 | 1:H:383:VAL:HG11 | 1.84 | 0.59 |
| 1:I:115:ALA:O | 1:I:118:ARG:HB3 | 2.03 | 0.59 |
| 1:I:149:ILE:HD12 | 1:I:383:VAL:HG11 | 1.85 | 0.59 |
| 1:I:452:LEU:HD13 | 1:I:465:LEU:HD13 | 1.85 | 0.59 |
| 1:J:89:VAL:HG12 | 1:J:490:VAL:HG23 | 1.85 | 0.59 |
| 1:L:79:ASP:HA | 1:L:83:GLY:CA | 2.31 | 0.59 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:L:127:ALA:HB3 | 1:L:491:LEU:HD13 | 1.83 | 0.59 |
| 1:L:231:MET:HB2 | 1:L:284:TYR:H | 1.68 | 0.59 |
| 1:M:510:ALA:C | 1:M:512:PRO:HD2 | 2.23 | 0.59 |
| 1:O:81:GLU:C | 1:O:386:GLN:HG3 | 2.23 | 0.59 |
| 1:O:146:LEU:HB2 | 1:O:171:VAL:HG11 | 1.85 | 0.59 |
| 1:A:154:LEU:HD21 | 1:A:163:LYS:HZ2 | 1.64 | 0.59 |
| 1:B:114:ILE:HA | 1:B:117:TRP:CE3 | 2.38 | 0.59 |
| 1:B:317:GLU:HB2 | 1:B:329:LYS:HD3 | 1.85 | 0.59 |
| 1:C:40:LEU:HD22 | 1:C:41:SER:N | 2.18 | 0.59 |
| 1:C:58:LEU:HB3 | 1:C:72:VAL:CG1 | 2.32 | 0.59 |
| 1:E:211:ILE:HD11 | 1:E:297:MET:HG3 | 1.85 | 0.59 |
| 1:H:82:VAL:HG11 | 1:H:486:VAL:HG12 | 1.84 | 0.59 |
| 1:H:146:LEU:HB2 | 1:H:171:VAL:HG21 | 1.83 | 0.59 |
| 1:L:11:ALA:HB1 | 1:L:506:ASN:HA | 1.84 | 0.59 |
| 1:N:111:GLN:O | 1:N:114:ILE:HB | 2.02 | 0.59 |
| 1:O:101:GLU:O | 1:O:104:ILE:HG12 | 2.03 | 0.59 |
| 1:O:154:LEU:HD21 | 1:O:163:LYS:HG3 | 1.85 | 0.59 |
| 1:P:268:ARG:O | 1:P:271:LYS:HG2 | 2.03 | 0.59 |
| 1:A:145:ASP:O | 1:A:171:VAL:HG11 | 2.02 | 0.58 |
| 1:B:145:ASP:OD1 | 1:B:171:VAL:HB | 2.03 | 0.58 |
| 1:C:404:MET:O | 1:C:408:VAL:HG22 | 2.03 | 0.58 |
| 1:C:418:LYS:HE2 | 1:L:445:SER:HB2 | 1.84 | 0.58 |
| 1:G:157:LYS:HD3 | 1:G:376:SER:CB | 2.33 | 0.58 |
| 1:G:226:ILE:HG12 | 1:G:278:ILE:HG23 | 1.85 | 0.58 |
| 1:G:356:GLU:OE1 | 1:G:356:GLU:HA | 2.02 | 0.58 |
| 1:H:313:VAL:HG13 | 1:H:352:VAL:HG11 | 1.85 | 0.58 |
| 1:I:185:ALA:HA | 1:I:309:ARG:HB2 | 1.84 | 0.58 |
| 1:J:128:LEU:HD12 | 1:J:491:LEU:CD1 | 2.30 | 0.58 |
| 1:K:305:VAL:HG22 | 1:K:309:ARG:HH12 | 1.67 | 0.58 |
| 1:L:119:GLU:OE1 | 1:L:119:GLU:HA | 2.03 | 0.58 |
| 1:L:182:ASN:H | 1:L:182:ASN:HD22 | 1.51 | 0.58 |
| 1:M:372:GLU:HG3 | 1:M:375:ARG:NH1 | 2.17 | 0.58 |
| 1:O:59:LYS:HE2 | 1:O:76:ARG:HB2 | 1.83 | 0.58 |
| 1:P:231:MET:HG3 | 1:P:283:ILE:HG13 | 1.84 | 0.58 |
| 1:P:485:GLN:HB3 | 1:P:489:GLN:HE22 | 1.68 | 0.58 |
| 1:D:132:ALA:O | 1:D:133:VAL:HG22 | 2.03 | 0.58 |
| 1:D:352:VAL:HG22 | 1:D:355:GLY:H | 1.66 | 0.58 |
| 1:I:219:ILE:HD11 | 1:I:336:ILE:HB | 1.85 | 0.58 |
| 1:I:334:LYS:CD | 1:I:351:GLY:HA3 | 2.33 | 0.58 |
| 1:I:452:LEU:HD22 | 1:I:465:LEU:HD21 | 1.85 | 0.58 |
| 1:J:154:LEU:CD2 | 1:J:163:LYS:HG3 | 2.33 | 0.58 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:J:190:LYS:HD2 | 1:J:370:LEU:HG | 1.84 | 0.58 |
| 1:J:509:LYS:HA | 1:N:40:LEU:CB | 2.34 | 0.58 |
| 1:L:4:ASP:CG | 1:L:509:LYS:HB2 | 2.24 | 0.58 |
| 1:L:178:LYS:HZ1 | 1:L:388:VAL:HG13 | 1.67 | 0.58 |
| 1:O:161:HIS:CG | 1:O:162:HIS:H | 2.21 | 0.58 |
| 1:A:92:LEU:HD13 | 1:A:93:ALA:N | 2.18 | 0.58 |
| 1:D:133:VAL:HG12 | 1:D:395:TYR:CD2 | 2.37 | 0.58 |
| 1:F:198:ASP:C | 1:F:363:ARG:HB2 | 2.23 | 0.58 |
| 1:G:59:LYS:HE2 | 1:G:76:ARG:HB2 | 1.86 | 0.58 |
| 1:G:113:ILE:HG22 | 1:G:117:TRP:HZ3 | 1.68 | 0.58 |
| 1:G:157:LYS:HD3 | 1:G:376:SER:HB2 | 1.86 | 0.58 |
| 1:G:159:LEU:HG | 1:G:163:LYS:HD2 | 1.85 | 0.58 |
| 1:H:78:GLN:OE1 | 1:H:489:GLN:HB3 | 2.04 | 0.58 |
| 1:I:113:ILE:HD13 | 1:I:418:LYS:HZ3 | 1.67 | 0.58 |
| 1:I:114:ILE:CD1 | 1:I:502:LEU:HD13 | 2.33 | 0.58 |
| 1:L:29:THR:O | 1:L:156:SER:HB2 | 2.03 | 0.58 |
| 1:M:513:ARG:HG3 | 1:M:513:ARG:O | 2.04 | 0.58 |
| 1:O:325:PRO:C | 1:O:326:GLU:HG3 | 2.23 | 0.58 |
| 1:P:31:GLY:O | 1:P:156:SER:HA | 2.04 | 0.58 |
| 1:A:58:LEU:HB3 | 1:A:72:VAL:CG1 | 2.33 | 0.58 |
| 1:A:373:ALA:HA | 1:A:376:SER:OG | 2.04 | 0.58 |
| 1:E:103:LEU:HG | 1:E:113:ILE:HD13 | 1.86 | 0.58 |
| 1:F:324:HIS:HB2 | 1:F:329:LYS:NZ | 2.18 | 0.58 |
| 1:G:128:LEU:O | 1:G:129:LEU:HD22 | 2.03 | 0.58 |
| 1:G:192:LEU:O | 1:G:366:THR:HG23 | 2.04 | 0.58 |
| 1:I:114:ILE:HA | 1:I:117:TRP:CE3 | 2.39 | 0.58 |
| 1:K:484:PHE:CE2 | 1:K:488:ARG:HD3 | 2.38 | 0.58 |
| 1:M:170:ALA:HB1 | 1:M:384:LEU:HD11 | 1.84 | 0.58 |
| 1:O:324:HIS:HB2 | 1:O:329:LYS:HE2 | 1.85 | 0.58 |
| 1:P:85:GLY:O | 1:P:153:THR:HA | 2.03 | 0.58 |
| 1:P:162:HIS:HB3 | 1:P:198:ASP:OD2 | 2.02 | 0.58 |
| 1:P:219:ILE:HB | 1:P:275:ASN:HB3 | 1.86 | 0.58 |
| 1:P:310:LEU:O | 1:P:314:THR:HG22 | 2.03 | 0.58 |
| 1:P:324:HIS:ND1 | 1:P:325:PRO:HD3 | 2.17 | 0.58 |
| 1:C:126:GLN:HA | 1:C:129:LEU:CB | 2.33 | 0.58 |
| 1:D:19:ALA:HB3 | 1:D:98:ARG:HH22 | 1.67 | 0.58 |
| 1:D:141:LYS:HG2 | 1:D:144:GLN:HB2 | 1.84 | 0.58 |
| 1:D:372:GLU:O | 1:D:375:ARG:HB3 | 2.03 | 0.58 |
| 1:D:445:SER:HA | 1:D:448:LEU:HB3 | 1.86 | 0.58 |
| 1:E:85:GLY:O | 1:E:153:THR:HA | 2.03 | 0.58 |
| 1:G:435:THR:HG23 | 1:G:445:SER:HB3 | 1.84 | 0.58 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:H:404:MET:O | 1:H:408:VAL:HG22 | 2.03 | 0.58 |
| 1:I:148:ASN:CA | 1:I:480:ILE:HA | 2.33 | 0.58 |
| 1:I:216:PRO:CG | 1:I:295:GLY:HA2 | 2.33 | 0.58 |
| 1:I:274:ILE:O | 1:I:296:VAL:HG22 | 2.03 | 0.58 |
| 1:L:324:HIS:HB2 | 1:L:329:LYS:CE | 2.33 | 0.58 |
| 1:L:341:ILE:HB | 1:L:346:LEU:CD2 | 2.32 | 0.58 |
| 1:N:119:GLU:HB3 | 1:N:423:MET:HG3 | 1.85 | 0.58 |
| 1:N:145:ASP:CG | 1:N:171:VAL:HB | 2.24 | 0.58 |
| 1:E:324:HIS:HB2 | 1:E:329:LYS:HZ3 | 1.68 | 0.58 |
| 1:F:81:GLU:C | 1:F:386:GLN:HG3 | 2.24 | 0.58 |
| 1:G:28:SER:HB2 | 1:G:35:MET:SD | 2.44 | 0.58 |
| 1:I:58:LEU:HB3 | 1:I:72:VAL:HG13 | 1.86 | 0.58 |
| 1:J:312:LEU:O | 1:J:354:LEU:HD22 | 2.03 | 0.58 |
| 1:L:82:VAL:CB | 1:L:386:GLN:HG3 | 2.34 | 0.58 |
| 1:L:199:SER:HA | 1:L:363:ARG:H | 1.68 | 0.58 |
| 1:L:511:ALA:HB1 | 1:L:512:PRO:HD2 | 1.84 | 0.58 |
| 1:M:101:GLU:O | 1:M:104:ILE:HG12 | 2.02 | 0.58 |
| 1:M:365:ALA:O | 1:M:366:THR:HB | 2.03 | 0.58 |
| 1:M:434:PRO:HB3 | 1:M:452:LEU:CD2 | 2.34 | 0.58 |
| 1:N:317:GLU:HB2 | 1:N:329:LYS:HD3 | 1.85 | 0.58 |
| 1:O:58:LEU:HB3 | 1:O:72:VAL:HG11 | 1.84 | 0.58 |
| 1:O:82:VAL:HG22 | 1:O:486:VAL:HG12 | 1.86 | 0.58 |
| 1:O:159:LEU:HB2 | 1:O:369:ILE:HG23 | 1.85 | 0.58 |
| 1:O:177:LEU:HD23 | 1:O:186:ILE:HD11 | 1.86 | 0.58 |
| 1:A:122:LYS:O | 1:A:126:GLN:HG3 | 2.04 | 0.58 |
| 1:A:503:ARG:NH2 | 1:F:158:LEU:HB3 | 2.18 | 0.58 |
| 1:B:39:LEU:HD11 | 1:B:57:ILE:HG12 | 1.84 | 0.58 |
| 1:F:276:CYS:HA | 1:F:297:MET:O | 2.03 | 0.58 |
| 1:H:312:LEU:O | 1:H:354:LEU:HD22 | 2.04 | 0.58 |
| 1:J:369:ILE:HG12 | 1:K:500:VAL:HG21 | 1.84 | 0.58 |
| 1:K:216:PRO:CG | 1:K:295:GLY:HA2 | 2.34 | 0.58 |
| 1:N:119:GLU:CD | 1:N:423:MET:HG3 | 2.24 | 0.58 |
| 1:O:145:ASP:CG | 1:O:171:VAL:HB | 2.23 | 0.58 |
| 1:O:173:ALA:HA | 1:O:176:ARG:NH1 | 2.18 | 0.58 |
| 1:D:39:LEU:HB2 | 1:E:508:ILE:HG22 | 1.85 | 0.58 |
| 1:E:255:GLU:O | 1:E:258:GLU:HB3 | 2.04 | 0.58 |
| 1:E:446:ALA:CB | 1:J:106:LYS:HG2 | 2.34 | 0.58 |
| 1:F:79:ASP:HA | 1:F:83:GLY:HA2 | 1.83 | 0.58 |
| 1:F:139:GLU:O | 1:F:140:VAL:HB | 2.04 | 0.58 |
| 1:I:354:LEU:HD21 | 1:I:356:GLU:HB3 | 1.85 | 0.58 |
| 1:J:179:GLY:HA2 | 1:J:389:LYS:HE2 | 1.85 | 0.58 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:J:317:GLU:HB2 | 1:J:329:LYS:HD3 | 1.85 | 0.58 |
| 1:O:146:LEU:HD23 | 1:O:148:ASN:H | 1.69 | 0.58 |
| 1:A:451:GLN:HE22 | 1:A:471:THR:HA | 1.68 | 0.58 |
| 1:C:40:LEU:HD22 | 1:C:41:SER:H | 1.69 | 0.58 |
| 1:D:174:VAL:HG21 | 1:D:384:LEU:HB3 | 1.86 | 0.58 |
| 1:F:383:VAL:HG12 | 1:F:384:LEU:HD23 | 1.85 | 0.58 |
| 1:I:113:ILE:HD13 | 1:I:418:LYS:NZ | 2.19 | 0.58 |
| 1:I:334:LYS:HD3 | 1:I:351:GLY:HA3 | 1.85 | 0.58 |
| 1:K:161:HIS:CD2 | 1:K:162:HIS:H | 2.21 | 0.58 |
| 1:P:206:LEU:HD12 | 1:P:361:VAL:HG22 | 1.85 | 0.58 |
| 1:A:413:SER:OG | 1:M:454:ALA:HA | 2.04 | 0.58 |
| 1:D:48:LEU:HD23 | 1:E:507:ILE:HD11 | 1.84 | 0.58 |
| 1:D:117:TRP:HE1 | 1:D:495:ALA:HB3 | 1.69 | 0.58 |
| 1:E:334:LYS:HB3 | 1:E:351:GLY:HA3 | 1.86 | 0.58 |
| 1:H:128:LEU:HD21 | 1:H:491:LEU:HD13 | 1.85 | 0.58 |
| 1:I:176:ARG:HH12 | 1:I:360:ILE:HG13 | 1.69 | 0.58 |
| 1:J:163:LYS:O | 1:J:166:PHE:HB2 | 2.04 | 0.58 |
| 1:L:312:LEU:HA | 1:P:213:VAL:HG21 | 1.85 | 0.58 |
| 1:M:159:LEU:HG | 1:M:163:LYS:CD | 2.34 | 0.58 |
| 1:O:58:LEU:HB3 | 1:O:72:VAL:CG1 | 2.33 | 0.58 |
| 1:O:64:ASP:C | 1:O:66:PRO:HD2 | 2.24 | 0.58 |
| 1:O:133:VAL:HB | 1:O:395:TYR:CD2 | 2.39 | 0.58 |
| 1:O:312:LEU:O | 1:O:354:LEU:HD22 | 2.04 | 0.58 |
| 1:P:146:LEU:HD13 | 1:P:167:THR:O | 2.03 | 0.58 |
| 1:C:209:LYS:HE2 | 1:C:301:HIS:O | 2.04 | 0.57 |
| 1:D:280:ARG:CD | 1:D:304:PHE:HB2 | 2.34 | 0.57 |
| 1:D:440:ASN:HA | 1:E:109:HIS:CG | 2.38 | 0.57 |
| 1:E:163:LYS:HD2 | 1:E:166:PHE:CG | 2.39 | 0.57 |
| 1:E:201:LEU:HD23 | 1:E:360:ILE:HG12 | 1.86 | 0.57 |
| 1:E:434:PRO:HB3 | 1:E:452:LEU:CD2 | 2.34 | 0.57 |
| 1:F:379:ASP:O | 1:F:383:VAL:HG23 | 2.04 | 0.57 |
| 1:H:122:LYS:HG3 | 1:H:122:LYS:O | 2.02 | 0.57 |
| 1:H:368:GLN:HG3 | 1:H:369:ILE:H | 1.69 | 0.57 |
| 1:I:82:VAL:HG21 | 1:I:486:VAL:HG12 | 1.85 | 0.57 |
| 1:K:394:VAL:HG21 | 1:K:487:LYS:HG3 | 1.85 | 0.57 |
| 1:L:128:LEU:HD11 | 1:L:488:ARG:HB2 | 1.85 | 0.57 |
| 1:L:145:ASP:O | 1:L:171:VAL:HG11 | 2.03 | 0.57 |
| 1:L:367:GLN:O | 1:L:367:GLN:HG2 | 2.04 | 0.57 |
| 1:O:324:HIS:HB2 | 1:O:329:LYS:CE | 2.34 | 0.57 |
| 1:C:36:ASP:O | 1:H:504:VAL:HG11 | 2.04 | 0.57 |
| 1:C:438:ALA:HB2 | 1:C:448:LEU:HG | 1.84 | 0.57 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:D:41:SER:HB3 | 1:D:45:ASP:OD2 | 2.04 | 0.57 |
| 1:E:399:CYS:SG | 1:E:464:GLY:HA3 | 2.44 | 0.57 |
| 1:F:131:SER:HA | 1:F:403:LEU:HD23 | 1.84 | 0.57 |
| 1:G:175:LEU:O | 1:G:178:LYS:HG2 | 2.04 | 0.57 |
| 1:H:114:ILE:CD1 | 1:H:503:ARG:HA | 2.34 | 0.57 |
| 1:I:149:ILE:HB | 1:I:481:THR:O | 2.04 | 0.57 |
| 1:J:127:ALA:HB3 | 1:J:404:MET:HG3 | 1.86 | 0.57 |
| 1:L:280:ARG:HA | 1:L:302:ALA:O | 2.03 | 0.57 |
| 1:L:390:ASP:HB2 | 1:L:485:GLN:HE22 | 1.68 | 0.57 |
| 1:M:390:ASP:CB | 1:M:485:GLN:HE22 | 2.17 | 0.57 |
| 1:P:146:LEU:CD2 | 1:P:167:THR:HG23 | 2.34 | 0.57 |
| 1:P:146:LEU:HB2 | 1:P:171:VAL:CG2 | 2.34 | 0.57 |
| 1:P:222:ALA:HA | 1:P:275:ASN:HB2 | 1.86 | 0.57 |
| 1:A:112:THR:HG23 | 1:F:442:GLY:CA | 2.34 | 0.57 |
| 1:A:177:LEU:HD13 | 1:A:177:LEU:C | 2.24 | 0.57 |
| 1:B:162:HIS:HB3 | 1:B:198:ASP:OD2 | 2.04 | 0.57 |
| 1:E:145:ASP:OD1 | 1:E:171:VAL:HB | 2.04 | 0.57 |
| 1:F:280:ARG:HD2 | 1:F:304:PHE:HB2 | 1.85 | 0.57 |
| 1:G:96:LEU:HD21 | 1:G:117:TRP:CZ2 | 2.39 | 0.57 |
| 1:I:126:GLN:CG | 1:I:411:LEU:HD11 | 2.33 | 0.57 |
| 1:J:452:LEU:HD13 | 1:J:465:LEU:HD13 | 1.86 | 0.57 |
| 1:L:82:VAL:HG23 | 1:L:386:GLN:HG3 | 1.85 | 0.57 |
| 1:M:128:LEU:CD1 | 1:M:491:LEU:HD12 | 2.30 | 0.57 |
| 1:C:171:VAL:HG13 | 1:C:384:LEU:HG | 1.85 | 0.57 |
| 1:K:368:GLN:CG | 1:K:369:ILE:N | 2.67 | 0.57 |
| 1:M:198:ASP:O | 1:M:363:ARG:HB2 | 2.04 | 0.57 |
| 1:M:367:GLN:CD | 1:M:369:ILE:HB | 2.24 | 0.57 |
| 1:N:67:ALA:HB2 | 1:N:507:ILE:HD13 | 1.86 | 0.57 |
| 1:P:104:ILE:HG13 | 1:P:105:ALA:N | 2.19 | 0.57 |
| 1:P:362:LEU:HD12 | 1:P:377:LEU:HD22 | 1.86 | 0.57 |
| 1:A:126:GLN:NE2 | 1:A:411:LEU:HB3 | 2.20 | 0.57 |
| 1:B:116:GLY:O | 1:B:119:GLU:HB2 | 2.04 | 0.57 |
| 1:B:157:LYS:HB2 | 1:B:159:LEU:HD21 | 1.87 | 0.57 |
| 1:C:80:ASP:HA | 1:C:183:LEU:HD22 | 1.87 | 0.57 |
| 1:D:93:ALA:HA | 1:D:494:ALA:CB | 2.34 | 0.57 |
| 1:D:163:LYS:O | 1:D:163:LYS:HG2 | 2.03 | 0.57 |
| 1:E:126:GLN:NE2 | 1:E:130:ASN:HD22 | 2.03 | 0.57 |
| 1:E:210:LYS:HE2 | 1:E:212:GLY:O | 2.05 | 0.57 |
| 1:F:418:LYS:CD | 1:O:450:ALA:HB2 | 2.33 | 0.57 |
| 1:H:154:LEU:CD2 | 1:H:163:LYS:HG3 | 2.31 | 0.57 |
| 1:I:280:ARG:HD2 | 1:I:304:PHE:HB2 | 1.86 | 0.57 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:I:402:MET:SD | 1:I:453:ARG:HA | 2.45 | 0.57 |
| 1:K:188:VAL:HG11 | 1:K:377:LEU:HD11 | 1.86 | 0.57 |
| 1:L:159:LEU:HD12 | 1:L:372:GLU:CD | 2.25 | 0.57 |
| 1:N:24:ASP:O | 1:N:27:LYS:HG2 | 2.04 | 0.57 |
| 1:N:33:LYS:O | 1:N:35:MET:HE3 | 2.03 | 0.57 |
| 1:N:119:GLU:OE1 | 1:N:119:GLU:HA | 2.05 | 0.57 |
| 1:N:324:HIS:O | 1:N:328:VAL:HG22 | 2.05 | 0.57 |
| 1:P:149:ILE:HD13 | 1:P:482:GLU:HG2 | 1.87 | 0.57 |
| 1:B:215:GLN:HG3 | 1:B:292:GLY:HA2 | 1.87 | 0.57 |
| 1:B:324:HIS:ND1 | 1:B:325:PRO:HD3 | 2.19 | 0.57 |
| 1:C:219:ILE:HD12 | 1:C:275:ASN:HB3 | 1.86 | 0.57 |
| 1:C:452:LEU:HD13 | 1:C:465:LEU:CD1 | 2.35 | 0.57 |
| 1:F:74:MET:O | 1:F:77:VAL:HG12 | 2.04 | 0.57 |
| 1:H:173:ALA:HB2 | 1:H:360:ILE:HD11 | 1.86 | 0.57 |
| 1:J:176:ARG:NE | 1:J:358:CYS:HB2 | 2.19 | 0.57 |
| 1:J:188:VAL:CG2 | 1:J:362:LEU:HG | 2.34 | 0.57 |
| 1:K:84:ASP:OD2 | 1:K:379:ASP:HB2 | 2.04 | 0.57 |
| 1:K:189:ILE:HG23 | 1:K:190:LYS:N | 2.20 | 0.57 |
| 1:O:159:LEU:HD13 | 1:O:372:GLU:OE2 | 2.04 | 0.57 |
| 1:A:499:GLU:O | 1:A:503:ARG:HD3 | 2.03 | 0.57 |
| 1:B:114:ILE:HD11 | 1:B:502:LEU:CD2 | 2.28 | 0.57 |
| 1:C:163:LYS:HD2 | 1:C:166:PHE:CG | 2.40 | 0.57 |
| 1:E:122:LYS:NZ | 1:E:411:LEU:HD22 | 2.19 | 0.57 |
| 1:E:139:GLU:O | 1:E:140:VAL:HB | 2.03 | 0.57 |
| 1:F:204:GLY:HA3 | 1:F:349:PHE:O | 2.04 | 0.57 |
| 1:F:313:VAL:HG22 | 1:F:357:ALA:HB3 | 1.87 | 0.57 |
| 1:G:110:PRO:HA | 1:G:113:ILE:HD12 | 1.86 | 0.57 |
| 1:J:187:HIS:O | 1:J:359:THR:HG23 | 2.04 | 0.57 |
| 1:K:141:LYS:HD2 | 1:K:144:GLN:HB2 | 1.85 | 0.57 |
| 1:K:508:ILE:HG22 | 1:K:509:LYS:N | 2.20 | 0.57 |
| 1:L:369:ILE:O | 1:L:372:GLU:HB3 | 2.04 | 0.57 |
| 1:M:451:GLN:HE22 | 1:M:471:THR:HA | 1.70 | 0.57 |
| 1:P:6:GLU:O | 1:P:7:ARG:HG3 | 2.04 | 0.57 |
| 1:A:182:ASN:CG | 1:A:183:LEU:H | 2.08 | 0.57 |
| 1:E:39:LEU:HD12 | 1:E:57:ILE:HG13 | 1.87 | 0.57 |
| 1:E:116:GLY:O | 1:E:119:GLU:HB2 | 2.04 | 0.57 |
| 1:F:163:LYS:HD2 | 1:F:166:PHE:CG | 2.39 | 0.57 |
| 1:F:310:LEU:O | 1:F:313:VAL:HB | 2.05 | 0.57 |
| 1:G:171:VAL:O | 1:G:175:LEU:HG | 2.05 | 0.57 |
| 1:J:219:ILE:HD11 | 1:J:336:ILE:HB | 1.87 | 0.57 |
| 1:K:96:LEU:HD21 | 1:K:117:TRP:CZ2 | 2.39 | 0.57 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:K:283:ILE:HG22 | 1:K:300:GLU:CG | 2.33 | 0.57 |
| 1:L:10:THR:O | 1:L:13:LEU:HB3 | 2.05 | 0.57 |
| 1:L:317:GLU:HB2 | 1:L:329:LYS:HG2 | 1.87 | 0.57 |
| 1:M:79:ASP:HA | 1:M:83:GLY:HA2 | 1.84 | 0.57 |
| 1:N:485:GLN:HE21 | 1:N:488:ARG:HH21 | 1.52 | 0.57 |
| 1:B:322:PHE:HA | 1:B:324:HIS:CD2 | 2.40 | 0.57 |
| 1:C:154:LEU:CD2 | 1:C:163:LYS:HG3 | 2.34 | 0.57 |
| 1:C:399:CYS:HA | 1:C:456:HIS:NE2 | 2.19 | 0.57 |
| 1:E:391:SER:O | 1:E:392:ARG:HG2 | 2.05 | 0.57 |
| 1:F:116:GLY:HA3 | 1:F:422:ALA:HB3 | 1.87 | 0.57 |
| 1:I:145:ASP:O | 1:I:171:VAL:HG11 | 2.04 | 0.57 |
| 1:K:79:ASP:HA | 1:K:83:GLY:CA | 2.34 | 0.57 |
| 1:K:106:LYS:O | 1:K:108:ILE:HD12 | 2.05 | 0.57 |
| 1:K:280:ARG:O | 1:K:281:GLN:HB3 | 2.05 | 0.57 |
| 1:M:192:LEU:O | 1:M:343:GLU:HG2 | 2.05 | 0.57 |
| 1:N:231:MET:HB2 | 1:N:284:TYR:H | 1.70 | 0.57 |
| 1:O:159:LEU:CB | 1:O:369:ILE:HG23 | 2.35 | 0.57 |
| 1:A:76:ARG:O | 1:A:79:ASP:HB3 | 2.05 | 0.57 |
| 1:A:127:ALA:HB1 | 1:A:491:LEU:CD1 | 2.35 | 0.57 |
| 1:B:146:LEU:CD2 | 1:B:167:THR:HG23 | 2.29 | 0.57 |
| 1:E:27:LYS:CB | 1:E:436:ILE:HD11 | 2.33 | 0.57 |
| 1:E:138:ASP:O | 1:E:139:GLU:HB2 | 2.03 | 0.57 |
| 1:F:88:SER:O | 1:F:92:LEU:HD13 | 2.04 | 0.57 |
| 1:F:200:TYR:HB2 | 1:F:341:ILE:HD11 | 1.87 | 0.57 |
| 1:G:313:VAL:HG22 | 1:G:357:ALA:CB | 2.34 | 0.57 |
| 1:G:334:LYS:CD | 1:G:351:GLY:HA3 | 2.34 | 0.57 |
| 1:H:39:LEU:O | 1:H:48:LEU:HA | 2.05 | 0.57 |
| 1:H:211:ILE:H | 1:H:211:ILE:HD13 | 1.68 | 0.57 |
| 1:J:226:ILE:HG12 | 1:J:278:ILE:HG23 | 1.86 | 0.57 |
| 1:K:226:ILE:HG12 | 1:K:278:ILE:HG23 | 1.87 | 0.57 |
| 1:L:109:HIS:CE1 | 1:P:440:ASN:HA | 2.39 | 0.57 |
| 1:O:82:VAL:HA | 1:O:386:GLN:HG3 | 1.86 | 0.57 |
| 1:P:185:ALA:HA | 1:P:309:ARG:CB | 2.35 | 0.57 |
| 1:P:231:MET:HE1 | 1:P:265:LYS:HD3 | 1.87 | 0.57 |
| 1:P:363:ARG:O | 1:P:370:LEU:HD11 | 2.05 | 0.57 |
| 1:B:132:ALA:O | 1:B:133:VAL:HG12 | 2.05 | 0.56 |
| 1:B:190:LYS:CG | 1:B:374:GLU:HB3 | 2.35 | 0.56 |
| 1:B:263:LYS:HA | 1:B:266:VAL:HG12 | 1.86 | 0.56 |
| 1:E:126:GLN:HE21 | 1:E:130:ASN:HD22 | 1.53 | 0.56 |
| 1:F:114:ILE:HG13 | 1:F:503:ARG:HB3 | 1.87 | 0.56 |
| 1:F:127:ALA:HB3 | 1:F:491:LEU:HD11 | 1.87 | 0.56 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:G:16:PHE:CE2 | 1:G:98:ARG:HA | 2.40 | 0.56 |
| 1:G:191:LYS:HB3 | 1:G:343:GLU:OE1 | 2.05 | 0.56 |
| 1:H:40:LEU:HD22 | 1:H:41:SER:N | 2.20 | 0.56 |
| 1:H:106:LYS:HE3 | 1:P:446:ALA:HB2 | 1.87 | 0.56 |
| 1:I:188:VAL:HB | 1:I:377:LEU:HD23 | 1.86 | 0.56 |
| 1:J:280:ARG:HD2 | 1:J:304:PHE:HB2 | 1.86 | 0.56 |
| 1:L:431:ARG:NH2 | 1:L:434:PRO:HG2 | 2.20 | 0.56 |
| 1:O:163:LYS:O | 1:O:166:PHE:HB2 | 2.05 | 0.56 |
| 1:P:448:LEU:HD11 | 1:P:465:LEU:CD1 | 2.35 | 0.56 |
| 1:B:367:GLN:HG2 | 1:F:492:LEU:HD12 | 1.87 | 0.56 |
| 1:C:16:PHE:HA | 1:C:97:LEU:HD23 | 1.86 | 0.56 |
| 1:E:367:GLN:HB2 | 1:G:70:VAL:CG1 | 2.35 | 0.56 |
| 1:G:54:GLY:O | 1:G:58:LEU:HD23 | 2.05 | 0.56 |
| 1:H:137:SER:HB2 | 1:H:393:THR:OG1 | 2.05 | 0.56 |
| 1:H:482:GLU:OE1 | 1:H:487:LYS:HE3 | 2.04 | 0.56 |
| 1:I:364:GLY:HA3 | 1:I:370:LEU:HD11 | 1.87 | 0.56 |
| 1:K:159:LEU:HD23 | 1:K:163:LYS:HD3 | 1.86 | 0.56 |
| 1:O:112:THR:HG21 | 1:O:418:LYS:HE2 | 1.87 | 0.56 |
| 1:P:269:ILE:CG2 | 1:P:274:ILE:HG21 | 2.31 | 0.56 |
| 1:P:277:PHE:O | 1:P:298:ALA:HA | 2.05 | 0.56 |
| 1:A:511:ALA:HB3 | 1:F:61:ILE:HD11 | 1.86 | 0.56 |
| 1:B:114:ILE:HA | 1:B:117:TRP:CZ3 | 2.40 | 0.56 |
| 1:B:116:GLY:HA3 | 1:B:422:ALA:HB3 | 1.86 | 0.56 |
| 1:D:159:LEU:HD12 | 1:D:372:GLU:CG | 2.36 | 0.56 |
| 1:D:159:LEU:HD13 | 1:D:159:LEU:N | 2.20 | 0.56 |
| 1:D:191:LYS:HA | 1:D:191:LYS:HZ3 | 1.68 | 0.56 |
| 1:D:364:GLY:HA3 | 1:D:370:LEU:CD1 | 2.34 | 0.56 |
| 1:D:390:ASP:CB | 1:D:485:GLN:HE22 | 2.18 | 0.56 |
| 1:F:99:GLU:HG2 | 1:F:425:SER:HB2 | 1.86 | 0.56 |
| 1:F:185:ALA:HA | 1:F:309:ARG:HH11 | 1.71 | 0.56 |
| 1:F:192:LEU:O | 1:F:192:LEU:HD22 | 2.05 | 0.56 |
| 1:F:274:ILE:O | 1:F:296:VAL:HG22 | 2.04 | 0.56 |
| 1:G:50:VAL:HG22 | 1:G:372:GLU:CG | 2.35 | 0.56 |
| 1:G:66:PRO:CA | 1:G:507:ILE:HD11 | 2.35 | 0.56 |
| 1:G:128:LEU:HD21 | 1:G:488:ARG:HA | 1.87 | 0.56 |
| 1:H:154:LEU:HD22 | 1:H:167:THR:CB | 2.34 | 0.56 |
| 1:H:159:LEU:HG | 1:H:372:GLU:HG2 | 1.88 | 0.56 |
| 1:I:207:LEU:O | 1:I:347:ILE:HG22 | 2.05 | 0.56 |
| 1:I:231:MET:HB2 | 1:I:284:TYR:H | 1.71 | 0.56 |
| 1:J:117:TRP:HE1 | 1:J:498:ALA:HB3 | 1.70 | 0.56 |
| 1:J:185:ALA:CA | 1:J:309:ARG:HD2 | 2.35 | 0.56 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:J:274:ILE:O | 1:J:296:VAL:HG22 | 2.06 | 0.56 |
| 1:J:341:ILE:HG23 | 1:J:363:ARG:CZ | 2.35 | 0.56 |
| 1:K:411:LEU:HB3 | 1:K:423:MET:SD | 2.45 | 0.56 |
| 1:L:367:GLN:C | 1:L:369:ILE:H | 2.07 | 0.56 |
| 1:M:154:LEU:HD22 | 1:M:167:THR:HB | 1.87 | 0.56 |
| 1:N:223:LYS:HB2 | 1:N:274:ILE:HA | 1.87 | 0.56 |
| 1:O:152:THR:OG1 | 1:O:480:ILE:HD12 | 2.05 | 0.56 |
| 1:O:152:THR:OG1 | 1:O:480:ILE:HG23 | 2.05 | 0.56 |
| 1:O:231:MET:HB2 | 1:O:284:TYR:H | 1.71 | 0.56 |
| 1:A:49:MET:CB | 1:A:369:ILE:HG21 | 2.36 | 0.56 |
| 1:B:225:LEU:HD12 | 1:B:226:ILE:N | 2.20 | 0.56 |
| 1:C:22:ILE:HD12 | 1:C:90:THR:CG2 | 2.35 | 0.56 |
| 1:D:448:LEU:HD21 | 1:D:465:LEU:CD1 | 2.35 | 0.56 |
| 1:D:450:ALA:HB3 | 1:K:417:GLY:N | 2.20 | 0.56 |
| 1:F:210:LYS:NZ | 1:F:213:VAL:HA | 2.21 | 0.56 |
| 1:G:316:GLY:O | 1:G:317:GLU:HG2 | 2.04 | 0.56 |
| 1:I:111:GLN:HG2 | 1:O:33:LYS:CB | 2.35 | 0.56 |
| 1:I:192:LEU:HG | 1:I:366:THR:HG22 | 1.87 | 0.56 |
| 1:I:274:ILE:HG23 | 1:I:296:VAL:HG21 | 1.88 | 0.56 |
| 1:J:215:GLN:HG3 | 1:J:292:GLY:HA2 | 1.87 | 0.56 |
| 1:K:402:MET:HG2 | 1:K:431:ARG:HH22 | 1.70 | 0.56 |
| 1:N:452:LEU:HD13 | 1:N:465:LEU:CD1 | 2.35 | 0.56 |
| 1:O:386:GLN:NE2 | 1:O:386:GLN:HA | 2.19 | 0.56 |
| 1:A:59:LYS:HE3 | 1:A:73:ASP:HA | 1.87 | 0.56 |
| 1:A:101:GLU:O | 1:A:104:ILE:HG12 | 2.05 | 0.56 |
| 1:A:112:THR:HG23 | 1:F:442:GLY:HA2 | 1.86 | 0.56 |
| 1:B:286:TYR:HB2 | 1:B:287:PRO:HD3 | 1.88 | 0.56 |
| 1:C:22:ILE:HD12 | 1:C:90:THR:HG23 | 1.87 | 0.56 |
| 1:C:59:LYS:HE3 | 1:C:76:ARG:HB2 | 1.87 | 0.56 |
| 1:C:128:LEU:HD22 | 1:C:394:VAL:HG11 | 1.87 | 0.56 |
| 1:D:89:VAL:HA | 1:D:490:VAL:CG2 | 2.36 | 0.56 |
| 1:E:158:LEU:C | 1:E:159:LEU:HD13 | 2.26 | 0.56 |
| 1:G:48:LEU:HD13 | 1:G:48:LEU:O | 2.05 | 0.56 |
| 1:G:352:VAL:CG2 | 1:G:355:GLY:H | 2.19 | 0.56 |
| 1:H:122:LYS:O | 1:H:126:GLN:HG3 | 2.05 | 0.56 |
| 1:H:205:PHE:HB3 | 1:H:349:PHE:HB3 | 1.88 | 0.56 |
| 1:J:131:SER:HB3 | 1:J:403:LEU:CD2 | 2.36 | 0.56 |
| 1:J:411:LEU:HB3 | 1:J:423:MET:SD | 2.45 | 0.56 |
| 1:K:99:GLU:O | 1:K:102:SER:HB2 | 2.05 | 0.56 |
| 1:K:268:ARG:O | 1:K:271:LYS:HG2 | 2.05 | 0.56 |
| 1:L:226:ILE:HD13 | 1:L:307:VAL:HG13 | 1.87 | 0.56 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:N:438:ALA:HB2 | 1:N:448:LEU:HG | 1.86 | 0.56 |
| 1:P:394:VAL:CG2 | 1:P:482:GLU:HB2 | 2.36 | 0.56 |
| 1:C:39:LEU:CD2 | 1:H:508:ILE:HD12 | 2.34 | 0.56 |
| 1:C:58:LEU:HB3 | 1:C:72:VAL:HG13 | 1.86 | 0.56 |
| 1:C:82:VAL:CG1 | 1:C:83:GLY:H | 2.18 | 0.56 |
| 1:D:82:VAL:O | 1:D:382:CYS:HB3 | 2.06 | 0.56 |
| 1:D:176:ARG:HE | 1:D:358:CYS:HB2 | 1.68 | 0.56 |
| 1:E:343:GLU:HG2 | 1:G:76:ARG:HH12 | 1.71 | 0.56 |
| 1:F:418:LYS:HG2 | 1:O:450:ALA:HB1 | 1.86 | 0.56 |
| 1:G:38:ILE:HB | 1:G:48:LEU:CD2 | 2.35 | 0.56 |
| 1:I:122:LYS:NZ | 1:I:125:ARG:HH21 | 2.03 | 0.56 |
| 1:I:326:GLU:HG3 | 1:I:327:LEU:N | 2.21 | 0.56 |
| 1:K:32:PRO:HA | 1:K:155:SER:C | 2.26 | 0.56 |
| 1:K:120:ALA:HA | 1:K:123:ALA:HB3 | 1.88 | 0.56 |
| 1:L:146:LEU:HD12 | 1:L:171:VAL:CG1 | 2.36 | 0.56 |
| 1:O:175:LEU:O | 1:O:178:LYS:HG2 | 2.06 | 0.56 |
| 1:A:49:MET:HG3 | 1:A:369:ILE:HB | 1.88 | 0.56 |
| 1:A:139:GLU:O | 1:A:140:VAL:HB | 2.06 | 0.56 |
| 1:B:133:VAL:HG22 | 1:B:134:ASP:H | 1.70 | 0.56 |
| 1:B:190:LYS:HD2 | 1:B:190:LYS:O | 2.06 | 0.56 |
| 1:D:35:MET:SD | 1:E:111:GLN:HG2 | 2.45 | 0.56 |
| 1:D:445:SER:O | 1:D:449:VAL:HG23 | 2.05 | 0.56 |
| 1:D:508:ILE:HG22 | 1:D:509:LYS:HG2 | 1.87 | 0.56 |
| 1:F:33:LYS:HD2 | 1:F:440:ASN:O | 2.06 | 0.56 |
| 1:F:188:VAL:HG11 | 1:F:377:LEU:HD21 | 1.88 | 0.56 |
| 1:J:338:GLU:OE2 | 1:J:345:LYS:HE2 | 2.05 | 0.56 |
| 1:K:74:MET:HG3 | 1:K:497:ALA:HB1 | 1.88 | 0.56 |
| 1:K:112:THR:HG22 | 1:K:418:LYS:NZ | 2.20 | 0.56 |
| 1:K:225:LEU:HD11 | 1:K:324:HIS:ND1 | 2.21 | 0.56 |
| 1:K:364:GLY:HA3 | 1:K:370:LEU:CD2 | 2.35 | 0.56 |
| 1:L:346:LEU:HD22 | 1:L:346:LEU:N | 2.20 | 0.56 |
| 1:L:487:LYS:O | 1:L:491:LEU:HG | 2.06 | 0.56 |
| 1:P:185:ALA:HA | 1:P:309:ARG:HB3 | 1.86 | 0.56 |
| 1:B:324:HIS:CG | 1:B:325:PRO:HD3 | 2.41 | 0.56 |
| 1:C:82:VAL:HG13 | 1:C:83:GLY:H | 1.69 | 0.56 |
| 1:C:106:LYS:O | 1:C:107:LYS:HG2 | 2.06 | 0.56 |
| 1:E:187:HIS:O | 1:E:359:THR:HG23 | 2.06 | 0.56 |
| 1:F:231:MET:HG3 | 1:F:283:ILE:HG13 | 1.86 | 0.56 |
| 1:I:190:LYS:HD3 | 1:I:371:ASP:HB3 | 1.88 | 0.56 |
| 1:I:306:GLY:HA2 | 1:I:309:ARG:CZ | 2.35 | 0.56 |
| 1:K:368:GLN:HE22 | 1:P:503:ARG:CZ | 2.18 | 0.56 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:L:6:GLU:OE1 | 1:L:11:ALA:HA | 2.05 | 0.56 |
| 1:L:120:ALA:HA | 1:L:123:ALA:CB | 2.35 | 0.56 |
| 1:M:204:GLY:HA3 | 1:M:349:PHE:O | 2.06 | 0.56 |
| 1:N:2:GLY:HA3 | 1:N:513:ARG:OXT | 2.05 | 0.56 |
| 1:N:191:LYS:HG2 | 1:N:341:ILE:CG2 | 2.35 | 0.56 |
| 1:P:111:GLN:HA | 1:P:114:ILE:HG12 | 1.87 | 0.56 |
| 1:C:140:VAL:HA | 1:C:175:LEU:HD22 | 1.88 | 0.56 |
| 1:D:59:LYS:HE3 | 1:D:73:ASP:HA | 1.88 | 0.56 |
| 1:E:29:THR:O | 1:E:156:SER:HB3 | 2.06 | 0.56 |
| 1:E:117:TRP:HE1 | 1:E:498:ALA:HB3 | 1.70 | 0.56 |
| 1:F:226:ILE:HG12 | 1:F:278:ILE:HG23 | 1.87 | 0.56 |
| 1:G:171:VAL:O | 1:G:174:VAL:HG22 | 2.06 | 0.56 |
| 1:H:33:LYS:HB2 | 1:H:440:ASN:HB2 | 1.88 | 0.56 |
| 1:I:59:LYS:HZ1 | 1:I:76:ARG:H | 1.52 | 0.56 |
| 1:I:274:ILE:HG23 | 1:I:296:VAL:CG2 | 2.36 | 0.56 |
| 1:J:59:LYS:HE2 | 1:J:76:ARG:CB | 2.36 | 0.56 |
| 1:J:442:GLY:HA2 | 1:K:109:HIS:ND1 | 2.20 | 0.56 |
| 1:L:122:LYS:O | 1:L:125:ARG:HB2 | 2.06 | 0.56 |
| 1:L:280:ARG:HD2 | 1:L:304:PHE:HB2 | 1.88 | 0.56 |
| 1:L:415:THR:HB | 1:L:419:GLU:CB | 2.35 | 0.56 |
| 1:N:188:VAL:HG21 | 1:N:377:LEU:HD11 | 1.87 | 0.56 |
| 1:O:13:LEU:HD12 | 1:O:13:LEU:O | 2.05 | 0.56 |
| 1:P:74:MET:O | 1:P:77:VAL:HG12 | 2.06 | 0.56 |
| 1:P:161:HIS:CG | 1:P:162:HIS:H | 2.24 | 0.56 |
| 1:P:313:VAL:HG22 | 1:P:357:ALA:HB3 | 1.87 | 0.56 |
| 1:C:168:LYS:O | 1:C:171:VAL:HG22 | 2.06 | 0.56 |
| 1:C:431:ARG:CZ | 1:C:431:ARG:HA | 2.36 | 0.56 |
| 1:C:451:GLN:NE2 | 1:C:471:THR:HA | 2.21 | 0.56 |
| 1:D:96:LEU:O | 1:D:96:LEU:HD22 | 2.05 | 0.56 |
| 1:D:312:LEU:O | 1:D:354:LEU:HD22 | 2.06 | 0.56 |
| 1:F:6:GLU:HB3 | 1:F:11:ALA:HB2 | 1.88 | 0.56 |
| 1:F:178:LYS:NZ | 1:F:388:VAL:HG22 | 2.21 | 0.56 |
| 1:H:154:LEU:HD11 | 1:H:163:LYS:HZ2 | 1.71 | 0.56 |
| 1:I:151:GLY:HA2 | 1:I:167:THR:HG21 | 1.87 | 0.56 |
| 1:J:58:LEU:HB3 | 1:J:72:VAL:CG1 | 2.36 | 0.56 |
| 1:J:322:PHE:HA | 1:J:324:HIS:CD2 | 2.40 | 0.56 |
| 1:J:452:LEU:HD13 | 1:J:465:LEU:CD1 | 2.35 | 0.56 |
| 1:K:259:LYS:O | 1:K:262:MET:HB3 | 2.06 | 0.56 |
| 1:L:183:LEU:HD11 | 1:L:381:LEU:HD22 | 1.87 | 0.56 |
| 1:L:408:VAL:HG23 | 1:L:427:ALA:HB1 | 1.88 | 0.56 |
| 1:N:372:GLU:O | 1:N:375:ARG:HB3 | 2.06 | 0.56 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:P:32:PRO:HG2 | 1:P:467:MET:CE | 2.35 | 0.56 |
| 1:P:393:THR:HG22 | 1:P:483:SER:HA | 1.87 | 0.56 |
| 1:A:22:ILE:HD12 | 1:A:90:THR:CG2 | 2.36 | 0.55 |
| 1:B:146:LEU:HD12 | 1:B:171:VAL:CG1 | 2.28 | 0.55 |
| 1:B:265:LYS:HE2 | 1:B:322:PHE:CE1 | 2.41 | 0.55 |
| 1:D:161:HIS:CE1 | 1:D:369:ILE:HG21 | 2.41 | 0.55 |
| 1:D:163:LYS:HE3 | 1:D:373:ALA:HA | 1.88 | 0.55 |
| 1:E:513:ARG:HA | 1:E:513:ARG:NE | 2.21 | 0.55 |
| 1:G:92:LEU:HD11 | 1:G:433:LEU:HD11 | 1.87 | 0.55 |
| 1:H:171:VAL:HA | 1:H:174:VAL:HG13 | 1.88 | 0.55 |
| 1:I:381:LEU:C | 1:I:381:LEU:HD13 | 2.26 | 0.55 |
| 1:J:106:LYS:O | 1:J:107:LYS:HG2 | 2.06 | 0.55 |
| 1:K:145:ASP:O | 1:K:171:VAL:HG11 | 2.06 | 0.55 |
| 1:L:209:LYS:HE2 | 1:L:301:HIS:O | 2.06 | 0.55 |
| 1:L:434:PRO:HB3 | 1:L:452:LEU:CD2 | 2.36 | 0.55 |
| 1:P:175:LEU:O | 1:P:178:LYS:HG2 | 2.05 | 0.55 |
| 1:P:280:ARG:HD2 | 1:P:304:PHE:HB2 | 1.87 | 0.55 |
| 1:A:143:ARG:HA | 1:A:143:ARG:HE | 1.70 | 0.55 |
| 1:A:174:VAL:HG11 | 1:A:384:LEU:HB2 | 1.88 | 0.55 |
| 1:B:145:ASP:O | 1:B:171:VAL:HG11 | 2.05 | 0.55 |
| 1:C:155:SER:HA | 1:C:160:THR:HG21 | 1.87 | 0.55 |
| 1:C:191:LYS:H | 1:C:363:ARG:HA | 1.71 | 0.55 |
| 1:E:58:LEU:HB3 | 1:E:72:VAL:HG11 | 1.87 | 0.55 |
| 1:F:324:HIS:ND1 | 1:F:325:PRO:HD3 | 2.22 | 0.55 |
| 1:G:287:PRO:O | 1:G:291:PHE:HD1 | 1.90 | 0.55 |
| 1:H:216:PRO:HG2 | 1:H:295:GLY:HA2 | 1.87 | 0.55 |
| 1:I:185:ALA:HA | 1:I:309:ARG:CD | 2.36 | 0.55 |
| 1:K:191:LYS:HE3 | 1:K:191:LYS:HA | 1.87 | 0.55 |
| 1:K:438:ALA:CB | 1:K:448:LEU:HG | 2.35 | 0.55 |
| 1:L:185:ALA:HB3 | 1:L:357:ALA:CB | 2.36 | 0.55 |
| 1:M:106:LYS:O | 1:M:106:LYS:HD3 | 2.06 | 0.55 |
| 1:O:323:ASP:C | 1:O:325:PRO:HD2 | 2.27 | 0.55 |
| 1:B:32:PRO:HG2 | 1:B:467:MET:HB2 | 1.88 | 0.55 |
| 1:B:111:GLN:CD | 1:G:158:LEU:HD11 | 2.27 | 0.55 |
| 1:C:317:GLU:HB2 | 1:C:329:LYS:HD3 | 1.87 | 0.55 |
| 1:E:57:ILE:HG23 | 1:E:58:LEU:HD22 | 1.89 | 0.55 |
| 1:G:48:LEU:HD21 | 1:G:368:GLN:NE2 | 2.21 | 0.55 |
| 1:G:204:GLY:HA3 | 1:G:350:SER:HA | 1.87 | 0.55 |
| 1:G:448:LEU:HD21 | 1:G:465:LEU:CD1 | 2.36 | 0.55 |
| 1:H:420:ALA:HB3 | 1:P:450:ALA:CB | 2.36 | 0.55 |
| 1:L:31:GLY:O | 1:L:156:SER:HA | 2.07 | 0.55 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:L:141:LYS:HE2 | 1:L:144:GLN:HB2 | 1.87 | 0.55 |
| 1:L:497:ALA:O | 1:L:500:VAL:HG22 | 2.06 | 0.55 |
| 1:M:32:PRO:CD | 1:M:467:MET:SD | 2.95 | 0.55 |
| 1:M:157:LYS:HB3 | 1:M:159:LEU:HD11 | 1.87 | 0.55 |
| 1:M:343:GLU:HG3 | 1:M:344:ASP:H | 1.71 | 0.55 |
| 1:P:118:ARG:O | 1:P:121:THR:HB | 2.07 | 0.55 |
| 1:P:372:GLU:HA | 1:P:375:ARG:NH1 | 2.22 | 0.55 |
| 1:A:30:LEU:HD11 | 1:A:87:THR:O | 2.06 | 0.55 |
| 1:A:510:ALA:HB2 | 1:F:39:LEU:HD13 | 1.88 | 0.55 |
| 1:B:96:LEU:HD11 | 1:B:117:TRP:HZ2 | 1.71 | 0.55 |
| 1:B:146:LEU:HB2 | 1:B:171:VAL:CG2 | 2.37 | 0.55 |
| 1:B:163:LYS:HE3 | 1:B:376:SER:HB3 | 1.88 | 0.55 |
| 1:E:276:CYS:HA | 1:E:297:MET:O | 2.06 | 0.55 |
| 1:G:50:VAL:HG22 | 1:G:372:GLU:CD | 2.27 | 0.55 |
| 1:G:78:GLN:HG3 | 1:G:83:GLY:HA2 | 1.89 | 0.55 |
| 1:H:222:ALA:HA | 1:H:275:ASN:OD1 | 2.05 | 0.55 |
| 1:H:316:GLY:O | 1:H:330:LEU:HB2 | 2.07 | 0.55 |
| 1:H:444:ASP:OD2 | 1:P:106:LYS:HE2 | 2.06 | 0.55 |
| 1:J:367:GLN:HB3 | 1:K:74:MET:CG | 2.36 | 0.55 |
| 1:J:433:LEU:HA | 1:J:436:ILE:HG22 | 1.89 | 0.55 |
| 1:K:164:ASP:O | 1:K:167:THR:HG22 | 2.06 | 0.55 |
| 1:K:389:LYS:HD2 | 1:K:389:LYS:N | 2.21 | 0.55 |
| 1:L:312:LEU:CA | 1:P:213:VAL:HG11 | 2.34 | 0.55 |
| 1:M:124:ALA:O | 1:M:128:LEU:HG | 2.07 | 0.55 |
| 1:M:452:LEU:HD13 | 1:M:465:LEU:CD1 | 2.35 | 0.55 |
| 1:N:163:LYS:O | 1:N:163:LYS:HG2 | 2.05 | 0.55 |
| 1:O:11:ALA:HB1 | 1:O:505:ASP:HA | 1.87 | 0.55 |
| 1:P:372:GLU:HG3 | 1:P:375:ARG:HH11 | 1.71 | 0.55 |
| 1:B:143:ARG:HA | 1:B:143:ARG:HE | 1.72 | 0.55 |
| 1:C:75:SER:O | 1:C:78:GLN:HB3 | 2.06 | 0.55 |
| 1:C:114:ILE:HA | 1:C:117:TRP:CE3 | 2.42 | 0.55 |
| 1:D:116:GLY:CA | 1:D:422:ALA:HB1 | 2.37 | 0.55 |
| 1:D:211:ILE:HG12 | 1:D:298:ALA:H | 1.70 | 0.55 |
| 1:G:178:LYS:NZ | 1:G:388:VAL:HG11 | 2.20 | 0.55 |
| 1:H:231:MET:HG3 | 1:H:283:ILE:HG13 | 1.87 | 0.55 |
| 1:I:231:MET:HG3 | 1:I:283:ILE:HG13 | 1.88 | 0.55 |
| 1:J:192:LEU:HA | 1:J:366:THR:OG1 | 2.07 | 0.55 |
| 1:N:32:PRO:HB3 | 1:N:155:SER:HB3 | 1.89 | 0.55 |
| 1:O:188:VAL:HG21 | 1:O:377:LEU:HD13 | 1.89 | 0.55 |
| 1:P:103:LEU:O | 1:P:106:LYS:HB3 | 2.07 | 0.55 |
| 1:A:171:VAL:HA | 1:A:174:VAL:HG22 | 1.88 | 0.55 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:C:380:ALA:O | 1:C:384:LEU:HD22 | 2.07 | 0.55 |
| 1:C:485:GLN:HB2 | 1:C:489:GLN:OE1 | 2.07 | 0.55 |
| 1:D:78:GLN:HG3 | 1:D:83:GLY:HA2 | 1.89 | 0.55 |
| 1:D:265:LYS:HE2 | 1:D:322:PHE:CE1 | 2.41 | 0.55 |
| 1:D:446:ALA:HB1 | 1:K:418:LYS:HG2 | 1.89 | 0.55 |
| 1:F:101:GLU:O | 1:F:104:ILE:HG12 | 2.06 | 0.55 |
| 1:G:414:ARG:O | 1:G:416:PRO:HD3 | 2.07 | 0.55 |
| 1:I:148:ASN:CB | 1:I:480:ILE:HA | 2.37 | 0.55 |
| 1:J:324:HIS:CG | 1:J:325:PRO:HD3 | 2.42 | 0.55 |
| 1:K:433:LEU:O | 1:K:437:ILE:HG12 | 2.07 | 0.55 |
| 1:O:67:ALA:CB | 1:O:507:ILE:HG21 | 2.35 | 0.55 |
| 1:O:364:GLY:HA3 | 1:O:370:LEU:HD21 | 1.88 | 0.55 |
| 1:P:110:PRO:HA | 1:P:113:ILE:HD12 | 1.87 | 0.55 |
| 1:B:324:HIS:HB2 | 1:B:329:LYS:HE2 | 1.89 | 0.55 |
| 1:B:354:LEU:CD2 | 1:B:356:GLU:HB3 | 2.36 | 0.55 |
| 1:C:78:GLN:CG | 1:C:83:GLY:HA2 | 2.36 | 0.55 |
| 1:D:341:ILE:HD12 | 1:D:363:ARG:CZ | 2.36 | 0.55 |
| 1:G:173:ALA:HB2 | 1:G:360:ILE:HD11 | 1.87 | 0.55 |
| 1:H:177:LEU:HD13 | 1:H:177:LEU:O | 2.07 | 0.55 |
| 1:J:201:LEU:CD2 | 1:J:360:ILE:HD13 | 2.30 | 0.55 |
| 1:L:127:ALA:HB1 | 1:L:404:MET:SD | 2.47 | 0.55 |
| 1:L:211:ILE:HD11 | 1:L:297:MET:HG3 | 1.89 | 0.55 |
| 1:M:103:LEU:HA | 1:M:106:LYS:HB2 | 1.89 | 0.55 |
| 1:N:57:ILE:HG23 | 1:N:58:LEU:HD22 | 1.89 | 0.55 |
| 1:N:122:LYS:O | 1:N:126:GLN:HB2 | 2.06 | 0.55 |
| 1:O:6:GLU:OE1 | 1:O:11:ALA:HA | 2.07 | 0.55 |
| 1:O:146:LEU:HD13 | 1:O:168:LYS:HA | 1.88 | 0.55 |
| 1:O:216:PRO:CG | 1:O:295:GLY:HA2 | 2.36 | 0.55 |
| 1:O:426:TYR:OH | 1:O:491:LEU:HD22 | 2.07 | 0.55 |
| 1:P:96:LEU:O | 1:P:96:LEU:HD22 | 2.07 | 0.55 |
| 1:A:108:ILE:HD13 | 1:M:444:ASP:HA | 1.88 | 0.55 |
| 1:B:413:SER:HA | 1:I:454:ALA:HA | 1.89 | 0.55 |
| 1:C:269:ILE:HG23 | 1:C:274:ILE:CG2 | 2.37 | 0.55 |
| 1:D:219:ILE:HB | 1:D:275:ASN:HB3 | 1.87 | 0.55 |
| 1:D:408:VAL:HA | 1:D:411:LEU:HD12 | 1.89 | 0.55 |
| 1:E:265:LYS:HE2 | 1:E:322:PHE:CE1 | 2.41 | 0.55 |
| 1:F:341:ILE:HG23 | 1:F:363:ARG:NH2 | 2.21 | 0.55 |
| 1:G:225:LEU:HD22 | 1:G:329:LYS:HG3 | 1.88 | 0.55 |
| 1:H:174:VAL:O | 1:H:178:LYS:HG3 | 2.07 | 0.55 |
| 1:K:33:LYS:HB2 | 1:K:440:ASN:CG | 2.27 | 0.55 |
| 1:K:265:LYS:HE2 | 1:K:322:PHE:CE2 | 2.42 | 0.55 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:M:97:LEU:HD13 | 1:M:97:LEU:H | 1.72 | 0.55 |
| 1:N:157:LYS:HE3 | 1:N:375:ARG:HD3 | 1.89 | 0.55 |
| 1:N:159:LEU:HG | 1:N:163:LYS:HD3 | 1.87 | 0.55 |
| 1:N:219:ILE:HB | 1:N:275:ASN:HB3 | 1.89 | 0.55 |
| 1:A:165:HIS:O | 1:A:168:LYS:HB3 | 2.07 | 0.55 |
| 1:A:174:VAL:HG11 | 1:A:384:LEU:CB | 2.37 | 0.55 |
| 1:A:367:GLN:CG | 1:A:368:GLN:H | 2.17 | 0.55 |
| 1:C:408:VAL:HG23 | 1:C:427:ALA:HB1 | 1.89 | 0.55 |
| 1:D:89:VAL:O | 1:D:490:VAL:HG23 | 2.07 | 0.55 |
| 1:F:384:LEU:HA | 1:F:387:THR:OG1 | 2.07 | 0.55 |
| 1:F:450:ALA:HA | 1:O:417:GLY:CA | 2.36 | 0.55 |
| 1:G:154:LEU:HD22 | 1:G:167:THR:OG1 | 2.06 | 0.55 |
| 1:G:343:GLU:OE2 | 1:G:344:ASP:HB2 | 2.06 | 0.55 |
| 1:H:146:LEU:CD2 | 1:H:147:MET:H | 2.20 | 0.55 |
| 1:H:231:MET:HB2 | 1:H:284:TYR:H | 1.72 | 0.55 |
| 1:I:58:LEU:HD22 | 1:N:513:ARG:CG | 2.37 | 0.55 |
| 1:J:24:ASP:O | 1:J:27:LYS:HG2 | 2.07 | 0.55 |
| 1:K:203:GLU:HB2 | 1:K:350:SER:CB | 2.36 | 0.55 |
| 1:K:225:LEU:HD11 | 1:K:324:HIS:CE1 | 2.41 | 0.55 |
| 1:K:280:ARG:HD2 | 1:K:304:PHE:HB2 | 1.89 | 0.55 |
| 1:L:96:LEU:O | 1:L:96:LEU:HD22 | 2.07 | 0.55 |
| 1:L:176:ARG:NH2 | 1:L:360:ILE:HG12 | 2.21 | 0.55 |
| 1:N:176:ARG:HH22 | 1:N:360:ILE:HG13 | 1.71 | 0.55 |
| 1:N:269:ILE:HG23 | 1:N:274:ILE:HG21 | 1.89 | 0.55 |
| 1:P:93:ALA:HB1 | 1:P:498:ALA:HB2 | 1.87 | 0.55 |
| 1:A:96:LEU:HD13 | 1:A:97:LEU:N | 2.22 | 0.55 |
| 1:A:130:ASN:HB3 | 1:A:404:MET:HA | 1.89 | 0.55 |
| 1:A:178:LYS:HB2 | 1:A:389:LYS:HE2 | 1.89 | 0.55 |
| 1:B:222:ALA:HA | 1:B:275:ASN:HB2 | 1.89 | 0.55 |
| 1:B:452:LEU:HD13 | 1:B:465:LEU:CD1 | 2.37 | 0.55 |
| 1:C:171:VAL:HG12 | 1:C:384:LEU:HG | 1.88 | 0.55 |
| 1:C:317:GLU:CB | 1:C:329:LYS:HD3 | 2.37 | 0.55 |
| 1:D:280:ARG:HD3 | 1:D:304:PHE:HB2 | 1.89 | 0.55 |
| 1:E:334:LYS:CD | 1:E:351:GLY:HA3 | 2.37 | 0.55 |
| 1:F:149:ILE:HB | 1:F:481:THR:O | 2.07 | 0.55 |
| 1:G:13:LEU:O | 1:G:16:PHE:HB3 | 2.07 | 0.55 |
| 1:G:65:ASN:OD1 | 1:G:66:PRO:HD3 | 2.07 | 0.55 |
| 1:H:160:THR:HA | 1:H:163:LYS:HB3 | 1.89 | 0.55 |
| 1:J:50:VAL:HG22 | 1:J:375:ARG:HH21 | 1.72 | 0.55 |
| 1:J:509:LYS:HG3 | 1:N:40:LEU:HG | 1.89 | 0.55 |
| 1:L:143:ARG:HA | 1:L:143:ARG:HE | 1.72 | 0.55 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:L:496:GLU:O | 1:L:499:GLU:HB3 | 2.07 | 0.55 |
| 1:M:75:SER:O | 1:M:78:GLN:HB3 | 2.06 | 0.55 |
| 1:N:176:ARG:CD | 1:N:358:CYS:HB2 | 2.37 | 0.55 |
| 1:O:276:CYS:HA | 1:O:297:MET:O | 2.07 | 0.55 |
| 1:B:176:ARG:CZ | 1:B:358:CYS:HB2 | 2.37 | 0.54 |
| 1:C:81:GLU:O | 1:C:386:GLN:HG3 | 2.07 | 0.54 |
| 1:D:191:LYS:HA | 1:D:191:LYS:CE | 2.38 | 0.54 |
| 1:E:32:PRO:CA | 1:E:155:SER:HB3 | 2.37 | 0.54 |
| 1:E:176:ARG:NH1 | 1:E:201:LEU:HD21 | 2.22 | 0.54 |
| 1:E:341:ILE:HG23 | 1:E:363:ARG:NH2 | 2.22 | 0.54 |
| 1:E:364:GLY:HA3 | 1:E:370:LEU:CD1 | 2.37 | 0.54 |
| 1:E:489:GLN:HE21 | 1:E:489:GLN:N | 2.05 | 0.54 |
| 1:F:117:TRP:HA | 1:F:120:ALA:CB | 2.36 | 0.54 |
| 1:G:38:ILE:HB | 1:G:48:LEU:HD23 | 1.89 | 0.54 |
| 1:G:231:MET:HG3 | 1:G:283:ILE:HG13 | 1.88 | 0.54 |
| 1:H:369:ILE:C | 1:H:371:ASP:H | 2.09 | 0.54 |
| 1:K:54:GLY:O | 1:K:58:LEU:HD23 | 2.06 | 0.54 |
| 1:K:111:GLN:O | 1:K:114:ILE:HB | 2.07 | 0.54 |
| 1:K:159:LEU:HB3 | 1:K:163:LYS:CD | 2.37 | 0.54 |
| 1:K:438:ALA:HB2 | 1:K:448:LEU:HG | 1.88 | 0.54 |
| 1:N:82:VAL:CG1 | 1:N:83:GLY:H | 2.20 | 0.54 |
| 1:N:173:ALA:HB2 | 1:N:360:ILE:CD1 | 2.37 | 0.54 |
| 1:N:192:LEU:HD12 | 1:N:343:GLU:OE1 | 2.07 | 0.54 |
| 1:N:367:GLN:HG2 | 1:N:369:ILE:H | 1.72 | 0.54 |
| 1:P:448:LEU:HD13 | 1:P:448:LEU:C | 2.27 | 0.54 |
| 1:A:503:ARG:HH21 | 1:F:158:LEU:HD22 | 1.72 | 0.54 |
| 1:B:141:LYS:HE2 | 1:B:141:LYS:HA | 1.90 | 0.54 |
| 1:B:417:GLY:O | 1:I:450:ALA:HB3 | 2.08 | 0.54 |
| 1:C:219:ILE:HB | 1:C:275:ASN:HB3 | 1.89 | 0.54 |
| 1:D:79:ASP:HA | 1:D:83:GLY:CA | 2.36 | 0.54 |
| 1:F:190:LYS:HD2 | 1:F:190:LYS:C | 2.27 | 0.54 |
| 1:G:192:LEU:HB2 | 1:G:343:GLU:OE2 | 2.07 | 0.54 |
| 1:G:310:LEU:O | 1:G:314:THR:HG22 | 2.08 | 0.54 |
| 1:H:146:LEU:HD13 | 1:H:167:THR:O | 2.08 | 0.54 |
| 1:H:317:GLU:CB | 1:H:329:LYS:HD3 | 2.37 | 0.54 |
| 1:K:231:MET:HE1 | 1:K:265:LYS:HD3 | 1.89 | 0.54 |
| 1:O:145:ASP:OD1 | 1:O:171:VAL:HB | 2.08 | 0.54 |
| 1:P:159:LEU:HD13 | 1:P:159:LEU:H | 1.72 | 0.54 |
| 1:P:183:LEU:HD13 | 1:P:385:ALA:CB | 2.37 | 0.54 |
| 1:A:38:ILE:HA | 1:A:49:MET:O | 2.06 | 0.54 |
| 1:A:446:ALA:HB3 | 1:M:421:VAL:HB | 1.88 | 0.54 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:B:280:ARG:HD2 | 1:B:304:PHE:HB2 | 1.88 | 0.54 |
| 1:C:412:ALA:CB | 1:C:424:GLU:HB3 | 2.38 | 0.54 |
| 1:D:19:ALA:HB3 | 1:D:98:ARG:NH2 | 2.22 | 0.54 |
| 1:E:27:LYS:HB2 | 1:E:436:ILE:CD1 | 2.34 | 0.54 |
| 1:E:145:ASP:OD2 | 1:E:175:LEU:HD11 | 2.07 | 0.54 |
| 1:E:188:VAL:HG12 | 1:E:360:ILE:O | 2.07 | 0.54 |
| 1:G:124:ALA:HB1 | 1:G:491:LEU:HB3 | 1.89 | 0.54 |
| 1:G:163:LYS:HA | 1:G:166:PHE:CD1 | 2.43 | 0.54 |
| 1:G:316:GLY:C | 1:G:317:GLU:HG2 | 2.27 | 0.54 |
| 1:G:317:GLU:HB3 | 1:G:329:LYS:HD3 | 1.87 | 0.54 |
| 1:J:109:HIS:CE1 | 1:J:111:GLN:HB2 | 2.42 | 0.54 |
| 1:K:211:ILE:CD1 | 1:K:297:MET:HG3 | 2.29 | 0.54 |
| 1:L:269:ILE:HG23 | 1:L:274:ILE:HG22 | 1.89 | 0.54 |
| 1:L:415:THR:HB | 1:L:419:GLU:HB2 | 1.89 | 0.54 |
| 1:L:431:ARG:NH1 | 1:L:453:ARG:HD3 | 2.23 | 0.54 |
| 1:N:100:ALA:HA | 1:N:103:LEU:HD22 | 1.90 | 0.54 |
| 1:N:210:LYS:HE2 | 1:N:212:GLY:O | 2.07 | 0.54 |
| 1:P:313:VAL:O | 1:P:352:VAL:HG23 | 2.07 | 0.54 |
| 1:A:40:LEU:HD22 | 1:C:507:ILE:O | 2.08 | 0.54 |
| 1:A:154:LEU:HD21 | 1:A:163:LYS:HZ3 | 1.71 | 0.54 |
| 1:B:431:ARG:O | 1:B:434:PRO:HD2 | 2.06 | 0.54 |
| 1:C:204:GLY:HA3 | 1:C:349:PHE:O | 2.08 | 0.54 |
| 1:C:274:ILE:O | 1:C:296:VAL:HG22 | 2.07 | 0.54 |
| 1:D:125:ARG:O | 1:D:129:LEU:HD13 | 2.08 | 0.54 |
| 1:D:508:ILE:HD12 | 1:H:63:VAL:CG2 | 2.35 | 0.54 |
| 1:F:157:LYS:CE | 1:F:375:ARG:HD2 | 2.36 | 0.54 |
| 1:F:402:MET:CE | 1:F:453:ARG:HG2 | 2.38 | 0.54 |
| 1:H:421:VAL:HA | 1:H:424:GLU:OE1 | 2.08 | 0.54 |
| 1:I:111:GLN:HG2 | 1:O:33:LYS:HB2 | 1.89 | 0.54 |
| 1:J:141:LYS:HG2 | 1:J:144:GLN:HB2 | 1.90 | 0.54 |
| 1:J:219:ILE:HD12 | 1:J:275:ASN:HB3 | 1.88 | 0.54 |
| 1:J:225:LEU:HD11 | 1:J:324:HIS:ND1 | 2.23 | 0.54 |
| 1:J:321:THR:O | 1:J:323:ASP:N | 2.41 | 0.54 |
| 1:J:451:GLN:HE22 | 1:J:471:THR:HA | 1.72 | 0.54 |
| 1:J:507:ILE:HA | 1:N:38:ILE:HD11 | 1.88 | 0.54 |
| 1:K:148:ASN:HB3 | 1:K:481:THR:CG2 | 2.37 | 0.54 |
| 1:L:116:GLY:O | 1:L:119:GLU:HB2 | 2.07 | 0.54 |
| 1:N:198:ASP:OD1 | 1:N:364:GLY:HA2 | 2.08 | 0.54 |
| 1:N:419:GLU:H | 1:N:419:GLU:CD | 2.11 | 0.54 |
| 1:P:511:ALA:N | 1:P:512:PRO:CD | 2.70 | 0.54 |
| 1:A:140:VAL:HA | 1:A:178:LYS:HZ2 | 1.73 | 0.54 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:A:408:VAL:HG23 | 1:A:427:ALA:HB1 | 1.88 | 0.54 |
| 1:D:93:ALA:HA | 1:D:494:ALA:HB1 | 1.89 | 0.54 |
| 1:D:231:MET:HG3 | 1:D:283:ILE:HG13 | 1.88 | 0.54 |
| 1:F:217:LYS:HB2 | 1:F:217:LYS:NZ | 2.23 | 0.54 |
| 1:I:61:ILE:HG21 | 1:N:511:ALA:CB | 2.25 | 0.54 |
| 1:I:188:VAL:HB | 1:I:377:LEU:CD2 | 2.36 | 0.54 |
| 1:J:372:GLU:HA | 1:J:375:ARG:CD | 2.37 | 0.54 |
| 1:J:510:ALA:H | 1:N:40:LEU:HG | 1.73 | 0.54 |
| 1:L:145:ASP:CG | 1:L:171:VAL:HB | 2.27 | 0.54 |
| 1:M:114:ILE:C | 1:M:116:GLY:H | 2.10 | 0.54 |
| 1:N:114:ILE:O | 1:N:114:ILE:HG22 | 2.07 | 0.54 |
| 1:O:6:GLU:OE2 | 1:O:506:ASN:HA | 2.06 | 0.54 |
| 1:O:504:VAL:HG12 | 1:O:505:ASP:N | 2.18 | 0.54 |
| 1:O:512:PRO:O | 1:O:513:ARG:HB3 | 2.07 | 0.54 |
| 1:B:146:LEU:HD11 | 1:B:150:ALA:HB2 | 1.88 | 0.54 |
| 1:C:110:PRO:O | 1:C:113:ILE:HB | 2.07 | 0.54 |
| 1:D:415:THR:HB | 1:D:419:GLU:CB | 2.38 | 0.54 |
| 1:E:390:ASP:CB | 1:E:485:GLN:HE22 | 2.21 | 0.54 |
| 1:F:219:ILE:HB | 1:F:275:ASN:HB3 | 1.89 | 0.54 |
| 1:F:266:VAL:HB | 1:F:290:LEU:HD21 | 1.88 | 0.54 |
| 1:H:369:ILE:HG23 | 1:H:370:LEU:N | 2.23 | 0.54 |
| 1:I:399:CYS:HA | 1:I:456:HIS:NE2 | 2.23 | 0.54 |
| 1:I:509:LYS:HA | 1:O:38:ILE:HG12 | 1.89 | 0.54 |
| 1:I:512:PRO:O | 1:O:40:LEU:HD12 | 2.07 | 0.54 |
| 1:K:96:LEU:O | 1:K:96:LEU:HD22 | 2.08 | 0.54 |
| 1:M:51:THR:HG21 | 1:M:56:THR:HB | 1.89 | 0.54 |
| 1:N:390:ASP:HB3 | 1:N:485:GLN:HE22 | 1.72 | 0.54 |
| 1:O:59:LYS:HE2 | 1:O:76:ARG:H | 1.72 | 0.54 |
| 1:O:107:LYS:HD2 | 1:O:107:LYS:C | 2.28 | 0.54 |
| 1:O:133:VAL:HG21 | 1:O:394:VAL:HA | 1.90 | 0.54 |
| 1:O:176:ARG:NE | 1:O:358:CYS:HB2 | 2.23 | 0.54 |
| 1:O:283:ILE:HG22 | 1:O:300:GLU:CG | 2.38 | 0.54 |
| 1:P:483:SER:O | 1:P:486:VAL:HG22 | 2.07 | 0.54 |
| 1:P:499:GLU:HG2 | 1:P:503:ARG:CZ | 2.38 | 0.54 |
| 1:B:154:LEU:HD13 | 1:B:167:THR:OG1 | 2.08 | 0.54 |
| 1:B:177:LEU:HD22 | 1:B:186:ILE:HD11 | 1.89 | 0.54 |
| 1:D:364:GLY:CA | 1:D:370:LEU:HD13 | 2.38 | 0.54 |
| 1:D:445:SER:OG | 1:K:106:LYS:HE3 | 2.07 | 0.54 |
| 1:D:500:VAL:HG12 | 1:D:503:ARG:HH21 | 1.73 | 0.54 |
| 1:G:11:ALA:O | 1:G:506:ASN:HB3 | 2.08 | 0.54 |
| 1:H:108:ILE:CD1 | 1:P:444:ASP:HB2 | 2.37 | 0.54 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:I:159:LEU:HD13 | 1:I:372:GLU:HB3 | 1.88 | 0.54 |
| 1:K:146:LEU:HD22 | 1:K:168:LYS:HA | 1.90 | 0.54 |
| 1:K:163:LYS:O | 1:K:166:PHE:HB2 | 2.08 | 0.54 |
| 1:L:393:THR:HB | 1:L:482:GLU:O | 2.08 | 0.54 |
| 1:M:82:VAL:HG22 | 1:M:486:VAL:HG12 | 1.89 | 0.54 |
| 1:N:51:THR:HG21 | 1:N:56:THR:HB | 1.89 | 0.54 |
| 1:O:206:LEU:HD12 | 1:O:359:THR:CG2 | 2.36 | 0.54 |
| 1:P:209:LYS:HE2 | 1:P:301:HIS:O | 2.08 | 0.54 |
| 1:A:511:ALA:HB3 | 1:F:61:ILE:CG1 | 2.38 | 0.54 |
| 1:B:128:LEU:HD21 | 1:B:488:ARG:HA | 1.88 | 0.54 |
| 1:B:139:GLU:O | 1:B:140:VAL:HB | 2.08 | 0.54 |
| 1:C:451:GLN:HE22 | 1:C:471:THR:HA | 1.73 | 0.54 |
| 1:E:108:ILE:HG23 | 1:E:109:HIS:N | 2.22 | 0.54 |
| 1:E:352:VAL:HG22 | 1:E:355:GLY:H | 1.73 | 0.54 |
| 1:F:284:TYR:O | 1:F:287:PRO:HD2 | 2.07 | 0.54 |
| 1:F:346:LEU:N | 1:F:346:LEU:HD22 | 2.22 | 0.54 |
| 1:G:133:VAL:HA | 1:G:393:THR:O | 2.08 | 0.54 |
| 1:H:216:PRO:CG | 1:H:295:GLY:HA2 | 2.37 | 0.54 |
| 1:I:17:ILE:HA | 1:I:20:ILE:HG22 | 1.90 | 0.54 |
| 1:J:421:VAL:O | 1:J:424:GLU:HG2 | 2.08 | 0.54 |
| 1:K:231:MET:HB2 | 1:K:284:TYR:H | 1.73 | 0.54 |
| 1:K:259:LYS:O | 1:K:263:LYS:HG2 | 2.08 | 0.54 |
| 1:L:96:LEU:HD11 | 1:L:498:ALA:HB1 | 1.89 | 0.54 |
| 1:M:58:LEU:HD12 | 1:M:72:VAL:HG22 | 1.90 | 0.54 |
| 1:M:146:LEU:CD2 | 1:M:147:MET:H | 2.20 | 0.54 |
| 1:N:159:LEU:CD1 | 1:N:372:GLU:HB3 | 2.38 | 0.54 |
| 1:N:390:ASP:CB | 1:N:485:GLN:HE22 | 2.21 | 0.54 |
| 1:O:43:GLY:O | 1:O:44:ARG:HB2 | 2.07 | 0.54 |
| 1:P:133:VAL:HG21 | 1:P:394:VAL:HB | 1.90 | 0.54 |
| 1:P:372:GLU:O | 1:P:375:ARG:HB3 | 2.07 | 0.54 |
| 1:B:106:LYS:NZ | 1:B:108:ILE:HB | 2.23 | 0.54 |
| 1:B:178:LYS:HE2 | 1:B:388:VAL:HB | 1.90 | 0.54 |
| 1:B:274:ILE:HG23 | 1:B:296:VAL:HG21 | 1.89 | 0.54 |
| 1:C:27:LYS:HG3 | 1:C:436:ILE:HD12 | 1.90 | 0.54 |
| 1:C:122:LYS:HE2 | 1:C:411:LEU:CD1 | 2.30 | 0.54 |
| 1:C:128:LEU:HD13 | 1:C:484:PHE:CE1 | 2.43 | 0.54 |
| 1:D:439:ASP:OD2 | 1:K:107:LYS:HE2 | 2.08 | 0.54 |
| 1:D:507:ILE:C | 1:D:507:ILE:HD13 | 2.28 | 0.54 |
| 1:E:159:LEU:CD2 | 1:E:163:LYS:HG2 | 2.35 | 0.54 |
| 1:E:183:LEU:HD13 | 1:E:381:LEU:CD1 | 2.37 | 0.54 |
| 1:G:401:GLU:HG2 | 1:G:433:LEU:HD22 | 1.90 | 0.54 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:I:31:GLY:O | 1:I:156:SER:HA | 2.08 | 0.54 |
| 1:K:206:LEU:HD11 | 1:K:346:LEU:CD2 | 2.38 | 0.54 |
| 1:K:207:LEU:O | 1:K:347:ILE:HG22 | 2.07 | 0.54 |
| 1:K:284:TYR:O | 1:K:287:PRO:HD2 | 2.07 | 0.54 |
| 1:L:116:GLY:HA3 | 1:L:422:ALA:CB | 2.37 | 0.54 |
| 1:L:313:VAL:HG13 | 1:L:352:VAL:HB | 1.89 | 0.54 |
| 1:M:119:GLU:HG2 | 1:M:422:ALA:HB3 | 1.90 | 0.54 |
| 1:M:128:LEU:HD21 | 1:M:491:LEU:HD12 | 1.88 | 0.54 |
| 1:M:159:LEU:HG | 1:M:163:LYS:HD3 | 1.88 | 0.54 |
| 1:N:393:THR:HB | 1:N:482:GLU:O | 2.08 | 0.54 |
| 1:O:209:LYS:HE2 | 1:O:301:HIS:O | 2.08 | 0.54 |
| 1:P:109:HIS:CD2 | 1:P:111:GLN:HG2 | 2.43 | 0.54 |
| 1:B:141:LYS:HA | 1:B:141:LYS:CE | 2.38 | 0.54 |
| 1:C:163:LYS:HE3 | 1:C:376:SER:HB2 | 1.90 | 0.54 |
| 1:D:448:LEU:C | 1:D:448:LEU:HD13 | 2.28 | 0.54 |
| 1:F:219:ILE:HD12 | 1:F:275:ASN:HB3 | 1.89 | 0.54 |
| 1:H:89:VAL:HG12 | 1:H:490:VAL:CG2 | 2.37 | 0.54 |
| 1:H:187:HIS:HA | 1:H:377:LEU:CD2 | 2.34 | 0.54 |
| 1:I:89:VAL:HG12 | 1:I:490:VAL:HG23 | 1.90 | 0.54 |
| 1:J:208:ASP:HB2 | 1:J:346:LEU:HD12 | 1.90 | 0.54 |
| 1:K:52:ASN:ND2 | 1:K:157:LYS:HG2 | 2.22 | 0.54 |
| 1:K:352:VAL:HG22 | 1:K:355:GLY:H | 1.73 | 0.54 |
| 1:L:146:LEU:CD2 | 1:L:147:MET:H | 2.20 | 0.54 |
| 1:L:438:ALA:HB2 | 1:L:448:LEU:HG | 1.90 | 0.54 |
| 1:N:163:LYS:HE3 | 1:N:373:ALA:HA | 1.88 | 0.54 |
| 1:O:117:TRP:HD1 | 1:O:495:ALA:HB1 | 1.72 | 0.54 |
| 1:P:57:ILE:HG23 | 1:P:58:LEU:HD22 | 1.90 | 0.54 |
| 1:P:116:GLY:HA3 | 1:P:422:ALA:CB | 2.38 | 0.54 |
| 1:P:339:VAL:HB | 1:P:348:HIS:CE1 | 2.43 | 0.54 |
| 1:P:390:ASP:HB3 | 1:P:485:GLN:HE22 | 1.73 | 0.54 |
| 1:E:431:ARG:HH21 | 1:E:434:PRO:HG2 | 1.72 | 0.53 |
| 1:E:448:LEU:HD21 | 1:E:465:LEU:CD1 | 2.33 | 0.53 |
| 1:G:188:VAL:HG21 | 1:G:377:LEU:HD13 | 1.89 | 0.53 |
| 1:G:209:LYS:HE2 | 1:G:301:HIS:O | 2.08 | 0.53 |
| 1:H:280:ARG:O | 1:H:281:GLN:HB3 | 2.06 | 0.53 |
| 1:I:32:PRO:HB2 | 1:I:33:LYS:HD2 | 1.89 | 0.53 |
| 1:I:111:GLN:O | 1:I:114:ILE:HB | 2.08 | 0.53 |
| 1:J:366:THR:CB | 1:K:77:VAL:HG21 | 2.38 | 0.53 |
| 1:K:59:LYS:NZ | 1:K:76:ARG:HB2 | 2.23 | 0.53 |
| 1:K:89:VAL:HG12 | 1:K:490:VAL:CG2 | 2.33 | 0.53 |
| 1:K:203:GLU:HB3 | 1:K:350:SER:HB2 | 1.89 | 0.53 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:K:208:ASP:O | 1:K:209:LYS:HG3 | 2.08 | 0.53 |
| 1:A:79:ASP:OD1 | 1:A:378:HIS:HD2 | 1.91 | 0.53 |
| 1:B:82:VAL:CG2 | 1:B:485:GLN:HB2 | 2.38 | 0.53 |
| 1:B:82:VAL:HG13 | 1:B:486:VAL:HG12 | 1.88 | 0.53 |
| 1:B:185:ALA:HA | 1:B:309:ARG:HG2 | 1.90 | 0.53 |
| 1:C:130:ASN:HD21 | 1:C:404:MET:HA | 1.70 | 0.53 |
| 1:C:284:TYR:O | 1:C:287:PRO:HD2 | 2.08 | 0.53 |
| 1:C:438:ALA:CB | 1:C:448:LEU:HG | 2.38 | 0.53 |
| 1:E:402:MET:SD | 1:E:453:ARG:HA | 2.48 | 0.53 |
| 1:F:54:GLY:O | 1:F:58:LEU:HD23 | 2.07 | 0.53 |
| 1:F:96:LEU:HD13 | 1:F:96:LEU:C | 2.28 | 0.53 |
| 1:F:341:ILE:HG22 | 1:F:346:LEU:HD21 | 1.90 | 0.53 |
| 1:F:446:ALA:HB2 | 1:O:108:ILE:CG2 | 2.38 | 0.53 |
| 1:H:54:GLY:O | 1:H:58:LEU:HD23 | 2.09 | 0.53 |
| 1:H:175:LEU:HA | 1:H:178:LYS:HE2 | 1.90 | 0.53 |
| 1:H:447:ASP:HA | 1:P:417:GLY:C | 2.29 | 0.53 |
| 1:I:122:LYS:O | 1:I:125:ARG:HG2 | 2.09 | 0.53 |
| 1:I:324:HIS:ND1 | 1:I:325:PRO:HD3 | 2.22 | 0.53 |
| 1:I:343:GLU:HG3 | 1:I:344:ASP:H | 1.73 | 0.53 |
| 1:I:448:LEU:HD21 | 1:I:465:LEU:CD1 | 2.31 | 0.53 |
| 1:J:210:LYS:HE2 | 1:J:212:GLY:O | 2.08 | 0.53 |
| 1:K:19:ALA:CB | 1:K:97:LEU:HD12 | 2.38 | 0.53 |
| 1:L:150:ALA:HB1 | 1:L:167:THR:OG1 | 2.08 | 0.53 |
| 1:M:499:GLU:O | 1:M:503:ARG:HB2 | 2.08 | 0.53 |
| 1:N:232:ASP:HA | 1:N:284:TYR:HB2 | 1.90 | 0.53 |
| 1:O:171:VAL:O | 1:O:174:VAL:HG22 | 2.07 | 0.53 |
| 1:B:59:LYS:HE3 | 1:B:73:ASP:HA | 1.91 | 0.53 |
| 1:C:174:VAL:HG11 | 1:C:384:LEU:CB | 2.39 | 0.53 |
| 1:E:110:PRO:O | 1:E:113:ILE:HB | 2.09 | 0.53 |
| 1:E:122:LYS:HE2 | 1:E:125:ARG:NH2 | 2.23 | 0.53 |
| 1:E:134:ASP:HB3 | 1:E:393:THR:OG1 | 2.08 | 0.53 |
| 1:E:223:LYS:HB2 | 1:E:274:ILE:HA | 1.90 | 0.53 |
| 1:E:390:ASP:HB2 | 1:E:485:GLN:HE22 | 1.73 | 0.53 |
| 1:G:283:ILE:HG22 | 1:G:300:GLU:CG | 2.37 | 0.53 |
| 1:H:114:ILE:HD12 | 1:H:503:ARG:HA | 1.88 | 0.53 |
| 1:H:183:LEU:HD22 | 1:H:382:CYS:SG | 2.49 | 0.53 |
| 1:H:310:LEU:O | 1:H:313:VAL:HB | 2.08 | 0.53 |
| 1:I:64:ASP:HB2 | 1:I:66:PRO:HD2 | 1.88 | 0.53 |
| 1:I:116:GLY:O | 1:I:119:GLU:HB2 | 2.08 | 0.53 |
| 1:I:146:LEU:HD21 | 1:I:150:ALA:HB3 | 1.90 | 0.53 |
| 1:J:148:ASN:HB3 | 1:J:481:THR:HG22 | 1.90 | 0.53 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:J:366:THR:HG23 | 1:J:370:LEU:HD23 | 1.90 | 0.53 |
| 1:J:492:LEU:HD13 | 1:J:493:SER:N | 2.21 | 0.53 |
| 1:K:58:LEU:HB3 | 1:K:72:VAL:CG1 | 2.38 | 0.53 |
| 1:K:191:LYS:HE3 | 1:K:191:LYS:CA | 2.39 | 0.53 |
| 1:L:101:GLU:O | 1:L:104:ILE:HG12 | 2.07 | 0.53 |
| 1:L:128:LEU:HD21 | 1:L:488:ARG:HA | 1.89 | 0.53 |
| 1:L:324:HIS:HB2 | 1:L:329:LYS:HE2 | 1.91 | 0.53 |
| 1:P:32:PRO:CD | 1:P:467:MET:SD | 2.95 | 0.53 |
| 1:P:171:VAL:O | 1:P:175:LEU:HG | 2.08 | 0.53 |
| 1:P:390:ASP:CB | 1:P:485:GLN:HE22 | 2.20 | 0.53 |
| 1:A:40:LEU:HD13 | 1:C:508:ILE:HG22 | 1.90 | 0.53 |
| 1:A:56:THR:HG23 | 1:A:375:ARG:NE | 2.23 | 0.53 |
| 1:A:448:LEU:HD11 | 1:A:465:LEU:HD11 | 1.91 | 0.53 |
| 1:B:30:LEU:HD22 | 1:B:436:ILE:HD13 | 1.91 | 0.53 |
| 1:B:58:LEU:HB3 | 1:B:72:VAL:HG11 | 1.89 | 0.53 |
| 1:B:75:SER:O | 1:B:78:GLN:HB3 | 2.09 | 0.53 |
| 1:B:289:GLN:C | 1:F:318:ILE:HG23 | 2.27 | 0.53 |
| 1:C:82:VAL:CG1 | 1:C:83:GLY:N | 2.71 | 0.53 |
| 1:C:500:VAL:O | 1:C:503:ARG:HB2 | 2.08 | 0.53 |
| 1:D:118:ARG:O | 1:D:121:THR:HB | 2.09 | 0.53 |
| 1:D:417:GLY:CA | 1:K:450:ALA:HB3 | 2.39 | 0.53 |
| 1:F:159:LEU:HG | 1:F:163:LYS:CG | 2.38 | 0.53 |
| 1:G:65:ASN:CG | 1:G:66:PRO:HD3 | 2.29 | 0.53 |
| 1:J:223:LYS:HD3 | 1:J:272:HIS:O | 2.08 | 0.53 |
| 1:J:263:LYS:HA | 1:J:266:VAL:HG12 | 1.90 | 0.53 |
| 1:K:40:LEU:HD23 | 1:K:41:SER:N | 2.23 | 0.53 |
| 1:K:210:LYS:HE2 | 1:K:212:GLY:O | 2.07 | 0.53 |
| 1:L:128:LEU:C | 1:L:129:LEU:HD13 | 2.28 | 0.53 |
| 1:L:206:LEU:HD21 | 1:L:348:HIS:NE2 | 2.24 | 0.53 |
| 1:L:322:PHE:O | 1:L:325:PRO:HD2 | 2.08 | 0.53 |
| 1:P:210:LYS:HE2 | 1:P:212:GLY:O | 2.08 | 0.53 |
| 1:P:250:LYS:O | 1:P:253:GLU:HB3 | 2.07 | 0.53 |
| 1:B:511:ALA:CB | 1:B:512:PRO:HD3 | 2.38 | 0.53 |
| 1:C:32:PRO:HA | 1:C:156:SER:HA | 1.89 | 0.53 |
| 1:C:216:PRO:CG | 1:C:295:GLY:HA2 | 2.38 | 0.53 |
| 1:D:439:ASP:HB2 | 1:K:108:ILE:HD11 | 1.90 | 0.53 |
| 1:E:133:VAL:HG23 | 1:E:134:ASP:N | 2.23 | 0.53 |
| 1:J:415:THR:HG23 | 1:J:420:ALA:CA | 2.39 | 0.53 |
| 1:K:266:VAL:HB | 1:K:290:LEU:CD2 | 2.28 | 0.53 |
| 1:L:14:SER:O | 1:L:17:ILE:HG22 | 2.09 | 0.53 |
| 1:L:170:ALA:HB1 | 1:L:380:ALA:HB1 | 1.91 | 0.53 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:M:110:PRO:O | 1:M:113:ILE:HB | 2.08 | 0.53 |
| 1:N:78:GLN:CG | 1:N:83:GLY:HA2 | 2.39 | 0.53 |
| 1:N:511:ALA:HB1 | 1:N:512:PRO:HD2 | 1.89 | 0.53 |
| 1:O:269:ILE:HG23 | 1:O:274:ILE:HG22 | 1.86 | 0.53 |
| 1:P:39:LEU:O | 1:P:48:LEU:HA | 2.08 | 0.53 |
| 1:P:438:ALA:HB2 | 1:P:448:LEU:HG | 1.91 | 0.53 |
| 1:B:163:LYS:HG3 | 1:B:166:PHE:CG | 2.43 | 0.53 |
| 1:C:81:GLU:O | 1:C:82:VAL:HB | 2.09 | 0.53 |
| 1:C:150:ALA:HB2 | 1:C:384:LEU:HD11 | 1.90 | 0.53 |
| 1:D:159:LEU:HD22 | 1:D:160:THR:N | 2.24 | 0.53 |
| 1:D:200:TYR:HB2 | 1:D:363:ARG:CZ | 2.38 | 0.53 |
| 1:D:226:ILE:HA | 1:D:278:ILE:O | 2.07 | 0.53 |
| 1:E:222:ALA:HA | 1:E:275:ASN:OD1 | 2.08 | 0.53 |
| 1:F:154:LEU:HD11 | 1:F:163:LYS:CG | 2.39 | 0.53 |
| 1:H:276:CYS:HA | 1:H:297:MET:O | 2.08 | 0.53 |
| 1:H:502:LEU:O | 1:H:502:LEU:HD22 | 2.09 | 0.53 |
| 1:I:59:LYS:NZ | 1:I:76:ARG:H | 2.07 | 0.53 |
| 1:I:92:LEU:O | 1:I:95:GLU:HG2 | 2.08 | 0.53 |
| 1:I:177:LEU:HG | 1:I:186:ILE:HD11 | 1.90 | 0.53 |
| 1:I:210:LYS:HE2 | 1:I:212:GLY:O | 2.09 | 0.53 |
| 1:I:448:LEU:C | 1:I:448:LEU:HD13 | 2.29 | 0.53 |
| 1:J:114:ILE:HA | 1:J:117:TRP:CZ3 | 2.44 | 0.53 |
| 1:K:176:ARG:HH12 | 1:K:201:LEU:HD11 | 1.73 | 0.53 |
| 1:N:173:ALA:HA | 1:N:176:ARG:CZ | 2.39 | 0.53 |
| 1:N:341:ILE:HD11 | 1:N:348:HIS:CE1 | 2.44 | 0.53 |
| 1:P:82:VAL:HG13 | 1:P:486:VAL:HG12 | 1.90 | 0.53 |
| 1:P:313:VAL:CG1 | 1:P:352:VAL:HB | 2.38 | 0.53 |
| 1:B:451:GLN:HE22 | 1:B:471:THR:HA | 1.74 | 0.53 |
| 1:C:166:PHE:CE1 | 1:C:198:ASP:HB3 | 2.43 | 0.53 |
| 1:C:485:GLN:HB3 | 1:C:488:ARG:HH21 | 1.72 | 0.53 |
| 1:F:108:ILE:HG22 | 1:F:109:HIS:N | 2.24 | 0.53 |
| 1:F:394:VAL:HG23 | 1:F:482:GLU:HB2 | 1.89 | 0.53 |
| 1:G:32:PRO:HG2 | 1:G:467:MET:CE | 2.39 | 0.53 |
| 1:G:127:ALA:O | 1:G:130:ASN:HB3 | 2.09 | 0.53 |
| 1:G:231:MET:HB2 | 1:G:284:TYR:H | 1.73 | 0.53 |
| 1:K:117:TRP:CH2 | 1:K:502:LEU:HD12 | 2.43 | 0.53 |
| 1:K:312:LEU:O | 1:K:354:LEU:HD22 | 2.08 | 0.53 |
| 1:K:402:MET:SD | 1:K:453:ARG:HA | 2.49 | 0.53 |
| 1:L:41:SER:OG | 1:M:510:ALA:HB3 | 2.07 | 0.53 |
| 1:L:312:LEU:HD22 | 1:P:213:VAL:HG22 | 1.91 | 0.53 |
| 1:N:191:LYS:HG2 | 1:N:341:ILE:HG21 | 1.90 | 0.53 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:N:222:ALA:HA | 1:N:275:ASN:OD1 | 2.09 | 0.53 |
| 1:P:38:ILE:CG2 | 1:P:48:LEU:HD13 | 2.38 | 0.53 |
| 1:A:79:ASP:HA | 1:A:83:GLY:HA3 | 1.91 | 0.53 |
| 1:A:146:LEU:HD23 | 1:A:147:MET:N | 2.23 | 0.53 |
| 1:B:372:GLU:O | 1:B:375:ARG:HB3 | 2.09 | 0.53 |
| 1:B:431:ARG:HH21 | 1:B:434:PRO:HG2 | 1.74 | 0.53 |
| 1:C:425:SER:O | 1:C:428:LYS:HG2 | 2.09 | 0.53 |
| 1:C:448:LEU:HD21 | 1:C:465:LEU:CD1 | 2.39 | 0.53 |
| 1:C:492:LEU:HD12 | 1:C:493:SER:N | 2.24 | 0.53 |
| 1:D:37:LYS:CD | 1:E:504:VAL:HG13 | 2.39 | 0.53 |
| 1:D:177:LEU:HD13 | 1:D:356:GLU:O | 2.09 | 0.53 |
| 1:E:334:LYS:O | 1:E:335:LEU:HB2 | 2.09 | 0.53 |
| 1:F:32:PRO:HG2 | 1:F:467:MET:HE1 | 1.89 | 0.53 |
| 1:F:188:VAL:CG2 | 1:F:377:LEU:HD21 | 2.38 | 0.53 |
| 1:G:82:VAL:HG12 | 1:G:83:GLY:N | 2.22 | 0.53 |
| 1:H:100:ALA:HA | 1:H:103:LEU:HD13 | 1.91 | 0.53 |
| 1:H:146:LEU:HD23 | 1:H:148:ASN:H | 1.73 | 0.53 |
| 1:H:146:LEU:HD11 | 1:H:150:ALA:CB | 2.39 | 0.53 |
| 1:I:183:LEU:HD13 | 1:I:385:ALA:HB2 | 1.91 | 0.53 |
| 1:J:211:ILE:HD13 | 1:J:215:GLN:CB | 2.39 | 0.53 |
| 1:J:412:ALA:HB1 | 1:J:424:GLU:HB3 | 1.91 | 0.53 |
| 1:K:141:LYS:O | 1:K:145:ASP:HB2 | 2.09 | 0.53 |
| 1:K:280:ARG:HG3 | 1:K:304:PHE:HB2 | 1.89 | 0.53 |
| 1:L:38:ILE:HG23 | 1:M:504:VAL:HG21 | 1.91 | 0.53 |
| 1:L:284:TYR:O | 1:L:287:PRO:HD2 | 2.08 | 0.53 |
| 1:L:312:LEU:HA | 1:P:213:VAL:CB | 2.39 | 0.53 |
| 1:O:431:ARG:O | 1:O:434:PRO:HD2 | 2.09 | 0.53 |
| 1:P:31:GLY:C | 1:P:156:SER:HA | 2.29 | 0.53 |
| 1:P:200:TYR:CD1 | 1:P:363:ARG:HD2 | 2.43 | 0.53 |
| 1:P:222:ALA:HA | 1:P:275:ASN:OD1 | 2.09 | 0.53 |
| 1:P:324:HIS:HB2 | 1:P:329:LYS:NZ | 2.24 | 0.53 |
| 1:A:57:ILE:HG23 | 1:A:58:LEU:HD23 | 1.89 | 0.53 |
| 1:A:111:GLN:HA | 1:A:114:ILE:CD1 | 2.37 | 0.53 |
| 1:A:433:LEU:O | 1:A:436:ILE:HG22 | 2.09 | 0.53 |
| 1:B:95:GLU:HA | 1:B:98:ARG:HD2 | 1.91 | 0.53 |
| 1:B:163:LYS:HG3 | 1:B:166:PHE:CD1 | 2.44 | 0.53 |
| 1:B:176:ARG:NH1 | 1:B:201:LEU:HD21 | 2.21 | 0.53 |
| 1:D:202:ASP:OD2 | 1:D:361:VAL:HG21 | 2.08 | 0.53 |
| 1:F:375:ARG:HH11 | 1:F:375:ARG:HG3 | 1.73 | 0.53 |
| 1:F:508:ILE:N | 1:F:508:ILE:CD1 | 2.71 | 0.53 |
| 1:G:79:ASP:HA | 1:G:83:GLY:CA | 2.37 | 0.53 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:G:216:PRO:HG2 | 1:G:295:GLY:CA | 2.39 | 0.53 |
| 1:H:200:TYR:CD1 | 1:H:363:ARG:HD3 | 2.44 | 0.53 |
| 1:H:232:ASP:HA | 1:H:284:TYR:HB2 | 1.91 | 0.53 |
| 1:H:450:ALA:CA | 1:P:420:ALA:HB2 | 2.38 | 0.53 |
| 1:I:280:ARG:O | 1:I:281:GLN:HB3 | 2.09 | 0.53 |
| 1:J:185:ALA:HA | 1:J:309:ARG:CD | 2.39 | 0.53 |
| 1:N:284:TYR:O | 1:N:287:PRO:HD2 | 2.09 | 0.53 |
| 1:O:96:LEU:HD13 | 1:O:97:LEU:N | 2.22 | 0.53 |
| 1:O:108:ILE:HG21 | 1:O:418:LYS:HZ3 | 1.73 | 0.53 |
| 1:O:137:SER:HB3 | 1:O:391:SER:HA | 1.91 | 0.53 |
| 1:B:111:GLN:O | 1:B:114:ILE:HB | 2.09 | 0.53 |
| 1:B:289:GLN:O | 1:F:318:ILE:HG23 | 2.09 | 0.53 |
| 1:C:69:LYS:HB3 | 1:C:508:ILE:HD12 | 1.90 | 0.53 |
| 1:C:495:ALA:O | 1:C:497:ALA:N | 2.42 | 0.53 |
| 1:F:57:ILE:HG23 | 1:F:58:LEU:HD22 | 1.91 | 0.53 |
| 1:F:112:THR:HG21 | 1:F:418:LYS:HE2 | 1.91 | 0.53 |
| 1:F:448:LEU:HA | 1:F:451:GLN:HE21 | 1.73 | 0.53 |
| 1:G:128:LEU:HD22 | 1:G:488:ARG:HG2 | 1.91 | 0.53 |
| 1:H:59:LYS:HE3 | 1:H:73:ASP:HA | 1.91 | 0.53 |
| 1:H:173:ALA:HB2 | 1:H:360:ILE:CD1 | 2.38 | 0.53 |
| 1:H:189:ILE:HG13 | 1:H:206:LEU:HD12 | 1.91 | 0.53 |
| 1:I:132:ALA:HB1 | 1:I:395:TYR:CD2 | 2.44 | 0.53 |
| 1:I:188:VAL:O | 1:I:374:GLU:HG3 | 2.08 | 0.53 |
| 1:J:176:ARG:HD2 | 1:J:358:CYS:SG | 2.48 | 0.53 |
| 1:M:433:LEU:O | 1:M:436:ILE:HG22 | 2.09 | 0.53 |
| 1:N:232:ASP:HA | 1:N:284:TYR:CD1 | 2.44 | 0.53 |
| 1:O:225:LEU:HG | 1:O:277:PHE:CD1 | 2.44 | 0.53 |
| 1:P:33:LYS:HD3 | 1:P:441:ALA:HA | 1.91 | 0.53 |
| 1:P:99:GLU:O | 1:P:103:LEU:HD13 | 2.08 | 0.53 |
| 1:A:448:LEU:HD21 | 1:A:465:LEU:CD1 | 2.30 | 0.52 |
| 1:B:154:LEU:HD21 | 1:B:163:LYS:HG2 | 1.91 | 0.52 |
| 1:B:274:ILE:HG23 | 1:B:296:VAL:CG2 | 2.39 | 0.52 |
| 1:B:442:GLY:HA2 | 1:F:109:HIS:CG | 2.44 | 0.52 |
| 1:C:364:GLY:HA3 | 1:C:370:LEU:CD1 | 2.38 | 0.52 |
| 1:D:125:ARG:HA | 1:D:128:LEU:CD1 | 2.39 | 0.52 |
| 1:D:225:LEU:HD11 | 1:D:324:HIS:ND1 | 2.24 | 0.52 |
| 1:E:32:PRO:HB2 | 1:E:467:MET:CE | 2.39 | 0.52 |
| 1:G:141:LYS:HG2 | 1:G:144:GLN:HB2 | 1.90 | 0.52 |
| 1:G:193:GLY:HA3 | 1:G:343:GLU:HB2 | 1.91 | 0.52 |
| 1:I:187:HIS:CE1 | 1:I:189:ILE:HD12 | 2.44 | 0.52 |
| 1:I:412:ALA:CB | 1:I:424:GLU:HB3 | 2.40 | 0.52 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:K:109:HIS:HB3 | 1:K:112:THR:OG1 | 2.09 | 0.52 |
| 1:L:92:LEU:HA | 1:L:95:GLU:OE2 | 2.08 | 0.52 |
| 1:L:145:ASP:OD1 | 1:L:171:VAL:HB | 2.08 | 0.52 |
| 1:L:262:MET:SD | 1:L:290:LEU:HB2 | 2.49 | 0.52 |
| 1:N:15:SER:HB3 | 1:N:501:ILE:HG22 | 1.91 | 0.52 |
| 1:N:131:SER:HA | 1:N:403:LEU:CD2 | 2.39 | 0.52 |
| 1:N:188:VAL:HG11 | 1:N:377:LEU:HG | 1.90 | 0.52 |
| 1:N:287:PRO:O | 1:N:291:PHE:HD1 | 1.92 | 0.52 |
| 1:B:64:ASP:OD1 | 1:B:66:PRO:HD2 | 2.09 | 0.52 |
| 1:C:111:GLN:O | 1:C:114:ILE:HB | 2.09 | 0.52 |
| 1:D:92:LEU:HB2 | 1:D:490:VAL:CG2 | 2.38 | 0.52 |
| 1:G:64:ASP:CG | 1:G:66:PRO:HD2 | 2.30 | 0.52 |
| 1:G:70:VAL:HG23 | 1:G:501:ILE:HG12 | 1.90 | 0.52 |
| 1:G:163:LYS:HG3 | 1:G:166:PHE:CG | 2.44 | 0.52 |
| 1:G:210:LYS:HE2 | 1:G:212:GLY:O | 2.08 | 0.52 |
| 1:H:485:GLN:HE21 | 1:H:488:ARG:HH21 | 1.57 | 0.52 |
| 1:I:106:LYS:HB2 | 1:I:106:LYS:NZ | 2.24 | 0.52 |
| 1:I:116:GLY:HA3 | 1:I:422:ALA:HB3 | 1.91 | 0.52 |
| 1:I:146:LEU:HD11 | 1:I:150:ALA:HB3 | 1.92 | 0.52 |
| 1:I:326:GLU:HG3 | 1:I:327:LEU:H | 1.75 | 0.52 |
| 1:J:441:ALA:HB2 | 1:J:467:MET:HG2 | 1.91 | 0.52 |
| 1:K:452:LEU:HD11 | 1:K:456:HIS:HE1 | 1.74 | 0.52 |
| 1:L:43:GLY:HA2 | 1:M:513:ARG:HB2 | 1.91 | 0.52 |
| 1:O:112:THR:HG22 | 1:O:418:LYS:HE2 | 1.91 | 0.52 |
| 1:P:215:GLN:HG3 | 1:P:292:GLY:HA2 | 1.91 | 0.52 |
| 1:P:219:ILE:CD1 | 1:P:276:CYS:HB2 | 2.40 | 0.52 |
| 1:P:381:LEU:O | 1:P:381:LEU:HD22 | 2.09 | 0.52 |
| 1:P:408:VAL:HA | 1:P:411:LEU:HD12 | 1.90 | 0.52 |
| 1:A:431:ARG:O | 1:A:434:PRO:HD2 | 2.09 | 0.52 |
| 1:A:448:LEU:HD11 | 1:A:465:LEU:CD1 | 2.40 | 0.52 |
| 1:B:183:LEU:HD13 | 1:B:385:ALA:HB2 | 1.91 | 0.52 |
| 1:B:324:HIS:HB2 | 1:B:329:LYS:CE | 2.39 | 0.52 |
| 1:D:22:ILE:O | 1:D:26:VAL:HG22 | 2.10 | 0.52 |
| 1:D:59:LYS:HE2 | 1:D:76:ARG:CB | 2.38 | 0.52 |
| 1:D:163:LYS:NZ | 1:D:376:SER:HB3 | 2.24 | 0.52 |
| 1:E:185:ALA:HA | 1:E:309:ARG:HD3 | 1.91 | 0.52 |
| 1:F:433:LEU:O | 1:F:436:ILE:HG22 | 2.09 | 0.52 |
| 1:F:453:ARG:HH22 | 1:O:421:VAL:HB | 1.74 | 0.52 |
| 1:G:124:ALA:CB | 1:G:491:LEU:HB3 | 2.39 | 0.52 |
| 1:I:146:LEU:HG | 1:I:148:ASN:H | 1.73 | 0.52 |
| 1:I:371:ASP:O | 1:I:374:GLU:HB3 | 2.09 | 0.52 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:J:402:MET:CE | 1:J:453:ARG:HG2 | 2.40 | 0.52 |
| 1:N:40:LEU:C | 1:N:40:LEU:HD13 | 2.30 | 0.52 |
| 1:N:274:ILE:HG23 | 1:N:296:VAL:HG21 | 1.92 | 0.52 |
| 1:N:344:ASP:O | 1:N:346:LEU:HD13 | 2.09 | 0.52 |
| 1:B:108:ILE:HG22 | 1:B:109:HIS:N | 2.25 | 0.52 |
| 1:B:211:ILE:HG21 | 1:B:215:GLN:NE2 | 2.25 | 0.52 |
| 1:D:82:VAL:HG22 | 1:D:386:GLN:CG | 2.38 | 0.52 |
| 1:D:205:PHE:HA | 1:D:359:THR:OG1 | 2.10 | 0.52 |
| 1:E:137:SER:O | 1:E:391:SER:HA | 2.09 | 0.52 |
| 1:F:31:GLY:O | 1:F:156:SER:HA | 2.08 | 0.52 |
| 1:F:421:VAL:O | 1:F:424:GLU:HG2 | 2.08 | 0.52 |
| 1:G:390:ASP:HB3 | 1:G:485:GLN:HE22 | 1.74 | 0.52 |
| 1:I:103:LEU:HD11 | 1:I:113:ILE:HD12 | 1.91 | 0.52 |
| 1:I:161:HIS:HB3 | 1:N:118:ARG:HH22 | 1.74 | 0.52 |
| 1:I:510:ALA:N | 1:O:38:ILE:HD11 | 2.20 | 0.52 |
| 1:K:175:LEU:O | 1:K:178:LYS:HG2 | 2.08 | 0.52 |
| 1:L:38:ILE:HD12 | 1:L:48:LEU:HD22 | 1.90 | 0.52 |
| 1:L:84:ASP:CG | 1:L:85:GLY:H | 2.11 | 0.52 |
| 1:L:159:LEU:HD12 | 1:L:372:GLU:CG | 2.40 | 0.52 |
| 1:M:61:ILE:CG1 | 1:M:63:VAL:HG23 | 2.38 | 0.52 |
| 1:N:381:LEU:O | 1:N:381:LEU:HD13 | 2.09 | 0.52 |
| 1:A:40:LEU:HB3 | 1:C:507:ILE:O | 2.10 | 0.52 |
| 1:B:82:VAL:HG11 | 1:B:486:VAL:HA | 1.91 | 0.52 |
| 1:B:223:LYS:HE2 | 1:B:272:HIS:NE2 | 2.24 | 0.52 |
| 1:B:367:GLN:O | 1:B:370:LEU:HB3 | 2.09 | 0.52 |
| 1:C:79:ASP:HA | 1:C:83:GLY:HA3 | 1.92 | 0.52 |
| 1:C:106:LYS:HG3 | 1:C:418:LYS:NZ | 2.25 | 0.52 |
| 1:C:159:LEU:CB | 1:C:369:ILE:HG23 | 2.40 | 0.52 |
| 1:C:211:ILE:HG13 | 1:C:298:ALA:O | 2.10 | 0.52 |
| 1:F:29:THR:HG23 | 1:F:52:ASN:OD1 | 2.10 | 0.52 |
| 1:F:81:GLU:O | 1:F:82:VAL:HB | 2.10 | 0.52 |
| 1:G:483:SER:O | 1:G:486:VAL:HG22 | 2.10 | 0.52 |
| 1:I:226:ILE:HG12 | 1:I:278:ILE:HG23 | 1.91 | 0.52 |
| 1:L:131:SER:OG | 1:L:403:LEU:HD21 | 2.10 | 0.52 |
| 1:L:186:ILE:HA | 1:L:358:CYS:O | 2.10 | 0.52 |
| 1:L:312:LEU:HD22 | 1:P:213:VAL:HG21 | 1.92 | 0.52 |
| 1:M:35:MET:HE2 | 1:O:111:GLN:HG2 | 1.91 | 0.52 |
| 1:M:381:LEU:O | 1:M:381:LEU:HD22 | 2.10 | 0.52 |
| 1:M:452:LEU:HD13 | 1:M:465:LEU:HD13 | 1.91 | 0.52 |
| 1:N:38:ILE:HD13 | 1:N:48:LEU:CD2 | 2.32 | 0.52 |
| 1:N:274:ILE:HG23 | 1:N:296:VAL:CG2 | 2.39 | 0.52 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:O:161:HIS:CD2 | 1:O:162:HIS:H | 2.28 | 0.52 |
| 1:P:59:LYS:HE2 | 1:P:76:ARG:CB | 2.38 | 0.52 |
| 1:C:269:ILE:HG12 | 1:C:274:ILE:HG21 | 1.92 | 0.52 |
| 1:F:96:LEU:O | 1:F:96:LEU:HD22 | 2.10 | 0.52 |
| 1:F:431:ARG:NE | 1:F:431:ARG:HA | 2.24 | 0.52 |
| 1:G:59:LYS:HB2 | 1:G:59:LYS:NZ | 2.25 | 0.52 |
| 1:H:165:HIS:O | 1:H:168:LYS:HB3 | 2.09 | 0.52 |
| 1:H:211:ILE:HG13 | 1:H:298:ALA:H | 1.73 | 0.52 |
| 1:I:451:GLN:HE22 | 1:I:471:THR:HA | 1.75 | 0.52 |
| 1:K:96:LEU:HD13 | 1:K:97:LEU:N | 2.25 | 0.52 |
| 1:L:22:ILE:HD12 | 1:L:90:THR:CG2 | 2.39 | 0.52 |
| 1:L:119:GLU:O | 1:L:123:ALA:N | 2.43 | 0.52 |
| 1:M:177:LEU:HD11 | 1:M:183:LEU:HD12 | 1.90 | 0.52 |
| 1:M:345:LYS:C | 1:M:346:LEU:HD12 | 2.30 | 0.52 |
| 1:M:502:LEU:O | 1:M:502:LEU:HD23 | 2.09 | 0.52 |
| 1:P:194:GLY:HA2 | 1:P:365:ALA:HA | 1.90 | 0.52 |
| 1:B:188:VAL:CG2 | 1:B:377:LEU:HD22 | 2.39 | 0.52 |
| 1:F:176:ARG:HH12 | 1:F:201:LEU:HD21 | 1.75 | 0.52 |
| 1:F:431:ARG:HA | 1:F:431:ARG:CZ | 2.39 | 0.52 |
| 1:H:143:ARG:NE | 1:H:143:ARG:HA | 2.25 | 0.52 |
| 1:H:189:ILE:CG1 | 1:H:206:LEU:HD12 | 2.39 | 0.52 |
| 1:I:140:VAL:HA | 1:I:175:LEU:CD1 | 2.40 | 0.52 |
| 1:J:36:ASP:O | 1:K:504:VAL:HG22 | 2.09 | 0.52 |
| 1:J:313:VAL:HG22 | 1:J:357:ALA:HB3 | 1.92 | 0.52 |
| 1:K:201:LEU:CD1 | 1:K:360:ILE:HG22 | 2.32 | 0.52 |
| 1:K:368:GLN:CG | 1:K:369:ILE:H | 2.22 | 0.52 |
| 1:L:475:MET:SD | 1:L:480:ILE:HB | 2.50 | 0.52 |
| 1:O:89:VAL:HB | 1:O:490:VAL:CG2 | 2.40 | 0.52 |
| 1:P:126:GLN:NE2 | 1:P:411:LEU:HD22 | 2.24 | 0.52 |
| 1:P:154:LEU:HD22 | 1:P:167:THR:HB | 1.92 | 0.52 |
| 1:P:330:LEU:N | 1:P:330:LEU:HD23 | 2.25 | 0.52 |
| 1:B:287:PRO:O | 1:B:291:PHE:HD2 | 1.92 | 0.52 |
| 1:B:289:GLN:NE2 | 1:F:228:ASN:HD22 | 2.08 | 0.52 |
| 1:C:130:ASN:HB3 | 1:C:403:LEU:CD2 | 2.38 | 0.52 |
| 1:D:277:PHE:CE2 | 1:D:279:ASN:HB2 | 2.44 | 0.52 |
| 1:D:284:TYR:O | 1:D:287:PRO:HD2 | 2.09 | 0.52 |
| 1:E:191:LYS:HZ1 | 1:E:346:LEU:HD21 | 1.74 | 0.52 |
| 1:E:280:ARG:HD2 | 1:E:304:PHE:HB2 | 1.90 | 0.52 |
| 1:E:375:ARG:HD3 | 1:E:375:ARG:H | 1.74 | 0.52 |
| 1:G:222:ALA:HA | 1:G:275:ASN:OD1 | 2.10 | 0.52 |
| 1:G:500:VAL:O | 1:G:504:VAL:HG23 | 2.10 | 0.52 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:H:59:LYS:HE2 | 1:H:76:ARG:CB | 2.40 | 0.52 |
| 1:H:390:ASP:HB3 | 1:H:485:GLN:CD | 2.30 | 0.52 |
| 1:H:396:GLY:HA3 | 1:H:480:ILE:HG22 | 1.91 | 0.52 |
| 1:I:363:ARG:O | 1:I:370:LEU:HD11 | 2.09 | 0.52 |
| 1:J:380:ALA:O | 1:J:384:LEU:HD23 | 2.09 | 0.52 |
| 1:K:421:VAL:O | 1:K:424:GLU:HG2 | 2.10 | 0.52 |
| 1:M:159:LEU:CD1 | 1:M:369:ILE:HG23 | 2.39 | 0.52 |
| 1:M:171:VAL:HA | 1:M:174:VAL:HG13 | 1.91 | 0.52 |
| 1:M:448:LEU:HD13 | 1:M:448:LEU:C | 2.30 | 0.52 |
| 1:N:128:LEU:C | 1:N:129:LEU:HD22 | 2.30 | 0.52 |
| 1:O:107:LYS:O | 1:O:108:ILE:HG13 | 2.10 | 0.52 |
| 1:O:163:LYS:HE3 | 1:O:376:SER:HB3 | 1.92 | 0.52 |
| 1:O:397:GLY:HA3 | 1:O:475:MET:CE | 2.40 | 0.52 |
| 1:P:81:GLU:O | 1:P:386:GLN:HG3 | 2.10 | 0.52 |
| 1:P:452:LEU:HA | 1:P:472:ILE:HG21 | 1.91 | 0.52 |
| 1:A:141:LYS:HE2 | 1:A:144:GLN:HE21 | 1.75 | 0.52 |
| 1:B:109:HIS:CE1 | 1:B:111:GLN:HB3 | 2.45 | 0.52 |
| 1:B:354:LEU:HG | 1:B:356:GLU:CB | 2.40 | 0.52 |
| 1:C:508:ILE:O | 1:C:508:ILE:HG13 | 2.10 | 0.52 |
| 1:D:65:ASN:CG | 1:D:66:PRO:HD3 | 2.30 | 0.52 |
| 1:D:96:LEU:HG | 1:D:495:ALA:HB2 | 1.92 | 0.52 |
| 1:D:225:LEU:HD11 | 1:D:324:HIS:CE1 | 2.45 | 0.52 |
| 1:E:154:LEU:HD22 | 1:E:167:THR:CB | 2.40 | 0.52 |
| 1:E:445:SER:O | 1:E:449:VAL:HG23 | 2.10 | 0.52 |
| 1:F:114:ILE:HA | 1:F:117:TRP:HE3 | 1.75 | 0.52 |
| 1:F:417:GLY:CA | 1:O:450:ALA:HA | 2.38 | 0.52 |
| 1:G:280:ARG:HD2 | 1:G:304:PHE:HB2 | 1.92 | 0.52 |
| 1:J:175:LEU:O | 1:J:178:LYS:HG2 | 2.09 | 0.52 |
| 1:K:150:ALA:HB1 | 1:K:167:THR:OG1 | 2.10 | 0.52 |
| 1:L:163:LYS:HA | 1:L:166:PHE:CD1 | 2.45 | 0.52 |
| 1:L:265:LYS:O | 1:L:269:ILE:HB | 2.10 | 0.52 |
| 1:N:280:ARG:HD2 | 1:N:304:PHE:HB2 | 1.90 | 0.52 |
| 1:N:438:ALA:CB | 1:N:448:LEU:HG | 2.39 | 0.52 |
| 1:O:28:SER:O | 1:O:34:GLY:HA2 | 2.09 | 0.52 |
| 1:O:352:VAL:HG22 | 1:O:355:GLY:H | 1.75 | 0.52 |
| 1:O:366:THR:O | 1:O:367:GLN:HB3 | 2.10 | 0.52 |
| 1:O:487:LYS:O | 1:O:491:LEU:HG | 2.10 | 0.52 |
| 1:A:177:LEU:O | 1:A:177:LEU:HD22 | 2.10 | 0.52 |
| 1:B:32:PRO:CD | 1:B:467:MET:SD | 2.88 | 0.52 |
| 1:C:33:LYS:NZ | 1:H:118:ARG:HH22 | 2.08 | 0.52 |
| 1:C:174:VAL:HB | 1:C:385:ALA:HA | 1.92 | 0.52 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:E:141:LYS:HG2 | 1:E:144:GLN:HB2 | 1.92 | 0.52 |
| 1:E:258:GLU:CD | 1:E:284:TYR:HE2 | 2.13 | 0.52 |
| 1:E:352:VAL:CG2 | 1:E:355:GLY:H | 2.23 | 0.52 |
| 1:G:145:ASP:OD2 | 1:G:175:LEU:HD11 | 2.10 | 0.52 |
| 1:H:40:LEU:HD22 | 1:H:41:SER:H | 1.74 | 0.52 |
| 1:H:149:ILE:HB | 1:H:481:THR:O | 2.09 | 0.52 |
| 1:H:185:ALA:CA | 1:H:309:ARG:HB2 | 2.37 | 0.52 |
| 1:K:146:LEU:HB2 | 1:K:171:VAL:HG21 | 1.91 | 0.52 |
| 1:K:149:ILE:HG21 | 1:K:387:THR:OG1 | 2.11 | 0.52 |
| 1:L:112:THR:HB | 1:L:418:LYS:NZ | 2.25 | 0.52 |
| 1:L:114:ILE:HD12 | 1:L:499:GLU:HG3 | 1.91 | 0.52 |
| 1:L:268:ARG:O | 1:L:271:LYS:HG2 | 2.10 | 0.52 |
| 1:M:128:LEU:HD22 | 1:M:487:LYS:CG | 2.40 | 0.52 |
| 1:M:410:GLN:O | 1:M:413:SER:HB3 | 2.10 | 0.52 |
| 1:N:113:ILE:C | 1:N:115:ALA:H | 2.14 | 0.52 |
| 1:N:159:LEU:HD12 | 1:N:372:GLU:HB3 | 1.91 | 0.52 |
| 1:O:317:GLU:CB | 1:O:329:LYS:HG2 | 2.37 | 0.52 |
| 1:P:99:GLU:CD | 1:P:425:SER:HB2 | 2.30 | 0.52 |
| 1:P:145:ASP:O | 1:P:171:VAL:HG11 | 2.10 | 0.52 |
| 1:A:437:ILE:HG23 | 1:A:467:MET:SD | 2.50 | 0.51 |
| 1:B:25:LEU:HD22 | 1:F:508:ILE:HD13 | 1.92 | 0.51 |
| 1:B:146:LEU:HD11 | 1:B:150:ALA:HB3 | 1.91 | 0.51 |
| 1:C:199:SER:HB2 | 1:C:362:LEU:HD22 | 1.92 | 0.51 |
| 1:C:205:PHE:HA | 1:C:359:THR:HB | 1.92 | 0.51 |
| 1:E:284:TYR:O | 1:E:287:PRO:HD2 | 2.10 | 0.51 |
| 1:E:334:LYS:CB | 1:E:351:GLY:HA3 | 2.40 | 0.51 |
| 1:F:114:ILE:HD13 | 1:F:117:TRP:CZ3 | 2.45 | 0.51 |
| 1:F:231:MET:HE1 | 1:F:265:LYS:HD3 | 1.92 | 0.51 |
| 1:G:187:HIS:O | 1:G:359:THR:HG23 | 2.11 | 0.51 |
| 1:H:265:LYS:HE2 | 1:H:322:PHE:CE1 | 2.43 | 0.51 |
| 1:H:425:SER:O | 1:H:428:LYS:HG2 | 2.10 | 0.51 |
| 1:I:33:LYS:HB2 | 1:I:440:ASN:O | 2.10 | 0.51 |
| 1:I:173:ALA:HB2 | 1:I:360:ILE:CD1 | 2.40 | 0.51 |
| 1:I:191:LYS:HA | 1:I:191:LYS:HE3 | 1.92 | 0.51 |
| 1:J:149:ILE:HG23 | 1:J:383:VAL:CG1 | 2.40 | 0.51 |
| 1:J:386:GLN:HE21 | 1:J:485:GLN:NE2 | 2.08 | 0.51 |
| 1:K:310:LEU:O | 1:K:313:VAL:HB | 2.10 | 0.51 |
| 1:K:451:GLN:HE22 | 1:K:471:THR:HA | 1.74 | 0.51 |
| 1:L:141:LYS:HE2 | 1:L:144:GLN:HE21 | 1.75 | 0.51 |
| 1:N:40:LEU:HD13 | 1:N:41:SER:N | 2.26 | 0.51 |
| 1:N:231:MET:HG3 | 1:N:283:ILE:HG13 | 1.92 | 0.51 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:O:82:VAL:HA | 1:O:386:GLN:CB | 2.40 | 0.51 |
| 1:P:274:ILE:HG23 | 1:P:296:VAL:CG2 | 2.40 | 0.51 |
| 1:C:390:ASP:HB3 | 1:C:485:GLN:OE1 | 2.10 | 0.51 |
| 1:D:317:GLU:HB2 | 1:D:329:LYS:HD3 | 1.92 | 0.51 |
| 1:E:435:THR:HG23 | 1:E:445:SER:HB3 | 1.92 | 0.51 |
| 1:E:452:LEU:HD13 | 1:E:465:LEU:CD1 | 2.40 | 0.51 |
| 1:F:52:ASN:H | 1:F:375:ARG:NE | 2.07 | 0.51 |
| 1:G:133:VAL:O | 1:G:134:ASP:HB3 | 2.10 | 0.51 |
| 1:G:274:ILE:HG23 | 1:G:296:VAL:HG21 | 1.91 | 0.51 |
| 1:H:163:LYS:HA | 1:H:166:PHE:CD1 | 2.45 | 0.51 |
| 1:I:163:LYS:HD2 | 1:I:166:PHE:CG | 2.45 | 0.51 |
| 1:J:497:ALA:O | 1:J:500:VAL:HG22 | 2.10 | 0.51 |
| 1:K:317:GLU:HB2 | 1:K:329:LYS:HD3 | 1.91 | 0.51 |
| 1:L:11:ALA:HB3 | 1:L:505:ASP:O | 2.10 | 0.51 |
| 1:L:222:ALA:HA | 1:L:275:ASN:HB2 | 1.93 | 0.51 |
| 1:N:2:GLY:HA2 | 1:N:506:ASN:HD21 | 1.75 | 0.51 |
| 1:N:48:LEU:N | 1:N:48:LEU:HD12 | 2.25 | 0.51 |
| 1:A:75:SER:O | 1:A:78:GLN:HB3 | 2.10 | 0.51 |
| 1:C:188:VAL:HG11 | 1:C:377:LEU:HD22 | 1.91 | 0.51 |
| 1:C:226:ILE:HD13 | 1:C:307:VAL:HG13 | 1.92 | 0.51 |
| 1:D:287:PRO:O | 1:D:291:PHE:HD1 | 1.94 | 0.51 |
| 1:D:407:ALA:O | 1:D:411:LEU:HG | 2.10 | 0.51 |
| 1:D:450:ALA:HA | 1:D:453:ARG:HE | 1.75 | 0.51 |
| 1:E:173:ALA:CB | 1:E:360:ILE:HD11 | 2.31 | 0.51 |
| 1:E:414:ARG:HA | 1:E:414:ARG:NE | 2.25 | 0.51 |
| 1:F:108:ILE:HB | 1:O:446:ALA:CB | 2.40 | 0.51 |
| 1:F:402:MET:SD | 1:F:453:ARG:HA | 2.50 | 0.51 |
| 1:G:146:LEU:HD13 | 1:G:168:LYS:HA | 1.91 | 0.51 |
| 1:H:451:GLN:HE22 | 1:H:471:THR:HA | 1.73 | 0.51 |
| 1:I:173:ALA:HA | 1:I:176:ARG:CZ | 2.40 | 0.51 |
| 1:I:284:TYR:O | 1:I:287:PRO:HD2 | 2.08 | 0.51 |
| 1:K:367:GLN:HG2 | 1:K:368:GLN:HG2 | 1.92 | 0.51 |
| 1:L:109:HIS:ND1 | 1:L:111:GLN:HB2 | 2.25 | 0.51 |
| 1:M:57:ILE:HG23 | 1:M:58:LEU:CD2 | 2.41 | 0.51 |
| 1:M:61:ILE:HG13 | 1:M:63:VAL:HG23 | 1.92 | 0.51 |
| 1:N:108:ILE:HG22 | 1:N:109:HIS:N | 2.25 | 0.51 |
| 1:N:211:ILE:CD1 | 1:N:297:MET:HG3 | 2.29 | 0.51 |
| 1:N:325:PRO:C | 1:N:326:GLU:HG3 | 2.29 | 0.51 |
| 1:O:10:THR:O | 1:O:13:LEU:HB3 | 2.10 | 0.51 |
| 1:A:58:LEU:HB3 | 1:A:72:VAL:HG11 | 1.92 | 0.51 |
| 1:D:92:LEU:O | 1:D:95:GLU:HG2 | 2.10 | 0.51 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:D:225:LEU:HD12 | 1:D:226:ILE:N | 2.25 | 0.51 |
| 1:E:171:VAL:O | 1:E:174:VAL:HG22 | 2.10 | 0.51 |
| 1:E:367:GLN:HB2 | 1:G:70:VAL:HG12 | 1.91 | 0.51 |
| 1:E:448:LEU:HA | 1:E:451:GLN:HE21 | 1.75 | 0.51 |
| 1:E:483:SER:O | 1:E:486:VAL:HG22 | 2.11 | 0.51 |
| 1:F:32:PRO:HA | 1:F:155:SER:HB3 | 1.92 | 0.51 |
| 1:F:171:VAL:O | 1:F:175:LEU:HG | 2.10 | 0.51 |
| 1:F:397:GLY:HA3 | 1:F:475:MET:CE | 2.40 | 0.51 |
| 1:H:150:ALA:HB3 | 1:H:167:THR:HG23 | 1.91 | 0.51 |
| 1:H:452:LEU:HD13 | 1:H:465:LEU:CD1 | 2.40 | 0.51 |
| 1:J:222:ALA:HA | 1:J:275:ASN:OD1 | 2.09 | 0.51 |
| 1:K:140:VAL:H | 1:K:178:LYS:NZ | 2.08 | 0.51 |
| 1:K:171:VAL:O | 1:K:174:VAL:HG22 | 2.10 | 0.51 |
| 1:L:341:ILE:HG23 | 1:L:363:ARG:NE | 2.24 | 0.51 |
| 1:N:194:GLY:O | 1:N:195:SER:HB2 | 2.10 | 0.51 |
| 1:O:143:ARG:HA | 1:O:143:ARG:HE | 1.75 | 0.51 |
| 1:O:364:GLY:HA3 | 1:O:370:LEU:CG | 2.41 | 0.51 |
| 1:P:50:VAL:HG13 | 1:P:375:ARG:NH2 | 2.26 | 0.51 |
| 1:A:96:LEU:HD22 | 1:A:96:LEU:O | 2.10 | 0.51 |
| 1:B:57:ILE:HG23 | 1:B:58:LEU:HD23 | 1.93 | 0.51 |
| 1:B:207:LEU:HD13 | 1:B:208:ASP:N | 2.26 | 0.51 |
| 1:B:392:ARG:HG3 | 1:B:484:PHE:CB | 2.41 | 0.51 |
| 1:C:274:ILE:HG23 | 1:C:296:VAL:HG21 | 1.91 | 0.51 |
| 1:D:96:LEU:C | 1:D:96:LEU:HD13 | 2.31 | 0.51 |
| 1:D:125:ARG:HG3 | 1:D:125:ARG:NH1 | 2.23 | 0.51 |
| 1:D:421:VAL:O | 1:D:424:GLU:HG2 | 2.10 | 0.51 |
| 1:E:33:LYS:HG3 | 1:G:109:HIS:HE2 | 1.75 | 0.51 |
| 1:F:313:VAL:HG13 | 1:F:352:VAL:CB | 2.41 | 0.51 |
| 1:F:452:LEU:HD13 | 1:F:465:LEU:CD1 | 2.41 | 0.51 |
| 1:G:125:ARG:O | 1:G:128:LEU:HB2 | 2.10 | 0.51 |
| 1:G:154:LEU:HD21 | 1:G:163:LYS:HZ3 | 1.72 | 0.51 |
| 1:H:110:PRO:O | 1:H:113:ILE:HB | 2.10 | 0.51 |
| 1:H:179:GLY:HA3 | 1:H:356:GLU:OE1 | 2.10 | 0.51 |
| 1:J:216:PRO:CG | 1:J:295:GLY:HA2 | 2.41 | 0.51 |
| 1:K:22:ILE:HD12 | 1:K:90:THR:CG2 | 2.40 | 0.51 |
| 1:K:157:LYS:HB3 | 1:K:159:LEU:HD22 | 1.92 | 0.51 |
| 1:L:96:LEU:HD13 | 1:L:97:LEU:N | 2.25 | 0.51 |
| 1:L:132:ALA:HB3 | 1:L:461:THR:CB | 2.40 | 0.51 |
| 1:M:124:ALA:CB | 1:M:491:LEU:HD13 | 2.35 | 0.51 |
| 1:M:176:ARG:HH22 | 1:M:360:ILE:CG1 | 2.22 | 0.51 |
| 1:N:284:TYR:CE2 | 1:N:286:TYR:CD1 | 2.99 | 0.51 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:O:22:ILE:HD12 | 1:O:90:THR:CG2 | 2.41 | 0.51 |
| 1:A:57:ILE:O | 1:A:57:ILE:HD13 | 2.11 | 0.51 |
| 1:A:59:LYS:HE2 | 1:A:76:ARG:CB | 2.40 | 0.51 |
| 1:A:137:SER:O | 1:A:141:LYS:HB2 | 2.11 | 0.51 |
| 1:B:265:LYS:O | 1:B:269:ILE:HB | 2.10 | 0.51 |
| 1:B:504:VAL:CG1 | 1:B:507:ILE:HG23 | 2.29 | 0.51 |
| 1:C:19:ALA:HB1 | 1:C:94:ALA:HA | 1.92 | 0.51 |
| 1:C:269:ILE:HG23 | 1:C:274:ILE:HG21 | 1.92 | 0.51 |
| 1:D:161:HIS:CE1 | 1:D:369:ILE:HD13 | 2.46 | 0.51 |
| 1:E:57:ILE:HG23 | 1:E:58:LEU:CD2 | 2.41 | 0.51 |
| 1:E:79:ASP:HA | 1:E:83:GLY:HA2 | 1.89 | 0.51 |
| 1:F:57:ILE:HG23 | 1:F:58:LEU:CD2 | 2.40 | 0.51 |
| 1:F:111:GLN:HG3 | 1:F:503:ARG:O | 2.09 | 0.51 |
| 1:G:173:ALA:HA | 1:G:176:ARG:CZ | 2.40 | 0.51 |
| 1:G:206:LEU:HD22 | 1:G:207:LEU:N | 2.25 | 0.51 |
| 1:G:341:ILE:O | 1:G:341:ILE:HG22 | 2.11 | 0.51 |
| 1:H:58:LEU:HB3 | 1:H:72:VAL:HG13 | 1.93 | 0.51 |
| 1:H:277:PHE:O | 1:H:298:ALA:HA | 2.10 | 0.51 |
| 1:H:397:GLY:O | 1:H:465:LEU:HD23 | 2.11 | 0.51 |
| 1:I:41:SER:HB3 | 1:I:45:ASP:CB | 2.41 | 0.51 |
| 1:I:62:GLY:HA3 | 1:I:69:LYS:HD2 | 1.93 | 0.51 |
| 1:I:433:LEU:HB2 | 1:I:434:PRO:HD3 | 1.92 | 0.51 |
| 1:J:51:THR:HG21 | 1:J:56:THR:HB | 1.93 | 0.51 |
| 1:K:34:GLY:HA3 | 1:K:156:SER:O | 2.10 | 0.51 |
| 1:K:134:ASP:HB2 | 1:K:393:THR:O | 2.11 | 0.51 |
| 1:K:395:TYR:HE1 | 1:K:476:SER:OG | 1.94 | 0.51 |
| 1:O:82:VAL:HG13 | 1:O:83:GLY:N | 2.15 | 0.51 |
| 1:O:159:LEU:HG | 1:O:163:LYS:CG | 2.38 | 0.51 |
| 1:O:216:PRO:HG2 | 1:O:295:GLY:HA2 | 1.93 | 0.51 |
| 1:P:274:ILE:HG23 | 1:P:296:VAL:HG21 | 1.93 | 0.51 |
| 1:A:512:PRO:O | 1:A:513:ARG:HB2 | 2.10 | 0.51 |
| 1:B:502:LEU:HD23 | 1:B:502:LEU:O | 2.10 | 0.51 |
| 1:D:40:LEU:H | 1:E:507:ILE:CG2 | 2.23 | 0.51 |
| 1:E:231:MET:HG3 | 1:E:283:ILE:HG13 | 1.92 | 0.51 |
| 1:E:431:ARG:O | 1:E:434:PRO:HD2 | 2.10 | 0.51 |
| 1:F:188:VAL:HG11 | 1:F:377:LEU:CD2 | 2.41 | 0.51 |
| 1:G:215:GLN:HG3 | 1:G:292:GLY:HA2 | 1.93 | 0.51 |
| 1:G:226:ILE:HD13 | 1:G:307:VAL:HG13 | 1.92 | 0.51 |
| 1:G:280:ARG:O | 1:G:281:GLN:HB3 | 2.11 | 0.51 |
| 1:J:125:ARG:O | 1:J:129:LEU:HD21 | 2.09 | 0.51 |
| 1:J:504:VAL:HG22 | 1:N:36:ASP:HB2 | 1.92 | 0.51 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:K:112:THR:HG22 | 1:K:418:LYS:HZ3 | 1.75 | 0.51 |
| 1:K:452:LEU:HD22 | 1:K:465:LEU:HD11 | 1.92 | 0.51 |
| 1:L:103:LEU:HD23 | 1:L:502:LEU:CD1 | 2.39 | 0.51 |
| 1:L:126:GLN:HE22 | 1:L:408:VAL:CG1 | 2.23 | 0.51 |
| 1:M:50:VAL:HG11 | 1:M:368:GLN:HB2 | 1.91 | 0.51 |
| 1:M:372:GLU:HG3 | 1:M:375:ARG:CZ | 2.40 | 0.51 |
| 1:O:385:ALA:O | 1:O:388:VAL:HG12 | 2.11 | 0.51 |
| 1:O:397:GLY:HA3 | 1:O:475:MET:HE1 | 1.91 | 0.51 |
| 1:B:99:GLU:CD | 1:B:425:SER:HB2 | 2.31 | 0.51 |
| 1:B:305:VAL:HB | 1:B:309:ARG:HH12 | 1.75 | 0.51 |
| 1:C:99:GLU:HG3 | 1:C:425:SER:HB3 | 1.93 | 0.51 |
| 1:E:122:LYS:HE2 | 1:E:125:ARG:HH21 | 1.76 | 0.51 |
| 1:E:159:LEU:HD23 | 1:E:163:LYS:CG | 2.39 | 0.51 |
| 1:F:421:VAL:HG22 | 1:O:453:ARG:HH22 | 1.76 | 0.51 |
| 1:G:452:LEU:HD11 | 1:G:456:HIS:CE1 | 2.45 | 0.51 |
| 1:H:119:GLU:OE1 | 1:H:419:GLU:HG2 | 2.11 | 0.51 |
| 1:H:402:MET:HE2 | 1:H:453:ARG:HG2 | 1.93 | 0.51 |
| 1:I:134:ASP:O | 1:I:135:HIS:HB3 | 2.11 | 0.51 |
| 1:I:402:MET:CE | 1:I:453:ARG:HG2 | 2.40 | 0.51 |
| 1:K:219:ILE:HD11 | 1:K:336:ILE:HB | 1.93 | 0.51 |
| 1:L:36:ASP:OD1 | 1:L:52:ASN:HB2 | 2.10 | 0.51 |
| 1:L:114:ILE:HD13 | 1:L:117:TRP:CZ3 | 2.45 | 0.51 |
| 1:L:431:ARG:HA | 1:L:431:ARG:CZ | 2.41 | 0.51 |
| 1:P:79:ASP:HA | 1:P:83:GLY:HA2 | 1.90 | 0.51 |
| 1:P:177:LEU:HD22 | 1:P:356:GLU:OE2 | 2.10 | 0.51 |
| 1:P:352:VAL:HG22 | 1:P:355:GLY:H | 1.74 | 0.51 |
| 1:P:451:GLN:HE22 | 1:P:471:THR:HA | 1.76 | 0.51 |
| 1:A:439:ASP:OD1 | 1:M:107:LYS:HD3 | 2.11 | 0.51 |
| 1:B:166:PHE:CE1 | 1:B:198:ASP:HB3 | 2.46 | 0.51 |
| 1:B:324:HIS:O | 1:B:329:LYS:HG2 | 2.10 | 0.51 |
| 1:D:101:GLU:O | 1:D:104:ILE:HG12 | 2.10 | 0.51 |
| 1:D:376:SER:O | 1:D:379:ASP:HB2 | 2.11 | 0.51 |
| 1:E:441:ALA:HB2 | 1:E:467:MET:HG2 | 1.93 | 0.51 |
| 1:G:71:LEU:HB2 | 1:G:501:ILE:CG1 | 2.40 | 0.51 |
| 1:H:408:VAL:HG23 | 1:H:427:ALA:HB1 | 1.93 | 0.51 |
| 1:H:492:LEU:O | 1:H:496:GLU:HG2 | 2.11 | 0.51 |
| 1:I:30:LEU:HG | 1:I:87:THR:O | 2.10 | 0.51 |
| 1:I:283:ILE:HG22 | 1:I:300:GLU:CG | 2.38 | 0.51 |
| 1:J:96:LEU:O | 1:J:96:LEU:HD22 | 2.11 | 0.51 |
| 1:J:390:ASP:HB3 | 1:J:485:GLN:CD | 2.30 | 0.51 |
| 1:J:438:ALA:CB | 1:J:448:LEU:HG | 2.38 | 0.51 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:K:431:ARG:HH21 | 1:K:434:PRO:HG2 | 1.75 | 0.51 |
| 1:L:106:LYS:HB3 | 1:L:108:ILE:HG12 | 1.91 | 0.51 |
| 1:M:38:ILE:HD12 | 1:M:38:ILE:O | 2.11 | 0.51 |
| 1:P:207:LEU:O | 1:P:347:ILE:HG22 | 2.11 | 0.51 |
| 1:A:149:ILE:HB | 1:A:481:THR:O | 2.11 | 0.51 |
| 1:C:133:VAL:CG1 | 1:C:394:VAL:HA | 2.33 | 0.51 |
| 1:D:27:LYS:HG3 | 1:D:28:SER:N | 2.24 | 0.51 |
| 1:D:310:LEU:O | 1:D:313:VAL:HB | 2.11 | 0.51 |
| 1:E:154:LEU:HD23 | 1:E:163:LYS:HG3 | 1.93 | 0.51 |
| 1:F:52:ASN:H | 1:F:375:ARG:HD3 | 1.76 | 0.51 |
| 1:F:106:LYS:CE | 1:F:421:VAL:HG21 | 2.39 | 0.51 |
| 1:F:159:LEU:HB3 | 1:F:369:ILE:CG2 | 2.40 | 0.51 |
| 1:F:191:LYS:HD3 | 1:F:192:LEU:H | 1.77 | 0.51 |
| 1:G:100:ALA:HA | 1:G:103:LEU:HD22 | 1.93 | 0.51 |
| 1:G:222:ALA:HB1 | 1:G:336:ILE:HD12 | 1.93 | 0.51 |
| 1:K:310:LEU:HD21 | 1:K:349:PHE:CD1 | 2.46 | 0.51 |
| 1:K:368:GLN:HE22 | 1:P:503:ARG:NH2 | 2.09 | 0.51 |
| 1:L:146:LEU:HD21 | 1:L:150:ALA:HB3 | 1.92 | 0.51 |
| 1:N:173:ALA:HB2 | 1:N:360:ILE:HD12 | 1.93 | 0.51 |
| 1:O:38:ILE:HD13 | 1:O:48:LEU:CD2 | 2.32 | 0.51 |
| 1:O:64:ASP:CG | 1:O:66:PRO:HD2 | 2.31 | 0.51 |
| 1:O:222:ALA:HB1 | 1:O:336:ILE:HD12 | 1.93 | 0.51 |
| 1:P:274:ILE:O | 1:P:296:VAL:HG22 | 2.11 | 0.51 |
| 1:A:367:GLN:O | 1:A:370:LEU:HB3 | 2.11 | 0.50 |
| 1:A:370:LEU:HD12 | 1:A:370:LEU:O | 2.11 | 0.50 |
| 1:B:269:ILE:HG23 | 1:B:274:ILE:HG22 | 1.93 | 0.50 |
| 1:C:159:LEU:HG | 1:C:163:LYS:CG | 2.39 | 0.50 |
| 1:C:163:LYS:HD2 | 1:C:166:PHE:CD1 | 2.46 | 0.50 |
| 1:C:452:LEU:HD13 | 1:C:465:LEU:HD13 | 1.93 | 0.50 |
| 1:E:85:GLY:HA2 | 1:E:153:THR:OG1 | 2.11 | 0.50 |
| 1:F:19:ALA:HB3 | 1:F:98:ARG:HH22 | 1.76 | 0.50 |
| 1:G:208:ASP:O | 1:G:209:LYS:HG3 | 2.11 | 0.50 |
| 1:G:222:ALA:HA | 1:G:275:ASN:HB2 | 1.94 | 0.50 |
| 1:H:95:GLU:HA | 1:H:98:ARG:HD2 | 1.93 | 0.50 |
| 1:H:103:LEU:HA | 1:H:106:LYS:HB2 | 1.92 | 0.50 |
| 1:H:334:LYS:HD2 | 1:H:351:GLY:HA3 | 1.92 | 0.50 |
| 1:J:200:TYR:HB2 | 1:J:363:ARG:NH2 | 2.26 | 0.50 |
| 1:J:431:ARG:O | 1:J:434:PRO:HD2 | 2.11 | 0.50 |
| 1:K:96:LEU:HD13 | 1:K:96:LEU:C | 2.31 | 0.50 |
| 1:L:140:VAL:HA | 1:L:175:LEU:CD2 | 2.41 | 0.50 |
| 1:L:364:GLY:C | 1:L:370:LEU:HD22 | 2.31 | 0.50 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:M:128:LEU:HD13 | 1:M:488:ARG:HA | 1.94 | 0.50 |
| 1:M:431:ARG:HH21 | 1:M:434:PRO:HG2 | 1.75 | 0.50 |
| 1:N:15:SER:HB3 | 1:N:501:ILE:CG2 | 2.41 | 0.50 |
| 1:N:68:ALA:O | 1:N:72:VAL:HG23 | 2.10 | 0.50 |
| 1:O:40:LEU:C | 1:O:40:LEU:HD13 | 2.32 | 0.50 |
| 1:O:402:MET:SD | 1:O:453:ARG:HA | 2.51 | 0.50 |
| 1:P:280:ARG:HG3 | 1:P:304:PHE:HB2 | 1.93 | 0.50 |
| 1:P:431:ARG:O | 1:P:434:PRO:HD2 | 2.12 | 0.50 |
| 1:B:173:ALA:HA | 1:B:176:ARG:CZ | 2.41 | 0.50 |
| 1:C:27:LYS:HG3 | 1:C:436:ILE:CD1 | 2.41 | 0.50 |
| 1:C:117:TRP:HD1 | 1:C:496:GLU:N | 2.09 | 0.50 |
| 1:C:345:LYS:C | 1:C:346:LEU:HD12 | 2.32 | 0.50 |
| 1:E:385:ALA:O | 1:E:389:LYS:HB2 | 2.10 | 0.50 |
| 1:F:188:VAL:HG21 | 1:F:377:LEU:CD2 | 2.40 | 0.50 |
| 1:I:41:SER:OG | 1:N:511:ALA:HB2 | 2.11 | 0.50 |
| 1:I:183:LEU:HD13 | 1:I:385:ALA:CB | 2.42 | 0.50 |
| 1:I:405:ALA:HA | 1:I:408:VAL:HG22 | 1.93 | 0.50 |
| 1:J:206:LEU:HD21 | 1:J:346:LEU:HB3 | 1.94 | 0.50 |
| 1:J:268:ARG:O | 1:J:271:LYS:HG2 | 2.11 | 0.50 |
| 1:K:431:ARG:O | 1:K:434:PRO:HD2 | 2.11 | 0.50 |
| 1:L:50:VAL:HG13 | 1:L:375:ARG:CZ | 2.42 | 0.50 |
| 1:M:114:ILE:O | 1:M:117:TRP:HE3 | 1.94 | 0.50 |
| 1:M:366:THR:HG23 | 1:M:366:THR:O | 2.11 | 0.50 |
| 1:N:231:MET:HE1 | 1:N:265:LYS:HD3 | 1.92 | 0.50 |
| 1:N:381:LEU:HD13 | 1:N:381:LEU:C | 2.31 | 0.50 |
| 1:O:106:LYS:HD3 | 1:O:108:ILE:HD13 | 1.93 | 0.50 |
| 1:O:114:ILE:HA | 1:O:117:TRP:CE3 | 2.47 | 0.50 |
| 1:O:149:ILE:CD1 | 1:O:482:GLU:HA | 2.35 | 0.50 |
| 1:O:215:GLN:HG3 | 1:O:292:GLY:HA2 | 1.93 | 0.50 |
| 1:P:16:PHE:HA | 1:P:97:LEU:HD23 | 1.93 | 0.50 |
| 1:P:36:ASP:OD1 | 1:P:52:ASN:HB2 | 2.12 | 0.50 |
| 1:P:44:ARG:HG2 | 1:P:44:ARG:HH11 | 1.77 | 0.50 |
| 1:P:154:LEU:HD21 | 1:P:163:LYS:HZ2 | 1.75 | 0.50 |
| 1:P:501:ILE:HA | 1:P:504:VAL:CG1 | 2.38 | 0.50 |
| 1:B:38:ILE:H | 1:F:507:ILE:CG1 | 2.25 | 0.50 |
| 1:C:106:LYS:HD2 | 1:C:418:LYS:HD3 | 1.92 | 0.50 |
| 1:C:139:GLU:O | 1:C:140:VAL:HB | 2.12 | 0.50 |
| 1:D:120:ALA:O | 1:D:124:ALA:HB3 | 2.12 | 0.50 |
| 1:D:171:VAL:O | 1:D:174:VAL:HG22 | 2.10 | 0.50 |
| 1:E:107:LYS:HE3 | 1:J:443:TYR:O | 2.11 | 0.50 |
| 1:F:222:ALA:HA | 1:F:275:ASN:HB2 | 1.93 | 0.50 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:G:32:PRO:HA | 1:G:155:SER:HB3 | 1.92 | 0.50 |
| 1:G:59:LYS:HE2 | 1:G:76:ARG:HE | 1.76 | 0.50 |
| 1:G:96:LEU:HD11 | 1:G:117:TRP:CZ2 | 2.45 | 0.50 |
| 1:I:100:ALA:O | 1:I:103:LEU:HB3 | 2.12 | 0.50 |
| 1:I:188:VAL:HG21 | 1:I:362:LEU:CG | 2.41 | 0.50 |
| 1:I:287:PRO:O | 1:I:291:PHE:HD1 | 1.95 | 0.50 |
| 1:I:338:GLU:HA | 1:I:347:ILE:HA | 1.94 | 0.50 |
| 1:I:398:GLY:HA2 | 1:I:401:GLU:OE1 | 2.12 | 0.50 |
| 1:J:124:ALA:CA | 1:J:491:LEU:HD13 | 2.41 | 0.50 |
| 1:J:231:MET:HB2 | 1:J:284:TYR:H | 1.77 | 0.50 |
| 1:J:266:VAL:HB | 1:J:290:LEU:CD2 | 2.41 | 0.50 |
| 1:J:415:THR:CG2 | 1:J:420:ALA:HA | 2.41 | 0.50 |
| 1:K:111:GLN:HA | 1:K:114:ILE:HG12 | 1.92 | 0.50 |
| 1:K:226:ILE:HA | 1:K:278:ILE:O | 2.10 | 0.50 |
| 1:K:262:MET:SD | 1:K:290:LEU:HB2 | 2.52 | 0.50 |
| 1:K:373:ALA:O | 1:K:377:LEU:HB2 | 2.11 | 0.50 |
| 1:L:109:HIS:CE1 | 1:L:111:GLN:HE21 | 2.30 | 0.50 |
| 1:L:139:GLU:O | 1:L:140:VAL:HB | 2.11 | 0.50 |
| 1:L:163:LYS:O | 1:L:163:LYS:HG2 | 2.11 | 0.50 |
| 1:O:341:ILE:HG23 | 1:O:363:ARG:NH2 | 2.25 | 0.50 |
| 1:P:146:LEU:HD21 | 1:P:167:THR:HG23 | 1.93 | 0.50 |
| 1:P:183:LEU:HD13 | 1:P:385:ALA:HB2 | 1.93 | 0.50 |
| 1:B:99:GLU:HG3 | 1:B:425:SER:CB | 2.41 | 0.50 |
| 1:B:99:GLU:CG | 1:B:425:SER:HB2 | 2.40 | 0.50 |
| 1:B:291:PHE:HD1 | 1:B:296:VAL:CG1 | 2.24 | 0.50 |
| 1:C:35:MET:HB3 | 1:H:504:VAL:HG12 | 1.94 | 0.50 |
| 1:C:287:PRO:O | 1:C:291:PHE:HD1 | 1.94 | 0.50 |
| 1:C:316:GLY:O | 1:C:330:LEU:HB2 | 2.12 | 0.50 |
| 1:D:485:GLN:HB3 | 1:D:489:GLN:HE22 | 1.76 | 0.50 |
| 1:D:502:LEU:C | 1:D:502:LEU:HD13 | 2.32 | 0.50 |
| 1:E:110:PRO:HA | 1:E:113:ILE:HD12 | 1.93 | 0.50 |
| 1:E:313:VAL:HG13 | 1:E:352:VAL:HB | 1.94 | 0.50 |
| 1:H:219:ILE:HB | 1:H:275:ASN:HB3 | 1.92 | 0.50 |
| 1:H:274:ILE:O | 1:H:274:ILE:HG23 | 2.11 | 0.50 |
| 1:H:287:PRO:O | 1:H:291:PHE:HD1 | 1.95 | 0.50 |
| 1:H:369:ILE:HG23 | 1:H:370:LEU:H | 1.77 | 0.50 |
| 1:I:211:ILE:HB | 1:I:215:GLN:OE1 | 2.10 | 0.50 |
| 1:J:176:ARG:HD2 | 1:J:358:CYS:CB | 2.41 | 0.50 |
| 1:J:506:ASN:HB3 | 1:N:37:LYS:HD2 | 1.92 | 0.50 |
| 1:K:78:GLN:OE1 | 1:K:489:GLN:HB3 | 2.11 | 0.50 |
| 1:K:176:ARG:NE | 1:K:358:CYS:HB3 | 2.25 | 0.50 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:M:64:ASP:CB | 1:M:66:PRO:HD2 | 2.42 | 0.50 |
| 1:N:79:ASP:HA | 1:N:83:GLY:HA3 | 1.93 | 0.50 |
| 1:N:114:ILE:HA | 1:N:117:TRP:CZ3 | 2.47 | 0.50 |
| 1:N:124:ALA:O | 1:N:128:LEU:HG | 2.10 | 0.50 |
| 1:P:226:ILE:HA | 1:P:278:ILE:O | 2.12 | 0.50 |
| 1:A:26:VAL:O | 1:A:29:THR:HB | 2.11 | 0.50 |
| 1:A:122:LYS:HD3 | 1:A:423:MET:SD | 2.52 | 0.50 |
| 1:D:145:ASP:OD2 | 1:D:175:LEU:HD11 | 2.11 | 0.50 |
| 1:F:287:PRO:O | 1:F:291:PHE:HD2 | 1.94 | 0.50 |
| 1:F:341:ILE:HG23 | 1:F:363:ARG:HH22 | 1.77 | 0.50 |
| 1:G:11:ALA:HB1 | 1:G:506:ASN:CG | 2.30 | 0.50 |
| 1:G:166:PHE:CD1 | 1:G:166:PHE:N | 2.79 | 0.50 |
| 1:I:104:ILE:HG13 | 1:I:105:ALA:N | 2.25 | 0.50 |
| 1:I:171:VAL:HA | 1:I:174:VAL:HG13 | 1.94 | 0.50 |
| 1:I:181:GLY:HA3 | 1:I:356:GLU:CD | 2.32 | 0.50 |
| 1:I:324:HIS:HB2 | 1:I:329:LYS:HZ3 | 1.75 | 0.50 |
| 1:J:415:THR:HG23 | 1:J:420:ALA:HA | 1.94 | 0.50 |
| 1:M:334:LYS:O | 1:M:335:LEU:HB2 | 2.11 | 0.50 |
| 1:N:394:VAL:HG23 | 1:N:482:GLU:HB2 | 1.94 | 0.50 |
| 1:P:438:ALA:CB | 1:P:448:LEU:HG | 2.40 | 0.50 |
| 1:A:163:LYS:HA | 1:A:166:PHE:CD1 | 2.46 | 0.50 |
| 1:B:116:GLY:HA3 | 1:B:422:ALA:CB | 2.41 | 0.50 |
| 1:B:509:LYS:HG3 | 1:B:510:ALA:H | 1.75 | 0.50 |
| 1:D:158:LEU:HD13 | 1:E:503:ARG:HH22 | 1.76 | 0.50 |
| 1:D:452:LEU:HD11 | 1:D:456:HIS:HE1 | 1.77 | 0.50 |
| 1:E:114:ILE:HA | 1:E:117:TRP:CE3 | 2.46 | 0.50 |
| 1:G:81:GLU:O | 1:G:82:VAL:HG23 | 2.12 | 0.50 |
| 1:G:107:LYS:O | 1:N:444:ASP:HB3 | 2.11 | 0.50 |
| 1:I:188:VAL:CG1 | 1:I:374:GLU:HA | 2.41 | 0.50 |
| 1:I:207:LEU:HB3 | 1:I:347:ILE:CG2 | 2.41 | 0.50 |
| 1:J:99:GLU:HG2 | 1:J:425:SER:HB2 | 1.92 | 0.50 |
| 1:K:39:LEU:CD1 | 1:K:57:ILE:HG13 | 2.41 | 0.50 |
| 1:L:127:ALA:CB | 1:L:491:LEU:HD13 | 2.41 | 0.50 |
| 1:L:222:ALA:O | 1:L:333:CYS:HB3 | 2.12 | 0.50 |
| 1:L:259:LYS:O | 1:L:262:MET:HB3 | 2.11 | 0.50 |
| 1:M:390:ASP:HB3 | 1:M:485:GLN:OE1 | 2.12 | 0.50 |
| 1:N:168:LYS:O | 1:N:171:VAL:HG22 | 2.11 | 0.50 |
| 1:N:209:LYS:HE2 | 1:N:301:HIS:O | 2.12 | 0.50 |
| 1:O:203:GLU:HG2 | 1:O:350:SER:HB2 | 1.93 | 0.50 |
| 1:O:390:ASP:HB3 | 1:O:485:GLN:CD | 2.32 | 0.50 |
| 1:O:402:MET:CE | 1:O:453:ARG:HG2 | 2.41 | 0.50 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:P:222:ALA:HA | 1:P:275:ASN:CB | 2.41 | 0.50 |
| 1:P:433:LEU:O | 1:P:436:ILE:HG22 | 2.12 | 0.50 |
| 1:P:462:THR:O | 1:P:475:MET:HB3 | 2.11 | 0.50 |
| 1:A:145:ASP:OD2 | 1:A:175:LEU:HD11 | 2.12 | 0.50 |
| 1:B:124:ALA:O | 1:B:128:LEU:HG | 2.12 | 0.50 |
| 1:B:268:ARG:O | 1:B:271:LYS:HG2 | 2.12 | 0.50 |
| 1:B:443:TYR:CG | 1:B:470:GLY:HA3 | 2.47 | 0.50 |
| 1:C:99:GLU:HG2 | 1:C:425:SER:HB3 | 1.94 | 0.50 |
| 1:C:276:CYS:HA | 1:C:297:MET:O | 2.12 | 0.50 |
| 1:D:68:ALA:O | 1:D:72:VAL:HG23 | 2.11 | 0.50 |
| 1:D:116:GLY:O | 1:D:120:ALA:N | 2.45 | 0.50 |
| 1:D:159:LEU:HD23 | 1:D:163:LYS:HB3 | 1.94 | 0.50 |
| 1:D:394:VAL:CG2 | 1:D:482:GLU:HB2 | 2.42 | 0.50 |
| 1:G:297:MET:CE | 1:G:347:ILE:HD11 | 2.41 | 0.50 |
| 1:H:24:ASP:O | 1:H:27:LYS:HB3 | 2.11 | 0.50 |
| 1:I:352:VAL:HG22 | 1:I:355:GLY:H | 1.76 | 0.50 |
| 1:J:82:VAL:HG13 | 1:J:83:GLY:N | 2.27 | 0.50 |
| 1:J:152:THR:O | 1:J:155:SER:HB2 | 2.12 | 0.50 |
| 1:K:274:ILE:HG23 | 1:K:274:ILE:O | 2.12 | 0.50 |
| 1:L:402:MET:CE | 1:L:453:ARG:HG2 | 2.42 | 0.50 |
| 1:N:64:ASP:OD2 | 1:N:66:PRO:HD2 | 2.12 | 0.50 |
| 1:P:51:THR:HG21 | 1:P:56:THR:HB | 1.93 | 0.50 |
| 1:B:343:GLU:HG2 | 1:B:344:ASP:N | 2.27 | 0.50 |
| 1:D:448:LEU:HA | 1:D:451:GLN:HE21 | 1.76 | 0.50 |
| 1:E:149:ILE:HD12 | 1:E:483:SER:H | 1.76 | 0.50 |
| 1:E:160:THR:HA | 1:E:163:LYS:HB3 | 1.93 | 0.50 |
| 1:E:452:LEU:HA | 1:E:472:ILE:HG21 | 1.94 | 0.50 |
| 1:F:39:LEU:O | 1:F:48:LEU:HA | 2.12 | 0.50 |
| 1:F:452:LEU:HD22 | 1:F:465:LEU:HD11 | 1.94 | 0.50 |
| 1:G:38:ILE:HA | 1:G:50:VAL:HG23 | 1.93 | 0.50 |
| 1:G:165:HIS:O | 1:G:168:LYS:HB3 | 2.11 | 0.50 |
| 1:G:262:MET:HG2 | 1:G:290:LEU:HD22 | 1.93 | 0.50 |
| 1:G:277:PHE:O | 1:G:298:ALA:HA | 2.11 | 0.50 |
| 1:J:226:ILE:HD13 | 1:J:307:VAL:HG13 | 1.92 | 0.50 |
| 1:J:443:TYR:CD2 | 1:J:470:GLY:HA2 | 2.47 | 0.50 |
| 1:J:507:ILE:HG23 | 1:N:38:ILE:HD11 | 1.93 | 0.50 |
| 1:L:317:GLU:OE1 | 1:L:329:LYS:HB3 | 2.10 | 0.50 |
| 1:N:59:LYS:HE3 | 1:N:76:ARG:HB2 | 1.92 | 0.50 |
| 1:N:219:ILE:CD1 | 1:N:276:CYS:HB2 | 2.42 | 0.50 |
| 1:O:163:LYS:HE3 | 1:O:376:SER:CB | 2.41 | 0.50 |
| 1:P:206:LEU:HD21 | 1:P:348:HIS:CE1 | 2.46 | 0.50 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:P:231:MET:HB2 | 1:P:284:TYR:H | 1.77 | 0.50 |
| 1:B:166:PHE:CE1 | 1:B:198:ASP:CB | 2.95 | 0.50 |
| 1:D:163:LYS:HE3 | 1:D:373:ALA:CA | 2.42 | 0.50 |
| 1:E:442:GLY:HA3 | 1:G:108:ILE:C | 2.33 | 0.50 |
| 1:E:510:ALA:C | 1:E:512:PRO:HD3 | 2.32 | 0.50 |
| 1:F:14:SER:O | 1:F:17:ILE:HG22 | 2.12 | 0.50 |
| 1:F:313:VAL:HG13 | 1:F:352:VAL:HB | 1.94 | 0.50 |
| 1:G:152:THR:OG1 | 1:G:480:ILE:HG23 | 2.12 | 0.50 |
| 1:H:354:LEU:HG | 1:H:356:GLU:HB2 | 1.94 | 0.50 |
| 1:I:140:VAL:HA | 1:I:175:LEU:HD22 | 1.94 | 0.50 |
| 1:I:159:LEU:HG | 1:I:163:LYS:CG | 2.41 | 0.50 |
| 1:I:199:SER:HB2 | 1:I:362:LEU:CD2 | 2.41 | 0.50 |
| 1:I:205:PHE:CE2 | 1:I:207:LEU:HB2 | 2.47 | 0.50 |
| 1:J:231:MET:HG3 | 1:J:283:ILE:HG13 | 1.94 | 0.50 |
| 1:J:475:MET:SD | 1:J:480:ILE:HB | 2.52 | 0.50 |
| 1:K:219:ILE:HB | 1:K:275:ASN:HB3 | 1.94 | 0.50 |
| 1:L:40:LEU:HD12 | 1:L:48:LEU:HG | 1.94 | 0.50 |
| 1:L:221:ASN:HA | 1:L:333:CYS:HB2 | 1.94 | 0.50 |
| 1:L:451:GLN:HE22 | 1:L:471:THR:HA | 1.77 | 0.50 |
| 1:P:390:ASP:HB3 | 1:P:485:GLN:NE2 | 2.27 | 0.50 |
| 1:A:53:ASP:HB3 | 1:A:376:SER:HB2 | 1.93 | 0.49 |
| 1:A:111:GLN:HG2 | 1:F:35:MET:HE1 | 1.93 | 0.49 |
| 1:B:225:LEU:HD21 | 1:B:324:HIS:CE1 | 2.46 | 0.49 |
| 1:D:26:VAL:HG23 | 1:D:91:VAL:HG22 | 1.93 | 0.49 |
| 1:E:258:GLU:OE2 | 1:E:284:TYR:HE2 | 1.95 | 0.49 |
| 1:F:146:LEU:HD11 | 1:F:150:ALA:CB | 2.42 | 0.49 |
| 1:F:188:VAL:CG1 | 1:F:377:LEU:HD21 | 2.42 | 0.49 |
| 1:G:448:LEU:C | 1:G:448:LEU:HD13 | 2.32 | 0.49 |
| 1:H:402:MET:HE1 | 1:H:406:HIS:HB2 | 1.94 | 0.49 |
| 1:I:42:SER:H | 1:N:510:ALA:HA | 1.76 | 0.49 |
| 1:I:59:LYS:HE3 | 1:I:73:ASP:HA | 1.93 | 0.49 |
| 1:I:433:LEU:O | 1:I:436:ILE:HG22 | 2.12 | 0.49 |
| 1:K:171:VAL:O | 1:K:175:LEU:HG | 2.12 | 0.49 |
| 1:K:175:LEU:HA | 1:K:178:LYS:HE3 | 1.94 | 0.49 |
| 1:K:416:PRO:O | 1:K:419:GLU:HG2 | 2.12 | 0.49 |
| 1:L:106:LYS:O | 1:L:107:LYS:HG2 | 2.12 | 0.49 |
| 1:L:159:LEU:HB3 | 1:L:369:ILE:HG23 | 1.94 | 0.49 |
| 1:L:265:LYS:HE2 | 1:L:322:PHE:CZ | 2.47 | 0.49 |
| 1:L:276:CYS:HA | 1:L:297:MET:O | 2.12 | 0.49 |
| 1:M:485:GLN:HE21 | 1:M:488:ARG:HH21 | 1.60 | 0.49 |
| 1:O:198:ASP:OD1 | 1:O:364:GLY:HA2 | 2.12 | 0.49 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:A:157:LYS:HB3 | 1:A:159:LEU:CD2 | 2.41 | 0.49 |
| 1:B:82:VAL:CG1 | 1:B:486:VAL:HG12 | 2.42 | 0.49 |
| 1:B:128:LEU:HD22 | 1:B:488:ARG:CG | 2.42 | 0.49 |
| 1:B:257:ALA:O | 1:B:260:GLU:HB3 | 2.12 | 0.49 |
| 1:B:313:VAL:HG13 | 1:B:352:VAL:CB | 2.41 | 0.49 |
| 1:B:413:SER:HB2 | 1:I:454:ALA:HA | 1.94 | 0.49 |
| 1:B:421:VAL:N | 1:I:450:ALA:HB2 | 2.27 | 0.49 |
| 1:B:433:LEU:HA | 1:B:436:ILE:HG22 | 1.94 | 0.49 |
| 1:C:30:LEU:HG | 1:C:87:THR:O | 2.12 | 0.49 |
| 1:C:57:ILE:HG23 | 1:C:58:LEU:HD23 | 1.94 | 0.49 |
| 1:C:101:GLU:O | 1:C:104:ILE:HG12 | 2.12 | 0.49 |
| 1:E:317:GLU:HB3 | 1:E:329:LYS:HD3 | 1.94 | 0.49 |
| 1:E:367:GLN:CG | 1:E:369:ILE:HB | 2.42 | 0.49 |
| 1:F:32:PRO:HA | 1:F:155:SER:CB | 2.42 | 0.49 |
| 1:H:104:ILE:HG13 | 1:H:105:ALA:N | 2.27 | 0.49 |
| 1:H:431:ARG:CZ | 1:H:431:ARG:HA | 2.42 | 0.49 |
| 1:I:106:LYS:HG3 | 1:I:107:LYS:N | 2.27 | 0.49 |
| 1:J:138:ASP:O | 1:J:139:GLU:HB2 | 2.11 | 0.49 |
| 1:J:160:THR:HA | 1:J:163:LYS:HB3 | 1.94 | 0.49 |
| 1:J:266:VAL:CB | 1:J:290:LEU:HD21 | 2.41 | 0.49 |
| 1:J:366:THR:HB | 1:K:77:VAL:HG21 | 1.92 | 0.49 |
| 1:J:434:PRO:HB3 | 1:J:452:LEU:CD2 | 2.42 | 0.49 |
| 1:K:130:ASN:O | 1:K:131:SER:HB2 | 2.12 | 0.49 |
| 1:L:176:ARG:HH21 | 1:L:360:ILE:HG12 | 1.77 | 0.49 |
| 1:M:145:ASP:O | 1:M:171:VAL:HG11 | 2.12 | 0.49 |
| 1:M:386:GLN:NE2 | 1:M:485:GLN:HG2 | 2.27 | 0.49 |
| 1:O:310:LEU:O | 1:O:314:THR:HG22 | 2.11 | 0.49 |
| 1:O:448:LEU:C | 1:O:448:LEU:HD13 | 2.33 | 0.49 |
| 1:A:38:ILE:HD11 | 1:C:504:VAL:HG22 | 1.94 | 0.49 |
| 1:A:161:HIS:CG | 1:A:162:HIS:H | 2.31 | 0.49 |
| 1:A:171:VAL:O | 1:A:174:VAL:HG22 | 2.12 | 0.49 |
| 1:B:199:SER:HA | 1:B:362:LEU:HA | 1.93 | 0.49 |
| 1:B:226:ILE:HG12 | 1:B:278:ILE:HG23 | 1.95 | 0.49 |
| 1:C:111:GLN:HA | 1:C:114:ILE:HG12 | 1.92 | 0.49 |
| 1:E:146:LEU:HD23 | 1:E:148:ASN:H | 1.77 | 0.49 |
| 1:E:280:ARG:O | 1:E:281:GLN:HB3 | 2.11 | 0.49 |
| 1:E:462:THR:O | 1:E:475:MET:HB3 | 2.11 | 0.49 |
| 1:F:410:GLN:OE1 | 1:O:410:GLN:HG2 | 2.12 | 0.49 |
| 1:G:166:PHE:CZ | 1:G:198:ASP:HB3 | 2.48 | 0.49 |
| 1:G:211:ILE:HG12 | 1:G:298:ALA:H | 1.77 | 0.49 |
| 1:H:338:GLU:HA | 1:H:347:ILE:HA | 1.94 | 0.49 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:H:376:SER:O | 1:H:379:ASP:HB3 | 2.13 | 0.49 |
| 1:I:48:LEU:HD12 | 1:N:70:VAL:CG1 | 2.42 | 0.49 |
| 1:I:191:LYS:HE2 | 1:I:344:ASP:HB3 | 1.93 | 0.49 |
| 1:J:109:HIS:ND1 | 1:J:111:GLN:HB2 | 2.27 | 0.49 |
| 1:L:36:ASP:HB2 | 1:M:503:ARG:HD3 | 1.94 | 0.49 |
| 1:L:75:SER:O | 1:L:78:GLN:HB3 | 2.11 | 0.49 |
| 1:M:177:LEU:C | 1:M:177:LEU:HD13 | 2.33 | 0.49 |
| 1:N:163:LYS:HE3 | 1:N:376:SER:HB2 | 1.94 | 0.49 |
| 1:N:334:LYS:O | 1:N:335:LEU:HB2 | 2.11 | 0.49 |
| 1:O:38:ILE:CD1 | 1:O:48:LEU:HD23 | 2.30 | 0.49 |
| 1:O:163:LYS:HD2 | 1:O:166:PHE:CG | 2.48 | 0.49 |
| 1:O:173:ALA:O | 1:O:176:ARG:HG2 | 2.13 | 0.49 |
| 1:O:284:TYR:O | 1:O:287:PRO:HD2 | 2.12 | 0.49 |
| 1:P:35:MET:N | 1:P:35:MET:SD | 2.85 | 0.49 |
| 1:P:161:HIS:CD2 | 1:P:162:HIS:H | 2.30 | 0.49 |
| 1:A:49:MET:HG3 | 1:A:369:ILE:CB | 2.43 | 0.49 |
| 1:A:92:LEU:O | 1:A:95:GLU:HB3 | 2.12 | 0.49 |
| 1:D:37:LYS:O | 1:D:50:VAL:HA | 2.12 | 0.49 |
| 1:D:110:PRO:HG2 | 1:D:502:LEU:HD11 | 1.93 | 0.49 |
| 1:D:185:ALA:HA | 1:D:309:ARG:HD3 | 1.93 | 0.49 |
| 1:E:33:LYS:HG3 | 1:G:109:HIS:CE1 | 2.47 | 0.49 |
| 1:E:438:ALA:HB2 | 1:E:448:LEU:HG | 1.94 | 0.49 |
| 1:E:451:GLN:HE22 | 1:E:471:THR:HA | 1.78 | 0.49 |
| 1:F:231:MET:HB2 | 1:F:284:TYR:H | 1.78 | 0.49 |
| 1:F:375:ARG:NH1 | 1:F:375:ARG:HB2 | 2.27 | 0.49 |
| 1:H:58:LEU:HB3 | 1:H:72:VAL:HG11 | 1.93 | 0.49 |
| 1:H:280:ARG:HD2 | 1:H:304:PHE:HB2 | 1.94 | 0.49 |
| 1:I:114:ILE:HD12 | 1:I:502:LEU:HD13 | 1.94 | 0.49 |
| 1:I:305:VAL:O | 1:I:309:ARG:HG2 | 2.11 | 0.49 |
| 1:I:367:GLN:HG2 | 1:I:369:ILE:N | 2.28 | 0.49 |
| 1:J:124:ALA:CB | 1:J:491:LEU:HD13 | 2.43 | 0.49 |
| 1:J:408:VAL:HG23 | 1:J:427:ALA:HB1 | 1.94 | 0.49 |
| 1:J:415:THR:HG23 | 1:J:420:ALA:HB2 | 1.95 | 0.49 |
| 1:J:512:PRO:O | 1:J:513:ARG:CB | 2.61 | 0.49 |
| 1:K:330:LEU:CD2 | 1:K:330:LEU:N | 2.75 | 0.49 |
| 1:L:35:MET:HB3 | 1:M:503:ARG:O | 2.13 | 0.49 |
| 1:N:141:LYS:HD2 | 1:N:144:GLN:HB2 | 1.94 | 0.49 |
| 1:N:206:LEU:HD21 | 1:N:346:LEU:HB3 | 1.93 | 0.49 |
| 1:O:483:SER:O | 1:O:486:VAL:HG22 | 2.11 | 0.49 |
| 1:P:15:SER:OG | 1:P:501:ILE:HG22 | 2.12 | 0.49 |
| 1:P:425:SER:O | 1:P:428:LYS:HG2 | 2.12 | 0.49 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:A:52:ASN:OD1 | 1:A:157:LYS:HG2 | 2.11 | 0.49 |
| 1:B:190:LYS:HG3 | 1:B:374:GLU:HB3 | 1.94 | 0.49 |
| 1:B:211:ILE:HG21 | 1:B:215:GLN:HE22 | 1.76 | 0.49 |
| 1:C:79:ASP:OD1 | 1:C:83:GLY:HA3 | 2.12 | 0.49 |
| 1:C:171:VAL:O | 1:C:175:LEU:HG | 2.12 | 0.49 |
| 1:C:201:LEU:HD22 | 1:C:202:ASP:N | 2.27 | 0.49 |
| 1:D:33:LYS:O | 1:D:35:MET:SD | 2.71 | 0.49 |
| 1:D:35:MET:CB | 1:E:503:ARG:HB3 | 2.42 | 0.49 |
| 1:D:57:ILE:HG23 | 1:D:58:LEU:HD22 | 1.94 | 0.49 |
| 1:D:360:ILE:HG22 | 1:D:361:VAL:N | 2.27 | 0.49 |
| 1:F:154:LEU:HD21 | 1:F:163:LYS:HG3 | 1.94 | 0.49 |
| 1:F:397:GLY:HA3 | 1:F:475:MET:HE1 | 1.94 | 0.49 |
| 1:G:207:LEU:HD23 | 1:G:208:ASP:H | 1.78 | 0.49 |
| 1:G:343:GLU:CG | 1:G:344:ASP:N | 2.75 | 0.49 |
| 1:H:57:ILE:HG23 | 1:H:58:LEU:CD2 | 2.43 | 0.49 |
| 1:H:297:MET:HE1 | 1:H:336:ILE:HG22 | 1.95 | 0.49 |
| 1:H:310:LEU:O | 1:H:314:THR:HG22 | 2.13 | 0.49 |
| 1:H:420:ALA:HB3 | 1:P:450:ALA:HB2 | 1.94 | 0.49 |
| 1:H:452:LEU:HD13 | 1:H:465:LEU:HD13 | 1.95 | 0.49 |
| 1:I:187:HIS:NE2 | 1:I:189:ILE:HD12 | 2.27 | 0.49 |
| 1:J:109:HIS:CG | 1:N:440:ASN:HA | 2.48 | 0.49 |
| 1:K:452:LEU:HD13 | 1:K:465:LEU:CD1 | 2.42 | 0.49 |
| 1:L:70:VAL:HG11 | 1:P:48:LEU:CD1 | 2.43 | 0.49 |
| 1:N:103:LEU:O | 1:N:106:LYS:HB2 | 2.13 | 0.49 |
| 1:N:313:VAL:HG13 | 1:N:352:VAL:HG21 | 1.94 | 0.49 |
| 1:N:408:VAL:HA | 1:N:411:LEU:HD12 | 1.93 | 0.49 |
| 1:O:141:LYS:HG2 | 1:O:144:GLN:HB2 | 1.93 | 0.49 |
| 1:A:365:ALA:O | 1:A:366:THR:HG23 | 2.13 | 0.49 |
| 1:A:404:MET:O | 1:A:408:VAL:HG22 | 2.12 | 0.49 |
| 1:B:25:LEU:HD22 | 1:F:508:ILE:HG12 | 1.95 | 0.49 |
| 1:C:369:ILE:HA | 1:C:372:GLU:CG | 2.42 | 0.49 |
| 1:D:344:ASP:O | 1:D:346:LEU:HD12 | 2.11 | 0.49 |
| 1:E:34:GLY:HA3 | 1:E:156:SER:HA | 1.93 | 0.49 |
| 1:E:366:THR:O | 1:E:367:GLN:HB3 | 2.13 | 0.49 |
| 1:H:129:LEU:HB3 | 1:H:484:PHE:CZ | 2.47 | 0.49 |
| 1:H:431:ARG:HH21 | 1:H:434:PRO:HG2 | 1.77 | 0.49 |
| 1:I:32:PRO:HA | 1:I:156:SER:HA | 1.93 | 0.49 |
| 1:J:111:GLN:HE21 | 1:J:114:ILE:CD1 | 2.17 | 0.49 |
| 1:K:38:ILE:CG2 | 1:K:369:ILE:HD11 | 2.42 | 0.49 |
| 1:L:11:ALA:CB | 1:L:506:ASN:HA | 2.43 | 0.49 |
| 1:L:111:GLN:HA | 1:L:114:ILE:CG1 | 2.42 | 0.49 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:M:50:VAL:HG21 | 1:M:368:GLN:NE2 | 2.28 | 0.49 |
| 1:A:32:PRO:HA | 1:A:155:SER:HB3 | 1.94 | 0.49 |
| 1:C:191:LYS:HB3 | 1:C:363:ARG:HB2 | 1.93 | 0.49 |
| 1:D:114:ILE:HA | 1:D:117:TRP:CE3 | 2.48 | 0.49 |
| 1:D:431:ARG:O | 1:D:434:PRO:HD2 | 2.12 | 0.49 |
| 1:F:173:ALA:O | 1:F:176:ARG:HG2 | 2.13 | 0.49 |
| 1:F:207:LEU:HB3 | 1:F:347:ILE:CG2 | 2.43 | 0.49 |
| 1:H:146:LEU:HD21 | 1:H:167:THR:HG23 | 1.94 | 0.49 |
| 1:H:186:ILE:O | 1:H:377:LEU:HD21 | 2.12 | 0.49 |
| 1:I:82:VAL:HG13 | 1:I:83:GLY:N | 2.28 | 0.49 |
| 1:J:85:GLY:O | 1:J:153:THR:HA | 2.13 | 0.49 |
| 1:J:505:ASP:HB3 | 1:N:37:LYS:HZ3 | 1.76 | 0.49 |
| 1:K:166:PHE:CZ | 1:K:198:ASP:HB3 | 2.47 | 0.49 |
| 1:L:77:VAL:HG13 | 1:P:192:LEU:HD23 | 1.94 | 0.49 |
| 1:L:269:ILE:HG23 | 1:L:274:ILE:HG21 | 1.95 | 0.49 |
| 1:M:68:ALA:O | 1:M:72:VAL:HG23 | 2.13 | 0.49 |
| 1:M:114:ILE:C | 1:M:116:GLY:N | 2.66 | 0.49 |
| 1:N:312:LEU:O | 1:N:354:LEU:HD22 | 2.11 | 0.49 |
| 1:O:393:THR:HG22 | 1:O:483:SER:HA | 1.94 | 0.49 |
| 1:P:211:ILE:HG12 | 1:P:298:ALA:H | 1.78 | 0.49 |
| 1:A:57:ILE:HD13 | 1:A:57:ILE:C | 2.32 | 0.49 |
| 1:A:126:GLN:NE2 | 1:A:423:MET:SD | 2.86 | 0.49 |
| 1:B:174:VAL:CG1 | 1:B:384:LEU:HB3 | 2.36 | 0.49 |
| 1:C:59:LYS:CE | 1:C:76:ARG:HB2 | 2.43 | 0.49 |
| 1:C:95:GLU:CD | 1:C:429:ALA:HB1 | 2.33 | 0.49 |
| 1:D:506:ASN:H | 1:H:25:LEU:HG | 1.77 | 0.49 |
| 1:E:369:ILE:HG23 | 1:E:372:GLU:OE1 | 2.12 | 0.49 |
| 1:H:30:LEU:HD22 | 1:H:436:ILE:HD13 | 1.94 | 0.49 |
| 1:J:52:ASN:OD1 | 1:J:157:LYS:HG2 | 2.13 | 0.49 |
| 1:J:184:GLU:HG2 | 1:J:309:ARG:HD2 | 1.95 | 0.49 |
| 1:N:222:ALA:HA | 1:N:275:ASN:HB2 | 1.95 | 0.49 |
| 1:N:313:VAL:HG13 | 1:N:352:VAL:CG2 | 2.43 | 0.49 |
| 1:P:185:ALA:H | 1:P:309:ARG:HG2 | 1.78 | 0.49 |
| 1:P:286:TYR:HB2 | 1:P:287:PRO:HD3 | 1.94 | 0.49 |
| 1:A:146:LEU:CD2 | 1:A:147:MET:N | 2.74 | 0.49 |
| 1:C:122:LYS:O | 1:C:125:ARG:HB2 | 2.12 | 0.49 |
| 1:C:209:LYS:HB2 | 1:C:299:ILE:HG23 | 1.93 | 0.49 |
| 1:C:397:GLY:HA3 | 1:C:475:MET:HE1 | 1.94 | 0.49 |
| 1:D:222:ALA:HA | 1:D:275:ASN:OD1 | 2.13 | 0.49 |
| 1:E:211:ILE:HG13 | 1:E:298:ALA:O | 2.13 | 0.49 |
| 1:E:226:ILE:HD12 | 1:E:317:GLU:HG3 | 1.95 | 0.49 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:E:274:ILE:O | 1:E:274:ILE:HG23 | 2.12 | 0.49 |
| 1:F:226:ILE:HG12 | 1:F:278:ILE:CG2 | 2.43 | 0.49 |
| 1:G:22:ILE:HD12 | 1:G:90:THR:CG2 | 2.43 | 0.49 |
| 1:I:96:LEU:O | 1:I:96:LEU:HD22 | 2.13 | 0.49 |
| 1:I:201:LEU:CD2 | 1:I:360:ILE:HG12 | 2.42 | 0.49 |
| 1:J:274:ILE:HG23 | 1:J:296:VAL:CG2 | 2.43 | 0.49 |
| 1:J:431:ARG:NH2 | 1:J:434:PRO:HG2 | 2.28 | 0.49 |
| 1:J:435:THR:HG23 | 1:J:445:SER:HB3 | 1.94 | 0.49 |
| 1:L:323:ASP:C | 1:L:325:PRO:HD2 | 2.33 | 0.49 |
| 1:M:399:CYS:HA | 1:M:456:HIS:NE2 | 2.28 | 0.49 |
| 1:M:404:MET:O | 1:M:408:VAL:HG22 | 2.13 | 0.49 |
| 1:M:433:LEU:HB2 | 1:M:434:PRO:HD3 | 1.95 | 0.49 |
| 1:N:57:ILE:HD13 | 1:N:57:ILE:C | 2.33 | 0.49 |
| 1:N:431:ARG:O | 1:N:434:PRO:HD2 | 2.13 | 0.49 |
| 1:O:39:LEU:HB3 | 1:O:513:ARG:HG2 | 1.94 | 0.49 |
| 1:O:114:ILE:HG23 | 1:O:499:GLU:HA | 1.94 | 0.49 |
| 1:O:139:GLU:OE2 | 1:O:178:LYS:HD2 | 2.13 | 0.49 |
| 1:O:222:ALA:HA | 1:O:275:ASN:HB2 | 1.94 | 0.49 |
| 1:P:139:GLU:O | 1:P:140:VAL:HB | 2.12 | 0.49 |
| 1:A:38:ILE:HD12 | 1:A:48:LEU:HB3 | 1.95 | 0.49 |
| 1:B:92:LEU:HD11 | 1:B:433:LEU:HD21 | 1.95 | 0.49 |
| 1:C:96:LEU:O | 1:C:96:LEU:HD22 | 2.13 | 0.49 |
| 1:D:111:GLN:HA | 1:D:114:ILE:HG12 | 1.94 | 0.49 |
| 1:D:173:ALA:HA | 1:D:176:ARG:CZ | 2.43 | 0.49 |
| 1:D:341:ILE:HD11 | 1:D:346:LEU:HD13 | 1.95 | 0.49 |
| 1:E:146:LEU:HD21 | 1:E:150:ALA:CB | 2.33 | 0.49 |
| 1:F:431:ARG:O | 1:F:434:PRO:HD2 | 2.12 | 0.49 |
| 1:G:176:ARG:HE | 1:G:358:CYS:CB | 2.25 | 0.49 |
| 1:G:367:GLN:HE21 | 1:G:369:ILE:HB | 1.78 | 0.49 |
| 1:H:14:SER:O | 1:H:17:ILE:HG22 | 2.13 | 0.49 |
| 1:H:188:VAL:HG12 | 1:H:377:LEU:HB2 | 1.93 | 0.49 |
| 1:H:448:LEU:HD13 | 1:H:448:LEU:C | 2.33 | 0.49 |
| 1:J:29:THR:O | 1:J:156:SER:HB2 | 2.13 | 0.49 |
| 1:L:263:LYS:O | 1:L:267:GLU:HG2 | 2.12 | 0.49 |
| 1:N:334:LYS:HB3 | 1:N:351:GLY:HA3 | 1.94 | 0.49 |
| 1:O:67:ALA:HB3 | 1:O:507:ILE:HG21 | 1.94 | 0.49 |
| 1:O:334:LYS:HD2 | 1:O:351:GLY:HA3 | 1.93 | 0.49 |
| 1:O:376:SER:O | 1:O:379:ASP:HB2 | 2.12 | 0.49 |
| 1:A:377:LEU:HG | 1:A:377:LEU:O | 2.13 | 0.48 |
| 1:A:511:ALA:O | 1:A:513:ARG:N | 2.46 | 0.48 |
| 1:B:14:SER:O | 1:B:17:ILE:HG22 | 2.13 | 0.48 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:B:32:PRO:HG2 | 1:B:467:MET:CB | 2.44 | 0.48 |
| 1:B:57:ILE:HG23 | 1:B:58:LEU:CD2 | 2.44 | 0.48 |
| 1:B:132:ALA:CB | 1:B:394:VAL:HG13 | 2.43 | 0.48 |
| 1:B:185:ALA:HB1 | 1:B:357:ALA:HB2 | 1.95 | 0.48 |
| 1:B:392:ARG:HG3 | 1:B:484:PHE:CG | 2.48 | 0.48 |
| 1:C:126:GLN:HE21 | 1:C:407:ALA:HB1 | 1.78 | 0.48 |
| 1:D:153:THR:HG21 | 1:D:379:ASP:HB3 | 1.95 | 0.48 |
| 1:D:157:LYS:HB3 | 1:D:159:LEU:CD1 | 2.43 | 0.48 |
| 1:D:266:VAL:HB | 1:D:290:LEU:HD21 | 1.94 | 0.48 |
| 1:E:107:LYS:NZ | 1:J:439:ASP:HA | 2.27 | 0.48 |
| 1:E:219:ILE:HB | 1:E:275:ASN:HB3 | 1.94 | 0.48 |
| 1:E:222:ALA:HA | 1:E:275:ASN:HB2 | 1.95 | 0.48 |
| 1:E:225:LEU:HD11 | 1:E:324:HIS:ND1 | 2.28 | 0.48 |
| 1:F:146:LEU:HD22 | 1:F:168:LYS:CA | 2.37 | 0.48 |
| 1:G:38:ILE:HG13 | 1:G:39:LEU:N | 2.28 | 0.48 |
| 1:H:286:TYR:HB2 | 1:H:287:PRO:HD3 | 1.94 | 0.48 |
| 1:J:123:ALA:HB1 | 1:J:408:VAL:HG12 | 1.95 | 0.48 |
| 1:J:185:ALA:CB | 1:J:357:ALA:HB1 | 2.42 | 0.48 |
| 1:J:219:ILE:HB | 1:J:275:ASN:HB3 | 1.95 | 0.48 |
| 1:J:512:PRO:O | 1:J:513:ARG:HB2 | 2.13 | 0.48 |
| 1:K:127:ALA:HB1 | 1:K:491:LEU:HD13 | 1.94 | 0.48 |
| 1:K:128:LEU:HD11 | 1:K:492:LEU:CD1 | 2.43 | 0.48 |
| 1:L:372:GLU:HA | 1:L:375:ARG:CZ | 2.42 | 0.48 |
| 1:M:59:LYS:HE3 | 1:M:73:ASP:HA | 1.95 | 0.48 |
| 1:N:334:LYS:CG | 1:N:351:GLY:HA3 | 2.43 | 0.48 |
| 1:O:188:VAL:CG1 | 1:O:377:LEU:HD22 | 2.36 | 0.48 |
| 1:C:150:ALA:O | 1:C:154:LEU:HD13 | 2.14 | 0.48 |
| 1:D:59:LYS:HZ3 | 1:D:76:ARG:HB2 | 1.78 | 0.48 |
| 1:D:124:ALA:O | 1:D:127:ALA:HB3 | 2.13 | 0.48 |
| 1:D:207:LEU:HB3 | 1:D:347:ILE:HG23 | 1.94 | 0.48 |
| 1:D:211:ILE:CD1 | 1:D:297:MET:HG3 | 2.31 | 0.48 |
| 1:E:82:VAL:HG13 | 1:E:83:GLY:N | 2.28 | 0.48 |
| 1:F:85:GLY:O | 1:F:153:THR:HG23 | 2.13 | 0.48 |
| 1:G:149:ILE:HD12 | 1:G:483:SER:N | 2.28 | 0.48 |
| 1:G:436:ILE:HA | 1:G:439:ASP:OD2 | 2.14 | 0.48 |
| 1:H:109:HIS:HB3 | 1:H:112:THR:OG1 | 2.13 | 0.48 |
| 1:J:96:LEU:HD13 | 1:J:96:LEU:C | 2.34 | 0.48 |
| 1:J:206:LEU:CD2 | 1:J:346:LEU:HB3 | 2.43 | 0.48 |
| 1:L:106:LYS:HD3 | 1:L:108:ILE:HD11 | 1.95 | 0.48 |
| 1:L:171:VAL:HG12 | 1:L:384:LEU:HG | 1.95 | 0.48 |
| 1:N:78:GLN:CD | 1:N:83:GLY:HA2 | 2.34 | 0.48 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:N:145:ASP:OD1 | 1:N:171:VAL:HB | 2.14 | 0.48 |
| 1:O:205:PHE:HA | 1:O:359:THR:OG1 | 2.12 | 0.48 |
| 1:P:123:ALA:HB2 | 1:P:423:MET:HE2 | 1.95 | 0.48 |
| 1:B:106:LYS:HZ2 | 1:B:108:ILE:HB | 1.77 | 0.48 |
| 1:B:448:LEU:HD13 | 1:B:448:LEU:C | 2.33 | 0.48 |
| 1:C:225:LEU:HG | 1:C:277:PHE:CD1 | 2.47 | 0.48 |
| 1:D:145:ASP:CG | 1:D:171:VAL:HB | 2.32 | 0.48 |
| 1:D:222:ALA:HA | 1:D:275:ASN:HB2 | 1.96 | 0.48 |
| 1:D:448:LEU:HA | 1:D:451:GLN:HG2 | 1.96 | 0.48 |
| 1:E:6:GLU:HA | 1:E:10:THR:OG1 | 2.13 | 0.48 |
| 1:E:124:ALA:O | 1:E:128:LEU:HG | 2.13 | 0.48 |
| 1:E:176:ARG:NH2 | 1:E:360:ILE:HG13 | 2.28 | 0.48 |
| 1:G:101:GLU:O | 1:G:104:ILE:HG12 | 2.13 | 0.48 |
| 1:G:452:LEU:HD13 | 1:G:465:LEU:CD1 | 2.43 | 0.48 |
| 1:I:110:PRO:HA | 1:I:113:ILE:HG12 | 1.95 | 0.48 |
| 1:I:418:LYS:HA | 1:I:418:LYS:HZ2 | 1.78 | 0.48 |
| 1:J:33:LYS:NZ | 1:J:468:LYS:HG3 | 2.28 | 0.48 |
| 1:K:84:ASP:CG | 1:K:85:GLY:H | 2.15 | 0.48 |
| 1:K:103:LEU:HG | 1:K:113:ILE:CD1 | 2.44 | 0.48 |
| 1:K:166:PHE:CE1 | 1:K:198:ASP:HB2 | 2.47 | 0.48 |
| 1:K:185:ALA:HA | 1:K:309:ARG:CG | 2.43 | 0.48 |
| 1:L:40:LEU:HD23 | 1:L:41:SER:N | 2.27 | 0.48 |
| 1:L:313:VAL:O | 1:L:352:VAL:HG23 | 2.14 | 0.48 |
| 1:N:226:ILE:HG12 | 1:N:278:ILE:CG2 | 2.43 | 0.48 |
| 1:N:269:ILE:HG23 | 1:N:274:ILE:HG22 | 1.95 | 0.48 |
| 1:N:397:GLY:O | 1:N:465:LEU:HD23 | 2.14 | 0.48 |
| 1:N:433:LEU:O | 1:N:436:ILE:HG22 | 2.14 | 0.48 |
| 1:O:146:LEU:HD13 | 1:O:167:THR:O | 2.13 | 0.48 |
| 1:P:30:LEU:HG | 1:P:87:THR:O | 2.13 | 0.48 |
| 1:P:96:LEU:HD13 | 1:P:96:LEU:C | 2.33 | 0.48 |
| 1:P:231:MET:CG | 1:P:283:ILE:HG13 | 2.43 | 0.48 |
| 1:P:313:VAL:HG13 | 1:P:352:VAL:CB | 2.43 | 0.48 |
| 1:P:397:GLY:HA3 | 1:P:475:MET:CE | 2.43 | 0.48 |
| 1:B:190:LYS:HG2 | 1:B:374:GLU:HB3 | 1.96 | 0.48 |
| 1:B:317:GLU:CB | 1:B:329:LYS:HD3 | 2.43 | 0.48 |
| 1:D:420:ALA:HB1 | 1:K:453:ARG:NH2 | 2.29 | 0.48 |
| 1:G:149:ILE:HD12 | 1:G:483:SER:H | 1.77 | 0.48 |
| 1:G:231:MET:HE1 | 1:G:265:LYS:HD3 | 1.95 | 0.48 |
| 1:G:341:ILE:O | 1:G:343:GLU:N | 2.45 | 0.48 |
| 1:H:145:ASP:OD1 | 1:H:171:VAL:HB | 2.13 | 0.48 |
| 1:I:146:LEU:HD22 | 1:I:167:THR:C | 2.33 | 0.48 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:I:452:LEU:CD2 | 1:I:465:LEU:HD21 | 2.44 | 0.48 |
| 1:J:27:LYS:HB2 | 1:J:436:ILE:CD1 | 2.43 | 0.48 |
| 1:J:283:ILE:CG2 | 1:J:300:GLU:HG3 | 2.42 | 0.48 |
| 1:K:397:GLY:HA3 | 1:K:475:MET:CE | 2.44 | 0.48 |
| 1:L:163:LYS:HA | 1:L:166:PHE:HD1 | 1.78 | 0.48 |
| 1:M:65:ASN:N | 1:M:66:PRO:HD2 | 2.29 | 0.48 |
| 1:M:129:LEU:HG | 1:M:392:ARG:HH22 | 1.79 | 0.48 |
| 1:N:215:GLN:HA | 1:N:292:GLY:HA2 | 1.95 | 0.48 |
| 1:N:447:ASP:O | 1:N:451:GLN:HG2 | 2.14 | 0.48 |
| 1:O:82:VAL:HG22 | 1:O:83:GLY:N | 2.29 | 0.48 |
| 1:O:452:LEU:HD13 | 1:O:465:LEU:HD13 | 1.95 | 0.48 |
| 1:P:89:VAL:HG12 | 1:P:490:VAL:HG21 | 1.96 | 0.48 |
| 1:C:57:ILE:HG23 | 1:C:58:LEU:CD2 | 2.43 | 0.48 |
| 1:C:159:LEU:HD13 | 1:C:372:GLU:OE1 | 2.13 | 0.48 |
| 1:D:89:VAL:HG12 | 1:D:490:VAL:HB | 1.94 | 0.48 |
| 1:D:92:LEU:HB2 | 1:D:490:VAL:HG21 | 1.94 | 0.48 |
| 1:D:317:GLU:HB3 | 1:D:330:LEU:H | 1.78 | 0.48 |
| 1:D:411:LEU:HB3 | 1:D:423:MET:SD | 2.54 | 0.48 |
| 1:E:448:LEU:HD13 | 1:E:448:LEU:C | 2.34 | 0.48 |
| 1:F:171:VAL:HG12 | 1:F:384:LEU:HD13 | 1.95 | 0.48 |
| 1:F:211:ILE:HG12 | 1:F:298:ALA:H | 1.77 | 0.48 |
| 1:F:448:LEU:C | 1:F:448:LEU:HD13 | 2.33 | 0.48 |
| 1:G:134:ASP:HB3 | 1:G:393:THR:OG1 | 2.14 | 0.48 |
| 1:G:431:ARG:HH21 | 1:G:434:PRO:HG2 | 1.79 | 0.48 |
| 1:I:159:LEU:HB2 | 1:I:369:ILE:CG2 | 2.21 | 0.48 |
| 1:I:163:LYS:HD2 | 1:I:166:PHE:HB2 | 1.95 | 0.48 |
| 1:I:402:MET:SD | 1:I:456:HIS:HB2 | 2.54 | 0.48 |
| 1:J:148:ASN:HB3 | 1:J:481:THR:CG2 | 2.43 | 0.48 |
| 1:K:146:LEU:HB2 | 1:K:171:VAL:CG2 | 2.43 | 0.48 |
| 1:K:262:MET:SD | 1:K:290:LEU:HD22 | 2.53 | 0.48 |
| 1:L:40:LEU:HD12 | 1:L:48:LEU:CD2 | 2.43 | 0.48 |
| 1:N:14:SER:O | 1:N:17:ILE:HG22 | 2.14 | 0.48 |
| 1:N:132:ALA:HB3 | 1:N:461:THR:HG21 | 1.95 | 0.48 |
| 1:O:133:VAL:HG21 | 1:O:394:VAL:CA | 2.43 | 0.48 |
| 1:O:334:LYS:CD | 1:O:351:GLY:HA3 | 2.43 | 0.48 |
| 1:O:345:LYS:C | 1:O:346:LEU:HD12 | 2.33 | 0.48 |
| 1:P:37:LYS:O | 1:P:50:VAL:HA | 2.14 | 0.48 |
| 1:P:166:PHE:CE1 | 1:P:198:ASP:HB3 | 2.48 | 0.48 |
| 1:P:500:VAL:O | 1:P:501:ILE:HB | 2.14 | 0.48 |
| 1:A:158:LEU:CD2 | 1:C:503:ARG:HH22 | 2.18 | 0.48 |
| 1:A:369:ILE:O | 1:A:372:GLU:CB | 2.60 | 0.48 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:C:173:ALA:CB | 1:C:360:ILE:HD11 | 2.32 | 0.48 |
| 1:C:222:ALA:HA | 1:C:275:ASN:OD1 | 2.13 | 0.48 |
| 1:C:505:ASP:O | 1:C:506:ASN:HB3 | 2.14 | 0.48 |
| 1:D:259:LYS:O | 1:D:262:MET:HB3 | 2.13 | 0.48 |
| 1:D:445:SER:CB | 1:K:108:ILE:HD13 | 2.43 | 0.48 |
| 1:E:154:LEU:CD2 | 1:E:167:THR:HB | 2.42 | 0.48 |
| 1:F:123:ALA:O | 1:F:126:GLN:HB2 | 2.13 | 0.48 |
| 1:F:372:GLU:HG3 | 1:F:375:ARG:HE | 1.78 | 0.48 |
| 1:G:102:SER:O | 1:G:105:ALA:HB3 | 2.13 | 0.48 |
| 1:G:133:VAL:HG23 | 1:G:134:ASP:H | 1.79 | 0.48 |
| 1:G:157:LYS:CD | 1:G:376:SER:HB2 | 2.44 | 0.48 |
| 1:I:40:LEU:CB | 1:I:48:LEU:HD23 | 2.40 | 0.48 |
| 1:I:190:LYS:O | 1:I:190:LYS:HG3 | 2.11 | 0.48 |
| 1:I:390:ASP:HB3 | 1:I:485:GLN:CD | 2.34 | 0.48 |
| 1:I:397:GLY:HA3 | 1:I:475:MET:CE | 2.43 | 0.48 |
| 1:J:274:ILE:O | 1:J:274:ILE:HG23 | 2.14 | 0.48 |
| 1:K:226:ILE:HB | 1:K:317:GLU:OE2 | 2.13 | 0.48 |
| 1:K:485:GLN:HG2 | 1:K:488:ARG:HH21 | 1.79 | 0.48 |
| 1:L:312:LEU:O | 1:P:213:VAL:HG11 | 2.12 | 0.48 |
| 1:L:334:LYS:HD3 | 1:L:351:GLY:HA3 | 1.94 | 0.48 |
| 1:L:366:THR:HA | 1:L:370:LEU:HB3 | 1.96 | 0.48 |
| 1:M:58:LEU:HB3 | 1:M:72:VAL:CG1 | 2.43 | 0.48 |
| 1:M:157:LYS:HG2 | 1:M:372:GLU:OE2 | 2.13 | 0.48 |
| 1:M:334:LYS:CG | 1:M:351:GLY:HA3 | 2.43 | 0.48 |
| 1:N:324:HIS:HB2 | 1:N:329:LYS:CE | 2.43 | 0.48 |
| 1:O:154:LEU:CD2 | 1:O:163:LYS:HG3 | 2.43 | 0.48 |
| 1:O:265:LYS:HE2 | 1:O:322:PHE:CE1 | 2.48 | 0.48 |
| 1:P:32:PRO:HA | 1:P:156:SER:N | 2.29 | 0.48 |
| 1:P:231:MET:CE | 1:P:265:LYS:HD3 | 2.44 | 0.48 |
| 1:P:263:LYS:HA | 1:P:266:VAL:HG12 | 1.96 | 0.48 |
| 1:P:284:TYR:O | 1:P:287:PRO:HD2 | 2.13 | 0.48 |
| 1:A:106:LYS:HE3 | 1:M:446:ALA:HB2 | 1.96 | 0.48 |
| 1:B:82:VAL:HG23 | 1:B:485:GLN:HB2 | 1.94 | 0.48 |
| 1:B:170:ALA:O | 1:B:173:ALA:HB3 | 2.13 | 0.48 |
| 1:B:219:ILE:HD12 | 1:B:275:ASN:HB3 | 1.96 | 0.48 |
| 1:B:325:PRO:C | 1:B:326:GLU:HG3 | 2.31 | 0.48 |
| 1:C:78:GLN:CD | 1:C:83:GLY:HA2 | 2.33 | 0.48 |
| 1:C:143:ARG:NE | 1:C:143:ARG:HA | 2.28 | 0.48 |
| 1:D:163:LYS:HG3 | 1:D:166:PHE:HB2 | 1.95 | 0.48 |
| 1:D:380:ALA:O | 1:D:384:LEU:HD23 | 2.12 | 0.48 |
| 1:D:402:MET:HG2 | 1:D:431:ARG:NH2 | 2.29 | 0.48 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:E:89:VAL:HG12 | 1:E:490:VAL:HG23 | 1.95 | 0.48 |
| 1:E:219:ILE:HD12 | 1:E:275:ASN:HB3 | 1.95 | 0.48 |
| 1:E:313:VAL:HG13 | 1:E:352:VAL:HG11 | 1.96 | 0.48 |
| 1:F:108:ILE:HG13 | 1:O:446:ALA:H | 1.79 | 0.48 |
| 1:F:112:THR:CG2 | 1:F:418:LYS:CE | 2.91 | 0.48 |
| 1:F:405:ALA:HA | 1:F:408:VAL:HG22 | 1.96 | 0.48 |
| 1:G:108:ILE:CG2 | 1:G:109:HIS:N | 2.67 | 0.48 |
| 1:G:154:LEU:HD22 | 1:G:167:THR:CB | 2.43 | 0.48 |
| 1:G:193:GLY:HA3 | 1:G:343:GLU:CB | 2.44 | 0.48 |
| 1:G:367:GLN:HG3 | 1:G:370:LEU:N | 2.28 | 0.48 |
| 1:H:498:ALA:HA | 1:H:501:ILE:HD12 | 1.94 | 0.48 |
| 1:I:160:THR:HA | 1:I:163:LYS:HB3 | 1.96 | 0.48 |
| 1:J:287:PRO:O | 1:J:291:PHE:HD1 | 1.97 | 0.48 |
| 1:K:117:TRP:HD1 | 1:K:499:GLU:HA | 1.78 | 0.48 |
| 1:K:171:VAL:CA | 1:K:174:VAL:HG22 | 2.43 | 0.48 |
| 1:K:206:LEU:HD11 | 1:K:346:LEU:HD23 | 1.95 | 0.48 |
| 1:M:433:LEU:HA | 1:M:436:ILE:HG22 | 1.96 | 0.48 |
| 1:N:445:SER:HA | 1:N:448:LEU:HB3 | 1.95 | 0.48 |
| 1:O:418:LYS:O | 1:O:421:VAL:HG12 | 2.14 | 0.48 |
| 1:P:194:GLY:CA | 1:P:365:ALA:HA | 2.44 | 0.48 |
| 1:A:40:LEU:HD23 | 1:A:41:SER:N | 2.28 | 0.48 |
| 1:A:68:ALA:O | 1:A:72:VAL:HG23 | 2.13 | 0.48 |
| 1:A:128:LEU:O | 1:A:129:LEU:CB | 2.61 | 0.48 |
| 1:A:148:ASN:HA | 1:A:480:ILE:HA | 1.96 | 0.48 |
| 1:A:401:GLU:HG2 | 1:A:433:LEU:HD22 | 1.94 | 0.48 |
| 1:D:159:LEU:CD2 | 1:D:163:LYS:HD3 | 2.41 | 0.48 |
| 1:D:324:HIS:HB2 | 1:D:329:LYS:HZ1 | 1.75 | 0.48 |
| 1:D:392:ARG:HD3 | 1:D:484:PHE:CE1 | 2.49 | 0.48 |
| 1:E:381:LEU:HD13 | 1:E:381:LEU:C | 2.34 | 0.48 |
| 1:F:108:ILE:HB | 1:O:446:ALA:HB2 | 1.95 | 0.48 |
| 1:F:108:ILE:HG13 | 1:O:444:ASP:OD1 | 2.14 | 0.48 |
| 1:F:375:ARG:HH11 | 1:F:375:ARG:CG | 2.26 | 0.48 |
| 1:F:446:ALA:HB1 | 1:O:418:LYS:CE | 2.44 | 0.48 |
| 1:J:203:GLU:HG2 | 1:J:350:SER:HB2 | 1.94 | 0.48 |
| 1:K:191:LYS:HD2 | 1:K:344:ASP:OD1 | 2.14 | 0.48 |
| 1:K:216:PRO:HG2 | 1:K:295:GLY:HA2 | 1.94 | 0.48 |
| 1:L:57:ILE:HG23 | 1:L:58:LEU:HD23 | 1.96 | 0.48 |
| 1:L:83:GLY:HA3 | 1:L:382:CYS:HB3 | 1.96 | 0.48 |
| 1:L:222:ALA:HA | 1:L:275:ASN:OD1 | 2.14 | 0.48 |
| 1:M:190:LYS:HG3 | 1:M:370:LEU:CG | 2.44 | 0.48 |
| 1:M:485:GLN:CB | 1:M:489:GLN:HE22 | 2.26 | 0.48 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:N:386:GLN:HG2 | 1:N:485:GLN:HG2 | 1.96 | 0.48 |
| 1:O:119:GLU:OE2 | 1:O:419:GLU:HG2 | 2.14 | 0.48 |
| 1:P:116:GLY:HA3 | 1:P:422:ALA:HB1 | 1.95 | 0.48 |
| 1:P:219:ILE:HD13 | 1:P:276:CYS:HB2 | 1.95 | 0.48 |
| 1:B:101:GLU:O | 1:B:104:ILE:HG12 | 2.14 | 0.48 |
| 1:C:36:ASP:O | 1:C:37:LYS:HD3 | 2.14 | 0.48 |
| 1:C:108:ILE:HG22 | 1:C:109:HIS:N | 2.29 | 0.48 |
| 1:C:381:LEU:HD13 | 1:C:381:LEU:C | 2.35 | 0.48 |
| 1:D:317:GLU:OE2 | 1:D:329:LYS:HD2 | 2.13 | 0.48 |
| 1:E:311:ALA:HA | 1:E:314:THR:HG22 | 1.96 | 0.48 |
| 1:E:324:HIS:O | 1:E:328:VAL:HG23 | 2.14 | 0.48 |
| 1:E:475:MET:SD | 1:E:480:ILE:HB | 2.54 | 0.48 |
| 1:F:96:LEU:HD21 | 1:F:117:TRP:HZ2 | 1.78 | 0.48 |
| 1:G:402:MET:HG2 | 1:G:431:ARG:HH22 | 1.79 | 0.48 |
| 1:H:206:LEU:HD21 | 1:H:346:LEU:HB2 | 1.96 | 0.48 |
| 1:H:225:LEU:HD11 | 1:H:324:HIS:CE1 | 2.49 | 0.48 |
| 1:I:96:LEU:HD13 | 1:I:97:LEU:N | 2.29 | 0.48 |
| 1:K:32:PRO:HG2 | 1:K:467:MET:CE | 2.43 | 0.48 |
| 1:K:115:ALA:O | 1:K:119:GLU:HG2 | 2.14 | 0.48 |
| 1:K:170:ALA:O | 1:K:173:ALA:HB3 | 2.14 | 0.48 |
| 1:L:431:ARG:HH21 | 1:L:434:PRO:HG2 | 1.79 | 0.48 |
| 1:N:117:TRP:HD1 | 1:N:495:ALA:HB1 | 1.79 | 0.48 |
| 1:N:154:LEU:HD13 | 1:N:167:THR:OG1 | 2.14 | 0.48 |
| 1:O:65:ASN:CG | 1:O:66:PRO:HD3 | 2.34 | 0.48 |
| 1:P:321:THR:HG22 | 1:P:322:PHE:H | 1.78 | 0.48 |
| 1:P:402:MET:CE | 1:P:453:ARG:HG3 | 2.43 | 0.48 |
| 1:C:27:LYS:O | 1:C:436:ILE:HD11 | 2.14 | 0.48 |
| 1:C:176:ARG:NH2 | 1:C:360:ILE:HG13 | 2.29 | 0.48 |
| 1:D:143:ARG:HA | 1:D:143:ARG:HE | 1.78 | 0.48 |
| 1:D:443:TYR:CE1 | 1:D:470:GLY:HA3 | 2.49 | 0.48 |
| 1:E:196:LEU:C | 1:E:196:LEU:HD13 | 2.34 | 0.48 |
| 1:H:447:ASP:HA | 1:P:417:GLY:HA2 | 1.96 | 0.48 |
| 1:I:146:LEU:HB2 | 1:I:171:VAL:CG1 | 2.43 | 0.48 |
| 1:I:216:PRO:HG2 | 1:I:295:GLY:CA | 2.43 | 0.48 |
| 1:I:332:SER:OG | 1:I:349:PHE:HZ | 1.96 | 0.48 |
| 1:K:38:ILE:HA | 1:K:50:VAL:HB | 1.96 | 0.48 |
| 1:L:96:LEU:HD21 | 1:L:117:TRP:HZ2 | 1.79 | 0.48 |
| 1:M:82:VAL:CG2 | 1:M:486:VAL:HG12 | 2.44 | 0.48 |
| 1:O:59:LYS:HE2 | 1:O:76:ARG:N | 2.29 | 0.48 |
| 1:O:152:THR:CB | 1:O:480:ILE:HD12 | 2.44 | 0.48 |
| 1:O:225:LEU:HD11 | 1:O:324:HIS:CE1 | 2.49 | 0.48 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:P:283:ILE:HG22 | 1:P:300:GLU:CG | 2.43 | 0.48 |
| 1:B:188:VAL:CB | 1:B:377:LEU:HD22 | 2.44 | 0.47 |
| 1:B:448:LEU:HD11 | 1:B:465:LEU:HD11 | 1.96 | 0.47 |
| 1:C:412:ALA:HB1 | 1:C:424:GLU:HB3 | 1.96 | 0.47 |
| 1:D:38:ILE:O | 1:E:507:ILE:HA | 2.14 | 0.47 |
| 1:E:263:LYS:O | 1:E:267:GLU:HG2 | 2.14 | 0.47 |
| 1:E:312:LEU:HD13 | 1:E:354:LEU:CD2 | 2.43 | 0.47 |
| 1:E:443:TYR:CD2 | 1:E:470:GLY:HA3 | 2.49 | 0.47 |
| 1:F:192:LEU:H | 1:F:192:LEU:CD1 | 2.23 | 0.47 |
| 1:G:108:ILE:HD11 | 1:N:447:ASP:HB2 | 1.95 | 0.47 |
| 1:I:58:LEU:HB3 | 1:I:72:VAL:CG1 | 2.43 | 0.47 |
| 1:I:222:ALA:HA | 1:I:275:ASN:CG | 2.34 | 0.47 |
| 1:J:179:GLY:HA2 | 1:J:389:LYS:CE | 2.44 | 0.47 |
| 1:K:61:ILE:HG22 | 1:K:63:VAL:HG23 | 1.96 | 0.47 |
| 1:K:124:ALA:O | 1:K:127:ALA:HB3 | 2.13 | 0.47 |
| 1:L:166:PHE:CE1 | 1:L:198:ASP:CB | 2.97 | 0.47 |
| 1:L:334:LYS:HD3 | 1:L:351:GLY:CA | 2.43 | 0.47 |
| 1:M:124:ALA:HB1 | 1:M:491:LEU:CD1 | 2.38 | 0.47 |
| 1:O:394:VAL:HG23 | 1:O:482:GLU:HB2 | 1.95 | 0.47 |
| 1:A:154:LEU:HD22 | 1:A:167:THR:OG1 | 2.14 | 0.47 |
| 1:B:4:ASP:HB2 | 1:B:508:ILE:HG12 | 1.95 | 0.47 |
| 1:B:128:LEU:HD22 | 1:B:488:ARG:HG2 | 1.96 | 0.47 |
| 1:B:354:LEU:HD21 | 1:B:356:GLU:HB3 | 1.96 | 0.47 |
| 1:C:146:LEU:HD21 | 1:C:167:THR:HG23 | 1.97 | 0.47 |
| 1:C:164:ASP:O | 1:C:167:THR:HG22 | 2.14 | 0.47 |
| 1:C:181:GLY:O | 1:C:182:ASN:HB2 | 2.14 | 0.47 |
| 1:C:204:GLY:O | 1:C:359:THR:HB | 2.14 | 0.47 |
| 1:E:143:ARG:HA | 1:E:143:ARG:HE | 1.77 | 0.47 |
| 1:E:334:LYS:HD3 | 1:E:351:GLY:CA | 2.45 | 0.47 |
| 1:E:412:ALA:CB | 1:E:424:GLU:HB3 | 2.44 | 0.47 |
| 1:E:442:GLY:HA3 | 1:G:108:ILE:O | 2.14 | 0.47 |
| 1:G:256:HIS:O | 1:G:259:LYS:HB2 | 2.15 | 0.47 |
| 1:J:171:VAL:O | 1:J:175:LEU:HG | 2.14 | 0.47 |
| 1:J:226:ILE:HA | 1:J:278:ILE:O | 2.14 | 0.47 |
| 1:J:369:ILE:HG13 | 1:J:372:GLU:OE1 | 2.14 | 0.47 |
| 1:K:140:VAL:H | 1:K:178:LYS:HZ2 | 1.61 | 0.47 |
| 1:L:261:LYS:O | 1:L:264:GLU:HG2 | 2.14 | 0.47 |
| 1:M:22:ILE:HD12 | 1:M:90:THR:CG2 | 2.44 | 0.47 |
| 1:M:41:SER:O | 1:M:45:ASP:HB2 | 2.14 | 0.47 |
| 1:N:96:LEU:HD23 | 1:N:498:ALA:HB1 | 1.95 | 0.47 |
| 1:N:334:LYS:CB | 1:N:351:GLY:HA3 | 2.45 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:O:287:PRO:O | 1:O:291:PHE:HD1 | 1.96 | 0.47 |
| 1:P:111:GLN:O | 1:P:114:ILE:HB | 2.14 | 0.47 |
| 1:B:509:LYS:HG3 | 1:B:510:ALA:N | 2.29 | 0.47 |
| 1:C:143:ARG:HA | 1:C:143:ARG:HE | 1.79 | 0.47 |
| 1:C:192:LEU:O | 1:C:366:THR:HG21 | 2.15 | 0.47 |
| 1:C:394:VAL:CG2 | 1:C:482:GLU:HB2 | 2.44 | 0.47 |
| 1:D:40:LEU:H | 1:E:507:ILE:HG21 | 1.79 | 0.47 |
| 1:D:163:LYS:CG | 1:D:166:PHE:HB2 | 2.44 | 0.47 |
| 1:D:324:HIS:HB2 | 1:D:329:LYS:CE | 2.44 | 0.47 |
| 1:E:451:GLN:NE2 | 1:E:471:THR:HA | 2.29 | 0.47 |
| 1:G:38:ILE:HG21 | 1:G:368:GLN:OE1 | 2.14 | 0.47 |
| 1:G:417:GLY:CA | 1:N:450:ALA:HB1 | 2.43 | 0.47 |
| 1:G:431:ARG:O | 1:G:434:PRO:HD2 | 2.14 | 0.47 |
| 1:H:265:LYS:NZ | 1:H:287:PRO:HG3 | 2.24 | 0.47 |
| 1:H:394:VAL:HB | 1:H:400:SER:OG | 2.14 | 0.47 |
| 1:I:206:LEU:HD21 | 1:I:346:LEU:CB | 2.44 | 0.47 |
| 1:I:431:ARG:O | 1:I:434:PRO:HD2 | 2.13 | 0.47 |
| 1:K:368:GLN:OE1 | 1:P:500:VAL:HG12 | 2.14 | 0.47 |
| 1:L:138:ASP:O | 1:L:139:GLU:HB2 | 2.14 | 0.47 |
| 1:M:79:ASP:HA | 1:M:83:GLY:N | 2.29 | 0.47 |
| 1:M:111:GLN:HA | 1:M:114:ILE:HG12 | 1.95 | 0.47 |
| 1:M:164:ASP:O | 1:M:167:THR:HG22 | 2.14 | 0.47 |
| 1:N:108:ILE:CG2 | 1:N:109:HIS:N | 2.78 | 0.47 |
| 1:N:176:ARG:HD2 | 1:N:358:CYS:N | 2.29 | 0.47 |
| 1:O:194:GLY:HA2 | 1:O:364:GLY:C | 2.35 | 0.47 |
| 1:P:148:ASN:HA | 1:P:480:ILE:HA | 1.96 | 0.47 |
| 1:P:259:LYS:HA | 1:P:259:LYS:HE3 | 1.96 | 0.47 |
| 1:P:280:ARG:O | 1:P:281:GLN:HB3 | 2.13 | 0.47 |
| 1:A:469:GLU:HG2 | 1:A:471:THR:OG1 | 2.14 | 0.47 |
| 1:B:38:ILE:HG13 | 1:F:507:ILE:HG12 | 1.96 | 0.47 |
| 1:B:42:SER:H | 1:F:512:PRO:HG3 | 1.78 | 0.47 |
| 1:C:401:GLU:HG2 | 1:C:433:LEU:HD22 | 1.95 | 0.47 |
| 1:D:39:LEU:O | 1:D:39:LEU:HG | 2.15 | 0.47 |
| 1:D:117:TRP:CZ2 | 1:D:495:ALA:CB | 2.97 | 0.47 |
| 1:D:124:ALA:O | 1:D:128:LEU:HG | 2.15 | 0.47 |
| 1:E:211:ILE:HG22 | 1:E:288:GLU:OE1 | 2.14 | 0.47 |
| 1:E:367:GLN:HG2 | 1:E:369:ILE:H | 1.79 | 0.47 |
| 1:F:84:ASP:CG | 1:F:85:GLY:H | 2.17 | 0.47 |
| 1:F:159:LEU:HG | 1:F:163:LYS:CB | 2.45 | 0.47 |
| 1:F:222:ALA:HA | 1:F:275:ASN:CB | 2.44 | 0.47 |
| 1:F:225:LEU:HB2 | 1:F:274:ILE:HD11 | 1.95 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:G:28:SER:O | 1:G:34:GLY:HA2 | 2.14 | 0.47 |
| 1:H:178:LYS:CD | 1:H:388:VAL:HG11 | 2.39 | 0.47 |
| 1:H:188:VAL:HG11 | 1:H:373:ALA:O | 2.14 | 0.47 |
| 1:H:274:ILE:HG23 | 1:H:296:VAL:CG2 | 2.45 | 0.47 |
| 1:I:274:ILE:O | 1:I:274:ILE:HG23 | 2.15 | 0.47 |
| 1:J:219:ILE:HD13 | 1:J:276:CYS:HB2 | 1.95 | 0.47 |
| 1:J:265:LYS:HE2 | 1:J:322:PHE:CE1 | 2.49 | 0.47 |
| 1:K:32:PRO:HB2 | 1:K:467:MET:SD | 2.54 | 0.47 |
| 1:K:397:GLY:HA3 | 1:K:475:MET:HE1 | 1.95 | 0.47 |
| 1:L:187:HIS:O | 1:L:359:THR:HG23 | 2.13 | 0.47 |
| 1:L:325:PRO:O | 1:L:326:GLU:HG2 | 2.13 | 0.47 |
| 1:L:412:ALA:CB | 1:L:424:GLU:HB3 | 2.44 | 0.47 |
| 1:M:35:MET:HG2 | 1:O:503:ARG:CG | 2.43 | 0.47 |
| 1:O:112:THR:HG22 | 1:O:418:LYS:CE | 2.45 | 0.47 |
| 1:P:206:LEU:HD21 | 1:P:348:HIS:NE2 | 2.30 | 0.47 |
| 1:P:337:GLU:HG3 | 1:P:339:VAL:HG23 | 1.96 | 0.47 |
| 1:B:122:LYS:O | 1:B:126:GLN:HG3 | 2.14 | 0.47 |
| 1:B:171:VAL:O | 1:B:174:VAL:HG22 | 2.15 | 0.47 |
| 1:B:211:ILE:HG12 | 1:B:298:ALA:H | 1.79 | 0.47 |
| 1:C:280:ARG:O | 1:C:280:ARG:CG | 2.63 | 0.47 |
| 1:D:496:GLU:O | 1:D:500:VAL:HG13 | 2.14 | 0.47 |
| 1:D:503:ARG:HB3 | 1:H:37:LYS:HD3 | 1.96 | 0.47 |
| 1:E:188:VAL:CG1 | 1:E:360:ILE:HB | 2.44 | 0.47 |
| 1:F:108:ILE:CG1 | 1:O:446:ALA:H | 2.28 | 0.47 |
| 1:F:263:LYS:HA | 1:F:266:VAL:HG12 | 1.95 | 0.47 |
| 1:G:313:VAL:HG13 | 1:G:352:VAL:HB | 1.96 | 0.47 |
| 1:I:37:LYS:O | 1:I:50:VAL:HA | 2.14 | 0.47 |
| 1:I:92:LEU:HA | 1:I:95:GLU:OE2 | 2.15 | 0.47 |
| 1:I:191:LYS:HD3 | 1:I:346:LEU:HD11 | 1.95 | 0.47 |
| 1:I:397:GLY:HA3 | 1:I:475:MET:HE1 | 1.96 | 0.47 |
| 1:J:38:ILE:CG2 | 1:J:50:VAL:HB | 2.43 | 0.47 |
| 1:J:171:VAL:O | 1:J:174:VAL:HG22 | 2.13 | 0.47 |
| 1:J:345:LYS:O | 1:J:346:LEU:HD13 | 2.14 | 0.47 |
| 1:K:102:SER:O | 1:K:105:ALA:HB3 | 2.14 | 0.47 |
| 1:K:163:LYS:HG3 | 1:K:166:PHE:HB2 | 1.95 | 0.47 |
| 1:K:169:LEU:HD11 | 1:K:201:LEU:HB2 | 1.97 | 0.47 |
| 1:K:185:ALA:HB3 | 1:K:357:ALA:HB2 | 1.95 | 0.47 |
| 1:L:57:ILE:C | 1:L:57:ILE:HD13 | 2.35 | 0.47 |
| 1:L:318:ILE:HG21 | 1:P:285:ASN:O | 2.15 | 0.47 |
| 1:L:321:THR:O | 1:L:323:ASP:N | 2.48 | 0.47 |
| 1:M:510:ALA:O | 1:M:511:ALA:HB3 | 2.15 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:N:17:ILE:O | 1:N:20:ILE:HG22 | 2.14 | 0.47 |
| 1:N:57:ILE:HD13 | 1:N:57:ILE:O | 2.15 | 0.47 |
| 1:N:99:GLU:O | 1:N:103:LEU:HD13 | 2.15 | 0.47 |
| 1:O:40:LEU:HD22 | 1:O:41:SER:H | 1.79 | 0.47 |
| 1:O:40:LEU:HD23 | 1:O:48:LEU:HD12 | 1.95 | 0.47 |
| 1:O:68:ALA:O | 1:O:72:VAL:HG23 | 2.15 | 0.47 |
| 1:O:133:VAL:HG21 | 1:O:394:VAL:C | 2.34 | 0.47 |
| 1:O:186:ILE:HD13 | 1:O:381:LEU:HD21 | 1.95 | 0.47 |
| 1:O:274:ILE:HG23 | 1:O:274:ILE:O | 2.15 | 0.47 |
| 1:O:348:HIS:O | 1:O:349:PHE:C | 2.52 | 0.47 |
| 1:B:225:LEU:HG | 1:B:277:PHE:CE1 | 2.49 | 0.47 |
| 1:B:313:VAL:HG13 | 1:B:352:VAL:CG2 | 2.44 | 0.47 |
| 1:B:334:LYS:CB | 1:B:351:GLY:HA3 | 2.44 | 0.47 |
| 1:C:39:LEU:HD21 | 1:H:508:ILE:CD1 | 2.41 | 0.47 |
| 1:C:280:ARG:HD3 | 1:C:304:PHE:HB2 | 1.96 | 0.47 |
| 1:E:130:ASN:O | 1:E:131:SER:HB2 | 2.14 | 0.47 |
| 1:E:133:VAL:HB | 1:E:393:THR:O | 2.14 | 0.47 |
| 1:E:313:VAL:HG13 | 1:E:352:VAL:CB | 2.43 | 0.47 |
| 1:F:451:GLN:NE2 | 1:F:471:THR:HA | 2.29 | 0.47 |
| 1:G:236:ILE:CG2 | 1:G:237:LYS:N | 2.77 | 0.47 |
| 1:H:191:LYS:HD3 | 1:H:191:LYS:HA | 1.76 | 0.47 |
| 1:H:197:ALA:O | 1:H:198:ASP:HB2 | 2.14 | 0.47 |
| 1:H:397:GLY:HA3 | 1:H:475:MET:CE | 2.44 | 0.47 |
| 1:I:33:LYS:HD2 | 1:I:33:LYS:N | 2.29 | 0.47 |
| 1:I:61:ILE:HG12 | 1:I:63:VAL:HG22 | 1.96 | 0.47 |
| 1:I:219:ILE:CD1 | 1:I:276:CYS:HB2 | 2.44 | 0.47 |
| 1:I:222:ALA:HA | 1:I:275:ASN:OD1 | 2.14 | 0.47 |
| 1:I:510:ALA:H | 1:O:38:ILE:CD1 | 2.21 | 0.47 |
| 1:J:143:ARG:HA | 1:J:143:ARG:NE | 2.30 | 0.47 |
| 1:J:157:LYS:HB3 | 1:J:159:LEU:HD21 | 1.97 | 0.47 |
| 1:K:231:MET:CG | 1:K:283:ILE:HG13 | 2.43 | 0.47 |
| 1:K:269:ILE:CG1 | 1:K:274:ILE:HG21 | 2.44 | 0.47 |
| 1:L:70:VAL:HG11 | 1:P:48:LEU:HG | 1.97 | 0.47 |
| 1:L:156:SER:OG | 1:L:157:LYS:HD2 | 2.15 | 0.47 |
| 1:L:188:VAL:HA | 1:L:360:ILE:O | 2.14 | 0.47 |
| 1:L:228:ASN:CG | 1:L:319:ALA:HB3 | 2.35 | 0.47 |
| 1:M:114:ILE:HA | 1:M:117:TRP:CZ3 | 2.49 | 0.47 |
| 1:M:136:GLY:O | 1:M:137:SER:HB3 | 2.13 | 0.47 |
| 1:N:171:VAL:HG12 | 1:N:384:LEU:HG | 1.96 | 0.47 |
| 1:O:431:ARG:HH21 | 1:O:434:PRO:HG2 | 1.79 | 0.47 |
| 1:P:174:VAL:O | 1:P:177:LEU:HB3 | 2.15 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:A:413:SER:OG | 1:M:457:SER:HB2 | 2.15 | 0.47 |
| 1:A:505:ASP:HB3 | 1:F:37:LYS:HD3 | 1.96 | 0.47 |
| 1:B:3:ALA:HB1 | 1:B:508:ILE:CD1 | 2.45 | 0.47 |
| 1:B:397:GLY:HA3 | 1:B:475:MET:CE | 2.45 | 0.47 |
| 1:B:413:SER:O | 1:I:454:ALA:HA | 2.15 | 0.47 |
| 1:B:499:GLU:O | 1:B:503:ARG:HG2 | 2.15 | 0.47 |
| 1:D:1:ALA:HA | 1:D:509:LYS:HD2 | 1.97 | 0.47 |
| 1:D:125:ARG:HA | 1:D:128:LEU:HD12 | 1.95 | 0.47 |
| 1:D:146:LEU:HD13 | 1:D:167:THR:O | 2.15 | 0.47 |
| 1:D:163:LYS:HZ2 | 1:D:376:SER:HB3 | 1.78 | 0.47 |
| 1:E:173:ALA:O | 1:E:176:ARG:HG2 | 2.14 | 0.47 |
| 1:E:354:LEU:HD21 | 1:E:356:GLU:HB3 | 1.96 | 0.47 |
| 1:E:451:GLN:HG3 | 1:E:472:ILE:HG23 | 1.96 | 0.47 |
| 1:F:141:LYS:CG | 1:F:144:GLN:HB2 | 2.45 | 0.47 |
| 1:F:203:GLU:HG2 | 1:F:350:SER:HB2 | 1.97 | 0.47 |
| 1:F:365:ALA:O | 1:F:366:THR:HB | 2.15 | 0.47 |
| 1:F:413:SER:HG | 1:O:406:HIS:CE1 | 2.32 | 0.47 |
| 1:G:434:PRO:HB3 | 1:G:452:LEU:HD23 | 1.95 | 0.47 |
| 1:G:452:LEU:HD22 | 1:G:465:LEU:HD21 | 1.96 | 0.47 |
| 1:H:32:PRO:HG3 | 1:H:155:SER:HB3 | 1.96 | 0.47 |
| 1:H:111:GLN:O | 1:H:114:ILE:HB | 2.15 | 0.47 |
| 1:H:269:ILE:CG2 | 1:H:274:ILE:HG21 | 2.39 | 0.47 |
| 1:I:109:HIS:CD2 | 1:O:440:ASN:HA | 2.50 | 0.47 |
| 1:I:214:ASN:O | 1:I:215:GLN:HB2 | 2.14 | 0.47 |
| 1:J:158:LEU:O | 1:J:160:THR:N | 2.48 | 0.47 |
| 1:J:226:ILE:HB | 1:J:317:GLU:OE2 | 2.14 | 0.47 |
| 1:K:191:LYS:HZ3 | 1:K:346:LEU:HD11 | 1.78 | 0.47 |
| 1:K:215:GLN:HE21 | 1:K:292:GLY:N | 2.13 | 0.47 |
| 1:K:448:LEU:HD13 | 1:K:448:LEU:C | 2.35 | 0.47 |
| 1:L:114:ILE:HD13 | 1:L:117:TRP:HZ3 | 1.78 | 0.47 |
| 1:L:509:LYS:HE3 | 1:P:40:LEU:HD12 | 1.96 | 0.47 |
| 1:M:41:SER:HB2 | 1:M:45:ASP:OD2 | 2.15 | 0.47 |
| 1:M:97:LEU:HD13 | 1:M:97:LEU:N | 2.28 | 0.47 |
| 1:M:106:LYS:C | 1:M:107:LYS:HE2 | 2.35 | 0.47 |
| 1:M:143:ARG:HA | 1:M:143:ARG:HE | 1.80 | 0.47 |
| 1:M:431:ARG:O | 1:M:434:PRO:HD2 | 2.14 | 0.47 |
| 1:N:92:LEU:HA | 1:N:95:GLU:OE2 | 2.15 | 0.47 |
| 1:N:127:ALA:HB2 | 1:N:404:MET:HG3 | 1.95 | 0.47 |
| 1:N:146:LEU:HB2 | 1:N:171:VAL:CG1 | 2.45 | 0.47 |
| 1:N:222:ALA:HA | 1:N:275:ASN:CG | 2.34 | 0.47 |
| 1:N:323:ASP:C | 1:N:325:PRO:HD2 | 2.34 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:N:369:ILE:HA | 1:N:372:GLU:OE2 | 2.14 | 0.47 |
| 1:N:433:LEU:HB2 | 1:N:434:PRO:HD3 | 1.95 | 0.47 |
| 1:O:78:GLN:NE2 | 1:O:82:VAL:HG13 | 2.30 | 0.47 |
| 1:O:133:VAL:CG2 | 1:O:394:VAL:HA | 2.45 | 0.47 |
| 1:P:196:LEU:C | 1:P:196:LEU:HD13 | 2.35 | 0.47 |
| 1:P:222:ALA:HA | 1:P:275:ASN:CG | 2.35 | 0.47 |
| 1:P:274:ILE:HG23 | 1:P:274:ILE:O | 2.15 | 0.47 |
| 1:B:25:LEU:N | 1:B:25:LEU:HD23 | 2.29 | 0.47 |
| 1:B:39:LEU:HB3 | 1:F:510:ALA:HB1 | 1.96 | 0.47 |
| 1:B:417:GLY:HA3 | 1:I:451:GLN:HB3 | 1.97 | 0.47 |
| 1:B:451:GLN:NE2 | 1:B:471:THR:HA | 2.30 | 0.47 |
| 1:C:500:VAL:HA | 1:C:503:ARG:HG3 | 1.97 | 0.47 |
| 1:D:449:VAL:O | 1:D:453:ARG:HG3 | 2.15 | 0.47 |
| 1:E:59:LYS:CE | 1:E:76:ARG:HB2 | 2.44 | 0.47 |
| 1:E:146:LEU:HB2 | 1:E:171:VAL:HG21 | 1.96 | 0.47 |
| 1:G:117:TRP:C | 1:G:119:GLU:H | 2.17 | 0.47 |
| 1:G:373:ALA:HA | 1:G:376:SER:OG | 2.15 | 0.47 |
| 1:H:188:VAL:HG11 | 1:H:377:LEU:HB2 | 1.97 | 0.47 |
| 1:H:317:GLU:HB3 | 1:H:329:LYS:HA | 1.97 | 0.47 |
| 1:I:40:LEU:HB3 | 1:N:508:ILE:CA | 2.45 | 0.47 |
| 1:I:96:LEU:HD13 | 1:I:96:LEU:C | 2.36 | 0.47 |
| 1:I:225:LEU:HD11 | 1:I:324:HIS:ND1 | 2.29 | 0.47 |
| 1:J:58:LEU:HB3 | 1:J:72:VAL:HG11 | 1.97 | 0.47 |
| 1:J:162:HIS:HB3 | 1:J:198:ASP:OD2 | 2.15 | 0.47 |
| 1:J:505:ASP:HB3 | 1:N:37:LYS:HZ2 | 1.79 | 0.47 |
| 1:K:33:LYS:HB2 | 1:K:440:ASN:CB | 2.45 | 0.47 |
| 1:K:57:ILE:HG23 | 1:K:58:LEU:CD2 | 2.44 | 0.47 |
| 1:K:341:ILE:O | 1:K:341:ILE:HG22 | 2.15 | 0.47 |
| 1:K:495:ALA:O | 1:K:499:GLU:HB2 | 2.15 | 0.47 |
| 1:M:53:ASP:H | 1:M:375:ARG:NH1 | 2.13 | 0.47 |
| 1:O:104:ILE:HG13 | 1:O:105:ALA:N | 2.28 | 0.47 |
| 1:P:216:PRO:HG2 | 1:P:295:GLY:CA | 2.44 | 0.47 |
| 1:P:433:LEU:HB2 | 1:P:434:PRO:HD3 | 1.95 | 0.47 |
| 1:B:171:VAL:CA | 1:B:174:VAL:HG22 | 2.43 | 0.47 |
| 1:B:219:ILE:HB | 1:B:275:ASN:HB3 | 1.97 | 0.47 |
| 1:B:225:LEU:HD11 | 1:B:324:HIS:ND1 | 2.30 | 0.47 |
| 1:B:277:PHE:O | 1:B:298:ALA:HA | 2.15 | 0.47 |
| 1:H:231:MET:CG | 1:H:283:ILE:HG13 | 2.44 | 0.47 |
| 1:H:259:LYS:HA | 1:H:259:LYS:HE3 | 1.97 | 0.47 |
| 1:H:341:ILE:O | 1:H:343:GLU:N | 2.48 | 0.47 |
| 1:I:119:GLU:HG3 | 1:I:419:GLU:HB3 | 1.96 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:J:402:MET:HG2 | 1:J:431:ARG:HH22 | 1.79 | 0.47 |
| 1:J:404:MET:O | 1:J:408:VAL:HG22 | 2.15 | 0.47 |
| 1:L:38:ILE:O | 1:L:39:LEU:HD23 | 2.14 | 0.47 |
| 1:L:326:GLU:HG3 | 1:L:327:LEU:N | 2.30 | 0.47 |
| 1:M:174:VAL:CG1 | 1:M:384:LEU:HD13 | 2.45 | 0.47 |
| 1:N:107:LYS:O | 1:N:107:LYS:CG | 2.63 | 0.47 |
| 1:O:452:LEU:HD13 | 1:O:465:LEU:CD1 | 2.44 | 0.47 |
| 1:O:508:ILE:HG12 | 1:O:509:LYS:H | 1.79 | 0.47 |
| 1:A:141:LYS:HG2 | 1:A:144:GLN:HB2 | 1.97 | 0.47 |
| 1:B:37:LYS:HA | 1:F:507:ILE:HG13 | 1.98 | 0.47 |
| 1:B:163:LYS:HA | 1:B:166:PHE:HD1 | 1.79 | 0.47 |
| 1:B:173:ALA:O | 1:B:176:ARG:HG2 | 2.15 | 0.47 |
| 1:B:216:PRO:HG3 | 1:B:295:GLY:HA2 | 1.94 | 0.47 |
| 1:D:150:ALA:O | 1:D:154:LEU:HD13 | 2.15 | 0.47 |
| 1:D:207:LEU:HD12 | 1:D:299:ILE:HD13 | 1.97 | 0.47 |
| 1:F:324:HIS:HB2 | 1:F:329:LYS:HE2 | 1.97 | 0.47 |
| 1:F:412:ALA:CB | 1:F:424:GLU:HB3 | 2.44 | 0.47 |
| 1:F:418:LYS:HG2 | 1:O:450:ALA:CB | 2.44 | 0.47 |
| 1:G:274:ILE:HG23 | 1:G:296:VAL:CG2 | 2.45 | 0.47 |
| 1:J:52:ASN:CG | 1:J:157:LYS:HG2 | 2.35 | 0.47 |
| 1:J:324:HIS:O | 1:J:328:VAL:HG22 | 2.15 | 0.47 |
| 1:L:117:TRP:HA | 1:L:120:ALA:CB | 2.45 | 0.47 |
| 1:L:146:LEU:HD13 | 1:L:171:VAL:HG13 | 1.97 | 0.47 |
| 1:L:402:MET:SD | 1:L:453:ARG:HA | 2.55 | 0.47 |
| 1:M:38:ILE:HG22 | 1:M:50:VAL:HB | 1.97 | 0.47 |
| 1:M:408:VAL:HG23 | 1:M:427:ALA:HB1 | 1.96 | 0.47 |
| 1:M:500:VAL:HA | 1:M:503:ARG:NH1 | 2.27 | 0.47 |
| 1:N:48:LEU:HD12 | 1:N:48:LEU:H | 1.80 | 0.47 |
| 1:N:92:LEU:HD21 | 1:N:433:LEU:HD11 | 1.95 | 0.47 |
| 1:N:114:ILE:HA | 1:N:117:TRP:CE3 | 2.50 | 0.47 |
| 1:N:452:LEU:HD11 | 1:N:456:HIS:CE1 | 2.50 | 0.47 |
| 1:O:231:MET:HE1 | 1:O:265:LYS:HD3 | 1.96 | 0.47 |
| 1:P:452:LEU:HD11 | 1:P:456:HIS:HE1 | 1.80 | 0.47 |
| 1:A:411:LEU:HA | 1:A:414:ARG:HB3 | 1.95 | 0.46 |
| 1:B:30:LEU:HD13 | 1:B:436:ILE:HD11 | 1.97 | 0.46 |
| 1:B:256:HIS:O | 1:B:259:LYS:HB2 | 2.15 | 0.46 |
| 1:B:352:VAL:HG22 | 1:B:355:GLY:H | 1.80 | 0.46 |
| 1:C:14:SER:O | 1:C:17:ILE:HG22 | 2.14 | 0.46 |
| 1:D:89:VAL:HA | 1:D:490:VAL:HB | 1.96 | 0.46 |
| 1:D:339:VAL:HB | 1:D:348:HIS:CE1 | 2.51 | 0.46 |
| 1:E:204:GLY:HA3 | 1:E:349:PHE:O | 2.15 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:F:159:LEU:H | 1:F:159:LEU:CD2 | 2.28 | 0.46 |
| 1:G:269:ILE:HG12 | 1:G:274:ILE:HG21 | 1.97 | 0.46 |
| 1:H:204:GLY:HA3 | 1:H:349:PHE:O | 2.15 | 0.46 |
| 1:H:339:VAL:HG13 | 1:H:340:MET:N | 2.31 | 0.46 |
| 1:J:173:ALA:O | 1:J:176:ARG:HG2 | 2.15 | 0.46 |
| 1:J:385:ALA:O | 1:J:388:VAL:HG12 | 2.15 | 0.46 |
| 1:K:126:GLN:NE2 | 1:K:411:LEU:HD22 | 2.30 | 0.46 |
| 1:L:119:GLU:OE2 | 1:L:419:GLU:HB3 | 2.14 | 0.46 |
| 1:L:385:ALA:O | 1:L:388:VAL:HB | 2.15 | 0.46 |
| 1:N:207:LEU:HB3 | 1:N:347:ILE:CG2 | 2.45 | 0.46 |
| 1:N:334:LYS:HD3 | 1:N:334:LYS:C | 2.35 | 0.46 |
| 1:N:363:ARG:O | 1:N:370:LEU:HD11 | 2.14 | 0.46 |
| 1:N:434:PRO:HB3 | 1:N:452:LEU:CD2 | 2.45 | 0.46 |
| 1:N:448:LEU:C | 1:N:448:LEU:HD13 | 2.36 | 0.46 |
| 1:O:82:VAL:CA | 1:O:386:GLN:HG3 | 2.45 | 0.46 |
| 1:O:96:LEU:O | 1:O:96:LEU:HD22 | 2.15 | 0.46 |
| 1:P:145:ASP:OD2 | 1:P:175:LEU:HD11 | 2.16 | 0.46 |
| 1:B:54:GLY:O | 1:B:58:LEU:HD23 | 2.15 | 0.46 |
| 1:B:443:TYR:CD1 | 1:B:470:GLY:CA | 2.98 | 0.46 |
| 1:B:503:ARG:HG3 | 1:B:504:VAL:HG23 | 1.97 | 0.46 |
| 1:C:310:LEU:O | 1:C:313:VAL:HB | 2.15 | 0.46 |
| 1:E:131:SER:O | 1:E:133:VAL:N | 2.49 | 0.46 |
| 1:E:337:GLU:HG3 | 1:E:339:VAL:HG23 | 1.97 | 0.46 |
| 1:F:178:LYS:HG3 | 1:F:388:VAL:CG1 | 2.45 | 0.46 |
| 1:G:71:LEU:H | 1:G:501:ILE:HD11 | 1.80 | 0.46 |
| 1:G:110:PRO:O | 1:G:113:ILE:HB | 2.15 | 0.46 |
| 1:G:206:LEU:HD11 | 1:G:346:LEU:HD23 | 1.96 | 0.46 |
| 1:I:116:GLY:HA3 | 1:I:422:ALA:CB | 2.45 | 0.46 |
| 1:J:163:LYS:HA | 1:J:166:PHE:HD1 | 1.77 | 0.46 |
| 1:J:448:LEU:HD13 | 1:J:448:LEU:C | 2.35 | 0.46 |
| 1:K:130:ASN:O | 1:K:131:SER:CB | 2.62 | 0.46 |
| 1:K:154:LEU:HD13 | 1:K:167:THR:OG1 | 2.14 | 0.46 |
| 1:K:215:GLN:HG3 | 1:K:292:GLY:HA2 | 1.96 | 0.46 |
| 1:K:219:ILE:HD12 | 1:K:275:ASN:CB | 2.45 | 0.46 |
| 1:K:433:LEU:HA | 1:K:436:ILE:HG22 | 1.97 | 0.46 |
| 1:L:102:SER:O | 1:L:105:ALA:HB3 | 2.15 | 0.46 |
| 1:L:440:ASN:HA | 1:M:109:HIS:CE1 | 2.50 | 0.46 |
| 1:M:30:LEU:HD11 | 1:M:87:THR:O | 2.15 | 0.46 |
| 1:N:146:LEU:HD22 | 1:N:168:LYS:HA | 1.96 | 0.46 |
| 1:N:216:PRO:HG2 | 1:N:295:GLY:CA | 2.46 | 0.46 |
| 1:O:222:ALA:HA | 1:O:275:ASN:OD1 | 2.14 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:P:261:LYS:O | 1:P:265:LYS:HG3 | 2.15 | 0.46 |
| 1:B:17:ILE:O | 1:B:20:ILE:HG22 | 2.15 | 0.46 |
| 1:B:51:THR:HG21 | 1:B:56:THR:HB | 1.96 | 0.46 |
| 1:B:437:ILE:HG23 | 1:B:467:MET:SD | 2.56 | 0.46 |
| 1:C:402:MET:SD | 1:C:453:ARG:HA | 2.55 | 0.46 |
| 1:D:390:ASP:HB3 | 1:D:485:GLN:HE22 | 1.78 | 0.46 |
| 1:D:484:PHE:CE2 | 1:D:488:ARG:NE | 2.80 | 0.46 |
| 1:F:11:ALA:HB3 | 1:F:506:ASN:CG | 2.36 | 0.46 |
| 1:G:17:ILE:O | 1:G:20:ILE:HG22 | 2.14 | 0.46 |
| 1:G:74:MET:CE | 1:G:493:SER:HA | 2.45 | 0.46 |
| 1:H:92:LEU:O | 1:H:95:GLU:HG2 | 2.15 | 0.46 |
| 1:H:114:ILE:HD11 | 1:H:502:LEU:HD22 | 1.98 | 0.46 |
| 1:H:191:LYS:HG3 | 1:H:343:GLU:CD | 2.36 | 0.46 |
| 1:H:222:ALA:HA | 1:H:275:ASN:CG | 2.36 | 0.46 |
| 1:H:261:LYS:O | 1:H:264:GLU:HG2 | 2.15 | 0.46 |
| 1:I:206:LEU:HD21 | 1:I:346:LEU:HB2 | 1.96 | 0.46 |
| 1:J:33:LYS:HD3 | 1:J:467:MET:CE | 2.46 | 0.46 |
| 1:J:127:ALA:CB | 1:J:404:MET:HA | 2.46 | 0.46 |
| 1:J:185:ALA:N | 1:J:309:ARG:HD2 | 2.31 | 0.46 |
| 1:K:38:ILE:CG2 | 1:K:50:VAL:HB | 2.33 | 0.46 |
| 1:K:153:THR:OG1 | 1:K:383:VAL:HG21 | 2.15 | 0.46 |
| 1:K:204:GLY:O | 1:K:349:PHE:HB3 | 2.16 | 0.46 |
| 1:L:38:ILE:O | 1:M:507:ILE:HA | 2.15 | 0.46 |
| 1:L:190:LYS:HE3 | 1:L:192:LEU:HG | 1.97 | 0.46 |
| 1:M:452:LEU:HD22 | 1:M:465:LEU:HD21 | 1.97 | 0.46 |
| 1:N:117:TRP:HE1 | 1:N:495:ALA:HA | 1.81 | 0.46 |
| 1:O:211:ILE:HG12 | 1:O:298:ALA:H | 1.79 | 0.46 |
| 1:O:443:TYR:CD2 | 1:O:470:GLY:HA2 | 2.50 | 0.46 |
| 1:P:176:ARG:HH12 | 1:P:201:LEU:HD11 | 1.79 | 0.46 |
| 1:P:211:ILE:CD1 | 1:P:297:MET:HG3 | 2.40 | 0.46 |
| 1:P:262:MET:SD | 1:P:290:LEU:HB2 | 2.55 | 0.46 |
| 1:A:509:LYS:CG | 1:A:510:ALA:H | 2.24 | 0.46 |
| 1:B:78:GLN:NE2 | 1:B:486:VAL:HA | 2.31 | 0.46 |
| 1:C:125:ARG:O | 1:C:129:LEU:N | 2.48 | 0.46 |
| 1:D:12:ARG:HB2 | 1:D:502:LEU:HD23 | 1.97 | 0.46 |
| 1:D:334:LYS:CB | 1:D:351:GLY:HA3 | 2.45 | 0.46 |
| 1:D:399:CYS:SG | 1:D:475:MET:HB2 | 2.56 | 0.46 |
| 1:D:443:TYR:CD1 | 1:D:470:GLY:CA | 2.98 | 0.46 |
| 1:F:215:GLN:HG3 | 1:F:292:GLY:HA2 | 1.98 | 0.46 |
| 1:G:211:ILE:HB | 1:G:215:GLN:OE1 | 2.15 | 0.46 |
| 1:G:450:ALA:HA | 1:N:417:GLY:HA3 | 1.97 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:H:16:PHE:HA | 1:H:97:LEU:HD23 | 1.96 | 0.46 |
| 1:H:96:LEU:O | 1:H:96:LEU:HD22 | 2.15 | 0.46 |
| 1:H:122:LYS:HG3 | 1:H:126:GLN:HE21 | 1.81 | 0.46 |
| 1:I:127:ALA:CB | 1:I:491:LEU:HD11 | 2.45 | 0.46 |
| 1:I:176:ARG:HD2 | 1:I:358:CYS:CB | 2.46 | 0.46 |
| 1:I:206:LEU:HD13 | 1:I:206:LEU:C | 2.36 | 0.46 |
| 1:J:58:LEU:HB3 | 1:J:72:VAL:HG13 | 1.98 | 0.46 |
| 1:J:104:ILE:HG13 | 1:J:105:ALA:N | 2.30 | 0.46 |
| 1:J:158:LEU:CD2 | 1:K:503:ARG:HB2 | 2.46 | 0.46 |
| 1:K:116:GLY:O | 1:K:119:GLU:HB2 | 2.16 | 0.46 |
| 1:M:343:GLU:CG | 1:M:344:ASP:H | 2.28 | 0.46 |
| 1:N:146:LEU:HD11 | 1:N:150:ALA:CB | 2.45 | 0.46 |
| 1:N:431:ARG:HH21 | 1:N:434:PRO:HG2 | 1.80 | 0.46 |
| 1:O:277:PHE:CE2 | 1:O:279:ASN:HB2 | 2.50 | 0.46 |
| 1:P:38:ILE:HG23 | 1:P:50:VAL:HB | 1.98 | 0.46 |
| 1:P:116:GLY:HA2 | 1:P:119:GLU:HB2 | 1.98 | 0.46 |
| 1:A:104:ILE:HG13 | 1:A:105:ALA:N | 2.30 | 0.46 |
| 1:A:157:LYS:CB | 1:A:159:LEU:HD21 | 2.44 | 0.46 |
| 1:B:225:LEU:HG | 1:B:277:PHE:CD1 | 2.51 | 0.46 |
| 1:C:431:ARG:O | 1:C:434:PRO:HD2 | 2.15 | 0.46 |
| 1:D:216:PRO:HG2 | 1:D:295:GLY:HA2 | 1.96 | 0.46 |
| 1:D:434:PRO:HB3 | 1:D:452:LEU:CD2 | 2.46 | 0.46 |
| 1:E:305:VAL:O | 1:E:309:ARG:HG3 | 2.16 | 0.46 |
| 1:F:40:LEU:HD22 | 1:F:41:SER:N | 2.30 | 0.46 |
| 1:F:52:ASN:H | 1:F:375:ARG:CD | 2.29 | 0.46 |
| 1:G:452:LEU:HD13 | 1:G:465:LEU:HD13 | 1.97 | 0.46 |
| 1:H:48:LEU:HD13 | 1:H:48:LEU:N | 2.31 | 0.46 |
| 1:I:157:LYS:HB3 | 1:I:159:LEU:HD22 | 1.97 | 0.46 |
| 1:I:166:PHE:CE1 | 1:I:198:ASP:HB3 | 2.51 | 0.46 |
| 1:I:312:LEU:O | 1:I:354:LEU:HD22 | 2.15 | 0.46 |
| 1:I:337:GLU:HG3 | 1:I:339:VAL:CG2 | 2.45 | 0.46 |
| 1:J:334:LYS:CD | 1:J:351:GLY:HA3 | 2.45 | 0.46 |
| 1:K:10:THR:O | 1:K:13:LEU:HB3 | 2.15 | 0.46 |
| 1:L:30:LEU:HD11 | 1:L:87:THR:O | 2.15 | 0.46 |
| 1:L:96:LEU:CD1 | 1:L:498:ALA:HB1 | 2.46 | 0.46 |
| 1:M:176:ARG:NH2 | 1:M:360:ILE:HG13 | 2.29 | 0.46 |
| 1:M:206:LEU:HD11 | 1:M:346:LEU:CD2 | 2.46 | 0.46 |
| 1:N:451:GLN:HE22 | 1:N:471:THR:HA | 1.81 | 0.46 |
| 1:O:32:PRO:C | 1:O:33:LYS:HD2 | 2.36 | 0.46 |
| 1:O:140:VAL:HA | 1:O:175:LEU:CD2 | 2.38 | 0.46 |
| 1:O:310:LEU:O | 1:O:313:VAL:HB | 2.16 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:O:511:ALA:HB1 | 1:O:512:PRO:HD2 | 1.98 | 0.46 |
| 1:P:27:LYS:HA | 1:P:30:LEU:HD13 | 1.96 | 0.46 |
| 1:P:154:LEU:HG | 1:P:376:SER:OG | 2.16 | 0.46 |
| 1:P:287:PRO:O | 1:P:291:PHE:HD1 | 1.98 | 0.46 |
| 1:A:446:ALA:HB1 | 1:M:421:VAL:HB | 1.92 | 0.46 |
| 1:B:261:LYS:O | 1:B:265:LYS:HG3 | 2.16 | 0.46 |
| 1:B:310:LEU:O | 1:B:314:THR:HG22 | 2.16 | 0.46 |
| 1:B:369:ILE:HG12 | 1:F:496:GLU:CD | 2.36 | 0.46 |
| 1:C:137:SER:OG | 1:C:388:VAL:HA | 2.16 | 0.46 |
| 1:D:150:ALA:HB2 | 1:D:384:LEU:HD21 | 1.98 | 0.46 |
| 1:D:207:LEU:HD22 | 1:D:208:ASP:H | 1.79 | 0.46 |
| 1:D:226:ILE:HG12 | 1:D:278:ILE:HG23 | 1.96 | 0.46 |
| 1:F:163:LYS:O | 1:F:166:PHE:HB2 | 2.16 | 0.46 |
| 1:G:59:LYS:HE2 | 1:G:76:ARG:NE | 2.31 | 0.46 |
| 1:G:177:LEU:HG | 1:G:177:LEU:O | 2.15 | 0.46 |
| 1:G:247:SER:O | 1:G:248:THR:CB | 2.64 | 0.46 |
| 1:I:24:ASP:O | 1:I:27:LYS:HG2 | 2.15 | 0.46 |
| 1:I:106:LYS:CD | 1:I:113:ILE:HD11 | 2.44 | 0.46 |
| 1:I:109:HIS:HB3 | 1:O:442:GLY:HA2 | 1.97 | 0.46 |
| 1:J:38:ILE:CG1 | 1:K:507:ILE:HG12 | 2.46 | 0.46 |
| 1:J:487:LYS:O | 1:J:490:VAL:HG12 | 2.16 | 0.46 |
| 1:K:154:LEU:O | 1:K:157:LYS:HB2 | 2.16 | 0.46 |
| 1:K:211:ILE:HB | 1:K:215:GLN:OE1 | 2.16 | 0.46 |
| 1:N:277:PHE:CE2 | 1:N:279:ASN:HB2 | 2.50 | 0.46 |
| 1:N:377:LEU:H | 1:N:377:LEU:CD2 | 2.29 | 0.46 |
| 1:O:51:THR:HG21 | 1:O:56:THR:HB | 1.98 | 0.46 |
| 1:O:139:GLU:OE2 | 1:O:140:VAL:HG23 | 2.15 | 0.46 |
| 1:O:280:ARG:O | 1:O:280:ARG:HD3 | 2.15 | 0.46 |
| 1:O:486:VAL:O | 1:O:490:VAL:HG12 | 2.15 | 0.46 |
| 1:P:163:LYS:HD2 | 1:P:166:PHE:CD1 | 2.51 | 0.46 |
| 1:P:321:THR:C | 1:P:323:ASP:H | 2.19 | 0.46 |
| 1:B:40:LEU:O | 1:F:511:ALA:HA | 2.16 | 0.46 |
| 1:B:161:HIS:CE1 | 1:B:369:ILE:HD12 | 2.50 | 0.46 |
| 1:D:210:LYS:HE2 | 1:D:212:GLY:O | 2.16 | 0.46 |
| 1:D:313:VAL:HG13 | 1:D:352:VAL:HB | 1.97 | 0.46 |
| 1:D:321:THR:O | 1:D:323:ASP:N | 2.49 | 0.46 |
| 1:F:41:SER:O | 1:F:45:ASP:HB2 | 2.15 | 0.46 |
| 1:F:117:TRP:CD1 | 1:F:495:ALA:O | 2.69 | 0.46 |
| 1:F:337:GLU:HG3 | 1:F:339:VAL:HG23 | 1.98 | 0.46 |
| 1:H:89:VAL:CG1 | 1:H:490:VAL:HG23 | 2.40 | 0.46 |
| 1:H:154:LEU:HD22 | 1:H:167:THR:OG1 | 2.16 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:I:28:SER:O | 1:I:34:GLY:HA2 | 2.16 | 0.46 |
| 1:I:146:LEU:HD13 | 1:I:171:VAL:CG1 | 2.44 | 0.46 |
| 1:I:146:LEU:CD2 | 1:I:168:LYS:HA | 2.46 | 0.46 |
| 1:I:310:LEU:O | 1:I:314:THR:HG22 | 2.16 | 0.46 |
| 1:I:462:THR:O | 1:I:475:MET:HB3 | 2.15 | 0.46 |
| 1:J:158:LEU:HD23 | 1:K:503:ARG:CB | 2.46 | 0.46 |
| 1:J:173:ALA:HA | 1:J:176:ARG:CZ | 2.46 | 0.46 |
| 1:J:185:ALA:HB3 | 1:J:357:ALA:HB1 | 1.97 | 0.46 |
| 1:J:208:ASP:HB2 | 1:J:346:LEU:CD1 | 2.46 | 0.46 |
| 1:J:274:ILE:HG23 | 1:J:296:VAL:HG21 | 1.98 | 0.46 |
| 1:K:368:GLN:HG3 | 1:K:369:ILE:H | 1.77 | 0.46 |
| 1:L:106:LYS:HE2 | 1:L:421:VAL:HG11 | 1.97 | 0.46 |
| 1:N:265:LYS:O | 1:N:269:ILE:HB | 2.15 | 0.46 |
| 1:O:40:LEU:HD22 | 1:O:41:SER:N | 2.31 | 0.46 |
| 1:O:40:LEU:HB2 | 1:O:48:LEU:HG | 1.98 | 0.46 |
| 1:O:146:LEU:HB2 | 1:O:171:VAL:CG1 | 2.46 | 0.46 |
| 1:O:365:ALA:O | 1:O:366:THR:HG23 | 2.15 | 0.46 |
| 1:O:407:ALA:O | 1:O:411:LEU:HG | 2.15 | 0.46 |
| 1:P:286:TYR:O | 1:P:289:GLN:HG2 | 2.16 | 0.46 |
| 1:P:443:TYR:CD2 | 1:P:470:GLY:HA2 | 2.50 | 0.46 |
| 1:A:58:LEU:HB3 | 1:A:72:VAL:HG13 | 1.97 | 0.46 |
| 1:A:381:LEU:O | 1:A:381:LEU:HD22 | 2.16 | 0.46 |
| 1:C:108:ILE:CD1 | 1:C:418:LYS:HE3 | 2.29 | 0.46 |
| 1:D:123:ALA:HB1 | 1:D:408:VAL:HG12 | 1.98 | 0.46 |
| 1:D:146:LEU:HD23 | 1:D:148:ASN:H | 1.80 | 0.46 |
| 1:E:28:SER:O | 1:E:34:GLY:HA2 | 2.15 | 0.46 |
| 1:E:176:ARG:HH22 | 1:E:360:ILE:HG13 | 1.81 | 0.46 |
| 1:E:448:LEU:HD11 | 1:E:465:LEU:HD11 | 1.98 | 0.46 |
| 1:F:393:THR:HB | 1:F:482:GLU:O | 2.16 | 0.46 |
| 1:G:93:ALA:O | 1:G:96:LEU:HB3 | 2.16 | 0.46 |
| 1:G:107:LYS:N | 1:N:446:ALA:HB2 | 2.31 | 0.46 |
| 1:G:226:ILE:HA | 1:G:278:ILE:O | 2.15 | 0.46 |
| 1:H:39:LEU:CD1 | 1:H:57:ILE:HD11 | 2.46 | 0.46 |
| 1:H:190:LYS:C | 1:H:190:LYS:HD2 | 2.36 | 0.46 |
| 1:H:199:SER:HB2 | 1:H:362:LEU:CD2 | 2.46 | 0.46 |
| 1:I:143:ARG:HA | 1:I:143:ARG:HE | 1.81 | 0.46 |
| 1:I:443:TYR:CE1 | 1:I:470:GLY:HA3 | 2.51 | 0.46 |
| 1:J:133:VAL:O | 1:J:134:ASP:HB3 | 2.16 | 0.46 |
| 1:J:145:ASP:OD2 | 1:J:175:LEU:HD11 | 2.16 | 0.46 |
| 1:J:265:LYS:O | 1:J:269:ILE:HB | 2.15 | 0.46 |
| 1:K:19:ALA:HB2 | 1:K:97:LEU:HD12 | 1.96 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:K:452:LEU:HD11 | 1:K:456:HIS:CE1 | 2.51 | 0.46 |
| 1:M:206:LEU:HD22 | 1:M:207:LEU:N | 2.31 | 0.46 |
| 1:M:367:GLN:OE1 | 1:M:369:ILE:HB | 2.16 | 0.46 |
| 1:N:207:LEU:HD13 | 1:N:208:ASP:N | 2.31 | 0.46 |
| 1:N:324:HIS:HB2 | 1:N:329:LYS:HZ3 | 1.81 | 0.46 |
| 1:O:28:SER:HB2 | 1:O:35:MET:SD | 2.56 | 0.46 |
| 1:O:139:GLU:O | 1:O:140:VAL:HB | 2.16 | 0.46 |
| 1:O:154:LEU:CD2 | 1:O:167:THR:HB | 2.46 | 0.46 |
| 1:P:110:PRO:O | 1:P:113:ILE:HB | 2.16 | 0.46 |
| 1:P:157:LYS:CB | 1:P:159:LEU:HD21 | 2.43 | 0.46 |
| 1:P:280:ARG:O | 1:P:281:GLN:CB | 2.63 | 0.46 |
| 1:P:369:ILE:HD12 | 1:P:372:GLU:OE1 | 2.16 | 0.46 |
| 1:A:159:LEU:HA | 1:A:161:HIS:CE1 | 2.51 | 0.46 |
| 1:B:102:SER:O | 1:B:105:ALA:HB3 | 2.16 | 0.46 |
| 1:C:32:PRO:HD2 | 1:C:467:MET:HE1 | 1.98 | 0.46 |
| 1:C:82:VAL:HG23 | 1:C:386:GLN:HB2 | 1.97 | 0.46 |
| 1:C:117:TRP:CD1 | 1:C:495:ALA:HA | 2.51 | 0.46 |
| 1:C:165:HIS:HD2 | 1:C:197:ALA:O | 1.99 | 0.46 |
| 1:D:453:ARG:NH2 | 1:K:420:ALA:HB3 | 2.31 | 0.46 |
| 1:E:226:ILE:HA | 1:E:278:ILE:O | 2.15 | 0.46 |
| 1:E:231:MET:HE1 | 1:E:265:LYS:HD3 | 1.97 | 0.46 |
| 1:E:261:LYS:O | 1:E:265:LYS:HG3 | 2.16 | 0.46 |
| 1:E:455:ALA:HB2 | 1:E:472:ILE:HD12 | 1.98 | 0.46 |
| 1:G:168:LYS:O | 1:G:171:VAL:HG22 | 2.16 | 0.46 |
| 1:H:268:ARG:O | 1:H:271:LYS:HG2 | 2.15 | 0.46 |
| 1:I:434:PRO:HB3 | 1:I:452:LEU:HD23 | 1.94 | 0.46 |
| 1:J:126:GLN:O | 1:J:130:ASN:HB2 | 2.15 | 0.46 |
| 1:J:149:ILE:CG2 | 1:J:383:VAL:HG12 | 2.46 | 0.46 |
| 1:J:504:VAL:HA | 1:N:36:ASP:O | 2.15 | 0.46 |
| 1:K:65:ASN:CG | 1:K:66:PRO:HD3 | 2.36 | 0.46 |
| 1:K:487:LYS:O | 1:K:490:VAL:HG12 | 2.16 | 0.46 |
| 1:N:185:ALA:H | 1:N:309:ARG:HE | 1.64 | 0.46 |
| 1:N:297:MET:CE | 1:N:347:ILE:HD11 | 2.46 | 0.46 |
| 1:O:96:LEU:HD13 | 1:O:96:LEU:C | 2.36 | 0.46 |
| 1:O:128:LEU:O | 1:O:129:LEU:HB2 | 2.16 | 0.46 |
| 1:O:219:ILE:HD11 | 1:O:336:ILE:HB | 1.97 | 0.46 |
| 1:P:154:LEU:HD22 | 1:P:167:THR:CB | 2.46 | 0.46 |
| 1:A:16:PHE:HA | 1:A:97:LEU:CD2 | 2.46 | 0.46 |
| 1:A:151:GLY:O | 1:A:155:SER:N | 2.49 | 0.46 |
| 1:A:415:THR:HB | 1:A:416:PRO:HD2 | 1.97 | 0.46 |
| 1:A:418:LYS:N | 1:A:418:LYS:HD2 | 2.31 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:B:78:GLN:NE2 | 1:B:82:VAL:HG11 | 2.30 | 0.46 |
| 1:B:100:ALA:HA | 1:B:103:LEU:HD13 | 1.97 | 0.46 |
| 1:B:408:VAL:HG23 | 1:B:427:ALA:HB1 | 1.97 | 0.46 |
| 1:C:274:ILE:HG23 | 1:C:296:VAL:CG2 | 2.46 | 0.46 |
| 1:C:397:GLY:HA3 | 1:C:475:MET:CE | 2.46 | 0.46 |
| 1:F:112:THR:HG22 | 1:F:418:LYS:HE3 | 1.98 | 0.46 |
| 1:F:126:GLN:NE2 | 1:F:411:LEU:HD21 | 2.31 | 0.46 |
| 1:F:326:GLU:HB2 | 1:F:327:LEU:H | 1.56 | 0.46 |
| 1:G:207:LEU:O | 1:G:347:ILE:HG22 | 2.16 | 0.46 |
| 1:G:322:PHE:HA | 1:G:324:HIS:CD2 | 2.51 | 0.46 |
| 1:H:6:GLU:HB2 | 1:H:10:THR:OG1 | 2.15 | 0.46 |
| 1:I:191:LYS:C | 1:I:193:GLY:H | 2.18 | 0.46 |
| 1:I:222:ALA:HA | 1:I:275:ASN:CB | 2.46 | 0.46 |
| 1:I:222:ALA:HA | 1:I:275:ASN:HB2 | 1.98 | 0.46 |
| 1:I:335:LEU:HD21 | 1:I:337:GLU:OE2 | 2.16 | 0.46 |
| 1:I:402:MET:HG3 | 1:I:452:LEU:HG | 1.97 | 0.46 |
| 1:I:509:LYS:N | 1:I:509:LYS:HD2 | 2.31 | 0.46 |
| 1:J:158:LEU:C | 1:J:160:THR:H | 2.18 | 0.46 |
| 1:J:352:VAL:CG2 | 1:J:355:GLY:H | 2.28 | 0.46 |
| 1:K:149:ILE:N | 1:K:481:THR:HG22 | 2.31 | 0.46 |
| 1:K:231:MET:CE | 1:K:265:LYS:HD3 | 2.45 | 0.46 |
| 1:L:38:ILE:CG2 | 1:L:50:VAL:HB | 2.25 | 0.46 |
| 1:L:131:SER:HB2 | 1:L:461:THR:CG2 | 2.46 | 0.46 |
| 1:L:132:ALA:HB1 | 1:L:395:TYR:HE1 | 1.81 | 0.46 |
| 1:M:159:LEU:HG | 1:M:163:LYS:HD2 | 1.98 | 0.46 |
| 1:M:188:VAL:HB | 1:M:377:LEU:HD13 | 1.98 | 0.46 |
| 1:M:390:ASP:HB2 | 1:M:485:GLN:HE22 | 1.81 | 0.46 |
| 1:N:399:CYS:SG | 1:N:464:GLY:CA | 3.02 | 0.46 |
| 1:O:280:ARG:HE | 1:O:304:PHE:HB2 | 1.80 | 0.46 |
| 1:O:433:LEU:HB2 | 1:O:434:PRO:HD3 | 1.97 | 0.46 |
| 1:P:170:ALA:O | 1:P:173:ALA:HB3 | 2.16 | 0.46 |
| 1:P:206:LEU:HD22 | 1:P:346:LEU:HB3 | 1.97 | 0.46 |
| 1:A:117:TRP:O | 1:A:120:ALA:HB3 | 2.17 | 0.45 |
| 1:B:192:LEU:CD2 | 1:F:77:VAL:HG21 | 2.46 | 0.45 |
| 1:B:421:VAL:HB | 1:I:450:ALA:HB2 | 1.97 | 0.45 |
| 1:C:169:LEU:HD11 | 1:C:201:LEU:HB2 | 1.97 | 0.45 |
| 1:C:205:PHE:HD2 | 1:C:359:THR:HG1 | 1.64 | 0.45 |
| 1:C:431:ARG:HH21 | 1:C:434:PRO:HG2 | 1.81 | 0.45 |
| 1:C:448:LEU:C | 1:C:448:LEU:HD13 | 2.37 | 0.45 |
| 1:D:313:VAL:HG13 | 1:D:352:VAL:CG2 | 2.46 | 0.45 |
| 1:E:36:ASP:OD1 | 1:E:158:LEU:HB2 | 2.15 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:E:508:ILE:HG23 | 1:E:509:LYS:H | 1.80 | 0.45 |
| 1:G:31:GLY:O | 1:G:33:LYS:N | 2.47 | 0.45 |
| 1:G:133:VAL:CA | 1:G:393:THR:O | 2.64 | 0.45 |
| 1:G:137:SER:CB | 1:G:391:SER:HA | 2.45 | 0.45 |
| 1:G:274:ILE:HG23 | 1:G:274:ILE:O | 2.16 | 0.45 |
| 1:H:106:LYS:CE | 1:P:446:ALA:HB2 | 2.45 | 0.45 |
| 1:H:183:LEU:HD11 | 1:H:381:LEU:HB2 | 1.98 | 0.45 |
| 1:H:211:ILE:HG23 | 1:H:298:ALA:O | 2.16 | 0.45 |
| 1:I:110:PRO:HA | 1:I:113:ILE:CG1 | 2.45 | 0.45 |
| 1:I:113:ILE:CD1 | 1:I:418:LYS:HZ3 | 2.27 | 0.45 |
| 1:I:310:LEU:C | 1:I:310:LEU:HD13 | 2.37 | 0.45 |
| 1:J:127:ALA:HA | 1:J:130:ASN:HB2 | 1.98 | 0.45 |
| 1:J:265:LYS:HE2 | 1:J:322:PHE:CZ | 2.51 | 0.45 |
| 1:K:149:ILE:CD1 | 1:K:483:SER:H | 2.25 | 0.45 |
| 1:L:161:HIS:HE1 | 1:L:369:ILE:HG21 | 1.81 | 0.45 |
| 1:L:388:VAL:HG12 | 1:L:389:LYS:N | 2.31 | 0.45 |
| 1:N:37:LYS:O | 1:N:50:VAL:HA | 2.17 | 0.45 |
| 1:N:116:GLY:HA2 | 1:N:422:ALA:HB1 | 1.98 | 0.45 |
| 1:N:416:PRO:HB2 | 1:N:419:GLU:OE2 | 2.16 | 0.45 |
| 1:N:452:LEU:HD13 | 1:N:465:LEU:HD11 | 1.98 | 0.45 |
| 1:O:66:PRO:CG | 1:O:509:LYS:HA | 2.46 | 0.45 |
| 1:O:443:TYR:CD1 | 1:O:470:GLY:HA3 | 2.52 | 0.45 |
| 1:P:354:LEU:HD13 | 1:P:356:GLU:CB | 2.45 | 0.45 |
| 1:P:372:GLU:HA | 1:P:375:ARG:HH12 | 1.81 | 0.45 |
| 1:A:399:CYS:SG | 1:A:464:GLY:CA | 3.02 | 0.45 |
| 1:A:448:LEU:C | 1:A:448:LEU:HD13 | 2.36 | 0.45 |
| 1:B:58:LEU:HB3 | 1:B:72:VAL:CG1 | 2.46 | 0.45 |
| 1:B:123:ALA:O | 1:B:126:GLN:HB2 | 2.17 | 0.45 |
| 1:B:405:ALA:HA | 1:B:408:VAL:HG22 | 1.98 | 0.45 |
| 1:C:82:VAL:HB | 1:C:386:GLN:HG3 | 1.98 | 0.45 |
| 1:C:171:VAL:O | 1:C:174:VAL:HG22 | 2.16 | 0.45 |
| 1:D:280:ARG:HD2 | 1:D:304:PHE:HB2 | 1.98 | 0.45 |
| 1:D:448:LEU:HA | 1:D:451:GLN:NE2 | 2.31 | 0.45 |
| 1:E:190:LYS:HG3 | 1:E:370:LEU:HG | 1.97 | 0.45 |
| 1:E:411:LEU:HB3 | 1:E:423:MET:CE | 2.46 | 0.45 |
| 1:F:182:ASN:CG | 1:F:183:LEU:H | 2.20 | 0.45 |
| 1:F:229:THR:HG21 | 1:F:321:THR:HG22 | 1.97 | 0.45 |
| 1:F:261:LYS:O | 1:F:264:GLU:HG2 | 2.16 | 0.45 |
| 1:F:265:LYS:HE2 | 1:F:322:PHE:CZ | 2.50 | 0.45 |
| 1:F:434:PRO:HB3 | 1:F:452:LEU:CD2 | 2.46 | 0.45 |
| 1:G:16:PHE:HE2 | 1:G:98:ARG:HA | 1.80 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:G:143:ARG:HA | 1:G:143:ARG:HE | 1.81 | 0.45 |
| 1:G:151:GLY:HA2 | 1:G:167:THR:HG21 | 1.98 | 0.45 |
| 1:G:263:LYS:O | 1:G:267:GLU:HG2 | 2.16 | 0.45 |
| 1:G:384:LEU:N | 1:G:384:LEU:HD22 | 2.32 | 0.45 |
| 1:H:146:LEU:HD11 | 1:H:150:ALA:HB2 | 1.97 | 0.45 |
| 1:H:211:ILE:HG12 | 1:H:215:GLN:OE1 | 2.16 | 0.45 |
| 1:I:149:ILE:HG21 | 1:I:383:VAL:HG11 | 1.97 | 0.45 |
| 1:I:170:ALA:O | 1:I:173:ALA:HB3 | 2.16 | 0.45 |
| 1:I:176:ARG:CD | 1:I:358:CYS:HB2 | 2.46 | 0.45 |
| 1:I:176:ARG:NH2 | 1:I:360:ILE:HG13 | 2.29 | 0.45 |
| 1:I:280:ARG:HG3 | 1:I:304:PHE:CA | 2.45 | 0.45 |
| 1:K:39:LEU:HB3 | 1:P:508:ILE:CD1 | 2.46 | 0.45 |
| 1:K:401:GLU:HG2 | 1:K:433:LEU:HD22 | 1.98 | 0.45 |
| 1:N:159:LEU:HB2 | 1:N:163:LYS:HB3 | 1.98 | 0.45 |
| 1:N:324:HIS:HB2 | 1:N:329:LYS:HE2 | 1.98 | 0.45 |
| 1:O:82:VAL:HG11 | 1:O:485:GLN:HB3 | 1.98 | 0.45 |
| 1:O:211:ILE:HG13 | 1:O:298:ALA:O | 2.16 | 0.45 |
| 1:P:177:LEU:C | 1:P:177:LEU:HD13 | 2.36 | 0.45 |
| 1:P:265:LYS:HE2 | 1:P:322:PHE:CE2 | 2.52 | 0.45 |
| 1:P:321:THR:HG22 | 1:P:322:PHE:N | 2.31 | 0.45 |
| 1:B:3:ALA:HB3 | 1:G:40:LEU:CD2 | 2.46 | 0.45 |
| 1:B:154:LEU:CD2 | 1:B:163:LYS:HG2 | 2.46 | 0.45 |
| 1:B:402:MET:CE | 1:B:453:ARG:HG2 | 2.46 | 0.45 |
| 1:C:225:LEU:HG | 1:C:277:PHE:CE1 | 2.52 | 0.45 |
| 1:D:206:LEU:HD11 | 1:D:346:LEU:CD2 | 2.35 | 0.45 |
| 1:D:276:CYS:HA | 1:D:297:MET:O | 2.16 | 0.45 |
| 1:D:394:VAL:HG21 | 1:D:487:LYS:HG3 | 1.98 | 0.45 |
| 1:D:466:ASP:HB3 | 1:D:469:GLU:HB3 | 1.98 | 0.45 |
| 1:H:22:ILE:HD12 | 1:H:90:THR:CG2 | 2.46 | 0.45 |
| 1:H:133:VAL:O | 1:H:461:THR:HG21 | 2.16 | 0.45 |
| 1:H:261:LYS:O | 1:H:265:LYS:HG3 | 2.17 | 0.45 |
| 1:H:274:ILE:O | 1:H:296:VAL:HG22 | 2.17 | 0.45 |
| 1:H:369:ILE:C | 1:H:371:ASP:N | 2.70 | 0.45 |
| 1:H:405:ALA:HA | 1:H:408:VAL:HG22 | 1.98 | 0.45 |
| 1:I:326:GLU:CG | 1:I:327:LEU:H | 2.29 | 0.45 |
| 1:J:188:VAL:HG21 | 1:J:362:LEU:HG | 1.98 | 0.45 |
| 1:J:206:LEU:CD1 | 1:J:346:LEU:HG | 2.41 | 0.45 |
| 1:J:451:GLN:NE2 | 1:J:471:THR:HA | 2.31 | 0.45 |
| 1:K:365:ALA:N | 1:K:370:LEU:HG | 2.30 | 0.45 |
| 1:M:154:LEU:HD13 | 1:M:167:THR:OG1 | 2.16 | 0.45 |
| 1:M:190:LYS:HG3 | 1:M:370:LEU:HD21 | 1.98 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:O:19:ALA:HB3 | 1:O:98:ARG:NH2 | 2.31 | 0.45 |
| 1:B:39:LEU:HD11 | 1:B:57:ILE:HG13 | 1.98 | 0.45 |
| 1:B:204:GLY:O | 1:B:359:THR:HB | 2.16 | 0.45 |
| 1:B:354:LEU:HG | 1:B:356:GLU:HB3 | 1.99 | 0.45 |
| 1:B:482:GLU:OE1 | 1:B:487:LYS:HE3 | 2.16 | 0.45 |
| 1:D:188:VAL:CG1 | 1:D:377:LEU:HD22 | 2.46 | 0.45 |
| 1:D:286:TYR:HB2 | 1:D:287:PRO:HD3 | 1.97 | 0.45 |
| 1:D:310:LEU:O | 1:D:314:THR:HG22 | 2.16 | 0.45 |
| 1:D:354:LEU:CD2 | 1:D:356:GLU:HB3 | 2.46 | 0.45 |
| 1:E:146:LEU:HD13 | 1:E:167:THR:O | 2.16 | 0.45 |
| 1:E:313:VAL:HG13 | 1:E:352:VAL:CG1 | 2.46 | 0.45 |
| 1:G:394:VAL:CG2 | 1:G:482:GLU:HB2 | 2.46 | 0.45 |
| 1:G:483:SER:HB2 | 1:G:486:VAL:HG13 | 1.97 | 0.45 |
| 1:H:384:LEU:HA | 1:H:387:THR:OG1 | 2.16 | 0.45 |
| 1:I:431:ARG:HH21 | 1:I:434:PRO:HG2 | 1.81 | 0.45 |
| 1:K:74:MET:CE | 1:K:493:SER:HB3 | 2.46 | 0.45 |
| 1:K:89:VAL:CG1 | 1:K:490:VAL:HG23 | 2.40 | 0.45 |
| 1:K:206:LEU:HD21 | 1:K:346:LEU:HB3 | 1.98 | 0.45 |
| 1:L:54:GLY:O | 1:L:58:LEU:HD23 | 2.16 | 0.45 |
| 1:M:173:ALA:O | 1:M:176:ARG:HG2 | 2.17 | 0.45 |
| 1:N:30:LEU:HD22 | 1:N:436:ILE:HD12 | 1.98 | 0.45 |
| 1:N:159:LEU:HD22 | 1:N:159:LEU:N | 2.32 | 0.45 |
| 1:N:222:ALA:HA | 1:N:275:ASN:CB | 2.46 | 0.45 |
| 1:A:41:SER:O | 1:A:45:ASP:HB2 | 2.17 | 0.45 |
| 1:C:484:PHE:CE2 | 1:C:488:ARG:HD3 | 2.51 | 0.45 |
| 1:D:111:GLN:CD | 1:H:35:MET:HG2 | 2.37 | 0.45 |
| 1:D:274:ILE:HG23 | 1:D:296:VAL:CG2 | 2.46 | 0.45 |
| 1:E:375:ARG:HD3 | 1:E:375:ARG:N | 2.32 | 0.45 |
| 1:F:6:GLU:OE1 | 1:F:11:ALA:HA | 2.17 | 0.45 |
| 1:G:32:PRO:CA | 1:G:155:SER:HB3 | 2.47 | 0.45 |
| 1:G:159:LEU:HG | 1:G:163:LYS:HD3 | 1.98 | 0.45 |
| 1:G:324:HIS:HB2 | 1:G:329:LYS:HZ3 | 1.81 | 0.45 |
| 1:I:103:LEU:O | 1:I:106:LYS:HG2 | 2.15 | 0.45 |
| 1:K:226:ILE:HD13 | 1:K:307:VAL:HG13 | 1.99 | 0.45 |
| 1:K:370:LEU:O | 1:K:373:ALA:HB3 | 2.17 | 0.45 |
| 1:K:402:MET:HE2 | 1:K:453:ARG:HG2 | 1.99 | 0.45 |
| 1:L:82:VAL:CG2 | 1:L:386:GLN:HG3 | 2.46 | 0.45 |
| 1:L:231:MET:HE1 | 1:L:265:LYS:HD3 | 1.98 | 0.45 |
| 1:L:404:MET:HE3 | 1:L:430:LEU:HD11 | 1.99 | 0.45 |
| 1:M:96:LEU:HD21 | 1:M:117:TRP:HZ2 | 1.80 | 0.45 |
| 1:M:204:GLY:O | 1:M:359:THR:HB | 2.17 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:O:30:LEU:HG | 1:O:87:THR:O | 2.16 | 0.45 |
| 1:O:78:GLN:HE21 | 1:O:82:VAL:HG13 | 1.82 | 0.45 |
| 1:O:146:LEU:CD2 | 1:O:147:MET:H | 2.29 | 0.45 |
| 1:P:280:ARG:HG3 | 1:P:304:PHE:CA | 2.47 | 0.45 |
| 1:A:56:THR:HG22 | 1:A:372:GLU:HG3 | 1.90 | 0.45 |
| 1:A:397:GLY:O | 1:A:465:LEU:HB2 | 2.17 | 0.45 |
| 1:B:305:VAL:HB | 1:B:309:ARG:NH1 | 2.31 | 0.45 |
| 1:D:362:LEU:HD11 | 1:D:377:LEU:CD1 | 2.47 | 0.45 |
| 1:F:483:SER:HB2 | 1:F:486:VAL:HG13 | 1.97 | 0.45 |
| 1:G:219:ILE:HB | 1:G:275:ASN:HB3 | 1.98 | 0.45 |
| 1:I:313:VAL:HG13 | 1:I:352:VAL:HB | 1.97 | 0.45 |
| 1:I:384:LEU:HD13 | 1:I:384:LEU:HA | 1.79 | 0.45 |
| 1:J:160:THR:O | 1:J:160:THR:HG22 | 2.17 | 0.45 |
| 1:J:386:GLN:NE2 | 1:J:485:GLN:HE22 | 2.15 | 0.45 |
| 1:J:506:ASN:CB | 1:N:37:LYS:HD2 | 2.47 | 0.45 |
| 1:L:126:GLN:HE22 | 1:L:408:VAL:HG12 | 1.81 | 0.45 |
| 1:L:291:PHE:HB3 | 1:L:296:VAL:O | 2.16 | 0.45 |
| 1:L:407:ALA:O | 1:L:411:LEU:HG | 2.16 | 0.45 |
| 1:M:33:LYS:HG3 | 1:M:441:ALA:HA | 1.99 | 0.45 |
| 1:M:59:LYS:CE | 1:M:76:ARG:HB2 | 2.43 | 0.45 |
| 1:M:341:ILE:HG23 | 1:M:363:ARG:CZ | 2.47 | 0.45 |
| 1:O:345:LYS:O | 1:O:346:LEU:HD12 | 2.17 | 0.45 |
| 1:P:48:LEU:HD12 | 1:P:48:LEU:O | 2.16 | 0.45 |
| 1:P:146:LEU:HD22 | 1:P:167:THR:HG23 | 1.97 | 0.45 |
| 1:B:149:ILE:HG13 | 1:B:481:THR:O | 2.17 | 0.45 |
| 1:C:78:GLN:CD | 1:C:489:GLN:HG3 | 2.37 | 0.45 |
| 1:D:35:MET:SD | 1:E:111:GLN:CB | 3.02 | 0.45 |
| 1:E:145:ASP:CG | 1:E:171:VAL:HB | 2.37 | 0.45 |
| 1:E:287:PRO:O | 1:E:291:PHE:HD1 | 1.98 | 0.45 |
| 1:E:490:VAL:O | 1:E:494:ALA:HB2 | 2.16 | 0.45 |
| 1:F:269:ILE:HG23 | 1:F:274:ILE:HG21 | 1.95 | 0.45 |
| 1:G:394:VAL:HG23 | 1:G:482:GLU:HB2 | 1.97 | 0.45 |
| 1:H:128:LEU:HD11 | 1:H:488:ARG:HA | 1.99 | 0.45 |
| 1:H:146:LEU:HD22 | 1:H:168:LYS:HA | 1.97 | 0.45 |
| 1:H:226:ILE:HG12 | 1:H:278:ILE:HG23 | 1.99 | 0.45 |
| 1:H:431:ARG:O | 1:H:434:PRO:HD2 | 2.17 | 0.45 |
| 1:J:334:LYS:HB2 | 1:J:351:GLY:HA3 | 1.98 | 0.45 |
| 1:K:128:LEU:HD11 | 1:K:492:LEU:CG | 2.47 | 0.45 |
| 1:K:269:ILE:CG2 | 1:K:274:ILE:HG21 | 2.46 | 0.45 |
| 1:L:367:GLN:C | 1:L:369:ILE:N | 2.70 | 0.45 |
| 1:L:393:THR:HA | 1:L:484:PHE:N | 2.31 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:L:405:ALA:HA | 1:L:408:VAL:HG22 | 1.99 | 0.45 |
| 1:M:109:HIS:ND1 | 1:M:111:GLN:HB2 | 2.31 | 0.45 |
| 1:M:385:ALA:O | 1:M:388:VAL:HG12 | 2.17 | 0.45 |
| 1:O:364:GLY:HA3 | 1:O:370:LEU:CD2 | 2.46 | 0.45 |
| 1:P:434:PRO:HB3 | 1:P:452:LEU:CD2 | 2.47 | 0.45 |
| 1:C:92:LEU:HB2 | 1:C:490:VAL:CG2 | 2.46 | 0.45 |
| 1:C:133:VAL:HA | 1:C:395:TYR:CE2 | 2.51 | 0.45 |
| 1:C:487:LYS:O | 1:C:490:VAL:HG12 | 2.17 | 0.45 |
| 1:D:397:GLY:HA3 | 1:D:475:MET:CE | 2.47 | 0.45 |
| 1:D:416:PRO:HD2 | 1:D:419:GLU:HB2 | 1.98 | 0.45 |
| 1:E:2:GLY:O | 1:E:3:ALA:HB3 | 2.17 | 0.45 |
| 1:E:32:PRO:HA | 1:E:155:SER:OG | 2.17 | 0.45 |
| 1:E:41:SER:HB3 | 1:E:45:ASP:OD2 | 2.16 | 0.45 |
| 1:E:158:LEU:HD13 | 1:G:503:ARG:HB3 | 1.98 | 0.45 |
| 1:E:211:ILE:HD13 | 1:E:215:GLN:OE1 | 2.17 | 0.45 |
| 1:E:367:GLN:HG2 | 1:E:369:ILE:HB | 1.99 | 0.45 |
| 1:F:115:ALA:O | 1:F:118:ARG:HB3 | 2.17 | 0.45 |
| 1:F:280:ARG:O | 1:F:281:GLN:HB3 | 2.17 | 0.45 |
| 1:F:325:PRO:O | 1:F:326:GLU:HG3 | 2.17 | 0.45 |
| 1:G:134:ASP:OD1 | 1:G:392:ARG:HA | 2.16 | 0.45 |
| 1:G:364:GLY:HA3 | 1:G:370:LEU:CD1 | 2.38 | 0.45 |
| 1:H:57:ILE:HD13 | 1:H:57:ILE:C | 2.37 | 0.45 |
| 1:H:438:ALA:CB | 1:H:448:LEU:HG | 2.42 | 0.45 |
| 1:H:499:GLU:HG2 | 1:H:503:ARG:HD3 | 1.98 | 0.45 |
| 1:J:32:PRO:HD2 | 1:J:467:MET:CE | 2.46 | 0.45 |
| 1:J:392:ARG:C | 1:J:484:PHE:HB2 | 2.37 | 0.45 |
| 1:K:119:GLU:HG3 | 1:K:419:GLU:OE1 | 2.16 | 0.45 |
| 1:L:312:LEU:CB | 1:P:213:VAL:HG21 | 2.47 | 0.45 |
| 1:N:157:LYS:CE | 1:N:375:ARG:HD3 | 2.45 | 0.45 |
| 1:O:174:VAL:O | 1:O:177:LEU:HB3 | 2.17 | 0.45 |
| 1:O:300:GLU:OE2 | 1:O:301:HIS:HB2 | 2.17 | 0.45 |
| 1:O:370:LEU:HD22 | 1:O:370:LEU:HA | 1.72 | 0.45 |
| 1:P:176:ARG:HD2 | 1:P:358:CYS:SG | 2.57 | 0.45 |
| 1:A:146:LEU:HD13 | 1:A:167:THR:O | 2.16 | 0.45 |
| 1:A:154:LEU:HG | 1:A:157:LYS:HD2 | 1.98 | 0.45 |
| 1:B:128:LEU:HD22 | 1:B:488:ARG:HA | 1.98 | 0.45 |
| 1:B:226:ILE:HG12 | 1:B:278:ILE:CG2 | 2.47 | 0.45 |
| 1:C:215:GLN:HE21 | 1:C:292:GLY:N | 2.15 | 0.45 |
| 1:D:211:ILE:HG12 | 1:D:298:ALA:N | 2.31 | 0.45 |
| 1:D:211:ILE:HD13 | 1:D:215:GLN:CB | 2.46 | 0.45 |
| 1:D:402:MET:CE | 1:D:453:ARG:HG2 | 2.47 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:F:401:GLU:HG2 | 1:F:433:LEU:HD22 | 1.99 | 0.45 |
| 1:G:334:LYS:HB3 | 1:G:351:GLY:HA3 | 1.99 | 0.45 |
| 1:H:82:VAL:HG22 | 1:H:386:GLN:HG3 | 1.97 | 0.45 |
| 1:I:154:LEU:CD2 | 1:I:163:LYS:HG3 | 2.47 | 0.45 |
| 1:J:174:VAL:HG11 | 1:J:384:LEU:HB2 | 1.97 | 0.45 |
| 1:J:352:VAL:HG22 | 1:J:355:GLY:H | 1.81 | 0.45 |
| 1:K:134:ASP:CB | 1:K:393:THR:O | 2.65 | 0.45 |
| 1:K:154:LEU:HD22 | 1:K:167:THR:CB | 2.47 | 0.45 |
| 1:K:190:LYS:HD2 | 1:K:370:LEU:HB3 | 1.99 | 0.45 |
| 1:K:287:PRO:O | 1:K:291:PHE:HD1 | 2.00 | 0.45 |
| 1:L:216:PRO:HG2 | 1:L:295:GLY:CA | 2.43 | 0.45 |
| 1:M:146:LEU:CD1 | 1:M:171:VAL:HG13 | 2.41 | 0.45 |
| 1:N:219:ILE:CD1 | 1:N:336:ILE:HB | 2.46 | 0.45 |
| 1:N:280:ARG:HA | 1:N:302:ALA:O | 2.17 | 0.45 |
| 1:O:163:LYS:HA | 1:O:166:PHE:HD1 | 1.79 | 0.45 |
| 1:P:354:LEU:HD13 | 1:P:356:GLU:HB3 | 1.98 | 0.45 |
| 1:A:418:LYS:HE3 | 1:M:447:ASP:OD2 | 2.17 | 0.45 |
| 1:B:216:PRO:HG2 | 1:B:295:GLY:CA | 2.46 | 0.45 |
| 1:D:168:LYS:O | 1:D:171:VAL:HG22 | 2.17 | 0.45 |
| 1:D:412:ALA:HB1 | 1:D:424:GLU:HB3 | 1.99 | 0.45 |
| 1:E:191:LYS:HD2 | 1:E:341:ILE:HG22 | 1.98 | 0.45 |
| 1:F:452:LEU:HD11 | 1:F:456:HIS:CE1 | 2.51 | 0.45 |
| 1:G:32:PRO:HA | 1:G:155:SER:CB | 2.47 | 0.45 |
| 1:G:111:GLN:HA | 1:G:114:ILE:HG12 | 1.99 | 0.45 |
| 1:G:114:ILE:O | 1:G:117:TRP:HB2 | 2.17 | 0.45 |
| 1:H:128:LEU:HG | 1:H:491:LEU:HD22 | 1.99 | 0.45 |
| 1:H:354:LEU:C | 1:H:356:GLU:H | 2.19 | 0.45 |
| 1:H:398:GLY:HA2 | 1:H:401:GLU:OE2 | 2.17 | 0.45 |
| 1:I:40:LEU:C | 1:I:40:LEU:HD13 | 2.37 | 0.45 |
| 1:I:146:LEU:HB2 | 1:I:171:VAL:CG2 | 2.47 | 0.45 |
| 1:J:337:GLU:HG3 | 1:J:339:VAL:HG23 | 1.98 | 0.45 |
| 1:K:108:ILE:HG22 | 1:K:109:HIS:H | 1.79 | 0.45 |
| 1:K:163:LYS:HG3 | 1:K:166:PHE:CB | 2.47 | 0.45 |
| 1:K:222:ALA:HA | 1:K:275:ASN:CG | 2.37 | 0.45 |
| 1:L:99:GLU:O | 1:L:103:LEU:HD13 | 2.16 | 0.45 |
| 1:L:190:LYS:HE2 | 1:L:190:LYS:O | 2.17 | 0.45 |
| 1:M:81:GLU:HB3 | 1:M:489:GLN:HG2 | 1.99 | 0.45 |
| 1:M:88:SER:O | 1:M:92:LEU:HD13 | 2.17 | 0.45 |
| 1:M:405:ALA:HA | 1:M:408:VAL:HG22 | 1.98 | 0.45 |
| 1:N:174:VAL:HG13 | 1:N:385:ALA:HA | 1.97 | 0.45 |
| 1:N:313:VAL:HG13 | 1:N:352:VAL:HB | 1.98 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:O:66:PRO:HB3 | 1:O:509:LYS:HG2 | 1.98 | 0.45 |
| 1:O:135:HIS:CD2 | 1:O:135:HIS:H | 2.34 | 0.45 |
| 1:O:381:LEU:O | 1:O:381:LEU:HD22 | 2.17 | 0.45 |
| 1:P:99:GLU:O | 1:P:102:SER:HB2 | 2.17 | 0.45 |
| 1:B:3:ALA:HB3 | 1:G:40:LEU:CG | 2.45 | 0.44 |
| 1:C:89:VAL:HA | 1:C:490:VAL:CB | 2.47 | 0.44 |
| 1:C:221:ASN:HA | 1:C:333:CYS:HB2 | 2.00 | 0.44 |
| 1:C:402:MET:CG | 1:C:453:ARG:HG2 | 2.47 | 0.44 |
| 1:D:431:ARG:HH21 | 1:D:434:PRO:HG2 | 1.82 | 0.44 |
| 1:F:112:THR:CG2 | 1:F:418:LYS:HE3 | 2.46 | 0.44 |
| 1:F:291:PHE:HD1 | 1:F:296:VAL:CG1 | 2.30 | 0.44 |
| 1:F:341:ILE:CG2 | 1:F:346:LEU:HD21 | 2.47 | 0.44 |
| 1:G:71:LEU:HB2 | 1:G:501:ILE:CD1 | 2.47 | 0.44 |
| 1:G:175:LEU:HA | 1:G:178:LYS:HE2 | 1.98 | 0.44 |
| 1:G:327:LEU:C | 1:G:327:LEU:HD13 | 2.36 | 0.44 |
| 1:H:390:ASP:CB | 1:H:485:GLN:HE22 | 2.28 | 0.44 |
| 1:H:402:MET:HG2 | 1:H:431:ARG:HH22 | 1.80 | 0.44 |
| 1:J:161:HIS:CG | 1:J:162:HIS:H | 2.35 | 0.44 |
| 1:K:59:LYS:HE2 | 1:K:76:ARG:HB2 | 1.99 | 0.44 |
| 1:L:216:PRO:HG3 | 1:L:295:GLY:HA2 | 1.99 | 0.44 |
| 1:L:455:ALA:O | 1:L:458:GLU:HB3 | 2.16 | 0.44 |
| 1:L:485:GLN:HE21 | 1:L:488:ARG:HH21 | 1.65 | 0.44 |
| 1:L:509:LYS:HA | 1:P:40:LEU:O | 2.17 | 0.44 |
| 1:M:149:ILE:HD12 | 1:M:482:GLU:HA | 1.99 | 0.44 |
| 1:N:38:ILE:CD1 | 1:N:48:LEU:HD23 | 2.34 | 0.44 |
| 1:N:452:LEU:HD13 | 1:N:465:LEU:HD13 | 1.99 | 0.44 |
| 1:O:19:ALA:HB1 | 1:O:94:ALA:CA | 2.43 | 0.44 |
| 1:O:89:VAL:HB | 1:O:490:VAL:HG23 | 1.99 | 0.44 |
| 1:O:182:ASN:ND2 | 1:O:183:LEU:H | 2.15 | 0.44 |
| 1:O:393:THR:HA | 1:O:484:PHE:N | 2.32 | 0.44 |
| 1:P:6:GLU:HB2 | 1:P:10:THR:OG1 | 2.17 | 0.44 |
| 1:P:431:ARG:HH21 | 1:P:434:PRO:HG2 | 1.81 | 0.44 |
| 1:A:505:ASP:HB3 | 1:F:37:LYS:HD2 | 1.97 | 0.44 |
| 1:B:92:LEU:HD11 | 1:B:433:LEU:HD11 | 1.99 | 0.44 |
| 1:C:100:ALA:HA | 1:C:103:LEU:HD13 | 1.99 | 0.44 |
| 1:C:146:LEU:HD22 | 1:C:168:LYS:HA | 1.98 | 0.44 |
| 1:D:146:LEU:CD2 | 1:D:147:MET:H | 2.30 | 0.44 |
| 1:D:325:PRO:O | 1:D:326:GLU:HG3 | 2.17 | 0.44 |
| 1:E:146:LEU:CD1 | 1:E:167:THR:O | 2.65 | 0.44 |
| 1:E:286:TYR:HB2 | 1:E:287:PRO:HD3 | 1.98 | 0.44 |
| 1:F:297:MET:HE1 | 1:F:336:ILE:HG22 | 2.00 | 0.44 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:G:30:LEU:HD11 | 1:G:91:VAL:HG21 | 1.98 | 0.44 |
| 1:G:96:LEU:HD21 | 1:G:117:TRP:HZ2 | 1.82 | 0.44 |
| 1:G:232:ASP:HA | 1:G:284:TYR:CD1 | 2.52 | 0.44 |
| 1:H:176:ARG:HH22 | 1:H:360:ILE:HG13 | 1.82 | 0.44 |
| 1:J:57:ILE:O | 1:J:57:ILE:HD13 | 2.18 | 0.44 |
| 1:K:367:GLN:O | 1:K:368:GLN:HB3 | 2.17 | 0.44 |
| 1:L:174:VAL:O | 1:L:177:LEU:HB3 | 2.17 | 0.44 |
| 1:L:262:MET:CE | 1:L:290:LEU:HB2 | 2.47 | 0.44 |
| 1:L:297:MET:HE1 | 1:L:347:ILE:HD11 | 1.98 | 0.44 |
| 1:L:312:LEU:CA | 1:P:213:VAL:HG21 | 2.46 | 0.44 |
| 1:M:191:LYS:HE2 | 1:M:341:ILE:HB | 1.99 | 0.44 |
| 1:O:206:LEU:CD1 | 1:O:359:THR:HG21 | 2.47 | 0.44 |
| 1:O:325:PRO:O | 1:O:326:GLU:HG3 | 2.17 | 0.44 |
| 1:P:131:SER:O | 1:P:132:ALA:HB2 | 2.17 | 0.44 |
| 1:P:143:ARG:HA | 1:P:143:ARG:HE | 1.82 | 0.44 |
| 1:P:276:CYS:HA | 1:P:297:MET:O | 2.17 | 0.44 |
| 1:A:133:VAL:HG23 | 1:A:393:THR:O | 2.16 | 0.44 |
| 1:A:431:ARG:HH21 | 1:A:434:PRO:HG2 | 1.82 | 0.44 |
| 1:A:507:ILE:HG22 | 1:F:38:ILE:HD11 | 1.99 | 0.44 |
| 1:B:30:LEU:HD11 | 1:B:87:THR:O | 2.16 | 0.44 |
| 1:B:32:PRO:CA | 1:B:155:SER:O | 2.62 | 0.44 |
| 1:B:176:ARG:HG3 | 1:B:177:LEU:N | 2.32 | 0.44 |
| 1:B:265:LYS:NZ | 1:B:287:PRO:HG3 | 2.31 | 0.44 |
| 1:B:314:THR:HA | 1:B:332:SER:HB2 | 1.99 | 0.44 |
| 1:C:54:GLY:O | 1:C:58:LEU:HD23 | 2.18 | 0.44 |
| 1:C:280:ARG:O | 1:C:281:GLN:HB3 | 2.17 | 0.44 |
| 1:D:157:LYS:HB3 | 1:D:159:LEU:HD11 | 1.99 | 0.44 |
| 1:D:177:LEU:HG | 1:D:177:LEU:O | 2.17 | 0.44 |
| 1:E:158:LEU:O | 1:E:159:LEU:HD13 | 2.18 | 0.44 |
| 1:E:316:GLY:C | 1:E:317:GLU:HG2 | 2.38 | 0.44 |
| 1:F:11:ALA:HB3 | 1:F:506:ASN:ND2 | 2.32 | 0.44 |
| 1:G:321:THR:O | 1:G:323:ASP:N | 2.51 | 0.44 |
| 1:G:451:GLN:HE22 | 1:G:471:THR:HA | 1.83 | 0.44 |
| 1:H:147:MET:HG3 | 1:H:168:LYS:CD | 2.47 | 0.44 |
| 1:I:201:LEU:HD13 | 1:I:202:ASP:N | 2.32 | 0.44 |
| 1:I:284:TYR:CE2 | 1:I:286:TYR:HD1 | 2.35 | 0.44 |
| 1:L:207:LEU:HD22 | 1:L:208:ASP:N | 2.33 | 0.44 |
| 1:L:416:PRO:HD2 | 1:L:419:GLU:HG3 | 2.00 | 0.44 |
| 1:M:390:ASP:HB3 | 1:M:485:GLN:HE22 | 1.81 | 0.44 |
| 1:N:157:LYS:HB2 | 1:N:159:LEU:HD21 | 1.99 | 0.44 |
| 1:N:397:GLY:HA3 | 1:N:475:MET:CE | 2.47 | 0.44 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:P:50:VAL:HG13 | 1:P:375:ARG:HH21 | 1.82 | 0.44 |
| 1:P:122:LYS:HB2 | 1:P:122:LYS:NZ | 2.32 | 0.44 |
| 1:A:397:GLY:HA3 | 1:A:475:MET:HE1 | 1.99 | 0.44 |
| 1:A:453:ARG:NH2 | 1:M:412:ALA:HB3 | 2.33 | 0.44 |
| 1:B:25:LEU:CD2 | 1:F:508:ILE:HG12 | 2.48 | 0.44 |
| 1:B:111:GLN:HA | 1:B:114:ILE:HG12 | 2.00 | 0.44 |
| 1:C:162:HIS:HB3 | 1:C:198:ASP:OD2 | 2.17 | 0.44 |
| 1:C:324:HIS:HB2 | 1:C:329:LYS:HE2 | 2.00 | 0.44 |
| 1:C:499:GLU:O | 1:C:503:ARG:HG2 | 2.17 | 0.44 |
| 1:D:106:LYS:NZ | 1:K:446:ALA:HB2 | 2.32 | 0.44 |
| 1:D:127:ALA:CB | 1:D:404:MET:HG3 | 2.48 | 0.44 |
| 1:D:159:LEU:H | 1:D:159:LEU:CD1 | 2.28 | 0.44 |
| 1:D:502:LEU:HD13 | 1:D:502:LEU:O | 2.18 | 0.44 |
| 1:D:503:ARG:O | 1:H:37:LYS:HD2 | 2.17 | 0.44 |
| 1:E:171:VAL:O | 1:E:175:LEU:HG | 2.18 | 0.44 |
| 1:F:58:LEU:HB3 | 1:F:72:VAL:HG11 | 1.99 | 0.44 |
| 1:G:32:PRO:CB | 1:G:155:SER:HB3 | 2.47 | 0.44 |
| 1:G:433:LEU:HB2 | 1:G:434:PRO:HD3 | 1.99 | 0.44 |
| 1:H:170:ALA:HB1 | 1:H:380:ALA:CB | 2.46 | 0.44 |
| 1:H:191:LYS:HD2 | 1:H:344:ASP:CB | 2.47 | 0.44 |
| 1:H:230:GLY:HA2 | 1:H:279:ASN:HD21 | 1.83 | 0.44 |
| 1:H:370:LEU:HG | 1:H:370:LEU:O | 2.18 | 0.44 |
| 1:I:41:SER:HB3 | 1:I:45:ASP:HB2 | 2.00 | 0.44 |
| 1:I:154:LEU:HD23 | 1:I:164:ASP:HA | 1.99 | 0.44 |
| 1:I:396:GLY:HA3 | 1:I:480:ILE:CG2 | 2.44 | 0.44 |
| 1:J:509:LYS:HD3 | 1:N:48:LEU:HD21 | 2.00 | 0.44 |
| 1:K:143:ARG:NE | 1:K:143:ARG:CA | 2.81 | 0.44 |
| 1:K:192:LEU:H | 1:K:365:ALA:HB3 | 1.82 | 0.44 |
| 1:L:196:LEU:HD13 | 1:L:196:LEU:C | 2.38 | 0.44 |
| 1:M:186:ILE:HD12 | 1:M:381:LEU:HG | 2.00 | 0.44 |
| 1:M:196:LEU:C | 1:M:196:LEU:HD13 | 2.38 | 0.44 |
| 1:M:484:PHE:CE2 | 1:M:488:ARG:HD3 | 2.53 | 0.44 |
| 1:N:326:GLU:HB2 | 1:N:327:LEU:H | 1.59 | 0.44 |
| 1:O:341:ILE:HG23 | 1:O:363:ARG:HH21 | 1.81 | 0.44 |
| 1:O:402:MET:CG | 1:O:453:ARG:HG2 | 2.47 | 0.44 |
| 1:P:148:ASN:HB3 | 1:P:481:THR:HG22 | 1.99 | 0.44 |
| 1:B:415:THR:HB | 1:B:416:PRO:HD2 | 2.00 | 0.44 |
| 1:C:211:ILE:HG12 | 1:C:298:ALA:H | 1.83 | 0.44 |
| 1:C:225:LEU:CD1 | 1:C:329:LYS:HE2 | 2.47 | 0.44 |
| 1:D:40:LEU:HB3 | 1:D:48:LEU:HG | 1.98 | 0.44 |
| 1:D:57:ILE:HG23 | 1:D:58:LEU:CD2 | 2.47 | 0.44 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:D:207:LEU:HD22 | 1:D:208:ASP:N | 2.32 | 0.44 |
| 1:D:500:VAL:HG12 | 1:D:503:ARG:NH2 | 2.33 | 0.44 |
| 1:F:59:LYS:HD2 | 1:F:76:ARG:HD3 | 1.99 | 0.44 |
| 1:G:107:LYS:O | 1:G:108:ILE:CG1 | 2.60 | 0.44 |
| 1:G:450:ALA:CB | 1:N:418:LYS:N | 2.80 | 0.44 |
| 1:I:57:ILE:CD1 | 1:N:512:PRO:HB3 | 2.47 | 0.44 |
| 1:I:286:TYR:OH | 1:N:328:VAL:HA | 2.16 | 0.44 |
| 1:J:386:GLN:NE2 | 1:J:485:GLN:NE2 | 2.64 | 0.44 |
| 1:J:509:LYS:HA | 1:N:40:LEU:HB3 | 1.98 | 0.44 |
| 1:K:6:GLU:HB2 | 1:K:10:THR:OG1 | 2.17 | 0.44 |
| 1:K:161:HIS:CG | 1:K:162:HIS:H | 2.35 | 0.44 |
| 1:L:57:ILE:HD13 | 1:L:57:ILE:O | 2.17 | 0.44 |
| 1:L:109:HIS:CE1 | 1:L:111:GLN:NE2 | 2.86 | 0.44 |
| 1:L:206:LEU:HD22 | 1:L:346:LEU:HD23 | 1.99 | 0.44 |
| 1:M:82:VAL:HG21 | 1:M:486:VAL:N | 2.33 | 0.44 |
| 1:M:143:ARG:HG3 | 1:M:143:ARG:O | 2.16 | 0.44 |
| 1:M:154:LEU:HD21 | 1:M:163:LYS:HZ2 | 1.81 | 0.44 |
| 1:N:22:ILE:O | 1:N:26:VAL:HG22 | 2.17 | 0.44 |
| 1:N:100:ALA:O | 1:N:103:LEU:HB2 | 2.18 | 0.44 |
| 1:N:139:GLU:HA | 1:N:388:VAL:HG23 | 2.00 | 0.44 |
| 1:N:263:LYS:HA | 1:N:266:VAL:HG12 | 2.00 | 0.44 |
| 1:N:263:LYS:O | 1:N:266:VAL:HG12 | 2.18 | 0.44 |
| 1:N:417:GLY:O | 1:N:420:ALA:HB3 | 2.18 | 0.44 |
| 1:O:40:LEU:HD13 | 1:O:41:SER:N | 2.33 | 0.44 |
| 1:O:40:LEU:HD23 | 1:O:48:LEU:CD1 | 2.46 | 0.44 |
| 1:O:206:LEU:HD13 | 1:O:206:LEU:C | 2.37 | 0.44 |
| 1:P:38:ILE:H | 1:P:38:ILE:HG12 | 1.67 | 0.44 |
| 1:P:89:VAL:HG12 | 1:P:490:VAL:CG2 | 2.48 | 0.44 |
| 1:P:334:LYS:CB | 1:P:351:GLY:HA3 | 2.47 | 0.44 |
| 1:A:402:MET:HE2 | 1:A:453:ARG:HG2 | 2.00 | 0.44 |
| 1:A:434:PRO:HB3 | 1:A:452:LEU:CD2 | 2.47 | 0.44 |
| 1:A:439:ASP:CG | 1:M:107:LYS:HD3 | 2.38 | 0.44 |
| 1:A:508:ILE:O | 1:A:509:LYS:HB2 | 2.18 | 0.44 |
| 1:B:39:LEU:HB3 | 1:F:510:ALA:CB | 2.48 | 0.44 |
| 1:C:340:MET:HG2 | 1:C:345:LYS:HG2 | 2.00 | 0.44 |
| 1:D:59:LYS:NZ | 1:D:76:ARG:HB2 | 2.32 | 0.44 |
| 1:D:194:GLY:HA2 | 1:D:365:ALA:HA | 2.00 | 0.44 |
| 1:D:283:ILE:HG22 | 1:D:300:GLU:CG | 2.44 | 0.44 |
| 1:E:176:ARG:CZ | 1:E:358:CYS:HB2 | 2.47 | 0.44 |
| 1:E:399:CYS:HA | 1:E:456:HIS:NE2 | 2.32 | 0.44 |
| 1:F:321:THR:O | 1:F:323:ASP:N | 2.36 | 0.44 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:G:166:PHE:CE1 | 1:G:198:ASP:HB2 | 2.52 | 0.44 |
| 1:G:261:LYS:O | 1:G:264:GLU:HG2 | 2.17 | 0.44 |
| 1:G:269:ILE:CG2 | 1:G:274:ILE:HG21 | 2.47 | 0.44 |
| 1:H:21:ALA:O | 1:H:25:LEU:HD22 | 2.18 | 0.44 |
| 1:H:88:SER:O | 1:H:92:LEU:HD13 | 2.18 | 0.44 |
| 1:H:191:LYS:HD2 | 1:H:344:ASP:HB2 | 2.00 | 0.44 |
| 1:I:146:LEU:CG | 1:I:147:MET:N | 2.79 | 0.44 |
| 1:I:367:GLN:CD | 1:I:369:ILE:HB | 2.38 | 0.44 |
| 1:J:183:LEU:HD11 | 1:J:381:LEU:HD21 | 2.00 | 0.44 |
| 1:J:191:LYS:NZ | 1:J:344:ASP:HB3 | 2.32 | 0.44 |
| 1:K:431:ARG:CZ | 1:K:431:ARG:HA | 2.48 | 0.44 |
| 1:L:32:PRO:CA | 1:L:155:SER:HB3 | 2.47 | 0.44 |
| 1:L:184:GLU:OE1 | 1:L:356:GLU:HG2 | 2.18 | 0.44 |
| 1:L:318:ILE:HG12 | 1:P:289:GLN:HB3 | 1.98 | 0.44 |
| 1:M:146:LEU:HD13 | 1:M:171:VAL:HG22 | 1.99 | 0.44 |
| 1:M:206:LEU:HD21 | 1:M:346:LEU:HB3 | 1.98 | 0.44 |
| 1:O:14:SER:O | 1:O:17:ILE:HG22 | 2.17 | 0.44 |
| 1:O:334:LYS:CG | 1:O:351:GLY:HA3 | 2.47 | 0.44 |
| 1:O:341:ILE:C | 1:O:343:GLU:H | 2.21 | 0.44 |
| 1:O:404:MET:O | 1:O:408:VAL:HG22 | 2.18 | 0.44 |
| 1:P:198:ASP:HA | 1:P:364:GLY:N | 2.31 | 0.44 |
| 1:B:228:ASN:ND2 | 1:B:319:ALA:HB3 | 2.33 | 0.44 |
| 1:B:402:MET:SD | 1:B:456:HIS:CB | 3.01 | 0.44 |
| 1:C:206:LEU:HG | 1:C:361:VAL:HG21 | 2.00 | 0.44 |
| 1:D:215:GLN:HE21 | 1:D:292:GLY:N | 2.15 | 0.44 |
| 1:D:439:ASP:OD2 | 1:K:107:LYS:HG3 | 2.18 | 0.44 |
| 1:E:508:ILE:CG2 | 1:E:509:LYS:N | 2.80 | 0.44 |
| 1:F:146:LEU:CD2 | 1:F:167:THR:HG23 | 2.41 | 0.44 |
| 1:F:335:LEU:HD21 | 1:F:337:GLU:OE2 | 2.17 | 0.44 |
| 1:G:50:VAL:HG22 | 1:G:372:GLU:HG3 | 1.98 | 0.44 |
| 1:G:99:GLU:O | 1:G:103:LEU:HD13 | 2.17 | 0.44 |
| 1:G:159:LEU:HB2 | 1:G:163:LYS:HB2 | 1.99 | 0.44 |
| 1:G:250:LYS:HZ2 | 1:G:250:LYS:HB3 | 1.83 | 0.44 |
| 1:J:14:SER:O | 1:J:17:ILE:HG22 | 2.18 | 0.44 |
| 1:J:79:ASP:HA | 1:J:83:GLY:HA2 | 1.93 | 0.44 |
| 1:J:141:LYS:CG | 1:J:144:GLN:HB2 | 2.48 | 0.44 |
| 1:K:185:ALA:HA | 1:K:309:ARG:HG3 | 1.99 | 0.44 |
| 1:M:139:GLU:O | 1:M:141:LYS:N | 2.48 | 0.44 |
| 1:M:365:ALA:O | 1:M:366:THR:CB | 2.64 | 0.44 |
| 1:M:485:GLN:HB3 | 1:M:489:GLN:NE2 | 2.33 | 0.44 |
| 1:N:146:LEU:HB2 | 1:N:171:VAL:HG11 | 1.99 | 0.44 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:N:205:PHE:HA | 1:N:359:THR:OG1 | 2.18 | 0.44 |
| 1:O:14:SER:HB3 | 1:O:508:ILE:N | 2.33 | 0.44 |
| 1:O:377:LEU:HD23 | 1:O:377:LEU:C | 2.38 | 0.44 |
| 1:O:506:ASN:C | 1:O:507:ILE:HG12 | 2.37 | 0.44 |
| 1:P:30:LEU:O | 1:P:440:ASN:ND2 | 2.51 | 0.44 |
| 1:A:32:PRO:HG2 | 1:A:467:MET:CE | 2.47 | 0.44 |
| 1:A:96:LEU:HD13 | 1:A:96:LEU:C | 2.37 | 0.44 |
| 1:A:397:GLY:HA3 | 1:A:475:MET:CE | 2.47 | 0.44 |
| 1:B:138:ASP:O | 1:B:139:GLU:CB | 2.66 | 0.44 |
| 1:B:146:LEU:HD13 | 1:B:167:THR:O | 2.18 | 0.44 |
| 1:B:443:TYR:CD1 | 1:B:470:GLY:HA3 | 2.52 | 0.44 |
| 1:D:27:LYS:HD2 | 1:D:436:ILE:CD1 | 2.45 | 0.44 |
| 1:D:316:GLY:O | 1:D:330:LEU:HB2 | 2.17 | 0.44 |
| 1:D:443:TYR:CD1 | 1:D:470:GLY:HA2 | 2.53 | 0.44 |
| 1:E:343:GLU:HG2 | 1:G:76:ARG:NH1 | 2.31 | 0.44 |
| 1:E:390:ASP:HB3 | 1:E:485:GLN:OE1 | 2.18 | 0.44 |
| 1:E:402:MET:HG2 | 1:E:431:ARG:HH22 | 1.82 | 0.44 |
| 1:G:59:LYS:HE2 | 1:G:76:ARG:CD | 2.48 | 0.44 |
| 1:G:313:VAL:CG1 | 1:G:352:VAL:HB | 2.48 | 0.44 |
| 1:G:345:LYS:C | 1:G:346:LEU:HD12 | 2.38 | 0.44 |
| 1:H:174:VAL:HG21 | 1:H:384:LEU:HD12 | 2.00 | 0.44 |
| 1:H:390:ASP:OD2 | 1:H:484:PHE:HB3 | 2.17 | 0.44 |
| 1:H:399:CYS:SG | 1:H:464:GLY:CA | 3.03 | 0.44 |
| 1:H:468:LYS:HD2 | 1:H:469:GLU:N | 2.32 | 0.44 |
| 1:I:92:LEU:HG | 1:I:433:LEU:HD11 | 1.98 | 0.44 |
| 1:I:188:VAL:HG21 | 1:I:362:LEU:HG | 1.99 | 0.44 |
| 1:I:277:PHE:CE2 | 1:I:279:ASN:HB2 | 2.53 | 0.44 |
| 1:J:150:ALA:HB2 | 1:J:384:LEU:HD11 | 2.00 | 0.44 |
| 1:K:28:SER:HB2 | 1:K:35:MET:HB2 | 1.99 | 0.44 |
| 1:K:57:ILE:HD13 | 1:K:57:ILE:C | 2.38 | 0.44 |
| 1:K:196:LEU:O | 1:K:196:LEU:HD22 | 2.18 | 0.44 |
| 1:K:325:PRO:C | 1:K:326:GLU:HG3 | 2.38 | 0.44 |
| 1:L:81:GLU:O | 1:L:82:VAL:HB | 2.17 | 0.44 |
| 1:L:190:LYS:HD2 | 1:L:190:LYS:C | 2.38 | 0.44 |
| 1:M:146:LEU:CD2 | 1:M:167:THR:HG23 | 2.47 | 0.44 |
| 1:O:57:ILE:HG23 | 1:O:58:LEU:CD2 | 2.45 | 0.44 |
| 1:O:448:LEU:HD21 | 1:O:465:LEU:CD1 | 2.36 | 0.44 |
| 1:P:154:LEU:HD21 | 1:P:163:LYS:HZ1 | 1.80 | 0.44 |
| 1:P:231:MET:C | 1:P:284:TYR:HB2 | 2.38 | 0.44 |
| 1:A:14:SER:HA | 1:A:17:ILE:HG22 | 2.00 | 0.44 |
| 1:A:40:LEU:CD1 | 1:C:508:ILE:HG22 | 2.48 | 0.44 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:A:412:ALA:CB | 1:A:424:GLU:HB3 | 2.48 | 0.44 |
| 1:B:2:GLY:H | 1:G:42:SER:HB2 | 1.83 | 0.44 |
| 1:B:37:LYS:HD2 | 1:F:507:ILE:HA | 2.00 | 0.44 |
| 1:B:163:LYS:O | 1:B:166:PHE:HB2 | 2.18 | 0.44 |
| 1:C:38:ILE:O | 1:C:38:ILE:HG13 | 2.18 | 0.44 |
| 1:C:114:ILE:HD12 | 1:C:499:GLU:HA | 1.98 | 0.44 |
| 1:D:166:PHE:CZ | 1:D:198:ASP:HB3 | 2.52 | 0.44 |
| 1:E:96:LEU:O | 1:E:96:LEU:HD22 | 2.18 | 0.44 |
| 1:E:104:ILE:HG13 | 1:E:105:ALA:N | 2.33 | 0.44 |
| 1:E:419:GLU:OE1 | 1:E:419:GLU:HA | 2.18 | 0.44 |
| 1:F:284:TYR:HE2 | 1:F:286:TYR:CD1 | 2.35 | 0.44 |
| 1:G:108:ILE:HD12 | 1:N:446:ALA:HB3 | 2.00 | 0.44 |
| 1:G:334:LYS:HD3 | 1:G:351:GLY:CA | 2.47 | 0.44 |
| 1:G:379:ASP:O | 1:G:383:VAL:HG23 | 2.18 | 0.44 |
| 1:H:420:ALA:HB3 | 1:P:450:ALA:HB1 | 2.00 | 0.44 |
| 1:I:122:LYS:HZ3 | 1:I:125:ARG:HH21 | 1.66 | 0.44 |
| 1:J:32:PRO:HA | 1:J:155:SER:CB | 2.47 | 0.44 |
| 1:J:452:LEU:HD11 | 1:J:456:HIS:CE1 | 2.52 | 0.44 |
| 1:K:176:ARG:NH1 | 1:K:201:LEU:HD11 | 2.33 | 0.44 |
| 1:K:221:ASN:HA | 1:K:333:CYS:HB2 | 1.99 | 0.44 |
| 1:K:368:GLN:HG3 | 1:K:369:ILE:HB | 2.00 | 0.44 |
| 1:L:159:LEU:CB | 1:L:369:ILE:HG23 | 2.48 | 0.44 |
| 1:L:438:ALA:HB3 | 1:L:445:SER:OG | 2.18 | 0.44 |
| 1:N:112:THR:HB | 1:N:418:LYS:HE3 | 1.99 | 0.44 |
| 1:N:379:ASP:O | 1:N:383:VAL:HG23 | 2.18 | 0.44 |
| 1:N:390:ASP:HB3 | 1:N:485:GLN:NE2 | 2.32 | 0.44 |
| 1:O:39:LEU:HD13 | 1:O:57:ILE:CD1 | 2.48 | 0.44 |
| 1:O:154:LEU:HD22 | 1:O:167:THR:HB | 1.99 | 0.44 |
| 1:A:452:LEU:HD22 | 1:A:465:LEU:HD11 | 1.99 | 0.43 |
| 1:B:28:SER:HA | 1:B:35:MET:HE1 | 1.99 | 0.43 |
| 1:B:431:ARG:HA | 1:B:431:ARG:CZ | 2.48 | 0.43 |
| 1:C:313:VAL:CG2 | 1:C:357:ALA:HB3 | 2.46 | 0.43 |
| 1:C:450:ALA:CB | 1:L:418:LYS:HG2 | 2.48 | 0.43 |
| 1:D:119:GLU:HB3 | 1:D:423:MET:CE | 2.47 | 0.43 |
| 1:E:33:LYS:HD2 | 1:G:111:GLN:CG | 2.47 | 0.43 |
| 1:E:159:LEU:HD23 | 1:E:163:LYS:CB | 2.48 | 0.43 |
| 1:F:446:ALA:CA | 1:O:418:LYS:HD2 | 2.47 | 0.43 |
| 1:G:133:VAL:HG23 | 1:G:134:ASP:N | 2.32 | 0.43 |
| 1:G:171:VAL:HA | 1:G:174:VAL:HG22 | 2.00 | 0.43 |
| 1:H:369:ILE:O | 1:H:371:ASP:N | 2.51 | 0.43 |
| 1:J:365:ALA:HB3 | 1:J:367:GLN:NE2 | 2.33 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:J:394:VAL:HG23 | 1:J:482:GLU:HB2 | 1.99 | 0.43 |
| 1:K:128:LEU:C | 1:K:130:ASN:H | 2.20 | 0.43 |
| 1:K:211:ILE:HD13 | 1:K:215:GLN:CB | 2.48 | 0.43 |
| 1:K:369:ILE:O | 1:K:369:ILE:HG23 | 2.18 | 0.43 |
| 1:L:38:ILE:CG1 | 1:M:507:ILE:HG12 | 2.48 | 0.43 |
| 1:L:508:ILE:HB | 1:P:39:LEU:CD2 | 2.48 | 0.43 |
| 1:N:115:ALA:O | 1:N:118:ARG:HB3 | 2.18 | 0.43 |
| 1:O:43:GLY:O | 1:O:44:ARG:CB | 2.66 | 0.43 |
| 1:P:59:LYS:CE | 1:P:76:ARG:HB2 | 2.46 | 0.43 |
| 1:P:265:LYS:NZ | 1:P:287:PRO:HG3 | 2.33 | 0.43 |
| 1:A:32:PRO:HD2 | 1:A:440:ASN:ND2 | 2.33 | 0.43 |
| 1:A:183:LEU:HD11 | 1:A:381:LEU:HD11 | 2.00 | 0.43 |
| 1:B:485:GLN:HG2 | 1:B:488:ARG:NH2 | 2.31 | 0.43 |
| 1:C:11:ALA:HB1 | 1:C:505:ASP:OD1 | 2.17 | 0.43 |
| 1:C:78:GLN:O | 1:C:83:GLY:N | 2.51 | 0.43 |
| 1:C:159:LEU:O | 1:C:163:LYS:HB2 | 2.18 | 0.43 |
| 1:C:178:LYS:HZ3 | 1:C:388:VAL:HG21 | 1.84 | 0.43 |
| 1:C:383:VAL:HG12 | 1:C:384:LEU:HD13 | 2.00 | 0.43 |
| 1:C:385:ALA:O | 1:C:388:VAL:HG22 | 2.18 | 0.43 |
| 1:D:117:TRP:CE2 | 1:D:495:ALA:HB3 | 2.53 | 0.43 |
| 1:E:174:VAL:HG11 | 1:E:384:LEU:HB2 | 2.01 | 0.43 |
| 1:F:103:LEU:HG | 1:F:113:ILE:HD13 | 2.00 | 0.43 |
| 1:F:191:LYS:HD3 | 1:F:192:LEU:N | 2.32 | 0.43 |
| 1:F:324:HIS:HB2 | 1:F:329:LYS:CE | 2.47 | 0.43 |
| 1:F:446:ALA:HB2 | 1:O:108:ILE:HG12 | 2.00 | 0.43 |
| 1:G:146:LEU:CD1 | 1:G:171:VAL:HG13 | 2.19 | 0.43 |
| 1:G:337:GLU:HG3 | 1:G:339:VAL:HG23 | 1.99 | 0.43 |
| 1:H:101:GLU:O | 1:H:104:ILE:HG12 | 2.17 | 0.43 |
| 1:H:325:PRO:C | 1:H:326:GLU:HG3 | 2.37 | 0.43 |
| 1:I:146:LEU:HD11 | 1:I:150:ALA:CB | 2.47 | 0.43 |
| 1:I:211:ILE:HG13 | 1:I:298:ALA:O | 2.18 | 0.43 |
| 1:I:280:ARG:O | 1:I:281:GLN:CB | 2.67 | 0.43 |
| 1:I:321:THR:O | 1:I:323:ASP:N | 2.50 | 0.43 |
| 1:J:369:ILE:HG12 | 1:K:500:VAL:HG22 | 2.00 | 0.43 |
| 1:J:455:ALA:HB2 | 1:J:472:ILE:HD12 | 2.00 | 0.43 |
| 1:K:33:LYS:HB2 | 1:K:440:ASN:HB2 | 2.00 | 0.43 |
| 1:K:100:ALA:HA | 1:K:103:LEU:HD13 | 1.99 | 0.43 |
| 1:K:117:TRP:HB3 | 1:K:499:GLU:HG3 | 1.99 | 0.43 |
| 1:K:311:ALA:HA | 1:K:314:THR:HG22 | 2.00 | 0.43 |
| 1:L:110:PRO:HD2 | 1:L:111:GLN:HE22 | 1.83 | 0.43 |
| 1:L:261:LYS:O | 1:L:265:LYS:HG3 | 2.17 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:O:18:GLY:CA | 1:O:509:LYS:HG3 | 2.44 | 0.43 |
| 1:O:39:LEU:O | 1:O:48:LEU:HA | 2.17 | 0.43 |
| 1:O:65:ASN:N | 1:O:66:PRO:HD2 | 2.33 | 0.43 |
| 1:P:126:GLN:CD | 1:P:411:LEU:HD22 | 2.38 | 0.43 |
| 1:B:16:PHE:HA | 1:B:97:LEU:HD23 | 2.00 | 0.43 |
| 1:B:149:ILE:HA | 1:B:152:THR:HG22 | 1.99 | 0.43 |
| 1:B:157:LYS:HB2 | 1:B:159:LEU:CD2 | 2.48 | 0.43 |
| 1:B:280:ARG:O | 1:B:281:GLN:HB3 | 2.19 | 0.43 |
| 1:B:368:GLN:CB | 1:F:496:GLU:HB2 | 2.43 | 0.43 |
| 1:E:405:ALA:HA | 1:E:408:VAL:HG22 | 2.01 | 0.43 |
| 1:F:50:VAL:HG22 | 1:F:375:ARG:NH2 | 2.33 | 0.43 |
| 1:F:58:LEU:HB3 | 1:F:72:VAL:CG1 | 2.47 | 0.43 |
| 1:F:261:LYS:O | 1:F:265:LYS:HG3 | 2.18 | 0.43 |
| 1:G:19:ALA:HB1 | 1:G:94:ALA:HA | 2.00 | 0.43 |
| 1:G:188:VAL:HG23 | 1:G:360:ILE:O | 2.18 | 0.43 |
| 1:I:354:LEU:CD2 | 1:I:356:GLU:HB3 | 2.49 | 0.43 |
| 1:J:146:LEU:HB2 | 1:J:171:VAL:HG21 | 1.99 | 0.43 |
| 1:J:339:VAL:HB | 1:J:348:HIS:CE1 | 2.53 | 0.43 |
| 1:J:343:GLU:H | 1:J:343:GLU:CD | 2.21 | 0.43 |
| 1:K:14:SER:O | 1:K:17:ILE:HG22 | 2.19 | 0.43 |
| 1:K:508:ILE:CG2 | 1:K:509:LYS:N | 2.81 | 0.43 |
| 1:N:163:LYS:CG | 1:N:166:PHE:HB2 | 2.49 | 0.43 |
| 1:O:377:LEU:HD23 | 1:O:377:LEU:O | 2.18 | 0.43 |
| 1:P:141:LYS:HG3 | 1:P:144:GLN:H | 1.83 | 0.43 |
| 1:P:188:VAL:CG2 | 1:P:360:ILE:HB | 2.48 | 0.43 |
| 1:P:407:ALA:O | 1:P:411:LEU:HG | 2.18 | 0.43 |
| 1:A:446:ALA:HB2 | 1:M:421:VAL:HB | 1.94 | 0.43 |
| 1:A:511:ALA:HB3 | 1:F:61:ILE:CD1 | 2.48 | 0.43 |
| 1:B:198:ASP:HA | 1:B:364:GLY:HA2 | 2.00 | 0.43 |
| 1:C:82:VAL:N | 1:C:386:GLN:HG3 | 2.33 | 0.43 |
| 1:C:392:ARG:C | 1:C:484:PHE:HB2 | 2.39 | 0.43 |
| 1:D:2:GLY:N | 1:D:509:LYS:HA | 2.32 | 0.43 |
| 1:G:190:LYS:HG3 | 1:G:370:LEU:HD21 | 2.00 | 0.43 |
| 1:G:502:LEU:HD13 | 1:G:502:LEU:C | 2.38 | 0.43 |
| 1:H:215:GLN:HE21 | 1:H:292:GLY:N | 2.16 | 0.43 |
| 1:I:30:LEU:HD22 | 1:I:436:ILE:HD13 | 2.01 | 0.43 |
| 1:I:51:THR:HG21 | 1:I:56:THR:HB | 2.00 | 0.43 |
| 1:J:280:ARG:O | 1:J:281:GLN:HB3 | 2.19 | 0.43 |
| 1:L:431:ARG:O | 1:L:434:PRO:HD2 | 2.18 | 0.43 |
| 1:M:86:THR:HG22 | 1:M:156:SER:HB3 | 1.99 | 0.43 |
| 1:M:149:ILE:HD12 | 1:M:483:SER:N | 2.28 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:P:23:GLY:HA2 | 1:P:26:VAL:HG22 | 2.00 | 0.43 |
| 1:P:106:LYS:C | 1:P:107:LYS:HG2 | 2.38 | 0.43 |
| 1:P:258:GLU:CD | 1:P:284:TYR:HE2 | 2.21 | 0.43 |
| 1:P:324:HIS:O | 1:P:329:LYS:CG | 2.65 | 0.43 |
| 1:B:484:PHE:CE2 | 1:B:488:ARG:HD3 | 2.54 | 0.43 |
| 1:C:324:HIS:HB2 | 1:C:329:LYS:CE | 2.49 | 0.43 |
| 1:C:408:VAL:HG23 | 1:C:427:ALA:CB | 2.48 | 0.43 |
| 1:D:6:GLU:HB3 | 1:D:11:ALA:HB2 | 2.00 | 0.43 |
| 1:D:17:ILE:O | 1:D:20:ILE:HG22 | 2.19 | 0.43 |
| 1:E:146:LEU:O | 1:E:147:MET:HB2 | 2.18 | 0.43 |
| 1:E:203:GLU:H | 1:E:203:GLU:CD | 2.22 | 0.43 |
| 1:E:225:LEU:HD13 | 1:E:329:LYS:HE2 | 2.00 | 0.43 |
| 1:E:438:ALA:CB | 1:E:448:LEU:HG | 2.48 | 0.43 |
| 1:F:52:ASN:HB3 | 1:F:375:ARG:CD | 2.48 | 0.43 |
| 1:F:190:LYS:HD2 | 1:F:190:LYS:O | 2.19 | 0.43 |
| 1:F:433:LEU:HB2 | 1:F:434:PRO:HD3 | 2.01 | 0.43 |
| 1:G:127:ALA:C | 1:G:130:ASN:HB3 | 2.39 | 0.43 |
| 1:G:181:GLY:HA3 | 1:G:356:GLU:HG3 | 1.99 | 0.43 |
| 1:G:204:GLY:O | 1:G:359:THR:HB | 2.19 | 0.43 |
| 1:G:234:ASP:CG | 1:G:235:LYS:H | 2.22 | 0.43 |
| 1:H:19:ALA:HB1 | 1:H:94:ALA:HA | 2.01 | 0.43 |
| 1:H:93:ALA:HB2 | 1:H:494:ALA:HA | 2.00 | 0.43 |
| 1:H:191:LYS:HG3 | 1:H:343:GLU:OE2 | 2.19 | 0.43 |
| 1:H:455:ALA:HB2 | 1:H:472:ILE:HD12 | 2.01 | 0.43 |
| 1:I:318:ILE:O | 1:I:329:LYS:NZ | 2.52 | 0.43 |
| 1:J:191:LYS:HB3 | 1:J:363:ARG:HA | 2.00 | 0.43 |
| 1:J:191:LYS:HG3 | 1:J:343:GLU:OE2 | 2.18 | 0.43 |
| 1:J:211:ILE:HG12 | 1:J:298:ALA:H | 1.83 | 0.43 |
| 1:J:226:ILE:HG21 | 1:J:307:VAL:CG1 | 2.48 | 0.43 |
| 1:K:390:ASP:O | 1:K:391:SER:HB3 | 2.18 | 0.43 |
| 1:L:163:LYS:HG3 | 1:L:166:PHE:CG | 2.53 | 0.43 |
| 1:M:159:LEU:HD12 | 1:M:369:ILE:CG2 | 2.44 | 0.43 |
| 1:M:165:HIS:O | 1:M:168:LYS:HB3 | 2.18 | 0.43 |
| 1:N:225:LEU:HD12 | 1:N:226:ILE:N | 2.33 | 0.43 |
| 1:O:108:ILE:HG21 | 1:O:418:LYS:NZ | 2.34 | 0.43 |
| 1:P:28:SER:O | 1:P:34:GLY:HA2 | 2.18 | 0.43 |
| 1:B:39:LEU:CA | 1:F:510:ALA:HB1 | 2.48 | 0.43 |
| 1:B:109:HIS:NE2 | 1:B:111:GLN:HB3 | 2.34 | 0.43 |
| 1:B:230:GLY:HA2 | 1:B:279:ASN:HD21 | 1.84 | 0.43 |
| 1:C:117:TRP:O | 1:C:120:ALA:HB3 | 2.18 | 0.43 |
| 1:C:133:VAL:HG23 | 1:C:134:ASP:N | 2.23 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:D:166:PHE:CE1 | 1:D:198:ASP:HB2 | 2.54 | 0.43 |
| 1:E:431:ARG:NH2 | 1:E:434:PRO:HG2 | 2.33 | 0.43 |
| 1:G:57:ILE:C | 1:G:57:ILE:HD13 | 2.39 | 0.43 |
| 1:G:65:ASN:HB2 | 1:G:507:ILE:HD13 | 2.01 | 0.43 |
| 1:H:447:ASP:HB2 | 1:P:418:LYS:HZ1 | 1.79 | 0.43 |
| 1:I:32:PRO:HG3 | 1:I:155:SER:HB3 | 2.01 | 0.43 |
| 1:I:117:TRP:O | 1:I:120:ALA:HB3 | 2.18 | 0.43 |
| 1:I:125:ARG:O | 1:I:128:LEU:HB2 | 2.18 | 0.43 |
| 1:I:223:LYS:H | 1:I:275:ASN:HB2 | 1.84 | 0.43 |
| 1:I:311:ALA:HA | 1:I:314:THR:HG22 | 2.00 | 0.43 |
| 1:I:316:GLY:O | 1:I:330:LEU:HB2 | 2.18 | 0.43 |
| 1:I:324:HIS:CG | 1:I:325:PRO:HD3 | 2.54 | 0.43 |
| 1:J:146:LEU:HD13 | 1:J:167:THR:O | 2.19 | 0.43 |
| 1:J:171:VAL:CA | 1:J:174:VAL:HG22 | 2.47 | 0.43 |
| 1:K:43:GLY:O | 1:K:44:ARG:HB2 | 2.19 | 0.43 |
| 1:K:58:LEU:HB3 | 1:K:72:VAL:HG13 | 2.01 | 0.43 |
| 1:K:117:TRP:CD1 | 1:K:499:GLU:HA | 2.54 | 0.43 |
| 1:K:321:THR:O | 1:K:323:ASP:N | 2.51 | 0.43 |
| 1:L:57:ILE:HG23 | 1:L:58:LEU:CD2 | 2.49 | 0.43 |
| 1:M:32:PRO:CA | 1:M:155:SER:O | 2.61 | 0.43 |
| 1:N:408:VAL:HG12 | 1:N:411:LEU:HD12 | 2.00 | 0.43 |
| 1:O:106:LYS:HG3 | 1:O:108:ILE:HB | 2.00 | 0.43 |
| 1:O:190:LYS:HA | 1:O:362:LEU:HB2 | 2.00 | 0.43 |
| 1:P:176:ARG:NH1 | 1:P:201:LEU:HD11 | 2.33 | 0.43 |
| 1:A:31:GLY:O | 1:A:156:SER:CA | 2.59 | 0.43 |
| 1:B:274:ILE:O | 1:B:274:ILE:HG23 | 2.19 | 0.43 |
| 1:B:453:ARG:HB2 | 1:I:413:SER:OG | 2.18 | 0.43 |
| 1:C:280:ARG:O | 1:C:281:GLN:CB | 2.66 | 0.43 |
| 1:C:369:ILE:O | 1:C:372:GLU:HG2 | 2.19 | 0.43 |
| 1:C:452:LEU:HD11 | 1:C:456:HIS:CE1 | 2.54 | 0.43 |
| 1:D:22:ILE:HG13 | 1:D:23:GLY:N | 2.34 | 0.43 |
| 1:G:206:LEU:HD21 | 1:G:346:LEU:HD23 | 2.00 | 0.43 |
| 1:G:266:VAL:HB | 1:G:290:LEU:CD2 | 2.32 | 0.43 |
| 1:H:186:ILE:HG13 | 1:H:381:LEU:HD22 | 2.00 | 0.43 |
| 1:H:187:HIS:CA | 1:H:377:LEU:HD21 | 2.41 | 0.43 |
| 1:H:466:ASP:OD1 | 1:H:468:LYS:HG3 | 2.17 | 0.43 |
| 1:K:32:PRO:HD2 | 1:K:437:ILE:HG23 | 2.01 | 0.43 |
| 1:K:57:ILE:HD13 | 1:K:57:ILE:O | 2.19 | 0.43 |
| 1:K:59:LYS:CE | 1:K:76:ARG:HB2 | 2.49 | 0.43 |
| 1:K:138:ASP:H | 1:K:141:LYS:HE3 | 1.82 | 0.43 |
| 1:K:216:PRO:HG3 | 1:K:295:GLY:HA2 | 1.99 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:K:324:HIS:HB2 | 1:K:329:LYS:CE | 2.48 | 0.43 |
| 1:L:40:LEU:O | 1:M:509:LYS:HA | 2.19 | 0.43 |
| 1:L:50:VAL:O | 1:L:375:ARG:CD | 2.66 | 0.43 |
| 1:L:171:VAL:CG1 | 1:L:384:LEU:HG | 2.48 | 0.43 |
| 1:L:204:GLY:HA3 | 1:L:350:SER:HB3 | 2.01 | 0.43 |
| 1:L:312:LEU:HA | 1:P:213:VAL:CG2 | 2.47 | 0.43 |
| 1:L:325:PRO:O | 1:L:328:VAL:HG22 | 2.19 | 0.43 |
| 1:M:190:LYS:HG3 | 1:M:370:LEU:HG | 2.00 | 0.43 |
| 1:N:499:GLU:O | 1:N:503:ARG:HG3 | 2.18 | 0.43 |
| 1:O:209:LYS:HE2 | 1:O:302:ALA:HA | 1.99 | 0.43 |
| 1:O:324:HIS:O | 1:O:329:LYS:HG3 | 2.19 | 0.43 |
| 1:P:96:LEU:HD21 | 1:P:117:TRP:CZ2 | 2.54 | 0.43 |
| 1:P:508:ILE:CG2 | 1:P:509:LYS:N | 2.82 | 0.43 |
| 1:A:181:GLY:O | 1:A:182:ASN:HB3 | 2.18 | 0.43 |
| 1:B:289:GLN:HE22 | 1:F:228:ASN:ND2 | 2.17 | 0.43 |
| 1:B:322:PHE:O | 1:B:325:PRO:HD2 | 2.18 | 0.43 |
| 1:C:185:ALA:HB1 | 1:C:357:ALA:HB1 | 2.00 | 0.43 |
| 1:D:57:ILE:O | 1:D:57:ILE:HD13 | 2.19 | 0.43 |
| 1:D:99:GLU:O | 1:D:103:LEU:HD13 | 2.18 | 0.43 |
| 1:D:431:ARG:HA | 1:D:431:ARG:CZ | 2.49 | 0.43 |
| 1:E:226:ILE:HG12 | 1:E:278:ILE:CG2 | 2.49 | 0.43 |
| 1:E:280:ARG:O | 1:E:281:GLN:CB | 2.67 | 0.43 |
| 1:E:445:SER:HB2 | 1:J:105:ALA:O | 2.19 | 0.43 |
| 1:F:189:ILE:HG22 | 1:F:190:LYS:N | 2.33 | 0.43 |
| 1:G:178:LYS:HZ1 | 1:G:388:VAL:HG11 | 1.83 | 0.43 |
| 1:G:277:PHE:CE2 | 1:G:279:ASN:HB2 | 2.54 | 0.43 |
| 1:G:338:GLU:HA | 1:G:347:ILE:HA | 1.99 | 0.43 |
| 1:G:343:GLU:HG2 | 1:G:344:ASP:N | 2.34 | 0.43 |
| 1:G:367:GLN:HG3 | 1:G:370:LEU:H | 1.83 | 0.43 |
| 1:G:408:VAL:HG21 | 1:G:427:ALA:HA | 2.01 | 0.43 |
| 1:J:154:LEU:HD13 | 1:J:167:THR:OG1 | 2.19 | 0.43 |
| 1:J:222:ALA:HA | 1:J:275:ASN:CG | 2.39 | 0.43 |
| 1:J:369:ILE:HA | 1:J:372:GLU:CB | 2.48 | 0.43 |
| 1:K:52:ASN:HD21 | 1:K:157:LYS:HG2 | 1.83 | 0.43 |
| 1:K:388:VAL:HG23 | 1:K:389:LYS:CD | 2.49 | 0.43 |
| 1:L:274:ILE:HG23 | 1:L:296:VAL:HG21 | 1.99 | 0.43 |
| 1:M:124:ALA:CB | 1:M:491:LEU:HB3 | 2.44 | 0.43 |
| 1:M:431:ARG:HD3 | 1:M:453:ARG:NH2 | 2.34 | 0.43 |
| 1:N:82:VAL:CG1 | 1:N:83:GLY:N | 2.81 | 0.43 |
| 1:N:380:ALA:O | 1:N:384:LEU:HD23 | 2.19 | 0.43 |
| 1:O:114:ILE:HG21 | 1:O:503:ARG:NH2 | 2.34 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:O:170:ALA:O | 1:O:174:VAL:HG13 | 2.19 | 0.43 |
| 1:O:177:LEU:HD12 | 1:O:385:ALA:HB1 | 2.00 | 0.43 |
| 1:O:360:ILE:HG21 | 1:O:377:LEU:HD11 | 2.01 | 0.43 |
| 1:A:32:PRO:HD2 | 1:A:440:ASN:HD21 | 1.84 | 0.43 |
| 1:A:110:PRO:O | 1:A:113:ILE:HB | 2.19 | 0.43 |
| 1:A:126:GLN:CG | 1:A:411:LEU:HD13 | 2.49 | 0.43 |
| 1:E:188:VAL:HG11 | 1:E:360:ILE:HB | 2.01 | 0.43 |
| 1:E:354:LEU:HG | 1:E:356:GLU:H | 1.83 | 0.43 |
| 1:F:204:GLY:HA3 | 1:F:350:SER:HA | 2.01 | 0.43 |
| 1:F:211:ILE:CD1 | 1:F:297:MET:HG3 | 2.39 | 0.43 |
| 1:F:421:VAL:CG1 | 1:O:453:ARG:HH22 | 2.30 | 0.43 |
| 1:G:181:GLY:O | 1:G:182:ASN:CB | 2.66 | 0.43 |
| 1:G:219:ILE:HD12 | 1:G:275:ASN:HB3 | 2.00 | 0.43 |
| 1:G:252:ALA:O | 1:G:255:GLU:HB3 | 2.19 | 0.43 |
| 1:H:392:ARG:C | 1:H:484:PHE:HB2 | 2.39 | 0.43 |
| 1:I:123:ALA:O | 1:I:126:GLN:HB2 | 2.19 | 0.43 |
| 1:I:132:ALA:CB | 1:I:395:TYR:CD2 | 3.02 | 0.43 |
| 1:I:185:ALA:HA | 1:I:309:ARG:CB | 2.48 | 0.43 |
| 1:I:280:ARG:HG3 | 1:I:304:PHE:HB2 | 2.00 | 0.43 |
| 1:J:27:LYS:HB2 | 1:J:436:ILE:CG1 | 2.49 | 0.43 |
| 1:J:92:LEU:O | 1:J:95:GLU:HG2 | 2.19 | 0.43 |
| 1:J:188:VAL:HG11 | 1:J:377:LEU:HD22 | 2.00 | 0.43 |
| 1:J:367:GLN:HB3 | 1:K:74:MET:CB | 2.49 | 0.43 |
| 1:J:375:ARG:HH11 | 1:J:375:ARG:HB2 | 1.83 | 0.43 |
| 1:K:50:VAL:H | 1:K:375:ARG:HH22 | 1.67 | 0.43 |
| 1:L:106:LYS:CE | 1:L:421:VAL:HG21 | 2.49 | 0.43 |
| 1:L:225:LEU:HD11 | 1:L:324:HIS:ND1 | 2.34 | 0.43 |
| 1:N:9:GLU:CD | 1:N:9:GLU:H | 2.22 | 0.43 |
| 1:O:364:GLY:HA3 | 1:O:370:LEU:HG | 2.01 | 0.43 |
| 1:O:443:TYR:CE1 | 1:O:470:GLY:HA3 | 2.54 | 0.43 |
| 1:P:174:VAL:HG11 | 1:P:384:LEU:HB2 | 1.93 | 0.43 |
| 1:P:394:VAL:HG23 | 1:P:482:GLU:HB2 | 2.01 | 0.43 |
| 1:B:218:ARG:HG2 | 1:B:219:ILE:N | 2.34 | 0.43 |
| 1:B:263:LYS:O | 1:B:267:GLU:HG2 | 2.19 | 0.43 |
| 1:B:289:GLN:HE22 | 1:F:228:ASN:HD22 | 1.67 | 0.43 |
| 1:D:96:LEU:HD13 | 1:D:97:LEU:N | 2.33 | 0.43 |
| 1:D:189:ILE:HG22 | 1:D:190:LYS:N | 2.34 | 0.43 |
| 1:F:159:LEU:CB | 1:F:369:ILE:HG23 | 2.43 | 0.43 |
| 1:G:452:LEU:CD2 | 1:G:465:LEU:HD21 | 2.49 | 0.43 |
| 1:H:511:ALA:O | 1:H:512:PRO:O | 2.37 | 0.43 |
| 1:I:171:VAL:O | 1:I:175:LEU:HG | 2.18 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:K:32:PRO:CD | 1:K:437:ILE:HD12 | 2.48 | 0.43 |
| 1:K:185:ALA:CB | 1:K:357:ALA:HB1 | 2.46 | 0.43 |
| 1:K:204:GLY:HA3 | 1:K:350:SER:HA | 2.00 | 0.43 |
| 1:K:451:GLN:NE2 | 1:K:471:THR:HA | 2.34 | 0.43 |
| 1:L:191:LYS:O | 1:L:370:LEU:HD21 | 2.18 | 0.43 |
| 1:M:176:ARG:HD2 | 1:M:358:CYS:HB2 | 2.01 | 0.43 |
| 1:M:191:LYS:HG2 | 1:M:341:ILE:HG22 | 2.01 | 0.43 |
| 1:O:110:PRO:HB2 | 1:O:502:LEU:HG | 2.01 | 0.43 |
| 1:O:417:GLY:O | 1:O:420:ALA:HB3 | 2.19 | 0.43 |
| 1:O:508:ILE:HG23 | 1:O:509:LYS:N | 2.33 | 0.43 |
| 1:P:452:LEU:HD22 | 1:P:465:LEU:HD11 | 2.01 | 0.43 |
| 1:A:399:CYS:HA | 1:A:456:HIS:NE2 | 2.33 | 0.42 |
| 1:B:59:LYS:CE | 1:B:76:ARG:HB2 | 2.48 | 0.42 |
| 1:B:297:MET:CE | 1:B:347:ILE:HD11 | 2.49 | 0.42 |
| 1:C:150:ALA:CB | 1:C:384:LEU:HD21 | 2.49 | 0.42 |
| 1:D:269:ILE:HG23 | 1:D:274:ILE:HG22 | 1.96 | 0.42 |
| 1:E:100:ALA:O | 1:E:103:LEU:HB2 | 2.19 | 0.42 |
| 1:E:128:LEU:O | 1:E:130:ASN:N | 2.52 | 0.42 |
| 1:E:190:LYS:HB3 | 1:E:373:ALA:HB3 | 2.00 | 0.42 |
| 1:E:326:GLU:HB2 | 1:E:327:LEU:H | 1.60 | 0.42 |
| 1:F:32:PRO:HG2 | 1:F:467:MET:SD | 2.58 | 0.42 |
| 1:F:112:THR:HG22 | 1:F:418:LYS:CE | 2.49 | 0.42 |
| 1:G:124:ALA:HB1 | 1:G:491:LEU:CB | 2.49 | 0.42 |
| 1:H:452:LEU:CD2 | 1:H:465:LEU:HD21 | 2.49 | 0.42 |
| 1:H:454:ALA:HB2 | 1:P:413:SER:O | 2.19 | 0.42 |
| 1:J:284:TYR:O | 1:J:287:PRO:HD2 | 2.19 | 0.42 |
| 1:K:159:LEU:N | 1:K:159:LEU:CD1 | 2.82 | 0.42 |
| 1:L:59:LYS:HE3 | 1:L:76:ARG:HE | 1.83 | 0.42 |
| 1:L:127:ALA:CB | 1:L:404:MET:SD | 3.07 | 0.42 |
| 1:M:395:TYR:HE1 | 1:M:476:SER:OG | 2.02 | 0.42 |
| 1:N:198:ASP:CB | 1:N:364:GLY:HA2 | 2.49 | 0.42 |
| 1:N:310:LEU:O | 1:N:310:LEU:HD13 | 2.19 | 0.42 |
| 1:O:92:LEU:HD21 | 1:O:433:LEU:HD21 | 2.01 | 0.42 |
| 1:O:416:PRO:O | 1:O:419:GLU:HB3 | 2.19 | 0.42 |
| 1:P:28:SER:HB2 | 1:P:35:MET:SD | 2.59 | 0.42 |
| 1:P:126:GLN:O | 1:P:130:ASN:CB | 2.65 | 0.42 |
| 1:P:253:GLU:O | 1:P:256:HIS:HB3 | 2.19 | 0.42 |
| 1:A:32:PRO:HA | 1:A:155:SER:C | 2.39 | 0.42 |
| 1:B:399:CYS:SG | 1:B:464:GLY:CA | 3.05 | 0.42 |
| 1:D:92:LEU:HG | 1:D:433:LEU:HD21 | 2.01 | 0.42 |
| 1:D:280:ARG:O | 1:D:281:GLN:HB3 | 2.20 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:D:334:LYS:HB3 | 1:D:351:GLY:HA3 | 2.00 | 0.42 |
| 1:D:397:GLY:HA3 | 1:D:475:MET:HE1 | 2.01 | 0.42 |
| 1:E:231:MET:CE | 1:E:265:LYS:HD3 | 2.49 | 0.42 |
| 1:G:57:ILE:HG23 | 1:G:58:LEU:HD22 | 2.01 | 0.42 |
| 1:G:129:LEU:C | 1:G:129:LEU:CD2 | 2.87 | 0.42 |
| 1:G:483:SER:HB2 | 1:G:486:VAL:CG1 | 2.48 | 0.42 |
| 1:H:147:MET:C | 1:H:479:GLY:HA2 | 2.39 | 0.42 |
| 1:I:39:LEU:O | 1:I:48:LEU:HA | 2.19 | 0.42 |
| 1:I:159:LEU:CG | 1:I:163:LYS:HG2 | 2.48 | 0.42 |
| 1:K:24:ASP:O | 1:K:27:LYS:HG2 | 2.19 | 0.42 |
| 1:K:74:MET:HE1 | 1:K:493:SER:HB3 | 2.01 | 0.42 |
| 1:K:154:LEU:HD21 | 1:K:163:LYS:HG2 | 2.02 | 0.42 |
| 1:L:226:ILE:HA | 1:L:278:ILE:O | 2.19 | 0.42 |
| 1:L:394:VAL:HG21 | 1:L:487:LYS:HG3 | 2.01 | 0.42 |
| 1:N:188:VAL:CG2 | 1:N:377:LEU:HD11 | 2.49 | 0.42 |
| 1:N:402:MET:CE | 1:N:453:ARG:HG2 | 2.50 | 0.42 |
| 1:O:146:LEU:HD23 | 1:O:147:MET:N | 2.34 | 0.42 |
| 1:O:280:ARG:HG3 | 1:O:304:PHE:HB2 | 2.00 | 0.42 |
| 1:O:352:VAL:CG2 | 1:O:355:GLY:H | 2.32 | 0.42 |
| 1:P:32:PRO:CG | 1:P:467:MET:SD | 3.06 | 0.42 |
| 1:P:146:LEU:HD11 | 1:P:150:ALA:CB | 2.49 | 0.42 |
| 1:P:188:VAL:CG1 | 1:P:377:LEU:HD21 | 2.49 | 0.42 |
| 1:P:437:ILE:CG2 | 1:P:467:MET:SD | 3.06 | 0.42 |
| 1:A:112:THR:CG2 | 1:F:442:GLY:HA2 | 2.49 | 0.42 |
| 1:A:115:ALA:O | 1:A:118:ARG:HB3 | 2.20 | 0.42 |
| 1:B:7:ARG:O | 1:B:8:ALA:HB3 | 2.19 | 0.42 |
| 1:B:114:ILE:HD13 | 1:B:117:TRP:CZ3 | 2.54 | 0.42 |
| 1:B:431:ARG:HA | 1:B:431:ARG:NE | 2.34 | 0.42 |
| 1:B:504:VAL:HG11 | 1:B:507:ILE:CG2 | 2.32 | 0.42 |
| 1:C:40:LEU:HD23 | 1:C:47:SER:O | 2.20 | 0.42 |
| 1:C:211:ILE:HG22 | 1:C:288:GLU:OE1 | 2.19 | 0.42 |
| 1:C:310:LEU:O | 1:C:314:THR:HG22 | 2.18 | 0.42 |
| 1:D:85:GLY:HA2 | 1:D:153:THR:OG1 | 2.19 | 0.42 |
| 1:D:390:ASP:HB2 | 1:D:485:GLN:HE22 | 1.83 | 0.42 |
| 1:D:507:ILE:HA | 1:H:39:LEU:HD22 | 2.01 | 0.42 |
| 1:F:393:THR:HA | 1:F:484:PHE:N | 2.34 | 0.42 |
| 1:G:397:GLY:HA3 | 1:G:475:MET:CE | 2.49 | 0.42 |
| 1:H:57:ILE:HD13 | 1:H:57:ILE:O | 2.18 | 0.42 |
| 1:H:75:SER:O | 1:H:78:GLN:HB3 | 2.20 | 0.42 |
| 1:H:201:LEU:HD23 | 1:H:360:ILE:HG12 | 2.02 | 0.42 |
| 1:I:176:ARG:HD2 | 1:I:358:CYS:HB2 | 2.01 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:I:276:CYS:HA | 1:I:297:MET:O | 2.19 | 0.42 |
| 1:I:411:LEU:HB3 | 1:I:423:MET:CE | 2.50 | 0.42 |
| 1:J:309:ARG:O | 1:J:313:VAL:HG23 | 2.19 | 0.42 |
| 1:L:341:ILE:HD12 | 1:L:363:ARG:HH21 | 1.85 | 0.42 |
| 1:M:163:LYS:O | 1:M:166:PHE:HB2 | 2.18 | 0.42 |
| 1:M:486:VAL:O | 1:M:490:VAL:HG12 | 2.19 | 0.42 |
| 1:N:280:ARG:HG3 | 1:N:304:PHE:HA | 2.01 | 0.42 |
| 1:N:286:TYR:HB2 | 1:N:287:PRO:HD3 | 2.01 | 0.42 |
| 1:O:106:LYS:HG3 | 1:O:106:LYS:O | 2.20 | 0.42 |
| 1:O:174:VAL:HG21 | 1:O:384:LEU:HB3 | 2.01 | 0.42 |
| 1:P:95:GLU:OE1 | 1:P:429:ALA:HA | 2.18 | 0.42 |
| 1:P:226:ILE:HG12 | 1:P:278:ILE:CG2 | 2.48 | 0.42 |
| 1:A:150:ALA:HB2 | 1:A:384:LEU:HD21 | 2.01 | 0.42 |
| 1:C:116:GLY:HA2 | 1:C:119:GLU:OE1 | 2.20 | 0.42 |
| 1:C:369:ILE:CA | 1:C:372:GLU:HG2 | 2.48 | 0.42 |
| 1:D:196:LEU:HD13 | 1:D:196:LEU:C | 2.40 | 0.42 |
| 1:D:219:ILE:CD1 | 1:D:276:CYS:HB2 | 2.49 | 0.42 |
| 1:D:280:ARG:O | 1:D:280:ARG:CG | 2.61 | 0.42 |
| 1:E:215:GLN:HE21 | 1:E:292:GLY:N | 2.18 | 0.42 |
| 1:F:40:LEU:HB2 | 1:F:48:LEU:CD2 | 2.49 | 0.42 |
| 1:F:127:ALA:HB3 | 1:F:491:LEU:CD1 | 2.49 | 0.42 |
| 1:F:171:VAL:HG12 | 1:F:384:LEU:HD11 | 2.01 | 0.42 |
| 1:F:485:GLN:NE2 | 1:F:488:ARG:HH21 | 2.17 | 0.42 |
| 1:G:405:ALA:HB2 | 1:G:430:LEU:HB2 | 2.01 | 0.42 |
| 1:H:211:ILE:CD1 | 1:H:211:ILE:N | 2.70 | 0.42 |
| 1:H:394:VAL:CG2 | 1:H:482:GLU:HB2 | 2.45 | 0.42 |
| 1:I:32:PRO:CA | 1:I:156:SER:HA | 2.50 | 0.42 |
| 1:I:48:LEU:HD12 | 1:N:70:VAL:HG13 | 2.00 | 0.42 |
| 1:I:114:ILE:HD11 | 1:I:502:LEU:HD22 | 2.00 | 0.42 |
| 1:I:146:LEU:HG | 1:I:147:MET:N | 2.35 | 0.42 |
| 1:J:57:ILE:HD13 | 1:J:57:ILE:C | 2.39 | 0.42 |
| 1:J:263:LYS:O | 1:J:267:GLU:HG2 | 2.19 | 0.42 |
| 1:J:402:MET:SD | 1:J:453:ARG:HA | 2.59 | 0.42 |
| 1:K:192:LEU:HA | 1:K:364:GLY:O | 2.20 | 0.42 |
| 1:L:215:GLN:HE21 | 1:L:292:GLY:CA | 2.32 | 0.42 |
| 1:L:282:LEU:HD22 | 1:L:282:LEU:H | 1.85 | 0.42 |
| 1:L:372:GLU:HG3 | 1:L:375:ARG:NH2 | 2.35 | 0.42 |
| 1:L:448:LEU:HD21 | 1:L:465:LEU:HD12 | 2.01 | 0.42 |
| 1:L:448:LEU:C | 1:L:448:LEU:HD13 | 2.40 | 0.42 |
| 1:M:36:ASP:OD1 | 1:M:36:ASP:N | 2.52 | 0.42 |
| 1:M:158:LEU:HD23 | 1:M:369:ILE:CD1 | 2.48 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:N:154:LEU:HD21 | 1:N:163:LYS:NZ | 2.33 | 0.42 |
| 1:N:268:ARG:O | 1:N:271:LYS:HG2 | 2.20 | 0.42 |
| 1:O:82:VAL:HA | 1:O:386:GLN:CG | 2.49 | 0.42 |
| 1:P:438:ALA:HB2 | 1:P:448:LEU:CD1 | 2.50 | 0.42 |
| 1:A:49:MET:SD | 1:A:365:ALA:HB3 | 2.59 | 0.42 |
| 1:A:433:LEU:HB2 | 1:A:434:PRO:HD3 | 2.01 | 0.42 |
| 1:B:117:TRP:CD1 | 1:B:499:GLU:HG3 | 2.54 | 0.42 |
| 1:B:402:MET:HE2 | 1:B:453:ARG:HG2 | 2.00 | 0.42 |
| 1:C:37:LYS:HD2 | 1:H:506:ASN:CB | 2.44 | 0.42 |
| 1:C:106:LYS:HE2 | 1:C:113:ILE:CG1 | 2.49 | 0.42 |
| 1:C:324:HIS:CG | 1:C:325:PRO:HD3 | 2.53 | 0.42 |
| 1:D:99:GLU:O | 1:D:102:SER:HB2 | 2.20 | 0.42 |
| 1:D:116:GLY:HA3 | 1:D:422:ALA:HB1 | 2.01 | 0.42 |
| 1:F:443:TYR:CZ | 1:F:470:GLY:HA3 | 2.54 | 0.42 |
| 1:G:203:GLU:CD | 1:G:203:GLU:H | 2.22 | 0.42 |
| 1:G:399:CYS:SG | 1:G:464:GLY:CA | 3.06 | 0.42 |
| 1:G:433:LEU:HA | 1:G:436:ILE:HG22 | 2.02 | 0.42 |
| 1:H:216:PRO:HG2 | 1:H:295:GLY:CA | 2.48 | 0.42 |
| 1:I:102:SER:O | 1:I:105:ALA:HB3 | 2.19 | 0.42 |
| 1:I:225:LEU:HD11 | 1:I:324:HIS:CE1 | 2.54 | 0.42 |
| 1:J:27:LYS:HA | 1:J:30:LEU:HD13 | 2.01 | 0.42 |
| 1:J:191:LYS:HB2 | 1:J:191:LYS:HE3 | 1.91 | 0.42 |
| 1:J:305:VAL:HG22 | 1:J:309:ARG:CZ | 2.49 | 0.42 |
| 1:K:150:ALA:HB2 | 1:K:384:LEU:CD1 | 2.30 | 0.42 |
| 1:L:39:LEU:O | 1:L:48:LEU:HA | 2.20 | 0.42 |
| 1:L:79:ASP:CA | 1:L:83:GLY:HA2 | 2.44 | 0.42 |
| 1:L:259:LYS:O | 1:L:263:LYS:HG2 | 2.19 | 0.42 |
| 1:M:123:ALA:O | 1:M:126:GLN:HG2 | 2.19 | 0.42 |
| 1:M:132:ALA:H | 1:M:461:THR:HG21 | 1.85 | 0.42 |
| 1:M:163:LYS:O | 1:M:163:LYS:HG2 | 2.20 | 0.42 |
| 1:M:435:THR:HG22 | 1:M:445:SER:HB3 | 2.01 | 0.42 |
| 1:N:163:LYS:HG3 | 1:N:166:PHE:HB2 | 2.02 | 0.42 |
| 1:O:143:ARG:O | 1:O:143:ARG:HG3 | 2.20 | 0.42 |
| 1:O:280:ARG:O | 1:O:281:GLN:CB | 2.67 | 0.42 |
| 1:P:207:LEU:HB3 | 1:P:347:ILE:CG2 | 2.50 | 0.42 |
| 1:P:408:VAL:HG23 | 1:P:427:ALA:HB1 | 2.01 | 0.42 |
| 1:P:485:GLN:HB3 | 1:P:489:GLN:NE2 | 2.34 | 0.42 |
| 1:B:65:ASN:ND2 | 1:B:66:PRO:HD3 | 2.35 | 0.42 |
| 1:B:128:LEU:CD1 | 1:B:488:ARG:HA | 2.50 | 0.42 |
| 1:B:150:ALA:HB1 | 1:B:167:THR:OG1 | 2.19 | 0.42 |
| 1:C:309:ARG:O | 1:C:313:VAL:HG23 | 2.20 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:C:412:ALA:O | 1:C:420:ALA:HB1 | 2.20 | 0.42 |
| 1:C:443:TYR:CE1 | 1:C:470:GLY:HA3 | 2.55 | 0.42 |
| 1:D:93:ALA:HB1 | 1:D:494:ALA:HA | 2.01 | 0.42 |
| 1:F:145:ASP:OD2 | 1:F:175:LEU:HD11 | 2.19 | 0.42 |
| 1:F:166:PHE:CE2 | 1:F:363:ARG:O | 2.72 | 0.42 |
| 1:F:421:VAL:HG22 | 1:O:453:ARG:NH2 | 2.34 | 0.42 |
| 1:G:99:GLU:OE2 | 1:G:425:SER:HB2 | 2.20 | 0.42 |
| 1:G:108:ILE:HG13 | 1:N:446:ALA:HB3 | 2.01 | 0.42 |
| 1:G:314:THR:HG23 | 1:G:316:GLY:H | 1.84 | 0.42 |
| 1:G:414:ARG:HH21 | 1:N:406:HIS:CE1 | 2.37 | 0.42 |
| 1:H:30:LEU:HG | 1:H:87:THR:O | 2.19 | 0.42 |
| 1:H:82:VAL:HG21 | 1:H:485:GLN:HB3 | 2.01 | 0.42 |
| 1:H:188:VAL:HG12 | 1:H:377:LEU:HD22 | 2.02 | 0.42 |
| 1:I:133:VAL:HA | 1:I:393:THR:C | 2.35 | 0.42 |
| 1:I:198:ASP:HA | 1:I:364:GLY:HA2 | 2.02 | 0.42 |
| 1:J:96:LEU:HD13 | 1:J:97:LEU:N | 2.34 | 0.42 |
| 1:J:225:LEU:HD13 | 1:J:226:ILE:N | 2.35 | 0.42 |
| 1:J:280:ARG:O | 1:J:281:GLN:CB | 2.68 | 0.42 |
| 1:J:367:GLN:HB3 | 1:K:74:MET:HB2 | 2.02 | 0.42 |
| 1:J:415:THR:O | 1:J:420:ALA:HB2 | 2.20 | 0.42 |
| 1:J:452:LEU:HD22 | 1:J:465:LEU:HD11 | 2.00 | 0.42 |
| 1:K:185:ALA:HA | 1:K:309:ARG:CD | 2.50 | 0.42 |
| 1:K:313:VAL:CG1 | 1:K:352:VAL:HB | 2.50 | 0.42 |
| 1:K:396:GLY:HA3 | 1:K:480:ILE:HG22 | 2.01 | 0.42 |
| 1:N:142:PHE:C | 1:N:143:ARG:HG3 | 2.40 | 0.42 |
| 1:N:394:VAL:CG2 | 1:N:482:GLU:HB2 | 2.50 | 0.42 |
| 1:O:206:LEU:CG | 1:O:359:THR:HG21 | 2.49 | 0.42 |
| 1:O:408:VAL:HG23 | 1:O:427:ALA:HB1 | 2.00 | 0.42 |
| 1:P:57:ILE:HD13 | 1:P:57:ILE:C | 2.40 | 0.42 |
| 1:P:123:ALA:O | 1:P:126:GLN:HB2 | 2.19 | 0.42 |
| 1:P:166:PHE:CE1 | 1:P:198:ASP:CB | 3.02 | 0.42 |
| 1:P:203:GLU:H | 1:P:203:GLU:CD | 2.23 | 0.42 |
| 1:P:448:LEU:HD21 | 1:P:465:LEU:CD1 | 2.47 | 0.42 |
| 1:A:367:GLN:HG2 | 1:A:368:GLN:H | 1.85 | 0.42 |
| 1:C:192:LEU:HD12 | 1:C:192:LEU:N | 2.35 | 0.42 |
| 1:D:194:GLY:CA | 1:D:365:ALA:HA | 2.50 | 0.42 |
| 1:D:505:ASP:HB2 | 1:H:25:LEU:HB3 | 2.01 | 0.42 |
| 1:F:107:LYS:O | 1:F:108:ILE:HD13 | 2.20 | 0.42 |
| 1:F:188:VAL:HG23 | 1:F:360:ILE:O | 2.20 | 0.42 |
| 1:F:313:VAL:CG1 | 1:F:352:VAL:HB | 2.49 | 0.42 |
| 1:G:452:LEU:HD11 | 1:G:456:HIS:HE1 | 1.81 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:H:28:SER:OG | 1:H:37:LYS:HE3 | 2.19 | 0.42 |
| 1:H:206:LEU:HG | 1:H:361:VAL:HG13 | 2.01 | 0.42 |
| 1:H:498:ALA:O | 1:H:501:ILE:HB | 2.20 | 0.42 |
| 1:I:366:THR:O | 1:I:367:GLN:HB3 | 2.20 | 0.42 |
| 1:J:146:LEU:CD1 | 1:J:167:THR:O | 2.68 | 0.42 |
| 1:J:158:LEU:C | 1:J:160:THR:N | 2.73 | 0.42 |
| 1:J:286:TYR:HB2 | 1:J:287:PRO:HD3 | 2.02 | 0.42 |
| 1:J:369:ILE:HA | 1:J:372:GLU:HB2 | 2.00 | 0.42 |
| 1:J:399:CYS:SG | 1:J:464:GLY:CA | 3.01 | 0.42 |
| 1:K:40:LEU:HB2 | 1:P:507:ILE:HG22 | 2.01 | 0.42 |
| 1:K:58:LEU:HB3 | 1:K:72:VAL:HG11 | 2.02 | 0.42 |
| 1:L:51:THR:HG21 | 1:L:56:THR:HB | 2.02 | 0.42 |
| 1:L:367:GLN:O | 1:L:368:GLN:HB3 | 2.19 | 0.42 |
| 1:M:21:ALA:O | 1:M:25:LEU:HD23 | 2.20 | 0.42 |
| 1:O:59:LYS:HZ1 | 1:O:75:SER:HB3 | 1.84 | 0.42 |
| 1:O:82:VAL:HG22 | 1:O:486:VAL:CG1 | 2.49 | 0.42 |
| 1:O:226:ILE:HA | 1:O:278:ILE:O | 2.20 | 0.42 |
| 1:O:418:LYS:HA | 1:O:421:VAL:HG12 | 2.01 | 0.42 |
| 1:P:263:LYS:O | 1:P:267:GLU:HG2 | 2.19 | 0.42 |
| 1:A:452:LEU:HA | 1:A:472:ILE:HG21 | 2.02 | 0.42 |
| 1:B:25:LEU:HD22 | 1:F:508:ILE:CG1 | 2.49 | 0.42 |
| 1:B:224:ILE:CD1 | 1:B:349:PHE:HE2 | 2.33 | 0.42 |
| 1:C:149:ILE:HB | 1:C:481:THR:HG23 | 2.02 | 0.42 |
| 1:C:211:ILE:HG23 | 1:C:298:ALA:HB3 | 2.01 | 0.42 |
| 1:C:231:MET:HE1 | 1:C:265:LYS:HD3 | 2.01 | 0.42 |
| 1:C:450:ALA:HB2 | 1:L:418:LYS:HG2 | 2.01 | 0.42 |
| 1:E:122:LYS:CE | 1:E:125:ARG:HH21 | 2.33 | 0.42 |
| 1:F:209:LYS:HB2 | 1:F:299:ILE:HG23 | 2.01 | 0.42 |
| 1:F:345:LYS:C | 1:F:346:LEU:HD13 | 2.40 | 0.42 |
| 1:F:417:GLY:O | 1:O:453:ARG:NH2 | 2.52 | 0.42 |
| 1:G:450:ALA:HB2 | 1:N:418:LYS:N | 2.35 | 0.42 |
| 1:H:157:LYS:CB | 1:H:159:LEU:HD21 | 2.49 | 0.42 |
| 1:H:433:LEU:HB2 | 1:H:434:PRO:HD3 | 2.01 | 0.42 |
| 1:I:39:LEU:CD1 | 1:I:57:ILE:HD11 | 2.50 | 0.42 |
| 1:I:154:LEU:HD22 | 1:I:167:THR:CB | 2.47 | 0.42 |
| 1:J:163:LYS:HD2 | 1:J:166:PHE:CG | 2.54 | 0.42 |
| 1:J:196:LEU:C | 1:J:196:LEU:HD13 | 2.40 | 0.42 |
| 1:J:343:GLU:CD | 1:J:343:GLU:N | 2.73 | 0.42 |
| 1:J:506:ASN:O | 1:N:38:ILE:HG13 | 2.20 | 0.42 |
| 1:K:154:LEU:HA | 1:K:157:LYS:HD2 | 2.02 | 0.42 |
| 1:K:191:LYS:HZ2 | 1:K:346:LEU:HD11 | 1.85 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:L:154:LEU:CD2 | 1:L:167:THR:HB | 2.50 | 0.42 |
| 1:L:222:ALA:HA | 1:L:275:ASN:CB | 2.50 | 0.42 |
| 1:O:190:LYS:H | 1:O:190:LYS:HG3 | 1.64 | 0.42 |
| 1:P:510:ALA:C | 1:P:512:PRO:HD2 | 2.40 | 0.42 |
| 1:B:22:ILE:HD12 | 1:B:90:THR:CG2 | 2.49 | 0.42 |
| 1:B:112:THR:HG21 | 1:B:418:LYS:NZ | 2.35 | 0.42 |
| 1:C:222:ALA:HA | 1:C:275:ASN:CG | 2.39 | 0.42 |
| 1:D:93:ALA:CB | 1:D:494:ALA:HA | 2.50 | 0.42 |
| 1:D:261:LYS:O | 1:D:264:GLU:HG2 | 2.19 | 0.42 |
| 1:D:312:LEU:HD23 | 1:D:312:LEU:HA | 1.84 | 0.42 |
| 1:E:367:GLN:HG2 | 1:E:369:ILE:N | 2.35 | 0.42 |
| 1:G:19:ALA:HB3 | 1:G:98:ARG:NH2 | 2.35 | 0.42 |
| 1:G:196:LEU:C | 1:G:196:LEU:HD13 | 2.40 | 0.42 |
| 1:H:129:LEU:HB3 | 1:H:484:PHE:HZ | 1.85 | 0.42 |
| 1:H:262:MET:SD | 1:H:290:LEU:HB2 | 2.60 | 0.42 |
| 1:I:101:GLU:O | 1:I:104:ILE:HG12 | 2.20 | 0.42 |
| 1:I:154:LEU:CD2 | 1:I:164:ASP:HA | 2.49 | 0.42 |
| 1:J:32:PRO:HD2 | 1:J:467:MET:HE2 | 2.01 | 0.42 |
| 1:J:415:THR:HG23 | 1:J:420:ALA:CB | 2.50 | 0.42 |
| 1:N:173:ALA:HB2 | 1:N:360:ILE:HD11 | 2.02 | 0.42 |
| 1:O:150:ALA:HB3 | 1:O:167:THR:HG23 | 2.02 | 0.42 |
| 1:O:399:CYS:HA | 1:O:456:HIS:NE2 | 2.34 | 0.42 |
| 1:P:150:ALA:HB1 | 1:P:167:THR:OG1 | 2.20 | 0.42 |
| 1:A:127:ALA:CB | 1:A:491:LEU:HD22 | 2.50 | 0.42 |
| 1:B:197:ALA:O | 1:B:198:ASP:HB2 | 2.20 | 0.42 |
| 1:B:213:VAL:HG11 | 1:F:308:GLU:O | 2.20 | 0.42 |
| 1:B:431:ARG:CZ | 1:B:453:ARG:HD3 | 2.50 | 0.42 |
| 1:C:92:LEU:HB2 | 1:C:490:VAL:HG22 | 2.02 | 0.42 |
| 1:C:280:ARG:HA | 1:C:302:ALA:O | 2.20 | 0.42 |
| 1:C:379:ASP:O | 1:C:383:VAL:HG23 | 2.20 | 0.42 |
| 1:C:402:MET:CE | 1:C:453:ARG:HG2 | 2.50 | 0.42 |
| 1:D:361:VAL:HG12 | 1:D:363:ARG:HH12 | 1.85 | 0.42 |
| 1:D:395:TYR:OH | 1:D:462:THR:HG22 | 2.20 | 0.42 |
| 1:E:182:ASN:CG | 1:E:183:LEU:H | 2.24 | 0.42 |
| 1:E:232:ASP:HA | 1:E:284:TYR:CD1 | 2.54 | 0.42 |
| 1:E:280:ARG:HG3 | 1:E:304:PHE:HA | 2.01 | 0.42 |
| 1:E:415:THR:HB | 1:E:419:GLU:HB2 | 2.01 | 0.42 |
| 1:F:106:LYS:O | 1:O:445:SER:HB2 | 2.20 | 0.42 |
| 1:F:198:ASP:O | 1:F:199:SER:HB3 | 2.20 | 0.42 |
| 1:G:108:ILE:CG1 | 1:N:446:ALA:HB3 | 2.50 | 0.42 |
| 1:G:116:GLY:O | 1:G:119:GLU:HB2 | 2.20 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:G:200:TYR:HE2 | 1:G:363:ARG:HH21 | 1.68 | 0.42 |
| 1:G:330:LEU:HD13 | 1:G:330:LEU:HA | 1.85 | 0.42 |
| 1:G:404:MET:CE | 1:G:430:LEU:HD11 | 2.50 | 0.42 |
| 1:H:146:LEU:HD21 | 1:H:150:ALA:HB3 | 2.02 | 0.42 |
| 1:H:280:ARG:O | 1:H:281:GLN:CB | 2.68 | 0.42 |
| 1:I:139:GLU:OE1 | 1:I:178:LYS:HE3 | 2.19 | 0.42 |
| 1:I:313:VAL:CG1 | 1:I:352:VAL:HB | 2.50 | 0.42 |
| 1:I:394:VAL:HB | 1:I:400:SER:OG | 2.20 | 0.42 |
| 1:J:206:LEU:HD21 | 1:J:346:LEU:CB | 2.49 | 0.42 |
| 1:K:324:HIS:HB2 | 1:K:329:LYS:HE2 | 2.02 | 0.42 |
| 1:K:408:VAL:HA | 1:K:411:LEU:HD12 | 2.01 | 0.42 |
| 1:L:269:ILE:HD13 | 1:L:274:ILE:HG21 | 2.02 | 0.42 |
| 1:L:425:SER:O | 1:L:428:LYS:HG2 | 2.20 | 0.42 |
| 1:L:496:GLU:HG3 | 1:P:367:GLN:CD | 2.40 | 0.42 |
| 1:M:146:LEU:HB2 | 1:M:171:VAL:HG21 | 2.01 | 0.42 |
| 1:M:154:LEU:HD21 | 1:M:163:LYS:HZ3 | 1.84 | 0.42 |
| 1:M:486:VAL:HG23 | 1:M:487:LYS:CE | 2.50 | 0.42 |
| 1:N:159:LEU:CG | 1:N:163:LYS:HD3 | 2.49 | 0.42 |
| 1:O:17:ILE:O | 1:O:20:ILE:HG22 | 2.19 | 0.42 |
| 1:O:326:GLU:HB2 | 1:O:327:LEU:H | 1.59 | 0.42 |
| 1:P:99:GLU:OE1 | 1:P:425:SER:HB2 | 2.20 | 0.42 |
| 1:P:405:ALA:HA | 1:P:408:VAL:HG22 | 2.02 | 0.42 |
| 1:A:32:PRO:O | 1:A:155:SER:O | 2.38 | 0.41 |
| 1:A:109:HIS:HA | 1:A:110:PRO:HD2 | 1.94 | 0.41 |
| 1:B:214:ASN:O | 1:B:215:GLN:CB | 2.63 | 0.41 |
| 1:B:335:LEU:HD21 | 1:B:337:GLU:OE2 | 2.20 | 0.41 |
| 1:B:437:ILE:CG2 | 1:B:467:MET:SD | 3.08 | 0.41 |
| 1:D:57:ILE:HD13 | 1:D:57:ILE:C | 2.40 | 0.41 |
| 1:D:104:ILE:O | 1:D:107:LYS:HB3 | 2.18 | 0.41 |
| 1:D:143:ARG:O | 1:D:143:ARG:HG3 | 2.20 | 0.41 |
| 1:F:119:GLU:O | 1:F:122:LYS:HB3 | 2.20 | 0.41 |
| 1:G:33:LYS:HD3 | 1:G:441:ALA:HA | 2.02 | 0.41 |
| 1:G:40:LEU:HD12 | 1:G:41:SER:N | 2.34 | 0.41 |
| 1:H:116:GLY:O | 1:H:119:GLU:HB2 | 2.19 | 0.41 |
| 1:H:145:ASP:C | 1:H:171:VAL:HG21 | 2.40 | 0.41 |
| 1:H:284:TYR:CE2 | 1:H:286:TYR:CD1 | 3.08 | 0.41 |
| 1:I:313:VAL:HG13 | 1:I:352:VAL:CB | 2.50 | 0.41 |
| 1:K:122:LYS:HA | 1:K:125:ARG:HG2 | 2.02 | 0.41 |
| 1:K:354:LEU:CD2 | 1:K:356:GLU:HB3 | 2.49 | 0.41 |
| 1:K:433:LEU:HB2 | 1:K:434:PRO:HD3 | 2.02 | 0.41 |
| 1:L:59:LYS:HE3 | 1:L:76:ARG:CB | 2.50 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:L:89:VAL:HG12 | 1:L:490:VAL:HB | 2.02 | 0.41 |
| 1:L:274:ILE:O | 1:L:274:ILE:HG23 | 2.19 | 0.41 |
| 1:N:138:ASP:O | 1:N:139:GLU:CB | 2.62 | 0.41 |
| 1:N:431:ARG:CZ | 1:N:431:ARG:HA | 2.49 | 0.41 |
| 1:P:32:PRO:CA | 1:P:155:SER:O | 2.66 | 0.41 |
| 1:P:475:MET:O | 1:P:478:LEU:HB2 | 2.20 | 0.41 |
| 1:A:135:HIS:HB3 | 1:A:136:GLY:H | 1.68 | 0.41 |
| 1:A:158:LEU:C | 1:A:160:THR:H | 2.23 | 0.41 |
| 1:A:170:ALA:O | 1:A:173:ALA:HB3 | 2.19 | 0.41 |
| 1:B:354:LEU:HG | 1:B:356:GLU:H | 1.85 | 0.41 |
| 1:C:146:LEU:HD11 | 1:C:150:ALA:CB | 2.50 | 0.41 |
| 1:C:231:MET:C | 1:C:284:TYR:HB2 | 2.41 | 0.41 |
| 1:D:274:ILE:HG23 | 1:D:296:VAL:HG21 | 2.01 | 0.41 |
| 1:E:191:LYS:HD2 | 1:E:341:ILE:HB | 2.02 | 0.41 |
| 1:E:321:THR:O | 1:E:323:ASP:N | 2.52 | 0.41 |
| 1:E:403:LEU:HD22 | 1:E:461:THR:HG22 | 2.02 | 0.41 |
| 1:F:68:ALA:O | 1:F:72:VAL:HG23 | 2.21 | 0.41 |
| 1:F:92:LEU:HA | 1:F:95:GLU:OE2 | 2.19 | 0.41 |
| 1:F:112:THR:HG21 | 1:F:418:LYS:CE | 2.50 | 0.41 |
| 1:F:408:VAL:HG23 | 1:F:427:ALA:HB1 | 2.02 | 0.41 |
| 1:G:247:SER:O | 1:G:248:THR:HB | 2.21 | 0.41 |
| 1:G:284:TYR:CE2 | 1:G:286:TYR:HD1 | 2.38 | 0.41 |
| 1:G:334:LYS:CB | 1:G:351:GLY:HA3 | 2.50 | 0.41 |
| 1:G:398:GLY:HA2 | 1:G:401:GLU:OE1 | 2.19 | 0.41 |
| 1:H:183:LEU:HD11 | 1:H:381:LEU:CB | 2.49 | 0.41 |
| 1:H:253:GLU:O | 1:H:257:ALA:N | 2.53 | 0.41 |
| 1:I:127:ALA:HA | 1:I:404:MET:SD | 2.60 | 0.41 |
| 1:I:311:ALA:HA | 1:I:314:THR:CG2 | 2.50 | 0.41 |
| 1:J:174:VAL:HG11 | 1:J:384:LEU:CB | 2.50 | 0.41 |
| 1:J:191:LYS:HZ2 | 1:J:344:ASP:HB3 | 1.85 | 0.41 |
| 1:J:366:THR:HB | 1:K:77:VAL:CG1 | 2.47 | 0.41 |
| 1:K:106:LYS:HG2 | 1:K:113:ILE:HD11 | 2.02 | 0.41 |
| 1:K:190:LYS:NZ | 1:K:370:LEU:HB3 | 2.36 | 0.41 |
| 1:K:274:ILE:O | 1:K:296:VAL:HG22 | 2.20 | 0.41 |
| 1:K:297:MET:CE | 1:K:347:ILE:HD11 | 2.50 | 0.41 |
| 1:L:111:GLN:NE2 | 1:L:111:GLN:H | 2.18 | 0.41 |
| 1:L:191:LYS:HE3 | 1:L:344:ASP:HB2 | 2.01 | 0.41 |
| 1:L:393:THR:N | 1:L:484:PHE:HB2 | 2.34 | 0.41 |
| 1:L:402:MET:HE1 | 1:L:406:HIS:HB2 | 2.01 | 0.41 |
| 1:M:58:LEU:CB | 1:M:72:VAL:HG13 | 2.48 | 0.41 |
| 1:M:67:ALA:HB2 | 1:M:507:ILE:HD12 | 2.02 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:M:108:ILE:HG22 | 1:M:109:HIS:N | 2.35 | 0.41 |
| 1:M:141:LYS:CG | 1:M:144:GLN:HB2 | 2.49 | 0.41 |
| 1:M:411:LEU:CB | 1:M:423:MET:SD | 3.06 | 0.41 |
| 1:N:159:LEU:HA | 1:N:369:ILE:HG23 | 2.02 | 0.41 |
| 1:N:190:LYS:HD2 | 1:N:190:LYS:C | 2.40 | 0.41 |
| 1:P:138:ASP:O | 1:P:139:GLU:CB | 2.68 | 0.41 |
| 1:A:42:SER:CB | 1:C:509:LYS:HE3 | 2.51 | 0.41 |
| 1:A:174:VAL:O | 1:A:177:LEU:HD12 | 2.19 | 0.41 |
| 1:B:397:GLY:HA3 | 1:B:475:MET:HE1 | 2.01 | 0.41 |
| 1:C:47:SER:HB2 | 1:C:48:LEU:HD22 | 2.02 | 0.41 |
| 1:C:114:ILE:O | 1:C:117:TRP:HB2 | 2.20 | 0.41 |
| 1:C:163:LYS:HZ1 | 1:C:376:SER:CB | 2.33 | 0.41 |
| 1:C:200:TYR:CD1 | 1:C:363:ARG:NE | 2.88 | 0.41 |
| 1:D:165:HIS:O | 1:D:168:LYS:HB3 | 2.19 | 0.41 |
| 1:D:284:TYR:CE2 | 1:D:286:TYR:CD1 | 3.08 | 0.41 |
| 1:E:146:LEU:CD2 | 1:E:147:MET:H | 2.33 | 0.41 |
| 1:F:19:ALA:HB3 | 1:F:98:ARG:NH2 | 2.35 | 0.41 |
| 1:F:34:GLY:HA3 | 1:F:156:SER:OG | 2.21 | 0.41 |
| 1:F:58:LEU:C | 1:F:72:VAL:HG11 | 2.40 | 0.41 |
| 1:F:159:LEU:CD2 | 1:F:159:LEU:N | 2.84 | 0.41 |
| 1:G:192:LEU:HD23 | 1:G:366:THR:HG22 | 2.01 | 0.41 |
| 1:G:276:CYS:HA | 1:G:297:MET:O | 2.19 | 0.41 |
| 1:H:117:TRP:CH2 | 1:H:502:LEU:HD11 | 2.55 | 0.41 |
| 1:I:31:GLY:HA3 | 1:I:440:ASN:ND2 | 2.36 | 0.41 |
| 1:I:127:ALA:HB1 | 1:I:491:LEU:HD11 | 2.02 | 0.41 |
| 1:I:148:ASN:HA | 1:I:480:ILE:HG12 | 2.02 | 0.41 |
| 1:I:154:LEU:O | 1:I:157:LYS:HB2 | 2.20 | 0.41 |
| 1:I:334:LYS:CB | 1:I:351:GLY:HA3 | 2.50 | 0.41 |
| 1:J:190:LYS:HB2 | 1:J:370:LEU:HD11 | 2.02 | 0.41 |
| 1:J:277:PHE:CE2 | 1:J:279:ASN:HB2 | 2.56 | 0.41 |
| 1:K:171:VAL:CG1 | 1:K:384:LEU:HD12 | 2.49 | 0.41 |
| 1:K:284:TYR:CE2 | 1:K:286:TYR:CD1 | 3.08 | 0.41 |
| 1:L:313:VAL:CG1 | 1:L:352:VAL:HB | 2.51 | 0.41 |
| 1:L:354:LEU:HG | 1:L:356:GLU:HB2 | 2.01 | 0.41 |
| 1:M:100:ALA:CA | 1:M:103:LEU:HD13 | 2.43 | 0.41 |
| 1:M:145:ASP:OD2 | 1:M:175:LEU:HD11 | 2.20 | 0.41 |
| 1:M:463:ALA:HA | 1:M:473:GLY:O | 2.20 | 0.41 |
| 1:N:126:GLN:OE1 | 1:N:411:LEU:HD21 | 2.20 | 0.41 |
| 1:N:206:LEU:HD11 | 1:N:346:LEU:HD23 | 2.00 | 0.41 |
| 1:O:188:VAL:HG21 | 1:O:377:LEU:CD1 | 2.50 | 0.41 |
| 1:O:204:GLY:HA3 | 1:O:350:SER:HA | 2.02 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:O:280:ARG:HD3 | 1:O:280:ARG:C | 2.40 | 0.41 |
| 1:O:399:CYS:SG | 1:O:464:GLY:CA | 3.03 | 0.41 |
| 1:A:38:ILE:HG22 | 1:A:50:VAL:CB | 2.47 | 0.41 |
| 1:A:84:ASP:CG | 1:A:85:GLY:N | 2.73 | 0.41 |
| 1:A:134:ASP:OD2 | 1:A:393:THR:HG22 | 2.20 | 0.41 |
| 1:B:452:LEU:HA | 1:B:472:ILE:HG21 | 2.03 | 0.41 |
| 1:C:67:ALA:O | 1:C:68:ALA:HB2 | 2.20 | 0.41 |
| 1:C:127:ALA:HA | 1:C:404:MET:HG3 | 2.02 | 0.41 |
| 1:C:206:LEU:HD13 | 1:C:206:LEU:C | 2.40 | 0.41 |
| 1:C:351:GLY:C | 1:C:352:VAL:HG13 | 2.40 | 0.41 |
| 1:C:402:MET:HG2 | 1:C:431:ARG:NH2 | 2.34 | 0.41 |
| 1:C:431:ARG:NH2 | 1:C:434:PRO:HG2 | 2.34 | 0.41 |
| 1:E:36:ASP:CG | 1:E:158:LEU:HB2 | 2.41 | 0.41 |
| 1:E:192:LEU:HA | 1:E:370:LEU:HD21 | 2.01 | 0.41 |
| 1:E:207:LEU:HD22 | 1:E:208:ASP:H | 1.85 | 0.41 |
| 1:E:259:LYS:O | 1:E:262:MET:HB3 | 2.19 | 0.41 |
| 1:E:354:LEU:CD2 | 1:E:356:GLU:HB3 | 2.50 | 0.41 |
| 1:F:176:ARG:NE | 1:F:358:CYS:HB2 | 2.35 | 0.41 |
| 1:F:196:LEU:HD13 | 1:F:196:LEU:C | 2.40 | 0.41 |
| 1:F:446:ALA:N | 1:O:108:ILE:HG12 | 2.36 | 0.41 |
| 1:G:23:GLY:HA2 | 1:G:26:VAL:HG22 | 2.02 | 0.41 |
| 1:G:191:LYS:HZ3 | 1:G:346:LEU:HD11 | 1.85 | 0.41 |
| 1:G:341:ILE:HG23 | 1:G:363:ARG:CZ | 2.50 | 0.41 |
| 1:H:32:PRO:HB2 | 1:H:33:LYS:HD2 | 2.01 | 0.41 |
| 1:H:109:HIS:O | 1:H:113:ILE:HG12 | 2.20 | 0.41 |
| 1:H:222:ALA:HA | 1:H:275:ASN:HB2 | 2.01 | 0.41 |
| 1:J:133:VAL:HA | 1:J:393:THR:O | 2.20 | 0.41 |
| 1:J:201:LEU:HD22 | 1:J:202:ASP:N | 2.36 | 0.41 |
| 1:J:345:LYS:C | 1:J:346:LEU:HD13 | 2.40 | 0.41 |
| 1:K:207:LEU:HD21 | 1:K:209:LYS:CE | 2.50 | 0.41 |
| 1:K:225:LEU:HD13 | 1:K:329:LYS:HE3 | 2.03 | 0.41 |
| 1:L:41:SER:HB3 | 1:L:45:ASP:OD2 | 2.20 | 0.41 |
| 1:L:431:ARG:HD2 | 1:L:453:ARG:NH1 | 2.35 | 0.41 |
| 1:N:32:PRO:HG3 | 1:N:467:MET:CE | 2.50 | 0.41 |
| 1:O:106:LYS:HD3 | 1:O:108:ILE:CD1 | 2.50 | 0.41 |
| 1:O:196:LEU:C | 1:O:196:LEU:HD13 | 2.40 | 0.41 |
| 1:P:390:ASP:HB3 | 1:P:485:GLN:CD | 2.40 | 0.41 |
| 1:B:334:LYS:HB3 | 1:B:351:GLY:HA3 | 2.02 | 0.41 |
| 1:B:393:THR:HB | 1:B:481:THR:OG1 | 2.20 | 0.41 |
| 1:B:413:SER:CB | 1:I:454:ALA:HA | 2.50 | 0.41 |
| 1:D:27:LYS:CE | 1:K:107:LYS:HE3 | 2.50 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:D:125:ARG:CG | 1:D:125:ARG:NH1 | 2.78 | 0.41 |
| 1:D:420:ALA:HB1 | 1:K:453:ARG:HH21 | 1.86 | 0.41 |
| 1:D:508:ILE:O | 1:H:40:LEU:O | 2.39 | 0.41 |
| 1:F:126:GLN:O | 1:F:130:ASN:HB2 | 2.20 | 0.41 |
| 1:F:173:ALA:HA | 1:F:176:ARG:CZ | 2.51 | 0.41 |
| 1:F:265:LYS:O | 1:F:269:ILE:HG13 | 2.20 | 0.41 |
| 1:F:284:TYR:CE2 | 1:F:286:TYR:CD1 | 3.09 | 0.41 |
| 1:G:146:LEU:HD13 | 1:G:167:THR:O | 2.20 | 0.41 |
| 1:G:313:VAL:HG13 | 1:G:352:VAL:CB | 2.50 | 0.41 |
| 1:H:426:TYR:O | 1:H:429:ALA:HB3 | 2.19 | 0.41 |
| 1:H:502:LEU:HD13 | 1:H:502:LEU:C | 2.40 | 0.41 |
| 1:I:199:SER:CB | 1:I:362:LEU:HD22 | 2.48 | 0.41 |
| 1:I:211:ILE:HG12 | 1:I:298:ALA:H | 1.85 | 0.41 |
| 1:K:154:LEU:HD21 | 1:K:163:LYS:HZ3 | 1.85 | 0.41 |
| 1:K:266:VAL:CG2 | 1:K:290:LEU:HD11 | 2.50 | 0.41 |
| 1:L:40:LEU:HA | 1:L:48:LEU:HA | 2.01 | 0.41 |
| 1:L:368:GLN:HG3 | 1:L:368:GLN:O | 2.21 | 0.41 |
| 1:N:269:ILE:HG12 | 1:N:274:ILE:HG21 | 2.03 | 0.41 |
| 1:O:117:TRP:CD1 | 1:O:495:ALA:HA | 2.55 | 0.41 |
| 1:O:174:VAL:HG11 | 1:O:384:LEU:CB | 2.49 | 0.41 |
| 1:P:57:ILE:HD13 | 1:P:57:ILE:O | 2.19 | 0.41 |
| 1:P:259:LYS:O | 1:P:262:MET:HB3 | 2.19 | 0.41 |
| 1:A:146:LEU:HD22 | 1:A:147:MET:H | 1.85 | 0.41 |
| 1:B:226:ILE:HB | 1:B:317:GLU:OE2 | 2.20 | 0.41 |
| 1:C:92:LEU:O | 1:C:95:GLU:HG2 | 2.21 | 0.41 |
| 1:C:157:LYS:HE2 | 1:C:379:ASP:OD2 | 2.21 | 0.41 |
| 1:C:163:LYS:CE | 1:C:376:SER:HB2 | 2.50 | 0.41 |
| 1:C:274:ILE:O | 1:C:274:ILE:HG23 | 2.20 | 0.41 |
| 1:E:133:VAL:CG1 | 1:E:394:VAL:HG12 | 2.51 | 0.41 |
| 1:F:159:LEU:HD12 | 1:F:369:ILE:O | 2.19 | 0.41 |
| 1:G:449:VAL:O | 1:G:453:ARG:HG3 | 2.20 | 0.41 |
| 1:I:59:LYS:HD2 | 1:I:76:ARG:HB2 | 2.03 | 0.41 |
| 1:J:117:TRP:HD1 | 1:J:495:ALA:CA | 2.33 | 0.41 |
| 1:J:146:LEU:HD13 | 1:J:168:LYS:CA | 2.51 | 0.41 |
| 1:K:149:ILE:HD13 | 1:K:383:VAL:HG13 | 2.02 | 0.41 |
| 1:L:152:THR:OG1 | 1:L:480:ILE:HG23 | 2.20 | 0.41 |
| 1:L:177:LEU:HD21 | 1:L:183:LEU:HA | 2.02 | 0.41 |
| 1:L:200:TYR:HD1 | 1:L:363:ARG:HD2 | 1.82 | 0.41 |
| 1:L:326:GLU:HG3 | 1:L:327:LEU:HD22 | 2.03 | 0.41 |
| 1:L:499:GLU:O | 1:L:503:ARG:HG2 | 2.20 | 0.41 |
| 1:M:116:GLY:HA2 | 1:M:422:ALA:CA | 2.50 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:M:159:LEU:HD23 | 1:M:163:LYS:HB3 | 2.03 | 0.41 |
| 1:M:188:VAL:CG2 | 1:M:362:LEU:HG | 2.50 | 0.41 |
| 1:M:419:GLU:O | 1:M:422:ALA:HB3 | 2.21 | 0.41 |
| 1:M:452:LEU:HD11 | 1:M:456:HIS:CE1 | 2.55 | 0.41 |
| 1:N:125:ARG:HG3 | 1:N:126:GLN:N | 2.35 | 0.41 |
| 1:N:176:ARG:HD2 | 1:N:358:CYS:HB2 | 2.02 | 0.41 |
| 1:N:513:ARG:NE | 1:N:513:ARG:CA | 2.77 | 0.41 |
| 1:O:159:LEU:HD13 | 1:O:372:GLU:CD | 2.41 | 0.41 |
| 1:O:222:ALA:HA | 1:O:275:ASN:CB | 2.51 | 0.41 |
| 1:O:341:ILE:O | 1:O:343:GLU:N | 2.47 | 0.41 |
| 1:P:32:PRO:N | 1:P:156:SER:HA | 2.35 | 0.41 |
| 1:P:152:THR:HB | 1:P:480:ILE:HG23 | 2.03 | 0.41 |
| 1:P:159:LEU:H | 1:P:159:LEU:HD22 | 1.86 | 0.41 |
| 1:P:277:PHE:CE2 | 1:P:279:ASN:HB2 | 2.55 | 0.41 |
| 1:P:433:LEU:H | 1:P:433:LEU:HD12 | 1.85 | 0.41 |
| 1:P:496:GLU:O | 1:P:499:GLU:HB3 | 2.20 | 0.41 |
| 1:A:54:GLY:O | 1:A:58:LEU:HD23 | 2.21 | 0.41 |
| 1:A:148:ASN:HB3 | 1:A:481:THR:H | 1.85 | 0.41 |
| 1:A:438:ALA:CB | 1:A:448:LEU:HG | 2.46 | 0.41 |
| 1:B:122:LYS:NZ | 1:B:126:GLN:HE21 | 2.18 | 0.41 |
| 1:C:198:ASP:O | 1:C:363:ARG:O | 2.39 | 0.41 |
| 1:D:186:ILE:HG21 | 1:D:381:LEU:HG | 2.03 | 0.41 |
| 1:D:450:ALA:HB3 | 1:K:417:GLY:HA2 | 1.97 | 0.41 |
| 1:D:501:ILE:HA | 1:D:504:VAL:HG23 | 2.03 | 0.41 |
| 1:E:69:LYS:O | 1:E:72:VAL:HB | 2.21 | 0.41 |
| 1:E:166:PHE:CE1 | 1:E:198:ASP:HB3 | 2.55 | 0.41 |
| 1:E:183:LEU:O | 1:E:184:GLU:HG3 | 2.21 | 0.41 |
| 1:E:188:VAL:HG21 | 1:E:377:LEU:HB2 | 2.03 | 0.41 |
| 1:E:191:LYS:HB3 | 1:E:363:ARG:HG2 | 2.02 | 0.41 |
| 1:E:394:VAL:HG23 | 1:E:482:GLU:HB2 | 2.01 | 0.41 |
| 1:F:119:GLU:OE1 | 1:F:415:THR:HG21 | 2.20 | 0.41 |
| 1:F:127:ALA:CB | 1:F:491:LEU:HD11 | 2.51 | 0.41 |
| 1:F:216:PRO:HG2 | 1:F:295:GLY:CA | 2.45 | 0.41 |
| 1:F:286:TYR:HB2 | 1:F:287:PRO:HD3 | 2.03 | 0.41 |
| 1:F:402:MET:HE3 | 1:F:453:ARG:HG2 | 2.03 | 0.41 |
| 1:G:27:LYS:CA | 1:G:436:ILE:HD11 | 2.51 | 0.41 |
| 1:G:233:THR:HG21 | 1:G:261:LYS:HE3 | 2.02 | 0.41 |
| 1:G:280:ARG:HG2 | 1:G:302:ALA:O | 2.20 | 0.41 |
| 1:H:157:LYS:HB3 | 1:H:159:LEU:HD11 | 2.03 | 0.41 |
| 1:H:206:LEU:CD1 | 1:H:346:LEU:HG | 2.46 | 0.41 |
| 1:H:259:LYS:O | 1:H:262:MET:HB3 | 2.20 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:I:32:PRO:HA | 1:I:156:SER:CA | 2.50 | 0.41 |
| 1:I:33:LYS:HB3 | 1:N:109:HIS:HE1 | 1.79 | 0.41 |
| 1:I:412:ALA:HB1 | 1:I:424:GLU:HB3 | 2.02 | 0.41 |
| 1:J:117:TRP:O | 1:J:120:ALA:HB3 | 2.21 | 0.41 |
| 1:J:207:LEU:HD22 | 1:J:208:ASP:H | 1.86 | 0.41 |
| 1:J:334:LYS:HB3 | 1:J:351:GLY:HA3 | 2.00 | 0.41 |
| 1:J:341:ILE:HD11 | 1:J:348:HIS:CE1 | 2.55 | 0.41 |
| 1:K:115:ALA:O | 1:K:118:ARG:HB3 | 2.21 | 0.41 |
| 1:K:286:TYR:HB2 | 1:K:287:PRO:HD3 | 2.02 | 0.41 |
| 1:K:324:HIS:O | 1:K:328:VAL:HG22 | 2.21 | 0.41 |
| 1:L:109:HIS:HA | 1:L:110:PRO:HD3 | 1.92 | 0.41 |
| 1:L:318:ILE:CG1 | 1:P:289:GLN:HB3 | 2.51 | 0.41 |
| 1:N:119:GLU:CB | 1:N:423:MET:HG3 | 2.50 | 0.41 |
| 1:N:313:VAL:CG1 | 1:N:352:VAL:HB | 2.51 | 0.41 |
| 1:O:188:VAL:HG21 | 1:O:377:LEU:CD2 | 2.47 | 0.41 |
| 1:P:103:LEU:HD23 | 1:P:113:ILE:HD13 | 2.03 | 0.41 |
| 1:P:116:GLY:O | 1:P:119:GLU:HB2 | 2.21 | 0.41 |
| 1:P:149:ILE:CD1 | 1:P:482:GLU:HG2 | 2.50 | 0.41 |
| 1:P:359:THR:HG22 | 1:P:361:VAL:CG2 | 2.51 | 0.41 |
| 1:A:140:VAL:CA | 1:A:178:LYS:HZ2 | 2.33 | 0.41 |
| 1:A:173:ALA:HA | 1:A:176:ARG:NH1 | 2.36 | 0.41 |
| 1:B:38:ILE:CG2 | 1:B:50:VAL:HB | 2.51 | 0.41 |
| 1:B:106:LYS:HZ2 | 1:B:109:HIS:H | 1.67 | 0.41 |
| 1:B:321:THR:O | 1:B:323:ASP:N | 2.54 | 0.41 |
| 1:B:334:LYS:CD | 1:B:351:GLY:HA3 | 2.50 | 0.41 |
| 1:C:399:CYS:SG | 1:C:464:GLY:CA | 3.07 | 0.41 |
| 1:D:69:LYS:O | 1:D:72:VAL:HB | 2.21 | 0.41 |
| 1:D:146:LEU:CD1 | 1:D:167:THR:O | 2.69 | 0.41 |
| 1:D:274:ILE:O | 1:D:274:ILE:HG23 | 2.21 | 0.41 |
| 1:D:359:THR:O | 1:D:360:ILE:HG12 | 2.21 | 0.41 |
| 1:D:384:LEU:HD22 | 1:D:384:LEU:N | 2.36 | 0.41 |
| 1:D:448:LEU:HD21 | 1:D:465:LEU:HD12 | 2.03 | 0.41 |
| 1:E:65:ASN:CG | 1:E:66:PRO:HD3 | 2.41 | 0.41 |
| 1:E:446:ALA:HB3 | 1:J:106:LYS:HG2 | 2.01 | 0.41 |
| 1:F:109:HIS:ND1 | 1:F:111:GLN:HB2 | 2.33 | 0.41 |
| 1:F:214:ASN:O | 1:F:215:GLN:CB | 2.65 | 0.41 |
| 1:F:405:ALA:HA | 1:F:408:VAL:CG2 | 2.51 | 0.41 |
| 1:G:107:LYS:C | 1:G:108:ILE:HG13 | 2.41 | 0.41 |
| 1:G:183:LEU:HD11 | 1:G:381:LEU:HD11 | 2.02 | 0.41 |
| 1:H:225:LEU:HD13 | 1:H:329:LYS:HE2 | 2.02 | 0.41 |
| 1:I:33:LYS:CB | 1:N:109:HIS:CE1 | 3.00 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:I:286:TYR:HB2 | 1:I:287:PRO:HD3 | 2.02 | 0.41 |
| 1:I:354:LEU:HD21 | 1:I:356:GLU:CB | 2.49 | 0.41 |
| 1:J:207:LEU:HD22 | 1:J:208:ASP:N | 2.36 | 0.41 |
| 1:J:507:ILE:HA | 1:N:38:ILE:CD1 | 2.51 | 0.41 |
| 1:K:181:GLY:O | 1:K:182:ASN:CG | 2.59 | 0.41 |
| 1:K:284:TYR:CE2 | 1:K:286:TYR:HD1 | 2.39 | 0.41 |
| 1:L:265:LYS:HE2 | 1:L:322:PHE:CE2 | 2.55 | 0.41 |
| 1:L:387:THR:HA | 1:L:390:ASP:OD1 | 2.20 | 0.41 |
| 1:M:495:ALA:O | 1:M:499:GLU:HB2 | 2.20 | 0.41 |
| 1:N:47:SER:HB3 | 1:N:48:LEU:H | 1.70 | 0.41 |
| 1:N:128:LEU:O | 1:N:129:LEU:HD13 | 2.20 | 0.41 |
| 1:N:142:PHE:O | 1:N:143:ARG:CG | 2.66 | 0.41 |
| 1:N:448:LEU:HD21 | 1:N:465:LEU:CD1 | 2.42 | 0.41 |
| 1:O:313:VAL:HG13 | 1:O:352:VAL:CB | 2.51 | 0.41 |
| 1:O:384:LEU:HD22 | 1:O:384:LEU:N | 2.36 | 0.41 |
| 1:P:114:ILE:CG1 | 1:P:503:ARG:HD2 | 2.49 | 0.41 |
| 1:P:166:PHE:CD2 | 1:P:362:LEU:HD22 | 2.55 | 0.41 |
| 1:P:181:GLY:O | 1:P:182:ASN:HB3 | 2.20 | 0.41 |
| 1:P:339:VAL:HB | 1:P:348:HIS:ND1 | 2.36 | 0.41 |
| 1:A:32:PRO:CG | 1:A:467:MET:SD | 2.90 | 0.41 |
| 1:A:149:ILE:HD12 | 1:A:483:SER:H | 1.85 | 0.41 |
| 1:A:154:LEU:CD2 | 1:A:163:LYS:HG2 | 2.50 | 0.41 |
| 1:A:394:VAL:HG21 | 1:A:487:LYS:HG3 | 2.03 | 0.41 |
| 1:A:512:PRO:O | 1:A:513:ARG:CB | 2.68 | 0.41 |
| 1:B:100:ALA:O | 1:B:103:LEU:HB2 | 2.21 | 0.41 |
| 1:B:367:GLN:HB3 | 1:B:369:ILE:HG13 | 2.03 | 0.41 |
| 1:B:448:LEU:HD11 | 1:B:465:LEU:CD1 | 2.51 | 0.41 |
| 1:C:64:ASP:CG | 1:C:66:PRO:HD2 | 2.42 | 0.41 |
| 1:C:82:VAL:HG11 | 1:C:485:GLN:CG | 2.45 | 0.41 |
| 1:C:173:ALA:O | 1:C:176:ARG:HG2 | 2.20 | 0.41 |
| 1:C:206:LEU:HD21 | 1:C:346:LEU:HD23 | 2.03 | 0.41 |
| 1:C:321:THR:O | 1:C:323:ASP:N | 2.53 | 0.41 |
| 1:C:433:LEU:HB2 | 1:C:434:PRO:HD3 | 2.03 | 0.41 |
| 1:D:132:ALA:O | 1:D:133:VAL:CG2 | 2.67 | 0.41 |
| 1:D:133:VAL:HB | 1:D:394:VAL:HA | 2.03 | 0.41 |
| 1:D:177:LEU:HD23 | 1:D:186:ILE:HD11 | 2.02 | 0.41 |
| 1:E:48:LEU:HD11 | 1:G:65:ASN:O | 2.21 | 0.41 |
| 1:E:103:LEU:HG | 1:E:113:ILE:CD1 | 2.50 | 0.41 |
| 1:E:191:LYS:HD2 | 1:E:341:ILE:CG2 | 2.50 | 0.41 |
| 1:E:392:ARG:C | 1:E:484:PHE:HB2 | 2.41 | 0.41 |
| 1:F:82:VAL:HG13 | 1:F:83:GLY:N | 2.36 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:F:96:LEU:HA | 1:F:99:GLU:OE1 | 2.20 | 0.41 |
| 1:F:107:LYS:O | 1:F:107:LYS:CG | 2.69 | 0.41 |
| 1:F:268:ARG:O | 1:F:271:LYS:HG2 | 2.20 | 0.41 |
| 1:F:312:LEU:O | 1:F:354:LEU:HD22 | 2.21 | 0.41 |
| 1:F:312:LEU:O | 1:F:312:LEU:HD22 | 2.20 | 0.41 |
| 1:F:341:ILE:HG12 | 1:F:363:ARG:NH2 | 2.36 | 0.41 |
| 1:F:377:LEU:CD1 | 1:F:377:LEU:C | 2.89 | 0.41 |
| 1:F:396:GLY:HA3 | 1:F:480:ILE:HG22 | 2.02 | 0.41 |
| 1:F:450:ALA:HA | 1:O:417:GLY:H | 1.86 | 0.41 |
| 1:F:452:LEU:HD11 | 1:F:456:HIS:HE1 | 1.86 | 0.41 |
| 1:G:117:TRP:O | 1:G:120:ALA:HB3 | 2.21 | 0.41 |
| 1:H:15:SER:HB2 | 1:H:501:ILE:HD13 | 2.02 | 0.41 |
| 1:I:74:MET:SD | 1:I:74:MET:C | 2.99 | 0.41 |
| 1:I:149:ILE:O | 1:I:149:ILE:HD13 | 2.20 | 0.41 |
| 1:I:182:ASN:HB2 | 1:I:312:LEU:HG | 2.02 | 0.41 |
| 1:J:22:ILE:HD12 | 1:J:90:THR:CG2 | 2.50 | 0.41 |
| 1:J:31:GLY:C | 1:J:155:SER:HB3 | 2.41 | 0.41 |
| 1:J:39:LEU:O | 1:J:48:LEU:HD12 | 2.21 | 0.41 |
| 1:J:129:LEU:HD12 | 1:J:484:PHE:CZ | 2.56 | 0.41 |
| 1:J:178:LYS:NZ | 1:J:388:VAL:HG21 | 2.36 | 0.41 |
| 1:J:310:LEU:HD13 | 1:J:310:LEU:O | 2.21 | 0.41 |
| 1:J:313:VAL:CG1 | 1:J:352:VAL:HB | 2.51 | 0.41 |
| 1:K:65:ASN:ND2 | 1:K:66:PRO:HD3 | 2.36 | 0.41 |
| 1:K:113:ILE:HG22 | 1:K:117:TRP:HZ3 | 1.84 | 0.41 |
| 1:K:122:LYS:O | 1:K:125:ARG:HG2 | 2.21 | 0.41 |
| 1:K:232:ASP:HA | 1:K:284:TYR:CD1 | 2.55 | 0.41 |
| 1:L:126:GLN:HE21 | 1:L:126:GLN:HB2 | 1.64 | 0.41 |
| 1:L:128:LEU:HD11 | 1:L:488:ARG:CB | 2.51 | 0.41 |
| 1:L:154:LEU:HD22 | 1:L:167:THR:HB | 2.03 | 0.41 |
| 1:L:324:HIS:CG | 1:L:325:PRO:HD3 | 2.56 | 0.41 |
| 1:L:362:LEU:HD11 | 1:L:377:LEU:HD22 | 2.03 | 0.41 |
| 1:L:377:LEU:O | 1:L:380:ALA:HB3 | 2.21 | 0.41 |
| 1:L:384:LEU:HD22 | 1:L:384:LEU:N | 2.35 | 0.41 |
| 1:M:334:LYS:HG3 | 1:M:351:GLY:HA3 | 2.02 | 0.41 |
| 1:M:511:ALA:O | 1:M:512:PRO:O | 2.38 | 0.41 |
| 1:N:117:TRP:O | 1:N:120:ALA:HB3 | 2.20 | 0.41 |
| 1:N:146:LEU:HD11 | 1:N:150:ALA:HB2 | 2.03 | 0.41 |
| 1:N:185:ALA:N | 1:N:309:ARG:HG2 | 2.36 | 0.41 |
| 1:N:219:ILE:HD13 | 1:N:276:CYS:HB2 | 2.02 | 0.41 |
| 1:N:313:VAL:HG13 | 1:N:352:VAL:CB | 2.51 | 0.41 |
| 1:O:82:VAL:CG1 | 1:O:83:GLY:H | 2.15 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:O:313:VAL:HG13 | 1:O:352:VAL:HB | 2.02 | 0.41 |
| 1:O:393:THR:HA | 1:O:484:PHE:H | 1.86 | 0.41 |
| 1:O:394:VAL:CG2 | 1:O:482:GLU:HB2 | 2.51 | 0.41 |
| 1:O:412:ALA:O | 1:O:420:ALA:HB1 | 2.21 | 0.41 |
| 1:P:159:LEU:O | 1:P:161:HIS:N | 2.53 | 0.41 |
| 1:P:359:THR:HG22 | 1:P:361:VAL:HG23 | 2.03 | 0.41 |
| 1:P:394:VAL:O | 1:P:482:GLU:N | 2.51 | 0.41 |
| 1:P:485:GLN:CB | 1:P:489:GLN:HE22 | 2.33 | 0.41 |
| 1:B:255:GLU:O | 1:B:258:GLU:HB3 | 2.21 | 0.41 |
| 1:C:197:ALA:O | 1:C:198:ASP:HB2 | 2.21 | 0.41 |
| 1:D:117:TRP:HA | 1:D:120:ALA:CB | 2.50 | 0.41 |
| 1:D:146:LEU:HD21 | 1:D:150:ALA:CB | 2.30 | 0.41 |
| 1:D:431:ARG:HA | 1:D:431:ARG:NE | 2.36 | 0.41 |
| 1:E:108:ILE:CG2 | 1:E:109:HIS:N | 2.84 | 0.41 |
| 1:E:154:LEU:HD21 | 1:E:163:LYS:HG3 | 2.01 | 0.41 |
| 1:E:171:VAL:CG1 | 1:E:384:LEU:HD12 | 2.51 | 0.41 |
| 1:E:211:ILE:HG12 | 1:E:298:ALA:H | 1.85 | 0.41 |
| 1:F:116:GLY:HA3 | 1:F:422:ALA:HB1 | 2.02 | 0.41 |
| 1:F:178:LYS:HG3 | 1:F:388:VAL:HG13 | 2.01 | 0.41 |
| 1:F:310:LEU:O | 1:F:314:THR:HG22 | 2.20 | 0.41 |
| 1:G:52:ASN:CG | 1:G:157:LYS:HG2 | 2.42 | 0.41 |
| 1:G:66:PRO:N | 1:G:507:ILE:HD11 | 2.36 | 0.41 |
| 1:G:450:ALA:CA | 1:N:417:GLY:HA3 | 2.51 | 0.41 |
| 1:H:226:ILE:HG12 | 1:H:278:ILE:CG2 | 2.51 | 0.41 |
| 1:H:402:MET:CE | 1:H:406:HIS:HB2 | 2.50 | 0.41 |
| 1:I:169:LEU:HD23 | 1:I:362:LEU:CD2 | 2.50 | 0.41 |
| 1:I:219:ILE:HD13 | 1:I:276:CYS:HB2 | 2.02 | 0.41 |
| 1:K:191:LYS:HE3 | 1:K:191:LYS:HB2 | 1.89 | 0.41 |
| 1:K:191:LYS:HA | 1:K:191:LYS:CE | 2.51 | 0.41 |
| 1:L:128:LEU:HD21 | 1:L:488:ARG:CA | 2.50 | 0.41 |
| 1:L:177:LEU:C | 1:L:177:LEU:HD13 | 2.41 | 0.41 |
| 1:L:187:HIS:CE1 | 1:L:189:ILE:HD11 | 2.55 | 0.41 |
| 1:L:496:GLU:HB3 | 1:P:369:ILE:CG1 | 2.48 | 0.41 |
| 1:M:51:THR:HG22 | 1:M:53:ASP:O | 2.20 | 0.41 |
| 1:N:41:SER:O | 1:N:45:ASP:HB2 | 2.21 | 0.41 |
| 1:N:201:LEU:HD22 | 1:N:202:ASP:O | 2.21 | 0.41 |
| 1:N:284:TYR:CE2 | 1:N:286:TYR:HD1 | 2.37 | 0.41 |
| 1:B:25:LEU:HD12 | 1:F:509:LYS:HD2 | 2.02 | 0.40 |
| 1:B:27:LYS:HA | 1:B:436:ILE:CD1 | 2.34 | 0.40 |
| 1:B:36:ASP:O | 1:F:504:VAL:HG21 | 2.20 | 0.40 |
| 1:B:310:LEU:O | 1:B:310:LEU:HD13 | 2.21 | 0.40 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:B:443:TYR:CD1 | 1:B:470:GLY:HA2 | 2.56 | 0.40 |
| 1:C:58:LEU:HB3 | 1:C:72:VAL:HG11 | 2.01 | 0.40 |
| 1:C:78:GLN:OE1 | 1:C:78:GLN:HA | 2.21 | 0.40 |
| 1:C:117:TRP:HD1 | 1:C:495:ALA:C | 2.24 | 0.40 |
| 1:C:452:LEU:CD2 | 1:C:465:LEU:HD21 | 2.51 | 0.40 |
| 1:D:110:PRO:O | 1:D:113:ILE:HB | 2.21 | 0.40 |
| 1:D:140:VAL:HG12 | 1:D:141:LYS:N | 2.36 | 0.40 |
| 1:E:215:GLN:HG3 | 1:E:292:GLY:HA2 | 2.02 | 0.40 |
| 1:E:367:GLN:O | 1:E:370:LEU:HB3 | 2.21 | 0.40 |
| 1:F:75:SER:O | 1:F:78:GLN:HB3 | 2.21 | 0.40 |
| 1:F:154:LEU:CD1 | 1:F:159:LEU:HD21 | 2.49 | 0.40 |
| 1:G:96:LEU:O | 1:G:96:LEU:HD22 | 2.21 | 0.40 |
| 1:G:166:PHE:N | 1:G:166:PHE:HD1 | 2.18 | 0.40 |
| 1:G:198:ASP:O | 1:G:363:ARG:HB2 | 2.21 | 0.40 |
| 1:G:444:ASP:OD1 | 1:N:108:ILE:HG21 | 2.21 | 0.40 |
| 1:H:189:ILE:HG22 | 1:H:190:LYS:N | 2.35 | 0.40 |
| 1:I:322:PHE:HA | 1:I:324:HIS:CD2 | 2.57 | 0.40 |
| 1:J:159:LEU:HD23 | 1:J:163:LYS:CG | 2.42 | 0.40 |
| 1:J:228:ASN:ND2 | 1:J:319:ALA:HB3 | 2.36 | 0.40 |
| 1:J:276:CYS:HA | 1:J:297:MET:O | 2.22 | 0.40 |
| 1:K:185:ALA:HA | 1:K:309:ARG:HD3 | 2.02 | 0.40 |
| 1:K:310:LEU:HD21 | 1:K:349:PHE:CE1 | 2.56 | 0.40 |
| 1:K:388:VAL:HG23 | 1:K:389:LYS:HD2 | 2.02 | 0.40 |
| 1:M:65:ASN:N | 1:M:66:PRO:CD | 2.84 | 0.40 |
| 1:M:76:ARG:O | 1:M:79:ASP:HB3 | 2.21 | 0.40 |
| 1:N:201:LEU:HD23 | 1:N:360:ILE:HG12 | 2.02 | 0.40 |
| 1:N:216:PRO:HG2 | 1:N:295:GLY:C | 2.42 | 0.40 |
| 1:O:28:SER:HB2 | 1:O:35:MET:CG | 2.51 | 0.40 |
| 1:O:38:ILE:C | 1:O:39:LEU:HG | 2.40 | 0.40 |
| 1:O:65:ASN:N | 1:O:66:PRO:CD | 2.84 | 0.40 |
| 1:O:84:ASP:OD2 | 1:O:382:CYS:HB2 | 2.21 | 0.40 |
| 1:O:205:PHE:HA | 1:O:359:THR:CB | 2.51 | 0.40 |
| 1:P:226:ILE:HG21 | 1:P:307:VAL:CG1 | 2.51 | 0.40 |
| 1:P:280:ARG:HG3 | 1:P:304:PHE:CB | 2.51 | 0.40 |
| 1:A:126:GLN:HG2 | 1:A:411:LEU:HD13 | 2.03 | 0.40 |
| 1:A:182:ASN:CG | 1:A:183:LEU:N | 2.74 | 0.40 |
| 1:E:158:LEU:O | 1:E:158:LEU:HG | 2.20 | 0.40 |
| 1:E:312:LEU:HD22 | 1:E:312:LEU:HA | 1.86 | 0.40 |
| 1:E:394:VAL:CG2 | 1:E:482:GLU:HB2 | 2.51 | 0.40 |
| 1:F:59:LYS:HB2 | 1:F:59:LYS:HE2 | 1.92 | 0.40 |
| 1:F:159:LEU:H | 1:F:159:LEU:HD22 | 1.86 | 0.40 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:F:412:ALA:HB1 | 1:F:424:GLU:HB3 | 2.03 | 0.40 |
| 1:G:24:ASP:O | 1:G:27:LYS:HG2 | 2.21 | 0.40 |
| 1:G:74:MET:HE1 | 1:G:493:SER:HA | 2.03 | 0.40 |
| 1:G:110:PRO:HD2 | 1:G:111:GLN:OE1 | 2.21 | 0.40 |
| 1:G:313:VAL:HG13 | 1:G:352:VAL:CG1 | 2.51 | 0.40 |
| 1:H:57:ILE:HG23 | 1:H:58:LEU:HD22 | 2.02 | 0.40 |
| 1:H:146:LEU:HD11 | 1:H:150:ALA:HB3 | 2.02 | 0.40 |
| 1:H:166:PHE:CE1 | 1:H:198:ASP:HB3 | 2.56 | 0.40 |
| 1:H:219:ILE:CD1 | 1:H:275:ASN:HB3 | 2.49 | 0.40 |
| 1:H:232:ASP:HA | 1:H:284:TYR:CD1 | 2.56 | 0.40 |
| 1:I:38:ILE:O | 1:I:38:ILE:HG13 | 2.20 | 0.40 |
| 1:I:146:LEU:CD1 | 1:I:171:VAL:CG1 | 3.00 | 0.40 |
| 1:J:133:VAL:CA | 1:J:393:THR:O | 2.69 | 0.40 |
| 1:J:277:PHE:O | 1:J:298:ALA:HA | 2.21 | 0.40 |
| 1:J:448:LEU:HD22 | 1:J:451:GLN:HE21 | 1.86 | 0.40 |
| 1:J:452:LEU:HD11 | 1:J:456:HIS:HE1 | 1.86 | 0.40 |
| 1:J:484:PHE:CE2 | 1:J:488:ARG:NE | 2.89 | 0.40 |
| 1:K:173:ALA:O | 1:K:176:ARG:HG2 | 2.20 | 0.40 |
| 1:K:206:LEU:HD21 | 1:K:346:LEU:CB | 2.52 | 0.40 |
| 1:K:287:PRO:O | 1:K:290:LEU:HB3 | 2.22 | 0.40 |
| 1:L:131:SER:HB2 | 1:L:461:THR:HG21 | 2.02 | 0.40 |
| 1:L:176:ARG:HH22 | 1:L:201:LEU:HD21 | 1.87 | 0.40 |
| 1:L:432:MET:O | 1:L:435:THR:HB | 2.21 | 0.40 |
| 1:L:440:ASN:HA | 1:M:109:HIS:ND1 | 2.37 | 0.40 |
| 1:M:166:PHE:CE1 | 1:M:198:ASP:CB | 3.04 | 0.40 |
| 1:N:110:PRO:O | 1:N:114:ILE:HG12 | 2.21 | 0.40 |
| 1:N:475:MET:SD | 1:N:480:ILE:HB | 2.61 | 0.40 |
| 1:O:129:LEU:O | 1:O:132:ALA:HB2 | 2.20 | 0.40 |
| 1:O:159:LEU:HD22 | 1:O:159:LEU:N | 2.36 | 0.40 |
| 1:O:222:ALA:O | 1:O:333:CYS:HA | 2.22 | 0.40 |
| 1:P:27:LYS:HB2 | 1:P:436:ILE:HD13 | 2.03 | 0.40 |
| 1:P:257:ALA:O | 1:P:261:LYS:HD2 | 2.20 | 0.40 |
| 1:P:415:THR:HG21 | 1:P:423:MET:CE | 2.47 | 0.40 |
| 1:A:141:LYS:HG3 | 1:A:144:GLN:H | 1.86 | 0.40 |
| 1:A:433:LEU:O | 1:A:437:ILE:HG12 | 2.21 | 0.40 |
| 1:B:65:ASN:CG | 1:B:66:PRO:HD3 | 2.42 | 0.40 |
| 1:C:57:ILE:HD13 | 1:C:57:ILE:O | 2.21 | 0.40 |
| 1:C:313:VAL:CG1 | 1:C:352:VAL:HB | 2.51 | 0.40 |
| 1:C:507:ILE:HB | 1:C:508:ILE:H | 1.68 | 0.40 |
| 1:D:388:VAL:HG13 | 1:D:389:LYS:N | 2.36 | 0.40 |
| 1:D:396:GLY:HA3 | 1:D:480:ILE:HG22 | 2.03 | 0.40 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:E:188:VAL:CG2 | 1:E:377:LEU:HD22 | 2.51 | 0.40 |
| 1:E:323:ASP:C | 1:E:325:PRO:HD2 | 2.42 | 0.40 |
| 1:E:341:ILE:O | 1:E:343:GLU:N | 2.54 | 0.40 |
| 1:F:50:VAL:O | 1:F:375:ARG:NH1 | 2.50 | 0.40 |
| 1:F:53:ASP:N | 1:F:375:ARG:HD3 | 2.36 | 0.40 |
| 1:F:217:LYS:HB2 | 1:F:217:LYS:HZ2 | 1.86 | 0.40 |
| 1:F:386:GLN:HB3 | 1:F:485:GLN:HG3 | 2.03 | 0.40 |
| 1:G:49:MET:HB3 | 1:G:375:ARG:NH1 | 2.36 | 0.40 |
| 1:G:123:ALA:O | 1:G:126:GLN:HB2 | 2.21 | 0.40 |
| 1:G:390:ASP:HB3 | 1:G:485:GLN:OE1 | 2.22 | 0.40 |
| 1:H:219:ILE:HD12 | 1:H:275:ASN:CB | 2.50 | 0.40 |
| 1:H:232:ASP:N | 1:H:284:TYR:HB2 | 2.35 | 0.40 |
| 1:I:163:LYS:HE2 | 1:I:373:ALA:CB | 2.51 | 0.40 |
| 1:I:163:LYS:O | 1:I:166:PHE:HB2 | 2.21 | 0.40 |
| 1:I:222:ALA:HB1 | 1:I:336:ILE:HD12 | 2.02 | 0.40 |
| 1:K:405:ALA:HA | 1:K:408:VAL:HG22 | 2.03 | 0.40 |
| 1:L:32:PRO:HA | 1:L:155:SER:CB | 2.50 | 0.40 |
| 1:L:38:ILE:HG22 | 1:L:50:VAL:CG2 | 2.51 | 0.40 |
| 1:L:51:THR:HG22 | 1:L:53:ASP:O | 2.22 | 0.40 |
| 1:M:85:GLY:O | 1:M:153:THR:HA | 2.21 | 0.40 |
| 1:M:166:PHE:CE1 | 1:M:198:ASP:HB3 | 2.56 | 0.40 |
| 1:M:490:VAL:HG13 | 1:M:491:LEU:HG | 2.03 | 0.40 |
| 1:N:102:SER:O | 1:N:105:ALA:HB3 | 2.20 | 0.40 |
| 1:N:164:ASP:O | 1:N:167:THR:HG22 | 2.21 | 0.40 |
| 1:N:280:ARG:O | 1:N:281:GLN:CB | 2.69 | 0.40 |
| 1:O:78:GLN:NE2 | 1:O:486:VAL:HA | 2.36 | 0.40 |
| 1:O:141:LYS:HD2 | 1:O:141:LYS:HA | 1.95 | 0.40 |
| 1:P:158:LEU:HD23 | 1:P:158:LEU:HA | 1.84 | 0.40 |
| 1:P:280:ARG:CG | 1:P:304:PHE:HB2 | 2.52 | 0.40 |
| 1:P:338:GLU:HA | 1:P:347:ILE:HA | 2.02 | 0.40 |
| 1:A:402:MET:HE1 | 1:A:406:HIS:HB2 | 2.02 | 0.40 |
| 1:B:198:ASP:HA | 1:B:364:GLY:CA | 2.51 | 0.40 |
| 1:B:317:GLU:OE2 | 1:B:329:LYS:HE3 | 2.21 | 0.40 |
| 1:C:70:VAL:HG13 | 1:C:508:ILE:HG21 | 2.03 | 0.40 |
| 1:C:219:ILE:HG21 | 1:C:275:ASN:O | 2.22 | 0.40 |
| 1:E:65:ASN:ND2 | 1:E:66:PRO:HD3 | 2.37 | 0.40 |
| 1:E:131:SER:HA | 1:E:403:LEU:CD2 | 2.47 | 0.40 |
| 1:E:191:LYS:HE3 | 1:E:191:LYS:HB2 | 1.88 | 0.40 |
| 1:E:207:LEU:HD13 | 1:E:208:ASP:N | 2.37 | 0.40 |
| 1:E:313:VAL:CG1 | 1:E:352:VAL:HB | 2.51 | 0.40 |
| 1:F:222:ALA:HA | 1:F:275:ASN:CG | 2.42 | 0.40 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:F:394:VAL:CG2 | 1:F:482:GLU:HB2 | 2.51 | 0.40 |
| 1:G:38:ILE:HG22 | 1:G:50:VAL:CG2 | 2.51 | 0.40 |
| 1:G:129:LEU:HD23 | 1:G:129:LEU:O | 2.21 | 0.40 |
| 1:H:202:ASP:HB2 | 1:H:361:VAL:CG2 | 2.51 | 0.40 |
| 1:I:124:ALA:O | 1:I:128:LEU:HG | 2.22 | 0.40 |
| 1:I:146:LEU:HD22 | 1:I:168:LYS:HA | 2.03 | 0.40 |
| 1:I:182:ASN:CB | 1:I:312:LEU:HG | 2.51 | 0.40 |
| 1:I:408:VAL:HA | 1:I:411:LEU:HD12 | 2.03 | 0.40 |
| 1:I:431:ARG:CZ | 1:I:431:ARG:HA | 2.51 | 0.40 |
| 1:I:484:PHE:HE2 | 1:I:488:ARG:HE | 1.66 | 0.40 |
| 1:J:149:ILE:HG22 | 1:J:384:LEU:HD13 | 2.03 | 0.40 |
| 1:K:207:LEU:HD21 | 1:K:209:LYS:HE2 | 2.02 | 0.40 |
| 1:L:158:LEU:HD21 | 1:M:499:GLU:OE2 | 2.22 | 0.40 |
| 1:L:202:ASP:OD2 | 1:L:361:VAL:HG21 | 2.22 | 0.40 |
| 1:L:448:LEU:HD11 | 1:L:465:LEU:CD1 | 2.51 | 0.40 |
| 1:M:106:LYS:C | 1:M:107:LYS:HD2 | 2.40 | 0.40 |
| 1:M:126:GLN:HG3 | 1:M:127:ALA:N | 2.37 | 0.40 |
| 1:N:313:VAL:HG22 | 1:N:357:ALA:HB3 | 2.04 | 0.40 |
| 1:N:402:MET:HG2 | 1:N:431:ARG:HH22 | 1.85 | 0.40 |
| 1:N:452:LEU:CD2 | 1:N:465:LEU:HD21 | 2.52 | 0.40 |
| 1:O:225:LEU:HG | 1:O:277:PHE:HD1 | 1.85 | 0.40 |
| 1:A:40:LEU:HD22 | 1:C:508:ILE:HA | 2.03 | 0.40 |
| 1:A:59:LYS:CE | 1:A:76:ARG:HB2 | 2.46 | 0.40 |
| 1:A:138:ASP:O | 1:A:139:GLU:O | 2.39 | 0.40 |
| 1:B:40:LEU:HD23 | 1:B:48:LEU:CD1 | 2.51 | 0.40 |
| 1:B:277:PHE:CE2 | 1:B:279:ASN:HB2 | 2.56 | 0.40 |
| 1:C:231:MET:HG3 | 1:C:283:ILE:HG13 | 2.03 | 0.40 |
| 1:D:25:LEU:HG | 1:E:508:ILE:HG12 | 2.03 | 0.40 |
| 1:D:109:HIS:CE1 | 1:D:111:GLN:HB2 | 2.57 | 0.40 |
| 1:D:324:HIS:HB2 | 1:D:329:LYS:HE2 | 2.03 | 0.40 |
| 1:E:171:VAL:HA | 1:E:174:VAL:HG22 | 2.03 | 0.40 |
| 1:F:57:ILE:C | 1:F:57:ILE:HD13 | 2.42 | 0.40 |
| 1:F:417:GLY:C | 1:O:450:ALA:HA | 2.42 | 0.40 |
| 1:F:430:LEU:HD13 | 1:F:430:LEU:HA | 1.86 | 0.40 |
| 1:G:57:ILE:HG23 | 1:G:58:LEU:CD2 | 2.52 | 0.40 |
| 1:G:224:ILE:HD11 | 1:G:349:PHE:HE2 | 1.85 | 0.40 |
| 1:H:147:MET:HG3 | 1:H:168:LYS:HD3 | 2.04 | 0.40 |
| 1:H:163:LYS:HA | 1:H:166:PHE:HD1 | 1.85 | 0.40 |
| 1:H:231:MET:C | 1:H:284:TYR:HB2 | 2.42 | 0.40 |
| 1:H:280:ARG:HG2 | 1:H:302:ALA:O | 2.22 | 0.40 |
| 1:H:398:GLY:HA2 | 1:H:401:GLU:CD | 2.42 | 0.40 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:I:17:ILE:O | 1:I:20:ILE:HG22 | 2.21 | 0.40 |
| 1:I:32:PRO:CA | 1:I:155:SER:O | 2.62 | 0.40 |
| 1:I:63:VAL:HG21 | 1:N:511:ALA:O | 2.21 | 0.40 |
| 1:I:198:ASP:O | 1:I:199:SER:HB3 | 2.21 | 0.40 |
| 1:I:226:ILE:HA | 1:I:278:ILE:O | 2.21 | 0.40 |
| 1:I:341:ILE:HD13 | 1:I:341:ILE:HA | 1.93 | 0.40 |
| 1:I:452:LEU:HD13 | 1:I:465:LEU:HD11 | 2.04 | 0.40 |
| 1:J:59:LYS:CE | 1:J:76:ARG:HB2 | 2.48 | 0.40 |
| 1:J:95:GLU:OE2 | 1:J:429:ALA:HB1 | 2.21 | 0.40 |
| 1:J:109:HIS:HA | 1:J:110:PRO:HD2 | 1.82 | 0.40 |
| 1:J:158:LEU:HD23 | 1:K:503:ARG:NE | 2.36 | 0.40 |
| 1:L:137:SER:H | 1:L:391:SER:HA | 1.86 | 0.40 |
| 1:N:163:LYS:HG3 | 1:N:166:PHE:CB | 2.51 | 0.40 |
| 1:O:313:VAL:CG2 | 1:O:357:ALA:HB3 | 2.49 | 0.40 |
| 1:O:510:ALA:O | 1:O:511:ALA:HB2 | 2.22 | 0.40 |
| 1:P:52:ASN:HB2 | 1:P:375:ARG:HD3 | 2.02 | 0.40 |
| 1:P:96:LEU:HD13 | 1:P:97:LEU:N | 2.37 | 0.40 |
| 1:P:262:MET:SD | 1:P:290:LEU:HD22 | 2.62 | 0.40 |

There are no symmetry-related clashes.

## 5.3 Torsion angles (i)

### 5.3.1 Protein backbone (i)

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

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

| Mol | Chain | Analysed | Favoured | Allowed | Outliers | Percentiles | |
|---|---|---|---|---|---|---|---|
| 1 | A | 335/513 (65%) | 299 (89%) | 14 (4%) | 22 (7%) | 1 | 16 |
| 1 | B | 486/513 (95%) | 441 (91%) | 18 (4%) | 27 (6%) | 2 | 19 |
| 1 | C | 478/513 (93%) | 425 (89%) | 28 (6%) | 25 (5%) | 2 | 19 |
| 1 | D | 485/513 (94%) | 439 (90%) | 21 (4%) | 25 (5%) | 2 | 19 |
| 1 | E | 488/513 (95%) | 443 (91%) | 16 (3%) | 29 (6%) | 1 | 17 |
| 1 | F | 484/513 (94%) | 439 (91%) | 22 (4%) | 23 (5%) | 2 | 21 |

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| Mol | Chain | Analysed | Favoured | Allowed | Outliers | Percentiles | |
|---|---|---|---|---|---|---|---|
| 1 | G | 511/513 (100%) | 450 (88%) | 31 (6%) | 30 (6%) | 1 | 17 |
| 1 | H | 489/513 (95%) | 434 (89%) | 31 (6%) | 24 (5%) | 2 | 20 |
| 1 | I | 469/513 (91%) | 421 (90%) | 18 (4%) | 30 (6%) | 1 | 16 |
| 1 | J | 486/513 (95%) | 438 (90%) | 25 (5%) | 23 (5%) | 2 | 21 |
| 1 | K | 492/513 (96%) | 438 (89%) | 25 (5%) | 29 (6%) | 1 | 17 |
| 1 | L | 487/513 (95%) | 450 (92%) | 21 (4%) | 16 (3%) | 4 | 26 |
| 1 | M | 384/513 (75%) | 347 (90%) | 17 (4%) | 20 (5%) | 2 | 19 |
| 1 | N | 482/513 (94%) | 429 (89%) | 26 (5%) | 27 (6%) | 2 | 19 |
| 1 | O | 477/513 (93%) | 422 (88%) | 28 (6%) | 27 (6%) | 1 | 18 |
| 1 | P | 492/513 (96%) | 449 (91%) | 21 (4%) | 22 (4%) | 2 | 22 |
| All | All | 7525/8208 (92%) | 6764 (90%) | 362 (5%) | 399 (5%) | 3 | 19 |

All (399) Ramachandran outliers are listed below:

| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | A | 3 | ALA |
| 1 | A | 37 | LYS |
| 1 | A | 68 | ALA |
| 1 | A | 139 | GLU |
| 1 | A | 180 | SER |
| 1 | A | 505 | ASP |
| 1 | A | 509 | LYS |
| 1 | A | 512 | PRO |
| 1 | B | 132 | ALA |
| 1 | B | 133 | VAL |
| 1 | B | 178 | LYS |
| 1 | B | 182 | ASN |
| 1 | B | 215 | GLN |
| 1 | B | 326 | GLU |
| 1 | B | 366 | THR |
| 1 | B | 511 | ALA |
| 1 | C | 68 | ALA |
| 1 | C | 82 | VAL |
| 1 | C | 131 | SER |
| 1 | C | 139 | GLU |
| 1 | C | 215 | GLN |
| 1 | C | 281 | GLN |
| 1 | C | 325 | PRO |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | C | 366 | THR |
| 1 | C | 496 | GLU |
| 1 | C | 504 | VAL |
| 1 | C | 506 | ASN |
| 1 | C | 511 | ALA |
| 1 | D | 8 | ALA |
| 1 | D | 82 | VAL |
| 1 | D | 132 | ALA |
| 1 | D | 139 | GLU |
| 1 | D | 215 | GLN |
| 1 | D | 325 | PRO |
| 1 | D | 360 | ILE |
| 1 | D | 366 | THR |
| 1 | E | 82 | VAL |
| 1 | E | 129 | LEU |
| 1 | E | 131 | SER |
| 1 | E | 132 | ALA |
| 1 | E | 133 | VAL |
| 1 | E | 139 | GLU |
| 1 | E | 215 | GLN |
| 1 | E | 281 | GLN |
| 1 | E | 325 | PRO |
| 1 | E | 342 | GLY |
| 1 | E | 343 | GLU |
| 1 | E | 397 | GLY |
| 1 | E | 507 | ILE |
| 1 | F | 4 | ASP |
| 1 | F | 68 | ALA |
| 1 | F | 82 | VAL |
| 1 | F | 133 | VAL |
| 1 | F | 139 | GLU |
| 1 | F | 188 | VAL |
| 1 | F | 208 | ASP |
| 1 | F | 215 | GLN |
| 1 | F | 322 | PHE |
| 1 | F | 506 | ASN |
| 1 | G | 32 | PRO |
| 1 | G | 36 | ASP |
| 1 | G | 82 | VAL |
| 1 | G | 108 | ILE |
| 1 | G | 180 | SER |
| 1 | G | 182 | ASN |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | G | 215 | GLN |
| 1 | G | 234 | ASP |
| 1 | G | 237 | LYS |
| 1 | G | 248 | THR |
| 1 | G | 342 | GLY |
| 1 | G | 366 | THR |
| 1 | G | 412 | ALA |
| 1 | H | 182 | ASN |
| 1 | H | 184 | GLU |
| 1 | H | 185 | ALA |
| 1 | H | 215 | GLN |
| 1 | H | 274 | ILE |
| 1 | H | 281 | GLN |
| 1 | H | 325 | PRO |
| 1 | H | 340 | MET |
| 1 | H | 342 | GLY |
| 1 | H | 366 | THR |
| 1 | H | 370 | LEU |
| 1 | H | 480 | ILE |
| 1 | H | 512 | PRO |
| 1 | I | 82 | VAL |
| 1 | I | 129 | LEU |
| 1 | I | 137 | SER |
| 1 | I | 139 | GLU |
| 1 | I | 184 | GLU |
| 1 | I | 195 | SER |
| 1 | I | 196 | LEU |
| 1 | I | 215 | GLN |
| 1 | I | 281 | GLN |
| 1 | I | 326 | GLU |
| 1 | I | 417 | GLY |
| 1 | J | 4 | ASP |
| 1 | J | 47 | SER |
| 1 | J | 82 | VAL |
| 1 | J | 84 | ASP |
| 1 | J | 134 | ASP |
| 1 | J | 141 | LYS |
| 1 | J | 142 | PHE |
| 1 | J | 185 | ALA |
| 1 | J | 274 | ILE |
| 1 | J | 281 | GLN |
| 1 | J | 322 | PHE |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | J | 325 | PRO |
| 1 | J | 382 | CYS |
| 1 | K | 3 | ALA |
| 1 | K | 131 | SER |
| 1 | K | 182 | ASN |
| 1 | K | 192 | LEU |
| 1 | K | 215 | GLN |
| 1 | K | 325 | PRO |
| 1 | K | 350 | SER |
| 1 | K | 365 | ALA |
| 1 | K | 368 | GLN |
| 1 | K | 509 | LYS |
| 1 | K | 512 | PRO |
| 1 | L | 4 | ASP |
| 1 | L | 8 | ALA |
| 1 | L | 82 | VAL |
| 1 | L | 131 | SER |
| 1 | L | 132 | ALA |
| 1 | L | 215 | GLN |
| 1 | L | 325 | PRO |
| 1 | L | 511 | ALA |
| 1 | M | 184 | GLU |
| 1 | M | 340 | MET |
| 1 | M | 366 | THR |
| 1 | M | 511 | ALA |
| 1 | M | 512 | PRO |
| 1 | N | 68 | ALA |
| 1 | N | 84 | ASP |
| 1 | N | 129 | LEU |
| 1 | N | 133 | VAL |
| 1 | N | 139 | GLU |
| 1 | N | 140 | VAL |
| 1 | N | 141 | LYS |
| 1 | N | 185 | ALA |
| 1 | N | 195 | SER |
| 1 | N | 215 | GLN |
| 1 | N | 281 | GLN |
| 1 | N | 325 | PRO |
| 1 | N | 344 | ASP |
| 1 | N | 508 | ILE |
| 1 | O | 3 | ALA |
| 1 | O | 82 | VAL |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | O | 132 | ALA |
| 1 | O | 139 | GLU |
| 1 | O | 141 | LYS |
| 1 | O | 215 | GLN |
| 1 | O | 281 | GLN |
| 1 | O | 325 | PRO |
| 1 | O | 366 | THR |
| 1 | O | 507 | ILE |
| 1 | O | 508 | ILE |
| 1 | P | 132 | ALA |
| 1 | P | 281 | GLN |
| 1 | P | 325 | PRO |
| 1 | P | 512 | PRO |
| 1 | A | 8 | ALA |
| 1 | A | 82 | VAL |
| 1 | A | 131 | SER |
| 1 | A | 141 | LYS |
| 1 | A | 159 | LEU |
| 1 | A | 366 | THR |
| 1 | A | 507 | ILE |
| 1 | A | 511 | ALA |
| 1 | B | 68 | ALA |
| 1 | B | 114 | ILE |
| 1 | B | 139 | GLU |
| 1 | B | 159 | LEU |
| 1 | B | 274 | ILE |
| 1 | B | 322 | PHE |
| 1 | B | 342 | GLY |
| 1 | B | 508 | ILE |
| 1 | C | 83 | GLY |
| 1 | C | 141 | LYS |
| 1 | C | 274 | ILE |
| 1 | C | 322 | PHE |
| 1 | C | 510 | ALA |
| 1 | D | 46 | ALA |
| 1 | D | 84 | ASP |
| 1 | D | 141 | LYS |
| 1 | D | 274 | ILE |
| 1 | D | 322 | PHE |
| 1 | D | 361 | VAL |
| 1 | D | 417 | GLY |
| 1 | D | 421 | VAL |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | D | 504 | VAL |
| 1 | E | 68 | ALA |
| 1 | E | 84 | ASP |
| 1 | E | 159 | LEU |
| 1 | E | 181 | GLY |
| 1 | E | 274 | ILE |
| 1 | E | 322 | PHE |
| 1 | E | 366 | THR |
| 1 | F | 8 | ALA |
| 1 | F | 43 | GLY |
| 1 | F | 141 | LYS |
| 1 | F | 182 | ASN |
| 1 | F | 325 | PRO |
| 1 | G | 8 | ALA |
| 1 | G | 30 | LEU |
| 1 | G | 47 | SER |
| 1 | G | 134 | ASP |
| 1 | G | 141 | LYS |
| 1 | G | 245 | VAL |
| 1 | G | 249 | ALA |
| 1 | G | 322 | PHE |
| 1 | H | 8 | ALA |
| 1 | H | 68 | ALA |
| 1 | H | 140 | VAL |
| 1 | H | 160 | THR |
| 1 | I | 4 | ASP |
| 1 | I | 8 | ALA |
| 1 | I | 68 | ALA |
| 1 | I | 133 | VAL |
| 1 | I | 160 | THR |
| 1 | I | 182 | ASN |
| 1 | I | 192 | LEU |
| 1 | I | 274 | ILE |
| 1 | I | 322 | PHE |
| 1 | I | 366 | THR |
| 1 | I | 394 | VAL |
| 1 | J | 8 | ALA |
| 1 | J | 159 | LEU |
| 1 | K | 5 | GLU |
| 1 | K | 8 | ALA |
| 1 | K | 68 | ALA |
| 1 | K | 82 | VAL |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | K | 141 | LYS |
| 1 | K | 142 | PHE |
| 1 | K | 274 | ILE |
| 1 | K | 322 | PHE |
| 1 | K | 366 | THR |
| 1 | K | 508 | ILE |
| 1 | L | 68 | ALA |
| 1 | L | 141 | LYS |
| 1 | L | 274 | ILE |
| 1 | L | 322 | PHE |
| 1 | L | 371 | ASP |
| 1 | M | 68 | ALA |
| 1 | M | 82 | VAL |
| 1 | M | 135 | HIS |
| 1 | M | 137 | SER |
| 1 | M | 141 | LYS |
| 1 | M | 159 | LEU |
| 1 | M | 417 | GLY |
| 1 | N | 114 | ILE |
| 1 | N | 159 | LEU |
| 1 | N | 274 | ILE |
| 1 | N | 322 | PHE |
| 1 | N | 420 | ALA |
| 1 | N | 509 | LYS |
| 1 | N | 512 | PRO |
| 1 | O | 80 | ASP |
| 1 | O | 85 | GLY |
| 1 | O | 123 | ALA |
| 1 | O | 159 | LEU |
| 1 | O | 274 | ILE |
| 1 | O | 322 | PHE |
| 1 | O | 342 | GLY |
| 1 | O | 349 | PHE |
| 1 | P | 3 | ALA |
| 1 | P | 160 | THR |
| 1 | P | 182 | ASN |
| 1 | P | 274 | ILE |
| 1 | P | 322 | PHE |
| 1 | P | 501 | ILE |
| 1 | P | 509 | LYS |
| 1 | A | 129 | LEU |
| 1 | B | 4 | ASP |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | B | 8 | ALA |
| 1 | B | 141 | LYS |
| 1 | B | 146 | LEU |
| 1 | B | 184 | GLU |
| 1 | B | 281 | GLN |
| 1 | C | 159 | LEU |
| 1 | C | 182 | ASN |
| 1 | C | 507 | ILE |
| 1 | D | 159 | LEU |
| 1 | D | 182 | ASN |
| 1 | D | 184 | GLU |
| 1 | D | 281 | GLN |
| 1 | E | 141 | LYS |
| 1 | E | 142 | PHE |
| 1 | E | 335 | LEU |
| 1 | E | 367 | GLN |
| 1 | E | 396 | GLY |
| 1 | E | 510 | ALA |
| 1 | F | 281 | GLN |
| 1 | F | 366 | THR |
| 1 | G | 123 | ALA |
| 1 | G | 181 | GLY |
| 1 | G | 281 | GLN |
| 1 | G | 325 | PRO |
| 1 | H | 3 | ALA |
| 1 | H | 133 | VAL |
| 1 | H | 368 | GLN |
| 1 | I | 199 | SER |
| 1 | I | 343 | GLU |
| 1 | J | 139 | GLU |
| 1 | J | 366 | THR |
| 1 | K | 281 | GLN |
| 1 | L | 139 | GLU |
| 1 | M | 108 | ILE |
| 1 | M | 115 | ALA |
| 1 | M | 335 | LEU |
| 1 | M | 342 | GLY |
| 1 | M | 367 | GLN |
| 1 | M | 416 | PRO |
| 1 | N | 8 | ALA |
| 1 | N | 83 | GLY |
| 1 | N | 335 | LEU |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | O | 68 | ALA |
| 1 | O | 182 | ASN |
| 1 | O | 367 | GLN |
| 1 | P | 136 | GLY |
| 1 | P | 215 | GLN |
| 1 | B | 82 | VAL |
| 1 | B | 507 | ILE |
| 1 | C | 148 | ASN |
| 1 | C | 352 | VAL |
| 1 | C | 417 | GLY |
| 1 | D | 140 | VAL |
| 1 | D | 343 | GLU |
| 1 | D | 511 | ALA |
| 1 | E | 3 | ALA |
| 1 | E | 160 | THR |
| 1 | F | 132 | ALA |
| 1 | G | 131 | SER |
| 1 | G | 274 | ILE |
| 1 | G | 371 | ASP |
| 1 | H | 141 | LYS |
| 1 | I | 109 | HIS |
| 1 | J | 68 | ALA |
| 1 | J | 367 | GLN |
| 1 | K | 205 | PHE |
| 1 | K | 510 | ALA |
| 1 | M | 182 | ASN |
| 1 | N | 108 | ILE |
| 1 | N | 367 | GLN |
| 1 | P | 133 | VAL |
| 1 | P | 139 | GLU |
| 1 | P | 181 | GLY |
| 1 | A | 109 | HIS |
| 1 | A | 137 | SER |
| 1 | A | 161 | HIS |
| 1 | B | 140 | VAL |
| 1 | B | 185 | ALA |
| 1 | F | 140 | VAL |
| 1 | F | 367 | GLN |
| 1 | G | 137 | SER |
| 1 | H | 326 | GLU |
| 1 | H | 362 | LEU |
| 1 | I | 141 | LYS |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | I | 178 | LYS |
| 1 | J | 203 | GLU |
| 1 | J | 215 | GLN |
| 1 | J | 417 | GLY |
| 1 | K | 160 | THR |
| 1 | N | 498 | ALA |
| 1 | O | 133 | VAL |
| 1 | P | 141 | LYS |
| 1 | P | 506 | ASN |
| 1 | F | 274 | ILE |
| 1 | F | 342 | GLY |
| 1 | J | 416 | PRO |
| 1 | L | 324 | HIS |
| 1 | O | 32 | PRO |
| 1 | O | 504 | VAL |
| 1 | O | 511 | ALA |
| 1 | P | 108 | ILE |
| 1 | A | 181 | GLY |
| 1 | C | 108 | ILE |
| 1 | G | 140 | VAL |
| 1 | I | 140 | VAL |
| 1 | A | 140 | VAL |
| 1 | C | 85 | GLY |
| 1 | E | 140 | VAL |
| 1 | M | 507 | ILE |
| 1 | O | 43 | GLY |
| 1 | P | 82 | VAL |
| 1 | P | 511 | ALA |
| 1 | B | 108 | ILE |
| 1 | D | 108 | ILE |
| 1 | F | 108 | ILE |
| 1 | H | 82 | VAL |
| 1 | I | 508 | ILE |
| 1 | K | 108 | ILE |
| 1 | K | 114 | ILE |
| 1 | P | 140 | VAL |
| 1 | I | 108 | ILE |
| 1 | K | 2 | GLY |
| 1 | K | 204 | GLY |
| 1 | L | 140 | 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 PDB entries followed by that with respect to all EM entries.

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

| Mol | Chain | Analysed | Rotameric | Outliers | Percentiles | |
|---|---|---|---|---|---|---|
| 1 | A | 266/409 (65%) | 238 (90%) | 28 (10%) | 7 | 24 |
| 1 | B | 389/409 (95%) | 351 (90%) | 38 (10%) | 8 | 26 |
| 1 | C | 382/409 (93%) | 339 (89%) | 43 (11%) | 6 | 21 |
| 1 | D | 388/409 (95%) | 346 (89%) | 42 (11%) | 6 | 23 |
| 1 | E | 391/409 (96%) | 347 (89%) | 44 (11%) | 6 | 21 |
| 1 | F | 388/409 (95%) | 348 (90%) | 40 (10%) | 7 | 25 |
| 1 | G | 409/409 (100%) | 349 (85%) | 60 (15%) | 3 | 15 |
| 1 | H | 392/409 (96%) | 335 (86%) | 57 (14%) | 3 | 15 |
| 1 | I | 373/409 (91%) | 327 (88%) | 46 (12%) | 4 | 19 |
| 1 | J | 389/409 (95%) | 344 (88%) | 45 (12%) | 5 | 21 |
| 1 | K | 394/409 (96%) | 354 (90%) | 40 (10%) | 7 | 25 |
| 1 | L | 390/409 (95%) | 343 (88%) | 47 (12%) | 5 | 20 |
| 1 | M | 305/409 (75%) | 276 (90%) | 29 (10%) | 8 | 27 |
| 1 | N | 386/409 (94%) | 344 (89%) | 42 (11%) | 6 | 23 |
| 1 | O | 381/409 (93%) | 337 (88%) | 44 (12%) | 5 | 21 |
| 1 | P | 394/409 (96%) | 347 (88%) | 47 (12%) | 5 | 20 |
| All | All | 6017/6544 (92%) | 5325 (88%) | 692 (12%) | 9 | 21 |

All (692) residues with a non-rotameric sidechain are listed below:

| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | A | 35 | MET |
| 1 | A | 48 | LEU |
| 1 | A | 50 | VAL |
| 1 | A | 57 | ILE |
| 1 | A | 58 | LEU |
| 1 | A | 74 | MET |
| 1 | A | 92 | LEU |
| 1 | A | 96 | LEU |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | A | 98 | ARG |
| 1 | A | 109 | HIS |
| 1 | A | 122 | LYS |
| 1 | A | 139 | GLU |
| 1 | A | 159 | LEU |
| 1 | A | 167 | THR |
| 1 | A | 177 | LEU |
| 1 | A | 366 | THR |
| 1 | A | 370 | LEU |
| 1 | A | 371 | ASP |
| 1 | A | 401 | GLU |
| 1 | A | 402 | MET |
| 1 | A | 409 | THR |
| 1 | A | 423 | MET |
| 1 | A | 431 | ARG |
| 1 | A | 469 | GLU |
| 1 | A | 489 | GLN |
| 1 | A | 503 | ARG |
| 1 | A | 508 | ILE |
| 1 | A | 512 | PRO |
| 1 | B | 4 | ASP |
| 1 | B | 9 | GLU |
| 1 | B | 10 | THR |
| 1 | B | 27 | LYS |
| 1 | B | 38 | ILE |
| 1 | B | 42 | SER |
| 1 | B | 57 | ILE |
| 1 | B | 58 | LEU |
| 1 | B | 74 | MET |
| 1 | B | 80 | ASP |
| 1 | B | 89 | VAL |
| 1 | B | 98 | ARG |
| 1 | B | 133 | VAL |
| 1 | B | 143 | ARG |
| 1 | B | 159 | LEU |
| 1 | B | 167 | THR |
| 1 | B | 190 | LYS |
| 1 | B | 211 | ILE |
| 1 | B | 215 | GLN |
| 1 | B | 225 | LEU |
| 1 | B | 259 | LYS |
| 1 | B | 261 | LYS |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | B | 280 | ARG |
| 1 | B | 284 | TYR |
| 1 | B | 312 | LEU |
| 1 | B | 320 | SER |
| 1 | B | 326 | GLU |
| 1 | B | 327 | LEU |
| 1 | B | 343 | GLU |
| 1 | B | 344 | ASP |
| 1 | B | 369 | ILE |
| 1 | B | 394 | VAL |
| 1 | B | 402 | MET |
| 1 | B | 409 | THR |
| 1 | B | 424 | GLU |
| 1 | B | 431 | ARG |
| 1 | B | 489 | GLN |
| 1 | B | 507 | ILE |
| 1 | C | 25 | LEU |
| 1 | C | 57 | ILE |
| 1 | C | 58 | LEU |
| 1 | C | 65 | ASN |
| 1 | C | 78 | GLN |
| 1 | C | 96 | LEU |
| 1 | C | 98 | ARG |
| 1 | C | 118 | ARG |
| 1 | C | 131 | SER |
| 1 | C | 135 | HIS |
| 1 | C | 139 | GLU |
| 1 | C | 146 | LEU |
| 1 | C | 159 | LEU |
| 1 | C | 174 | VAL |
| 1 | C | 177 | LEU |
| 1 | C | 178 | LYS |
| 1 | C | 189 | ILE |
| 1 | C | 190 | LYS |
| 1 | C | 201 | LEU |
| 1 | C | 203 | GLU |
| 1 | C | 211 | ILE |
| 1 | C | 225 | LEU |
| 1 | C | 269 | ILE |
| 1 | C | 280 | ARG |
| 1 | C | 284 | TYR |
| 1 | C | 320 | SER |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | C | 335 | LEU |
| 1 | C | 343 | GLU |
| 1 | C | 367 | GLN |
| 1 | C | 384 | LEU |
| 1 | C | 389 | LYS |
| 1 | C | 401 | GLU |
| 1 | C | 402 | MET |
| 1 | C | 428 | LYS |
| 1 | C | 431 | ARG |
| 1 | C | 485 | GLN |
| 1 | C | 489 | GLN |
| 1 | C | 491 | LEU |
| 1 | C | 492 | LEU |
| 1 | C | 505 | ASP |
| 1 | C | 506 | ASN |
| 1 | C | 507 | ILE |
| 1 | C | 509 | LYS |
| 1 | D | 9 | GLU |
| 1 | D | 27 | LYS |
| 1 | D | 35 | MET |
| 1 | D | 38 | ILE |
| 1 | D | 39 | LEU |
| 1 | D | 40 | LEU |
| 1 | D | 57 | ILE |
| 1 | D | 58 | LEU |
| 1 | D | 96 | LEU |
| 1 | D | 98 | ARG |
| 1 | D | 109 | HIS |
| 1 | D | 114 | ILE |
| 1 | D | 125 | ARG |
| 1 | D | 128 | LEU |
| 1 | D | 146 | LEU |
| 1 | D | 147 | MET |
| 1 | D | 159 | LEU |
| 1 | D | 160 | THR |
| 1 | D | 167 | THR |
| 1 | D | 178 | LYS |
| 1 | D | 190 | LYS |
| 1 | D | 191 | LYS |
| 1 | D | 198 | ASP |
| 1 | D | 203 | GLU |
| 1 | D | 207 | LEU |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | D | 211 | ILE |
| 1 | D | 223 | LYS |
| 1 | D | 225 | LEU |
| 1 | D | 261 | LYS |
| 1 | D | 280 | ARG |
| 1 | D | 312 | LEU |
| 1 | D | 326 | GLU |
| 1 | D | 330 | LEU |
| 1 | D | 334 | LYS |
| 1 | D | 347 | ILE |
| 1 | D | 360 | ILE |
| 1 | D | 376 | SER |
| 1 | D | 402 | MET |
| 1 | D | 421 | VAL |
| 1 | D | 431 | ARG |
| 1 | D | 481 | THR |
| 1 | D | 507 | ILE |
| 1 | E | 57 | ILE |
| 1 | E | 58 | LEU |
| 1 | E | 96 | LEU |
| 1 | E | 98 | ARG |
| 1 | E | 103 | LEU |
| 1 | E | 107 | LYS |
| 1 | E | 108 | ILE |
| 1 | E | 143 | ARG |
| 1 | E | 146 | LEU |
| 1 | E | 159 | LEU |
| 1 | E | 160 | THR |
| 1 | E | 167 | THR |
| 1 | E | 183 | LEU |
| 1 | E | 190 | LYS |
| 1 | E | 191 | LYS |
| 1 | E | 203 | GLU |
| 1 | E | 207 | LEU |
| 1 | E | 211 | ILE |
| 1 | E | 215 | GLN |
| 1 | E | 225 | LEU |
| 1 | E | 255 | GLU |
| 1 | E | 280 | ARG |
| 1 | E | 312 | LEU |
| 1 | E | 317 | GLU |
| 1 | E | 320 | SER |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | E | 326 | GLU |
| 1 | E | 330 | LEU |
| 1 | E | 346 | LEU |
| 1 | E | 347 | ILE |
| 1 | E | 352 | VAL |
| 1 | E | 366 | THR |
| 1 | E | 367 | GLN |
| 1 | E | 368 | GLN |
| 1 | E | 375 | ARG |
| 1 | E | 401 | GLU |
| 1 | E | 402 | MET |
| 1 | E | 409 | THR |
| 1 | E | 415 | THR |
| 1 | E | 431 | ARG |
| 1 | E | 489 | GLN |
| 1 | E | 502 | LEU |
| 1 | E | 508 | ILE |
| 1 | E | 509 | LYS |
| 1 | E | 513 | ARG |
| 1 | F | 30 | LEU |
| 1 | F | 40 | LEU |
| 1 | F | 57 | ILE |
| 1 | F | 58 | LEU |
| 1 | F | 96 | LEU |
| 1 | F | 98 | ARG |
| 1 | F | 107 | LYS |
| 1 | F | 133 | VAL |
| 1 | F | 135 | HIS |
| 1 | F | 143 | ARG |
| 1 | F | 146 | LEU |
| 1 | F | 147 | MET |
| 1 | F | 159 | LEU |
| 1 | F | 167 | THR |
| 1 | F | 183 | LEU |
| 1 | F | 190 | LYS |
| 1 | F | 191 | LYS |
| 1 | F | 192 | LEU |
| 1 | F | 206 | LEU |
| 1 | F | 207 | LEU |
| 1 | F | 211 | ILE |
| 1 | F | 225 | LEU |
| 1 | F | 280 | ARG |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | F | 312 | LEU |
| 1 | F | 326 | GLU |
| 1 | F | 333 | CYS |
| 1 | F | 345 | LYS |
| 1 | F | 346 | LEU |
| 1 | F | 352 | VAL |
| 1 | F | 367 | GLN |
| 1 | F | 377 | LEU |
| 1 | F | 381 | LEU |
| 1 | F | 401 | GLU |
| 1 | F | 402 | MET |
| 1 | F | 418 | LYS |
| 1 | F | 421 | VAL |
| 1 | F | 431 | ARG |
| 1 | F | 506 | ASN |
| 1 | F | 508 | ILE |
| 1 | F | 509 | LYS |
| 1 | G | 9 | GLU |
| 1 | G | 33 | LYS |
| 1 | G | 35 | MET |
| 1 | G | 40 | LEU |
| 1 | G | 48 | LEU |
| 1 | G | 57 | ILE |
| 1 | G | 58 | LEU |
| 1 | G | 65 | ASN |
| 1 | G | 74 | MET |
| 1 | G | 89 | VAL |
| 1 | G | 96 | LEU |
| 1 | G | 98 | ARG |
| 1 | G | 106 | LYS |
| 1 | G | 109 | HIS |
| 1 | G | 111 | GLN |
| 1 | G | 122 | LYS |
| 1 | G | 129 | LEU |
| 1 | G | 146 | LEU |
| 1 | G | 152 | THR |
| 1 | G | 159 | LEU |
| 1 | G | 166 | PHE |
| 1 | G | 167 | THR |
| 1 | G | 177 | LEU |
| 1 | G | 178 | LYS |
| 1 | G | 190 | LYS |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | G | 207 | LEU |
| 1 | G | 211 | ILE |
| 1 | G | 215 | GLN |
| 1 | G | 225 | LEU |
| 1 | G | 233 | THR |
| 1 | G | 235 | LYS |
| 1 | G | 236 | ILE |
| 1 | G | 245 | VAL |
| 1 | G | 246 | ASP |
| 1 | G | 247 | SER |
| 1 | G | 258 | GLU |
| 1 | G | 263 | LYS |
| 1 | G | 269 | ILE |
| 1 | G | 280 | ARG |
| 1 | G | 314 | THR |
| 1 | G | 317 | GLU |
| 1 | G | 326 | GLU |
| 1 | G | 330 | LEU |
| 1 | G | 341 | ILE |
| 1 | G | 343 | GLU |
| 1 | G | 352 | VAL |
| 1 | G | 356 | GLU |
| 1 | G | 363 | ARG |
| 1 | G | 379 | ASP |
| 1 | G | 401 | GLU |
| 1 | G | 402 | MET |
| 1 | G | 409 | THR |
| 1 | G | 419 | GLU |
| 1 | G | 428 | LYS |
| 1 | G | 431 | ARG |
| 1 | G | 439 | ASP |
| 1 | G | 485 | GLN |
| 1 | G | 500 | VAL |
| 1 | G | 501 | ILE |
| 1 | G | 506 | ASN |
| 1 | H | 9 | GLU |
| 1 | H | 25 | LEU |
| 1 | H | 35 | MET |
| 1 | H | 40 | LEU |
| 1 | H | 48 | LEU |
| 1 | H | 57 | ILE |
| 1 | H | 58 | LEU |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | H | 96 | LEU |
| 1 | H | 98 | ARG |
| 1 | H | 106 | LYS |
| 1 | H | 122 | LYS |
| 1 | H | 128 | LEU |
| 1 | H | 129 | LEU |
| 1 | H | 131 | SER |
| 1 | H | 137 | SER |
| 1 | H | 142 | PHE |
| 1 | H | 144 | GLN |
| 1 | H | 146 | LEU |
| 1 | H | 152 | THR |
| 1 | H | 154 | LEU |
| 1 | H | 159 | LEU |
| 1 | H | 167 | THR |
| 1 | H | 177 | LEU |
| 1 | H | 182 | ASN |
| 1 | H | 184 | GLU |
| 1 | H | 190 | LYS |
| 1 | H | 191 | LYS |
| 1 | H | 203 | GLU |
| 1 | H | 207 | LEU |
| 1 | H | 211 | ILE |
| 1 | H | 225 | LEU |
| 1 | H | 259 | LYS |
| 1 | H | 267 | GLU |
| 1 | H | 269 | ILE |
| 1 | H | 278 | ILE |
| 1 | H | 280 | ARG |
| 1 | H | 303 | ASP |
| 1 | H | 314 | THR |
| 1 | H | 317 | GLU |
| 1 | H | 320 | SER |
| 1 | H | 326 | GLU |
| 1 | H | 339 | VAL |
| 1 | H | 340 | MET |
| 1 | H | 363 | ARG |
| 1 | H | 367 | GLN |
| 1 | H | 384 | LEU |
| 1 | H | 393 | THR |
| 1 | H | 402 | MET |
| 1 | H | 418 | LYS |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | H | 423 | MET |
| 1 | H | 426 | TYR |
| 1 | H | 431 | ARG |
| 1 | H | 468 | LYS |
| 1 | H | 481 | THR |
| 1 | H | 502 | LEU |
| 1 | H | 504 | VAL |
| 1 | H | 507 | ILE |
| 1 | I | 36 | ASP |
| 1 | I | 53 | ASP |
| 1 | I | 57 | ILE |
| 1 | I | 58 | LEU |
| 1 | I | 61 | ILE |
| 1 | I | 65 | ASN |
| 1 | I | 96 | LEU |
| 1 | I | 98 | ARG |
| 1 | I | 106 | LYS |
| 1 | I | 108 | ILE |
| 1 | I | 114 | ILE |
| 1 | I | 129 | LEU |
| 1 | I | 130 | ASN |
| 1 | I | 134 | ASP |
| 1 | I | 139 | GLU |
| 1 | I | 149 | ILE |
| 1 | I | 167 | THR |
| 1 | I | 178 | LYS |
| 1 | I | 189 | ILE |
| 1 | I | 191 | LYS |
| 1 | I | 196 | LEU |
| 1 | I | 201 | LEU |
| 1 | I | 202 | ASP |
| 1 | I | 211 | ILE |
| 1 | I | 215 | GLN |
| 1 | I | 225 | LEU |
| 1 | I | 280 | ARG |
| 1 | I | 330 | LEU |
| 1 | I | 352 | VAL |
| 1 | I | 354 | LEU |
| 1 | I | 366 | THR |
| 1 | I | 375 | ARG |
| 1 | I | 384 | LEU |
| 1 | I | 394 | VAL |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | I | 402 | MET |
| 1 | I | 409 | THR |
| 1 | I | 414 | ARG |
| 1 | I | 418 | LYS |
| 1 | I | 431 | ARG |
| 1 | I | 467 | MET |
| 1 | I | 487 | LYS |
| 1 | I | 489 | GLN |
| 1 | I | 496 | GLU |
| 1 | I | 507 | ILE |
| 1 | I | 508 | ILE |
| 1 | I | 509 | LYS |
| 1 | J | 38 | ILE |
| 1 | J | 57 | ILE |
| 1 | J | 58 | LEU |
| 1 | J | 74 | MET |
| 1 | J | 96 | LEU |
| 1 | J | 98 | ARG |
| 1 | J | 108 | ILE |
| 1 | J | 119 | GLU |
| 1 | J | 129 | LEU |
| 1 | J | 139 | GLU |
| 1 | J | 143 | ARG |
| 1 | J | 146 | LEU |
| 1 | J | 147 | MET |
| 1 | J | 149 | ILE |
| 1 | J | 159 | LEU |
| 1 | J | 167 | THR |
| 1 | J | 177 | LEU |
| 1 | J | 178 | LYS |
| 1 | J | 180 | SER |
| 1 | J | 191 | LYS |
| 1 | J | 192 | LEU |
| 1 | J | 203 | GLU |
| 1 | J | 211 | ILE |
| 1 | J | 223 | LYS |
| 1 | J | 225 | LEU |
| 1 | J | 262 | MET |
| 1 | J | 269 | ILE |
| 1 | J | 280 | ARG |
| 1 | J | 309 | ARG |
| 1 | J | 312 | LEU |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | J | 320 | SER |
| 1 | J | 326 | GLU |
| 1 | J | 346 | LEU |
| 1 | J | 352 | VAL |
| 1 | J | 366 | THR |
| 1 | J | 367 | GLN |
| 1 | J | 369 | ILE |
| 1 | J | 375 | ARG |
| 1 | J | 379 | ASP |
| 1 | J | 401 | GLU |
| 1 | J | 402 | MET |
| 1 | J | 409 | THR |
| 1 | J | 431 | ARG |
| 1 | J | 492 | LEU |
| 1 | J | 507 | ILE |
| 1 | K | 57 | ILE |
| 1 | K | 58 | LEU |
| 1 | K | 74 | MET |
| 1 | K | 96 | LEU |
| 1 | K | 98 | ARG |
| 1 | K | 104 | ILE |
| 1 | K | 125 | ARG |
| 1 | K | 126 | GLN |
| 1 | K | 128 | LEU |
| 1 | K | 129 | LEU |
| 1 | K | 134 | ASP |
| 1 | K | 146 | LEU |
| 1 | K | 152 | THR |
| 1 | K | 164 | ASP |
| 1 | K | 167 | THR |
| 1 | K | 188 | VAL |
| 1 | K | 189 | ILE |
| 1 | K | 191 | LYS |
| 1 | K | 192 | LEU |
| 1 | K | 211 | ILE |
| 1 | K | 225 | LEU |
| 1 | K | 269 | ILE |
| 1 | K | 280 | ARG |
| 1 | K | 326 | GLU |
| 1 | K | 330 | LEU |
| 1 | K | 335 | LEU |
| 1 | K | 343 | GLU |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | K | 352 | VAL |
| 1 | K | 366 | THR |
| 1 | K | 369 | ILE |
| 1 | K | 370 | LEU |
| 1 | K | 375 | ARG |
| 1 | K | 389 | LYS |
| 1 | K | 401 | GLU |
| 1 | K | 402 | MET |
| 1 | K | 409 | THR |
| 1 | K | 414 | ARG |
| 1 | K | 419 | GLU |
| 1 | K | 431 | ARG |
| 1 | K | 502 | LEU |
| 1 | L | 17 | ILE |
| 1 | L | 25 | LEU |
| 1 | L | 35 | MET |
| 1 | L | 48 | LEU |
| 1 | L | 50 | VAL |
| 1 | L | 57 | ILE |
| 1 | L | 58 | LEU |
| 1 | L | 65 | ASN |
| 1 | L | 74 | MET |
| 1 | L | 96 | LEU |
| 1 | L | 98 | ARG |
| 1 | L | 122 | LYS |
| 1 | L | 126 | GLN |
| 1 | L | 129 | LEU |
| 1 | L | 130 | ASN |
| 1 | L | 131 | SER |
| 1 | L | 133 | VAL |
| 1 | L | 143 | ARG |
| 1 | L | 144 | GLN |
| 1 | L | 146 | LEU |
| 1 | L | 152 | THR |
| 1 | L | 159 | LEU |
| 1 | L | 182 | ASN |
| 1 | L | 190 | LYS |
| 1 | L | 203 | GLU |
| 1 | L | 207 | LEU |
| 1 | L | 211 | ILE |
| 1 | L | 225 | LEU |
| 1 | L | 255 | GLU |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | L | 261 | LYS |
| 1 | L | 269 | ILE |
| 1 | L | 280 | ARG |
| 1 | L | 310 | LEU |
| 1 | L | 312 | LEU |
| 1 | L | 327 | LEU |
| 1 | L | 330 | LEU |
| 1 | L | 344 | ASP |
| 1 | L | 346 | LEU |
| 1 | L | 352 | VAL |
| 1 | L | 356 | GLU |
| 1 | L | 377 | LEU |
| 1 | L | 394 | VAL |
| 1 | L | 401 | GLU |
| 1 | L | 402 | MET |
| 1 | L | 409 | THR |
| 1 | L | 421 | VAL |
| 1 | L | 431 | ARG |
| 1 | M | 36 | ASP |
| 1 | M | 57 | ILE |
| 1 | M | 58 | LEU |
| 1 | M | 74 | MET |
| 1 | M | 97 | LEU |
| 1 | M | 98 | ARG |
| 1 | M | 107 | LYS |
| 1 | M | 119 | GLU |
| 1 | M | 138 | ASP |
| 1 | M | 143 | ARG |
| 1 | M | 146 | LEU |
| 1 | M | 152 | THR |
| 1 | M | 159 | LEU |
| 1 | M | 167 | THR |
| 1 | M | 174 | VAL |
| 1 | M | 180 | SER |
| 1 | M | 190 | LYS |
| 1 | M | 201 | LEU |
| 1 | M | 206 | LEU |
| 1 | M | 343 | GLU |
| 1 | M | 367 | GLN |
| 1 | M | 381 | LEU |
| 1 | M | 402 | MET |
| 1 | M | 409 | THR |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | M | 418 | LYS |
| 1 | M | 431 | ARG |
| 1 | M | 435 | THR |
| 1 | M | 487 | LYS |
| 1 | M | 509 | LYS |
| 1 | N | 9 | GLU |
| 1 | N | 13 | LEU |
| 1 | N | 35 | MET |
| 1 | N | 47 | SER |
| 1 | N | 57 | ILE |
| 1 | N | 65 | ASN |
| 1 | N | 74 | MET |
| 1 | N | 75 | SER |
| 1 | N | 98 | ARG |
| 1 | N | 106 | LYS |
| 1 | N | 108 | ILE |
| 1 | N | 129 | LEU |
| 1 | N | 131 | SER |
| 1 | N | 139 | GLU |
| 1 | N | 146 | LEU |
| 1 | N | 159 | LEU |
| 1 | N | 167 | THR |
| 1 | N | 177 | LEU |
| 1 | N | 186 | ILE |
| 1 | N | 195 | SER |
| 1 | N | 196 | LEU |
| 1 | N | 201 | LEU |
| 1 | N | 211 | ILE |
| 1 | N | 269 | ILE |
| 1 | N | 280 | ARG |
| 1 | N | 310 | LEU |
| 1 | N | 312 | LEU |
| 1 | N | 326 | GLU |
| 1 | N | 328 | VAL |
| 1 | N | 335 | LEU |
| 1 | N | 343 | GLU |
| 1 | N | 346 | LEU |
| 1 | N | 352 | VAL |
| 1 | N | 377 | LEU |
| 1 | N | 402 | MET |
| 1 | N | 409 | THR |
| 1 | N | 428 | LYS |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | N | 431 | ARG |
| 1 | N | 436 | ILE |
| 1 | N | 496 | GLU |
| 1 | N | 508 | ILE |
| 1 | N | 513 | ARG |
| 1 | O | 13 | LEU |
| 1 | O | 35 | MET |
| 1 | O | 47 | SER |
| 1 | O | 57 | ILE |
| 1 | O | 58 | LEU |
| 1 | O | 74 | MET |
| 1 | O | 96 | LEU |
| 1 | O | 98 | ARG |
| 1 | O | 106 | LYS |
| 1 | O | 107 | LYS |
| 1 | O | 111 | GLN |
| 1 | O | 113 | ILE |
| 1 | O | 133 | VAL |
| 1 | O | 135 | HIS |
| 1 | O | 143 | ARG |
| 1 | O | 146 | LEU |
| 1 | O | 152 | THR |
| 1 | O | 159 | LEU |
| 1 | O | 167 | THR |
| 1 | O | 178 | LYS |
| 1 | O | 183 | LEU |
| 1 | O | 190 | LYS |
| 1 | O | 203 | GLU |
| 1 | O | 206 | LEU |
| 1 | O | 207 | LEU |
| 1 | O | 211 | ILE |
| 1 | O | 215 | GLN |
| 1 | O | 218 | ARG |
| 1 | O | 225 | LEU |
| 1 | O | 312 | LEU |
| 1 | O | 326 | GLU |
| 1 | O | 328 | VAL |
| 1 | O | 343 | GLU |
| 1 | O | 352 | VAL |
| 1 | O | 370 | LEU |
| 1 | O | 381 | LEU |
| 1 | O | 401 | GLU |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | O | 402 | MET |
| 1 | O | 431 | ARG |
| 1 | O | 483 | SER |
| 1 | O | 502 | LEU |
| 1 | O | 505 | ASP |
| 1 | O | 507 | ILE |
| 1 | O | 513 | ARG |
| 1 | P | 33 | LYS |
| 1 | P | 35 | MET |
| 1 | P | 38 | ILE |
| 1 | P | 48 | LEU |
| 1 | P | 50 | VAL |
| 1 | P | 57 | ILE |
| 1 | P | 61 | ILE |
| 1 | P | 82 | VAL |
| 1 | P | 86 | THR |
| 1 | P | 96 | LEU |
| 1 | P | 98 | ARG |
| 1 | P | 104 | ILE |
| 1 | P | 106 | LYS |
| 1 | P | 111 | GLN |
| 1 | P | 139 | GLU |
| 1 | P | 146 | LEU |
| 1 | P | 152 | THR |
| 1 | P | 158 | LEU |
| 1 | P | 159 | LEU |
| 1 | P | 160 | THR |
| 1 | P | 167 | THR |
| 1 | P | 178 | LYS |
| 1 | P | 189 | ILE |
| 1 | P | 191 | LYS |
| 1 | P | 203 | GLU |
| 1 | P | 207 | LEU |
| 1 | P | 211 | ILE |
| 1 | P | 223 | LYS |
| 1 | P | 225 | LEU |
| 1 | P | 259 | LYS |
| 1 | P | 269 | ILE |
| 1 | P | 280 | ARG |
| 1 | P | 314 | THR |
| 1 | P | 330 | LEU |
| 1 | P | 334 | LYS |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | P | 340 | MET |
| 1 | P | 352 | VAL |
| 1 | P | 354 | LEU |
| 1 | P | 381 | LEU |
| 1 | P | 384 | LEU |
| 1 | P | 401 | GLU |
| 1 | P | 402 | MET |
| 1 | P | 409 | THR |
| 1 | P | 431 | ARG |
| 1 | P | 489 | GLN |
| 1 | P | 504 | VAL |
| 1 | P | 507 | ILE |

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (105) such sidechains are listed below:

| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | A | 52 | ASN |
| 1 | A | 126 | GLN |
| 1 | A | 144 | GLN |
| 1 | A | 161 | HIS |
| 1 | A | 378 | HIS |
| 1 | A | 386 | GLN |
| 1 | A | 410 | GLN |
| 1 | A | 451 | GLN |
| 1 | A | 489 | GLN |
| 1 | B | 111 | GLN |
| 1 | B | 126 | GLN |
| 1 | B | 161 | HIS |
| 1 | B | 215 | GLN |
| 1 | B | 386 | GLN |
| 1 | B | 410 | GLN |
| 1 | B | 451 | GLN |
| 1 | C | 126 | GLN |
| 1 | C | 130 | ASN |
| 1 | C | 161 | HIS |
| 1 | C | 165 | HIS |
| 1 | C | 182 | ASN |
| 1 | C | 410 | GLN |
| 1 | C | 451 | GLN |
| 1 | D | 161 | HIS |
| 1 | D | 182 | ASN |
| 1 | D | 348 | HIS |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | D | 386 | GLN |
| 1 | D | 451 | GLN |
| 1 | D | 485 | GLN |
| 1 | E | 126 | GLN |
| 1 | E | 289 | GLN |
| 1 | E | 410 | GLN |
| 1 | E | 451 | GLN |
| 1 | E | 489 | GLN |
| 1 | E | 506 | ASN |
| 1 | F | 228 | ASN |
| 1 | F | 386 | GLN |
| 1 | F | 451 | GLN |
| 1 | F | 485 | GLN |
| 1 | F | 506 | ASN |
| 1 | G | 126 | GLN |
| 1 | G | 182 | ASN |
| 1 | G | 348 | HIS |
| 1 | G | 451 | GLN |
| 1 | G | 506 | ASN |
| 1 | H | 126 | GLN |
| 1 | H | 367 | GLN |
| 1 | H | 410 | GLN |
| 1 | H | 451 | GLN |
| 1 | H | 485 | GLN |
| 1 | I | 130 | ASN |
| 1 | I | 161 | HIS |
| 1 | I | 410 | GLN |
| 1 | I | 451 | GLN |
| 1 | I | 489 | GLN |
| 1 | J | 109 | HIS |
| 1 | J | 111 | GLN |
| 1 | J | 126 | GLN |
| 1 | J | 161 | HIS |
| 1 | J | 348 | HIS |
| 1 | J | 410 | GLN |
| 1 | J | 451 | GLN |
| 1 | J | 485 | GLN |
| 1 | J | 489 | GLN |
| 1 | K | 52 | ASN |
| 1 | K | 161 | HIS |
| 1 | K | 410 | GLN |
| 1 | K | 451 | GLN |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | K | 506 | ASN |
| 1 | L | 52 | ASN |
| 1 | L | 109 | HIS |
| 1 | L | 111 | GLN |
| 1 | L | 126 | GLN |
| 1 | L | 144 | GLN |
| 1 | L | 161 | HIS |
| 1 | L | 165 | HIS |
| 1 | L | 182 | ASN |
| 1 | L | 451 | GLN |
| 1 | L | 489 | GLN |
| 1 | L | 506 | ASN |
| 1 | M | 109 | HIS |
| 1 | M | 148 | ASN |
| 1 | M | 368 | GLN |
| 1 | M | 386 | GLN |
| 1 | M | 410 | GLN |
| 1 | M | 451 | GLN |
| 1 | M | 489 | GLN |
| 1 | N | 65 | ASN |
| 1 | N | 161 | HIS |
| 1 | N | 410 | GLN |
| 1 | N | 451 | GLN |
| 1 | N | 485 | GLN |
| 1 | O | 60 | ASN |
| 1 | O | 135 | HIS |
| 1 | O | 161 | HIS |
| 1 | O | 182 | ASN |
| 1 | O | 378 | HIS |
| 1 | O | 386 | GLN |
| 1 | O | 451 | GLN |
| 1 | P | 148 | ASN |
| 1 | P | 182 | ASN |
| 1 | P | 289 | GLN |
| 1 | P | 410 | GLN |
| 1 | P | 451 | GLN |
| 1 | P | 489 | GLN |

### 5.3.3 RNA

There are no RNA molecules in this entry.

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

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

## 5.5 Carbohydrates (i)

There are no monosaccharides in this entry.

## 5.6 Ligand geometry (i)

There are no ligands in this entry.

## 5.7 Other polymers (i)

There are no such residues in this entry.

## 5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

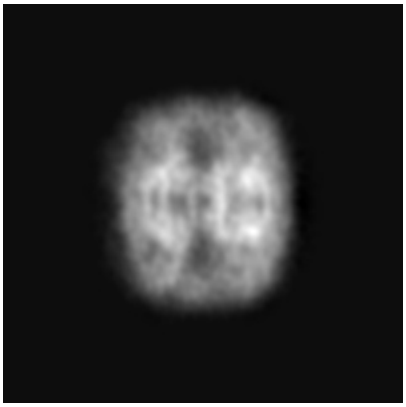
# 6 Map visualisation

This section contains visualisations of the EMDB entry EMD-1960. These allow visual inspection of the internal detail of the map and identification of artifacts.

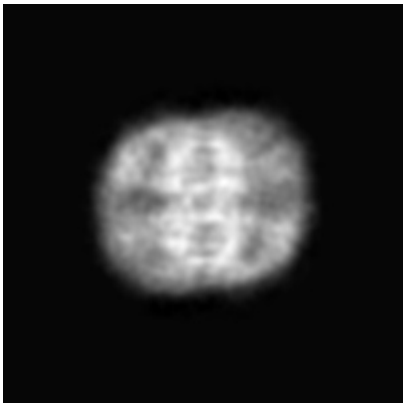
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

## 6.1 Orthogonal projections

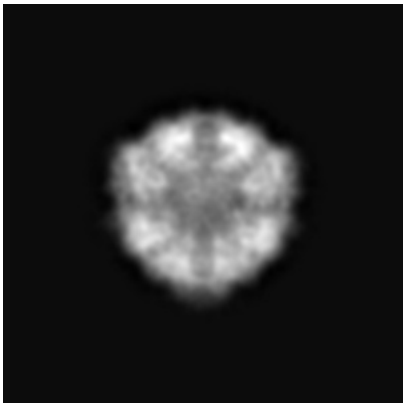
### 6.1.1 Primary map



X



Y

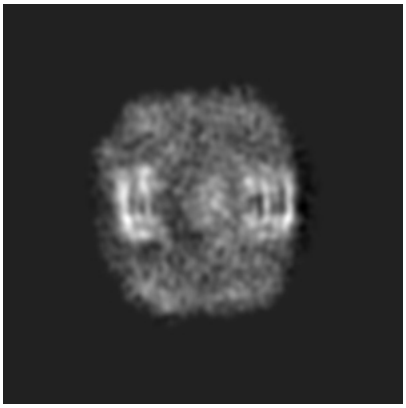


Z

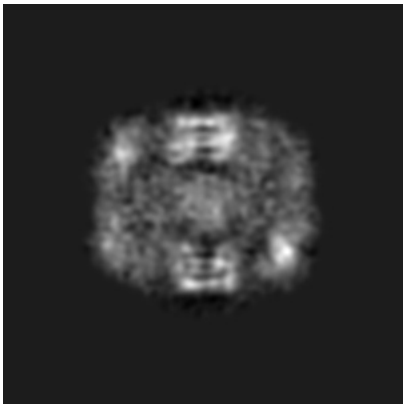
The images above show the map projected in three orthogonal directions.

## 6.2 Central slices

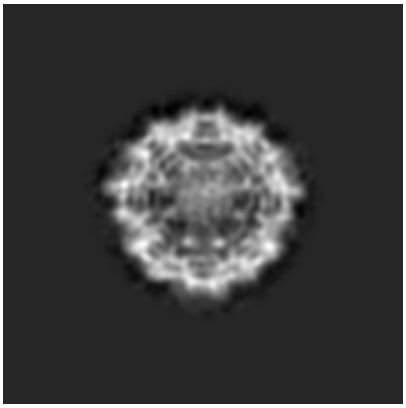
### 6.2.1 Primary map



X Index: 72



Y Index: 72

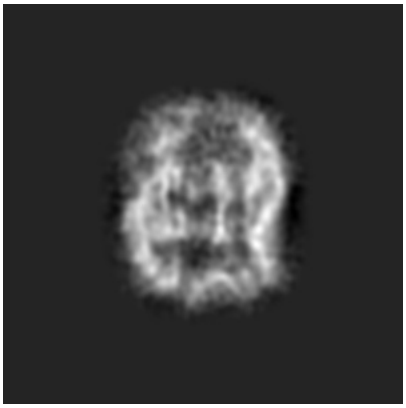


Z Index: 72

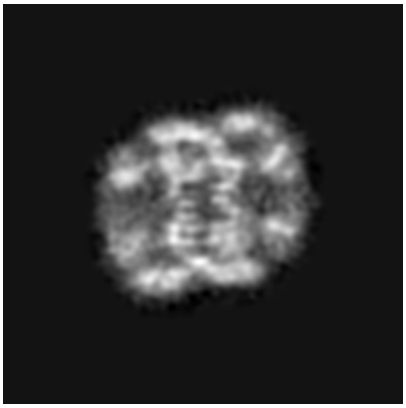
The images above show central slices of the map in three orthogonal directions.

## 6.3 Largest variance slices (i)

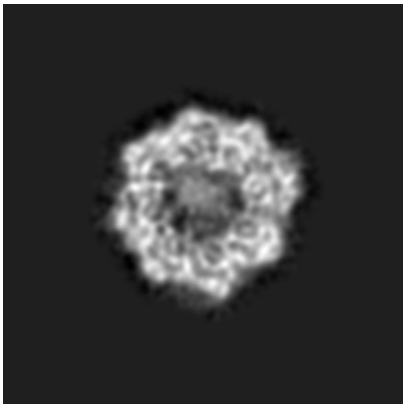
### 6.3.1 Primary map



X Index: 87



Y Index: 89

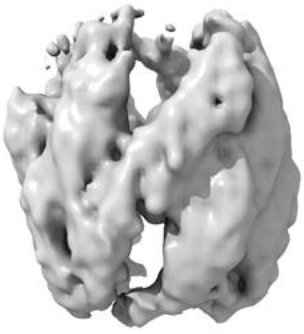


Z Index: 78

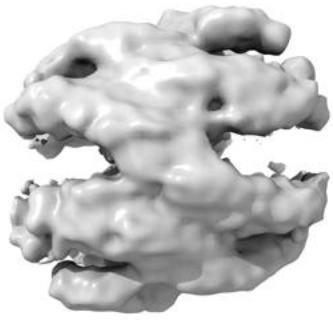
The images above show the largest variance slices of the map in three orthogonal directions.

## 6.4 Orthogonal surface views (i)

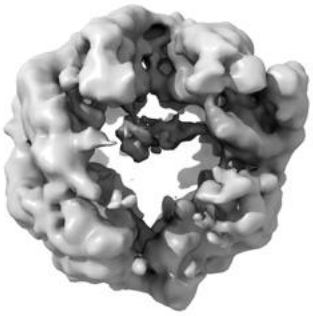
### 6.4.1 Primary map



X



Y



Z

The images above show the 3D surface view of the map at the recommended contour level 1.13. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

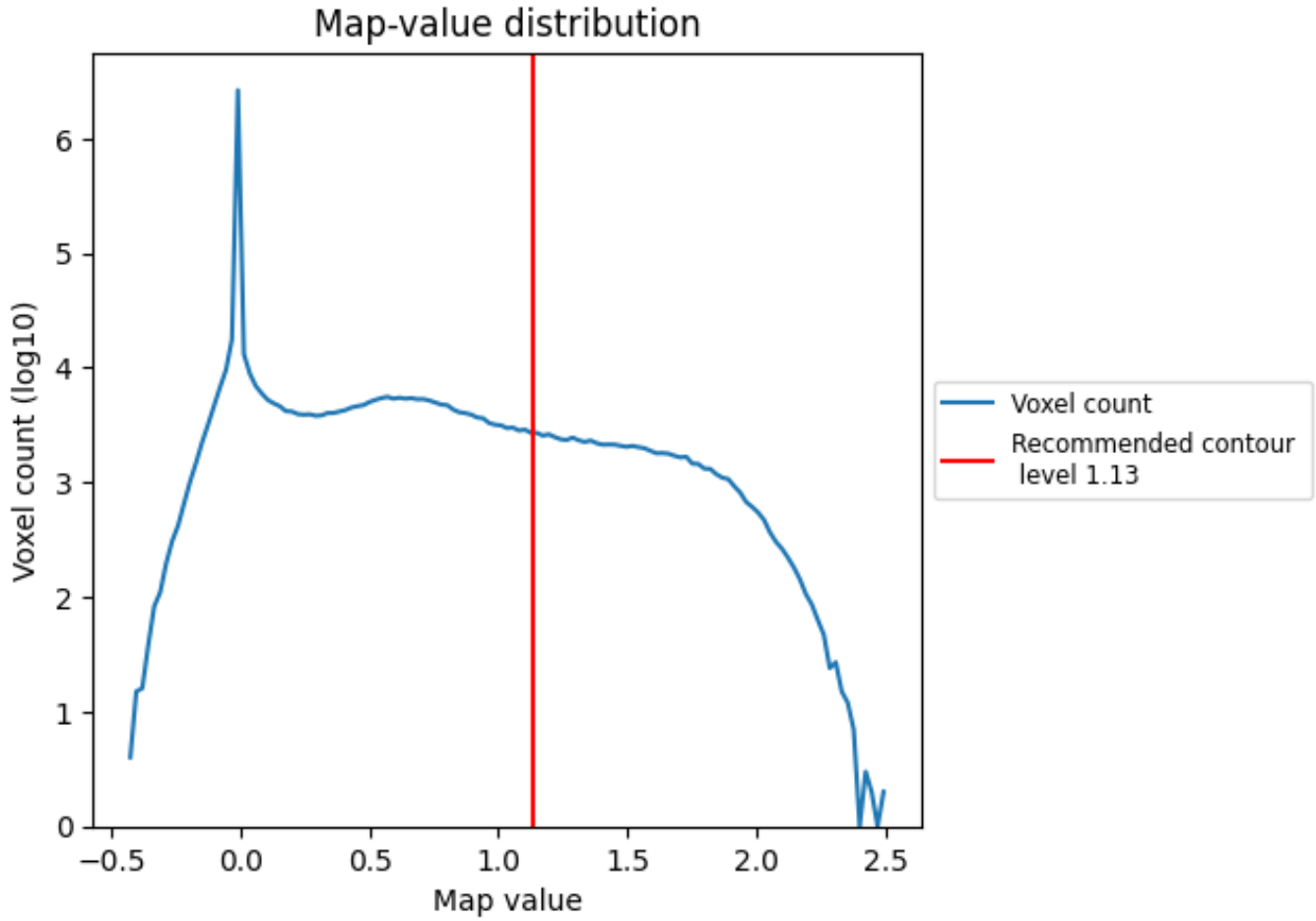
## 6.5 Mask visualisation (i)

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

# 7 Map analysis

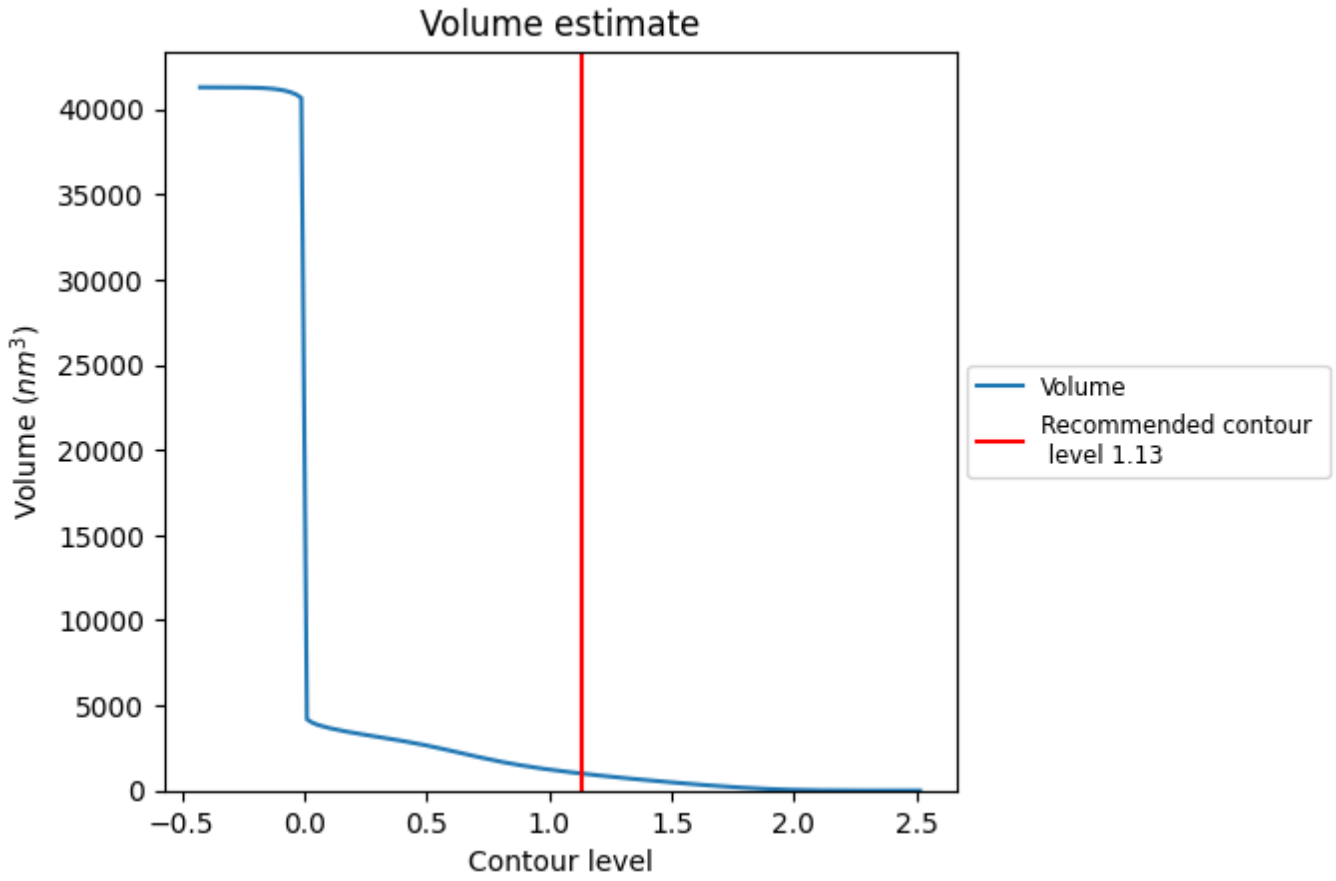
This section contains the results of statistical analysis of the map.

## 7.1 Map-value distribution




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

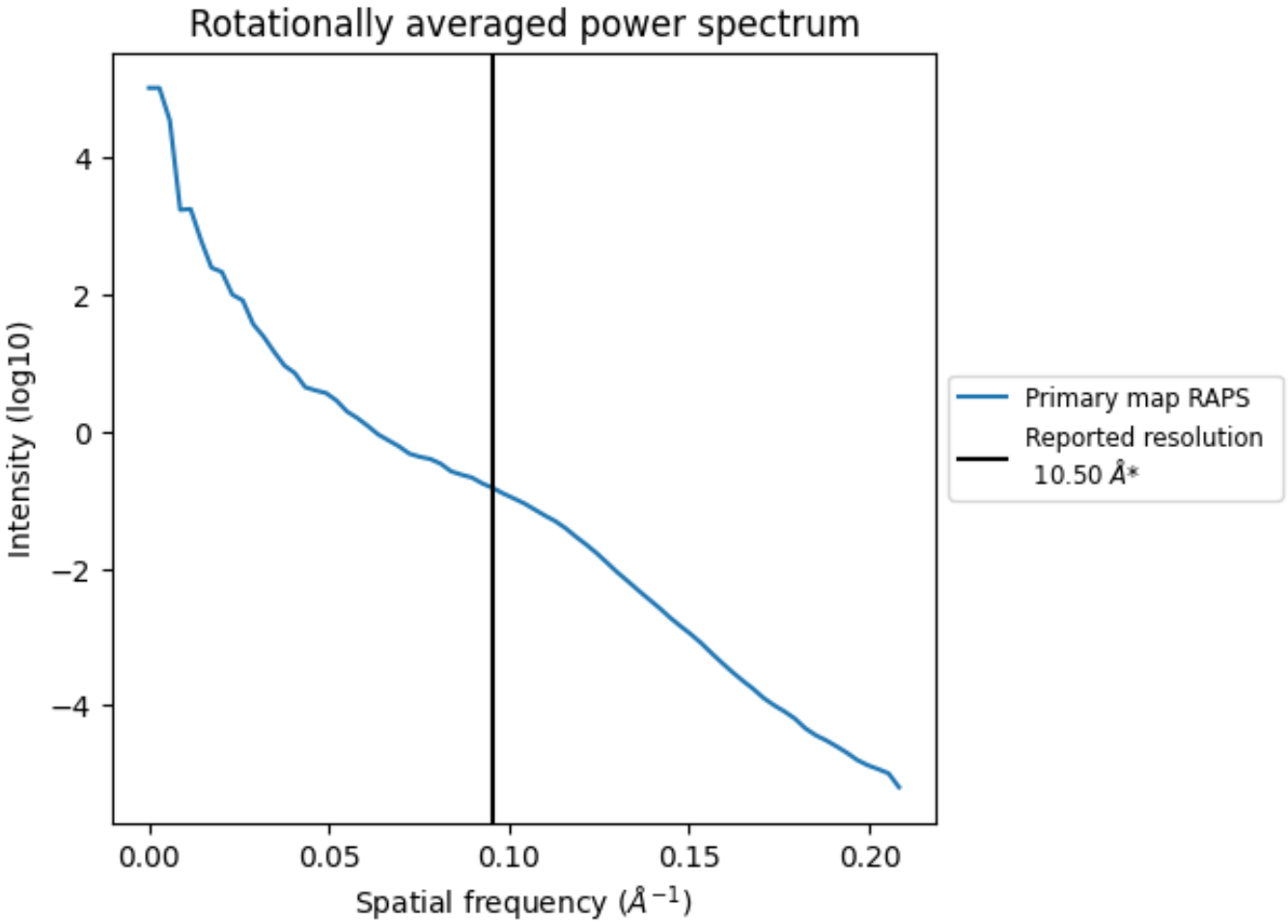
## 7.2 Volume estimate




The volume at the recommended contour level is 1005 $nm^3$; this corresponds to an approximate mass of 908 kDa.

The volume estimate graph shows how the enclosed volume varies with the contour level. The recommended contour level is shown as a vertical line and the intersection between the line and the curve gives the volume of the enclosed surface at the given level.

## 7.3 Rotationally averaged power spectrum (i)




*Reported resolution corresponds to spatial frequency of 0.095 Å$^{-1}$

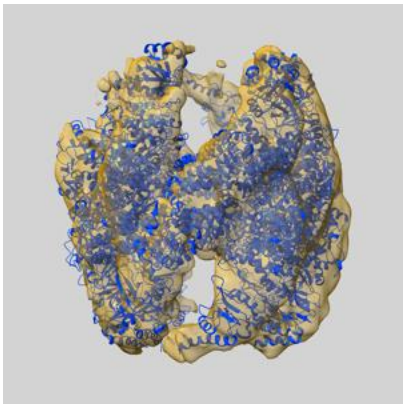
# 8 Fourier-Shell correlation

This section was not generated. No FSC curve or half-maps provided.

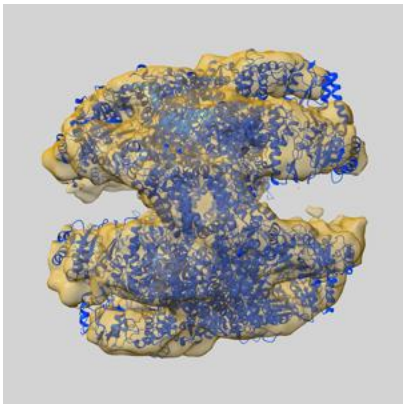
# 9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-1960 and PDB model 4A0O. Per-residue inclusion information can be found in section 3 on page 5.

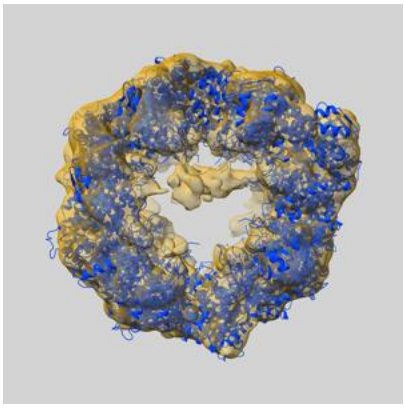
## 9.1 Map-model overlay



X



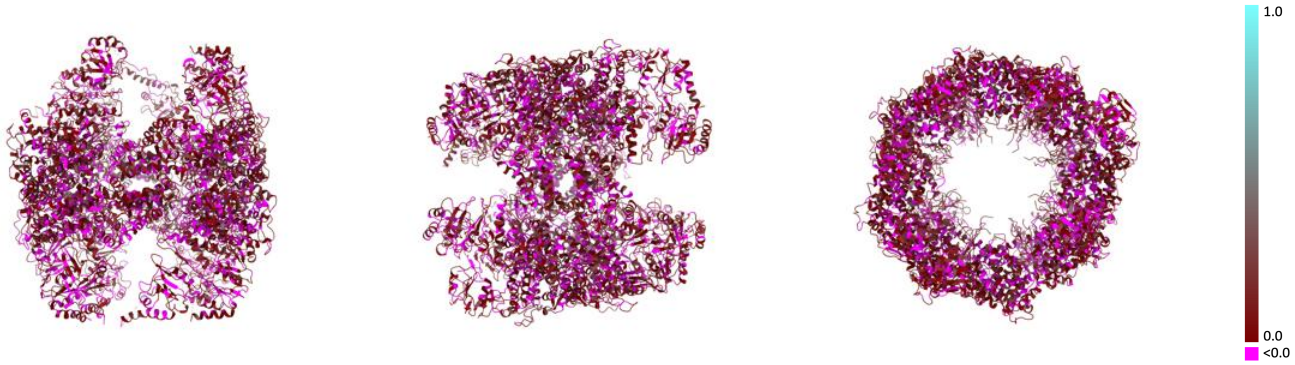
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 1.13 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

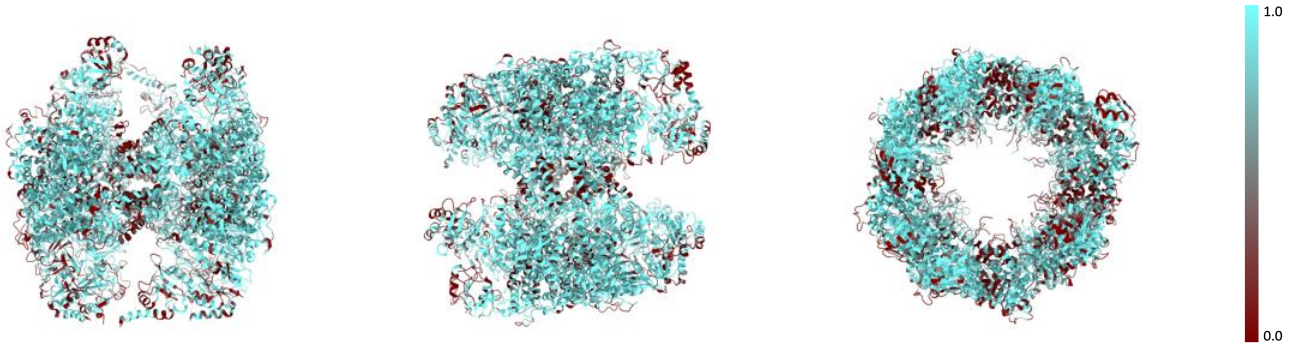
## 9.2 Q-score mapped to coordinate model (i)




X Y Z

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

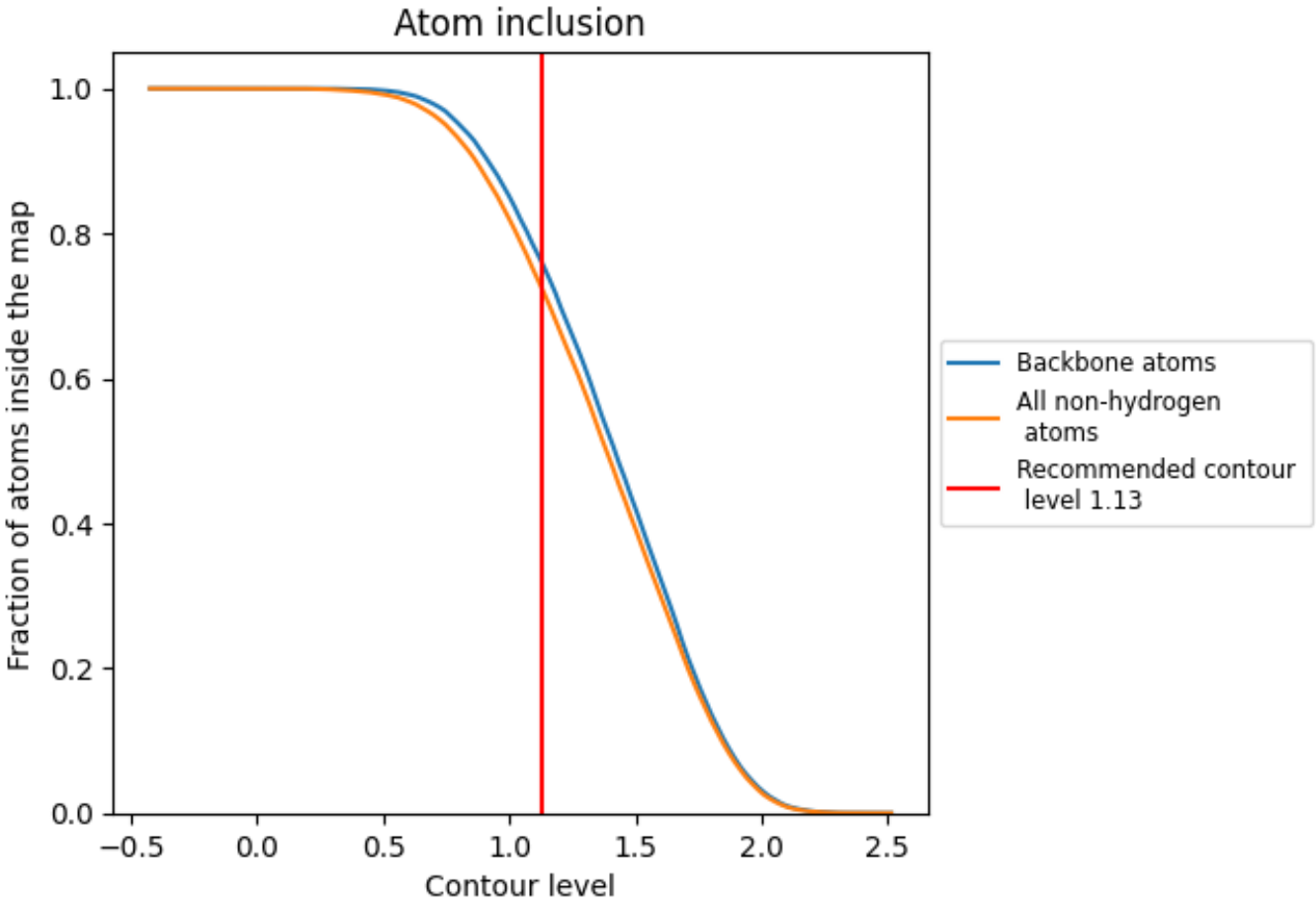
## 9.3 Atom inclusion mapped to coordinate model (i)




X Y Z

The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (1.13).

## 9.4 Atom inclusion (i)




At the recommended contour level, 76% of all backbone atoms, 72% of all non-hydrogen atoms, are inside the map.

## 9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (1.13) and Q-score for the entire model and for each chain.

| Chain | Atom inclusion | Q-score |
|---|---|---|
| All | 0.7236 | 0.0560 |
| A | 0.6769 | 0.0570 |
| B | 0.6947 | 0.0490 |
| C | 0.7048 | 0.0600 |
| D | 0.7978 | 0.0710 |
| E | 0.7444 | 0.0660 |
| F | 0.7956 | 0.0660 |
| G | 0.7871 | 0.0570 |
| H | 0.6382 | 0.0520 |
| I | 0.6291 | 0.0510 |
| J | 0.7686 | 0.0610 |
| K | 0.7307 | 0.0460 |
| L | 0.7691 | 0.0570 |
| M | 0.6310 | 0.0400 |
| N | 0.7689 | 0.0610 |
| O | 0.7323 | 0.0520 |
| P | 0.6691 | 0.0410 |