



Full wwPDB X-ray Structure Validation Report ⓘ

May 29, 2024 – 02:39 PM EDT

PDB ID : 2TAA
Title : STRUCTURE AND POSSIBLE CATALYTIC RESIDUES OF TAKA-AMYLASE A
Authors : Kusunoki, M.; Matsuura, Y.; Tanaka, N.; Kakudo, M.
Deposited on : 1982-10-18
Resolution : 3.00 Å(reported)

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

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

| | | |
|--------------------------------|---|--|
| MolProbity | : | 4.02b-467 |
| Xtriage (Phenix) | : | NOT EXECUTED |
| EDS | : | NOT EXECUTED |
| Percentile statistics | : | 20191225.v01 (using entries in the PDB archive December 25th 2019) |
| Ideal geometry (proteins) | : | Engh & Huber (2001) |
| Ideal geometry (DNA, RNA) | : | Parkinson et al. (1996) |
| Validation Pipeline (wwPDB-VP) | : | 2.36.2 |

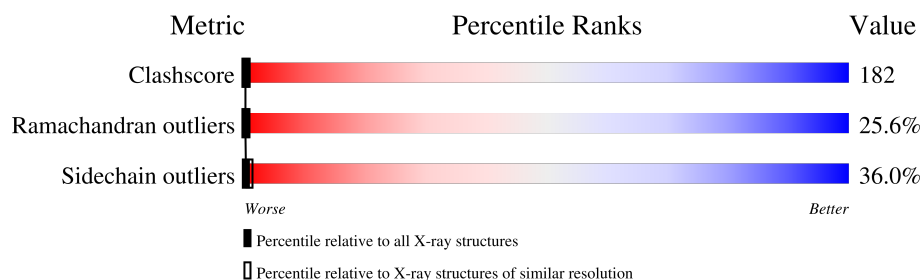
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.00 Å.

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



| Metric | Whole archive (#Entries) | Similar resolution (#Entries, resolution range(Å)) |
|-----------------------|-----------------------------|---|
| Clashscore | 141614 | 2416 (3.00-3.00) |
| Ramachandran outliers | 138981 | 2333 (3.00-3.00) |
| Sidechain outliers | 138945 | 2336 (3.00-3.00) |

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

Note EDS was not executed.

| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|---|
| 1 | A | 478 | <div> <div>8%</div> <div>29%</div> <div>32%</div> <div>30%</div> </div> |
| 1 | B | 478 | <div> <div>8%</div> <div>29%</div> <div>32%</div> <div>31%</div> </div> |
| 1 | C | 478 | <div> <div>9%</div> <div>28%</div> <div>33%</div> <div>30%</div> </div> |

2 Entry composition

There are 2 unique types of molecules in this entry. The entry contains 11073 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called TAKA-AMYLASE A.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|----|---------|---------|-------|
| 1 | A | 478 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 3690 | 2332 | 593 | 746 | 19 | | | |
| 1 | B | 478 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 3690 | 2332 | 593 | 746 | 19 | | | |
| 1 | C | 478 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 3690 | 2332 | 593 | 746 | 19 | | | |

- Molecule 2 is CALCIUM ION (three-letter code: CA) (formula: Ca).

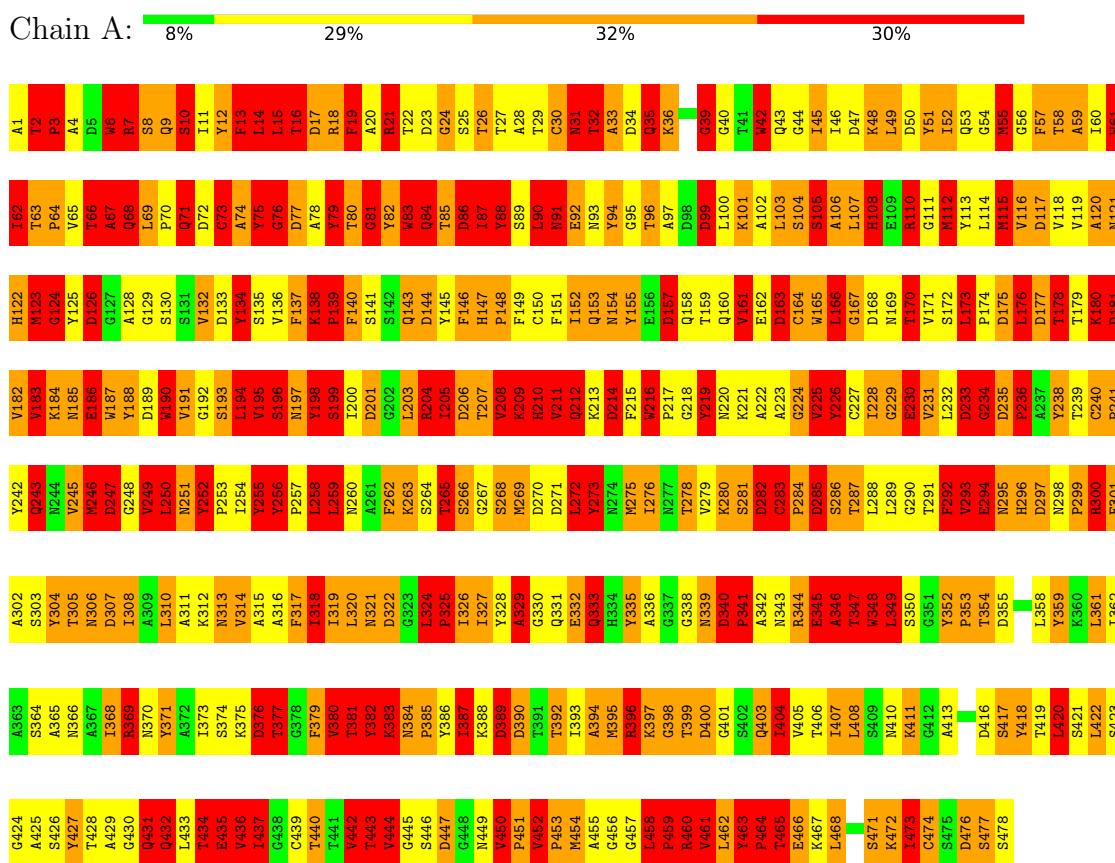
| Mol | Chain | Residues | Atoms | | ZeroOcc | AltConf |
|-----|-------|----------|-------|----|---------|---------|
| 2 | A | 1 | Total | Ca | 0 | 0 |
| | | | 1 | 1 | | |
| 2 | B | 1 | Total | Ca | 0 | 0 |
| | | | 1 | 1 | | |
| 2 | C | 1 | Total | Ca | 0 | 0 |
| | | | 1 | 1 | | |

3 Residue-property plots

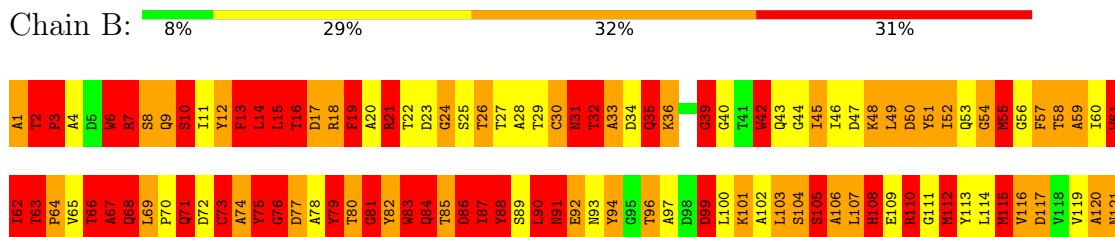
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry. Residues are color-coded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

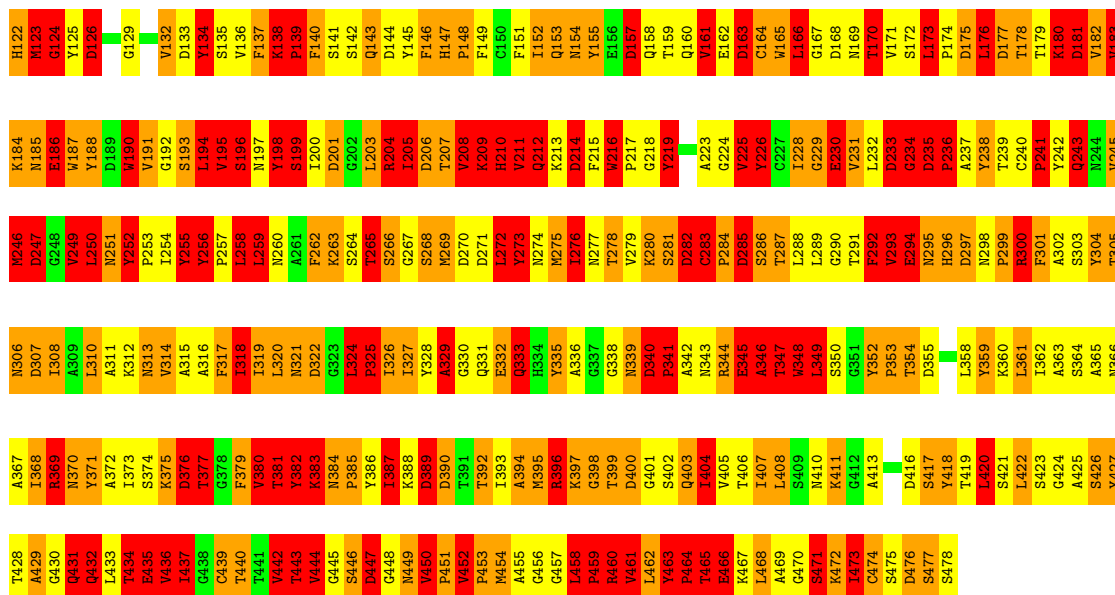
Note EDS was not executed.

• Molecule 1: TAKA-AMYLASE A

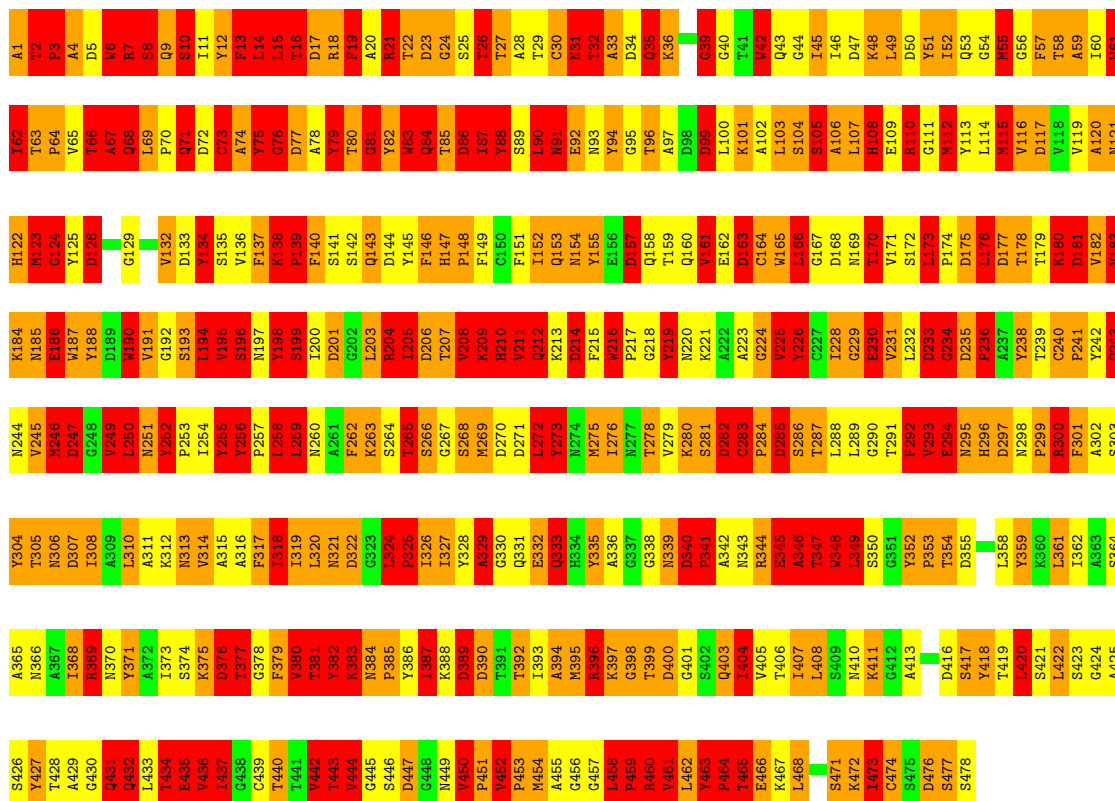


• Molecule 1: TAKA-AMYLASE A





- Molecule 1: TAKA-AMYLASE A



4 Data and refinement statistics

Xtriage (Phenix) and EDS were not executed - this section is therefore incomplete.

| Property | Value | Source |
|--|--|-----------|
| Space group | P 1 21 1 | Depositor |
| Cell constants a, b, c, α , β , γ | 91.90Å 133.30Å 94.30Å 90.00° 102.70° 90.00° | Depositor |
| Resolution (Å) | (Not available) – 3.00 | Depositor |
| % Data completeness (in resolution range) | (Not available) ((Not available)-3.00) | Depositor |
| R_{merge} | (Not available) | Depositor |
| R_{sym} | (Not available) | Depositor |
| Refinement program | unknown | Depositor |
| R, R_{free} | (Not available) , (Not available) | Depositor |
| Estimated twinning fraction | No twinning to report. | Xtriage |
| Total number of atoms | 11073 | wwPDB-VP |
| Average B, all atoms (Å ²) | 0.0 | wwPDB-VP |

5 Model quality

5.1 Standard geometry

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

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 | 1.93 | 77/3782 (2.0%) | 3.42 | 363/5163 (7.0%) |
| 1 | B | 1.93 | 77/3782 (2.0%) | 3.42 | 364/5163 (7.1%) |
| 1 | C | 1.93 | 77/3782 (2.0%) | 3.42 | 362/5163 (7.0%) |
| All | All | 1.93 | 231/11346 (2.0%) | 3.42 | 1089/15489 (7.0%) |

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

| Mol | Chain | #Chirality outliers | #Planarity outliers |
|-----|-------|---------------------|---------------------|
| 1 | A | 2 | 87 |
| 1 | B | 2 | 87 |
| 1 | C | 2 | 87 |
| All | All | 6 | 261 |

All (231) bond length outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|--------|-------------|----------|
| 1 | B | 463 | TYR | CD1-CE1 | -20.38 | 1.08 | 1.39 |
| 1 | A | 463 | TYR | CD1-CE1 | -20.38 | 1.08 | 1.39 |
| 1 | C | 463 | TYR | CD1-CE1 | -20.36 | 1.08 | 1.39 |
| 1 | C | 463 | TYR | CZ-OH | 19.61 | 1.71 | 1.37 |
| 1 | A | 463 | TYR | CZ-OH | 19.60 | 1.71 | 1.37 |
| 1 | B | 463 | TYR | CZ-OH | 19.59 | 1.71 | 1.37 |
| 1 | C | 404 | ILE | N-CA | 19.31 | 1.84 | 1.46 |
| 1 | B | 404 | ILE | N-CA | 19.30 | 1.84 | 1.46 |
| 1 | A | 404 | ILE | N-CA | 19.29 | 1.84 | 1.46 |
| 1 | C | 463 | TYR | CD2-CE2 | 14.81 | 1.61 | 1.39 |
| 1 | A | 463 | TYR | CD2-CE2 | 14.81 | 1.61 | 1.39 |
| 1 | B | 463 | TYR | CD2-CE2 | 14.74 | 1.61 | 1.39 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|--------|-------------|----------|
| 1 | B | 464 | PRO | N-CD | -12.14 | 1.30 | 1.47 |
| 1 | A | 464 | PRO | N-CD | -12.12 | 1.30 | 1.47 |
| 1 | C | 464 | PRO | N-CD | -12.06 | 1.30 | 1.47 |
| 1 | B | 341 | PRO | N-CD | -11.32 | 1.31 | 1.47 |
| 1 | A | 341 | PRO | N-CD | -11.31 | 1.32 | 1.47 |
| 1 | C | 341 | PRO | N-CD | -11.30 | 1.32 | 1.47 |
| 1 | B | 385 | PRO | N-CD | -11.21 | 1.32 | 1.47 |
| 1 | A | 385 | PRO | N-CD | -11.19 | 1.32 | 1.47 |
| 1 | C | 385 | PRO | N-CD | -11.14 | 1.32 | 1.47 |
| 1 | C | 42 | TRP | NE1-CE2 | -10.97 | 1.23 | 1.37 |
| 1 | B | 42 | TRP | NE1-CE2 | -10.95 | 1.23 | 1.37 |
| 1 | B | 104 | SER | CB-OG | -10.93 | 1.28 | 1.42 |
| 1 | A | 104 | SER | CB-OG | -10.92 | 1.28 | 1.42 |
| 1 | A | 42 | TRP | NE1-CE2 | -10.90 | 1.23 | 1.37 |
| 1 | C | 104 | SER | CB-OG | -10.86 | 1.28 | 1.42 |
| 1 | C | 139 | PRO | N-CD | -10.41 | 1.33 | 1.47 |
| 1 | B | 139 | PRO | N-CD | -10.37 | 1.33 | 1.47 |
| 1 | A | 139 | PRO | N-CD | -10.35 | 1.33 | 1.47 |
| 1 | A | 404 | ILE | C-O | 10.22 | 1.42 | 1.23 |
| 1 | B | 404 | ILE | C-O | 10.21 | 1.42 | 1.23 |
| 1 | C | 404 | ILE | C-O | 10.19 | 1.42 | 1.23 |
| 1 | A | 83 | TRP | NE1-CE2 | -10.05 | 1.24 | 1.37 |
| 1 | C | 83 | TRP | NE1-CE2 | -10.04 | 1.24 | 1.37 |
| 1 | B | 83 | TRP | NE1-CE2 | -10.01 | 1.24 | 1.37 |
| 1 | C | 396 | ARG | N-CA | 9.69 | 1.65 | 1.46 |
| 1 | B | 396 | ARG | N-CA | 9.68 | 1.65 | 1.46 |
| 1 | A | 396 | ARG | N-CA | 9.66 | 1.65 | 1.46 |
| 1 | B | 460 | ARG | CD-NE | 9.58 | 1.62 | 1.46 |
| 1 | A | 460 | ARG | CD-NE | 9.57 | 1.62 | 1.46 |
| 1 | C | 460 | ARG | CD-NE | 9.51 | 1.62 | 1.46 |
| 1 | C | 463 | TYR | CB-CG | 9.18 | 1.65 | 1.51 |
| 1 | A | 463 | TYR | CB-CG | 9.18 | 1.65 | 1.51 |
| 1 | B | 463 | TYR | CB-CG | 9.16 | 1.65 | 1.51 |
| 1 | B | 212 | GLN | N-CA | 8.96 | 1.64 | 1.46 |
| 1 | C | 212 | GLN | N-CA | 8.95 | 1.64 | 1.46 |
| 1 | A | 212 | GLN | N-CA | 8.92 | 1.64 | 1.46 |
| 1 | C | 458 | LEU | C-N | -8.82 | 1.17 | 1.34 |
| 1 | A | 458 | LEU | C-N | -8.81 | 1.17 | 1.34 |
| 1 | B | 458 | LEU | C-N | -8.80 | 1.17 | 1.34 |
| 1 | B | 464 | PRO | CA-CB | 8.29 | 1.70 | 1.53 |
| 1 | A | 464 | PRO | CA-CB | 8.28 | 1.70 | 1.53 |
| 1 | C | 464 | PRO | CA-CB | 8.26 | 1.70 | 1.53 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 1 | C | 459 | PRO | N-CD | 8.09 | 1.59 | 1.47 |
| 1 | A | 459 | PRO | N-CD | 8.08 | 1.59 | 1.47 |
| 1 | A | 341 | PRO | N-CA | 8.07 | 1.60 | 1.47 |
| 1 | B | 459 | PRO | N-CD | 8.05 | 1.59 | 1.47 |
| 1 | B | 341 | PRO | N-CA | 8.03 | 1.60 | 1.47 |
| 1 | C | 341 | PRO | N-CA | 8.02 | 1.60 | 1.47 |
| 1 | C | 300 | ARG | NE-CZ | -7.92 | 1.22 | 1.33 |
| 1 | A | 300 | ARG | NE-CZ | -7.85 | 1.22 | 1.33 |
| 1 | B | 211 | VAL | CA-CB | -7.81 | 1.38 | 1.54 |
| 1 | C | 165 | TRP | NE1-CE2 | -7.79 | 1.27 | 1.37 |
| 1 | B | 300 | ARG | NE-CZ | -7.79 | 1.23 | 1.33 |
| 1 | A | 211 | VAL | CA-CB | -7.79 | 1.38 | 1.54 |
| 1 | C | 304 | TYR | CZ-OH | -7.77 | 1.24 | 1.37 |
| 1 | C | 211 | VAL | CA-CB | -7.75 | 1.38 | 1.54 |
| 1 | B | 165 | TRP | NE1-CE2 | -7.75 | 1.27 | 1.37 |
| 1 | A | 165 | TRP | NE1-CE2 | -7.75 | 1.27 | 1.37 |
| 1 | B | 304 | TYR | CZ-OH | -7.72 | 1.24 | 1.37 |
| 1 | C | 348 | TRP | NE1-CE2 | -7.71 | 1.27 | 1.37 |
| 1 | B | 61 | TRP | NE1-CE2 | -7.70 | 1.27 | 1.37 |
| 1 | C | 61 | TRP | NE1-CE2 | -7.70 | 1.27 | 1.37 |
| 1 | A | 304 | TYR | CZ-OH | -7.69 | 1.24 | 1.37 |
| 1 | A | 61 | TRP | NE1-CE2 | -7.69 | 1.27 | 1.37 |
| 1 | A | 348 | TRP | NE1-CE2 | -7.68 | 1.27 | 1.37 |
| 1 | B | 348 | TRP | NE1-CE2 | -7.66 | 1.27 | 1.37 |
| 1 | B | 404 | ILE | CB-CG1 | -7.58 | 1.32 | 1.54 |
| 1 | A | 404 | ILE | CB-CG1 | -7.57 | 1.32 | 1.54 |
| 1 | C | 404 | ILE | CB-CG1 | -7.57 | 1.32 | 1.54 |
| 1 | C | 82 | TYR | CE2-CZ | -7.55 | 1.28 | 1.38 |
| 1 | B | 64 | PRO | N-CD | -7.53 | 1.37 | 1.47 |
| 1 | A | 82 | TYR | CE2-CZ | -7.52 | 1.28 | 1.38 |
| 1 | C | 64 | PRO | N-CD | -7.51 | 1.37 | 1.47 |
| 1 | A | 64 | PRO | N-CD | -7.50 | 1.37 | 1.47 |
| 1 | B | 82 | TYR | CE2-CZ | -7.46 | 1.28 | 1.38 |
| 1 | C | 463 | TYR | C-N | 7.35 | 1.48 | 1.34 |
| 1 | A | 463 | TYR | C-N | 7.35 | 1.48 | 1.34 |
| 1 | B | 463 | TYR | C-N | 7.34 | 1.48 | 1.34 |
| 1 | C | 63 | THR | CB-OG1 | -7.25 | 1.28 | 1.43 |
| 1 | B | 63 | THR | CB-OG1 | -7.24 | 1.28 | 1.43 |
| 1 | A | 63 | THR | CB-OG1 | -7.23 | 1.28 | 1.43 |
| 1 | C | 64 | PRO | N-CA | 7.14 | 1.59 | 1.47 |
| 1 | B | 208 | VAL | C-N | -7.14 | 1.17 | 1.34 |
| 1 | B | 404 | ILE | CA-CB | 7.13 | 1.71 | 1.54 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 1 | A | 404 | ILE | CA-CB | 7.12 | 1.71 | 1.54 |
| 1 | A | 208 | VAL | C-N | -7.12 | 1.17 | 1.34 |
| 1 | C | 208 | VAL | C-N | -7.11 | 1.17 | 1.34 |
| 1 | C | 404 | ILE | CA-CB | 7.11 | 1.71 | 1.54 |
| 1 | A | 64 | PRO | N-CA | 7.10 | 1.59 | 1.47 |
| 1 | B | 64 | PRO | N-CA | 7.08 | 1.59 | 1.47 |
| 1 | C | 166 | LEU | C-N | 6.97 | 1.45 | 1.33 |
| 1 | A | 166 | LEU | C-N | 6.94 | 1.45 | 1.33 |
| 1 | B | 166 | LEU | C-N | 6.89 | 1.45 | 1.33 |
| 1 | C | 397 | LYS | N-CA | 6.89 | 1.60 | 1.46 |
| 1 | A | 397 | LYS | N-CA | 6.87 | 1.60 | 1.46 |
| 1 | B | 397 | LYS | N-CA | 6.84 | 1.60 | 1.46 |
| 1 | C | 460 | ARG | CZ-NH2 | -6.78 | 1.24 | 1.33 |
| 1 | B | 6 | TRP | NE1-CE2 | -6.76 | 1.28 | 1.37 |
| 1 | C | 6 | TRP | NE1-CE2 | -6.75 | 1.28 | 1.37 |
| 1 | A | 6 | TRP | NE1-CE2 | -6.74 | 1.28 | 1.37 |
| 1 | A | 460 | ARG | CZ-NH2 | -6.73 | 1.24 | 1.33 |
| 1 | A | 139 | PRO | N-CA | 6.73 | 1.58 | 1.47 |
| 1 | B | 139 | PRO | N-CA | 6.72 | 1.58 | 1.47 |
| 1 | B | 460 | ARG | CZ-NH2 | -6.70 | 1.24 | 1.33 |
| 1 | C | 139 | PRO | N-CA | 6.67 | 1.58 | 1.47 |
| 1 | A | 187 | TRP | NE1-CE2 | -6.66 | 1.28 | 1.37 |
| 1 | C | 187 | TRP | NE1-CE2 | -6.66 | 1.28 | 1.37 |
| 1 | B | 187 | TRP | NE1-CE2 | -6.66 | 1.28 | 1.37 |
| 1 | B | 190 | TRP | NE1-CE2 | -6.64 | 1.28 | 1.37 |
| 1 | C | 190 | TRP | NE1-CE2 | -6.63 | 1.28 | 1.37 |
| 1 | A | 190 | TRP | NE1-CE2 | -6.62 | 1.28 | 1.37 |
| 1 | B | 216 | TRP | CD2-CE2 | -6.50 | 1.33 | 1.41 |
| 1 | C | 216 | TRP | CD2-CE2 | -6.48 | 1.33 | 1.41 |
| 1 | A | 216 | TRP | CD2-CE2 | -6.46 | 1.33 | 1.41 |
| 1 | A | 139 | PRO | CA-C | 6.36 | 1.65 | 1.52 |
| 1 | B | 139 | PRO | CA-C | 6.35 | 1.65 | 1.52 |
| 1 | C | 139 | PRO | CA-C | 6.35 | 1.65 | 1.52 |
| 1 | A | 83 | TRP | CD1-NE1 | -6.33 | 1.27 | 1.38 |
| 1 | B | 83 | TRP | CD1-NE1 | -6.33 | 1.27 | 1.38 |
| 1 | A | 398 | GLY | N-CA | 6.32 | 1.55 | 1.46 |
| 1 | B | 398 | GLY | N-CA | 6.31 | 1.55 | 1.46 |
| 1 | C | 83 | TRP | CD1-NE1 | -6.30 | 1.27 | 1.38 |
| 1 | C | 398 | GLY | N-CA | 6.29 | 1.55 | 1.46 |
| 1 | B | 463 | TYR | CA-CB | 6.25 | 1.67 | 1.53 |
| 1 | C | 435 | GLU | N-CA | 6.23 | 1.58 | 1.46 |
| 1 | B | 382 | TYR | CZ-OH | -6.23 | 1.27 | 1.37 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 1 | A | 463 | TYR | CA-CB | 6.22 | 1.67 | 1.53 |
| 1 | A | 435 | GLU | N-CA | 6.22 | 1.58 | 1.46 |
| 1 | B | 435 | GLU | N-CA | 6.22 | 1.58 | 1.46 |
| 1 | C | 463 | TYR | CA-CB | 6.21 | 1.67 | 1.53 |
| 1 | C | 382 | TYR | CZ-OH | -6.20 | 1.27 | 1.37 |
| 1 | A | 382 | TYR | CZ-OH | -6.19 | 1.27 | 1.37 |
| 1 | B | 341 | PRO | CA-C | 6.09 | 1.65 | 1.52 |
| 1 | A | 341 | PRO | CA-C | 6.09 | 1.65 | 1.52 |
| 1 | C | 341 | PRO | CA-C | 6.09 | 1.65 | 1.52 |
| 1 | B | 447 | ASP | N-CA | 6.03 | 1.58 | 1.46 |
| 1 | A | 447 | ASP | N-CA | 6.00 | 1.58 | 1.46 |
| 1 | C | 463 | TYR | CA-C | 5.99 | 1.68 | 1.52 |
| 1 | B | 463 | TYR | CA-C | 5.98 | 1.68 | 1.52 |
| 1 | A | 463 | TYR | CA-C | 5.98 | 1.68 | 1.52 |
| 1 | C | 447 | ASP | N-CA | 5.97 | 1.58 | 1.46 |
| 1 | B | 348 | TRP | CD1-NE1 | -5.85 | 1.28 | 1.38 |
| 1 | A | 21 | ARG | CZ-NH2 | -5.85 | 1.25 | 1.33 |
| 1 | B | 21 | ARG | CZ-NH2 | -5.84 | 1.25 | 1.33 |
| 1 | C | 21 | ARG | CZ-NH2 | -5.84 | 1.25 | 1.33 |
| 1 | A | 348 | TRP | CD1-NE1 | -5.82 | 1.28 | 1.38 |
| 1 | C | 348 | TRP | CD1-NE1 | -5.80 | 1.28 | 1.38 |
| 1 | C | 167 | GLY | N-CA | 5.79 | 1.54 | 1.46 |
| 1 | C | 434 | THR | C-N | 5.78 | 1.47 | 1.34 |
| 1 | A | 434 | THR | C-N | 5.77 | 1.47 | 1.34 |
| 1 | B | 167 | GLY | N-CA | 5.76 | 1.54 | 1.46 |
| 1 | A | 167 | GLY | N-CA | 5.75 | 1.54 | 1.46 |
| 1 | B | 434 | THR | C-N | 5.74 | 1.47 | 1.34 |
| 1 | C | 68 | GLN | C-N | -5.70 | 1.21 | 1.34 |
| 1 | A | 397 | LYS | CD-CE | 5.70 | 1.65 | 1.51 |
| 1 | A | 68 | GLN | C-N | -5.70 | 1.21 | 1.34 |
| 1 | B | 397 | LYS | CD-CE | 5.69 | 1.65 | 1.51 |
| 1 | B | 68 | GLN | C-N | -5.68 | 1.21 | 1.34 |
| 1 | C | 397 | LYS | CD-CE | 5.68 | 1.65 | 1.51 |
| 1 | B | 42 | TRP | CD1-NE1 | -5.62 | 1.28 | 1.38 |
| 1 | C | 42 | TRP | CD1-NE1 | -5.62 | 1.28 | 1.38 |
| 1 | A | 42 | TRP | CD1-NE1 | -5.61 | 1.28 | 1.38 |
| 1 | B | 453 | PRO | N-CD | -5.48 | 1.40 | 1.47 |
| 1 | B | 204 | ARG | CZ-NH1 | -5.45 | 1.25 | 1.33 |
| 1 | A | 453 | PRO | N-CD | -5.42 | 1.40 | 1.47 |
| 1 | C | 103 | LEU | CB-CG | 5.41 | 1.68 | 1.52 |
| 1 | A | 103 | LEU | CB-CG | 5.41 | 1.68 | 1.52 |
| 1 | B | 459 | PRO | N-CA | 5.41 | 1.56 | 1.47 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 1 | A | 459 | PRO | N-CA | 5.41 | 1.56 | 1.47 |
| 1 | C | 204 | ARG | CZ-NH1 | -5.40 | 1.26 | 1.33 |
| 1 | C | 453 | PRO | N-CD | -5.40 | 1.40 | 1.47 |
| 1 | B | 103 | LEU | CB-CG | 5.40 | 1.68 | 1.52 |
| 1 | A | 204 | ARG | CZ-NH1 | -5.37 | 1.26 | 1.33 |
| 1 | C | 459 | PRO | N-CA | 5.33 | 1.56 | 1.47 |
| 1 | A | 247 | ASP | N-CA | 5.33 | 1.57 | 1.46 |
| 1 | B | 247 | ASP | N-CA | 5.32 | 1.56 | 1.46 |
| 1 | C | 247 | ASP | N-CA | 5.31 | 1.56 | 1.46 |
| 1 | C | 132 | VAL | CA-CB | -5.29 | 1.43 | 1.54 |
| 1 | A | 132 | VAL | CA-CB | -5.29 | 1.43 | 1.54 |
| 1 | B | 132 | VAL | CA-CB | -5.29 | 1.43 | 1.54 |
| 1 | B | 464 | PRO | CA-C | 5.28 | 1.63 | 1.52 |
| 1 | A | 427 | TYR | CZ-OH | -5.27 | 1.28 | 1.37 |
| 1 | C | 168 | ASP | N-CA | 5.27 | 1.56 | 1.46 |
| 1 | C | 463 | TYR | N-CA | 5.27 | 1.56 | 1.46 |
| 1 | A | 463 | TYR | N-CA | 5.26 | 1.56 | 1.46 |
| 1 | B | 427 | TYR | CZ-OH | -5.26 | 1.28 | 1.37 |
| 1 | C | 427 | TYR | CZ-OH | -5.26 | 1.28 | 1.37 |
| 1 | A | 464 | PRO | CA-C | 5.24 | 1.63 | 1.52 |
| 1 | A | 166 | LEU | N-CA | 5.24 | 1.56 | 1.46 |
| 1 | A | 168 | ASP | N-CA | 5.23 | 1.56 | 1.46 |
| 1 | B | 463 | TYR | N-CA | 5.23 | 1.56 | 1.46 |
| 1 | C | 166 | LEU | N-CA | 5.22 | 1.56 | 1.46 |
| 1 | B | 168 | ASP | N-CA | 5.21 | 1.56 | 1.46 |
| 1 | A | 75 | TYR | CE2-CZ | 5.21 | 1.45 | 1.38 |
| 1 | B | 75 | TYR | CE2-CZ | 5.20 | 1.45 | 1.38 |
| 1 | A | 62 | ILE | C-N | -5.20 | 1.22 | 1.34 |
| 1 | C | 216 | TRP | NE1-CE2 | -5.20 | 1.30 | 1.37 |
| 1 | B | 216 | TRP | NE1-CE2 | -5.19 | 1.30 | 1.37 |
| 1 | C | 464 | PRO | CA-C | 5.19 | 1.63 | 1.52 |
| 1 | B | 166 | LEU | N-CA | 5.19 | 1.56 | 1.46 |
| 1 | B | 62 | ILE | C-N | -5.18 | 1.22 | 1.34 |
| 1 | A | 216 | TRP | NE1-CE2 | -5.17 | 1.30 | 1.37 |
| 1 | C | 62 | ILE | C-N | -5.17 | 1.22 | 1.34 |
| 1 | C | 75 | TYR | CE2-CZ | 5.14 | 1.45 | 1.38 |
| 1 | C | 463 | TYR | CE1-CZ | -5.13 | 1.31 | 1.38 |
| 1 | A | 341 | PRO | C-N | 5.10 | 1.45 | 1.34 |
| 1 | C | 293 | VAL | N-CA | 5.09 | 1.56 | 1.46 |
| 1 | C | 341 | PRO | C-N | 5.09 | 1.45 | 1.34 |
| 1 | A | 463 | TYR | CE1-CZ | -5.08 | 1.31 | 1.38 |
| 1 | B | 341 | PRO | C-N | 5.07 | 1.45 | 1.34 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|--------|-------|-------------|----------|
| 1 | A | 293 | VAL | N-CA | 5.07 | 1.56 | 1.46 |
| 1 | B | 463 | TYR | CE1-CZ | -5.07 | 1.31 | 1.38 |
| 1 | C | 139 | PRO | C-N | 5.05 | 1.45 | 1.34 |
| 1 | A | 81 | GLY | C-N | 5.05 | 1.45 | 1.34 |
| 1 | A | 139 | PRO | C-N | 5.04 | 1.45 | 1.34 |
| 1 | C | 81 | GLY | C-N | 5.04 | 1.45 | 1.34 |
| 1 | B | 81 | GLY | C-N | 5.04 | 1.45 | 1.34 |
| 1 | B | 293 | VAL | N-CA | 5.03 | 1.56 | 1.46 |
| 1 | B | 139 | PRO | C-N | 5.02 | 1.45 | 1.34 |

All (1089) bond angle outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|--------|-------------|----------|
| 1 | B | 300 | ARG | NE-CZ-NH1 | -56.15 | 92.22 | 120.30 |
| 1 | A | 300 | ARG | NE-CZ-NH1 | -56.10 | 92.25 | 120.30 |
| 1 | C | 300 | ARG | NE-CZ-NH1 | -56.05 | 92.27 | 120.30 |
| 1 | C | 19 | PHE | CD1-CE1-CZ | -44.96 | 66.15 | 120.10 |
| 1 | A | 19 | PHE | CD1-CE1-CZ | -44.94 | 66.17 | 120.10 |
| 1 | B | 19 | PHE | CD1-CE1-CZ | -44.94 | 66.17 | 120.10 |
| 1 | C | 19 | PHE | CZ-CE2-CD2 | -44.54 | 66.65 | 120.10 |
| 1 | A | 19 | PHE | CZ-CE2-CD2 | -44.53 | 66.66 | 120.10 |
| 1 | B | 19 | PHE | CZ-CE2-CD2 | -44.53 | 66.66 | 120.10 |
| 1 | B | 464 | PRO | CA-N-CD | -43.27 | 50.93 | 111.50 |
| 1 | A | 464 | PRO | CA-N-CD | -43.26 | 50.94 | 111.50 |
| 1 | C | 464 | PRO | CA-N-CD | -43.26 | 50.94 | 111.50 |
| 1 | A | 204 | ARG | NE-CZ-NH1 | -36.19 | 102.20 | 120.30 |
| 1 | B | 204 | ARG | NE-CZ-NH1 | -36.17 | 102.21 | 120.30 |
| 1 | C | 204 | ARG | NE-CZ-NH1 | -36.12 | 102.24 | 120.30 |
| 1 | C | 460 | ARG | NE-CZ-NH2 | -34.78 | 102.91 | 120.30 |
| 1 | A | 460 | ARG | NE-CZ-NH2 | -34.76 | 102.92 | 120.30 |
| 1 | B | 460 | ARG | NE-CZ-NH2 | -34.63 | 102.99 | 120.30 |
| 1 | B | 460 | ARG | NE-CZ-NH1 | 34.40 | 137.50 | 120.30 |
| 1 | C | 460 | ARG | NE-CZ-NH1 | 34.39 | 137.50 | 120.30 |
| 1 | A | 460 | ARG | NE-CZ-NH1 | 34.38 | 137.49 | 120.30 |
| 1 | C | 138 | LYS | C-N-CD | -29.46 | 55.78 | 120.60 |
| 1 | A | 138 | LYS | C-N-CD | -29.46 | 55.80 | 120.60 |
| 1 | B | 138 | LYS | C-N-CD | -29.43 | 55.85 | 120.60 |
| 1 | B | 139 | PRO | CA-N-CD | -27.73 | 72.67 | 111.50 |
| 1 | A | 139 | PRO | CA-N-CD | -27.70 | 72.72 | 111.50 |
| 1 | C | 139 | PRO | CA-N-CD | -27.64 | 72.80 | 111.50 |
| 1 | C | 340 | ASP | C-N-CD | -27.11 | 60.96 | 120.60 |
| 1 | A | 340 | ASP | C-N-CD | -27.09 | 61.00 | 120.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|--------|-------------|----------|
| 1 | B | 340 | ASP | C-N-CD | -27.08 | 61.02 | 120.60 |
| 1 | A | 341 | PRO | CA-N-CD | -24.62 | 77.03 | 111.50 |
| 1 | C | 341 | PRO | CA-N-CD | -24.61 | 77.05 | 111.50 |
| 1 | B | 341 | PRO | CA-N-CD | -24.60 | 77.06 | 111.50 |
| 1 | C | 459 | PRO | N-CD-CG | -23.86 | 67.42 | 103.20 |
| 1 | A | 459 | PRO | N-CD-CG | -23.84 | 67.44 | 103.20 |
| 1 | B | 459 | PRO | N-CD-CG | -23.83 | 67.45 | 103.20 |
| 1 | B | 63 | THR | CA-CB-CG2 | -23.83 | 79.04 | 112.40 |
| 1 | A | 63 | THR | CA-CB-CG2 | -23.81 | 79.07 | 112.40 |
| 1 | C | 63 | THR | CA-CB-CG2 | -23.80 | 79.08 | 112.40 |
| 1 | A | 463 | TYR | CZ-CE2-CD2 | -23.26 | 98.86 | 119.80 |
| 1 | B | 463 | TYR | CZ-CE2-CD2 | -23.26 | 98.87 | 119.80 |
| 1 | C | 463 | TYR | CZ-CE2-CD2 | -23.21 | 98.92 | 119.80 |
| 1 | B | 21 | ARG | NE-CZ-NH1 | 21.51 | 131.06 | 120.30 |
| 1 | A | 21 | ARG | NE-CZ-NH1 | 21.41 | 131.01 | 120.30 |
| 1 | C | 21 | ARG | NE-CZ-NH1 | 21.36 | 130.98 | 120.30 |
| 1 | B | 463 | TYR | CG-CD1-CE1 | -21.13 | 104.40 | 121.30 |
| 1 | A | 463 | TYR | CG-CD1-CE1 | -21.12 | 104.41 | 121.30 |
| 1 | C | 463 | TYR | CG-CD1-CE1 | -21.07 | 104.44 | 121.30 |
| 1 | A | 459 | PRO | N-CA-CB | -20.49 | 78.71 | 103.30 |
| 1 | B | 459 | PRO | N-CA-CB | -20.49 | 78.71 | 103.30 |
| 1 | C | 459 | PRO | N-CA-CB | -20.46 | 78.75 | 103.30 |
| 1 | B | 300 | ARG | NE-CZ-NH2 | -20.12 | 110.24 | 120.30 |
| 1 | A | 300 | ARG | NE-CZ-NH2 | -20.11 | 110.25 | 120.30 |
| 1 | C | 300 | ARG | NE-CZ-NH2 | -20.08 | 110.26 | 120.30 |
| 1 | C | 396 | ARG | NE-CZ-NH2 | 20.05 | 130.32 | 120.30 |
| 1 | A | 396 | ARG | NE-CZ-NH2 | 20.03 | 130.31 | 120.30 |
| 1 | B | 396 | ARG | NE-CZ-NH2 | 20.01 | 130.30 | 120.30 |
| 1 | C | 76 | GLY | CA-C-O | -19.60 | 85.32 | 120.60 |
| 1 | A | 76 | GLY | CA-C-O | -19.59 | 85.34 | 120.60 |
| 1 | B | 76 | GLY | CA-C-O | -19.56 | 85.39 | 120.60 |
| 1 | A | 464 | PRO | N-CA-CB | -19.46 | 79.94 | 103.30 |
| 1 | A | 204 | ARG | NE-CZ-NH2 | 19.45 | 130.03 | 120.30 |
| 1 | C | 464 | PRO | N-CA-CB | -19.45 | 79.96 | 103.30 |
| 1 | B | 464 | PRO | N-CA-CB | -19.44 | 79.97 | 103.30 |
| 1 | C | 204 | ARG | NE-CZ-NH2 | 19.42 | 130.01 | 120.30 |
| 1 | B | 204 | ARG | NE-CZ-NH2 | 19.41 | 130.01 | 120.30 |
| 1 | B | 404 | ILE | CA-CB-CG1 | 18.95 | 147.01 | 111.00 |
| 1 | A | 404 | ILE | CA-CB-CG1 | 18.94 | 146.99 | 111.00 |
| 1 | C | 404 | ILE | CA-CB-CG1 | 18.94 | 146.98 | 111.00 |
| 1 | C | 461 | VAL | CA-C-O | -17.35 | 83.66 | 120.10 |
| 1 | B | 461 | VAL | CA-C-O | -17.34 | 83.68 | 120.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|--------|-------------|----------|
| 1 | A | 461 | VAL | CA-C-O | -17.34 | 83.69 | 120.10 |
| 1 | A | 139 | PRO | N-CA-CB | -16.90 | 83.02 | 103.30 |
| 1 | C | 139 | PRO | N-CA-CB | -16.89 | 83.03 | 103.30 |
| 1 | B | 139 | PRO | N-CA-CB | -16.89 | 83.04 | 103.30 |
| 1 | A | 396 | ARG | O-C-N | -16.74 | 95.92 | 122.70 |
| 1 | C | 396 | ARG | O-C-N | -16.73 | 95.93 | 122.70 |
| 1 | B | 396 | ARG | O-C-N | -16.68 | 96.01 | 122.70 |
| 1 | C | 458 | LEU | C-N-CD | -16.62 | 84.04 | 120.60 |
| 1 | B | 458 | LEU | C-N-CD | -16.61 | 84.06 | 120.60 |
| 1 | A | 458 | LEU | C-N-CD | -16.60 | 84.08 | 120.60 |
| 1 | B | 435 | GLU | CA-C-O | -15.79 | 86.94 | 120.10 |
| 1 | C | 435 | GLU | CA-C-O | -15.77 | 86.99 | 120.10 |
| 1 | A | 435 | GLU | CA-C-O | -15.76 | 87.00 | 120.10 |
| 1 | C | 435 | GLU | O-C-N | -15.66 | 97.64 | 122.70 |
| 1 | A | 435 | GLU | O-C-N | -15.61 | 97.72 | 122.70 |
| 1 | B | 435 | GLU | O-C-N | -15.57 | 97.79 | 122.70 |
| 1 | B | 81 | GLY | CA-C-O | -15.45 | 92.79 | 120.60 |
| 1 | A | 81 | GLY | CA-C-O | -15.44 | 92.81 | 120.60 |
| 1 | C | 81 | GLY | CA-C-O | -15.43 | 92.83 | 120.60 |
| 1 | C | 464 | PRO | CB-CG-CD | -15.16 | 47.38 | 106.50 |
| 1 | A | 464 | PRO | CB-CG-CD | -15.15 | 47.40 | 106.50 |
| 1 | B | 464 | PRO | CB-CG-CD | -15.15 | 47.40 | 106.50 |
| 1 | A | 341 | PRO | N-CA-CB | -14.96 | 85.34 | 103.30 |
| 1 | C | 341 | PRO | N-CA-CB | -14.96 | 85.34 | 103.30 |
| 1 | B | 341 | PRO | N-CA-CB | -14.90 | 85.42 | 103.30 |
| 1 | C | 404 | ILE | CB-CG1-CD1 | -14.64 | 72.91 | 113.90 |
| 1 | A | 404 | ILE | CB-CG1-CD1 | -14.63 | 72.93 | 113.90 |
| 1 | B | 404 | ILE | CB-CG1-CD1 | -14.62 | 72.97 | 113.90 |
| 1 | A | 80 | THR | C-N-CA | 13.87 | 151.43 | 122.30 |
| 1 | C | 80 | THR | C-N-CA | 13.86 | 151.40 | 122.30 |
| 1 | B | 80 | THR | C-N-CA | 13.84 | 151.36 | 122.30 |
| 1 | B | 211 | VAL | CA-CB-CG1 | -13.81 | 90.19 | 110.90 |
| 1 | C | 211 | VAL | CA-CB-CG1 | -13.80 | 90.20 | 110.90 |
| 1 | A | 211 | VAL | CA-CB-CG1 | -13.80 | 90.20 | 110.90 |
| 1 | C | 195 | VAL | CG1-CB-CG2 | -13.76 | 88.89 | 110.90 |
| 1 | B | 134 | TYR | CB-CG-CD1 | -13.76 | 112.75 | 121.00 |
| 1 | B | 195 | VAL | CG1-CB-CG2 | -13.76 | 88.89 | 110.90 |
| 1 | A | 195 | VAL | CG1-CB-CG2 | -13.75 | 88.89 | 110.90 |
| 1 | A | 134 | TYR | CB-CG-CD1 | -13.73 | 112.76 | 121.00 |
| 1 | C | 134 | TYR | CB-CG-CD1 | -13.73 | 112.76 | 121.00 |
| 1 | B | 208 | VAL | CG1-CB-CG2 | -13.64 | 89.08 | 110.90 |
| 1 | A | 208 | VAL | CG1-CB-CG2 | -13.62 | 89.12 | 110.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|--------|-------------|----------|
| 1 | C | 85 | THR | CA-CB-CG2 | -13.62 | 93.34 | 112.40 |
| 1 | C | 208 | VAL | CG1-CB-CG2 | -13.62 | 89.12 | 110.90 |
| 1 | A | 85 | THR | CA-CB-CG2 | -13.60 | 93.36 | 112.40 |
| 1 | B | 191 | VAL | CA-CB-CG1 | -13.59 | 90.52 | 110.90 |
| 1 | A | 191 | VAL | CA-CB-CG1 | -13.58 | 90.53 | 110.90 |
| 1 | C | 191 | VAL | CA-CB-CG1 | -13.57 | 90.55 | 110.90 |
| 1 | B | 85 | THR | CA-CB-CG2 | -13.55 | 93.42 | 112.40 |
| 1 | C | 76 | GLY | O-C-N | 12.93 | 143.38 | 122.70 |
| 1 | A | 76 | GLY | O-C-N | 12.92 | 143.38 | 122.70 |
| 1 | B | 76 | GLY | O-C-N | 12.90 | 143.35 | 122.70 |
| 1 | B | 418 | TYR | CB-CG-CD2 | 12.87 | 128.72 | 121.00 |
| 1 | C | 463 | TYR | CD1-CG-CD2 | -12.83 | 103.79 | 117.90 |
| 1 | A | 418 | TYR | CB-CG-CD2 | 12.81 | 128.69 | 121.00 |
| 1 | A | 463 | TYR | CD1-CG-CD2 | -12.81 | 103.81 | 117.90 |
| 1 | B | 463 | TYR | CD1-CG-CD2 | -12.78 | 103.84 | 117.90 |
| 1 | C | 418 | TYR | CB-CG-CD2 | 12.71 | 128.62 | 121.00 |
| 1 | A | 55 | MET | CA-CB-CG | 12.68 | 134.86 | 113.30 |
| 1 | B | 55 | MET | CA-CB-CG | 12.67 | 134.84 | 113.30 |
| 1 | C | 55 | MET | CA-CB-CG | 12.66 | 134.83 | 113.30 |
| 1 | A | 404 | ILE | O-C-N | -12.42 | 102.83 | 122.70 |
| 1 | C | 404 | ILE | O-C-N | -12.42 | 102.83 | 122.70 |
| 1 | B | 404 | ILE | O-C-N | -12.41 | 102.84 | 122.70 |
| 1 | B | 404 | ILE | CA-CB-CG2 | -12.25 | 86.39 | 110.90 |
| 1 | A | 404 | ILE | CA-CB-CG2 | -12.25 | 86.40 | 110.90 |
| 1 | C | 404 | ILE | CA-CB-CG2 | -12.25 | 86.41 | 110.90 |
| 1 | B | 123 | MET | N-CA-CB | -12.03 | 88.94 | 110.60 |
| 1 | C | 463 | TYR | CB-CG-CD1 | 12.03 | 128.22 | 121.00 |
| 1 | C | 123 | MET | N-CA-CB | -12.01 | 88.98 | 110.60 |
| 1 | A | 123 | MET | N-CA-CB | -12.01 | 88.98 | 110.60 |
| 1 | A | 463 | TYR | CB-CG-CD1 | 11.94 | 128.16 | 121.00 |
| 1 | B | 463 | TYR | CB-CG-CD1 | 11.90 | 128.14 | 121.00 |
| 1 | B | 418 | TYR | CB-CG-CD1 | -11.84 | 113.90 | 121.00 |
| 1 | A | 418 | TYR | CB-CG-CD1 | -11.83 | 113.90 | 121.00 |
| 1 | B | 341 | PRO | N-CD-CG | -11.81 | 85.49 | 103.20 |
| 1 | C | 418 | TYR | CB-CG-CD1 | -11.81 | 113.92 | 121.00 |
| 1 | C | 341 | PRO | N-CD-CG | -11.80 | 85.50 | 103.20 |
| 1 | A | 341 | PRO | N-CD-CG | -11.79 | 85.52 | 103.20 |
| 1 | B | 163 | ASP | CA-CB-CG | 11.08 | 137.78 | 113.40 |
| 1 | C | 163 | ASP | CA-CB-CG | 11.07 | 137.76 | 113.40 |
| 1 | A | 163 | ASP | CA-CB-CG | 11.06 | 137.74 | 113.40 |
| 1 | A | 139 | PRO | O-C-N | -10.94 | 105.20 | 122.70 |
| 1 | B | 139 | PRO | O-C-N | -10.92 | 105.23 | 122.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|--------|-------------|----------|
| 1 | C | 139 | PRO | O-C-N | -10.91 | 105.24 | 122.70 |
| 1 | C | 19 | PHE | CG-CD2-CE2 | -10.84 | 108.88 | 120.80 |
| 1 | A | 19 | PHE | CG-CD2-CE2 | -10.82 | 108.89 | 120.80 |
| 1 | B | 19 | PHE | CG-CD2-CE2 | -10.79 | 108.93 | 120.80 |
| 1 | A | 91 | ASN | CB-CA-C | -10.72 | 88.96 | 110.40 |
| 1 | B | 91 | ASN | CB-CA-C | -10.72 | 88.97 | 110.40 |
| 1 | C | 91 | ASN | CB-CA-C | -10.71 | 88.97 | 110.40 |
| 1 | C | 117 | ASP | CB-CG-OD2 | -10.69 | 108.68 | 118.30 |
| 1 | C | 96 | THR | CA-CB-OG1 | -10.67 | 86.60 | 109.00 |
| 1 | A | 96 | THR | CA-CB-OG1 | -10.66 | 86.60 | 109.00 |
| 1 | B | 96 | THR | CA-CB-OG1 | -10.65 | 86.64 | 109.00 |
| 1 | C | 463 | TYR | CA-C-O | -10.64 | 97.75 | 120.10 |
| 1 | A | 463 | TYR | CA-C-O | -10.62 | 97.79 | 120.10 |
| 1 | B | 463 | TYR | CA-C-O | -10.62 | 97.80 | 120.10 |
| 1 | A | 117 | ASP | CB-CG-OD2 | -10.61 | 108.75 | 118.30 |
| 1 | B | 117 | ASP | CB-CG-OD2 | -10.61 | 108.75 | 118.30 |
| 1 | B | 404 | ILE | CB-CA-C | 10.50 | 132.61 | 111.60 |
| 1 | C | 404 | ILE | CB-CA-C | 10.50 | 132.60 | 111.60 |
| 1 | A | 404 | ILE | CB-CA-C | 10.49 | 132.58 | 111.60 |
| 1 | A | 250 | LEU | CD1-CG-CD2 | -10.46 | 79.13 | 110.50 |
| 1 | B | 250 | LEU | CD1-CG-CD2 | -10.46 | 79.14 | 110.50 |
| 1 | C | 250 | LEU | CD1-CG-CD2 | -10.45 | 79.16 | 110.50 |
| 1 | A | 396 | ARG | NH1-CZ-NH2 | -10.38 | 107.98 | 119.40 |
| 1 | A | 103 | LEU | CB-CG-CD2 | -10.38 | 93.35 | 111.00 |
| 1 | C | 396 | ARG | NH1-CZ-NH2 | -10.38 | 107.98 | 119.40 |
| 1 | B | 103 | LEU | CB-CG-CD2 | -10.38 | 93.36 | 111.00 |
| 1 | B | 396 | ARG | NH1-CZ-NH2 | -10.37 | 107.99 | 119.40 |
| 1 | C | 103 | LEU | CB-CG-CD2 | -10.36 | 93.39 | 111.00 |
| 1 | C | 82 | TYR | CB-CG-CD2 | 10.31 | 127.18 | 121.00 |
| 1 | A | 82 | TYR | CB-CG-CD2 | 10.28 | 127.17 | 121.00 |
| 1 | B | 82 | TYR | CB-CG-CD2 | 10.24 | 127.15 | 121.00 |
| 1 | A | 461 | VAL | O-C-N | -10.12 | 106.51 | 122.70 |
| 1 | C | 461 | VAL | O-C-N | -10.10 | 106.54 | 122.70 |
| 1 | A | 452 | VAL | CA-CB-CG2 | -10.10 | 95.76 | 110.90 |
| 1 | C | 452 | VAL | CA-CB-CG2 | -10.09 | 95.77 | 110.90 |
| 1 | B | 461 | VAL | O-C-N | -10.09 | 106.56 | 122.70 |
| 1 | B | 452 | VAL | CA-CB-CG2 | -10.06 | 95.81 | 110.90 |
| 1 | C | 110 | ARG | NE-CZ-NH2 | 10.01 | 125.31 | 120.30 |
| 1 | B | 341 | PRO | O-C-N | -10.00 | 106.69 | 122.70 |
| 1 | B | 110 | ARG | NE-CZ-NH2 | 10.00 | 125.30 | 120.30 |
| 1 | A | 341 | PRO | O-C-N | -9.99 | 106.72 | 122.70 |
| 1 | A | 110 | ARG | NE-CZ-NH2 | 9.98 | 125.29 | 120.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 1 | C | 341 | PRO | O-C-N | -9.97 | 106.75 | 122.70 |
| 1 | A | 170 | THR | CA-CB-CG2 | -9.96 | 98.46 | 112.40 |
| 1 | B | 170 | THR | CA-CB-CG2 | -9.95 | 98.47 | 112.40 |
| 1 | C | 170 | THR | CA-CB-CG2 | -9.92 | 98.51 | 112.40 |
| 1 | C | 19 | PHE | CB-CG-CD1 | -9.79 | 113.94 | 120.80 |
| 1 | C | 19 | PHE | CG-CD1-CE1 | -9.77 | 110.05 | 120.80 |
| 1 | A | 19 | PHE | CG-CD1-CE1 | -9.77 | 110.06 | 120.80 |
| 1 | B | 76 | GLY | CA-C-N | -9.74 | 95.76 | 117.20 |
| 1 | B | 19 | PHE | CG-CD1-CE1 | -9.74 | 110.09 | 120.80 |
| 1 | A | 76 | GLY | CA-C-N | -9.74 | 95.78 | 117.20 |
| 1 | A | 19 | PHE | CB-CG-CD1 | -9.73 | 113.98 | 120.80 |
| 1 | C | 76 | GLY | CA-C-N | -9.71 | 95.83 | 117.20 |
| 1 | B | 88 | TYR | CB-CG-CD1 | -9.70 | 115.18 | 121.00 |
| 1 | B | 19 | PHE | CB-CG-CD1 | -9.69 | 114.02 | 120.80 |
| 1 | B | 204 | ARG | CD-NE-CZ | -9.68 | 110.05 | 123.60 |
| 1 | A | 88 | TYR | CB-CG-CD1 | -9.68 | 115.19 | 121.00 |
| 1 | C | 204 | ARG | CD-NE-CZ | -9.68 | 110.05 | 123.60 |
| 1 | A | 204 | ARG | CD-NE-CZ | -9.67 | 110.06 | 123.60 |
| 1 | C | 442 | VAL | CA-CB-CG1 | 9.66 | 125.39 | 110.90 |
| 1 | C | 88 | TYR | CB-CG-CD1 | -9.65 | 115.21 | 121.00 |
| 1 | A | 442 | VAL | CA-CB-CG1 | 9.64 | 125.36 | 110.90 |
| 1 | B | 442 | VAL | CA-CB-CG1 | 9.62 | 125.33 | 110.90 |
| 1 | B | 340 | ASP | O-C-N | 9.47 | 139.09 | 121.10 |
| 1 | A | 340 | ASP | O-C-N | 9.46 | 139.06 | 121.10 |
| 1 | C | 340 | ASP | O-C-N | 9.44 | 139.03 | 121.10 |
| 1 | B | 346 | ALA | N-CA-CB | -9.38 | 96.97 | 110.10 |
| 1 | A | 346 | ALA | N-CA-CB | -9.38 | 96.97 | 110.10 |
| 1 | C | 346 | ALA | N-CA-CB | -9.37 | 96.98 | 110.10 |
| 1 | B | 42 | TRP | CD1-NE1-CE2 | 9.32 | 117.39 | 109.00 |
| 1 | C | 42 | TRP | CD1-NE1-CE2 | 9.32 | 117.38 | 109.00 |
| 1 | A | 42 | TRP | CD1-NE1-CE2 | 9.29 | 117.36 | 109.00 |
| 1 | C | 258 | LEU | CB-CG-CD1 | -9.27 | 95.24 | 111.00 |
| 1 | A | 258 | LEU | CB-CG-CD1 | -9.25 | 95.28 | 111.00 |
| 1 | B | 258 | LEU | CB-CG-CD1 | -9.24 | 95.29 | 111.00 |
| 1 | A | 82 | TYR | CA-CB-CG | 9.08 | 130.65 | 113.40 |
| 1 | B | 82 | TYR | CA-CB-CG | 9.08 | 130.65 | 113.40 |
| 1 | A | 225 | VAL | CA-CB-CG2 | 9.06 | 124.50 | 110.90 |
| 1 | B | 225 | VAL | CA-CB-CG2 | 9.06 | 124.50 | 110.90 |
| 1 | C | 82 | TYR | CA-CB-CG | 9.06 | 130.62 | 113.40 |
| 1 | C | 225 | VAL | CA-CB-CG2 | 9.03 | 124.45 | 110.90 |
| 1 | B | 404 | ILE | CA-C-O | 9.03 | 139.06 | 120.10 |
| 1 | C | 404 | ILE | CA-C-O | 9.01 | 139.03 | 120.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 1 | A | 404 | ILE | CA-C-O | 9.01 | 139.02 | 120.10 |
| 1 | B | 233 | ASP | CB-CG-OD1 | -8.94 | 110.25 | 118.30 |
| 1 | C | 115 | MET | CG-SD-CE | -8.93 | 85.92 | 100.20 |
| 1 | A | 115 | MET | CG-SD-CE | -8.91 | 85.94 | 100.20 |
| 1 | A | 233 | ASP | CB-CG-OD1 | -8.90 | 110.29 | 118.30 |
| 1 | B | 115 | MET | CG-SD-CE | -8.89 | 85.98 | 100.20 |
| 1 | C | 233 | ASP | CB-CG-OD1 | -8.84 | 110.35 | 118.30 |
| 1 | B | 371 | TYR | CB-CG-CD1 | -8.83 | 115.70 | 121.00 |
| 1 | A | 371 | TYR | CB-CG-CD1 | -8.82 | 115.71 | 121.00 |
| 1 | B | 346 | ALA | CB-CA-C | -8.80 | 96.90 | 110.10 |
| 1 | A | 346 | ALA | CB-CA-C | -8.79 | 96.91 | 110.10 |
| 1 | C | 371 | TYR | CB-CG-CD1 | -8.79 | 115.72 | 121.00 |
| 1 | C | 346 | ALA | CB-CA-C | -8.79 | 96.92 | 110.10 |
| 1 | A | 188 | TYR | CG-CD2-CE2 | 8.78 | 128.32 | 121.30 |
| 1 | B | 188 | TYR | CG-CD2-CE2 | 8.76 | 128.31 | 121.30 |
| 1 | A | 420 | LEU | CD1-CG-CD2 | -8.75 | 84.25 | 110.50 |
| 1 | C | 420 | LEU | CD1-CG-CD2 | -8.75 | 84.25 | 110.50 |
| 1 | B | 420 | LEU | CD1-CG-CD2 | -8.74 | 84.27 | 110.50 |
| 1 | B | 188 | TYR | CA-CB-CG | 8.74 | 130.01 | 113.40 |
| 1 | C | 188 | TYR | CG-CD2-CE2 | 8.73 | 128.29 | 121.30 |
| 1 | C | 463 | TYR | C-N-CD | 8.73 | 146.74 | 128.40 |
| 1 | B | 463 | TYR | C-N-CD | 8.73 | 146.73 | 128.40 |
| 1 | A | 188 | TYR | CA-CB-CG | 8.73 | 129.98 | 113.40 |
| 1 | A | 463 | TYR | C-N-CD | 8.71 | 146.70 | 128.40 |
| 1 | C | 188 | TYR | CA-CB-CG | 8.71 | 129.94 | 113.40 |
| 1 | A | 175 | ASP | CB-CG-OD1 | -8.62 | 110.55 | 118.30 |
| 1 | B | 65 | VAL | CA-CB-CG1 | 8.61 | 123.82 | 110.90 |
| 1 | A | 65 | VAL | CA-CB-CG1 | 8.61 | 123.81 | 110.90 |
| 1 | C | 65 | VAL | CA-CB-CG1 | 8.60 | 123.80 | 110.90 |
| 1 | C | 435 | GLU | N-CA-CB | 8.59 | 126.06 | 110.60 |
| 1 | A | 459 | PRO | N-CA-C | -8.59 | 89.78 | 112.10 |
| 1 | B | 175 | ASP | CB-CG-OD1 | -8.59 | 110.57 | 118.30 |
| 1 | B | 459 | PRO | N-CA-C | -8.58 | 89.79 | 112.10 |
| 1 | C | 459 | PRO | N-CA-C | -8.58 | 89.79 | 112.10 |
| 1 | B | 318 | ILE | CG1-CB-CG2 | -8.58 | 92.53 | 111.40 |
| 1 | A | 435 | GLU | N-CA-CB | 8.57 | 126.03 | 110.60 |
| 1 | B | 435 | GLU | N-CA-CB | 8.57 | 126.03 | 110.60 |
| 1 | C | 175 | ASP | CB-CG-OD1 | -8.56 | 110.59 | 118.30 |
| 1 | A | 318 | ILE | CG1-CB-CG2 | -8.56 | 92.57 | 111.40 |
| 1 | C | 318 | ILE | CG1-CB-CG2 | -8.55 | 92.59 | 111.40 |
| 1 | B | 216 | TRP | CH2-CZ2-CE2 | 8.51 | 125.91 | 117.40 |
| 1 | A | 225 | VAL | N-CA-CB | -8.51 | 92.78 | 111.50 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 1 | B | 225 | VAL | N-CA-CB | -8.51 | 92.79 | 111.50 |
| 1 | C | 225 | VAL | N-CA-CB | -8.49 | 92.83 | 111.50 |
| 1 | A | 216 | TRP | CH2-CZ2-CE2 | 8.46 | 125.86 | 117.40 |
| 1 | A | 396 | ARG | CD-NE-CZ | -8.46 | 111.76 | 123.60 |
| 1 | C | 396 | ARG | CD-NE-CZ | -8.45 | 111.77 | 123.60 |
| 1 | B | 396 | ARG | CD-NE-CZ | -8.45 | 111.78 | 123.60 |
| 1 | A | 96 | THR | OG1-CB-CG2 | -8.44 | 90.58 | 110.00 |
| 1 | C | 216 | TRP | CH2-CZ2-CE2 | 8.43 | 125.83 | 117.40 |
| 1 | C | 96 | THR | OG1-CB-CG2 | -8.43 | 90.61 | 110.00 |
| 1 | B | 96 | THR | OG1-CB-CG2 | -8.43 | 90.61 | 110.00 |
| 1 | C | 225 | VAL | CA-CB-CG1 | 8.40 | 123.51 | 110.90 |
| 1 | B | 225 | VAL | CA-CB-CG1 | 8.39 | 123.49 | 110.90 |
| 1 | A | 225 | VAL | CA-CB-CG1 | 8.38 | 123.48 | 110.90 |
| 1 | C | 208 | VAL | CB-CA-C | 8.36 | 127.28 | 111.40 |
| 1 | A | 208 | VAL | CB-CA-C | 8.35 | 127.27 | 111.40 |
| 1 | B | 208 | VAL | CB-CA-C | 8.35 | 127.27 | 111.40 |
| 1 | B | 235 | ASP | CB-CG-OD1 | 8.32 | 125.79 | 118.30 |
| 1 | C | 163 | ASP | CB-CG-OD2 | -8.31 | 110.82 | 118.30 |
| 1 | B | 99 | ASP | CB-CG-OD1 | -8.31 | 110.82 | 118.30 |
| 1 | A | 99 | ASP | CB-CG-OD1 | -8.30 | 110.83 | 118.30 |
| 1 | A | 235 | ASP | CB-CG-OD1 | 8.30 | 125.77 | 118.30 |
| 1 | B | 84 | GLN | CA-CB-CG | 8.30 | 131.66 | 113.40 |
| 1 | C | 84 | GLN | CA-CB-CG | 8.29 | 131.65 | 113.40 |
| 1 | A | 163 | ASP | CB-CG-OD2 | -8.29 | 110.84 | 118.30 |
| 1 | A | 84 | GLN | CA-CB-CG | 8.29 | 131.63 | 113.40 |
| 1 | C | 235 | ASP | CB-CG-OD1 | 8.29 | 125.76 | 118.30 |
| 1 | C | 99 | ASP | CB-CG-OD1 | -8.29 | 110.84 | 118.30 |
| 1 | B | 341 | PRO | CA-CB-CG | -8.27 | 88.28 | 104.00 |
| 1 | A | 341 | PRO | CA-CB-CG | -8.27 | 88.29 | 104.00 |
| 1 | C | 341 | PRO | CA-CB-CG | -8.26 | 88.31 | 104.00 |
| 1 | A | 188 | TYR | CB-CG-CD1 | 8.25 | 125.95 | 121.00 |
| 1 | C | 188 | TYR | CB-CG-CD1 | 8.25 | 125.95 | 121.00 |
| 1 | B | 188 | TYR | CB-CG-CD1 | 8.24 | 125.94 | 121.00 |
| 1 | C | 396 | ARG | CA-C-N | 8.24 | 135.33 | 117.20 |
| 1 | A | 396 | ARG | CA-C-N | 8.23 | 135.30 | 117.20 |
| 1 | B | 396 | ARG | CA-C-N | 8.21 | 135.27 | 117.20 |
| 1 | B | 64 | PRO | CA-N-CD | -8.21 | 100.00 | 111.50 |
| 1 | C | 64 | PRO | CA-N-CD | -8.21 | 100.01 | 111.50 |
| 1 | B | 163 | ASP | CB-CG-OD2 | -8.21 | 110.91 | 118.30 |
| 1 | A | 64 | PRO | CA-N-CD | -8.21 | 100.01 | 111.50 |
| 1 | A | 163 | ASP | CB-CG-OD1 | 8.20 | 125.68 | 118.30 |
| 1 | B | 163 | ASP | CB-CG-OD1 | 8.18 | 125.66 | 118.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | C | 163 | ASP | CB-CG-OD1 | 8.16 | 125.64 | 118.30 |
| 1 | B | 198 | TYR | CB-CG-CD1 | -8.16 | 116.11 | 121.00 |
| 1 | A | 198 | TYR | CB-CG-CD1 | -8.13 | 116.12 | 121.00 |
| 1 | C | 112 | MET | CA-CB-CG | 8.12 | 127.11 | 113.30 |
| 1 | B | 112 | MET | CA-CB-CG | 8.12 | 127.10 | 113.30 |
| 1 | A | 112 | MET | CA-CB-CG | 8.11 | 127.09 | 113.30 |
| 1 | C | 198 | TYR | CB-CG-CD1 | -8.09 | 116.15 | 121.00 |
| 1 | B | 468 | LEU | CD1-CG-CD2 | -8.07 | 86.28 | 110.50 |
| 1 | C | 468 | LEU | CD1-CG-CD2 | -8.06 | 86.31 | 110.50 |
| 1 | A | 468 | LEU | CD1-CG-CD2 | -8.06 | 86.33 | 110.50 |
| 1 | A | 452 | VAL | CA-CB-CG1 | -8.03 | 98.85 | 110.90 |
| 1 | B | 452 | VAL | CA-CB-CG1 | -8.03 | 98.85 | 110.90 |
| 1 | C | 452 | VAL | CA-CB-CG1 | -8.01 | 98.89 | 110.90 |
| 1 | B | 283 | CYS | CB-CA-C | -8.00 | 94.39 | 110.40 |
| 1 | A | 283 | CYS | CB-CA-C | -8.00 | 94.41 | 110.40 |
| 1 | C | 283 | CYS | CB-CA-C | -7.97 | 94.45 | 110.40 |
| 1 | B | 191 | VAL | CG1-CB-CG2 | -7.96 | 98.16 | 110.90 |
| 1 | A | 191 | VAL | CG1-CB-CG2 | -7.96 | 98.17 | 110.90 |
| 1 | C | 191 | VAL | CG1-CB-CG2 | -7.95 | 98.19 | 110.90 |
| 1 | C | 19 | PHE | CD1-CG-CD2 | 7.83 | 128.47 | 118.30 |
| 1 | B | 340 | ASP | CB-CG-OD2 | -7.82 | 111.26 | 118.30 |
| 1 | A | 340 | ASP | CB-CG-OD2 | -7.81 | 111.27 | 118.30 |
| 1 | A | 19 | PHE | CD1-CG-CD2 | 7.81 | 128.45 | 118.30 |
| 1 | C | 230 | GLU | CA-CB-CG | 7.81 | 130.57 | 113.40 |
| 1 | C | 340 | ASP | CB-CG-OD2 | -7.80 | 111.28 | 118.30 |
| 1 | A | 230 | GLU | CA-CB-CG | 7.79 | 130.53 | 113.40 |
| 1 | B | 19 | PHE | CD1-CG-CD2 | 7.79 | 128.42 | 118.30 |
| 1 | B | 452 | VAL | CG1-CB-CG2 | 7.78 | 123.35 | 110.90 |
| 1 | C | 452 | VAL | CG1-CB-CG2 | 7.77 | 123.34 | 110.90 |
| 1 | A | 452 | VAL | CG1-CB-CG2 | 7.77 | 123.33 | 110.90 |
| 1 | B | 230 | GLU | CA-CB-CG | 7.76 | 130.48 | 113.40 |
| 1 | B | 67 | ALA | CA-C-O | -7.71 | 103.91 | 120.10 |
| 1 | C | 63 | THR | CA-CB-OG1 | -7.70 | 92.83 | 109.00 |
| 1 | A | 67 | ALA | CA-C-O | -7.68 | 103.96 | 120.10 |
| 1 | C | 67 | ALA | CA-C-O | -7.68 | 103.96 | 120.10 |
| 1 | A | 10 | SER | N-CA-CB | -7.68 | 98.98 | 110.50 |
| 1 | C | 10 | SER | N-CA-CB | -7.68 | 98.98 | 110.50 |
| 1 | A | 63 | THR | CA-CB-OG1 | -7.67 | 92.89 | 109.00 |
| 1 | B | 10 | SER | N-CA-CB | -7.66 | 99.00 | 110.50 |
| 1 | B | 63 | THR | CA-CB-OG1 | -7.66 | 92.92 | 109.00 |
| 1 | B | 88 | TYR | CB-CG-CD2 | 7.65 | 125.59 | 121.00 |
| 1 | C | 147 | HIS | CA-CB-CG | 7.61 | 126.53 | 113.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | B | 147 | HIS | CA-CB-CG | 7.60 | 126.52 | 113.60 |
| 1 | A | 147 | HIS | CA-CB-CG | 7.60 | 126.52 | 113.60 |
| 1 | A | 47 | ASP | CA-CB-CG | 7.58 | 130.07 | 113.40 |
| 1 | C | 47 | ASP | CA-CB-CG | 7.57 | 130.06 | 113.40 |
| 1 | A | 88 | TYR | CB-CG-CD2 | 7.57 | 125.54 | 121.00 |
| 1 | B | 47 | ASP | CA-CB-CG | 7.57 | 130.05 | 113.40 |
| 1 | B | 325 | PRO | N-CA-CB | -7.57 | 94.22 | 103.30 |
| 1 | A | 325 | PRO | N-CA-CB | -7.51 | 94.28 | 103.30 |
| 1 | C | 325 | PRO | N-CA-CB | -7.51 | 94.29 | 103.30 |
| 1 | B | 64 | PRO | CA-CB-CG | -7.50 | 89.75 | 104.00 |
| 1 | A | 64 | PRO | CA-CB-CG | -7.50 | 89.75 | 104.00 |
| 1 | B | 211 | VAL | CA-C-O | -7.50 | 104.35 | 120.10 |
| 1 | C | 88 | TYR | CB-CG-CD2 | 7.50 | 125.50 | 121.00 |
| 1 | A | 211 | VAL | CA-C-O | -7.48 | 104.39 | 120.10 |
| 1 | B | 463 | TYR | N-CA-CB | -7.47 | 97.14 | 110.60 |
| 1 | C | 211 | VAL | CA-C-O | -7.47 | 104.42 | 120.10 |
| 1 | A | 463 | TYR | N-CA-CB | -7.45 | 97.19 | 110.60 |
| 1 | C | 64 | PRO | CA-CB-CG | -7.45 | 89.84 | 104.00 |
| 1 | C | 463 | TYR | N-CA-CB | -7.44 | 97.20 | 110.60 |
| 1 | B | 265 | THR | CA-CB-CG2 | 7.41 | 122.77 | 112.40 |
| 1 | A | 265 | THR | CA-CB-CG2 | 7.40 | 122.76 | 112.40 |
| 1 | C | 265 | THR | CA-CB-CG2 | 7.38 | 122.74 | 112.40 |
| 1 | A | 155 | TYR | CB-CG-CD2 | -7.38 | 116.57 | 121.00 |
| 1 | B | 155 | TYR | CB-CG-CD2 | -7.37 | 116.58 | 121.00 |
| 1 | B | 14 | LEU | CD1-CG-CD2 | -7.37 | 88.40 | 110.50 |
| 1 | A | 14 | LEU | CD1-CG-CD2 | -7.36 | 88.43 | 110.50 |
| 1 | B | 465 | THR | CA-CB-OG1 | 7.35 | 124.43 | 109.00 |
| 1 | A | 465 | THR | CA-CB-OG1 | 7.35 | 124.43 | 109.00 |
| 1 | C | 47 | ASP | CB-CG-OD2 | 7.34 | 124.91 | 118.30 |
| 1 | C | 14 | LEU | CD1-CG-CD2 | -7.34 | 88.47 | 110.50 |
| 1 | C | 465 | THR | CA-CB-OG1 | 7.34 | 124.41 | 109.00 |
| 1 | A | 47 | ASP | CB-CG-OD2 | 7.33 | 124.90 | 118.30 |
| 1 | B | 427 | TYR | CA-CB-CG | 7.33 | 127.33 | 113.40 |
| 1 | C | 155 | TYR | CB-CG-CD2 | -7.33 | 116.61 | 121.00 |
| 1 | B | 47 | ASP | CB-CG-OD2 | 7.30 | 124.87 | 118.30 |
| 1 | C | 137 | PHE | CB-CG-CD1 | -7.30 | 115.69 | 120.80 |
| 1 | A | 427 | TYR | CA-CB-CG | 7.29 | 127.26 | 113.40 |
| 1 | B | 137 | PHE | CB-CG-CD1 | -7.29 | 115.70 | 120.80 |
| 1 | B | 63 | THR | N-CA-C | 7.29 | 130.68 | 111.00 |
| 1 | C | 427 | TYR | CA-CB-CG | 7.28 | 127.23 | 113.40 |
| 1 | C | 434 | THR | O-C-N | 7.28 | 134.35 | 122.70 |
| 1 | A | 434 | THR | O-C-N | 7.28 | 134.34 | 122.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 1 | A | 63 | THR | N-CA-C | 7.27 | 130.63 | 111.00 |
| 1 | B | 434 | THR | O-C-N | 7.27 | 134.34 | 122.70 |
| 1 | C | 63 | THR | N-CA-C | 7.27 | 130.64 | 111.00 |
| 1 | A | 137 | PHE | CB-CG-CD1 | -7.27 | 115.71 | 120.80 |
| 1 | C | 67 | ALA | CB-CA-C | -7.25 | 99.22 | 110.10 |
| 1 | B | 247 | ASP | N-CA-CB | 7.24 | 123.64 | 110.60 |
| 1 | A | 67 | ALA | CB-CA-C | -7.24 | 99.24 | 110.10 |
| 1 | A | 247 | ASP | N-CA-CB | 7.24 | 123.62 | 110.60 |
| 1 | A | 139 | PRO | CA-C-N | 7.22 | 133.09 | 117.20 |
| 1 | B | 67 | ALA | CB-CA-C | -7.22 | 99.26 | 110.10 |
| 1 | C | 247 | ASP | N-CA-CB | 7.22 | 123.60 | 110.60 |
| 1 | C | 139 | PRO | CA-C-N | 7.22 | 133.08 | 117.20 |
| 1 | C | 376 | ASP | O-C-N | -7.22 | 111.15 | 122.70 |
| 1 | A | 376 | ASP | O-C-N | -7.21 | 111.16 | 122.70 |
| 1 | B | 376 | ASP | O-C-N | -7.21 | 111.17 | 122.70 |
| 1 | B | 138 | LYS | CA-C-O | -7.20 | 104.97 | 120.10 |
| 1 | B | 139 | PRO | CA-C-N | 7.20 | 133.05 | 117.20 |
| 1 | C | 2 | THR | CA-CB-CG2 | 7.19 | 122.47 | 112.40 |
| 1 | A | 138 | LYS | CA-C-O | -7.19 | 105.01 | 120.10 |
| 1 | A | 2 | THR | CA-CB-CG2 | 7.18 | 122.46 | 112.40 |
| 1 | C | 138 | LYS | CA-C-O | -7.18 | 105.03 | 120.10 |
| 1 | B | 2 | THR | CA-CB-CG2 | 7.15 | 122.42 | 112.40 |
| 1 | A | 173 | LEU | CB-CG-CD2 | -7.14 | 98.86 | 111.00 |
| 1 | C | 173 | LEU | CB-CG-CD2 | -7.14 | 98.86 | 111.00 |
| 1 | B | 173 | LEU | CB-CG-CD2 | -7.13 | 98.87 | 111.00 |
| 1 | B | 245 | VAL | CA-CB-CG2 | 7.11 | 121.56 | 110.90 |
| 1 | B | 209 | LYS | N-CA-CB | -7.09 | 97.83 | 110.60 |
| 1 | B | 341 | PRO | C-N-CA | 7.09 | 139.42 | 121.70 |
| 1 | C | 341 | PRO | C-N-CA | 7.08 | 139.40 | 121.70 |
| 1 | A | 341 | PRO | C-N-CA | 7.08 | 139.40 | 121.70 |
| 1 | B | 318 | ILE | CA-CB-CG2 | 7.07 | 125.05 | 110.90 |
| 1 | A | 245 | VAL | CA-CB-CG2 | 7.07 | 121.50 | 110.90 |
| 1 | C | 245 | VAL | CA-CB-CG2 | 7.07 | 121.50 | 110.90 |
| 1 | C | 318 | ILE | CA-CB-CG2 | 7.07 | 125.03 | 110.90 |
| 1 | A | 209 | LYS | N-CA-CB | -7.06 | 97.89 | 110.60 |
| 1 | C | 209 | LYS | N-CA-CB | -7.05 | 97.90 | 110.60 |
| 1 | A | 318 | ILE | CA-CB-CG2 | 7.05 | 125.01 | 110.90 |
| 1 | B | 341 | PRO | CA-C-N | 7.05 | 132.72 | 117.20 |
| 1 | C | 341 | PRO | CA-C-N | 7.05 | 132.71 | 117.20 |
| 1 | A | 341 | PRO | CA-C-N | 7.05 | 132.70 | 117.20 |
| 1 | B | 63 | THR | N-CA-CB | -7.04 | 96.93 | 110.30 |
| 1 | A | 63 | THR | N-CA-CB | -7.03 | 96.94 | 110.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | C | 63 | THR | N-CA-CB | -7.02 | 96.95 | 110.30 |
| 1 | B | 439 | CYS | CA-CB-SG | -7.01 | 101.38 | 114.00 |
| 1 | A | 439 | CYS | CA-CB-SG | -7.00 | 101.40 | 114.00 |
| 1 | C | 198 | TYR | O-C-N | 7.00 | 133.90 | 122.70 |
| 1 | C | 439 | CYS | CA-CB-SG | -7.00 | 101.40 | 114.00 |
| 1 | A | 198 | TYR | O-C-N | 6.99 | 133.89 | 122.70 |
| 1 | B | 198 | TYR | O-C-N | 6.99 | 133.89 | 122.70 |
| 1 | C | 283 | CYS | N-CA-CB | -6.99 | 98.02 | 110.60 |
| 1 | C | 85 | THR | OG1-CB-CG2 | -6.97 | 93.97 | 110.00 |
| 1 | B | 85 | THR | OG1-CB-CG2 | -6.97 | 93.98 | 110.00 |
| 1 | A | 283 | CYS | N-CA-CB | -6.96 | 98.08 | 110.60 |
| 1 | B | 283 | CYS | N-CA-CB | -6.96 | 98.08 | 110.60 |
| 1 | A | 85 | THR | OG1-CB-CG2 | -6.95 | 94.01 | 110.00 |
| 1 | C | 126 | ASP | CB-CG-OD1 | -6.93 | 112.06 | 118.30 |
| 1 | B | 436 | VAL | CG1-CB-CG2 | -6.93 | 99.82 | 110.90 |
| 1 | B | 21 | ARG | NE-CZ-NH2 | -6.92 | 116.84 | 120.30 |
| 1 | A | 436 | VAL | CG1-CB-CG2 | -6.92 | 99.83 | 110.90 |
| 1 | C | 436 | VAL | CG1-CB-CG2 | -6.92 | 99.83 | 110.90 |
| 1 | A | 126 | ASP | CB-CG-OD1 | -6.91 | 112.08 | 118.30 |
| 1 | C | 196 | SER | N-CA-CB | -6.90 | 100.15 | 110.50 |
| 1 | A | 196 | SER | N-CA-CB | -6.90 | 100.15 | 110.50 |
| 1 | B | 196 | SER | N-CA-CB | -6.89 | 100.17 | 110.50 |
| 1 | C | 466 | GLU | OE1-CD-OE2 | -6.88 | 115.04 | 123.30 |
| 1 | C | 211 | VAL | N-CA-C | 6.88 | 129.57 | 111.00 |
| 1 | B | 143 | GLN | CA-CB-CG | 6.87 | 128.51 | 113.40 |
| 1 | B | 466 | GLU | OE1-CD-OE2 | -6.87 | 115.06 | 123.30 |
| 1 | B | 126 | ASP | CB-CG-OD1 | -6.87 | 112.12 | 118.30 |
| 1 | A | 21 | ARG | NE-CZ-NH2 | -6.87 | 116.87 | 120.30 |
| 1 | A | 211 | VAL | N-CA-C | 6.87 | 129.54 | 111.00 |
| 1 | C | 18 | ARG | NE-CZ-NH2 | -6.86 | 116.87 | 120.30 |
| 1 | B | 7 | ARG | NE-CZ-NH1 | 6.86 | 123.73 | 120.30 |
| 1 | A | 143 | GLN | CA-CB-CG | 6.86 | 128.49 | 113.40 |
| 1 | C | 329 | ALA | CB-CA-C | -6.86 | 99.81 | 110.10 |
| 1 | A | 329 | ALA | CB-CA-C | -6.86 | 99.82 | 110.10 |
| 1 | B | 444 | VAL | N-CA-CB | -6.86 | 96.42 | 111.50 |
| 1 | C | 143 | GLN | CA-CB-CG | 6.85 | 128.48 | 113.40 |
| 1 | A | 466 | GLU | OE1-CD-OE2 | -6.85 | 115.08 | 123.30 |
| 1 | B | 329 | ALA | CB-CA-C | -6.85 | 99.82 | 110.10 |
| 1 | B | 211 | VAL | N-CA-C | 6.85 | 129.50 | 111.00 |
| 1 | A | 444 | VAL | N-CA-CB | -6.84 | 96.45 | 111.50 |
| 1 | C | 444 | VAL | N-CA-CB | -6.84 | 96.46 | 111.50 |
| 1 | C | 21 | ARG | NE-CZ-NH2 | -6.83 | 116.88 | 120.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | B | 18 | ARG | NE-CZ-NH2 | -6.83 | 116.89 | 120.30 |
| 1 | B | 42 | TRP | CA-CB-CG | 6.83 | 126.67 | 113.70 |
| 1 | B | 443 | THR | O-C-N | -6.82 | 111.78 | 122.70 |
| 1 | C | 443 | THR | O-C-N | -6.82 | 111.78 | 122.70 |
| 1 | A | 42 | TRP | CA-CB-CG | 6.81 | 126.64 | 113.70 |
| 1 | C | 471 | SER | N-CA-CB | -6.81 | 100.28 | 110.50 |
| 1 | A | 443 | THR | O-C-N | -6.80 | 111.82 | 122.70 |
| 1 | A | 18 | ARG | NE-CZ-NH2 | -6.80 | 116.90 | 120.30 |
| 1 | B | 471 | SER | N-CA-CB | -6.80 | 100.31 | 110.50 |
| 1 | C | 82 | TYR | CG-CD2-CE2 | 6.79 | 126.74 | 121.30 |
| 1 | A | 471 | SER | N-CA-CB | -6.79 | 100.31 | 110.50 |
| 1 | C | 42 | TRP | CA-CB-CG | 6.79 | 126.61 | 113.70 |
| 1 | C | 262 | PHE | CB-CG-CD2 | 6.78 | 125.55 | 120.80 |
| 1 | A | 82 | TYR | CG-CD2-CE2 | 6.78 | 126.72 | 121.30 |
| 1 | B | 82 | TYR | CG-CD2-CE2 | 6.75 | 126.70 | 121.30 |
| 1 | C | 463 | TYR | N-CA-C | 6.74 | 129.18 | 111.00 |
| 1 | A | 7 | ARG | NE-CZ-NH1 | 6.73 | 123.67 | 120.30 |
| 1 | B | 458 | LEU | C-N-CA | 6.73 | 150.26 | 122.00 |
| 1 | C | 7 | ARG | NE-CZ-NH1 | 6.73 | 123.66 | 120.30 |
| 1 | A | 463 | TYR | N-CA-C | 6.72 | 129.16 | 111.00 |
| 1 | B | 63 | THR | OG1-CB-CG2 | 6.72 | 125.47 | 110.00 |
| 1 | B | 463 | TYR | N-CA-C | 6.72 | 129.16 | 111.00 |
| 1 | B | 211 | VAL | CA-CB-CG2 | 6.72 | 120.97 | 110.90 |
| 1 | A | 458 | LEU | C-N-CA | 6.71 | 150.20 | 122.00 |
| 1 | C | 458 | LEU | C-N-CA | 6.71 | 150.19 | 122.00 |
| 1 | A | 63 | THR | OG1-CB-CG2 | 6.70 | 125.41 | 110.00 |
| 1 | B | 124 | GLY | N-CA-C | 6.69 | 129.84 | 113.10 |
| 1 | A | 124 | GLY | N-CA-C | 6.69 | 129.83 | 113.10 |
| 1 | C | 124 | GLY | N-CA-C | 6.69 | 129.83 | 113.10 |
| 1 | C | 63 | THR | OG1-CB-CG2 | 6.68 | 125.37 | 110.00 |
| 1 | C | 211 | VAL | CA-CB-CG2 | 6.68 | 120.92 | 110.90 |
| 1 | A | 211 | VAL | CA-CB-CG2 | 6.68 | 120.92 | 110.90 |
| 1 | C | 101 | LYS | CD-CE-NZ | 6.67 | 127.04 | 111.70 |
| 1 | A | 262 | PHE | CB-CG-CD2 | 6.67 | 125.47 | 120.80 |
| 1 | B | 101 | LYS | CD-CE-NZ | 6.66 | 127.03 | 111.70 |
| 1 | A | 101 | LYS | CD-CE-NZ | 6.66 | 127.02 | 111.70 |
| 1 | B | 21 | ARG | NH1-CZ-NH2 | -6.66 | 112.08 | 119.40 |
| 1 | C | 140 | PHE | CB-CG-CD1 | 6.65 | 125.45 | 120.80 |
| 1 | B | 62 | ILE | CB-CG1-CD1 | -6.65 | 95.29 | 113.90 |
| 1 | B | 434 | THR | C-N-CA | 6.65 | 138.32 | 121.70 |
| 1 | C | 62 | ILE | CB-CG1-CD1 | -6.64 | 95.30 | 113.90 |
| 1 | A | 21 | ARG | NH1-CZ-NH2 | -6.64 | 112.10 | 119.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | A | 140 | PHE | CB-CG-CD1 | 6.63 | 125.44 | 120.80 |
| 1 | C | 21 | ARG | NH1-CZ-NH2 | -6.63 | 112.10 | 119.40 |
| 1 | C | 434 | THR | C-N-CA | 6.63 | 138.28 | 121.70 |
| 1 | A | 62 | ILE | CB-CG1-CD1 | -6.63 | 95.33 | 113.90 |
| 1 | A | 434 | THR | C-N-CA | 6.63 | 138.28 | 121.70 |
| 1 | B | 157 | ASP | CB-CG-OD1 | -6.63 | 112.33 | 118.30 |
| 1 | A | 201 | ASP | CB-CA-C | -6.62 | 97.16 | 110.40 |
| 1 | B | 201 | ASP | CB-CA-C | -6.62 | 97.16 | 110.40 |
| 1 | C | 201 | ASP | CB-CA-C | -6.62 | 97.16 | 110.40 |
| 1 | B | 262 | PHE | CB-CG-CD2 | 6.62 | 125.43 | 120.80 |
| 1 | C | 282 | ASP | CB-CG-OD1 | -6.61 | 112.35 | 118.30 |
| 1 | A | 157 | ASP | CB-CG-OD1 | -6.60 | 112.36 | 118.30 |
| 1 | A | 282 | ASP | CB-CG-OD1 | -6.59 | 112.37 | 118.30 |
| 1 | C | 157 | ASP | CB-CG-OD1 | -6.58 | 112.38 | 118.30 |
| 1 | B | 140 | PHE | CB-CG-CD1 | 6.58 | 125.40 | 120.80 |
| 1 | B | 335 | TYR | CB-CG-CD1 | -6.57 | 117.06 | 121.00 |
| 1 | C | 219 | TYR | CG-CD2-CE2 | -6.56 | 116.05 | 121.30 |
| 1 | B | 282 | ASP | CB-CG-OD1 | -6.54 | 112.41 | 118.30 |
| 1 | B | 80 | THR | CA-C-N | -6.54 | 103.12 | 116.20 |
| 1 | C | 138 | LYS | O-C-N | 6.54 | 133.52 | 121.10 |
| 1 | A | 335 | TYR | CB-CG-CD1 | -6.53 | 117.08 | 121.00 |
| 1 | B | 138 | LYS | O-C-N | 6.53 | 133.50 | 121.10 |
| 1 | A | 219 | TYR | CG-CD2-CE2 | -6.52 | 116.08 | 121.30 |
| 1 | B | 219 | TYR | CG-CD2-CE2 | -6.52 | 116.09 | 121.30 |
| 1 | A | 80 | THR | CA-C-N | -6.51 | 103.18 | 116.20 |
| 1 | A | 138 | LYS | O-C-N | 6.51 | 133.46 | 121.10 |
| 1 | C | 80 | THR | CA-C-N | -6.51 | 103.19 | 116.20 |
| 1 | C | 229 | GLY | C-N-CA | 6.49 | 137.93 | 121.70 |
| 1 | A | 229 | GLY | C-N-CA | 6.49 | 137.93 | 121.70 |
| 1 | B | 229 | GLY | C-N-CA | 6.48 | 137.91 | 121.70 |
| 1 | C | 335 | TYR | CB-CG-CD1 | -6.47 | 117.11 | 121.00 |
| 1 | B | 458 | LEU | N-CA-C | 6.47 | 128.46 | 111.00 |
| 1 | A | 458 | LEU | N-CA-C | 6.46 | 128.45 | 111.00 |
| 1 | B | 64 | PRO | N-CA-CB | 6.46 | 111.05 | 103.30 |
| 1 | C | 458 | LEU | N-CA-C | 6.45 | 128.43 | 111.00 |
| 1 | A | 64 | PRO | N-CA-CB | 6.45 | 111.04 | 103.30 |
| 1 | B | 463 | TYR | CB-CG-CD2 | 6.45 | 124.87 | 121.00 |
| 1 | A | 463 | TYR | CB-CG-CD2 | 6.43 | 124.86 | 121.00 |
| 1 | A | 459 | PRO | CA-N-CD | -6.43 | 102.50 | 111.50 |
| 1 | C | 64 | PRO | N-CA-CB | 6.42 | 111.01 | 103.30 |
| 1 | C | 459 | PRO | CA-N-CD | -6.42 | 102.51 | 111.50 |
| 1 | B | 306 | ASN | N-CA-CB | 6.41 | 122.14 | 110.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | A | 306 | ASN | N-CA-CB | 6.41 | 122.13 | 110.60 |
| 1 | B | 459 | PRO | CA-N-CD | -6.40 | 102.54 | 111.50 |
| 1 | C | 55 | MET | CB-CG-SD | 6.40 | 131.60 | 112.40 |
| 1 | B | 75 | TYR | CB-CG-CD1 | -6.40 | 117.16 | 121.00 |
| 1 | B | 55 | MET | CB-CG-SD | 6.39 | 131.58 | 112.40 |
| 1 | C | 61 | TRP | C-N-CA | -6.39 | 105.72 | 121.70 |
| 1 | C | 463 | TYR | CB-CG-CD2 | 6.39 | 124.83 | 121.00 |
| 1 | A | 55 | MET | CB-CG-SD | 6.39 | 131.56 | 112.40 |
| 1 | B | 61 | TRP | C-N-CA | -6.39 | 105.73 | 121.70 |
| 1 | C | 256 | TYR | CB-CG-CD2 | -6.38 | 117.17 | 121.00 |
| 1 | A | 61 | TRP | C-N-CA | -6.37 | 105.77 | 121.70 |
| 1 | A | 256 | TYR | CB-CG-CD2 | -6.37 | 117.18 | 121.00 |
| 1 | B | 403 | GLN | C-N-CA | 6.37 | 137.62 | 121.70 |
| 1 | A | 75 | TYR | CB-CG-CD1 | -6.37 | 117.18 | 121.00 |
| 1 | C | 306 | ASN | N-CA-CB | 6.37 | 122.06 | 110.60 |
| 1 | C | 403 | GLN | C-N-CA | 6.37 | 137.62 | 121.70 |
| 1 | A | 403 | GLN | C-N-CA | 6.36 | 137.60 | 121.70 |
| 1 | C | 390 | ASP | CA-CB-CG | 6.36 | 127.39 | 113.40 |
| 1 | A | 390 | ASP | CA-CB-CG | 6.34 | 127.35 | 113.40 |
| 1 | B | 190 | TRP | CE2-CD2-CG | 6.33 | 112.37 | 107.30 |
| 1 | C | 75 | TYR | CB-CG-CD1 | -6.33 | 117.20 | 121.00 |
| 1 | B | 390 | ASP | CA-CB-CG | 6.32 | 127.30 | 113.40 |
| 1 | B | 256 | TYR | CB-CG-CD2 | -6.31 | 117.21 | 121.00 |
| 1 | C | 262 | PHE | CB-CG-CD1 | -6.30 | 116.39 | 120.80 |
| 1 | A | 333 | GLN | CA-CB-CG | 6.29 | 127.25 | 113.40 |
| 1 | B | 233 | ASP | OD1-CG-OD2 | 6.29 | 135.25 | 123.30 |
| 1 | C | 190 | TRP | CE2-CD2-CG | 6.29 | 112.33 | 107.30 |
| 1 | B | 191 | VAL | CA-CB-CG2 | 6.29 | 120.33 | 110.90 |
| 1 | A | 191 | VAL | CA-CB-CG2 | 6.29 | 120.33 | 110.90 |
| 1 | B | 333 | GLN | CA-CB-CG | 6.28 | 127.22 | 113.40 |
| 1 | B | 42 | TRP | CD1-CG-CD2 | -6.28 | 101.28 | 106.30 |
| 1 | C | 333 | GLN | CA-CB-CG | 6.27 | 127.20 | 113.40 |
| 1 | A | 190 | TRP | CE2-CD2-CG | 6.27 | 112.32 | 107.30 |
| 1 | A | 233 | ASP | OD1-CG-OD2 | 6.27 | 135.22 | 123.30 |
| 1 | C | 233 | ASP | OD1-CG-OD2 | 6.27 | 135.21 | 123.30 |
| 1 | B | 262 | PHE | CB-CG-CD1 | -6.27 | 116.41 | 120.80 |
| 1 | C | 191 | VAL | CA-CB-CG2 | 6.26 | 120.30 | 110.90 |
| 1 | C | 42 | TRP | CD1-CG-CD2 | -6.24 | 101.31 | 106.30 |
| 1 | C | 345 | GLU | N-CA-CB | 6.23 | 121.82 | 110.60 |
| 1 | B | 345 | GLU | N-CA-CB | 6.23 | 121.81 | 110.60 |
| 1 | B | 369 | ARG | NE-CZ-NH1 | 6.22 | 123.41 | 120.30 |
| 1 | A | 42 | TRP | CD1-CG-CD2 | -6.22 | 101.32 | 106.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | A | 262 | PHE | CB-CG-CD1 | -6.22 | 116.45 | 120.80 |
| 1 | A | 345 | GLU | N-CA-CB | 6.22 | 121.79 | 110.60 |
| 1 | A | 369 | ARG | NE-CZ-NH1 | 6.21 | 123.41 | 120.30 |
| 1 | B | 66 | THR | CA-CB-OG1 | 6.21 | 122.04 | 109.00 |
| 1 | C | 49 | LEU | O-C-N | -6.20 | 112.78 | 122.70 |
| 1 | A | 49 | LEU | O-C-N | -6.20 | 112.78 | 122.70 |
| 1 | A | 66 | THR | CA-CB-OG1 | 6.20 | 122.01 | 109.00 |
| 1 | C | 104 | SER | CB-CA-C | -6.20 | 98.33 | 110.10 |
| 1 | C | 369 | ARG | NE-CZ-NH1 | 6.19 | 123.39 | 120.30 |
| 1 | C | 187 | TRP | CE2-CD2-CG | 6.18 | 112.25 | 107.30 |
| 1 | A | 104 | SER | CB-CA-C | -6.18 | 98.36 | 110.10 |
| 1 | B | 104 | SER | CB-CA-C | -6.18 | 98.36 | 110.10 |
| 1 | B | 49 | LEU | O-C-N | -6.18 | 112.82 | 122.70 |
| 1 | C | 66 | THR | CA-CB-OG1 | 6.16 | 121.94 | 109.00 |
| 1 | A | 103 | LEU | CB-CG-CD1 | 6.16 | 121.47 | 111.00 |
| 1 | C | 103 | LEU | CB-CG-CD1 | 6.16 | 121.47 | 111.00 |
| 1 | B | 411 | LYS | CB-CG-CD | -6.16 | 95.59 | 111.60 |
| 1 | B | 103 | LEU | CB-CG-CD1 | 6.15 | 121.46 | 111.00 |
| 1 | A | 411 | LYS | CB-CG-CD | -6.15 | 95.61 | 111.60 |
| 1 | B | 464 | PRO | CB-CA-C | 6.15 | 127.37 | 112.00 |
| 1 | A | 300 | ARG | CB-CG-CD | 6.14 | 127.57 | 111.60 |
| 1 | C | 411 | LYS | CB-CG-CD | -6.14 | 95.63 | 111.60 |
| 1 | C | 300 | ARG | CB-CG-CD | 6.14 | 127.56 | 111.60 |
| 1 | A | 464 | PRO | CB-CA-C | 6.13 | 127.34 | 112.00 |
| 1 | B | 75 | TYR | CD1-CE1-CZ | 6.13 | 125.32 | 119.80 |
| 1 | C | 464 | PRO | CB-CA-C | 6.13 | 127.34 | 112.00 |
| 1 | B | 458 | LEU | CB-CA-C | -6.13 | 98.55 | 110.20 |
| 1 | B | 300 | ARG | CB-CG-CD | 6.13 | 127.53 | 111.60 |
| 1 | C | 75 | TYR | CD1-CE1-CZ | 6.13 | 125.31 | 119.80 |
| 1 | B | 187 | TRP | CE2-CD2-CG | 6.12 | 112.20 | 107.30 |
| 1 | A | 187 | TRP | CE2-CD2-CG | 6.12 | 112.20 | 107.30 |
| 1 | A | 398 | GLY | N-CA-C | 6.12 | 128.40 | 113.10 |
| 1 | B | 398 | GLY | N-CA-C | 6.12 | 128.41 | 113.10 |
| 1 | A | 458 | LEU | CB-CA-C | -6.12 | 98.57 | 110.20 |
| 1 | B | 265 | THR | O-C-N | -6.12 | 112.91 | 122.70 |
| 1 | B | 273 | TYR | CB-CA-C | -6.12 | 98.17 | 110.40 |
| 1 | C | 285 | ASP | O-C-N | 6.11 | 132.48 | 122.70 |
| 1 | C | 398 | GLY | N-CA-C | 6.11 | 128.38 | 113.10 |
| 1 | A | 335 | TYR | CA-CB-CG | 6.11 | 125.01 | 113.40 |
| 1 | B | 285 | ASP | O-C-N | 6.11 | 132.47 | 122.70 |
| 1 | B | 473 | ILE | CA-CB-CG1 | 6.11 | 122.61 | 111.00 |
| 1 | C | 335 | TYR | CA-CB-CG | 6.11 | 125.00 | 113.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | A | 265 | THR | O-C-N | -6.10 | 112.93 | 122.70 |
| 1 | A | 75 | TYR | CD1-CE1-CZ | 6.10 | 125.29 | 119.80 |
| 1 | A | 273 | TYR | CB-CA-C | -6.10 | 98.20 | 110.40 |
| 1 | B | 15 | LEU | C-N-CA | 6.10 | 136.95 | 121.70 |
| 1 | B | 335 | TYR | CA-CB-CG | 6.10 | 124.99 | 113.40 |
| 1 | C | 458 | LEU | CB-CA-C | -6.10 | 98.61 | 110.20 |
| 1 | C | 473 | ILE | CA-CB-CG1 | 6.09 | 122.58 | 111.00 |
| 1 | A | 285 | ASP | O-C-N | 6.09 | 132.45 | 122.70 |
| 1 | A | 15 | LEU | C-N-CA | 6.09 | 136.93 | 121.70 |
| 1 | A | 473 | ILE | CA-CB-CG1 | 6.09 | 122.57 | 111.00 |
| 1 | C | 273 | TYR | CB-CA-C | -6.09 | 98.22 | 110.40 |
| 1 | C | 265 | THR | O-C-N | -6.08 | 112.98 | 122.70 |
| 1 | C | 15 | LEU | C-N-CA | 6.07 | 136.88 | 121.70 |
| 1 | A | 404 | ILE | CG1-CB-CG2 | 6.04 | 124.69 | 111.40 |
| 1 | C | 404 | ILE | CG1-CB-CG2 | 6.04 | 124.69 | 111.40 |
| 1 | B | 404 | ILE | CG1-CB-CG2 | 6.03 | 124.67 | 111.40 |
| 1 | B | 132 | VAL | CG1-CB-CG2 | 6.01 | 120.52 | 110.90 |
| 1 | A | 225 | VAL | O-C-N | -6.00 | 113.10 | 122.70 |
| 1 | B | 229 | GLY | CA-C-N | -6.00 | 104.00 | 117.20 |
| 1 | C | 132 | VAL | CG1-CB-CG2 | 6.00 | 120.50 | 110.90 |
| 1 | C | 225 | VAL | O-C-N | -6.00 | 113.11 | 122.70 |
| 1 | A | 132 | VAL | CG1-CB-CG2 | 5.99 | 120.48 | 110.90 |
| 1 | A | 229 | GLY | N-CA-C | -5.99 | 98.14 | 113.10 |
| 1 | B | 225 | VAL | O-C-N | -5.99 | 113.12 | 122.70 |
| 1 | A | 432 | GLN | CB-CA-C | 5.98 | 122.37 | 110.40 |
| 1 | B | 229 | GLY | N-CA-C | -5.98 | 98.14 | 113.10 |
| 1 | C | 432 | GLN | CB-CA-C | 5.98 | 122.37 | 110.40 |
| 1 | A | 154 | ASN | N-CA-C | -5.98 | 94.85 | 111.00 |
| 1 | C | 45 | ILE | CA-CB-CG2 | 5.98 | 122.85 | 110.90 |
| 1 | A | 229 | GLY | CA-C-N | -5.97 | 104.06 | 117.20 |
| 1 | B | 154 | ASN | N-CA-C | -5.97 | 94.89 | 111.00 |
| 1 | B | 432 | GLN | CB-CA-C | 5.97 | 122.33 | 110.40 |
| 1 | B | 51 | TYR | CG-CD2-CE2 | -5.96 | 116.53 | 121.30 |
| 1 | C | 154 | ASN | N-CA-C | -5.96 | 94.89 | 111.00 |
| 1 | C | 229 | GLY | N-CA-C | -5.96 | 98.19 | 113.10 |
| 1 | B | 45 | ILE | CA-CB-CG2 | 5.96 | 122.82 | 110.90 |
| 1 | B | 210 | HIS | CA-CB-CG | 5.96 | 123.73 | 113.60 |
| 1 | C | 210 | HIS | CA-CB-CG | 5.96 | 123.73 | 113.60 |
| 1 | A | 45 | ILE | CA-CB-CG2 | 5.96 | 122.82 | 110.90 |
| 1 | A | 210 | HIS | CA-CB-CG | 5.96 | 123.73 | 113.60 |
| 1 | C | 434 | THR | CA-C-O | -5.96 | 107.59 | 120.10 |
| 1 | B | 434 | THR | CA-C-O | -5.96 | 107.59 | 120.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | C | 229 | GLY | CA-C-N | -5.95 | 104.10 | 117.20 |
| 1 | C | 392 | THR | CA-CB-CG2 | 5.95 | 120.73 | 112.40 |
| 1 | A | 434 | THR | CA-C-O | -5.95 | 107.61 | 120.10 |
| 1 | C | 51 | TYR | CG-CD2-CE2 | -5.95 | 116.54 | 121.30 |
| 1 | A | 51 | TYR | CG-CD2-CE2 | -5.93 | 116.55 | 121.30 |
| 1 | A | 392 | THR | CA-CB-CG2 | 5.93 | 120.70 | 112.40 |
| 1 | B | 16 | THR | CA-CB-CG2 | -5.91 | 104.13 | 112.40 |
| 1 | B | 392 | THR | CA-CB-CG2 | 5.91 | 120.67 | 112.40 |
| 1 | C | 432 | GLN | N-CA-CB | -5.90 | 99.98 | 110.60 |
| 1 | C | 226 | TYR | O-C-N | -5.89 | 113.27 | 122.70 |
| 1 | A | 16 | THR | CA-CB-CG2 | -5.88 | 104.17 | 112.40 |
| 1 | A | 432 | GLN | N-CA-CB | -5.88 | 100.02 | 110.60 |
| 1 | B | 387 | ILE | CB-CG1-CD1 | -5.87 | 97.46 | 113.90 |
| 1 | B | 208 | VAL | CA-C-N | -5.87 | 104.29 | 117.20 |
| 1 | A | 226 | TYR | O-C-N | -5.86 | 113.32 | 122.70 |
| 1 | B | 432 | GLN | N-CA-CB | -5.86 | 100.05 | 110.60 |
| 1 | A | 387 | ILE | CB-CG1-CD1 | -5.86 | 97.49 | 113.90 |
| 1 | B | 252 | TYR | CG-CD2-CE2 | -5.86 | 116.61 | 121.30 |
| 1 | C | 208 | VAL | CA-C-N | -5.86 | 104.32 | 117.20 |
| 1 | C | 387 | ILE | CB-CG1-CD1 | -5.85 | 97.51 | 113.90 |
| 1 | A | 208 | VAL | CA-C-N | -5.85 | 104.33 | 117.20 |
| 1 | B | 219 | TYR | CB-CG-CD1 | -5.85 | 117.49 | 121.00 |
| 1 | A | 252 | TYR | CG-CD2-CE2 | -5.85 | 116.62 | 121.30 |
| 1 | C | 270 | ASP | CB-CG-OD2 | 5.85 | 123.56 | 118.30 |
| 1 | C | 16 | THR | CA-CB-CG2 | -5.84 | 104.22 | 112.40 |
| 1 | B | 226 | TYR | O-C-N | -5.84 | 113.36 | 122.70 |
| 1 | C | 252 | TYR | CG-CD2-CE2 | -5.83 | 116.63 | 121.30 |
| 1 | A | 226 | TYR | N-CA-C | 5.82 | 126.72 | 111.00 |
| 1 | A | 341 | PRO | N-CA-C | 5.82 | 127.24 | 112.10 |
| 1 | B | 341 | PRO | N-CA-C | 5.82 | 127.23 | 112.10 |
| 1 | C | 397 | LYS | CA-C-N | 5.82 | 127.84 | 116.20 |
| 1 | C | 341 | PRO | N-CA-C | 5.82 | 127.22 | 112.10 |
| 1 | A | 270 | ASP | CB-CG-OD2 | 5.82 | 123.53 | 118.30 |
| 1 | C | 226 | TYR | N-CA-C | 5.82 | 126.70 | 111.00 |
| 1 | B | 226 | TYR | N-CA-C | 5.81 | 126.70 | 111.00 |
| 1 | A | 219 | TYR | CB-CG-CD1 | -5.80 | 117.52 | 121.00 |
| 1 | B | 397 | LYS | CA-C-N | 5.80 | 127.81 | 116.20 |
| 1 | A | 397 | LYS | CA-C-N | 5.80 | 127.81 | 116.20 |
| 1 | B | 270 | ASP | CB-CG-OD2 | 5.80 | 123.52 | 118.30 |
| 1 | C | 65 | VAL | CB-CA-C | -5.80 | 100.39 | 111.40 |
| 1 | B | 347 | THR | O-C-N | -5.79 | 113.43 | 122.70 |
| 1 | A | 205 | ILE | CB-CG1-CD1 | -5.79 | 97.69 | 113.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | C | 1 | ALA | CA-C-O | -5.79 | 107.95 | 120.10 |
| 1 | C | 219 | TYR | CB-CG-CD1 | -5.79 | 117.53 | 121.00 |
| 1 | B | 205 | ILE | CB-CG1-CD1 | -5.78 | 97.70 | 113.90 |
| 1 | C | 205 | ILE | CB-CG1-CD1 | -5.78 | 97.71 | 113.90 |
| 1 | A | 1 | ALA | CA-C-O | -5.78 | 107.97 | 120.10 |
| 1 | A | 347 | THR | O-C-N | -5.78 | 113.46 | 122.70 |
| 1 | B | 473 | ILE | CA-CB-CG2 | 5.78 | 122.45 | 110.90 |
| 1 | A | 65 | VAL | CB-CA-C | -5.77 | 100.44 | 111.40 |
| 1 | B | 1 | ALA | CA-C-O | -5.77 | 107.98 | 120.10 |
| 1 | A | 473 | ILE | CA-CB-CG2 | 5.77 | 122.43 | 110.90 |
| 1 | B | 73 | CYS | CA-CB-SG | 5.77 | 124.38 | 114.00 |
| 1 | C | 473 | ILE | CA-CB-CG2 | 5.76 | 122.43 | 110.90 |
| 1 | A | 73 | CYS | CA-CB-SG | 5.76 | 124.37 | 114.00 |
| 1 | C | 59 | ALA | N-CA-CB | -5.76 | 102.03 | 110.10 |
| 1 | C | 73 | CYS | CA-CB-SG | 5.76 | 124.37 | 114.00 |
| 1 | B | 65 | VAL | CB-CA-C | -5.76 | 100.46 | 111.40 |
| 1 | C | 137 | PHE | CB-CG-CD2 | 5.76 | 124.83 | 120.80 |
| 1 | A | 134 | TYR | CB-CG-CD2 | 5.75 | 124.45 | 121.00 |
| 1 | A | 59 | ALA | N-CA-CB | -5.75 | 102.05 | 110.10 |
| 1 | B | 21 | ARG | CD-NE-CZ | 5.75 | 131.65 | 123.60 |
| 1 | B | 380 | VAL | CA-CB-CG1 | 5.75 | 119.52 | 110.90 |
| 1 | A | 19 | PHE | CB-CG-CD2 | -5.75 | 116.78 | 120.80 |
| 1 | B | 59 | ALA | N-CA-CB | -5.74 | 102.06 | 110.10 |
| 1 | A | 21 | ARG | CD-NE-CZ | 5.74 | 131.64 | 123.60 |
| 1 | B | 137 | PHE | CB-CG-CD2 | 5.74 | 124.82 | 120.80 |
| 1 | C | 347 | THR | O-C-N | -5.74 | 113.52 | 122.70 |
| 1 | C | 380 | VAL | CA-CB-CG1 | 5.74 | 119.51 | 110.90 |
| 1 | A | 137 | PHE | CB-CG-CD2 | 5.74 | 124.82 | 120.80 |
| 1 | A | 380 | VAL | CA-CB-CG1 | 5.74 | 119.50 | 110.90 |
| 1 | C | 21 | ARG | CD-NE-CZ | 5.74 | 131.63 | 123.60 |
| 1 | B | 146 | PHE | CB-CG-CD1 | -5.73 | 116.79 | 120.80 |
| 1 | B | 19 | PHE | CB-CG-CD2 | -5.73 | 116.79 | 120.80 |
| 1 | C | 19 | PHE | CB-CG-CD2 | -5.73 | 116.79 | 120.80 |
| 1 | C | 134 | TYR | CB-CG-CD2 | 5.72 | 124.43 | 121.00 |
| 1 | C | 230 | GLU | CB-CA-C | -5.72 | 98.96 | 110.40 |
| 1 | C | 343 | ASN | CA-CB-CG | -5.72 | 100.82 | 113.40 |
| 1 | A | 381 | THR | O-C-N | 5.72 | 131.85 | 122.70 |
| 1 | C | 55 | MET | O-C-N | -5.72 | 113.48 | 123.20 |
| 1 | B | 207 | THR | C-N-CA | 5.71 | 135.99 | 121.70 |
| 1 | A | 55 | MET | O-C-N | -5.71 | 113.49 | 123.20 |
| 1 | B | 96 | THR | O-C-N | -5.71 | 113.56 | 122.70 |
| 1 | B | 134 | TYR | CB-CG-CD2 | 5.71 | 124.43 | 121.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 1 | B | 55 | MET | O-C-N | -5.71 | 113.49 | 123.20 |
| 1 | A | 343 | ASN | CA-CB-CG | -5.71 | 100.85 | 113.40 |
| 1 | C | 207 | THR | C-N-CA | 5.71 | 135.97 | 121.70 |
| 1 | A | 146 | PHE | CB-CG-CD1 | -5.70 | 116.81 | 120.80 |
| 1 | C | 185 | ASN | CA-C-N | -5.70 | 104.67 | 117.20 |
| 1 | C | 381 | THR | O-C-N | 5.70 | 131.81 | 122.70 |
| 1 | A | 230 | GLU | CB-CA-C | -5.69 | 99.01 | 110.40 |
| 1 | A | 185 | ASN | CA-C-N | -5.69 | 104.68 | 117.20 |
| 1 | A | 207 | THR | C-N-CA | 5.69 | 135.93 | 121.70 |
| 1 | B | 185 | ASN | CA-C-N | -5.69 | 104.67 | 117.20 |
| 1 | A | 96 | THR | O-C-N | -5.69 | 113.60 | 122.70 |
| 1 | B | 343 | ASN | CA-CB-CG | -5.69 | 100.88 | 113.40 |
| 1 | C | 146 | PHE | CB-CG-CD1 | -5.69 | 116.82 | 120.80 |
| 1 | B | 234 | GLY | N-CA-C | 5.68 | 127.31 | 113.10 |
| 1 | C | 234 | GLY | N-CA-C | 5.68 | 127.31 | 113.10 |
| 1 | B | 381 | THR | O-C-N | 5.68 | 131.79 | 122.70 |
| 1 | A | 234 | GLY | N-CA-C | 5.67 | 127.28 | 113.10 |
| 1 | B | 230 | GLU | CB-CA-C | -5.66 | 99.07 | 110.40 |
| 1 | C | 96 | THR | O-C-N | -5.66 | 113.64 | 122.70 |
| 1 | C | 140 | PHE | CB-CG-CD2 | -5.66 | 116.83 | 120.80 |
| 1 | B | 383 | LYS | N-CA-CB | -5.65 | 100.43 | 110.60 |
| 1 | B | 297 | ASP | CB-CG-OD1 | 5.64 | 123.38 | 118.30 |
| 1 | B | 229 | GLY | O-C-N | 5.64 | 131.73 | 122.70 |
| 1 | A | 383 | LYS | N-CA-CB | -5.64 | 100.45 | 110.60 |
| 1 | B | 18 | ARG | NE-CZ-NH1 | 5.64 | 123.12 | 120.30 |
| 1 | C | 181 | ASP | N-CA-C | 5.64 | 126.23 | 111.00 |
| 1 | A | 297 | ASP | CB-CG-OD1 | 5.64 | 123.38 | 118.30 |
| 1 | C | 297 | ASP | CB-CG-OD1 | 5.64 | 123.37 | 118.30 |
| 1 | A | 181 | ASP | N-CA-C | 5.63 | 126.21 | 111.00 |
| 1 | C | 383 | LYS | N-CA-CB | -5.63 | 100.46 | 110.60 |
| 1 | B | 181 | ASP | N-CA-C | 5.63 | 126.19 | 111.00 |
| 1 | C | 167 | GLY | N-CA-C | 5.62 | 127.16 | 113.10 |
| 1 | B | 465 | THR | N-CA-CB | -5.62 | 99.62 | 110.30 |
| 1 | A | 229 | GLY | O-C-N | 5.62 | 131.68 | 122.70 |
| 1 | B | 167 | GLY | N-CA-C | 5.61 | 127.14 | 113.10 |
| 1 | B | 463 | TYR | O-C-N | 5.61 | 131.76 | 121.10 |
| 1 | A | 465 | THR | N-CA-CB | -5.61 | 99.64 | 110.30 |
| 1 | C | 465 | THR | N-CA-CB | -5.61 | 99.65 | 110.30 |
| 1 | A | 167 | GLY | N-CA-C | 5.61 | 127.12 | 113.10 |
| 1 | C | 198 | TYR | N-CA-CB | 5.60 | 120.69 | 110.60 |
| 1 | A | 52 | ILE | CA-CB-CG2 | 5.60 | 122.10 | 110.90 |
| 1 | A | 140 | PHE | CB-CG-CD2 | -5.60 | 116.88 | 120.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | A | 463 | TYR | O-C-N | 5.60 | 131.74 | 121.10 |
| 1 | B | 52 | ILE | CA-CB-CG2 | 5.60 | 122.10 | 110.90 |
| 1 | C | 198 | TYR | CA-C-O | -5.60 | 108.34 | 120.10 |
| 1 | B | 368 | ILE | CG1-CB-CG2 | -5.60 | 99.08 | 111.40 |
| 1 | A | 82 | TYR | C-N-CA | 5.60 | 135.69 | 121.70 |
| 1 | A | 198 | TYR | N-CA-CB | 5.59 | 120.67 | 110.60 |
| 1 | C | 247 | ASP | CA-CB-CG | 5.59 | 125.70 | 113.40 |
| 1 | C | 463 | TYR | O-C-N | 5.59 | 131.73 | 121.10 |
| 1 | A | 368 | ILE | CG1-CB-CG2 | -5.59 | 99.10 | 111.40 |
| 1 | C | 229 | GLY | O-C-N | 5.59 | 131.64 | 122.70 |
| 1 | B | 198 | TYR | CA-C-O | -5.59 | 108.36 | 120.10 |
| 1 | B | 198 | TYR | N-CA-CB | 5.59 | 120.66 | 110.60 |
| 1 | A | 49 | LEU | CB-CG-CD1 | -5.58 | 101.51 | 111.00 |
| 1 | C | 82 | TYR | C-N-CA | 5.58 | 135.66 | 121.70 |
| 1 | C | 49 | LEU | CB-CG-CD1 | -5.58 | 101.51 | 111.00 |
| 1 | C | 52 | ILE | CA-CB-CG2 | 5.58 | 122.06 | 110.90 |
| 1 | A | 198 | TYR | CA-C-O | -5.58 | 108.39 | 120.10 |
| 1 | C | 99 | ASP | CB-CA-C | -5.58 | 99.25 | 110.40 |
| 1 | A | 99 | ASP | CB-CA-C | -5.58 | 99.25 | 110.40 |
| 1 | A | 247 | ASP | CA-CB-CG | 5.58 | 125.67 | 113.40 |
| 1 | B | 82 | TYR | C-N-CA | 5.58 | 135.64 | 121.70 |
| 1 | B | 99 | ASP | CB-CA-C | -5.58 | 99.25 | 110.40 |
| 1 | B | 396 | ARG | CG-CD-NE | 5.57 | 123.50 | 111.80 |
| 1 | C | 368 | ILE | CG1-CB-CG2 | -5.57 | 99.14 | 111.40 |
| 1 | C | 376 | ASP | CB-CG-OD2 | -5.57 | 113.29 | 118.30 |
| 1 | B | 247 | ASP | CA-CB-CG | 5.57 | 125.65 | 113.40 |
| 1 | B | 49 | LEU | CB-CG-CD1 | -5.57 | 101.54 | 111.00 |
| 1 | C | 396 | ARG | CG-CD-NE | 5.57 | 123.49 | 111.80 |
| 1 | C | 199 | SER | CB-CA-C | -5.56 | 99.53 | 110.10 |
| 1 | A | 396 | ARG | CG-CD-NE | 5.56 | 123.48 | 111.80 |
| 1 | C | 83 | TRP | CE2-CD2-CG | -5.56 | 102.85 | 107.30 |
| 1 | A | 83 | TRP | CE2-CD2-CG | -5.56 | 102.86 | 107.30 |
| 1 | A | 199 | SER | CB-CA-C | -5.55 | 99.56 | 110.10 |
| 1 | B | 140 | PHE | CB-CG-CD2 | -5.55 | 116.92 | 120.80 |
| 1 | A | 376 | ASP | CB-CG-OD2 | -5.54 | 113.31 | 118.30 |
| 1 | B | 199 | SER | CB-CA-C | -5.54 | 99.57 | 110.10 |
| 1 | B | 376 | ASP | CB-CG-OD2 | -5.53 | 113.32 | 118.30 |
| 1 | B | 82 | TYR | CB-CG-CD1 | -5.52 | 117.69 | 121.00 |
| 1 | B | 83 | TRP | CE2-CD2-CG | -5.52 | 102.88 | 107.30 |
| 1 | C | 82 | TYR | CB-CG-CD1 | -5.52 | 117.69 | 121.00 |
| 1 | A | 300 | ARG | NH1-CZ-NH2 | 5.52 | 125.47 | 119.40 |
| 1 | C | 300 | ARG | NH1-CZ-NH2 | 5.52 | 125.47 | 119.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | B | 300 | ARG | NH1-CZ-NH2 | 5.51 | 125.47 | 119.40 |
| 1 | C | 18 | ARG | NE-CZ-NH1 | 5.51 | 123.06 | 120.30 |
| 1 | C | 154 | ASN | CA-CB-CG | 5.50 | 125.51 | 113.40 |
| 1 | C | 166 | LEU | CB-CA-C | 5.50 | 120.65 | 110.20 |
| 1 | A | 82 | TYR | CB-CG-CD1 | -5.50 | 117.70 | 121.00 |
| 1 | A | 166 | LEU | CB-CA-C | 5.49 | 120.64 | 110.20 |
| 1 | A | 154 | ASN | CA-CB-CG | 5.49 | 125.48 | 113.40 |
| 1 | B | 255 | TYR | CA-CB-CG | 5.48 | 123.82 | 113.40 |
| 1 | B | 166 | LEU | CB-CA-C | 5.48 | 120.61 | 110.20 |
| 1 | B | 326 | ILE | CB-CG1-CD1 | 5.48 | 129.24 | 113.90 |
| 1 | A | 18 | ARG | NE-CZ-NH1 | 5.48 | 123.04 | 120.30 |
| 1 | A | 181 | ASP | N-CA-CB | -5.47 | 100.76 | 110.60 |
| 1 | A | 326 | ILE | CB-CG1-CD1 | 5.47 | 129.21 | 113.90 |
| 1 | B | 154 | ASN | CA-CB-CG | 5.47 | 125.43 | 113.40 |
| 1 | C | 326 | ILE | CB-CG1-CD1 | 5.46 | 129.20 | 113.90 |
| 1 | B | 181 | ASP | N-CA-CB | -5.46 | 100.77 | 110.60 |
| 1 | A | 255 | TYR | CA-CB-CG | 5.45 | 123.76 | 113.40 |
| 1 | C | 255 | TYR | CA-CB-CG | 5.45 | 123.76 | 113.40 |
| 1 | C | 377 | THR | CA-CB-CG2 | 5.45 | 120.03 | 112.40 |
| 1 | B | 411 | LYS | N-CA-CB | -5.45 | 100.79 | 110.60 |
| 1 | B | 8 | SER | C-N-CA | 5.44 | 135.30 | 121.70 |
| 1 | C | 181 | ASP | N-CA-CB | -5.44 | 100.81 | 110.60 |
| 1 | C | 186 | GLU | CA-CB-CG | 5.44 | 125.37 | 113.40 |
| 1 | A | 377 | THR | CA-CB-CG2 | 5.44 | 120.01 | 112.40 |
| 1 | B | 377 | THR | CA-CB-CG2 | 5.44 | 120.01 | 112.40 |
| 1 | B | 404 | ILE | C-N-CA | -5.43 | 108.12 | 121.70 |
| 1 | C | 8 | SER | C-N-CA | 5.43 | 135.28 | 121.70 |
| 1 | A | 8 | SER | C-N-CA | 5.43 | 135.28 | 121.70 |
| 1 | A | 411 | LYS | N-CA-CB | -5.43 | 100.83 | 110.60 |
| 1 | C | 292 | PHE | C-N-CA | 5.43 | 135.27 | 121.70 |
| 1 | C | 252 | TYR | N-CA-C | 5.43 | 125.66 | 111.00 |
| 1 | B | 186 | GLU | CA-CB-CG | 5.43 | 125.34 | 113.40 |
| 1 | A | 252 | TYR | N-CA-C | 5.42 | 125.64 | 111.00 |
| 1 | A | 186 | GLU | CA-CB-CG | 5.42 | 125.33 | 113.40 |
| 1 | B | 389 | ASP | CB-CG-OD2 | 5.42 | 123.17 | 118.30 |
| 1 | A | 404 | ILE | C-N-CA | -5.41 | 108.17 | 121.70 |
| 1 | C | 411 | LYS | N-CA-CB | -5.41 | 100.86 | 110.60 |
| 1 | B | 252 | TYR | N-CA-C | 5.41 | 125.61 | 111.00 |
| 1 | A | 292 | PHE | C-N-CA | 5.41 | 135.22 | 121.70 |
| 1 | C | 404 | ILE | C-N-CA | -5.41 | 108.18 | 121.70 |
| 1 | A | 246 | MET | N-CA-C | 5.40 | 125.59 | 111.00 |
| 1 | B | 292 | PHE | C-N-CA | 5.40 | 135.21 | 121.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | C | 3 | PRO | N-CA-C | 5.40 | 126.15 | 112.10 |
| 1 | A | 3 | PRO | N-CA-C | 5.40 | 126.14 | 112.10 |
| 1 | B | 246 | MET | N-CA-C | 5.40 | 125.58 | 111.00 |
| 1 | A | 389 | ASP | CB-CG-OD2 | 5.39 | 123.16 | 118.30 |
| 1 | A | 435 | GLU | CA-C-N | 5.39 | 129.07 | 117.20 |
| 1 | B | 3 | PRO | N-CA-C | 5.39 | 126.12 | 112.10 |
| 1 | C | 198 | TYR | C-N-CA | 5.39 | 135.18 | 121.70 |
| 1 | C | 369 | ARG | NH1-CZ-NH2 | -5.39 | 113.47 | 119.40 |
| 1 | B | 435 | GLU | CA-C-N | 5.39 | 129.06 | 117.20 |
| 1 | C | 435 | GLU | CA-C-N | 5.39 | 129.06 | 117.20 |
| 1 | B | 198 | TYR | C-N-CA | 5.38 | 135.16 | 121.70 |
| 1 | A | 198 | TYR | C-N-CA | 5.38 | 135.16 | 121.70 |
| 1 | C | 246 | MET | N-CA-C | 5.38 | 125.53 | 111.00 |
| 1 | B | 245 | VAL | CG1-CB-CG2 | -5.37 | 102.30 | 110.90 |
| 1 | C | 135 | SER | N-CA-CB | -5.37 | 102.44 | 110.50 |
| 1 | A | 369 | ARG | NH1-CZ-NH2 | -5.37 | 113.50 | 119.40 |
| 1 | C | 245 | VAL | CG1-CB-CG2 | -5.37 | 102.31 | 110.90 |
| 1 | C | 327 | ILE | CA-CB-CG2 | -5.37 | 100.17 | 110.90 |
| 1 | A | 245 | VAL | CG1-CB-CG2 | -5.36 | 102.33 | 110.90 |
| 1 | B | 327 | ILE | CA-CB-CG2 | -5.35 | 100.19 | 110.90 |
| 1 | A | 327 | ILE | CA-CB-CG2 | -5.35 | 100.20 | 110.90 |
| 1 | B | 116 | VAL | CA-CB-CG2 | 5.35 | 118.92 | 110.90 |
| 1 | A | 135 | SER | N-CA-CB | -5.34 | 102.48 | 110.50 |
| 1 | A | 178 | THR | CA-CB-CG2 | 5.34 | 119.88 | 112.40 |
| 1 | A | 161 | VAL | C-N-CA | 5.34 | 135.05 | 121.70 |
| 1 | C | 161 | VAL | C-N-CA | 5.34 | 135.05 | 121.70 |
| 1 | C | 178 | THR | CA-CB-CG2 | 5.33 | 119.87 | 112.40 |
| 1 | C | 209 | LYS | CA-CB-CG | 5.33 | 125.14 | 113.40 |
| 1 | B | 369 | ARG | NH1-CZ-NH2 | -5.33 | 113.53 | 119.40 |
| 1 | B | 135 | SER | N-CA-CB | -5.33 | 102.51 | 110.50 |
| 1 | B | 161 | VAL | C-N-CA | 5.33 | 135.01 | 121.70 |
| 1 | B | 83 | TRP | CA-C-O | -5.32 | 108.92 | 120.10 |
| 1 | B | 450 | VAL | N-CA-C | 5.32 | 125.37 | 111.00 |
| 1 | C | 116 | VAL | CA-CB-CG2 | 5.32 | 118.88 | 110.90 |
| 1 | B | 209 | LYS | CA-CB-CG | 5.32 | 125.10 | 113.40 |
| 1 | A | 450 | VAL | N-CA-C | 5.32 | 125.35 | 111.00 |
| 1 | B | 178 | THR | CA-CB-CG2 | 5.32 | 119.84 | 112.40 |
| 1 | C | 83 | TRP | CA-C-O | -5.32 | 108.94 | 120.10 |
| 1 | A | 209 | LYS | CA-CB-CG | 5.31 | 125.09 | 113.40 |
| 1 | A | 83 | TRP | CA-C-O | -5.31 | 108.94 | 120.10 |
| 1 | A | 116 | VAL | CA-CB-CG2 | 5.31 | 118.87 | 110.90 |
| 1 | C | 389 | ASP | CB-CG-OD2 | 5.31 | 123.08 | 118.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | C | 243 | GLN | OE1-CD-NE2 | -5.31 | 109.69 | 121.90 |
| 1 | C | 15 | LEU | CA-CB-CG | -5.31 | 103.09 | 115.30 |
| 1 | C | 450 | VAL | N-CA-C | 5.30 | 125.31 | 111.00 |
| 1 | A | 243 | GLN | OE1-CD-NE2 | -5.30 | 109.71 | 121.90 |
| 1 | B | 15 | LEU | CA-CB-CG | -5.30 | 103.11 | 115.30 |
| 1 | C | 411 | LYS | CA-C-N | 5.30 | 126.79 | 116.20 |
| 1 | A | 15 | LEU | CA-CB-CG | -5.29 | 103.12 | 115.30 |
| 1 | A | 13 | PHE | CA-C-O | -5.28 | 109.00 | 120.10 |
| 1 | B | 148 | PRO | CA-N-CD | -5.28 | 104.11 | 111.50 |
| 1 | B | 319 | ILE | CA-CB-CG2 | 5.28 | 121.46 | 110.90 |
| 1 | A | 411 | LYS | CA-C-N | 5.28 | 126.76 | 116.20 |
| 1 | B | 243 | GLN | OE1-CD-NE2 | -5.28 | 109.76 | 121.90 |
| 1 | C | 13 | PHE | CA-C-O | -5.28 | 109.02 | 120.10 |
| 1 | A | 319 | ILE | CA-CB-CG2 | 5.27 | 121.44 | 110.90 |
| 1 | B | 411 | LYS | CA-C-N | 5.27 | 126.74 | 116.20 |
| 1 | C | 319 | ILE | CA-CB-CG2 | 5.26 | 121.42 | 110.90 |
| 1 | B | 13 | PHE | CA-C-O | -5.26 | 109.06 | 120.10 |
| 1 | C | 466 | GLU | CG-CD-OE2 | 5.25 | 128.81 | 118.30 |
| 1 | A | 148 | PRO | CA-N-CD | -5.25 | 104.15 | 111.50 |
| 1 | C | 266 | SER | CB-CA-C | -5.25 | 100.13 | 110.10 |
| 1 | B | 81 | GLY | N-CA-C | -5.24 | 100.00 | 113.10 |
| 1 | A | 71 | GLN | CB-CG-CD | 5.24 | 125.22 | 111.60 |
| 1 | A | 81 | GLY | N-CA-C | -5.24 | 100.00 | 113.10 |
| 1 | A | 266 | SER | CB-CA-C | -5.24 | 100.14 | 110.10 |
| 1 | C | 71 | GLN | CB-CG-CD | 5.24 | 125.22 | 111.60 |
| 1 | A | 259 | LEU | CB-CG-CD2 | -5.24 | 102.09 | 111.00 |
| 1 | B | 96 | THR | CA-CB-CG2 | 5.24 | 119.73 | 112.40 |
| 1 | B | 259 | LEU | CB-CG-CD2 | -5.24 | 102.09 | 111.00 |
| 1 | A | 466 | GLU | CG-CD-OE2 | 5.23 | 128.77 | 118.30 |
| 1 | C | 81 | GLY | N-CA-C | -5.23 | 100.02 | 113.10 |
| 1 | B | 71 | GLN | CB-CG-CD | 5.23 | 125.20 | 111.60 |
| 1 | A | 266 | SER | CA-CB-OG | -5.23 | 97.09 | 111.20 |
| 1 | B | 266 | SER | CB-CA-C | -5.23 | 100.17 | 110.10 |
| 1 | B | 466 | GLU | CG-CD-OE2 | 5.22 | 128.75 | 118.30 |
| 1 | B | 266 | SER | CA-CB-OG | -5.22 | 97.11 | 111.20 |
| 1 | B | 347 | THR | CA-CB-OG1 | 5.22 | 119.96 | 109.00 |
| 1 | C | 153 | GLN | CB-CG-CD | 5.22 | 125.17 | 111.60 |
| 1 | B | 87 | ILE | CA-CB-CG2 | 5.22 | 121.33 | 110.90 |
| 1 | C | 110 | ARG | NH1-CZ-NH2 | -5.22 | 113.66 | 119.40 |
| 1 | C | 266 | SER | CA-CB-OG | -5.21 | 97.13 | 111.20 |
| 1 | B | 236 | PRO | CB-CA-C | -5.21 | 98.97 | 112.00 |
| 1 | C | 148 | PRO | CA-N-CD | -5.21 | 104.21 | 111.50 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 1 | C | 347 | THR | CA-CB-OG1 | 5.21 | 119.94 | 109.00 |
| 1 | A | 347 | THR | CA-CB-OG1 | 5.21 | 119.94 | 109.00 |
| 1 | A | 87 | ILE | CA-CB-CG2 | 5.20 | 121.31 | 110.90 |
| 1 | A | 96 | THR | CA-CB-CG2 | 5.20 | 119.68 | 112.40 |
| 1 | A | 153 | GLN | CB-CG-CD | 5.20 | 125.12 | 111.60 |
| 1 | C | 87 | ILE | CA-CB-CG2 | 5.20 | 121.30 | 110.90 |
| 1 | C | 259 | LEU | CB-CG-CD2 | -5.20 | 102.16 | 111.00 |
| 1 | C | 211 | VAL | CB-CA-C | -5.20 | 101.53 | 111.40 |
| 1 | C | 236 | PRO | CB-CA-C | -5.20 | 99.01 | 112.00 |
| 1 | B | 153 | GLN | CB-CG-CD | 5.19 | 125.10 | 111.60 |
| 1 | B | 216 | TRP | CE3-CZ3-CH2 | -5.19 | 115.49 | 121.20 |
| 1 | B | 203 | LEU | CB-CA-C | -5.19 | 100.34 | 110.20 |
| 1 | A | 203 | LEU | CB-CA-C | -5.19 | 100.34 | 110.20 |
| 1 | A | 110 | ARG | NH1-CZ-NH2 | -5.18 | 113.70 | 119.40 |
| 1 | A | 236 | PRO | CB-CA-C | -5.18 | 99.04 | 112.00 |
| 1 | B | 7 | ARG | NE-CZ-NH2 | -5.18 | 117.71 | 120.30 |
| 1 | C | 203 | LEU | CB-CA-C | -5.18 | 100.35 | 110.20 |
| 1 | C | 435 | GLU | C-N-CA | 5.18 | 134.66 | 121.70 |
| 1 | C | 442 | VAL | N-CA-CB | -5.18 | 100.09 | 111.50 |
| 1 | A | 211 | VAL | CB-CA-C | -5.18 | 101.55 | 111.40 |
| 1 | B | 211 | VAL | CB-CA-C | -5.18 | 101.55 | 111.40 |
| 1 | C | 96 | THR | CA-CB-CG2 | 5.18 | 119.66 | 112.40 |
| 1 | B | 442 | VAL | N-CA-CB | -5.18 | 100.10 | 111.50 |
| 1 | A | 216 | TRP | CE3-CZ3-CH2 | -5.18 | 115.50 | 121.20 |
| 1 | A | 442 | VAL | N-CA-CB | -5.18 | 100.11 | 111.50 |
| 1 | A | 4 | ALA | N-CA-CB | -5.17 | 102.86 | 110.10 |
| 1 | A | 435 | GLU | C-N-CA | 5.17 | 134.63 | 121.70 |
| 1 | B | 58 | THR | O-C-N | -5.17 | 114.43 | 122.70 |
| 1 | B | 4 | ALA | N-CA-CB | -5.17 | 102.86 | 110.10 |
| 1 | B | 110 | ARG | NH1-CZ-NH2 | -5.17 | 113.71 | 119.40 |
| 1 | B | 435 | GLU | C-N-CA | 5.17 | 134.61 | 121.70 |
| 1 | A | 58 | THR | O-C-N | -5.16 | 114.44 | 122.70 |
| 1 | B | 134 | TYR | CG-CD2-CE2 | -5.15 | 117.18 | 121.30 |
| 1 | B | 7 | ARG | C-N-CA | 5.15 | 134.58 | 121.70 |
| 1 | C | 58 | THR | O-C-N | -5.15 | 114.46 | 122.70 |
| 1 | A | 243 | GLN | CG-CD-NE2 | 5.14 | 129.05 | 116.70 |
| 1 | C | 4 | ALA | N-CA-CB | -5.14 | 102.90 | 110.10 |
| 1 | C | 216 | TRP | CE3-CZ3-CH2 | -5.14 | 115.54 | 121.20 |
| 1 | B | 75 | TYR | CG-CD1-CE1 | -5.14 | 117.19 | 121.30 |
| 1 | A | 7 | ARG | C-N-CA | 5.14 | 134.55 | 121.70 |
| 1 | B | 139 | PRO | CA-CB-CG | -5.14 | 94.24 | 104.00 |
| 1 | C | 126 | ASP | CB-CG-OD2 | 5.14 | 122.93 | 118.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | C | 243 | GLN | CG-CD-NE2 | 5.14 | 129.03 | 116.70 |
| 1 | C | 139 | PRO | CA-CB-CG | -5.13 | 94.25 | 104.00 |
| 1 | B | 243 | GLN | CG-CD-NE2 | 5.13 | 129.02 | 116.70 |
| 1 | C | 134 | TYR | CG-CD2-CE2 | -5.13 | 117.20 | 121.30 |
| 1 | B | 126 | ASP | CB-CG-OD2 | 5.12 | 122.91 | 118.30 |
| 1 | B | 294 | GLU | OE1-CD-OE2 | -5.12 | 117.16 | 123.30 |
| 1 | A | 139 | PRO | CA-CB-CG | -5.12 | 94.28 | 104.00 |
| 1 | A | 18 | ARG | CA-CB-CG | 5.12 | 124.66 | 113.40 |
| 1 | C | 176 | LEU | CB-CA-C | -5.12 | 100.48 | 110.20 |
| 1 | C | 18 | ARG | CA-CB-CG | 5.11 | 124.64 | 113.40 |
| 1 | A | 126 | ASP | CB-CG-OD2 | 5.11 | 122.90 | 118.30 |
| 1 | C | 7 | ARG | C-N-CA | 5.11 | 134.47 | 121.70 |
| 1 | C | 294 | GLU | OE1-CD-OE2 | -5.11 | 117.17 | 123.30 |
| 1 | A | 176 | LEU | CB-CA-C | -5.11 | 100.50 | 110.20 |
| 1 | B | 18 | ARG | CA-CB-CG | 5.10 | 124.62 | 113.40 |
| 1 | A | 75 | TYR | CG-CD1-CE1 | -5.10 | 117.22 | 121.30 |
| 1 | C | 252 | TYR | CB-CG-CD1 | -5.10 | 117.94 | 121.00 |
| 1 | A | 134 | TYR | CG-CD2-CE2 | -5.09 | 117.22 | 121.30 |
| 1 | B | 176 | LEU | CB-CA-C | -5.09 | 100.52 | 110.20 |
| 1 | A | 294 | GLU | OE1-CD-OE2 | -5.09 | 117.19 | 123.30 |
| 1 | B | 80 | THR | O-C-N | 5.09 | 131.85 | 123.20 |
| 1 | C | 75 | TYR | CG-CD1-CE1 | -5.09 | 117.23 | 121.30 |
| 1 | A | 7 | ARG | NE-CZ-NH2 | -5.08 | 117.76 | 120.30 |
| 1 | A | 32 | THR | N-CA-C | 5.07 | 124.70 | 111.00 |
| 1 | B | 32 | THR | N-CA-C | 5.07 | 124.69 | 111.00 |
| 1 | C | 32 | THR | N-CA-C | 5.06 | 124.67 | 111.00 |
| 1 | C | 66 | THR | CB-CA-C | -5.06 | 97.94 | 111.60 |
| 1 | C | 96 | THR | N-CA-C | 5.06 | 124.65 | 111.00 |
| 1 | B | 66 | THR | CB-CA-C | -5.06 | 97.95 | 111.60 |
| 1 | C | 7 | ARG | NE-CZ-NH2 | -5.06 | 117.77 | 120.30 |
| 1 | A | 66 | THR | CB-CA-C | -5.05 | 97.95 | 111.60 |
| 1 | C | 382 | TYR | CG-CD2-CE2 | -5.05 | 117.26 | 121.30 |
| 1 | A | 80 | THR | O-C-N | 5.05 | 131.79 | 123.20 |
| 1 | A | 96 | THR | N-CA-C | 5.04 | 124.62 | 111.00 |
| 1 | A | 252 | TYR | CB-CG-CD1 | -5.04 | 117.98 | 121.00 |
| 1 | B | 252 | TYR | CB-CG-CD1 | -5.04 | 117.97 | 121.00 |
| 1 | B | 96 | THR | N-CA-C | 5.04 | 124.60 | 111.00 |
| 1 | C | 80 | THR | O-C-N | 5.03 | 131.76 | 123.20 |
| 1 | A | 249 | VAL | N-CA-C | 5.02 | 124.56 | 111.00 |
| 1 | B | 241 | PRO | CA-N-CD | -5.02 | 104.47 | 111.50 |
| 1 | C | 249 | VAL | N-CA-C | 5.02 | 124.55 | 111.00 |
| 1 | A | 382 | TYR | CG-CD2-CE2 | -5.02 | 117.28 | 121.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | C | 19 | PHE | CA-CB-CG | 5.02 | 125.94 | 113.90 |
| 1 | B | 249 | VAL | N-CA-C | 5.02 | 124.54 | 111.00 |
| 1 | C | 95 | GLY | C-N-CA | 5.01 | 134.24 | 121.70 |
| 1 | A | 19 | PHE | CA-CB-CG | 5.01 | 125.92 | 113.90 |
| 1 | B | 73 | CYS | CA-C-O | -5.01 | 109.58 | 120.10 |
| 1 | B | 85 | THR | CA-C-O | 5.00 | 130.61 | 120.10 |
| 1 | A | 73 | CYS | CA-C-O | -5.00 | 109.59 | 120.10 |
| 1 | A | 95 | GLY | C-N-CA | 5.00 | 134.21 | 121.70 |
| 1 | B | 19 | PHE | CA-CB-CG | 5.00 | 125.91 | 113.90 |
| 1 | B | 382 | TYR | CG-CD2-CE2 | -5.00 | 117.30 | 121.30 |

All (6) chirality outliers are listed below:

| Mol | Chain | Res | Type | Atom |
|-----|-------|-----|------|------|
| 1 | A | 208 | VAL | CA |
| 1 | A | 404 | ILE | CB |
| 1 | B | 208 | VAL | CA |
| 1 | B | 404 | ILE | CB |
| 1 | C | 208 | VAL | CA |
| 1 | C | 404 | ILE | CB |

All (261) planarity outliers are listed below:

| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | A | 105 | SER | Mainchain |
| 1 | A | 108 | HIS | Mainchain |
| 1 | A | 123 | MET | Mainchain |
| 1 | A | 13 | PHE | Mainchain |
| 1 | A | 134 | TYR | Sidechain |
| 1 | A | 138 | LYS | Mainchain,Peptide |
| 1 | A | 15 | LEU | Mainchain |
| 1 | A | 157 | ASP | Sidechain |
| 1 | A | 17 | ASP | Mainchain |
| 1 | A | 194 | LEU | Mainchain |
| 1 | A | 195 | VAL | Mainchain |
| 1 | A | 2 | THR | Mainchain |
| 1 | A | 204 | ARG | Sidechain |
| 1 | A | 205 | ILE | Mainchain |
| 1 | A | 208 | VAL | Mainchain |
| 1 | A | 209 | LYS | Mainchain |
| 1 | A | 211 | VAL | Mainchain |
| 1 | A | 212 | GLN | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|---------------------|
| 1 | A | 219 | TYR | Sidechain |
| 1 | A | 24 | GLY | Mainchain |
| 1 | A | 243 | GLN | Sidechain |
| 1 | A | 246 | MET | Mainchain |
| 1 | A | 249 | VAL | Mainchain |
| 1 | A | 250 | LEU | Mainchain |
| 1 | A | 252 | TYR | Mainchain |
| 1 | A | 255 | TYR | Sidechain |
| 1 | A | 256 | TYR | Mainchain |
| 1 | A | 258 | LEU | Mainchain |
| 1 | A | 259 | LEU | Mainchain |
| 1 | A | 26 | THR | Mainchain |
| 1 | A | 265 | THR | Mainchain |
| 1 | A | 272 | LEU | Mainchain |
| 1 | A | 273 | TYR | Mainchain |
| 1 | A | 278 | THR | Mainchain |
| 1 | A | 282 | ASP | Mainchain |
| 1 | A | 284 | PRO | Mainchain |
| 1 | A | 292 | PHE | Mainchain |
| 1 | A | 294 | GLU | Sidechain |
| 1 | A | 300 | ARG | Sidechain,Mainchain |
| 1 | A | 31 | ASN | Mainchain |
| 1 | A | 310 | LEU | Mainchain |
| 1 | A | 313 | ASN | Sidechain |
| 1 | A | 324 | LEU | Mainchain |
| 1 | A | 325 | PRO | Mainchain |
| 1 | A | 329 | ALA | Mainchain |
| 1 | A | 340 | ASP | Mainchain,Peptide |
| 1 | A | 346 | ALA | Mainchain |
| 1 | A | 347 | THR | Mainchain |
| 1 | A | 35 | GLN | Mainchain |
| 1 | A | 353 | PRO | Mainchain |
| 1 | A | 376 | ASP | Mainchain |
| 1 | A | 39 | GLY | Mainchain |
| 1 | A | 394 | ALA | Mainchain |
| 1 | A | 396 | ARG | Sidechain,Mainchain |
| 1 | A | 404 | ILE | Mainchain |
| 1 | A | 431 | GLN | Sidechain |
| 1 | A | 432 | GLN | Sidechain |
| 1 | A | 435 | GLU | Sidechain,Mainchain |
| 1 | A | 452 | VAL | Mainchain |
| 1 | A | 458 | LEU | Peptide |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|---------------------|
| 1 | A | 460 | ARG | Sidechain |
| 1 | A | 461 | VAL | Mainchain |
| 1 | A | 463 | TYR | Sidechain |
| 1 | A | 54 | GLY | Mainchain |
| 1 | A | 61 | TRP | Mainchain |
| 1 | A | 66 | THR | Mainchain |
| 1 | A | 68 | GLN | Sidechain |
| 1 | A | 7 | ARG | Sidechain |
| 1 | A | 73 | CYS | Mainchain |
| 1 | A | 74 | ALA | Mainchain |
| 1 | A | 75 | TYR | Sidechain |
| 1 | A | 76 | GLY | Mainchain |
| 1 | A | 79 | TYR | Sidechain |
| 1 | A | 81 | GLY | Mainchain |
| 1 | A | 86 | ASP | Mainchain |
| 1 | A | 87 | ILE | Mainchain |
| 1 | A | 91 | ASN | Sidechain,Mainchain |
| 1 | A | 93 | ASN | Mainchain |
| 1 | A | 94 | TYR | Sidechain,Mainchain |
| 1 | A | 99 | ASP | Sidechain |
| 1 | B | 105 | SER | Mainchain |
| 1 | B | 108 | HIS | Mainchain |
| 1 | B | 123 | MET | Mainchain |
| 1 | B | 13 | PHE | Mainchain |
| 1 | B | 134 | TYR | Sidechain |
| 1 | B | 138 | LYS | Mainchain,Peptide |
| 1 | B | 15 | LEU | Mainchain |
| 1 | B | 157 | ASP | Sidechain |
| 1 | B | 17 | ASP | Mainchain |
| 1 | B | 194 | LEU | Mainchain |
| 1 | B | 195 | VAL | Mainchain |
| 1 | B | 2 | THR | Mainchain |
| 1 | B | 204 | ARG | Sidechain |
| 1 | B | 205 | ILE | Mainchain |
| 1 | B | 208 | VAL | Mainchain |
| 1 | B | 209 | LYS | Mainchain |
| 1 | B | 211 | VAL | Mainchain |
| 1 | B | 212 | GLN | Mainchain |
| 1 | B | 219 | TYR | Sidechain |
| 1 | B | 24 | GLY | Mainchain |
| 1 | B | 243 | GLN | Sidechain |
| 1 | B | 246 | MET | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|---------------------|
| 1 | B | 249 | VAL | Mainchain |
| 1 | B | 250 | LEU | Mainchain |
| 1 | B | 252 | TYR | Mainchain |
| 1 | B | 255 | TYR | Sidechain |
| 1 | B | 256 | TYR | Mainchain |
| 1 | B | 258 | LEU | Mainchain |
| 1 | B | 259 | LEU | Mainchain |
| 1 | B | 26 | THR | Mainchain |
| 1 | B | 265 | THR | Mainchain |
| 1 | B | 272 | LEU | Mainchain |
| 1 | B | 273 | TYR | Mainchain |
| 1 | B | 278 | THR | Mainchain |
| 1 | B | 282 | ASP | Mainchain |
| 1 | B | 284 | PRO | Mainchain |
| 1 | B | 292 | PHE | Mainchain |
| 1 | B | 294 | GLU | Sidechain |
| 1 | B | 300 | ARG | Sidechain,Mainchain |
| 1 | B | 31 | ASN | Mainchain |
| 1 | B | 310 | LEU | Mainchain |
| 1 | B | 313 | ASN | Sidechain |
| 1 | B | 324 | LEU | Mainchain |
| 1 | B | 325 | PRO | Mainchain |
| 1 | B | 329 | ALA | Mainchain |
| 1 | B | 340 | ASP | Mainchain,Peptide |
| 1 | B | 346 | ALA | Mainchain |
| 1 | B | 347 | THR | Mainchain |
| 1 | B | 35 | GLN | Mainchain |
| 1 | B | 353 | PRO | Mainchain |
| 1 | B | 376 | ASP | Mainchain |
| 1 | B | 39 | GLY | Mainchain |
| 1 | B | 394 | ALA | Mainchain |
| 1 | B | 396 | ARG | Sidechain,Mainchain |
| 1 | B | 404 | ILE | Mainchain |
| 1 | B | 431 | GLN | Sidechain |
| 1 | B | 432 | GLN | Sidechain |
| 1 | B | 435 | GLU | Sidechain,Mainchain |
| 1 | B | 452 | VAL | Mainchain |
| 1 | B | 458 | LEU | Peptide |
| 1 | B | 460 | ARG | Sidechain |
| 1 | B | 461 | VAL | Mainchain |
| 1 | B | 463 | TYR | Sidechain |
| 1 | B | 54 | GLY | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|---------------------|
| 1 | B | 61 | TRP | Mainchain |
| 1 | B | 66 | THR | Mainchain |
| 1 | B | 68 | GLN | Sidechain |
| 1 | B | 7 | ARG | Sidechain |
| 1 | B | 73 | CYS | Mainchain |
| 1 | B | 74 | ALA | Mainchain |
| 1 | B | 75 | TYR | Sidechain |
| 1 | B | 76 | GLY | Mainchain |
| 1 | B | 79 | TYR | Sidechain |
| 1 | B | 81 | GLY | Mainchain |
| 1 | B | 86 | ASP | Mainchain |
| 1 | B | 87 | ILE | Mainchain |
| 1 | B | 91 | ASN | Sidechain,Mainchain |
| 1 | B | 93 | ASN | Mainchain |
| 1 | B | 94 | TYR | Sidechain,Mainchain |
| 1 | B | 99 | ASP | Sidechain |
| 1 | C | 105 | SER | Mainchain |
| 1 | C | 108 | HIS | Mainchain |
| 1 | C | 123 | MET | Mainchain |
| 1 | C | 13 | PHE | Mainchain |
| 1 | C | 134 | TYR | Sidechain |
| 1 | C | 138 | LYS | Mainchain,Peptide |
| 1 | C | 15 | LEU | Mainchain |
| 1 | C | 157 | ASP | Sidechain |
| 1 | C | 17 | ASP | Mainchain |
| 1 | C | 194 | LEU | Mainchain |
| 1 | C | 195 | VAL | Mainchain |
| 1 | C | 2 | THR | Mainchain |
| 1 | C | 204 | ARG | Sidechain |
| 1 | C | 205 | ILE | Mainchain |
| 1 | C | 208 | VAL | Mainchain |
| 1 | C | 209 | LYS | Mainchain |
| 1 | C | 211 | VAL | Mainchain |
| 1 | C | 212 | GLN | Mainchain |
| 1 | C | 219 | TYR | Sidechain |
| 1 | C | 24 | GLY | Mainchain |
| 1 | C | 243 | GLN | Sidechain |
| 1 | C | 246 | MET | Mainchain |
| 1 | C | 249 | VAL | Mainchain |
| 1 | C | 250 | LEU | Mainchain |
| 1 | C | 252 | TYR | Mainchain |
| 1 | C | 255 | TYR | Sidechain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|---------------------|
| 1 | C | 256 | TYR | Mainchain |
| 1 | C | 258 | LEU | Mainchain |
| 1 | C | 259 | LEU | Mainchain |
| 1 | C | 26 | THR | Mainchain |
| 1 | C | 265 | THR | Mainchain |
| 1 | C | 272 | LEU | Mainchain |
| 1 | C | 273 | TYR | Mainchain |
| 1 | C | 278 | THR | Mainchain |
| 1 | C | 282 | ASP | Mainchain |
| 1 | C | 284 | PRO | Mainchain |
| 1 | C | 292 | PHE | Mainchain |
| 1 | C | 294 | GLU | Sidechain |
| 1 | C | 300 | ARG | Sidechain,Mainchain |
| 1 | C | 31 | ASN | Mainchain |
| 1 | C | 310 | LEU | Mainchain |
| 1 | C | 313 | ASN | Sidechain |
| 1 | C | 324 | LEU | Mainchain |
| 1 | C | 325 | PRO | Mainchain |
| 1 | C | 329 | ALA | Mainchain |
| 1 | C | 340 | ASP | Mainchain,Peptide |
| 1 | C | 346 | ALA | Mainchain |
| 1 | C | 347 | THR | Mainchain |
| 1 | C | 35 | GLN | Mainchain |
| 1 | C | 353 | PRO | Mainchain |
| 1 | C | 376 | ASP | Mainchain |
| 1 | C | 39 | GLY | Mainchain |
| 1 | C | 394 | ALA | Mainchain |
| 1 | C | 396 | ARG | Sidechain,Mainchain |
| 1 | C | 404 | ILE | Mainchain |
| 1 | C | 431 | GLN | Sidechain |
| 1 | C | 432 | GLN | Sidechain |
| 1 | C | 435 | GLU | Sidechain,Mainchain |
| 1 | C | 452 | VAL | Mainchain |
| 1 | C | 458 | LEU | Peptide |
| 1 | C | 460 | ARG | Sidechain |
| 1 | C | 461 | VAL | Mainchain |
| 1 | C | 463 | TYR | Sidechain |
| 1 | C | 54 | GLY | Mainchain |
| 1 | C | 61 | TRP | Mainchain |
| 1 | C | 66 | THR | Mainchain |
| 1 | C | 68 | GLN | Sidechain |
| 1 | C | 7 | ARG | Sidechain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|---------------------|
| 1 | C | 73 | CYS | Mainchain |
| 1 | C | 74 | ALA | Mainchain |
| 1 | C | 75 | TYR | Sidechain |
| 1 | C | 76 | GLY | Mainchain |
| 1 | C | 79 | TYR | Sidechain |
| 1 | C | 81 | GLY | Mainchain |
| 1 | C | 86 | ASP | Mainchain |
| 1 | C | 87 | ILE | Mainchain |
| 1 | C | 91 | ASN | Sidechain,Mainchain |
| 1 | C | 93 | ASN | Mainchain |
| 1 | C | 94 | TYR | Sidechain,Mainchain |
| 1 | C | 99 | ASP | Sidechain |

5.2 Too-close contacts ⓘ

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

| Mol | Chain | Non-H | H(model) | H(added) | Clashes | Symm-Clashes |
|-----|-------|-------|----------|----------|---------|--------------|
| 1 | A | 3690 | 0 | 3448 | 1687 | 135 |
| 1 | B | 3690 | 0 | 3414 | 2177 | 0 |
| 1 | C | 3690 | 0 | 3447 | 1369 | 135 |
| 2 | A | 1 | 0 | 0 | 0 | 0 |
| 2 | B | 1 | 0 | 0 | 0 | 0 |
| 2 | C | 1 | 0 | 0 | 0 | 0 |
| All | All | 11073 | 0 | 10309 | 3895 | 135 |

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 182.

All (3895) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:87:ILE:CD1 | 1:B:374:SER:HB3 | 1.16 | 1.63 |
| 1:B:445:GLY:CA | 1:C:185:ASN:HD22 | 0.99 | 1.62 |
| 1:A:205:ILE:CG2 | 1:B:472:LYS:HG3 | 1.17 | 1.60 |
| 1:A:205:ILE:HG21 | 1:B:472:LYS:CG | 1.31 | 1.59 |
| 1:B:278:THR:HA | 1:C:380:VAL:CG2 | 1.28 | 1.59 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:190:TRP:CZ2 | 1:B:375:LYS:HD2 | 1.17 | 1.59 |
| 1:A:219:TYR:HE2 | 1:B:371:TYR:CB | 1.08 | 1.58 |
| 1:A:219:TYR:CE1 | 1:B:473:ILE:HD12 | 1.36 | 1.58 |
| 1:A:148:PRO:CA | 1:B:107:LEU:HA | 1.33 | 1.57 |
| 1:A:221:LYS:HA | 1:B:434:THR:CG2 | 1.25 | 1.56 |
| 1:A:165:TRP:HE1 | 1:B:110:ARG:CA | 0.92 | 1.56 |
| 1:A:190:TRP:CH2 | 1:B:375:LYS:HD2 | 1.38 | 1.56 |
| 1:A:222:ALA:CB | 1:B:368:ILE:CG1 | 1.82 | 1.55 |
| 1:A:148:PRO:HA | 1:B:107:LEU:CA | 1.35 | 1.55 |
| 1:A:186:GLU:HG3 | 1:B:370:ASN:CB | 1.21 | 1.53 |
| 1:A:180:LYS:HD3 | 1:B:57:PHE:CB | 1.39 | 1.52 |
| 1:A:227:CYS:CB | 1:B:476:ASP:HB2 | 1.30 | 1.52 |
| 1:A:222:ALA:CB | 1:B:368:ILE:HG13 | 1.03 | 1.51 |
| 1:A:143:GLN:HG2 | 1:B:108:HIS:CD2 | 1.00 | 1.50 |
| 1:A:180:LYS:CA | 1:B:55:MET:HB3 | 1.40 | 1.49 |
| 1:B:422:LEU:HD11 | 1:C:221:LYS:CG | 1.39 | 1.49 |
| 1:B:430:GLY:H | 1:C:185:ASN:CG | 1.05 | 1.48 |
| 1:A:225:VAL:H | 1:B:465:THR:CG2 | 1.20 | 1.48 |
| 1:B:238:TYR:CA | 1:C:376:ASP:C | 1.81 | 1.47 |
| 1:B:274:ASN:HA | 1:C:286:SER:CB | 1.44 | 1.47 |
| 1:A:145:TYR:CG | 1:B:9:GLN:OE1 | 1.65 | 1.47 |
| 1:A:143:GLN:CG | 1:B:108:HIS:CD2 | 1.95 | 1.46 |
| 1:A:87:ILE:HD11 | 1:B:374:SER:CB | 1.03 | 1.46 |
| 1:A:194:LEU:CD2 | 1:B:375:LYS:HG2 | 1.44 | 1.46 |
| 1:B:238:TYR:HA | 1:C:376:ASP:C | 1.16 | 1.46 |
| 1:A:165:TRP:CZ2 | 1:B:109:GLU:O | 1.66 | 1.45 |
| 1:A:221:LYS:CA | 1:B:434:THR:HG21 | 1.43 | 1.45 |
| 1:A:180:LYS:N | 1:B:55:MET:CB | 1.80 | 1.45 |
| 1:A:190:TRP:CH2 | 1:B:375:LYS:CD | 1.95 | 1.45 |
| 1:B:281:SER:CB | 1:C:8:SER:H | 1.25 | 1.45 |
| 1:A:463:TYR:OH | 1:A:463:TYR:CZ | 1.71 | 1.43 |
| 1:A:227:CYS:HB3 | 1:B:476:ASP:CB | 1.48 | 1.43 |
| 1:A:222:ALA:HA | 1:B:368:ILE:CD1 | 1.45 | 1.43 |
| 1:A:87:ILE:CG1 | 1:B:374:SER:O | 1.65 | 1.43 |
| 1:A:180:LYS:HA | 1:B:55:MET:CB | 1.45 | 1.42 |
| 1:C:463:TYR:OH | 1:C:463:TYR:CZ | 1.71 | 1.42 |
| 1:A:221:LYS:CB | 1:B:436:VAL:HA | 1.29 | 1.42 |
| 1:A:227:CYS:CB | 1:B:476:ASP:CB | 1.98 | 1.42 |
| 1:B:385:PRO:CA | 1:C:3:PRO:HD3 | 1.46 | 1.42 |
| 1:A:180:LYS:N | 1:B:55:MET:HB2 | 1.12 | 1.42 |
| 1:A:180:LYS:HE3 | 1:B:11:ILE:C | 1.40 | 1.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:194:LEU:HD22 | 1:B:375:LYS:CG | 1.51 | 1.41 |
| 1:A:229:GLY:CA | 1:B:478:SER:CB | 1.96 | 1.41 |
| 1:B:386:TYR:CE2 | 1:C:288:LEU:HD13 | 1.56 | 1.41 |
| 1:B:404:ILE:N | 1:B:404:ILE:CA | 1.85 | 1.40 |
| 1:B:445:GLY:N | 1:C:185:ASN:ND2 | 1.67 | 1.40 |
| 1:A:221:LYS:HB3 | 1:B:436:VAL:CA | 1.11 | 1.40 |
| 1:B:400:ASP:CB | 1:C:193:SER:O | 1.68 | 1.40 |
| 1:B:400:ASP:C | 1:C:193:SER:HA | 1.37 | 1.39 |
| 1:B:383:LYS:HG3 | 1:C:6:TRP:CD1 | 1.57 | 1.39 |
| 1:A:185:ASN:CB | 1:B:366:ASN:HA | 1.26 | 1.39 |
| 1:A:193:SER:CA | 1:B:403:GLN:HA | 1.47 | 1.38 |
| 1:A:219:TYR:CE2 | 1:B:371:TYR:CB | 1.99 | 1.38 |
| 1:B:445:GLY:CA | 1:C:185:ASN:ND2 | 1.82 | 1.38 |
| 1:B:237:ALA:CB | 1:C:379:PHE:N | 1.84 | 1.38 |
| 1:A:246:MET:CB | 1:B:477:SER:N | 1.72 | 1.37 |
| 1:A:87:ILE:CG1 | 1:B:374:SER:C | 1.92 | 1.37 |
| 1:B:238:TYR:HA | 1:C:376:ASP:CA | 1.54 | 1.37 |
| 1:C:404:ILE:N | 1:C:404:ILE:CA | 1.85 | 1.37 |
| 1:A:404:ILE:N | 1:A:404:ILE:CA | 1.84 | 1.37 |
| 1:B:235:ASP:OD2 | 1:C:399:THR:CG2 | 1.70 | 1.36 |
| 1:B:387:ILE:HG21 | 1:C:221:LYS:CE | 1.51 | 1.36 |
| 1:A:225:VAL:H | 1:B:465:THR:CB | 1.34 | 1.36 |
| 1:B:387:ILE:CG2 | 1:C:221:LYS:HE3 | 1.52 | 1.36 |
| 1:A:87:ILE:CD1 | 1:B:374:SER:CB | 1.76 | 1.36 |
| 1:B:463:TYR:CZ | 1:B:463:TYR:OH | 1.71 | 1.36 |
| 1:B:278:THR:HG21 | 1:C:381:THR:OG1 | 1.23 | 1.35 |
| 1:A:219:TYR:CD1 | 1:B:473:ILE:HD12 | 1.62 | 1.35 |
| 1:B:429:ALA:CB | 1:C:182:VAL:O | 1.72 | 1.35 |
| 1:B:422:LEU:CD1 | 1:C:221:LYS:HG2 | 1.57 | 1.35 |
| 1:A:87:ILE:HG12 | 1:B:374:SER:C | 1.42 | 1.34 |
| 1:A:145:TYR:CD1 | 1:B:9:GLN:OE1 | 1.80 | 1.34 |
| 1:B:235:ASP:OD1 | 1:C:399:THR:CG2 | 1.75 | 1.34 |
| 1:B:241:PRO:O | 1:C:374:SER:CA | 1.65 | 1.34 |
| 1:B:383:LYS:NZ | 1:C:5:ASP:HB2 | 1.43 | 1.33 |
| 1:A:189:ASP:H | 1:B:369:ARG:CA | 1.32 | 1.33 |
| 1:A:222:ALA:CA | 1:B:368:ILE:CD1 | 2.05 | 1.33 |
| 1:A:248:GLY:O | 1:B:477:SER:HB3 | 1.26 | 1.33 |
| 1:A:229:GLY:CA | 1:B:478:SER:HB2 | 1.53 | 1.33 |
| 1:B:430:GLY:H | 1:C:185:ASN:ND2 | 1.23 | 1.33 |
| 1:A:180:LYS:CD | 1:B:57:PHE:HB2 | 1.55 | 1.32 |
| 1:A:190:TRP:CZ3 | 1:B:371:TYR:CD1 | 2.14 | 1.32 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:88:TYR:CE2 | 1:B:373:ILE:C | 2.03 | 1.32 |
| 1:B:235:ASP:CG | 1:C:399:THR:HG21 | 1.47 | 1.31 |
| 1:B:237:ALA:HB2 | 1:C:379:PHE:N | 0.99 | 1.31 |
| 1:B:430:GLY:N | 1:C:185:ASN:CG | 1.84 | 1.31 |
| 1:A:180:LYS:CA | 1:B:55:MET:CB | 2.00 | 1.31 |
| 1:B:401:GLY:N | 1:C:196:SER:HB2 | 1.46 | 1.31 |
| 1:A:184:LYS:CG | 1:B:56:GLY:HA3 | 1.59 | 1.31 |
| 1:A:205:ILE:HG12 | 1:B:471:SER:C | 1.49 | 1.30 |
| 1:A:249:VAL:HG12 | 1:B:477:SER:CB | 1.60 | 1.30 |
| 1:B:235:ASP:CG | 1:C:399:THR:CG2 | 1.99 | 1.30 |
| 1:B:384:ASN:HA | 1:C:2:THR:CG2 | 1.60 | 1.30 |
| 1:A:190:TRP:HZ3 | 1:B:371:TYR:CD1 | 1.46 | 1.30 |
| 1:A:219:TYR:CE2 | 1:B:371:TYR:HB2 | 1.64 | 1.30 |
| 1:B:238:TYR:HB2 | 1:C:376:ASP:OD2 | 1.25 | 1.30 |
| 1:A:224:GLY:HA2 | 1:B:434:THR:OG1 | 1.27 | 1.29 |
| 1:A:88:TYR:CE2 | 1:B:373:ILE:O | 1.83 | 1.29 |
| 1:B:402:SER:H | 1:C:193:SER:CB | 1.44 | 1.29 |
| 1:B:279:VAL:CG1 | 1:C:4:ALA:HB1 | 1.62 | 1.29 |
| 1:B:278:THR:CA | 1:C:380:VAL:CG2 | 2.10 | 1.28 |
| 1:A:221:LYS:CG | 1:B:436:VAL:N | 1.96 | 1.28 |
| 1:B:274:ASN:HA | 1:C:286:SER:CA | 1.63 | 1.28 |
| 1:B:385:PRO:CD | 1:C:2:THR:HG22 | 1.61 | 1.28 |
| 1:B:278:THR:HG23 | 1:C:381:THR:N | 1.46 | 1.28 |
| 1:B:449:ASN:HB2 | 1:C:184:LYS:NZ | 1.46 | 1.27 |
| 1:B:278:THR:CA | 1:C:380:VAL:HG21 | 1.61 | 1.27 |
| 1:A:84:GLN:HE22 | 1:B:375:LYS:NZ | 1.32 | 1.26 |
| 1:A:186:GLU:OE1 | 1:B:373:ILE:HD12 | 1.15 | 1.26 |
| 1:B:385:PRO:N | 1:C:3:PRO:CD | 1.89 | 1.26 |
| 1:A:188:TYR:N | 1:B:367:ALA:O | 1.65 | 1.25 |
| 1:A:190:TRP:CZ3 | 1:B:371:TYR:CE1 | 2.24 | 1.25 |
| 1:A:217:PRO:HG2 | 1:B:364:SER:OG | 1.31 | 1.25 |
| 1:A:190:TRP:CZ2 | 1:B:375:LYS:CD | 2.11 | 1.25 |
| 1:A:180:LYS:CD | 1:B:57:PHE:CB | 2.12 | 1.25 |
| 1:A:190:TRP:CD2 | 1:B:374:SER:HB2 | 1.72 | 1.25 |
| 1:B:278:THR:C | 1:C:380:VAL:HG21 | 1.52 | 1.25 |
| 1:B:278:THR:O | 1:C:380:VAL:HG21 | 1.32 | 1.25 |
| 1:A:87:ILE:HG12 | 1:B:374:SER:CA | 1.66 | 1.25 |
| 1:A:165:TRP:HZ2 | 1:B:109:GLU:C | 1.38 | 1.24 |
| 1:A:180:LYS:HA | 1:B:55:MET:CG | 1.65 | 1.24 |
| 1:A:225:VAL:N | 1:B:465:THR:CG2 | 2.01 | 1.24 |
| 1:A:184:LYS:HG2 | 1:B:56:GLY:CA | 1.67 | 1.24 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:220:ASN:CA | 1:B:473:ILE:HG23 | 1.60 | 1.23 |
| 1:A:116:VAL:O | 1:B:469:ALA:HB1 | 1.37 | 1.23 |
| 1:A:227:CYS:CA | 1:B:476:ASP:HB2 | 1.67 | 1.23 |
| 1:B:382:TYR:CD1 | 1:C:2:THR:HG23 | 1.72 | 1.23 |
| 1:B:447:ASP:OD2 | 1:C:214:ASP:OD2 | 1.53 | 1.23 |
| 1:A:219:TYR:CE2 | 1:B:371:TYR:CG | 1.83 | 1.23 |
| 1:A:165:TRP:NE1 | 1:B:110:ARG:HA | 0.91 | 1.22 |
| 1:A:143:GLN:CD | 1:B:108:HIS:HA | 1.60 | 1.22 |
| 1:A:229:GLY:HA2 | 1:B:478:SER:CB | 1.59 | 1.22 |
| 1:A:87:ILE:HG12 | 1:B:374:SER:O | 1.25 | 1.22 |
| 1:B:277:ASN:CB | 1:C:286:SER:O | 1.85 | 1.22 |
| 1:B:385:PRO:HA | 1:C:3:PRO:CD | 1.68 | 1.22 |
| 1:B:400:ASP:HB2 | 1:C:193:SER:O | 1.09 | 1.22 |
| 1:B:274:ASN:CA | 1:C:286:SER:CB | 2.17 | 1.22 |
| 1:B:281:SER:HB3 | 1:C:8:SER:N | 1.26 | 1.22 |
| 1:A:192:GLY:O | 1:B:464:PRO:HG2 | 1.39 | 1.22 |
| 1:A:180:LYS:NZ | 1:B:57:PHE:HB3 | 1.55 | 1.21 |
| 1:B:449:ASN:N | 1:C:184:LYS:HZ1 | 1.36 | 1.21 |
| 1:B:404:ILE:CG1 | 1:C:223:ALA:HA | 1.68 | 1.21 |
| 1:A:222:ALA:CA | 1:B:368:ILE:HD11 | 1.67 | 1.20 |
| 1:B:385:PRO:CA | 1:C:3:PRO:CD | 2.19 | 1.20 |
| 1:B:386:TYR:CE2 | 1:C:247:ASP:HB3 | 1.44 | 1.20 |
| 1:B:384:ASN:CA | 1:C:2:THR:CG2 | 2.02 | 1.19 |
| 1:B:382:TYR:HA | 1:C:1:ALA:HB3 | 1.21 | 1.19 |
| 1:A:184:LYS:HE2 | 1:B:362:ILE:HG22 | 1.25 | 1.19 |
| 1:A:185:ASN:HB2 | 1:B:366:ASN:CA | 1.72 | 1.19 |
| 1:A:229:GLY:CA | 1:B:477:SER:O | 1.91 | 1.18 |
| 1:B:237:ALA:HB2 | 1:C:378:GLY:C | 1.61 | 1.18 |
| 1:B:422:LEU:CD2 | 1:C:221:LYS:NZ | 2.05 | 1.18 |
| 1:B:237:ALA:HB2 | 1:C:379:PHE:CA | 1.73 | 1.18 |
| 1:B:424:GLY:CA | 1:C:220:ASN:HB3 | 1.73 | 1.18 |
| 1:A:225:VAL:N | 1:B:465:THR:HG23 | 1.56 | 1.18 |
| 1:B:277:ASN:HB3 | 1:C:286:SER:O | 1.05 | 1.17 |
| 1:B:383:LYS:NZ | 1:C:5:ASP:CB | 2.07 | 1.17 |
| 1:B:449:ASN:N | 1:C:184:LYS:NZ | 1.91 | 1.17 |
| 1:A:200:ILE:HD12 | 1:B:467:LYS:CD | 1.74 | 1.17 |
| 1:A:186:GLU:CG | 1:B:370:ASN:CB | 2.10 | 1.17 |
| 1:A:197:ASN:O | 1:B:467:LYS:NZ | 1.77 | 1.17 |
| 1:B:383:LYS:CG | 1:C:6:TRP:CD1 | 2.27 | 1.17 |
| 1:A:180:LYS:CD | 1:B:12:TYR:HB2 | 1.75 | 1.17 |
| 1:A:186:GLU:OE1 | 1:B:370:ASN:HA | 1.42 | 1.17 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:281:SER:CB | 1:C:8:SER:N | 1.83 | 1.17 |
| 1:A:143:GLN:HG2 | 1:B:108:HIS:NE2 | 1.58 | 1.16 |
| 1:A:145:TYR:CD2 | 1:B:9:GLN:OE1 | 1.98 | 1.16 |
| 1:B:278:THR:CG2 | 1:C:381:THR:H | 1.58 | 1.16 |
| 1:B:386:TYR:CD2 | 1:C:288:LEU:HD13 | 1.81 | 1.16 |
| 1:A:218:GLY:HA3 | 1:B:364:SER:O | 1.43 | 1.16 |
| 1:A:221:LYS:CA | 1:B:434:THR:CG2 | 2.08 | 1.16 |
| 1:B:238:TYR:CD2 | 1:C:376:ASP:HB2 | 1.80 | 1.16 |
| 1:B:400:ASP:C | 1:C:196:SER:HB2 | 1.51 | 1.16 |
| 1:A:101:LYS:HG2 | 1:A:198:TYR:HA | 1.27 | 1.16 |
| 1:A:165:TRP:CZ2 | 1:B:109:GLU:C | 2.14 | 1.16 |
| 1:B:9:GLN:HG3 | 1:B:58:THR:HB | 1.28 | 1.16 |
| 1:A:196:SER:OG | 1:B:400:ASP:O | 1.63 | 1.15 |
| 1:A:407:ILE:HG23 | 1:A:461:VAL:HG22 | 1.19 | 1.15 |
| 1:A:229:GLY:HA3 | 1:B:478:SER:N | 1.61 | 1.15 |
| 1:C:230:GLU:HA | 1:C:250:LEU:HD23 | 1.25 | 1.15 |
| 1:B:399:THR:CG2 | 1:C:196:SER:O | 1.95 | 1.15 |
| 1:A:180:LYS:CE | 1:B:11:ILE:C | 2.15 | 1.14 |
| 1:A:189:ASP:HB2 | 1:B:369:ARG:HA | 1.17 | 1.14 |
| 1:A:223:ALA:N | 1:B:468:LEU:HD21 | 1.37 | 1.14 |
| 1:B:383:LYS:HZ3 | 1:C:5:ASP:CB | 1.58 | 1.14 |
| 1:A:116:VAL:O | 1:B:469:ALA:CB | 1.94 | 1.14 |
| 1:A:222:ALA:HB2 | 1:B:368:ILE:CG1 | 1.57 | 1.14 |
| 1:A:229:GLY:HA3 | 1:B:477:SER:C | 1.65 | 1.14 |
| 1:B:400:ASP:C | 1:C:193:SER:CA | 2.15 | 1.14 |
| 1:A:204:ARG:CB | 1:B:470:GLY:HA3 | 1.65 | 1.14 |
| 1:A:225:VAL:H | 1:B:465:THR:HG23 | 1.06 | 1.14 |
| 1:A:227:CYS:O | 1:B:476:ASP:HA | 1.44 | 1.14 |
| 1:A:230:GLU:HA | 1:A:250:LEU:HD23 | 1.25 | 1.14 |
| 1:B:107:LEU:HA | 1:B:110:ARG:HG2 | 1.26 | 1.14 |
| 1:B:401:GLY:N | 1:C:193:SER:O | 1.79 | 1.14 |
| 1:A:193:SER:CA | 1:B:403:GLN:CA | 2.19 | 1.14 |
| 1:A:222:ALA:HB1 | 1:B:368:ILE:CG1 | 1.56 | 1.14 |
| 1:B:236:PRO:CG | 1:C:378:GLY:CA | 2.25 | 1.13 |
| 1:A:218:GLY:HA3 | 1:B:364:SER:C | 1.69 | 1.13 |
| 1:B:399:THR:HG21 | 1:C:196:SER:O | 1.47 | 1.13 |
| 1:C:407:ILE:HG23 | 1:C:461:VAL:HG22 | 1.18 | 1.13 |
| 1:A:220:ASN:HA | 1:B:473:ILE:HG23 | 1.17 | 1.13 |
| 1:A:229:GLY:HA3 | 1:B:478:SER:CA | 1.79 | 1.13 |
| 1:A:146:PHE:N | 1:B:112:MET:H | 1.24 | 1.13 |
| 1:A:180:LYS:HE3 | 1:B:11:ILE:O | 1.45 | 1.13 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:188:TYR:CD2 | 1:B:366:ASN:C | 2.15 | 1.13 |
| 1:A:205:ILE:HD13 | 1:B:472:LYS:CG | 1.78 | 1.13 |
| 1:A:219:TYR:CD1 | 1:B:473:ILE:CD1 | 2.32 | 1.13 |
| 1:A:219:TYR:CD1 | 1:B:473:ILE:HB | 1.50 | 1.13 |
| 1:C:10:SER:HB3 | 1:C:57:PHE:HA | 1.18 | 1.13 |
| 1:A:185:ASN:HA | 1:A:188:TYR:HD2 | 1.08 | 1.13 |
| 1:B:400:ASP:CA | 1:C:193:SER:O | 1.96 | 1.13 |
| 1:A:184:LYS:HD2 | 1:B:363:ALA:CA | 1.76 | 1.12 |
| 1:A:219:TYR:N | 1:B:473:ILE:O | 1.71 | 1.12 |
| 1:A:225:VAL:CA | 1:B:465:THR:HG23 | 1.78 | 1.12 |
| 1:A:219:TYR:CE1 | 1:B:473:ILE:CD1 | 2.32 | 1.12 |
| 1:B:385:PRO:HD3 | 1:C:2:THR:HG22 | 1.12 | 1.12 |
| 1:B:386:TYR:CD2 | 1:C:288:LEU:CD1 | 2.31 | 1.12 |
| 1:A:9:GLN:HG3 | 1:A:58:THR:HB | 1.28 | 1.12 |
| 1:B:319:ILE:HA | 1:B:325:PRO:CB | 1.79 | 1.12 |
| 1:A:87:ILE:HG13 | 1:B:374:SER:O | 1.43 | 1.11 |
| 1:B:424:GLY:HA3 | 1:C:220:ASN:CB | 1.79 | 1.11 |
| 1:A:205:ILE:CD1 | 1:B:478:SER:HB3 | 1.79 | 1.11 |
| 1:B:420:LEU:HD23 | 1:B:452:VAL:HG13 | 1.21 | 1.11 |
| 1:A:144:ASP:O | 1:B:58:THR:O | 1.66 | 1.11 |
| 1:A:184:LYS:HD2 | 1:B:363:ALA:HA | 1.25 | 1.11 |
| 1:A:189:ASP:N | 1:B:369:ARG:HA | 1.65 | 1.11 |
| 1:B:387:ILE:N | 1:C:247:ASP:OD2 | 1.83 | 1.11 |
| 1:C:165:TRP:HZ3 | 1:C:172:SER:HB2 | 1.14 | 1.11 |
| 1:A:145:TYR:CD2 | 1:B:9:GLN:CD | 2.11 | 1.11 |
| 1:A:186:GLU:OE1 | 1:B:373:ILE:CD1 | 1.98 | 1.11 |
| 1:A:196:SER:CB | 1:B:401:GLY:O | 1.77 | 1.11 |
| 1:B:230:GLU:HA | 1:B:250:LEU:HD23 | 1.25 | 1.11 |
| 1:C:9:GLN:HG3 | 1:C:58:THR:HB | 1.28 | 1.11 |
| 1:A:10:SER:HB3 | 1:A:57:PHE:HA | 1.18 | 1.11 |
| 1:A:165:TRP:HZ2 | 1:B:109:GLU:O | 0.76 | 1.11 |
| 1:A:217:PRO:HB2 | 1:B:437:ILE:O | 1.50 | 1.11 |
| 1:A:319:ILE:HA | 1:A:325:PRO:CB | 1.79 | 1.11 |
| 1:B:274:ASN:C | 1:C:286:SER:OG | 1.89 | 1.11 |
| 1:B:384:ASN:HA | 1:C:2:THR:HG21 | 1.13 | 1.11 |
| 1:A:147:HIS:HA | 1:B:112:MET:HE3 | 1.26 | 1.10 |
| 1:A:205:ILE:HD12 | 1:B:478:SER:CB | 1.81 | 1.10 |
| 1:C:185:ASN:HA | 1:C:188:TYR:HD2 | 1.08 | 1.10 |
| 1:C:319:ILE:HA | 1:C:325:PRO:CB | 1.79 | 1.10 |
| 1:A:191:VAL:HG21 | 1:B:473:ILE:CD1 | 1.80 | 1.10 |
| 1:A:205:ILE:HG13 | 1:B:476:ASP:OD1 | 1.49 | 1.10 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:45:ILE:HG23 | 1:B:49:LEU:HD11 | 1.11 | 1.10 |
| 1:A:205:ILE:HB | 1:B:478:SER:OG | 1.50 | 1.10 |
| 1:A:249:VAL:HG12 | 1:B:477:SER:HB2 | 1.23 | 1.10 |
| 1:B:429:ALA:HB1 | 1:C:182:VAL:O | 1.50 | 1.10 |
| 1:C:195:VAL:HG23 | 1:C:200:ILE:HB | 1.27 | 1.10 |
| 1:A:107:LEU:HA | 1:A:110:ARG:HG2 | 1.26 | 1.10 |
| 1:A:180:LYS:HG2 | 1:B:327:ILE:CG2 | 1.81 | 1.10 |
| 1:B:444:VAL:C | 1:C:185:ASN:ND2 | 2.04 | 1.10 |
| 1:B:445:GLY:HA2 | 1:C:185:ASN:CB | 1.80 | 1.10 |
| 1:C:45:ILE:HG23 | 1:C:49:LEU:HD11 | 1.11 | 1.10 |
| 1:C:420:LEU:HD23 | 1:C:452:VAL:HG13 | 1.21 | 1.10 |
| 1:A:221:LYS:HG3 | 1:B:436:VAL:N | 1.67 | 1.10 |
| 1:A:45:ILE:HG23 | 1:A:49:LEU:HD11 | 1.11 | 1.09 |
| 1:A:191:VAL:CG2 | 1:B:473:ILE:HD11 | 1.81 | 1.09 |
| 1:B:422:LEU:CD2 | 1:C:221:LYS:HZ3 | 1.62 | 1.09 |
| 1:A:87:ILE:CD1 | 1:B:374:SER:CA | 2.29 | 1.09 |
| 1:B:101:LYS:HG2 | 1:B:198:TYR:HA | 1.27 | 1.09 |
| 1:B:383:LYS:CE | 1:C:5:ASP:HB2 | 1.82 | 1.09 |
| 1:B:422:LEU:HD21 | 1:C:221:LYS:HZ3 | 1.02 | 1.09 |
| 1:A:196:SER:HB3 | 1:B:401:GLY:O | 1.27 | 1.09 |
| 1:B:195:VAL:HG23 | 1:B:200:ILE:HB | 1.27 | 1.09 |
| 1:C:101:LYS:HG2 | 1:C:198:TYR:HA | 1.27 | 1.09 |
| 1:C:107:LEU:HA | 1:C:110:ARG:HG2 | 1.26 | 1.09 |
| 1:C:123:MET:HG3 | 1:C:146:PHE:HE1 | 1.16 | 1.09 |
| 1:A:87:ILE:CG1 | 1:B:374:SER:CA | 2.27 | 1.09 |
| 1:A:180:LYS:HE3 | 1:B:12:TYR:N | 1.68 | 1.09 |
| 1:A:189:ASP:N | 1:B:369:ARG:CA | 2.13 | 1.09 |
| 1:A:227:CYS:C | 1:B:476:ASP:CB | 2.20 | 1.09 |
| 1:A:229:GLY:HA2 | 1:B:478:SER:HB3 | 1.34 | 1.09 |
| 1:B:123:MET:HB3 | 1:B:137:PHE:CE1 | 1.87 | 1.09 |
| 1:A:145:TYR:CE1 | 1:B:113:TYR:CE2 | 2.42 | 1.08 |
| 1:A:205:ILE:CG1 | 1:B:478:SER:HB3 | 1.83 | 1.08 |
| 1:A:227:CYS:C | 1:B:476:ASP:HB2 | 1.72 | 1.08 |
| 1:B:123:MET:HB3 | 1:B:137:PHE:HE1 | 1.15 | 1.08 |
| 1:A:219:TYR:CD1 | 1:B:473:ILE:CB | 2.27 | 1.08 |
| 1:B:236:PRO:HG2 | 1:C:378:GLY:CA | 1.83 | 1.08 |
| 1:B:319:ILE:HA | 1:B:325:PRO:HB3 | 1.32 | 1.08 |
| 1:B:407:ILE:HG23 | 1:B:461:VAL:HG22 | 1.19 | 1.08 |
| 1:B:444:VAL:O | 1:C:185:ASN:CB | 2.01 | 1.08 |
| 1:A:123:MET:HB3 | 1:A:137:PHE:CE1 | 1.87 | 1.08 |
| 1:B:123:MET:HG3 | 1:B:146:PHE:HE1 | 1.17 | 1.08 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:430:GLY:N | 1:C:185:ASN:ND2 | 1.97 | 1.08 |
| 1:C:319:ILE:HG22 | 1:C:325:PRO:HB2 | 1.35 | 1.08 |
| 1:B:185:ASN:HA | 1:B:188:TYR:HD2 | 1.08 | 1.08 |
| 1:A:123:MET:HG3 | 1:A:146:PHE:HE1 | 1.17 | 1.08 |
| 1:A:319:ILE:HA | 1:A:325:PRO:HB3 | 1.32 | 1.08 |
| 1:B:444:VAL:O | 1:C:185:ASN:CG | 1.91 | 1.08 |
| 1:C:123:MET:HB3 | 1:C:137:PHE:HE1 | 1.15 | 1.08 |
| 1:A:2:THR:HB | 1:A:3:PRO:HD2 | 1.34 | 1.07 |
| 1:A:186:GLU:CD | 1:B:370:ASN:HA | 1.74 | 1.07 |
| 1:A:116:VAL:O | 1:B:470:GLY:N | 1.87 | 1.07 |
| 1:A:143:GLN:HG2 | 1:B:108:HIS:CG | 1.88 | 1.07 |
| 1:A:193:SER:C | 1:B:403:GLN:HA | 1.53 | 1.07 |
| 1:B:383:LYS:O | 1:C:3:PRO:CD | 2.01 | 1.07 |
| 1:B:446:SER:CB | 1:C:181:ASP:OD1 | 1.99 | 1.07 |
| 1:C:123:MET:HB3 | 1:C:137:PHE:CE1 | 1.87 | 1.07 |
| 1:B:279:VAL:HG13 | 1:C:4:ALA:CB | 1.84 | 1.07 |
| 1:B:429:ALA:HB3 | 1:C:182:VAL:O | 1.53 | 1.07 |
| 1:A:180:LYS:CE | 1:B:11:ILE:O | 2.03 | 1.07 |
| 1:A:205:ILE:CG1 | 1:B:476:ASP:OD1 | 2.02 | 1.07 |
| 1:A:319:ILE:HG22 | 1:A:325:PRO:HB2 | 1.35 | 1.07 |
| 1:B:2:THR:HB | 1:B:3:PRO:HD2 | 1.34 | 1.07 |
| 1:B:236:PRO:CG | 1:C:378:GLY:HA2 | 1.46 | 1.07 |
| 1:B:383:LYS:CB | 1:C:6:TRP:CD1 | 2.38 | 1.07 |
| 1:B:445:GLY:HA2 | 1:C:185:ASN:HD22 | 0.97 | 1.07 |
| 1:A:420:LEU:HD23 | 1:A:452:VAL:HG13 | 1.21 | 1.06 |
| 1:B:274:ASN:CA | 1:C:286:SER:CA | 2.33 | 1.06 |
| 1:B:319:ILE:HG22 | 1:B:325:PRO:HB2 | 1.35 | 1.06 |
| 1:A:190:TRP:CE2 | 1:B:374:SER:CB | 2.35 | 1.06 |
| 1:A:193:SER:HA | 1:B:403:GLN:HA | 1.16 | 1.06 |
| 1:B:235:ASP:OD1 | 1:C:399:THR:HG21 | 1.37 | 1.06 |
| 1:C:45:ILE:HB | 1:C:103:LEU:HD21 | 1.11 | 1.06 |
| 1:C:319:ILE:HA | 1:C:325:PRO:HB3 | 1.32 | 1.06 |
| 1:B:387:ILE:HG23 | 1:C:221:LYS:HE3 | 1.31 | 1.06 |
| 1:B:422:LEU:HD21 | 1:C:221:LYS:NZ | 1.65 | 1.06 |
| 1:A:84:GLN:NE2 | 1:B:375:LYS:NZ | 2.04 | 1.06 |
| 1:A:165:TRP:HZ3 | 1:A:172:SER:HB2 | 1.14 | 1.06 |
| 1:A:220:ASN:HA | 1:B:473:ILE:CG2 | 1.84 | 1.06 |
| 1:B:45:ILE:HB | 1:B:103:LEU:HD21 | 1.11 | 1.06 |
| 1:B:238:TYR:O | 1:C:376:ASP:HA | 1.55 | 1.06 |
| 1:B:401:GLY:N | 1:C:193:SER:CA | 2.19 | 1.06 |
| 1:A:187:TRP:CE3 | 1:B:371:TYR:HA | 1.91 | 1.05 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:190:TRP:CH2 | 1:B:375:LYS:HD3 | 1.80 | 1.05 |
| 1:A:219:TYR:CG | 1:B:473:ILE:HG13 | 1.89 | 1.05 |
| 1:B:384:ASN:CA | 1:C:2:THR:HG21 | 1.75 | 1.05 |
| 1:B:445:GLY:HA2 | 1:C:185:ASN:ND2 | 1.54 | 1.05 |
| 1:A:229:GLY:C | 1:B:477:SER:O | 1.95 | 1.05 |
| 1:B:165:TRP:HZ3 | 1:B:172:SER:HB2 | 1.14 | 1.05 |
| 1:B:278:THR:HA | 1:C:380:VAL:HG21 | 1.21 | 1.05 |
| 1:B:278:THR:CG2 | 1:C:381:THR:OG1 | 2.04 | 1.05 |
| 1:A:190:TRP:HZ3 | 1:B:371:TYR:CE1 | 1.65 | 1.05 |
| 1:A:45:ILE:HB | 1:A:103:LEU:HD21 | 1.11 | 1.05 |
| 1:A:147:HIS:O | 1:B:107:LEU:O | 1.73 | 1.05 |
| 1:B:274:ASN:CA | 1:C:286:SER:OG | 2.01 | 1.05 |
| 1:A:190:TRP:CE2 | 1:B:374:SER:HB2 | 1.91 | 1.05 |
| 1:A:219:TYR:CG | 1:B:473:ILE:CG1 | 2.37 | 1.05 |
| 1:A:224:GLY:HA2 | 1:B:434:THR:CB | 1.87 | 1.05 |
| 1:B:278:THR:HG23 | 1:C:381:THR:H | 0.89 | 1.05 |
| 1:A:197:ASN:N | 1:B:467:LYS:HE3 | 1.72 | 1.04 |
| 1:A:204:ARG:HB2 | 1:B:470:GLY:HA3 | 1.08 | 1.04 |
| 1:B:383:LYS:O | 1:C:3:PRO:HD2 | 1.56 | 1.04 |
| 1:B:404:ILE:CD1 | 1:C:223:ALA:HA | 1.78 | 1.04 |
| 1:A:83:TRP:HE1 | 1:A:173:LEU:HD21 | 1.19 | 1.04 |
| 1:A:115:MET:HE1 | 1:A:204:ARG:HB2 | 1.33 | 1.04 |
| 1:A:116:VAL:C | 1:B:469:ALA:HB1 | 1.57 | 1.04 |
| 1:A:187:TRP:HE3 | 1:B:371:TYR:HA | 1.16 | 1.04 |
| 1:A:205:ILE:HD13 | 1:B:472:LYS:HG2 | 1.32 | 1.04 |
| 1:B:445:GLY:N | 1:C:185:ASN:HD22 | 1.39 | 1.04 |
| 1:B:446:SER:OG | 1:C:181:ASP:CG | 1.95 | 1.04 |
| 1:A:222:ALA:CB | 1:B:368:ILE:CD1 | 2.32 | 1.04 |
| 1:B:235:ASP:OD1 | 1:C:399:THR:HG23 | 1.57 | 1.04 |
| 1:B:401:GLY:N | 1:C:193:SER:HA | 1.73 | 1.04 |
| 1:A:180:LYS:HG3 | 1:B:12:TYR:CD2 | 1.93 | 1.04 |
| 1:A:229:GLY:HA3 | 1:B:478:SER:CB | 1.75 | 1.04 |
| 1:B:402:SER:H | 1:C:193:SER:CA | 1.71 | 1.04 |
| 1:C:432:GLN:HG2 | 1:C:465:THR:HG21 | 1.40 | 1.04 |
| 1:A:221:LYS:CB | 1:B:436:VAL:CA | 1.79 | 1.03 |
| 1:A:225:VAL:CG2 | 1:B:465:THR:HG23 | 1.86 | 1.03 |
| 1:B:402:SER:N | 1:C:193:SER:CB | 2.20 | 1.03 |
| 1:C:2:THR:HB | 1:C:3:PRO:HD2 | 1.34 | 1.03 |
| 1:A:180:LYS:HD2 | 1:B:12:TYR:HB2 | 1.06 | 1.03 |
| 1:A:118:VAL:HB | 1:B:471:SER:HB2 | 1.37 | 1.03 |
| 1:A:205:ILE:HD12 | 1:B:478:SER:OXT | 1.57 | 1.03 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:180:LYS:CE | 1:B:57:PHE:CB | 2.36 | 1.03 |
| 1:B:382:TYR:CA | 1:C:1:ALA:HB3 | 1.82 | 1.03 |
| 1:B:387:ILE:CG2 | 1:C:221:LYS:CE | 2.21 | 1.03 |
| 1:A:146:PHE:N | 1:B:112:MET:N | 2.07 | 1.03 |
| 1:A:180:LYS:HA | 1:B:55:MET:HG3 | 1.38 | 1.03 |
| 1:A:204:ARG:HG3 | 1:A:228:ILE:HB | 1.37 | 1.03 |
| 1:A:432:GLN:HG2 | 1:A:465:THR:HG21 | 1.40 | 1.02 |
| 1:C:234:GLY:HA2 | 1:C:253:PRO:HD3 | 1.41 | 1.02 |
| 1:A:177:ASP:HB3 | 1:B:53:GLN:CB | 1.90 | 1.02 |
| 1:A:180:LYS:HZ3 | 1:B:57:PHE:HB3 | 1.04 | 1.02 |
| 1:A:208:VAL:HG21 | 1:B:478:SER:N | 1.44 | 1.02 |
| 1:A:123:MET:HB3 | 1:A:137:PHE:HE1 | 1.15 | 1.02 |
| 1:A:180:LYS:NZ | 1:B:10:SER:O | 1.92 | 1.02 |
| 1:A:180:LYS:NZ | 1:B:57:PHE:CB | 2.22 | 1.02 |
| 1:A:204:ARG:O | 1:B:471:SER:CA | 1.98 | 1.02 |
| 1:B:234:GLY:HA2 | 1:B:253:PRO:HD3 | 1.41 | 1.02 |
| 1:C:204:ARG:HG3 | 1:C:228:ILE:HB | 1.37 | 1.02 |
| 1:A:87:ILE:HD13 | 1:B:374:SER:CB | 1.89 | 1.02 |
| 1:A:234:GLY:HA2 | 1:A:253:PRO:HD3 | 1.42 | 1.02 |
| 1:A:246:MET:HB2 | 1:B:477:SER:N | 1.39 | 1.02 |
| 1:A:249:VAL:CB | 1:B:477:SER:OG | 2.07 | 1.02 |
| 1:B:204:ARG:HG3 | 1:B:228:ILE:HB | 1.37 | 1.02 |
| 1:B:387:ILE:HG21 | 1:C:221:LYS:HE2 | 1.36 | 1.02 |
| 1:B:432:GLN:HG2 | 1:B:465:THR:HG21 | 1.40 | 1.02 |
| 1:A:42:TRP:HE1 | 1:A:62:ILE:HD11 | 1.24 | 1.02 |
| 1:A:225:VAL:CB | 1:B:465:THR:HG23 | 1.89 | 1.02 |
| 1:B:83:TRP:HE1 | 1:B:173:LEU:HD21 | 1.19 | 1.02 |
| 1:B:208:VAL:HG12 | 1:B:231:VAL:HG12 | 1.42 | 1.02 |
| 1:C:208:VAL:HG12 | 1:C:231:VAL:HG12 | 1.42 | 1.02 |
| 1:A:143:GLN:NE2 | 1:B:108:HIS:CG | 2.27 | 1.01 |
| 1:A:190:TRP:CE3 | 1:B:374:SER:HB2 | 1.94 | 1.01 |
| 1:B:32:THR:HG21 | 1:B:342:ALA:HA | 1.42 | 1.01 |
| 1:C:83:TRP:HE1 | 1:C:173:LEU:HD21 | 1.19 | 1.01 |
| 1:B:383:LYS:HZ3 | 1:C:5:ASP:HB2 | 0.88 | 1.01 |
| 1:B:401:GLY:N | 1:C:196:SER:CB | 2.22 | 1.01 |
| 1:A:188:TYR:CE2 | 1:B:367:ALA:N | 2.27 | 1.01 |
| 1:A:219:TYR:HE1 | 1:B:471:SER:OG | 1.42 | 1.01 |
| 1:B:305:THR:HG21 | 1:B:310:LEU:HD22 | 1.01 | 1.01 |
| 1:B:449:ASN:CB | 1:C:184:LYS:NZ | 2.22 | 1.01 |
| 1:C:42:TRP:HE1 | 1:C:62:ILE:HD11 | 1.24 | 1.01 |
| 1:C:305:THR:HG21 | 1:C:310:LEU:HD22 | 1.01 | 1.01 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:183:VAL:CA | 1:B:370:ASN:ND2 | 1.78 | 1.01 |
| 1:A:230:GLU:N | 1:B:478:SER:HB2 | 1.75 | 1.01 |
| 1:A:248:GLY:C | 1:B:477:SER:HB3 | 1.79 | 1.01 |
| 1:B:42:TRP:HE1 | 1:B:62:ILE:HD11 | 1.24 | 1.01 |
| 1:B:277:ASN:ND2 | 1:C:286:SER:HB3 | 1.76 | 1.01 |
| 1:B:280:LYS:NZ | 1:C:226:TYR:HB2 | 1.74 | 1.01 |
| 1:A:189:ASP:H | 1:B:369:ARG:HA | 0.94 | 1.00 |
| 1:B:402:SER:N | 1:C:193:SER:OG | 1.93 | 1.00 |
| 1:A:143:GLN:HG2 | 1:B:108:HIS:HD2 | 1.23 | 1.00 |
| 1:A:165:TRP:CE2 | 1:B:110:ARG:HA | 1.96 | 1.00 |
| 1:A:194:LEU:CA | 1:B:403:GLN:HG2 | 1.91 | 1.00 |
| 1:A:219:TYR:CD1 | 1:B:473:ILE:CG1 | 2.43 | 1.00 |
| 1:B:274:ASN:O | 1:C:286:SER:HA | 1.61 | 1.00 |
| 1:C:11:ILE:HG12 | 1:C:324:LEU:HD23 | 1.42 | 1.00 |
| 1:A:229:GLY:O | 1:B:477:SER:O | 1.80 | 1.00 |
| 1:A:305:THR:HG21 | 1:A:310:LEU:HD22 | 1.01 | 1.00 |
| 1:B:119:VAL:HG23 | 1:B:206:ASP:HB2 | 1.44 | 1.00 |
| 1:B:422:LEU:HD22 | 1:C:221:LYS:NZ | 1.74 | 1.00 |
| 1:C:32:THR:HG21 | 1:C:342:ALA:HA | 1.42 | 1.00 |
| 1:A:32:THR:HG21 | 1:A:342:ALA:HA | 1.42 | 1.00 |
| 1:A:87:ILE:HG12 | 1:B:374:SER:HA | 1.42 | 1.00 |
| 1:A:227:CYS:C | 1:B:476:ASP:HA | 1.80 | 1.00 |
| 1:A:180:LYS:CE | 1:B:57:PHE:HB3 | 1.92 | 1.00 |
| 1:A:189:ASP:CB | 1:B:369:ARG:HA | 1.92 | 1.00 |
| 1:A:227:CYS:HB2 | 1:B:476:ASP:CB | 1.91 | 1.00 |
| 1:B:64:PRO:HG3 | 1:B:82:TYR:HA | 1.44 | 1.00 |
| 1:B:274:ASN:HA | 1:C:286:SER:HB2 | 1.41 | 1.00 |
| 1:B:11:ILE:HG12 | 1:B:324:LEU:HD23 | 1.42 | 0.99 |
| 1:C:433:LEU:HD23 | 1:C:444:VAL:HG11 | 1.44 | 0.99 |
| 1:A:165:TRP:CD1 | 1:B:110:ARG:HA | 1.98 | 0.99 |
| 1:A:433:LEU:HD23 | 1:A:444:VAL:HG11 | 1.44 | 0.99 |
| 1:B:258:LEU:HD21 | 1:B:314:VAL:HG23 | 1.44 | 0.99 |
| 1:C:230:GLU:CA | 1:C:250:LEU:HD23 | 1.92 | 0.99 |
| 1:B:385:PRO:HG3 | 1:C:224:GLY:O | 1.63 | 0.99 |
| 1:A:208:VAL:HG12 | 1:A:231:VAL:HG12 | 1.42 | 0.99 |
| 1:B:383:LYS:CB | 1:C:6:TRP:HD1 | 1.73 | 0.99 |
| 1:B:444:VAL:O | 1:C:185:ASN:HB2 | 1.61 | 0.99 |
| 1:A:11:ILE:HG12 | 1:A:324:LEU:HD23 | 1.42 | 0.99 |
| 1:A:191:VAL:HG21 | 1:B:473:ILE:HD11 | 0.99 | 0.99 |
| 1:B:237:ALA:CB | 1:C:378:GLY:C | 2.17 | 0.99 |
| 1:A:152:ILE:HD11 | 1:A:166:LEU:HA | 1.45 | 0.98 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:246:MET:HB3 | 1:B:477:SER:N | 1.44 | 0.98 |
| 1:B:429:ALA:HB3 | 1:C:186:GLU:HB3 | 1.42 | 0.98 |
| 1:B:230:GLU:CA | 1:B:250:LEU:HD23 | 1.92 | 0.98 |
| 1:A:145:TYR:HE1 | 1:B:113:TYR:CE2 | 1.79 | 0.98 |
| 1:C:64:PRO:HG3 | 1:C:82:TYR:HA | 1.44 | 0.98 |
| 1:A:180:LYS:HD3 | 1:B:57:PHE:CG | 1.72 | 0.98 |
| 1:A:219:TYR:HE2 | 1:B:371:TYR:HB2 | 0.82 | 0.98 |
| 1:B:383:LYS:CD | 1:C:5:ASP:HB2 | 1.94 | 0.98 |
| 1:A:230:GLU:CA | 1:A:250:LEU:HD23 | 1.92 | 0.98 |
| 1:B:387:ILE:CA | 1:C:247:ASP:OD2 | 2.12 | 0.98 |
| 1:C:152:ILE:HD11 | 1:C:166:LEU:HA | 1.45 | 0.98 |
| 1:A:184:LYS:HE2 | 1:B:362:ILE:CG2 | 1.84 | 0.98 |
| 1:A:219:TYR:CE1 | 1:B:471:SER:OG | 2.17 | 0.98 |
| 1:A:45:ILE:HG23 | 1:A:49:LEU:CD1 | 1.93 | 0.98 |
| 1:A:225:VAL:N | 1:B:465:THR:CB | 2.04 | 0.98 |
| 1:A:184:LYS:CD | 1:B:363:ALA:HA | 1.93 | 0.98 |
| 1:B:185:ASN:HA | 1:B:188:TYR:CD2 | 1.99 | 0.98 |
| 1:A:208:VAL:HB | 1:B:478:SER:OG | 1.11 | 0.97 |
| 1:A:227:CYS:HB3 | 1:B:476:ASP:HB3 | 1.45 | 0.97 |
| 1:B:45:ILE:HG23 | 1:B:49:LEU:CD1 | 1.93 | 0.97 |
| 1:A:64:PRO:HG3 | 1:A:82:TYR:HA | 1.44 | 0.97 |
| 1:A:180:LYS:HZ3 | 1:B:10:SER:C | 1.68 | 0.97 |
| 1:A:249:VAL:HB | 1:B:477:SER:OG | 1.64 | 0.97 |
| 1:B:385:PRO:HA | 1:C:3:PRO:HD3 | 0.99 | 0.97 |
| 1:B:386:TYR:CE2 | 1:C:247:ASP:CB | 2.37 | 0.97 |
| 1:C:258:LEU:HD21 | 1:C:314:VAL:HG23 | 1.43 | 0.97 |
| 1:B:188:TYR:HE1 | 1:B:218:GLY:HA3 | 1.29 | 0.97 |
| 1:C:45:ILE:HG23 | 1:C:49:LEU:CD1 | 1.93 | 0.97 |
| 1:A:119:VAL:HG23 | 1:A:206:ASP:HB2 | 1.44 | 0.97 |
| 1:A:186:GLU:HG3 | 1:B:370:ASN:HB3 | 0.97 | 0.97 |
| 1:A:225:VAL:CG2 | 1:B:465:THR:CG2 | 2.38 | 0.97 |
| 1:B:216:TRP:HB2 | 1:B:245:VAL:HG22 | 1.47 | 0.97 |
| 1:C:119:VAL:HG23 | 1:C:206:ASP:HB2 | 1.44 | 0.97 |
| 1:A:188:TYR:HE1 | 1:A:218:GLY:HA3 | 1.29 | 0.97 |
| 1:A:190:TRP:HZ2 | 1:B:375:LYS:HD2 | 1.22 | 0.97 |
| 1:A:194:LEU:HD13 | 1:B:375:LYS:CB | 1.94 | 0.97 |
| 1:A:218:GLY:H | 1:B:364:SER:HB3 | 1.30 | 0.97 |
| 1:B:433:LEU:HD23 | 1:B:444:VAL:HG11 | 1.44 | 0.97 |
| 1:A:194:LEU:HD13 | 1:B:375:LYS:HB3 | 1.47 | 0.96 |
| 1:C:216:TRP:HB2 | 1:C:245:VAL:HG22 | 1.47 | 0.96 |
| 1:B:383:LYS:HB3 | 1:C:6:TRP:HD1 | 1.26 | 0.96 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:386:TYR:CG | 1:C:288:LEU:CD1 | 2.47 | 0.96 |
| 1:A:180:LYS:O | 1:B:57:PHE:N | 1.84 | 0.96 |
| 1:A:185:ASN:HA | 1:A:188:TYR:CD2 | 1.99 | 0.96 |
| 1:A:193:SER:HA | 1:B:403:GLN:CA | 1.80 | 0.96 |
| 1:B:152:ILE:HD11 | 1:B:166:LEU:HA | 1.45 | 0.96 |
| 1:B:400:ASP:O | 1:C:193:SER:HA | 1.62 | 0.96 |
| 1:B:445:GLY:HA3 | 1:C:185:ASN:HD22 | 1.30 | 0.96 |
| 1:C:185:ASN:HA | 1:C:188:TYR:CD2 | 1.99 | 0.96 |
| 1:A:186:GLU:CG | 1:B:370:ASN:CA | 2.43 | 0.96 |
| 1:A:190:TRP:CE3 | 1:B:371:TYR:CD1 | 2.53 | 0.96 |
| 1:A:220:ASN:CA | 1:B:473:ILE:CG2 | 2.43 | 0.96 |
| 1:A:10:SER:HB3 | 1:A:57:PHE:CA | 1.96 | 0.96 |
| 1:A:221:LYS:CA | 1:B:474:CYS:SG | 2.53 | 0.96 |
| 1:B:277:ASN:HB2 | 1:C:286:SER:CB | 1.96 | 0.96 |
| 1:C:10:SER:HB3 | 1:C:57:PHE:CA | 1.96 | 0.96 |
| 1:A:258:LEU:HD21 | 1:A:314:VAL:HG23 | 1.44 | 0.96 |
| 1:A:143:GLN:NE2 | 1:B:108:HIS:ND1 | 2.12 | 0.96 |
| 1:A:196:SER:HB3 | 1:B:403:GLN:HG3 | 1.48 | 0.96 |
| 1:C:208:VAL:HG21 | 1:C:246:MET:SD | 2.06 | 0.96 |
| 1:B:208:VAL:HG21 | 1:B:246:MET:SD | 2.06 | 0.96 |
| 1:B:388:LYS:HA | 1:C:244:ASN:O | 1.64 | 0.96 |
| 1:A:208:VAL:HG21 | 1:A:246:MET:SD | 2.06 | 0.96 |
| 1:B:238:TYR:HA | 1:C:376:ASP:CB | 1.94 | 0.96 |
| 1:B:279:VAL:HG13 | 1:C:4:ALA:HB1 | 0.98 | 0.95 |
| 1:C:146:PHE:HA | 1:C:176:LEU:HA | 1.48 | 0.95 |
| 1:C:305:THR:HG21 | 1:C:310:LEU:CD2 | 1.96 | 0.95 |
| 1:A:229:GLY:HA2 | 1:B:478:SER:HB2 | 1.22 | 0.95 |
| 1:C:45:ILE:CB | 1:C:103:LEU:HD21 | 1.95 | 0.95 |
| 1:A:146:PHE:HA | 1:A:176:LEU:HA | 1.48 | 0.95 |
| 1:A:45:ILE:CB | 1:A:103:LEU:HD21 | 1.95 | 0.95 |
| 1:A:436:VAL:HG13 | 1:A:437:ILE:HG13 | 1.47 | 0.95 |
| 1:B:276:ILE:O | 1:C:4:ALA:CB | 2.13 | 0.95 |
| 1:B:278:THR:HA | 1:C:380:VAL:HG22 | 0.97 | 0.95 |
| 1:B:386:TYR:CZ | 1:C:288:LEU:HD13 | 2.01 | 0.95 |
| 1:B:449:ASN:H | 1:C:184:LYS:HZ1 | 1.07 | 0.95 |
| 1:A:189:ASP:HB2 | 1:B:369:ARG:CA | 1.96 | 0.95 |
| 1:A:305:THR:HG21 | 1:A:310:LEU:CD2 | 1.96 | 0.95 |
| 1:A:179:THR:C | 1:B:55:MET:HB2 | 1.87 | 0.95 |
| 1:A:186:GLU:HG3 | 1:B:370:ASN:CA | 1.97 | 0.95 |
| 1:B:45:ILE:CB | 1:B:103:LEU:HD21 | 1.95 | 0.95 |
| 1:B:382:TYR:O | 1:C:2:THR:CG2 | 2.15 | 0.94 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:227:CYS:C | 1:B:476:ASP:CA | 2.35 | 0.94 |
| 1:B:235:ASP:OD2 | 1:C:399:THR:HG22 | 1.63 | 0.94 |
| 1:B:305:THR:HG21 | 1:B:310:LEU:CD2 | 1.96 | 0.94 |
| 1:B:446:SER:OG | 1:C:181:ASP:OD1 | 1.84 | 0.94 |
| 1:C:436:VAL:HG13 | 1:C:437:ILE:HG13 | 1.47 | 0.94 |
| 1:A:200:ILE:CD1 | 1:B:467:LYS:NZ | 2.30 | 0.94 |
| 1:A:218:GLY:N | 1:B:364:SER:HB3 | 1.80 | 0.94 |
| 1:A:227:CYS:HB3 | 1:B:476:ASP:HB2 | 0.94 | 0.94 |
| 1:A:2:THR:CA | 1:B:432:GLN:NE2 | 2.19 | 0.94 |
| 1:A:143:GLN:HE21 | 1:B:108:HIS:CG | 1.84 | 0.94 |
| 1:C:188:TYR:HE1 | 1:C:218:GLY:HA3 | 1.29 | 0.94 |
| 1:B:436:VAL:HG13 | 1:B:437:ILE:HG13 | 1.47 | 0.94 |
| 1:A:165:TRP:CZ3 | 1:A:172:SER:HB2 | 2.02 | 0.94 |
| 1:A:88:TYR:HE2 | 1:B:373:ILE:C | 1.66 | 0.94 |
| 1:A:216:TRP:HB2 | 1:A:245:VAL:HG22 | 1.47 | 0.94 |
| 1:A:188:TYR:CD2 | 1:B:367:ALA:N | 2.35 | 0.94 |
| 1:B:146:PHE:HA | 1:B:176:LEU:HA | 1.48 | 0.94 |
| 1:B:406:THR:CG2 | 1:C:221:LYS:O | 2.16 | 0.94 |
| 1:A:217:PRO:CB | 1:B:437:ILE:O | 2.16 | 0.94 |
| 1:A:229:GLY:CA | 1:B:478:SER:HB3 | 1.88 | 0.94 |
| 1:B:165:TRP:CZ3 | 1:B:172:SER:HB2 | 2.02 | 0.94 |
| 1:A:198:TYR:HB2 | 1:B:467:LYS:NZ | 1.81 | 0.94 |
| 1:A:200:ILE:HD11 | 1:B:467:LYS:HZ3 | 1.33 | 0.94 |
| 1:B:11:ILE:HD13 | 1:B:326:ILE:HG12 | 1.49 | 0.94 |
| 1:B:238:TYR:CA | 1:C:377:THR:N | 2.30 | 0.93 |
| 1:A:11:ILE:HD13 | 1:A:326:ILE:HG12 | 1.49 | 0.93 |
| 1:A:190:TRP:CD1 | 1:B:372:ALA:O | 1.92 | 0.93 |
| 1:A:200:ILE:HD12 | 1:B:467:LYS:CE | 1.97 | 0.93 |
| 1:C:11:ILE:HD13 | 1:C:326:ILE:HG12 | 1.49 | 0.93 |
| 1:A:228:ILE:N | 1:B:476:ASP:CB | 2.31 | 0.93 |
| 1:B:404:ILE:HD11 | 1:C:223:ALA:CA | 1.81 | 0.93 |
| 1:A:194:LEU:CD2 | 1:B:375:LYS:CG | 2.24 | 0.93 |
| 1:B:382:TYR:O | 1:C:2:THR:HG23 | 1.67 | 0.93 |
| 1:B:427:TYR:N | 1:C:188:TYR:CD1 | 2.36 | 0.93 |
| 1:A:208:VAL:HG23 | 1:A:216:TRP:CE2 | 2.04 | 0.93 |
| 1:C:16:THR:HG1 | 1:C:94:TYR:HE1 | 0.95 | 0.93 |
| 1:A:183:VAL:HA | 1:B:370:ASN:ND2 | 1.82 | 0.93 |
| 1:A:205:ILE:HG12 | 1:B:471:SER:O | 1.66 | 0.93 |
| 1:A:205:ILE:HG23 | 1:B:472:LYS:N | 1.84 | 0.93 |
| 1:A:69:LEU:HB2 | 1:A:71:GLN:HE21 | 1.34 | 0.93 |
| 1:A:180:LYS:CD | 1:B:57:PHE:CG | 2.25 | 0.93 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:69:LEU:HB2 | 1:C:71:GLN:HE21 | 1.34 | 0.93 |
| 1:A:148:PRO:HD3 | 1:B:49:LEU:HD23 | 1.49 | 0.93 |
| 1:A:225:VAL:HG23 | 1:B:465:THR:CG2 | 1.80 | 0.93 |
| 1:C:165:TRP:CZ3 | 1:C:172:SER:HB2 | 2.02 | 0.93 |
| 1:C:208:VAL:HG23 | 1:C:216:TRP:CE2 | 2.04 | 0.93 |
| 1:A:248:GLY:O | 1:B:477:SER:CB | 2.16 | 0.93 |
| 1:B:424:GLY:O | 1:C:221:LYS:HB2 | 1.65 | 0.93 |
| 1:A:216:TRP:O | 1:B:473:ILE:O | 1.87 | 0.92 |
| 1:B:238:TYR:CA | 1:C:376:ASP:CA | 2.33 | 0.92 |
| 1:B:386:TYR:CE2 | 1:C:288:LEU:CD1 | 2.47 | 0.92 |
| 1:A:143:GLN:OE1 | 1:B:108:HIS:HA | 1.68 | 0.92 |
| 1:A:180:LYS:NZ | 1:B:10:SER:C | 2.23 | 0.92 |
| 1:A:229:GLY:CA | 1:B:477:SER:C | 2.34 | 0.92 |
| 1:C:308:ILE:HG22 | 1:C:312:LYS:HE3 | 1.50 | 0.92 |
| 1:B:208:VAL:HG23 | 1:B:216:TRP:CE2 | 2.04 | 0.92 |
| 1:B:69:LEU:HB2 | 1:B:71:GLN:HE21 | 1.34 | 0.92 |
| 1:B:278:THR:O | 1:C:380:VAL:CG2 | 2.18 | 0.92 |
| 1:A:186:GLU:CG | 1:B:370:ASN:HB3 | 1.89 | 0.92 |
| 1:A:230:GLU:H | 1:B:478:SER:HB2 | 1.29 | 0.92 |
| 1:B:383:LYS:HD2 | 1:C:5:ASP:HB2 | 1.48 | 0.92 |
| 1:A:197:ASN:O | 1:B:467:LYS:CE | 2.18 | 0.92 |
| 1:B:277:ASN:CB | 1:C:286:SER:HB3 | 1.99 | 0.92 |
| 1:A:147:HIS:HA | 1:B:112:MET:CE | 2.00 | 0.91 |
| 1:A:182:VAL:HB | 1:B:10:SER:C | 1.90 | 0.91 |
| 1:B:444:VAL:C | 1:C:185:ASN:CG | 2.25 | 0.91 |
| 1:A:182:VAL:H | 1:B:57:PHE:CB | 1.82 | 0.91 |
| 1:A:205:ILE:HG23 | 1:B:472:LYS:HG3 | 1.50 | 0.91 |
| 1:B:274:ASN:CA | 1:C:286:SER:HA | 2.01 | 0.91 |
| 1:B:400:ASP:C | 1:C:193:SER:O | 2.08 | 0.91 |
| 1:A:145:TYR:CE2 | 1:B:9:GLN:HB2 | 2.06 | 0.91 |
| 1:A:178:THR:HB | 1:B:57:PHE:O | 1.71 | 0.91 |
| 1:A:194:LEU:HB2 | 1:B:375:LYS:HB3 | 1.53 | 0.91 |
| 1:A:229:GLY:N | 1:A:246:MET:HE1 | 1.85 | 0.91 |
| 1:A:185:ASN:CB | 1:B:366:ASN:CA | 2.21 | 0.91 |
| 1:B:308:ILE:HG22 | 1:B:312:LYS:HE3 | 1.50 | 0.91 |
| 1:B:209:LYS:HB3 | 1:B:231:VAL:HG21 | 1.52 | 0.91 |
| 1:B:273:TYR:CD1 | 1:B:389:ASP:HB3 | 2.05 | 0.91 |
| 1:C:273:TYR:CD1 | 1:C:389:ASP:HB3 | 2.06 | 0.91 |
| 1:A:180:LYS:HG2 | 1:B:327:ILE:HG21 | 1.49 | 0.91 |
| 1:A:180:LYS:H | 1:B:55:MET:CB | 1.76 | 0.91 |
| 1:A:208:VAL:HA | 1:A:216:TRP:CZ2 | 2.06 | 0.91 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:222:ALA:CA | 1:B:368:ILE:HD12 | 1.99 | 0.91 |
| 1:B:383:LYS:HG3 | 1:C:6:TRP:NE1 | 1.84 | 0.91 |
| 1:C:208:VAL:HA | 1:C:216:TRP:CZ2 | 2.06 | 0.91 |
| 1:B:274:ASN:O | 1:C:286:SER:CA | 2.19 | 0.91 |
| 1:B:432:GLN:CG | 1:B:465:THR:HG21 | 2.01 | 0.91 |
| 1:A:191:VAL:O | 1:B:467:LYS:O | 1.88 | 0.91 |
| 1:A:308:ILE:HG22 | 1:A:312:LYS:HE3 | 1.50 | 0.90 |
| 1:B:305:THR:CG2 | 1:B:310:LEU:HD22 | 1.97 | 0.90 |
| 1:A:273:TYR:CD1 | 1:A:389:ASP:HB3 | 2.05 | 0.90 |
| 1:B:278:THR:C | 1:C:380:VAL:HG11 | 1.90 | 0.90 |
| 1:A:180:LYS:CG | 1:B:12:TYR:CD2 | 2.54 | 0.90 |
| 1:A:249:VAL:CG1 | 1:B:477:SER:CB | 2.48 | 0.90 |
| 1:B:241:PRO:O | 1:C:374:SER:HA | 1.11 | 0.90 |
| 1:A:209:LYS:HB3 | 1:A:231:VAL:HG21 | 1.52 | 0.90 |
| 1:A:222:ALA:HB2 | 1:B:368:ILE:HG13 | 1.19 | 0.90 |
| 1:B:208:VAL:HA | 1:B:216:TRP:CZ2 | 2.06 | 0.90 |
| 1:C:209:LYS:HB3 | 1:C:231:VAL:HG21 | 1.52 | 0.90 |
| 1:B:281:SER:HB2 | 1:C:6:TRP:C | 1.92 | 0.90 |
| 1:A:185:ASN:HB2 | 1:B:366:ASN:HA | 0.91 | 0.90 |
| 1:A:217:PRO:O | 1:B:474:CYS:HA | 1.72 | 0.90 |
| 1:A:145:TYR:CE2 | 1:B:9:GLN:CB | 2.55 | 0.90 |
| 1:C:319:ILE:CG2 | 1:C:325:PRO:HB2 | 2.01 | 0.90 |
| 1:A:145:TYR:CE1 | 1:B:113:TYR:HE2 | 1.85 | 0.90 |
| 1:A:205:ILE:HD12 | 1:B:478:SER:HB3 | 1.42 | 0.90 |
| 1:B:429:ALA:HB3 | 1:C:186:GLU:CB | 2.02 | 0.90 |
| 1:C:191:VAL:HG11 | 1:C:219:TYR:CZ | 2.07 | 0.90 |
| 1:C:432:GLN:CG | 1:C:465:THR:HG21 | 2.01 | 0.90 |
| 1:B:182:VAL:HG13 | 1:B:183:VAL:H | 1.37 | 0.90 |
| 1:B:382:TYR:CD1 | 1:C:2:THR:CG2 | 2.55 | 0.90 |
| 1:B:383:LYS:CE | 1:C:5:ASP:CB | 2.48 | 0.90 |
| 1:C:365:ALA:O | 1:C:368:ILE:HG22 | 1.72 | 0.90 |
| 1:A:184:LYS:H | 1:B:56:GLY:HA2 | 1.34 | 0.89 |
| 1:A:190:TRP:HH2 | 1:B:375:LYS:CD | 1.77 | 0.89 |
| 1:B:191:VAL:HG11 | 1:B:219:TYR:CZ | 2.07 | 0.89 |
| 1:B:235:ASP:CG | 1:C:399:THR:HG23 | 1.86 | 0.89 |
| 1:B:382:TYR:HD1 | 1:C:2:THR:HG23 | 1.15 | 0.89 |
| 1:C:433:LEU:HB2 | 1:C:442:VAL:HG12 | 1.54 | 0.89 |
| 1:A:190:TRP:CD2 | 1:B:374:SER:CB | 2.55 | 0.89 |
| 1:A:229:GLY:C | 1:B:478:SER:HB2 | 1.91 | 0.89 |
| 1:B:280:LYS:O | 1:C:7:ARG:N | 2.05 | 0.89 |
| 1:C:257:PRO:HA | 1:C:260:ASN:HB2 | 1.53 | 0.89 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:319:ILE:CG2 | 1:A:325:PRO:HB2 | 2.01 | 0.89 |
| 1:B:293:VAL:HG13 | 1:B:294:GLU:H | 1.36 | 0.89 |
| 1:B:319:ILE:CG2 | 1:B:325:PRO:HB2 | 2.01 | 0.89 |
| 1:A:432:GLN:CG | 1:A:465:THR:HG21 | 2.01 | 0.89 |
| 1:C:35:GLN:HB3 | 1:C:79:TYR:CE1 | 2.07 | 0.89 |
| 1:B:274:ASN:C | 1:C:286:SER:HA | 1.93 | 0.89 |
| 1:B:277:ASN:CG | 1:C:286:SER:HB3 | 1.93 | 0.89 |
| 1:B:404:ILE:CD1 | 1:C:223:ALA:CA | 2.43 | 0.89 |
| 1:B:404:ILE:HG12 | 1:C:223:ALA:HA | 1.51 | 0.89 |
| 1:A:10:SER:CB | 1:A:57:PHE:HA | 2.03 | 0.89 |
| 1:A:180:LYS:H | 1:B:55:MET:HB2 | 1.20 | 0.89 |
| 1:A:192:GLY:O | 1:B:464:PRO:CG | 2.20 | 0.89 |
| 1:A:257:PRO:HA | 1:A:260:ASN:HB2 | 1.53 | 0.89 |
| 1:A:433:LEU:HB2 | 1:A:442:VAL:HG12 | 1.54 | 0.89 |
| 1:B:236:PRO:HB2 | 1:C:380:VAL:HG12 | 1.55 | 0.89 |
| 1:B:408:LEU:HD11 | 1:B:462:LEU:HD21 | 1.54 | 0.89 |
| 1:C:10:SER:CB | 1:C:57:PHE:HA | 2.03 | 0.89 |
| 1:C:408:LEU:HD11 | 1:C:462:LEU:HD21 | 1.53 | 0.89 |
| 1:A:180:LYS:CA | 1:B:55:MET:CG | 2.42 | 0.89 |
| 1:A:184:LYS:H | 1:B:56:GLY:CA | 1.85 | 0.89 |
| 1:A:186:GLU:CG | 1:B:370:ASN:HA | 2.02 | 0.89 |
| 1:B:449:ASN:ND2 | 1:C:214:ASP:C | 2.25 | 0.89 |
| 1:A:180:LYS:HB3 | 1:B:12:TYR:CD2 | 2.08 | 0.89 |
| 1:A:293:VAL:HG13 | 1:A:294:GLU:H | 1.36 | 0.89 |
| 1:A:365:ALA:O | 1:A:368:ILE:HG22 | 1.72 | 0.89 |
| 1:B:396:ARG:C | 1:C:224:GLY:HA2 | 1.91 | 0.89 |
| 1:A:35:GLN:HB3 | 1:A:79:TYR:CE1 | 2.07 | 0.88 |
| 1:B:277:ASN:HB2 | 1:C:286:SER:HB3 | 1.55 | 0.88 |
| 1:B:445:GLY:HA2 | 1:C:185:ASN:CG | 1.93 | 0.88 |
| 1:B:445:GLY:HA2 | 1:C:185:ASN:HB3 | 1.54 | 0.88 |
| 1:C:11:ILE:CD1 | 1:C:324:LEU:HB3 | 2.04 | 0.88 |
| 1:B:208:VAL:HG12 | 1:B:231:VAL:CG1 | 2.04 | 0.88 |
| 1:A:200:ILE:HG21 | 1:B:467:LYS:HA | 1.55 | 0.88 |
| 1:A:205:ILE:HG13 | 1:B:478:SER:HB3 | 1.54 | 0.88 |
| 1:B:257:PRO:HA | 1:B:260:ASN:HB2 | 1.53 | 0.88 |
| 1:C:208:VAL:HG12 | 1:C:231:VAL:CG1 | 2.04 | 0.88 |
| 1:B:387:ILE:HA | 1:C:247:ASP:OD2 | 1.72 | 0.88 |
| 1:B:427:TYR:H | 1:C:188:TYR:HD1 | 1.13 | 0.88 |
| 1:A:208:VAL:HG12 | 1:A:231:VAL:CG1 | 2.04 | 0.88 |
| 1:A:222:ALA:HB2 | 1:B:368:ILE:CB | 2.02 | 0.88 |
| 1:B:11:ILE:CD1 | 1:B:324:LEU:HB3 | 2.04 | 0.88 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:275:MET:CA | 1:C:7:ARG:NH1 | 2.35 | 0.88 |
| 1:C:182:VAL:HG13 | 1:C:183:VAL:H | 1.36 | 0.88 |
| 1:A:42:TRP:HE1 | 1:A:62:ILE:CD1 | 1.86 | 0.88 |
| 1:A:165:TRP:HE1 | 1:B:110:ARG:N | 1.72 | 0.88 |
| 1:B:35:GLN:HB3 | 1:B:79:TYR:CE1 | 2.07 | 0.88 |
| 1:B:383:LYS:HD3 | 1:C:5:ASP:OD2 | 1.73 | 0.88 |
| 1:B:388:LYS:HE2 | 1:B:390:ASP:HB2 | 1.55 | 0.88 |
| 1:A:11:ILE:CD1 | 1:A:324:LEU:HB3 | 2.04 | 0.88 |
| 1:B:433:LEU:HB2 | 1:B:442:VAL:HG12 | 1.54 | 0.88 |
| 1:A:123:MET:HG3 | 1:A:146:PHE:CE1 | 2.07 | 0.88 |
| 1:A:408:LEU:HD11 | 1:A:462:LEU:HD21 | 1.53 | 0.88 |
| 1:B:276:ILE:O | 1:C:4:ALA:CA | 2.22 | 0.88 |
| 1:B:422:LEU:CD2 | 1:C:221:LYS:HZ2 | 1.83 | 0.88 |
| 1:A:16:THR:HG1 | 1:A:94:TYR:HE1 | 0.93 | 0.88 |
| 1:A:57:PHE:CE2 | 1:A:327:ILE:HG21 | 2.09 | 0.88 |
| 1:B:238:TYR:C | 1:C:377:THR:N | 2.28 | 0.88 |
| 1:C:293:VAL:HG13 | 1:C:294:GLU:H | 1.36 | 0.88 |
| 1:A:180:LYS:HE3 | 1:B:12:TYR:CA | 2.04 | 0.87 |
| 1:B:42:TRP:HE1 | 1:B:62:ILE:CD1 | 1.86 | 0.87 |
| 1:B:383:LYS:NZ | 1:C:6:TRP:N | 2.23 | 0.87 |
| 1:B:400:ASP:HA | 1:C:192:GLY:O | 1.74 | 0.87 |
| 1:C:123:MET:HG3 | 1:C:146:PHE:CE1 | 2.07 | 0.87 |
| 1:A:197:ASN:OD1 | 1:C:193:SER:O | 1.92 | 0.87 |
| 1:A:205:ILE:HG21 | 1:B:472:LYS:HG2 | 1.56 | 0.87 |
| 1:C:57:PHE:CE2 | 1:C:327:ILE:HG21 | 2.09 | 0.87 |
| 1:A:200:ILE:CG2 | 1:B:467:LYS:HA | 2.05 | 0.87 |
| 1:A:249:VAL:CG1 | 1:B:477:SER:OG | 2.22 | 0.87 |
| 1:C:42:TRP:HE1 | 1:C:62:ILE:CD1 | 1.86 | 0.87 |
| 1:C:422:LEU:HB3 | 1:C:450:VAL:HG22 | 1.55 | 0.87 |
| 1:C:45:ILE:HB | 1:C:103:LEU:CD2 | 2.03 | 0.87 |
| 1:C:280:LYS:CE | 1:C:383:LYS:HB3 | 2.04 | 0.87 |
| 1:C:305:THR:CG2 | 1:C:310:LEU:HD22 | 1.97 | 0.87 |
| 1:A:143:GLN:HE21 | 1:B:108:HIS:CE1 | 1.92 | 0.87 |
| 1:B:57:PHE:CE2 | 1:B:327:ILE:HG21 | 2.09 | 0.87 |
| 1:B:236:PRO:HG2 | 1:C:378:GLY:C | 1.95 | 0.87 |
| 1:B:237:ALA:CA | 1:C:379:PHE:N | 2.37 | 0.87 |
| 1:B:422:LEU:HB3 | 1:B:450:VAL:HG22 | 1.55 | 0.87 |
| 1:A:143:GLN:CG | 1:B:108:HIS:NE2 | 2.24 | 0.87 |
| 1:A:180:LYS:HZ3 | 1:A:182:VAL:HB | 1.38 | 0.87 |
| 1:A:295:ASN:HB3 | 1:A:298:ASN:HB2 | 1.56 | 0.87 |
| 1:A:305:THR:CG2 | 1:A:310:LEU:HD22 | 1.97 | 0.87 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:381:THR:HG22 | 1:C:1:ALA:HB2 | 1.54 | 0.87 |
| 1:A:87:ILE:HD11 | 1:B:374:SER:CA | 2.00 | 0.87 |
| 1:A:215:PHE:HD1 | 1:A:216:TRP:CE3 | 1.93 | 0.87 |
| 1:A:422:LEU:HB3 | 1:A:450:VAL:HG22 | 1.56 | 0.87 |
| 1:C:215:PHE:HD1 | 1:C:216:TRP:CE3 | 1.93 | 0.87 |
| 1:C:295:ASN:HB3 | 1:C:298:ASN:HB2 | 1.56 | 0.87 |
| 1:A:144:ASP:C | 1:B:58:THR:O | 2.13 | 0.87 |
| 1:A:205:ILE:CG1 | 1:B:471:SER:C | 2.42 | 0.87 |
| 1:B:385:PRO:HD2 | 1:C:2:THR:HG22 | 1.56 | 0.87 |
| 1:A:182:VAL:N | 1:B:57:PHE:CA | 2.31 | 0.86 |
| 1:A:208:VAL:HA | 1:A:216:TRP:HZ2 | 1.40 | 0.86 |
| 1:B:238:TYR:CG | 1:C:376:ASP:HB2 | 2.10 | 0.86 |
| 1:A:145:TYR:CD2 | 1:B:9:GLN:CG | 2.58 | 0.86 |
| 1:A:180:LYS:HB3 | 1:B:12:TYR:HD2 | 1.36 | 0.86 |
| 1:A:223:ALA:H | 1:B:468:LEU:CD2 | 1.87 | 0.86 |
| 1:B:295:ASN:HB3 | 1:B:298:ASN:HB2 | 1.56 | 0.86 |
| 1:A:280:LYS:CE | 1:A:383:LYS:HB3 | 2.04 | 0.86 |
| 1:B:215:PHE:HD1 | 1:B:216:TRP:CE3 | 1.93 | 0.86 |
| 1:A:431:GLN:HA | 1:A:431:GLN:HE21 | 1.41 | 0.86 |
| 1:B:276:ILE:O | 1:C:4:ALA:HA | 1.74 | 0.86 |
| 1:B:383:LYS:HZ3 | 1:C:6:TRP:N | 1.72 | 0.86 |
| 1:C:431:GLN:HA | 1:C:431:GLN:HE21 | 1.41 | 0.86 |
| 1:A:45:ILE:HB | 1:A:103:LEU:CD2 | 2.03 | 0.86 |
| 1:B:12:TYR:CE1 | 1:B:14:LEU:HD23 | 2.11 | 0.86 |
| 1:B:431:GLN:HE21 | 1:B:431:GLN:HA | 1.41 | 0.86 |
| 1:C:388:LYS:HE2 | 1:C:390:ASP:HB2 | 1.56 | 0.86 |
| 1:B:396:ARG:C | 1:C:224:GLY:CA | 2.44 | 0.86 |
| 1:B:400:ASP:CB | 1:C:194:LEU:O | 2.23 | 0.86 |
| 1:B:449:ASN:ND2 | 1:C:214:ASP:O | 2.09 | 0.86 |
| 1:B:399:THR:HG22 | 1:C:196:SER:O | 1.74 | 0.86 |
| 1:B:408:LEU:CD2 | 1:B:452:VAL:HG21 | 2.06 | 0.86 |
| 1:A:205:ILE:HG23 | 1:B:472:LYS:H | 1.40 | 0.86 |
| 1:A:219:TYR:HE1 | 1:B:471:SER:HG | 0.88 | 0.86 |
| 1:B:11:ILE:HD13 | 1:B:326:ILE:CG1 | 2.06 | 0.86 |
| 1:B:83:TRP:HE1 | 1:B:173:LEU:CD2 | 1.89 | 0.86 |
| 1:B:115:MET:HE1 | 1:B:204:ARG:HB2 | 1.54 | 0.86 |
| 1:B:400:ASP:CA | 1:C:193:SER:C | 2.44 | 0.86 |
| 1:A:408:LEU:CD2 | 1:A:452:VAL:HG21 | 2.06 | 0.86 |
| 1:B:386:TYR:CD2 | 1:C:247:ASP:HB3 | 2.11 | 0.86 |
| 1:C:83:TRP:HE1 | 1:C:173:LEU:CD2 | 1.89 | 0.86 |
| 1:A:87:ILE:HG13 | 1:B:374:SER:C | 1.85 | 0.85 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:180:LYS:HA | 1:B:55:MET:HB3 | 0.93 | 0.85 |
| 1:A:223:ALA:H | 1:B:468:LEU:HD21 | 1.03 | 0.85 |
| 1:A:205:ILE:CG2 | 1:B:472:LYS:CG | 2.13 | 0.85 |
| 1:A:230:GLU:HA | 1:A:250:LEU:CD2 | 2.06 | 0.85 |
| 1:B:16:THR:HG1 | 1:B:94:TYR:HE1 | 1.23 | 0.85 |
| 1:B:139:PRO:HG2 | 1:B:140:PHE:CD1 | 2.11 | 0.85 |
| 1:B:401:GLY:N | 1:C:193:SER:C | 2.29 | 0.85 |
| 1:A:11:ILE:HD13 | 1:A:326:ILE:CG1 | 2.06 | 0.85 |
| 1:A:83:TRP:HE1 | 1:A:173:LEU:CD2 | 1.89 | 0.85 |
| 1:A:219:TYR:CZ | 1:B:473:ILE:HD12 | 2.10 | 0.85 |
| 1:A:147:HIS:CG | 1:A:148:PRO:HD2 | 2.11 | 0.85 |
| 1:A:200:ILE:HD11 | 1:B:467:LYS:NZ | 1.91 | 0.85 |
| 1:B:238:TYR:HB2 | 1:C:376:ASP:CG | 1.96 | 0.85 |
| 1:B:406:THR:HG21 | 1:C:221:LYS:O | 1.75 | 0.85 |
| 1:C:408:LEU:CD2 | 1:C:452:VAL:HG21 | 2.06 | 0.85 |
| 1:C:147:HIS:CG | 1:C:148:PRO:HD2 | 2.11 | 0.85 |
| 1:C:208:VAL:HA | 1:C:216:TRP:HZ2 | 1.40 | 0.85 |
| 1:C:230:GLU:HA | 1:C:250:LEU:CD2 | 2.06 | 0.85 |
| 1:A:88:TYR:CD2 | 1:B:373:ILE:O | 2.29 | 0.85 |
| 1:A:220:ASN:OD1 | 1:B:439:CYS:SG | 2.35 | 0.85 |
| 1:A:221:LYS:CA | 1:B:434:THR:HG22 | 2.04 | 0.85 |
| 1:B:241:PRO:HB2 | 1:C:374:SER:C | 1.97 | 0.85 |
| 1:B:123:MET:HG3 | 1:B:146:PHE:CE1 | 2.07 | 0.85 |
| 1:B:230:GLU:HA | 1:B:250:LEU:CD2 | 2.06 | 0.85 |
| 1:A:194:LEU:O | 1:B:467:LYS:NZ | 2.08 | 0.85 |
| 1:B:235:ASP:OD2 | 1:C:399:THR:HG21 | 1.47 | 0.85 |
| 1:A:139:PRO:HG2 | 1:A:140:PHE:CD1 | 2.11 | 0.85 |
| 1:A:180:LYS:C | 1:B:55:MET:HB3 | 1.96 | 0.85 |
| 1:A:388:LYS:HE2 | 1:A:390:ASP:HB2 | 1.56 | 0.85 |
| 1:B:147:HIS:CG | 1:B:148:PRO:HD2 | 2.11 | 0.85 |
| 1:A:455:ALA:HB3 | 1:A:458:LEU:HD11 | 1.58 | 0.85 |
| 1:C:200:ILE:HG22 | 1:C:203:LEU:HD11 | 1.59 | 0.84 |
| 1:A:163:ASP:CA | 1:B:53:GLN:OE1 | 2.24 | 0.84 |
| 1:B:237:ALA:HB2 | 1:C:379:PHE:H | 1.39 | 0.84 |
| 1:B:383:LYS:CD | 1:C:5:ASP:OD2 | 2.24 | 0.84 |
| 1:A:12:TYR:CE1 | 1:A:14:LEU:HD23 | 2.11 | 0.84 |
| 1:A:204:ARG:O | 1:B:471:SER:HA | 1.58 | 0.84 |
| 1:C:11:ILE:HD13 | 1:C:326:ILE:CG1 | 2.06 | 0.84 |
| 1:A:186:GLU:HA | 1:B:369:ARG:NH1 | 1.92 | 0.84 |
| 1:A:420:LEU:HD23 | 1:A:452:VAL:CG1 | 2.07 | 0.84 |
| 1:B:236:PRO:HG2 | 1:C:378:GLY:O | 1.77 | 0.84 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:281:SER:HB2 | 1:C:6:TRP:O | 1.78 | 0.84 |
| 1:C:12:TYR:CE1 | 1:C:14:LEU:HD23 | 2.11 | 0.84 |
| 1:C:139:PRO:HG2 | 1:C:140:PHE:CD1 | 2.11 | 0.84 |
| 1:A:187:TRP:C | 1:B:367:ALA:O | 2.15 | 0.84 |
| 1:A:200:ILE:HG22 | 1:A:203:LEU:HD11 | 1.59 | 0.84 |
| 1:B:213:LYS:HE2 | 1:C:375:LYS:HG3 | 1.57 | 0.84 |
| 1:B:396:ARG:HB2 | 1:C:221:LYS:HA | 1.57 | 0.84 |
| 1:B:420:LEU:HD23 | 1:B:452:VAL:CG1 | 2.07 | 0.84 |
| 1:B:455:ALA:HB3 | 1:B:458:LEU:HD11 | 1.58 | 0.84 |
| 1:A:184:LYS:HD2 | 1:B:363:ALA:C | 1.97 | 0.84 |
| 1:A:219:TYR:CE2 | 1:B:371:TYR:CD2 | 2.64 | 0.84 |
| 1:A:145:TYR:HE1 | 1:B:113:TYR:HE2 | 1.14 | 0.84 |
| 1:B:386:TYR:CD1 | 1:C:288:LEU:HD12 | 2.11 | 0.84 |
| 1:B:449:ASN:HB2 | 1:C:184:LYS:HZ3 | 1.05 | 0.84 |
| 1:A:195:VAL:HG22 | 1:B:466:GLU:CG | 2.07 | 0.84 |
| 1:B:208:VAL:HA | 1:B:216:TRP:HZ2 | 1.40 | 0.84 |
| 1:B:387:ILE:HG22 | 1:B:395:MET:HA | 1.60 | 0.84 |
| 1:A:148:PRO:CD | 1:B:49:LEU:HD23 | 2.07 | 0.83 |
| 1:A:180:LYS:HG2 | 1:B:327:ILE:HG22 | 1.58 | 0.83 |
| 1:A:227:CYS:O | 1:B:476:ASP:CA | 2.26 | 0.83 |
| 1:B:211:VAL:HB | 1:B:216:TRP:CZ2 | 2.13 | 0.83 |
| 1:B:385:PRO:HA | 1:C:3:PRO:CG | 2.07 | 0.83 |
| 1:C:420:LEU:HD23 | 1:C:452:VAL:CG1 | 2.07 | 0.83 |
| 1:A:236:PRO:O | 1:A:240:CYS:HB2 | 1.78 | 0.83 |
| 1:A:211:VAL:HB | 1:A:216:TRP:CZ2 | 2.13 | 0.83 |
| 1:A:229:GLY:CA | 1:A:246:MET:HE1 | 2.08 | 0.83 |
| 1:B:281:SER:HB2 | 1:C:8:SER:H | 1.41 | 0.83 |
| 1:A:222:ALA:CA | 1:B:368:ILE:CG1 | 2.50 | 0.83 |
| 1:B:385:PRO:N | 1:C:3:PRO:HD3 | 1.72 | 0.83 |
| 1:B:385:PRO:HD3 | 1:C:2:THR:CG2 | 2.03 | 0.83 |
| 1:C:14:LEU:HD12 | 1:C:62:ILE:HG22 | 1.61 | 0.83 |
| 1:C:455:ALA:HB3 | 1:C:458:LEU:HD11 | 1.58 | 0.83 |
| 1:C:211:VAL:HB | 1:C:216:TRP:CZ2 | 2.13 | 0.83 |
| 1:A:200:ILE:HD12 | 1:B:467:LYS:HD2 | 1.60 | 0.83 |
| 1:A:221:LYS:HB3 | 1:B:436:VAL:N | 1.93 | 0.83 |
| 1:A:249:VAL:HG12 | 1:B:477:SER:OG | 1.79 | 0.83 |
| 1:C:236:PRO:O | 1:C:240:CYS:HB2 | 1.78 | 0.82 |
| 1:A:195:VAL:HG22 | 1:B:466:GLU:HG3 | 1.59 | 0.82 |
| 1:A:195:VAL:HA | 1:A:200:ILE:HD12 | 1.60 | 0.82 |
| 1:A:214:ASP:OD1 | 1:B:360:LYS:O | 1.95 | 0.82 |
| 1:A:432:GLN:HG2 | 1:A:465:THR:CG2 | 2.09 | 0.82 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:237:ALA:CB | 1:C:379:PHE:H | 1.92 | 0.82 |
| 1:C:387:ILE:HG22 | 1:C:395:MET:HA | 1.60 | 0.82 |
| 1:B:200:ILE:HG22 | 1:B:203:LEU:HD11 | 1.59 | 0.82 |
| 1:C:7:ARG:HG2 | 1:C:287:THR:OG1 | 1.79 | 0.82 |
| 1:A:180:LYS:CB | 1:B:12:TYR:HD2 | 1.92 | 0.82 |
| 1:A:225:VAL:HG23 | 1:B:465:THR:HG22 | 1.62 | 0.82 |
| 1:A:14:LEU:HD12 | 1:A:62:ILE:HG22 | 1.61 | 0.82 |
| 1:B:275:MET:C | 1:C:7:ARG:NH1 | 2.19 | 0.82 |
| 1:A:208:VAL:CA | 1:B:472:LYS:HE2 | 2.09 | 0.82 |
| 1:A:229:GLY:N | 1:B:477:SER:O | 2.13 | 0.82 |
| 1:A:280:LYS:HE3 | 1:A:383:LYS:HB3 | 1.62 | 0.82 |
| 1:C:35:GLN:HB3 | 1:C:79:TYR:HE1 | 1.44 | 0.82 |
| 1:A:200:ILE:HD12 | 1:B:467:LYS:NZ | 1.93 | 0.82 |
| 1:B:365:ALA:O | 1:B:368:ILE:HG22 | 1.72 | 0.82 |
| 1:B:422:LEU:HB3 | 1:B:450:VAL:CG2 | 2.09 | 0.82 |
| 1:C:195:VAL:HA | 1:C:200:ILE:HD12 | 1.60 | 0.82 |
| 1:A:115:MET:CE | 1:A:204:ARG:HB2 | 2.09 | 0.82 |
| 1:A:223:ALA:N | 1:B:468:LEU:CD2 | 2.32 | 0.82 |
| 1:B:7:ARG:HG2 | 1:B:287:THR:OG1 | 1.79 | 0.82 |
| 1:C:280:LYS:HE3 | 1:C:383:LYS:HB3 | 1.62 | 0.82 |
| 1:A:315:ALA:HA | 1:A:318:ILE:HG23 | 1.62 | 0.82 |
| 1:B:14:LEU:HD12 | 1:B:62:ILE:HG22 | 1.61 | 0.82 |
| 1:B:35:GLN:HB3 | 1:B:79:TYR:HE1 | 1.44 | 0.82 |
| 1:B:195:VAL:HA | 1:B:200:ILE:HD12 | 1.60 | 0.82 |
| 1:A:198:TYR:HB2 | 1:B:467:LYS:HZ3 | 1.42 | 0.81 |
| 1:B:115:MET:CE | 1:B:204:ARG:HB2 | 2.09 | 0.81 |
| 1:B:385:PRO:CA | 1:C:3:PRO:CG | 2.57 | 0.81 |
| 1:A:194:LEU:CD1 | 1:B:375:LYS:HB3 | 2.10 | 0.81 |
| 1:A:243:GLN:HB3 | 1:A:284:PRO:HG2 | 1.62 | 0.81 |
| 1:B:213:LYS:HE2 | 1:C:375:LYS:CG | 2.11 | 0.81 |
| 1:B:238:TYR:CB | 1:C:376:ASP:OD2 | 2.19 | 0.81 |
| 1:B:379:PHE:CE1 | 1:B:397:LYS:HE3 | 2.16 | 0.81 |
| 1:C:115:MET:CE | 1:C:204:ARG:HB2 | 2.09 | 0.81 |
| 1:C:422:LEU:HB3 | 1:C:450:VAL:CG2 | 2.09 | 0.81 |
| 1:C:432:GLN:HG2 | 1:C:465:THR:CG2 | 2.09 | 0.81 |
| 1:C:468:LEU:HD23 | 1:C:473:ILE:HG12 | 1.60 | 0.81 |
| 1:A:7:ARG:HG2 | 1:A:287:THR:OG1 | 1.80 | 0.81 |
| 1:A:180:LYS:CG | 1:B:12:TYR:HD2 | 1.92 | 0.81 |
| 1:A:200:ILE:HD12 | 1:B:467:LYS:CG | 2.10 | 0.81 |
| 1:B:341:PRO:HD2 | 1:B:342:ALA:N | 1.88 | 0.81 |
| 1:C:379:PHE:CE1 | 1:C:397:LYS:HE3 | 2.16 | 0.81 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:200:ILE:CB | 1:B:467:LYS:HA | 2.10 | 0.81 |
| 1:A:217:PRO:HD3 | 1:A:245:VAL:HG23 | 1.62 | 0.81 |
| 1:A:379:PHE:CE1 | 1:A:397:LYS:HE3 | 2.16 | 0.81 |
| 1:A:422:LEU:HB3 | 1:A:450:VAL:CG2 | 2.09 | 0.81 |
| 1:C:217:PRO:HD3 | 1:C:245:VAL:CG2 | 2.10 | 0.81 |
| 1:A:35:GLN:HB3 | 1:A:79:TYR:HE1 | 1.44 | 0.81 |
| 1:A:137:PHE:HB3 | 1:A:140:PHE:HB2 | 1.63 | 0.81 |
| 1:B:468:LEU:HD23 | 1:B:473:ILE:HG12 | 1.60 | 0.81 |
| 1:A:2:THR:CA | 1:B:432:GLN:HE22 | 1.34 | 0.81 |
| 1:A:217:PRO:HD3 | 1:A:245:VAL:CG2 | 2.10 | 0.81 |
| 1:B:217:PRO:HD3 | 1:B:245:VAL:CG2 | 2.10 | 0.81 |
| 1:B:278:THR:C | 1:C:380:VAL:CG2 | 2.41 | 0.81 |
| 1:B:426:SER:HA | 1:C:188:TYR:HD1 | 1.46 | 0.81 |
| 1:C:263:LYS:HD2 | 1:C:304:TYR:CD2 | 2.16 | 0.81 |
| 1:A:180:LYS:HZ1 | 1:B:11:ILE:CA | 1.94 | 0.81 |
| 1:B:45:ILE:HB | 1:B:103:LEU:CD2 | 2.03 | 0.81 |
| 1:A:87:ILE:CD1 | 1:B:374:SER:OG | 2.29 | 0.81 |
| 1:A:468:LEU:HD23 | 1:A:473:ILE:HG12 | 1.60 | 0.81 |
| 1:B:188:TYR:CE1 | 1:B:218:GLY:HA3 | 2.15 | 0.81 |
| 1:B:402:SER:H | 1:C:193:SER:HB2 | 1.46 | 0.81 |
| 1:B:428:THR:HA | 1:C:186:GLU:C | 2.01 | 0.81 |
| 1:B:432:GLN:HG2 | 1:B:465:THR:CG2 | 2.09 | 0.81 |
| 1:C:137:PHE:HB3 | 1:C:140:PHE:HB2 | 1.63 | 0.81 |
| 1:C:188:TYR:CE1 | 1:C:218:GLY:HA3 | 2.15 | 0.81 |
| 1:C:315:ALA:HA | 1:C:318:ILE:HG23 | 1.62 | 0.81 |
| 1:A:194:LEU:CB | 1:B:375:LYS:HB3 | 2.12 | 0.80 |
| 1:B:263:LYS:HD2 | 1:B:304:TYR:CD2 | 2.16 | 0.80 |
| 1:C:217:PRO:HD3 | 1:C:245:VAL:HG23 | 1.62 | 0.80 |
| 1:A:185:ASN:CG | 1:B:369:ARG:HD3 | 2.02 | 0.80 |
| 1:B:382:TYR:CA | 1:C:1:ALA:CB | 2.52 | 0.80 |
| 1:A:180:LYS:HD3 | 1:B:57:PHE:HB2 | 0.81 | 0.80 |
| 1:B:137:PHE:HB3 | 1:B:140:PHE:HB2 | 1.63 | 0.80 |
| 1:B:185:ASN:CA | 1:B:188:TYR:HD2 | 1.91 | 0.80 |
| 1:B:400:ASP:C | 1:C:193:SER:C | 2.40 | 0.80 |
| 1:B:424:GLY:O | 1:C:218:GLY:CA | 2.30 | 0.80 |
| 1:A:88:TYR:CZ | 1:B:373:ILE:C | 2.55 | 0.80 |
| 1:B:243:GLN:HB3 | 1:B:284:PRO:HG2 | 1.62 | 0.80 |
| 1:C:115:MET:HE1 | 1:C:204:ARG:HB2 | 1.61 | 0.80 |
| 1:A:387:ILE:HG22 | 1:A:395:MET:HA | 1.60 | 0.80 |
| 1:A:84:GLN:HE22 | 1:B:375:LYS:HZ2 | 1.28 | 0.80 |
| 1:A:177:ASP:HB3 | 1:B:53:GLN:HB3 | 1.61 | 0.80 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:206:ASP:HA | 1:A:230:GLU:HG3 | 1.64 | 0.80 |
| 1:B:192:GLY:O | 1:B:195:VAL:HG12 | 1.82 | 0.80 |
| 1:A:197:ASN:C | 1:B:467:LYS:CE | 2.50 | 0.80 |
| 1:A:205:ILE:CD1 | 1:B:478:SER:OXT | 2.30 | 0.80 |
| 1:A:410:ASN:HB3 | 1:A:454:MET:HE1 | 1.61 | 0.80 |
| 1:B:206:ASP:HA | 1:B:230:GLU:HG3 | 1.64 | 0.80 |
| 1:A:143:GLN:CD | 1:B:108:HIS:CA | 2.46 | 0.80 |
| 1:A:148:PRO:CG | 1:B:49:LEU:HD23 | 2.11 | 0.80 |
| 1:A:200:ILE:HB | 1:B:467:LYS:HA | 1.64 | 0.80 |
| 1:B:428:THR:CB | 1:C:186:GLU:O | 2.29 | 0.80 |
| 1:A:204:ARG:HB2 | 1:B:470:GLY:CA | 1.90 | 0.80 |
| 1:A:263:LYS:HD2 | 1:A:304:TYR:CD2 | 2.16 | 0.80 |
| 1:C:192:GLY:O | 1:C:195:VAL:HG12 | 1.82 | 0.80 |
| 1:A:219:TYR:HD1 | 1:B:473:ILE:HB | 1.00 | 0.80 |
| 1:B:204:ARG:HG3 | 1:B:228:ILE:CB | 2.12 | 0.80 |
| 1:B:278:THR:CA | 1:C:380:VAL:HG22 | 1.94 | 0.80 |
| 1:B:408:LEU:HD21 | 1:B:452:VAL:HG21 | 1.64 | 0.80 |
| 1:A:185:ASN:CA | 1:A:188:TYR:HD2 | 1.92 | 0.79 |
| 1:A:204:ARG:HG3 | 1:A:228:ILE:CB | 2.12 | 0.79 |
| 1:A:214:ASP:HB2 | 1:B:360:LYS:HA | 1.63 | 0.79 |
| 1:C:152:ILE:HD11 | 1:C:166:LEU:CA | 2.12 | 0.79 |
| 1:C:206:ASP:HA | 1:C:230:GLU:HG3 | 1.64 | 0.79 |
| 1:A:205:ILE:HG13 | 1:A:229:GLY:HA2 | 1.65 | 0.79 |
| 1:A:224:GLY:N | 1:B:465:THR:HA | 1.98 | 0.79 |
| 1:B:208:VAL:CA | 1:B:216:TRP:CZ2 | 2.65 | 0.79 |
| 1:B:236:PRO:CB | 1:C:380:VAL:HG12 | 2.11 | 0.79 |
| 1:B:424:GLY:HA2 | 1:C:216:TRP:O | 1.81 | 0.79 |
| 1:B:465:THR:HA | 1:B:468:LEU:HD12 | 1.65 | 0.79 |
| 1:C:243:GLN:HB3 | 1:C:284:PRO:HG2 | 1.62 | 0.79 |
| 1:A:192:GLY:O | 1:A:195:VAL:HG12 | 1.82 | 0.79 |
| 1:C:205:ILE:HG13 | 1:C:229:GLY:HA2 | 1.65 | 0.79 |
| 1:C:465:THR:HA | 1:C:468:LEU:HD12 | 1.65 | 0.79 |
| 1:B:420:LEU:CD2 | 1:B:452:VAL:HG13 | 2.11 | 0.79 |
| 1:C:204:ARG:HG3 | 1:C:228:ILE:CB | 2.12 | 0.79 |
| 1:C:208:VAL:CA | 1:C:216:TRP:CZ2 | 2.65 | 0.79 |
| 1:A:205:ILE:CD1 | 1:B:472:LYS:HG2 | 2.11 | 0.79 |
| 1:A:208:VAL:CA | 1:A:216:TRP:CZ2 | 2.65 | 0.79 |
| 1:A:84:GLN:HE22 | 1:B:375:LYS:HZ1 | 1.30 | 0.79 |
| 1:A:465:THR:HA | 1:A:468:LEU:HD12 | 1.65 | 0.79 |
| 1:C:408:LEU:HD21 | 1:C:452:VAL:HG21 | 1.64 | 0.79 |
| 1:A:175:ASP:O | 1:B:110:ARG:O | 2.01 | 0.79 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:147:HIS:HD2 | 1:B:177:ASP:O | 1.66 | 0.79 |
| 1:B:205:ILE:HG13 | 1:B:229:GLY:HA2 | 1.65 | 0.79 |
| 1:A:139:PRO:HG2 | 1:A:140:PHE:CE1 | 2.18 | 0.79 |
| 1:B:400:ASP:HB3 | 1:C:194:LEU:O | 1.83 | 0.79 |
| 1:B:428:THR:HA | 1:C:186:GLU:O | 1.83 | 0.79 |
| 1:A:217:PRO:CG | 1:B:364:SER:OG | 2.25 | 0.79 |
| 1:B:11:ILE:HD11 | 1:B:324:LEU:HB3 | 1.65 | 0.79 |
| 1:C:139:PRO:HG2 | 1:C:140:PHE:CE1 | 2.18 | 0.79 |
| 1:A:152:ILE:HD11 | 1:A:166:LEU:CA | 2.12 | 0.78 |
| 1:A:227:CYS:HB2 | 1:B:476:ASP:CA | 2.13 | 0.78 |
| 1:A:420:LEU:CD2 | 1:A:452:VAL:HG22 | 2.13 | 0.78 |
| 1:B:217:PRO:HD3 | 1:B:245:VAL:HG23 | 1.62 | 0.78 |
| 1:A:211:VAL:HB | 1:B:472:LYS:NZ | 1.98 | 0.78 |
| 1:A:216:TRP:O | 1:B:473:ILE:C | 2.22 | 0.78 |
| 1:A:224:GLY:N | 1:B:465:THR:CA | 2.43 | 0.78 |
| 1:A:408:LEU:HD21 | 1:A:452:VAL:HG21 | 1.64 | 0.78 |
| 1:B:315:ALA:HA | 1:B:318:ILE:HG23 | 1.62 | 0.78 |
| 1:B:446:SER:O | 1:C:182:VAL:N | 2.12 | 0.78 |
| 1:C:185:ASN:CA | 1:C:188:TYR:HD2 | 1.92 | 0.78 |
| 1:C:420:LEU:CD2 | 1:C:452:VAL:HG22 | 2.13 | 0.78 |
| 1:A:205:ILE:HD13 | 1:B:472:LYS:HA | 1.64 | 0.78 |
| 1:A:455:ALA:HB3 | 1:A:458:LEU:CD1 | 2.13 | 0.78 |
| 1:C:55:MET:HG3 | 1:C:57:PHE:HE2 | 1.48 | 0.78 |
| 1:A:205:ILE:HB | 1:B:478:SER:HG | 1.44 | 0.78 |
| 1:A:186:GLU:HA | 1:B:369:ARG:HH11 | 1.47 | 0.78 |
| 1:A:218:GLY:CA | 1:B:364:SER:O | 2.30 | 0.78 |
| 1:B:152:ILE:HD11 | 1:B:166:LEU:CA | 2.12 | 0.78 |
| 1:C:341:PRO:HD2 | 1:C:342:ALA:N | 1.87 | 0.78 |
| 1:A:143:GLN:CG | 1:B:108:HIS:CG | 2.56 | 0.78 |
| 1:C:11:ILE:HD11 | 1:C:324:LEU:HB3 | 1.65 | 0.78 |
| 1:C:455:ALA:HB3 | 1:C:458:LEU:CD1 | 2.13 | 0.78 |
| 1:A:16:THR:HG21 | 1:A:42:TRP:CD1 | 2.19 | 0.78 |
| 1:A:191:VAL:HG13 | 1:B:371:TYR:C | 2.03 | 0.78 |
| 1:B:402:SER:N | 1:C:193:SER:CA | 2.44 | 0.78 |
| 1:B:449:ASN:CA | 1:C:184:LYS:HZ1 | 1.96 | 0.78 |
| 1:B:455:ALA:HB3 | 1:B:458:LEU:CD1 | 2.13 | 0.78 |
| 1:C:16:THR:HG21 | 1:C:42:TRP:CD1 | 2.19 | 0.78 |
| 1:A:61:TRP:CZ3 | 1:A:326:ILE:HG21 | 2.19 | 0.78 |
| 1:A:180:LYS:CB | 1:B:12:TYR:CD2 | 2.67 | 0.78 |
| 1:A:182:VAL:N | 1:B:57:PHE:CB | 2.46 | 0.78 |
| 1:B:61:TRP:CZ3 | 1:B:326:ILE:HG21 | 2.19 | 0.78 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:122:HIS:ND1 | 1:B:173:LEU:HD22 | 1.99 | 0.78 |
| 1:B:139:PRO:HG2 | 1:B:140:PHE:CE1 | 2.18 | 0.78 |
| 1:B:16:THR:HG21 | 1:B:42:TRP:NE1 | 1.99 | 0.78 |
| 1:B:427:TYR:N | 1:C:188:TYR:HD1 | 1.75 | 0.78 |
| 1:B:420:LEU:CD2 | 1:B:452:VAL:HG22 | 2.13 | 0.77 |
| 1:B:445:GLY:CA | 1:C:185:ASN:CB | 2.61 | 0.77 |
| 1:C:61:TRP:CZ3 | 1:C:326:ILE:HG21 | 2.19 | 0.77 |
| 1:C:407:ILE:CG2 | 1:C:461:VAL:HG22 | 2.10 | 0.77 |
| 1:A:185:ASN:OD1 | 1:B:369:ARG:HD3 | 1.83 | 0.77 |
| 1:B:385:PRO:HG3 | 1:C:224:GLY:C | 2.04 | 0.77 |
| 1:C:147:HIS:HD2 | 1:C:177:ASP:O | 1.66 | 0.77 |
| 1:A:64:PRO:HD2 | 1:A:81:GLY:O | 1.84 | 0.77 |
| 1:A:189:ASP:O | 1:B:463:TYR:CE2 | 2.37 | 0.77 |
| 1:B:16:THR:HG21 | 1:B:42:TRP:CD1 | 2.19 | 0.77 |
| 1:C:16:THR:HG21 | 1:C:42:TRP:NE1 | 2.00 | 0.77 |
| 1:C:122:HIS:ND1 | 1:C:173:LEU:HD22 | 1.99 | 0.77 |
| 1:A:227:CYS:CB | 1:B:476:ASP:HB3 | 2.04 | 0.77 |
| 1:B:68:GLN:HA | 1:B:85:THR:HG22 | 1.67 | 0.77 |
| 1:C:64:PRO:HD2 | 1:C:81:GLY:O | 1.84 | 0.77 |
| 1:A:180:LYS:CG | 1:B:327:ILE:CG2 | 2.61 | 0.77 |
| 1:B:64:PRO:HD2 | 1:B:81:GLY:O | 1.84 | 0.77 |
| 1:C:147:HIS:CE1 | 1:C:163:ASP:HB3 | 2.19 | 0.77 |
| 1:A:52:ILE:HD12 | 1:A:112:MET:SD | 2.25 | 0.77 |
| 1:A:177:ASP:HB3 | 1:B:53:GLN:CA | 2.14 | 0.77 |
| 1:A:420:LEU:CD2 | 1:A:452:VAL:HG13 | 2.11 | 0.77 |
| 1:B:52:ILE:HD12 | 1:B:112:MET:SD | 2.25 | 0.77 |
| 1:C:420:LEU:HD21 | 1:C:452:VAL:HG22 | 1.66 | 0.77 |
| 1:A:55:MET:HG3 | 1:A:57:PHE:HE2 | 1.48 | 0.77 |
| 1:A:129:GLY:O | 1:B:109:GLU:HG2 | 1.85 | 0.77 |
| 1:A:11:ILE:HD11 | 1:A:324:LEU:HB3 | 1.65 | 0.77 |
| 1:A:88:TYR:CZ | 1:B:373:ILE:O | 2.38 | 0.77 |
| 1:A:145:TYR:CE2 | 1:B:9:GLN:CG | 2.53 | 0.77 |
| 1:B:11:ILE:HD11 | 1:B:324:LEU:CB | 2.15 | 0.77 |
| 1:A:147:HIS:CE1 | 1:A:163:ASP:HB3 | 2.19 | 0.77 |
| 1:A:243:GLN:HA | 1:A:249:VAL:HG11 | 1.67 | 0.77 |
| 1:A:420:LEU:HD21 | 1:A:452:VAL:HG22 | 1.66 | 0.77 |
| 1:B:147:HIS:CE1 | 1:B:163:ASP:HB3 | 2.19 | 0.77 |
| 1:A:11:ILE:HD11 | 1:A:324:LEU:CB | 2.15 | 0.77 |
| 1:A:194:LEU:HA | 1:B:403:GLN:HG2 | 1.67 | 0.77 |
| 1:B:243:GLN:HA | 1:B:249:VAL:HG11 | 1.67 | 0.77 |
| 1:B:249:VAL:HG22 | 1:B:289:LEU:HD12 | 1.67 | 0.77 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:68:GLN:HA | 1:C:85:THR:HG22 | 1.67 | 0.77 |
| 1:A:122:HIS:ND1 | 1:A:173:LEU:HD22 | 1.99 | 0.76 |
| 1:A:380:VAL:HG13 | 1:A:381:THR:H | 1.50 | 0.76 |
| 1:B:42:TRP:NE1 | 1:B:62:ILE:HD11 | 2.00 | 0.76 |
| 1:C:11:ILE:HD11 | 1:C:324:LEU:CB | 2.14 | 0.76 |
| 1:A:84:GLN:NE2 | 1:B:375:LYS:HZ1 | 1.81 | 0.76 |
| 1:A:85:THR:HG23 | 1:A:85:THR:O | 1.84 | 0.76 |
| 1:A:219:TYR:CD2 | 1:B:473:ILE:HG13 | 2.20 | 0.76 |
| 1:B:400:ASP:HB2 | 1:C:194:LEU:O | 1.84 | 0.76 |
| 1:A:68:GLN:HA | 1:A:85:THR:HG22 | 1.67 | 0.76 |
| 1:B:422:LEU:HD11 | 1:C:221:LYS:CD | 2.14 | 0.76 |
| 1:C:85:THR:HG23 | 1:C:85:THR:O | 1.84 | 0.76 |
| 1:C:243:GLN:HA | 1:C:249:VAL:HG11 | 1.68 | 0.76 |
| 1:C:129:GLY:O | 1:C:132:VAL:HB | 1.86 | 0.76 |
| 1:B:129:GLY:O | 1:B:132:VAL:HB | 1.86 | 0.76 |
| 1:B:51:TYR:OH | 1:B:332:GLU:HG3 | 1.86 | 0.76 |
| 1:B:85:THR:O | 1:B:85:THR:HG23 | 1.84 | 0.76 |
| 1:C:188:TYR:HE1 | 1:C:218:GLY:CA | 1.98 | 0.76 |
| 1:C:249:VAL:HG22 | 1:C:289:LEU:HD12 | 1.67 | 0.76 |
| 1:A:16:THR:HG21 | 1:A:42:TRP:NE1 | 2.00 | 0.76 |
| 1:A:87:ILE:HD13 | 1:B:374:SER:OG | 1.84 | 0.76 |
| 1:A:436:VAL:HG13 | 1:A:437:ILE:CG1 | 2.16 | 0.76 |
| 1:B:55:MET:HG3 | 1:B:57:PHE:HE2 | 1.48 | 0.76 |
| 1:B:188:TYR:HE1 | 1:B:218:GLY:CA | 1.98 | 0.76 |
| 1:A:60:ILE:HD12 | 1:A:107:LEU:HD13 | 1.68 | 0.76 |
| 1:A:196:SER:O | 1:B:466:GLU:OE1 | 2.02 | 0.76 |
| 1:A:341:PRO:HD2 | 1:A:342:ALA:N | 1.88 | 0.76 |
| 1:B:389:ASP:N | 1:C:244:ASN:OD1 | 2.18 | 0.76 |
| 1:C:52:ILE:HD12 | 1:C:112:MET:SD | 2.25 | 0.76 |
| 1:A:219:TYR:CD1 | 1:B:473:ILE:N | 2.40 | 0.76 |
| 1:B:383:LYS:HG2 | 1:C:113:TYR:CE1 | 2.21 | 0.76 |
| 1:B:399:THR:HG22 | 1:C:196:SER:CA | 2.16 | 0.76 |
| 1:B:449:ASN:N | 1:C:184:LYS:HZ2 | 1.82 | 0.76 |
| 1:A:197:ASN:C | 1:B:467:LYS:HE3 | 2.06 | 0.76 |
| 1:B:277:ASN:CB | 1:C:7:ARG:CZ | 2.46 | 0.76 |
| 1:B:380:VAL:HG13 | 1:B:381:THR:H | 1.50 | 0.76 |
| 1:C:60:ILE:HD12 | 1:C:107:LEU:HD13 | 1.68 | 0.76 |
| 1:C:436:VAL:HG13 | 1:C:437:ILE:CG1 | 2.16 | 0.76 |
| 1:C:465:THR:HA | 1:C:468:LEU:CD1 | 2.16 | 0.76 |
| 1:A:129:GLY:O | 1:A:132:VAL:HB | 1.86 | 0.75 |
| 1:A:205:ILE:CA | 1:B:471:SER:HA | 2.16 | 0.75 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:42:TRP:NE1 | 1:C:62:ILE:HD11 | 2.00 | 0.75 |
| 1:C:320:LEU:HD22 | 1:C:407:ILE:CD1 | 2.16 | 0.75 |
| 1:A:190:TRP:CZ2 | 1:B:375:LYS:CB | 2.58 | 0.75 |
| 1:A:435:GLU:HB2 | 1:A:440:THR:HB | 1.67 | 0.75 |
| 1:B:161:VAL:HG23 | 1:B:210:HIS:CD2 | 2.22 | 0.75 |
| 1:A:182:VAL:HB | 1:B:10:SER:O | 1.86 | 0.75 |
| 1:A:188:TYR:HE1 | 1:A:218:GLY:CA | 1.98 | 0.75 |
| 1:A:188:TYR:CE1 | 1:A:218:GLY:HA3 | 2.15 | 0.75 |
| 1:A:249:VAL:HG22 | 1:A:289:LEU:HD12 | 1.67 | 0.75 |
| 1:C:51:TYR:OH | 1:C:332:GLU:HG3 | 1.86 | 0.75 |
| 1:A:42:TRP:NE1 | 1:A:62:ILE:HD11 | 2.00 | 0.75 |
| 1:A:215:PHE:HE1 | 1:B:472:LYS:HB2 | 1.51 | 0.75 |
| 1:A:222:ALA:HB2 | 1:B:368:ILE:CD1 | 2.06 | 0.75 |
| 1:B:410:ASN:HB3 | 1:B:454:MET:HE1 | 1.66 | 0.75 |
| 1:B:420:LEU:HD21 | 1:B:452:VAL:HG22 | 1.66 | 0.75 |
| 1:C:68:GLN:HA | 1:C:85:THR:CG2 | 2.16 | 0.75 |
| 1:C:307:ASP:HB2 | 1:C:413:ALA:HB2 | 1.67 | 0.75 |
| 1:A:51:TYR:OH | 1:A:332:GLU:HG3 | 1.86 | 0.75 |
| 1:A:179:THR:OG1 | 1:B:52:ILE:HG13 | 1.87 | 0.75 |
| 1:B:399:THR:HB | 1:C:196:SER:HA | 1.67 | 0.75 |
| 1:B:436:VAL:HG13 | 1:B:437:ILE:CG1 | 2.16 | 0.75 |
| 1:A:319:ILE:HA | 1:A:325:PRO:HB2 | 1.66 | 0.75 |
| 1:A:396:ARG:NH1 | 1:A:404:ILE:HD11 | 2.01 | 0.75 |
| 1:A:465:THR:HA | 1:A:468:LEU:CD1 | 2.16 | 0.75 |
| 1:B:307:ASP:HB2 | 1:B:413:ALA:HB2 | 1.67 | 0.75 |
| 1:B:382:TYR:O | 1:C:2:THR:CB | 2.34 | 0.75 |
| 1:B:320:LEU:HD22 | 1:B:407:ILE:CD1 | 2.17 | 0.75 |
| 1:C:123:MET:HE3 | 1:C:140:PHE:HE1 | 1.50 | 0.75 |
| 1:C:161:VAL:HG23 | 1:C:210:HIS:CD2 | 2.21 | 0.75 |
| 1:B:449:ASN:CA | 1:C:184:LYS:NZ | 2.49 | 0.75 |
| 1:C:435:GLU:HB2 | 1:C:440:THR:HB | 1.67 | 0.75 |
| 1:A:180:LYS:CE | 1:B:57:PHE:CG | 2.68 | 0.75 |
| 1:A:194:LEU:HD22 | 1:B:375:LYS:CB | 2.17 | 0.75 |
| 1:A:212:GLN:HE22 | 1:B:53:GLN:C | 1.61 | 0.75 |
| 1:B:68:GLN:HA | 1:B:85:THR:CG2 | 2.16 | 0.75 |
| 1:B:195:VAL:CG2 | 1:B:200:ILE:HB | 2.13 | 0.75 |
| 1:A:84:GLN:NE2 | 1:B:375:LYS:HZ2 | 1.77 | 0.74 |
| 1:A:145:TYR:HE2 | 1:B:9:GLN:HB2 | 1.47 | 0.74 |
| 1:A:190:TRP:CZ2 | 1:B:374:SER:CB | 2.70 | 0.74 |
| 1:A:307:ASP:HB2 | 1:A:413:ALA:HB2 | 1.67 | 0.74 |
| 1:A:320:LEU:HD22 | 1:A:407:ILE:CD1 | 2.16 | 0.74 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:60:ILE:HD12 | 1:B:107:LEU:HD13 | 1.68 | 0.74 |
| 1:B:206:ASP:HA | 1:B:230:GLU:CG | 2.17 | 0.74 |
| 1:B:465:THR:HA | 1:B:468:LEU:CD1 | 2.16 | 0.74 |
| 1:A:68:GLN:HA | 1:A:85:THR:CG2 | 2.16 | 0.74 |
| 1:B:191:VAL:HG11 | 1:B:219:TYR:OH | 1.86 | 0.74 |
| 1:C:396:ARG:NH1 | 1:C:404:ILE:HD11 | 2.01 | 0.74 |
| 1:A:188:TYR:N | 1:B:367:ALA:C | 2.32 | 0.74 |
| 1:A:196:SER:HB3 | 1:B:403:GLN:CG | 2.13 | 0.74 |
| 1:A:205:ILE:HD13 | 1:B:472:LYS:CA | 2.18 | 0.74 |
| 1:B:56:GLY:HA3 | 1:B:366:ASN:HB3 | 1.69 | 0.74 |
| 1:B:310:LEU:O | 1:B:314:VAL:HG12 | 1.87 | 0.74 |
| 1:B:383:LYS:CG | 1:C:6:TRP:NE1 | 2.45 | 0.74 |
| 1:C:410:ASN:HB3 | 1:C:454:MET:HE1 | 1.68 | 0.74 |
| 1:A:373:ILE:CG2 | 1:A:377:THR:HG22 | 2.18 | 0.74 |
| 1:B:238:TYR:CA | 1:C:376:ASP:CB | 2.65 | 0.74 |
| 1:B:277:ASN:HB2 | 1:C:7:ARG:CZ | 2.15 | 0.74 |
| 1:C:14:LEU:HD12 | 1:C:62:ILE:CG2 | 2.17 | 0.74 |
| 1:A:161:VAL:HG23 | 1:A:210:HIS:CD2 | 2.22 | 0.74 |
| 1:B:435:GLU:HB2 | 1:B:440:THR:HB | 1.67 | 0.74 |
| 1:C:373:ILE:CG2 | 1:C:377:THR:HG22 | 2.18 | 0.74 |
| 1:B:14:LEU:HD12 | 1:B:62:ILE:CG2 | 2.17 | 0.74 |
| 1:A:310:LEU:O | 1:A:314:VAL:HG12 | 1.88 | 0.74 |
| 1:C:152:ILE:CD1 | 1:C:166:LEU:HG | 2.18 | 0.74 |
| 1:A:180:LYS:HZ1 | 1:B:11:ILE:HA | 1.51 | 0.74 |
| 1:A:190:TRP:HH2 | 1:B:375:LYS:HZ2 | 1.35 | 0.74 |
| 1:A:200:ILE:CD1 | 1:B:467:LYS:HZ3 | 1.96 | 0.74 |
| 1:B:55:MET:HG3 | 1:B:57:PHE:CE2 | 2.23 | 0.74 |
| 1:B:276:ILE:O | 1:C:4:ALA:HB2 | 1.88 | 0.74 |
| 1:A:163:ASP:HA | 1:B:53:GLN:OE1 | 1.87 | 0.74 |
| 1:A:194:LEU:CG | 1:B:375:LYS:HB3 | 2.18 | 0.74 |
| 1:A:197:ASN:O | 1:B:467:LYS:HE3 | 1.86 | 0.74 |
| 1:A:206:ASP:HA | 1:A:230:GLU:CG | 2.17 | 0.74 |
| 1:B:386:TYR:CD2 | 1:C:288:LEU:HD11 | 2.21 | 0.74 |
| 1:C:55:MET:HG3 | 1:C:57:PHE:CE2 | 2.22 | 0.74 |
| 1:C:56:GLY:HA3 | 1:C:366:ASN:HB3 | 1.68 | 0.74 |
| 1:C:191:VAL:HG11 | 1:C:219:TYR:OH | 1.87 | 0.74 |
| 1:A:163:ASP:HB3 | 1:B:53:GLN:OE1 | 1.87 | 0.74 |
| 1:A:216:TRP:CZ2 | 1:B:478:SER:OXT | 2.41 | 0.74 |
| 1:A:218:GLY:H | 1:B:364:SER:CB | 2.00 | 0.74 |
| 1:A:205:ILE:CD1 | 1:B:472:LYS:HA | 2.16 | 0.73 |
| 1:B:274:ASN:HA | 1:C:286:SER:N | 2.02 | 0.73 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:428:THR:CA | 1:C:186:GLU:O | 2.36 | 0.73 |
| 1:A:200:ILE:HG21 | 1:B:467:LYS:C | 2.09 | 0.73 |
| 1:B:468:LEU:HD23 | 1:B:473:ILE:CG1 | 2.18 | 0.73 |
| 1:C:206:ASP:HA | 1:C:230:GLU:CG | 2.17 | 0.73 |
| 1:C:468:LEU:HD23 | 1:C:473:ILE:CG1 | 2.18 | 0.73 |
| 1:A:11:ILE:HB | 1:A:326:ILE:HA | 1.70 | 0.73 |
| 1:B:152:ILE:CD1 | 1:B:166:LEU:HG | 2.18 | 0.73 |
| 1:B:277:ASN:HD22 | 1:C:286:SER:HB3 | 1.52 | 0.73 |
| 1:B:319:ILE:HA | 1:B:325:PRO:HB2 | 1.66 | 0.73 |
| 1:B:383:LYS:HZ3 | 1:C:6:TRP:H | 1.33 | 0.73 |
| 1:B:422:LEU:CD1 | 1:C:221:LYS:CG | 2.35 | 0.73 |
| 1:C:12:TYR:HE1 | 1:C:14:LEU:HD23 | 1.54 | 0.73 |
| 1:B:11:ILE:HB | 1:B:326:ILE:HA | 1.70 | 0.73 |
| 1:A:14:LEU:HD12 | 1:A:62:ILE:CG2 | 2.17 | 0.73 |
| 1:A:55:MET:HG3 | 1:A:57:PHE:CE2 | 2.23 | 0.73 |
| 1:A:204:ARG:CG | 1:A:228:ILE:HB | 2.18 | 0.73 |
| 1:B:83:TRP:CH2 | 1:B:171:VAL:HG21 | 2.24 | 0.73 |
| 1:C:204:ARG:CG | 1:C:228:ILE:HB | 2.18 | 0.73 |
| 1:C:310:LEU:O | 1:C:314:VAL:HG12 | 1.88 | 0.73 |
| 1:C:382:TYR:CD1 | 1:C:397:LYS:HA | 2.24 | 0.73 |
| 1:A:115:MET:CE | 1:B:470:GLY:HA3 | 2.17 | 0.73 |
| 1:A:222:ALA:HA | 1:B:368:ILE:HD11 | 0.76 | 0.73 |
| 1:B:213:LYS:CE | 1:C:375:LYS:CG | 2.66 | 0.73 |
| 1:B:381:THR:HG21 | 1:C:201:ASP:OD1 | 1.88 | 0.73 |
| 1:B:407:ILE:CG2 | 1:B:461:VAL:HG22 | 2.10 | 0.73 |
| 1:A:56:GLY:HA3 | 1:A:366:ASN:HB3 | 1.69 | 0.73 |
| 1:A:152:ILE:CD1 | 1:A:166:LEU:HG | 2.18 | 0.73 |
| 1:B:383:LYS:NZ | 1:C:5:ASP:HB3 | 2.00 | 0.73 |
| 1:C:123:MET:CB | 1:C:174:PRO:HG2 | 2.19 | 0.73 |
| 1:C:234:GLY:HA2 | 1:C:253:PRO:CD | 2.18 | 0.73 |
| 1:A:123:MET:CB | 1:A:174:PRO:HG2 | 2.19 | 0.73 |
| 1:A:143:GLN:CD | 1:B:108:HIS:CG | 2.61 | 0.73 |
| 1:A:316:ALA:O | 1:A:320:LEU:HB2 | 1.89 | 0.73 |
| 1:B:238:TYR:C | 1:C:376:ASP:HA | 2.08 | 0.73 |
| 1:B:382:TYR:CD1 | 1:B:397:LYS:HA | 2.24 | 0.73 |
| 1:C:11:ILE:HB | 1:C:326:ILE:HA | 1.70 | 0.73 |
| 1:C:57:PHE:CZ | 1:C:327:ILE:HG21 | 2.24 | 0.73 |
| 1:C:319:ILE:HA | 1:C:325:PRO:HB2 | 1.66 | 0.73 |
| 1:A:420:LEU:HD21 | 1:A:452:VAL:CG2 | 2.19 | 0.73 |
| 1:B:201:ASP:C | 1:B:225:VAL:HG13 | 2.09 | 0.73 |
| 1:B:238:TYR:C | 1:C:376:ASP:C | 2.47 | 0.73 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:57:PHE:CZ | 1:A:327:ILE:HG21 | 2.24 | 0.73 |
| 1:A:229:GLY:CA | 1:B:478:SER:CA | 2.52 | 0.73 |
| 1:A:468:LEU:HD23 | 1:A:473:ILE:CG1 | 2.18 | 0.73 |
| 1:B:123:MET:HE1 | 1:B:140:PHE:HE1 | 1.54 | 0.73 |
| 1:C:316:ALA:O | 1:C:320:LEU:HB2 | 1.89 | 0.73 |
| 1:B:316:ALA:O | 1:B:320:LEU:HB2 | 1.89 | 0.72 |
| 1:B:422:LEU:HD22 | 1:C:221:LYS:HZ2 | 1.46 | 0.72 |
| 1:A:83:TRP:CH2 | 1:A:171:VAL:HG21 | 2.24 | 0.72 |
| 1:A:201:ASP:C | 1:A:225:VAL:HG13 | 2.09 | 0.72 |
| 1:A:219:TYR:HD1 | 1:B:472:LYS:C | 1.91 | 0.72 |
| 1:A:234:GLY:HA2 | 1:A:253:PRO:CD | 2.18 | 0.72 |
| 1:B:123:MET:CB | 1:B:174:PRO:HG2 | 2.19 | 0.72 |
| 1:B:382:TYR:HD1 | 1:C:2:THR:CG2 | 1.93 | 0.72 |
| 1:C:49:LEU:HD23 | 1:C:110:ARG:HD2 | 1.70 | 0.72 |
| 1:A:189:ASP:O | 1:B:463:TYR:HE2 | 1.72 | 0.72 |
| 1:A:211:VAL:HG13 | 1:A:212:GLN:N | 2.04 | 0.72 |
| 1:A:382:TYR:CD1 | 1:A:397:LYS:HA | 2.24 | 0.72 |
| 1:B:400:ASP:CA | 1:C:192:GLY:O | 2.37 | 0.72 |
| 1:C:83:TRP:CH2 | 1:C:171:VAL:HG21 | 2.24 | 0.72 |
| 1:C:201:ASP:C | 1:C:225:VAL:HG13 | 2.09 | 0.72 |
| 1:B:422:LEU:CD1 | 1:C:221:LYS:HZ2 | 2.02 | 0.72 |
| 1:A:187:TRP:CZ3 | 1:B:374:SER:OG | 2.43 | 0.72 |
| 1:A:188:TYR:OH | 1:B:363:ALA:C | 2.28 | 0.72 |
| 1:A:247:ASP:HA | 1:B:475:SER:OG | 1.89 | 0.72 |
| 1:B:57:PHE:CZ | 1:B:327:ILE:HG21 | 2.24 | 0.72 |
| 1:A:373:ILE:HG23 | 1:A:377:THR:HG22 | 1.72 | 0.72 |
| 1:B:195:VAL:HG23 | 1:B:200:ILE:CB | 2.15 | 0.72 |
| 1:B:280:LYS:O | 1:C:7:ARG:HB2 | 1.89 | 0.72 |
| 1:B:371:TYR:CE2 | 1:B:473:ILE:HD11 | 2.25 | 0.72 |
| 1:A:143:GLN:O | 1:B:112:MET:N | 2.23 | 0.72 |
| 1:B:234:GLY:HA2 | 1:B:253:PRO:CD | 2.18 | 0.72 |
| 1:B:408:LEU:O | 1:B:408:LEU:HD22 | 1.90 | 0.72 |
| 1:C:195:VAL:HG23 | 1:C:200:ILE:CB | 2.15 | 0.72 |
| 1:A:371:TYR:CE2 | 1:A:473:ILE:HD11 | 2.25 | 0.72 |
| 1:A:406:THR:HG21 | 1:A:425:ALA:CB | 2.20 | 0.72 |
| 1:A:408:LEU:O | 1:A:408:LEU:HD22 | 1.90 | 0.72 |
| 1:C:211:VAL:HG13 | 1:C:212:GLN:N | 2.04 | 0.72 |
| 1:C:406:THR:HG21 | 1:C:425:ALA:CB | 2.20 | 0.72 |
| 1:A:407:ILE:CG2 | 1:A:461:VAL:HG22 | 2.10 | 0.72 |
| 1:C:420:LEU:HD21 | 1:C:452:VAL:CG2 | 2.19 | 0.72 |
| 1:A:49:LEU:HD23 | 1:A:110:ARG:HD2 | 1.70 | 0.71 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:180:LYS:HD2 | 1:B:12:TYR:CB | 2.02 | 0.71 |
| 1:B:21:ARG:HG3 | 1:B:40:GLY:HA2 | 1.72 | 0.71 |
| 1:B:241:PRO:HB2 | 1:C:375:LYS:N | 2.04 | 0.71 |
| 1:A:194:LEU:CA | 1:B:403:GLN:CG | 2.67 | 0.71 |
| 1:A:194:LEU:HD21 | 1:B:375:LYS:HG2 | 1.67 | 0.71 |
| 1:C:371:TYR:CE2 | 1:C:473:ILE:HD11 | 2.25 | 0.71 |
| 1:A:190:TRP:HZ3 | 1:B:371:TYR:HD1 | 1.33 | 0.71 |
| 1:A:205:ILE:HD12 | 1:B:478:SER:CA | 2.21 | 0.71 |
| 1:B:12:TYR:HE1 | 1:B:14:LEU:HD23 | 1.53 | 0.71 |
| 1:B:208:VAL:CA | 1:B:216:TRP:HZ2 | 2.03 | 0.71 |
| 1:C:21:ARG:HG3 | 1:C:40:GLY:HA2 | 1.72 | 0.71 |
| 1:C:373:ILE:HG23 | 1:C:377:THR:HG22 | 1.72 | 0.71 |
| 1:C:408:LEU:O | 1:C:408:LEU:HD22 | 1.90 | 0.71 |
| 1:B:211:VAL:HG13 | 1:B:212:GLN:N | 2.04 | 0.71 |
| 1:A:187:TRP:O | 1:B:368:ILE:O | 2.07 | 0.71 |
| 1:B:446:SER:HB2 | 1:C:181:ASP:OD1 | 1.90 | 0.71 |
| 1:A:294:GLU:OE2 | 1:A:300:ARG:HG3 | 1.90 | 0.71 |
| 1:B:45:ILE:CG2 | 1:B:103:LEU:HD21 | 2.21 | 0.71 |
| 1:B:49:LEU:HD23 | 1:B:110:ARG:HD2 | 1.70 | 0.71 |
| 1:B:229:GLY:CA | 1:B:246:MET:HE1 | 2.19 | 0.71 |
| 1:B:382:TYR:HA | 1:C:1:ALA:CB | 2.10 | 0.71 |
| 1:B:406:THR:HG21 | 1:B:425:ALA:CB | 2.20 | 0.71 |
| 1:A:178:THR:HA | 1:B:52:ILE:HD12 | 1.73 | 0.71 |
| 1:A:180:LYS:HE2 | 1:B:11:ILE:O | 1.86 | 0.71 |
| 1:A:468:LEU:HD23 | 1:A:473:ILE:CD1 | 2.21 | 0.71 |
| 1:B:294:GLU:OE2 | 1:B:300:ARG:HG3 | 1.90 | 0.71 |
| 1:B:420:LEU:HD21 | 1:B:452:VAL:CG2 | 2.19 | 0.71 |
| 1:C:61:TRP:HZ3 | 1:C:326:ILE:HG21 | 1.54 | 0.71 |
| 1:C:468:LEU:HD23 | 1:C:473:ILE:CD1 | 2.21 | 0.71 |
| 1:A:12:TYR:HE1 | 1:A:14:LEU:HD23 | 1.54 | 0.71 |
| 1:A:101:LYS:CG | 1:A:198:TYR:HA | 2.16 | 0.71 |
| 1:A:205:ILE:CG1 | 1:B:478:SER:CB | 2.66 | 0.71 |
| 1:A:224:GLY:CA | 1:B:434:THR:OG1 | 2.23 | 0.71 |
| 1:B:16:THR:OG1 | 1:B:94:TYR:HE1 | 1.73 | 0.71 |
| 1:B:381:THR:CG2 | 1:C:1:ALA:HB2 | 2.21 | 0.71 |
| 1:B:399:THR:HG22 | 1:C:196:SER:C | 2.11 | 0.71 |
| 1:A:209:LYS:HB3 | 1:A:231:VAL:CG2 | 2.21 | 0.71 |
| 1:A:215:PHE:CD1 | 1:A:216:TRP:CE3 | 2.79 | 0.71 |
| 1:A:473:ILE:HG23 | 1:A:474:CYS:H | 1.56 | 0.71 |
| 1:B:215:PHE:CD1 | 1:B:216:TRP:CE3 | 2.79 | 0.71 |
| 1:B:382:TYR:C | 1:C:2:THR:HG23 | 2.11 | 0.71 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:61:TRP:HZ3 | 1:A:326:ILE:HG21 | 1.54 | 0.70 |
| 1:A:252:TYR:HA | 1:A:292:PHE:HZ | 1.56 | 0.70 |
| 1:C:294:GLU:OE2 | 1:C:300:ARG:HG3 | 1.90 | 0.70 |
| 1:A:21:ARG:HG3 | 1:A:40:GLY:HA2 | 1.72 | 0.70 |
| 1:A:200:ILE:HG21 | 1:B:467:LYS:CA | 2.21 | 0.70 |
| 1:B:14:LEU:CD1 | 1:B:62:ILE:HG22 | 2.21 | 0.70 |
| 1:C:45:ILE:CG2 | 1:C:103:LEU:HD21 | 2.21 | 0.70 |
| 1:A:195:VAL:HA | 1:A:200:ILE:CD1 | 2.20 | 0.70 |
| 1:A:211:VAL:HG11 | 1:A:216:TRP:NE1 | 2.06 | 0.70 |
| 1:B:209:LYS:HB3 | 1:B:231:VAL:CG2 | 2.21 | 0.70 |
| 1:B:274:ASN:C | 1:C:286:SER:CB | 2.57 | 0.70 |
| 1:C:215:PHE:CD1 | 1:C:216:TRP:CE3 | 2.79 | 0.70 |
| 1:C:473:ILE:HG23 | 1:C:474:CYS:H | 1.56 | 0.70 |
| 1:A:14:LEU:CD1 | 1:A:62:ILE:HG22 | 2.22 | 0.70 |
| 1:A:180:LYS:C | 1:B:57:PHE:H | 1.93 | 0.70 |
| 1:A:227:CYS:CB | 1:B:476:ASP:CA | 2.69 | 0.70 |
| 1:B:116:VAL:HG11 | 1:B:200:ILE:HG23 | 1.73 | 0.70 |
| 1:B:386:TYR:CG | 1:C:288:LEU:HD12 | 2.26 | 0.70 |
| 1:C:179:THR:O | 1:C:180:LYS:HB3 | 1.91 | 0.70 |
| 1:C:195:VAL:HA | 1:C:200:ILE:CD1 | 2.20 | 0.70 |
| 1:B:204:ARG:CG | 1:B:228:ILE:HB | 2.18 | 0.70 |
| 1:C:209:LYS:HB3 | 1:C:231:VAL:CG2 | 2.21 | 0.70 |
| 1:C:252:TYR:HA | 1:C:292:PHE:HZ | 1.56 | 0.70 |
| 1:C:341:PRO:CD | 1:C:342:ALA:N | 2.54 | 0.70 |
| 1:A:45:ILE:CG2 | 1:A:103:LEU:HD21 | 2.21 | 0.70 |
| 1:A:64:PRO:HG3 | 1:A:82:TYR:CA | 2.21 | 0.70 |
| 1:A:179:THR:O | 1:A:180:LYS:HB3 | 1.91 | 0.70 |
| 1:B:11:ILE:HD13 | 1:B:324:LEU:HB3 | 1.73 | 0.70 |
| 1:B:195:VAL:HA | 1:B:200:ILE:CD1 | 2.20 | 0.70 |
| 1:B:209:LYS:HD2 | 1:B:232:LEU:O | 1.92 | 0.70 |
| 1:C:11:ILE:HD13 | 1:C:324:LEU:HB3 | 1.73 | 0.70 |
| 1:C:258:LEU:HD21 | 1:C:314:VAL:CG2 | 2.21 | 0.70 |
| 1:A:165:TRP:HE1 | 1:B:110:ARG:CB | 1.99 | 0.70 |
| 1:B:382:TYR:HE1 | 1:B:385:PRO:CD | 2.04 | 0.70 |
| 1:C:211:VAL:HG11 | 1:C:216:TRP:NE1 | 2.07 | 0.70 |
| 1:A:116:VAL:HG11 | 1:A:200:ILE:HG23 | 1.73 | 0.70 |
| 1:A:209:LYS:HD2 | 1:A:232:LEU:O | 1.92 | 0.70 |
| 1:A:11:ILE:HD13 | 1:A:324:LEU:HB3 | 1.73 | 0.70 |
| 1:A:189:ASP:CA | 1:B:369:ARG:HA | 2.21 | 0.70 |
| 1:A:221:LYS:HB2 | 1:B:436:VAL:CA | 2.10 | 0.70 |
| 1:A:205:ILE:HB | 1:B:478:SER:CB | 2.22 | 0.69 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:208:VAL:CA | 1:A:216:TRP:HZ2 | 2.03 | 0.69 |
| 1:B:238:TYR:CA | 1:C:376:ASP:HA | 2.22 | 0.69 |
| 1:B:381:THR:HG22 | 1:C:1:ALA:CB | 2.22 | 0.69 |
| 1:B:468:LEU:HD23 | 1:B:473:ILE:CD1 | 2.21 | 0.69 |
| 1:C:116:VAL:HG11 | 1:C:200:ILE:HG23 | 1.74 | 0.69 |
| 1:A:185:ASN:HB3 | 1:B:366:ASN:OD1 | 1.92 | 0.69 |
| 1:A:188:TYR:H | 1:B:367:ALA:C | 1.92 | 0.69 |
| 1:B:149:PHE:HA | 1:B:165:TRP:CD1 | 2.27 | 0.69 |
| 1:B:447:ASP:CG | 1:C:214:ASP:OD2 | 2.31 | 0.69 |
| 1:C:12:TYR:CD2 | 1:C:52:ILE:HG22 | 2.27 | 0.69 |
| 1:C:420:LEU:CD2 | 1:C:452:VAL:HG13 | 2.11 | 0.69 |
| 1:A:12:TYR:CD2 | 1:A:52:ILE:HG22 | 2.28 | 0.69 |
| 1:A:88:TYR:HE2 | 1:B:374:SER:N | 1.90 | 0.69 |
| 1:A:190:TRP:CZ2 | 1:B:374:SER:HB3 | 2.26 | 0.69 |
| 1:A:205:ILE:HD12 | 1:B:478:SER:C | 2.11 | 0.69 |
| 1:A:221:LYS:CB | 1:B:436:VAL:N | 2.36 | 0.69 |
| 1:B:152:ILE:HD13 | 1:B:166:LEU:HG | 1.74 | 0.69 |
| 1:B:277:ASN:ND2 | 1:C:285:ASP:O | 2.25 | 0.69 |
| 1:B:399:THR:O | 1:C:192:GLY:O | 2.09 | 0.69 |
| 1:B:422:LEU:HD11 | 1:C:221:LYS:CB | 2.21 | 0.69 |
| 1:C:14:LEU:CD1 | 1:C:62:ILE:HG22 | 2.21 | 0.69 |
| 1:C:101:LYS:CG | 1:C:198:TYR:HA | 2.16 | 0.69 |
| 1:C:209:LYS:HD2 | 1:C:232:LEU:O | 1.92 | 0.69 |
| 1:A:87:ILE:O | 1:A:88:TYR:HD2 | 1.75 | 0.69 |
| 1:A:215:PHE:HE1 | 1:B:472:LYS:CB | 2.05 | 0.69 |
| 1:A:341:PRO:CD | 1:A:342:ALA:N | 2.54 | 0.69 |
| 1:C:382:TYR:HE1 | 1:C:385:PRO:CD | 2.04 | 0.69 |
| 1:A:146:PHE:H | 1:B:112:MET:H | 1.33 | 0.69 |
| 1:C:16:THR:OG1 | 1:C:94:TYR:HE1 | 1.73 | 0.69 |
| 1:C:311:ALA:O | 1:C:314:VAL:HG13 | 1.93 | 0.69 |
| 1:B:12:TYR:CD2 | 1:B:52:ILE:HG22 | 2.27 | 0.69 |
| 1:B:216:TRP:HA | 1:B:216:TRP:HE3 | 1.57 | 0.69 |
| 1:B:252:TYR:HA | 1:B:292:PHE:HZ | 1.56 | 0.69 |
| 1:B:341:PRO:CD | 1:B:342:ALA:N | 2.54 | 0.69 |
| 1:B:408:LEU:HD13 | 1:B:408:LEU:H | 1.58 | 0.69 |
| 1:B:179:THR:O | 1:B:180:LYS:HB3 | 1.91 | 0.69 |
| 1:B:386:TYR:CD1 | 1:C:288:LEU:CD1 | 2.74 | 0.69 |
| 1:C:229:GLY:CA | 1:C:246:MET:HE1 | 2.22 | 0.69 |
| 1:A:216:TRP:HA | 1:A:216:TRP:HE3 | 1.57 | 0.69 |
| 1:A:382:TYR:HE1 | 1:A:385:PRO:CD | 2.04 | 0.69 |
| 1:B:9:GLN:HG3 | 1:B:58:THR:CB | 2.18 | 0.69 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:45:ILE:HG21 | 1:B:103:LEU:HD11 | 1.75 | 0.69 |
| 1:B:87:ILE:O | 1:B:88:TYR:HD2 | 1.74 | 0.69 |
| 1:C:45:ILE:HG21 | 1:C:103:LEU:HD11 | 1.75 | 0.69 |
| 1:C:52:ILE:HG13 | 1:C:53:GLN:H | 1.56 | 0.69 |
| 1:C:87:ILE:O | 1:C:88:TYR:HD2 | 1.75 | 0.69 |
| 1:A:52:ILE:HG13 | 1:A:53:GLN:N | 2.08 | 0.69 |
| 1:A:52:ILE:HG13 | 1:A:53:GLN:H | 1.56 | 0.69 |
| 1:A:149:PHE:HA | 1:A:165:TRP:CD1 | 2.27 | 0.69 |
| 1:A:182:VAL:CG2 | 1:B:10:SER:O | 2.41 | 0.69 |
| 1:A:184:LYS:HD2 | 1:B:363:ALA:O | 1.91 | 0.69 |
| 1:A:221:LYS:HG2 | 1:B:436:VAL:N | 1.81 | 0.69 |
| 1:A:258:LEU:HD21 | 1:A:314:VAL:CG2 | 2.21 | 0.69 |
| 1:A:269:MET:HG3 | 1:A:393:ILE:HD11 | 1.75 | 0.69 |
| 1:B:123:MET:SD | 1:B:137:PHE:HD1 | 2.16 | 0.69 |
| 1:B:294:GLU:CD | 1:B:300:ARG:HG3 | 2.13 | 0.69 |
| 1:B:400:ASP:CB | 1:C:194:LEU:C | 2.62 | 0.69 |
| 1:C:69:LEU:HB2 | 1:C:71:GLN:NE2 | 2.06 | 0.69 |
| 1:C:216:TRP:CB | 1:C:245:VAL:HG22 | 2.23 | 0.69 |
| 1:A:198:TYR:HB2 | 1:B:467:LYS:HZ1 | 1.56 | 0.69 |
| 1:A:406:THR:HG21 | 1:A:425:ALA:HB1 | 1.75 | 0.69 |
| 1:B:311:ALA:O | 1:B:314:VAL:HG13 | 1.93 | 0.69 |
| 1:C:152:ILE:HD13 | 1:C:166:LEU:HG | 1.74 | 0.69 |
| 1:C:269:MET:HG3 | 1:C:393:ILE:HD11 | 1.75 | 0.69 |
| 1:C:294:GLU:CD | 1:C:300:ARG:HG3 | 2.13 | 0.69 |
| 1:C:406:THR:HG21 | 1:C:425:ALA:HB1 | 1.75 | 0.69 |
| 1:A:200:ILE:HD12 | 1:B:467:LYS:HG3 | 1.75 | 0.68 |
| 1:A:215:PHE:CD1 | 1:A:216:TRP:CZ3 | 2.82 | 0.68 |
| 1:B:269:MET:HG3 | 1:B:393:ILE:HD11 | 1.75 | 0.68 |
| 1:B:273:TYR:CE1 | 1:B:386:TYR:HB2 | 2.28 | 0.68 |
| 1:A:69:LEU:HB2 | 1:A:71:GLN:NE2 | 2.06 | 0.68 |
| 1:A:107:LEU:CA | 1:A:110:ARG:HG2 | 2.14 | 0.68 |
| 1:A:179:THR:OG1 | 1:B:49:LEU:O | 2.12 | 0.68 |
| 1:A:246:MET:CE | 1:B:476:ASP:CG | 2.62 | 0.68 |
| 1:A:311:ALA:O | 1:A:314:VAL:HG13 | 1.93 | 0.68 |
| 1:B:61:TRP:HZ3 | 1:B:326:ILE:HG21 | 1.54 | 0.68 |
| 1:B:161:VAL:HG23 | 1:B:210:HIS:HD2 | 1.58 | 0.68 |
| 1:B:215:PHE:CD1 | 1:B:216:TRP:CZ3 | 2.82 | 0.68 |
| 1:B:426:SER:HA | 1:C:188:TYR:CD1 | 2.28 | 0.68 |
| 1:C:215:PHE:CD1 | 1:C:216:TRP:CZ3 | 2.82 | 0.68 |
| 1:A:16:THR:OG1 | 1:A:94:TYR:HE1 | 1.73 | 0.68 |
| 1:A:151:PHE:O | 1:A:153:GLN:HG2 | 1.93 | 0.68 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:294:GLU:CD | 1:A:300:ARG:HG3 | 2.13 | 0.68 |
| 1:B:211:VAL:HG11 | 1:B:216:TRP:NE1 | 2.06 | 0.68 |
| 1:B:386:TYR:CZ | 1:C:288:LEU:CD1 | 2.76 | 0.68 |
| 1:C:52:ILE:HG13 | 1:C:53:GLN:N | 2.08 | 0.68 |
| 1:C:149:PHE:HA | 1:C:165:TRP:CD1 | 2.27 | 0.68 |
| 1:C:216:TRP:HA | 1:C:216:TRP:HE3 | 1.57 | 0.68 |
| 1:C:408:LEU:HD13 | 1:C:408:LEU:H | 1.58 | 0.68 |
| 1:A:116:VAL:O | 1:B:469:ALA:HB3 | 1.91 | 0.68 |
| 1:A:152:ILE:HD13 | 1:A:166:LEU:HG | 1.74 | 0.68 |
| 1:A:315:ALA:O | 1:A:319:ILE:HG12 | 1.93 | 0.68 |
| 1:C:195:VAL:CG2 | 1:C:200:ILE:HB | 2.13 | 0.68 |
| 1:C:273:TYR:CE1 | 1:C:386:TYR:HB2 | 2.29 | 0.68 |
| 1:A:208:VAL:N | 1:B:472:LYS:CE | 2.50 | 0.68 |
| 1:A:382:TYR:OH | 1:A:396:ARG:HG2 | 1.93 | 0.68 |
| 1:B:400:ASP:HB2 | 1:C:194:LEU:C | 2.14 | 0.68 |
| 1:B:400:ASP:HA | 1:C:193:SER:C | 2.14 | 0.68 |
| 1:B:406:THR:HG21 | 1:B:425:ALA:HB1 | 1.75 | 0.68 |
| 1:C:87:ILE:HG23 | 1:C:139:PRO:HG3 | 1.75 | 0.68 |
| 1:A:45:ILE:HG21 | 1:A:103:LEU:HD11 | 1.75 | 0.68 |
| 1:A:87:ILE:HG23 | 1:A:139:PRO:HG3 | 1.75 | 0.68 |
| 1:A:89:SER:O | 1:A:90:LEU:HB2 | 1.92 | 0.68 |
| 1:A:118:VAL:HB | 1:B:471:SER:CB | 2.18 | 0.68 |
| 1:A:178:THR:CA | 1:B:52:ILE:HD12 | 2.22 | 0.68 |
| 1:A:180:LYS:HG3 | 1:B:12:TYR:CG | 2.28 | 0.68 |
| 1:A:205:ILE:N | 1:B:471:SER:HA | 1.81 | 0.68 |
| 1:A:216:TRP:CB | 1:A:245:VAL:HG22 | 2.23 | 0.68 |
| 1:A:219:TYR:CD1 | 1:B:472:LYS:C | 2.66 | 0.68 |
| 1:A:225:VAL:CG2 | 1:B:465:THR:HG22 | 2.22 | 0.68 |
| 1:A:321:ASN:CG | 1:A:322:ASP:H | 1.97 | 0.68 |
| 1:B:315:ALA:O | 1:B:319:ILE:HG12 | 1.93 | 0.68 |
| 1:B:446:SER:HB3 | 1:C:181:ASP:N | 2.08 | 0.68 |
| 1:C:107:LEU:CA | 1:C:110:ARG:HG2 | 2.14 | 0.68 |
| 1:C:382:TYR:OH | 1:C:396:ARG:HG2 | 1.93 | 0.68 |
| 1:A:227:CYS:HB2 | 1:B:476:ASP:N | 2.08 | 0.68 |
| 1:A:228:ILE:N | 1:B:476:ASP:HB2 | 1.99 | 0.68 |
| 1:B:28:ALA:HB3 | 1:B:348:TRP:HZ2 | 1.58 | 0.68 |
| 1:B:151:PHE:O | 1:B:153:GLN:HG2 | 1.93 | 0.68 |
| 1:B:369:ARG:HH11 | 1:B:369:ARG:HB3 | 1.57 | 0.68 |
| 1:C:123:MET:SD | 1:C:137:PHE:HD1 | 2.16 | 0.68 |
| 1:C:208:VAL:CG2 | 1:C:216:TRP:CE2 | 2.76 | 0.68 |
| 1:A:88:TYR:CZ | 1:B:373:ILE:CA | 2.65 | 0.68 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:177:ASP:C | 1:B:53:GLN:HA | 2.14 | 0.68 |
| 1:A:196:SER:C | 1:B:467:LYS:HE3 | 2.14 | 0.68 |
| 1:A:408:LEU:HD21 | 1:A:452:VAL:CG2 | 2.23 | 0.68 |
| 1:A:408:LEU:H | 1:A:408:LEU:HD13 | 1.58 | 0.68 |
| 1:B:69:LEU:HB2 | 1:B:71:GLN:NE2 | 2.06 | 0.68 |
| 1:B:216:TRP:CB | 1:B:245:VAL:HG22 | 2.23 | 0.68 |
| 1:B:385:PRO:HB3 | 1:C:226:TYR:N | 2.09 | 0.68 |
| 1:C:151:PHE:O | 1:C:153:GLN:HG2 | 1.93 | 0.68 |
| 1:B:180:LYS:HZ1 | 1:B:182:VAL:HB | 1.58 | 0.68 |
| 1:A:165:TRP:NE1 | 1:B:110:ARG:N | 2.34 | 0.68 |
| 1:A:200:ILE:CG2 | 1:B:467:LYS:CA | 2.72 | 0.68 |
| 1:A:208:VAL:CG2 | 1:A:216:TRP:CE2 | 2.76 | 0.68 |
| 1:A:273:TYR:CE1 | 1:A:386:TYR:HB2 | 2.28 | 0.68 |
| 1:B:89:SER:O | 1:B:90:LEU:HB2 | 1.92 | 0.68 |
| 1:B:251:ASN:O | 1:B:254:ILE:HG22 | 1.94 | 0.68 |
| 1:C:251:ASN:O | 1:C:254:ILE:HG22 | 1.94 | 0.68 |
| 1:C:321:ASN:CG | 1:C:322:ASP:H | 1.97 | 0.68 |
| 1:A:123:MET:SD | 1:A:137:PHE:HD1 | 2.16 | 0.67 |
| 1:B:52:ILE:HG13 | 1:B:53:GLN:N | 2.08 | 0.67 |
| 1:B:402:SER:N | 1:C:193:SER:HA | 2.08 | 0.67 |
| 1:B:408:LEU:HD21 | 1:B:452:VAL:CG2 | 2.23 | 0.67 |
| 1:C:408:LEU:HD21 | 1:C:452:VAL:CG2 | 2.23 | 0.67 |
| 1:A:385:PRO:HD2 | 1:A:396:ARG:O | 1.94 | 0.67 |
| 1:C:161:VAL:HG23 | 1:C:210:HIS:HD2 | 1.58 | 0.67 |
| 1:A:215:PHE:CE2 | 1:B:367:ALA:HB1 | 2.29 | 0.67 |
| 1:A:251:ASN:O | 1:A:254:ILE:HG22 | 1.94 | 0.67 |
| 1:B:87:ILE:HG23 | 1:B:139:PRO:HG3 | 1.75 | 0.67 |
| 1:B:205:ILE:HD12 | 1:B:208:VAL:CG2 | 2.25 | 0.67 |
| 1:C:111:GLY:O | 1:C:112:MET:HB2 | 1.94 | 0.67 |
| 1:A:221:LYS:O | 1:B:434:THR:HG22 | 1.93 | 0.67 |
| 1:B:424:GLY:HA3 | 1:C:220:ASN:HB3 | 0.83 | 0.67 |
| 1:C:64:PRO:HG3 | 1:C:82:TYR:CA | 2.21 | 0.67 |
| 1:C:385:PRO:HD2 | 1:C:396:ARG:O | 1.94 | 0.67 |
| 1:B:101:LYS:CG | 1:B:198:TYR:HA | 2.16 | 0.67 |
| 1:B:396:ARG:C | 1:C:224:GLY:HA3 | 2.15 | 0.67 |
| 1:C:315:ALA:O | 1:C:319:ILE:HG12 | 1.93 | 0.67 |
| 1:C:369:ARG:HB3 | 1:C:369:ARG:HH11 | 1.57 | 0.67 |
| 1:A:145:TYR:CE1 | 1:B:9:GLN:OE1 | 2.23 | 0.67 |
| 1:A:177:ASP:OD1 | 1:B:53:GLN:O | 2.12 | 0.67 |
| 1:B:280:LYS:O | 1:C:6:TRP:C | 2.32 | 0.67 |
| 1:A:239:THR:HG21 | 1:A:253:PRO:HD3 | 1.76 | 0.67 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:369:ARG:HB3 | 1:A:369:ARG:HH11 | 1.57 | 0.67 |
| 1:B:274:ASN:C | 1:C:286:SER:CA | 2.59 | 0.67 |
| 1:C:205:ILE:HD12 | 1:C:208:VAL:CG2 | 2.24 | 0.67 |
| 1:B:64:PRO:HG3 | 1:B:82:TYR:CA | 2.21 | 0.67 |
| 1:C:28:ALA:HB3 | 1:C:348:TRP:HZ2 | 1.58 | 0.67 |
| 1:A:190:TRP:CE3 | 1:A:191:VAL:CG1 | 2.78 | 0.67 |
| 1:A:251:ASN:OD1 | 1:A:254:ILE:HD12 | 1.95 | 0.67 |
| 1:B:208:VAL:CG2 | 1:B:216:TRP:CE2 | 2.76 | 0.67 |
| 1:B:321:ASN:CG | 1:B:322:ASP:H | 1.97 | 0.67 |
| 1:B:449:ASN:HB2 | 1:C:184:LYS:HZ2 | 1.57 | 0.67 |
| 1:C:89:SER:O | 1:C:90:LEU:HB2 | 1.92 | 0.67 |
| 1:A:165:TRP:NE1 | 1:B:110:ARG:CB | 2.58 | 0.66 |
| 1:A:180:LYS:CG | 1:B:327:ILE:HG21 | 2.23 | 0.66 |
| 1:A:184:LYS:HB2 | 1:B:363:ALA:O | 1.94 | 0.66 |
| 1:B:176:LEU:HD22 | 1:B:187:TRP:HE1 | 1.59 | 0.66 |
| 1:B:182:VAL:O | 1:B:186:GLU:HB3 | 1.95 | 0.66 |
| 1:B:238:TYR:HA | 1:C:376:ASP:CG | 2.14 | 0.66 |
| 1:C:211:VAL:CB | 1:C:216:TRP:CZ2 | 2.78 | 0.66 |
| 1:A:147:HIS:ND1 | 1:A:148:PRO:HD2 | 2.10 | 0.66 |
| 1:A:153:GLN:O | 1:A:154:ASN:HB3 | 1.95 | 0.66 |
| 1:A:200:ILE:HG22 | 1:A:203:LEU:CD1 | 2.25 | 0.66 |
| 1:B:385:PRO:CD | 1:C:3:PRO:HD2 | 2.25 | 0.66 |
| 1:C:382:TYR:CE1 | 1:C:397:LYS:HA | 2.30 | 0.66 |
| 1:B:200:ILE:HG22 | 1:B:203:LEU:CD1 | 2.25 | 0.66 |
| 1:C:236:PRO:HG3 | 1:C:278:THR:HG21 | 1.77 | 0.66 |
| 1:C:399:THR:HG22 | 1:C:400:ASP:H | 1.60 | 0.66 |
| 1:A:28:ALA:HB3 | 1:A:348:TRP:HZ2 | 1.58 | 0.66 |
| 1:A:140:PHE:CE2 | 1:A:176:LEU:HD21 | 2.31 | 0.66 |
| 1:A:194:LEU:HD13 | 1:B:375:LYS:CG | 2.25 | 0.66 |
| 1:C:147:HIS:ND1 | 1:C:148:PRO:HD2 | 2.10 | 0.66 |
| 1:C:182:VAL:O | 1:C:186:GLU:HB3 | 1.95 | 0.66 |
| 1:A:176:LEU:HD22 | 1:A:187:TRP:HE1 | 1.59 | 0.66 |
| 1:A:205:ILE:HD12 | 1:A:208:VAL:CG2 | 2.25 | 0.66 |
| 1:A:211:VAL:CB | 1:A:216:TRP:CZ2 | 2.78 | 0.66 |
| 1:B:385:PRO:HD2 | 1:B:396:ARG:O | 1.94 | 0.66 |
| 1:C:200:ILE:HG22 | 1:C:203:LEU:CD1 | 2.25 | 0.66 |
| 1:C:362:ILE:O | 1:C:366:ASN:HB2 | 1.96 | 0.66 |
| 1:A:111:GLY:O | 1:A:112:MET:HB2 | 1.94 | 0.66 |
| 1:A:346:ALA:HB1 | 1:A:348:TRP:CE3 | 2.31 | 0.66 |
| 1:A:399:THR:HG22 | 1:A:400:ASP:H | 1.60 | 0.66 |
| 1:B:111:GLY:O | 1:B:112:MET:HB2 | 1.94 | 0.66 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:140:PHE:CE2 | 1:B:176:LEU:HD21 | 2.31 | 0.66 |
| 1:B:194:LEU:HG | 1:B:200:ILE:HD13 | 1.78 | 0.66 |
| 1:B:236:PRO:CB | 1:C:380:VAL:CG1 | 2.74 | 0.66 |
| 1:B:258:LEU:O | 1:B:262:PHE:HB2 | 1.95 | 0.66 |
| 1:C:140:PHE:CE2 | 1:C:176:LEU:HD21 | 2.31 | 0.66 |
| 1:C:239:THR:HG21 | 1:C:253:PRO:HD3 | 1.77 | 0.66 |
| 1:C:346:ALA:HB1 | 1:C:348:TRP:CE3 | 2.31 | 0.66 |
| 1:A:258:LEU:O | 1:A:262:PHE:HB2 | 1.95 | 0.66 |
| 1:B:190:TRP:CE3 | 1:B:191:VAL:CG1 | 2.78 | 0.66 |
| 1:B:211:VAL:CG2 | 1:B:215:PHE:HB3 | 2.26 | 0.66 |
| 1:C:83:TRP:NE1 | 1:C:173:LEU:HD21 | 2.03 | 0.66 |
| 1:C:251:ASN:OD1 | 1:C:254:ILE:HD12 | 1.95 | 0.66 |
| 1:A:185:ASN:OD1 | 1:B:369:ARG:CD | 2.44 | 0.66 |
| 1:A:236:PRO:HG3 | 1:A:278:THR:HG21 | 1.77 | 0.66 |
| 1:A:379:PHE:CZ | 1:A:397:LYS:HE3 | 2.31 | 0.66 |
| 1:B:187:TRP:CZ3 | 1:B:190:TRP:CZ3 | 2.84 | 0.66 |
| 1:B:382:TYR:CE1 | 1:B:397:LYS:HA | 2.31 | 0.66 |
| 1:C:11:ILE:CG1 | 1:C:324:LEU:HD23 | 2.24 | 0.66 |
| 1:C:55:MET:O | 1:C:362:ILE:HG22 | 1.96 | 0.66 |
| 1:A:182:VAL:O | 1:A:186:GLU:HB3 | 1.95 | 0.66 |
| 1:A:208:VAL:CB | 1:B:478:SER:OG | 2.05 | 0.66 |
| 1:B:55:MET:O | 1:B:362:ILE:HG22 | 1.96 | 0.66 |
| 1:B:379:PHE:CZ | 1:B:397:LYS:HE3 | 2.31 | 0.66 |
| 1:A:180:LYS:CD | 1:B:12:TYR:CB | 2.65 | 0.66 |
| 1:A:211:VAL:CG2 | 1:A:215:PHE:HB3 | 2.26 | 0.66 |
| 1:C:153:GLN:O | 1:C:154:ASN:HB3 | 1.95 | 0.66 |
| 1:C:211:VAL:CG2 | 1:C:215:PHE:HB3 | 2.26 | 0.66 |
| 1:A:55:MET:O | 1:A:362:ILE:HG22 | 1.96 | 0.65 |
| 1:A:362:ILE:O | 1:A:366:ASN:HB2 | 1.96 | 0.65 |
| 1:B:211:VAL:CB | 1:B:216:TRP:CZ2 | 2.78 | 0.65 |
| 1:B:239:THR:HG21 | 1:B:253:PRO:HD3 | 1.76 | 0.65 |
| 1:B:243:GLN:HB3 | 1:B:284:PRO:CG | 2.25 | 0.65 |
| 1:B:346:ALA:HB1 | 1:B:348:TRP:CE3 | 2.31 | 0.65 |
| 1:C:176:LEU:HD22 | 1:C:187:TRP:HE1 | 1.59 | 0.65 |
| 1:C:190:TRP:CE3 | 1:C:191:VAL:CG1 | 2.78 | 0.65 |
| 1:C:243:GLN:HB3 | 1:C:284:PRO:CG | 2.25 | 0.65 |
| 1:A:222:ALA:HB1 | 1:B:368:ILE:HG13 | 0.65 | 0.65 |
| 1:B:251:ASN:OD1 | 1:B:254:ILE:HD12 | 1.95 | 0.65 |
| 1:A:147:HIS:CA | 1:B:110:ARG:C | 2.48 | 0.65 |
| 1:A:195:VAL:HG11 | 1:B:464:PRO:O | 1.96 | 0.65 |
| 1:B:410:ASN:HB3 | 1:B:454:MET:CE | 2.26 | 0.65 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:11:ILE:HG21 | 1:C:326:ILE:HG12 | 1.78 | 0.65 |
| 1:A:115:MET:HE1 | 1:B:470:GLY:HA3 | 1.78 | 0.65 |
| 1:A:243:GLN:HB3 | 1:A:284:PRO:CG | 2.25 | 0.65 |
| 1:A:305:THR:HG23 | 1:A:307:ASP:OD2 | 1.97 | 0.65 |
| 1:B:236:PRO:HG3 | 1:B:278:THR:HG21 | 1.77 | 0.65 |
| 1:B:305:THR:HG23 | 1:B:307:ASP:OD2 | 1.97 | 0.65 |
| 1:B:385:PRO:HA | 1:C:3:PRO:CB | 2.27 | 0.65 |
| 1:B:472:LYS:O | 1:B:473:ILE:HG22 | 1.97 | 0.65 |
| 1:A:87:ILE:CG1 | 1:B:374:SER:HA | 2.11 | 0.65 |
| 1:A:191:VAL:O | 1:B:467:LYS:HB3 | 1.97 | 0.65 |
| 1:A:332:GLU:HG2 | 1:A:333:GLN:H | 1.62 | 0.65 |
| 1:B:124:GLY:N | 1:B:174:PRO:HD2 | 2.12 | 0.65 |
| 1:B:147:HIS:ND1 | 1:B:148:PRO:HD2 | 2.10 | 0.65 |
| 1:B:153:GLN:O | 1:B:154:ASN:HB3 | 1.95 | 0.65 |
| 1:A:186:GLU:CA | 1:B:369:ARG:HH11 | 2.10 | 0.65 |
| 1:A:194:LEU:HG | 1:A:200:ILE:HD13 | 1.78 | 0.65 |
| 1:A:213:LYS:O | 1:A:214:ASP:HB3 | 1.97 | 0.65 |
| 1:A:341:PRO:HD2 | 1:A:342:ALA:H | 1.59 | 0.65 |
| 1:C:194:LEU:HG | 1:C:200:ILE:HD13 | 1.78 | 0.65 |
| 1:A:11:ILE:HG21 | 1:A:326:ILE:HG12 | 1.78 | 0.65 |
| 1:A:148:PRO:HA | 1:B:107:LEU:N | 2.09 | 0.65 |
| 1:A:218:GLY:CA | 1:B:364:SER:HB3 | 2.27 | 0.65 |
| 1:C:379:PHE:CZ | 1:C:397:LYS:HE3 | 2.31 | 0.65 |
| 1:A:187:TRP:CZ3 | 1:A:190:TRP:CZ3 | 2.84 | 0.65 |
| 1:B:238:TYR:CD2 | 1:C:403:GLN:NE2 | 2.64 | 0.65 |
| 1:B:385:PRO:HB3 | 1:C:226:TYR:HA | 1.79 | 0.65 |
| 1:A:352:TYR:C | 1:A:354:THR:H | 1.99 | 0.65 |
| 1:A:410:ASN:HB3 | 1:A:454:MET:CE | 2.26 | 0.65 |
| 1:C:187:TRP:CZ3 | 1:C:190:TRP:CZ3 | 2.84 | 0.65 |
| 1:C:258:LEU:O | 1:C:262:PHE:HB2 | 1.95 | 0.65 |
| 1:A:205:ILE:CG2 | 1:B:472:LYS:N | 2.59 | 0.65 |
| 1:A:382:TYR:CE1 | 1:A:397:LYS:HA | 2.30 | 0.65 |
| 1:B:11:ILE:HD12 | 1:B:325:PRO:C | 2.17 | 0.65 |
| 1:C:124:GLY:N | 1:C:174:PRO:HD2 | 2.12 | 0.65 |
| 1:A:11:ILE:CG1 | 1:A:324:LEU:HD23 | 2.24 | 0.64 |
| 1:B:258:LEU:HD21 | 1:B:314:VAL:CG2 | 2.21 | 0.64 |
| 1:C:332:GLU:HG2 | 1:C:333:GLN:H | 1.62 | 0.64 |
| 1:C:410:ASN:HB3 | 1:C:454:MET:CE | 2.26 | 0.64 |
| 1:A:145:TYR:CE1 | 1:B:113:TYR:CD2 | 2.84 | 0.64 |
| 1:A:161:VAL:HG23 | 1:A:210:HIS:HD2 | 1.58 | 0.64 |
| 1:A:226:TYR:HA | 1:A:247:ASP:OD1 | 1.97 | 0.64 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:78:ALA:O | 1:C:81:GLY:HA2 | 1.97 | 0.64 |
| 1:C:88:TYR:CE2 | 1:C:139:PRO:HB3 | 2.32 | 0.64 |
| 1:C:341:PRO:HD2 | 1:C:342:ALA:H | 1.59 | 0.64 |
| 1:A:11:ILE:HD11 | 1:A:324:LEU:CA | 2.28 | 0.64 |
| 1:A:88:TYR:CE2 | 1:A:139:PRO:HB3 | 2.32 | 0.64 |
| 1:B:385:PRO:CA | 1:C:3:PRO:HG3 | 2.27 | 0.64 |
| 1:A:124:GLY:N | 1:A:174:PRO:HD2 | 2.12 | 0.64 |
| 1:A:229:GLY:HA3 | 1:A:246:MET:HE1 | 1.73 | 0.64 |
| 1:B:88:TYR:CE2 | 1:B:139:PRO:HB3 | 2.32 | 0.64 |
| 1:C:87:ILE:O | 1:C:88:TYR:CD2 | 2.51 | 0.64 |
| 1:A:197:ASN:ND2 | 1:C:196:SER:OG | 2.19 | 0.64 |
| 1:A:216:TRP:CE3 | 1:A:216:TRP:HA | 2.33 | 0.64 |
| 1:A:220:ASN:C | 1:B:473:ILE:HG23 | 2.18 | 0.64 |
| 1:B:87:ILE:O | 1:B:88:TYR:CD2 | 2.51 | 0.64 |
| 1:B:213:LYS:CE | 1:C:375:LYS:HG3 | 2.27 | 0.64 |
| 1:B:213:LYS:O | 1:B:214:ASP:HB3 | 1.97 | 0.64 |
| 1:A:83:TRP:NE1 | 1:A:173:LEU:HD21 | 2.03 | 0.64 |
| 1:A:196:SER:OG | 1:C:193:SER:HA | 1.97 | 0.64 |
| 1:B:11:ILE:HG21 | 1:B:326:ILE:HG12 | 1.78 | 0.64 |
| 1:B:226:TYR:HA | 1:B:247:ASP:OD1 | 1.98 | 0.64 |
| 1:B:237:ALA:CA | 1:C:379:PHE:H | 2.06 | 0.64 |
| 1:C:11:ILE:HD11 | 1:C:324:LEU:CA | 2.27 | 0.64 |
| 1:C:11:ILE:HD12 | 1:C:325:PRO:C | 2.17 | 0.64 |
| 1:B:332:GLU:HG2 | 1:B:333:GLN:H | 1.62 | 0.64 |
| 1:B:388:LYS:CA | 1:C:244:ASN:O | 2.42 | 0.64 |
| 1:B:422:LEU:HD13 | 1:C:221:LYS:HZ2 | 1.62 | 0.64 |
| 1:C:216:TRP:CE3 | 1:C:216:TRP:HA | 2.33 | 0.64 |
| 1:B:11:ILE:HD11 | 1:B:324:LEU:CA | 2.28 | 0.64 |
| 1:B:78:ALA:O | 1:B:81:GLY:HA2 | 1.97 | 0.64 |
| 1:B:216:TRP:CE3 | 1:B:216:TRP:HA | 2.33 | 0.64 |
| 1:B:385:PRO:N | 1:C:3:PRO:HD2 | 1.65 | 0.64 |
| 1:C:115:MET:HE1 | 1:C:228:ILE:HG13 | 1.80 | 0.64 |
| 1:C:226:TYR:HA | 1:C:247:ASP:OD1 | 1.97 | 0.64 |
| 1:C:383:LYS:O | 1:C:385:PRO:HD3 | 1.97 | 0.64 |
| 1:A:11:ILE:CD1 | 1:A:326:ILE:HG12 | 2.26 | 0.64 |
| 1:A:55:MET:SD | 1:A:362:ILE:HD13 | 2.38 | 0.64 |
| 1:A:252:TYR:HA | 1:A:292:PHE:CZ | 2.33 | 0.64 |
| 1:A:458:LEU:HD13 | 1:A:460:ARG:HH22 | 1.62 | 0.64 |
| 1:A:11:ILE:HB | 1:A:326:ILE:HG12 | 1.79 | 0.64 |
| 1:A:78:ALA:O | 1:A:81:GLY:HA2 | 1.96 | 0.64 |
| 1:A:87:ILE:O | 1:A:88:TYR:CD2 | 2.51 | 0.64 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:190:TRP:CE3 | 1:B:371:TYR:CG | 2.86 | 0.64 |
| 1:A:292:PHE:O | 1:A:293:VAL:HG12 | 1.98 | 0.64 |
| 1:B:11:ILE:CD1 | 1:B:326:ILE:HG12 | 2.26 | 0.64 |
| 1:B:83:TRP:NE1 | 1:B:173:LEU:HD21 | 2.03 | 0.64 |
| 1:B:383:LYS:CD | 1:C:5:ASP:CB | 2.73 | 0.64 |
| 1:B:430:GLY:CA | 1:C:185:ASN:ND2 | 2.61 | 0.64 |
| 1:C:208:VAL:CA | 1:C:216:TRP:HZ2 | 2.03 | 0.64 |
| 1:C:213:LYS:O | 1:C:214:ASP:HB3 | 1.97 | 0.64 |
| 1:C:305:THR:HG23 | 1:C:307:ASP:OD2 | 1.97 | 0.64 |
| 1:A:221:LYS:C | 1:B:434:THR:CG2 | 2.66 | 0.63 |
| 1:A:383:LYS:O | 1:A:385:PRO:HD3 | 1.97 | 0.63 |
| 1:B:172:SER:O | 1:B:174:PRO:HD3 | 1.97 | 0.63 |
| 1:B:251:ASN:HB3 | 1:B:254:ILE:CG2 | 2.28 | 0.63 |
| 1:B:274:ASN:O | 1:C:286:SER:OG | 2.15 | 0.63 |
| 1:B:280:LYS:HB2 | 1:C:3:PRO:O | 1.95 | 0.63 |
| 1:C:11:ILE:HB | 1:C:326:ILE:HG12 | 1.79 | 0.63 |
| 1:C:292:PHE:O | 1:C:293:VAL:HG12 | 1.98 | 0.63 |
| 1:C:472:LYS:O | 1:C:473:ILE:HG22 | 1.97 | 0.63 |
| 1:A:11:ILE:HD12 | 1:A:325:PRO:C | 2.17 | 0.63 |
| 1:A:182:VAL:N | 1:B:57:PHE:CG | 2.58 | 0.63 |
| 1:A:225:VAL:O | 1:A:225:VAL:HG12 | 1.98 | 0.63 |
| 1:B:11:ILE:HB | 1:B:326:ILE:HG12 | 1.79 | 0.63 |
| 1:B:292:PHE:O | 1:B:293:VAL:HG12 | 1.98 | 0.63 |
| 1:C:45:ILE:CG2 | 1:C:49:LEU:HD11 | 2.06 | 0.63 |
| 1:C:252:TYR:HA | 1:C:292:PHE:CZ | 2.33 | 0.63 |
| 1:C:473:ILE:CG2 | 1:C:474:CYS:H | 2.10 | 0.63 |
| 1:B:252:TYR:HA | 1:B:292:PHE:CZ | 2.33 | 0.63 |
| 1:C:55:MET:SD | 1:C:362:ILE:HD13 | 2.38 | 0.63 |
| 1:A:68:GLN:HE22 | 1:A:81:GLY:HA2 | 1.62 | 0.63 |
| 1:A:165:TRP:NE1 | 1:B:110:ARG:CA | 1.78 | 0.63 |
| 1:A:473:ILE:CG2 | 1:A:474:CYS:H | 2.10 | 0.63 |
| 1:B:383:LYS:O | 1:B:385:PRO:HD3 | 1.97 | 0.63 |
| 1:B:458:LEU:HD13 | 1:B:460:ARG:HH22 | 1.62 | 0.63 |
| 1:C:75:TYR:HE1 | 1:C:170:THR:CG2 | 2.12 | 0.63 |
| 1:A:68:GLN:O | 1:A:85:THR:HG21 | 1.99 | 0.63 |
| 1:A:75:TYR:HE1 | 1:A:170:THR:CG2 | 2.12 | 0.63 |
| 1:A:472:LYS:O | 1:A:473:ILE:HG22 | 1.97 | 0.63 |
| 1:B:238:TYR:N | 1:C:376:ASP:C | 2.34 | 0.63 |
| 1:B:371:TYR:CD2 | 1:B:473:ILE:HD11 | 2.34 | 0.63 |
| 1:C:11:ILE:CD1 | 1:C:326:ILE:HG12 | 2.26 | 0.63 |
| 1:A:200:ILE:HG22 | 1:B:468:LEU:N | 2.14 | 0.63 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:75:TYR:CE1 | 1:B:170:THR:HG21 | 2.34 | 0.63 |
| 1:B:387:ILE:HG23 | 1:B:388:LYS:H | 1.63 | 0.63 |
| 1:C:387:ILE:HG23 | 1:C:388:LYS:H | 1.63 | 0.63 |
| 1:C:458:LEU:HD13 | 1:C:460:ARG:HH22 | 1.62 | 0.63 |
| 1:A:55:MET:HB3 | 1:A:57:PHE:CE2 | 2.34 | 0.63 |
| 1:A:187:TRP:CB | 1:B:367:ALA:O | 2.47 | 0.63 |
| 1:A:224:GLY:CA | 1:B:434:THR:CB | 2.72 | 0.63 |
| 1:B:55:MET:SD | 1:B:362:ILE:HD13 | 2.38 | 0.63 |
| 1:C:172:SER:O | 1:C:174:PRO:HD3 | 1.98 | 0.63 |
| 1:A:287:THR:HG21 | 1:A:380:VAL:C | 2.20 | 0.63 |
| 1:A:387:ILE:HG23 | 1:A:388:LYS:H | 1.63 | 0.63 |
| 1:B:75:TYR:HE1 | 1:B:170:THR:CG2 | 2.12 | 0.63 |
| 1:B:383:LYS:C | 1:C:3:PRO:CD | 2.59 | 0.63 |
| 1:C:371:TYR:CD2 | 1:C:473:ILE:HD11 | 2.34 | 0.63 |
| 1:A:143:GLN:NE2 | 1:B:108:HIS:HA | 2.12 | 0.63 |
| 1:A:177:ASP:CB | 1:B:53:GLN:HG2 | 2.27 | 0.63 |
| 1:A:194:LEU:HD22 | 1:B:375:LYS:HG2 | 0.68 | 0.63 |
| 1:A:197:ASN:CA | 1:B:467:LYS:HE3 | 2.28 | 0.63 |
| 1:A:214:ASP:CG | 1:B:360:LYS:O | 2.36 | 0.63 |
| 1:B:2:THR:HB | 1:B:3:PRO:CD | 2.22 | 0.63 |
| 1:B:45:ILE:CG2 | 1:B:49:LEU:HD11 | 2.06 | 0.63 |
| 1:B:238:TYR:CB | 1:C:376:ASP:CG | 2.65 | 0.63 |
| 1:B:341:PRO:HD2 | 1:B:342:ALA:H | 1.59 | 0.63 |
| 1:C:55:MET:HB3 | 1:C:57:PHE:CE2 | 2.34 | 0.63 |
| 1:C:68:GLN:O | 1:C:85:THR:HG21 | 1.99 | 0.63 |
| 1:C:68:GLN:HE22 | 1:C:81:GLY:HA2 | 1.62 | 0.63 |
| 1:C:225:VAL:O | 1:C:225:VAL:HG12 | 1.98 | 0.63 |
| 1:C:287:THR:HG21 | 1:C:380:VAL:C | 2.20 | 0.63 |
| 1:A:45:ILE:CG2 | 1:A:49:LEU:HD11 | 2.06 | 0.62 |
| 1:A:143:GLN:OE1 | 1:B:112:MET:O | 2.16 | 0.62 |
| 1:A:144:ASP:OD1 | 1:B:6:TRP:HH2 | 1.81 | 0.62 |
| 1:A:208:VAL:CG2 | 1:B:478:SER:N | 2.33 | 0.62 |
| 1:B:208:VAL:HG23 | 1:B:216:TRP:CZ2 | 2.34 | 0.62 |
| 1:B:229:GLY:HA3 | 1:B:246:MET:HE1 | 1.80 | 0.62 |
| 1:B:238:TYR:CB | 1:C:376:ASP:CB | 2.76 | 0.62 |
| 1:B:341:PRO:CD | 1:B:342:ALA:H | 2.12 | 0.62 |
| 1:C:341:PRO:CD | 1:C:342:ALA:H | 2.12 | 0.62 |
| 1:A:217:PRO:C | 1:B:473:ILE:O | 2.37 | 0.62 |
| 1:A:341:PRO:CD | 1:A:342:ALA:H | 2.12 | 0.62 |
| 1:B:68:GLN:HE22 | 1:B:81:GLY:HA2 | 1.62 | 0.62 |
| 1:B:225:VAL:O | 1:B:225:VAL:HG12 | 1.98 | 0.62 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:281:SER:CB | 1:C:6:TRP:O | 2.47 | 0.62 |
| 1:C:352:TYR:C | 1:C:354:THR:H | 1.99 | 0.62 |
| 1:A:418:TYR:CD1 | 1:A:454:MET:HE3 | 2.34 | 0.62 |
| 1:B:11:ILE:HD12 | 1:B:325:PRO:O | 1.99 | 0.62 |
| 1:A:172:SER:O | 1:A:174:PRO:HD3 | 1.98 | 0.62 |
| 1:A:177:ASP:HB3 | 1:B:53:GLN:CG | 2.29 | 0.62 |
| 1:B:430:GLY:N | 1:C:185:ASN:CB | 2.58 | 0.62 |
| 1:C:208:VAL:HG23 | 1:C:216:TRP:CZ2 | 2.34 | 0.62 |
| 1:A:52:ILE:O | 1:A:55:MET:HB2 | 2.00 | 0.62 |
| 1:A:208:VAL:HG23 | 1:A:216:TRP:CZ2 | 2.34 | 0.62 |
| 1:A:217:PRO:HB2 | 1:B:437:ILE:C | 2.20 | 0.62 |
| 1:A:371:TYR:CD2 | 1:A:473:ILE:HD11 | 2.34 | 0.62 |
| 1:B:79:TYR:CE2 | 1:B:344:ARG:HG2 | 2.35 | 0.62 |
| 1:B:287:THR:HG21 | 1:B:380:VAL:C | 2.20 | 0.62 |
| 1:B:383:LYS:HD2 | 1:C:5:ASP:CB | 2.25 | 0.62 |
| 1:C:75:TYR:CE1 | 1:C:170:THR:HG21 | 2.34 | 0.62 |
| 1:C:180:LYS:O | 1:C:180:LYS:HD3 | 2.00 | 0.62 |
| 1:A:11:ILE:HD12 | 1:A:325:PRO:O | 1.99 | 0.62 |
| 1:A:186:GLU:CD | 1:B:370:ASN:CA | 2.59 | 0.62 |
| 1:B:69:LEU:CB | 1:B:71:GLN:HE21 | 2.12 | 0.62 |
| 1:B:274:ASN:O | 1:C:286:SER:CB | 2.46 | 0.62 |
| 1:C:251:ASN:HB3 | 1:C:254:ILE:CG2 | 2.29 | 0.62 |
| 1:A:218:GLY:HA2 | 1:B:437:ILE:H | 1.65 | 0.62 |
| 1:A:251:ASN:HB3 | 1:A:254:ILE:CG2 | 2.28 | 0.62 |
| 1:C:48:LYS:O | 1:C:49:LEU:HB2 | 2.00 | 0.62 |
| 1:A:428:THR:HG23 | 1:A:431:GLN:HB2 | 1.82 | 0.62 |
| 1:B:180:LYS:O | 1:B:180:LYS:HD3 | 2.00 | 0.62 |
| 1:B:383:LYS:HB3 | 1:C:6:TRP:CD1 | 2.15 | 0.62 |
| 1:A:75:TYR:CE1 | 1:A:170:THR:HG21 | 2.34 | 0.62 |
| 1:A:143:GLN:HG3 | 1:B:108:HIS:NE2 | 2.13 | 0.62 |
| 1:B:327:ILE:O | 1:B:327:ILE:HG23 | 2.00 | 0.62 |
| 1:B:352:TYR:C | 1:B:354:THR:H | 1.99 | 0.62 |
| 1:A:148:PRO:HG3 | 1:B:49:LEU:HD23 | 1.82 | 0.62 |
| 1:A:179:THR:CG2 | 1:B:50:ASP:O | 2.48 | 0.62 |
| 1:A:187:TRP:CZ3 | 1:B:374:SER:CB | 2.82 | 0.62 |
| 1:B:238:TYR:N | 1:C:377:THR:N | 2.38 | 0.62 |
| 1:B:381:THR:CG2 | 1:C:201:ASP:OD1 | 2.48 | 0.62 |
| 1:B:387:ILE:CG2 | 1:B:395:MET:HA | 2.28 | 0.62 |
| 1:B:428:THR:HG23 | 1:B:431:GLN:HB2 | 1.82 | 0.62 |
| 1:C:428:THR:HG23 | 1:C:431:GLN:HB2 | 1.82 | 0.62 |
| 1:A:180:LYS:NZ | 1:B:11:ILE:CA | 2.61 | 0.61 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:448:GLY:C | 1:C:184:LYS:NZ | 2.53 | 0.61 |
| 1:C:472:LYS:HG2 | 1:C:478:SER:OXT | 2.01 | 0.61 |
| 1:A:79:TYR:CE2 | 1:A:344:ARG:HG2 | 2.35 | 0.61 |
| 1:B:68:GLN:O | 1:B:85:THR:HG21 | 1.99 | 0.61 |
| 1:B:332:GLU:HA | 1:B:358:LEU:HB3 | 1.82 | 0.61 |
| 1:C:11:ILE:HD12 | 1:C:325:PRO:O | 1.99 | 0.61 |
| 1:C:258:LEU:HG | 1:C:262:PHE:CD2 | 2.34 | 0.61 |
| 1:A:2:THR:HB | 1:A:3:PRO:CD | 2.22 | 0.61 |
| 1:A:258:LEU:HG | 1:A:262:PHE:CD2 | 2.34 | 0.61 |
| 1:B:13:PHE:CD2 | 1:B:328:TYR:HD2 | 2.19 | 0.61 |
| 1:B:316:ALA:HA | 1:B:319:ILE:HD11 | 1.82 | 0.61 |
| 1:A:48:LYS:O | 1:A:49:LEU:HB2 | 2.00 | 0.61 |
| 1:A:144:ASP:HB3 | 1:B:58:THR:O | 1.99 | 0.61 |
| 1:A:184:LYS:CE | 1:B:362:ILE:HG22 | 2.17 | 0.61 |
| 1:A:217:PRO:HG2 | 1:B:364:SER:CB | 2.28 | 0.61 |
| 1:A:239:THR:HG21 | 1:A:253:PRO:CD | 2.31 | 0.61 |
| 1:B:237:ALA:CB | 1:C:379:PHE:CA | 2.62 | 0.61 |
| 1:B:258:LEU:HG | 1:B:262:PHE:CD2 | 2.34 | 0.61 |
| 1:B:382:TYR:CE1 | 1:C:2:THR:HG23 | 2.32 | 0.61 |
| 1:B:385:PRO:HB3 | 1:C:226:TYR:H | 1.65 | 0.61 |
| 1:B:472:LYS:HG2 | 1:B:478:SER:OXT | 2.01 | 0.61 |
| 1:C:52:ILE:CD1 | 1:C:112:MET:SD | 2.88 | 0.61 |
| 1:C:52:ILE:O | 1:C:55:MET:HB2 | 2.00 | 0.61 |
| 1:C:79:TYR:CE2 | 1:C:344:ARG:HG2 | 2.35 | 0.61 |
| 1:C:79:TYR:HE2 | 1:C:344:ARG:HG2 | 1.64 | 0.61 |
| 1:A:11:ILE:HG22 | 1:A:326:ILE:HG23 | 1.83 | 0.61 |
| 1:A:200:ILE:HB | 1:B:467:LYS:CA | 2.23 | 0.61 |
| 1:B:6:TRP:CH2 | 1:B:113:TYR:HB3 | 2.36 | 0.61 |
| 1:B:52:ILE:CD1 | 1:B:112:MET:SD | 2.88 | 0.61 |
| 1:B:79:TYR:HE2 | 1:B:344:ARG:HG2 | 1.64 | 0.61 |
| 1:B:239:THR:HG21 | 1:B:253:PRO:CD | 2.31 | 0.61 |
| 1:C:6:TRP:CH2 | 1:C:113:TYR:HB3 | 2.36 | 0.61 |
| 1:C:9:GLN:HG3 | 1:C:58:THR:CB | 2.17 | 0.61 |
| 1:A:104:SER:O | 1:A:108:HIS:HB2 | 2.00 | 0.61 |
| 1:A:472:LYS:HG2 | 1:A:478:SER:OXT | 2.01 | 0.61 |
| 1:B:104:SER:O | 1:B:108:HIS:HB2 | 2.00 | 0.61 |
| 1:C:104:SER:O | 1:C:108:HIS:HB2 | 2.00 | 0.61 |
| 1:A:6:TRP:CH2 | 1:A:113:TYR:HB3 | 2.36 | 0.61 |
| 1:A:186:GLU:CA | 1:B:369:ARG:NH1 | 2.63 | 0.61 |
| 1:A:387:ILE:CG2 | 1:A:395:MET:HA | 2.28 | 0.61 |
| 1:B:11:ILE:HG22 | 1:B:326:ILE:HG23 | 1.83 | 0.61 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:238:TYR:HD2 | 1:C:403:GLN:CD | 2.03 | 0.61 |
| 1:B:280:LYS:CE | 1:B:383:LYS:HB3 | 2.04 | 0.61 |
| 1:C:13:PHE:CD2 | 1:C:328:TYR:HD2 | 2.19 | 0.61 |
| 1:C:472:LYS:O | 1:C:473:ILE:HB | 2.01 | 0.61 |
| 1:A:13:PHE:CD2 | 1:A:328:TYR:HD2 | 2.19 | 0.61 |
| 1:A:185:ASN:CB | 1:B:366:ASN:OD1 | 2.49 | 0.61 |
| 1:C:332:GLU:HA | 1:C:358:LEU:HB3 | 1.82 | 0.61 |
| 1:A:84:GLN:HE22 | 1:B:375:LYS:HZ3 | 1.40 | 0.61 |
| 1:B:55:MET:HB3 | 1:B:57:PHE:CE2 | 2.34 | 0.61 |
| 1:C:11:ILE:HG22 | 1:C:326:ILE:HG23 | 1.83 | 0.61 |
| 1:A:79:TYR:HE2 | 1:A:344:ARG:HG2 | 1.64 | 0.61 |
| 1:A:184:LYS:CG | 1:B:56:GLY:CA | 2.48 | 0.61 |
| 1:B:383:LYS:HZ1 | 1:C:5:ASP:HB3 | 1.66 | 0.61 |
| 1:B:422:LEU:HD11 | 1:C:221:LYS:HG2 | 0.65 | 0.61 |
| 1:A:52:ILE:CD1 | 1:A:112:MET:SD | 2.88 | 0.60 |
| 1:A:145:TYR:HE2 | 1:B:9:GLN:CB | 2.06 | 0.60 |
| 1:A:163:ASP:CB | 1:B:53:GLN:OE1 | 2.48 | 0.60 |
| 1:B:444:VAL:HG23 | 1:C:185:ASN:OD1 | 2.01 | 0.60 |
| 1:C:327:ILE:HG23 | 1:C:327:ILE:O | 2.00 | 0.60 |
| 1:A:13:PHE:O | 1:A:329:ALA:HB2 | 2.01 | 0.60 |
| 1:A:147:HIS:CA | 1:B:111:GLY:O | 2.50 | 0.60 |
| 1:A:194:LEU:CD1 | 1:B:375:LYS:CB | 2.73 | 0.60 |
| 1:A:195:VAL:HG11 | 1:B:464:PRO:C | 2.22 | 0.60 |
| 1:A:327:ILE:HG23 | 1:A:327:ILE:O | 2.00 | 0.60 |
| 1:A:332:GLU:HA | 1:A:358:LEU:HB3 | 1.82 | 0.60 |
| 1:B:236:PRO:HB3 | 1:C:380:VAL:CG1 | 2.30 | 0.60 |
| 1:B:382:TYR:CE1 | 1:C:2:THR:CG2 | 2.83 | 0.60 |
| 1:C:69:LEU:CB | 1:C:71:GLN:HE21 | 2.12 | 0.60 |
| 1:C:258:LEU:CD1 | 1:C:317:PHE:CE1 | 2.85 | 0.60 |
| 1:A:9:GLN:HG3 | 1:A:58:THR:CB | 2.18 | 0.60 |
| 1:A:194:LEU:CD1 | 1:B:375:LYS:CG | 2.78 | 0.60 |
| 1:A:223:ALA:C | 1:B:465:THR:HA | 2.21 | 0.60 |
| 1:A:251:ASN:HB2 | 1:A:290:GLY:O | 2.01 | 0.60 |
| 1:A:468:LEU:HD22 | 1:A:473:ILE:HG21 | 1.83 | 0.60 |
| 1:B:258:LEU:CD1 | 1:B:317:PHE:CE1 | 2.84 | 0.60 |
| 1:A:183:VAL:HG13 | 1:A:184:LYS:H | 1.66 | 0.60 |
| 1:A:194:LEU:O | 1:B:467:LYS:CE | 2.50 | 0.60 |
| 1:A:212:GLN:NE2 | 1:B:53:GLN:C | 2.38 | 0.60 |
| 1:A:243:GLN:HA | 1:A:249:VAL:CG1 | 2.31 | 0.60 |
| 1:C:387:ILE:CG2 | 1:C:395:MET:HA | 2.28 | 0.60 |
| 1:A:316:ALA:HA | 1:A:319:ILE:HD11 | 1.82 | 0.60 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:383:LYS:HZ3 | 1:C:5:ASP:C | 2.05 | 0.60 |
| 1:B:430:GLY:N | 1:C:185:ASN:OD1 | 2.29 | 0.60 |
| 1:B:459:PRO:O | 1:B:460:ARG:HB2 | 2.01 | 0.60 |
| 1:C:2:THR:HB | 1:C:3:PRO:CD | 2.22 | 0.60 |
| 1:C:195:VAL:CA | 1:C:200:ILE:HD12 | 2.30 | 0.60 |
| 1:C:239:THR:HG21 | 1:C:253:PRO:CD | 2.31 | 0.60 |
| 1:C:255:TYR:CG | 1:C:292:PHE:HE2 | 2.20 | 0.60 |
| 1:A:243:GLN:CA | 1:A:249:VAL:HG11 | 2.31 | 0.60 |
| 1:A:255:TYR:CG | 1:A:292:PHE:HE2 | 2.20 | 0.60 |
| 1:B:255:TYR:CG | 1:B:292:PHE:HE2 | 2.19 | 0.60 |
| 1:C:28:ALA:HB3 | 1:C:348:TRP:CZ2 | 2.36 | 0.60 |
| 1:A:188:TYR:OH | 1:B:363:ALA:O | 2.19 | 0.60 |
| 1:A:221:LYS:HA | 1:B:474:CYS:SG | 2.39 | 0.60 |
| 1:B:28:ALA:HB3 | 1:B:348:TRP:CZ2 | 2.37 | 0.60 |
| 1:B:48:LYS:O | 1:B:49:LEU:HB2 | 2.00 | 0.60 |
| 1:B:52:ILE:O | 1:B:55:MET:HB2 | 2.00 | 0.60 |
| 1:B:243:GLN:CA | 1:B:249:VAL:HG11 | 2.31 | 0.60 |
| 1:B:251:ASN:HB2 | 1:B:290:GLY:O | 2.01 | 0.60 |
| 1:B:399:THR:CG2 | 1:C:196:SER:C | 2.69 | 0.60 |
| 1:C:183:VAL:HG13 | 1:C:184:LYS:H | 1.66 | 0.60 |
| 1:C:468:LEU:HD22 | 1:C:473:ILE:HG21 | 1.83 | 0.60 |
| 1:A:58:THR:HG22 | 1:A:112:MET:HA | 1.84 | 0.60 |
| 1:A:88:TYR:CE2 | 1:B:374:SER:N | 2.66 | 0.60 |
| 1:A:205:ILE:HG12 | 1:B:472:LYS:N | 2.14 | 0.60 |
| 1:B:115:MET:HE1 | 1:B:228:ILE:HG13 | 1.84 | 0.60 |
| 1:B:383:LYS:HZ3 | 1:C:5:ASP:CA | 2.15 | 0.60 |
| 1:B:472:LYS:O | 1:B:473:ILE:HB | 2.01 | 0.60 |
| 1:C:11:ILE:CG2 | 1:C:326:ILE:HG12 | 2.32 | 0.60 |
| 1:C:316:ALA:HA | 1:C:319:ILE:HD11 | 1.82 | 0.60 |
| 1:A:144:ASP:O | 1:B:58:THR:C | 2.41 | 0.60 |
| 1:B:258:LEU:HD11 | 1:B:317:PHE:CE1 | 2.37 | 0.60 |
| 1:C:243:GLN:HA | 1:C:249:VAL:CG1 | 2.31 | 0.60 |
| 1:C:243:GLN:CA | 1:C:249:VAL:HG11 | 2.31 | 0.60 |
| 1:A:180:LYS:HE2 | 1:B:57:PHE:CG | 2.37 | 0.59 |
| 1:A:200:ILE:CD1 | 1:B:467:LYS:HZ2 | 2.12 | 0.59 |
| 1:C:229:GLY:HA3 | 1:C:246:MET:HE1 | 1.82 | 0.59 |
| 1:C:435:GLU:OE1 | 1:C:436:VAL:HG12 | 2.02 | 0.59 |
| 1:A:11:ILE:CG2 | 1:A:326:ILE:HG12 | 2.32 | 0.59 |
| 1:A:87:ILE:HD11 | 1:A:190:TRP:CZ2 | 2.37 | 0.59 |
| 1:A:188:TYR:CE1 | 1:B:367:ALA:HB3 | 2.37 | 0.59 |
| 1:A:258:LEU:HD11 | 1:A:317:PHE:CE1 | 2.37 | 0.59 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:11:ILE:CG1 | 1:B:324:LEU:HD23 | 2.24 | 0.59 |
| 1:B:312:LYS:HG2 | 1:B:361:LEU:HD13 | 1.84 | 0.59 |
| 1:C:87:ILE:HD11 | 1:C:190:TRP:CZ2 | 2.37 | 0.59 |
| 1:C:251:ASN:HB2 | 1:C:290:GLY:O | 2.01 | 0.59 |
| 1:C:258:LEU:HD11 | 1:C:317:PHE:CE1 | 2.37 | 0.59 |
| 1:A:222:ALA:HB2 | 1:B:368:ILE:HB | 1.83 | 0.59 |
| 1:A:258:LEU:CD1 | 1:A:317:PHE:CE1 | 2.85 | 0.59 |
| 1:A:435:GLU:OE1 | 1:A:436:VAL:HG12 | 2.02 | 0.59 |
| 1:B:11:ILE:CB | 1:B:326:ILE:HG12 | 2.32 | 0.59 |
| 1:B:213:LYS:CG | 1:C:375:LYS:HG3 | 2.31 | 0.59 |
| 1:B:236:PRO:HB3 | 1:B:278:THR:HG22 | 1.84 | 0.59 |
| 1:A:11:ILE:CB | 1:A:326:ILE:HG12 | 2.32 | 0.59 |
| 1:A:182:VAL:HG13 | 1:A:183:VAL:N | 2.17 | 0.59 |
| 1:A:262:PHE:O | 1:A:263:LYS:HG2 | 2.03 | 0.59 |
| 1:A:312:LYS:HG2 | 1:A:361:LEU:HD13 | 1.85 | 0.59 |
| 1:A:472:LYS:O | 1:A:473:ILE:HB | 2.01 | 0.59 |
| 1:B:280:LYS:NZ | 1:C:226:TYR:CB | 2.58 | 0.59 |
| 1:B:383:LYS:HB2 | 1:C:6:TRP:CD1 | 2.34 | 0.59 |
| 1:B:435:GLU:OE1 | 1:B:436:VAL:HG12 | 2.02 | 0.59 |
| 1:C:58:THR:HG22 | 1:C:112:MET:HA | 1.83 | 0.59 |
| 1:C:258:LEU:HG | 1:C:262:PHE:CE2 | 2.37 | 0.59 |
| 1:C:312:LYS:HG2 | 1:C:361:LEU:HD13 | 1.85 | 0.59 |
| 1:A:187:TRP:CG | 1:B:370:ASN:CB | 2.81 | 0.59 |
| 1:B:243:GLN:HB3 | 1:B:284:PRO:HD2 | 1.85 | 0.59 |
| 1:B:243:GLN:HA | 1:B:249:VAL:CG1 | 2.31 | 0.59 |
| 1:B:262:PHE:O | 1:B:263:LYS:HG2 | 2.03 | 0.59 |
| 1:B:386:TYR:HD2 | 1:C:3:PRO:HB3 | 1.68 | 0.59 |
| 1:A:187:TRP:HZ3 | 1:A:190:TRP:CZ3 | 2.21 | 0.59 |
| 1:A:205:ILE:CB | 1:B:478:SER:CB | 2.81 | 0.59 |
| 1:A:258:LEU:HG | 1:A:262:PHE:CE2 | 2.38 | 0.59 |
| 1:C:13:PHE:O | 1:C:329:ALA:HB2 | 2.01 | 0.59 |
| 1:A:228:ILE:HA | 1:B:476:ASP:O | 2.02 | 0.59 |
| 1:A:251:ASN:HB3 | 1:A:254:ILE:HG22 | 1.84 | 0.59 |
| 1:B:183:VAL:HG13 | 1:B:184:LYS:H | 1.67 | 0.59 |
| 1:B:208:VAL:CG2 | 1:B:246:MET:SD | 2.88 | 0.59 |
| 1:B:216:TRP:HB2 | 1:B:245:VAL:CG2 | 2.29 | 0.59 |
| 1:C:315:ALA:CA | 1:C:318:ILE:HG23 | 2.31 | 0.59 |
| 1:A:211:VAL:HG11 | 1:A:216:TRP:CE2 | 2.38 | 0.59 |
| 1:A:222:ALA:N | 1:B:368:ILE:HD12 | 2.18 | 0.59 |
| 1:A:280:LYS:HE3 | 1:A:383:LYS:CB | 2.33 | 0.59 |
| 1:B:152:ILE:CD1 | 1:B:166:LEU:HA | 2.28 | 0.59 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:195:VAL:CA | 1:B:200:ILE:HD12 | 2.30 | 0.59 |
| 1:B:211:VAL:HG11 | 1:B:216:TRP:CE2 | 2.38 | 0.59 |
| 1:B:300:ARG:NH1 | 1:B:328:TYR:CE1 | 2.69 | 0.59 |
| 1:B:399:THR:HG22 | 1:C:195:VAL:C | 2.23 | 0.59 |
| 1:B:406:THR:HG21 | 1:C:221:LYS:C | 2.23 | 0.59 |
| 1:B:422:LEU:CG | 1:C:221:LYS:HG2 | 2.30 | 0.59 |
| 1:C:243:GLN:HB3 | 1:C:284:PRO:HD2 | 1.84 | 0.59 |
| 1:A:28:ALA:HB3 | 1:A:348:TRP:CZ2 | 2.36 | 0.59 |
| 1:A:187:TRP:HB3 | 1:B:371:TYR:CA | 2.31 | 0.59 |
| 1:A:193:SER:O | 1:B:467:LYS:HG2 | 2.03 | 0.59 |
| 1:A:221:LYS:O | 1:B:434:THR:CG2 | 2.51 | 0.59 |
| 1:A:459:PRO:O | 1:A:460:ARG:HB2 | 2.01 | 0.59 |
| 1:B:11:ILE:CG2 | 1:B:326:ILE:HG12 | 2.32 | 0.59 |
| 1:C:11:ILE:CB | 1:C:326:ILE:HG12 | 2.32 | 0.59 |
| 1:C:101:LYS:HE2 | 1:C:198:TYR:CD2 | 2.38 | 0.59 |
| 1:C:300:ARG:NH1 | 1:C:328:TYR:CE1 | 2.69 | 0.59 |
| 1:A:48:LYS:HA | 1:A:48:LYS:HE3 | 1.85 | 0.59 |
| 1:A:200:ILE:CD1 | 1:B:467:LYS:CE | 2.74 | 0.59 |
| 1:A:229:GLY:HA3 | 1:B:477:SER:O | 1.71 | 0.59 |
| 1:A:236:PRO:HB3 | 1:A:278:THR:HG22 | 1.84 | 0.59 |
| 1:B:187:TRP:HZ3 | 1:B:190:TRP:CZ3 | 2.21 | 0.59 |
| 1:B:258:LEU:HG | 1:B:262:PHE:CE2 | 2.37 | 0.59 |
| 1:B:280:LYS:CB | 1:C:3:PRO:O | 2.43 | 0.59 |
| 1:B:315:ALA:CA | 1:B:318:ILE:HG23 | 2.31 | 0.59 |
| 1:A:101:LYS:HE2 | 1:A:198:TYR:CD2 | 2.38 | 0.58 |
| 1:A:143:GLN:NE2 | 1:B:108:HIS:CA | 2.66 | 0.58 |
| 1:A:179:THR:OG1 | 1:B:52:ILE:CG1 | 2.49 | 0.58 |
| 1:B:13:PHE:O | 1:B:329:ALA:HB2 | 2.01 | 0.58 |
| 1:C:28:ALA:CB | 1:C:348:TRP:HZ2 | 2.16 | 0.58 |
| 1:C:187:TRP:HZ3 | 1:C:190:TRP:CZ3 | 2.21 | 0.58 |
| 1:A:28:ALA:CB | 1:A:348:TRP:HZ2 | 2.16 | 0.58 |
| 1:A:145:TYR:CD2 | 1:B:9:GLN:HG3 | 2.38 | 0.58 |
| 1:A:182:VAL:H | 1:B:57:PHE:HB3 | 1.65 | 0.58 |
| 1:A:194:LEU:O | 1:B:403:GLN:OE1 | 2.21 | 0.58 |
| 1:A:221:LYS:CB | 1:B:434:THR:CG2 | 2.79 | 0.58 |
| 1:B:468:LEU:HD22 | 1:B:473:ILE:HG21 | 1.83 | 0.58 |
| 1:C:137:PHE:CB | 1:C:140:PHE:HB2 | 2.33 | 0.58 |
| 1:C:262:PHE:O | 1:C:263:LYS:HG2 | 2.03 | 0.58 |
| 1:A:60:ILE:CD1 | 1:A:107:LEU:HD13 | 2.32 | 0.58 |
| 1:A:188:TYR:CD2 | 1:B:366:ASN:O | 2.53 | 0.58 |
| 1:A:194:LEU:HA | 1:B:403:GLN:CG | 2.33 | 0.58 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:28:ALA:CB | 1:B:348:TRP:HZ2 | 2.17 | 0.58 |
| 1:B:60:ILE:CD1 | 1:B:107:LEU:HD13 | 2.32 | 0.58 |
| 1:B:101:LYS:HE2 | 1:B:198:TYR:CD2 | 2.38 | 0.58 |
| 1:B:103:LEU:O | 1:B:106:ALA:HB3 | 2.03 | 0.58 |
| 1:B:137:PHE:CB | 1:B:140:PHE:HB2 | 2.32 | 0.58 |
| 1:B:238:TYR:HD2 | 1:C:376:ASP:HB2 | 1.61 | 0.58 |
| 1:B:308:ILE:CG2 | 1:B:312:LYS:HE3 | 2.30 | 0.58 |
| 1:B:429:ALA:HB1 | 1:C:181:ASP:O | 2.03 | 0.58 |
| 1:C:208:VAL:CG2 | 1:C:246:MET:SD | 2.88 | 0.58 |
| 1:A:15:LEU:O | 1:A:16:THR:HG23 | 2.03 | 0.58 |
| 1:A:204:ARG:HG3 | 1:A:228:ILE:CG2 | 2.34 | 0.58 |
| 1:A:315:ALA:CA | 1:A:318:ILE:HG23 | 2.31 | 0.58 |
| 1:B:48:LYS:HE3 | 1:B:48:LYS:HA | 1.85 | 0.58 |
| 1:C:91:ASN:C | 1:C:92:GLU:HG3 | 2.20 | 0.58 |
| 1:C:431:GLN:O | 1:C:444:VAL:HG13 | 2.04 | 0.58 |
| 1:A:182:VAL:CB | 1:B:10:SER:O | 2.52 | 0.58 |
| 1:A:188:TYR:CE1 | 1:B:365:ALA:HA | 2.39 | 0.58 |
| 1:B:24:GLY:O | 1:B:348:TRP:CD1 | 2.56 | 0.58 |
| 1:B:251:ASN:HB3 | 1:B:254:ILE:HG22 | 1.84 | 0.58 |
| 1:B:278:THR:CG2 | 1:C:381:THR:N | 2.32 | 0.58 |
| 1:C:103:LEU:O | 1:C:106:ALA:HB3 | 2.03 | 0.58 |
| 1:C:236:PRO:HB3 | 1:C:278:THR:HG22 | 1.84 | 0.58 |
| 1:C:459:PRO:O | 1:C:460:ARG:HB2 | 2.01 | 0.58 |
| 1:A:58:THR:CG2 | 1:A:112:MET:HA | 2.33 | 0.58 |
| 1:A:159:THR:O | 1:A:160:GLN:HG3 | 2.03 | 0.58 |
| 1:B:19:PHE:CD1 | 1:B:347:THR:HB | 2.39 | 0.58 |
| 1:B:91:ASN:C | 1:B:92:GLU:HG3 | 2.20 | 0.58 |
| 1:B:243:GLN:OE1 | 1:B:289:LEU:HD12 | 2.04 | 0.58 |
| 1:B:401:GLY:C | 1:C:193:SER:OG | 1.96 | 0.58 |
| 1:C:48:LYS:HA | 1:C:48:LYS:HE3 | 1.85 | 0.58 |
| 1:A:24:GLY:O | 1:A:348:TRP:CD1 | 2.56 | 0.58 |
| 1:A:243:GLN:HB3 | 1:A:284:PRO:HD2 | 1.84 | 0.58 |
| 1:A:300:ARG:NH1 | 1:A:328:TYR:CE1 | 2.69 | 0.58 |
| 1:A:364:SER:HB2 | 1:A:437:ILE:CG2 | 2.33 | 0.58 |
| 1:A:431:GLN:O | 1:A:444:VAL:HG13 | 2.04 | 0.58 |
| 1:B:87:ILE:HD11 | 1:B:190:TRP:CZ2 | 2.37 | 0.58 |
| 1:B:278:THR:C | 1:C:380:VAL:CG1 | 2.69 | 0.58 |
| 1:B:293:VAL:HG11 | 1:B:331:GLN:NE2 | 2.19 | 0.58 |
| 1:C:24:GLY:O | 1:C:348:TRP:CD1 | 2.56 | 0.58 |
| 1:A:19:PHE:CD1 | 1:A:347:THR:HB | 2.39 | 0.58 |
| 1:A:137:PHE:CB | 1:A:140:PHE:HB2 | 2.32 | 0.58 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:200:ILE:HG22 | 1:B:468:LEU:H | 1.68 | 0.58 |
| 1:A:293:VAL:HG11 | 1:A:331:GLN:NE2 | 2.19 | 0.58 |
| 1:B:443:THR:HG22 | 1:B:451:PRO:HG3 | 1.86 | 0.58 |
| 1:C:293:VAL:HG11 | 1:C:331:GLN:NE2 | 2.19 | 0.58 |
| 1:C:319:ILE:CB | 1:C:325:PRO:HB2 | 2.33 | 0.58 |
| 1:A:249:VAL:CA | 1:B:477:SER:OG | 2.51 | 0.58 |
| 1:B:385:PRO:CD | 1:C:3:PRO:CD | 2.76 | 0.58 |
| 1:C:58:THR:CG2 | 1:C:112:MET:HA | 2.33 | 0.58 |
| 1:C:251:ASN:HB3 | 1:C:254:ILE:HG22 | 1.84 | 0.58 |
| 1:B:319:ILE:CB | 1:B:325:PRO:HB2 | 2.33 | 0.58 |
| 1:B:364:SER:HB2 | 1:B:437:ILE:CG2 | 2.33 | 0.58 |
| 1:B:406:THR:HG23 | 1:C:221:LYS:O | 2.01 | 0.58 |
| 1:B:431:GLN:O | 1:B:444:VAL:HG13 | 2.03 | 0.58 |
| 1:C:243:GLN:OE1 | 1:C:289:LEU:HD12 | 2.04 | 0.58 |
| 1:C:364:SER:HB2 | 1:C:437:ILE:CG2 | 2.33 | 0.58 |
| 1:A:123:MET:SD | 1:A:137:PHE:CD1 | 2.97 | 0.57 |
| 1:A:219:TYR:HD1 | 1:B:472:LYS:O | 1.87 | 0.57 |
| 1:B:125:TYR:CE1 | 1:B:133:ASP:HB2 | 2.39 | 0.57 |
| 1:B:159:THR:O | 1:B:160:GLN:HG3 | 2.03 | 0.57 |
| 1:B:204:ARG:HG3 | 1:B:228:ILE:CG2 | 2.34 | 0.57 |
| 1:B:327:ILE:HA | 1:B:331:GLN:OE1 | 2.04 | 0.57 |
| 1:C:61:TRP:HZ2 | 1:C:204:ARG:NE | 2.02 | 0.57 |
| 1:C:211:VAL:HG11 | 1:C:216:TRP:CE2 | 2.38 | 0.57 |
| 1:C:443:THR:HG22 | 1:C:451:PRO:HG3 | 1.86 | 0.57 |
| 1:A:184:LYS:HB2 | 1:B:367:ALA:CB | 2.32 | 0.57 |
| 1:A:191:VAL:HG13 | 1:B:372:ALA:N | 2.16 | 0.57 |
| 1:A:205:ILE:HD11 | 1:A:246:MET:HE3 | 1.85 | 0.57 |
| 1:A:379:PHE:CZ | 1:A:397:LYS:CE | 2.87 | 0.57 |
| 1:A:418:TYR:CD1 | 1:A:454:MET:CE | 2.87 | 0.57 |
| 1:A:443:THR:HG22 | 1:A:451:PRO:HG3 | 1.86 | 0.57 |
| 1:B:418:TYR:CD1 | 1:B:454:MET:HE3 | 2.39 | 0.57 |
| 1:C:60:ILE:CD1 | 1:C:107:LEU:HD13 | 2.32 | 0.57 |
| 1:C:308:ILE:CG2 | 1:C:312:LYS:HE3 | 2.30 | 0.57 |
| 1:C:379:PHE:CZ | 1:C:397:LYS:CE | 2.87 | 0.57 |
| 1:A:118:VAL:HG22 | 1:B:375:LYS:HE2 | 1.85 | 0.57 |
| 1:A:194:LEU:HA | 1:B:403:GLN:OE1 | 2.04 | 0.57 |
| 1:A:243:GLN:OE1 | 1:A:289:LEU:HD12 | 2.04 | 0.57 |
| 1:B:15:LEU:O | 1:B:16:THR:HG23 | 2.03 | 0.57 |
| 1:B:187:TRP:CE3 | 1:B:190:TRP:CZ3 | 2.92 | 0.57 |
| 1:B:444:VAL:CG2 | 1:C:185:ASN:OD1 | 2.52 | 0.57 |
| 1:C:123:MET:SD | 1:C:137:PHE:CD1 | 2.97 | 0.57 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:280:LYS:HE3 | 1:C:383:LYS:CB | 2.33 | 0.57 |
| 1:C:418:TYR:CD1 | 1:C:454:MET:CE | 2.87 | 0.57 |
| 1:A:103:LEU:O | 1:A:106:ALA:HB3 | 2.03 | 0.57 |
| 1:A:147:HIS:CA | 1:B:112:MET:HE3 | 2.16 | 0.57 |
| 1:A:182:VAL:HG21 | 1:B:58:THR:CB | 2.34 | 0.57 |
| 1:A:204:ARG:O | 1:B:471:SER:CB | 2.53 | 0.57 |
| 1:A:208:VAL:CG2 | 1:A:246:MET:SD | 2.88 | 0.57 |
| 1:A:319:ILE:CB | 1:A:325:PRO:HB2 | 2.33 | 0.57 |
| 1:B:57:PHE:CZ | 1:B:327:ILE:HD13 | 2.40 | 0.57 |
| 1:B:190:TRP:CE3 | 1:B:191:VAL:HG12 | 2.40 | 0.57 |
| 1:A:57:PHE:CZ | 1:A:327:ILE:HD13 | 2.40 | 0.57 |
| 1:A:200:ILE:CD1 | 1:B:467:LYS:HG3 | 2.34 | 0.57 |
| 1:B:277:ASN:HB2 | 1:C:286:SER:OG | 2.05 | 0.57 |
| 1:B:418:TYR:CD1 | 1:B:454:MET:CE | 2.87 | 0.57 |
| 1:C:15:LEU:O | 1:C:16:THR:HG23 | 2.03 | 0.57 |
| 1:C:19:PHE:CD1 | 1:C:347:THR:HB | 2.39 | 0.57 |
| 1:C:279:VAL:HG13 | 1:C:280:LYS:H | 1.69 | 0.57 |
| 1:A:116:VAL:C | 1:B:470:GLY:H | 1.96 | 0.57 |
| 1:A:215:PHE:CE2 | 1:B:367:ALA:CB | 2.88 | 0.57 |
| 1:A:252:TYR:N | 1:A:253:PRO:HD2 | 2.20 | 0.57 |
| 1:C:57:PHE:CZ | 1:C:327:ILE:HD13 | 2.40 | 0.57 |
| 1:C:136:VAL:O | 1:C:136:VAL:HG12 | 2.05 | 0.57 |
| 1:C:204:ARG:HG3 | 1:C:228:ILE:CG2 | 2.34 | 0.57 |
| 1:C:252:TYR:N | 1:C:253:PRO:HD2 | 2.20 | 0.57 |
| 1:A:136:VAL:O | 1:A:136:VAL:HG12 | 2.05 | 0.57 |
| 1:A:182:VAL:HG13 | 1:B:56:GLY:O | 2.04 | 0.57 |
| 1:A:200:ILE:CG2 | 1:B:468:LEU:N | 2.68 | 0.57 |
| 1:A:327:ILE:HA | 1:A:331:GLN:OE1 | 2.04 | 0.57 |
| 1:B:52:ILE:HD11 | 1:B:112:MET:HE1 | 1.87 | 0.57 |
| 1:B:60:ILE:HD12 | 1:B:107:LEU:CD1 | 2.35 | 0.57 |
| 1:B:61:TRP:HZ2 | 1:B:204:ARG:NE | 2.03 | 0.57 |
| 1:B:136:VAL:O | 1:B:136:VAL:HG12 | 2.05 | 0.57 |
| 1:B:211:VAL:HB | 1:B:216:TRP:CH2 | 2.40 | 0.57 |
| 1:B:213:LYS:HG2 | 1:C:375:LYS:HE2 | 1.87 | 0.57 |
| 1:C:159:THR:O | 1:C:160:GLN:HG3 | 2.03 | 0.57 |
| 1:C:187:TRP:CE3 | 1:C:190:TRP:CZ3 | 2.92 | 0.57 |
| 1:A:184:LYS:CE | 1:B:366:ASN:HD22 | 2.18 | 0.57 |
| 1:A:195:VAL:HG12 | 1:B:464:PRO:HG2 | 1.85 | 0.57 |
| 1:A:436:VAL:HG22 | 1:A:437:ILE:H | 1.70 | 0.57 |
| 1:C:10:SER:HB3 | 1:C:57:PHE:CB | 2.35 | 0.57 |
| 1:A:125:TYR:CE1 | 1:A:133:ASP:HB2 | 2.39 | 0.57 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:165:TRP:CD1 | 1:B:110:ARG:CB | 2.88 | 0.57 |
| 1:A:187:TRP:CE3 | 1:A:190:TRP:CZ3 | 2.92 | 0.57 |
| 1:A:187:TRP:CE3 | 1:B:374:SER:OG | 2.53 | 0.57 |
| 1:A:190:TRP:CE3 | 1:A:191:VAL:HG12 | 2.40 | 0.57 |
| 1:A:222:ALA:HB3 | 1:B:473:ILE:HG12 | 1.86 | 0.57 |
| 1:B:386:TYR:CE1 | 1:C:288:LEU:HD12 | 2.39 | 0.57 |
| 1:B:400:ASP:HB2 | 1:C:193:SER:C | 2.10 | 0.57 |
| 1:B:407:ILE:HG12 | 1:B:461:VAL:HG13 | 1.87 | 0.57 |
| 1:C:123:MET:HE3 | 1:C:140:PHE:CE1 | 2.37 | 0.57 |
| 1:C:125:TYR:CE1 | 1:C:133:ASP:HB2 | 2.39 | 0.57 |
| 1:C:216:TRP:HB2 | 1:C:217:PRO:HD3 | 1.86 | 0.57 |
| 1:A:279:VAL:HG13 | 1:A:280:LYS:H | 1.69 | 0.57 |
| 1:B:216:TRP:HB2 | 1:B:217:PRO:HD3 | 1.86 | 0.57 |
| 1:C:190:TRP:CE3 | 1:C:191:VAL:HG12 | 2.40 | 0.57 |
| 1:C:211:VAL:HB | 1:C:216:TRP:CH2 | 2.40 | 0.57 |
| 1:A:123:MET:HE1 | 1:A:140:PHE:HE1 | 1.69 | 0.56 |
| 1:A:165:TRP:CD1 | 1:B:110:ARG:HB2 | 2.40 | 0.56 |
| 1:A:230:GLU:C | 1:A:250:LEU:HD23 | 2.25 | 0.56 |
| 1:B:213:LYS:CE | 1:C:375:LYS:HG2 | 2.34 | 0.56 |
| 1:B:238:TYR:CB | 1:C:376:ASP:HB2 | 2.35 | 0.56 |
| 1:B:386:TYR:CG | 1:C:288:LEU:HD11 | 2.35 | 0.56 |
| 1:A:69:LEU:CB | 1:A:71:GLN:HE21 | 2.12 | 0.56 |
| 1:A:187:TRP:CE3 | 1:A:190:TRP:CE3 | 2.94 | 0.56 |
| 1:B:383:LYS:HG2 | 1:C:113:TYR:HE1 | 1.66 | 0.56 |
| 1:B:401:GLY:N | 1:C:193:SER:CB | 2.68 | 0.56 |
| 1:C:263:LYS:HA | 1:C:310:LEU:HD23 | 1.86 | 0.56 |
| 1:C:407:ILE:HG12 | 1:C:461:VAL:HG13 | 1.87 | 0.56 |
| 1:A:61:TRP:HZ2 | 1:A:204:ARG:NE | 2.03 | 0.56 |
| 1:A:91:ASN:C | 1:A:92:GLU:HG3 | 2.20 | 0.56 |
| 1:A:190:TRP:CZ2 | 1:B:375:LYS:CG | 2.88 | 0.56 |
| 1:A:204:ARG:NH1 | 1:A:230:GLU:HG2 | 2.21 | 0.56 |
| 1:A:407:ILE:HG12 | 1:A:461:VAL:HG13 | 1.87 | 0.56 |
| 1:B:182:VAL:HG13 | 1:B:183:VAL:HG12 | 1.87 | 0.56 |
| 1:B:230:GLU:C | 1:B:250:LEU:HD23 | 2.25 | 0.56 |
| 1:B:263:LYS:HA | 1:B:310:LEU:HD23 | 1.86 | 0.56 |
| 1:B:379:PHE:CZ | 1:B:397:LYS:CE | 2.87 | 0.56 |
| 1:B:400:ASP:HA | 1:C:195:VAL:N | 2.19 | 0.56 |
| 1:B:445:GLY:CA | 1:C:185:ASN:HB2 | 2.35 | 0.56 |
| 1:B:446:SER:CB | 1:C:181:ASP:N | 2.31 | 0.56 |
| 1:C:152:ILE:CD1 | 1:C:166:LEU:HA | 2.28 | 0.56 |
| 1:C:187:TRP:CE3 | 1:C:190:TRP:CE3 | 2.94 | 0.56 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:230:GLU:C | 1:C:250:LEU:HD23 | 2.25 | 0.56 |
| 1:C:327:ILE:HA | 1:C:331:GLN:OE1 | 2.04 | 0.56 |
| 1:A:205:ILE:HG12 | 1:B:476:ASP:OD1 | 2.02 | 0.56 |
| 1:A:205:ILE:CD1 | 1:B:478:SER:CB | 2.52 | 0.56 |
| 1:A:215:PHE:CE1 | 1:B:472:LYS:CB | 2.88 | 0.56 |
| 1:A:216:TRP:HB2 | 1:A:217:PRO:HD3 | 1.86 | 0.56 |
| 1:B:2:THR:CB | 1:B:3:PRO:HD2 | 2.18 | 0.56 |
| 1:A:25:SER:HB3 | 1:A:28:ALA:HB2 | 1.87 | 0.56 |
| 1:A:60:ILE:HD12 | 1:A:107:LEU:CD1 | 2.35 | 0.56 |
| 1:A:218:GLY:HA3 | 1:B:364:SER:CA | 2.33 | 0.56 |
| 1:A:379:PHE:CE1 | 1:A:397:LYS:CE | 2.88 | 0.56 |
| 1:B:321:ASN:HA | 1:B:384:ASN:ND2 | 2.21 | 0.56 |
| 1:C:180:LYS:NZ | 1:C:182:VAL:HB | 2.20 | 0.56 |
| 1:C:295:ASN:O | 1:C:298:ASN:HB2 | 2.05 | 0.56 |
| 1:A:178:THR:HB | 1:B:58:THR:HA | 1.88 | 0.56 |
| 1:A:295:ASN:O | 1:A:298:ASN:HB2 | 2.05 | 0.56 |
| 1:B:123:MET:SD | 1:B:137:PHE:CD1 | 2.97 | 0.56 |
| 1:B:187:TRP:CE3 | 1:B:190:TRP:CE3 | 2.93 | 0.56 |
| 1:B:295:ASN:O | 1:B:298:ASN:HB2 | 2.05 | 0.56 |
| 1:A:180:LYS:CE | 1:B:11:ILE:CA | 2.84 | 0.56 |
| 1:A:382:TYR:HE1 | 1:A:385:PRO:HD3 | 1.70 | 0.56 |
| 1:A:401:GLY:O | 1:A:467:LYS:HE3 | 2.06 | 0.56 |
| 1:B:252:TYR:N | 1:B:253:PRO:HD2 | 2.20 | 0.56 |
| 1:C:60:ILE:HD12 | 1:C:107:LEU:CD1 | 2.35 | 0.56 |
| 1:C:204:ARG:NH1 | 1:C:230:GLU:HG2 | 2.20 | 0.56 |
| 1:C:418:TYR:CD1 | 1:C:454:MET:HE3 | 2.41 | 0.56 |
| 1:A:199:SER:C | 1:A:200:ILE:HG13 | 2.16 | 0.56 |
| 1:B:99:ASP:O | 1:B:102:ALA:HB3 | 2.05 | 0.56 |
| 1:B:185:ASN:O | 1:B:188:TYR:HB2 | 2.06 | 0.56 |
| 1:B:216:TRP:CE3 | 1:B:216:TRP:CA | 2.89 | 0.56 |
| 1:B:255:TYR:HD2 | 1:B:256:TYR:N | 2.04 | 0.56 |
| 1:B:468:LEU:CD2 | 1:B:473:ILE:HG21 | 2.36 | 0.56 |
| 1:C:115:MET:HE2 | 1:C:204:ARG:HB2 | 1.85 | 0.56 |
| 1:C:137:PHE:HZ | 1:C:174:PRO:HG3 | 1.71 | 0.56 |
| 1:C:152:ILE:HD11 | 1:C:166:LEU:HG | 1.87 | 0.56 |
| 1:C:401:GLY:O | 1:C:467:LYS:HE3 | 2.06 | 0.56 |
| 1:A:10:SER:HB3 | 1:A:57:PHE:CB | 2.35 | 0.56 |
| 1:A:187:TRP:CA | 1:B:367:ALA:O | 2.53 | 0.56 |
| 1:A:263:LYS:HA | 1:A:310:LEU:HD23 | 1.86 | 0.56 |
| 1:B:209:LYS:CB | 1:B:231:VAL:HG11 | 2.36 | 0.56 |
| 1:B:383:LYS:NZ | 1:C:6:TRP:H | 1.93 | 0.56 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:255:TYR:HD2 | 1:C:256:TYR:N | 2.04 | 0.56 |
| 1:C:321:ASN:HA | 1:C:384:ASN:ND2 | 2.21 | 0.56 |
| 1:C:379:PHE:CE1 | 1:C:397:LYS:CE | 2.88 | 0.56 |
| 1:C:468:LEU:CD2 | 1:C:473:ILE:HG21 | 2.36 | 0.56 |
| 1:C:468:LEU:CD2 | 1:C:473:ILE:HG12 | 2.34 | 0.56 |
| 1:A:137:PHE:HZ | 1:A:174:PRO:HG3 | 1.71 | 0.56 |
| 1:A:180:LYS:NZ | 1:B:11:ILE:N | 2.53 | 0.56 |
| 1:A:205:ILE:CB | 1:B:478:SER:OG | 2.39 | 0.56 |
| 1:A:209:LYS:N | 1:A:231:VAL:HG11 | 2.21 | 0.56 |
| 1:A:216:TRP:CE3 | 1:A:216:TRP:CA | 2.89 | 0.56 |
| 1:B:25:SER:HB3 | 1:B:28:ALA:HB2 | 1.87 | 0.56 |
| 1:B:386:TYR:CE1 | 1:C:288:LEU:CD1 | 2.89 | 0.56 |
| 1:C:209:LYS:N | 1:C:231:VAL:HG11 | 2.21 | 0.56 |
| 1:C:436:VAL:HG22 | 1:C:437:ILE:H | 1.70 | 0.56 |
| 1:A:211:VAL:HB | 1:A:216:TRP:CH2 | 2.40 | 0.55 |
| 1:B:137:PHE:HZ | 1:B:174:PRO:HG3 | 1.71 | 0.55 |
| 1:B:193:SER:O | 1:B:196:SER:HB3 | 2.07 | 0.55 |
| 1:B:424:GLY:O | 1:C:218:GLY:HA2 | 2.05 | 0.55 |
| 1:C:73:CYS:HB3 | 1:C:126:ASP:OD1 | 2.06 | 0.55 |
| 1:C:209:LYS:CB | 1:C:231:VAL:HG11 | 2.36 | 0.55 |
| 1:A:12:TYR:CE1 | 1:A:14:LEU:CD2 | 2.89 | 0.55 |
| 1:A:152:ILE:HD11 | 1:A:166:LEU:HG | 1.87 | 0.55 |
| 1:A:192:GLY:C | 1:B:464:PRO:CG | 2.74 | 0.55 |
| 1:B:152:ILE:HD11 | 1:B:166:LEU:HG | 1.87 | 0.55 |
| 1:B:403:GLN:NE2 | 1:C:196:SER:OG | 2.39 | 0.55 |
| 1:B:436:VAL:HG22 | 1:B:437:ILE:H | 1.70 | 0.55 |
| 1:C:382:TYR:HE1 | 1:C:385:PRO:HD3 | 1.70 | 0.55 |
| 1:A:73:CYS:HB3 | 1:A:126:ASP:OD1 | 2.06 | 0.55 |
| 1:A:147:HIS:NE2 | 1:A:163:ASP:HB3 | 2.20 | 0.55 |
| 1:B:73:CYS:HB3 | 1:B:126:ASP:OD1 | 2.06 | 0.55 |
| 1:B:282:ASP:OD1 | 1:C:379:PHE:HD2 | 1.89 | 0.55 |
| 1:C:216:TRP:CE3 | 1:C:216:TRP:CA | 2.89 | 0.55 |
| 1:C:418:TYR:CE1 | 1:C:454:MET:HE2 | 2.42 | 0.55 |
| 1:A:182:VAL:N | 1:B:57:PHE:N | 2.54 | 0.55 |
| 1:B:448:GLY:C | 1:C:184:LYS:HZ2 | 2.08 | 0.55 |
| 1:C:25:SER:HB3 | 1:C:28:ALA:HB2 | 1.87 | 0.55 |
| 1:A:75:TYR:HE1 | 1:A:170:THR:HG21 | 1.71 | 0.55 |
| 1:A:99:ASP:O | 1:A:102:ALA:HB3 | 2.06 | 0.55 |
| 1:A:185:ASN:N | 1:B:366:ASN:HB3 | 2.16 | 0.55 |
| 1:A:221:LYS:NZ | 1:B:436:VAL:O | 2.35 | 0.55 |
| 1:B:147:HIS:NE2 | 1:B:163:ASP:HB3 | 2.20 | 0.55 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:209:LYS:N | 1:B:231:VAL:HG11 | 2.21 | 0.55 |
| 1:B:382:TYR:HE1 | 1:B:385:PRO:HD3 | 1.70 | 0.55 |
| 1:A:222:ALA:HB2 | 1:B:368:ILE:HD12 | 1.83 | 0.55 |
| 1:A:255:TYR:CD2 | 1:A:256:TYR:N | 2.75 | 0.55 |
| 1:A:255:TYR:HD2 | 1:A:256:TYR:N | 2.04 | 0.55 |
| 1:C:182:VAL:HG13 | 1:C:183:VAL:HG12 | 1.87 | 0.55 |
| 1:A:184:LYS:CB | 1:B:363:ALA:O | 2.54 | 0.55 |
| 1:A:193:SER:HB3 | 1:B:376:ASP:OD1 | 2.07 | 0.55 |
| 1:A:212:GLN:OE1 | 1:B:53:GLN:O | 2.24 | 0.55 |
| 1:A:208:VAL:N | 1:B:472:LYS:HE2 | 2.19 | 0.55 |
| 1:A:225:VAL:N | 1:B:465:THR:CA | 2.67 | 0.55 |
| 1:A:249:VAL:N | 1:B:477:SER:HB3 | 2.22 | 0.55 |
| 1:A:254:ILE:HD11 | 1:A:321:ASN:HD21 | 1.72 | 0.55 |
| 1:A:321:ASN:HA | 1:A:384:ASN:ND2 | 2.21 | 0.55 |
| 1:A:468:LEU:CD2 | 1:A:473:ILE:HG21 | 2.36 | 0.55 |
| 1:B:230:GLU:O | 1:B:250:LEU:HD23 | 2.07 | 0.55 |
| 1:B:294:GLU:HB3 | 1:B:300:ARG:HA | 1.89 | 0.55 |
| 1:B:401:GLY:O | 1:B:467:LYS:HE3 | 2.06 | 0.55 |
| 1:C:254:ILE:HD11 | 1:C:321:ASN:HD21 | 1.72 | 0.55 |
| 1:A:180:LYS:HZ3 | 1:B:57:PHE:CB | 1.91 | 0.55 |
| 1:A:182:VAL:HG13 | 1:A:183:VAL:HG12 | 1.88 | 0.55 |
| 1:A:185:ASN:ND2 | 1:B:319:ILE:CG1 | 2.70 | 0.55 |
| 1:A:190:TRP:HH2 | 1:B:375:LYS:NZ | 2.02 | 0.55 |
| 1:A:385:PRO:HG2 | 1:A:396:ARG:H | 1.72 | 0.55 |
| 1:B:137:PHE:O | 1:B:139:PRO:HD3 | 2.07 | 0.55 |
| 1:C:138:LYS:HA | 1:C:140:PHE:H | 1.72 | 0.55 |
| 1:C:199:SER:C | 1:C:200:ILE:HG13 | 2.16 | 0.55 |
| 1:A:209:LYS:CB | 1:A:231:VAL:HG11 | 2.36 | 0.55 |
| 1:A:221:LYS:C | 1:B:434:THR:HG22 | 2.27 | 0.55 |
| 1:A:308:ILE:CG2 | 1:A:312:LYS:HE3 | 2.30 | 0.55 |
| 1:B:238:TYR:CA | 1:C:376:ASP:CG | 2.75 | 0.55 |
| 1:B:254:ILE:HD11 | 1:B:321:ASN:HD21 | 1.72 | 0.55 |
| 1:B:385:PRO:HG2 | 1:B:396:ARG:H | 1.72 | 0.55 |
| 1:B:418:TYR:CE1 | 1:B:454:MET:HE2 | 2.42 | 0.55 |
| 1:B:424:GLY:O | 1:C:218:GLY:C | 2.44 | 0.55 |
| 1:B:431:GLN:HA | 1:B:431:GLN:NE2 | 2.18 | 0.55 |
| 1:B:468:LEU:CD2 | 1:B:473:ILE:HG12 | 2.34 | 0.55 |
| 1:B:204:ARG:NH1 | 1:B:230:GLU:HG2 | 2.21 | 0.54 |
| 1:B:255:TYR:CD1 | 1:B:292:PHE:CD2 | 2.96 | 0.54 |
| 1:B:428:THR:HB | 1:C:186:GLU:O | 2.06 | 0.54 |
| 1:C:147:HIS:NE2 | 1:C:163:ASP:HB3 | 2.20 | 0.54 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:138:LYS:HA | 1:A:140:PHE:H | 1.72 | 0.54 |
| 1:A:230:GLU:O | 1:A:250:LEU:HD23 | 2.07 | 0.54 |
| 1:A:294:GLU:HB3 | 1:A:300:ARG:HA | 1.89 | 0.54 |
| 1:B:236:PRO:HG3 | 1:C:381:THR:OG1 | 2.07 | 0.54 |
| 1:B:255:TYR:CD2 | 1:B:256:TYR:N | 2.75 | 0.54 |
| 1:B:385:PRO:HA | 1:C:3:PRO:HB3 | 1.88 | 0.54 |
| 1:B:426:SER:N | 1:C:219:TYR:O | 2.23 | 0.54 |
| 1:A:180:LYS:CA | 1:B:55:MET:HG3 | 2.21 | 0.54 |
| 1:A:180:LYS:HZ2 | 1:B:57:PHE:CB | 2.20 | 0.54 |
| 1:B:205:ILE:O | 1:B:230:GLU:HG3 | 2.07 | 0.54 |
| 1:C:57:PHE:HZ | 1:C:327:ILE:HD13 | 1.73 | 0.54 |
| 1:C:185:ASN:CA | 1:C:188:TYR:CD2 | 2.79 | 0.54 |
| 1:A:205:ILE:O | 1:A:230:GLU:HG3 | 2.07 | 0.54 |
| 1:B:379:PHE:CE1 | 1:B:397:LYS:CE | 2.89 | 0.54 |
| 1:C:32:THR:CG2 | 1:C:342:ALA:HA | 2.28 | 0.54 |
| 1:C:99:ASP:O | 1:C:102:ALA:HB3 | 2.06 | 0.54 |
| 1:C:420:LEU:CD2 | 1:C:452:VAL:CG2 | 2.83 | 0.54 |
| 1:A:115:MET:CE | 1:B:470:GLY:CA | 2.84 | 0.54 |
| 1:A:137:PHE:O | 1:A:139:PRO:HD3 | 2.07 | 0.54 |
| 1:A:144:ASP:OD1 | 1:B:6:TRP:CH2 | 2.59 | 0.54 |
| 1:A:205:ILE:HD12 | 1:B:478:SER:OG | 2.06 | 0.54 |
| 1:A:250:LEU:CD1 | 1:A:292:PHE:CE1 | 2.91 | 0.54 |
| 1:B:137:PHE:CG | 1:B:146:PHE:CZ | 2.95 | 0.54 |
| 1:B:180:LYS:NZ | 1:B:182:VAL:HB | 2.21 | 0.54 |
| 1:B:238:TYR:O | 1:C:377:THR:N | 2.40 | 0.54 |
| 1:B:280:LYS:HZ1 | 1:C:226:TYR:HB2 | 1.67 | 0.54 |
| 1:B:399:THR:CG2 | 1:C:196:SER:CA | 2.84 | 0.54 |
| 1:C:255:TYR:CD2 | 1:C:256:TYR:N | 2.75 | 0.54 |
| 1:C:294:GLU:HB3 | 1:C:300:ARG:HA | 1.89 | 0.54 |
| 1:C:313:ASN:ND2 | 1:C:410:ASN:O | 2.40 | 0.54 |
| 1:A:255:TYR:CD1 | 1:A:292:PHE:CD2 | 2.96 | 0.54 |
| 1:B:12:TYR:CE1 | 1:B:14:LEU:CD2 | 2.89 | 0.54 |
| 1:B:138:LYS:HA | 1:B:140:PHE:H | 1.72 | 0.54 |
| 1:B:313:ASN:ND2 | 1:B:410:ASN:O | 2.40 | 0.54 |
| 1:C:216:TRP:HB2 | 1:C:217:PRO:CD | 2.38 | 0.54 |
| 1:C:250:LEU:CD1 | 1:C:292:PHE:CE1 | 2.91 | 0.54 |
| 1:A:182:VAL:HG21 | 1:B:58:THR:CA | 2.13 | 0.54 |
| 1:A:313:ASN:ND2 | 1:A:410:ASN:O | 2.40 | 0.54 |
| 1:C:214:ASP:O | 1:C:217:PRO:HG2 | 2.07 | 0.54 |
| 1:C:230:GLU:O | 1:C:250:LEU:HD23 | 2.07 | 0.54 |
| 1:C:255:TYR:CD1 | 1:C:292:PHE:CD2 | 2.96 | 0.54 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:385:PRO:HG2 | 1:C:396:ARG:H | 1.72 | 0.54 |
| 1:A:197:ASN:C | 1:B:467:LYS:NZ | 2.57 | 0.54 |
| 1:A:248:GLY:C | 1:B:477:SER:CB | 2.68 | 0.54 |
| 1:B:148:PRO:O | 1:B:165:TRP:CD1 | 2.61 | 0.54 |
| 1:B:241:PRO:CA | 1:C:374:SER:CA | 2.59 | 0.54 |
| 1:B:250:LEU:CD1 | 1:B:292:PHE:CE1 | 2.91 | 0.54 |
| 1:B:385:PRO:HB3 | 1:C:226:TYR:CA | 2.37 | 0.54 |
| 1:B:387:ILE:HG13 | 1:B:424:GLY:HA3 | 1.89 | 0.54 |
| 1:C:148:PRO:O | 1:C:165:TRP:CD1 | 2.61 | 0.54 |
| 1:A:165:TRP:CE2 | 1:B:110:ARG:CA | 2.75 | 0.54 |
| 1:A:200:ILE:CD1 | 1:B:467:LYS:HD2 | 2.36 | 0.54 |
| 1:A:221:LYS:HG3 | 1:B:434:THR:HG23 | 1.90 | 0.54 |
| 1:A:221:LYS:HB2 | 1:B:436:VAL:HA | 1.65 | 0.54 |
| 1:A:420:LEU:CD2 | 1:A:452:VAL:CG2 | 2.83 | 0.54 |
| 1:B:16:THR:CG2 | 1:B:42:TRP:CD1 | 2.91 | 0.54 |
| 1:B:147:HIS:CE1 | 1:B:163:ASP:CB | 2.90 | 0.54 |
| 1:B:213:LYS:NZ | 1:C:375:LYS:HG2 | 2.23 | 0.54 |
| 1:B:229:GLY:N | 1:B:246:MET:HE1 | 2.22 | 0.54 |
| 1:C:137:PHE:CG | 1:C:146:PHE:CZ | 2.95 | 0.54 |
| 1:C:205:ILE:O | 1:C:230:GLU:HG3 | 2.07 | 0.54 |
| 1:A:57:PHE:HZ | 1:A:327:ILE:HD13 | 1.73 | 0.54 |
| 1:A:137:PHE:CG | 1:A:146:PHE:CZ | 2.95 | 0.54 |
| 1:A:148:PRO:O | 1:A:165:TRP:CD1 | 2.61 | 0.54 |
| 1:A:184:LYS:CB | 1:B:367:ALA:HB2 | 2.38 | 0.54 |
| 1:A:216:TRP:HB2 | 1:A:217:PRO:CD | 2.38 | 0.54 |
| 1:A:428:THR:CG2 | 1:A:431:GLN:HG2 | 2.39 | 0.54 |
| 1:B:45:ILE:O | 1:B:49:LEU:HD13 | 2.08 | 0.54 |
| 1:B:214:ASP:O | 1:B:217:PRO:HG2 | 2.07 | 0.54 |
| 1:B:238:TYR:CD2 | 1:C:376:ASP:CB | 2.73 | 0.54 |
| 1:C:75:TYR:HE1 | 1:C:170:THR:HG21 | 1.71 | 0.54 |
| 1:A:75:TYR:CE1 | 1:A:170:THR:CG2 | 2.91 | 0.53 |
| 1:A:180:LYS:CE | 1:B:12:TYR:HB2 | 2.37 | 0.53 |
| 1:A:188:TYR:CE1 | 1:B:365:ALA:CA | 2.70 | 0.53 |
| 1:B:137:PHE:O | 1:B:140:PHE:CD1 | 2.62 | 0.53 |
| 1:B:395:MET:SD | 1:B:407:ILE:HD12 | 2.49 | 0.53 |
| 1:C:137:PHE:O | 1:C:140:PHE:CD1 | 2.61 | 0.53 |
| 1:C:147:HIS:CE1 | 1:C:163:ASP:CB | 2.90 | 0.53 |
| 1:A:468:LEU:CD2 | 1:A:473:ILE:HG12 | 2.34 | 0.53 |
| 1:B:29:THR:O | 1:B:30:CYS:HB2 | 2.08 | 0.53 |
| 1:B:75:TYR:HE1 | 1:B:170:THR:HG21 | 1.71 | 0.53 |
| 1:B:190:TRP:CZ3 | 1:B:191:VAL:HG12 | 2.43 | 0.53 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:57:PHE:CZ | 1:A:362:ILE:CG2 | 2.91 | 0.53 |
| 1:A:395:MET:SD | 1:A:407:ILE:HD12 | 2.49 | 0.53 |
| 1:B:32:THR:CG2 | 1:B:342:ALA:HA | 2.28 | 0.53 |
| 1:B:213:LYS:HG2 | 1:C:375:LYS:CE | 2.39 | 0.53 |
| 1:C:137:PHE:O | 1:C:139:PRO:HD3 | 2.07 | 0.53 |
| 1:C:215:PHE:CE1 | 1:C:216:TRP:CZ3 | 2.96 | 0.53 |
| 1:C:395:MET:SD | 1:C:407:ILE:HD12 | 2.49 | 0.53 |
| 1:A:143:GLN:CG | 1:B:108:HIS:CE1 | 2.91 | 0.53 |
| 1:A:184:LYS:HG2 | 1:B:56:GLY:HA3 | 0.70 | 0.53 |
| 1:A:193:SER:O | 1:A:196:SER:HB3 | 2.07 | 0.53 |
| 1:A:215:PHE:CE1 | 1:A:216:TRP:CZ3 | 2.96 | 0.53 |
| 1:A:215:PHE:HA | 1:B:364:SER:HA | 1.90 | 0.53 |
| 1:A:243:GLN:HB3 | 1:A:284:PRO:CD | 2.39 | 0.53 |
| 1:B:137:PHE:O | 1:B:140:PHE:HD1 | 1.92 | 0.53 |
| 1:B:382:TYR:CE1 | 1:B:396:ARG:O | 2.62 | 0.53 |
| 1:C:188:TYR:CE1 | 1:C:218:GLY:CA | 2.85 | 0.53 |
| 1:C:250:LEU:CD1 | 1:C:292:PHE:HE1 | 2.22 | 0.53 |
| 1:C:254:ILE:HD11 | 1:C:321:ASN:ND2 | 2.23 | 0.53 |
| 1:A:45:ILE:HG21 | 1:A:103:LEU:CD1 | 2.38 | 0.53 |
| 1:A:145:TYR:OH | 1:B:6:TRP:HA | 2.09 | 0.53 |
| 1:A:194:LEU:CD1 | 1:B:375:LYS:HG3 | 2.38 | 0.53 |
| 1:A:200:ILE:CG2 | 1:B:467:LYS:C | 2.76 | 0.53 |
| 1:A:254:ILE:HD11 | 1:A:321:ASN:ND2 | 2.23 | 0.53 |
| 1:B:91:ASN:OD1 | 1:B:94:TYR:HD2 | 1.92 | 0.53 |
| 1:C:66:THR:CG2 | 1:C:86:ASP:HB3 | 2.39 | 0.53 |
| 1:C:348:TRP:CD1 | 1:C:348:TRP:O | 2.62 | 0.53 |
| 1:A:91:ASN:OD1 | 1:A:94:TYR:HD2 | 1.92 | 0.53 |
| 1:A:320:LEU:HD22 | 1:A:407:ILE:HD13 | 1.90 | 0.53 |
| 1:B:21:ARG:CG | 1:B:21:ARG:HH21 | 2.22 | 0.53 |
| 1:B:216:TRP:HB2 | 1:B:217:PRO:CD | 2.38 | 0.53 |
| 1:C:16:THR:CG2 | 1:C:42:TRP:CD1 | 2.91 | 0.53 |
| 1:C:157:ASP:OD2 | 1:C:159:THR:HB | 2.08 | 0.53 |
| 1:C:386:TYR:O | 1:C:388:LYS:N | 2.42 | 0.53 |
| 1:A:191:VAL:HG21 | 1:B:473:ILE:CG1 | 2.37 | 0.53 |
| 1:A:218:GLY:N | 1:B:437:ILE:HA | 2.24 | 0.53 |
| 1:A:382:TYR:CD1 | 1:A:382:TYR:C | 2.81 | 0.53 |
| 1:A:382:TYR:CE1 | 1:A:396:ARG:O | 2.62 | 0.53 |
| 1:A:387:ILE:HG13 | 1:A:424:GLY:HA3 | 1.89 | 0.53 |
| 1:B:57:PHE:HZ | 1:B:327:ILE:HD13 | 1.73 | 0.53 |
| 1:B:66:THR:CG2 | 1:B:86:ASP:HB3 | 2.39 | 0.53 |
| 1:B:332:GLU:HA | 1:B:358:LEU:CB | 2.39 | 0.53 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:383:LYS:NZ | 1:C:5:ASP:C | 2.61 | 0.53 |
| 1:C:21:ARG:HH21 | 1:C:21:ARG:CG | 2.22 | 0.53 |
| 1:C:243:GLN:HB3 | 1:C:284:PRO:CD | 2.39 | 0.53 |
| 1:C:428:THR:CG2 | 1:C:431:GLN:HG2 | 2.39 | 0.53 |
| 1:A:45:ILE:O | 1:A:49:LEU:HD13 | 2.08 | 0.53 |
| 1:A:68:GLN:C | 1:A:85:THR:HG21 | 2.29 | 0.53 |
| 1:A:315:ALA:HA | 1:A:318:ILE:CG2 | 2.36 | 0.53 |
| 1:A:332:GLU:HA | 1:A:358:LEU:CB | 2.39 | 0.53 |
| 1:A:386:TYR:O | 1:A:388:LYS:N | 2.42 | 0.53 |
| 1:B:11:ILE:HD13 | 1:B:326:ILE:HG13 | 1.89 | 0.53 |
| 1:B:122:HIS:CB | 1:B:173:LEU:HB3 | 2.39 | 0.53 |
| 1:B:237:ALA:HB2 | 1:C:379:PHE:CB | 2.38 | 0.53 |
| 1:A:16:THR:CG2 | 1:A:42:TRP:CD1 | 2.91 | 0.53 |
| 1:A:29:THR:O | 1:A:30:CYS:HB2 | 2.08 | 0.53 |
| 1:A:66:THR:CG2 | 1:A:86:ASP:HB3 | 2.39 | 0.53 |
| 1:A:87:ILE:C | 1:B:374:SER:O | 2.47 | 0.53 |
| 1:A:190:TRP:CD2 | 1:B:374:SER:N | 2.64 | 0.53 |
| 1:A:273:TYR:CE1 | 1:A:389:ASP:HB3 | 2.44 | 0.53 |
| 1:B:68:GLN:C | 1:B:85:THR:HG21 | 2.29 | 0.53 |
| 1:B:157:ASP:OD2 | 1:B:159:THR:HB | 2.08 | 0.53 |
| 1:B:191:VAL:HG11 | 1:B:219:TYR:CE2 | 2.44 | 0.53 |
| 1:B:215:PHE:CE1 | 1:B:216:TRP:CZ3 | 2.96 | 0.53 |
| 1:B:382:TYR:CD1 | 1:B:382:TYR:C | 2.81 | 0.53 |
| 1:C:57:PHE:CZ | 1:C:362:ILE:CG2 | 2.91 | 0.53 |
| 1:C:147:HIS:CD2 | 1:C:177:ASP:O | 2.56 | 0.53 |
| 1:A:6:TRP:CZ2 | 1:A:113:TYR:CD1 | 2.98 | 0.53 |
| 1:A:250:LEU:CD1 | 1:A:292:PHE:HE1 | 2.22 | 0.53 |
| 1:B:238:TYR:C | 1:B:238:TYR:CD1 | 2.83 | 0.53 |
| 1:B:300:ARG:HH11 | 1:B:328:TYR:HE1 | 1.53 | 0.53 |
| 1:B:399:THR:CB | 1:C:196:SER:HA | 2.38 | 0.53 |
| 1:C:91:ASN:OD1 | 1:C:94:TYR:HD2 | 1.92 | 0.53 |
| 1:A:122:HIS:CB | 1:A:173:LEU:HB3 | 2.39 | 0.52 |
| 1:A:137:PHE:O | 1:A:140:PHE:CD1 | 2.62 | 0.52 |
| 1:A:163:ASP:C | 1:B:53:GLN:OE1 | 2.47 | 0.52 |
| 1:A:279:VAL:O | 1:A:283:CYS:HB2 | 2.09 | 0.52 |
| 1:A:348:TRP:CD1 | 1:A:348:TRP:O | 2.62 | 0.52 |
| 1:B:241:PRO:HA | 1:C:373:ILE:HG22 | 1.91 | 0.52 |
| 1:B:428:THR:CG2 | 1:B:431:GLN:HG2 | 2.39 | 0.52 |
| 1:C:122:HIS:CB | 1:C:173:LEU:HB3 | 2.39 | 0.52 |
| 1:C:190:TRP:CZ3 | 1:C:191:VAL:HG12 | 2.43 | 0.52 |
| 1:C:191:VAL:HG11 | 1:C:219:TYR:CE2 | 2.44 | 0.52 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:279:VAL:O | 1:C:283:CYS:HB2 | 2.09 | 0.52 |
| 1:C:382:TYR:CD1 | 1:C:382:TYR:C | 2.81 | 0.52 |
| 1:C:382:TYR:CE1 | 1:C:396:ARG:O | 2.62 | 0.52 |
| 1:C:387:ILE:HG13 | 1:C:424:GLY:HA3 | 1.89 | 0.52 |
| 1:A:163:ASP:O | 1:B:53:GLN:OE1 | 2.27 | 0.52 |
| 1:A:220:ASN:HA | 1:B:473:ILE:HG22 | 1.86 | 0.52 |
| 1:A:221:LYS:HG3 | 1:B:434:THR:CG2 | 2.39 | 0.52 |
| 1:A:382:TYR:CE1 | 1:A:385:PRO:HD3 | 2.45 | 0.52 |
| 1:B:75:TYR:CE1 | 1:B:170:THR:CG2 | 2.91 | 0.52 |
| 1:B:91:ASN:OD1 | 1:B:94:TYR:CD2 | 2.63 | 0.52 |
| 1:B:217:PRO:HD3 | 1:B:245:VAL:HG22 | 1.91 | 0.52 |
| 1:B:243:GLN:HB3 | 1:B:284:PRO:CD | 2.39 | 0.52 |
| 1:B:254:ILE:HD11 | 1:B:321:ASN:ND2 | 2.23 | 0.52 |
| 1:C:6:TRP:CZ2 | 1:C:113:TYR:CD1 | 2.98 | 0.52 |
| 1:C:45:ILE:O | 1:C:49:LEU:HD13 | 2.08 | 0.52 |
| 1:C:68:GLN:C | 1:C:85:THR:HG21 | 2.29 | 0.52 |
| 1:C:137:PHE:O | 1:C:140:PHE:HD1 | 1.92 | 0.52 |
| 1:C:332:GLU:HA | 1:C:358:LEU:CB | 2.39 | 0.52 |
| 1:C:405:VAL:HB | 1:C:463:TYR:CD2 | 2.44 | 0.52 |
| 1:A:21:ARG:HH21 | 1:A:21:ARG:CG | 2.22 | 0.52 |
| 1:A:123:MET:HB2 | 1:A:174:PRO:HG2 | 1.91 | 0.52 |
| 1:A:137:PHE:O | 1:A:140:PHE:HD1 | 1.92 | 0.52 |
| 1:A:144:ASP:O | 1:B:58:THR:CG2 | 2.42 | 0.52 |
| 1:A:157:ASP:OD2 | 1:A:159:THR:HB | 2.08 | 0.52 |
| 1:A:192:GLY:C | 1:B:464:PRO:HG2 | 2.23 | 0.52 |
| 1:A:197:ASN:HD21 | 1:C:196:SER:CB | 2.18 | 0.52 |
| 1:A:238:TYR:CD1 | 1:A:238:TYR:C | 2.83 | 0.52 |
| 1:A:394:ALA:HA | 1:A:408:LEU:HA | 1.92 | 0.52 |
| 1:B:45:ILE:HG21 | 1:B:103:LEU:CD1 | 2.38 | 0.52 |
| 1:B:57:PHE:CZ | 1:B:362:ILE:CG2 | 2.91 | 0.52 |
| 1:B:279:VAL:O | 1:B:283:CYS:HB2 | 2.09 | 0.52 |
| 1:B:348:TRP:CD1 | 1:B:348:TRP:O | 2.62 | 0.52 |
| 1:C:18:ARG:CZ | 1:C:79:TYR:CD2 | 2.92 | 0.52 |
| 1:C:45:ILE:HG21 | 1:C:103:LEU:CD1 | 2.38 | 0.52 |
| 1:A:144:ASP:O | 1:B:58:THR:HG22 | 1.88 | 0.52 |
| 1:A:147:HIS:CE1 | 1:A:163:ASP:CB | 2.90 | 0.52 |
| 1:A:187:TRP:CH2 | 1:B:374:SER:OG | 2.61 | 0.52 |
| 1:A:188:TYR:CE1 | 1:A:218:GLY:CA | 2.85 | 0.52 |
| 1:A:190:TRP:CZ3 | 1:A:191:VAL:HG12 | 2.43 | 0.52 |
| 1:B:274:ASN:HD21 | 1:C:285:ASP:H | 1.58 | 0.52 |
| 1:B:405:VAL:HB | 1:B:463:TYR:CD2 | 2.45 | 0.52 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:238:TYR:CD1 | 1:C:238:TYR:C | 2.83 | 0.52 |
| 1:A:91:ASN:OD1 | 1:A:94:TYR:CD2 | 2.63 | 0.52 |
| 1:A:178:THR:HA | 1:B:112:MET:CE | 2.40 | 0.52 |
| 1:A:468:LEU:HD23 | 1:A:473:ILE:HD13 | 1.91 | 0.52 |
| 1:B:101:LYS:HE2 | 1:B:198:TYR:CE2 | 2.45 | 0.52 |
| 1:B:299:PRO:HB2 | 1:B:303:SER:HB2 | 1.92 | 0.52 |
| 1:B:308:ILE:O | 1:B:311:ALA:HB3 | 2.10 | 0.52 |
| 1:B:445:GLY:CA | 1:C:185:ASN:CG | 2.60 | 0.52 |
| 1:C:185:ASN:O | 1:C:188:TYR:HB2 | 2.06 | 0.52 |
| 1:C:193:SER:O | 1:C:196:SER:HB3 | 2.06 | 0.52 |
| 1:C:458:LEU:CD1 | 1:C:460:ARG:HH22 | 2.23 | 0.52 |
| 1:A:319:ILE:CA | 1:A:325:PRO:HB2 | 2.39 | 0.52 |
| 1:B:13:PHE:HB3 | 1:B:328:TYR:HA | 1.92 | 0.52 |
| 1:B:250:LEU:CD1 | 1:B:292:PHE:HE1 | 2.21 | 0.52 |
| 1:B:279:VAL:HG21 | 1:B:289:LEU:HD21 | 1.91 | 0.52 |
| 1:B:426:SER:CA | 1:C:188:TYR:HD1 | 2.20 | 0.52 |
| 1:C:262:PHE:CZ | 1:C:314:VAL:HB | 2.45 | 0.52 |
| 1:C:394:ALA:HA | 1:C:408:LEU:HA | 1.92 | 0.52 |
| 1:A:205:ILE:HG21 | 1:B:472:LYS:HG3 | 0.54 | 0.52 |
| 1:A:246:MET:HE1 | 1:B:476:ASP:CG | 2.30 | 0.52 |
| 1:A:279:VAL:HG21 | 1:A:289:LEU:HD21 | 1.91 | 0.52 |
| 1:A:299:PRO:HB2 | 1:A:303:SER:HB2 | 1.92 | 0.52 |
| 1:B:281:SER:HB3 | 1:C:8:SER:H | 0.69 | 0.52 |
| 1:C:29:THR:O | 1:C:30:CYS:HB2 | 2.07 | 0.52 |
| 1:C:91:ASN:OD1 | 1:C:94:TYR:CD2 | 2.63 | 0.52 |
| 1:C:101:LYS:HE2 | 1:C:198:TYR:CE2 | 2.45 | 0.52 |
| 1:C:320:LEU:HD22 | 1:C:407:ILE:HD13 | 1.90 | 0.52 |
| 1:C:404:ILE:N | 1:C:404:ILE:CB | 2.73 | 0.52 |
| 1:A:32:THR:CG2 | 1:A:342:ALA:HA | 2.28 | 0.52 |
| 1:A:101:LYS:HE2 | 1:A:198:TYR:CE2 | 2.45 | 0.52 |
| 1:A:123:MET:CA | 1:A:174:PRO:HG2 | 2.40 | 0.52 |
| 1:A:185:ASN:HA | 1:B:365:ALA:O | 2.04 | 0.52 |
| 1:A:216:TRP:HB3 | 1:A:246:MET:HG2 | 1.91 | 0.52 |
| 1:A:465:THR:HA | 1:A:468:LEU:HD11 | 1.92 | 0.52 |
| 1:B:123:MET:CA | 1:B:174:PRO:HG2 | 2.40 | 0.52 |
| 1:B:286:SER:HB3 | 1:B:288:LEU:HG | 1.92 | 0.52 |
| 1:C:13:PHE:HB3 | 1:C:328:TYR:HA | 1.92 | 0.52 |
| 1:C:299:PRO:HB2 | 1:C:303:SER:HB2 | 1.92 | 0.52 |
| 1:A:18:ARG:CZ | 1:A:79:TYR:CD2 | 2.92 | 0.52 |
| 1:B:6:TRP:CZ2 | 1:B:113:TYR:CD1 | 2.97 | 0.52 |
| 1:B:396:ARG:HD3 | 1:C:221:LYS:C | 2.31 | 0.52 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:458:LEU:CD1 | 1:B:460:ARG:HH22 | 2.23 | 0.52 |
| 1:C:2:THR:CB | 1:C:3:PRO:HD2 | 2.18 | 0.52 |
| 1:C:279:VAL:HG21 | 1:C:289:LEU:HD21 | 1.91 | 0.52 |
| 1:C:468:LEU:HD23 | 1:C:473:ILE:HD13 | 1.91 | 0.52 |
| 1:A:182:VAL:HG21 | 1:B:58:THR:HB | 1.92 | 0.52 |
| 1:A:431:GLN:HA | 1:A:431:GLN:NE2 | 2.18 | 0.52 |
| 1:A:458:LEU:CD1 | 1:A:460:ARG:HH22 | 2.23 | 0.52 |
| 1:B:18:ARG:CZ | 1:B:79:TYR:CD2 | 2.92 | 0.52 |
| 1:B:83:TRP:NE1 | 1:B:173:LEU:CD2 | 2.68 | 0.52 |
| 1:B:187:TRP:HE3 | 1:B:190:TRP:CE3 | 2.28 | 0.52 |
| 1:B:382:TYR:CE1 | 1:B:385:PRO:HD3 | 2.44 | 0.52 |
| 1:C:11:ILE:HD13 | 1:C:326:ILE:HG13 | 1.89 | 0.52 |
| 1:C:308:ILE:O | 1:C:311:ALA:HB3 | 2.10 | 0.52 |
| 1:A:185:ASN:HD22 | 1:B:319:ILE:HB | 1.75 | 0.51 |
| 1:A:262:PHE:CZ | 1:A:314:VAL:HB | 2.45 | 0.51 |
| 1:A:405:VAL:HB | 1:A:463:TYR:CD2 | 2.45 | 0.51 |
| 1:B:87:ILE:CG2 | 1:B:139:PRO:HG3 | 2.40 | 0.51 |
| 1:B:262:PHE:CZ | 1:B:314:VAL:HB | 2.45 | 0.51 |
| 1:B:386:TYR:O | 1:B:388:LYS:N | 2.42 | 0.51 |
| 1:B:468:LEU:HD23 | 1:B:473:ILE:HD13 | 1.91 | 0.51 |
| 1:C:12:TYR:CE1 | 1:C:14:LEU:CD2 | 2.89 | 0.51 |
| 1:C:123:MET:CA | 1:C:174:PRO:HG2 | 2.40 | 0.51 |
| 1:C:200:ILE:O | 1:C:225:VAL:HG11 | 2.10 | 0.51 |
| 1:A:13:PHE:HB3 | 1:A:328:TYR:HA | 1.92 | 0.51 |
| 1:A:152:ILE:CD1 | 1:A:166:LEU:HA | 2.28 | 0.51 |
| 1:A:216:TRP:HB2 | 1:A:245:VAL:CG2 | 2.29 | 0.51 |
| 1:A:301:PHE:C | 1:A:301:PHE:CD2 | 2.83 | 0.51 |
| 1:A:308:ILE:O | 1:A:311:ALA:HB3 | 2.10 | 0.51 |
| 1:A:382:TYR:CD2 | 1:A:398:GLY:O | 2.64 | 0.51 |
| 1:B:68:GLN:HB2 | 1:B:69:LEU:HD23 | 1.92 | 0.51 |
| 1:B:199:SER:C | 1:B:200:ILE:HG13 | 2.16 | 0.51 |
| 1:C:300:ARG:HH11 | 1:C:328:TYR:HE1 | 1.53 | 0.51 |
| 1:C:301:PHE:C | 1:C:301:PHE:CD2 | 2.83 | 0.51 |
| 1:C:380:VAL:CG1 | 1:C:381:THR:H | 2.22 | 0.51 |
| 1:C:382:TYR:CD2 | 1:C:398:GLY:O | 2.64 | 0.51 |
| 1:C:427:TYR:CE1 | 1:C:433:LEU:HD11 | 2.45 | 0.51 |
| 1:A:49:LEU:O | 1:A:52:ILE:HG12 | 2.11 | 0.51 |
| 1:A:189:ASP:HB2 | 1:B:369:ARG:CG | 2.41 | 0.51 |
| 1:A:286:SER:HB3 | 1:A:288:LEU:HG | 1.92 | 0.51 |
| 1:B:394:ALA:HA | 1:B:408:LEU:HA | 1.92 | 0.51 |
| 1:B:418:TYR:HD1 | 1:B:454:MET:CE | 2.22 | 0.51 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:315:ALA:HA | 1:C:318:ILE:CG2 | 2.36 | 0.51 |
| 1:C:382:TYR:CE1 | 1:C:385:PRO:HD3 | 2.44 | 0.51 |
| 1:C:473:ILE:HG23 | 1:C:474:CYS:N | 2.25 | 0.51 |
| 1:A:200:ILE:O | 1:A:225:VAL:HG11 | 2.10 | 0.51 |
| 1:A:2:THR:CB | 1:A:3:PRO:HD2 | 2.18 | 0.51 |
| 1:A:238:TYR:O | 1:A:241:PRO:HG2 | 2.11 | 0.51 |
| 1:B:315:ALA:HA | 1:B:318:ILE:CG2 | 2.36 | 0.51 |
| 1:B:427:TYR:CE1 | 1:B:433:LEU:HD11 | 2.46 | 0.51 |
| 1:B:443:THR:O | 1:B:451:PRO:HD2 | 2.11 | 0.51 |
| 1:C:250:LEU:HD12 | 1:C:292:PHE:CE1 | 2.46 | 0.51 |
| 1:C:280:LYS:O | 1:C:281:SER:HB2 | 2.11 | 0.51 |
| 1:A:190:TRP:CD2 | 1:B:374:SER:CA | 2.83 | 0.51 |
| 1:A:217:PRO:HA | 1:B:474:CYS:O | 2.10 | 0.51 |
| 1:A:404:ILE:N | 1:A:404:ILE:CB | 2.73 | 0.51 |
| 1:B:7:ARG:NE | 1:B:286:SER:O | 2.44 | 0.51 |
| 1:B:201:ASP:O | 1:B:225:VAL:HG13 | 2.10 | 0.51 |
| 1:B:250:LEU:HD12 | 1:B:292:PHE:CE1 | 2.45 | 0.51 |
| 1:B:428:THR:CA | 1:C:186:GLU:C | 2.77 | 0.51 |
| 1:C:238:TYR:O | 1:C:241:PRO:HG2 | 2.11 | 0.51 |
| 1:A:123:MET:CE | 1:A:140:PHE:HE1 | 2.24 | 0.51 |
| 1:A:177:ASP:HB3 | 1:B:53:GLN:HG2 | 1.90 | 0.51 |
| 1:B:134:TYR:CE1 | 1:B:143:GLN:CB | 2.94 | 0.51 |
| 1:B:238:TYR:HD2 | 1:C:403:GLN:NE2 | 2.07 | 0.51 |
| 1:B:301:PHE:CD2 | 1:B:301:PHE:C | 2.83 | 0.51 |
| 1:B:420:LEU:CD2 | 1:B:452:VAL:CG2 | 2.83 | 0.51 |
| 1:C:243:GLN:HG2 | 1:C:284:PRO:O | 2.11 | 0.51 |
| 1:A:182:VAL:CG2 | 1:B:58:THR:CB | 2.89 | 0.51 |
| 1:A:278:THR:O | 1:A:282:ASP:HB2 | 2.11 | 0.51 |
| 1:B:14:LEU:HD22 | 1:B:19:PHE:CE2 | 2.46 | 0.51 |
| 1:B:117:ASP:CG | 1:B:204:ARG:NH1 | 2.65 | 0.51 |
| 1:B:216:TRP:HB3 | 1:B:246:MET:HG2 | 1.91 | 0.51 |
| 1:B:280:LYS:O | 1:C:6:TRP:CA | 2.54 | 0.51 |
| 1:B:280:LYS:O | 1:C:7:ARG:CB | 2.59 | 0.51 |
| 1:B:320:LEU:HD22 | 1:B:407:ILE:HD13 | 1.90 | 0.51 |
| 1:B:434:THR:C | 1:B:435:GLU:O | 2.47 | 0.51 |
| 1:C:134:TYR:CE1 | 1:C:143:GLN:CB | 2.94 | 0.51 |
| 1:C:217:PRO:HD3 | 1:C:245:VAL:HG22 | 1.91 | 0.51 |
| 1:C:225:VAL:O | 1:C:225:VAL:CG1 | 2.59 | 0.51 |
| 1:C:229:GLY:N | 1:C:246:MET:HE1 | 2.25 | 0.51 |
| 1:A:68:GLN:HB2 | 1:A:69:LEU:HD23 | 1.92 | 0.51 |
| 1:A:181:ASP:OD1 | 1:B:319:ILE:HD13 | 2.11 | 0.51 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:380:VAL:CG1 | 1:A:381:THR:H | 2.22 | 0.51 |
| 1:A:418:TYR:HD1 | 1:A:454:MET:CE | 2.23 | 0.51 |
| 1:A:418:TYR:CE1 | 1:A:454:MET:HE2 | 2.46 | 0.51 |
| 1:B:200:ILE:O | 1:B:225:VAL:HG11 | 2.10 | 0.51 |
| 1:B:406:THR:HG21 | 1:C:221:LYS:CB | 2.41 | 0.51 |
| 1:B:449:ASN:CB | 1:C:184:LYS:HZ2 | 2.13 | 0.51 |
| 1:C:14:LEU:HD22 | 1:C:19:PHE:CE2 | 2.46 | 0.51 |
| 1:C:101:LYS:HE3 | 1:C:198:TYR:CZ | 2.46 | 0.51 |
| 1:C:200:ILE:CG2 | 1:C:203:LEU:HD11 | 2.38 | 0.51 |
| 1:C:216:TRP:HB3 | 1:C:246:MET:HG2 | 1.91 | 0.51 |
| 1:C:418:TYR:HD1 | 1:C:454:MET:CE | 2.23 | 0.51 |
| 1:C:443:THR:O | 1:C:451:PRO:HD2 | 2.11 | 0.51 |
| 1:C:465:THR:HA | 1:C:468:LEU:HD11 | 1.92 | 0.51 |
| 1:A:187:TRP:HE3 | 1:A:190:TRP:CE3 | 2.28 | 0.51 |
| 1:A:250:LEU:HD12 | 1:A:292:PHE:CE1 | 2.46 | 0.51 |
| 1:B:137:PHE:CZ | 1:B:174:PRO:HG3 | 2.46 | 0.51 |
| 1:C:68:GLN:HB2 | 1:C:69:LEU:HD23 | 1.92 | 0.51 |
| 1:C:216:TRP:HB2 | 1:C:245:VAL:CG2 | 2.29 | 0.51 |
| 1:C:431:GLN:HA | 1:C:431:GLN:NE2 | 2.18 | 0.51 |
| 1:A:7:ARG:NE | 1:A:286:SER:O | 2.44 | 0.50 |
| 1:A:101:LYS:HE3 | 1:A:198:TYR:CZ | 2.46 | 0.50 |
| 1:A:134:TYR:CE1 | 1:A:143:GLN:CB | 2.94 | 0.50 |
| 1:A:229:GLY:H | 1:A:246:MET:HE1 | 1.71 | 0.50 |
| 1:A:280:LYS:O | 1:A:281:SER:HB2 | 2.11 | 0.50 |
| 1:A:427:TYR:CE1 | 1:A:433:LEU:HD11 | 2.45 | 0.50 |
| 1:B:255:TYR:CD1 | 1:B:292:PHE:CE2 | 2.99 | 0.50 |
| 1:C:187:TRP:HE3 | 1:C:190:TRP:CE3 | 2.29 | 0.50 |
| 1:C:295:ASN:CB | 1:C:298:ASN:HB2 | 2.37 | 0.50 |
| 1:C:434:THR:C | 1:C:435:GLU:O | 2.47 | 0.50 |
| 1:A:148:PRO:HB3 | 1:B:49:LEU:CD2 | 2.41 | 0.50 |
| 1:B:192:GLY:HA2 | 1:B:223:ALA:HB2 | 1.94 | 0.50 |
| 1:B:243:GLN:HG2 | 1:B:284:PRO:O | 2.11 | 0.50 |
| 1:B:295:ASN:CB | 1:B:298:ASN:HB2 | 2.36 | 0.50 |
| 1:B:359:TYR:HA | 1:B:362:ILE:HD12 | 1.93 | 0.50 |
| 1:B:382:TYR:CD2 | 1:B:398:GLY:O | 2.64 | 0.50 |
| 1:C:208:VAL:HG23 | 1:C:216:TRP:CD2 | 2.46 | 0.50 |
| 1:C:278:THR:O | 1:C:282:ASP:HB2 | 2.11 | 0.50 |
| 1:A:145:TYR:N | 1:B:9:GLN:OE1 | 2.44 | 0.50 |
| 1:A:443:THR:O | 1:A:451:PRO:HD2 | 2.11 | 0.50 |
| 1:B:188:TYR:CE1 | 1:B:218:GLY:CA | 2.85 | 0.50 |
| 1:B:237:ALA:HB3 | 1:C:399:THR:OG1 | 2.11 | 0.50 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:465:THR:HA | 1:B:468:LEU:HD11 | 1.92 | 0.50 |
| 1:C:49:LEU:O | 1:C:52:ILE:HG12 | 2.11 | 0.50 |
| 1:C:119:VAL:HG23 | 1:C:206:ASP:CB | 2.31 | 0.50 |
| 1:A:11:ILE:HD13 | 1:A:326:ILE:HG13 | 1.89 | 0.50 |
| 1:A:185:ASN:N | 1:B:366:ASN:CB | 2.36 | 0.50 |
| 1:A:200:ILE:HD12 | 1:B:467:LYS:HZ2 | 1.75 | 0.50 |
| 1:A:215:PHE:CD1 | 1:A:215:PHE:C | 2.85 | 0.50 |
| 1:A:347:THR:CG2 | 1:A:348:TRP:N | 2.73 | 0.50 |
| 1:B:243:GLN:HE22 | 1:B:289:LEU:HD13 | 1.77 | 0.50 |
| 1:B:278:THR:O | 1:B:282:ASP:HB2 | 2.10 | 0.50 |
| 1:C:201:ASP:O | 1:C:225:VAL:HG13 | 2.10 | 0.50 |
| 1:C:243:GLN:HE22 | 1:C:289:LEU:HD13 | 1.77 | 0.50 |
| 1:A:45:ILE:CG2 | 1:A:49:LEU:CD1 | 2.80 | 0.50 |
| 1:A:57:PHE:CZ | 1:A:362:ILE:HG23 | 2.47 | 0.50 |
| 1:A:87:ILE:HG21 | 1:A:123:MET:HE1 | 1.93 | 0.50 |
| 1:A:117:ASP:CG | 1:A:204:ARG:NH1 | 2.65 | 0.50 |
| 1:A:183:VAL:HG22 | 1:A:184:LYS:N | 2.27 | 0.50 |
| 1:A:188:TYR:CZ | 1:B:367:ALA:N | 2.78 | 0.50 |
| 1:A:201:ASP:O | 1:A:225:VAL:HG13 | 2.10 | 0.50 |
| 1:A:255:TYR:CD1 | 1:A:292:PHE:CE2 | 2.99 | 0.50 |
| 1:B:327:ILE:HG13 | 1:B:331:GLN:CD | 2.32 | 0.50 |
| 1:B:385:PRO:CD | 1:B:396:ARG:O | 2.60 | 0.50 |
| 1:B:385:PRO:CB | 1:C:3:PRO:HD3 | 2.34 | 0.50 |
| 1:C:87:ILE:CG2 | 1:C:139:PRO:HG3 | 2.40 | 0.50 |
| 1:A:14:LEU:HD22 | 1:A:19:PHE:CE2 | 2.46 | 0.50 |
| 1:A:165:TRP:CE2 | 1:B:109:GLU:C | 2.80 | 0.50 |
| 1:A:262:PHE:CZ | 1:A:314:VAL:HA | 2.47 | 0.50 |
| 1:A:364:SER:HB2 | 1:A:437:ILE:HG22 | 1.93 | 0.50 |
| 1:A:436:VAL:HG22 | 1:A:437:ILE:N | 2.26 | 0.50 |
| 1:B:49:LEU:O | 1:B:52:ILE:HG12 | 2.11 | 0.50 |
| 1:B:57:PHE:CZ | 1:B:362:ILE:HG23 | 2.47 | 0.50 |
| 1:B:225:VAL:O | 1:B:225:VAL:CG1 | 2.59 | 0.50 |
| 1:B:273:TYR:CE1 | 1:B:389:ASP:HB3 | 2.44 | 0.50 |
| 1:B:392:THR:CG2 | 1:B:410:ASN:HB2 | 2.42 | 0.50 |
| 1:A:147:HIS:O | 1:B:110:ARG:N | 2.30 | 0.50 |
| 1:A:180:LYS:HE3 | 1:B:12:TYR:HA | 1.91 | 0.50 |
| 1:A:194:LEU:O | 1:B:403:GLN:CG | 2.59 | 0.50 |
| 1:A:373:ILE:HG22 | 1:A:377:THR:HG22 | 1.92 | 0.50 |
| 1:B:242:TYR:CA | 1:B:245:VAL:HG12 | 2.42 | 0.50 |
| 1:B:243:GLN:NE2 | 1:B:284:PRO:O | 2.42 | 0.50 |
| 1:B:262:PHE:CZ | 1:B:314:VAL:HA | 2.47 | 0.50 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:436:VAL:HG22 | 1:B:437:ILE:N | 2.26 | 0.50 |
| 1:C:42:TRP:CD2 | 1:C:94:TYR:CD1 | 3.00 | 0.50 |
| 1:C:57:PHE:CZ | 1:C:362:ILE:HG23 | 2.47 | 0.50 |
| 1:C:300:ARG:HG2 | 1:C:335:TYR:O | 2.12 | 0.50 |
| 1:C:347:THR:CG2 | 1:C:348:TRP:N | 2.73 | 0.50 |
| 1:B:238:TYR:O | 1:B:241:PRO:HG2 | 2.11 | 0.50 |
| 1:B:277:ASN:HB2 | 1:C:286:SER:O | 2.00 | 0.50 |
| 1:B:300:ARG:HG2 | 1:B:335:TYR:O | 2.12 | 0.50 |
| 1:C:117:ASP:CG | 1:C:204:ARG:NH1 | 2.65 | 0.50 |
| 1:C:215:PHE:CD1 | 1:C:215:PHE:C | 2.85 | 0.50 |
| 1:C:273:TYR:CE1 | 1:C:389:ASP:HB3 | 2.44 | 0.50 |
| 1:C:307:ASP:HB2 | 1:C:413:ALA:CB | 2.40 | 0.50 |
| 1:C:364:SER:HB2 | 1:C:437:ILE:HG22 | 1.93 | 0.50 |
| 1:C:369:ARG:HG2 | 1:C:379:PHE:CZ | 2.47 | 0.50 |
| 1:A:18:ARG:HD3 | 1:A:344:ARG:HB3 | 1.94 | 0.50 |
| 1:A:194:LEU:O | 1:B:403:GLN:HG3 | 2.11 | 0.50 |
| 1:A:243:GLN:HE22 | 1:A:289:LEU:HD13 | 1.76 | 0.50 |
| 1:A:262:PHE:CE2 | 1:A:314:VAL:HB | 2.47 | 0.50 |
| 1:A:280:LYS:HE3 | 1:A:383:LYS:C | 2.31 | 0.50 |
| 1:A:300:ARG:HG2 | 1:A:335:TYR:O | 2.12 | 0.50 |
| 1:B:101:LYS:HE3 | 1:B:198:TYR:CZ | 2.46 | 0.50 |
| 1:B:158:GLN:HA | 1:B:161:VAL:CG1 | 2.42 | 0.50 |
| 1:B:208:VAL:HG23 | 1:B:216:TRP:CD2 | 2.46 | 0.50 |
| 1:B:215:PHE:CD1 | 1:B:215:PHE:C | 2.85 | 0.50 |
| 1:C:7:ARG:NE | 1:C:286:SER:O | 2.44 | 0.50 |
| 1:C:13:PHE:CD2 | 1:C:328:TYR:CD2 | 2.99 | 0.50 |
| 1:C:255:TYR:CD1 | 1:C:292:PHE:CE2 | 2.99 | 0.50 |
| 1:C:385:PRO:CD | 1:C:396:ARG:O | 2.60 | 0.50 |
| 1:C:392:THR:CG2 | 1:C:410:ASN:HB2 | 2.42 | 0.50 |
| 1:A:123:MET:N | 1:A:174:PRO:HG2 | 2.27 | 0.49 |
| 1:A:177:ASP:HB3 | 1:B:53:GLN:HA | 1.94 | 0.49 |
| 1:A:184:LYS:HB2 | 1:B:367:ALA:HB2 | 1.94 | 0.49 |
| 1:A:189:ASP:CB | 1:B:369:ARG:O | 2.60 | 0.49 |
| 1:A:300:ARG:HH11 | 1:A:328:TYR:HE1 | 1.53 | 0.49 |
| 1:A:432:GLN:HG3 | 1:A:465:THR:HG21 | 1.90 | 0.49 |
| 1:A:434:THR:C | 1:A:435:GLU:O | 2.47 | 0.49 |
| 1:B:42:TRP:CD2 | 1:B:94:TYR:CD1 | 3.00 | 0.49 |
| 1:B:134:TYR:CE1 | 1:B:143:GLN:HB2 | 2.47 | 0.49 |
| 1:B:420:LEU:CD2 | 1:B:452:VAL:CG1 | 2.82 | 0.49 |
| 1:C:158:GLN:HA | 1:C:161:VAL:CG1 | 2.42 | 0.49 |
| 1:C:183:VAL:HG22 | 1:C:184:LYS:N | 2.27 | 0.49 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:192:GLY:HA2 | 1:C:223:ALA:HB2 | 1.94 | 0.49 |
| 1:C:327:ILE:HG13 | 1:C:331:GLN:CD | 2.32 | 0.49 |
| 1:A:34:ASP:O | 1:A:36:LYS:HG3 | 2.12 | 0.49 |
| 1:A:192:GLY:HA2 | 1:A:223:ALA:HB2 | 1.94 | 0.49 |
| 1:A:295:ASN:CB | 1:A:298:ASN:HB2 | 2.36 | 0.49 |
| 1:A:327:ILE:HG13 | 1:A:331:GLN:OE1 | 2.12 | 0.49 |
| 1:A:369:ARG:HG2 | 1:A:379:PHE:CZ | 2.47 | 0.49 |
| 1:A:392:THR:CG2 | 1:A:410:ASN:HB2 | 2.42 | 0.49 |
| 1:B:34:ASP:O | 1:B:36:LYS:HG3 | 2.12 | 0.49 |
| 1:B:123:MET:N | 1:B:174:PRO:HG2 | 2.27 | 0.49 |
| 1:B:229:GLY:HA3 | 1:B:246:MET:CE | 2.42 | 0.49 |
| 1:B:347:THR:CG2 | 1:B:348:TRP:N | 2.73 | 0.49 |
| 1:B:428:THR:HA | 1:C:188:TYR:N | 2.28 | 0.49 |
| 1:C:137:PHE:CZ | 1:C:174:PRO:HG3 | 2.47 | 0.49 |
| 1:C:243:GLN:NE2 | 1:C:284:PRO:O | 2.42 | 0.49 |
| 1:C:280:LYS:HE3 | 1:C:383:LYS:C | 2.31 | 0.49 |
| 1:C:432:GLN:HG3 | 1:C:465:THR:HG21 | 1.90 | 0.49 |
| 1:A:88:TYR:CZ | 1:B:373:ILE:HA | 2.45 | 0.49 |
| 1:A:137:PHE:CZ | 1:A:174:PRO:HG3 | 2.47 | 0.49 |
| 1:A:158:GLN:HA | 1:A:161:VAL:CG1 | 2.42 | 0.49 |
| 1:A:243:GLN:HG2 | 1:A:284:PRO:O | 2.11 | 0.49 |
| 1:A:243:GLN:NE2 | 1:A:284:PRO:O | 2.42 | 0.49 |
| 1:A:263:LYS:CA | 1:A:310:LEU:HD23 | 2.42 | 0.49 |
| 1:A:418:TYR:HD1 | 1:A:454:MET:HE3 | 1.73 | 0.49 |
| 1:B:369:ARG:HG2 | 1:B:379:PHE:CZ | 2.47 | 0.49 |
| 1:C:262:PHE:CZ | 1:C:314:VAL:HA | 2.47 | 0.49 |
| 1:C:436:VAL:HG22 | 1:C:437:ILE:N | 2.26 | 0.49 |
| 1:A:19:PHE:HD1 | 1:A:347:THR:HB | 1.77 | 0.49 |
| 1:A:42:TRP:CD2 | 1:A:94:TYR:CD1 | 3.00 | 0.49 |
| 1:A:87:ILE:CG2 | 1:A:139:PRO:HG3 | 2.40 | 0.49 |
| 1:A:186:GLU:HB2 | 1:B:369:ARG:HH12 | 1.77 | 0.49 |
| 1:A:227:CYS:SG | 1:B:473:ILE:HG22 | 2.53 | 0.49 |
| 1:A:240:CYS:CB | 1:A:241:PRO:CD | 2.89 | 0.49 |
| 1:B:13:PHE:CD2 | 1:B:328:TYR:CD2 | 2.99 | 0.49 |
| 1:B:183:VAL:HG22 | 1:B:184:LYS:N | 2.27 | 0.49 |
| 1:C:463:TYR:OH | 1:C:463:TYR:CE2 | 2.51 | 0.49 |
| 1:A:214:ASP:O | 1:A:217:PRO:HG2 | 2.07 | 0.49 |
| 1:A:327:ILE:HG13 | 1:A:331:GLN:CD | 2.32 | 0.49 |
| 1:B:19:PHE:HD1 | 1:B:347:THR:HB | 1.77 | 0.49 |
| 1:B:383:LYS:HE2 | 1:C:5:ASP:CB | 2.39 | 0.49 |
| 1:C:123:MET:N | 1:C:174:PRO:HG2 | 2.27 | 0.49 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:161:VAL:O | 1:C:210:HIS:HB3 | 2.12 | 0.49 |
| 1:C:229:GLY:HA3 | 1:C:246:MET:CE | 2.42 | 0.49 |
| 1:C:263:LYS:CA | 1:C:310:LEU:HD23 | 2.42 | 0.49 |
| 1:C:327:ILE:HG13 | 1:C:331:GLN:OE1 | 2.12 | 0.49 |
| 1:C:359:TYR:HA | 1:C:362:ILE:HD12 | 1.93 | 0.49 |
| 1:A:79:TYR:HE2 | 1:A:344:ARG:CD | 2.25 | 0.49 |
| 1:A:79:TYR:HE2 | 1:A:344:ARG:CG | 2.26 | 0.49 |
| 1:A:197:ASN:OD1 | 1:B:400:ASP:OD1 | 2.30 | 0.49 |
| 1:A:225:VAL:O | 1:A:225:VAL:CG1 | 2.59 | 0.49 |
| 1:A:236:PRO:CB | 1:A:278:THR:HG22 | 2.43 | 0.49 |
| 1:A:259:LEU:HD21 | 1:A:304:TYR:OH | 2.12 | 0.49 |
| 1:A:385:PRO:CD | 1:A:396:ARG:O | 2.60 | 0.49 |
| 1:B:79:TYR:HE2 | 1:B:344:ARG:CD | 2.25 | 0.49 |
| 1:B:119:VAL:HG23 | 1:B:206:ASP:CB | 2.31 | 0.49 |
| 1:B:123:MET:HB2 | 1:B:174:PRO:HG2 | 1.91 | 0.49 |
| 1:B:263:LYS:CA | 1:B:310:LEU:HD23 | 2.42 | 0.49 |
| 1:B:364:SER:HB2 | 1:B:437:ILE:HG22 | 1.93 | 0.49 |
| 1:B:384:ASN:CA | 1:C:2:THR:HG22 | 2.05 | 0.49 |
| 1:B:385:PRO:HG2 | 1:B:396:ARG:N | 2.28 | 0.49 |
| 1:C:123:MET:HB2 | 1:C:174:PRO:HG2 | 1.91 | 0.49 |
| 1:C:180:LYS:O | 1:C:182:VAL:HG12 | 2.13 | 0.49 |
| 1:C:236:PRO:CB | 1:C:278:THR:HG22 | 2.43 | 0.49 |
| 1:C:262:PHE:CE2 | 1:C:314:VAL:HB | 2.47 | 0.49 |
| 1:C:273:TYR:HB2 | 1:C:389:ASP:OD1 | 2.13 | 0.49 |
| 1:A:219:TYR:CZ | 1:B:371:TYR:CD2 | 2.71 | 0.49 |
| 1:A:434:THR:HG21 | 1:A:474:CYS:SG | 2.53 | 0.49 |
| 1:B:45:ILE:CG2 | 1:B:49:LEU:CD1 | 2.80 | 0.49 |
| 1:B:262:PHE:CE2 | 1:B:314:VAL:HB | 2.47 | 0.49 |
| 1:B:327:ILE:HG13 | 1:B:331:GLN:OE1 | 2.12 | 0.49 |
| 1:C:13:PHE:CE2 | 1:C:296:HIS:CD2 | 3.01 | 0.49 |
| 1:C:83:TRP:NE1 | 1:C:173:LEU:CD2 | 2.68 | 0.49 |
| 1:C:134:TYR:CE1 | 1:C:143:GLN:HB2 | 2.47 | 0.49 |
| 1:C:242:TYR:CA | 1:C:245:VAL:HG12 | 2.42 | 0.49 |
| 1:A:11:ILE:HB | 1:A:326:ILE:CA | 2.41 | 0.49 |
| 1:A:147:HIS:HA | 1:B:111:GLY:O | 2.12 | 0.49 |
| 1:A:180:LYS:CE | 1:B:12:TYR:N | 2.55 | 0.49 |
| 1:A:204:ARG:HG2 | 1:A:228:ILE:O | 2.12 | 0.49 |
| 1:A:221:LYS:CG | 1:B:434:THR:CG2 | 2.91 | 0.49 |
| 1:A:246:MET:CE | 1:B:476:ASP:OD1 | 2.61 | 0.49 |
| 1:C:204:ARG:NH1 | 1:C:230:GLU:HB3 | 2.28 | 0.49 |
| 1:A:101:LYS:CE | 1:A:198:TYR:CE2 | 2.96 | 0.49 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:180:LYS:NZ | 1:B:57:PHE:HB2 | 2.11 | 0.49 |
| 1:A:204:ARG:NH1 | 1:A:230:GLU:HB3 | 2.28 | 0.49 |
| 1:A:246:MET:N | 1:B:474:CYS:O | 2.46 | 0.49 |
| 1:A:394:ALA:HA | 1:A:407:ILE:O | 2.13 | 0.49 |
| 1:B:147:HIS:CD2 | 1:B:177:ASP:O | 2.56 | 0.49 |
| 1:B:307:ASP:HB2 | 1:B:413:ALA:CB | 2.40 | 0.49 |
| 1:C:79:TYR:HE2 | 1:C:344:ARG:CG | 2.25 | 0.49 |
| 1:A:13:PHE:CD2 | 1:A:328:TYR:CD2 | 2.99 | 0.49 |
| 1:A:13:PHE:CE2 | 1:A:296:HIS:CD2 | 3.01 | 0.49 |
| 1:A:161:VAL:O | 1:A:210:HIS:HB3 | 2.12 | 0.49 |
| 1:A:187:TRP:CD1 | 1:B:370:ASN:CB | 2.96 | 0.49 |
| 1:A:203:LEU:HB3 | 1:B:471:SER:H | 1.77 | 0.49 |
| 1:A:205:ILE:HA | 1:B:471:SER:HA | 1.94 | 0.49 |
| 1:A:242:TYR:CA | 1:A:245:VAL:HG12 | 2.42 | 0.49 |
| 1:A:273:TYR:HB2 | 1:A:389:ASP:OD1 | 2.13 | 0.49 |
| 1:A:307:ASP:HB2 | 1:A:413:ALA:CB | 2.40 | 0.49 |
| 1:B:154:ASN:O | 1:B:157:ASP:HB3 | 2.13 | 0.49 |
| 1:B:161:VAL:O | 1:B:210:HIS:HB3 | 2.12 | 0.49 |
| 1:C:434:THR:HG21 | 1:C:474:CYS:SG | 2.53 | 0.49 |
| 1:A:177:ASP:CG | 1:B:53:GLN:O | 2.52 | 0.48 |
| 1:A:196:SER:OG | 1:B:400:ASP:C | 2.45 | 0.48 |
| 1:A:216:TRP:N | 1:A:217:PRO:HD2 | 2.28 | 0.48 |
| 1:A:359:TYR:HA | 1:A:362:ILE:HD12 | 1.93 | 0.48 |
| 1:B:180:LYS:O | 1:B:182:VAL:HG12 | 2.13 | 0.48 |
| 1:B:185:ASN:CA | 1:B:188:TYR:CD2 | 2.79 | 0.48 |
| 1:B:204:ARG:CZ | 1:B:230:GLU:HB2 | 2.43 | 0.48 |
| 1:B:273:TYR:HB2 | 1:B:389:ASP:OD1 | 2.13 | 0.48 |
| 1:B:436:VAL:HG13 | 1:B:437:ILE:CD1 | 2.43 | 0.48 |
| 1:A:133:ASP:O | 1:A:134:TYR:HB2 | 2.13 | 0.48 |
| 1:A:193:SER:O | 1:A:196:SER:CB | 2.61 | 0.48 |
| 1:A:194:LEU:HD13 | 1:B:375:LYS:HG3 | 1.93 | 0.48 |
| 1:A:204:ARG:CZ | 1:A:230:GLU:HB2 | 2.43 | 0.48 |
| 1:A:382:TYR:OH | 1:A:385:PRO:HG3 | 2.13 | 0.48 |
| 1:B:204:ARG:NH1 | 1:B:230:GLU:HB3 | 2.28 | 0.48 |
| 1:B:321:ASN:OD1 | 1:B:384:ASN:ND2 | 2.47 | 0.48 |
| 1:B:434:THR:HG21 | 1:B:474:CYS:SG | 2.53 | 0.48 |
| 1:C:21:ARG:HH21 | 1:C:21:ARG:HG2 | 1.78 | 0.48 |
| 1:C:75:TYR:CE1 | 1:C:170:THR:CG2 | 2.91 | 0.48 |
| 1:C:154:ASN:O | 1:C:157:ASP:HB3 | 2.13 | 0.48 |
| 1:C:193:SER:O | 1:C:196:SER:CB | 2.61 | 0.48 |
| 1:C:240:CYS:CB | 1:C:241:PRO:CD | 2.89 | 0.48 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:259:LEU:HD21 | 1:C:304:TYR:OH | 2.12 | 0.48 |
| 1:C:394:ALA:HA | 1:C:407:ILE:O | 2.13 | 0.48 |
| 1:A:21:ARG:HH21 | 1:A:21:ARG:HG2 | 1.78 | 0.48 |
| 1:A:147:HIS:HB2 | 1:A:175:ASP:O | 2.13 | 0.48 |
| 1:A:208:VAL:HG23 | 1:A:216:TRP:CD2 | 2.46 | 0.48 |
| 1:A:255:TYR:CG | 1:A:292:PHE:CE2 | 3.00 | 0.48 |
| 1:A:436:VAL:HG13 | 1:A:437:ILE:CD1 | 2.43 | 0.48 |
| 1:B:392:THR:HG21 | 1:B:410:ASN:HB2 | 1.94 | 0.48 |
| 1:B:394:ALA:HA | 1:B:407:ILE:O | 2.13 | 0.48 |
| 1:B:399:THR:CG2 | 1:C:196:SER:HA | 2.44 | 0.48 |
| 1:C:11:ILE:HB | 1:C:326:ILE:CA | 2.41 | 0.48 |
| 1:C:147:HIS:HB2 | 1:C:175:ASP:O | 2.12 | 0.48 |
| 1:C:346:ALA:O | 1:C:349:LEU:HB2 | 2.14 | 0.48 |
| 1:A:119:VAL:HG23 | 1:A:206:ASP:CB | 2.31 | 0.48 |
| 1:A:165:TRP:CE2 | 1:B:110:ARG:N | 2.80 | 0.48 |
| 1:A:221:LYS:O | 1:B:463:TYR:HB3 | 2.13 | 0.48 |
| 1:A:473:ILE:HG23 | 1:A:474:CYS:N | 2.25 | 0.48 |
| 1:B:134:TYR:CD1 | 1:B:143:GLN:HB3 | 2.49 | 0.48 |
| 1:B:147:HIS:HB2 | 1:B:175:ASP:O | 2.13 | 0.48 |
| 1:C:79:TYR:HE2 | 1:C:344:ARG:CD | 2.25 | 0.48 |
| 1:C:101:LYS:CE | 1:C:198:TYR:CE2 | 2.96 | 0.48 |
| 1:C:134:TYR:CD1 | 1:C:143:GLN:HB3 | 2.49 | 0.48 |
| 1:C:455:ALA:HB3 | 1:C:458:LEU:HD12 | 1.95 | 0.48 |
| 1:A:189:ASP:HB3 | 1:B:369:ARG:O | 2.13 | 0.48 |
| 1:A:225:VAL:HG11 | 1:B:466:GLU:HA | 1.95 | 0.48 |
| 1:A:246:MET:HE3 | 1:B:476:ASP:OD1 | 2.13 | 0.48 |
| 1:A:256:TYR:N | 1:A:257:PRO:HD2 | 2.28 | 0.48 |
| 1:B:241:PRO:HB2 | 1:C:376:ASP:H | 1.79 | 0.48 |
| 1:B:256:TYR:N | 1:B:257:PRO:HD2 | 2.28 | 0.48 |
| 1:B:404:ILE:N | 1:B:404:ILE:CB | 2.73 | 0.48 |
| 1:B:428:THR:OG1 | 1:C:186:GLU:O | 2.31 | 0.48 |
| 1:B:455:ALA:HB3 | 1:B:458:LEU:HD12 | 1.95 | 0.48 |
| 1:C:18:ARG:HD3 | 1:C:344:ARG:HB3 | 1.95 | 0.48 |
| 1:C:204:ARG:CG | 1:C:204:ARG:HH11 | 2.20 | 0.48 |
| 1:C:385:PRO:HG2 | 1:C:396:ARG:N | 2.28 | 0.48 |
| 1:A:385:PRO:HG2 | 1:A:396:ARG:N | 2.28 | 0.48 |
| 1:A:392:THR:HG21 | 1:A:410:ASN:HB2 | 1.94 | 0.48 |
| 1:B:18:ARG:HD3 | 1:B:344:ARG:HB3 | 1.94 | 0.48 |
| 1:B:101:LYS:CE | 1:B:198:TYR:CE2 | 2.96 | 0.48 |
| 1:B:193:SER:O | 1:B:196:SER:CB | 2.61 | 0.48 |
| 1:B:237:ALA:O | 1:C:376:ASP:OD1 | 2.30 | 0.48 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:259:LEU:HD21 | 1:B:304:TYR:OH | 2.12 | 0.48 |
| 1:B:319:ILE:CA | 1:B:325:PRO:HB2 | 2.39 | 0.48 |
| 1:B:346:ALA:O | 1:B:349:LEU:HB2 | 2.14 | 0.48 |
| 1:A:122:HIS:HB2 | 1:A:173:LEU:HB3 | 1.96 | 0.48 |
| 1:A:134:TYR:CE1 | 1:A:143:GLN:HB2 | 2.47 | 0.48 |
| 1:A:180:LYS:CB | 1:B:55:MET:CG | 2.92 | 0.48 |
| 1:A:204:ARG:CB | 1:B:470:GLY:CA | 2.23 | 0.48 |
| 1:A:346:ALA:O | 1:A:349:LEU:HB2 | 2.14 | 0.48 |
| 1:B:123:MET:HE1 | 1:B:140:PHE:CE1 | 2.41 | 0.48 |
| 1:B:216:TRP:N | 1:B:217:PRO:HD2 | 2.28 | 0.48 |
| 1:B:428:THR:HB | 1:C:190:TRP:H | 1.78 | 0.48 |
| 1:C:204:ARG:CZ | 1:C:230:GLU:HB2 | 2.43 | 0.48 |
| 1:C:216:TRP:N | 1:C:217:PRO:HD2 | 2.28 | 0.48 |
| 1:C:255:TYR:CG | 1:C:292:PHE:CE2 | 3.00 | 0.48 |
| 1:C:321:ASN:OD1 | 1:C:384:ASN:ND2 | 2.46 | 0.48 |
| 1:C:436:VAL:HG13 | 1:C:437:ILE:CD1 | 2.43 | 0.48 |
| 1:A:35:GLN:HG3 | 1:A:76:GLY:HA3 | 1.95 | 0.48 |
| 1:A:42:TRP:CE3 | 1:A:94:TYR:CG | 3.01 | 0.48 |
| 1:A:180:LYS:HZ2 | 1:B:57:PHE:HB2 | 1.77 | 0.48 |
| 1:A:190:TRP:CE3 | 1:A:191:VAL:HG13 | 2.49 | 0.48 |
| 1:A:294:GLU:OE1 | 1:A:331:GLN:HA | 2.14 | 0.48 |
| 1:B:133:ASP:O | 1:B:134:TYR:HB2 | 2.13 | 0.48 |
| 1:B:190:TRP:CE3 | 1:B:191:VAL:HG13 | 2.49 | 0.48 |
| 1:C:42:TRP:CE3 | 1:C:94:TYR:CG | 3.01 | 0.48 |
| 1:C:286:SER:C | 1:C:287:THR:HG23 | 2.33 | 0.48 |
| 1:C:392:THR:HG21 | 1:C:410:ASN:HB2 | 1.94 | 0.48 |
| 1:A:180:LYS:HG3 | 1:B:12:TYR:CB | 2.43 | 0.48 |
| 1:A:180:LYS:HE2 | 1:B:57:PHE:HB3 | 1.91 | 0.48 |
| 1:A:194:LEU:CG | 1:B:375:LYS:CG | 2.90 | 0.48 |
| 1:A:196:SER:CB | 1:B:403:GLN:HG3 | 2.33 | 0.48 |
| 1:B:13:PHE:CE2 | 1:B:296:HIS:CD2 | 3.01 | 0.48 |
| 1:B:79:TYR:HE2 | 1:B:344:ARG:CG | 2.26 | 0.48 |
| 1:B:122:HIS:CE1 | 1:B:173:LEU:HD22 | 2.48 | 0.48 |
| 1:B:182:VAL:HG13 | 1:B:183:VAL:N | 2.18 | 0.48 |
| 1:B:205:ILE:HD13 | 1:B:205:ILE:HG21 | 1.47 | 0.48 |
| 1:B:238:TYR:CD2 | 1:C:403:GLN:OE1 | 2.67 | 0.48 |
| 1:B:364:SER:HB2 | 1:B:437:ILE:HG23 | 1.96 | 0.48 |
| 1:C:34:ASP:O | 1:C:36:LYS:HG3 | 2.13 | 0.48 |
| 1:C:122:HIS:HB2 | 1:C:173:LEU:HB3 | 1.96 | 0.48 |
| 1:C:433:LEU:O | 1:C:442:VAL:HB | 2.14 | 0.48 |
| 1:A:91:ASN:C | 1:A:92:GLU:CG | 2.82 | 0.48 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:134:TYR:CD1 | 1:A:143:GLN:HB3 | 2.49 | 0.48 |
| 1:A:227:CYS:CA | 1:B:476:ASP:HA | 2.43 | 0.48 |
| 1:A:385:PRO:HG2 | 1:A:396:ARG:CA | 2.44 | 0.48 |
| 1:B:13:PHE:CD2 | 1:B:61:TRP:CZ3 | 3.02 | 0.48 |
| 1:B:286:SER:C | 1:B:287:THR:HG23 | 2.33 | 0.48 |
| 1:B:382:TYR:C | 1:C:2:THR:CG2 | 2.77 | 0.48 |
| 1:B:383:LYS:CG | 1:C:113:TYR:CE1 | 2.95 | 0.48 |
| 1:B:463:TYR:OH | 1:B:463:TYR:CE2 | 2.51 | 0.48 |
| 1:C:133:ASP:O | 1:C:134:TYR:HB2 | 2.13 | 0.48 |
| 1:C:272:LEU:O | 1:C:275:MET:HB3 | 2.14 | 0.48 |
| 1:C:308:ILE:H | 1:C:308:ILE:HG13 | 1.19 | 0.48 |
| 1:C:385:PRO:HG2 | 1:C:396:ARG:CA | 2.44 | 0.48 |
| 1:A:88:TYR:CD2 | 1:A:139:PRO:HB3 | 2.49 | 0.47 |
| 1:A:215:PHE:CE1 | 1:B:472:LYS:HB3 | 2.49 | 0.47 |
| 1:A:286:SER:C | 1:A:287:THR:HG23 | 2.33 | 0.47 |
| 1:A:321:ASN:OD1 | 1:A:384:ASN:ND2 | 2.47 | 0.47 |
| 1:A:420:LEU:CD1 | 1:A:454:MET:HE2 | 2.44 | 0.47 |
| 1:B:42:TRP:CE3 | 1:B:94:TYR:CG | 3.01 | 0.47 |
| 1:B:204:ARG:HG2 | 1:B:228:ILE:O | 2.12 | 0.47 |
| 1:B:250:LEU:HD12 | 1:B:292:PHE:HE1 | 1.79 | 0.47 |
| 1:C:35:GLN:HG3 | 1:C:76:GLY:HA3 | 1.95 | 0.47 |
| 1:C:45:ILE:CG2 | 1:C:49:LEU:CD1 | 2.80 | 0.47 |
| 1:C:180:LYS:HZ3 | 1:C:182:VAL:HB | 1.77 | 0.47 |
| 1:C:382:TYR:OH | 1:C:385:PRO:HG3 | 2.13 | 0.47 |
| 1:A:208:VAL:C | 1:A:216:TRP:HZ2 | 2.17 | 0.47 |
| 1:A:249:VAL:CA | 1:B:477:SER:CB | 2.92 | 0.47 |
| 1:A:272:LEU:O | 1:A:275:MET:HB3 | 2.14 | 0.47 |
| 1:A:433:LEU:O | 1:A:442:VAL:HB | 2.14 | 0.47 |
| 1:B:122:HIS:HB2 | 1:B:173:LEU:HB3 | 1.96 | 0.47 |
| 1:B:237:ALA:HA | 1:C:379:PHE:H | 1.77 | 0.47 |
| 1:B:447:ASP:OD1 | 1:C:184:LYS:HD2 | 2.15 | 0.47 |
| 1:C:88:TYR:CD2 | 1:C:139:PRO:HB3 | 2.49 | 0.47 |
| 1:C:122:HIS:CE1 | 1:C:173:LEU:HD22 | 2.48 | 0.47 |
| 1:C:208:VAL:C | 1:C:216:TRP:HZ2 | 2.17 | 0.47 |
| 1:C:373:ILE:HG22 | 1:C:377:THR:HG22 | 1.92 | 0.47 |
| 1:C:418:TYR:CD1 | 1:C:454:MET:HE2 | 2.49 | 0.47 |
| 1:A:122:HIS:CE1 | 1:A:173:LEU:HD22 | 2.48 | 0.47 |
| 1:A:250:LEU:HD12 | 1:A:292:PHE:HE1 | 1.80 | 0.47 |
| 1:A:455:ALA:HB3 | 1:A:458:LEU:HD12 | 1.95 | 0.47 |
| 1:B:35:GLN:HG3 | 1:B:76:GLY:HA3 | 1.95 | 0.47 |
| 1:B:123:MET:CE | 1:B:140:PHE:HE1 | 2.24 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:195:VAL:HG23 | 1:B:200:ILE:O | 2.14 | 0.47 |
| 1:C:13:PHE:CD2 | 1:C:61:TRP:CZ3 | 3.02 | 0.47 |
| 1:A:43:GLN:NE2 | 1:A:99:ASP:OD1 | 2.46 | 0.47 |
| 1:A:120:ALA:HA | 1:A:187:TRP:CH2 | 2.49 | 0.47 |
| 1:A:188:TYR:N | 1:B:369:ARG:C | 2.68 | 0.47 |
| 1:A:232:LEU:HD23 | 1:A:232:LEU:H | 1.78 | 0.47 |
| 1:B:120:ALA:HA | 1:B:187:TRP:CH2 | 2.49 | 0.47 |
| 1:B:205:ILE:HD12 | 1:B:208:VAL:HG21 | 1.96 | 0.47 |
| 1:C:184:LYS:C | 1:C:188:TYR:CD2 | 2.88 | 0.47 |
| 1:C:190:TRP:CE3 | 1:C:191:VAL:HG13 | 2.49 | 0.47 |
| 1:C:204:ARG:HG2 | 1:C:228:ILE:O | 2.12 | 0.47 |
| 1:A:13:PHE:CD2 | 1:A:61:TRP:CZ3 | 3.02 | 0.47 |
| 1:A:154:ASN:O | 1:A:157:ASP:HB3 | 2.13 | 0.47 |
| 1:A:180:LYS:CE | 1:B:57:PHE:HB2 | 2.22 | 0.47 |
| 1:B:232:LEU:N | 1:B:232:LEU:HD23 | 2.30 | 0.47 |
| 1:C:49:LEU:HD23 | 1:C:110:ARG:CD | 2.41 | 0.47 |
| 1:C:250:LEU:HD12 | 1:C:292:PHE:HE1 | 1.80 | 0.47 |
| 1:C:294:GLU:OE1 | 1:C:331:GLN:HA | 2.14 | 0.47 |
| 1:A:190:TRP:CZ3 | 1:B:374:SER:HB2 | 2.43 | 0.47 |
| 1:A:364:SER:HB2 | 1:A:437:ILE:HG23 | 1.96 | 0.47 |
| 1:B:11:ILE:HB | 1:B:326:ILE:CA | 2.40 | 0.47 |
| 1:B:12:TYR:CD1 | 1:B:12:TYR:C | 2.88 | 0.47 |
| 1:B:185:ASN:N | 1:B:188:TYR:CD2 | 2.83 | 0.47 |
| 1:B:187:TRP:HZ3 | 1:B:190:TRP:CH2 | 2.33 | 0.47 |
| 1:B:213:LYS:HZ3 | 1:C:375:LYS:HG2 | 1.80 | 0.47 |
| 1:B:238:TYR:CD2 | 1:C:403:GLN:CD | 2.84 | 0.47 |
| 1:B:241:PRO:HB2 | 1:C:376:ASP:N | 2.29 | 0.47 |
| 1:B:255:TYR:CG | 1:B:292:PHE:CE2 | 3.00 | 0.47 |
| 1:B:433:LEU:O | 1:B:442:VAL:HB | 2.14 | 0.47 |
| 1:C:12:TYR:CD1 | 1:C:12:TYR:C | 2.88 | 0.47 |
| 1:C:120:ALA:HA | 1:C:187:TRP:CH2 | 2.49 | 0.47 |
| 1:C:187:TRP:HZ3 | 1:C:190:TRP:CH2 | 2.33 | 0.47 |
| 1:C:232:LEU:N | 1:C:232:LEU:HD23 | 2.30 | 0.47 |
| 1:C:256:TYR:N | 1:C:257:PRO:HD2 | 2.28 | 0.47 |
| 1:A:12:TYR:C | 1:A:12:TYR:CD1 | 2.88 | 0.47 |
| 1:A:56:GLY:HA3 | 1:A:366:ASN:CB | 2.42 | 0.47 |
| 1:A:83:TRP:NE1 | 1:A:173:LEU:CD2 | 2.68 | 0.47 |
| 1:A:129:GLY:C | 1:B:109:GLU:OE2 | 2.52 | 0.47 |
| 1:A:178:THR:CB | 1:B:57:PHE:O | 2.54 | 0.47 |
| 1:A:180:LYS:H | 1:B:55:MET:CA | 2.25 | 0.47 |
| 1:A:181:ASP:N | 1:B:362:ILE:CG2 | 2.77 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:187:TRP:HB3 | 1:B:371:TYR:HB2 | 1.96 | 0.47 |
| 1:A:249:VAL:CA | 1:B:477:SER:HB3 | 2.45 | 0.47 |
| 1:A:404:ILE:N | 1:A:404:ILE:HG22 | 2.30 | 0.47 |
| 1:B:21:ARG:HH21 | 1:B:21:ARG:HG2 | 1.79 | 0.47 |
| 1:B:88:TYR:CD2 | 1:B:139:PRO:HB3 | 2.49 | 0.47 |
| 1:B:115:MET:HE2 | 1:B:204:ARG:HB2 | 1.93 | 0.47 |
| 1:B:184:LYS:C | 1:B:188:TYR:CD2 | 2.88 | 0.47 |
| 1:B:232:LEU:HD23 | 1:B:232:LEU:H | 1.78 | 0.47 |
| 1:B:237:ALA:CB | 1:C:379:PHE:CB | 2.93 | 0.47 |
| 1:B:385:PRO:HG2 | 1:B:396:ARG:CA | 2.44 | 0.47 |
| 1:B:397:LYS:N | 1:C:224:GLY:HA3 | 2.30 | 0.47 |
| 1:B:399:THR:HG22 | 1:C:196:SER:N | 2.29 | 0.47 |
| 1:B:420:LEU:CD1 | 1:B:454:MET:HE2 | 2.44 | 0.47 |
| 1:C:43:GLN:NE2 | 1:C:99:ASP:OD1 | 2.46 | 0.47 |
| 1:C:83:TRP:HH2 | 1:C:171:VAL:HG21 | 1.74 | 0.47 |
| 1:C:195:VAL:HG23 | 1:C:200:ILE:O | 2.14 | 0.47 |
| 1:C:319:ILE:CA | 1:C:325:PRO:HB2 | 2.39 | 0.47 |
| 1:C:364:SER:HB2 | 1:C:437:ILE:HG23 | 1.96 | 0.47 |
| 1:C:404:ILE:N | 1:C:404:ILE:HG22 | 2.30 | 0.47 |
| 1:A:123:MET:CB | 1:A:137:PHE:CE1 | 2.79 | 0.47 |
| 1:A:146:PHE:HB2 | 1:B:111:GLY:HA2 | 1.03 | 0.47 |
| 1:A:229:GLY:HA3 | 1:A:246:MET:CE | 2.42 | 0.47 |
| 1:A:232:LEU:HD23 | 1:A:232:LEU:N | 2.30 | 0.47 |
| 1:B:432:GLN:HG3 | 1:B:465:THR:HG21 | 1.90 | 0.47 |
| 1:C:55:MET:HG3 | 1:C:362:ILE:HG21 | 1.97 | 0.47 |
| 1:C:123:MET:CG | 1:C:146:PHE:HE1 | 2.07 | 0.47 |
| 1:C:420:LEU:CD1 | 1:C:454:MET:HE2 | 2.45 | 0.47 |
| 1:A:62:ILE:HD13 | 1:A:62:ILE:HG21 | 1.43 | 0.47 |
| 1:A:147:HIS:CE1 | 1:B:110:ARG:NH1 | 2.83 | 0.47 |
| 1:A:187:TRP:CD1 | 1:B:370:ASN:HB3 | 2.49 | 0.47 |
| 1:A:387:ILE:HD11 | 1:A:424:GLY:C | 2.35 | 0.47 |
| 1:A:387:ILE:HG21 | 1:A:387:ILE:HD13 | 1.37 | 0.47 |
| 1:B:204:ARG:CZ | 1:B:230:GLU:CB | 2.93 | 0.47 |
| 1:B:243:GLN:NE2 | 1:B:285:ASP:HA | 2.30 | 0.47 |
| 1:B:252:TYR:CA | 1:B:292:PHE:HZ | 2.27 | 0.47 |
| 1:B:387:ILE:HD11 | 1:B:424:GLY:C | 2.36 | 0.47 |
| 1:C:408:LEU:HD13 | 1:C:460:ARG:O | 2.15 | 0.47 |
| 1:A:49:LEU:HD23 | 1:A:110:ARG:CD | 2.41 | 0.47 |
| 1:A:143:GLN:NE2 | 1:B:108:HIS:CB | 2.77 | 0.47 |
| 1:A:148:PRO:HG3 | 1:B:49:LEU:CD2 | 2.45 | 0.47 |
| 1:A:205:ILE:CG1 | 1:B:472:LYS:N | 2.75 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:294:GLU:OE1 | 1:B:331:GLN:HA | 2.14 | 0.47 |
| 1:C:185:ASN:N | 1:C:188:TYR:CD2 | 2.83 | 0.47 |
| 1:A:147:HIS:HB3 | 1:B:110:ARG:O | 2.14 | 0.46 |
| 1:A:187:TRP:HZ3 | 1:A:190:TRP:CH2 | 2.33 | 0.46 |
| 1:A:217:PRO:HD3 | 1:A:245:VAL:HG22 | 1.91 | 0.46 |
| 1:A:221:LYS:CB | 1:B:434:THR:HG22 | 2.44 | 0.46 |
| 1:A:243:GLN:NE2 | 1:A:285:ASP:HA | 2.30 | 0.46 |
| 1:A:418:TYR:CE1 | 1:A:454:MET:CE | 2.98 | 0.46 |
| 1:A:422:LEU:HD11 | 1:A:425:ALA:HB2 | 1.97 | 0.46 |
| 1:B:147:HIS:N | 1:B:175:ASP:O | 2.48 | 0.46 |
| 1:B:282:ASP:HA | 1:C:373:ILE:HD13 | 1.97 | 0.46 |
| 1:C:78:ALA:O | 1:C:81:GLY:CA | 2.61 | 0.46 |
| 1:C:232:LEU:HD23 | 1:C:232:LEU:H | 1.78 | 0.46 |
| 1:C:387:ILE:HD11 | 1:C:424:GLY:C | 2.35 | 0.46 |
| 1:A:147:HIS:N | 1:B:110:ARG:O | 2.39 | 0.46 |
| 1:A:292:PHE:C | 1:A:293:VAL:HG12 | 2.36 | 0.46 |
| 1:A:463:TYR:OH | 1:A:463:TYR:CE2 | 2.51 | 0.46 |
| 1:B:272:LEU:O | 1:B:275:MET:HB3 | 2.14 | 0.46 |
| 1:B:317:PHE:CD1 | 1:B:317:PHE:C | 2.89 | 0.46 |
| 1:B:458:LEU:CD1 | 1:B:460:ARG:NH2 | 2.79 | 0.46 |
| 1:C:19:PHE:HD1 | 1:C:347:THR:HB | 1.77 | 0.46 |
| 1:C:204:ARG:CZ | 1:C:230:GLU:CB | 2.93 | 0.46 |
| 1:C:205:ILE:HD12 | 1:C:208:VAL:HG21 | 1.96 | 0.46 |
| 1:C:243:GLN:NE2 | 1:C:285:ASP:HA | 2.30 | 0.46 |
| 1:A:192:GLY:N | 1:B:463:TYR:OH | 2.41 | 0.46 |
| 1:A:215:PHE:CD2 | 1:B:367:ALA:HB2 | 2.51 | 0.46 |
| 1:A:458:LEU:CD1 | 1:A:460:ARG:NH2 | 2.79 | 0.46 |
| 1:B:208:VAL:C | 1:B:216:TRP:HZ2 | 2.17 | 0.46 |
| 1:B:292:PHE:C | 1:B:293:VAL:HG12 | 2.36 | 0.46 |
| 1:C:476:ASP:O | 1:C:477:SER:HB3 | 2.15 | 0.46 |
| 1:A:242:TYR:HA | 1:A:245:VAL:HG12 | 1.97 | 0.46 |
| 1:A:243:GLN:CB | 1:A:249:VAL:HG11 | 2.45 | 0.46 |
| 1:A:368:ILE:HG21 | 1:A:368:ILE:HD13 | 1.44 | 0.46 |
| 1:B:19:PHE:CE1 | 1:B:347:THR:HG21 | 2.50 | 0.46 |
| 1:B:107:LEU:HG | 1:B:108:HIS:N | 2.30 | 0.46 |
| 1:B:394:ALA:HB1 | 1:C:221:LYS:NZ | 2.30 | 0.46 |
| 1:B:400:ASP:CB | 1:C:195:VAL:N | 2.78 | 0.46 |
| 1:B:446:SER:HG | 1:C:181:ASP:CG | 1.96 | 0.46 |
| 1:C:148:PRO:O | 1:C:165:TRP:NE1 | 2.48 | 0.46 |
| 1:C:240:CYS:N | 1:C:241:PRO:HD2 | 2.30 | 0.46 |
| 1:C:422:LEU:HD11 | 1:C:425:ALA:HB2 | 1.98 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:75:TYR:HE1 | 1:A:170:THR:CB | 2.29 | 0.46 |
| 1:A:83:TRP:HH2 | 1:A:171:VAL:HG21 | 1.74 | 0.46 |
| 1:A:218:GLY:HA2 | 1:B:437:ILE:N | 2.30 | 0.46 |
| 1:A:280:LYS:NZ | 1:A:383:LYS:HB3 | 2.31 | 0.46 |
| 1:A:300:ARG:NH1 | 1:A:329:ALA:O | 2.49 | 0.46 |
| 1:B:75:TYR:HE1 | 1:B:170:THR:CB | 2.29 | 0.46 |
| 1:B:148:PRO:O | 1:B:165:TRP:NE1 | 2.49 | 0.46 |
| 1:B:408:LEU:HD13 | 1:B:460:ARG:O | 2.15 | 0.46 |
| 1:C:292:PHE:C | 1:C:293:VAL:HG12 | 2.36 | 0.46 |
| 1:C:451:PRO:O | 1:C:453:PRO:HD3 | 2.16 | 0.46 |
| 1:A:19:PHE:CE1 | 1:A:347:THR:HG21 | 2.50 | 0.46 |
| 1:A:185:ASN:ND2 | 1:B:319:ILE:HD12 | 2.30 | 0.46 |
| 1:A:204:ARG:CZ | 1:A:230:GLU:CB | 2.93 | 0.46 |
| 1:A:216:TRP:O | 1:B:474:CYS:N | 2.49 | 0.46 |
| 1:B:55:MET:HG3 | 1:B:362:ILE:HG21 | 1.97 | 0.46 |
| 1:B:62:ILE:HD13 | 1:B:62:ILE:HG21 | 1.42 | 0.46 |
| 1:B:68:GLN:NE2 | 1:B:81:GLY:HA2 | 2.29 | 0.46 |
| 1:B:78:ALA:O | 1:B:81:GLY:CA | 2.61 | 0.46 |
| 1:B:242:TYR:HA | 1:B:245:VAL:HG12 | 1.97 | 0.46 |
| 1:B:340:ASP:OD1 | 1:B:341:PRO:N | 2.48 | 0.46 |
| 1:C:61:TRP:HZ2 | 1:C:204:ARG:CZ | 2.29 | 0.46 |
| 1:C:68:GLN:NE2 | 1:C:81:GLY:HA2 | 2.29 | 0.46 |
| 1:C:75:TYR:HE1 | 1:C:170:THR:CB | 2.29 | 0.46 |
| 1:C:418:TYR:CE1 | 1:C:454:MET:CE | 2.98 | 0.46 |
| 1:A:123:MET:CE | 1:A:140:PHE:CE1 | 2.98 | 0.46 |
| 1:A:211:VAL:H | 1:A:211:VAL:HG12 | 1.05 | 0.46 |
| 1:A:340:ASP:OD1 | 1:A:341:PRO:N | 2.48 | 0.46 |
| 1:A:408:LEU:HD13 | 1:A:460:ARG:O | 2.15 | 0.46 |
| 1:B:188:TYR:HE1 | 1:B:218:GLY:C | 2.18 | 0.46 |
| 1:B:332:GLU:O | 1:B:358:LEU:HB2 | 2.15 | 0.46 |
| 1:B:451:PRO:O | 1:B:453:PRO:HD3 | 2.16 | 0.46 |
| 1:C:56:GLY:HA3 | 1:C:366:ASN:CB | 2.42 | 0.46 |
| 1:C:188:TYR:HE1 | 1:C:218:GLY:C | 2.18 | 0.46 |
| 1:A:78:ALA:O | 1:A:81:GLY:CA | 2.61 | 0.46 |
| 1:A:332:GLU:O | 1:A:358:LEU:HB2 | 2.15 | 0.46 |
| 1:A:451:PRO:O | 1:A:453:PRO:HD3 | 2.16 | 0.46 |
| 1:B:83:TRP:HH2 | 1:B:171:VAL:HG21 | 1.74 | 0.46 |
| 1:B:404:ILE:N | 1:B:404:ILE:HG22 | 2.30 | 0.46 |
| 1:C:18:ARG:CD | 1:C:344:ARG:HB3 | 2.46 | 0.46 |
| 1:C:263:LYS:H | 1:C:310:LEU:HD23 | 1.81 | 0.46 |
| 1:C:317:PHE:CD1 | 1:C:317:PHE:C | 2.89 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:332:GLU:O | 1:C:358:LEU:HB2 | 2.15 | 0.46 |
| 1:A:55:MET:HG3 | 1:A:362:ILE:HG21 | 1.97 | 0.46 |
| 1:A:188:TYR:HE1 | 1:A:218:GLY:C | 2.18 | 0.46 |
| 1:B:422:LEU:HD21 | 1:C:221:LYS:HG2 | 1.98 | 0.46 |
| 1:C:25:SER:C | 1:C:348:TRP:HE1 | 2.20 | 0.46 |
| 1:C:147:HIS:N | 1:C:175:ASP:O | 2.48 | 0.46 |
| 1:C:243:GLN:CB | 1:C:249:VAL:HG11 | 2.45 | 0.46 |
| 1:C:300:ARG:NH1 | 1:C:329:ALA:O | 2.49 | 0.46 |
| 1:C:388:LYS:CE | 1:C:390:ASP:HB2 | 2.39 | 0.46 |
| 1:A:55:MET:HE3 | 1:A:332:GLU:HB3 | 1.97 | 0.46 |
| 1:A:61:TRP:HZ2 | 1:A:204:ARG:CZ | 2.29 | 0.46 |
| 1:A:123:MET:CG | 1:A:146:PHE:HE1 | 2.07 | 0.46 |
| 1:A:143:GLN:N | 1:B:113:TYR:CD2 | 2.84 | 0.46 |
| 1:A:165:TRP:CZ2 | 1:B:110:ARG:N | 2.77 | 0.46 |
| 1:A:180:LYS:CG | 1:B:12:TYR:HB2 | 2.42 | 0.46 |
| 1:A:194:LEU:CG | 1:B:375:LYS:CB | 2.91 | 0.46 |
| 1:A:246:MET:HB2 | 1:B:476:ASP:C | 2.26 | 0.46 |
| 1:B:243:GLN:CB | 1:B:249:VAL:HG11 | 2.45 | 0.46 |
| 1:B:381:THR:HG22 | 1:C:1:ALA:CA | 2.46 | 0.46 |
| 1:C:42:TRP:NE1 | 1:C:62:ILE:CD1 | 2.68 | 0.46 |
| 1:C:188:TYR:CE1 | 1:C:218:GLY:C | 2.89 | 0.46 |
| 1:A:21:ARG:HG2 | 1:A:21:ARG:NH2 | 2.32 | 0.45 |
| 1:A:88:TYR:CE2 | 1:B:373:ILE:CA | 2.88 | 0.45 |
| 1:A:147:HIS:N | 1:A:175:ASP:O | 2.48 | 0.45 |
| 1:A:263:LYS:H | 1:A:310:LEU:HD23 | 1.81 | 0.45 |
| 1:A:317:PHE:CD1 | 1:A:317:PHE:C | 2.89 | 0.45 |
| 1:A:476:ASP:O | 1:A:477:SER:HB3 | 2.15 | 0.45 |
| 1:B:176:LEU:O | 1:B:177:ASP:HB2 | 2.16 | 0.45 |
| 1:B:400:ASP:C | 1:C:192:GLY:O | 2.55 | 0.45 |
| 1:B:404:ILE:HD12 | 1:B:404:ILE:HG21 | 1.03 | 0.45 |
| 1:B:418:TYR:CD1 | 1:B:454:MET:HE2 | 2.51 | 0.45 |
| 1:C:19:PHE:CE1 | 1:C:347:THR:HG21 | 2.50 | 0.45 |
| 1:C:62:ILE:HG21 | 1:C:62:ILE:HD13 | 1.42 | 0.45 |
| 1:C:100:LEU:O | 1:C:103:LEU:HB3 | 2.16 | 0.45 |
| 1:C:205:ILE:HG21 | 1:C:205:ILE:HD13 | 1.47 | 0.45 |
| 1:A:18:ARG:CD | 1:A:344:ARG:HB3 | 2.46 | 0.45 |
| 1:A:31:ASN:ND2 | 1:A:33:ALA:HB3 | 2.31 | 0.45 |
| 1:A:185:ASN:HD22 | 1:B:319:ILE:CB | 2.29 | 0.45 |
| 1:A:205:ILE:HD12 | 1:A:208:VAL:HG21 | 1.96 | 0.45 |
| 1:B:18:ARG:CD | 1:B:344:ARG:HB3 | 2.46 | 0.45 |
| 1:C:21:ARG:HG2 | 1:C:21:ARG:NH2 | 2.32 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:242:TYR:HA | 1:C:245:VAL:HG12 | 1.97 | 0.45 |
| 1:A:68:GLN:NE2 | 1:A:81:GLY:HA2 | 2.29 | 0.45 |
| 1:A:246:MET:HE3 | 1:B:476:ASP:CG | 2.34 | 0.45 |
| 1:B:281:SER:HB2 | 1:C:8:SER:N | 2.08 | 0.45 |
| 1:B:408:LEU:HD11 | 1:B:462:LEU:CD2 | 2.36 | 0.45 |
| 1:B:426:SER:C | 1:C:188:TYR:HA | 2.37 | 0.45 |
| 1:B:445:GLY:N | 1:C:185:ASN:HD21 | 1.96 | 0.45 |
| 1:C:19:PHE:CD1 | 1:C:347:THR:CB | 3.00 | 0.45 |
| 1:C:177:ASP:OD1 | 1:C:183:VAL:HG21 | 2.16 | 0.45 |
| 1:C:280:LYS:NZ | 1:C:383:LYS:HB3 | 2.31 | 0.45 |
| 1:C:354:THR:O | 1:C:359:TYR:CD1 | 2.70 | 0.45 |
| 1:A:144:ASP:N | 1:B:113:TYR:CG | 2.84 | 0.45 |
| 1:A:185:ASN:ND2 | 1:B:319:ILE:HB | 2.31 | 0.45 |
| 1:A:191:VAL:HG11 | 1:A:219:TYR:CZ | 2.07 | 0.45 |
| 1:B:19:PHE:CD1 | 1:B:347:THR:CB | 3.00 | 0.45 |
| 1:B:21:ARG:HG2 | 1:B:21:ARG:NH2 | 2.32 | 0.45 |
| 1:B:31:ASN:ND2 | 1:B:33:ALA:HB3 | 2.31 | 0.45 |
| 1:B:43:GLN:NE2 | 1:B:99:ASP:OD1 | 2.46 | 0.45 |
| 1:B:123:MET:CE | 1:B:140:PHE:CE1 | 2.98 | 0.45 |
| 1:B:132:VAL:HG11 | 1:B:134:TYR:HE2 | 1.81 | 0.45 |
| 1:C:31:ASN:ND2 | 1:C:33:ALA:HB3 | 2.31 | 0.45 |
| 1:C:64:PRO:CG | 1:C:82:TYR:HA | 2.31 | 0.45 |
| 1:C:123:MET:CE | 1:C:140:PHE:CE1 | 2.98 | 0.45 |
| 1:A:25:SER:C | 1:A:348:TRP:HE1 | 2.20 | 0.45 |
| 1:A:145:TYR:CD1 | 1:B:113:TYR:CE2 | 3.01 | 0.45 |
| 1:A:194:LEU:HD13 | 1:B:375:LYS:CA | 2.44 | 0.45 |
| 1:A:320:LEU:HD22 | 1:A:407:ILE:HD11 | 1.98 | 0.45 |
| 1:B:61:TRP:HZ2 | 1:B:204:ARG:CZ | 2.29 | 0.45 |
| 1:B:66:THR:HB | 1:B:67:ALA:H | 1.23 | 0.45 |
| 1:B:100:LEU:O | 1:B:103:LEU:HB3 | 2.16 | 0.45 |
| 1:B:188:TYR:CE1 | 1:B:218:GLY:C | 2.89 | 0.45 |
| 1:B:255:TYR:CB | 1:B:292:PHE:CE2 | 3.00 | 0.45 |
| 1:B:300:ARG:NH1 | 1:B:329:ALA:O | 2.49 | 0.45 |
| 1:B:418:TYR:CE1 | 1:B:454:MET:CE | 2.98 | 0.45 |
| 1:A:176:LEU:O | 1:A:177:ASP:HB2 | 2.16 | 0.45 |
| 1:A:185:ASN:ND2 | 1:B:319:ILE:CB | 2.79 | 0.45 |
| 1:A:188:TYR:CE1 | 1:A:218:GLY:C | 2.89 | 0.45 |
| 1:B:82:TYR:OH | 1:B:296:HIS:CE1 | 2.70 | 0.45 |
| 1:B:238:TYR:HD2 | 1:C:403:GLN:OE1 | 1.99 | 0.45 |
| 1:B:251:ASN:HD22 | 1:B:251:ASN:HA | 1.53 | 0.45 |
| 1:B:285:ASP:OD2 | 1:C:5:ASP:OD2 | 2.30 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:87:ILE:O | 1:C:87:ILE:HG23 | 2.16 | 0.45 |
| 1:C:176:LEU:O | 1:C:177:ASP:HB2 | 2.16 | 0.45 |
| 1:A:87:ILE:O | 1:A:87:ILE:HG23 | 2.16 | 0.45 |
| 1:A:177:ASP:OD1 | 1:A:183:VAL:HG21 | 2.17 | 0.45 |
| 1:A:188:TYR:CZ | 1:B:367:ALA:HB3 | 2.52 | 0.45 |
| 1:A:188:TYR:C | 1:B:368:ILE:HG12 | 2.37 | 0.45 |
| 1:A:240:CYS:N | 1:A:241:PRO:HD2 | 2.30 | 0.45 |
| 1:B:177:ASP:OD1 | 1:B:183:VAL:HG11 | 2.17 | 0.45 |
| 1:B:204:ARG:HH12 | 1:B:230:GLU:HG2 | 1.82 | 0.45 |
| 1:B:205:ILE:HD12 | 1:B:208:VAL:CB | 2.46 | 0.45 |
| 1:B:232:LEU:O | 1:B:233:ASP:HB2 | 2.17 | 0.45 |
| 1:B:241:PRO:CB | 1:C:376:ASP:N | 2.77 | 0.45 |
| 1:B:263:LYS:H | 1:B:310:LEU:HD23 | 1.81 | 0.45 |
| 1:B:386:TYR:H | 1:C:3:PRO:HB3 | 1.82 | 0.45 |
| 1:B:396:ARG:O | 1:C:224:GLY:CA | 2.65 | 0.45 |
| 1:C:229:GLY:N | 1:C:246:MET:CE | 2.80 | 0.45 |
| 1:C:317:PHE:CD1 | 1:C:318:ILE:N | 2.85 | 0.45 |
| 1:C:340:ASP:OD1 | 1:C:341:PRO:N | 2.48 | 0.45 |
| 1:A:19:PHE:CD1 | 1:A:347:THR:CB | 3.00 | 0.45 |
| 1:A:180:LYS:CA | 1:B:55:MET:HG2 | 2.42 | 0.45 |
| 1:A:184:LYS:CE | 1:B:366:ASN:ND2 | 2.80 | 0.45 |
| 1:A:227:CYS:SG | 1:B:473:ILE:CG2 | 3.05 | 0.45 |
| 1:A:242:TYR:O | 1:A:245:VAL:HG12 | 2.17 | 0.45 |
| 1:A:332:GLU:CG | 1:A:333:GLN:H | 2.30 | 0.45 |
| 1:B:229:GLY:N | 1:B:246:MET:CE | 2.80 | 0.45 |
| 1:B:380:VAL:CG1 | 1:B:381:THR:H | 2.22 | 0.45 |
| 1:B:401:GLY:CA | 1:C:196:SER:HB2 | 2.39 | 0.45 |
| 1:B:418:TYR:HD1 | 1:B:454:MET:HE3 | 1.79 | 0.45 |
| 1:B:424:GLY:C | 1:C:218:GLY:C | 2.76 | 0.45 |
| 1:C:424:GLY:O | 1:C:425:ALA:HB3 | 2.17 | 0.45 |
| 1:A:66:THR:O | 1:A:67:ALA:HB2 | 2.17 | 0.45 |
| 1:A:148:PRO:CA | 1:B:107:LEU:CB | 2.94 | 0.45 |
| 1:A:182:VAL:CG2 | 1:B:58:THR:HB | 2.47 | 0.45 |
| 1:A:317:PHE:CD1 | 1:A:318:ILE:N | 2.85 | 0.45 |
| 1:A:424:GLY:O | 1:A:425:ALA:HB3 | 2.17 | 0.45 |
| 1:B:25:SER:C | 1:B:348:TRP:HE1 | 2.20 | 0.45 |
| 1:C:123:MET:HG3 | 1:C:176:LEU:HD11 | 1.99 | 0.45 |
| 1:C:177:ASP:OD1 | 1:C:183:VAL:HG11 | 2.17 | 0.45 |
| 1:C:400:ASP:OD1 | 1:C:401:GLY:N | 2.50 | 0.45 |
| 1:A:55:MET:CG | 1:A:57:PHE:HE2 | 2.26 | 0.45 |
| 1:A:82:TYR:OH | 1:A:296:HIS:CE1 | 2.70 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:107:LEU:HG | 1:A:108:HIS:N | 2.30 | 0.45 |
| 1:A:246:MET:CB | 1:B:476:ASP:C | 2.69 | 0.45 |
| 1:A:258:LEU:HD12 | 1:A:317:PHE:CE1 | 2.52 | 0.45 |
| 1:A:354:THR:O | 1:A:359:TYR:CD1 | 2.70 | 0.45 |
| 1:B:107:LEU:HD12 | 1:B:111:GLY:O | 2.17 | 0.45 |
| 1:B:277:ASN:CB | 1:C:286:SER:CB | 2.69 | 0.45 |
| 1:B:424:GLY:O | 1:B:425:ALA:HB3 | 2.17 | 0.45 |
| 1:C:158:GLN:HA | 1:C:161:VAL:HG11 | 1.99 | 0.45 |
| 1:C:242:TYR:O | 1:C:245:VAL:HG12 | 2.17 | 0.45 |
| 1:C:373:ILE:HA | 1:C:377:THR:HA | 1.99 | 0.45 |
| 1:C:458:LEU:CD1 | 1:C:460:ARG:NH2 | 2.79 | 0.45 |
| 1:A:373:ILE:HA | 1:A:377:THR:HA | 1.99 | 0.44 |
| 1:B:123:MET:HG3 | 1:B:176:LEU:HD11 | 1.99 | 0.44 |
| 1:B:236:PRO:CB | 1:B:278:THR:HG22 | 2.43 | 0.44 |
| 1:B:241:PRO:CA | 1:C:374:SER:HA | 2.28 | 0.44 |
| 1:B:373:ILE:HA | 1:B:377:THR:HA | 1.99 | 0.44 |
| 1:B:387:ILE:HG23 | 1:B:388:LYS:N | 2.32 | 0.44 |
| 1:B:428:THR:O | 1:C:185:ASN:OD1 | 2.35 | 0.44 |
| 1:B:453:PRO:O | 1:B:460:ARG:NE | 2.50 | 0.44 |
| 1:C:66:THR:O | 1:C:67:ALA:HB2 | 2.17 | 0.44 |
| 1:C:91:ASN:C | 1:C:92:GLU:CG | 2.82 | 0.44 |
| 1:C:182:VAL:HG13 | 1:C:183:VAL:N | 2.17 | 0.44 |
| 1:C:472:LYS:O | 1:C:473:ILE:CB | 2.65 | 0.44 |
| 1:A:158:GLN:HA | 1:A:161:VAL:HG11 | 1.99 | 0.44 |
| 1:A:179:THR:HG23 | 1:B:50:ASP:O | 2.16 | 0.44 |
| 1:A:188:TYR:N | 1:B:370:ASN:N | 2.62 | 0.44 |
| 1:A:400:ASP:OD1 | 1:A:401:GLY:N | 2.50 | 0.44 |
| 1:B:277:ASN:ND2 | 1:C:286:SER:CB | 2.66 | 0.44 |
| 1:B:368:ILE:HD13 | 1:B:368:ILE:HG21 | 1.44 | 0.44 |
| 1:C:252:TYR:CA | 1:C:292:PHE:HZ | 2.27 | 0.44 |
| 1:C:258:LEU:HD12 | 1:C:317:PHE:CE1 | 2.52 | 0.44 |
| 1:C:318:ILE:HG12 | 1:C:319:ILE:N | 2.33 | 0.44 |
| 1:A:177:ASP:OD1 | 1:A:183:VAL:HG11 | 2.17 | 0.44 |
| 1:A:191:VAL:HG23 | 1:A:192:GLY:N | 2.33 | 0.44 |
| 1:A:422:LEU:HD12 | 1:A:424:GLY:O | 2.18 | 0.44 |
| 1:B:64:PRO:CG | 1:B:82:TYR:HA | 2.31 | 0.44 |
| 1:B:66:THR:O | 1:B:67:ALA:HB2 | 2.17 | 0.44 |
| 1:B:213:LYS:HG2 | 1:C:375:LYS:HG3 | 1.99 | 0.44 |
| 1:C:107:LEU:HD12 | 1:C:111:GLY:O | 2.17 | 0.44 |
| 1:C:152:ILE:HD11 | 1:C:166:LEU:CG | 2.48 | 0.44 |
| 1:C:159:THR:O | 1:C:159:THR:HG22 | 2.17 | 0.44 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:204:ARG:HH12 | 1:C:230:GLU:HG2 | 1.82 | 0.44 |
| 1:C:205:ILE:HD12 | 1:C:208:VAL:CB | 2.46 | 0.44 |
| 1:C:232:LEU:O | 1:C:233:ASP:HB2 | 2.16 | 0.44 |
| 1:A:100:LEU:O | 1:A:103:LEU:HB3 | 2.17 | 0.44 |
| 1:A:179:THR:HA | 1:B:54:GLY:N | 2.30 | 0.44 |
| 1:A:187:TRP:HB2 | 1:B:370:ASN:HB2 | 1.14 | 0.44 |
| 1:A:188:TYR:C | 1:B:368:ILE:CG1 | 2.86 | 0.44 |
| 1:B:87:ILE:O | 1:B:87:ILE:HG23 | 2.16 | 0.44 |
| 1:B:91:ASN:C | 1:B:92:GLU:CG | 2.82 | 0.44 |
| 1:B:123:MET:H | 1:B:174:PRO:HG2 | 1.82 | 0.44 |
| 1:B:123:MET:CG | 1:B:146:PHE:HE1 | 2.07 | 0.44 |
| 1:B:354:THR:O | 1:B:359:TYR:CD1 | 2.70 | 0.44 |
| 1:C:107:LEU:HG | 1:C:108:HIS:N | 2.31 | 0.44 |
| 1:A:107:LEU:HD12 | 1:A:111:GLY:O | 2.17 | 0.44 |
| 1:A:152:ILE:HD11 | 1:A:166:LEU:CG | 2.48 | 0.44 |
| 1:A:255:TYR:CB | 1:A:292:PHE:CE2 | 3.00 | 0.44 |
| 1:A:453:PRO:O | 1:A:460:ARG:NE | 2.50 | 0.44 |
| 1:B:177:ASP:OD1 | 1:B:183:VAL:HG21 | 2.16 | 0.44 |
| 1:C:21:ARG:NH2 | 1:C:39:GLY:O | 2.51 | 0.44 |
| 1:C:82:TYR:OH | 1:C:296:HIS:CE1 | 2.70 | 0.44 |
| 1:C:123:MET:H | 1:C:174:PRO:HG2 | 1.82 | 0.44 |
| 1:C:255:TYR:CB | 1:C:292:PHE:CE2 | 3.00 | 0.44 |
| 1:C:320:LEU:HD22 | 1:C:407:ILE:HD11 | 1.98 | 0.44 |
| 1:A:21:ARG:NH2 | 1:A:39:GLY:O | 2.51 | 0.44 |
| 1:A:184:LYS:N | 1:B:56:GLY:CA | 2.67 | 0.44 |
| 1:A:232:LEU:O | 1:A:233:ASP:HB2 | 2.16 | 0.44 |
| 1:A:318:ILE:HG12 | 1:A:319:ILE:N | 2.33 | 0.44 |
| 1:B:242:TYR:O | 1:B:245:VAL:HG12 | 2.17 | 0.44 |
| 1:B:472:LYS:HE2 | 1:B:478:SER:OXT | 2.18 | 0.44 |
| 1:C:49:LEU:O | 1:C:52:ILE:CG1 | 2.66 | 0.44 |
| 1:C:132:VAL:HG11 | 1:C:134:TYR:HE2 | 1.82 | 0.44 |
| 1:C:420:LEU:CD2 | 1:C:452:VAL:CG1 | 2.83 | 0.44 |
| 1:A:73:CYS:CB | 1:A:126:ASP:OD1 | 2.65 | 0.44 |
| 1:A:123:MET:H | 1:A:174:PRO:HG2 | 1.82 | 0.44 |
| 1:A:246:MET:HB3 | 1:B:476:ASP:CA | 2.46 | 0.44 |
| 1:A:472:LYS:HE2 | 1:A:478:SER:OXT | 2.18 | 0.44 |
| 1:B:55:MET:CE | 1:B:332:GLU:HB3 | 2.48 | 0.44 |
| 1:B:258:LEU:HD12 | 1:B:317:PHE:CE1 | 2.52 | 0.44 |
| 1:B:317:PHE:CD1 | 1:B:318:ILE:N | 2.85 | 0.44 |
| 1:B:318:ILE:HG12 | 1:B:319:ILE:N | 2.33 | 0.44 |
| 1:A:49:LEU:O | 1:A:52:ILE:CG1 | 2.66 | 0.44 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:123:MET:HG3 | 1:A:176:LEU:HD11 | 1.99 | 0.44 |
| 1:A:132:VAL:HG21 | 1:B:109:GLU:HA | 2.00 | 0.44 |
| 1:A:143:GLN:O | 1:B:112:MET:CA | 2.64 | 0.44 |
| 1:A:144:ASP:N | 1:B:113:TYR:CD2 | 2.85 | 0.44 |
| 1:A:238:TYR:CD1 | 1:A:239:THR:N | 2.86 | 0.44 |
| 1:B:20:ALA:O | 1:B:21:ARG:HB2 | 2.18 | 0.44 |
| 1:B:158:GLN:HA | 1:B:161:VAL:HG11 | 1.99 | 0.44 |
| 1:B:246:MET:HB3 | 1:B:246:MET:HE3 | 0.97 | 0.44 |
| 1:B:251:ASN:HB3 | 1:B:254:ILE:HG21 | 2.00 | 0.44 |
| 1:B:383:LYS:HZ2 | 1:C:6:TRP:N | 2.10 | 0.44 |
| 1:C:117:ASP:HA | 1:C:204:ARG:HB3 | 2.00 | 0.44 |
| 1:C:191:VAL:HG23 | 1:C:192:GLY:N | 2.33 | 0.44 |
| 1:C:353:PRO:O | 1:C:355:ASP:N | 2.51 | 0.44 |
| 1:C:453:PRO:O | 1:C:460:ARG:NE | 2.50 | 0.44 |
| 1:A:132:VAL:HG11 | 1:A:134:TYR:HE2 | 1.82 | 0.44 |
| 1:A:137:PHE:CD1 | 1:A:146:PHE:CZ | 3.06 | 0.44 |
| 1:A:145:TYR:OH | 1:B:6:TRP:N | 2.51 | 0.44 |
| 1:A:197:ASN:OD1 | 1:C:193:SER:C | 2.50 | 0.44 |
| 1:A:353:PRO:O | 1:A:355:ASP:N | 2.51 | 0.44 |
| 1:A:369:ARG:HH11 | 1:A:369:ARG:CB | 2.29 | 0.44 |
| 1:B:21:ARG:NH2 | 1:B:39:GLY:O | 2.51 | 0.44 |
| 1:B:48:LYS:HA | 1:B:48:LYS:CE | 2.46 | 0.44 |
| 1:B:162:GLU:HA | 1:B:210:HIS:O | 2.18 | 0.44 |
| 1:B:353:PRO:O | 1:B:355:ASP:N | 2.51 | 0.44 |
| 1:C:46:ILE:HG21 | 1:C:46:ILE:HD13 | 1.78 | 0.44 |
| 1:C:55:MET:SD | 1:C:362:ILE:CD1 | 3.06 | 0.44 |
| 1:C:238:TYR:CD1 | 1:C:239:THR:N | 2.86 | 0.44 |
| 1:C:472:LYS:HE2 | 1:C:478:SER:OXT | 2.18 | 0.44 |
| 1:A:57:PHE:CZ | 1:A:327:ILE:CG2 | 2.99 | 0.43 |
| 1:A:117:ASP:HA | 1:A:204:ARG:HB3 | 2.00 | 0.43 |
| 1:A:159:THR:O | 1:A:159:THR:HG22 | 2.17 | 0.43 |
| 1:A:187:TRP:HB2 | 1:B:367:ALA:O | 2.17 | 0.43 |
| 1:A:223:ALA:CA | 1:B:463:TYR:CD1 | 2.97 | 0.43 |
| 1:A:420:LEU:CD2 | 1:A:452:VAL:CG1 | 2.82 | 0.43 |
| 1:B:73:CYS:CB | 1:B:126:ASP:OD1 | 2.65 | 0.43 |
| 1:B:253:PRO:HB2 | 1:B:275:MET:CE | 2.48 | 0.43 |
| 1:B:255:TYR:CD1 | 1:B:292:PHE:HD2 | 2.36 | 0.43 |
| 1:B:293:VAL:HG13 | 1:B:294:GLU:N | 2.19 | 0.43 |
| 1:B:348:TRP:C | 1:B:350:SER:N | 2.72 | 0.43 |
| 1:B:429:ALA:HB1 | 1:C:182:VAL:C | 2.32 | 0.43 |
| 1:C:162:GLU:HA | 1:C:210:HIS:O | 2.18 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:137:PHE:O | 1:A:139:PRO:CD | 2.66 | 0.43 |
| 1:A:178:THR:HA | 1:B:52:ILE:CD1 | 2.45 | 0.43 |
| 1:A:182:VAL:HB | 1:B:57:PHE:HB3 | 1.54 | 0.43 |
| 1:A:187:TRP:CD1 | 1:B:370:ASN:HB2 | 2.53 | 0.43 |
| 1:A:253:PRO:HB2 | 1:A:275:MET:CE | 2.49 | 0.43 |
| 1:B:7:ARG:HG3 | 1:B:288:LEU:HD23 | 2.00 | 0.43 |
| 1:B:49:LEU:O | 1:B:52:ILE:CG1 | 2.66 | 0.43 |
| 1:B:62:ILE:HG13 | 1:B:63:THR:N | 2.32 | 0.43 |
| 1:B:403:GLN:HG3 | 1:B:467:LYS:HG2 | 2.00 | 0.43 |
| 1:C:73:CYS:CB | 1:C:126:ASP:OD1 | 2.65 | 0.43 |
| 1:C:205:ILE:HG21 | 1:C:216:TRP:CZ3 | 2.53 | 0.43 |
| 1:C:369:ARG:HH11 | 1:C:369:ARG:CB | 2.29 | 0.43 |
| 1:C:422:LEU:HD12 | 1:C:424:GLY:O | 2.18 | 0.43 |
| 1:A:55:MET:CG | 1:A:362:ILE:HG21 | 2.49 | 0.43 |
| 1:A:162:GLU:HA | 1:A:210:HIS:O | 2.18 | 0.43 |
| 1:A:185:ASN:HD21 | 1:B:319:ILE:HG13 | 1.83 | 0.43 |
| 1:A:218:GLY:C | 1:B:473:ILE:O | 2.47 | 0.43 |
| 1:A:403:GLN:HG3 | 1:A:467:LYS:HG2 | 2.00 | 0.43 |
| 1:B:55:MET:HE3 | 1:B:332:GLU:HB3 | 2.00 | 0.43 |
| 1:B:137:PHE:O | 1:B:139:PRO:CD | 2.66 | 0.43 |
| 1:B:278:THR:HG23 | 1:C:380:VAL:C | 2.22 | 0.43 |
| 1:B:319:ILE:CA | 1:B:325:PRO:CB | 2.73 | 0.43 |
| 1:B:382:TYR:CE1 | 1:C:2:THR:HG22 | 2.51 | 0.43 |
| 1:C:55:MET:CE | 1:C:332:GLU:HB3 | 2.48 | 0.43 |
| 1:C:137:PHE:CD1 | 1:C:146:PHE:CZ | 3.06 | 0.43 |
| 1:C:149:PHE:CD1 | 1:C:165:TRP:CD2 | 3.07 | 0.43 |
| 1:C:209:LYS:HB2 | 1:C:231:VAL:HG11 | 2.01 | 0.43 |
| 1:A:130:SER:N | 1:B:109:GLU:OE2 | 2.51 | 0.43 |
| 1:A:180:LYS:HZ1 | 1:B:11:ILE:N | 2.16 | 0.43 |
| 1:A:220:ASN:OD1 | 1:B:474:CYS:SG | 2.73 | 0.43 |
| 1:A:307:ASP:OD2 | 1:A:307:ASP:N | 2.51 | 0.43 |
| 1:A:388:LYS:HE2 | 1:A:390:ASP:CB | 2.39 | 0.43 |
| 1:B:205:ILE:HG21 | 1:B:216:TRP:CZ3 | 2.53 | 0.43 |
| 1:B:209:LYS:HB2 | 1:B:231:VAL:HG11 | 2.01 | 0.43 |
| 1:B:353:PRO:C | 1:B:355:ASP:N | 2.71 | 0.43 |
| 1:C:66:THR:O | 1:C:91:ASN:N | 2.52 | 0.43 |
| 1:C:101:LYS:O | 1:C:105:SER:HB2 | 2.19 | 0.43 |
| 1:C:388:LYS:HE2 | 1:C:390:ASP:CB | 2.40 | 0.43 |
| 1:A:149:PHE:CD1 | 1:A:165:TRP:CD2 | 3.07 | 0.43 |
| 1:A:201:ASP:HA | 1:B:466:GLU:HA | 1.99 | 0.43 |
| 1:A:222:ALA:HB3 | 1:B:473:ILE:CG1 | 2.48 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:227:CYS:CA | 1:B:476:ASP:CA | 2.92 | 0.43 |
| 1:A:249:VAL:HA | 1:B:477:SER:HB3 | 1.99 | 0.43 |
| 1:B:101:LYS:O | 1:B:105:SER:HB2 | 2.19 | 0.43 |
| 1:B:149:PHE:CD1 | 1:B:165:TRP:CD2 | 3.07 | 0.43 |
| 1:B:339:ASN:O | 1:B:340:ASP:HB2 | 2.19 | 0.43 |
| 1:C:61:TRP:CZ2 | 1:C:204:ARG:NE | 2.85 | 0.43 |
| 1:C:132:VAL:HG11 | 1:C:134:TYR:CE2 | 2.54 | 0.43 |
| 1:C:204:ARG:NH1 | 1:C:230:GLU:CB | 2.82 | 0.43 |
| 1:C:385:PRO:CG | 1:C:396:ARG:O | 2.67 | 0.43 |
| 1:C:387:ILE:HG23 | 1:C:388:LYS:N | 2.32 | 0.43 |
| 1:A:7:ARG:HG3 | 1:A:288:LEU:HD23 | 2.00 | 0.43 |
| 1:A:101:LYS:O | 1:A:105:SER:HB2 | 2.19 | 0.43 |
| 1:A:121:ASN:C | 1:A:121:ASN:HD22 | 2.22 | 0.43 |
| 1:A:180:LYS:CE | 1:B:12:TYR:CA | 2.88 | 0.43 |
| 1:A:187:TRP:HB3 | 1:B:371:TYR:CB | 2.49 | 0.43 |
| 1:A:252:TYR:CA | 1:A:292:PHE:HZ | 2.27 | 0.43 |
| 1:B:11:ILE:HD11 | 1:B:324:LEU:C | 2.39 | 0.43 |
| 1:B:46:ILE:HD13 | 1:B:46:ILE:HG21 | 1.78 | 0.43 |
| 1:B:132:VAL:HG11 | 1:B:134:TYR:CE2 | 2.54 | 0.43 |
| 1:B:159:THR:O | 1:B:159:THR:HG22 | 2.18 | 0.43 |
| 1:B:307:ASP:OD2 | 1:B:307:ASP:N | 2.51 | 0.43 |
| 1:B:450:VAL:HA | 1:B:451:PRO:HD2 | 1.82 | 0.43 |
| 1:C:430:GLY:N | 1:C:445:GLY:HA2 | 2.34 | 0.43 |
| 1:A:55:MET:CE | 1:A:332:GLU:HB3 | 2.48 | 0.43 |
| 1:A:177:ASP:CB | 1:B:53:GLN:CG | 2.92 | 0.43 |
| 1:A:211:VAL:HG21 | 1:A:215:PHE:HB3 | 2.00 | 0.43 |
| 1:A:348:TRP:C | 1:A:350:SER:N | 2.72 | 0.43 |
| 1:B:137:PHE:CD1 | 1:B:146:PHE:CZ | 3.06 | 0.43 |
| 1:B:191:VAL:HG23 | 1:B:192:GLY:N | 2.33 | 0.43 |
| 1:B:255:TYR:CD2 | 1:B:255:TYR:C | 2.92 | 0.43 |
| 1:B:315:ALA:O | 1:B:318:ILE:HG23 | 2.19 | 0.43 |
| 1:B:320:LEU:HD22 | 1:B:407:ILE:HD11 | 1.98 | 0.43 |
| 1:C:137:PHE:O | 1:C:139:PRO:CD | 2.66 | 0.43 |
| 1:A:132:VAL:HG11 | 1:A:134:TYR:CE2 | 2.54 | 0.43 |
| 1:A:204:ARG:HH12 | 1:A:230:GLU:HG2 | 1.82 | 0.43 |
| 1:B:204:ARG:HG2 | 1:B:204:ARG:HH11 | 1.84 | 0.43 |
| 1:B:211:VAL:H | 1:B:211:VAL:HG12 | 1.06 | 0.43 |
| 1:B:236:PRO:CG | 1:C:378:GLY:C | 2.71 | 0.43 |
| 1:B:274:ASN:CG | 1:C:286:SER:H | 2.21 | 0.43 |
| 1:B:332:GLU:CG | 1:B:333:GLN:H | 2.30 | 0.43 |
| 1:B:388:LYS:CE | 1:B:390:ASP:HB2 | 2.39 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:472:LYS:O | 1:B:473:ILE:CG2 | 2.66 | 0.43 |
| 1:C:251:ASN:HD22 | 1:C:251:ASN:HA | 1.53 | 0.43 |
| 1:C:315:ALA:O | 1:C:318:ILE:HG23 | 2.19 | 0.43 |
| 1:A:20:ALA:O | 1:A:21:ARG:HB2 | 2.18 | 0.43 |
| 1:A:64:PRO:CG | 1:A:82:TYR:HA | 2.31 | 0.43 |
| 1:A:251:ASN:HB3 | 1:A:254:ILE:HG21 | 2.00 | 0.43 |
| 1:A:280:LYS:HE3 | 1:A:383:LYS:CA | 2.48 | 0.43 |
| 1:A:315:ALA:O | 1:A:318:ILE:HG23 | 2.19 | 0.43 |
| 1:A:430:GLY:N | 1:A:445:GLY:HA2 | 2.33 | 0.43 |
| 1:B:190:TRP:CZ3 | 1:B:191:VAL:CG1 | 3.01 | 0.43 |
| 1:B:200:ILE:CG2 | 1:B:203:LEU:HD11 | 2.38 | 0.43 |
| 1:B:204:ARG:CG | 1:B:204:ARG:HH11 | 2.20 | 0.43 |
| 1:B:238:TYR:CD1 | 1:B:239:THR:N | 2.86 | 0.43 |
| 1:B:317:PHE:O | 1:B:321:ASN:CB | 2.67 | 0.43 |
| 1:B:382:TYR:HD2 | 1:B:398:GLY:O | 2.02 | 0.43 |
| 1:C:11:ILE:HD11 | 1:C:324:LEU:C | 2.39 | 0.43 |
| 1:C:307:ASP:OD2 | 1:C:307:ASP:N | 2.51 | 0.43 |
| 1:A:55:MET:CG | 1:A:57:PHE:CE2 | 2.98 | 0.43 |
| 1:A:87:ILE:O | 1:A:88:TYR:CB | 2.67 | 0.43 |
| 1:A:137:PHE:O | 1:A:140:PHE:HB2 | 2.19 | 0.43 |
| 1:A:145:TYR:CD1 | 1:B:113:TYR:CD2 | 3.06 | 0.43 |
| 1:A:180:LYS:NZ | 1:B:11:ILE:C | 2.66 | 0.43 |
| 1:A:204:ARG:NH1 | 1:A:230:GLU:CB | 2.82 | 0.43 |
| 1:A:218:GLY:CA | 1:B:364:SER:C | 2.62 | 0.43 |
| 1:A:251:ASN:HD22 | 1:A:251:ASN:HA | 1.53 | 0.43 |
| 1:A:317:PHE:O | 1:A:321:ASN:CB | 2.67 | 0.43 |
| 1:A:387:ILE:HG23 | 1:A:388:LYS:N | 2.32 | 0.43 |
| 1:A:444:VAL:HG13 | 1:A:444:VAL:H | 1.30 | 0.43 |
| 1:B:87:ILE:HD11 | 1:B:190:TRP:CE2 | 2.54 | 0.43 |
| 1:B:140:PHE:CZ | 1:B:176:LEU:HD21 | 2.54 | 0.43 |
| 1:B:408:LEU:HD13 | 1:B:408:LEU:N | 2.30 | 0.43 |
| 1:B:422:LEU:HD12 | 1:B:424:GLY:O | 2.18 | 0.43 |
| 1:B:435:GLU:CB | 1:B:440:THR:HB | 2.46 | 0.43 |
| 1:C:12:TYR:CG | 1:C:52:ILE:HG22 | 2.54 | 0.43 |
| 1:C:253:PRO:HB2 | 1:C:275:MET:CE | 2.49 | 0.43 |
| 1:C:280:LYS:HE3 | 1:C:383:LYS:CA | 2.48 | 0.43 |
| 1:C:346:ALA:C | 1:C:348:TRP:N | 2.71 | 0.43 |
| 1:C:353:PRO:C | 1:C:355:ASP:N | 2.71 | 0.43 |
| 1:A:66:THR:O | 1:A:91:ASN:N | 2.52 | 0.42 |
| 1:A:148:PRO:CB | 1:B:49:LEU:HD23 | 2.46 | 0.42 |
| 1:A:279:VAL:HG23 | 1:A:283:CYS:SG | 2.59 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:300:ARG:HB2 | 1:A:336:ALA:O | 2.19 | 0.42 |
| 1:A:353:PRO:C | 1:A:355:ASP:N | 2.71 | 0.42 |
| 1:B:117:ASP:HA | 1:B:204:ARG:HB3 | 2.00 | 0.42 |
| 1:B:137:PHE:O | 1:B:140:PHE:HB2 | 2.19 | 0.42 |
| 1:B:204:ARG:NH1 | 1:B:230:GLU:CB | 2.82 | 0.42 |
| 1:B:385:PRO:HD2 | 1:C:2:THR:CG2 | 2.39 | 0.42 |
| 1:B:385:PRO:CG | 1:B:396:ARG:O | 2.67 | 0.42 |
| 1:B:422:LEU:CD1 | 1:C:221:LYS:CB | 2.91 | 0.42 |
| 1:B:433:LEU:HD13 | 1:B:464:PRO:HA | 2.01 | 0.42 |
| 1:B:443:THR:O | 1:B:451:PRO:CD | 2.67 | 0.42 |
| 1:C:7:ARG:HG3 | 1:C:288:LEU:HD23 | 2.00 | 0.42 |
| 1:C:18:ARG:HG2 | 1:C:345:GLU:H | 1.84 | 0.42 |
| 1:C:55:MET:CG | 1:C:362:ILE:HG21 | 2.49 | 0.42 |
| 1:C:57:PHE:CZ | 1:C:327:ILE:CG2 | 2.99 | 0.42 |
| 1:C:190:TRP:CZ3 | 1:C:191:VAL:CG1 | 3.01 | 0.42 |
| 1:C:208:VAL:HG12 | 1:C:231:VAL:HG11 | 1.97 | 0.42 |
| 1:A:12:TYR:CG | 1:A:52:ILE:HG22 | 2.54 | 0.42 |
| 1:A:190:TRP:CZ3 | 1:B:371:TYR:HD1 | 2.09 | 0.42 |
| 1:A:190:TRP:N | 1:B:369:ARG:O | 2.52 | 0.42 |
| 1:A:255:TYR:HB3 | 1:A:292:PHE:CE2 | 2.54 | 0.42 |
| 1:A:321:ASN:CG | 1:A:322:ASP:N | 2.69 | 0.42 |
| 1:B:11:ILE:HA | 1:B:59:ALA:HB3 | 2.01 | 0.42 |
| 1:B:213:LYS:CD | 1:C:375:LYS:HG2 | 2.49 | 0.42 |
| 1:C:20:ALA:O | 1:C:21:ARG:HB2 | 2.18 | 0.42 |
| 1:C:55:MET:HE3 | 1:C:332:GLU:HB3 | 2.00 | 0.42 |
| 1:C:137:PHE:O | 1:C:140:PHE:HB2 | 2.19 | 0.42 |
| 1:C:400:ASP:O | 1:C:403:GLN:HB2 | 2.19 | 0.42 |
| 1:A:13:PHE:HD1 | 1:A:14:LEU:N | 2.18 | 0.42 |
| 1:A:190:TRP:CZ3 | 1:A:191:VAL:CG1 | 3.01 | 0.42 |
| 1:A:400:ASP:O | 1:A:403:GLN:HB2 | 2.19 | 0.42 |
| 1:A:443:THR:O | 1:A:451:PRO:CD | 2.67 | 0.42 |
| 1:B:57:PHE:CZ | 1:B:362:ILE:HG21 | 2.54 | 0.42 |
| 1:B:116:VAL:HG13 | 1:B:116:VAL:O | 2.20 | 0.42 |
| 1:B:121:ASN:HD22 | 1:B:121:ASN:C | 2.22 | 0.42 |
| 1:B:142:SER:HB2 | 1:B:145:TYR:CE1 | 2.55 | 0.42 |
| 1:B:300:ARG:HB2 | 1:B:336:ALA:O | 2.19 | 0.42 |
| 1:B:400:ASP:O | 1:B:403:GLN:HB2 | 2.19 | 0.42 |
| 1:B:401:GLY:O | 1:B:403:GLN:HG3 | 2.20 | 0.42 |
| 1:C:13:PHE:HD1 | 1:C:14:LEU:N | 2.17 | 0.42 |
| 1:C:52:ILE:HD13 | 1:C:52:ILE:HG21 | 1.75 | 0.42 |
| 1:C:251:ASN:HB3 | 1:C:254:ILE:HG21 | 2.00 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:255:TYR:HB3 | 1:C:292:PHE:CE2 | 2.54 | 0.42 |
| 1:A:190:TRP:NE1 | 1:B:376:ASP:N | 2.65 | 0.42 |
| 1:A:193:SER:CB | 1:B:403:GLN:HB3 | 2.50 | 0.42 |
| 1:A:200:ILE:CG2 | 1:A:203:LEU:HD11 | 2.38 | 0.42 |
| 1:A:346:ALA:C | 1:A:348:TRP:N | 2.71 | 0.42 |
| 1:B:66:THR:O | 1:B:91:ASN:N | 2.52 | 0.42 |
| 1:B:236:PRO:HB3 | 1:B:278:THR:CG2 | 2.49 | 0.42 |
| 1:B:279:VAL:HG13 | 1:B:280:LYS:N | 2.35 | 0.42 |
| 1:B:346:ALA:C | 1:B:348:TRP:N | 2.71 | 0.42 |
| 1:B:348:TRP:O | 1:B:350:SER:N | 2.53 | 0.42 |
| 1:B:383:LYS:HZ1 | 1:C:5:ASP:CB | 2.12 | 0.42 |
| 1:C:48:LYS:HA | 1:C:48:LYS:CE | 2.46 | 0.42 |
| 1:C:87:ILE:HD11 | 1:C:190:TRP:CE2 | 2.54 | 0.42 |
| 1:C:121:ASN:C | 1:C:121:ASN:HD22 | 2.22 | 0.42 |
| 1:C:403:GLN:HG3 | 1:C:467:LYS:HG2 | 2.00 | 0.42 |
| 1:C:450:VAL:HA | 1:C:451:PRO:HD2 | 1.82 | 0.42 |
| 1:A:42:TRP:CZ3 | 1:A:94:TYR:CD2 | 3.07 | 0.42 |
| 1:A:209:LYS:HB2 | 1:A:231:VAL:HG11 | 2.01 | 0.42 |
| 1:A:255:TYR:CD2 | 1:A:255:TYR:C | 2.92 | 0.42 |
| 1:A:312:LYS:CG | 1:A:361:LEU:HD13 | 2.49 | 0.42 |
| 1:B:369:ARG:HH11 | 1:B:369:ARG:CB | 2.29 | 0.42 |
| 1:B:382:TYR:CG | 1:B:398:GLY:N | 2.85 | 0.42 |
| 1:B:446:SER:OG | 1:C:181:ASP:CB | 2.38 | 0.42 |
| 1:C:140:PHE:CZ | 1:C:176:LEU:HD21 | 2.54 | 0.42 |
| 1:C:211:VAL:HG21 | 1:C:215:PHE:HB3 | 2.00 | 0.42 |
| 1:C:401:GLY:O | 1:C:403:GLN:HG3 | 2.20 | 0.42 |
| 1:C:433:LEU:HD13 | 1:C:464:PRO:HA | 2.02 | 0.42 |
| 1:A:61:TRP:CZ2 | 1:A:204:ARG:NE | 2.85 | 0.42 |
| 1:A:140:PHE:CZ | 1:A:176:LEU:HD21 | 2.54 | 0.42 |
| 1:A:190:TRP:CZ2 | 1:B:374:SER:HB2 | 2.44 | 0.42 |
| 1:A:190:TRP:HH2 | 1:B:375:LYS:CE | 2.31 | 0.42 |
| 1:A:385:PRO:CG | 1:A:396:ARG:O | 2.67 | 0.42 |
| 1:B:55:MET:CG | 1:B:362:ILE:HG21 | 2.49 | 0.42 |
| 1:B:428:THR:HB | 1:C:190:TRP:N | 2.34 | 0.42 |
| 1:C:16:THR:OG1 | 1:C:94:TYR:CE1 | 2.58 | 0.42 |
| 1:C:87:ILE:O | 1:C:88:TYR:CB | 2.67 | 0.42 |
| 1:C:279:VAL:HG23 | 1:C:283:CYS:SG | 2.59 | 0.42 |
| 1:C:348:TRP:C | 1:C:350:SER:N | 2.72 | 0.42 |
| 1:A:185:ASN:HD22 | 1:B:319:ILE:HD12 | 1.85 | 0.42 |
| 1:A:348:TRP:O | 1:A:350:SER:N | 2.53 | 0.42 |
| 1:A:382:TYR:HD2 | 1:A:398:GLY:O | 2.02 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:401:GLY:O | 1:A:403:GLN:HG3 | 2.20 | 0.42 |
| 1:A:433:LEU:HD13 | 1:A:464:PRO:HA | 2.02 | 0.42 |
| 1:B:87:ILE:HG21 | 1:B:123:MET:HE1 | 2.02 | 0.42 |
| 1:B:107:LEU:O | 1:B:111:GLY:N | 2.51 | 0.42 |
| 1:B:255:TYR:HB3 | 1:B:292:PHE:CE2 | 2.54 | 0.42 |
| 1:B:280:LYS:O | 1:B:281:SER:HB2 | 2.11 | 0.42 |
| 1:B:308:ILE:H | 1:B:308:ILE:HG13 | 1.20 | 0.42 |
| 1:B:400:ASP:OD1 | 1:B:401:GLY:N | 2.50 | 0.42 |
| 1:C:300:ARG:HB2 | 1:C:336:ALA:O | 2.19 | 0.42 |
| 1:A:194:LEU:HA | 1:B:376:ASP:HB3 | 2.00 | 0.42 |
| 1:A:194:LEU:C | 1:B:403:GLN:CG | 2.88 | 0.42 |
| 1:A:229:GLY:CA | 1:B:476:ASP:OD1 | 2.68 | 0.42 |
| 1:A:339:ASN:O | 1:A:340:ASP:HB2 | 2.19 | 0.42 |
| 1:A:427:TYR:CZ | 1:A:433:LEU:HD11 | 2.55 | 0.42 |
| 1:B:12:TYR:OH | 1:B:19:PHE:HE1 | 2.03 | 0.42 |
| 1:B:18:ARG:HG2 | 1:B:345:GLU:H | 1.84 | 0.42 |
| 1:B:55:MET:SD | 1:B:362:ILE:CD1 | 3.06 | 0.42 |
| 1:B:132:VAL:CG1 | 1:B:134:TYR:CE2 | 3.02 | 0.42 |
| 1:B:213:LYS:CD | 1:C:375:LYS:CG | 2.98 | 0.42 |
| 1:B:256:TYR:CB | 1:B:257:PRO:CD | 2.98 | 0.42 |
| 1:B:277:ASN:HD22 | 1:C:286:SER:CB | 2.28 | 0.42 |
| 1:B:422:LEU:CD2 | 1:C:221:LYS:HG2 | 2.49 | 0.42 |
| 1:B:430:GLY:N | 1:B:445:GLY:HA2 | 2.33 | 0.42 |
| 1:B:447:ASP:HB3 | 1:C:184:LYS:HE2 | 1.67 | 0.42 |
| 1:C:7:ARG:HG2 | 1:C:287:THR:HG1 | 1.81 | 0.42 |
| 1:C:42:TRP:CZ3 | 1:C:94:TYR:CD2 | 3.07 | 0.42 |
| 1:C:348:TRP:O | 1:C:350:SER:N | 2.53 | 0.42 |
| 1:C:408:LEU:HD11 | 1:C:462:LEU:CD2 | 2.35 | 0.42 |
| 1:C:444:VAL:HG13 | 1:C:444:VAL:H | 1.30 | 0.42 |
| 1:A:11:ILE:HD11 | 1:A:324:LEU:C | 2.39 | 0.42 |
| 1:A:11:ILE:HA | 1:A:59:ALA:HB3 | 2.01 | 0.42 |
| 1:A:57:PHE:CZ | 1:A:362:ILE:HG21 | 2.54 | 0.42 |
| 1:A:180:LYS:NZ | 1:A:182:VAL:HB | 2.21 | 0.42 |
| 1:A:193:SER:CB | 1:B:403:GLN:CB | 2.94 | 0.42 |
| 1:A:246:MET:CE | 1:B:476:ASP:CB | 2.97 | 0.42 |
| 1:A:407:ILE:HA | 1:A:461:VAL:HA | 2.02 | 0.42 |
| 1:B:13:PHE:CB | 1:B:328:TYR:HA | 2.50 | 0.42 |
| 1:B:42:TRP:CZ3 | 1:B:94:TYR:CD2 | 3.07 | 0.42 |
| 1:B:152:ILE:HD11 | 1:B:166:LEU:CG | 2.48 | 0.42 |
| 1:B:279:VAL:HG23 | 1:B:283:CYS:SG | 2.59 | 0.42 |
| 1:B:295:ASN:O | 1:B:298:ASN:N | 2.53 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:458:LEU:HA | 1:B:459:PRO:HD2 | 1.65 | 0.42 |
| 1:C:79:TYR:C | 1:C:81:GLY:N | 2.73 | 0.42 |
| 1:C:317:PHE:O | 1:C:321:ASN:CB | 2.67 | 0.42 |
| 1:C:407:ILE:HA | 1:C:461:VAL:HA | 2.02 | 0.42 |
| 1:C:418:TYR:HD1 | 1:C:454:MET:HE3 | 1.81 | 0.42 |
| 1:C:432:GLN:O | 1:C:465:THR:HB | 2.20 | 0.42 |
| 1:A:132:VAL:CG1 | 1:A:134:TYR:CE2 | 3.02 | 0.42 |
| 1:A:199:SER:O | 1:B:466:GLU:HG3 | 2.20 | 0.42 |
| 1:A:293:VAL:HG11 | 1:A:331:GLN:CD | 2.40 | 0.42 |
| 1:A:380:VAL:HG13 | 1:A:381:THR:N | 2.28 | 0.42 |
| 1:B:136:VAL:O | 1:B:136:VAL:CG1 | 2.68 | 0.42 |
| 1:B:241:PRO:CB | 1:C:376:ASP:H | 2.33 | 0.42 |
| 1:B:293:VAL:HG11 | 1:B:331:GLN:CD | 2.41 | 0.42 |
| 1:B:380:VAL:HG13 | 1:B:381:THR:N | 2.28 | 0.42 |
| 1:C:12:TYR:CD1 | 1:C:14:LEU:HD23 | 2.53 | 0.42 |
| 1:C:136:VAL:O | 1:C:136:VAL:CG1 | 2.68 | 0.42 |
| 1:C:255:TYR:CD2 | 1:C:255:TYR:C | 2.92 | 0.42 |
| 1:C:265:THR:O | 1:C:411:LYS:HD2 | 2.20 | 0.42 |
| 1:C:330:GLY:HA3 | 1:C:335:TYR:HD1 | 1.85 | 0.42 |
| 1:C:368:ILE:HG21 | 1:C:368:ILE:HD13 | 1.44 | 0.42 |
| 1:B:11:ILE:CD1 | 1:B:324:LEU:C | 2.89 | 0.41 |
| 1:B:173:LEU:HA | 1:B:174:PRO:HD2 | 1.82 | 0.41 |
| 1:B:255:TYR:HD1 | 1:B:292:PHE:HD2 | 1.68 | 0.41 |
| 1:B:287:THR:HG21 | 1:B:380:VAL:O | 2.19 | 0.41 |
| 1:B:383:LYS:CD | 1:C:5:ASP:CG | 2.86 | 0.41 |
| 1:C:12:TYR:OH | 1:C:19:PHE:HE1 | 2.03 | 0.41 |
| 1:C:57:PHE:CZ | 1:C:362:ILE:HG21 | 2.54 | 0.41 |
| 1:C:427:TYR:CZ | 1:C:433:LEU:HD11 | 2.55 | 0.41 |
| 1:A:221:LYS:HB3 | 1:B:436:VAL:HA | 0.43 | 0.41 |
| 1:A:330:GLY:HA3 | 1:A:335:TYR:HD1 | 1.85 | 0.41 |
| 1:A:408:LEU:HD11 | 1:A:462:LEU:CD2 | 2.36 | 0.41 |
| 1:B:87:ILE:O | 1:B:88:TYR:CB | 2.67 | 0.41 |
| 1:C:255:TYR:CD1 | 1:C:292:PHE:HD2 | 2.36 | 0.41 |
| 1:C:293:VAL:HG11 | 1:C:331:GLN:CD | 2.40 | 0.41 |
| 1:C:339:ASN:O | 1:C:340:ASP:HB2 | 2.19 | 0.41 |
| 1:C:382:TYR:HD2 | 1:C:398:GLY:O | 2.02 | 0.41 |
| 1:C:434:THR:CG2 | 1:C:474:CYS:SG | 3.08 | 0.41 |
| 1:C:443:THR:O | 1:C:451:PRO:CD | 2.67 | 0.41 |
| 1:A:189:ASP:O | 1:B:463:TYR:OH | 2.30 | 0.41 |
| 1:A:205:ILE:CD1 | 1:B:472:LYS:CA | 2.86 | 0.41 |
| 1:A:224:GLY:CA | 1:B:434:THR:HB | 2.50 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:255:TYR:CD1 | 1:A:292:PHE:HD2 | 2.36 | 0.41 |
| 1:A:265:THR:O | 1:A:411:LYS:HD2 | 2.20 | 0.41 |
| 1:A:400:ASP:CG | 1:A:401:GLY:N | 2.74 | 0.41 |
| 1:B:228:ILE:HD12 | 1:B:228:ILE:HG21 | 1.72 | 0.41 |
| 1:B:238:TYR:O | 1:C:376:ASP:CA | 2.46 | 0.41 |
| 1:C:11:ILE:CD1 | 1:C:324:LEU:C | 2.89 | 0.41 |
| 1:C:66:THR:HG22 | 1:C:86:ASP:HB3 | 2.03 | 0.41 |
| 1:C:87:ILE:HD13 | 1:C:87:ILE:HG21 | 1.82 | 0.41 |
| 1:C:400:ASP:CG | 1:C:401:GLY:N | 2.74 | 0.41 |
| 1:A:11:ILE:CD1 | 1:A:324:LEU:C | 2.89 | 0.41 |
| 1:A:12:TYR:OH | 1:A:19:PHE:HE1 | 2.03 | 0.41 |
| 1:A:18:ARG:HG2 | 1:A:345:GLU:H | 1.84 | 0.41 |
| 1:A:55:MET:SD | 1:A:362:ILE:CD1 | 3.06 | 0.41 |
| 1:A:185:ASN:ND2 | 1:B:319:ILE:HG13 | 2.34 | 0.41 |
| 1:A:262:PHE:CZ | 1:A:314:VAL:CA | 3.03 | 0.41 |
| 1:A:287:THR:HG21 | 1:A:380:VAL:O | 2.19 | 0.41 |
| 1:A:432:GLN:O | 1:A:465:THR:HB | 2.20 | 0.41 |
| 1:B:319:ILE:HG22 | 1:B:325:PRO:CB | 2.27 | 0.41 |
| 1:B:330:GLY:CA | 1:B:335:TYR:HD1 | 2.34 | 0.41 |
| 1:B:344:ARG:HD2 | 1:B:344:ARG:N | 2.36 | 0.41 |
| 1:B:381:THR:CB | 1:C:1:ALA:HB2 | 2.50 | 0.41 |
| 1:B:384:ASN:HA | 1:C:2:THR:HG22 | 1.59 | 0.41 |
| 1:B:385:PRO:O | 1:B:395:MET:CB | 2.68 | 0.41 |
| 1:B:427:TYR:CZ | 1:B:433:LEU:HD11 | 2.55 | 0.41 |
| 1:B:432:GLN:O | 1:B:465:THR:HB | 2.20 | 0.41 |
| 1:C:262:PHE:CZ | 1:C:314:VAL:CA | 3.03 | 0.41 |
| 1:C:346:ALA:HB3 | 1:C:349:LEU:HB2 | 2.03 | 0.41 |
| 1:A:136:VAL:O | 1:A:136:VAL:CG1 | 2.68 | 0.41 |
| 1:A:379:PHE:CZ | 1:A:397:LYS:HE2 | 2.56 | 0.41 |
| 1:A:434:THR:CG2 | 1:A:474:CYS:SG | 3.08 | 0.41 |
| 1:B:42:TRP:NE1 | 1:B:62:ILE:CD1 | 2.68 | 0.41 |
| 1:B:79:TYR:C | 1:B:81:GLY:N | 2.73 | 0.41 |
| 1:B:243:GLN:HE21 | 1:B:285:ASP:HA | 1.85 | 0.41 |
| 1:B:429:ALA:CB | 1:C:186:GLU:HB3 | 2.30 | 0.41 |
| 1:C:142:SER:HB2 | 1:C:145:TYR:CE1 | 2.55 | 0.41 |
| 1:C:236:PRO:HB3 | 1:C:278:THR:CG2 | 2.49 | 0.41 |
| 1:C:379:PHE:CZ | 1:C:397:LYS:HE2 | 2.56 | 0.41 |
| 1:A:48:LYS:HA | 1:A:48:LYS:CE | 2.46 | 0.41 |
| 1:A:194:LEU:HA | 1:B:403:GLN:CD | 2.41 | 0.41 |
| 1:A:208:VAL:HG22 | 1:A:216:TRP:NE1 | 2.36 | 0.41 |
| 1:A:216:TRP:HE3 | 1:B:472:LYS:HB3 | 1.38 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:295:ASN:O | 1:A:298:ASN:N | 2.53 | 0.41 |
| 1:A:401:GLY:HA3 | 1:A:403:GLN:NE2 | 2.36 | 0.41 |
| 1:A:408:LEU:HD13 | 1:A:408:LEU:N | 2.30 | 0.41 |
| 1:B:12:TYR:CD1 | 1:B:14:LEU:HD23 | 2.54 | 0.41 |
| 1:B:19:PHE:CD1 | 1:B:347:THR:CG2 | 3.04 | 0.41 |
| 1:B:66:THR:HG22 | 1:B:86:ASP:HB3 | 2.03 | 0.41 |
| 1:B:134:TYR:CZ | 1:B:143:GLN:HB2 | 2.55 | 0.41 |
| 1:B:191:VAL:HG23 | 1:B:192:GLY:H | 1.85 | 0.41 |
| 1:B:199:SER:HB2 | 1:B:200:ILE:H | 1.27 | 0.41 |
| 1:B:399:THR:HG22 | 1:B:400:ASP:N | 2.36 | 0.41 |
| 1:B:399:THR:HG22 | 1:C:195:VAL:O | 2.20 | 0.41 |
| 1:C:11:ILE:HA | 1:C:59:ALA:HB3 | 2.02 | 0.41 |
| 1:C:117:ASP:OD2 | 1:C:204:ARG:NH1 | 2.54 | 0.41 |
| 1:C:122:HIS:ND1 | 1:C:173:LEU:CD2 | 2.78 | 0.41 |
| 1:C:132:VAL:CG1 | 1:C:134:TYR:CE2 | 3.03 | 0.41 |
| 1:C:134:TYR:CZ | 1:C:143:GLN:HB2 | 2.55 | 0.41 |
| 1:C:137:PHE:CG | 1:C:146:PHE:HZ | 2.39 | 0.41 |
| 1:C:191:VAL:HG13 | 1:C:191:VAL:H | 1.24 | 0.41 |
| 1:C:330:GLY:CA | 1:C:335:TYR:HD1 | 2.34 | 0.41 |
| 1:C:338:GLY:O | 1:C:340:ASP:N | 2.53 | 0.41 |
| 1:C:408:LEU:HD13 | 1:C:408:LEU:N | 2.31 | 0.41 |
| 1:A:66:THR:HG22 | 1:A:86:ASP:HB3 | 2.03 | 0.41 |
| 1:A:190:TRP:CZ2 | 1:B:375:LYS:HB2 | 2.35 | 0.41 |
| 1:A:344:ARG:HD2 | 1:A:344:ARG:N | 2.36 | 0.41 |
| 1:B:253:PRO:HB2 | 1:B:275:MET:HE3 | 2.02 | 0.41 |
| 1:B:301:PHE:O | 1:B:304:TYR:HD1 | 2.04 | 0.41 |
| 1:B:407:ILE:HA | 1:B:461:VAL:HA | 2.02 | 0.41 |
| 1:B:434:THR:CG2 | 1:B:474:CYS:SG | 3.09 | 0.41 |
| 1:C:66:THR:HG21 | 1:C:87:ILE:N | 2.35 | 0.41 |
| 1:C:116:VAL:O | 1:C:116:VAL:HG13 | 2.20 | 0.41 |
| 1:C:208:VAL:HG22 | 1:C:216:TRP:NE1 | 2.36 | 0.41 |
| 1:A:52:ILE:HG12 | 1:A:52:ILE:H | 1.59 | 0.41 |
| 1:A:228:ILE:HG21 | 1:A:228:ILE:HD12 | 1.72 | 0.41 |
| 1:B:13:PHE:HD1 | 1:B:14:LEU:N | 2.18 | 0.41 |
| 1:B:275:MET:HA | 1:C:7:ARG:NH1 | 2.29 | 0.41 |
| 1:B:279:VAL:HG11 | 1:C:4:ALA:HB1 | 1.83 | 0.41 |
| 1:B:400:ASP:HB3 | 1:C:194:LEU:C | 2.34 | 0.41 |
| 1:B:472:LYS:O | 1:B:473:ILE:CB | 2.66 | 0.41 |
| 1:C:13:PHE:CB | 1:C:328:TYR:HA | 2.50 | 0.41 |
| 1:C:68:GLN:O | 1:C:85:THR:CG2 | 2.69 | 0.41 |
| 1:C:256:TYR:CB | 1:C:257:PRO:CD | 2.98 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:344:ARG:HD2 | 1:C:344:ARG:N | 2.36 | 0.41 |
| 1:A:13:PHE:CB | 1:A:328:TYR:HA | 2.50 | 0.41 |
| 1:A:19:PHE:CD1 | 1:A:347:THR:CG2 | 3.04 | 0.41 |
| 1:A:66:THR:HG21 | 1:A:87:ILE:N | 2.35 | 0.41 |
| 1:A:87:ILE:HD11 | 1:B:374:SER:C | 2.36 | 0.41 |
| 1:A:117:ASP:OD2 | 1:A:204:ARG:NH1 | 2.53 | 0.41 |
| 1:A:191:VAL:HG23 | 1:A:192:GLY:H | 1.85 | 0.41 |
| 1:A:194:LEU:O | 1:B:403:GLN:CD | 2.59 | 0.41 |
| 1:A:208:VAL:CG2 | 1:A:216:TRP:NE1 | 2.84 | 0.41 |
| 1:A:219:TYR:CG | 1:B:473:ILE:CD1 | 2.87 | 0.41 |
| 1:A:246:MET:HB3 | 1:B:476:ASP:C | 2.27 | 0.41 |
| 1:A:272:LEU:HA | 1:A:275:MET:HB3 | 2.02 | 0.41 |
| 1:A:283:CYS:SG | 1:A:289:LEU:HD11 | 2.61 | 0.41 |
| 1:A:293:VAL:HG13 | 1:A:294:GLU:N | 2.19 | 0.41 |
| 1:A:301:PHE:O | 1:A:304:TYR:HD1 | 2.04 | 0.41 |
| 1:A:318:ILE:HG21 | 1:A:318:ILE:HD13 | 1.14 | 0.41 |
| 1:A:346:ALA:HB3 | 1:A:349:LEU:HB2 | 2.03 | 0.41 |
| 1:A:371:TYR:O | 1:A:374:SER:HB2 | 2.21 | 0.41 |
| 1:A:381:THR:O | 1:A:382:TYR:C | 2.59 | 0.41 |
| 1:A:385:PRO:O | 1:A:395:MET:CB | 2.68 | 0.41 |
| 1:A:465:THR:O | 1:A:465:THR:HG23 | 2.21 | 0.41 |
| 1:B:66:THR:HG21 | 1:B:87:ILE:N | 2.35 | 0.41 |
| 1:B:117:ASP:OD2 | 1:B:204:ARG:NH1 | 2.53 | 0.41 |
| 1:B:123:MET:CB | 1:B:137:PHE:CE1 | 2.80 | 0.41 |
| 1:B:255:TYR:CE1 | 1:B:293:VAL:O | 2.74 | 0.41 |
| 1:B:262:PHE:CZ | 1:B:314:VAL:CA | 3.04 | 0.41 |
| 1:B:265:THR:O | 1:B:411:LYS:HD2 | 2.20 | 0.41 |
| 1:B:330:GLY:HA3 | 1:B:335:TYR:HD1 | 1.85 | 0.41 |
| 1:B:353:PRO:C | 1:B:355:ASP:H | 2.24 | 0.41 |
| 1:B:452:VAL:HG22 | 1:B:452:VAL:O | 2.16 | 0.41 |
| 1:C:10:SER:HB3 | 1:C:57:PHE:HB3 | 2.03 | 0.41 |
| 1:C:19:PHE:CD1 | 1:C:347:THR:CG2 | 3.04 | 0.41 |
| 1:C:287:THR:HG21 | 1:C:380:VAL:O | 2.19 | 0.41 |
| 1:C:301:PHE:O | 1:C:304:TYR:HD1 | 2.04 | 0.41 |
| 1:C:381:THR:O | 1:C:382:TYR:C | 2.59 | 0.41 |
| 1:C:385:PRO:O | 1:C:395:MET:CB | 2.68 | 0.41 |
| 1:C:401:GLY:HA3 | 1:C:403:GLN:NE2 | 2.35 | 0.41 |
| 1:C:465:THR:O | 1:C:465:THR:HG23 | 2.21 | 0.41 |
| 1:A:79:TYR:C | 1:A:81:GLY:N | 2.73 | 0.41 |
| 1:A:134:TYR:CZ | 1:A:143:GLN:HB2 | 2.55 | 0.41 |
| 1:A:137:PHE:CG | 1:A:146:PHE:HZ | 2.39 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:255:TYR:HD1 | 1:A:292:PHE:HD2 | 1.68 | 0.41 |
| 1:A:256:TYR:CB | 1:A:257:PRO:CD | 2.98 | 0.41 |
| 1:A:330:GLY:CA | 1:A:335:TYR:HD1 | 2.34 | 0.41 |
| 1:A:338:GLY:O | 1:A:340:ASP:N | 2.53 | 0.41 |
| 1:B:61:TRP:CZ2 | 1:B:204:ARG:NE | 2.85 | 0.41 |
| 1:B:134:TYR:CG | 1:B:143:GLN:HB3 | 2.56 | 0.41 |
| 1:B:208:VAL:CG2 | 1:B:216:TRP:NE1 | 2.84 | 0.41 |
| 1:B:338:GLY:O | 1:B:340:ASP:N | 2.53 | 0.41 |
| 1:B:346:ALA:HB3 | 1:B:349:LEU:HB2 | 2.03 | 0.41 |
| 1:B:382:TYR:CE1 | 1:B:385:PRO:CD | 2.94 | 0.41 |
| 1:C:55:MET:CG | 1:C:57:PHE:CE2 | 2.97 | 0.41 |
| 1:C:295:ASN:O | 1:C:298:ASN:N | 2.53 | 0.41 |
| 1:C:371:TYR:O | 1:C:374:SER:HB2 | 2.21 | 0.41 |
| 1:C:385:PRO:O | 1:C:395:MET:HB3 | 2.20 | 0.41 |
| 1:A:188:TYR:CD1 | 1:B:368:ILE:CG2 | 2.52 | 0.40 |
| 1:A:450:VAL:HA | 1:A:451:PRO:HD2 | 1.82 | 0.40 |
| 1:B:191:VAL:HG13 | 1:B:191:VAL:H | 1.25 | 0.40 |
| 1:B:208:VAL:HG22 | 1:B:216:TRP:NE1 | 2.36 | 0.40 |
| 1:B:211:VAL:HG21 | 1:B:215:PHE:HB3 | 2.00 | 0.40 |
| 1:B:273:TYR:OH | 1:C:244:ASN:HA | 2.21 | 0.40 |
| 1:B:279:VAL:HG13 | 1:C:4:ALA:CA | 2.44 | 0.40 |
| 1:C:283:CYS:SG | 1:C:289:LEU:HD11 | 2.61 | 0.40 |
| 1:A:46:ILE:HD13 | 1:A:46:ILE:HG21 | 1.78 | 0.40 |
| 1:A:193:SER:HA | 1:B:404:ILE:N | 2.22 | 0.40 |
| 1:A:197:ASN:ND2 | 1:B:400:ASP:OD1 | 2.50 | 0.40 |
| 1:A:245:VAL:C | 1:A:246:MET:CG | 2.90 | 0.40 |
| 1:A:353:PRO:C | 1:A:355:ASP:H | 2.24 | 0.40 |
| 1:B:12:TYR:CG | 1:B:52:ILE:HG22 | 2.54 | 0.40 |
| 1:B:106:ALA:O | 1:B:109:GLU:HB2 | 2.21 | 0.40 |
| 1:C:134:TYR:CG | 1:C:143:GLN:HB3 | 2.56 | 0.40 |
| 1:C:184:LYS:HG3 | 1:C:185:ASN:H | 1.86 | 0.40 |
| 1:C:238:TYR:HA | 1:C:241:PRO:HG3 | 2.04 | 0.40 |
| 1:C:312:LYS:CG | 1:C:361:LEU:HD13 | 2.49 | 0.40 |
| 1:C:319:ILE:CA | 1:C:325:PRO:CB | 2.72 | 0.40 |
| 1:A:180:LYS:HB3 | 1:B:12:TYR:CE2 | 2.52 | 0.40 |
| 1:A:190:TRP:CH2 | 1:B:375:LYS:NZ | 2.84 | 0.40 |
| 1:A:204:ARG:CG | 1:A:228:ILE:O | 2.70 | 0.40 |
| 1:A:221:LYS:HA | 1:B:434:THR:HG21 | 0.47 | 0.40 |
| 1:A:249:VAL:CB | 1:B:477:SER:CB | 2.94 | 0.40 |
| 1:A:249:VAL:HA | 1:B:477:SER:CB | 2.51 | 0.40 |
| 1:A:255:TYR:CE1 | 1:A:293:VAL:O | 2.74 | 0.40 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:385:PRO:O | 1:A:395:MET:HB3 | 2.20 | 0.40 |
| 1:A:472:LYS:O | 1:A:473:ILE:CB | 2.66 | 0.40 |
| 1:B:272:LEU:HA | 1:B:275:MET:HB3 | 2.02 | 0.40 |
| 1:B:448:GLY:HA3 | 1:C:184:LYS:HB2 | 0.96 | 0.40 |
| 1:C:123:MET:CE | 1:C:140:PHE:HE1 | 2.24 | 0.40 |
| 1:C:186:GLU:HG3 | 1:C:187:TRP:N | 2.36 | 0.40 |
| 1:C:208:VAL:CG2 | 1:C:216:TRP:NE1 | 2.84 | 0.40 |
| 1:C:262:PHE:CE1 | 1:C:314:VAL:HB | 2.57 | 0.40 |
| 1:C:458:LEU:HD13 | 1:C:460:ARG:NH2 | 2.33 | 0.40 |
| 1:A:134:TYR:CG | 1:A:143:GLN:HB3 | 2.56 | 0.40 |
| 1:A:190:TRP:HH2 | 1:B:375:LYS:HD3 | 1.57 | 0.40 |
| 1:A:205:ILE:HG13 | 1:A:229:GLY:CA | 2.44 | 0.40 |
| 1:A:458:LEU:HA | 1:A:459:PRO:HD2 | 1.65 | 0.40 |
| 1:B:401:GLY:HA3 | 1:B:403:GLN:NE2 | 2.36 | 0.40 |
| 1:B:458:LEU:HD13 | 1:B:460:ARG:NH2 | 2.33 | 0.40 |
| 1:C:106:ALA:O | 1:C:109:GLU:HB2 | 2.21 | 0.40 |
| 1:C:190:TRP:HZ3 | 1:C:219:TYR:OH | 2.05 | 0.40 |
| 1:C:204:ARG:HH11 | 1:C:204:ARG:HG2 | 1.84 | 0.40 |
| 1:C:255:TYR:HD1 | 1:C:292:PHE:HD2 | 1.68 | 0.40 |
| 1:C:255:TYR:CE1 | 1:C:293:VAL:O | 2.74 | 0.40 |
| 1:C:321:ASN:CG | 1:C:322:ASP:N | 2.69 | 0.40 |
| 1:C:332:GLU:CG | 1:C:333:GLN:H | 2.30 | 0.40 |
| 1:C:387:ILE:HD13 | 1:C:387:ILE:HG21 | 1.37 | 0.40 |
| 1:A:10:SER:HB3 | 1:A:57:PHE:HB3 | 2.03 | 0.40 |
| 1:A:224:GLY:N | 1:B:434:THR:HB | 2.36 | 0.40 |
| 1:A:452:VAL:HG22 | 1:A:452:VAL:O | 2.17 | 0.40 |
| 1:B:1:ALA:HB1 | 1:B:113:TYR:HE1 | 1.86 | 0.40 |
| 1:B:122:HIS:ND1 | 1:B:173:LEU:CD2 | 2.77 | 0.40 |
| 1:B:262:PHE:CE1 | 1:B:314:VAL:HB | 2.57 | 0.40 |
| 1:B:283:CYS:SG | 1:B:289:LEU:HD11 | 2.61 | 0.40 |
| 1:B:385:PRO:O | 1:B:395:MET:HB3 | 2.20 | 0.40 |
| 1:C:152:ILE:HD11 | 1:C:166:LEU:CB | 2.52 | 0.40 |
| 1:C:205:ILE:HG13 | 1:C:229:GLY:CA | 2.44 | 0.40 |
| 1:C:245:VAL:C | 1:C:246:MET:CG | 2.90 | 0.40 |
| 1:C:353:PRO:C | 1:C:355:ASP:H | 2.24 | 0.40 |
| 1:C:472:LYS:O | 1:C:473:ILE:CG2 | 2.66 | 0.40 |

All (135) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-----------------|------------------------|--------------------------|-------------------|
| 1:A:151:PHE:C | 1:C:25:SER:O[2_646] | 0.53 | 1.67 |
| 1:A:149:PHE:CB | 1:C:29:THR:OG1[2_646] | 0.66 | 1.54 |
| 1:A:149:PHE:CD2 | 1:C:29:THR:CA[2_646] | 0.70 | 1.50 |
| 1:A:165:TRP:O | 1:C:27:THR:CA[2_646] | 0.72 | 1.48 |
| 1:A:152:ILE:CA | 1:C:26:THR:N[2_646] | 0.76 | 1.44 |
| 1:A:152:ILE:CB | 1:C:26:THR:OG1[2_646] | 0.76 | 1.44 |
| 1:A:153:GLN:CG | 1:C:24:GLY:O[2_646] | 0.82 | 1.38 |
| 1:A:151:PHE:C | 1:C:25:SER:C[2_646] | 0.95 | 1.25 |
| 1:A:152:ILE:CB | 1:C:26:THR:CB[2_646] | 0.95 | 1.25 |
| 1:A:153:GLN:C | 1:C:24:GLY:CA[2_646] | 0.97 | 1.23 |
| 1:A:153:GLN:CB | 1:C:24:GLY:O[2_646] | 0.99 | 1.21 |
| 1:A:165:TRP:CB | 1:C:27:THR:O[2_646] | 0.99 | 1.21 |
| 1:A:165:TRP:CA | 1:C:27:THR:CG2[2_646] | 1.00 | 1.20 |
| 1:A:152:ILE:N | 1:C:26:THR:N[2_646] | 1.04 | 1.16 |
| 1:A:152:ILE:CG1 | 1:C:26:THR:OG1[2_646] | 1.06 | 1.14 |
| 1:A:165:TRP:CA | 1:C:27:THR:CB[2_646] | 1.07 | 1.13 |
| 1:A:151:PHE:N | 1:C:28:ALA:CB[2_646] | 1.09 | 1.11 |
| 1:A:151:PHE:CZ | 1:C:349:LEU:CG[2_646] | 1.09 | 1.11 |
| 1:A:165:TRP:C | 1:C:27:THR:CB[2_646] | 1.10 | 1.10 |
| 1:A:149:PHE:CG | 1:C:29:THR:CA[2_646] | 1.11 | 1.09 |
| 1:A:152:ILE:N | 1:C:25:SER:C[2_646] | 1.13 | 1.07 |
| 1:A:153:GLN:CA | 1:C:24:GLY:CA[2_646] | 1.18 | 1.02 |
| 1:A:150:CYS:C | 1:C:28:ALA:CA[2_646] | 1.19 | 1.01 |
| 1:A:151:PHE:O | 1:C:25:SER:C[2_646] | 1.19 | 1.01 |
| 1:A:151:PHE:CE1 | 1:C:349:LEU:CG[2_646] | 1.22 | 0.98 |
| 1:A:149:PHE:CD2 | 1:C:29:THR:C[2_646] | 1.23 | 0.97 |
| 1:A:149:PHE:CB | 1:C:29:THR:CB[2_646] | 1.25 | 0.95 |
| 1:A:153:GLN:CA | 1:C:24:GLY:C[2_646] | 1.29 | 0.91 |
| 1:A:151:PHE:CA | 1:C:25:SER:O[2_646] | 1.30 | 0.90 |
| 1:A:165:TRP:C | 1:C:27:THR:CA[2_646] | 1.30 | 0.90 |
| 1:A:149:PHE:CA | 1:C:29:THR:OG1[2_646] | 1.32 | 0.88 |
| 1:A:165:TRP:O | 1:C:27:THR:N[2_646] | 1.32 | 0.88 |
| 1:A:150:CYS:O | 1:C:28:ALA:N[2_646] | 1.33 | 0.87 |
| 1:A:153:GLN:CB | 1:C:24:GLY:C[2_646] | 1.37 | 0.83 |
| 1:A:150:CYS:C | 1:C:28:ALA:N[2_646] | 1.42 | 0.78 |
| 1:A:150:CYS:CA | 1:C:28:ALA:CA[2_646] | 1.42 | 0.78 |
| 1:A:152:ILE:CG2 | 1:C:26:THR:OG1[2_646] | 1.46 | 0.74 |
| 1:A:151:PHE:CE1 | 1:C:349:LEU:CB[2_646] | 1.47 | 0.73 |
| 1:A:149:PHE:CE2 | 1:C:30:CYS:N[2_646] | 1.48 | 0.72 |
| 1:A:151:PHE:O | 1:C:25:SER:CA[2_646] | 1.48 | 0.72 |
| 1:A:151:PHE:CZ | 1:C:349:LEU:CD1[2_646] | 1.48 | 0.72 |
| 1:A:152:ILE:N | 1:C:25:SER:O[2_646] | 1.49 | 0.71 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-----------------|------------------------|--------------------------|-------------------|
| 1:A:150:CYS:C | 1:C:28:ALA:CB[2_646] | 1.50 | 0.70 |
| 1:A:151:PHE:O | 1:C:25:SER:O[2_646] | 1.50 | 0.70 |
| 1:A:153:GLN:O | 1:C:23:ASP:O[2_646] | 1.53 | 0.67 |
| 1:A:160:GLN:OE1 | 1:C:23:ASP:O[2_646] | 1.54 | 0.66 |
| 1:A:152:ILE:CG1 | 1:C:26:THR:CB[2_646] | 1.55 | 0.65 |
| 1:A:153:GLN:N | 1:C:25:SER:N[2_646] | 1.55 | 0.65 |
| 1:A:152:ILE:N | 1:C:26:THR:CA[2_646] | 1.58 | 0.62 |
| 1:A:128:ALA:CB | 1:C:31:ASN:CB[2_646] | 1.59 | 0.61 |
| 1:A:165:TRP:N | 1:C:27:THR:CB[2_646] | 1.61 | 0.59 |
| 1:A:152:ILE:C | 1:C:26:THR:N[2_646] | 1.62 | 0.58 |
| 1:A:153:GLN:O | 1:C:24:GLY:CA[2_646] | 1.63 | 0.57 |
| 1:A:165:TRP:C | 1:C:27:THR:CG2[2_646] | 1.64 | 0.56 |
| 1:A:153:GLN:O | 1:C:24:GLY:N[2_646] | 1.65 | 0.55 |
| 1:A:151:PHE:CD1 | 1:C:349:LEU:CA[2_646] | 1.66 | 0.54 |
| 1:A:153:GLN:O | 1:C:23:ASP:C[2_646] | 1.66 | 0.54 |
| 1:A:130:SER:CB | 1:C:31:ASN:OD1[2_646] | 1.67 | 0.53 |
| 1:A:153:GLN:N | 1:C:24:GLY:C[2_646] | 1.67 | 0.53 |
| 1:A:165:TRP:C | 1:C:27:THR:OG1[2_646] | 1.69 | 0.51 |
| 1:A:152:ILE:CD1 | 1:C:26:THR:CB[2_646] | 1.71 | 0.49 |
| 1:A:151:PHE:O | 1:C:25:SER:CB[2_646] | 1.72 | 0.48 |
| 1:A:152:ILE:CA | 1:C:25:SER:C[2_646] | 1.72 | 0.48 |
| 1:A:153:GLN:NE2 | 1:C:21:ARG:CD[2_646] | 1.72 | 0.48 |
| 1:A:153:GLN:CG | 1:C:24:GLY:C[2_646] | 1.74 | 0.46 |
| 1:A:153:GLN:CB | 1:C:24:GLY:CA[2_646] | 1.75 | 0.45 |
| 1:A:149:PHE:CD2 | 1:C:29:THR:N[2_646] | 1.76 | 0.44 |
| 1:A:152:ILE:CB | 1:C:26:THR:CA[2_646] | 1.76 | 0.44 |
| 1:A:165:TRP:CB | 1:C:27:THR:C[2_646] | 1.77 | 0.43 |
| 1:A:149:PHE:CE2 | 1:C:29:THR:C[2_646] | 1.78 | 0.42 |
| 1:A:153:GLN:OE1 | 1:C:348:TRP:CD2[2_646] | 1.80 | 0.40 |
| 1:A:151:PHE:CE1 | 1:C:349:LEU:CA[2_646] | 1.81 | 0.39 |
| 1:A:152:ILE:CB | 1:C:26:THR:CG2[2_646] | 1.81 | 0.39 |
| 1:A:165:TRP:O | 1:C:27:THR:CB[2_646] | 1.81 | 0.39 |
| 1:A:151:PHE:N | 1:C:28:ALA:CA[2_646] | 1.82 | 0.38 |
| 1:A:149:PHE:C | 1:C:29:THR:N[2_646] | 1.83 | 0.37 |
| 1:A:149:PHE:CG | 1:C:29:THR:CB[2_646] | 1.84 | 0.36 |
| 1:A:152:ILE:CA | 1:C:26:THR:CA[2_646] | 1.84 | 0.36 |
| 1:A:130:SER:O | 1:C:34:ASP:OD1[2_646] | 1.85 | 0.35 |
| 1:A:150:CYS:CA | 1:C:28:ALA:CB[2_646] | 1.86 | 0.34 |
| 1:A:153:GLN:C | 1:C:24:GLY:N[2_646] | 1.86 | 0.34 |
| 1:A:152:ILE:CA | 1:C:26:THR:OG1[2_646] | 1.87 | 0.33 |
| 1:A:149:PHE:CB | 1:C:29:THR:CA[2_646] | 1.88 | 0.32 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-----------------|------------------------|--------------------------|-------------------|
| 1:A:151:PHE:C | 1:C:26:THR:N[2_646] | 1.88 | 0.32 |
| 1:A:165:TRP:CA | 1:C:27:THR:CA[2_646] | 1.88 | 0.32 |
| 1:A:154:ASN:N | 1:C:24:GLY:CA[2_646] | 1.89 | 0.31 |
| 1:A:149:PHE:CD2 | 1:C:30:CYS:N[2_646] | 1.90 | 0.30 |
| 1:A:128:ALA:O | 1:C:31:ASN:ND2[2_646] | 1.91 | 0.29 |
| 1:A:151:PHE:CB | 1:C:348:TRP:CE2[2_646] | 1.91 | 0.29 |
| 1:A:152:ILE:CB | 1:C:26:THR:N[2_646] | 1.91 | 0.29 |
| 1:A:150:CYS:O | 1:C:27:THR:C[2_646] | 1.93 | 0.27 |
| 1:A:151:PHE:N | 1:C:28:ALA:N[2_646] | 1.93 | 0.27 |
| 1:A:152:ILE:N | 1:C:26:THR:C[2_646] | 1.93 | 0.27 |
| 1:A:166:LEU:N | 1:C:27:THR:CG2[2_646] | 1.93 | 0.27 |
| 1:A:153:GLN:OE1 | 1:C:348:TRP:CG[2_646] | 1.94 | 0.26 |
| 1:A:167:GLY:O | 1:C:349:LEU:O[2_646] | 1.94 | 0.26 |
| 1:A:151:PHE:CB | 1:C:348:TRP:CZ2[2_646] | 1.96 | 0.24 |
| 1:A:154:ASN:CB | 1:C:22:THR:O[2_646] | 1.96 | 0.24 |
| 1:A:130:SER:CA | 1:C:31:ASN:OD1[2_646] | 1.97 | 0.23 |
| 1:A:149:PHE:CG | 1:C:29:THR:N[2_646] | 1.97 | 0.23 |
| 1:A:149:PHE:N | 1:C:29:THR:OG1[2_646] | 1.97 | 0.23 |
| 1:A:150:CYS:N | 1:C:28:ALA:CA[2_646] | 2.01 | 0.19 |
| 1:A:149:PHE:O | 1:C:29:THR:N[2_646] | 2.03 | 0.17 |
| 1:A:165:TRP:CG | 1:C:27:THR:O[2_646] | 2.04 | 0.16 |
| 1:A:166:LEU:N | 1:C:27:THR:OG1[2_646] | 2.04 | 0.16 |
| 1:A:150:CYS:O | 1:C:28:ALA:CA[2_646] | 2.07 | 0.13 |
| 1:A:153:GLN:CA | 1:C:24:GLY:O[2_646] | 2.07 | 0.13 |
| 1:A:165:TRP:CA | 1:C:27:THR:O[2_646] | 2.07 | 0.13 |
| 1:A:151:PHE:O | 1:C:348:TRP:NE1[2_646] | 2.09 | 0.11 |
| 1:A:152:ILE:CG2 | 1:C:26:THR:CG2[2_646] | 2.09 | 0.11 |
| 1:A:165:TRP:CB | 1:C:27:THR:CG2[2_646] | 2.09 | 0.11 |
| 1:A:165:TRP:O | 1:C:26:THR:C[2_646] | 2.09 | 0.11 |
| 1:A:151:PHE:CB | 1:C:348:TRP:NE1[2_646] | 2.10 | 0.10 |
| 1:A:152:ILE:N | 1:C:27:THR:N[2_646] | 2.10 | 0.10 |
| 1:A:130:SER:N | 1:C:31:ASN:OD1[2_646] | 2.11 | 0.09 |
| 1:A:149:PHE:CE2 | 1:C:29:THR:CA[2_646] | 2.11 | 0.09 |
| 1:A:152:ILE:CG1 | 1:C:27:THR:N[2_646] | 2.11 | 0.09 |
| 1:A:153:GLN:CD | 1:C:348:TRP:NE1[2_646] | 2.12 | 0.08 |
| 1:A:149:PHE:CD2 | 1:C:29:THR:CB[2_646] | 2.13 | 0.07 |
| 1:A:153:GLN:CD | 1:C:348:TRP:CE2[2_646] | 2.14 | 0.06 |
| 1:A:166:LEU:N | 1:C:27:THR:CB[2_646] | 2.14 | 0.06 |
| 1:A:152:ILE:CG2 | 1:C:26:THR:CB[2_646] | 2.15 | 0.05 |
| 1:A:153:GLN:NE2 | 1:C:348:TRP:CE2[2_646] | 2.15 | 0.05 |
| 1:A:149:PHE:CG | 1:C:29:THR:OG1[2_646] | 2.16 | 0.04 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-----------------|-----------------------|--------------------------|-------------------|
| 1:A:152:ILE:CG1 | 1:C:26:THR:CA[2_646] | 2.16 | 0.04 |
| 1:A:130:SER:O | 1:C:34:ASP:CG[2_646] | 2.17 | 0.03 |
| 1:A:151:PHE:N | 1:C:25:SER:O[2_646] | 2.17 | 0.03 |
| 1:A:152:ILE:CA | 1:C:26:THR:CB[2_646] | 2.17 | 0.03 |
| 1:A:151:PHE:CZ | 1:C:349:LEU:CB[2_646] | 2.18 | 0.02 |
| 1:A:153:GLN:CD | 1:C:24:GLY:O[2_646] | 2.18 | 0.02 |
| 1:A:128:ALA:C | 1:C:31:ASN:CB[2_646] | 2.19 | 0.01 |
| 1:A:150:CYS:N | 1:C:29:THR:N[2_646] | 2.19 | 0.01 |
| 1:A:152:ILE:O | 1:C:26:THR:N[2_646] | 2.19 | 0.01 |
| 1:A:165:TRP:O | 1:C:27:THR:C[2_646] | 2.19 | 0.01 |
| 1:A:165:TRP:CA | 1:C:27:THR:C[2_646] | 2.19 | 0.01 |

5.3 Torsion angles

5.3.1 Protein backbone

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

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

| Mol | Chain | Analysed | Favoured | Allowed | Outliers | Percentiles | |
|-----|-------|------------------|-----------|-----------|-----------|-------------|---|
| 1 | A | 476/478 (100%) | 237 (50%) | 117 (25%) | 122 (26%) | 0 | 0 |
| 1 | B | 476/478 (100%) | 237 (50%) | 117 (25%) | 122 (26%) | 0 | 0 |
| 1 | C | 476/478 (100%) | 237 (50%) | 117 (25%) | 122 (26%) | 0 | 0 |
| All | All | 1428/1434 (100%) | 711 (50%) | 351 (25%) | 366 (26%) | 0 | 0 |

All (366) Ramachandran outliers are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | A | 2 | THR |
| 1 | A | 7 | ARG |
| 1 | A | 16 | THR |
| 1 | A | 19 | PHE |
| 1 | A | 21 | ARG |
| 1 | A | 30 | CYS |
| 1 | A | 32 | THR |
| 1 | A | 33 | ALA |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | A | 63 | THR |
| 1 | A | 66 | THR |
| 1 | A | 67 | ALA |
| 1 | A | 68 | GLN |
| 1 | A | 72 | ASP |
| 1 | A | 74 | ALA |
| 1 | A | 83 | TRP |
| 1 | A | 84 | GLN |
| 1 | A | 87 | ILE |
| 1 | A | 88 | TYR |
| 1 | A | 90 | LEU |
| 1 | A | 91 | ASN |
| 1 | A | 120 | ALA |
| 1 | A | 139 | PRO |
| 1 | A | 144 | ASP |
| 1 | A | 155 | TYR |
| 1 | A | 161 | VAL |
| 1 | A | 164 | CYS |
| 1 | A | 169 | ASN |
| 1 | A | 173 | LEU |
| 1 | A | 177 | ASP |
| 1 | A | 180 | LYS |
| 1 | A | 181 | ASP |
| 1 | A | 182 | VAL |
| 1 | A | 199 | SER |
| 1 | A | 214 | ASP |
| 1 | A | 225 | VAL |
| 1 | A | 226 | TYR |
| 1 | A | 231 | VAL |
| 1 | A | 233 | ASP |
| 1 | A | 247 | ASP |
| 1 | A | 263 | LYS |
| 1 | A | 268 | SER |
| 1 | A | 280 | LYS |
| 1 | A | 281 | SER |
| 1 | A | 293 | VAL |
| 1 | A | 295 | ASN |
| 1 | A | 296 | HIS |
| 1 | A | 301 | PHE |
| 1 | A | 341 | PRO |
| 1 | A | 344 | ARG |
| 1 | A | 345 | GLU |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | A | 346 | ALA |
| 1 | A | 354 | THR |
| 1 | A | 382 | TYR |
| 1 | A | 387 | ILE |
| 1 | A | 426 | SER |
| 1 | A | 436 | VAL |
| 1 | A | 437 | ILE |
| 1 | A | 440 | THR |
| 1 | A | 460 | ARG |
| 1 | A | 472 | LYS |
| 1 | A | 473 | ILE |
| 1 | B | 2 | THR |
| 1 | B | 7 | ARG |
| 1 | B | 16 | THR |
| 1 | B | 19 | PHE |
| 1 | B | 21 | ARG |
| 1 | B | 30 | CYS |
| 1 | B | 32 | THR |
| 1 | B | 33 | ALA |
| 1 | B | 63 | THR |
| 1 | B | 66 | THR |
| 1 | B | 67 | ALA |
| 1 | B | 68 | GLN |
| 1 | B | 72 | ASP |
| 1 | B | 74 | ALA |
| 1 | B | 83 | TRP |
| 1 | B | 84 | GLN |
| 1 | B | 87 | ILE |
| 1 | B | 88 | TYR |
| 1 | B | 90 | LEU |
| 1 | B | 91 | ASN |
| 1 | B | 120 | ALA |
| 1 | B | 139 | PRO |
| 1 | B | 144 | ASP |
| 1 | B | 155 | TYR |
| 1 | B | 161 | VAL |
| 1 | B | 164 | CYS |
| 1 | B | 169 | ASN |
| 1 | B | 173 | LEU |
| 1 | B | 177 | ASP |
| 1 | B | 180 | LYS |
| 1 | B | 181 | ASP |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | B | 182 | VAL |
| 1 | B | 199 | SER |
| 1 | B | 214 | ASP |
| 1 | B | 225 | VAL |
| 1 | B | 226 | TYR |
| 1 | B | 231 | VAL |
| 1 | B | 233 | ASP |
| 1 | B | 247 | ASP |
| 1 | B | 263 | LYS |
| 1 | B | 268 | SER |
| 1 | B | 280 | LYS |
| 1 | B | 281 | SER |
| 1 | B | 293 | VAL |
| 1 | B | 295 | ASN |
| 1 | B | 296 | HIS |
| 1 | B | 301 | PHE |
| 1 | B | 341 | PRO |
| 1 | B | 344 | ARG |
| 1 | B | 345 | GLU |
| 1 | B | 346 | ALA |
| 1 | B | 354 | THR |
| 1 | B | 382 | TYR |
| 1 | B | 387 | ILE |
| 1 | B | 426 | SER |
| 1 | B | 436 | VAL |
| 1 | B | 437 | ILE |
| 1 | B | 440 | THR |
| 1 | B | 460 | ARG |
| 1 | B | 472 | LYS |
| 1 | B | 473 | ILE |
| 1 | C | 2 | THR |
| 1 | C | 7 | ARG |
| 1 | C | 16 | THR |
| 1 | C | 19 | PHE |
| 1 | C | 21 | ARG |
| 1 | C | 30 | CYS |
| 1 | C | 32 | THR |
| 1 | C | 33 | ALA |
| 1 | C | 63 | THR |
| 1 | C | 66 | THR |
| 1 | C | 67 | ALA |
| 1 | C | 68 | GLN |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | C | 72 | ASP |
| 1 | C | 74 | ALA |
| 1 | C | 83 | TRP |
| 1 | C | 84 | GLN |
| 1 | C | 87 | ILE |
| 1 | C | 88 | TYR |
| 1 | C | 90 | LEU |
| 1 | C | 91 | ASN |
| 1 | C | 120 | ALA |
| 1 | C | 139 | PRO |
| 1 | C | 144 | ASP |
| 1 | C | 155 | TYR |
| 1 | C | 161 | VAL |
| 1 | C | 164 | CYS |
| 1 | C | 169 | ASN |
| 1 | C | 173 | LEU |
| 1 | C | 177 | ASP |
| 1 | C | 180 | LYS |
| 1 | C | 181 | ASP |
| 1 | C | 182 | VAL |
| 1 | C | 199 | SER |
| 1 | C | 214 | ASP |
| 1 | C | 225 | VAL |
| 1 | C | 226 | TYR |
| 1 | C | 231 | VAL |
| 1 | C | 233 | ASP |
| 1 | C | 247 | ASP |
| 1 | C | 263 | LYS |
| 1 | C | 268 | SER |
| 1 | C | 280 | LYS |
| 1 | C | 281 | SER |
| 1 | C | 293 | VAL |
| 1 | C | 295 | ASN |
| 1 | C | 296 | HIS |
| 1 | C | 301 | PHE |
| 1 | C | 341 | PRO |
| 1 | C | 344 | ARG |
| 1 | C | 345 | GLU |
| 1 | C | 346 | ALA |
| 1 | C | 354 | THR |
| 1 | C | 382 | TYR |
| 1 | C | 387 | ILE |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | C | 426 | SER |
| 1 | C | 436 | VAL |
| 1 | C | 437 | ILE |
| 1 | C | 440 | THR |
| 1 | C | 460 | ARG |
| 1 | C | 472 | LYS |
| 1 | C | 473 | ILE |
| 1 | A | 6 | TRP |
| 1 | A | 22 | THR |
| 1 | A | 39 | GLY |
| 1 | A | 44 | GLY |
| 1 | A | 71 | GLN |
| 1 | A | 75 | TYR |
| 1 | A | 79 | TYR |
| 1 | A | 86 | ASP |
| 1 | A | 97 | ALA |
| 1 | A | 124 | GLY |
| 1 | A | 141 | SER |
| 1 | A | 170 | THR |
| 1 | A | 190 | TRP |
| 1 | A | 198 | TYR |
| 1 | A | 224 | GLY |
| 1 | A | 234 | GLY |
| 1 | A | 267 | GLY |
| 1 | A | 294 | GLU |
| 1 | A | 302 | ALA |
| 1 | A | 329 | ALA |
| 1 | A | 332 | GLU |
| 1 | A | 339 | ASN |
| 1 | A | 377 | THR |
| 1 | A | 383 | LYS |
| 1 | A | 400 | ASP |
| 1 | A | 416 | ASP |
| 1 | A | 417 | SER |
| 1 | A | 423 | SER |
| 1 | A | 429 | ALA |
| 1 | A | 477 | SER |
| 1 | B | 22 | THR |
| 1 | B | 39 | GLY |
| 1 | B | 44 | GLY |
| 1 | B | 71 | GLN |
| 1 | B | 75 | TYR |

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Continued from previous page...

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | B | 79 | TYR |
| 1 | B | 86 | ASP |
| 1 | B | 97 | ALA |
| 1 | B | 124 | GLY |
| 1 | B | 141 | SER |
| 1 | B | 170 | THR |
| 1 | B | 190 | TRP |
| 1 | B | 198 | TYR |
| 1 | B | 224 | GLY |
| 1 | B | 234 | GLY |
| 1 | B | 267 | GLY |
| 1 | B | 294 | GLU |
| 1 | B | 302 | ALA |
| 1 | B | 329 | ALA |
| 1 | B | 332 | GLU |
| 1 | B | 339 | ASN |
| 1 | B | 377 | THR |
| 1 | B | 383 | LYS |
| 1 | B | 400 | ASP |
| 1 | B | 416 | ASP |
| 1 | B | 417 | SER |
| 1 | B | 423 | SER |
| 1 | B | 429 | ALA |
| 1 | B | 477 | SER |
| 1 | C | 22 | THR |
| 1 | C | 39 | GLY |
| 1 | C | 44 | GLY |
| 1 | C | 71 | GLN |
| 1 | C | 75 | TYR |
| 1 | C | 79 | TYR |
| 1 | C | 86 | ASP |
| 1 | C | 97 | ALA |
| 1 | C | 124 | GLY |
| 1 | C | 141 | SER |
| 1 | C | 170 | THR |
| 1 | C | 190 | TRP |
| 1 | C | 198 | TYR |
| 1 | C | 224 | GLY |
| 1 | C | 234 | GLY |
| 1 | C | 267 | GLY |
| 1 | C | 294 | GLU |
| 1 | C | 302 | ALA |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | C | 329 | ALA |
| 1 | C | 332 | GLU |
| 1 | C | 339 | ASN |
| 1 | C | 377 | THR |
| 1 | C | 383 | LYS |
| 1 | C | 400 | ASP |
| 1 | C | 416 | ASP |
| 1 | C | 417 | SER |
| 1 | C | 423 | SER |
| 1 | C | 429 | ALA |
| 1 | C | 477 | SER |
| 1 | A | 3 | PRO |
| 1 | A | 26 | THR |
| 1 | A | 70 | PRO |
| 1 | A | 77 | ASP |
| 1 | A | 112 | MET |
| 1 | A | 183 | VAL |
| 1 | A | 196 | SER |
| 1 | A | 349 | LEU |
| 1 | A | 446 | SER |
| 1 | B | 3 | PRO |
| 1 | B | 6 | TRP |
| 1 | B | 26 | THR |
| 1 | B | 70 | PRO |
| 1 | B | 77 | ASP |
| 1 | B | 112 | MET |
| 1 | B | 183 | VAL |
| 1 | B | 196 | SER |
| 1 | B | 349 | LEU |
| 1 | B | 446 | SER |
| 1 | C | 3 | PRO |
| 1 | C | 6 | TRP |
| 1 | C | 26 | THR |
| 1 | C | 70 | PRO |
| 1 | C | 77 | ASP |
| 1 | C | 112 | MET |
| 1 | C | 183 | VAL |
| 1 | C | 196 | SER |
| 1 | C | 349 | LEU |
| 1 | C | 446 | SER |
| 1 | A | 106 | ALA |
| 1 | A | 134 | TYR |

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Continued from previous page...

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | A | 241 | PRO |
| 1 | A | 297 | ASP |
| 1 | A | 380 | VAL |
| 1 | A | 381 | THR |
| 1 | A | 450 | VAL |
| 1 | A | 456 | GLY |
| 1 | B | 134 | TYR |
| 1 | B | 241 | PRO |
| 1 | B | 297 | ASP |
| 1 | B | 380 | VAL |
| 1 | B | 381 | THR |
| 1 | B | 450 | VAL |
| 1 | B | 456 | GLY |
| 1 | C | 134 | TYR |
| 1 | C | 241 | PRO |
| 1 | C | 297 | ASP |
| 1 | C | 380 | VAL |
| 1 | C | 381 | THR |
| 1 | C | 450 | VAL |
| 1 | C | 456 | GLY |
| 1 | A | 36 | LYS |
| 1 | A | 240 | CYS |
| 1 | A | 252 | TYR |
| 1 | A | 299 | PRO |
| 1 | A | 321 | ASN |
| 1 | A | 340 | ASP |
| 1 | A | 352 | TYR |
| 1 | A | 384 | ASN |
| 1 | B | 36 | LYS |
| 1 | B | 106 | ALA |
| 1 | B | 240 | CYS |
| 1 | B | 252 | TYR |
| 1 | B | 299 | PRO |
| 1 | B | 321 | ASN |
| 1 | B | 340 | ASP |
| 1 | B | 352 | TYR |
| 1 | B | 384 | ASN |
| 1 | C | 36 | LYS |
| 1 | C | 106 | ALA |
| 1 | C | 240 | CYS |
| 1 | C | 252 | TYR |
| 1 | C | 299 | PRO |

Continued on next page...

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | C | 321 | ASN |
| 1 | C | 340 | ASP |
| 1 | C | 352 | TYR |
| 1 | C | 384 | ASN |
| 1 | A | 276 | ILE |
| 1 | B | 276 | ILE |
| 1 | C | 276 | ILE |
| 1 | A | 152 | ILE |
| 1 | A | 457 | GLY |
| 1 | B | 152 | ILE |
| 1 | B | 457 | GLY |
| 1 | C | 152 | ILE |
| 1 | C | 236 | PRO |
| 1 | C | 457 | GLY |
| 1 | C | 459 | PRO |
| 1 | A | 236 | PRO |
| 1 | A | 459 | PRO |
| 1 | B | 236 | PRO |
| 1 | B | 459 | PRO |
| 1 | A | 451 | PRO |
| 1 | B | 451 | PRO |
| 1 | C | 451 | PRO |

5.3.2 Protein sidechains ⓘ

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

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

| Mol | Chain | Analysed | Rotameric | Outliers | Percentiles | |
|-----|-------|------------------|-----------|-----------|-------------|---|
| 1 | A | 400/400 (100%) | 256 (64%) | 144 (36%) | 0 | 1 |
| 1 | B | 400/400 (100%) | 256 (64%) | 144 (36%) | 0 | 1 |
| 1 | C | 400/400 (100%) | 256 (64%) | 144 (36%) | 0 | 1 |
| All | All | 1200/1200 (100%) | 768 (64%) | 432 (36%) | 0 | 1 |

All (432) residues with a non-rotameric sidechain are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | A | 7 | ARG |
| 1 | A | 8 | SER |
| 1 | A | 9 | GLN |
| 1 | A | 10 | SER |
| 1 | A | 12 | TYR |
| 1 | A | 13 | PHE |
| 1 | A | 14 | LEU |
| 1 | A | 15 | LEU |
| 1 | A | 17 | ASP |
| 1 | A | 21 | ARG |
| 1 | A | 23 | ASP |
| 1 | A | 27 | THR |
| 1 | A | 31 | ASN |
| 1 | A | 35 | GLN |
| 1 | A | 42 | TRP |
| 1 | A | 48 | LYS |
| 1 | A | 50 | ASP |
| 1 | A | 55 | MET |
| 1 | A | 57 | PHE |
| 1 | A | 62 | ILE |
| 1 | A | 68 | GLN |
| 1 | A | 69 | LEU |
| 1 | A | 77 | ASP |
| 1 | A | 80 | THR |
| 1 | A | 84 | GLN |
| 1 | A | 90 | LEU |
| 1 | A | 91 | ASN |
| 1 | A | 92 | GLU |
| 1 | A | 96 | THR |
| 1 | A | 105 | SER |
| 1 | A | 107 | LEU |
| 1 | A | 108 | HIS |
| 1 | A | 110 | ARG |
| 1 | A | 114 | LEU |
| 1 | A | 115 | MET |
| 1 | A | 121 | ASN |
| 1 | A | 122 | HIS |
| 1 | A | 123 | MET |
| 1 | A | 126 | ASP |
| 1 | A | 139 | PRO |
| 1 | A | 157 | ASP |
| 1 | A | 161 | VAL |
| 1 | A | 163 | ASP |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | A | 164 | CYS |
| 1 | A | 166 | LEU |
| 1 | A | 176 | LEU |
| 1 | A | 178 | THR |
| 1 | A | 180 | LYS |
| 1 | A | 181 | ASP |
| 1 | A | 183 | VAL |
| 1 | A | 184 | LYS |
| 1 | A | 186 | GLU |
| 1 | A | 193 | SER |
| 1 | A | 194 | LEU |
| 1 | A | 195 | VAL |
| 1 | A | 197 | ASN |
| 1 | A | 199 | SER |
| 1 | A | 205 | ILE |
| 1 | A | 206 | ASP |
| 1 | A | 207 | THR |
| 1 | A | 210 | HIS |
| 1 | A | 212 | GLN |
| 1 | A | 214 | ASP |
| 1 | A | 216 | TRP |
| 1 | A | 228 | ILE |
| 1 | A | 230 | GLU |
| 1 | A | 235 | ASP |
| 1 | A | 238 | TYR |
| 1 | A | 246 | MET |
| 1 | A | 249 | VAL |
| 1 | A | 250 | LEU |
| 1 | A | 251 | ASN |
| 1 | A | 252 | TYR |
| 1 | A | 255 | TYR |
| 1 | A | 259 | LEU |
| 1 | A | 264 | SER |
| 1 | A | 266 | SER |
| 1 | A | 268 | SER |
| 1 | A | 269 | MET |
| 1 | A | 271 | ASP |
| 1 | A | 272 | LEU |
| 1 | A | 275 | MET |
| 1 | A | 276 | ILE |
| 1 | A | 283 | CYS |
| 1 | A | 285 | ASP |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | A | 286 | SER |
| 1 | A | 287 | THR |
| 1 | A | 291 | THR |
| 1 | A | 292 | PHE |
| 1 | A | 300 | ARG |
| 1 | A | 305 | THR |
| 1 | A | 306 | ASN |
| 1 | A | 307 | ASP |
| 1 | A | 308 | ILE |
| 1 | A | 314 | VAL |
| 1 | A | 317 | PHE |
| 1 | A | 318 | ILE |
| 1 | A | 320 | LEU |
| 1 | A | 322 | ASP |
| 1 | A | 324 | LEU |
| 1 | A | 325 | PRO |
| 1 | A | 333 | GLN |
| 1 | A | 341 | PRO |
| 1 | A | 347 | THR |
| 1 | A | 348 | TRP |
| 1 | A | 349 | LEU |
| 1 | A | 359 | TYR |
| 1 | A | 361 | LEU |
| 1 | A | 369 | ARG |
| 1 | A | 370 | ASN |
| 1 | A | 375 | LYS |
| 1 | A | 376 | ASP |
| 1 | A | 379 | PHE |
| 1 | A | 381 | THR |
| 1 | A | 389 | ASP |
| 1 | A | 395 | MET |
| 1 | A | 399 | THR |
| 1 | A | 404 | ILE |
| 1 | A | 407 | ILE |
| 1 | A | 408 | LEU |
| 1 | A | 417 | SER |
| 1 | A | 419 | THR |
| 1 | A | 420 | LEU |
| 1 | A | 421 | SER |
| 1 | A | 422 | LEU |
| 1 | A | 431 | GLN |
| 1 | A | 432 | GLN |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | A | 434 | THR |
| 1 | A | 437 | ILE |
| 1 | A | 442 | VAL |
| 1 | A | 443 | THR |
| 1 | A | 444 | VAL |
| 1 | A | 447 | ASP |
| 1 | A | 449 | ASN |
| 1 | A | 452 | VAL |
| 1 | A | 454 | MET |
| 1 | A | 462 | LEU |
| 1 | A | 464 | PRO |
| 1 | A | 465 | THR |
| 1 | A | 466 | GLU |
| 1 | A | 471 | SER |
| 1 | A | 473 | ILE |
| 1 | A | 474 | CYS |
| 1 | A | 476 | ASP |
| 1 | B | 7 | ARG |
| 1 | B | 8 | SER |
| 1 | B | 9 | GLN |
| 1 | B | 10 | SER |
| 1 | B | 12 | TYR |
| 1 | B | 13 | PHE |
| 1 | B | 14 | LEU |
| 1 | B | 15 | LEU |
| 1 | B | 17 | ASP |
| 1 | B | 21 | ARG |
| 1 | B | 23 | ASP |
| 1 | B | 27 | THR |
| 1 | B | 31 | ASN |
| 1 | B | 35 | GLN |
| 1 | B | 42 | TRP |
| 1 | B | 48 | LYS |
| 1 | B | 50 | ASP |
| 1 | B | 55 | MET |
| 1 | B | 57 | PHE |
| 1 | B | 62 | ILE |
| 1 | B | 68 | GLN |
| 1 | B | 69 | LEU |
| 1 | B | 77 | ASP |
| 1 | B | 80 | THR |
| 1 | B | 84 | GLN |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | B | 90 | LEU |
| 1 | B | 91 | ASN |
| 1 | B | 92 | GLU |
| 1 | B | 96 | THR |
| 1 | B | 105 | SER |
| 1 | B | 107 | LEU |
| 1 | B | 108 | HIS |
| 1 | B | 110 | ARG |
| 1 | B | 114 | LEU |
| 1 | B | 115 | MET |
| 1 | B | 121 | ASN |
| 1 | B | 122 | HIS |
| 1 | B | 123 | MET |
| 1 | B | 126 | ASP |
| 1 | B | 139 | PRO |
| 1 | B | 157 | ASP |
| 1 | B | 161 | VAL |
| 1 | B | 163 | ASP |
| 1 | B | 164 | CYS |
| 1 | B | 166 | LEU |
| 1 | B | 176 | LEU |
| 1 | B | 178 | THR |
| 1 | B | 180 | LYS |
| 1 | B | 181 | ASP |
| 1 | B | 183 | VAL |
| 1 | B | 184 | LYS |
| 1 | B | 186 | GLU |
| 1 | B | 193 | SER |
| 1 | B | 194 | LEU |
| 1 | B | 195 | VAL |
| 1 | B | 197 | ASN |
| 1 | B | 199 | SER |
| 1 | B | 205 | ILE |
| 1 | B | 206 | ASP |
| 1 | B | 207 | THR |
| 1 | B | 210 | HIS |
| 1 | B | 212 | GLN |
| 1 | B | 214 | ASP |
| 1 | B | 216 | TRP |
| 1 | B | 228 | ILE |
| 1 | B | 230 | GLU |
| 1 | B | 235 | ASP |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | B | 238 | TYR |
| 1 | B | 246 | MET |
| 1 | B | 249 | VAL |
| 1 | B | 250 | LEU |
| 1 | B | 251 | ASN |
| 1 | B | 252 | TYR |
| 1 | B | 255 | TYR |
| 1 | B | 259 | LEU |
| 1 | B | 264 | SER |
| 1 | B | 266 | SER |
| 1 | B | 268 | SER |
| 1 | B | 269 | MET |
| 1 | B | 271 | ASP |
| 1 | B | 272 | LEU |
| 1 | B | 275 | MET |
| 1 | B | 276 | ILE |
| 1 | B | 283 | CYS |
| 1 | B | 285 | ASP |
| 1 | B | 286 | SER |
| 1 | B | 287 | THR |
| 1 | B | 291 | THR |
| 1 | B | 292 | PHE |
| 1 | B | 300 | ARG |
| 1 | B | 305 | THR |
| 1 | B | 306 | ASN |
| 1 | B | 307 | ASP |
| 1 | B | 308 | ILE |
| 1 | B | 314 | VAL |
| 1 | B | 317 | PHE |
| 1 | B | 318 | ILE |
| 1 | B | 320 | LEU |
| 1 | B | 322 | ASP |
| 1 | B | 324 | LEU |
| 1 | B | 325 | PRO |
| 1 | B | 333 | GLN |
| 1 | B | 341 | PRO |
| 1 | B | 347 | THR |
| 1 | B | 348 | TRP |
| 1 | B | 349 | LEU |
| 1 | B | 359 | TYR |
| 1 | B | 361 | LEU |
| 1 | B | 369 | ARG |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | B | 370 | ASN |
| 1 | B | 375 | LYS |
| 1 | B | 376 | ASP |
| 1 | B | 379 | PHE |
| 1 | B | 381 | THR |
| 1 | B | 389 | ASP |
| 1 | B | 395 | MET |
| 1 | B | 399 | THR |
| 1 | B | 404 | ILE |
| 1 | B | 407 | ILE |
| 1 | B | 408 | LEU |
| 1 | B | 417 | SER |
| 1 | B | 419 | THR |
| 1 | B | 420 | LEU |
| 1 | B | 421 | SER |
| 1 | B | 422 | LEU |
| 1 | B | 431 | GLN |
| 1 | B | 432 | GLN |
| 1 | B | 434 | THR |
| 1 | B | 437 | ILE |
| 1 | B | 442 | VAL |
| 1 | B | 443 | THR |
| 1 | B | 444 | VAL |
| 1 | B | 447 | ASP |
| 1 | B | 449 | ASN |
| 1 | B | 452 | VAL |
| 1 | B | 454 | MET |
| 1 | B | 462 | LEU |
| 1 | B | 464 | PRO |
| 1 | B | 465 | THR |
| 1 | B | 466 | GLU |
| 1 | B | 471 | SER |
| 1 | B | 473 | ILE |
| 1 | B | 474 | CYS |
| 1 | B | 476 | ASP |
| 1 | C | 7 | ARG |
| 1 | C | 8 | SER |
| 1 | C | 9 | GLN |
| 1 | C | 10 | SER |
| 1 | C | 12 | TYR |
| 1 | C | 13 | PHE |
| 1 | C | 14 | LEU |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | C | 15 | LEU |
| 1 | C | 17 | ASP |
| 1 | C | 21 | ARG |
| 1 | C | 23 | ASP |
| 1 | C | 27 | THR |
| 1 | C | 31 | ASN |
| 1 | C | 35 | GLN |
| 1 | C | 42 | TRP |
| 1 | C | 48 | LYS |
| 1 | C | 50 | ASP |
| 1 | C | 55 | MET |
| 1 | C | 57 | PHE |
| 1 | C | 62 | ILE |
| 1 | C | 68 | GLN |
| 1 | C | 69 | LEU |
| 1 | C | 77 | ASP |
| 1 | C | 80 | THR |
| 1 | C | 84 | GLN |
| 1 | C | 90 | LEU |
| 1 | C | 91 | ASN |
| 1 | C | 92 | GLU |
| 1 | C | 96 | THR |
| 1 | C | 105 | SER |
| 1 | C | 107 | LEU |
| 1 | C | 108 | HIS |
| 1 | C | 110 | ARG |
| 1 | C | 114 | LEU |
| 1 | C | 115 | MET |
| 1 | C | 121 | ASN |
| 1 | C | 122 | HIS |
| 1 | C | 123 | MET |
| 1 | C | 126 | ASP |
| 1 | C | 139 | PRO |
| 1 | C | 157 | ASP |
| 1 | C | 161 | VAL |
| 1 | C | 163 | ASP |
| 1 | C | 164 | CYS |
| 1 | C | 166 | LEU |
| 1 | C | 176 | LEU |
| 1 | C | 178 | THR |
| 1 | C | 180 | LYS |
| 1 | C | 181 | ASP |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | C | 183 | VAL |
| 1 | C | 184 | LYS |
| 1 | C | 186 | GLU |
| 1 | C | 193 | SER |
| 1 | C | 194 | LEU |
| 1 | C | 195 | VAL |
| 1 | C | 197 | ASN |
| 1 | C | 199 | SER |
| 1 | C | 205 | ILE |
| 1 | C | 206 | ASP |
| 1 | C | 207 | THR |
| 1 | C | 210 | HIS |
| 1 | C | 212 | GLN |
| 1 | C | 214 | ASP |
| 1 | C | 216 | TRP |
| 1 | C | 228 | ILE |
| 1 | C | 230 | GLU |
| 1 | C | 235 | ASP |
| 1 | C | 238 | TYR |
| 1 | C | 246 | MET |
| 1 | C | 249 | VAL |
| 1 | C | 250 | LEU |
| 1 | C | 251 | ASN |
| 1 | C | 252 | TYR |
| 1 | C | 255 | TYR |
| 1 | C | 259 | LEU |
| 1 | C | 264 | SER |
| 1 | C | 266 | SER |
| 1 | C | 268 | SER |
| 1 | C | 269 | MET |
| 1 | C | 271 | ASP |
| 1 | C | 272 | LEU |
| 1 | C | 275 | MET |
| 1 | C | 276 | ILE |
| 1 | C | 283 | CYS |
| 1 | C | 285 | ASP |
| 1 | C | 286 | SER |
| 1 | C | 287 | THR |
| 1 | C | 291 | THR |
| 1 | C | 292 | PHE |
| 1 | C | 300 | ARG |
| 1 | C | 305 | THR |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | C | 306 | ASN |
| 1 | C | 307 | ASP |
| 1 | C | 308 | ILE |
| 1 | C | 314 | VAL |
| 1 | C | 317 | PHE |
| 1 | C | 318 | ILE |
| 1 | C | 320 | LEU |
| 1 | C | 322 | ASP |
| 1 | C | 324 | LEU |
| 1 | C | 325 | PRO |
| 1 | C | 333 | GLN |
| 1 | C | 341 | PRO |
| 1 | C | 347 | THR |
| 1 | C | 348 | TRP |
| 1 | C | 349 | LEU |
| 1 | C | 359 | TYR |
| 1 | C | 361 | LEU |
| 1 | C | 369 | ARG |
| 1 | C | 370 | ASN |
| 1 | C | 375 | LYS |
| 1 | C | 376 | ASP |
| 1 | C | 379 | PHE |
| 1 | C | 381 | THR |
| 1 | C | 389 | ASP |
| 1 | C | 395 | MET |
| 1 | C | 399 | THR |
| 1 | C | 404 | ILE |
| 1 | C | 407 | ILE |
| 1 | C | 408 | LEU |
| 1 | C | 417 | SER |
| 1 | C | 419 | THR |
| 1 | C | 420 | LEU |
| 1 | C | 421 | SER |
| 1 | C | 422 | LEU |
| 1 | C | 431 | GLN |
| 1 | C | 432 | GLN |
| 1 | C | 434 | THR |
| 1 | C | 437 | ILE |
| 1 | C | 442 | VAL |
| 1 | C | 443 | THR |
| 1 | C | 444 | VAL |
| 1 | C | 447 | ASP |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | C | 449 | ASN |
| 1 | C | 452 | VAL |
| 1 | C | 454 | MET |
| 1 | C | 462 | LEU |
| 1 | C | 464 | PRO |
| 1 | C | 465 | THR |
| 1 | C | 466 | GLU |
| 1 | C | 471 | SER |
| 1 | C | 473 | ILE |
| 1 | C | 474 | CYS |
| 1 | C | 476 | ASP |

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (57) such sidechains are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | A | 31 | ASN |
| 1 | A | 35 | GLN |
| 1 | A | 68 | GLN |
| 1 | A | 71 | GLN |
| 1 | A | 84 | GLN |
| 1 | A | 91 | ASN |
| 1 | A | 143 | GLN |
| 1 | A | 147 | HIS |
| 1 | A | 185 | ASN |
| 1 | A | 210 | HIS |
| 1 | A | 212 | GLN |
| 1 | A | 296 | HIS |
| 1 | A | 298 | ASN |
| 1 | A | 306 | ASN |
| 1 | A | 321 | ASN |
| 1 | A | 334 | HIS |
| 1 | A | 384 | ASN |
| 1 | A | 403 | GLN |
| 1 | A | 410 | ASN |
| 1 | A | 431 | GLN |
| 1 | B | 31 | ASN |
| 1 | B | 35 | GLN |
| 1 | B | 68 | GLN |
| 1 | B | 71 | GLN |
| 1 | B | 91 | ASN |
| 1 | B | 147 | HIS |
| 1 | B | 158 | GLN |

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Continued from previous page...

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | B | 210 | HIS |
| 1 | B | 220 | ASN |
| 1 | B | 274 | ASN |
| 1 | B | 296 | HIS |
| 1 | B | 298 | ASN |
| 1 | B | 306 | ASN |
| 1 | B | 321 | ASN |
| 1 | B | 334 | HIS |
| 1 | B | 384 | ASN |
| 1 | B | 403 | GLN |
| 1 | B | 410 | ASN |
| 1 | B | 431 | GLN |
| 1 | C | 31 | ASN |
| 1 | C | 35 | GLN |
| 1 | C | 68 | GLN |
| 1 | C | 71 | GLN |
| 1 | C | 91 | ASN |
| 1 | C | 147 | HIS |
| 1 | C | 185 | ASN |
| 1 | C | 210 | HIS |
| 1 | C | 212 | GLN |
| 1 | C | 296 | HIS |
| 1 | C | 298 | ASN |
| 1 | C | 306 | ASN |
| 1 | C | 321 | ASN |
| 1 | C | 334 | HIS |
| 1 | C | 384 | ASN |
| 1 | C | 403 | GLN |
| 1 | C | 410 | ASN |
| 1 | C | 431 | GLN |

5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 3 ligands modelled in this entry, 3 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

The following chains have linkage breaks:

| Mol | Chain | Number of breaks |
|-----|-------|------------------|
| 1 | A | 2 |
| 1 | B | 2 |
| 1 | C | 2 |

All chain breaks are listed below:

| Model | Chain | Residue-1 | Atom-1 | Residue-2 | Atom-2 | Distance (Å) |
|-------|-------|-----------|--------|-----------|--------|--------------|
| 1 | A | 208:VAL | C | 209:LYS | N | 1.17 |
| 1 | A | 458:LEU | C | 459:PRO | N | 1.17 |
| 1 | B | 208:VAL | C | 209:LYS | N | 1.17 |
| 1 | B | 458:LEU | C | 459:PRO | N | 1.17 |
| 1 | C | 208:VAL | C | 209:LYS | N | 1.17 |
| 1 | C | 458:LEU | C | 459:PRO | N | 1.17 |

6 Fit of model and data

6.1 Protein, DNA and RNA chains

EDS was not executed - this section is therefore empty.

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

EDS was not executed - this section is therefore empty.

6.3 Carbohydrates

EDS was not executed - this section is therefore empty.

6.4 Ligands

EDS was not executed - this section is therefore empty.

6.5 Other polymers

EDS was not executed - this section is therefore empty.