



Full wwPDB X-ray Structure Validation Report ⓘ

Aug 8, 2020 – 04:36 AM BST

PDB ID : 1SID
Title : MURINE POLYOMAVIRUS COMPLEXED WITH 3'SIALYL LACTOSE
Authors : Stehle, T.; Harrison, S.C.
Deposited on : 1995-12-12
Resolution : 3.65 Å(reported)

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

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

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

MolProbity : 4.02b-467
Mogul : 1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix) : **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) : 2.13.1

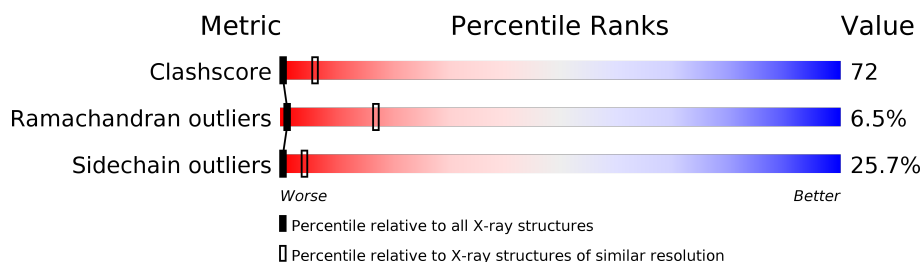
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.65 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 | 1037 (3.80-3.52) |
| Ramachandran outliers | 138981 | 1004 (3.80-3.52) |
| Sidechain outliers | 138945 | 1002 (3.80-3.52) |





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

Note EDS was not executed.

| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|---|
| 1 | A | 383 | 23% (green), 50% (yellow), 20% (orange), 7% (red), 0% (grey) |
| 1 | B | 383 | 25% (green), 46% (yellow), 22% (orange), 5% (red), 2% (grey) |
| 1 | C | 383 | 22% (green), 48% (yellow), 21% (orange), 7% (red), 2% (grey) |
| 1 | D | 383 | 20% (green), 44% (yellow), 22% (orange), 11% (red), 1% (grey) |
| 1 | E | 383 | 20% (green), 52% (yellow), 21% (orange), 5% (red), 2% (grey) |
| 1 | F | 383 | 20% (green), 46% (yellow), 23% (orange), 8% (red), 3% (grey) |
| 2 | G | 3 | 67% (yellow), 33% (orange) |
| 2 | H | 3 | 33% (yellow), 67% (orange) |

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| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|--|
| 2 | I | 3 |  33% 67% |
| 2 | J | 3 |  33% 67% |
| 2 | K | 3 |  33% 67% |
| 2 | L | 3 |  33% 67% |

2 Entry composition [i](#)

There are 2 unique types of molecules in this entry. The entry contains 17003 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.

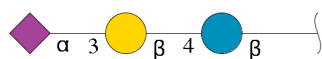
- Molecule 1 is a protein called POLYOMAVIRUS COAT PROTEIN VP1.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|---------------|-----------|----------|----------|---------|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 1 | A | 366 | Total 2849 | C 1804 | N 479 | O 550 | S 16 | 0 | 0 | 0 |
| 1 | B | 367 | Total 2857 | C 1808 | N 481 | O 552 | S 16 | 0 | 0 | 0 |
| 1 | C | 357 | Total 2784 | C 1761 | N 468 | O 539 | S 16 | 0 | 0 | 0 |
| 1 | D | 340 | Total 2645 | C 1674 | N 445 | O 511 | S 15 | 0 | 0 | 0 |
| 1 | E | 367 | Total 2857 | C 1808 | N 481 | O 552 | S 16 | 0 | 0 | 0 |
| 1 | F | 354 | Total 2753 | C 1740 | N 461 | O 536 | S 16 | 0 | 0 | 0 |

There are 6 discrepancies between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|----------|------------|
| A | 6 | ALA | SER | conflict | UNP P49302 |
| B | 6 | ALA | SER | conflict | UNP P49302 |
| C | 6 | ALA | SER | conflict | UNP P49302 |
| D | 6 | ALA | SER | conflict | UNP P49302 |
| E | 6 | ALA | SER | conflict | UNP P49302 |
| F | 6 | ALA | SER | conflict | UNP P49302 |

- Molecule 2 is an oligosaccharide called N-acetyl-alpha-neuraminic acid-(2-3)-beta-D-galactopyranose-(1-4)-beta-D-glucofuranose.



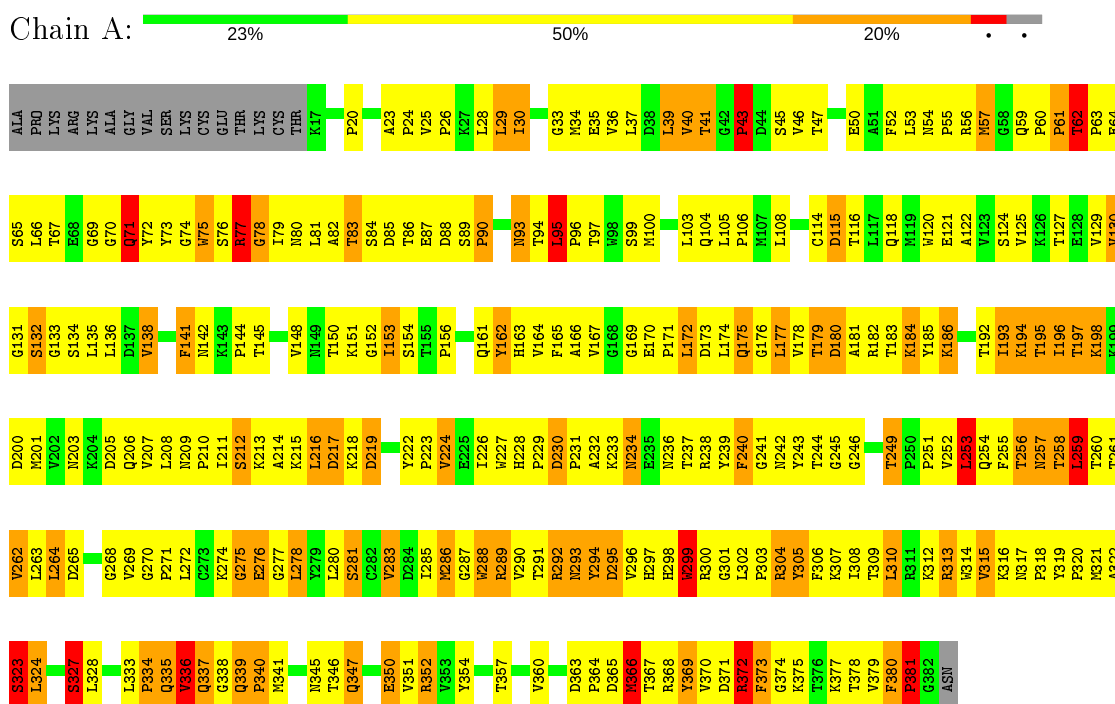
| Mol | Chain | Residues | Atoms | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|----|---|----|---------|---------|-------|
| 2 | G | 3 | Total | C | N | O | 0 | 0 | 0 |
| | | | 43 | 23 | 1 | 19 | | | |
| 2 | H | 3 | Total | C | N | O | 0 | 0 | 0 |
| | | | 43 | 23 | 1 | 19 | | | |
| 2 | I | 3 | Total | C | N | O | 0 | 0 | 0 |
| | | | 43 | 23 | 1 | 19 | | | |
| 2 | J | 3 | Total | C | N | O | 0 | 0 | 0 |
| | | | 43 | 23 | 1 | 19 | | | |
| 2 | K | 3 | Total | C | N | O | 0 | 0 | 0 |
| | | | 43 | 23 | 1 | 19 | | | |
| 2 | L | 3 | Total | C | N | O | 0 | 0 | 0 |
| | | | 43 | 23 | 1 | 19 | | | |

3 Residue-property plots

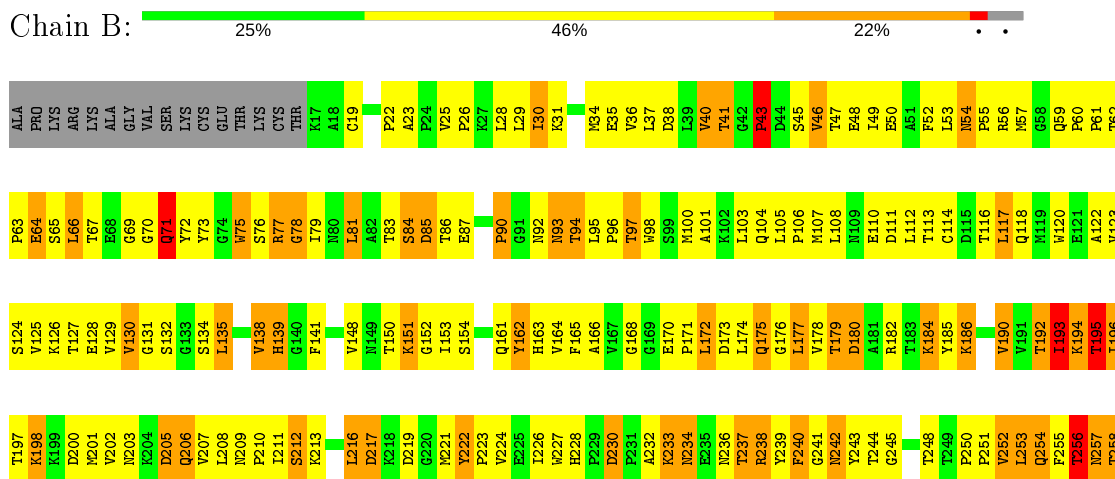
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry. Residues are color-coded 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.

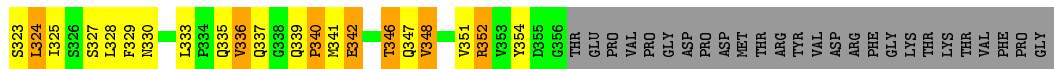
Note EDS was not executed.

- Molecule 1: POLYOMAVIRUS COAT PROTEIN VP1

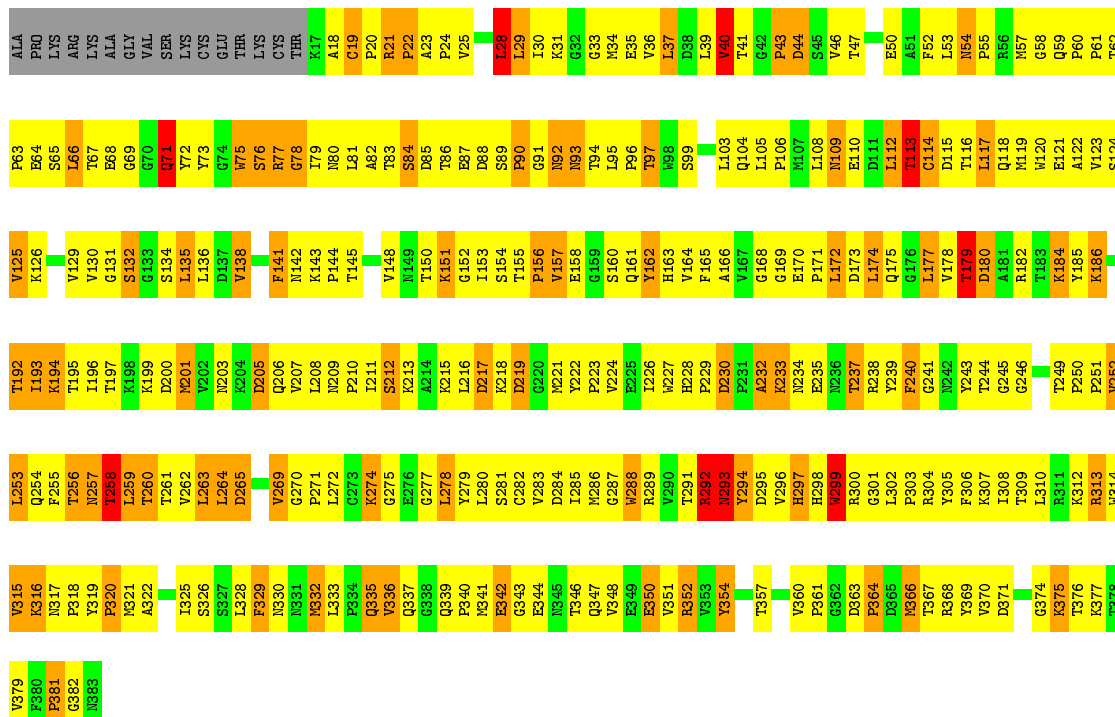


- Molecule 1: POLYOMAVIRUS COAT PROTEIN VP1

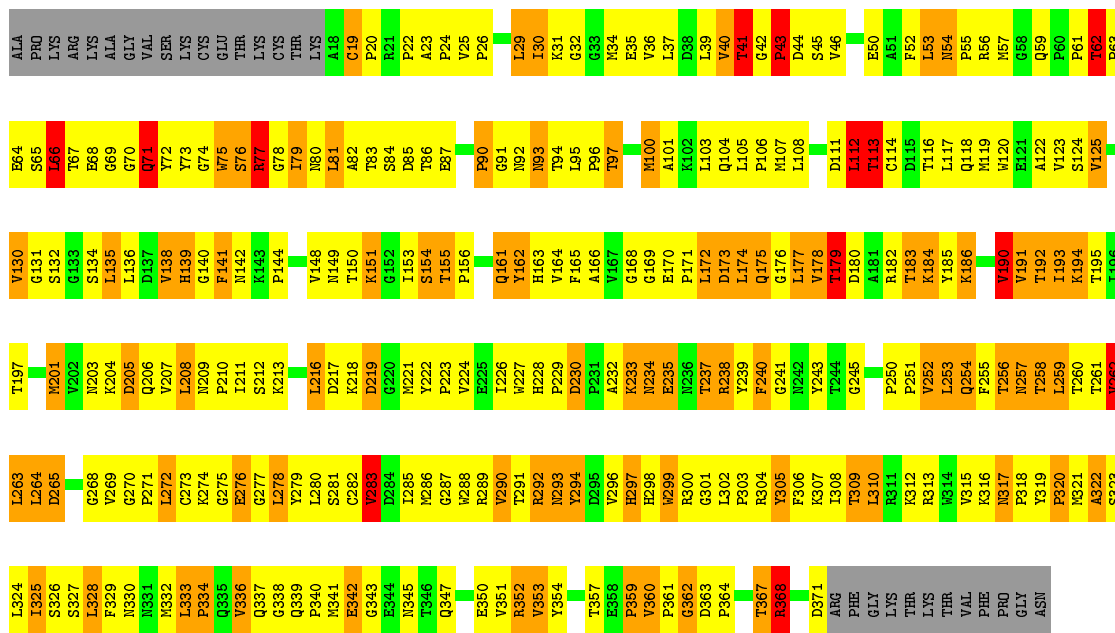
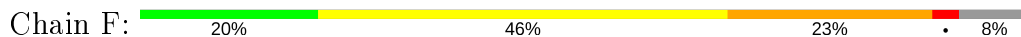




• Molecule 1: POLYOMAVIRUS COAT PROTEIN VP1



• Molecule 1: POLYOMAVIRUS COAT PROTEIN VP1



- Molecule 2: N-acetyl-alpha-neuraminic acid-(2-3)-beta-D-galactopyranose-(1-4)-beta-D-glucopyranose

Chain G:  67% 33%

BGC1
GAL2
STA3

- Molecule 2: N-acetyl-alpha-neuraminic acid-(2-3)-beta-D-galactopyranose-(1-4)-beta-D-glucopyranose

Chain H:  33% 67%

BGC1
GAL2
STA3

- Molecule 2: N-acetyl-alpha-neuraminic acid-(2-3)-beta-D-galactopyranose-(1-4)-beta-D-glucopyranose

Chain I:  33% 67%

BGC1
GAL2
STA3

- Molecule 2: N-acetyl-alpha-neuraminic acid-(2-3)-beta-D-galactopyranose-(1-4)-beta-D-glucopyranose

Chain J:  33% 67%

BGC1
GAL2
STA3

- Molecule 2: N-acetyl-alpha-neuraminic acid-(2-3)-beta-D-galactopyranose-(1-4)-beta-D-glucopyranose

Chain K:  33% 67%

BGC1
GAL2
STA3

- Molecule 2: N-acetyl-alpha-neuraminic acid-(2-3)-beta-D-galactopyranose-(1-4)-beta-D-glucopyranose

Chain L:  33% 67%

BGC1
GAL2
STA3

4 Data and refinement statistics

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

| Property | Value | Source |
|--|---|-----------|
| Space group | I 2 3 | Depositor |
| Cell constants a, b, c, α , β , γ | 570.00Å 570.00Å 570.00Å 90.00° 90.00° 90.00° | Depositor |
| Resolution (Å) | 12.00 – 3.65 | Depositor |
| % Data completeness (in resolution range) | 73.0 (12.00-3.65) | Depositor |
| R_{merge} | (Not available) | Depositor |
| R_{sym} | (Not available) | Depositor |
| Refinement program | X-PLOR | Depositor |
| R, R_{free} | 0.236 , 0.253 | Depositor |
| Estimated twinning fraction | No twinning to report. | Xtrriage |
| Total number of atoms | 17003 | wwPDB-VP |
| Average B, all atoms (Å ²) | 77.0 | wwPDB-VP |

5 Model quality i

5.1 Standard geometry i

Bond lengths and bond angles in the following residue types are not validated in this section: SIA, BGC, GAL

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 5$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

| Mol | Chain | Bond lengths | | Bond angles | |
|-----|-------|--------------|----------------|-------------|------------------|
| | | RMSZ | # Z >5 | RMSZ | # Z >5 |
| 1 | A | 0.96 | 2/2920 (0.1%) | 1.26 | 22/3981 (0.6%) |
| 1 | B | 0.95 | 0/2927 | 1.25 | 19/3989 (0.5%) |
| 1 | C | 0.97 | 0/2852 | 1.26 | 21/3888 (0.5%) |
| 1 | D | 1.01 | 2/2708 (0.1%) | 1.27 | 23/3690 (0.6%) |
| 1 | E | 1.00 | 1/2928 (0.0%) | 1.34 | 23/3992 (0.6%) |
| 1 | F | 0.96 | 2/2820 (0.1%) | 1.25 | 21/3847 (0.5%) |
| All | All | 0.98 | 7/17155 (0.0%) | 1.27 | 129/23387 (0.6%) |

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 | 0 | 5 |
| 1 | B | 0 | 3 |
| 1 | C | 0 | 4 |
| 1 | D | 0 | 5 |
| 1 | E | 0 | 2 |
| 1 | F | 0 | 3 |
| All | All | 0 | 22 |

All (7) bond length outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|--------|-------|-------------|----------|
| 1 | E | 336 | VAL | C-N | 13.07 | 1.64 | 1.34 |
| 1 | D | 342 | GLU | CD-OE2 | 6.37 | 1.32 | 1.25 |
| 1 | A | 336 | VAL | C-N | -5.83 | 1.20 | 1.34 |
| 1 | D | 299 | TRP | CB-CG | 5.46 | 1.60 | 1.50 |
| 1 | F | 234 | ASN | CB-CG | 5.37 | 1.63 | 1.51 |
| 1 | A | 262 | VAL | CA-CB | -5.31 | 1.43 | 1.54 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|-------|-------|-------------|----------|
| 1 | F | 262 | VAL | CA-CB | -5.04 | 1.44 | 1.54 |

All (129) bond angle outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|----------|--------|-------------|----------|
| 1 | E | 336 | VAL | O-C-N | 21.97 | 157.85 | 122.70 |
| 1 | A | 336 | VAL | O-C-N | -17.79 | 94.24 | 122.70 |
| 1 | E | 336 | VAL | CA-C-N | -16.45 | 81.00 | 117.20 |
| 1 | C | 29 | LEU | CA-CB-CG | -11.50 | 88.85 | 115.30 |
| 1 | F | 264 | LEU | CA-CB-CG | -11.09 | 89.80 | 115.30 |
| 1 | B | 275 | GLY | N-CA-C | -10.19 | 87.64 | 113.10 |
| 1 | C | 264 | LEU | CA-CB-CG | -9.45 | 93.56 | 115.30 |
| 1 | D | 299 | TRP | CA-CB-CG | 8.86 | 130.53 | 113.70 |
| 1 | E | 177 | LEU | CA-CB-CG | -8.77 | 95.12 | 115.30 |
| 1 | F | 275 | GLY | N-CA-C | -8.69 | 91.37 | 113.10 |
| 1 | F | 29 | LEU | CA-CB-CG | -8.62 | 95.46 | 115.30 |
| 1 | C | 275 | GLY | N-CA-C | -8.60 | 91.60 | 113.10 |
| 1 | E | 29 | LEU | CA-CB-CG | -8.48 | 95.78 | 115.30 |
| 1 | A | 275 | GLY | N-CA-C | -8.35 | 92.24 | 113.10 |
| 1 | E | 299 | TRP | CA-CB-CG | 8.34 | 129.54 | 113.70 |
| 1 | F | 177 | LEU | CA-CB-CG | -8.23 | 96.38 | 115.30 |
| 1 | A | 29 | LEU | CA-CB-CG | -8.18 | 96.49 | 115.30 |
| 1 | B | 177 | LEU | CA-CB-CG | -8.08 | 96.73 | 115.30 |
| 1 | E | 71 | GLN | CA-C-N | -8.03 | 99.54 | 117.20 |
| 1 | A | 177 | LEU | CA-CB-CG | -7.92 | 97.09 | 115.30 |
| 1 | A | 71 | GLN | CA-C-N | -7.68 | 100.31 | 117.20 |
| 1 | F | 256 | THR | N-CA-C | 7.54 | 131.35 | 111.00 |
| 1 | D | 29 | LEU | CA-CB-CG | -7.52 | 98.00 | 115.30 |
| 1 | B | 264 | LEU | CA-CB-CG | -7.44 | 98.18 | 115.30 |
| 1 | B | 362 | GLY | N-CA-C | -7.43 | 94.52 | 113.10 |
| 1 | A | 336 | VAL | CA-C-N | -7.42 | 100.88 | 117.20 |
| 1 | D | 259 | LEU | N-CA-C | 7.35 | 130.84 | 111.00 |
| 1 | C | 95 | LEU | CA-CB-CG | -7.31 | 98.48 | 115.30 |
| 1 | B | 71 | GLN | CA-C-N | -7.30 | 101.14 | 117.20 |
| 1 | D | 256 | THR | N-CA-C | 7.24 | 130.55 | 111.00 |
| 1 | C | 299 | TRP | CA-CB-CG | 7.21 | 127.39 | 113.70 |
| 1 | B | 299 | TRP | CA-CB-CG | 7.17 | 127.33 | 113.70 |
| 1 | D | 71 | GLN | CA-C-N | -7.10 | 101.59 | 117.20 |
| 1 | E | 259 | LEU | N-CA-C | 6.98 | 129.86 | 111.00 |
| 1 | E | 112 | LEU | CA-CB-CG | -6.92 | 99.38 | 115.30 |
| 1 | D | 264 | LEU | CA-CB-CG | -6.86 | 99.51 | 115.30 |
| 1 | E | 264 | LEU | CA-CB-CG | -6.83 | 99.58 | 115.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|----------|-------|-------------|----------|
| 1 | F | 256 | THR | CA-C-N | -6.80 | 102.23 | 117.20 |
| 1 | A | 256 | THR | CA-C-N | -6.73 | 102.39 | 117.20 |
| 1 | F | 71 | GLN | CA-C-N | -6.73 | 102.40 | 117.20 |
| 1 | E | 259 | LEU | CA-CB-CG | -6.65 | 100.00 | 115.30 |
| 1 | F | 263 | LEU | CA-CB-CG | -6.62 | 100.06 | 115.30 |
| 1 | A | 299 | TRP | CA-CB-CG | 6.62 | 126.28 | 113.70 |
| 1 | C | 259 | LEU | CA-CB-CG | 6.62 | 130.52 | 115.30 |
| 1 | C | 360 | VAL | CB-CA-C | -6.58 | 98.89 | 111.40 |
| 1 | F | 257 | ASN | N-CA-CB | -6.56 | 98.79 | 110.60 |
| 1 | A | 264 | LEU | CA-CB-CG | -6.49 | 100.37 | 115.30 |
| 1 | A | 259 | LEU | N-CA-C | 6.39 | 128.25 | 111.00 |
| 1 | F | 292 | ARG | N-CA-C | -6.38 | 93.77 | 111.00 |
| 1 | B | 259 | LEU | N-CA-C | 6.29 | 127.98 | 111.00 |
| 1 | A | 256 | THR | N-CA-C | 6.29 | 127.97 | 111.00 |
| 1 | B | 377 | LYS | N-CA-C | -6.27 | 94.06 | 111.00 |
| 1 | D | 275 | GLY | N-CA-C | -6.25 | 97.49 | 113.10 |
| 1 | E | 78 | GLY | N-CA-C | -6.22 | 97.55 | 113.10 |
| 1 | E | 256 | THR | N-CA-C | 6.20 | 127.75 | 111.00 |
| 1 | E | 275 | GLY | N-CA-C | -6.14 | 97.75 | 113.10 |
| 1 | C | 253 | LEU | CA-CB-CG | -6.12 | 101.22 | 115.30 |
| 1 | D | 256 | THR | CA-C-N | -6.09 | 103.80 | 117.20 |
| 1 | C | 95 | LEU | N-CA-C | 6.07 | 127.39 | 111.00 |
| 1 | F | 258 | THR | N-CA-C | 6.07 | 127.38 | 111.00 |
| 1 | B | 256 | THR | N-CA-C | 5.97 | 127.11 | 111.00 |
| 1 | F | 272 | LEU | CA-CB-CG | -5.97 | 101.58 | 115.30 |
| 1 | B | 299 | TRP | N-CA-C | 5.83 | 126.74 | 111.00 |
| 1 | E | 258 | THR | N-CA-C | 5.81 | 126.69 | 111.00 |
| 1 | E | 263 | LEU | CA-CB-CG | -5.80 | 101.96 | 115.30 |
| 1 | C | 263 | LEU | CA-CB-CG | -5.79 | 101.98 | 115.30 |
| 1 | E | 274 | LYS | N-CA-C | -5.77 | 95.43 | 111.00 |
| 1 | E | 28 | LEU | CA-CB-CG | -5.77 | 102.04 | 115.30 |
| 1 | C | 350 | GLU | N-CA-C | 5.74 | 126.49 | 111.00 |
| 1 | D | 197 | THR | N-CA-C | -5.73 | 95.54 | 111.00 |
| 1 | B | 254 | GLN | N-CA-C | 5.71 | 126.43 | 111.00 |
| 1 | C | 292 | ARG | N-CA-C | -5.71 | 95.59 | 111.00 |
| 1 | E | 40 | VAL | CB-CA-C | -5.71 | 100.55 | 111.40 |
| 1 | B | 380 | PHE | N-CA-C | -5.67 | 95.70 | 111.00 |
| 1 | C | 91 | GLY | N-CA-C | -5.67 | 98.93 | 113.10 |
| 1 | C | 256 | THR | N-CA-C | 5.67 | 126.30 | 111.00 |
| 1 | B | 40 | VAL | CB-CA-C | -5.66 | 100.64 | 111.40 |
| 1 | D | 258 | THR | N-CA-C | 5.61 | 126.14 | 111.00 |
| 1 | F | 238 | ARG | N-CA-C | -5.60 | 95.89 | 111.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | A | 299 | TRP | N-CA-C | 5.59 | 126.11 | 111.00 |
| 1 | D | 40 | VAL | N-CA-C | 5.57 | 126.05 | 111.00 |
| 1 | F | 254 | GLN | N-CA-C | 5.57 | 126.05 | 111.00 |
| 1 | A | 289 | ARG | N-CA-C | -5.57 | 95.95 | 111.00 |
| 1 | D | 259 | LEU | CA-CB-CG | -5.57 | 102.49 | 115.30 |
| 1 | E | 232 | ALA | N-CA-C | -5.57 | 95.96 | 111.00 |
| 1 | B | 78 | GLY | N-CA-C | -5.56 | 99.19 | 113.10 |
| 1 | A | 257 | ASN | N-CA-CB | -5.54 | 100.64 | 110.60 |
| 1 | D | 177 | LEU | CB-CG-CD2 | -5.53 | 101.59 | 111.00 |
| 1 | C | 177 | LEU | N-CA-C | -5.51 | 96.11 | 111.00 |
| 1 | D | 40 | VAL | CA-C-N | -5.49 | 105.13 | 117.20 |
| 1 | C | 289 | ARG | N-CA-C | -5.47 | 96.24 | 111.00 |
| 1 | A | 253 | LEU | CA-CB-CG | -5.45 | 102.76 | 115.30 |
| 1 | D | 296 | VAL | N-CA-C | -5.45 | 96.29 | 111.00 |
| 1 | E | 76 | SER | N-CA-C | -5.43 | 96.33 | 111.00 |
| 1 | F | 177 | LEU | CB-CA-C | -5.42 | 99.89 | 110.20 |
| 1 | F | 283 | VAL | CB-CA-C | -5.42 | 101.10 | 111.40 |
| 1 | F | 256 | THR | C-N-CA | 5.42 | 135.25 | 121.70 |
| 1 | D | 324 | LEU | CA-CB-CG | 5.36 | 127.63 | 115.30 |
| 1 | D | 274 | LYS | N-CA-C | -5.35 | 96.55 | 111.00 |
| 1 | F | 289 | ARG | N-CA-C | -5.35 | 96.55 | 111.00 |
| 1 | D | 280 | LEU | CA-CB-CG | -5.35 | 102.99 | 115.30 |
| 1 | F | 299 | TRP | N-CA-C | 5.35 | 125.44 | 111.00 |
| 1 | D | 42 | GLY | N-CA-C | -5.34 | 99.76 | 113.10 |
| 1 | A | 62 | THR | N-CA-C | 5.33 | 125.40 | 111.00 |
| 1 | A | 381 | PRO | CA-N-CD | -5.29 | 104.10 | 111.50 |
| 1 | C | 299 | TRP | N-CA-C | 5.28 | 125.27 | 111.00 |
| 1 | A | 71 | GLN | CB-CA-C | 5.22 | 120.83 | 110.40 |
| 1 | B | 353 | VAL | CB-CA-C | -5.21 | 101.50 | 111.40 |
| 1 | B | 289 | ARG | N-CA-C | -5.20 | 96.95 | 111.00 |
| 1 | B | 94 | THR | N-CA-C | -5.20 | 96.97 | 111.00 |
| 1 | B | 19 | CYS | N-CA-C | -5.19 | 96.99 | 111.00 |
| 1 | E | 292 | ARG | N-CA-C | -5.19 | 97.00 | 111.00 |
| 1 | D | 177 | LEU | CB-CA-C | -5.17 | 100.37 | 110.20 |
| 1 | F | 114 | CYS | N-CA-C | -5.16 | 97.08 | 111.00 |
| 1 | D | 141 | PHE | N-CA-C | 5.12 | 124.81 | 111.00 |
| 1 | F | 53 | LEU | CA-CB-CG | 5.10 | 127.02 | 115.30 |
| 1 | E | 336 | VAL | C-N-CA | -5.08 | 109.00 | 121.70 |
| 1 | A | 78 | GLY | N-CA-C | -5.08 | 100.40 | 113.10 |
| 1 | D | 286 | MET | CG-SD-CE | 5.07 | 108.30 | 100.20 |
| 1 | C | 177 | LEU | CB-CA-C | -5.05 | 100.60 | 110.20 |
| 1 | C | 360 | VAL | CG1-CB-CG2 | 5.05 | 118.98 | 110.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|----------|-------|-------------|----------|
| 1 | D | 289 | ARG | N-CA-C | -5.04 | 97.38 | 111.00 |
| 1 | A | 258 | THR | N-CA-C | 5.04 | 124.59 | 111.00 |
| 1 | C | 280 | LEU | CA-CB-CG | -5.02 | 103.75 | 115.30 |
| 1 | A | 95 | LEU | CA-CB-CG | -5.01 | 103.77 | 115.30 |
| 1 | C | 272 | LEU | CA-CB-CG | -5.01 | 103.78 | 115.30 |
| 1 | A | 153 | ILE | CB-CA-C | -5.01 | 101.59 | 111.60 |
| 1 | E | 277 | GLY | N-CA-C | 5.01 | 125.62 | 113.10 |
| 1 | B | 238 | ARG | N-CA-C | -5.00 | 97.49 | 111.00 |

There are no chirality outliers.

All (22) planarity outliers are listed below:

| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | A | 162 | TYR | Sidechain |
| 1 | A | 305 | TYR | Sidechain |
| 1 | A | 336 | VAL | Mainchain,Peptide |
| 1 | A | 71 | GLN | Mainchain |
| 1 | B | 162 | TYR | Sidechain |
| 1 | B | 305 | TYR | Sidechain |
| 1 | B | 71 | GLN | Mainchain |
| 1 | C | 162 | TYR | Sidechain |
| 1 | C | 279 | TYR | Sidechain |
| 1 | C | 298 | HIS | Mainchain |
| 1 | C | 305 | TYR | Sidechain |
| 1 | D | 162 | TYR | Sidechain |
| 1 | D | 305 | TYR | Sidechain |
| 1 | D | 319 | TYR | Mainchain |
| 1 | D | 354 | TYR | Sidechain |
| 1 | D | 71 | GLN | Mainchain |
| 1 | E | 162 | TYR | Sidechain |
| 1 | E | 71 | GLN | Mainchain |
| 1 | F | 162 | TYR | Sidechain |
| 1 | F | 305 | TYR | Sidechain |
| 1 | F | 71 | GLN | Mainchain |

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 | 2849 | 0 | 2814 | 457 | 2 |
| 1 | B | 2857 | 0 | 2820 | 454 | 0 |
| 1 | C | 2784 | 0 | 2743 | 441 | 0 |
| 1 | D | 2645 | 0 | 2616 | 404 | 0 |
| 1 | E | 2857 | 0 | 2821 | 472 | 0 |
| 1 | F | 2753 | 0 | 2710 | 420 | 0 |
| 2 | G | 43 | 0 | 37 | 1 | 0 |
| 2 | H | 43 | 0 | 37 | 5 | 0 |
| 2 | I | 43 | 0 | 37 | 3 | 0 |
| 2 | J | 43 | 0 | 37 | 1 | 0 |
| 2 | K | 43 | 0 | 37 | 3 | 0 |
| 2 | L | 43 | 0 | 37 | 5 | 0 |
| All | All | 17003 | 0 | 16746 | 2434 | 2 |

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 72.

All (2434) 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:328:LEU:CD2 | 1:A:333:LEU:HD21 | 1.37 | 1.52 |
| 1:A:328:LEU:HD21 | 1:A:333:LEU:CD2 | 1.40 | 1.50 |
| 1:A:175:GLN:HB2 | 1:A:230:ASP:HB2 | 1.26 | 1.11 |
| 1:F:175:GLN:HB2 | 1:F:230:ASP:HB2 | 1.33 | 1.10 |
| 1:B:336:VAL:HA | 1:B:337:GLN:N | 1.68 | 1.09 |
| 1:A:144:PRO:HD3 | 1:A:292:ARG:HG2 | 1.35 | 1.08 |
| 1:D:175:GLN:HG3 | 1:D:213:LYS:HG2 | 1.37 | 1.05 |
| 1:A:125:VAL:HG12 | 1:A:263:LEU:HD21 | 1.34 | 1.04 |
| 1:B:175:GLN:HB2 | 1:B:230:ASP:HB2 | 1.39 | 1.03 |
| 1:E:177:LEU:HD13 | 1:E:207:VAL:O | 1.59 | 1.03 |
| 1:A:71:GLN:HG3 | 1:B:203:ASN:HB3 | 1.38 | 1.03 |
| 1:D:66:LEU:HB3 | 1:D:71:GLN:HB2 | 1.39 | 1.01 |
| 1:A:37:LEU:HD23 | 1:A:106:PRO:HD3 | 1.43 | 1.00 |
| 1:E:233:LYS:HD3 | 1:E:234:ASN:HD22 | 1.25 | 0.98 |
| 1:E:112:LEU:HB3 | 1:E:116:THR:HG23 | 1.45 | 0.98 |
| 1:A:203:ASN:HB3 | 1:E:71:GLN:HG3 | 1.42 | 0.98 |
| 1:F:122:ALA:HB3 | 1:F:271:PRO:HD2 | 1.44 | 0.98 |
| 1:D:71:GLN:HG3 | 1:E:203:ASN:HB3 | 1.47 | 0.96 |
| 1:C:346:THR:HG22 | 1:C:348:VAL:HB | 1.49 | 0.95 |
| 1:D:138:VAL:HB | 1:D:153:ILE:HG23 | 1.48 | 0.95 |
| 1:C:168:GLY:HA3 | 1:C:237:THR:HG23 | 1.46 | 0.95 |
| 1:F:138:VAL:HB | 1:F:153:ILE:HG23 | 1.48 | 0.95 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:328:LEU:CG | 1:A:333:LEU:HD21 | 1.97 | 0.94 |
| 1:A:177:LEU:HD21 | 1:A:209:ASN:H | 1.29 | 0.94 |
| 1:A:192:THR:HG22 | 1:A:193:ILE:HD12 | 1.46 | 0.94 |
| 1:D:346:THR:HG22 | 1:D:348:VAL:HB | 1.49 | 0.94 |
| 1:A:372:ARG:HH11 | 1:A:372:ARG:HB2 | 1.31 | 0.94 |
| 1:D:178:VAL:HG11 | 1:D:201:MET:HE1 | 1.50 | 0.93 |
| 1:A:336:VAL:CG2 | 1:A:337:GLN:HA | 1.98 | 0.93 |
| 1:A:205:ASP:HA | 1:A:209:ASN:HB2 | 1.48 | 0.93 |
| 1:C:208:LEU:O | 1:C:210:PRO:HD3 | 1.68 | 0.92 |
| 1:D:257:ASN:ND2 | 1:E:238:ARG:HA | 1.85 | 0.92 |
| 1:A:350:GLU:HG3 | 1:A:351:VAL:N | 1.84 | 0.92 |
| 1:E:175:GLN:HG3 | 1:E:213:LYS:HG2 | 1.52 | 0.91 |
| 1:C:71:GLN:HG3 | 1:D:203:ASN:HB3 | 1.49 | 0.91 |
| 1:D:176:GLY:C | 1:D:177:LEU:HD12 | 1.90 | 0.91 |
| 1:A:336:VAL:HG23 | 1:A:337:GLN:HA | 1.50 | 0.90 |
| 1:D:257:ASN:HB2 | 1:E:239:TYR:CE1 | 2.06 | 0.90 |
| 1:E:83:THR:HB | 1:E:87:GLU:HB3 | 1.51 | 0.90 |
| 1:B:52:PHE:CE2 | 1:C:208:LEU:HD23 | 2.07 | 0.89 |
| 1:F:108:LEU:HB3 | 1:F:118:GLN:HE21 | 1.34 | 0.89 |
| 1:F:30:ILE:HD13 | 1:F:36:VAL:HG13 | 1.55 | 0.89 |
| 1:A:141:PHE:CE1 | 1:A:292:ARG:HG3 | 2.08 | 0.88 |
| 1:A:257:ASN:ND2 | 1:B:238:ARG:HA | 1.87 | 0.88 |
| 1:F:262:VAL:HG12 | 1:F:264:LEU:H | 1.38 | 0.88 |
| 1:D:336:VAL:CA | 1:D:337:GLN:OE1 | 2.22 | 0.88 |
| 1:B:262:VAL:HG12 | 1:B:264:LEU:H | 1.37 | 0.88 |
| 1:A:380:PHE:CG | 1:A:381:PRO:HD2 | 2.09 | 0.88 |
| 1:B:205:ASP:HA | 1:B:209:ASN:HB2 | 1.52 | 0.88 |
| 1:D:336:VAL:HA | 1:D:337:GLN:OE1 | 1.73 | 0.88 |
| 1:E:335:GLN:HA | 1:E:335:GLN:OE1 | 1.74 | 0.88 |
| 1:C:172:LEU:HD22 | 1:C:173:ASP:N | 1.89 | 0.88 |
| 1:A:297:HIS:HE1 | 1:E:145:THR:HG21 | 1.38 | 0.88 |
| 1:A:336:VAL:HG23 | 1:A:337:GLN:CA | 2.04 | 0.87 |
| 1:D:168:GLY:HA3 | 1:D:237:THR:HG23 | 1.55 | 0.87 |
| 1:B:346:THR:HG21 | 1:B:348:VAL:HG12 | 1.57 | 0.87 |
| 1:B:336:VAL:O | 1:B:337:GLN:HA | 1.75 | 0.86 |
| 1:E:253:LEU:HD23 | 1:E:254:GLN:H | 1.40 | 0.86 |
| 1:C:142:ASN:C | 1:C:292:ARG:HB2 | 1.96 | 0.86 |
| 1:A:177:LEU:HD13 | 1:A:207:VAL:O | 1.73 | 0.86 |
| 1:C:350:GLU:CB | 1:F:233:LYS:HB3 | 2.06 | 0.86 |
| 1:E:168:GLY:HA3 | 1:E:237:THR:HG23 | 1.58 | 0.86 |
| 1:D:265:ASP:H | 1:D:270:GLY:H | 1.21 | 0.86 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:168:GLY:HA3 | 1:B:237:THR:HG23 | 1.56 | 0.85 |
| 1:F:177:LEU:HD21 | 1:F:208:LEU:HA | 1.58 | 0.85 |
| 1:A:125:VAL:CG1 | 1:A:263:LEU:HD21 | 2.07 | 0.85 |
| 1:D:286:MET:HA | 1:D:286:MET:HE3 | 1.58 | 0.85 |
| 1:C:138:VAL:HB | 1:C:153:ILE:HG23 | 1.57 | 0.84 |
| 1:D:104:GLN:HE22 | 1:D:276:GLU:HB2 | 1.42 | 0.84 |
| 1:B:71:GLN:HG3 | 1:C:203:ASN:HB3 | 1.58 | 0.84 |
| 1:B:131:GLY:HA3 | 1:C:177:LEU:HD12 | 1.57 | 0.84 |
| 1:D:286:MET:CE | 1:D:286:MET:HA | 2.08 | 0.84 |
| 1:E:141:PHE:CE1 | 1:E:292:ARG:HG3 | 2.12 | 0.84 |
| 1:B:346:THR:CG2 | 1:B:348:VAL:HG12 | 2.08 | 0.84 |
| 1:C:62:THR:OG1 | 1:C:63:PRO:HD3 | 1.78 | 0.84 |
| 1:A:192:THR:HG22 | 1:A:193:ILE:CD1 | 2.07 | 0.83 |
| 1:B:379:VAL:HG12 | 1:B:380:PHE:O | 1.76 | 0.83 |
| 1:F:83:THR:HB | 1:F:87:GLU:HB3 | 1.58 | 0.83 |
| 1:A:175:GLN:CB | 1:A:230:ASP:HB2 | 2.09 | 0.83 |
| 1:A:262:VAL:HG12 | 1:A:264:LEU:H | 1.41 | 0.83 |
| 1:A:76:SER:O | 1:A:298:HIS:HB2 | 1.78 | 0.83 |
| 1:B:37:LEU:HD23 | 1:B:106:PRO:HD3 | 1.59 | 0.83 |
| 1:B:138:VAL:HB | 1:B:153:ILE:HG23 | 1.61 | 0.83 |
| 1:D:257:ASN:HB2 | 1:E:239:TYR:CD1 | 2.13 | 0.83 |
| 1:B:77:ARG:HB2 | 1:B:93:ASN:HB2 | 1.61 | 0.82 |
| 1:F:168:GLY:HA3 | 1:F:237:THR:HG23 | 1.62 | 0.82 |
| 1:B:83:THR:HB | 1:B:87:GLU:HB3 | 1.59 | 0.82 |
| 1:B:222:TYR:HB3 | 1:B:227:TRP:CD1 | 2.15 | 0.82 |
| 1:D:178:VAL:HG22 | 1:D:179:THR:H | 1.42 | 0.82 |
| 1:A:340:PRO:HG2 | 1:A:347:GLN:HE22 | 1.44 | 0.82 |
| 1:D:114:CYS:HB2 | 1:D:116:THR:HG22 | 1.62 | 0.82 |
| 1:B:233:LYS:HG2 | 1:B:234:ASN:N | 1.95 | 0.81 |
| 1:E:177:LEU:HD21 | 1:E:209:ASN:H | 1.42 | 0.81 |
| 1:A:138:VAL:HB | 1:A:153:ILE:HG23 | 1.61 | 0.81 |
| 1:A:63:PRO:O | 1:A:71:GLN:NE2 | 2.14 | 0.81 |
| 1:D:336:VAL:C | 1:D:337:GLN:OE1 | 2.18 | 0.81 |
| 1:B:257:ASN:HD22 | 1:B:257:ASN:H | 1.28 | 0.81 |
| 1:C:50:GLU:CD | 1:D:233:LYS:HA | 2.01 | 0.81 |
| 1:C:350:GLU:HG3 | 1:F:233:LYS:HG2 | 1.62 | 0.80 |
| 1:C:205:ASP:HA | 1:C:209:ASN:HB2 | 1.62 | 0.80 |
| 1:D:76:SER:O | 1:D:298:HIS:HB2 | 1.80 | 0.80 |
| 1:F:203:ASN:O | 1:F:206:GLN:HB3 | 1.81 | 0.80 |
| 1:B:22:PRO:HG2 | 1:F:359:PRO:HB3 | 1.64 | 0.80 |
| 1:C:176:GLY:O | 1:C:177:LEU:HD23 | 1.80 | 0.80 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:163:HIS:HA | 1:F:283:VAL:O | 1.81 | 0.80 |
| 1:F:142:ASN:C | 1:F:292:ARG:HB2 | 2.02 | 0.80 |
| 1:C:50:GLU:OE1 | 1:D:233:LYS:HA | 1.82 | 0.79 |
| 1:A:41:THR:O | 1:A:45:SER:HB3 | 1.82 | 0.79 |
| 1:D:104:GLN:NE2 | 1:D:276:GLU:HB2 | 1.97 | 0.79 |
| 1:E:313:ARG:HH11 | 1:E:313:ARG:HG2 | 1.47 | 0.79 |
| 1:F:168:GLY:CA | 1:F:237:THR:HG23 | 2.11 | 0.79 |
| 1:E:122:ALA:HA | 1:E:310:LEU:HB3 | 1.65 | 0.79 |
| 1:B:258:THR:HB | 1:B:259:LEU:HD22 | 1.63 | 0.79 |
| 1:B:308:ILE:N | 1:B:308:ILE:HD12 | 1.97 | 0.79 |
| 1:D:174:LEU:N | 1:D:174:LEU:HD12 | 1.98 | 0.79 |
| 1:D:83:THR:HB | 1:D:87:GLU:HB3 | 1.64 | 0.79 |
| 1:E:272:LEU:N | 1:E:272:LEU:HD12 | 1.98 | 0.79 |
| 1:C:161:GLN:HE22 | 1:C:251:PRO:HA | 1.47 | 0.79 |
| 1:B:217:ASP:O | 1:F:336:VAL:HG13 | 1.82 | 0.79 |
| 1:B:163:HIS:HA | 1:B:283:VAL:O | 1.83 | 0.78 |
| 1:F:308:ILE:HD12 | 1:F:308:ILE:N | 1.98 | 0.78 |
| 1:F:208:LEU:O | 1:F:210:PRO:HD3 | 1.84 | 0.78 |
| 1:C:352:ARG:NE | 1:F:233:LYS:HE3 | 1.97 | 0.78 |
| 1:D:144:PRO:HD3 | 1:D:292:ARG:HG2 | 1.64 | 0.78 |
| 1:E:118:GLN:HB2 | 1:E:314:TRP:CZ3 | 2.18 | 0.78 |
| 1:A:208:LEU:O | 1:A:210:PRO:HD3 | 1.83 | 0.78 |
| 1:B:177:LEU:HD21 | 1:B:208:LEU:HA | 1.63 | 0.78 |
| 1:B:350:GLU:HG3 | 1:B:351:VAL:N | 1.99 | 0.78 |
| 1:C:175:GLN:HB2 | 1:C:230:ASP:HB2 | 1.64 | 0.78 |
| 1:B:251:PRO:HD2 | 1:C:245:GLY:HA3 | 1.65 | 0.78 |
| 1:A:239:TYR:CD1 | 1:E:257:ASN:HB2 | 2.19 | 0.78 |
| 1:A:69:GLY:C | 1:A:71:GLN:H | 1.84 | 0.78 |
| 1:B:161:GLN:HE22 | 1:B:251:PRO:HA | 1.48 | 0.78 |
| 1:C:109:ASN:HB3 | 1:C:117:LEU:HD21 | 1.66 | 0.78 |
| 1:C:52:PHE:CE1 | 1:D:208:LEU:HD23 | 2.19 | 0.78 |
| 1:E:62:THR:OG1 | 1:E:63:PRO:HD3 | 1.83 | 0.78 |
| 1:A:97:THR:HG22 | 1:A:223:PRO:HA | 1.66 | 0.78 |
| 1:A:141:PHE:CD2 | 1:B:84:SER:HA | 2.19 | 0.78 |
| 1:A:207:VAL:HG23 | 1:A:208:LEU:H | 1.48 | 0.77 |
| 1:B:263:LEU:O | 1:B:270:GLY:HA2 | 1.84 | 0.77 |
| 1:D:71:GLN:HG3 | 1:E:203:ASN:CB | 2.14 | 0.77 |
| 1:A:222:TYR:HB3 | 1:A:227:TRP:CD1 | 2.19 | 0.77 |
| 1:B:341:MET:HE3 | 1:B:346:THR:HG22 | 1.66 | 0.77 |
| 1:D:258:THR:HB | 1:D:259:LEU:HD22 | 1.66 | 0.77 |
| 1:D:111:ASP:HB3 | 1:D:116:THR:HG23 | 1.66 | 0.77 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:341:MET:CE | 1:F:347:GLN:HB2 | 2.14 | 0.77 |
| 1:A:194:LYS:HA | 1:A:197:THR:O | 1.85 | 0.77 |
| 1:B:97:THR:HA | 1:B:223:PRO:HA | 1.67 | 0.77 |
| 1:C:233:LYS:CE | 1:F:350:GLU:HG2 | 2.13 | 0.77 |
| 1:A:124:SER:HA | 1:A:263:LEU:HG | 1.67 | 0.77 |
| 1:E:178:VAL:HG22 | 1:E:179:THR:N | 1.99 | 0.77 |
| 1:D:153:ILE:HG12 | 1:E:297:HIS:ND1 | 2.00 | 0.77 |
| 1:F:177:LEU:HD13 | 1:F:207:VAL:O | 1.85 | 0.76 |
| 1:A:288:TRP:HZ3 | 1:A:299:TRP:CE2 | 2.03 | 0.76 |
| 1:C:112:LEU:H | 1:C:112:LEU:HD22 | 1.49 | 0.76 |
| 1:D:66:LEU:HD23 | 1:D:66:LEU:H | 1.51 | 0.76 |
| 1:E:122:ALA:O | 1:E:271:PRO:HD2 | 1.85 | 0.76 |
| 1:F:288:TRP:HE3 | 1:F:299:TRP:HB3 | 1.49 | 0.76 |
| 1:D:251:PRO:HD2 | 1:E:245:GLY:HA3 | 1.68 | 0.76 |
| 1:A:257:ASN:HB2 | 1:B:239:TYR:CE2 | 2.20 | 0.76 |
| 1:D:178:VAL:HG22 | 1:D:179:THR:N | 2.00 | 0.76 |
| 1:D:90:PRO:HB2 | 1:D:186:LYS:HE3 | 1.66 | 0.76 |
| 1:C:197:THR:O | 1:C:197:THR:HG23 | 1.85 | 0.76 |
| 1:D:346:THR:CG2 | 1:D:348:VAL:HB | 2.15 | 0.76 |
| 1:D:78:GLY:HA2 | 1:D:298:HIS:HB3 | 1.65 | 0.76 |
| 1:F:321:MET:O | 1:F:324:LEU:HG | 1.86 | 0.76 |
| 1:A:177:LEU:CD2 | 1:A:209:ASN:H | 1.98 | 0.76 |
| 1:B:288:TRP:HZ3 | 1:B:299:TRP:CE2 | 2.04 | 0.76 |
| 1:C:176:GLY:C | 1:C:177:LEU:HD23 | 2.07 | 0.76 |
| 1:E:76:SER:O | 1:E:298:HIS:HB2 | 1.86 | 0.76 |
| 1:B:304:ARG:HD3 | 1:B:306:PHE:CZ | 2.21 | 0.75 |
| 1:F:341:MET:HE1 | 1:F:347:GLN:HB2 | 1.68 | 0.75 |
| 1:A:370:VAL:HG13 | 1:A:374:GLY:O | 1.86 | 0.75 |
| 1:C:175:GLN:HE21 | 1:C:176:GLY:N | 1.84 | 0.75 |
| 1:D:122:ALA:HB3 | 1:D:271:PRO:HD2 | 1.67 | 0.75 |
| 1:C:28:LEU:HD23 | 1:C:29:LEU:N | 2.02 | 0.75 |
| 1:D:269:VAL:HG12 | 1:D:270:GLY:O | 1.87 | 0.75 |
| 1:C:308:ILE:HD12 | 1:C:308:ILE:H | 1.51 | 0.75 |
| 1:B:125:VAL:HG12 | 1:B:263:LEU:HD21 | 1.67 | 0.75 |
| 1:C:313:ARG:HG2 | 1:C:314:TRP:N | 2.02 | 0.75 |
| 1:D:72:TYR:O | 1:D:75:TRP:HB2 | 1.86 | 0.75 |
| 1:D:133:GLY:N | 1:E:228:HIS:HE1 | 1.83 | 0.75 |
| 1:C:175:GLN:HE21 | 1:C:176:GLY:H | 1.35 | 0.74 |
| 1:D:30:ILE:HD13 | 1:D:36:VAL:HG13 | 1.67 | 0.74 |
| 1:B:339:GLN:HG2 | 1:B:340:PRO:HD2 | 1.69 | 0.74 |
| 1:C:346:THR:CG2 | 1:C:348:VAL:HB | 2.16 | 0.74 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:172:LEU:HD22 | 1:F:173:ASP:N | 2.02 | 0.74 |
| 1:F:142:ASN:O | 1:F:292:ARG:HB2 | 1.85 | 0.74 |
| 1:A:52:PHE:CE2 | 1:B:208:LEU:HD22 | 2.22 | 0.74 |
| 1:B:22:PRO:HB2 | 1:F:360:VAL:HG23 | 1.70 | 0.74 |
| 1:B:103:LEU:HD22 | 1:F:341:MET:HG3 | 1.69 | 0.74 |
| 1:B:135:LEU:HD12 | 1:B:135:LEU:N | 2.03 | 0.74 |
| 1:C:75:TRP:NE1 | 1:C:300:ARG:HB2 | 2.03 | 0.74 |
| 1:A:79:ILE:HD11 | 1:A:298:HIS:HA | 1.69 | 0.74 |
| 1:D:258:THR:C | 1:D:259:LEU:HD22 | 2.08 | 0.74 |
| 1:F:320:PRO:O | 1:F:323:SER:HB3 | 1.88 | 0.74 |
| 1:A:135:LEU:N | 1:A:135:LEU:HD12 | 2.02 | 0.73 |
| 1:C:172:LEU:HD22 | 1:C:173:ASP:H | 1.51 | 0.73 |
| 1:D:177:LEU:N | 1:D:177:LEU:HD12 | 2.02 | 0.73 |
| 1:E:75:TRP:NE1 | 1:E:300:ARG:HB2 | 2.03 | 0.73 |
| 1:B:219:ASP:HB2 | 1:F:338:GLY:HA2 | 1.69 | 0.73 |
| 1:F:91:GLY:N | 1:F:186:LYS:HZ1 | 1.86 | 0.73 |
| 1:C:39:LEU:HD12 | 1:C:40:VAL:H | 1.52 | 0.73 |
| 1:E:66:LEU:HD23 | 1:E:66:LEU:H | 1.51 | 0.73 |
| 1:A:39:LEU:HD12 | 1:A:40:VAL:N | 2.03 | 0.73 |
| 1:C:77:ARG:HB2 | 1:C:93:ASN:HB2 | 1.69 | 0.73 |
| 1:E:109:ASN:OD1 | 1:E:117:LEU:HA | 1.87 | 0.73 |
| 1:E:175:GLN:HB2 | 1:E:230:ASP:HB2 | 1.69 | 0.73 |
| 1:B:272:LEU:HD12 | 1:B:272:LEU:N | 2.03 | 0.73 |
| 1:B:30:ILE:HD13 | 1:B:36:VAL:HG13 | 1.69 | 0.73 |
| 1:E:350:GLU:HG3 | 1:E:351:VAL:N | 2.02 | 0.73 |
| 1:C:175:GLN:HG2 | 1:C:213:LYS:HG2 | 1.70 | 0.73 |
| 1:C:71:GLN:HA | 1:C:71:GLN:NE2 | 1.94 | 0.73 |
| 1:D:54:ASN:HD22 | 1:D:55:PRO:HD2 | 1.53 | 0.73 |
| 1:E:123:VAL:HG13 | 1:E:264:LEU:HD13 | 1.70 | 0.73 |
| 1:E:305:TYR:HE1 | 1:E:307:LYS:HB2 | 1.53 | 0.73 |
| 1:A:69:GLY:HA3 | 1:A:71:GLN:HE22 | 1.53 | 0.73 |
| 1:F:238:ARG:NH2 | 1:F:265:ASP:HB3 | 2.04 | 0.73 |
| 1:F:75:TRP:NE1 | 1:F:300:ARG:HB2 | 2.04 | 0.73 |
| 1:D:240:PHE:CD1 | 1:D:240:PHE:N | 2.56 | 0.73 |
| 1:E:233:LYS:HD2 | 1:E:234:ASN:N | 2.03 | 0.73 |
| 1:E:163:HIS:HA | 1:E:283:VAL:O | 1.89 | 0.73 |
| 1:C:203:ASN:O | 1:C:206:GLN:HB3 | 1.87 | 0.72 |
| 1:C:286:MET:HE3 | 1:C:286:MET:HA | 1.70 | 0.72 |
| 1:C:76:SER:O | 1:C:298:HIS:HB2 | 1.89 | 0.72 |
| 1:B:125:VAL:CG1 | 1:B:263:LEU:HD21 | 2.18 | 0.72 |
| 1:F:296:VAL:HG11 | 2:L:3:SIA:H32 | 1.70 | 0.72 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:192:THR:HB | 1:E:194:LYS:HD3 | 1.70 | 0.72 |
| 1:A:62:THR:OG1 | 1:A:63:PRO:HD3 | 1.89 | 0.72 |
| 1:B:170:GLU:HB2 | 1:B:171:PRO:HD2 | 1.69 | 0.72 |
| 1:E:121:GLU:HG2 | 1:E:271:PRO:O | 1.88 | 0.72 |
| 1:A:203:ASN:CB | 1:E:71:GLN:HG3 | 2.16 | 0.72 |
| 1:B:131:GLY:CA | 1:C:177:LEU:HD12 | 2.20 | 0.72 |
| 1:F:150:THR:O | 1:F:150:THR:HG22 | 1.87 | 0.72 |
| 1:A:122:ALA:HB3 | 1:A:271:PRO:HD2 | 1.71 | 0.72 |
| 1:F:30:ILE:HG12 | 1:F:31:LYS:N | 2.02 | 0.72 |
| 1:A:153:ILE:HD11 | 1:B:297:HIS:HB3 | 1.72 | 0.72 |
| 1:A:50:GLU:HG2 | 1:B:233:LYS:HA | 1.71 | 0.72 |
| 1:D:112:LEU:H | 1:D:112:LEU:HD12 | 1.54 | 0.72 |
| 1:F:144:PRO:HD3 | 1:F:292:ARG:CG | 2.20 | 0.72 |
| 1:C:340:PRO:HG2 | 1:C:347:GLN:HG3 | 1.72 | 0.72 |
| 1:D:28:LEU:HG | 1:D:29:LEU:N | 2.03 | 0.72 |
| 1:D:71:GLN:HE21 | 1:D:73:TYR:HB2 | 1.53 | 0.72 |
| 1:F:350:GLU:HG3 | 1:F:351:VAL:N | 2.04 | 0.72 |
| 1:C:313:ARG:HG2 | 1:C:314:TRP:H | 1.52 | 0.72 |
| 1:D:25:VAL:HG23 | 1:D:26:PRO:HD2 | 1.71 | 0.72 |
| 1:D:262:VAL:HG12 | 1:D:264:LEU:H | 1.55 | 0.72 |
| 1:D:263:LEU:O | 1:D:270:GLY:HA2 | 1.90 | 0.71 |
| 1:F:218:LYS:HB2 | 1:F:222:TYR:CE1 | 2.25 | 0.71 |
| 1:D:257:ASN:HD21 | 1:E:238:ARG:HA | 1.53 | 0.71 |
| 1:F:178:VAL:HG22 | 1:F:179:THR:H | 1.54 | 0.71 |
| 1:B:105:LEU:HB2 | 1:B:276:GLU:O | 1.91 | 0.71 |
| 1:D:174:LEU:H | 1:D:174:LEU:HD12 | 1.53 | 0.71 |
| 1:D:180:ASP:OD2 | 1:D:182:ARG:HD3 | 1.90 | 0.71 |
| 1:F:350:GLU:HG3 | 1:F:351:VAL:H | 1.55 | 0.71 |
| 1:A:52:PHE:CZ | 1:B:208:LEU:HD22 | 2.26 | 0.71 |
| 1:C:108:LEU:HD11 | 1:C:120:TRP:CE2 | 2.26 | 0.71 |
| 1:D:287:GLY:O | 1:D:299:TRP:HB2 | 1.91 | 0.71 |
| 1:B:360:VAL:HG12 | 1:B:361:PRO:O | 1.90 | 0.71 |
| 1:E:368:ARG:CZ | 1:E:377:LYS:HE3 | 2.21 | 0.71 |
| 1:F:106:PRO:HD2 | 1:F:120:TRP:HE1 | 1.55 | 0.71 |
| 1:A:194:LYS:HD3 | 1:A:194:LYS:H | 1.56 | 0.70 |
| 1:A:71:GLN:HA | 1:A:71:GLN:OE1 | 1.85 | 0.70 |
| 1:C:269:VAL:HG12 | 1:C:270:GLY:O | 1.91 | 0.70 |
| 1:F:180:ASP:HB3 | 1:F:182:ARG:CG | 2.21 | 0.70 |
| 1:B:328:LEU:O | 1:B:332:MET:SD | 2.49 | 0.70 |
| 1:C:100:MET:HG2 | 1:C:216:LEU:HD13 | 1.72 | 0.70 |
| 1:D:318:PRO:HG2 | 1:D:319:TYR:CD2 | 2.26 | 0.70 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:D:90:PRO:HB3 | 1:D:95:LEU:HD11 | 1.71 | 0.70 |
| 1:A:161:GLN:HE22 | 1:A:251:PRO:HA | 1.57 | 0.70 |
| 1:B:373:PHE:N | 1:B:373:PHE:CD1 | 2.59 | 0.70 |
| 1:C:232:ALA:HB3 | 1:C:234:ASN:O | 1.91 | 0.70 |
| 1:C:352:ARG:HE | 1:F:233:LYS:HE3 | 1.56 | 0.70 |
| 1:F:65:SER:HB3 | 1:F:68:GLU:HG2 | 1.73 | 0.70 |
| 1:B:79:ILE:HD11 | 1:B:298:HIS:HA | 1.74 | 0.70 |
| 1:D:176:GLY:O | 1:D:177:LEU:HD12 | 1.91 | 0.70 |
| 1:B:296:VAL:HG11 | 2:H:3:SIA:H32 | 1.72 | 0.70 |
| 1:C:50:GLU:OE2 | 1:D:233:LYS:HA | 1.92 | 0.70 |
| 1:E:112:LEU:O | 1:E:116:THR:HG22 | 1.92 | 0.70 |
| 1:E:135:LEU:HD13 | 1:E:135:LEU:N | 2.06 | 0.70 |
| 1:E:138:VAL:HB | 1:E:153:ILE:HD12 | 1.72 | 0.70 |
| 1:E:209:ASN:OD1 | 1:E:211:ILE:HD13 | 1.92 | 0.70 |
| 1:E:208:LEU:O | 1:E:210:PRO:HD3 | 1.92 | 0.70 |
| 1:E:259:LEU:HD22 | 1:E:259:LEU:N | 2.07 | 0.70 |
| 1:F:192:THR:H | 1:F:195:THR:HB | 1.57 | 0.70 |
| 1:B:193:ILE:HD12 | 1:B:193:ILE:N | 2.06 | 0.70 |
| 1:D:57:MET:HB2 | 1:D:96:PRO:HB3 | 1.74 | 0.70 |
| 1:E:186:LYS:HE2 | 1:E:186:LYS:N | 2.05 | 0.70 |
| 1:E:71:GLN:NE2 | 1:E:73:TYR:HB2 | 2.07 | 0.70 |
| 1:A:30:ILE:HG12 | 1:A:36:VAL:HG13 | 1.74 | 0.70 |
| 1:A:39:LEU:HD12 | 1:A:40:VAL:H | 1.56 | 0.70 |
| 1:C:95:LEU:HD23 | 1:C:96:PRO:HD2 | 1.74 | 0.70 |
| 1:F:66:LEU:HD23 | 1:F:66:LEU:H | 1.56 | 0.70 |
| 1:B:122:ALA:HA | 1:B:310:LEU:HB3 | 1.73 | 0.70 |
| 1:B:341:MET:C | 1:B:346:THR:HG23 | 2.13 | 0.70 |
| 1:D:175:GLN:HB2 | 1:D:230:ASP:HB2 | 1.73 | 0.70 |
| 1:F:194:LYS:HD3 | 1:F:194:LYS:H | 1.56 | 0.70 |
| 1:F:259:LEU:HD13 | 1:F:259:LEU:N | 2.07 | 0.70 |
| 1:A:178:VAL:HG22 | 1:A:179:THR:N | 2.07 | 0.69 |
| 1:C:233:LYS:NZ | 1:F:350:GLU:HG2 | 2.07 | 0.69 |
| 1:F:108:LEU:HD11 | 1:F:120:TRP:CE2 | 2.27 | 0.69 |
| 1:F:106:PRO:HD2 | 1:F:120:TRP:NE1 | 2.07 | 0.69 |
| 1:A:211:ILE:HD12 | 1:A:211:ILE:N | 2.07 | 0.69 |
| 1:B:192:THR:HB | 1:B:193:ILE:HD12 | 1.74 | 0.69 |
| 1:C:273:CYS:HB3 | 1:C:277:GLY:O | 1.92 | 0.69 |
| 1:E:265:ASP:H | 1:E:270:GLY:H | 1.39 | 0.69 |
| 1:B:71:GLN:HG3 | 1:C:203:ASN:CB | 2.23 | 0.69 |
| 1:D:103:LEU:HB2 | 1:D:278:LEU:HB3 | 1.74 | 0.69 |
| 1:D:285:ILE:N | 1:D:285:ILE:HD12 | 2.07 | 0.69 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:209:ASN:OD1 | 1:C:211:ILE:HD13 | 1.91 | 0.69 |
| 1:C:233:LYS:HB3 | 1:F:350:GLU:HB3 | 1.74 | 0.69 |
| 1:F:150:THR:HG21 | 1:F:292:ARG:HH21 | 1.58 | 0.69 |
| 1:F:233:LYS:HD3 | 1:F:234:ASN:N | 2.07 | 0.69 |
| 1:A:233:LYS:HG3 | 1:A:234:ASN:HD22 | 1.58 | 0.69 |
| 1:B:178:VAL:HG22 | 1:B:179:THR:N | 2.08 | 0.69 |
| 1:F:111:ASP:HB3 | 1:F:116:THR:HG22 | 1.74 | 0.69 |
| 1:A:308:ILE:HD12 | 1:A:308:ILE:N | 2.07 | 0.69 |
| 1:C:126:LYS:HG3 | 1:C:260:THR:HG23 | 1.75 | 0.69 |
| 1:D:224:VAL:HG21 | 1:D:283:VAL:HG11 | 1.74 | 0.69 |
| 1:E:175:GLN:CB | 1:E:230:ASP:HB2 | 2.23 | 0.69 |
| 1:E:293:ASN:OD1 | 1:E:294:TYR:HB2 | 1.91 | 0.69 |
| 1:F:97:THR:HA | 1:F:223:PRO:HA | 1.75 | 0.69 |
| 1:A:239:TYR:CE1 | 1:E:257:ASN:HB2 | 2.28 | 0.69 |
| 1:C:163:HIS:HA | 1:C:283:VAL:O | 1.92 | 0.69 |
| 1:F:104:GLN:HE21 | 1:F:105:LEU:N | 1.90 | 0.69 |
| 1:A:205:ASP:CA | 1:A:209:ASN:HB2 | 2.23 | 0.68 |
| 1:B:257:ASN:HB3 | 1:C:239:TYR:CE2 | 2.28 | 0.68 |
| 1:D:317:ASN:HD22 | 1:D:318:PRO:HD2 | 1.56 | 0.68 |
| 1:E:170:GLU:HB2 | 1:E:171:PRO:HD2 | 1.73 | 0.68 |
| 1:E:246:GLY:HA3 | 1:E:249:THR:OG1 | 1.93 | 0.68 |
| 1:A:203:ASN:O | 1:A:206:GLN:HB3 | 1.94 | 0.68 |
| 1:A:275:GLY:O | 1:A:277:GLY:N | 2.26 | 0.68 |
| 1:B:161:GLN:NE2 | 1:B:251:PRO:HA | 2.07 | 0.68 |
| 1:D:141:PHE:CE1 | 1:D:292:ARG:HG3 | 2.28 | 0.68 |
| 1:B:256:THR:HG23 | 1:B:258:THR:H | 1.58 | 0.68 |
| 1:F:177:LEU:CD2 | 1:F:208:LEU:HA | 2.23 | 0.68 |
| 1:F:278:LEU:HD22 | 1:F:280:LEU:HD21 | 1.76 | 0.68 |
| 1:A:177:LEU:HD21 | 1:A:209:ASN:N | 2.06 | 0.68 |
| 1:A:336:VAL:CB | 1:A:337:GLN:HA | 2.23 | 0.68 |
| 1:C:233:LYS:HG3 | 1:C:234:ASN:H | 1.58 | 0.68 |
| 1:E:265:ASP:OD1 | 1:E:269:VAL:HB | 1.94 | 0.68 |
| 1:A:228:HIS:HB3 | 1:A:229:PRO:HD2 | 1.75 | 0.68 |
| 1:C:287:GLY:O | 1:C:299:TRP:HB2 | 1.94 | 0.68 |
| 1:E:203:ASN:O | 1:E:206:GLN:HB3 | 1.93 | 0.68 |
| 1:E:305:TYR:CE1 | 1:E:307:LYS:HB2 | 2.28 | 0.68 |
| 1:A:50:GLU:HA | 1:A:306:PHE:O | 1.93 | 0.68 |
| 1:A:56:ARG:NH1 | 1:A:56:ARG:HB2 | 2.09 | 0.68 |
| 1:F:240:PHE:N | 1:F:240:PHE:CD1 | 2.58 | 0.68 |
| 1:F:265:ASP:OD1 | 1:F:269:VAL:HB | 1.94 | 0.68 |
| 1:A:304:ARG:HD3 | 1:A:306:PHE:CZ | 2.29 | 0.68 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:257:ASN:HD21 | 1:D:239:TYR:H | 1.42 | 0.68 |
| 1:C:308:ILE:HD12 | 1:C:308:ILE:N | 2.07 | 0.68 |
| 1:C:69:GLY:C | 1:C:71:GLN:H | 1.97 | 0.68 |
| 1:C:52:PHE:CD1 | 1:D:208:LEU:HD23 | 2.29 | 0.68 |
| 1:E:179:THR:O | 1:E:206:GLN:HG3 | 1.94 | 0.68 |
| 1:E:75:TRP:CZ2 | 1:E:300:ARG:HD2 | 2.29 | 0.68 |
| 1:C:318:PRO:HB3 | 1:F:363:ASP:H | 1.58 | 0.68 |
| 1:C:28:LEU:HD23 | 1:C:30:ILE:N | 2.09 | 0.68 |
| 1:F:41:THR:HB | 1:F:45:SER:OG | 1.93 | 0.68 |
| 1:F:72:TYR:O | 1:F:75:TRP:HB2 | 1.94 | 0.68 |
| 1:A:105:LEU:HB3 | 1:A:120:TRP:NE1 | 2.09 | 0.68 |
| 1:C:257:ASN:HD22 | 1:C:257:ASN:H | 1.41 | 0.68 |
| 1:F:317:ASN:HD22 | 1:F:318:PRO:HD2 | 1.58 | 0.68 |
| 1:B:318:PRO:HG2 | 1:B:319:TYR:H | 1.58 | 0.67 |
| 1:E:110:GLU:HA | 1:E:110:GLU:OE1 | 1.94 | 0.67 |
| 1:F:105:LEU:HB2 | 1:F:276:GLU:O | 1.93 | 0.67 |
| 1:C:293:ASN:OD1 | 1:C:294:TYR:HB2 | 1.94 | 0.67 |
| 1:E:112:LEU:HB3 | 1:E:116:THR:CG2 | 2.23 | 0.67 |
| 1:F:209:ASN:OD1 | 1:F:211:ILE:HD13 | 1.94 | 0.67 |
| 1:A:72:TYR:O | 1:A:75:TRP:HB2 | 1.95 | 0.67 |
| 1:B:52:PHE:CD2 | 1:C:208:LEU:HD23 | 2.30 | 0.67 |
| 1:C:153:ILE:HD11 | 1:D:297:HIS:HB3 | 1.76 | 0.67 |
| 1:C:335:GLN:HA | 1:C:335:GLN:OE1 | 1.91 | 0.67 |
| 1:A:69:GLY:HA3 | 1:A:71:GLN:NE2 | 2.10 | 0.67 |
| 1:C:105:LEU:HB3 | 1:C:120:TRP:CD1 | 2.29 | 0.67 |
| 1:D:211:ILE:HD12 | 1:D:211:ILE:N | 2.09 | 0.67 |
| 1:E:317:ASN:HD22 | 1:E:318:PRO:HD2 | 1.58 | 0.67 |
| 1:C:193:ILE:CD1 | 1:C:201:MET:SD | 2.83 | 0.67 |
| 1:C:168:GLY:CA | 1:C:237:THR:HG23 | 2.22 | 0.67 |
| 1:D:233:LYS:HG3 | 1:D:234:ASN:N | 2.10 | 0.67 |
| 1:C:350:GLU:HB3 | 1:F:233:LYS:HB3 | 1.75 | 0.67 |
| 1:F:269:VAL:HG12 | 1:F:270:GLY:O | 1.94 | 0.67 |
| 1:E:46:VAL:HG12 | 1:E:47:THR:N | 2.09 | 0.67 |
| 1:A:150:THR:HG21 | 1:A:292:ARG:HH21 | 1.59 | 0.67 |
| 1:A:192:THR:HG23 | 1:A:226:ILE:CD1 | 2.24 | 0.67 |
| 1:E:308:ILE:HD12 | 1:E:308:ILE:N | 2.10 | 0.67 |
| 1:A:97:THR:HG22 | 1:A:223:PRO:CA | 2.24 | 0.67 |
| 1:E:178:VAL:HG22 | 1:E:179:THR:H | 1.58 | 0.67 |
| 1:F:125:VAL:HB | 1:F:263:LEU:HD11 | 1.77 | 0.67 |
| 1:B:69:GLY:C | 1:B:71:GLN:H | 1.97 | 0.66 |
| 1:D:172:LEU:HD22 | 1:D:173:ASP:N | 2.10 | 0.66 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:105:LEU:HD12 | 1:E:105:LEU:N | 2.10 | 0.66 |
| 1:E:57:MET:CB | 1:E:96:PRO:HA | 2.25 | 0.66 |
| 1:F:336:VAL:HA | 1:F:337:GLN:N | 2.11 | 0.66 |
| 1:A:186:LYS:H | 1:A:186:LYS:HD2 | 1.61 | 0.66 |
| 1:A:324:LEU:HA | 1:A:327:SER:HB2 | 1.77 | 0.66 |
| 1:C:79:ILE:HB | 1:C:297:HIS:O | 1.94 | 0.66 |
| 1:E:255:PHE:O | 1:E:256:THR:HB | 1.94 | 0.66 |
| 1:B:313:ARG:HG2 | 1:B:314:TRP:N | 2.10 | 0.66 |
| 1:C:135:LEU:N | 1:C:135:LEU:HD22 | 2.10 | 0.66 |
| 1:C:123:VAL:HG13 | 1:C:264:LEU:HD13 | 1.77 | 0.66 |
| 1:F:288:TRP:HZ3 | 1:F:299:TRP:CD2 | 2.14 | 0.66 |
| 1:B:164:VAL:HG22 | 1:B:241:GLY:HA3 | 1.77 | 0.66 |
| 1:C:100:MET:C | 1:C:100:MET:SD | 2.73 | 0.66 |
| 1:D:207:VAL:HG23 | 1:D:208:LEU:N | 2.10 | 0.66 |
| 1:E:308:ILE:CG2 | 1:E:310:LEU:HD23 | 2.25 | 0.66 |
| 1:D:208:LEU:O | 1:D:210:PRO:HD3 | 1.95 | 0.66 |
| 1:D:145:THR:HG21 | 1:E:297:HIS:HE1 | 1.60 | 0.66 |
| 1:A:163:HIS:HA | 1:A:283:VAL:O | 1.96 | 0.66 |
| 1:E:194:LYS:H | 1:E:194:LYS:HD3 | 1.59 | 0.66 |
| 1:F:55:PRO:HD3 | 1:F:303:PRO:CA | 2.26 | 0.66 |
| 1:E:288:TRP:HZ3 | 1:E:299:TRP:CE2 | 2.13 | 0.66 |
| 1:F:108:LEU:HB3 | 1:F:118:GLN:NE2 | 2.09 | 0.66 |
| 1:F:288:TRP:CZ3 | 1:F:299:TRP:CD2 | 2.84 | 0.66 |
| 1:A:90:PRO:HG2 | 1:A:185:TYR:HA | 1.78 | 0.66 |
| 1:B:124:SER:HA | 1:B:261:THR:O | 1.95 | 0.65 |
| 1:C:193:ILE:N | 1:C:193:ILE:HD12 | 2.12 | 0.65 |
| 1:C:166:ALA:HA | 1:C:238:ARG:O | 1.97 | 0.65 |
| 1:D:114:CYS:HB2 | 1:D:116:THR:CG2 | 2.26 | 0.65 |
| 1:E:97:THR:HG22 | 1:E:222:TYR:O | 1.95 | 0.65 |
| 1:F:192:THR:H | 1:F:195:THR:CB | 2.09 | 0.65 |
| 1:F:69:GLY:C | 1:F:71:GLN:H | 1.98 | 0.65 |
| 1:A:175:GLN:HB2 | 1:A:230:ASP:CB | 2.16 | 0.65 |
| 1:B:125:VAL:HA | 1:B:307:LYS:O | 1.97 | 0.65 |
| 1:B:76:SER:O | 1:B:298:HIS:HB2 | 1.96 | 0.65 |
| 1:D:164:VAL:HG22 | 1:D:241:GLY:HA3 | 1.78 | 0.65 |
| 1:C:352:ARG:NH2 | 1:F:233:LYS:O | 2.29 | 0.65 |
| 1:A:150:THR:HG21 | 1:A:292:ARG:NH2 | 2.12 | 0.65 |
| 1:A:297:HIS:CE1 | 1:E:145:THR:HG21 | 2.27 | 0.65 |
| 1:E:125:VAL:HG13 | 1:E:125:VAL:O | 1.96 | 0.65 |
| 1:F:144:PRO:HD3 | 1:F:292:ARG:HG2 | 1.76 | 0.65 |
| 1:A:336:VAL:HG23 | 1:A:337:GLN:N | 2.12 | 0.65 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:28:LEU:HD12 | 1:F:353:VAL:O | 1.97 | 0.65 |
| 1:A:83:THR:HB | 1:A:87:GLU:HG2 | 1.79 | 0.65 |
| 1:B:84:SER:O | 1:B:86:THR:N | 2.30 | 0.65 |
| 1:D:308:ILE:N | 1:D:308:ILE:HD12 | 2.11 | 0.65 |
| 1:E:142:ASN:C | 1:E:292:ARG:HB2 | 2.16 | 0.65 |
| 1:B:108:LEU:HD11 | 1:B:120:TRP:CE2 | 2.32 | 0.65 |
| 1:C:105:LEU:HB3 | 1:C:120:TRP:NE1 | 2.12 | 0.65 |
| 1:C:144:PRO:HD3 | 1:C:292:ARG:CG | 2.27 | 0.65 |
| 1:D:79:ILE:HD11 | 1:D:299:TRP:CZ3 | 2.31 | 0.65 |
| 1:E:97:THR:HG22 | 1:E:222:TYR:C | 2.17 | 0.65 |
| 1:F:286:MET:HA | 1:F:286:MET:HE3 | 1.79 | 0.65 |
| 1:C:79:ILE:HD13 | 1:C:94:THR:HG23 | 1.79 | 0.65 |
| 1:D:97:THR:HG22 | 1:D:222:TYR:C | 2.16 | 0.65 |
| 1:D:30:ILE:CD1 | 1:D:36:VAL:HG13 | 2.26 | 0.65 |
| 1:A:84:SER:HA | 1:E:141:PHE:CD2 | 2.31 | 0.65 |
| 1:E:150:THR:O | 1:E:150:THR:HG22 | 1.95 | 0.65 |
| 1:E:233:LYS:HD3 | 1:E:234:ASN:ND2 | 2.06 | 0.65 |
| 1:F:243:TYR:CZ | 1:F:245:GLY:CA | 2.80 | 0.65 |
| 1:B:71:GLN:CG | 1:C:203:ASN:HB3 | 2.26 | 0.65 |
| 1:C:77:ARG:CB | 1:C:93:ASN:HB2 | 2.27 | 0.65 |
| 1:D:233:LYS:HG3 | 1:D:234:ASN:H | 1.61 | 0.65 |
| 1:F:265:ASP:H | 1:F:270:GLY:H | 1.43 | 0.65 |
| 1:A:257:ASN:HD22 | 1:B:239:TYR:H | 1.45 | 0.65 |
| 1:A:306:PHE:HB3 | 1:A:308:ILE:CD1 | 2.27 | 0.65 |
| 1:A:350:GLU:CG | 1:A:351:VAL:N | 2.58 | 0.65 |
| 1:B:208:LEU:O | 1:B:210:PRO:HD3 | 1.97 | 0.65 |
| 1:D:317:ASN:ND2 | 1:D:318:PRO:HD2 | 2.12 | 0.65 |
| 1:F:238:ARG:HH21 | 1:F:265:ASP:HB3 | 1.60 | 0.65 |
| 1:F:255:PHE:O | 1:F:256:THR:HB | 1.97 | 0.65 |
| 1:B:238:ARG:HH21 | 1:B:265:ASP:HB3 | 1.62 | 0.65 |
| 1:D:111:ASP:HB3 | 1:D:116:THR:CG2 | 2.26 | 0.65 |
| 1:D:193:ILE:N | 1:D:193:ILE:HD12 | 2.11 | 0.65 |
| 1:D:265:ASP:OD1 | 1:D:269:VAL:HB | 1.96 | 0.65 |
| 1:E:368:ARG:HA | 1:E:376:THR:O | 1.97 | 0.65 |
| 1:A:83:THR:HG22 | 1:A:87:GLU:HB3 | 1.79 | 0.64 |
| 1:D:193:ILE:H | 1:D:193:ILE:HD12 | 1.62 | 0.64 |
| 1:E:222:TYR:HB3 | 1:E:227:TRP:CD1 | 2.32 | 0.64 |
| 1:F:103:LEU:HB2 | 1:F:278:LEU:HB3 | 1.79 | 0.64 |
| 1:A:105:LEU:HB3 | 1:A:106:PRO:HD2 | 1.79 | 0.64 |
| 1:B:275:GLY:O | 1:B:277:GLY:N | 2.29 | 0.64 |
| 1:B:324:LEU:O | 1:B:328:LEU:HD23 | 1.98 | 0.64 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:198:LYS:HD3 | 1:C:198:LYS:H | 1.61 | 0.64 |
| 1:F:111:ASP:HB3 | 1:F:116:THR:CG2 | 2.27 | 0.64 |
| 1:F:319:TYR:HD1 | 1:F:320:PRO:HD2 | 1.61 | 0.64 |
| 1:A:246:GLY:HA3 | 1:A:249:THR:OG1 | 1.97 | 0.64 |
| 1:F:285:ILE:N | 1:F:285:ILE:HD12 | 2.12 | 0.64 |
| 1:B:71:GLN:HE21 | 1:B:73:TYR:HB2 | 1.61 | 0.64 |
| 1:D:35:GLU:HG2 | 1:D:36:VAL:N | 2.13 | 0.64 |
| 1:D:71:GLN:HA | 1:D:71:GLN:NE2 | 2.06 | 0.64 |
| 1:A:328:LEU:HD11 | 1:A:333:LEU:CD2 | 2.26 | 0.64 |
| 1:A:336:VAL:CB | 1:A:337:GLN:CA | 2.75 | 0.64 |
| 1:C:193:ILE:O | 1:C:196:ILE:HG23 | 1.98 | 0.64 |
| 1:D:106:PRO:HD2 | 1:D:120:TRP:HE1 | 1.61 | 0.64 |
| 1:E:54:ASN:HD22 | 1:E:55:PRO:HD2 | 1.62 | 0.64 |
| 1:A:233:LYS:HG3 | 1:A:234:ASN:N | 2.12 | 0.64 |
| 1:B:177:LEU:HD22 | 1:B:207:VAL:C | 2.18 | 0.64 |
| 1:C:193:ILE:HD11 | 1:C:201:MET:SD | 2.38 | 0.64 |
| 1:C:97:THR:HG22 | 1:C:223:PRO:CA | 2.27 | 0.64 |
| 1:E:233:LYS:HD2 | 1:E:234:ASN:H | 1.62 | 0.64 |
| 1:E:90:PRO:HB2 | 1:E:186:LYS:HE3 | 1.79 | 0.64 |
| 1:F:90:PRO:HB2 | 1:F:95:LEU:HD11 | 1.79 | 0.64 |
| 1:B:262:VAL:HG12 | 1:B:264:LEU:HB2 | 1.79 | 0.64 |
| 1:C:286:MET:CE | 1:C:286:MET:HA | 2.28 | 0.64 |
| 1:C:84:SER:O | 1:C:86:THR:N | 2.30 | 0.64 |
| 1:D:55:PRO:HD3 | 1:D:303:PRO:HA | 1.80 | 0.64 |
| 1:D:76:SER:HG | 1:D:299:TRP:HE3 | 1.46 | 0.64 |
| 1:E:103:LEU:HB2 | 1:E:278:LEU:HB3 | 1.80 | 0.64 |
| 1:A:69:GLY:O | 1:A:71:GLN:N | 2.30 | 0.64 |
| 1:C:192:THR:HB | 1:C:194:LYS:HD3 | 1.79 | 0.64 |
| 1:A:192:THR:HG21 | 1:A:194:LYS:HE2 | 1.79 | 0.64 |
| 1:B:259:LEU:N | 1:B:259:LEU:HD22 | 2.13 | 0.64 |
| 1:B:324:LEU:H | 1:B:324:LEU:HD22 | 1.62 | 0.64 |
| 1:C:103:LEU:HB2 | 1:C:278:LEU:HB3 | 1.78 | 0.64 |
| 1:C:193:ILE:HG12 | 1:C:201:MET:CE | 2.28 | 0.64 |
| 1:D:233:LYS:CG | 1:D:234:ASN:H | 2.10 | 0.64 |
| 1:F:161:GLN:HE22 | 1:F:251:PRO:HA | 1.63 | 0.64 |
| 1:A:105:LEU:HD12 | 1:A:105:LEU:N | 2.13 | 0.63 |
| 1:A:380:PHE:CD1 | 1:A:381:PRO:HD2 | 2.33 | 0.63 |
| 1:B:177:LEU:HD13 | 1:B:207:VAL:O | 1.98 | 0.63 |
| 1:C:211:ILE:N | 1:C:211:ILE:HD12 | 2.12 | 0.63 |
| 1:D:258:THR:HB | 1:D:259:LEU:CD2 | 2.29 | 0.63 |
| 1:D:335:GLN:NE2 | 1:D:335:GLN:HA | 2.13 | 0.63 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:243:TYR:CZ | 1:E:245:GLY:HA2 | 2.33 | 0.63 |
| 1:E:84:SER:O | 1:E:86:THR:N | 2.31 | 0.63 |
| 1:E:83:THR:CB | 1:E:87:GLU:HB3 | 2.27 | 0.63 |
| 1:A:308:ILE:HG22 | 1:A:310:LEU:HD12 | 1.79 | 0.63 |
| 1:D:186:LYS:H | 1:D:186:LYS:HD2 | 1.62 | 0.63 |
| 1:F:269:VAL:HA | 1:F:313:ARG:NH2 | 2.13 | 0.63 |
| 1:A:179:THR:O | 1:A:206:GLN:HG3 | 1.97 | 0.63 |
| 1:A:207:VAL:HG23 | 1:A:208:LEU:N | 2.14 | 0.63 |
| 1:B:161:GLN:HE22 | 1:B:251:PRO:CA | 2.11 | 0.63 |
| 1:B:257:ASN:HD21 | 1:C:239:TYR:H | 1.44 | 0.63 |
| 1:D:170:GLU:HB2 | 1:D:171:PRO:HD2 | 1.80 | 0.63 |
| 1:E:115:ASP:HB3 | 1:E:317:ASN:H | 1.62 | 0.63 |
| 1:F:182:ARG:HG3 | 1:F:183:THR:H | 1.63 | 0.63 |
| 1:A:306:PHE:HB3 | 1:A:308:ILE:HD11 | 1.79 | 0.63 |
| 1:B:185:TYR:CD2 | 1:B:192:THR:HG21 | 2.32 | 0.63 |
| 1:B:100:MET:SD | 1:B:101:ALA:N | 2.71 | 0.63 |
| 1:D:55:PRO:HD3 | 1:D:303:PRO:CA | 2.29 | 0.63 |
| 1:F:264:LEU:HD23 | 1:F:268:GLY:HA2 | 1.81 | 0.63 |
| 1:B:178:VAL:HG11 | 1:B:201:MET:HE1 | 1.79 | 0.63 |
| 1:D:239:TYR:C | 1:D:240:PHE:CD1 | 2.72 | 0.63 |
| 1:B:186:LYS:HE2 | 1:B:186:LYS:N | 2.13 | 0.63 |
| 1:E:169:GLY:HA3 | 1:E:272:LEU:O | 1.99 | 0.63 |
| 1:F:108:LEU:HD11 | 1:F:120:TRP:CZ2 | 2.34 | 0.63 |
| 1:A:172:LEU:HD22 | 1:A:173:ASP:N | 2.13 | 0.63 |
| 1:C:121:GLU:HG2 | 1:C:271:PRO:O | 1.98 | 0.63 |
| 1:C:186:LYS:N | 1:C:186:LYS:HE2 | 2.13 | 0.63 |
| 1:C:97:THR:HG22 | 1:C:223:PRO:HA | 1.81 | 0.63 |
| 1:C:265:ASP:OD1 | 1:C:269:VAL:HB | 1.99 | 0.63 |
| 1:A:257:ASN:HD21 | 1:B:238:ARG:HA | 1.60 | 0.63 |
| 1:C:100:MET:SD | 1:C:101:ALA:N | 2.72 | 0.63 |
| 1:F:263:LEU:O | 1:F:270:GLY:HA2 | 1.98 | 0.63 |
| 1:B:103:LEU:HD13 | 1:F:341:MET:HB3 | 1.81 | 0.63 |
| 1:B:269:VAL:HG12 | 1:B:270:GLY:O | 1.98 | 0.62 |
| 1:C:240:PHE:CD1 | 1:C:240:PHE:N | 2.66 | 0.62 |
| 1:D:313:ARG:HG2 | 1:D:314:TRP:H | 1.63 | 0.62 |
| 1:A:304:ARG:HG2 | 1:A:306:PHE:CE1 | 2.33 | 0.62 |
| 1:D:268:GLY:O | 1:D:313:ARG:NH2 | 2.32 | 0.62 |
| 1:A:288:TRP:CE3 | 1:A:299:TRP:HB3 | 2.34 | 0.62 |
| 1:A:336:VAL:CG2 | 1:A:337:GLN:CA | 2.70 | 0.62 |
| 1:C:115:ASP:CG | 1:C:116:THR:H | 2.03 | 0.62 |
| 1:C:341:MET:SD | 1:C:348:VAL:HG23 | 2.40 | 0.62 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:153:ILE:HD11 | 1:C:297:HIS:HB2 | 1.82 | 0.62 |
| 1:D:78:GLY:CA | 1:D:298:HIS:HB3 | 2.29 | 0.62 |
| 1:D:313:ARG:HG2 | 1:D:314:TRP:N | 2.14 | 0.62 |
| 1:E:130:VAL:O | 1:E:302:LEU:HD22 | 1.99 | 0.62 |
| 1:E:66:LEU:HB3 | 1:E:71:GLN:HB2 | 1.81 | 0.62 |
| 1:F:269:VAL:HA | 1:F:313:ARG:HH21 | 1.65 | 0.62 |
| 1:F:81:LEU:HD23 | 1:F:82:ALA:O | 2.00 | 0.62 |
| 1:A:131:GLY:O | 1:A:134:SER:HB3 | 1.99 | 0.62 |
| 1:A:97:THR:HA | 1:A:223:PRO:HA | 1.79 | 0.62 |
| 1:A:288:TRP:HB3 | 1:A:297:HIS:O | 1.99 | 0.62 |
| 1:D:76:SER:OG | 1:D:299:TRP:CE3 | 2.52 | 0.62 |
| 1:F:81:LEU:HG | 1:F:82:ALA:H | 1.64 | 0.62 |
| 1:B:52:PHE:CZ | 1:F:347:GLN:HB3 | 2.35 | 0.62 |
| 1:D:57:MET:O | 1:D:57:MET:HG3 | 2.00 | 0.62 |
| 1:E:142:ASN:O | 1:E:292:ARG:HB2 | 2.00 | 0.62 |
| 1:F:233:LYS:HD3 | 1:F:234:ASN:H | 1.63 | 0.62 |
| 1:A:175:GLN:HG2 | 1:A:212:SER:O | 2.00 | 0.62 |
| 1:B:185:TYR:HA | 1:B:186:LYS:HE2 | 1.82 | 0.62 |
| 1:E:240:PHE:N | 1:E:240:PHE:CD1 | 2.64 | 0.62 |
| 1:A:164:VAL:HA | 1:A:241:GLY:HA3 | 1.81 | 0.62 |
| 1:A:371:ASP:O | 1:A:373:PHE:N | 2.33 | 0.62 |
| 1:D:272:LEU:HD12 | 1:D:272:LEU:N | 2.15 | 0.62 |
| 1:E:162:TYR:CE1 | 1:E:283:VAL:HG21 | 2.35 | 0.62 |
| 1:E:304:ARG:HD3 | 1:E:306:PHE:CZ | 2.34 | 0.62 |
| 1:A:203:ASN:HD22 | 1:E:71:GLN:HE21 | 1.46 | 0.62 |
| 1:E:77:ARG:O | 1:E:298:HIS:CG | 2.52 | 0.62 |
| 1:F:317:ASN:HD22 | 1:F:318:PRO:CD | 2.13 | 0.62 |
| 1:F:90:PRO:CB | 1:F:95:LEU:HD11 | 2.30 | 0.62 |
| 1:B:185:TYR:HB2 | 1:B:194:LYS:HE3 | 1.82 | 0.62 |
| 1:D:179:THR:O | 1:D:206:GLN:HG3 | 2.00 | 0.62 |
| 1:A:175:GLN:HG3 | 1:A:213:LYS:CE | 2.30 | 0.62 |
| 1:F:125:VAL:O | 1:F:125:VAL:HG13 | 2.00 | 0.62 |
| 1:F:232:ALA:HB3 | 1:F:234:ASN:O | 1.99 | 0.62 |
| 1:A:130:VAL:HG23 | 1:A:303:PRO:HG2 | 1.82 | 0.61 |
| 1:B:117:LEU:HD12 | 1:B:117:LEU:H | 1.63 | 0.61 |
| 1:D:217:ASP:OD1 | 1:D:218:LYS:HD3 | 1.99 | 0.61 |
| 1:A:216:LEU:HD23 | 1:A:222:TYR:CD1 | 2.35 | 0.61 |
| 1:A:77:ARG:O | 1:A:298:HIS:CG | 2.53 | 0.61 |
| 1:E:366:MET:HG2 | 1:E:367:THR:N | 2.15 | 0.61 |
| 1:B:56:ARG:HE | 1:F:339:GLN:NE2 | 1.97 | 0.61 |
| 1:A:328:LEU:HD11 | 1:A:333:LEU:HD23 | 1.83 | 0.61 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:180:ASP:OD2 | 1:C:182:ARG:HD3 | 2.00 | 0.61 |
| 1:E:193:ILE:HG12 | 1:E:201:MET:CE | 2.30 | 0.61 |
| 1:E:285:ILE:N | 1:E:285:ILE:HD12 | 2.14 | 0.61 |
| 1:E:308:ILE:HG22 | 1:E:310:LEU:HD23 | 1.80 | 0.61 |
| 1:A:233:LYS:HA | 1:E:50:GLU:HG2 | 1.82 | 0.61 |
| 1:F:19:CYS:HB3 | 1:F:20:PRO:CD | 2.31 | 0.61 |
| 1:A:121:GLU:O | 1:A:310:LEU:HB2 | 1.99 | 0.61 |
| 1:B:165:PHE:CZ | 1:B:240:PHE:CE1 | 2.88 | 0.61 |
| 1:B:262:VAL:CG1 | 1:B:264:LEU:HB2 | 2.30 | 0.61 |
| 1:B:35:GLU:O | 1:B:38:ASP:HB2 | 2.00 | 0.61 |
| 1:D:43:PRO:O | 1:D:312:LYS:HB2 | 2.00 | 0.61 |
| 1:D:76:SER:OG | 1:D:299:TRP:HE3 | 1.84 | 0.61 |
| 1:A:135:LEU:HD12 | 1:A:135:LEU:H | 1.66 | 0.61 |
| 1:A:193:ILE:O | 1:A:196:ILE:HG23 | 2.01 | 0.61 |
| 1:D:66:LEU:HD12 | 1:E:182:ARG:HB3 | 1.83 | 0.61 |
| 1:B:101:ALA:HB2 | 1:F:339:GLN:HB2 | 1.81 | 0.61 |
| 1:B:203:ASN:O | 1:B:206:GLN:HB3 | 2.00 | 0.61 |
| 1:C:251:PRO:HD2 | 1:D:245:GLY:HA3 | 1.83 | 0.61 |
| 1:E:136:LEU:O | 1:E:138:VAL:HG22 | 2.01 | 0.61 |
| 1:E:318:PRO:HG2 | 1:E:319:TYR:CD2 | 2.36 | 0.61 |
| 1:B:177:LEU:CD2 | 1:B:208:LEU:HA | 2.31 | 0.61 |
| 1:B:186:LYS:HE2 | 1:B:186:LYS:H | 1.66 | 0.61 |
| 1:C:256:THR:HB | 1:D:240:PHE:HA | 1.82 | 0.61 |
| 1:C:304:ARG:HD3 | 1:C:306:PHE:CZ | 2.36 | 0.61 |
| 1:D:54:ASN:HD21 | 1:E:208:LEU:CB | 2.14 | 0.61 |
| 1:E:218:LYS:N | 1:E:218:LYS:HD2 | 2.16 | 0.61 |
| 1:A:336:VAL:HB | 1:A:337:GLN:CA | 2.31 | 0.61 |
| 1:C:300:ARG:HH11 | 1:C:300:ARG:HG3 | 1.65 | 0.61 |
| 1:C:118:GLN:HB3 | 1:C:314:TRP:CE3 | 2.36 | 0.61 |
| 1:A:288:TRP:HE3 | 1:A:299:TRP:HB3 | 1.65 | 0.61 |
| 1:D:253:LEU:HD23 | 1:D:254:GLN:N | 2.16 | 0.61 |
| 1:B:103:LEU:CD2 | 1:F:341:MET:HG3 | 2.30 | 0.61 |
| 1:A:233:LYS:HG3 | 1:A:234:ASN:ND2 | 2.15 | 0.61 |
| 1:B:22:PRO:HG2 | 1:F:359:PRO:CB | 2.31 | 0.61 |
| 1:C:170:GLU:HB2 | 1:C:171:PRO:HD2 | 1.83 | 0.61 |
| 1:C:341:MET:CE | 1:C:347:GLN:HB2 | 2.30 | 0.61 |
| 1:D:178:VAL:CG2 | 1:D:179:THR:H | 2.14 | 0.61 |
| 1:D:306:PHE:HB3 | 1:D:308:ILE:HD11 | 1.83 | 0.61 |
| 1:A:84:SER:HB3 | 1:A:86:THR:HG22 | 1.83 | 0.60 |
| 1:D:232:ALA:HB3 | 1:D:235:GLU:OE1 | 2.01 | 0.60 |
| 1:E:170:GLU:CD | 1:E:274:LYS:HD2 | 2.22 | 0.60 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:324:LEU:HD12 | 1:F:325:ILE:N | 2.16 | 0.60 |
| 1:A:141:PHE:HD2 | 1:B:84:SER:HA | 1.63 | 0.60 |
| 1:D:203:ASN:O | 1:D:206:GLN:HB3 | 2.01 | 0.60 |
| 1:F:104:GLN:NE2 | 1:F:105:LEU:N | 2.49 | 0.60 |
| 1:B:25:VAL:HG21 | 1:F:360:VAL:HG13 | 1.81 | 0.60 |
| 1:A:240:PHE:CD1 | 1:A:240:PHE:N | 2.65 | 0.60 |
| 1:B:46:VAL:HG12 | 1:B:47:THR:H | 1.66 | 0.60 |
| 1:D:84:SER:O | 1:D:86:THR:N | 2.34 | 0.60 |
| 1:E:55:PRO:HD3 | 1:E:303:PRO:HB3 | 1.82 | 0.60 |
| 1:E:333:LEU:HD22 | 1:E:333:LEU:H | 1.66 | 0.60 |
| 1:F:211:ILE:N | 1:F:211:ILE:HD12 | 2.16 | 0.60 |
| 1:F:94:THR:O | 1:F:95:LEU:HD23 | 2.01 | 0.60 |
| 1:A:251:PRO:HG2 | 1:B:243:TYR:HE2 | 1.66 | 0.60 |
| 1:A:35:GLU:HG2 | 1:A:36:VAL:N | 2.15 | 0.60 |
| 1:B:30:ILE:HG12 | 1:B:31:LYS:N | 2.17 | 0.60 |
| 1:B:346:THR:HG21 | 1:B:348:VAL:CG1 | 2.31 | 0.60 |
| 1:C:207:VAL:HG23 | 1:C:208:LEU:N | 2.15 | 0.60 |
| 1:C:79:ILE:HD11 | 1:C:299:TRP:CZ3 | 2.37 | 0.60 |
| 1:D:91:GLY:N | 1:D:186:LYS:HZ1 | 1.99 | 0.60 |
| 1:D:168:GLY:CA | 1:D:237:THR:HG23 | 2.28 | 0.60 |
| 1:E:79:ILE:HD11 | 1:E:299:TRP:CZ3 | 2.36 | 0.60 |
| 1:F:291:THR:OG1 | 1:F:296:VAL:HB | 2.01 | 0.60 |
| 1:C:111:ASP:CG | 1:C:114:CYS:HB3 | 2.21 | 0.60 |
| 1:C:192:THR:O | 1:C:196:ILE:HG22 | 2.02 | 0.60 |
| 1:D:192:THR:O | 1:D:196:ILE:HG22 | 2.00 | 0.60 |
| 1:D:265:ASP:CG | 1:D:269:VAL:HB | 2.21 | 0.60 |
| 1:E:207:VAL:HG23 | 1:E:208:LEU:N | 2.16 | 0.60 |
| 1:A:257:ASN:HB2 | 1:B:239:TYR:CZ | 2.36 | 0.60 |
| 1:B:269:VAL:HA | 1:B:313:ARG:NH2 | 2.16 | 0.60 |
| 1:C:105:LEU:N | 1:C:105:LEU:HD12 | 2.16 | 0.60 |
| 1:D:133:GLY:CA | 1:E:228:HIS:HE1 | 2.13 | 0.60 |
| 1:F:19:CYS:HB3 | 1:F:20:PRO:HD2 | 1.82 | 0.60 |
| 1:F:317:ASN:ND2 | 1:F:319:TYR:H | 1.99 | 0.60 |
| 1:E:313:ARG:CG | 1:E:313:ARG:HH11 | 2.14 | 0.60 |
| 1:F:233:LYS:HD3 | 1:F:234:ASN:HB2 | 1.83 | 0.60 |
| 1:F:125:VAL:HG11 | 1:F:263:LEU:HD21 | 1.82 | 0.60 |
| 1:E:370:VAL:HG22 | 1:E:375:LYS:CB | 2.32 | 0.60 |
| 1:F:205:ASP:HA | 1:F:209:ASN:HB2 | 1.84 | 0.60 |
| 1:B:240:PHE:N | 1:B:240:PHE:CD1 | 2.68 | 0.60 |
| 1:B:341:MET:CE | 1:B:348:VAL:HB | 2.31 | 0.60 |
| 1:C:111:ASP:OD2 | 1:C:114:CYS:HB3 | 2.02 | 0.60 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:132:SER:HA | 1:C:135:LEU:HD23 | 1.83 | 0.60 |
| 1:C:152:GLY:HA2 | 1:D:295:ASP:HB3 | 1.83 | 0.60 |
| 1:C:194:LYS:H | 1:C:194:LYS:HD3 | 1.65 | 0.60 |
| 1:C:194:LYS:HG2 | 1:C:195:THR:H | 1.66 | 0.60 |
| 1:D:193:ILE:CD1 | 1:D:194:LYS:HD3 | 2.32 | 0.60 |
| 1:C:118:GLN:HB3 | 1:C:314:TRP:CZ3 | 2.37 | 0.60 |
| 1:C:265:ASP:H | 1:C:270:GLY:H | 1.50 | 0.60 |
| 1:F:285:ILE:H | 1:F:285:ILE:HD12 | 1.65 | 0.60 |
| 1:A:251:PRO:HG2 | 1:B:245:GLY:HA3 | 1.84 | 0.59 |
| 1:B:257:ASN:ND2 | 1:C:239:TYR:H | 2.00 | 0.59 |
| 1:C:265:ASP:HB3 | 1:C:270:GLY:H | 1.66 | 0.59 |
| 1:A:153:ILE:HG12 | 1:B:297:HIS:ND1 | 2.17 | 0.59 |
| 1:A:336:VAL:HB | 1:A:338:GLY:H | 1.67 | 0.59 |
| 1:B:207:VAL:HG23 | 1:B:208:LEU:H | 1.67 | 0.59 |
| 1:B:251:PRO:HD2 | 1:C:245:GLY:CA | 2.32 | 0.59 |
| 1:D:348:VAL:HG12 | 1:D:348:VAL:O | 2.02 | 0.59 |
| 1:A:328:LEU:CD1 | 1:A:333:LEU:HD21 | 2.32 | 0.59 |
| 1:A:336:VAL:HB | 1:A:337:GLN:HA | 1.84 | 0.59 |
| 1:C:197:THR:O | 1:C:199:LYS:N | 2.35 | 0.59 |
| 1:C:142:ASN:O | 1:C:292:ARG:HB2 | 2.01 | 0.59 |
| 1:C:346:THR:HG22 | 1:C:348:VAL:CB | 2.27 | 0.59 |
| 1:C:57:MET:HB3 | 1:C:96:PRO:HB3 | 1.84 | 0.59 |
| 1:D:193:ILE:HD12 | 1:D:194:LYS:HD3 | 1.83 | 0.59 |
| 1:D:30:ILE:HD12 | 1:D:39:LEU:HD23 | 1.84 | 0.59 |
| 1:F:288:TRP:CZ3 | 1:F:299:TRP:CE3 | 2.89 | 0.59 |
| 1:F:288:TRP:HE3 | 1:F:299:TRP:CB | 2.15 | 0.59 |
| 1:F:55:PRO:HD3 | 1:F:303:PRO:HA | 1.83 | 0.59 |
| 1:A:25:VAL:HG13 | 1:A:26:PRO:HD2 | 1.84 | 0.59 |
| 1:A:142:ASN:O | 1:A:292:ARG:HB2 | 2.01 | 0.59 |
| 1:A:69:GLY:C | 1:A:71:GLN:N | 2.55 | 0.59 |
| 1:B:59:GLN:HE21 | 1:B:71:GLN:HE22 | 1.47 | 0.59 |
| 1:C:125:VAL:HA | 1:C:307:LYS:O | 2.02 | 0.59 |
| 1:E:193:ILE:O | 1:E:196:ILE:HG23 | 2.01 | 0.59 |
| 1:E:278:LEU:HD22 | 1:E:279:TYR:N | 2.17 | 0.59 |
| 1:E:306:PHE:HB3 | 1:E:308:ILE:CD1 | 2.32 | 0.59 |
| 1:F:263:LEU:HB3 | 1:F:271:PRO:HD3 | 1.85 | 0.59 |
| 1:F:50:GLU:HA | 1:F:306:PHE:O | 2.00 | 0.59 |
| 1:B:135:LEU:CD1 | 1:B:135:LEU:N | 2.64 | 0.59 |
| 1:E:35:GLU:HG2 | 1:E:36:VAL:N | 2.16 | 0.59 |
| 1:E:88:ASP:O | 1:E:184:LYS:HB2 | 2.03 | 0.59 |
| 1:D:47:THR:O | 1:D:310:LEU:HD12 | 2.03 | 0.59 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:177:LEU:HD21 | 1:E:209:ASN:N | 2.15 | 0.59 |
| 1:F:192:THR:HB | 1:F:194:LYS:HD3 | 1.84 | 0.59 |
| 1:A:82:ALA:HB1 | 1:A:88:ASP:HA | 1.85 | 0.59 |
| 1:C:285:ILE:N | 1:C:285:ILE:HD12 | 2.17 | 0.59 |
| 1:D:62:THR:OG1 | 1:D:63:PRO:HD3 | 2.03 | 0.59 |
| 1:A:295:ASP:HB3 | 1:E:152:GLY:HA2 | 1.84 | 0.59 |
| 1:F:300:ARG:HG3 | 1:F:301:GLY:N | 2.18 | 0.59 |
| 1:B:238:ARG:NH2 | 1:B:265:ASP:HB3 | 2.18 | 0.59 |
| 1:E:306:PHE:HB3 | 1:E:308:ILE:HD11 | 1.84 | 0.59 |
| 1:B:108:LEU:HB3 | 1:B:118:GLN:HE21 | 1.67 | 0.59 |
| 1:B:339:GLN:NE2 | 1:B:347:GLN:NE2 | 2.51 | 0.59 |
| 1:C:117:LEU:HD13 | 1:C:118:GLN:N | 2.17 | 0.59 |
| 1:F:197:THR:HG23 | 1:F:197:THR:O | 2.02 | 0.59 |
| 1:A:369:TYR:N | 1:A:369:TYR:CD1 | 2.71 | 0.59 |
| 1:B:75:TRP:NE1 | 1:B:300:ARG:HB2 | 2.18 | 0.59 |
| 1:E:238:ARG:NH2 | 1:E:265:ASP:HB3 | 2.17 | 0.59 |
| 1:E:367:THR:CG2 | 1:E:368:ARG:N | 2.66 | 0.59 |
| 1:E:57:MET:HB2 | 1:E:96:PRO:HB3 | 1.85 | 0.59 |
| 1:F:186:LYS:CD | 1:F:186:LYS:H | 2.16 | 0.59 |
| 1:A:296:VAL:HG11 | 2:G:3:SIA:H32 | 1.83 | 0.59 |
| 1:A:233:LYS:HG3 | 1:A:234:ASN:H | 1.68 | 0.58 |
| 1:A:300:ARG:HG3 | 1:A:301:GLY:N | 2.17 | 0.58 |
| 1:A:122:ALA:HA | 1:A:310:LEU:HB3 | 1.85 | 0.58 |
| 1:A:43:PRO:HA | 1:A:312:LYS:HD2 | 1.85 | 0.58 |
| 1:B:222:TYR:H | 1:B:222:TYR:HD1 | 1.50 | 0.58 |
| 1:C:145:THR:HG21 | 1:D:297:HIS:HE1 | 1.68 | 0.58 |
| 1:C:285:ILE:H | 1:C:285:ILE:HD12 | 1.68 | 0.58 |
| 1:C:57:MET:HA | 1:C:96:PRO:HA | 1.83 | 0.58 |
| 1:D:125:VAL:HB | 1:D:263:LEU:HD11 | 1.85 | 0.58 |
| 1:E:228:HIS:HB3 | 1:E:229:PRO:HD2 | 1.84 | 0.58 |
| 1:E:66:LEU:CD2 | 1:E:66:LEU:H | 2.12 | 0.58 |
| 1:F:80:ASN:HB3 | 1:F:90:PRO:O | 2.02 | 0.58 |
| 1:A:211:ILE:O | 1:A:213:LYS:N | 2.36 | 0.58 |
| 1:B:43:PRO:HA | 1:B:312:LYS:HD2 | 1.85 | 0.58 |
| 1:C:69:GLY:O | 1:C:71:GLN:N | 2.36 | 0.58 |
| 1:D:52:PHE:CE1 | 1:E:208:LEU:HD22 | 2.38 | 0.58 |
| 1:E:150:THR:HG21 | 1:E:292:ARG:HH21 | 1.67 | 0.58 |
| 1:E:368:ARG:NH2 | 1:E:377:LYS:HE3 | 2.18 | 0.58 |
| 1:F:62:THR:OG1 | 1:F:63:PRO:HD3 | 2.04 | 0.58 |
| 1:A:80:ASN:HB3 | 1:A:90:PRO:O | 2.03 | 0.58 |
| 1:F:90:PRO:HD2 | 1:F:186:LYS:HE3 | 1.84 | 0.58 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:142:ASN:HD21 | 1:A:289:ARG:HG3 | 1.68 | 0.58 |
| 1:A:79:ILE:HG21 | 1:E:153:ILE:CD1 | 2.34 | 0.58 |
| 1:E:28:LEU:HG | 1:E:29:LEU:N | 2.19 | 0.58 |
| 1:F:201:MET:HA | 1:F:201:MET:CE | 2.33 | 0.58 |
| 1:B:165:PHE:CZ | 1:B:240:PHE:HE1 | 2.21 | 0.58 |
| 1:B:306:PHE:HB3 | 1:B:308:ILE:HD11 | 1.84 | 0.58 |
| 1:B:34:MET:O | 1:B:37:LEU:HB2 | 2.04 | 0.58 |
| 1:C:207:VAL:HG23 | 1:C:208:LEU:H | 1.69 | 0.58 |
| 1:D:106:PRO:HD2 | 1:D:120:TRP:NE1 | 2.17 | 0.58 |
| 1:D:50:GLU:OE2 | 1:E:233:LYS:HA | 2.03 | 0.58 |
| 1:E:166:ALA:HA | 1:E:238:ARG:O | 2.03 | 0.58 |
| 1:A:313:ARG:NH1 | 1:E:23:ALA:HB1 | 2.19 | 0.58 |
| 1:E:60:PRO:HB2 | 1:E:61:PRO:HD2 | 1.84 | 0.58 |
| 1:F:208:LEU:HD23 | 1:F:208:LEU:O | 2.04 | 0.58 |
| 1:A:106:PRO:HD2 | 1:A:120:TRP:HE1 | 1.69 | 0.58 |
| 1:A:175:GLN:HA | 1:A:213:LYS:HA | 1.85 | 0.58 |
| 1:B:205:ASP:CA | 1:B:209:ASN:HB2 | 2.30 | 0.58 |
| 1:B:358:GLU:HG3 | 1:B:359:PRO:O | 2.03 | 0.58 |
| 1:C:178:VAL:HG22 | 1:C:179:THR:N | 2.18 | 0.58 |
| 1:D:108:LEU:HB3 | 1:D:118:GLN:HE21 | 1.68 | 0.58 |
| 1:F:252:VAL:O | 1:F:253:LEU:HD12 | 2.04 | 0.58 |
| 1:A:135:LEU:CD1 | 1:A:135:LEU:H | 2.17 | 0.58 |
| 1:A:135:LEU:N | 1:A:135:LEU:CD1 | 2.66 | 0.58 |
| 1:B:25:VAL:HG12 | 1:B:26:PRO:HD2 | 1.86 | 0.58 |
| 1:D:339:GLN:HG2 | 1:D:340:PRO:HD2 | 1.85 | 0.58 |
| 1:F:122:ALA:HA | 1:F:310:LEU:HB3 | 1.85 | 0.58 |
| 1:F:69:GLY:O | 1:F:71:GLN:N | 2.37 | 0.58 |
| 1:A:129:VAL:HB | 1:A:253:LEU:HD21 | 1.84 | 0.58 |
| 1:A:150:THR:HG22 | 1:A:150:THR:O | 2.02 | 0.58 |
| 1:B:177:LEU:CD2 | 1:B:205:ASP:O | 2.51 | 0.58 |
| 1:B:310:LEU:H | 1:B:310:LEU:HD12 | 1.69 | 0.58 |
| 1:C:233:LYS:HG3 | 1:C:234:ASN:N | 2.19 | 0.58 |
| 1:E:315:VAL:HG12 | 1:E:316:LYS:H | 1.67 | 0.58 |
| 1:E:296:VAL:HG11 | 2:K:3:SIA:H32 | 1.86 | 0.58 |
| 1:E:92:ASN:OD1 | 1:E:186:LYS:HD2 | 2.04 | 0.58 |
| 1:E:208:LEU:HD23 | 1:E:210:PRO:HG3 | 1.86 | 0.58 |
| 1:E:150:THR:HG21 | 1:E:292:ARG:NH2 | 2.19 | 0.58 |
| 1:A:205:ASP:HA | 1:A:209:ASN:CB | 2.29 | 0.58 |
| 1:B:162:TYR:CE1 | 1:B:224:VAL:HG11 | 2.39 | 0.58 |
| 1:C:202:VAL:HG12 | 1:C:203:ASN:OD1 | 2.04 | 0.58 |
| 1:C:50:GLU:HG2 | 1:C:307:LYS:HG3 | 1.84 | 0.58 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:125:VAL:HA | 1:E:307:LYS:O | 2.04 | 0.58 |
| 1:E:35:GLU:HG2 | 1:E:36:VAL:H | 1.69 | 0.58 |
| 1:E:90:PRO:HB3 | 1:E:95:LEU:HD11 | 1.86 | 0.58 |
| 1:F:100:MET:SD | 1:F:101:ALA:N | 2.77 | 0.58 |
| 1:F:150:THR:HG21 | 1:F:292:ARG:NH2 | 2.19 | 0.58 |
| 1:A:30:ILE:CG1 | 1:A:36:VAL:HG13 | 2.33 | 0.57 |
| 1:B:69:GLY:O | 1:B:71:GLN:N | 2.37 | 0.57 |
| 1:C:191:VAL:HG21 | 1:C:222:TYR:CD2 | 2.39 | 0.57 |
| 1:D:233:LYS:CG | 1:D:234:ASN:N | 2.66 | 0.57 |
| 1:D:341:MET:HE2 | 1:D:347:GLN:HB2 | 1.86 | 0.57 |
| 1:A:257:ASN:HD22 | 1:B:238:ARG:HA | 1.65 | 0.57 |
| 1:A:34:MET:O | 1:A:37:LEU:HD13 | 2.04 | 0.57 |
| 1:B:261:THR:HG22 | 1:B:262:VAL:N | 2.19 | 0.57 |
| 1:B:342:GLU:N | 1:B:346:THR:HG23 | 2.19 | 0.57 |
| 1:D:177:LEU:CD1 | 1:D:177:LEU:N | 2.68 | 0.57 |
| 1:D:32:GLY:CA | 1:D:36:VAL:HG21 | 2.34 | 0.57 |
| 1:E:61:PRO:HG2 | 1:E:62:THR:H | 1.68 | 0.57 |
| 1:F:287:GLY:O | 1:F:299:TRP:HB2 | 2.03 | 0.57 |
| 1:A:293:ASN:OD1 | 1:A:294:TYR:N | 2.38 | 0.57 |
| 1:B:48:GLU:O | 1:F:351:VAL:HA | 2.03 | 0.57 |
| 1:C:222:TYR:HB3 | 1:C:227:TRP:CD1 | 2.40 | 0.57 |
| 1:C:341:MET:C | 1:C:346:THR:HG23 | 2.25 | 0.57 |
| 1:D:100:MET:C | 1:D:100:MET:SD | 2.83 | 0.57 |
| 1:E:317:ASN:ND2 | 1:E:318:PRO:HD2 | 2.17 | 0.57 |
| 1:E:58:GLY:HA3 | 1:E:76:SER:HA | 1.84 | 0.57 |
| 1:A:175:GLN:HG3 | 1:A:213:LYS:CD | 2.34 | 0.57 |
| 1:B:105:LEU:N | 1:B:105:LEU:HD12 | 2.18 | 0.57 |
| 1:A:251:PRO:HG2 | 1:B:243:TYR:CE2 | 2.39 | 0.57 |
| 1:C:263:LEU:O | 1:C:270:GLY:HA2 | 2.04 | 0.57 |
| 1:A:166:ALA:HB2 | 1:A:239:TYR:CB | 2.34 | 0.57 |
| 1:B:111:ASP:OD2 | 1:B:114:CYS:SG | 2.62 | 0.57 |
| 1:B:209:ASN:OD1 | 1:B:211:ILE:HD13 | 2.04 | 0.57 |
| 1:B:222:TYR:N | 1:B:222:TYR:CD1 | 2.72 | 0.57 |
| 1:B:371:ASP:O | 1:B:373:PHE:N | 2.37 | 0.57 |
| 1:D:150:THR:HG21 | 1:D:292:ARG:HH21 | 1.68 | 0.57 |
| 1:E:256:THR:OG1 | 1:E:257:ASN:N | 2.37 | 0.57 |
| 1:F:204:LYS:NZ | 1:F:204:LYS:HB3 | 2.18 | 0.57 |
| 1:F:57:MET:SD | 1:F:301:GLY:HA3 | 2.44 | 0.57 |
| 1:B:164:VAL:HA | 1:B:241:GLY:HA3 | 1.87 | 0.57 |
| 1:B:300:ARG:HG3 | 1:B:301:GLY:N | 2.18 | 0.57 |
| 1:B:72:TYR:O | 1:B:75:TRP:HB2 | 2.03 | 0.57 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:D:100:MET:SD | 1:D:101:ALA:N | 2.78 | 0.57 |
| 1:E:298:HIS:CD2 | 1:E:298:HIS:H | 2.22 | 0.57 |
| 1:F:339:GLN:HG2 | 1:F:340:PRO:HD2 | 1.85 | 0.57 |
| 1:B:76:SER:OG | 1:B:299:TRP:CE3 | 2.58 | 0.57 |
| 1:D:131:GLY:O | 1:D:134:SER:HB3 | 2.05 | 0.57 |
| 1:A:293:ASN:OD1 | 1:A:294:TYR:HB2 | 2.05 | 0.57 |
| 1:A:350:GLU:HG3 | 1:A:351:VAL:H | 1.69 | 0.57 |
| 1:A:378:THR:HG22 | 1:A:379:VAL:O | 2.05 | 0.57 |
| 1:B:46:VAL:HG12 | 1:B:47:THR:N | 2.19 | 0.57 |
| 1:E:288:TRP:CZ3 | 1:E:299:TRP:CE2 | 2.92 | 0.57 |
| 1:A:174:LEU:HA | 1:A:230:ASP:H | 1.70 | 0.57 |
| 1:A:263:LEU:O | 1:A:270:GLY:HA2 | 2.04 | 0.57 |
| 1:C:190:VAL:HG23 | 1:C:221:MET:O | 2.04 | 0.57 |
| 1:C:25:VAL:CG1 | 1:C:26:PRO:HD2 | 2.35 | 0.57 |
| 1:E:177:LEU:CD1 | 1:E:207:VAL:O | 2.42 | 0.57 |
| 1:C:177:LEU:HD23 | 1:C:177:LEU:N | 2.20 | 0.57 |
| 1:C:76:SER:OG | 1:C:299:TRP:CE3 | 2.52 | 0.57 |
| 1:C:55:PRO:HD3 | 1:C:303:PRO:HA | 1.86 | 0.57 |
| 1:C:363:ASP:HB3 | 1:C:366:MET:CE | 2.35 | 0.57 |
| 1:E:354:TYR:N | 1:E:354:TYR:CD1 | 2.73 | 0.57 |
| 1:A:243:TYR:CZ | 1:A:245:GLY:HA2 | 2.39 | 0.56 |
| 1:B:166:ALA:HA | 1:B:238:ARG:O | 2.06 | 0.56 |
| 1:D:219:ASP:O | 1:D:221:MET:HB2 | 2.05 | 0.56 |
| 1:E:39:LEU:HD12 | 1:E:39:LEU:O | 2.05 | 0.56 |
| 1:A:232:ALA:HB3 | 1:A:234:ASN:O | 2.05 | 0.56 |
| 1:A:261:THR:HG22 | 1:A:262:VAL:N | 2.19 | 0.56 |
| 1:A:265:ASP:H | 1:A:270:GLY:H | 1.51 | 0.56 |
| 1:A:319:TYR:N | 1:A:320:PRO:HD2 | 2.20 | 0.56 |
| 1:B:194:LYS:HG3 | 1:B:195:THR:H | 1.71 | 0.56 |
| 1:C:193:ILE:O | 1:C:197:THR:HG22 | 2.05 | 0.56 |
| 1:C:198:LYS:HD3 | 1:C:198:LYS:N | 2.17 | 0.56 |
| 1:C:210:PRO:HA | 1:C:213:LYS:HE2 | 1.87 | 0.56 |
| 1:C:246:GLY:HA3 | 1:C:249:THR:OG1 | 2.06 | 0.56 |
| 1:C:318:PRO:O | 1:C:320:PRO:HD3 | 2.05 | 0.56 |
| 1:E:113:THR:C | 1:E:115:ASP:H | 2.08 | 0.56 |
| 1:E:34:MET:O | 1:E:37:LEU:HD22 | 2.06 | 0.56 |
| 1:F:130:VAL:HG23 | 1:F:303:PRO:HG2 | 1.86 | 0.56 |
| 1:A:323:SER:O | 1:A:327:SER:HB2 | 2.05 | 0.56 |
| 1:B:122:ALA:HB3 | 1:B:271:PRO:HD2 | 1.87 | 0.56 |
| 1:C:186:LYS:HE2 | 1:C:186:LYS:H | 1.69 | 0.56 |
| 1:C:55:PRO:HD3 | 1:C:303:PRO:CA | 2.36 | 0.56 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:77:ARG:CB | 1:E:93:ASN:HB2 | 2.36 | 0.56 |
| 1:A:169:GLY:HA3 | 1:A:272:LEU:O | 2.05 | 0.56 |
| 1:B:265:ASP:H | 1:B:270:GLY:H | 1.53 | 0.56 |
| 1:B:323:SER:O | 1:B:327:SER:N | 2.38 | 0.56 |
| 1:D:105:LEU:HD12 | 1:D:105:LEU:N | 2.21 | 0.56 |
| 1:E:88:ASP:H | 1:E:184:LYS:HD3 | 1.70 | 0.56 |
| 1:F:57:MET:HA | 1:F:96:PRO:HA | 1.87 | 0.56 |
| 1:A:20:PRO:HG2 | 1:B:116:THR:HG21 | 1.87 | 0.56 |
| 1:B:166:ALA:HB2 | 1:B:239:TYR:HB3 | 1.88 | 0.56 |
| 1:B:288:TRP:CZ3 | 1:B:299:TRP:CE2 | 2.91 | 0.56 |
| 1:B:50:GLU:HA | 1:B:306:PHE:O | 2.06 | 0.56 |
| 1:B:153:ILE:HG12 | 1:C:297:HIS:CE1 | 2.40 | 0.56 |
| 1:C:350:GLU:CD | 1:C:351:VAL:H | 2.09 | 0.56 |
| 1:D:219:ASP:O | 1:D:221:MET:N | 2.39 | 0.56 |
| 1:E:243:TYR:OH | 1:E:245:GLY:HA2 | 2.05 | 0.56 |
| 1:F:186:LYS:H | 1:F:186:LYS:HD2 | 1.71 | 0.56 |
| 1:F:192:THR:HG22 | 1:F:193:ILE:CD1 | 2.35 | 0.56 |
| 1:F:96:PRO:HG3 | 1:F:299:TRP:CZ2 | 2.40 | 0.56 |
| 1:A:192:THR:HG23 | 1:A:226:ILE:HD13 | 1.87 | 0.56 |
| 1:B:286:MET:HE3 | 1:B:286:MET:HA | 1.87 | 0.56 |
| 1:D:98:TRP:HH2 | 1:D:164:VAL:CG1 | 2.18 | 0.56 |
| 1:E:194:LYS:HA | 1:E:197:THR:O | 2.06 | 0.56 |
| 1:C:97:THR:HA | 1:C:223:PRO:HA | 1.88 | 0.56 |
| 1:E:90:PRO:HD2 | 1:E:186:LYS:CE | 2.35 | 0.56 |
| 1:D:133:GLY:H | 1:E:228:HIS:HE1 | 1.52 | 0.56 |
| 1:E:291:THR:OG1 | 1:E:296:VAL:HB | 2.06 | 0.56 |
| 1:E:46:VAL:HG12 | 1:E:47:THR:H | 1.69 | 0.56 |
| 1:B:150:THR:HG22 | 1:B:150:THR:O | 2.04 | 0.56 |
| 1:F:300:ARG:CG | 1:F:301:GLY:N | 2.68 | 0.56 |
| 1:B:175:GLN:HE21 | 1:B:176:GLY:N | 2.04 | 0.56 |
| 1:B:66:LEU:HD23 | 1:B:66:LEU:N | 2.20 | 0.56 |
| 1:B:256:THR:HA | 1:C:239:TYR:CE1 | 2.41 | 0.56 |
| 1:C:360:VAL:HG12 | 1:C:361:PRO:HD2 | 1.87 | 0.56 |
| 1:F:233:LYS:HD3 | 1:F:234:ASN:CB | 2.36 | 0.56 |
| 1:C:34:MET:O | 1:C:37:LEU:HB2 | 2.06 | 0.56 |
| 1:F:308:ILE:HD12 | 1:F:308:ILE:H | 1.67 | 0.56 |
| 1:C:144:PRO:HD3 | 1:C:292:ARG:HG3 | 1.87 | 0.56 |
| 1:D:164:VAL:CG2 | 1:D:241:GLY:HA3 | 2.35 | 0.56 |
| 1:E:90:PRO:HD2 | 1:E:186:LYS:HZ1 | 1.70 | 0.56 |
| 1:F:194:LYS:H | 1:F:194:LYS:CD | 2.19 | 0.56 |
| 1:A:336:VAL:HB | 1:A:338:GLY:N | 2.21 | 0.55 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:83:THR:CG2 | 1:A:87:GLU:HB3 | 2.36 | 0.55 |
| 1:B:258:THR:HB | 1:B:259:LEU:CD2 | 2.36 | 0.55 |
| 1:C:192:THR:OG1 | 1:C:194:LYS:HE3 | 2.06 | 0.55 |
| 1:C:346:THR:C | 1:C:348:VAL:H | 2.08 | 0.55 |
| 1:F:19:CYS:CB | 1:F:20:PRO:HD2 | 2.36 | 0.55 |
| 1:F:259:LEU:N | 1:F:259:LEU:CD1 | 2.70 | 0.55 |
| 1:F:262:VAL:CG1 | 1:F:264:LEU:HB2 | 2.36 | 0.55 |
| 1:A:328:LEU:HD21 | 1:A:333:LEU:HD21 | 0.62 | 0.55 |
| 1:A:339:GLN:HG2 | 1:A:347:GLN:NE2 | 2.21 | 0.55 |
| 1:A:370:VAL:HG22 | 1:A:375:LYS:HE2 | 1.89 | 0.55 |
| 1:A:372:ARG:HB3 | 1:A:373:PHE:CE1 | 2.40 | 0.55 |
| 1:A:61:PRO:HG2 | 1:A:62:THR:H | 1.71 | 0.55 |
| 1:B:257:ASN:ND2 | 1:C:239:TYR:O | 2.39 | 0.55 |
| 1:C:90:PRO:HD2 | 1:C:186:LYS:CE | 2.36 | 0.55 |
| 1:E:82:ALA:HB1 | 1:E:88:ASP:HA | 1.88 | 0.55 |
| 1:B:370:VAL:HA | 1:B:375:LYS:HA | 1.89 | 0.55 |
| 1:B:69:GLY:C | 1:B:71:GLN:N | 2.60 | 0.55 |
| 1:C:322:ALA:HA | 1:C:325:ILE:HG22 | 1.88 | 0.55 |
| 1:E:138:VAL:HG12 | 1:E:153:ILE:CG2 | 2.36 | 0.55 |
| 1:F:185:TYR:HB2 | 1:F:194:LYS:CE | 2.36 | 0.55 |
| 1:F:164:VAL:HG22 | 1:F:241:GLY:HA3 | 1.86 | 0.55 |
| 1:F:62:THR:O | 1:F:64:GLU:N | 2.39 | 0.55 |
| 1:A:116:THR:HA | 1:A:315:VAL:O | 2.06 | 0.55 |
| 1:A:239:TYR:C | 1:A:240:PHE:CG | 2.80 | 0.55 |
| 1:A:161:GLN:NE2 | 1:A:251:PRO:HA | 2.20 | 0.55 |
| 1:B:78:GLY:O | 1:B:79:ILE:HD13 | 2.07 | 0.55 |
| 1:C:28:LEU:CD2 | 1:C:30:ILE:N | 2.69 | 0.55 |
| 1:D:306:PHE:HB3 | 1:D:308:ILE:CD1 | 2.37 | 0.55 |
| 1:E:60:PRO:CB | 1:E:61:PRO:HD2 | 2.35 | 0.55 |
| 1:A:254:GLN:HA | 1:A:254:GLN:OE1 | 2.06 | 0.55 |
| 1:B:273:CYS:HB3 | 1:B:277:GLY:O | 2.05 | 0.55 |
| 1:B:328:LEU:C | 1:B:332:MET:SD | 2.84 | 0.55 |
| 1:B:54:ASN:HD22 | 1:B:55:PRO:HD2 | 1.71 | 0.55 |
| 1:C:288:TRP:HB2 | 1:C:297:HIS:HB3 | 1.88 | 0.55 |
| 1:D:340:PRO:HG2 | 1:D:347:GLN:HG3 | 1.88 | 0.55 |
| 1:F:66:LEU:HD23 | 1:F:66:LEU:N | 2.22 | 0.55 |
| 1:A:121:GLU:HG3 | 1:A:272:LEU:CD2 | 2.37 | 0.55 |
| 1:B:100:MET:C | 1:B:100:MET:SD | 2.85 | 0.55 |
| 1:B:176:GLY:O | 1:B:177:LEU:HD23 | 2.07 | 0.55 |
| 1:D:253:LEU:HD23 | 1:D:254:GLN:H | 1.71 | 0.55 |
| 1:E:125:VAL:CG1 | 1:E:263:LEU:HD21 | 2.37 | 0.55 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:161:GLN:NE2 | 1:E:251:PRO:HA | 2.21 | 0.55 |
| 1:F:125:VAL:CG1 | 1:F:263:LEU:HD21 | 2.36 | 0.55 |
| 1:F:161:GLN:HE22 | 1:F:251:PRO:CA | 2.19 | 0.55 |
| 1:C:152:GLY:HA2 | 1:D:295:ASP:CB | 2.36 | 0.55 |
| 1:C:186:LYS:H | 1:C:186:LYS:CD | 2.20 | 0.55 |
| 1:C:197:THR:O | 1:C:197:THR:CG2 | 2.54 | 0.55 |
| 1:D:149:ASN:O | 1:D:151:LYS:HE2 | 2.06 | 0.55 |
| 1:D:304:ARG:HG2 | 1:D:306:PHE:CE1 | 2.41 | 0.55 |
| 1:E:121:GLU:HG3 | 1:E:313:ARG:HD2 | 1.89 | 0.55 |
| 1:A:193:ILE:HG12 | 1:A:201:MET:CE | 2.37 | 0.55 |
| 1:A:317:ASN:ND2 | 1:A:320:PRO:HD3 | 2.21 | 0.55 |
| 1:C:30:ILE:HG23 | 1:C:36:VAL:HG13 | 1.87 | 0.55 |
| 1:D:192:THR:H | 1:D:195:THR:CB | 2.19 | 0.55 |
| 1:A:242:ASN:HB2 | 1:E:253:LEU:O | 2.06 | 0.55 |
| 1:E:79:ILE:HD13 | 1:E:94:THR:HG23 | 1.89 | 0.55 |
| 1:F:233:LYS:HE2 | 1:F:234:ASN:ND2 | 2.21 | 0.55 |
| 1:B:168:GLY:CA | 1:B:237:THR:HG23 | 2.34 | 0.55 |
| 1:B:258:THR:C | 1:B:259:LEU:HD22 | 2.26 | 0.55 |
| 1:B:276:GLU:HG2 | 1:C:370:VAL:CG2 | 2.37 | 0.55 |
| 1:C:310:LEU:N | 1:C:310:LEU:HD12 | 2.22 | 0.55 |
| 1:C:83:THR:HB | 1:C:87:GLU:HB3 | 1.87 | 0.55 |
| 1:D:265:ASP:H | 1:D:270:GLY:N | 1.99 | 0.55 |
| 1:D:50:GLU:HG2 | 1:D:305:TYR:OH | 2.06 | 0.55 |
| 1:E:150:THR:CG2 | 1:E:292:ARG:HH21 | 2.19 | 0.55 |
| 1:F:243:TYR:CZ | 1:F:245:GLY:HA3 | 2.42 | 0.55 |
| 1:F:341:MET:HE3 | 1:F:347:GLN:HB2 | 1.87 | 0.55 |
| 1:C:161:GLN:NE2 | 1:C:251:PRO:HA | 2.18 | 0.55 |
| 1:D:208:LEU:O | 1:D:208:LEU:HG | 2.06 | 0.55 |
| 1:D:28:LEU:HD11 | 1:D:30:ILE:O | 2.06 | 0.55 |
| 1:D:342:GLU:N | 1:D:346:THR:HG23 | 2.22 | 0.55 |
| 1:E:117:LEU:HD13 | 1:E:118:GLN:H | 1.72 | 0.55 |
| 1:F:91:GLY:N | 1:F:186:LYS:NZ | 2.55 | 0.55 |
| 1:A:145:THR:HG21 | 1:B:297:HIS:CE1 | 2.42 | 0.54 |
| 1:C:53:LEU:HD22 | 1:C:306:PHE:CE1 | 2.43 | 0.54 |
| 1:E:341:MET:C | 1:E:346:THR:HG23 | 2.28 | 0.54 |
| 1:F:175:GLN:HG3 | 1:F:213:LYS:NZ | 2.22 | 0.54 |
| 1:D:133:GLY:H | 1:E:228:HIS:CE1 | 2.24 | 0.54 |
| 1:D:59:GLN:NE2 | 1:D:69:GLY:O | 2.39 | 0.54 |
| 1:B:175:GLN:CB | 1:B:230:ASP:HB2 | 2.26 | 0.54 |
| 1:C:239:TYR:C | 1:C:240:PHE:CD1 | 2.81 | 0.54 |
| 1:D:211:ILE:CD1 | 1:D:211:ILE:N | 2.71 | 0.54 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:144:PRO:HD3 | 1:F:292:ARG:HG3 | 1.88 | 0.54 |
| 1:F:302:LEU:HB3 | 1:F:303:PRO:HD2 | 1.89 | 0.54 |
| 1:A:125:VAL:O | 1:A:125:VAL:HG13 | 2.07 | 0.54 |
| 1:A:243:TYR:CZ | 1:A:245:GLY:CA | 2.91 | 0.54 |
| 1:B:177:LEU:HD22 | 1:B:205:ASP:O | 2.08 | 0.54 |
| 1:B:50:GLU:HG2 | 1:C:233:LYS:HA | 1.88 | 0.54 |
| 1:C:350:GLU:HG3 | 1:F:233:LYS:CG | 2.33 | 0.54 |
| 1:A:121:GLU:HG3 | 1:A:272:LEU:HD23 | 1.89 | 0.54 |
| 1:A:142:ASN:C | 1:A:292:ARG:HB2 | 2.28 | 0.54 |
| 1:D:161:GLN:HE22 | 1:D:251:PRO:HA | 1.72 | 0.54 |
| 1:E:178:VAL:CG2 | 1:E:179:THR:N | 2.68 | 0.54 |
| 1:F:105:LEU:HB3 | 1:F:120:TRP:CD1 | 2.43 | 0.54 |
| 1:A:286:MET:HA | 1:A:286:MET:HE3 | 1.88 | 0.54 |
| 1:B:192:THR:HG22 | 1:B:226:ILE:CD1 | 2.38 | 0.54 |
| 1:B:252:VAL:HG13 | 1:C:244:THR:HA | 1.89 | 0.54 |
| 1:C:153:ILE:HG12 | 1:D:297:HIS:ND1 | 2.22 | 0.54 |
| 1:E:57:MET:HB2 | 1:E:96:PRO:HA | 1.90 | 0.54 |
| 1:E:59:GLN:HG3 | 1:E:60:PRO:N | 2.22 | 0.54 |
| 1:F:256:THR:OG1 | 1:F:257:ASN:N | 2.41 | 0.54 |
| 1:B:110:GLU:CD | 1:F:322:ALA:H | 2.11 | 0.54 |
| 1:A:78:GLY:O | 1:A:79:ILE:HD13 | 2.08 | 0.54 |
| 1:B:62:THR:OG1 | 1:B:63:PRO:HD3 | 2.08 | 0.54 |
| 1:C:126:LYS:HG2 | 1:C:260:THR:HA | 1.90 | 0.54 |
| 1:C:54:ASN:HD22 | 1:C:55:PRO:HD2 | 1.73 | 0.54 |
| 1:D:115:ASP:OD2 | 1:D:317:ASN:HB3 | 2.08 | 0.54 |
| 1:A:108:LEU:HD11 | 1:A:120:TRP:CE2 | 2.43 | 0.54 |
| 1:A:174:LEU:HD11 | 1:A:214:ALA:HB3 | 1.90 | 0.54 |
| 1:A:287:GLY:O | 1:A:299:TRP:HB2 | 2.08 | 0.54 |
| 1:B:162:TYR:HE1 | 1:B:283:VAL:HG21 | 1.73 | 0.54 |
| 1:C:82:ALA:HB1 | 1:C:88:ASP:HA | 1.89 | 0.54 |
| 1:C:31:LYS:HE3 | 1:D:233:LYS:NZ | 2.22 | 0.54 |
| 1:E:287:GLY:O | 1:E:299:TRP:HB2 | 2.07 | 0.54 |
| 1:F:211:ILE:O | 1:F:213:LYS:N | 2.40 | 0.54 |
| 1:F:280:LEU:HD23 | 1:F:280:LEU:N | 2.23 | 0.54 |
| 1:B:346:THR:HG22 | 1:B:348:VAL:H | 1.73 | 0.54 |
| 1:C:82:ALA:HB2 | 1:C:88:ASP:OD1 | 2.07 | 0.54 |
| 1:D:310:LEU:H | 1:D:310:LEU:HD12 | 1.72 | 0.54 |
| 1:E:82:ALA:HB1 | 1:E:87:GLU:O | 2.08 | 0.54 |
| 1:F:185:TYR:HB2 | 1:F:194:LYS:HE2 | 1.90 | 0.54 |
| 1:A:181:ALA:H | 1:A:206:GLN:HE21 | 1.55 | 0.54 |
| 1:A:133:GLY:HA3 | 1:B:228:HIS:HE1 | 1.72 | 0.54 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:153:ILE:HD11 | 1:D:297:HIS:CB | 2.37 | 0.54 |
| 1:C:192:THR:HB | 1:C:193:ILE:HD12 | 1.90 | 0.54 |
| 1:B:178:VAL:CG2 | 1:B:179:THR:N | 2.70 | 0.53 |
| 1:B:207:VAL:HG23 | 1:B:208:LEU:N | 2.23 | 0.53 |
| 1:C:256:THR:HA | 1:D:239:TYR:CE1 | 2.42 | 0.53 |
| 1:D:257:ASN:HD22 | 1:E:239:TYR:H | 1.55 | 0.53 |
| 1:D:142:ASN:O | 1:D:292:ARG:HB2 | 2.08 | 0.53 |
| 1:F:264:LEU:N | 1:F:264:LEU:HD12 | 2.22 | 0.53 |
| 1:B:250:PRO:HB3 | 1:C:245:GLY:O | 2.09 | 0.53 |
| 1:B:257:ASN:HB3 | 1:C:239:TYR:CZ | 2.43 | 0.53 |
| 1:C:253:LEU:O | 1:D:242:ASN:HB2 | 2.08 | 0.53 |
| 1:D:56:ARG:NH2 | 1:D:219:ASP:OD1 | 2.41 | 0.53 |
| 1:E:132:SER:O | 1:E:135:LEU:HD22 | 2.08 | 0.53 |
| 1:F:339:GLN:CB | 1:F:340:PRO:HD2 | 2.38 | 0.53 |
| 1:A:90:PRO:HD2 | 1:A:186:LYS:HE3 | 1.91 | 0.53 |
| 1:D:285:ILE:N | 1:D:285:ILE:CD1 | 2.72 | 0.53 |
| 1:D:71:GLN:CG | 1:E:203:ASN:HB3 | 2.30 | 0.53 |
| 1:A:192:THR:O | 1:A:196:ILE:HG22 | 2.08 | 0.53 |
| 1:C:120:TRP:HA | 1:C:120:TRP:CE3 | 2.44 | 0.53 |
| 1:C:174:LEU:HD23 | 1:C:227:TRP:HB3 | 1.89 | 0.53 |
| 1:E:138:VAL:HG12 | 1:E:153:ILE:HG21 | 1.90 | 0.53 |
| 1:E:208:LEU:O | 1:E:208:LEU:HD23 | 2.09 | 0.53 |
| 1:E:285:ILE:HD12 | 1:E:285:ILE:H | 1.72 | 0.53 |
| 1:A:203:ASN:HD22 | 1:E:71:GLN:NE2 | 2.05 | 0.53 |
| 1:F:262:VAL:HG12 | 1:F:264:LEU:HB2 | 1.91 | 0.53 |
| 1:A:308:ILE:N | 1:A:308:ILE:CD1 | 2.72 | 0.53 |
| 1:A:82:ALA:HB1 | 1:A:87:GLU:O | 2.08 | 0.53 |
| 1:A:84:SER:O | 1:A:87:GLU:N | 2.41 | 0.53 |
| 1:D:336:VAL:C | 1:D:337:GLN:O | 2.46 | 0.53 |
| 1:E:166:ALA:HB2 | 1:E:239:TYR:HB3 | 1.91 | 0.53 |
| 1:B:48:GLU:HB2 | 1:F:352:ARG:HG3 | 1.89 | 0.53 |
| 1:B:117:LEU:HA | 1:B:314:TRP:HZ3 | 1.73 | 0.53 |
| 1:C:161:GLN:HA | 1:C:285:ILE:HG22 | 1.90 | 0.53 |
| 1:D:33:GLY:O | 1:D:36:VAL:HB | 2.07 | 0.53 |
| 1:D:341:MET:CE | 1:D:347:GLN:HB2 | 2.37 | 0.53 |
| 1:F:57:MET:HB2 | 1:F:96:PRO:HB3 | 1.91 | 0.53 |
| 2:L:2:GAL:H3 | 2:L:3:SIA:O1B | 2.08 | 0.53 |
| 1:A:178:VAL:HG22 | 1:A:179:THR:H | 1.74 | 0.53 |
| 1:A:124:SER:CA | 1:A:263:LEU:HG | 2.35 | 0.53 |
| 1:A:317:ASN:OD1 | 1:A:319:TYR:HD2 | 1.92 | 0.53 |
| 1:C:97:THR:HG22 | 1:C:223:PRO:N | 2.23 | 0.53 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:341:MET:HA | 1:C:346:THR:HG23 | 1.90 | 0.53 |
| 1:C:341:MET:HE2 | 1:C:347:GLN:HB2 | 1.90 | 0.53 |
| 1:C:65:SER:C | 1:C:67:THR:H | 2.11 | 0.53 |
| 1:E:164:VAL:HG22 | 1:E:241:GLY:HA3 | 1.90 | 0.53 |
| 1:F:150:THR:CG2 | 1:F:292:ARG:HH21 | 2.21 | 0.53 |
| 1:B:90:PRO:HD2 | 1:B:186:LYS:NZ | 2.24 | 0.53 |
| 1:E:329:PHE:O | 1:E:332:MET:N | 2.42 | 0.53 |
| 1:A:169:GLY:O | 1:A:274:LYS:HG2 | 2.09 | 0.53 |
| 1:A:323:SER:HB2 | 1:A:324:LEU:HG | 1.91 | 0.53 |
| 1:A:370:VAL:HG12 | 1:A:371:ASP:O | 2.08 | 0.53 |
| 1:A:372:ARG:HB3 | 1:A:373:PHE:CD1 | 2.44 | 0.53 |
| 1:B:300:ARG:CG | 1:B:301:GLY:N | 2.72 | 0.53 |
| 1:C:233:LYS:HB3 | 1:F:350:GLU:CB | 2.39 | 0.53 |
| 1:C:363:ASP:HB3 | 1:C:366:MET:HE2 | 1.91 | 0.53 |
| 1:D:97:THR:HG22 | 1:D:222:TYR:O | 2.09 | 0.53 |
| 1:F:135:LEU:HD13 | 1:F:135:LEU:N | 2.24 | 0.53 |
| 1:F:276:GLU:OE1 | 1:F:276:GLU:HA | 2.09 | 0.53 |
| 1:B:275:GLY:C | 1:B:277:GLY:H | 2.12 | 0.53 |
| 1:B:285:ILE:HD12 | 1:B:285:ILE:H | 1.74 | 0.53 |
| 1:B:300:ARG:HG3 | 1:B:301:GLY:H | 1.74 | 0.53 |
| 1:B:336:VAL:O | 1:B:337:GLN:CA | 2.53 | 0.53 |
| 1:C:72:TYR:O | 1:C:75:TRP:HB2 | 2.09 | 0.53 |
| 1:C:89:SER:OG | 1:C:186:LYS:NZ | 2.42 | 0.53 |
| 1:D:61:PRO:HG2 | 1:D:62:THR:H | 1.73 | 0.53 |
| 1:E:193:ILE:O | 1:E:197:THR:HG22 | 2.09 | 0.53 |
| 1:F:265:ASP:CG | 1:F:269:VAL:HB | 2.28 | 0.53 |
| 1:A:238:ARG:NH2 | 1:A:265:ASP:HB3 | 2.23 | 0.52 |
| 1:B:371:ASP:C | 1:B:373:PHE:H | 2.12 | 0.52 |
| 1:E:192:THR:O | 1:E:196:ILE:HG22 | 2.08 | 0.52 |
| 1:E:168:GLY:CA | 1:E:237:THR:HG23 | 2.35 | 0.52 |
| 1:E:342:GLU:HG2 | 1:E:343:GLY:N | 2.24 | 0.52 |
| 1:E:66:LEU:HD23 | 1:E:66:LEU:N | 2.20 | 0.52 |
| 1:E:69:GLY:C | 1:E:71:GLN:H | 2.12 | 0.52 |
| 1:F:317:ASN:ND2 | 1:F:318:PRO:HD2 | 2.25 | 0.52 |
| 1:F:332:MET:O | 1:F:334:PRO:HD3 | 2.09 | 0.52 |
| 1:F:34:MET:O | 1:F:37:LEU:HB2 | 2.09 | 0.52 |
| 1:A:94:THR:O | 1:A:94:THR:HG22 | 2.09 | 0.52 |
| 1:C:78:GLY:HA3 | 2:I:2:GAL:C4 | 2.39 | 0.52 |
| 1:E:177:LEU:HD21 | 1:E:208:LEU:HA | 1.90 | 0.52 |
| 1:C:233:LYS:HE2 | 1:F:352:ARG:CZ | 2.39 | 0.52 |
| 1:A:86:THR:HG23 | 1:A:87:GLU:N | 2.25 | 0.52 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:23:ALA:O | 1:F:359:PRO:HA | 2.09 | 0.52 |
| 1:B:165:PHE:CE1 | 1:B:240:PHE:HE1 | 2.27 | 0.52 |
| 1:B:323:SER:O | 1:B:327:SER:HB3 | 2.08 | 0.52 |
| 1:D:98:TRP:HH2 | 1:D:164:VAL:HG11 | 1.73 | 0.52 |
| 1:A:234:ASN:HD22 | 1:A:234:ASN:N | 2.08 | 0.52 |
| 1:B:285:ILE:HD12 | 1:B:285:ILE:N | 2.23 | 0.52 |
| 1:D:117:LEU:HD23 | 1:D:118:GLN:N | 2.25 | 0.52 |
| 1:F:150:THR:O | 1:F:150:THR:CG2 | 2.57 | 0.52 |
| 1:F:168:GLY:HA2 | 1:F:237:THR:HA | 1.92 | 0.52 |
| 1:D:139:HIS:HD2 | 1:E:88:ASP:OD2 | 1.92 | 0.52 |
| 1:F:288:TRP:HA | 1:F:299:TRP:CB | 2.39 | 0.52 |
| 1:F:300:ARG:HG3 | 1:F:301:GLY:H | 1.74 | 0.52 |
| 1:A:288:TRP:HZ3 | 1:A:299:TRP:CD2 | 2.26 | 0.52 |
| 1:B:172:LEU:HD22 | 1:B:173:ASP:O | 2.10 | 0.52 |
| 1:F:164:VAL:HA | 1:F:241:GLY:HA3 | 1.91 | 0.52 |
| 1:F:76:SER:O | 1:F:298:HIS:HB2 | 2.10 | 0.52 |
| 1:A:88:ASP:H | 1:A:184:LYS:HD3 | 1.73 | 0.52 |
| 1:A:56:ARG:HB2 | 1:A:56:ARG:HH11 | 1.75 | 0.52 |
| 1:C:186:LYS:CE | 1:C:186:LYS:H | 2.23 | 0.52 |
| 1:C:272:LEU:HD12 | 1:C:272:LEU:N | 2.25 | 0.52 |
| 1:D:54:ASN:HD21 | 1:E:208:LEU:HB2 | 1.74 | 0.52 |
| 1:F:169:GLY:O | 1:F:274:LYS:HG2 | 2.10 | 0.52 |
| 1:F:321:MET:C | 1:F:323:SER:H | 2.13 | 0.52 |
| 1:F:86:THR:HG23 | 1:F:87:GLU:N | 2.24 | 0.52 |
| 1:A:177:LEU:HD22 | 1:A:205:ASP:O | 2.10 | 0.52 |
| 1:C:48:GLU:HG2 | 1:C:309:THR:HG23 | 1.92 | 0.52 |
| 1:C:75:TRP:CD1 | 1:C:300:ARG:HB2 | 2.45 | 0.52 |
| 1:D:90:PRO:HD2 | 1:D:184:LYS:O | 2.09 | 0.52 |
| 1:E:193:ILE:N | 1:E:193:ILE:HD12 | 2.25 | 0.52 |
| 1:E:80:ASN:HB3 | 1:E:90:PRO:O | 2.10 | 0.52 |
| 1:F:74:GLY:O | 1:F:300:ARG:NH1 | 2.42 | 0.52 |
| 1:A:297:HIS:ND1 | 1:E:153:ILE:HG12 | 2.24 | 0.52 |
| 1:A:81:LEU:HG | 1:A:82:ALA:H | 1.74 | 0.52 |
| 1:B:232:ALA:HB3 | 1:B:234:ASN:O | 2.10 | 0.52 |
| 1:B:60:PRO:HB2 | 1:B:61:PRO:HD2 | 1.92 | 0.52 |
| 1:C:37:LEU:HG | 1:C:106:PRO:HD3 | 1.92 | 0.52 |
| 1:D:236:ASN:OD1 | 1:D:271:PRO:HA | 2.10 | 0.52 |
| 1:D:256:THR:HG23 | 1:D:258:THR:N | 2.25 | 0.52 |
| 1:E:162:TYR:HE1 | 1:E:283:VAL:HG21 | 1.74 | 0.52 |
| 1:E:286:MET:SD | 1:E:302:LEU:HD12 | 2.50 | 0.52 |
| 1:F:332:MET:HG3 | 1:F:333:LEU:HD22 | 1.91 | 0.52 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:178:VAL:CG2 | 1:A:179:THR:N | 2.73 | 0.52 |
| 1:A:288:TRP:CZ3 | 1:A:299:TRP:CE2 | 2.92 | 0.52 |
| 1:C:194:LYS:HG2 | 1:C:195:THR:N | 2.25 | 0.52 |
| 1:C:75:TRP:CZ2 | 1:C:300:ARG:HD2 | 2.45 | 0.52 |
| 1:D:175:GLN:OE1 | 1:D:208:LEU:HD11 | 2.10 | 0.52 |
| 1:D:209:ASN:OD1 | 1:D:211:ILE:HD13 | 2.09 | 0.52 |
| 1:E:105:LEU:HD12 | 1:E:105:LEU:H | 1.74 | 0.52 |
| 1:A:208:LEU:HD13 | 1:E:52:PHE:CD1 | 2.45 | 0.52 |
| 1:E:83:THR:O | 1:E:84:SER:HB2 | 2.09 | 0.52 |
| 1:A:243:TYR:HE2 | 1:E:251:PRO:HB2 | 1.75 | 0.51 |
| 1:A:262:VAL:HG12 | 1:A:264:LEU:N | 2.20 | 0.51 |
| 1:B:104:GLN:HE21 | 1:B:105:LEU:N | 2.08 | 0.51 |
| 1:B:194:LYS:O | 1:B:196:ILE:N | 2.43 | 0.51 |
| 1:B:341:MET:CA | 1:B:346:THR:HG23 | 2.40 | 0.51 |
| 1:C:142:ASN:N | 1:C:154:SER:OG | 2.42 | 0.51 |
| 1:C:291:THR:OG1 | 1:C:296:VAL:HG23 | 2.11 | 0.51 |
| 1:D:123:VAL:O | 1:D:263:LEU:N | 2.42 | 0.51 |
| 1:C:233:LYS:HE3 | 1:F:350:GLU:HG2 | 1.91 | 0.51 |
| 1:B:48:GLU:HB2 | 1:F:352:ARG:CG | 2.40 | 0.51 |
| 1:F:84:SER:HB3 | 1:F:86:THR:HG22 | 1.92 | 0.51 |
| 1:A:167:VAL:C | 1:A:237:THR:HG23 | 2.31 | 0.51 |
| 1:C:78:GLY:HA3 | 2:I:2:GAL:H4 | 1.92 | 0.51 |
| 1:D:327:SER:OG | 1:D:328:LEU:N | 2.43 | 0.51 |
| 1:D:71:GLN:NE2 | 1:D:73:TYR:H | 2.06 | 0.51 |
| 1:E:233:LYS:CD | 1:E:234:ASN:N | 2.72 | 0.51 |
| 1:E:33:GLY:O | 1:E:36:VAL:HG23 | 2.10 | 0.51 |
| 1:F:166:ALA:HB2 | 1:F:239:TYR:CB | 2.41 | 0.51 |
| 1:F:193:ILE:HD12 | 1:F:194:LYS:HD3 | 1.91 | 0.51 |
| 1:A:259:LEU:HD13 | 1:A:260:THR:H | 1.74 | 0.51 |
| 1:B:308:ILE:N | 1:B:308:ILE:CD1 | 2.67 | 0.51 |
| 1:C:198:LYS:CD | 1:C:198:LYS:H | 2.20 | 0.51 |
| 1:C:75:TRP:CE2 | 1:C:300:ARG:HD2 | 2.45 | 0.51 |
| 1:C:336:VAL:HA | 1:C:337:GLN:N | 2.25 | 0.51 |
| 1:D:108:LEU:HG | 1:D:312:LYS:HE2 | 1.91 | 0.51 |
| 1:E:258:THR:HB | 1:E:259:LEU:HD22 | 1.92 | 0.51 |
| 1:F:65:SER:HB3 | 1:F:68:GLU:CG | 2.40 | 0.51 |
| 1:F:71:GLN:HE21 | 1:F:73:TYR:HB2 | 1.75 | 0.51 |
| 1:A:341:MET:CE | 1:A:347:GLN:HB2 | 2.39 | 0.51 |
| 1:B:243:TYR:CZ | 1:B:245:GLY:HA2 | 2.45 | 0.51 |
| 1:B:56:ARG:NH1 | 1:B:56:ARG:HB2 | 2.26 | 0.51 |
| 1:B:90:PRO:HG2 | 1:B:185:TYR:CE1 | 2.46 | 0.51 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:143:LYS:N | 1:C:292:ARG:HB2 | 2.26 | 0.51 |
| 1:D:233:LYS:C | 1:D:234:ASN:HD22 | 2.14 | 0.51 |
| 1:F:90:PRO:HD2 | 1:F:186:LYS:CE | 2.41 | 0.51 |
| 1:A:28:LEU:HG | 1:A:29:LEU:N | 2.23 | 0.51 |
| 1:B:77:ARG:O | 1:B:298:HIS:CG | 2.64 | 0.51 |
| 1:C:234:ASN:OD1 | 1:F:352:ARG:NH2 | 2.43 | 0.51 |
| 1:D:207:VAL:HG23 | 1:D:208:LEU:H | 1.74 | 0.51 |
| 1:D:124:SER:HA | 1:D:262:VAL:HA | 1.92 | 0.51 |
| 1:D:163:HIS:HA | 1:D:283:VAL:O | 2.11 | 0.51 |
| 1:E:109:ASN:OD1 | 1:E:118:GLN:N | 2.43 | 0.51 |
| 1:E:185:TYR:HB2 | 1:E:194:LYS:HE2 | 1.91 | 0.51 |
| 1:E:77:ARG:O | 1:E:298:HIS:ND1 | 2.44 | 0.51 |
| 1:F:96:PRO:HG3 | 1:F:299:TRP:HZ2 | 1.75 | 0.51 |
| 1:A:192:THR:CG2 | 1:A:194:LYS:HE2 | 2.40 | 0.51 |
| 1:A:193:ILE:HD13 | 1:A:201:MET:HG2 | 1.92 | 0.51 |
| 1:B:165:PHE:CD1 | 1:B:165:PHE:C | 2.83 | 0.51 |
| 1:C:28:LEU:HD21 | 1:C:30:ILE:C | 2.30 | 0.51 |
| 1:D:337:GLN:HA | 1:D:337:GLN:OE1 | 2.10 | 0.51 |
| 1:E:286:MET:HE3 | 1:E:286:MET:HA | 1.92 | 0.51 |
| 1:E:318:PRO:HG2 | 1:E:319:TYR:H | 1.76 | 0.51 |
| 1:E:77:ARG:HB3 | 1:E:93:ASN:HB2 | 1.92 | 0.51 |
| 1:F:239:TYR:C | 1:F:240:PHE:CD1 | 2.84 | 0.51 |
| 1:F:55:PRO:HB3 | 1:F:302:LEU:O | 2.11 | 0.51 |
| 1:A:229:PRO:O | 1:A:229:PRO:HG2 | 2.10 | 0.51 |
| 1:B:153:ILE:HD11 | 1:C:297:HIS:CG | 2.46 | 0.51 |
| 1:B:354:TYR:N | 1:B:354:TYR:CD1 | 2.78 | 0.51 |
| 1:D:308:ILE:HG22 | 1:D:310:LEU:HG | 1.93 | 0.51 |
| 1:F:232:ALA:HB3 | 1:F:235:GLU:OE1 | 2.10 | 0.51 |
| 1:F:273:CYS:HB3 | 1:F:277:GLY:O | 2.11 | 0.51 |
| 1:A:192:THR:HB | 1:A:194:LYS:CE | 2.41 | 0.51 |
| 1:B:177:LEU:CD1 | 1:B:207:VAL:O | 2.58 | 0.51 |
| 1:C:106:PRO:HD2 | 1:C:120:TRP:HE1 | 1.75 | 0.51 |
| 1:C:211:ILE:N | 1:C:211:ILE:CD1 | 2.74 | 0.51 |
| 1:C:54:ASN:HD21 | 1:D:208:LEU:CB | 2.24 | 0.51 |
| 1:D:142:ASN:HD21 | 1:D:289:ARG:HG3 | 1.76 | 0.51 |
| 1:E:117:LEU:O | 1:E:315:VAL:HG23 | 2.11 | 0.51 |
| 1:E:192:THR:HG21 | 1:E:194:LYS:HE2 | 1.92 | 0.51 |
| 1:E:193:ILE:HG12 | 1:E:201:MET:HE1 | 1.90 | 0.51 |
| 1:F:100:MET:C | 1:F:100:MET:SD | 2.89 | 0.51 |
| 1:F:180:ASP:HB3 | 1:F:182:ARG:HG2 | 1.93 | 0.51 |
| 1:A:145:THR:OG1 | 1:A:153:ILE:N | 2.44 | 0.51 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:253:LEU:HD23 | 1:E:254:GLN:N | 2.18 | 0.51 |
| 1:E:72:TYR:O | 1:E:75:TRP:HB2 | 2.10 | 0.51 |
| 1:B:287:GLY:O | 1:B:299:TRP:HB2 | 2.11 | 0.51 |
| 1:C:265:ASP:H | 1:C:270:GLY:N | 2.08 | 0.51 |
| 1:D:105:LEU:HD23 | 1:D:120:TRP:CD2 | 2.45 | 0.51 |
| 1:D:175:GLN:HG2 | 1:D:212:SER:O | 2.11 | 0.51 |
| 1:E:192:THR:H | 1:E:195:THR:HB | 1.74 | 0.51 |
| 1:F:166:ALA:HB1 | 1:F:238:ARG:O | 2.11 | 0.51 |
| 1:F:192:THR:HG22 | 1:F:193:ILE:HD12 | 1.91 | 0.51 |
| 1:F:209:ASN:ND2 | 1:F:211:ILE:HB | 2.25 | 0.51 |
| 1:A:166:ALA:HB2 | 1:A:239:TYR:HB3 | 1.92 | 0.50 |
| 1:A:275:GLY:C | 1:A:277:GLY:H | 2.11 | 0.50 |
| 1:A:285:ILE:N | 1:A:285:ILE:HD12 | 2.25 | 0.50 |
| 1:A:74:GLY:O | 1:A:300:ARG:NH1 | 2.44 | 0.50 |
| 1:B:177:LEU:HD21 | 1:B:208:LEU:CA | 2.39 | 0.50 |
| 1:B:211:ILE:N | 1:B:211:ILE:HD12 | 2.25 | 0.50 |
| 1:B:239:TYR:C | 1:B:240:PHE:CG | 2.84 | 0.50 |
| 1:C:191:VAL:HG23 | 1:C:222:TYR:HA | 1.93 | 0.50 |
| 1:D:300:ARG:CG | 1:D:301:GLY:N | 2.74 | 0.50 |
| 1:F:222:TYR:HB3 | 1:F:227:TRP:CD1 | 2.45 | 0.50 |
| 1:F:308:ILE:HG22 | 1:F:310:LEU:HG | 1.92 | 0.50 |
| 1:B:243:TYR:OH | 1:B:245:GLY:HA2 | 2.11 | 0.50 |
| 1:A:145:THR:HG21 | 1:B:297:HIS:HE1 | 1.75 | 0.50 |
| 1:B:317:ASN:OD1 | 1:B:318:PRO:HD2 | 2.11 | 0.50 |
| 1:B:341:MET:HA | 1:B:341:MET:CE | 2.41 | 0.50 |
| 1:C:339:GLN:CB | 1:C:340:PRO:HD2 | 2.40 | 0.50 |
| 1:F:104:GLN:NE2 | 1:F:105:LEU:O | 2.45 | 0.50 |
| 1:F:25:VAL:CG1 | 1:F:26:PRO:HD2 | 2.41 | 0.50 |
| 1:F:317:ASN:HD21 | 1:F:319:TYR:HB2 | 1.75 | 0.50 |
| 1:A:142:ASN:ND2 | 1:A:289:ARG:HG3 | 2.25 | 0.50 |
| 1:B:162:TYR:CE1 | 1:B:283:VAL:HG21 | 2.46 | 0.50 |
| 1:B:305:TYR:CG | 1:B:306:PHE:N | 2.80 | 0.50 |
| 1:C:265:ASP:CG | 1:C:269:VAL:HB | 2.31 | 0.50 |
| 1:D:144:PRO:HA | 1:D:153:ILE:O | 2.11 | 0.50 |
| 1:D:80:ASN:HB3 | 1:D:90:PRO:O | 2.11 | 0.50 |
| 1:E:177:LEU:CD2 | 1:E:209:ASN:H | 2.18 | 0.50 |
| 1:A:233:LYS:HA | 1:E:50:GLU:CG | 2.41 | 0.50 |
| 1:F:170:GLU:HB2 | 1:F:171:PRO:HD2 | 1.92 | 0.50 |
| 1:A:265:ASP:OD1 | 1:A:269:VAL:N | 2.44 | 0.50 |
| 1:B:243:TYR:CZ | 1:B:245:GLY:CA | 2.94 | 0.50 |
| 1:B:92:ASN:OD1 | 1:B:186:LYS:HD2 | 2.11 | 0.50 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:144:PRO:HA | 1:C:153:ILE:O | 2.12 | 0.50 |
| 1:D:259:LEU:N | 1:D:259:LEU:HD22 | 2.26 | 0.50 |
| 1:D:32:GLY:HA3 | 1:D:36:VAL:CG2 | 2.42 | 0.50 |
| 1:A:125:VAL:HA | 1:A:307:LYS:O | 2.11 | 0.50 |
| 1:B:86:THR:HG23 | 1:B:87:GLU:N | 2.26 | 0.50 |
| 1:C:228:HIS:HB3 | 1:C:229:PRO:HD2 | 1.91 | 0.50 |
| 1:C:333:LEU:HD12 | 1:C:334:PRO:O | 2.12 | 0.50 |
| 1:D:97:THR:HA | 1:D:223:PRO:HA | 1.94 | 0.50 |
| 1:D:66:LEU:HD23 | 1:D:66:LEU:N | 2.24 | 0.50 |
| 1:D:69:GLY:C | 1:D:71:GLN:H | 2.15 | 0.50 |
| 1:B:52:PHE:CE2 | 1:F:347:GLN:HB3 | 2.47 | 0.50 |
| 1:A:166:ALA:HB1 | 1:A:238:ARG:O | 2.11 | 0.50 |
| 1:A:170:GLU:HB2 | 1:A:171:PRO:HD2 | 1.94 | 0.50 |
| 1:B:288:TRP:CZ3 | 1:B:299:TRP:CD1 | 3.00 | 0.50 |
| 1:B:69:GLY:HA3 | 1:B:71:GLN:OE1 | 2.11 | 0.50 |
| 1:B:152:GLY:HA2 | 1:C:295:ASP:HB3 | 1.94 | 0.50 |
| 1:C:300:ARG:CG | 1:C:301:GLY:N | 2.75 | 0.50 |
| 1:D:192:THR:HG21 | 1:D:194:LYS:CE | 2.41 | 0.50 |
| 1:E:112:LEU:O | 1:E:116:THR:CG2 | 2.60 | 0.50 |
| 1:E:203:ASN:O | 1:E:206:GLN:CB | 2.60 | 0.50 |
| 1:E:62:THR:O | 1:E:64:GLU:N | 2.42 | 0.50 |
| 1:B:305:TYR:CE2 | 1:B:307:LYS:HB2 | 2.46 | 0.50 |
| 1:B:367:THR:HG22 | 1:B:368:ARG:H | 1.77 | 0.50 |
| 1:E:265:ASP:H | 1:E:270:GLY:N | 2.09 | 0.50 |
| 1:A:184:LYS:O | 1:A:186:LYS:HE2 | 2.12 | 0.50 |
| 1:A:180:ASP:HA | 1:A:206:GLN:HE21 | 1.76 | 0.50 |
| 1:A:288:TRP:CZ3 | 1:A:299:TRP:CD2 | 2.99 | 0.50 |
| 1:B:197:THR:O | 1:B:197:THR:HG23 | 2.10 | 0.50 |
| 1:C:192:THR:N | 1:C:195:THR:OG1 | 2.42 | 0.50 |
| 1:B:50:GLU:CD | 1:C:233:LYS:HA | 2.31 | 0.50 |
| 1:D:138:VAL:HB | 1:D:153:ILE:HD12 | 1.94 | 0.50 |
| 1:D:91:GLY:N | 1:D:186:LYS:NZ | 2.60 | 0.50 |
| 1:D:279:TYR:N | 1:D:279:TYR:CD1 | 2.79 | 0.50 |
| 1:E:177:LEU:CD2 | 1:E:208:LEU:HA | 2.42 | 0.50 |
| 1:E:243:TYR:CZ | 1:E:245:GLY:CA | 2.94 | 0.50 |
| 1:E:93:ASN:OD1 | 1:E:93:ASN:N | 2.44 | 0.50 |
| 1:A:166:ALA:HB1 | 1:A:237:THR:HG22 | 1.93 | 0.50 |
| 1:C:25:VAL:HG13 | 1:C:26:PRO:HD2 | 1.92 | 0.50 |
| 1:C:278:LEU:HD23 | 1:C:279:TYR:N | 2.26 | 0.50 |
| 1:D:202:VAL:HG12 | 1:D:203:ASN:OD1 | 2.12 | 0.50 |
| 1:D:236:ASN:ND2 | 1:D:272:LEU:O | 2.42 | 0.50 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:161:GLN:HE22 | 1:E:251:PRO:HA | 1.77 | 0.50 |
| 1:E:288:TRP:HB3 | 1:E:299:TRP:HB3 | 1.94 | 0.50 |
| 1:E:300:ARG:CG | 1:E:301:GLY:N | 2.74 | 0.50 |
| 1:A:339:GLN:HG3 | 1:A:340:PRO:HD2 | 1.94 | 0.49 |
| 1:B:131:GLY:O | 1:B:134:SER:HB3 | 2.11 | 0.49 |
| 1:B:57:MET:SD | 1:B:301:GLY:HA3 | 2.52 | 0.49 |
| 1:C:109:ASN:HB3 | 1:C:117:LEU:CD2 | 2.40 | 0.49 |
| 1:B:134:SER:OG | 1:C:179:THR:HG23 | 2.11 | 0.49 |
| 1:C:311:ARG:NH2 | 1:C:313:ARG:NH2 | 2.59 | 0.49 |
| 1:D:319:TYR:HB2 | 1:D:324:LEU:HD23 | 1.93 | 0.49 |
| 1:E:193:ILE:CD1 | 1:E:201:MET:SD | 3.00 | 0.49 |
| 1:E:162:TYR:CE1 | 1:E:224:VAL:HG11 | 2.47 | 0.49 |
| 1:B:117:LEU:HD12 | 1:B:117:LEU:N | 2.26 | 0.49 |
| 1:B:60:PRO:CB | 1:B:61:PRO:HD2 | 2.41 | 0.49 |
| 1:C:288:TRP:HA | 1:C:299:TRP:HB3 | 1.94 | 0.49 |
| 1:C:311:ARG:HH21 | 1:C:313:ARG:NH2 | 2.09 | 0.49 |
| 1:C:62:THR:CB | 1:C:63:PRO:HD3 | 2.42 | 0.49 |
| 1:D:55:PRO:CD | 1:D:303:PRO:HB3 | 2.43 | 0.49 |
| 1:D:75:TRP:NE1 | 1:D:300:ARG:HB2 | 2.26 | 0.49 |
| 1:E:211:ILE:N | 1:E:211:ILE:HD12 | 2.27 | 0.49 |
| 1:E:308:ILE:CD1 | 1:E:308:ILE:N | 2.75 | 0.49 |
| 1:E:329:PHE:O | 1:E:332:MET:HB2 | 2.12 | 0.49 |
| 1:F:19:CYS:CB | 1:F:20:PRO:CD | 2.90 | 0.49 |
| 1:C:350:GLU:HB2 | 1:F:233:LYS:HB3 | 1.90 | 0.49 |
| 1:A:177:LEU:CD2 | 1:A:205:ASP:O | 2.59 | 0.49 |
| 1:A:57:MET:CB | 1:A:96:PRO:HA | 2.41 | 0.49 |
| 1:B:83:THR:O | 1:B:84:SER:HB2 | 2.12 | 0.49 |
| 1:C:69:GLY:C | 1:C:71:GLN:N | 2.64 | 0.49 |
| 1:D:255:PHE:HB2 | 1:E:241:GLY:O | 2.11 | 0.49 |
| 1:D:322:ALA:O | 1:D:325:ILE:HB | 2.11 | 0.49 |
| 1:E:37:LEU:HB3 | 1:E:106:PRO:HG2 | 1.93 | 0.49 |
| 1:E:367:THR:HG22 | 1:E:368:ARG:N | 2.27 | 0.49 |
| 1:F:201:MET:HA | 1:F:201:MET:HE2 | 1.93 | 0.49 |
| 1:F:175:GLN:HG3 | 1:F:213:LYS:CE | 2.43 | 0.49 |
| 1:F:97:THR:HG22 | 1:F:222:TYR:C | 2.33 | 0.49 |
| 2:I:2:GAL:H3 | 2:I:3:SIA:O1B | 2.09 | 0.49 |
| 1:A:84:SER:HA | 1:E:141:PHE:HD2 | 1.72 | 0.49 |
| 1:B:208:LEU:O | 1:B:208:LEU:HD23 | 2.12 | 0.49 |
| 1:B:94:THR:O | 1:B:95:LEU:HG | 2.12 | 0.49 |
| 1:C:164:VAL:HG22 | 1:C:241:GLY:HA3 | 1.94 | 0.49 |
| 1:D:144:PRO:HD3 | 1:D:292:ARG:CG | 2.40 | 0.49 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:D:98:TRP:N | 1:D:222:TYR:O | 2.43 | 0.49 |
| 1:D:304:ARG:HD3 | 1:D:306:PHE:CZ | 2.46 | 0.49 |
| 1:E:69:GLY:O | 1:E:71:GLN:N | 2.44 | 0.49 |
| 1:C:316:LYS:HE3 | 1:F:359:PRO:HD2 | 1.94 | 0.49 |
| 1:F:42:GLY:O | 1:F:312:LYS:NZ | 2.30 | 0.49 |
| 1:C:349:GLU:O | 1:C:350:GLU:HG2 | 2.12 | 0.49 |
| 1:D:175:GLN:HG2 | 1:D:176:GLY:N | 2.27 | 0.49 |
| 1:D:69:GLY:O | 1:D:71:GLN:N | 2.46 | 0.49 |
| 1:E:122:ALA:O | 1:E:271:PRO:CD | 2.58 | 0.49 |
| 1:E:126:LYS:HG2 | 1:E:260:THR:HG23 | 1.95 | 0.49 |
| 1:F:285:ILE:CD1 | 1:F:285:ILE:H | 2.25 | 0.49 |
| 1:C:269:VAL:HA | 1:C:313:ARG:NH2 | 2.27 | 0.49 |
| 1:D:219:ASP:O | 1:D:220:GLY:C | 2.50 | 0.49 |
| 1:D:269:VAL:CG1 | 1:D:272:LEU:HD11 | 2.42 | 0.49 |
| 1:E:166:ALA:HB2 | 1:E:239:TYR:CB | 2.43 | 0.49 |
| 1:A:177:LEU:CD1 | 1:A:207:VAL:O | 2.53 | 0.49 |
| 1:A:211:ILE:HD12 | 1:A:211:ILE:H | 1.76 | 0.49 |
| 1:A:253:LEU:HG | 1:A:254:GLN:H | 1.77 | 0.49 |
| 1:A:278:LEU:HD11 | 1:A:308:ILE:HG21 | 1.95 | 0.49 |
| 1:A:133:GLY:CA | 1:B:228:HIS:HE1 | 2.26 | 0.49 |
| 1:A:50:GLU:CD | 1:B:233:LYS:HB2 | 2.32 | 0.49 |
| 1:C:174:LEU:N | 1:C:174:LEU:HD12 | 2.27 | 0.49 |
| 1:C:243:TYR:CZ | 1:C:245:GLY:CA | 2.96 | 0.49 |
| 1:D:175:GLN:HG2 | 1:D:176:GLY:H | 1.77 | 0.49 |
| 1:D:185:TYR:HB2 | 1:D:194:LYS:HE3 | 1.93 | 0.49 |
| 1:E:288:TRP:CE3 | 1:E:299:TRP:CG | 3.00 | 0.49 |
| 1:E:91:GLY:O | 1:E:93:ASN:N | 2.44 | 0.49 |
| 1:F:75:TRP:HE1 | 1:F:300:ARG:HB2 | 1.74 | 0.49 |
| 1:F:84:SER:O | 1:F:87:GLU:N | 2.45 | 0.49 |
| 1:A:264:LEU:HD23 | 1:A:268:GLY:HA2 | 1.94 | 0.49 |
| 1:A:118:GLN:HB2 | 1:A:314:TRP:CZ3 | 2.47 | 0.49 |
| 1:B:104:GLN:HE22 | 1:B:276:GLU:HB2 | 1.78 | 0.49 |
| 1:B:125:VAL:O | 1:B:125:VAL:HG13 | 2.13 | 0.49 |
| 1:B:46:VAL:O | 1:F:353:VAL:HA | 2.12 | 0.49 |
| 1:E:114:CYS:C | 1:E:116:THR:N | 2.65 | 0.49 |
| 1:C:233:LYS:NZ | 1:F:352:ARG:NE | 2.61 | 0.49 |
| 1:F:367:THR:HG22 | 1:F:368:ARG:H | 1.78 | 0.49 |
| 1:C:150:THR:O | 1:C:150:THR:HG22 | 2.12 | 0.49 |
| 1:C:61:PRO:HG2 | 1:C:62:THR:H | 1.78 | 0.49 |
| 1:D:203:ASN:N | 1:D:203:ASN:OD1 | 2.44 | 0.49 |
| 1:D:43:PRO:HD2 | 1:D:44:ASP:H | 1.77 | 0.49 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:161:GLN:NE2 | 1:F:251:PRO:HA | 2.25 | 0.49 |
| 1:F:329:PHE:O | 1:F:333:LEU:HB2 | 2.13 | 0.49 |
| 1:A:181:ALA:H | 1:A:206:GLN:NE2 | 2.11 | 0.49 |
| 1:A:184:LYS:N | 1:A:184:LYS:HD2 | 2.28 | 0.49 |
| 1:A:175:GLN:HG3 | 1:A:213:LYS:HD3 | 1.94 | 0.49 |
| 1:A:222:TYR:N | 1:A:222:TYR:CD1 | 2.81 | 0.49 |
| 1:A:290:VAL:HG22 | 1:A:297:HIS:CD2 | 2.48 | 0.49 |
| 1:A:50:GLU:HG2 | 1:A:305:TYR:OH | 2.12 | 0.49 |
| 1:D:172:LEU:HD22 | 1:D:173:ASP:O | 2.12 | 0.49 |
| 1:D:21:ARG:HE | 1:D:21:ARG:H | 1.60 | 0.49 |
| 1:D:264:LEU:HA | 1:D:264:LEU:HD12 | 1.42 | 0.49 |
| 1:D:34:MET:O | 1:D:37:LEU:HB2 | 2.13 | 0.49 |
| 1:D:83:THR:CB | 1:D:87:GLU:HB3 | 2.41 | 0.49 |
| 1:B:45:SER:HA | 1:F:354:TYR:O | 2.13 | 0.49 |
| 1:A:106:PRO:HD2 | 1:A:120:TRP:NE1 | 2.27 | 0.48 |
| 1:B:172:LEU:HD22 | 1:B:173:ASP:N | 2.28 | 0.48 |
| 1:B:288:TRP:HB3 | 1:B:297:HIS:O | 2.12 | 0.48 |
| 1:C:105:LEU:HB3 | 1:C:106:PRO:HD2 | 1.94 | 0.48 |
| 1:D:221:MET:O | 1:D:223:PRO:HD3 | 2.13 | 0.48 |
| 1:F:192:THR:HG21 | 1:F:194:LYS:HE2 | 1.95 | 0.48 |
| 1:F:177:LEU:CD1 | 1:F:207:VAL:O | 2.56 | 0.48 |
| 1:F:207:VAL:HG23 | 1:F:208:LEU:N | 2.28 | 0.48 |
| 1:F:317:ASN:HD22 | 1:F:319:TYR:H | 1.60 | 0.48 |
| 1:B:164:VAL:HB | 1:B:283:VAL:CG2 | 2.42 | 0.48 |
| 1:B:185:TYR:CB | 1:B:192:THR:HG21 | 2.43 | 0.48 |
| 1:C:41:THR:HB | 1:C:45:SER:HB2 | 1.95 | 0.48 |
| 1:D:91:GLY:H | 1:D:186:LYS:NZ | 2.11 | 0.48 |
| 1:E:119:MET:HG2 | 1:E:315:VAL:HG21 | 1.95 | 0.48 |
| 1:A:161:GLN:HE22 | 1:A:251:PRO:CA | 2.23 | 0.48 |
| 1:B:166:ALA:HB2 | 1:B:239:TYR:CB | 2.44 | 0.48 |
| 1:B:180:ASP:HB3 | 1:B:182:ARG:HG2 | 1.94 | 0.48 |
| 1:B:162:TYR:HB3 | 1:B:285:ILE:HD13 | 1.95 | 0.48 |
| 1:B:50:GLU:CG | 1:C:233:LYS:HA | 2.43 | 0.48 |
| 1:D:123:VAL:HG12 | 1:D:124:SER:N | 2.26 | 0.48 |
| 1:D:97:THR:HG22 | 1:D:223:PRO:N | 2.28 | 0.48 |
| 1:E:125:VAL:HG12 | 1:E:263:LEU:HD21 | 1.95 | 0.48 |
| 1:F:111:ASP:C | 1:F:113:THR:N | 2.66 | 0.48 |
| 1:C:352:ARG:NE | 1:F:234:ASN:OD1 | 2.47 | 0.48 |
| 1:A:56:ARG:NH1 | 1:A:219:ASP:OD1 | 2.46 | 0.48 |
| 1:A:278:LEU:HD22 | 1:A:280:LEU:CD2 | 2.43 | 0.48 |
| 1:A:335:GLN:HE21 | 1:A:336:VAL:HG22 | 1.79 | 0.48 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:288:TRP:HA | 1:B:299:TRP:HB3 | 1.95 | 0.48 |
| 1:B:323:SER:O | 1:B:327:SER:CB | 2.62 | 0.48 |
| 1:C:162:TYR:HB3 | 1:C:285:ILE:HD13 | 1.96 | 0.48 |
| 1:D:24:PRO:C | 1:D:25:VAL:HG12 | 2.32 | 0.48 |
| 1:A:108:LEU:HD11 | 1:A:120:TRP:CZ2 | 2.48 | 0.48 |
| 1:A:33:GLY:O | 1:A:36:VAL:HG23 | 2.14 | 0.48 |
| 1:B:105:LEU:HB3 | 1:B:120:TRP:CD1 | 2.48 | 0.48 |
| 1:B:111:ASP:C | 1:B:113:THR:N | 2.66 | 0.48 |
| 1:B:50:GLU:HG2 | 1:B:305:TYR:OH | 2.13 | 0.48 |
| 1:C:35:GLU:HG2 | 1:C:36:VAL:N | 2.27 | 0.48 |
| 1:B:139:HIS:HD2 | 1:C:88:ASP:OD1 | 1.96 | 0.48 |
| 1:E:157:VAL:O | 1:E:158:GLU:HG3 | 2.14 | 0.48 |
| 1:F:193:ILE:O | 1:F:197:THR:HG22 | 2.12 | 0.48 |
| 1:F:65:SER:C | 1:F:67:THR:H | 2.16 | 0.48 |
| 1:A:228:HIS:CE1 | 1:E:131:GLY:HA2 | 2.49 | 0.48 |
| 1:A:57:MET:HE1 | 1:A:299:TRP:O | 2.12 | 0.48 |
| 1:A:318:PRO:O | 1:A:321:MET:HG2 | 2.13 | 0.48 |
| 1:C:39:LEU:HD12 | 1:C:40:VAL:N | 2.25 | 0.48 |
| 1:C:71:GLN:HE21 | 1:C:73:TYR:HB2 | 1.79 | 0.48 |
| 1:E:112:LEU:O | 1:E:114:CYS:N | 2.47 | 0.48 |
| 1:F:304:ARG:HG2 | 1:F:305:TYR:N | 2.28 | 0.48 |
| 1:F:39:LEU:HD12 | 1:F:40:VAL:H | 1.78 | 0.48 |
| 1:B:239:TYR:C | 1:B:239:TYR:CD1 | 2.87 | 0.48 |
| 1:C:125:VAL:HB | 1:C:263:LEU:HD11 | 1.95 | 0.48 |
| 1:C:211:ILE:O | 1:C:213:LYS:N | 2.44 | 0.48 |
| 1:C:175:GLN:CB | 1:C:230:ASP:HB2 | 2.41 | 0.48 |
| 1:C:291:THR:HB | 1:C:293:ASN:HB3 | 1.94 | 0.48 |
| 1:D:207:VAL:CG2 | 1:D:208:LEU:N | 2.77 | 0.48 |
| 1:A:294:TYR:CD1 | 1:E:151:LYS:HG2 | 2.48 | 0.48 |
| 1:E:145:THR:HB | 1:E:152:GLY:HA3 | 1.94 | 0.48 |
| 1:E:305:TYR:C | 1:E:306:PHE:CD1 | 2.87 | 0.48 |
| 1:E:59:GLN:HG3 | 1:E:60:PRO:CD | 2.44 | 0.48 |
| 1:E:94:THR:O | 1:E:95:LEU:HD23 | 2.14 | 0.48 |
| 1:F:164:VAL:HG12 | 1:F:165:PHE:N | 2.27 | 0.48 |
| 1:F:104:GLN:HE22 | 1:F:276:GLU:HB2 | 1.78 | 0.48 |
| 1:F:55:PRO:HD3 | 1:F:303:PRO:HB3 | 1.96 | 0.48 |
| 1:F:75:TRP:CD1 | 1:F:300:ARG:HB2 | 2.48 | 0.48 |
| 1:A:233:LYS:HA | 1:E:50:GLU:CD | 2.34 | 0.48 |
| 1:C:185:TYR:HB2 | 1:C:194:LYS:HE2 | 1.96 | 0.48 |
| 1:C:236:ASN:OD1 | 1:C:272:LEU:HD12 | 2.14 | 0.48 |
| 1:C:142:ASN:HD21 | 1:C:289:ARG:CG | 2.27 | 0.48 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:329:PHE:C | 1:C:331:ASN:H | 2.17 | 0.48 |
| 1:E:216:LEU:HD23 | 1:E:216:LEU:HA | 1.51 | 0.48 |
| 1:F:69:GLY:C | 1:F:71:GLN:N | 2.65 | 0.48 |
| 1:A:340:PRO:HG2 | 1:A:347:GLN:NE2 | 2.22 | 0.48 |
| 1:B:288:TRP:CZ3 | 1:B:299:TRP:NE1 | 2.82 | 0.48 |
| 1:C:209:ASN:ND2 | 1:C:211:ILE:HB | 2.29 | 0.48 |
| 1:E:209:ASN:HA | 1:E:210:PRO:HD3 | 1.65 | 0.48 |
| 1:E:23:ALA:HA | 1:E:24:PRO:HD3 | 1.63 | 0.48 |
| 1:E:325:ILE:O | 1:E:328:LEU:HB3 | 2.14 | 0.48 |
| 1:E:370:VAL:HA | 1:E:375:LYS:HA | 1.96 | 0.48 |
| 1:F:149:ASN:O | 1:F:151:LYS:HE2 | 2.14 | 0.48 |
| 1:A:233:LYS:HE2 | 1:A:234:ASN:HD21 | 1.79 | 0.48 |
| 1:B:185:TYR:HB2 | 1:B:194:LYS:CE | 2.43 | 0.48 |
| 1:C:59:GLN:OE1 | 1:C:60:PRO:HD2 | 2.13 | 0.48 |
| 1:C:97:THR:CG2 | 1:C:223:PRO:HA | 2.44 | 0.48 |
| 1:D:185:TYR:HB2 | 1:D:194:LYS:CE | 2.43 | 0.48 |
| 1:D:264:LEU:CD2 | 1:D:268:GLY:HA2 | 2.44 | 0.48 |
| 1:E:279:TYR:C | 1:E:280:LEU:HD23 | 2.34 | 0.48 |
| 1:E:340:PRO:O | 1:E:346:THR:HA | 2.13 | 0.48 |
| 1:A:280:LEU:HD23 | 1:A:280:LEU:N | 2.30 | 0.47 |
| 1:B:366:MET:CE | 1:B:377:LYS:HG2 | 2.44 | 0.47 |
| 1:C:132:SER:O | 1:C:135:LEU:HD23 | 2.14 | 0.47 |
| 1:C:341:MET:CA | 1:C:346:THR:HG23 | 2.43 | 0.47 |
| 1:B:139:HIS:HB3 | 1:C:80:ASN:O | 2.13 | 0.47 |
| 1:D:138:VAL:CB | 1:D:153:ILE:HG23 | 2.34 | 0.47 |
| 1:D:130:VAL:O | 1:D:303:PRO:HD2 | 2.14 | 0.47 |
| 1:D:321:MET:O | 1:D:322:ALA:C | 2.52 | 0.47 |
| 1:D:69:GLY:HA3 | 1:D:71:GLN:OE1 | 2.13 | 0.47 |
| 1:E:145:THR:OG1 | 1:E:153:ILE:HB | 2.14 | 0.47 |
| 1:E:304:ARG:HD3 | 1:E:306:PHE:CE1 | 2.49 | 0.47 |
| 1:E:69:GLY:C | 1:E:71:GLN:N | 2.67 | 0.47 |
| 1:E:90:PRO:HD2 | 1:E:186:LYS:NZ | 2.29 | 0.47 |
| 1:F:91:GLY:O | 1:F:93:ASN:N | 2.47 | 0.47 |
| 1:A:100:MET:HB3 | 1:A:216:LEU:HD13 | 1.96 | 0.47 |
| 1:A:288:TRP:CZ3 | 1:A:299:TRP:CD1 | 3.02 | 0.47 |
| 1:A:296:VAL:HG12 | 1:A:298:HIS:HD2 | 1.79 | 0.47 |
| 1:A:328:LEU:HD21 | 1:A:333:LEU:HD22 | 1.71 | 0.47 |
| 1:B:161:GLN:OE1 | 1:B:251:PRO:HA | 2.15 | 0.47 |
| 1:A:257:ASN:HB2 | 1:B:239:TYR:CD2 | 2.48 | 0.47 |
| 1:D:55:PRO:HD3 | 1:D:303:PRO:HB3 | 1.96 | 0.47 |
| 1:D:72:TYR:O | 1:D:73:TYR:C | 2.51 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:177:LEU:HA | 1:E:177:LEU:HD23 | 1.67 | 0.47 |
| 1:E:192:THR:H | 1:E:195:THR:CB | 2.26 | 0.47 |
| 1:E:197:THR:HG23 | 1:E:197:THR:O | 2.12 | 0.47 |
| 1:F:112:LEU:HD12 | 1:F:113:THR:H | 1.80 | 0.47 |
| 1:F:120:TRP:HA | 1:F:120:TRP:CE3 | 2.49 | 0.47 |
| 1:F:243:TYR:CZ | 1:F:245:GLY:HA2 | 2.48 | 0.47 |
| 1:F:362:GLY:O | 1:F:364:PRO:HD3 | 2.13 | 0.47 |
| 1:A:142:ASN:HD21 | 1:A:289:ARG:CG | 2.26 | 0.47 |
| 1:A:82:ALA:CB | 1:A:88:ASP:HA | 2.44 | 0.47 |
| 1:E:280:LEU:N | 1:E:280:LEU:HD23 | 2.29 | 0.47 |
| 1:F:243:TYR:OH | 1:F:245:GLY:HA3 | 2.14 | 0.47 |
| 1:F:254:GLN:HA | 1:F:254:GLN:OE1 | 2.14 | 0.47 |
| 1:A:103:LEU:HB2 | 1:A:278:LEU:HB3 | 1.95 | 0.47 |
| 1:A:233:LYS:CG | 1:A:234:ASN:HD22 | 2.27 | 0.47 |
| 1:B:197:THR:O | 1:B:197:THR:CG2 | 2.63 | 0.47 |
| 1:B:322:ALA:O | 1:B:323:SER:C | 2.52 | 0.47 |
| 1:C:175:GLN:OE1 | 1:C:208:LEU:HD11 | 2.15 | 0.47 |
| 1:C:181:ALA:H | 1:C:206:GLN:NE2 | 2.12 | 0.47 |
| 1:E:375:LYS:HG2 | 1:E:375:LYS:O | 2.13 | 0.47 |
| 1:F:224:VAL:HG21 | 1:F:283:VAL:HG11 | 1.95 | 0.47 |
| 1:F:77:ARG:HB2 | 1:F:93:ASN:HB2 | 1.95 | 0.47 |
| 1:A:175:GLN:HG3 | 1:A:213:LYS:HE2 | 1.96 | 0.47 |
| 1:A:305:TYR:CG | 1:A:306:PHE:N | 2.82 | 0.47 |
| 1:B:178:VAL:HG11 | 1:B:201:MET:CE | 2.45 | 0.47 |
| 1:C:135:LEU:N | 1:C:135:LEU:CD2 | 2.78 | 0.47 |
| 1:C:66:LEU:HD23 | 1:C:66:LEU:N | 2.29 | 0.47 |
| 1:D:174:LEU:HD22 | 1:D:227:TRP:HB3 | 1.96 | 0.47 |
| 1:C:300:ARG:NH2 | 1:D:206:GLN:O | 2.43 | 0.47 |
| 1:D:83:THR:O | 1:D:84:SER:HB2 | 2.14 | 0.47 |
| 1:E:29:LEU:HA | 1:E:29:LEU:HD23 | 1.39 | 0.47 |
| 1:E:37:LEU:HD13 | 1:E:37:LEU:H | 1.80 | 0.47 |
| 1:E:91:GLY:O | 1:E:94:THR:N | 2.43 | 0.47 |
| 1:C:233:LYS:HD2 | 1:F:350:GLU:OE1 | 2.14 | 0.47 |
| 1:A:370:VAL:CG2 | 1:A:375:LYS:HE2 | 2.45 | 0.47 |
| 1:B:175:GLN:NE2 | 1:B:176:GLY:O | 2.47 | 0.47 |
| 1:B:253:LEU:HD23 | 1:B:254:GLN:H | 1.80 | 0.47 |
| 1:B:378:THR:HG22 | 1:B:379:VAL:N | 2.29 | 0.47 |
| 1:C:216:LEU:HA | 1:C:216:LEU:HD23 | 1.51 | 0.47 |
| 1:C:261:THR:HG22 | 1:C:262:VAL:N | 2.30 | 0.47 |
| 1:D:142:ASN:ND2 | 1:D:289:ARG:HG3 | 2.29 | 0.47 |
| 1:E:57:MET:CA | 1:E:96:PRO:HA | 2.45 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:177:LEU:HD21 | 1:F:208:LEU:CA | 2.39 | 0.47 |
| 1:A:181:ALA:O | 1:A:201:MET:HB2 | 2.14 | 0.47 |
| 1:A:65:SER:C | 1:A:67:THR:H | 2.18 | 0.47 |
| 1:B:108:LEU:HD11 | 1:B:120:TRP:NE1 | 2.30 | 0.47 |
| 1:B:363:ASP:O | 1:B:366:MET:HB3 | 2.14 | 0.47 |
| 1:B:40:VAL:HG12 | 1:B:41:THR:N | 2.30 | 0.47 |
| 1:C:205:ASP:OD1 | 1:C:209:ASN:ND2 | 2.48 | 0.47 |
| 1:D:192:THR:HB | 1:D:194:LYS:HD3 | 1.96 | 0.47 |
| 1:E:97:THR:HG23 | 1:E:223:PRO:HA | 1.96 | 0.47 |
| 1:F:322:ALA:HB1 | 1:F:325:ILE:HB | 1.96 | 0.47 |
| 2:H:2:GAL:H3 | 2:H:3:SIA:O1B | 2.13 | 0.47 |
| 1:B:341:MET:HA | 1:B:341:MET:HE3 | 1.96 | 0.47 |
| 1:B:94:THR:O | 1:B:94:THR:HG22 | 2.15 | 0.47 |
| 1:C:209:ASN:O | 1:C:212:SER:N | 2.48 | 0.47 |
| 1:D:21:ARG:H | 1:D:21:ARG:NE | 2.13 | 0.47 |
| 1:D:32:GLY:HA3 | 1:D:36:VAL:HG21 | 1.96 | 0.47 |
| 1:D:50:GLU:HA | 1:D:306:PHE:O | 2.15 | 0.47 |
| 1:E:308:ILE:HG21 | 1:E:310:LEU:HD23 | 1.95 | 0.47 |
| 1:E:314:TRP:HA | 1:E:314:TRP:CE3 | 2.48 | 0.47 |
| 1:F:105:LEU:HB3 | 1:F:120:TRP:NE1 | 2.29 | 0.47 |
| 1:F:180:ASP:HB3 | 1:F:182:ARG:HG3 | 1.95 | 0.47 |
| 1:B:75:TRP:CZ2 | 1:B:300:ARG:HD2 | 2.49 | 0.47 |
| 1:B:346:THR:CB | 1:B:348:VAL:HG12 | 2.44 | 0.47 |
| 1:B:371:ASP:C | 1:B:373:PHE:N | 2.67 | 0.47 |
| 1:C:255:PHE:O | 1:C:256:THR:HB | 2.15 | 0.47 |
| 1:C:122:ALA:O | 1:C:271:PRO:HD2 | 2.15 | 0.47 |
| 1:D:255:PHE:O | 1:E:240:PHE:HA | 2.15 | 0.47 |
| 1:D:125:VAL:HA | 1:D:307:LYS:O | 2.14 | 0.47 |
| 1:E:222:TYR:CD1 | 1:E:222:TYR:N | 2.83 | 0.47 |
| 1:E:346:THR:HG22 | 1:E:348:VAL:HG23 | 1.96 | 0.47 |
| 1:F:136:LEU:O | 1:F:138:VAL:HG22 | 2.15 | 0.47 |
| 1:C:233:LYS:CD | 1:F:350:GLU:HG2 | 2.43 | 0.47 |
| 1:B:93:ASN:ND2 | 2:H:2:GAL:H62 | 2.29 | 0.47 |
| 1:A:192:THR:HB | 1:A:194:LYS:HD3 | 1.97 | 0.47 |
| 1:A:251:PRO:CG | 1:B:245:GLY:HA3 | 2.44 | 0.47 |
| 1:A:367:THR:HB | 1:A:378:THR:OG1 | 2.15 | 0.47 |
| 1:B:177:LEU:HD23 | 1:B:205:ASP:O | 2.15 | 0.47 |
| 1:C:28:LEU:HD23 | 1:C:29:LEU:C | 2.34 | 0.47 |
| 1:C:362:GLY:O | 1:C:364:PRO:HD3 | 2.15 | 0.47 |
| 1:C:66:LEU:HA | 1:C:71:GLN:HB2 | 1.97 | 0.47 |
| 1:D:161:GLN:OE1 | 1:D:251:PRO:HA | 2.15 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:151:LYS:HG3 | 1:E:152:GLY:H | 1.79 | 0.47 |
| 1:E:305:TYR:CD1 | 1:E:306:PHE:N | 2.83 | 0.47 |
| 1:A:165:PHE:HB2 | 1:A:281:SER:O | 2.15 | 0.47 |
| 1:A:239:TYR:CE1 | 1:E:257:ASN:CB | 2.96 | 0.47 |
| 1:A:283:VAL:O | 1:A:283:VAL:HG23 | 2.15 | 0.47 |
| 1:B:31:LYS:HD2 | 1:C:233:LYS:NZ | 2.30 | 0.47 |
| 1:B:321:MET:O | 1:B:325:ILE:HG12 | 2.15 | 0.47 |
| 1:B:41:THR:HB | 1:B:45:SER:OG | 2.14 | 0.47 |
| 1:C:197:THR:O | 1:C:198:LYS:C | 2.54 | 0.47 |
| 1:C:288:TRP:CB | 1:C:297:HIS:HB3 | 2.45 | 0.47 |
| 1:C:67:THR:OG1 | 1:C:68:GLU:N | 2.47 | 0.47 |
| 1:F:52:PHE:HA | 1:F:304:ARG:O | 2.15 | 0.47 |
| 1:F:325:ILE:HD13 | 1:F:328:LEU:HD23 | 1.97 | 0.47 |
| 1:B:49:ILE:HG12 | 1:F:351:VAL:HG22 | 1.97 | 0.47 |
| 1:A:167:VAL:HG13 | 1:A:280:LEU:HD22 | 1.96 | 0.46 |
| 1:A:288:TRP:HB2 | 1:A:297:HIS:HD2 | 1.80 | 0.46 |
| 1:A:96:PRO:HG3 | 1:A:299:TRP:CZ2 | 2.50 | 0.46 |
| 1:C:123:VAL:HG13 | 1:C:264:LEU:CD1 | 2.44 | 0.46 |
| 1:C:91:GLY:O | 1:C:94:THR:HB | 2.15 | 0.46 |
| 1:D:177:LEU:CD2 | 1:D:207:VAL:O | 2.63 | 0.46 |
| 1:D:234:ASN:N | 1:D:234:ASN:HD22 | 2.13 | 0.46 |
| 1:F:125:VAL:HA | 1:F:307:LYS:O | 2.15 | 0.46 |
| 1:A:196:ILE:HG21 | 1:A:227:TRP:CH2 | 2.50 | 0.46 |
| 1:A:265:ASP:CG | 1:A:269:VAL:HB | 2.35 | 0.46 |
| 1:B:104:GLN:NE2 | 1:B:105:LEU:N | 2.63 | 0.46 |
| 1:D:94:THR:O | 1:D:94:THR:HG22 | 2.16 | 0.46 |
| 1:E:194:LYS:C | 1:E:196:ILE:N | 2.68 | 0.46 |
| 1:E:50:GLU:HG3 | 1:E:307:LYS:HG3 | 1.96 | 0.46 |
| 1:F:107:MET:C | 1:F:108:LEU:HD12 | 2.36 | 0.46 |
| 1:F:279:TYR:C | 1:F:280:LEU:HD23 | 2.35 | 0.46 |
| 1:A:194:LYS:CD | 1:A:194:LYS:H | 2.27 | 0.46 |
| 1:A:233:LYS:HE2 | 1:A:234:ASN:ND2 | 2.30 | 0.46 |
| 1:A:253:LEU:O | 1:B:242:ASN:HB2 | 2.16 | 0.46 |
| 1:A:318:PRO:C | 1:A:320:PRO:HD2 | 2.35 | 0.46 |
| 1:B:152:GLY:O | 1:B:153:ILE:HD13 | 2.14 | 0.46 |
| 1:B:164:VAL:CG2 | 1:B:241:GLY:HA3 | 2.45 | 0.46 |
| 1:B:257:ASN:ND2 | 1:B:257:ASN:H | 2.05 | 0.46 |
| 1:C:341:MET:HE1 | 1:C:347:GLN:HB2 | 1.98 | 0.46 |
| 1:D:93:ASN:ND2 | 1:D:93:ASN:H | 2.13 | 0.46 |
| 1:A:208:LEU:N | 1:E:54:ASN:HD21 | 2.12 | 0.46 |
| 1:E:71:GLN:HE21 | 1:E:73:TYR:HB2 | 1.78 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:182:ARG:HG3 | 1:F:183:THR:N | 2.30 | 0.46 |
| 1:F:228:HIS:HB3 | 1:F:229:PRO:HD2 | 1.98 | 0.46 |
| 1:C:350:GLU:CG | 1:F:233:LYS:HB3 | 2.43 | 0.46 |
| 1:B:219:ASP:CB | 1:F:338:GLY:HA2 | 2.42 | 0.46 |
| 1:F:84:SER:O | 1:F:86:THR:N | 2.48 | 0.46 |
| 1:A:237:THR:O | 1:E:257:ASN:ND2 | 2.49 | 0.46 |
| 1:A:239:TYR:C | 1:A:240:PHE:CD1 | 2.88 | 0.46 |
| 1:A:259:LEU:HD13 | 1:A:260:THR:N | 2.31 | 0.46 |
| 1:B:262:VAL:HG12 | 1:B:264:LEU:N | 2.17 | 0.46 |
| 1:C:194:LYS:O | 1:C:196:ILE:N | 2.48 | 0.46 |
| 1:D:178:VAL:CG2 | 1:D:179:THR:N | 2.69 | 0.46 |
| 1:D:243:TYR:CZ | 1:D:245:GLY:CA | 2.99 | 0.46 |
| 1:D:346:THR:C | 1:D:348:VAL:H | 2.16 | 0.46 |
| 1:D:60:PRO:CB | 1:D:61:PRO:HD2 | 2.44 | 0.46 |
| 1:F:209:ASN:HD21 | 1:F:211:ILE:HB | 1.80 | 0.46 |
| 1:B:125:VAL:HG11 | 1:B:263:LEU:HD21 | 1.95 | 0.46 |
| 1:B:103:LEU:O | 1:B:277:GLY:HA2 | 2.15 | 0.46 |
| 1:B:35:GLU:O | 1:B:36:VAL:C | 2.53 | 0.46 |
| 1:D:243:TYR:CZ | 1:D:245:GLY:HA2 | 2.50 | 0.46 |
| 1:D:274:LYS:C | 1:D:275:GLY:O | 2.50 | 0.46 |
| 1:D:224:VAL:CG2 | 1:D:283:VAL:HG11 | 2.42 | 0.46 |
| 1:A:180:ASP:C | 1:A:182:ARG:H | 2.17 | 0.46 |
| 1:A:77:ARG:HB2 | 1:A:93:ASN:HB2 | 1.97 | 0.46 |
| 1:B:108:LEU:HB3 | 1:B:118:GLN:HG3 | 1.97 | 0.46 |
| 1:B:310:LEU:N | 1:B:310:LEU:HD12 | 2.28 | 0.46 |
| 1:C:145:THR:OG1 | 1:C:153:ILE:N | 2.49 | 0.46 |
| 1:C:175:GLN:NE2 | 1:C:176:GLY:N | 2.60 | 0.46 |
| 1:B:251:PRO:HB2 | 1:C:243:TYR:HE2 | 1.81 | 0.46 |
| 1:D:50:GLU:OE2 | 1:E:233:LYS:CA | 2.63 | 0.46 |
| 1:D:69:GLY:C | 1:D:71:GLN:N | 2.69 | 0.46 |
| 1:E:141:PHE:CD1 | 1:E:292:ARG:HG3 | 2.47 | 0.46 |
| 1:F:139:HIS:HB2 | 1:F:140:GLY:H | 1.65 | 0.46 |
| 1:F:265:ASP:OD1 | 1:F:269:VAL:N | 2.48 | 0.46 |
| 2:K:2:GAL:H3 | 2:K:3:SIA:O1B | 2.11 | 0.46 |
| 1:A:271:PRO:C | 1:A:272:LEU:HG | 2.36 | 0.46 |
| 1:A:288:TRP:CE3 | 1:A:299:TRP:CG | 3.04 | 0.46 |
| 1:A:56:ARG:CB | 1:A:56:ARG:HH11 | 2.28 | 0.46 |
| 1:A:88:ASP:O | 1:A:184:LYS:HB2 | 2.16 | 0.46 |
| 1:B:104:GLN:C | 1:B:105:LEU:HD12 | 2.36 | 0.46 |
| 1:B:265:ASP:OD1 | 1:B:269:VAL:HB | 2.15 | 0.46 |
| 1:C:300:ARG:NH1 | 1:C:300:ARG:HG3 | 2.29 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:D:341:MET:C | 1:D:346:THR:HG23 | 2.36 | 0.46 |
| 1:E:197:THR:HG23 | 1:E:199:LYS:O | 2.15 | 0.46 |
| 1:F:285:ILE:N | 1:F:285:ILE:CD1 | 2.78 | 0.46 |
| 1:A:257:ASN:HD22 | 1:B:239:TYR:N | 2.13 | 0.46 |
| 1:A:297:HIS:CG | 1:E:153:ILE:HG12 | 2.50 | 0.46 |
| 1:B:152:GLY:HA2 | 1:C:295:ASP:O | 2.15 | 0.46 |
| 1:B:219:ASP:C | 1:B:221:MET:N | 2.68 | 0.46 |
| 1:D:192:THR:HG21 | 1:D:194:LYS:HE2 | 1.98 | 0.46 |
| 1:D:291:THR:OG1 | 1:D:296:VAL:HB | 2.16 | 0.46 |
| 1:D:39:LEU:HD12 | 1:D:40:VAL:N | 2.30 | 0.46 |
| 1:C:141:PHE:HD2 | 1:D:84:SER:HA | 1.81 | 0.46 |
| 1:E:43:PRO:O | 1:E:312:LYS:HD2 | 2.16 | 0.46 |
| 1:F:25:VAL:HG13 | 1:F:26:PRO:HD2 | 1.98 | 0.46 |
| 1:F:54:ASN:HD22 | 1:F:55:PRO:HD2 | 1.80 | 0.46 |
| 1:A:333:LEU:HA | 1:A:334:PRO:HD3 | 1.52 | 0.46 |
| 1:A:375:LYS:HE3 | 1:A:375:LYS:HB2 | 1.63 | 0.46 |
| 1:B:107:MET:C | 1:B:108:LEU:HD12 | 2.36 | 0.46 |
| 1:B:111:ASP:C | 1:B:113:THR:H | 2.20 | 0.46 |
| 1:B:25:VAL:CG1 | 1:B:26:PRO:HD2 | 2.45 | 0.46 |
| 1:C:28:LEU:C | 1:C:28:LEU:HD23 | 2.35 | 0.46 |
| 1:D:145:THR:HG21 | 1:E:297:HIS:CE1 | 2.46 | 0.46 |
| 1:D:239:TYR:C | 1:D:240:PHE:CG | 2.89 | 0.46 |
| 1:D:55:PRO:HD3 | 1:D:303:PRO:CB | 2.46 | 0.46 |
| 1:F:191:VAL:HA | 1:F:195:THR:HG21 | 1.98 | 0.46 |
| 1:F:190:VAL:HG23 | 1:F:223:PRO:HD3 | 1.97 | 0.46 |
| 1:A:177:LEU:HD23 | 1:A:177:LEU:HA | 1.70 | 0.46 |
| 1:A:243:TYR:CE2 | 1:E:251:PRO:HB2 | 2.50 | 0.46 |
| 1:A:93:ASN:OD1 | 1:A:93:ASN:N | 2.49 | 0.46 |
| 1:B:185:TYR:CG | 1:B:192:THR:HG21 | 2.49 | 0.46 |
| 1:B:31:LYS:HD2 | 1:C:233:LYS:HZ2 | 1.81 | 0.46 |
| 1:B:380:PHE:HA | 1:B:381:PRO:HD2 | 1.59 | 0.46 |
| 1:B:56:ARG:CZ | 1:B:56:ARG:HB2 | 2.45 | 0.46 |
| 1:C:103:LEU:N | 1:C:103:LEU:HD22 | 2.31 | 0.46 |
| 1:D:218:LYS:HB3 | 1:D:219:ASP:H | 1.42 | 0.46 |
| 1:D:319:TYR:CB | 1:D:324:LEU:HD23 | 2.46 | 0.46 |
| 1:E:259:LEU:HA | 1:E:259:LEU:HD13 | 1.46 | 0.46 |
| 1:F:174:LEU:HD12 | 1:F:174:LEU:H | 1.81 | 0.46 |
| 1:F:95:LEU:HA | 1:F:96:PRO:HD2 | 1.75 | 0.46 |
| 1:A:196:ILE:HG21 | 1:A:227:TRP:HH2 | 1.81 | 0.45 |
| 1:B:90:PRO:HD2 | 1:B:186:LYS:HZ3 | 1.81 | 0.45 |
| 1:B:274:LYS:C | 1:B:275:GLY:O | 2.52 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:372:ARG:C | 1:B:373:PHE:CD1 | 2.89 | 0.45 |
| 1:B:86:THR:HG23 | 1:B:87:GLU:H | 1.82 | 0.45 |
| 1:C:105:LEU:CB | 1:C:120:TRP:CD1 | 2.96 | 0.45 |
| 1:C:186:LYS:C | 1:C:188:GLU:N | 2.69 | 0.45 |
| 1:C:191:VAL:HG21 | 1:C:222:TYR:CG | 2.50 | 0.45 |
| 1:D:302:LEU:HB3 | 1:D:303:PRO:HD2 | 1.98 | 0.45 |
| 1:D:59:GLN:HA | 1:D:60:PRO:HD2 | 1.81 | 0.45 |
| 1:E:207:VAL:CG2 | 1:E:208:LEU:N | 2.78 | 0.45 |
| 1:E:223:PRO:CG | 1:E:226:ILE:HD12 | 2.45 | 0.45 |
| 1:F:172:LEU:HD22 | 1:F:172:LEU:C | 2.37 | 0.45 |
| 1:F:176:GLY:O | 1:F:177:LEU:HD23 | 2.16 | 0.45 |
| 1:F:32:GLY:CA | 1:F:36:VAL:HG21 | 2.46 | 0.45 |
| 1:F:59:GLN:HE22 | 1:F:69:GLY:HA3 | 1.80 | 0.45 |
| 1:A:87:GLU:HA | 1:A:184:LYS:NZ | 2.31 | 0.45 |
| 1:C:315:VAL:HG23 | 1:C:316:LYS:O | 2.16 | 0.45 |
| 1:D:95:LEU:HA | 1:D:96:PRO:HD2 | 1.67 | 0.45 |
| 1:F:262:VAL:HG12 | 1:F:264:LEU:N | 2.19 | 0.45 |
| 1:A:174:LEU:HD13 | 1:A:227:TRP:HB3 | 1.97 | 0.45 |
| 1:A:233:LYS:CG | 1:A:234:ASN:N | 2.79 | 0.45 |
| 1:A:60:PRO:HB2 | 1:A:61:PRO:HD2 | 1.97 | 0.45 |
| 1:A:85:ASP:O | 1:A:182:ARG:NH1 | 2.50 | 0.45 |
| 1:B:103:LEU:HB2 | 1:B:278:LEU:HB3 | 1.98 | 0.45 |
| 1:B:205:ASP:HA | 1:B:209:ASN:CB | 2.37 | 0.45 |
| 1:B:233:LYS:C | 1:B:234:ASN:HD22 | 2.20 | 0.45 |
| 1:B:55:PRO:HB3 | 1:B:302:LEU:O | 2.17 | 0.45 |
| 1:C:223:PRO:HG3 | 1:C:226:ILE:HD12 | 1.98 | 0.45 |
| 1:D:252:VAL:HA | 1:E:243:TYR:O | 2.16 | 0.45 |
| 1:D:315:VAL:HG23 | 1:D:316:LYS:N | 2.29 | 0.45 |
| 1:E:115:ASP:O | 1:E:316:LYS:HA | 2.16 | 0.45 |
| 1:E:134:SER:C | 1:E:136:LEU:H | 2.19 | 0.45 |
| 1:E:360:VAL:HA | 1:E:361:PRO:HD2 | 1.60 | 0.45 |
| 1:F:103:LEU:HA | 1:F:103:LEU:HD13 | 1.62 | 0.45 |
| 1:F:204:LYS:HB3 | 1:F:204:LYS:HZ3 | 1.80 | 0.45 |
| 1:F:57:MET:CB | 1:F:96:PRO:HB3 | 2.47 | 0.45 |
| 1:A:114:CYS:C | 1:A:116:THR:H | 2.20 | 0.45 |
| 1:B:232:ALA:C | 1:B:234:ASN:N | 2.70 | 0.45 |
| 1:C:56:ARG:HH22 | 1:C:219:ASP:CG | 2.19 | 0.45 |
| 1:E:178:VAL:CG2 | 1:E:179:THR:H | 2.25 | 0.45 |
| 1:F:112:LEU:HD12 | 1:F:113:THR:N | 2.32 | 0.45 |
| 1:F:79:ILE:HD13 | 1:F:94:THR:HG23 | 1.97 | 0.45 |
| 1:A:172:LEU:C | 1:A:172:LEU:HD22 | 2.37 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:150:THR:CG2 | 1:A:292:ARG:HH21 | 2.28 | 0.45 |
| 1:A:57:MET:SD | 1:A:301:GLY:HA3 | 2.57 | 0.45 |
| 1:A:75:TRP:NE1 | 1:A:300:ARG:HB2 | 2.32 | 0.45 |
| 1:B:130:VAL:O | 1:B:302:LEU:HD22 | 2.16 | 0.45 |
| 1:B:193:ILE:O | 1:B:197:THR:HG22 | 2.17 | 0.45 |
| 1:C:142:ASN:HD21 | 1:C:289:ARG:HG3 | 1.81 | 0.45 |
| 1:C:339:GLN:HB3 | 1:C:340:PRO:HD2 | 1.98 | 0.45 |
| 1:D:164:VAL:HA | 1:D:241:GLY:HA3 | 1.98 | 0.45 |
| 1:D:161:GLN:NE2 | 1:D:251:PRO:HA | 2.31 | 0.45 |
| 1:D:251:PRO:HD2 | 1:E:245:GLY:CA | 2.43 | 0.45 |
| 1:D:66:LEU:CB | 1:D:71:GLN:HB2 | 2.29 | 0.45 |
| 1:E:185:TYR:HB2 | 1:E:194:LYS:CE | 2.47 | 0.45 |
| 1:D:133:GLY:HA3 | 1:E:228:HIS:CE1 | 2.51 | 0.45 |
| 1:E:264:LEU:HD12 | 1:E:270:GLY:HA3 | 1.99 | 0.45 |
| 1:A:145:THR:OG1 | 1:A:153:ILE:HB | 2.16 | 0.45 |
| 1:A:300:ARG:HG3 | 1:A:301:GLY:H | 1.80 | 0.45 |
| 1:B:265:ASP:CG | 1:B:269:VAL:HB | 2.37 | 0.45 |
| 1:D:280:LEU:HD23 | 1:D:280:LEU:HA | 1.63 | 0.45 |
| 1:E:291:THR:O | 1:E:293:ASN:N | 2.50 | 0.45 |
| 1:F:197:THR:O | 1:F:197:THR:CG2 | 2.64 | 0.45 |
| 1:F:29:LEU:HD23 | 1:F:29:LEU:HA | 1.55 | 0.45 |
| 1:A:370:VAL:HA | 1:A:374:GLY:O | 2.17 | 0.45 |
| 1:B:105:LEU:N | 1:B:105:LEU:CD1 | 2.79 | 0.45 |
| 1:B:126:LYS:HG2 | 1:B:260:THR:HG23 | 1.98 | 0.45 |
| 1:B:339:GLN:CG | 1:B:340:PRO:HD2 | 2.45 | 0.45 |
| 1:B:95:LEU:HA | 1:B:96:PRO:HD2 | 1.60 | 0.45 |
| 1:C:288:TRP:HA | 1:C:299:TRP:CB | 2.46 | 0.45 |
| 1:C:322:ALA:O | 1:C:326:SER:HB2 | 2.16 | 0.45 |
| 1:C:325:ILE:O | 1:C:328:LEU:HB2 | 2.16 | 0.45 |
| 1:D:348:VAL:CG1 | 1:D:348:VAL:O | 2.63 | 0.45 |
| 1:D:79:ILE:HA | 1:D:79:ILE:HD13 | 1.69 | 0.45 |
| 1:E:112:LEU:HD23 | 1:E:112:LEU:HA | 1.58 | 0.45 |
| 1:E:114:CYS:C | 1:E:116:THR:H | 2.20 | 0.45 |
| 1:E:118:GLN:HB2 | 1:E:314:TRP:CH2 | 2.49 | 0.45 |
| 1:E:136:LEU:HD23 | 1:E:136:LEU:HA | 1.68 | 0.45 |
| 1:E:245:GLY:O | 1:E:249:THR:HG21 | 2.17 | 0.45 |
| 1:E:291:THR:HB | 1:E:293:ASN:HB3 | 1.98 | 0.45 |
| 1:E:143:LYS:NZ | 1:E:295:ASP:OD2 | 2.46 | 0.45 |
| 1:F:194:LYS:HA | 1:F:197:THR:O | 2.16 | 0.45 |
| 1:F:55:PRO:HD3 | 1:F:303:PRO:CB | 2.46 | 0.45 |
| 1:B:93:ASN:HD21 | 2:H:2:GAL:H62 | 1.82 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:105:LEU:CD1 | 1:A:105:LEU:N | 2.79 | 0.45 |
| 1:A:88:ASP:O | 1:A:184:LYS:HD3 | 2.17 | 0.45 |
| 1:A:264:LEU:HA | 1:A:264:LEU:HD12 | 1.68 | 0.45 |
| 1:A:300:ARG:CG | 1:A:301:GLY:N | 2.80 | 0.45 |
| 1:B:290:VAL:HG13 | 1:B:297:HIS:HA | 1.99 | 0.45 |
| 1:B:52:PHE:CD2 | 1:C:208:LEU:CD2 | 2.99 | 0.45 |
| 1:B:62:THR:O | 1:B:64:GLU:N | 2.48 | 0.45 |
| 1:C:105:LEU:HD21 | 1:C:310:LEU:HD22 | 1.99 | 0.45 |
| 1:C:194:LYS:O | 1:C:197:THR:N | 2.50 | 0.45 |
| 1:C:162:TYR:CE2 | 1:C:224:VAL:HG11 | 2.52 | 0.45 |
| 1:C:165:PHE:O | 1:C:239:TYR:HA | 2.17 | 0.45 |
| 1:D:228:HIS:HB3 | 1:D:229:PRO:HD2 | 1.99 | 0.45 |
| 1:D:327:SER:O | 1:D:330:ASN:N | 2.49 | 0.45 |
| 1:E:300:ARG:HG3 | 1:E:301:GLY:N | 2.32 | 0.45 |
| 1:E:43:PRO:CG | 1:E:44:ASP:H | 2.30 | 0.45 |
| 1:A:263:LEU:N | 1:A:263:LEU:HD23 | 2.32 | 0.45 |
| 1:A:328:LEU:CG | 1:A:333:LEU:CD2 | 2.84 | 0.45 |
| 1:A:369:TYR:N | 1:A:369:TYR:HD1 | 2.15 | 0.45 |
| 1:B:151:LYS:HD3 | 1:B:151:LYS:HA | 1.59 | 0.45 |
| 1:B:341:MET:HA | 1:B:346:THR:HG23 | 1.98 | 0.45 |
| 1:C:52:PHE:CD1 | 1:D:208:LEU:CD2 | 2.99 | 0.45 |
| 1:D:30:ILE:CD1 | 1:D:39:LEU:HD23 | 2.47 | 0.45 |
| 1:E:239:TYR:C | 1:E:240:PHE:CD1 | 2.90 | 0.45 |
| 1:E:254:GLN:HA | 1:E:254:GLN:OE1 | 2.17 | 0.45 |
| 1:A:224:VAL:CG1 | 1:A:283:VAL:HG11 | 2.47 | 0.45 |
| 1:A:372:ARG:NH1 | 1:A:372:ARG:HB2 | 2.13 | 0.45 |
| 1:A:365:ASP:HB3 | 1:A:380:PHE:HE2 | 1.82 | 0.45 |
| 1:B:172:LEU:CD2 | 1:B:173:ASP:N | 2.80 | 0.45 |
| 1:C:100:MET:HB2 | 1:C:280:LEU:O | 2.17 | 0.45 |
| 1:C:354:TYR:CD1 | 1:C:354:TYR:N | 2.85 | 0.45 |
| 1:E:232:ALA:HB3 | 1:E:235:GLU:OE1 | 2.16 | 0.45 |
| 1:D:257:ASN:HD22 | 1:E:238:ARG:HA | 1.78 | 0.45 |
| 1:E:117:LEU:O | 1:E:314:TRP:HE3 | 2.00 | 0.45 |
| 1:E:325:ILE:O | 1:E:326:SER:C | 2.55 | 0.45 |
| 1:E:57:MET:HA | 1:E:96:PRO:HA | 1.98 | 0.45 |
| 1:F:161:GLN:OE1 | 1:F:251:PRO:HA | 2.17 | 0.45 |
| 1:A:125:VAL:N | 1:A:261:THR:O | 2.49 | 0.44 |
| 1:B:302:LEU:HB3 | 1:B:303:PRO:HD2 | 1.99 | 0.44 |
| 1:B:78:GLY:C | 1:B:79:ILE:HD13 | 2.38 | 0.44 |
| 1:C:67:THR:OG1 | 1:C:68:GLU:HG3 | 2.16 | 0.44 |
| 1:C:79:ILE:HA | 1:C:79:ILE:HD13 | 1.71 | 0.44 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:D:141:PHE:CD1 | 1:D:292:ARG:CB | 3.01 | 0.44 |
| 1:D:90:PRO:HD2 | 1:D:186:LYS:CE | 2.46 | 0.44 |
| 1:E:104:GLN:HE21 | 1:E:105:LEU:N | 2.13 | 0.44 |
| 1:F:193:ILE:HG12 | 1:F:201:MET:HE1 | 1.97 | 0.44 |
| 1:F:91:GLY:H | 1:F:186:LYS:NZ | 2.15 | 0.44 |
| 1:A:207:VAL:HB | 1:E:54:ASN:ND2 | 2.32 | 0.44 |
| 1:A:352:ARG:HG3 | 1:A:354:TYR:HE1 | 1.81 | 0.44 |
| 1:A:366:MET:HA | 1:A:380:PHE:CZ | 2.53 | 0.44 |
| 1:A:79:ILE:HG21 | 1:E:153:ILE:HD11 | 1.98 | 0.44 |
| 1:B:180:ASP:C | 1:B:182:ARG:H | 2.20 | 0.44 |
| 1:B:203:ASN:N | 1:B:203:ASN:OD1 | 2.47 | 0.44 |
| 1:B:358:GLU:OE2 | 1:B:368:ARG:NH2 | 2.50 | 0.44 |
| 1:C:139:HIS:HD2 | 1:D:88:ASP:OD1 | 2.00 | 0.44 |
| 1:E:174:LEU:HD11 | 1:E:215:LYS:O | 2.17 | 0.44 |
| 1:F:208:LEU:C | 1:F:208:LEU:HD23 | 2.37 | 0.44 |
| 1:A:138:VAL:CB | 1:A:153:ILE:HG23 | 2.39 | 0.44 |
| 1:A:104:GLN:HE22 | 1:A:276:GLU:HB2 | 1.81 | 0.44 |
| 1:A:89:SER:HA | 1:A:184:LYS:HB2 | 1.99 | 0.44 |
| 1:A:52:PHE:CD2 | 1:B:208:LEU:HD13 | 2.52 | 0.44 |
| 1:B:76:SER:CB | 1:B:299:TRP:CE3 | 3.01 | 0.44 |
| 1:B:318:PRO:CG | 1:B:319:TYR:H | 2.27 | 0.44 |
| 1:B:341:MET:HA | 1:B:346:THR:CG2 | 2.47 | 0.44 |
| 1:D:151:LYS:HD3 | 1:D:151:LYS:HA | 1.79 | 0.44 |
| 1:D:216:LEU:HA | 1:D:216:LEU:HD23 | 1.70 | 0.44 |
| 1:D:50:GLU:HG2 | 1:D:305:TYR:CZ | 2.51 | 0.44 |
| 1:D:335:GLN:HA | 1:D:335:GLN:HE21 | 1.83 | 0.44 |
| 1:E:155:THR:HA | 1:E:156:PRO:HD2 | 1.87 | 0.44 |
| 1:E:118:GLN:HA | 1:E:313:ARG:O | 2.17 | 0.44 |
| 1:E:318:PRO:HG2 | 1:E:319:TYR:N | 2.31 | 0.44 |
| 1:E:46:VAL:CG1 | 1:E:47:THR:N | 2.78 | 0.44 |
| 1:F:342:GLU:HG2 | 1:F:343:GLY:N | 2.33 | 0.44 |
| 1:A:193:ILE:N | 1:A:193:ILE:HD12 | 2.33 | 0.44 |
| 1:A:192:THR:CB | 1:A:194:LYS:HE2 | 2.47 | 0.44 |
| 1:B:105:LEU:HB3 | 1:B:120:TRP:NE1 | 2.32 | 0.44 |
| 1:B:85:ASP:OD2 | 1:B:182:ARG:NH1 | 2.50 | 0.44 |
| 1:C:37:LEU:HA | 1:C:37:LEU:HD12 | 1.76 | 0.44 |
| 1:D:161:GLN:HE22 | 1:D:251:PRO:CA | 2.31 | 0.44 |
| 1:D:305:TYR:CG | 1:D:306:PHE:N | 2.85 | 0.44 |
| 1:E:131:GLY:O | 1:E:134:SER:HB3 | 2.17 | 0.44 |
| 1:E:164:VAL:HG12 | 1:E:165:PHE:N | 2.32 | 0.44 |
| 1:E:217:ASP:C | 1:E:218:LYS:HD2 | 2.38 | 0.44 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:21:ARG:HA | 1:E:22:PRO:HD2 | 1.74 | 0.44 |
| 1:F:177:LEU:HD23 | 1:F:177:LEU:HA | 1.64 | 0.44 |
| 1:A:164:VAL:HG12 | 1:A:165:PHE:N | 2.32 | 0.44 |
| 1:A:196:ILE:HG13 | 1:A:197:THR:N | 2.31 | 0.44 |
| 1:A:238:ARG:HA | 1:E:257:ASN:HD22 | 1.83 | 0.44 |
| 1:A:288:TRP:CZ3 | 1:A:299:TRP:CG | 3.05 | 0.44 |
| 1:A:336:VAL:CG2 | 1:A:337:GLN:N | 2.70 | 0.44 |
| 1:A:54:ASN:ND2 | 1:B:207:VAL:HB | 2.32 | 0.44 |
| 1:C:350:GLU:HG3 | 1:F:233:LYS:NZ | 2.33 | 0.44 |
| 1:D:246:GLY:HA3 | 1:D:249:THR:OG1 | 2.16 | 0.44 |
| 1:D:259:LEU:HA | 1:D:259:LEU:HD13 | 1.81 | 0.44 |
| 1:D:308:ILE:N | 1:D:308:ILE:CD1 | 2.78 | 0.44 |
| 1:E:250:PRO:HA | 1:E:251:PRO:HD3 | 1.54 | 0.44 |
| 1:E:370:VAL:HG22 | 1:E:375:LYS:HA | 1.99 | 0.44 |
| 1:E:89:SER:OG | 1:E:186:LYS:NZ | 2.51 | 0.44 |
| 1:F:111:ASP:C | 1:F:113:THR:H | 2.21 | 0.44 |
| 1:F:94:THR:HG22 | 1:F:94:THR:O | 2.17 | 0.44 |
| 1:A:194:LYS:C | 1:A:196:ILE:N | 2.70 | 0.44 |
| 1:A:339:GLN:HA | 1:A:340:PRO:HD2 | 1.57 | 0.44 |
| 1:B:193:ILE:HG12 | 1:B:201:MET:CE | 2.47 | 0.44 |
| 1:C:125:VAL:HG23 | 1:C:308:ILE:HG13 | 1.99 | 0.44 |
| 1:D:264:LEU:HG | 1:D:268:GLY:HA2 | 1.99 | 0.44 |
| 1:D:321:MET:O | 1:D:324:LEU:N | 2.50 | 0.44 |
| 1:E:285:ILE:N | 1:E:285:ILE:CD1 | 2.79 | 0.44 |
| 1:F:177:LEU:CD2 | 1:F:205:ASP:O | 2.65 | 0.44 |
| 1:F:211:ILE:N | 1:F:211:ILE:CD1 | 2.81 | 0.44 |
| 1:A:255:PHE:HE2 | 1:B:162:TYR:CE2 | 2.35 | 0.44 |
| 1:A:59:GLN:HG3 | 1:A:60:PRO:O | 2.17 | 0.44 |
| 1:B:97:THR:HG22 | 1:B:222:TYR:C | 2.38 | 0.44 |
| 1:C:209:ASN:C | 1:C:211:ILE:H | 2.20 | 0.44 |
| 1:D:60:PRO:HB2 | 1:D:61:PRO:HD2 | 1.99 | 0.44 |
| 1:E:201:MET:HE2 | 1:E:201:MET:HB3 | 1.87 | 0.44 |
| 1:E:50:GLU:HA | 1:E:306:PHE:O | 2.18 | 0.44 |
| 1:F:141:PHE:CE2 | 1:F:292:ARG:NH1 | 2.85 | 0.44 |
| 1:F:164:VAL:HA | 1:F:240:PHE:O | 2.17 | 0.44 |
| 1:A:104:GLN:HE21 | 1:A:105:LEU:N | 2.16 | 0.44 |
| 1:A:216:LEU:HD23 | 1:A:216:LEU:HA | 1.84 | 0.44 |
| 1:B:367:THR:HB | 1:B:378:THR:CB | 2.48 | 0.44 |
| 1:C:175:GLN:OE1 | 1:C:208:LEU:CD1 | 2.66 | 0.44 |
| 1:C:239:TYR:C | 1:C:239:TYR:CD1 | 2.91 | 0.44 |
| 1:D:142:ASN:HA | 1:D:290:VAL:O | 2.17 | 0.44 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:175:GLN:HB2 | 1:E:230:ASP:CB | 2.45 | 0.44 |
| 1:E:229:PRO:HG2 | 1:E:229:PRO:O | 2.18 | 0.44 |
| 1:E:166:ALA:CA | 1:E:238:ARG:O | 2.66 | 0.44 |
| 1:E:313:ARG:CG | 1:E:313:ARG:NH1 | 2.77 | 0.44 |
| 1:E:65:SER:C | 1:E:67:THR:H | 2.21 | 0.44 |
| 1:C:350:GLU:HG3 | 1:F:233:LYS:CB | 2.48 | 0.44 |
| 1:A:161:GLN:OE1 | 1:A:251:PRO:HA | 2.18 | 0.44 |
| 1:A:233:LYS:CG | 1:A:234:ASN:H | 2.30 | 0.44 |
| 1:A:243:TYR:OH | 1:A:245:GLY:HA2 | 2.18 | 0.44 |
| 1:A:300:ARG:HG3 | 1:A:300:ARG:HH11 | 1.83 | 0.44 |
| 1:B:30:ILE:HG23 | 1:F:353:VAL:CG2 | 2.47 | 0.44 |
| 1:B:319:TYR:HA | 1:B:320:PRO:HD3 | 1.66 | 0.44 |
| 1:C:177:LEU:HA | 1:C:205:ASP:O | 2.18 | 0.44 |
| 1:C:323:SER:O | 1:C:327:SER:N | 2.51 | 0.44 |
| 1:D:186:LYS:H | 1:D:186:LYS:CD | 2.26 | 0.44 |
| 1:D:169:GLY:HA3 | 1:D:272:LEU:O | 2.17 | 0.44 |
| 1:E:174:LEU:HD12 | 1:E:174:LEU:H | 1.82 | 0.44 |
| 1:E:363:ASP:HA | 1:E:364:PRO:HD3 | 1.67 | 0.44 |
| 1:F:166:ALA:HB2 | 1:F:239:TYR:HB3 | 2.00 | 0.44 |
| 1:F:175:GLN:NE2 | 1:F:176:GLY:O | 2.51 | 0.44 |
| 1:F:91:GLY:H | 1:F:186:LYS:HZ1 | 1.65 | 0.44 |
| 1:F:269:VAL:CG1 | 1:F:272:LEU:HD11 | 2.48 | 0.44 |
| 1:A:136:LEU:HA | 1:A:136:LEU:HD23 | 1.57 | 0.43 |
| 1:A:286:MET:HA | 1:A:286:MET:CE | 2.48 | 0.43 |
| 1:B:98:TRP:HH2 | 1:B:164:VAL:HG12 | 1.83 | 0.43 |
| 1:C:117:LEU:HD13 | 1:C:118:GLN:H | 1.83 | 0.43 |
| 1:C:233:LYS:HE3 | 1:C:233:LYS:HB2 | 1.25 | 0.43 |
| 1:D:327:SER:O | 1:D:328:LEU:C | 2.56 | 0.43 |
| 1:E:103:LEU:HD22 | 1:E:103:LEU:N | 2.33 | 0.43 |
| 1:E:105:LEU:CD1 | 1:E:105:LEU:N | 2.78 | 0.43 |
| 1:E:232:ALA:C | 1:E:234:ASN:H | 2.21 | 0.43 |
| 1:F:168:GLY:N | 1:F:237:THR:HG23 | 2.31 | 0.43 |
| 1:A:100:MET:C | 1:A:100:MET:SD | 2.97 | 0.43 |
| 1:A:138:VAL:O | 1:A:153:ILE:HG23 | 2.18 | 0.43 |
| 1:B:129:VAL:HB | 1:B:253:LEU:HD21 | 1.98 | 0.43 |
| 1:B:177:LEU:HA | 1:B:177:LEU:HD23 | 1.75 | 0.43 |
| 1:B:255:PHE:HA | 1:B:255:PHE:HD1 | 1.70 | 0.43 |
| 1:D:133:GLY:CA | 1:E:228:HIS:CE1 | 2.97 | 0.43 |
| 1:E:219:ASP:C | 1:E:221:MET:N | 2.72 | 0.43 |
| 1:E:72:TYR:O | 1:E:73:TYR:C | 2.57 | 0.43 |
| 1:F:290:VAL:HG22 | 1:F:297:HIS:HD2 | 1.83 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:75:TRP:CE2 | 1:B:300:ARG:HD2 | 2.53 | 0.43 |
| 1:B:368:ARG:HG2 | 1:B:375:LYS:HE3 | 1.99 | 0.43 |
| 1:C:144:PRO:HD3 | 1:C:292:ARG:HG2 | 1.98 | 0.43 |
| 1:C:288:TRP:HZ3 | 1:C:299:TRP:CE2 | 2.37 | 0.43 |
| 1:C:50:GLU:CG | 1:C:307:LYS:HG3 | 2.49 | 0.43 |
| 1:C:321:MET:O | 1:C:325:ILE:HG22 | 2.18 | 0.43 |
| 1:D:150:THR:HG22 | 1:D:150:THR:O | 2.18 | 0.43 |
| 1:D:91:GLY:H | 1:D:186:LYS:CE | 2.32 | 0.43 |
| 1:D:76:SER:CB | 1:D:299:TRP:HE3 | 2.31 | 0.43 |
| 1:E:185:TYR:HB2 | 1:E:194:LYS:NZ | 2.33 | 0.43 |
| 1:E:39:LEU:O | 1:E:40:VAL:C | 2.56 | 0.43 |
| 1:E:91:GLY:H | 1:E:186:LYS:HE3 | 1.82 | 0.43 |
| 1:F:111:ASP:O | 1:F:113:THR:N | 2.51 | 0.43 |
| 1:F:123:VAL:O | 1:F:263:LEU:N | 2.50 | 0.43 |
| 1:F:162:TYR:CE1 | 1:F:283:VAL:HG21 | 2.53 | 0.43 |
| 1:A:170:GLU:OE2 | 1:A:274:LYS:HD2 | 2.18 | 0.43 |
| 1:B:153:ILE:HD11 | 1:C:297:HIS:CB | 2.48 | 0.43 |
| 1:B:193:ILE:HG22 | 1:B:212:SER:HB3 | 2.00 | 0.43 |
| 1:B:209:ASN:HA | 1:B:210:PRO:HD3 | 1.88 | 0.43 |
| 1:B:216:LEU:HA | 1:B:216:LEU:HD23 | 1.64 | 0.43 |
| 1:B:57:MET:HB2 | 1:B:96:PRO:HB3 | 1.99 | 0.43 |
| 1:D:105:LEU:HB3 | 1:D:120:TRP:CD1 | 2.54 | 0.43 |
| 1:D:125:VAL:N | 1:D:261:THR:O | 2.51 | 0.43 |
| 1:D:25:VAL:CG2 | 1:D:26:PRO:HD2 | 2.44 | 0.43 |
| 1:D:287:GLY:C | 1:D:299:TRP:HB2 | 2.38 | 0.43 |
| 1:D:300:ARG:HG3 | 1:D:301:GLY:N | 2.32 | 0.43 |
| 1:E:288:TRP:HE3 | 1:E:299:TRP:CG | 2.36 | 0.43 |
| 1:F:216:LEU:HA | 1:F:216:LEU:HD23 | 1.52 | 0.43 |
| 1:F:59:GLN:NE2 | 1:F:69:GLY:HA3 | 2.34 | 0.43 |
| 1:B:78:GLY:HA3 | 2:H:2:GAL:O3 | 2.18 | 0.43 |
| 1:B:92:ASN:HD21 | 1:B:190:VAL:HG12 | 1.83 | 0.43 |
| 1:B:161:GLN:CD | 1:B:251:PRO:HA | 2.38 | 0.43 |
| 1:B:288:TRP:HE3 | 1:B:299:TRP:HB3 | 1.82 | 0.43 |
| 1:C:41:THR:HB | 1:C:45:SER:CB | 2.47 | 0.43 |
| 1:B:139:HIS:HD2 | 1:C:88:ASP:OD2 | 2.01 | 0.43 |
| 1:D:29:LEU:HA | 1:D:29:LEU:HD23 | 1.48 | 0.43 |
| 1:E:239:TYR:C | 1:E:240:PHE:CG | 2.91 | 0.43 |
| 1:F:224:VAL:CG2 | 1:F:283:VAL:HG11 | 2.48 | 0.43 |
| 1:F:239:TYR:C | 1:F:240:PHE:CG | 2.92 | 0.43 |
| 1:F:124:SER:HA | 1:F:261:THR:O | 2.19 | 0.43 |
| 1:F:328:LEU:HG | 1:F:329:PHE:N | 2.34 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:91:GLY:O | 1:F:94:THR:N | 2.49 | 0.43 |
| 1:A:198:LYS:H | 1:A:198:LYS:HG2 | 1.26 | 0.43 |
| 1:A:265:ASP:OD1 | 1:A:269:VAL:HB | 2.18 | 0.43 |
| 1:B:182:ARG:O | 1:B:184:LYS:HD2 | 2.18 | 0.43 |
| 1:B:194:LYS:O | 1:B:195:THR:C | 2.56 | 0.43 |
| 1:B:232:ALA:C | 1:B:234:ASN:H | 2.21 | 0.43 |
| 1:B:304:ARG:HD3 | 1:B:306:PHE:CE1 | 2.52 | 0.43 |
| 1:B:358:GLU:HB2 | 1:B:359:PRO:HD2 | 2.00 | 0.43 |
| 1:B:83:THR:CB | 1:B:87:GLU:HB3 | 2.39 | 0.43 |
| 1:C:203:ASN:OD1 | 1:C:203:ASN:N | 2.52 | 0.43 |
| 1:C:69:GLY:HA3 | 1:C:71:GLN:OE1 | 2.19 | 0.43 |
| 1:D:194:LYS:C | 1:D:196:ILE:N | 2.71 | 0.43 |
| 1:D:165:PHE:CE1 | 1:D:240:PHE:CD1 | 3.07 | 0.43 |
| 1:D:82:ALA:HB1 | 1:D:87:GLU:O | 2.18 | 0.43 |
| 1:E:283:VAL:O | 1:E:283:VAL:HG23 | 2.17 | 0.43 |
| 1:F:78:GLY:HA3 | 2:L:2:GAL:C4 | 2.49 | 0.43 |
| 1:A:328:LEU:HD23 | 1:A:333:LEU:HD11 | 2.01 | 0.43 |
| 1:A:95:LEU:HA | 1:A:96:PRO:HD2 | 1.71 | 0.43 |
| 1:B:236:ASN:O | 1:B:271:PRO:HB3 | 2.18 | 0.43 |
| 1:B:30:ILE:HG23 | 1:B:36:VAL:HG13 | 2.00 | 0.43 |
| 1:C:115:ASP:O | 1:C:116:THR:C | 2.57 | 0.43 |
| 1:D:133:GLY:N | 1:E:228:HIS:CE1 | 2.72 | 0.43 |
| 1:F:123:VAL:HB | 1:F:309:THR:O | 2.19 | 0.43 |
| 1:F:250:PRO:HA | 1:F:251:PRO:HD3 | 1.77 | 0.43 |
| 1:F:288:TRP:HZ3 | 1:F:299:TRP:CE2 | 2.35 | 0.43 |
| 1:F:80:ASN:OD1 | 1:F:90:PRO:O | 2.36 | 0.43 |
| 1:A:261:THR:CG2 | 1:A:262:VAL:N | 2.81 | 0.43 |
| 1:A:278:LEU:HD22 | 1:A:280:LEU:HD23 | 1.99 | 0.43 |
| 1:B:250:PRO:HA | 1:B:251:PRO:HD3 | 1.55 | 0.43 |
| 1:C:161:GLN:HE22 | 1:C:251:PRO:CA | 2.25 | 0.43 |
| 1:C:205:ASP:O | 1:C:207:VAL:N | 2.51 | 0.43 |
| 1:C:350:GLU:CD | 1:C:351:VAL:N | 2.71 | 0.43 |
| 1:C:95:LEU:HA | 1:C:96:PRO:HD2 | 1.86 | 0.43 |
| 1:E:175:GLN:HA | 1:E:213:LYS:HA | 1.99 | 0.43 |
| 1:A:231:PRO:HG2 | 1:E:305:TYR:CD2 | 2.53 | 0.43 |
| 1:F:105:LEU:HD23 | 1:F:120:TRP:CD2 | 2.54 | 0.43 |
| 1:F:184:LYS:O | 1:F:186:LYS:HE2 | 2.19 | 0.43 |
| 1:F:54:ASN:HD22 | 1:F:303:PRO:HB3 | 1.83 | 0.43 |
| 1:F:317:ASN:HD22 | 1:F:318:PRO:N | 2.16 | 0.43 |
| 1:F:322:ALA:C | 1:F:324:LEU:N | 2.69 | 0.43 |
| 1:A:340:PRO:O | 1:A:346:THR:HA | 2.19 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:257:ASN:HD21 | 1:C:239:TYR:N | 2.14 | 0.43 |
| 1:C:233:LYS:CG | 1:C:234:ASN:N | 2.82 | 0.43 |
| 1:C:308:ILE:HG22 | 1:C:309:THR:N | 2.33 | 0.43 |
| 1:D:175:GLN:HG3 | 1:D:213:LYS:CG | 2.28 | 0.43 |
| 1:D:302:LEU:HA | 1:D:302:LEU:HD23 | 1.86 | 0.43 |
| 1:E:125:VAL:CG1 | 1:E:125:VAL:O | 2.65 | 0.43 |
| 1:E:129:VAL:HB | 1:E:253:LEU:HD21 | 2.00 | 0.43 |
| 1:E:284:ASP:OD1 | 1:E:304:ARG:NH1 | 2.51 | 0.43 |
| 1:F:278:LEU:HD22 | 1:F:280:LEU:CD2 | 2.46 | 0.43 |
| 1:F:291:THR:HB | 1:F:293:ASN:HB3 | 2.00 | 0.43 |
| 1:F:361:PRO:HG2 | 1:F:364:PRO:HG3 | 2.00 | 0.43 |
| 2:J:2:GAL:H3 | 2:J:3:SIA:O1B | 2.16 | 0.43 |
| 1:A:215:LYS:O | 1:A:222:TYR:CZ | 2.72 | 0.43 |
| 1:A:280:LEU:HD13 | 1:A:306:PHE:CD2 | 2.54 | 0.43 |
| 1:A:82:ALA:HB2 | 1:A:88:ASP:OD1 | 2.19 | 0.43 |
| 1:B:153:ILE:CD1 | 1:C:79:ILE:HG21 | 2.48 | 0.43 |
| 1:B:288:TRP:CE3 | 1:B:299:TRP:HB3 | 2.54 | 0.43 |
| 1:D:288:TRP:HA | 1:D:299:TRP:CB | 2.49 | 0.43 |
| 1:E:160:SER:HA | 1:E:244:THR:O | 2.17 | 0.43 |
| 1:E:144:PRO:HD3 | 1:E:292:ARG:HD3 | 2.01 | 0.43 |
| 1:E:363:ASP:O | 1:E:366:MET:HB3 | 2.18 | 0.43 |
| 1:E:82:ALA:CB | 1:E:88:ASP:HA | 2.49 | 0.43 |
| 1:F:23:ALA:HA | 1:F:24:PRO:HD3 | 1.74 | 0.43 |
| 1:F:305:TYR:C | 1:F:306:PHE:CD1 | 2.92 | 0.43 |
| 1:F:97:THR:HG22 | 1:F:223:PRO:CA | 2.49 | 0.43 |
| 1:A:176:GLY:C | 1:A:177:LEU:HG | 2.38 | 0.42 |
| 1:C:249:THR:HA | 1:C:250:PRO:HD3 | 1.61 | 0.42 |
| 1:C:337:GLN:HB2 | 1:C:338:GLY:H | 1.67 | 0.42 |
| 1:E:265:ASP:OD1 | 1:E:269:VAL:N | 2.49 | 0.42 |
| 1:E:318:PRO:HG2 | 1:E:319:TYR:CG | 2.54 | 0.42 |
| 1:F:218:LYS:HB2 | 1:F:222:TYR:HE1 | 1.78 | 0.42 |
| 1:F:336:VAL:CA | 1:F:337:GLN:N | 2.82 | 0.42 |
| 1:A:142:ASN:ND2 | 1:A:289:ARG:CG | 2.82 | 0.42 |
| 1:B:192:THR:CB | 1:B:193:ILE:HD12 | 2.48 | 0.42 |
| 1:C:111:ASP:OD1 | 1:C:114:CYS:HB3 | 2.19 | 0.42 |
| 1:C:171:PRO:HD3 | 1:C:279:TYR:CE2 | 2.53 | 0.42 |
| 1:D:77:ARG:O | 1:D:298:HIS:ND1 | 2.52 | 0.42 |
| 1:E:164:VAL:HA | 1:E:241:GLY:HA3 | 2.01 | 0.42 |
| 1:E:125:VAL:HG11 | 1:E:263:LEU:HD21 | 2.00 | 0.42 |
| 1:E:265:ASP:CG | 1:E:269:VAL:HB | 2.40 | 0.42 |
| 1:E:52:PHE:CD1 | 1:E:52:PHE:C | 2.93 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:204:LYS:NZ | 1:F:204:LYS:CB | 2.81 | 0.42 |
| 1:F:351:VAL:CG1 | 1:F:352:ARG:N | 2.82 | 0.42 |
| 1:A:291:THR:O | 1:A:293:ASN:N | 2.53 | 0.42 |
| 1:A:46:VAL:HG12 | 1:A:47:THR:N | 2.35 | 0.42 |
| 1:B:123:VAL:O | 1:B:263:LEU:N | 2.52 | 0.42 |
| 1:B:197:THR:O | 1:B:198:LYS:C | 2.58 | 0.42 |
| 1:B:25:VAL:HG21 | 1:F:360:VAL:HA | 2.00 | 0.42 |
| 1:B:308:ILE:H | 1:B:308:ILE:HD12 | 1.80 | 0.42 |
| 1:B:311:ARG:HH21 | 1:B:313:ARG:NH2 | 2.17 | 0.42 |
| 1:B:54:ASN:HD22 | 1:B:55:PRO:CD | 2.31 | 0.42 |
| 1:C:254:GLN:O | 1:C:256:THR:N | 2.52 | 0.42 |
| 1:C:316:LYS:HE3 | 1:F:359:PRO:HB2 | 2.01 | 0.42 |
| 1:D:132:SER:O | 1:D:135:LEU:CD2 | 2.68 | 0.42 |
| 1:D:166:ALA:HB1 | 1:D:238:ARG:O | 2.19 | 0.42 |
| 1:D:171:PRO:HG2 | 1:D:215:LYS:HD2 | 2.02 | 0.42 |
| 1:E:105:LEU:HB3 | 1:E:120:TRP:NE1 | 2.35 | 0.42 |
| 1:E:121:GLU:CG | 1:E:313:ARG:HD2 | 2.49 | 0.42 |
| 1:E:368:ARG:HG3 | 1:E:376:THR:O | 2.20 | 0.42 |
| 1:F:182:ARG:CG | 1:F:183:THR:H | 2.32 | 0.42 |
| 1:F:75:TRP:CE2 | 1:F:300:ARG:HD2 | 2.54 | 0.42 |
| 1:F:83:THR:CB | 1:F:87:GLU:HB3 | 2.39 | 0.42 |
| 1:C:79:ILE:HG22 | 1:C:79:ILE:O | 2.19 | 0.42 |
| 1:D:125:VAL:CG1 | 1:D:263:LEU:HD21 | 2.49 | 0.42 |
| 1:D:172:LEU:C | 1:D:172:LEU:HD22 | 2.38 | 0.42 |
| 1:D:57:MET:HB2 | 1:D:96:PRO:CB | 2.46 | 0.42 |
| 1:E:109:ASN:HD22 | 1:E:110:GLU:H | 1.65 | 0.42 |
| 1:D:251:PRO:HB2 | 1:E:243:TYR:CE2 | 2.55 | 0.42 |
| 1:E:296:VAL:HG12 | 1:E:298:HIS:HD2 | 1.84 | 0.42 |
| 1:F:302:LEU:HD23 | 1:F:302:LEU:HA | 1.76 | 0.42 |
| 1:F:112:LEU:HD23 | 1:F:321:MET:SD | 2.59 | 0.42 |
| 1:C:111:ASP:C | 1:C:113:THR:H | 2.22 | 0.42 |
| 1:C:117:LEU:HD22 | 1:C:117:LEU:HA | 1.45 | 0.42 |
| 1:C:57:MET:HB3 | 1:C:96:PRO:CB | 2.48 | 0.42 |
| 1:D:153:ILE:HD13 | 1:D:153:ILE:HA | 1.81 | 0.42 |
| 1:D:218:LYS:H | 1:D:222:TYR:HE2 | 1.66 | 0.42 |
| 1:D:269:VAL:HG13 | 1:D:272:LEU:HD11 | 2.02 | 0.42 |
| 1:E:164:VAL:HA | 1:E:240:PHE:O | 2.20 | 0.42 |
| 1:E:339:GLN:HA | 1:E:340:PRO:HD3 | 1.76 | 0.42 |
| 1:E:90:PRO:HD2 | 1:E:184:LYS:O | 2.18 | 0.42 |
| 1:F:97:THR:HG22 | 1:F:223:PRO:N | 2.35 | 0.42 |
| 1:F:339:GLN:CG | 1:F:340:PRO:HD2 | 2.47 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:255:PHE:HB2 | 1:B:241:GLY:O | 2.19 | 0.42 |
| 1:B:117:LEU:HA | 1:B:314:TRP:CZ3 | 2.52 | 0.42 |
| 1:B:209:ASN:C | 1:B:211:ILE:H | 2.22 | 0.42 |
| 1:B:360:VAL:HG12 | 1:B:361:PRO:N | 2.34 | 0.42 |
| 1:C:100:MET:SD | 1:C:101:ALA:HA | 2.60 | 0.42 |
| 1:C:302:LEU:HB3 | 1:C:303:PRO:HD2 | 2.01 | 0.42 |
| 1:D:198:LYS:HA | 1:D:198:LYS:HD3 | 1.52 | 0.42 |
| 1:D:285:ILE:HG22 | 1:D:287:GLY:N | 2.34 | 0.42 |
| 1:E:175:GLN:HG2 | 1:E:212:SER:O | 2.20 | 0.42 |
| 1:E:207:VAL:HG23 | 1:E:208:LEU:H | 1.85 | 0.42 |
| 1:E:232:ALA:C | 1:E:234:ASN:N | 2.70 | 0.42 |
| 1:A:162:TYR:CE2 | 1:E:255:PHE:HE2 | 2.37 | 0.42 |
| 1:E:30:ILE:CG1 | 1:E:31:LYS:N | 2.82 | 0.42 |
| 1:E:97:THR:HA | 1:E:223:PRO:HA | 2.00 | 0.42 |
| 1:B:118:GLN:HA | 1:B:313:ARG:O | 2.19 | 0.42 |
| 1:B:117:LEU:CD1 | 1:B:315:VAL:HG22 | 2.50 | 0.42 |
| 1:B:354:TYR:N | 1:B:354:TYR:HD1 | 2.18 | 0.42 |
| 1:D:202:VAL:O | 1:D:203:ASN:C | 2.58 | 0.42 |
| 1:D:238:ARG:HG3 | 1:D:263:LEU:HA | 2.01 | 0.42 |
| 1:D:308:ILE:H | 1:D:308:ILE:HD12 | 1.83 | 0.42 |
| 1:F:131:GLY:O | 1:F:134:SER:HB3 | 2.20 | 0.42 |
| 1:F:341:MET:HE1 | 1:F:347:GLN:CB | 2.44 | 0.42 |
| 1:A:172:LEU:HD13 | 1:A:174:LEU:HD23 | 2.02 | 0.42 |
| 1:A:85:ASP:CG | 1:A:182:ARG:HH12 | 2.22 | 0.42 |
| 1:A:72:TYR:O | 1:A:73:TYR:C | 2.57 | 0.42 |
| 1:B:178:VAL:HG22 | 1:B:179:THR:H | 1.84 | 0.42 |
| 1:B:236:ASN:OD1 | 1:B:271:PRO:HA | 2.20 | 0.42 |
| 1:C:125:VAL:O | 1:C:125:VAL:HG13 | 2.19 | 0.42 |
| 1:E:151:LYS:HA | 1:E:151:LYS:HD3 | 1.79 | 0.42 |
| 1:E:180:ASP:HB3 | 1:E:182:ARG:HG2 | 2.01 | 0.42 |
| 1:E:288:TRP:HE3 | 1:E:299:TRP:HB3 | 1.83 | 0.42 |
| 1:E:370:VAL:HG22 | 1:E:375:LYS:HB2 | 2.02 | 0.42 |
| 1:E:81:LEU:HG | 1:E:82:ALA:H | 1.85 | 0.42 |
| 1:F:155:THR:HA | 1:F:156:PRO:HD2 | 1.81 | 0.42 |
| 1:C:350:GLU:HG3 | 1:F:233:LYS:HB3 | 2.01 | 0.42 |
| 1:F:166:ALA:HB1 | 1:F:237:THR:HG22 | 2.02 | 0.42 |
| 1:F:324:LEU:HA | 1:F:327:SER:HB2 | 2.02 | 0.42 |
| 1:A:238:ARG:HH21 | 1:A:265:ASP:HB3 | 1.84 | 0.42 |
| 1:A:23:ALA:HA | 1:A:24:PRO:HD3 | 1.84 | 0.42 |
| 1:A:302:LEU:HD23 | 1:A:302:LEU:HA | 1.66 | 0.42 |
| 1:A:328:LEU:CD2 | 1:A:333:LEU:CD2 | 2.31 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:170:GLU:CB | 1:B:171:PRO:HD2 | 2.44 | 0.42 |
| 1:B:265:ASP:OD1 | 1:B:269:VAL:N | 2.53 | 0.42 |
| 1:B:380:PHE:C | 1:B:382:GLY:N | 2.73 | 0.42 |
| 1:C:209:ASN:O | 1:C:211:ILE:N | 2.53 | 0.42 |
| 1:C:126:LYS:CG | 1:C:260:THR:HG23 | 2.48 | 0.42 |
| 1:D:139:HIS:HB2 | 1:D:140:GLY:H | 1.67 | 0.42 |
| 1:D:140:GLY:O | 1:D:154:SER:OG | 2.35 | 0.42 |
| 1:E:142:ASN:ND2 | 1:E:289:ARG:HG3 | 2.35 | 0.42 |
| 1:E:175:GLN:HG3 | 1:E:213:LYS:CG | 2.35 | 0.42 |
| 1:E:271:PRO:C | 1:E:272:LEU:HD12 | 2.40 | 0.42 |
| 1:E:79:ILE:HD11 | 1:E:299:TRP:HZ3 | 1.80 | 0.42 |
| 1:E:300:ARG:HG3 | 1:E:301:GLY:H | 1.85 | 0.42 |
| 1:F:91:GLY:H | 1:F:186:LYS:CE | 2.32 | 0.42 |
| 1:A:368:ARG:HH21 | 1:A:377:LYS:HG2 | 1.84 | 0.42 |
| 1:B:288:TRP:CE3 | 1:B:299:TRP:CG | 3.08 | 0.42 |
| 1:C:233:LYS:HE2 | 1:F:352:ARG:NH1 | 2.35 | 0.42 |
| 1:D:117:LEU:HD23 | 1:D:118:GLN:H | 1.83 | 0.42 |
| 1:E:333:LEU:HD22 | 1:E:333:LEU:N | 2.34 | 0.42 |
| 1:F:286:MET:CE | 1:F:286:MET:HA | 2.48 | 0.42 |
| 1:A:52:PHE:HA | 1:A:304:ARG:O | 2.20 | 0.41 |
| 1:B:180:ASP:O | 1:B:182:ARG:N | 2.53 | 0.41 |
| 1:B:211:ILE:O | 1:B:213:LYS:N | 2.53 | 0.41 |
| 1:C:104:GLN:HE21 | 1:C:105:LEU:N | 2.18 | 0.41 |
| 1:C:115:ASP:O | 1:C:317:ASN:HB2 | 2.20 | 0.41 |
| 1:D:193:ILE:CG2 | 1:D:212:SER:HB3 | 2.50 | 0.41 |
| 1:D:278:LEU:CD2 | 1:D:278:LEU:C | 2.89 | 0.41 |
| 1:E:138:VAL:O | 1:E:153:ILE:HG23 | 2.20 | 0.41 |
| 1:E:180:ASP:OD1 | 1:E:182:ARG:HG2 | 2.20 | 0.41 |
| 1:A:39:LEU:O | 1:A:41:THR:N | 2.53 | 0.41 |
| 1:B:101:ALA:HB2 | 1:F:339:GLN:CB | 2.49 | 0.41 |
| 1:B:192:THR:HB | 1:B:194:LYS:HG2 | 2.01 | 0.41 |
| 1:C:132:SER:CA | 1:C:135:LEU:HD23 | 2.48 | 0.41 |
| 1:C:193:ILE:CG2 | 1:C:212:SER:HB3 | 2.50 | 0.41 |
| 1:C:299:TRP:H | 1:C:299:TRP:HE3 | 1.68 | 0.41 |
| 1:D:193:ILE:O | 1:D:197:THR:HG22 | 2.20 | 0.41 |
| 1:D:59:GLN:OE1 | 1:D:77:ARG:HD2 | 2.19 | 0.41 |
| 1:E:117:LEU:HA | 1:E:117:LEU:HD22 | 1.51 | 0.41 |
| 1:E:194:LYS:H | 1:E:194:LYS:CD | 2.28 | 0.41 |
| 1:E:193:ILE:HD11 | 1:E:201:MET:SD | 2.61 | 0.41 |
| 1:E:59:GLN:HG3 | 1:E:60:PRO:HD2 | 2.01 | 0.41 |
| 1:F:218:LYS:O | 1:F:219:ASP:HB2 | 2.20 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:219:ASP:C | 1:F:221:MET:N | 2.68 | 0.41 |
| 1:F:66:LEU:HB3 | 1:F:71:GLN:HB2 | 2.02 | 0.41 |
| 1:F:78:GLY:HA3 | 2:L:2:GAL:O4 | 2.20 | 0.41 |
| 1:A:174:LEU:HB2 | 1:A:228:HIS:O | 2.20 | 0.41 |
| 1:A:166:ALA:CB | 1:A:238:ARG:O | 2.68 | 0.41 |
| 1:A:54:ASN:HD22 | 1:A:55:PRO:HD2 | 1.85 | 0.41 |
| 1:B:108:LEU:HB3 | 1:B:118:GLN:NE2 | 2.35 | 0.41 |
| 1:B:348:VAL:O | 1:B:348:VAL:HG13 | 2.19 | 0.41 |
| 1:C:108:LEU:HD11 | 1:C:120:TRP:NE1 | 2.35 | 0.41 |
| 1:B:54:ASN:ND2 | 1:C:207:VAL:HB | 2.35 | 0.41 |
| 1:C:50:GLU:OE2 | 1:D:233:LYS:CA | 2.64 | 0.41 |
| 1:D:318:PRO:O | 1:D:319:TYR:CD1 | 2.73 | 0.41 |
| 1:E:269:VAL:HG12 | 1:E:270:GLY:O | 2.20 | 0.41 |
| 1:E:298:HIS:HD2 | 1:E:298:HIS:H | 1.67 | 0.41 |
| 1:E:321:MET:O | 1:E:322:ALA:C | 2.59 | 0.41 |
| 1:E:332:MET:HA | 1:E:332:MET:CE | 2.50 | 0.41 |
| 1:E:337:GLN:OE1 | 1:E:337:GLN:HA | 2.19 | 0.41 |
| 1:E:83:THR:HG22 | 1:E:84:SER:N | 2.35 | 0.41 |
| 1:F:56:ARG:HH12 | 1:F:219:ASP:CG | 2.23 | 0.41 |
| 1:F:62:THR:CB | 1:F:63:PRO:HD3 | 2.50 | 0.41 |
| 1:F:78:GLY:HA3 | 2:L:2:GAL:H4 | 2.02 | 0.41 |
| 1:B:176:GLY:O | 1:B:177:LEU:CD2 | 2.69 | 0.41 |
| 1:B:194:LYS:O | 1:B:197:THR:N | 2.54 | 0.41 |
| 1:B:379:VAL:O | 1:B:380:PHE:C | 2.59 | 0.41 |
| 1:C:115:ASP:CG | 1:C:116:THR:N | 2.72 | 0.41 |
| 1:C:193:ILE:H | 1:C:193:ILE:HD12 | 1.84 | 0.41 |
| 1:C:271:PRO:C | 1:C:272:LEU:HG | 2.40 | 0.41 |
| 1:C:62:THR:O | 1:C:64:GLU:N | 2.54 | 0.41 |
| 1:E:113:THR:C | 1:E:115:ASP:N | 2.74 | 0.41 |
| 1:E:370:VAL:HG13 | 1:E:374:GLY:C | 2.41 | 0.41 |
| 1:E:86:THR:HG23 | 1:E:87:GLU:N | 2.35 | 0.41 |
| 1:F:177:LEU:HD22 | 1:F:205:ASP:O | 2.20 | 0.41 |
| 1:A:105:LEU:HB3 | 1:A:106:PRO:CD | 2.47 | 0.41 |
| 1:A:217:ASP:OD1 | 1:A:218:LYS:HD3 | 2.20 | 0.41 |
| 1:A:169:GLY:HA3 | 1:A:236:ASN:ND2 | 2.36 | 0.41 |
| 1:C:193:ILE:HD12 | 1:C:194:LYS:HD3 | 2.02 | 0.41 |
| 1:C:25:VAL:HG12 | 1:C:26:PRO:CD | 2.50 | 0.41 |
| 1:C:358:GLU:HG3 | 1:C:359:PRO:O | 2.20 | 0.41 |
| 1:D:262:VAL:HG12 | 1:D:264:LEU:HB2 | 2.01 | 0.41 |
| 1:E:257:ASN:HB3 | 1:E:258:THR:H | 1.41 | 0.41 |
| 1:E:278:LEU:HD22 | 1:E:278:LEU:C | 2.41 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:57:MET:CB | 1:E:96:PRO:HB3 | 2.47 | 0.41 |
| 1:F:192:THR:HG23 | 1:F:226:ILE:CD1 | 2.51 | 0.41 |
| 1:F:81:LEU:CG | 1:F:82:ALA:H | 2.33 | 0.41 |
| 1:C:178:VAL:CG2 | 1:C:179:THR:N | 2.81 | 0.41 |
| 1:D:186:LYS:N | 1:D:186:LYS:CD | 2.83 | 0.41 |
| 1:D:272:LEU:N | 1:D:272:LEU:CD1 | 2.80 | 0.41 |
| 1:F:123:VAL:HG12 | 1:F:124:SER:N | 2.33 | 0.41 |
| 1:E:78:GLY:HA3 | 2:K:2:GAL:O4 | 2.20 | 0.41 |
| 1:A:178:VAL:CG2 | 1:A:179:THR:H | 2.32 | 0.41 |
| 1:A:350:GLU:OE2 | 1:A:352:ARG:HD2 | 2.21 | 0.41 |
| 1:C:222:TYR:N | 1:C:222:TYR:CD1 | 2.89 | 0.41 |
| 1:C:105:LEU:HB2 | 1:C:276:GLU:O | 2.21 | 0.41 |
| 1:D:125:VAL:HG12 | 1:D:263:LEU:HD21 | 2.03 | 0.41 |
| 1:D:68:GLU:HG2 | 1:D:68:GLU:H | 1.64 | 0.41 |
| 1:E:143:LYS:HA | 1:E:292:ARG:HA | 2.02 | 0.41 |
| 1:E:97:THR:CG2 | 1:E:223:PRO:HA | 2.51 | 0.41 |
| 1:E:264:LEU:HD12 | 1:E:264:LEU:HA | 1.63 | 0.41 |
| 1:F:316:LYS:HE2 | 1:F:316:LYS:HB3 | 1.77 | 0.41 |
| 1:F:43:PRO:CD | 1:F:44:ASP:H | 2.33 | 0.41 |
| 1:B:185:TYR:CA | 1:B:186:LYS:HE2 | 2.49 | 0.41 |
| 1:B:205:ASP:O | 1:B:207:VAL:N | 2.54 | 0.41 |
| 1:B:65:SER:C | 1:B:67:THR:H | 2.24 | 0.41 |
| 1:C:352:ARG:HE | 1:F:234:ASN:CG | 2.24 | 0.41 |
| 1:C:64:GLU:O | 1:C:66:LEU:HD23 | 2.21 | 0.41 |
| 1:D:193:ILE:O | 1:D:196:ILE:HG23 | 2.20 | 0.41 |
| 1:E:150:THR:CG2 | 1:E:292:ARG:NH2 | 2.82 | 0.41 |
| 1:E:288:TRP:CE3 | 1:E:299:TRP:HB3 | 2.55 | 0.41 |
| 1:F:315:VAL:HG23 | 1:F:316:LYS:N | 2.35 | 0.41 |
| 1:A:145:THR:HB | 1:A:152:GLY:HA3 | 2.03 | 0.41 |
| 1:A:367:THR:H | 1:A:380:PHE:HE1 | 1.69 | 0.41 |
| 1:B:185:TYR:CD2 | 1:B:192:THR:CG2 | 3.01 | 0.41 |
| 1:B:61:PRO:HG2 | 1:B:62:THR:H | 1.86 | 0.41 |
| 1:C:117:LEU:HD13 | 1:C:118:GLN:O | 2.20 | 0.41 |
| 1:C:207:VAL:CG2 | 1:C:208:LEU:N | 2.84 | 0.41 |
| 1:C:171:PRO:HD3 | 1:C:279:TYR:CZ | 2.56 | 0.41 |
| 1:A:233:LYS:HE2 | 1:E:31:LYS:HD2 | 2.02 | 0.41 |
| 1:E:346:THR:HG22 | 1:E:348:VAL:CG2 | 2.51 | 0.41 |
| 1:E:62:THR:OG1 | 1:E:63:PRO:CD | 2.61 | 0.41 |
| 1:F:184:LYS:N | 1:F:184:LYS:HD2 | 2.35 | 0.41 |
| 1:F:97:THR:HG22 | 1:F:223:PRO:HA | 2.03 | 0.41 |
| 1:A:165:PHE:CD2 | 1:A:166:ALA:N | 2.89 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:193:ILE:HG12 | 1:A:201:MET:HE3 | 2.03 | 0.41 |
| 1:A:285:ILE:H | 1:A:285:ILE:HD12 | 1.85 | 0.41 |
| 1:A:328:LEU:HD21 | 1:A:333:LEU:CG | 2.36 | 0.41 |
| 1:A:132:SER:HB2 | 1:B:243:TYR:HB2 | 2.02 | 0.41 |
| 1:B:305:TYR:C | 1:B:306:PHE:CD1 | 2.94 | 0.41 |
| 1:B:320:PRO:O | 1:B:324:LEU:HD22 | 2.21 | 0.41 |
| 1:B:66:LEU:CD2 | 1:B:66:LEU:N | 2.83 | 0.41 |
| 1:D:120:TRP:O | 1:D:272:LEU:HA | 2.21 | 0.41 |
| 1:D:135:LEU:HD22 | 1:D:135:LEU:N | 2.36 | 0.41 |
| 1:D:153:ILE:HG12 | 1:E:297:HIS:CG | 2.53 | 0.41 |
| 1:D:352:ARG:HG3 | 1:D:352:ARG:HH11 | 1.86 | 0.41 |
| 1:D:43:PRO:CD | 1:D:44:ASP:H | 2.33 | 0.41 |
| 1:E:144:PRO:HG3 | 1:E:292:ARG:HG2 | 2.02 | 0.41 |
| 1:E:177:LEU:HD11 | 1:E:208:LEU:HA | 2.03 | 0.41 |
| 1:E:194:LYS:O | 1:E:196:ILE:N | 2.54 | 0.41 |
| 1:E:124:SER:HA | 1:E:261:THR:O | 2.21 | 0.41 |
| 1:E:170:GLU:HB3 | 1:E:274:LYS:HD2 | 2.03 | 0.41 |
| 1:F:288:TRP:HA | 1:F:299:TRP:HB3 | 2.02 | 0.41 |
| 1:A:79:ILE:HG23 | 1:A:79:ILE:HD12 | 1.78 | 0.41 |
| 1:B:257:ASN:N | 1:B:257:ASN:HD22 | 2.03 | 0.41 |
| 1:C:123:VAL:O | 1:C:263:LEU:N | 2.50 | 0.41 |
| 1:C:142:ASN:O | 1:C:143:LYS:C | 2.59 | 0.41 |
| 1:C:164:VAL:HG12 | 1:C:165:PHE:N | 2.36 | 0.41 |
| 1:C:177:LEU:HD22 | 1:C:208:LEU:HA | 2.03 | 0.41 |
| 1:C:352:ARG:NH1 | 1:C:352:ARG:HG2 | 2.36 | 0.41 |
| 1:D:254:GLN:HA | 1:D:254:GLN:OE1 | 2.20 | 0.41 |
| 1:D:310:LEU:N | 1:D:310:LEU:HD12 | 2.36 | 0.41 |
| 1:E:18:ALA:O | 1:E:19:CYS:C | 2.59 | 0.41 |
| 1:E:208:LEU:CD2 | 1:E:210:PRO:HG3 | 2.50 | 0.41 |
| 1:E:238:ARG:HG3 | 1:E:263:LEU:HA | 2.02 | 0.41 |
| 1:E:165:PHE:HB2 | 1:E:282:CYS:HB3 | 2.02 | 0.41 |
| 1:E:351:VAL:HG12 | 1:E:352:ARG:N | 2.36 | 0.41 |
| 1:F:134:SER:C | 1:F:136:LEU:H | 2.24 | 0.41 |
| 1:F:142:ASN:HB2 | 1:F:154:SER:HB3 | 2.02 | 0.41 |
| 1:F:192:THR:N | 1:F:195:THR:HB | 2.32 | 0.41 |
| 1:F:359:PRO:O | 1:F:360:VAL:C | 2.59 | 0.41 |
| 1:F:84:SER:C | 1:F:86:THR:N | 2.73 | 0.41 |
| 1:A:176:GLY:O | 1:A:177:LEU:HG | 2.21 | 0.40 |
| 1:A:30:ILE:CD1 | 1:A:36:VAL:HG13 | 2.51 | 0.40 |
| 1:A:62:THR:O | 1:A:64:GLU:N | 2.55 | 0.40 |
| 1:B:194:LYS:C | 1:B:196:ILE:N | 2.74 | 0.40 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:71:GLN:NE2 | 1:B:71:GLN:HA | 2.25 | 0.40 |
| 1:C:192:THR:H | 1:C:195:THR:HG1 | 1.66 | 0.40 |
| 1:C:209:ASN:HA | 1:C:210:PRO:HD3 | 1.71 | 0.40 |
| 1:C:124:SER:HA | 1:C:261:THR:O | 2.21 | 0.40 |
| 1:C:272:LEU:HD12 | 1:C:272:LEU:H | 1.86 | 0.40 |
| 1:C:285:ILE:CD1 | 1:C:285:ILE:N | 2.84 | 0.40 |
| 1:C:90:PRO:HD2 | 1:C:186:LYS:NZ | 2.36 | 0.40 |
| 1:D:145:THR:OG1 | 1:D:153:ILE:N | 2.52 | 0.40 |
| 1:D:174:LEU:N | 1:D:174:LEU:CD1 | 2.68 | 0.40 |
| 1:D:288:TRP:CE3 | 1:D:299:TRP:HB3 | 2.56 | 0.40 |
| 1:D:320:PRO:O | 1:D:321:MET:C | 2.58 | 0.40 |
| 1:E:211:ILE:N | 1:E:211:ILE:CD1 | 2.84 | 0.40 |
| 1:E:174:LEU:HD22 | 1:E:227:TRP:HB3 | 2.03 | 0.40 |
| 1:C:352:ARG:CZ | 1:F:233:LYS:HB2 | 2.51 | 0.40 |
| 1:A:192:THR:N | 1:A:195:THR:OG1 | 2.51 | 0.40 |
| 1:B:127:THR:OG1 | 1:B:128:GLU:N | 2.54 | 0.40 |
| 1:B:346:THR:C | 1:B:348:VAL:H | 2.24 | 0.40 |
| 1:B:366:MET:HE3 | 1:B:377:LYS:HG2 | 2.02 | 0.40 |
| 1:C:132:SER:C | 1:C:135:LEU:HD23 | 2.42 | 0.40 |
| 1:C:77:ARG:O | 1:C:298:HIS:CG | 2.74 | 0.40 |
| 1:D:249:THR:HA | 1:D:250:PRO:HD3 | 1.87 | 0.40 |
| 1:D:255:PHE:HE2 | 1:E:162:TYR:CE2 | 2.40 | 0.40 |
| 1:D:117:LEU:HB3 | 1:D:315:VAL:HG22 | 2.03 | 0.40 |
| 1:E:186:LYS:HE2 | 1:E:186:LYS:H | 1.82 | 0.40 |
| 1:E:144:PRO:HD3 | 1:E:292:ARG:HG2 | 2.04 | 0.40 |
| 1:F:203:ASN:N | 1:F:203:ASN:OD1 | 2.54 | 0.40 |
| 1:F:280:LEU:HD13 | 1:F:306:PHE:CD2 | 2.56 | 0.40 |
| 1:A:25:VAL:HG13 | 1:A:26:PRO:CD | 2.51 | 0.40 |
| 1:A:115:ASP:O | 1:A:316:LYS:HA | 2.21 | 0.40 |
| 1:B:122:ALA:CA | 1:B:310:LEU:HB3 | 2.48 | 0.40 |
| 1:B:117:LEU:CA | 1:B:314:TRP:HZ3 | 2.34 | 0.40 |
| 1:B:378:THR:CG2 | 1:B:379:VAL:N | 2.84 | 0.40 |
| 1:C:135:LEU:H | 1:C:135:LEU:HD22 | 1.85 | 0.40 |
| 1:C:205:ASP:CA | 1:C:209:ASN:HB2 | 2.42 | 0.40 |
| 1:C:86:THR:HG23 | 1:C:87:GLU:N | 2.37 | 0.40 |
| 1:D:174:LEU:HA | 1:D:230:ASP:H | 1.86 | 0.40 |
| 1:D:21:ARG:HA | 1:D:22:PRO:HD3 | 1.96 | 0.40 |
| 1:D:288:TRP:CE3 | 1:D:299:TRP:CG | 3.08 | 0.40 |
| 1:D:32:GLY:N | 1:D:36:VAL:HG21 | 2.35 | 0.40 |
| 1:D:57:MET:O | 1:D:57:MET:CG | 2.69 | 0.40 |
| 1:E:103:LEU:CD2 | 1:E:103:LEU:N | 2.85 | 0.40 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:205:ASP:HA | 1:E:209:ASN:HB2 | 2.02 | 0.40 |
| 1:E:172:LEU:HD21 | 1:E:229:PRO:HA | 2.03 | 0.40 |
| 1:E:287:GLY:C | 1:E:299:TRP:HB2 | 2.42 | 0.40 |
| 1:F:151:LYS:HA | 1:F:151:LYS:HD3 | 1.73 | 0.40 |
| 1:F:144:PRO:HA | 1:F:153:ILE:O | 2.21 | 0.40 |
| 1:F:321:MET:C | 1:F:323:SER:N | 2.74 | 0.40 |
| 1:F:39:LEU:HD12 | 1:F:40:VAL:N | 2.35 | 0.40 |
| 1:A:180:ASP:OD2 | 1:A:182:ARG:HD2 | 2.22 | 0.40 |
| 1:A:76:SER:CB | 1:A:299:TRP:CE3 | 3.04 | 0.40 |
| 1:A:45:SER:OG | 1:A:312:LYS:HE3 | 2.20 | 0.40 |
| 1:B:233:LYS:HG2 | 1:B:234:ASN:HD22 | 1.85 | 0.40 |
| 1:C:100:MET:SD | 1:C:101:ALA:CA | 3.09 | 0.40 |
| 1:C:280:LEU:HD23 | 1:C:280:LEU:HA | 1.66 | 0.40 |
| 1:C:288:TRP:CA | 1:C:299:TRP:HB3 | 2.50 | 0.40 |
| 1:C:352:ARG:HH21 | 1:F:233:LYS:C | 2.24 | 0.40 |
| 1:D:121:GLU:CG | 1:D:269:VAL:O | 2.70 | 0.40 |
| 1:D:54:ASN:HA | 1:D:55:PRO:HD2 | 1.67 | 0.40 |
| 1:E:113:THR:O | 1:E:115:ASP:N | 2.54 | 0.40 |
| 1:A:243:TYR:O | 1:E:252:VAL:HA | 2.20 | 0.40 |
| 1:F:35:GLU:O | 1:F:36:VAL:C | 2.58 | 0.40 |
| 1:A:105:LEU:HB3 | 1:A:120:TRP:HE1 | 1.82 | 0.40 |
| 1:A:305:TYR:CE2 | 1:A:307:LYS:HB2 | 2.57 | 0.40 |
| 1:A:363:ASP:OD1 | 1:A:366:MET:N | 2.54 | 0.40 |
| 1:C:111:ASP:O | 1:C:114:CYS:O | 2.39 | 0.40 |
| 1:C:208:LEU:O | 1:C:208:LEU:HG | 2.21 | 0.40 |
| 1:C:52:PHE:CD1 | 1:C:52:PHE:C | 2.95 | 0.40 |
| 1:D:236:ASN:OD1 | 1:D:272:LEU:HD12 | 2.21 | 0.40 |
| 1:D:71:GLN:HE21 | 1:D:73:TYR:H | 1.68 | 0.40 |
| 1:C:153:ILE:HD13 | 1:D:79:ILE:HG21 | 2.03 | 0.40 |
| 1:E:153:ILE:HD13 | 1:E:153:ILE:HA | 1.89 | 0.40 |
| 1:E:259:LEU:CD2 | 1:E:259:LEU:N | 2.79 | 0.40 |
| 1:E:162:TYR:CD1 | 1:E:283:VAL:HG21 | 2.56 | 0.40 |
| 1:E:37:LEU:N | 1:E:37:LEU:HD13 | 2.36 | 0.40 |
| 1:F:136:LEU:HD23 | 1:F:136:LEU:HA | 1.82 | 0.40 |

All (2) 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:274:LYS:CD | 1:A:328:LEU:O[2_555] | 1.75 | 0.45 |
| 1:A:217:ASP:O | 1:A:336:VAL:O[2_555] | 2.05 | 0.15 |

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 | 364/383 (95%) | 270 (74%) | 67 (18%) | 27 (7%) | 1 | 13 |
| 1 | B | 363/383 (95%) | 280 (77%) | 62 (17%) | 21 (6%) | 1 | 19 |
| 1 | C | 353/383 (92%) | 275 (78%) | 60 (17%) | 18 (5%) | 2 | 21 |
| 1 | D | 336/383 (88%) | 264 (79%) | 58 (17%) | 14 (4%) | 3 | 25 |
| 1 | E | 365/383 (95%) | 278 (76%) | 62 (17%) | 25 (7%) | 1 | 15 |
| 1 | F | 350/383 (91%) | 271 (77%) | 45 (13%) | 34 (10%) | 0 | 8 |
| All | All | 2131/2298 (93%) | 1638 (77%) | 354 (17%) | 139 (6%) | 1 | 17 |

All (139) Ramachandran outliers are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | A | 43 | PRO |
| 1 | A | 62 | THR |
| 1 | A | 148 | VAL |
| 1 | A | 183 | THR |
| 1 | A | 276 | GLU |
| 1 | A | 293 | ASN |
| 1 | A | 322 | ALA |
| 1 | A | 323 | SER |
| 1 | A | 327 | SER |
| 1 | A | 334 | PRO |
| 1 | A | 372 | ARG |
| 1 | A | 381 | PRO |
| 1 | B | 43 | PRO |
| 1 | B | 77 | ARG |
| 1 | B | 85 | ASP |
| 1 | B | 276 | GLU |
| 1 | C | 43 | PRO |
| 1 | C | 62 | THR |
| 1 | C | 85 | ASP |
| 1 | C | 90 | PRO |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | C | 198 | LYS |
| 1 | D | 43 | PRO |
| 1 | D | 85 | ASP |
| 1 | D | 293 | ASN |
| 1 | D | 322 | ALA |
| 1 | E | 43 | PRO |
| 1 | E | 77 | ARG |
| 1 | E | 85 | ASP |
| 1 | E | 90 | PRO |
| 1 | E | 92 | ASN |
| 1 | E | 113 | THR |
| 1 | E | 258 | THR |
| 1 | E | 371 | ASP |
| 1 | E | 381 | PRO |
| 1 | F | 19 | CYS |
| 1 | F | 40 | VAL |
| 1 | F | 41 | THR |
| 1 | F | 43 | PRO |
| 1 | F | 61 | PRO |
| 1 | F | 62 | THR |
| 1 | F | 92 | ASN |
| 1 | F | 183 | THR |
| 1 | F | 212 | SER |
| 1 | A | 61 | PRO |
| 1 | A | 212 | SER |
| 1 | B | 148 | VAL |
| 1 | B | 198 | LYS |
| 1 | B | 297 | HIS |
| 1 | B | 318 | PRO |
| 1 | C | 61 | PRO |
| 1 | C | 70 | GLY |
| 1 | C | 77 | ARG |
| 1 | C | 212 | SER |
| 1 | C | 255 | PHE |
| 1 | D | 45 | SER |
| 1 | D | 55 | PRO |
| 1 | D | 84 | SER |
| 1 | D | 148 | VAL |
| 1 | D | 321 | MET |
| 1 | E | 40 | VAL |
| 1 | E | 84 | SER |
| 1 | E | 148 | VAL |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | E | 212 | SER |
| 1 | E | 257 | ASN |
| 1 | F | 70 | GLY |
| 1 | F | 77 | ARG |
| 1 | F | 113 | THR |
| 1 | F | 148 | VAL |
| 1 | F | 276 | GLU |
| 1 | F | 293 | ASN |
| 1 | A | 90 | PRO |
| 1 | A | 200 | ASP |
| 1 | A | 337 | GLN |
| 1 | A | 366 | MET |
| 1 | B | 70 | GLY |
| 1 | C | 116 | THR |
| 1 | C | 190 | VAL |
| 1 | C | 342 | GLU |
| 1 | D | 90 | PRO |
| 1 | E | 20 | PRO |
| 1 | F | 90 | PRO |
| 1 | F | 112 | LEU |
| 1 | F | 179 | THR |
| 1 | F | 219 | ASP |
| 1 | F | 322 | ALA |
| 1 | F | 368 | ARG |
| 1 | A | 156 | PRO |
| 1 | B | 81 | LEU |
| 1 | B | 84 | SER |
| 1 | B | 195 | THR |
| 1 | B | 206 | GLN |
| 1 | B | 325 | ILE |
| 1 | B | 329 | PHE |
| 1 | B | 361 | PRO |
| 1 | B | 381 | PRO |
| 1 | C | 148 | VAL |
| 1 | C | 200 | ASP |
| 1 | C | 206 | GLN |
| 1 | C | 293 | ASN |
| 1 | C | 318 | PRO |
| 1 | D | 220 | GLY |
| 1 | E | 22 | PRO |
| 1 | E | 293 | ASN |
| 1 | E | 320 | PRO |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | E | 379 | VAL |
| 1 | E | 382 | GLY |
| 1 | F | 66 | LEU |
| 1 | F | 85 | ASP |
| 1 | F | 208 | LEU |
| 1 | F | 297 | HIS |
| 1 | F | 334 | PRO |
| 1 | F | 342 | GLU |
| 1 | A | 70 | GLY |
| 1 | A | 77 | ARG |
| 1 | A | 339 | GLN |
| 1 | A | 364 | PRO |
| 1 | B | 193 | ILE |
| 1 | B | 212 | SER |
| 1 | D | 41 | THR |
| 1 | E | 179 | THR |
| 1 | F | 320 | PRO |
| 1 | F | 362 | GLY |
| 1 | A | 340 | PRO |
| 1 | B | 90 | PRO |
| 1 | E | 114 | CYS |
| 1 | F | 294 | TYR |
| 1 | A | 249 | THR |
| 1 | B | 360 | VAL |
| 1 | E | 125 | VAL |
| 1 | F | 22 | PRO |
| 1 | F | 125 | VAL |
| 1 | F | 155 | THR |
| 1 | E | 156 | PRO |
| 1 | F | 190 | VAL |
| 1 | A | 40 | VAL |
| 1 | E | 364 | PRO |
| 1 | D | 340 | PRO |
| 1 | A | 30 | ILE |
| 1 | D | 269 | VAL |

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 | 321/335 (96%) | 244 (76%) | 77 (24%) | 0 | 5 |
| 1 | B | 322/335 (96%) | 237 (74%) | 85 (26%) | 0 | 3 |
| 1 | C | 314/335 (94%) | 238 (76%) | 76 (24%) | 0 | 5 |
| 1 | D | 298/335 (89%) | 214 (72%) | 84 (28%) | 0 | 2 |
| 1 | E | 322/335 (96%) | 241 (75%) | 81 (25%) | 0 | 4 |
| 1 | F | 311/335 (93%) | 228 (73%) | 83 (27%) | 0 | 3 |
| All | All | 1888/2010 (94%) | 1402 (74%) | 486 (26%) | 0 | 4 |

All (486) residues with a non-rotameric sidechain are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | A | 39 | LEU |
| 1 | A | 41 | THR |
| 1 | A | 43 | PRO |
| 1 | A | 53 | LEU |
| 1 | A | 57 | MET |
| 1 | A | 66 | LEU |
| 1 | A | 71 | GLN |
| 1 | A | 75 | TRP |
| 1 | A | 77 | ARG |
| 1 | A | 83 | THR |
| 1 | A | 93 | ASN |
| 1 | A | 95 | LEU |
| 1 | A | 99 | SER |
| 1 | A | 115 | ASP |
| 1 | A | 127 | THR |
| 1 | A | 130 | VAL |
| 1 | A | 132 | SER |
| 1 | A | 138 | VAL |
| 1 | A | 141 | PHE |
| 1 | A | 151 | LYS |
| 1 | A | 154 | SER |
| 1 | A | 172 | LEU |
| 1 | A | 175 | GLN |
| 1 | A | 179 | THR |
| 1 | A | 180 | ASP |
| 1 | A | 184 | LYS |
| 1 | A | 186 | LYS |
| 1 | A | 193 | ILE |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | A | 194 | LYS |
| 1 | A | 195 | THR |
| 1 | A | 196 | ILE |
| 1 | A | 197 | THR |
| 1 | A | 198 | LYS |
| 1 | A | 216 | LEU |
| 1 | A | 217 | ASP |
| 1 | A | 219 | ASP |
| 1 | A | 224 | VAL |
| 1 | A | 230 | ASP |
| 1 | A | 234 | ASN |
| 1 | A | 240 | PHE |
| 1 | A | 244 | THR |
| 1 | A | 252 | VAL |
| 1 | A | 253 | LEU |
| 1 | A | 256 | THR |
| 1 | A | 258 | THR |
| 1 | A | 259 | LEU |
| 1 | A | 278 | LEU |
| 1 | A | 281 | SER |
| 1 | A | 283 | VAL |
| 1 | A | 286 | MET |
| 1 | A | 288 | TRP |
| 1 | A | 292 | ARG |
| 1 | A | 294 | TYR |
| 1 | A | 295 | ASP |
| 1 | A | 299 | TRP |
| 1 | A | 304 | ARG |
| 1 | A | 309 | THR |
| 1 | A | 310 | LEU |
| 1 | A | 313 | ARG |
| 1 | A | 315 | VAL |
| 1 | A | 323 | SER |
| 1 | A | 324 | LEU |
| 1 | A | 327 | SER |
| 1 | A | 335 | GLN |
| 1 | A | 336 | VAL |
| 1 | A | 345 | ASN |
| 1 | A | 347 | GLN |
| 1 | A | 350 | GLU |
| 1 | A | 352 | ARG |
| 1 | A | 357 | THR |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | A | 360 | VAL |
| 1 | A | 366 | MET |
| 1 | A | 369 | TYR |
| 1 | A | 372 | ARG |
| 1 | A | 373 | PHE |
| 1 | A | 380 | PHE |
| 1 | A | 381 | PRO |
| 1 | B | 29 | LEU |
| 1 | B | 30 | ILE |
| 1 | B | 41 | THR |
| 1 | B | 43 | PRO |
| 1 | B | 46 | VAL |
| 1 | B | 53 | LEU |
| 1 | B | 54 | ASN |
| 1 | B | 64 | GLU |
| 1 | B | 66 | LEU |
| 1 | B | 71 | GLN |
| 1 | B | 75 | TRP |
| 1 | B | 81 | LEU |
| 1 | B | 93 | ASN |
| 1 | B | 97 | THR |
| 1 | B | 112 | LEU |
| 1 | B | 117 | LEU |
| 1 | B | 130 | VAL |
| 1 | B | 132 | SER |
| 1 | B | 135 | LEU |
| 1 | B | 138 | VAL |
| 1 | B | 139 | HIS |
| 1 | B | 141 | PHE |
| 1 | B | 151 | LYS |
| 1 | B | 154 | SER |
| 1 | B | 172 | LEU |
| 1 | B | 174 | LEU |
| 1 | B | 175 | GLN |
| 1 | B | 179 | THR |
| 1 | B | 180 | ASP |
| 1 | B | 184 | LYS |
| 1 | B | 186 | LYS |
| 1 | B | 190 | VAL |
| 1 | B | 192 | THR |
| 1 | B | 193 | ILE |
| 1 | B | 194 | LYS |

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Continued from previous page...

| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | B | 195 | THR |
| 1 | B | 196 | ILE |
| 1 | B | 200 | ASP |
| 1 | B | 202 | VAL |
| 1 | B | 205 | ASP |
| 1 | B | 216 | LEU |
| 1 | B | 217 | ASP |
| 1 | B | 222 | TYR |
| 1 | B | 230 | ASP |
| 1 | B | 233 | LYS |
| 1 | B | 234 | ASN |
| 1 | B | 237 | THR |
| 1 | B | 240 | PHE |
| 1 | B | 242 | ASN |
| 1 | B | 244 | THR |
| 1 | B | 248 | THR |
| 1 | B | 252 | VAL |
| 1 | B | 253 | LEU |
| 1 | B | 256 | THR |
| 1 | B | 257 | ASN |
| 1 | B | 258 | THR |
| 1 | B | 260 | THR |
| 1 | B | 262 | VAL |
| 1 | B | 265 | ASP |
| 1 | B | 278 | LEU |
| 1 | B | 281 | SER |
| 1 | B | 283 | VAL |
| 1 | B | 288 | TRP |
| 1 | B | 290 | VAL |
| 1 | B | 294 | TYR |
| 1 | B | 297 | HIS |
| 1 | B | 299 | TRP |
| 1 | B | 309 | THR |
| 1 | B | 310 | LEU |
| 1 | B | 316 | LYS |
| 1 | B | 321 | MET |
| 1 | B | 324 | LEU |
| 1 | B | 332 | MET |
| 1 | B | 336 | VAL |
| 1 | B | 342 | GLU |
| 1 | B | 347 | GLN |
| 1 | B | 353 | VAL |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | B | 354 | TYR |
| 1 | B | 361 | PRO |
| 1 | B | 364 | PRO |
| 1 | B | 367 | THR |
| 1 | B | 368 | ARG |
| 1 | B | 371 | ASP |
| 1 | B | 372 | ARG |
| 1 | B | 373 | PHE |
| 1 | C | 29 | LEU |
| 1 | C | 37 | LEU |
| 1 | C | 41 | THR |
| 1 | C | 43 | PRO |
| 1 | C | 45 | SER |
| 1 | C | 53 | LEU |
| 1 | C | 54 | ASN |
| 1 | C | 66 | LEU |
| 1 | C | 75 | TRP |
| 1 | C | 79 | ILE |
| 1 | C | 93 | ASN |
| 1 | C | 100 | MET |
| 1 | C | 109 | ASN |
| 1 | C | 110 | GLU |
| 1 | C | 112 | LEU |
| 1 | C | 117 | LEU |
| 1 | C | 121 | GLU |
| 1 | C | 132 | SER |
| 1 | C | 134 | SER |
| 1 | C | 138 | VAL |
| 1 | C | 141 | PHE |
| 1 | C | 151 | LYS |
| 1 | C | 154 | SER |
| 1 | C | 172 | LEU |
| 1 | C | 175 | GLN |
| 1 | C | 179 | THR |
| 1 | C | 186 | LYS |
| 1 | C | 191 | VAL |
| 1 | C | 192 | THR |
| 1 | C | 193 | ILE |
| 1 | C | 194 | LYS |
| 1 | C | 195 | THR |
| 1 | C | 196 | ILE |
| 1 | C | 199 | LYS |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | C | 201 | MET |
| 1 | C | 216 | LEU |
| 1 | C | 217 | ASP |
| 1 | C | 218 | LYS |
| 1 | C | 219 | ASP |
| 1 | C | 233 | LYS |
| 1 | C | 237 | THR |
| 1 | C | 240 | PHE |
| 1 | C | 242 | ASN |
| 1 | C | 244 | THR |
| 1 | C | 252 | VAL |
| 1 | C | 253 | LEU |
| 1 | C | 257 | ASN |
| 1 | C | 258 | THR |
| 1 | C | 259 | LEU |
| 1 | C | 260 | THR |
| 1 | C | 262 | VAL |
| 1 | C | 265 | ASP |
| 1 | C | 272 | LEU |
| 1 | C | 278 | LEU |
| 1 | C | 281 | SER |
| 1 | C | 286 | MET |
| 1 | C | 288 | TRP |
| 1 | C | 291 | THR |
| 1 | C | 292 | ARG |
| 1 | C | 293 | ASN |
| 1 | C | 294 | TYR |
| 1 | C | 295 | ASP |
| 1 | C | 296 | VAL |
| 1 | C | 299 | TRP |
| 1 | C | 305 | TYR |
| 1 | C | 309 | THR |
| 1 | C | 310 | LEU |
| 1 | C | 329 | PHE |
| 1 | C | 330 | ASN |
| 1 | C | 335 | GLN |
| 1 | C | 336 | VAL |
| 1 | C | 352 | ARG |
| 1 | C | 354 | TYR |
| 1 | C | 359 | PRO |
| 1 | C | 360 | VAL |
| 1 | C | 372 | ARG |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | D | 21 | ARG |
| 1 | D | 25 | VAL |
| 1 | D | 30 | ILE |
| 1 | D | 39 | LEU |
| 1 | D | 41 | THR |
| 1 | D | 45 | SER |
| 1 | D | 53 | LEU |
| 1 | D | 54 | ASN |
| 1 | D | 59 | GLN |
| 1 | D | 66 | LEU |
| 1 | D | 68 | GLU |
| 1 | D | 71 | GLN |
| 1 | D | 75 | TRP |
| 1 | D | 76 | SER |
| 1 | D | 77 | ARG |
| 1 | D | 81 | LEU |
| 1 | D | 85 | ASP |
| 1 | D | 93 | ASN |
| 1 | D | 97 | THR |
| 1 | D | 100 | MET |
| 1 | D | 108 | LEU |
| 1 | D | 112 | LEU |
| 1 | D | 113 | THR |
| 1 | D | 115 | ASP |
| 1 | D | 130 | VAL |
| 1 | D | 132 | SER |
| 1 | D | 138 | VAL |
| 1 | D | 139 | HIS |
| 1 | D | 141 | PHE |
| 1 | D | 151 | LYS |
| 1 | D | 154 | SER |
| 1 | D | 172 | LEU |
| 1 | D | 173 | ASP |
| 1 | D | 174 | LEU |
| 1 | D | 179 | THR |
| 1 | D | 182 | ARG |
| 1 | D | 184 | LYS |
| 1 | D | 186 | LYS |
| 1 | D | 192 | THR |
| 1 | D | 193 | ILE |
| 1 | D | 194 | LYS |
| 1 | D | 197 | THR |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | D | 202 | VAL |
| 1 | D | 205 | ASP |
| 1 | D | 216 | LEU |
| 1 | D | 218 | LYS |
| 1 | D | 219 | ASP |
| 1 | D | 230 | ASP |
| 1 | D | 234 | ASN |
| 1 | D | 237 | THR |
| 1 | D | 240 | PHE |
| 1 | D | 244 | THR |
| 1 | D | 248 | THR |
| 1 | D | 252 | VAL |
| 1 | D | 253 | LEU |
| 1 | D | 256 | THR |
| 1 | D | 258 | THR |
| 1 | D | 260 | THR |
| 1 | D | 262 | VAL |
| 1 | D | 265 | ASP |
| 1 | D | 278 | LEU |
| 1 | D | 279 | TYR |
| 1 | D | 281 | SER |
| 1 | D | 286 | MET |
| 1 | D | 288 | TRP |
| 1 | D | 292 | ARG |
| 1 | D | 294 | TYR |
| 1 | D | 297 | HIS |
| 1 | D | 299 | TRP |
| 1 | D | 309 | THR |
| 1 | D | 310 | LEU |
| 1 | D | 313 | ARG |
| 1 | D | 315 | VAL |
| 1 | D | 316 | LYS |
| 1 | D | 318 | PRO |
| 1 | D | 321 | MET |
| 1 | D | 323 | SER |
| 1 | D | 329 | PHE |
| 1 | D | 333 | LEU |
| 1 | D | 336 | VAL |
| 1 | D | 346 | THR |
| 1 | D | 348 | VAL |
| 1 | D | 351 | VAL |
| 1 | D | 352 | ARG |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | E | 19 | CYS |
| 1 | E | 21 | ARG |
| 1 | E | 25 | VAL |
| 1 | E | 28 | LEU |
| 1 | E | 37 | LEU |
| 1 | E | 41 | THR |
| 1 | E | 44 | ASP |
| 1 | E | 53 | LEU |
| 1 | E | 54 | ASN |
| 1 | E | 66 | LEU |
| 1 | E | 68 | GLU |
| 1 | E | 75 | TRP |
| 1 | E | 93 | ASN |
| 1 | E | 97 | THR |
| 1 | E | 99 | SER |
| 1 | E | 108 | LEU |
| 1 | E | 109 | ASN |
| 1 | E | 113 | THR |
| 1 | E | 117 | LEU |
| 1 | E | 132 | SER |
| 1 | E | 135 | LEU |
| 1 | E | 138 | VAL |
| 1 | E | 141 | PHE |
| 1 | E | 151 | LYS |
| 1 | E | 154 | SER |
| 1 | E | 157 | VAL |
| 1 | E | 172 | LEU |
| 1 | E | 173 | ASP |
| 1 | E | 174 | LEU |
| 1 | E | 179 | THR |
| 1 | E | 180 | ASP |
| 1 | E | 184 | LYS |
| 1 | E | 186 | LYS |
| 1 | E | 192 | THR |
| 1 | E | 193 | ILE |
| 1 | E | 194 | LYS |
| 1 | E | 200 | ASP |
| 1 | E | 201 | MET |
| 1 | E | 205 | ASP |
| 1 | E | 217 | ASP |
| 1 | E | 219 | ASP |
| 1 | E | 230 | ASP |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | E | 233 | LYS |
| 1 | E | 237 | THR |
| 1 | E | 240 | PHE |
| 1 | E | 252 | VAL |
| 1 | E | 253 | LEU |
| 1 | E | 258 | THR |
| 1 | E | 260 | THR |
| 1 | E | 262 | VAL |
| 1 | E | 265 | ASP |
| 1 | E | 269 | VAL |
| 1 | E | 278 | LEU |
| 1 | E | 281 | SER |
| 1 | E | 288 | TRP |
| 1 | E | 292 | ARG |
| 1 | E | 293 | ASN |
| 1 | E | 294 | TYR |
| 1 | E | 297 | HIS |
| 1 | E | 299 | TRP |
| 1 | E | 309 | THR |
| 1 | E | 313 | ARG |
| 1 | E | 315 | VAL |
| 1 | E | 316 | LYS |
| 1 | E | 320 | PRO |
| 1 | E | 329 | PHE |
| 1 | E | 330 | ASN |
| 1 | E | 332 | MET |
| 1 | E | 335 | GLN |
| 1 | E | 336 | VAL |
| 1 | E | 342 | GLU |
| 1 | E | 344 | GLU |
| 1 | E | 347 | GLN |
| 1 | E | 350 | GLU |
| 1 | E | 352 | ARG |
| 1 | E | 354 | TYR |
| 1 | E | 357 | THR |
| 1 | E | 366 | MET |
| 1 | E | 369 | TYR |
| 1 | E | 375 | LYS |
| 1 | E | 381 | PRO |
| 1 | F | 30 | ILE |
| 1 | F | 41 | THR |
| 1 | F | 43 | PRO |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | F | 46 | VAL |
| 1 | F | 53 | LEU |
| 1 | F | 54 | ASN |
| 1 | F | 62 | THR |
| 1 | F | 66 | LEU |
| 1 | F | 71 | GLN |
| 1 | F | 75 | TRP |
| 1 | F | 76 | SER |
| 1 | F | 77 | ARG |
| 1 | F | 79 | ILE |
| 1 | F | 81 | LEU |
| 1 | F | 93 | ASN |
| 1 | F | 97 | THR |
| 1 | F | 100 | MET |
| 1 | F | 112 | LEU |
| 1 | F | 113 | THR |
| 1 | F | 117 | LEU |
| 1 | F | 119 | MET |
| 1 | F | 130 | VAL |
| 1 | F | 132 | SER |
| 1 | F | 135 | LEU |
| 1 | F | 138 | VAL |
| 1 | F | 139 | HIS |
| 1 | F | 141 | PHE |
| 1 | F | 151 | LYS |
| 1 | F | 154 | SER |
| 1 | F | 161 | GLN |
| 1 | F | 172 | LEU |
| 1 | F | 173 | ASP |
| 1 | F | 174 | LEU |
| 1 | F | 175 | GLN |
| 1 | F | 178 | VAL |
| 1 | F | 179 | THR |
| 1 | F | 184 | LYS |
| 1 | F | 186 | LYS |
| 1 | F | 190 | VAL |
| 1 | F | 191 | VAL |
| 1 | F | 192 | THR |
| 1 | F | 193 | ILE |
| 1 | F | 194 | LYS |
| 1 | F | 201 | MET |
| 1 | F | 205 | ASP |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | F | 216 | LEU |
| 1 | F | 217 | ASP |
| 1 | F | 230 | ASP |
| 1 | F | 233 | LYS |
| 1 | F | 235 | GLU |
| 1 | F | 237 | THR |
| 1 | F | 240 | PHE |
| 1 | F | 252 | VAL |
| 1 | F | 253 | LEU |
| 1 | F | 258 | THR |
| 1 | F | 259 | LEU |
| 1 | F | 260 | THR |
| 1 | F | 262 | VAL |
| 1 | F | 265 | ASP |
| 1 | F | 278 | LEU |
| 1 | F | 281 | SER |
| 1 | F | 282 | CYS |
| 1 | F | 283 | VAL |
| 1 | F | 290 | VAL |
| 1 | F | 294 | TYR |
| 1 | F | 309 | THR |
| 1 | F | 310 | LEU |
| 1 | F | 317 | ASN |
| 1 | F | 325 | ILE |
| 1 | F | 326 | SER |
| 1 | F | 328 | LEU |
| 1 | F | 330 | ASN |
| 1 | F | 333 | LEU |
| 1 | F | 336 | VAL |
| 1 | F | 345 | ASN |
| 1 | F | 352 | ARG |
| 1 | F | 353 | VAL |
| 1 | F | 357 | THR |
| 1 | F | 359 | PRO |
| 1 | F | 360 | VAL |
| 1 | F | 367 | THR |
| 1 | F | 368 | ARG |
| 1 | F | 371 | ASP |

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (79) such sidechains are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | A | 54 | ASN |
| 1 | A | 71 | GLN |
| 1 | A | 104 | GLN |
| 1 | A | 118 | GLN |
| 1 | A | 139 | HIS |
| 1 | A | 142 | ASN |
| 1 | A | 206 | GLN |
| 1 | A | 228 | HIS |
| 1 | A | 234 | ASN |
| 1 | A | 257 | ASN |
| 1 | A | 297 | HIS |
| 1 | A | 335 | GLN |
| 1 | A | 337 | GLN |
| 1 | A | 345 | ASN |
| 1 | A | 347 | GLN |
| 1 | B | 54 | ASN |
| 1 | B | 59 | GLN |
| 1 | B | 93 | ASN |
| 1 | B | 104 | GLN |
| 1 | B | 118 | GLN |
| 1 | B | 139 | HIS |
| 1 | B | 175 | GLN |
| 1 | B | 206 | GLN |
| 1 | B | 228 | HIS |
| 1 | B | 257 | ASN |
| 1 | B | 297 | HIS |
| 1 | B | 339 | GLN |
| 1 | B | 347 | GLN |
| 1 | C | 54 | ASN |
| 1 | C | 104 | GLN |
| 1 | C | 109 | ASN |
| 1 | C | 139 | HIS |
| 1 | C | 142 | ASN |
| 1 | C | 161 | GLN |
| 1 | C | 175 | GLN |
| 1 | C | 206 | GLN |
| 1 | C | 228 | HIS |
| 1 | C | 257 | ASN |
| 1 | C | 337 | GLN |
| 1 | C | 347 | GLN |
| 1 | D | 54 | ASN |
| 1 | D | 80 | ASN |
| 1 | D | 93 | ASN |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | D | 104 | GLN |
| 1 | D | 118 | GLN |
| 1 | D | 139 | HIS |
| 1 | D | 142 | ASN |
| 1 | D | 228 | HIS |
| 1 | D | 234 | ASN |
| 1 | D | 257 | ASN |
| 1 | D | 297 | HIS |
| 1 | D | 317 | ASN |
| 1 | D | 331 | ASN |
| 1 | D | 335 | GLN |
| 1 | D | 339 | GLN |
| 1 | D | 347 | GLN |
| 1 | E | 54 | ASN |
| 1 | E | 59 | GLN |
| 1 | E | 71 | GLN |
| 1 | E | 104 | GLN |
| 1 | E | 139 | HIS |
| 1 | E | 161 | GLN |
| 1 | E | 228 | HIS |
| 1 | E | 234 | ASN |
| 1 | E | 257 | ASN |
| 1 | E | 297 | HIS |
| 1 | E | 298 | HIS |
| 1 | E | 317 | ASN |
| 1 | E | 339 | GLN |
| 1 | E | 347 | GLN |
| 1 | F | 54 | ASN |
| 1 | F | 59 | GLN |
| 1 | F | 104 | GLN |
| 1 | F | 118 | GLN |
| 1 | F | 297 | HIS |
| 1 | F | 317 | ASN |
| 1 | F | 331 | ASN |
| 1 | F | 339 | GLN |
| 1 | F | 347 | GLN |

5.3.3 RNA

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

18 monosaccharides are modelled in this entry.

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

| Mol | Type | Chain | Res | Link | Bond lengths | | | Bond angles | | |
|-----|------|-------|-----|------|--------------|------|----------|-------------|------|----------|
| | | | | | Counts | RMSZ | # Z > 2 | Counts | RMSZ | # Z > 2 |
| 2 | BGC | G | 1 | 2 | 12,12,12 | 0.66 | 0 | 17,17,17 | 0.88 | 1 (5%) |
| 2 | GAL | G | 2 | 2 | 11,11,12 | 0.34 | 0 | 15,15,17 | 1.27 | 1 (6%) |
| 2 | SIA | G | 3 | 2 | 17,20,21 | 0.61 | 0 | 21,28,31 | 0.96 | 1 (4%) |
| 2 | BGC | H | 1 | 2 | 12,12,12 | 0.69 | 0 | 17,17,17 | 0.75 | 1 (5%) |
| 2 | GAL | H | 2 | 2 | 11,11,12 | 0.53 | 0 | 15,15,17 | 1.68 | 1 (6%) |
| 2 | SIA | H | 3 | 2 | 17,20,21 | 0.60 | 0 | 21,28,31 | 0.87 | 1 (4%) |
| 2 | BGC | I | 1 | 2 | 12,12,12 | 0.70 | 0 | 17,17,17 | 0.81 | 1 (5%) |
| 2 | GAL | I | 2 | 2 | 11,11,12 | 0.40 | 0 | 15,15,17 | 1.86 | 1 (6%) |
| 2 | SIA | I | 3 | 2 | 17,20,21 | 0.62 | 0 | 21,28,31 | 0.96 | 1 (4%) |
| 2 | BGC | J | 1 | 2 | 12,12,12 | 0.68 | 0 | 17,17,17 | 0.84 | 1 (5%) |
| 2 | GAL | J | 2 | 2 | 11,11,12 | 0.24 | 0 | 15,15,17 | 1.57 | 1 (6%) |
| 2 | SIA | J | 3 | 2 | 17,20,21 | 0.79 | 0 | 21,28,31 | 1.31 | 2 (9%) |
| 2 | BGC | K | 1 | 2 | 12,12,12 | 0.79 | 0 | 17,17,17 | 1.07 | 1 (5%) |
| 2 | GAL | K | 2 | 2 | 11,11,12 | 0.25 | 0 | 15,15,17 | 1.60 | 1 (6%) |
| 2 | SIA | K | 3 | 2 | 17,20,21 | 0.65 | 0 | 21,28,31 | 1.18 | 3 (14%) |
| 2 | BGC | L | 1 | 2 | 12,12,12 | 0.83 | 0 | 17,17,17 | 0.88 | 1 (5%) |
| 2 | GAL | L | 2 | 2 | 11,11,12 | 0.36 | 0 | 15,15,17 | 1.19 | 1 (6%) |
| 2 | SIA | L | 3 | 2 | 17,20,21 | 0.81 | 0 | 21,28,31 | 1.26 | 2 (9%) |

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

| Mol | Type | Chain | Res | Link | Chirals | Torsions | Rings |
|-----|------|-------|-----|------|---------|------------|---------|
| 2 | BGC | G | 1 | 2 | - | 0/2/22/22 | 0/1/1/1 |
| 2 | GAL | G | 2 | 2 | - | 0/2/19/22 | 0/1/1/1 |
| 2 | SIA | G | 3 | 2 | - | 1/14/34/38 | 0/1/1/1 |
| 2 | BGC | H | 1 | 2 | - | 0/2/22/22 | 0/1/1/1 |
| 2 | GAL | H | 2 | 2 | - | 0/2/19/22 | 0/1/1/1 |
| 2 | SIA | H | 3 | 2 | - | 0/14/34/38 | 0/1/1/1 |
| 2 | BGC | I | 1 | 2 | - | 0/2/22/22 | 0/1/1/1 |
| 2 | GAL | I | 2 | 2 | - | 0/2/19/22 | 0/1/1/1 |
| 2 | SIA | I | 3 | 2 | - | 6/14/34/38 | 0/1/1/1 |
| 2 | BGC | J | 1 | 2 | - | 1/2/22/22 | 0/1/1/1 |
| 2 | GAL | J | 2 | 2 | - | 0/2/19/22 | 0/1/1/1 |
| 2 | SIA | J | 3 | 2 | - | 2/14/34/38 | 0/1/1/1 |
| 2 | BGC | K | 1 | 2 | - | 0/2/22/22 | 0/1/1/1 |
| 2 | GAL | K | 2 | 2 | - | 1/2/19/22 | 0/1/1/1 |
| 2 | SIA | K | 3 | 2 | - | 4/14/34/38 | 0/1/1/1 |
| 2 | BGC | L | 1 | 2 | - | 1/2/22/22 | 0/1/1/1 |
| 2 | GAL | L | 2 | 2 | - | 0/2/19/22 | 0/1/1/1 |
| 2 | SIA | L | 3 | 2 | - | 6/14/34/38 | 0/1/1/1 |

There are no bond length outliers.

All (22) bond angle outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z | Observed($^{\circ}$) | Ideal($^{\circ}$) |
|-----|-------|-----|------|----------|-------|------------------------|---------------------|
| 2 | I | 2 | GAL | C1-C2-C3 | -6.31 | 101.90 | 109.67 |
| 2 | H | 2 | GAL | C1-C2-C3 | -5.76 | 102.59 | 109.67 |
| 2 | J | 2 | GAL | C1-C2-C3 | -5.74 | 102.62 | 109.67 |
| 2 | K | 2 | GAL | C1-C2-C3 | -5.55 | 102.84 | 109.67 |
| 2 | G | 2 | GAL | C1-C2-C3 | -4.49 | 104.15 | 109.67 |
| 2 | J | 3 | SIA | C8-C7-C6 | -4.42 | 104.64 | 113.03 |
| 2 | L | 3 | SIA | C8-C7-C6 | -3.74 | 105.95 | 113.03 |
| 2 | L | 2 | GAL | C1-C2-C3 | -3.65 | 105.17 | 109.67 |
| 2 | K | 1 | BGC | C4-C3-C2 | -3.37 | 104.94 | 110.82 |
| 2 | I | 3 | SIA | C3-C4-C5 | -3.19 | 107.60 | 111.46 |
| 2 | K | 3 | SIA | C3-C4-C5 | -2.95 | 107.90 | 111.46 |
| 2 | L | 3 | SIA | C4-C3-C2 | 2.91 | 115.03 | 109.81 |
| 2 | G | 1 | BGC | C4-C3-C2 | -2.87 | 105.81 | 110.82 |
| 2 | G | 3 | SIA | C8-C7-C6 | -2.82 | 107.68 | 113.03 |
| 2 | I | 1 | BGC | C4-C3-C2 | -2.65 | 106.20 | 110.82 |
| 2 | K | 3 | SIA | C8-C7-C6 | -2.61 | 108.09 | 113.03 |
| 2 | J | 1 | BGC | C4-C3-C2 | -2.41 | 106.61 | 110.82 |
| 2 | J | 3 | SIA | C3-C4-C5 | -2.32 | 108.66 | 111.46 |
| 2 | K | 3 | SIA | C4-C3-C2 | 2.31 | 113.95 | 109.81 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|----------|-------|-------------|----------|
| 2 | L | 1 | BGC | C4-C3-C2 | -2.16 | 107.06 | 110.82 |
| 2 | H | 1 | BGC | C4-C3-C2 | -2.11 | 107.14 | 110.82 |
| 2 | H | 3 | SIA | C4-C3-C2 | 2.08 | 113.54 | 109.81 |

There are no chirality outliers.

All (22) torsion outliers are listed below:

| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-------------|
| 2 | I | 3 | SIA | C6-C7-C8-C9 |
| 2 | I | 3 | SIA | C6-C7-C8-O8 |
| 2 | I | 3 | SIA | O7-C7-C8-C9 |
| 2 | I | 3 | SIA | O7-C7-C8-O8 |
| 2 | K | 3 | SIA | C5-C6-C7-C8 |
| 2 | K | 3 | SIA | C5-C6-C7-O7 |
| 2 | K | 3 | SIA | O6-C6-C7-C8 |
| 2 | K | 3 | SIA | O6-C6-C7-O7 |
| 2 | J | 3 | SIA | C5-C6-C7-O7 |
| 2 | J | 3 | SIA | O6-C6-C7-O7 |
| 2 | L | 3 | SIA | C6-C7-C8-C9 |
| 2 | L | 3 | SIA | O7-C7-C8-C9 |
| 2 | L | 3 | SIA | O8-C8-C9-O9 |
| 2 | J | 1 | BGC | O5-C5-C6-O6 |
| 2 | K | 2 | GAL | O5-C5-C6-O6 |
| 2 | L | 3 | SIA | C6-C7-C8-O8 |
| 2 | L | 1 | BGC | O5-C5-C6-O6 |
| 2 | G | 3 | SIA | O6-C6-C7-O7 |
| 2 | L | 3 | SIA | O7-C7-C8-O8 |
| 2 | I | 3 | SIA | O8-C8-C9-O9 |
| 2 | L | 3 | SIA | C7-C8-C9-O9 |
| 2 | I | 3 | SIA | C7-C8-C9-O9 |

There are no ring outliers.

11 monomers are involved in 18 short contacts:

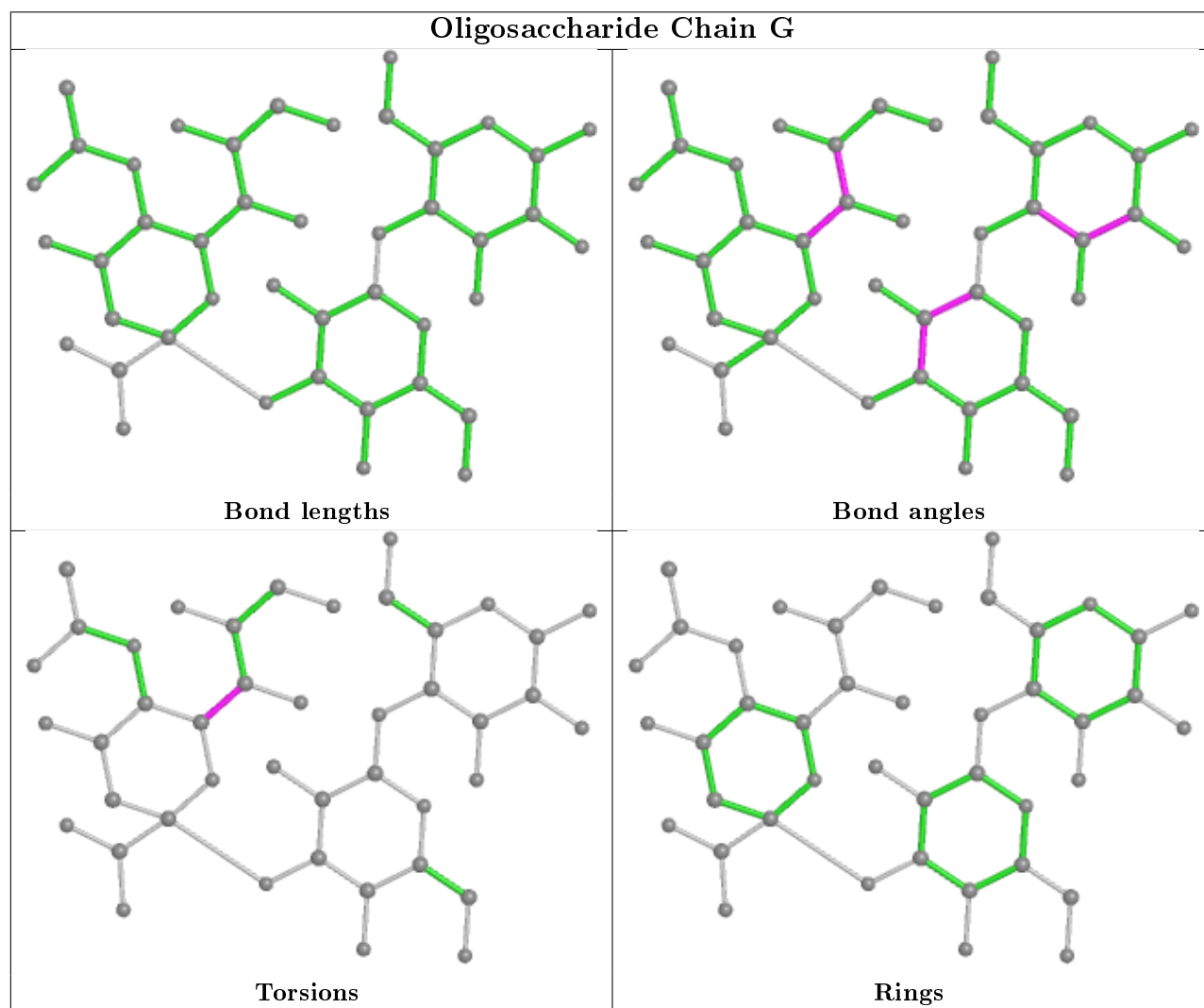
| Mol | Chain | Res | Type | Clashes | Symm-Clashes |
|-----|-------|-----|------|---------|--------------|
| 2 | I | 2 | GAL | 3 | 0 |
| 2 | I | 3 | SIA | 1 | 0 |
| 2 | G | 3 | SIA | 1 | 0 |
| 2 | H | 3 | SIA | 2 | 0 |
| 2 | K | 2 | GAL | 2 | 0 |
| 2 | L | 3 | SIA | 2 | 0 |

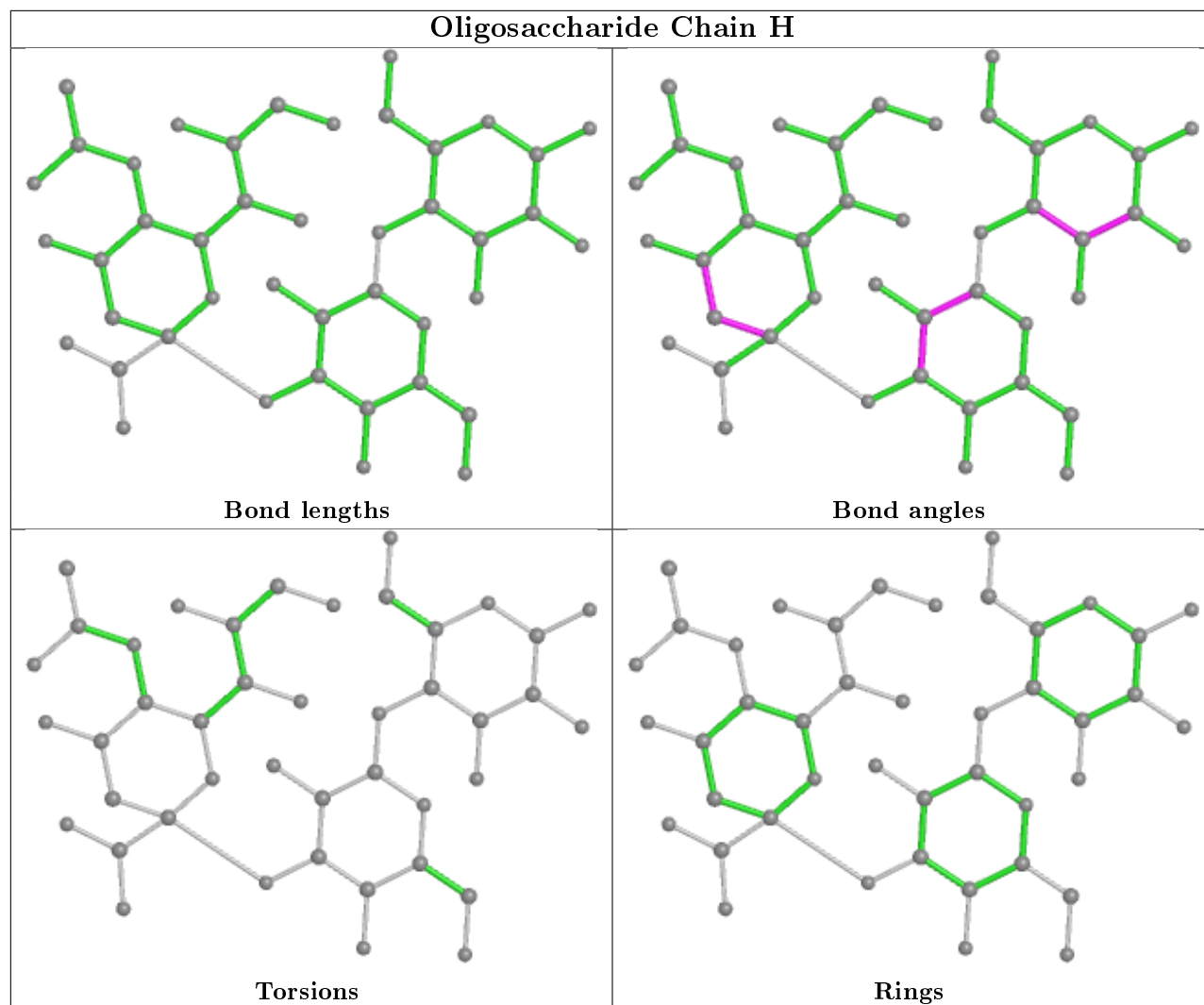
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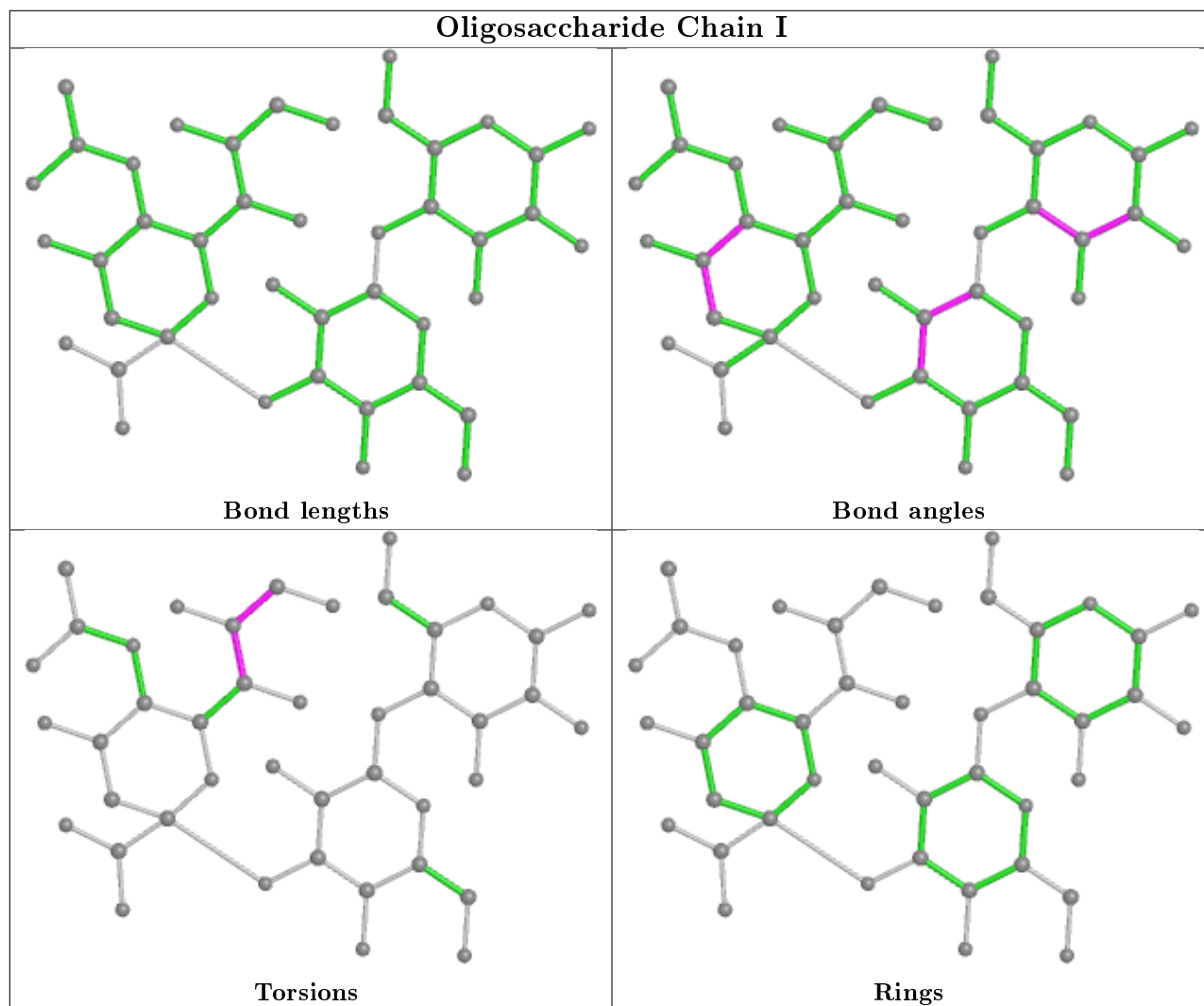
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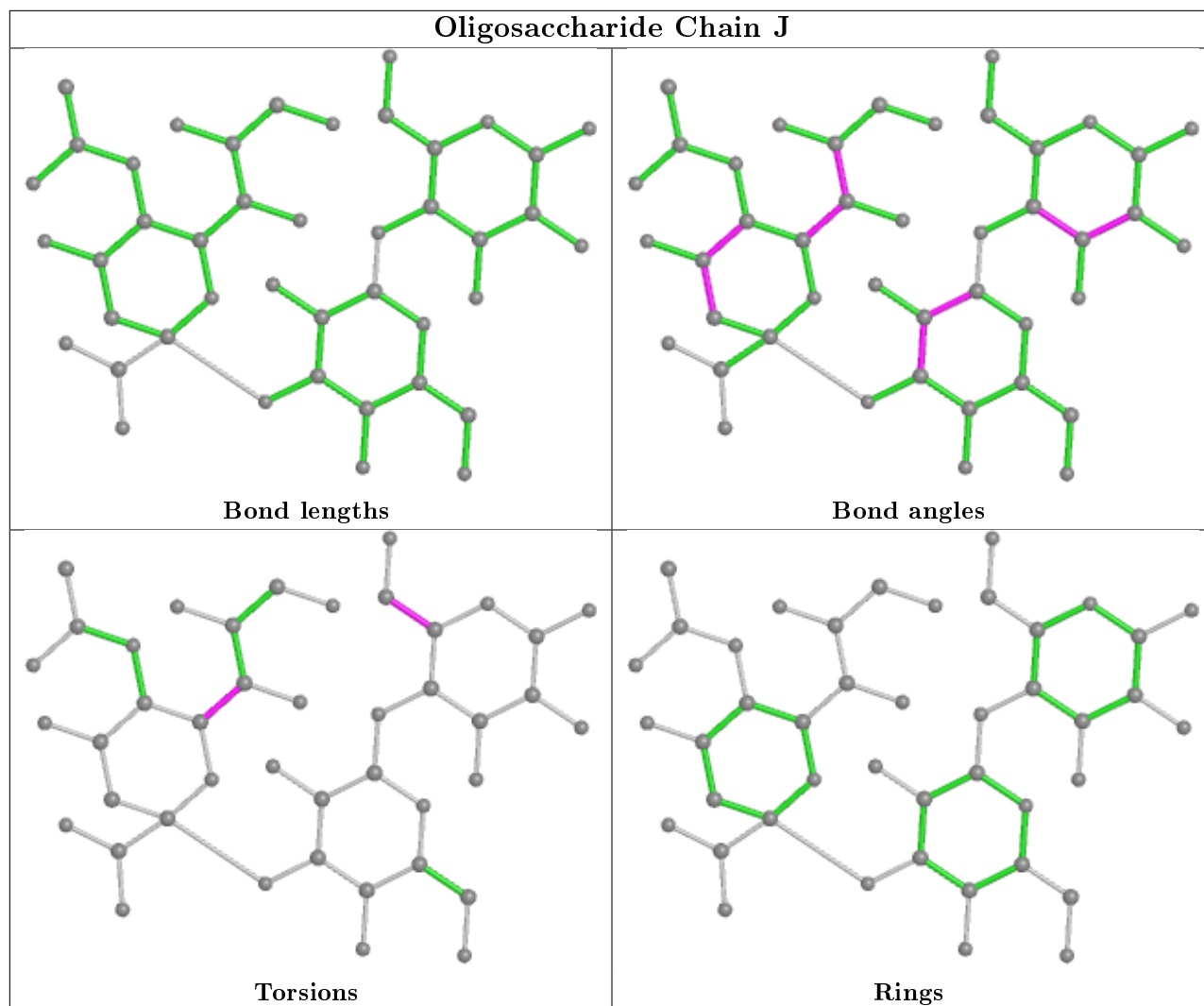
| Mol | Chain | Res | Type | Clashes | Symm-Clashes |
|-----|-------|-----|------|---------|--------------|
| 2 | L | 2 | GAL | 4 | 0 |
| 2 | J | 2 | GAL | 1 | 0 |
| 2 | K | 3 | SIA | 2 | 0 |
| 2 | H | 2 | GAL | 4 | 0 |
| 2 | J | 3 | SIA | 1 | 0 |

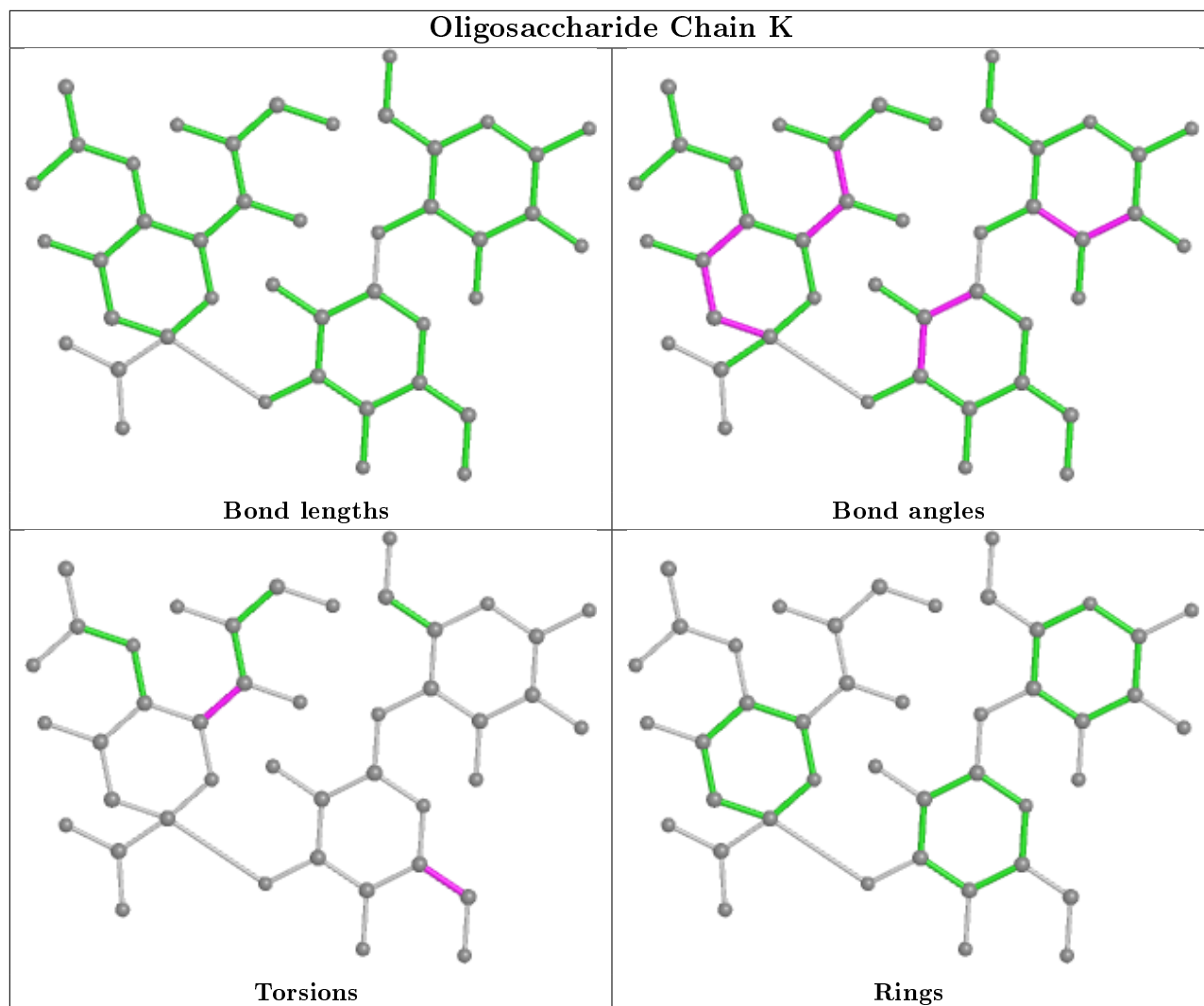
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for oligosaccharide.

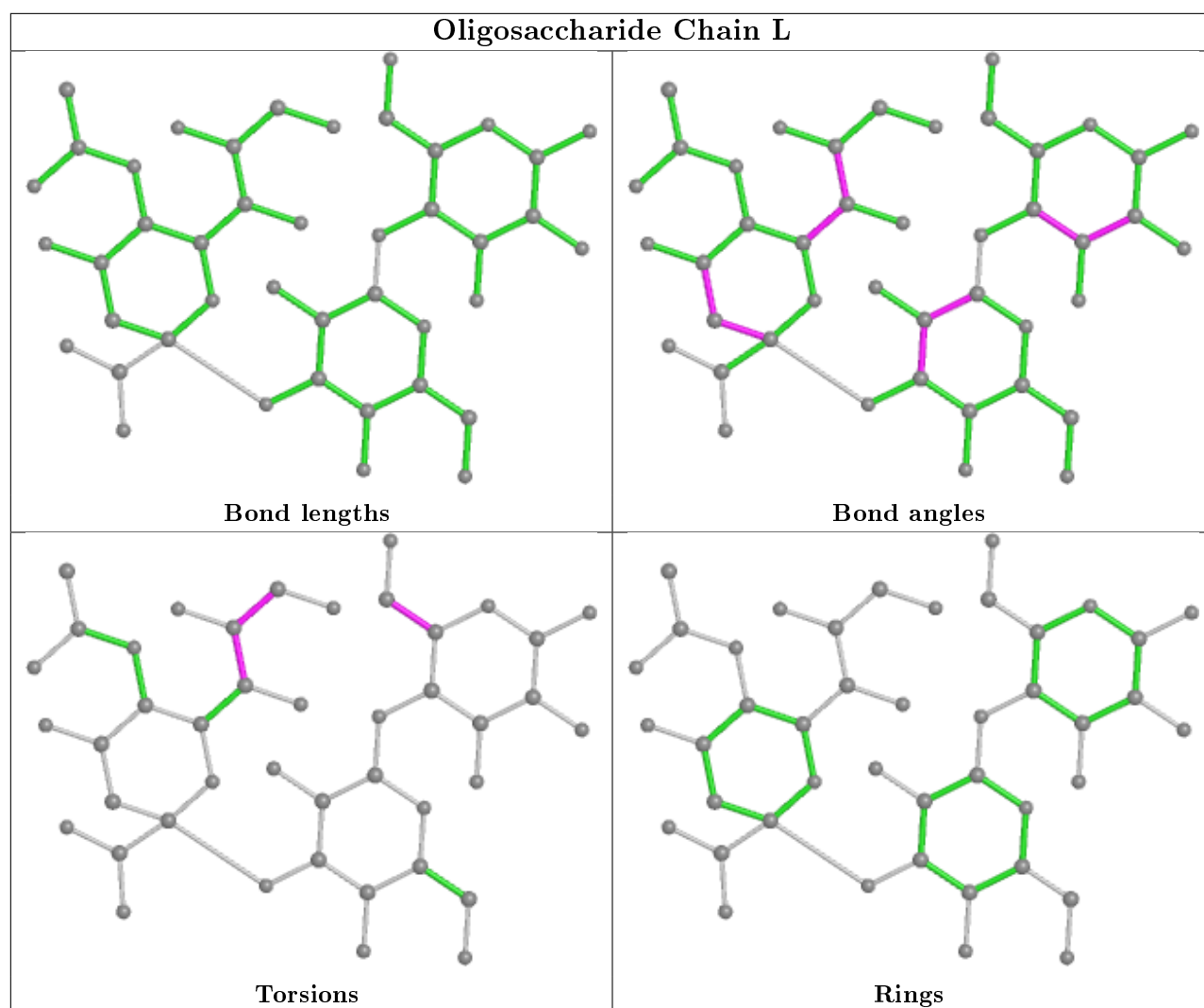












5.6 Ligand geometry [i](#)

There are no ligands in this entry.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

The following chains have linkage breaks:

| Mol | Chain | Number of breaks |
|-----|-------|------------------|
| 1 | B | 1 |
| 1 | D | 1 |

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| Mol | Chain | Number of breaks |
|-----|-------|------------------|
| 1 | C | 1 |
| 1 | F | 1 |
| 1 | E | 1 |

All chain breaks are listed below:

| Model | Chain | Residue-1 | Atom-1 | Residue-2 | Atom-2 | Distance (Å) |
|-------|-------|-----------|--------|-----------|--------|--------------|
| 1 | D | 336:VAL | C | 337:GLN | N | 4.77 |
| 1 | B | 336:VAL | C | 337:GLN | N | 3.16 |
| 1 | F | 336:VAL | C | 337:GLN | N | 2.96 |
| 1 | C | 336:VAL | C | 337:GLN | N | 2.91 |
| 1 | E | 336:VAL | C | 337:GLN | N | 1.64 |

6 Fit of model and data [i](#)

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

EDS was not executed - this section is therefore empty.

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

EDS was not executed - this section is therefore empty.

6.3 Carbohydrates [i](#)

EDS was not executed - this section is therefore empty.

6.4 Ligands [i](#)

EDS was not executed - this section is therefore empty.

6.5 Other polymers [i](#)

EDS was not executed - this section is therefore empty.