



Full wwPDB EM Validation Report ⓘ

Jun 9, 2024 – 07:34 AM EDT

PDB ID : 8ET2
EMDB ID : EMD-28584
Title : CryoEM structure of the GSDMB pore
Authors : Wang, C.; Ruan, J.
Deposited on : 2022-10-15
Resolution : 4.96 Å (reported)

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

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

EMDB validation analysis : 0.0.1.dev92
MolProbity : 4.02b-467
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.36.2

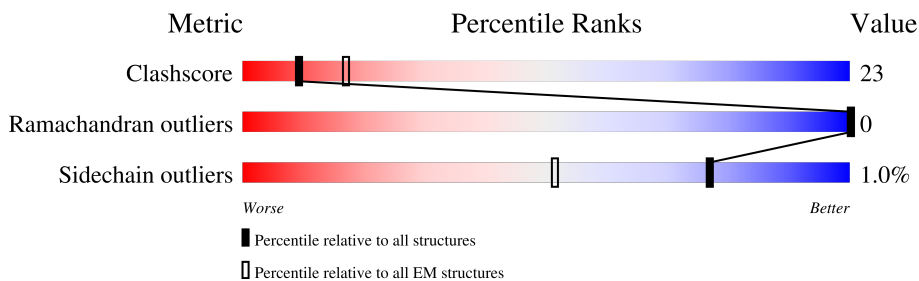
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 4.96 Å.

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





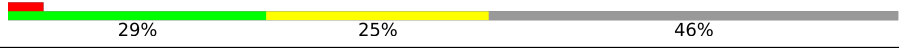
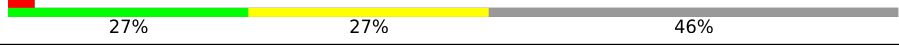
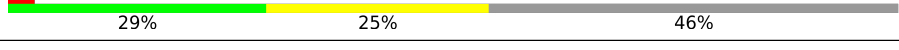
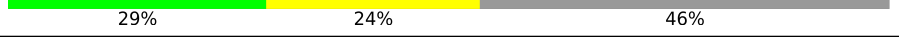

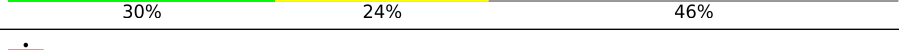
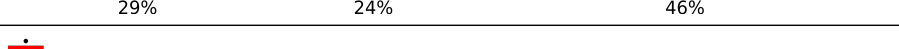
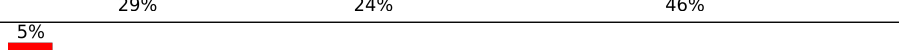
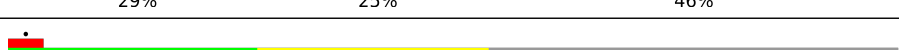
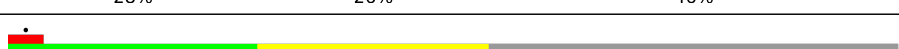
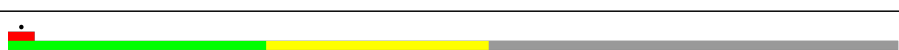
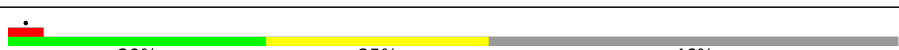
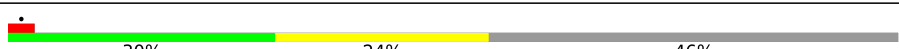

| Metric | Whole archive (#Entries) | EM structures (#Entries) |
|-----------------------|--------------------------|--------------------------|
| Clashscore | 158937 | 4297 |
| Ramachandran outliers | 154571 | 4023 |
| Sidechain outliers | 154315 | 3826 |

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

| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|------------------|
| 1 | A | 411 | |
| 1 | B | 411 | |
| 1 | C | 411 | |
| 1 | D | 411 | |
| 1 | E | 411 | |
| 1 | F | 411 | |
| 1 | G | 411 | |
| 1 | H | 411 | |

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| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|---|
| 1 | I | 411 |  30% 24% 46% |
| 1 | J | 411 |  30% 24% 46% |
| 1 | K | 411 |  29% 25% 46% |
| 1 | L | 411 |  27% 27% 46% |
| 1 | M | 411 |  29% 25% 46% |
| 1 | N | 411 |  29% 24% 46% |
| 1 | O | 411 |  29% 25% 46% |
| 1 | P | 411 |  30% 24% 46% |
| 1 | Q | 411 |  29% 24% 46% |
| 1 | R | 411 |  29% 24% 46% |
| 1 | S | 411 |  5% 29% 25% 46% |
| 1 | T | 411 |  28% 26% 46% |
| 1 | U | 411 |  28% 26% 46% |
| 1 | V | 411 |  29% 25% 46% |
| 1 | W | 411 |  29% 25% 46% |
| 1 | X | 411 |  30% 24% 46% |

2 Entry composition i

There is only 1 type of molecule in this entry. The entry contains 43584 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

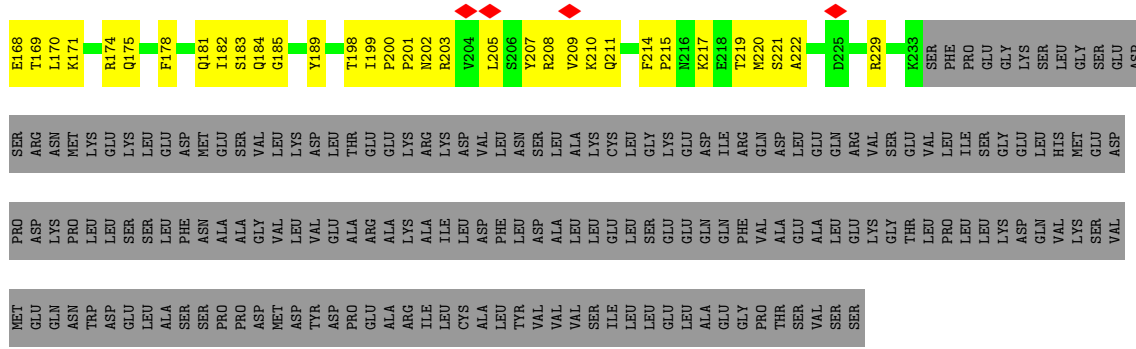
- Molecule 1 is a protein called Isoform 1 of Gasdermin-B.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|---|---------|-------|
| | | | Total | C | N | O | S | | |
| 1 | A | 221 | 1816 | 1153 | 323 | 334 | 6 | 0 | 0 |
| 1 | B | 221 | 1816 | 1153 | 323 | 334 | 6 | 0 | 0 |
| 1 | C | 221 | 1816 | 1153 | 323 | 334 | 6 | 0 | 0 |
| 1 | D | 221 | 1816 | 1153 | 323 | 334 | 6 | 0 | 0 |
| 1 | E | 221 | 1816 | 1153 | 323 | 334 | 6 | 0 | 0 |
| 1 | F | 221 | 1816 | 1153 | 323 | 334 | 6 | 0 | 0 |
| 1 | G | 221 | 1816 | 1153 | 323 | 334 | 6 | 0 | 0 |
| 1 | H | 221 | 1816 | 1153 | 323 | 334 | 6 | 0 | 0 |
| 1 | I | 221 | 1816 | 1153 | 323 | 334 | 6 | 0 | 0 |
| 1 | J | 221 | 1816 | 1153 | 323 | 334 | 6 | 0 | 0 |
| 1 | K | 221 | 1816 | 1153 | 323 | 334 | 6 | 0 | 0 |
| 1 | L | 221 | 1816 | 1153 | 323 | 334 | 6 | 0 | 0 |
| 1 | M | 221 | 1816 | 1153 | 323 | 334 | 6 | 0 | 0 |
| 1 | N | 221 | 1816 | 1153 | 323 | 334 | 6 | 0 | 0 |
| 1 | O | 221 | 1816 | 1153 | 323 | 334 | 6 | 0 | 0 |
| 1 | P | 221 | 1816 | 1153 | 323 | 334 | 6 | 0 | 0 |
| 1 | Q | 221 | 1816 | 1153 | 323 | 334 | 6 | 0 | 0 |

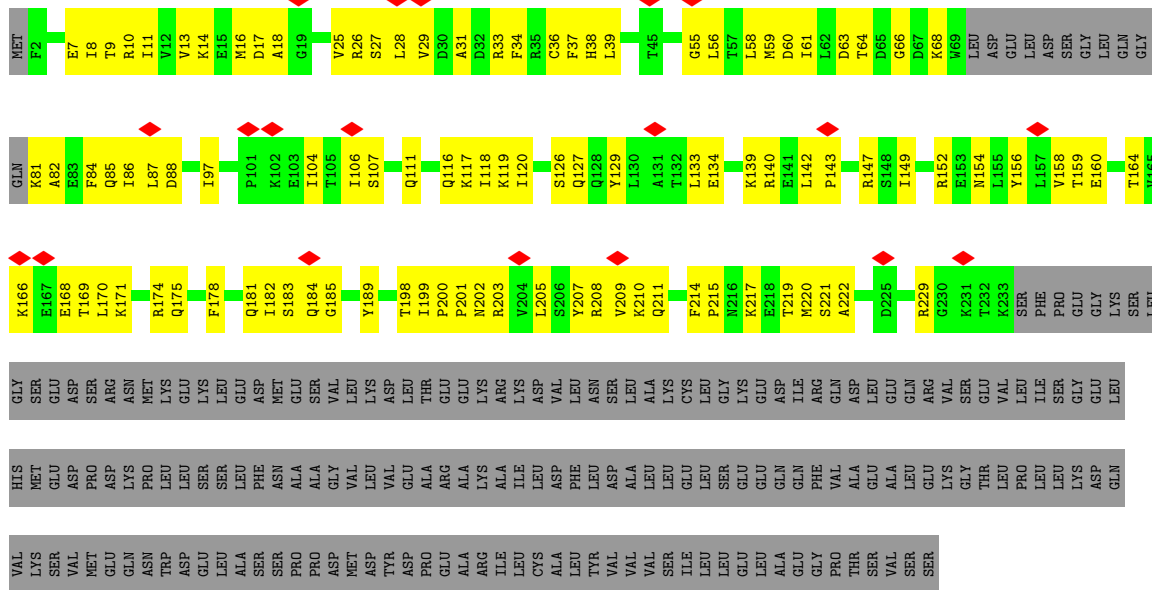
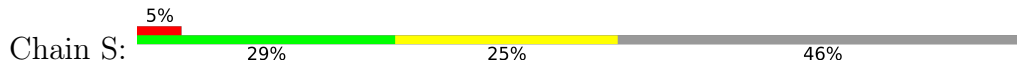
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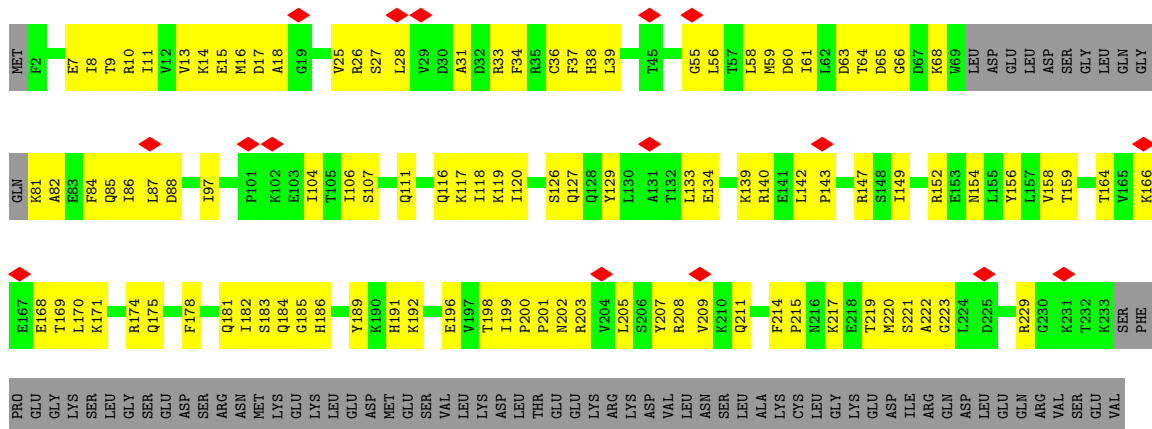
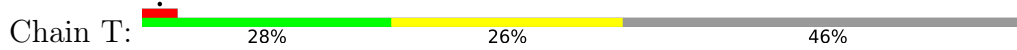
| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|---|---------|-------|
| 1 | R | 221 | Total | C | N | O | S | 0 | 0 |
| | | | 1816 | 1153 | 323 | 334 | 6 | | |
| 1 | S | 221 | Total | C | N | O | S | 0 | 0 |
| | | | 1816 | 1153 | 323 | 334 | 6 | | |
| 1 | T | 221 | Total | C | N | O | S | 0 | 0 |
| | | | 1816 | 1153 | 323 | 334 | 6 | | |
| 1 | U | 221 | Total | C | N | O | S | 0 | 0 |
| | | | 1816 | 1153 | 323 | 334 | 6 | | |
| 1 | V | 221 | Total | C | N | O | S | 0 | 0 |
| | | | 1816 | 1153 | 323 | 334 | 6 | | |
| 1 | W | 221 | Total | C | N | O | S | 0 | 0 |
| | | | 1816 | 1153 | 323 | 334 | 6 | | |
| 1 | X | 221 | Total | C | N | O | S | 0 | 0 |
| | | | 1816 | 1153 | 323 | 334 | 6 | | |

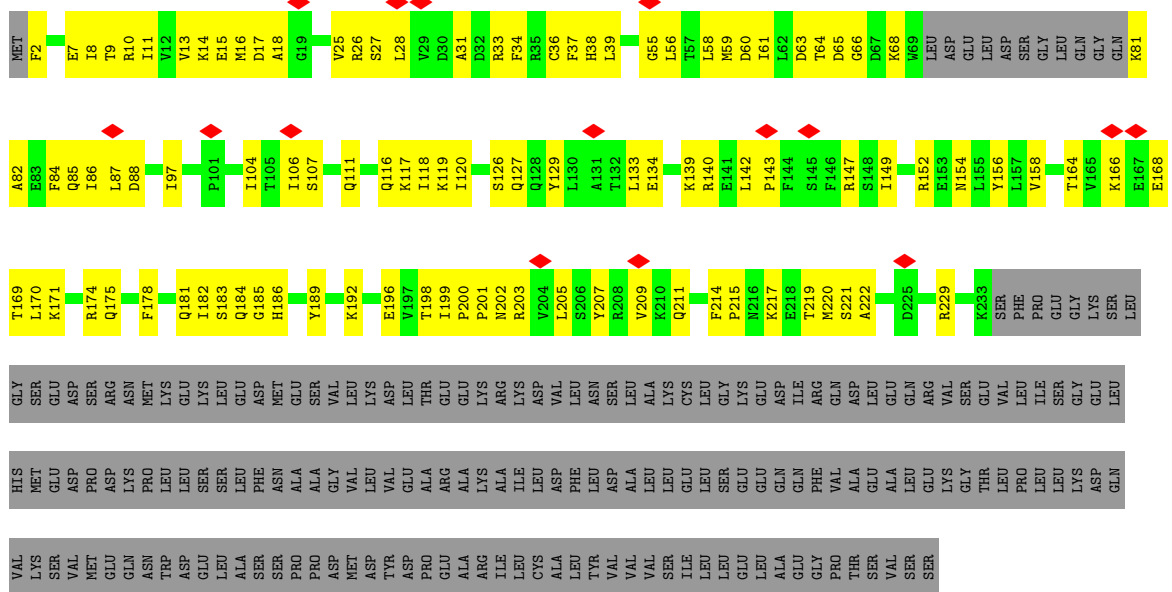
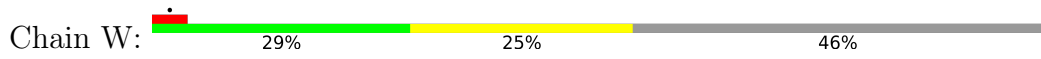


• Molecule 1: Isoform 1 of Gasdermin-B

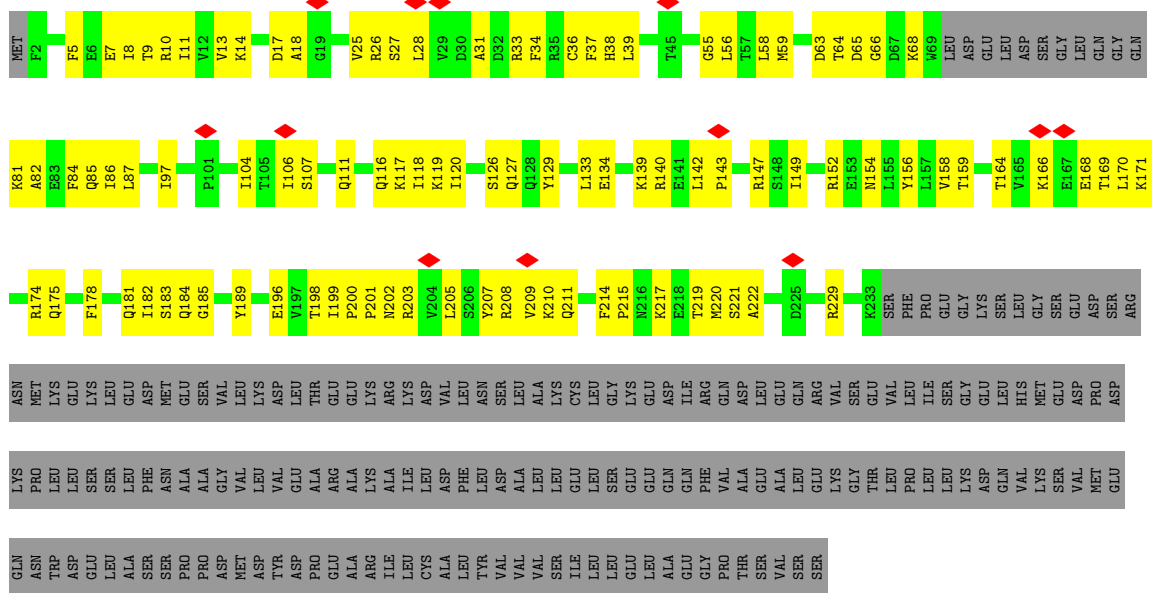
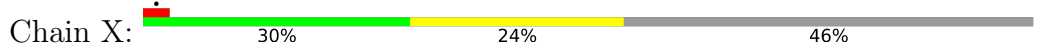


• Molecule 1: Isoform 1 of Gasdermin-B





• Molecule 1: Isoform 1 of Gasdermin-B



4 Experimental information

| Property | Value | Source |
|--------------------------------------|-------------------------------|-----------|
| EM reconstruction method | SINGLE PARTICLE | Depositor |
| Imposed symmetry | POINT, Not provided | |
| Number of particles used | 41799 | Depositor |
| Resolution determination method | FSC 0.143 CUT-OFF | Depositor |
| CTF correction method | NONE | Depositor |
| Microscope | FEI TITAN KRIOS | Depositor |
| Voltage (kV) | 300 | Depositor |
| Electron dose ($e^-/\text{\AA}^2$) | 50 | Depositor |
| Minimum defocus (nm) | 1000 | Depositor |
| Maximum defocus (nm) | 2000 | Depositor |
| Magnification | Not provided | |
| Image detector | GATAN K3 BIOQUANTUM (6k x 4k) | Depositor |
| Maximum map value | 1.058 | Depositor |
| Minimum map value | -0.716 | Depositor |
| Average map value | 0.004 | Depositor |
| Map value standard deviation | 0.036 | Depositor |
| Recommended contour level | 0.15 | Depositor |
| Map size (\AA) | 424.96, 424.96, 424.96 | wwPDB |
| Map dimensions | 256, 256, 256 | wwPDB |
| Map angles ($^\circ$) | 90.0, 90.0, 90.0 | wwPDB |
| Pixel spacing (\AA) | 1.66, 1.66, 1.66 | Depositor |

5 Model quality [i](#)

5.1 Standard geometry [i](#)

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

| Mol | Chain | Bond lengths | | Bond angles | |
|-----|-------|--------------|---------|-------------|---------|
| | | RMSZ | # Z >5 | RMSZ | # Z >5 |
| 1 | A | 0.26 | 0/1850 | 0.63 | 0/2484 |
| 1 | B | 0.27 | 0/1850 | 0.63 | 0/2484 |
| 1 | C | 0.26 | 0/1850 | 0.63 | 0/2484 |
| 1 | D | 0.27 | 0/1850 | 0.63 | 0/2484 |
| 1 | E | 0.26 | 0/1850 | 0.63 | 0/2484 |
| 1 | F | 0.26 | 0/1850 | 0.63 | 0/2484 |
| 1 | G | 0.27 | 0/1850 | 0.63 | 0/2484 |
| 1 | H | 0.27 | 0/1850 | 0.63 | 0/2484 |
| 1 | I | 0.27 | 0/1850 | 0.63 | 0/2484 |
| 1 | J | 0.27 | 0/1850 | 0.63 | 0/2484 |
| 1 | K | 0.26 | 0/1850 | 0.63 | 0/2484 |
| 1 | L | 0.26 | 0/1850 | 0.63 | 0/2484 |
| 1 | M | 0.26 | 0/1850 | 0.63 | 0/2484 |
| 1 | N | 0.27 | 0/1850 | 0.63 | 0/2484 |
| 1 | O | 0.27 | 0/1850 | 0.63 | 0/2484 |
| 1 | P | 0.26 | 0/1850 | 0.63 | 0/2484 |
| 1 | Q | 0.26 | 0/1850 | 0.63 | 0/2484 |
| 1 | R | 0.27 | 0/1850 | 0.63 | 0/2484 |
| 1 | S | 0.26 | 0/1850 | 0.63 | 0/2484 |
| 1 | T | 0.26 | 0/1850 | 0.63 | 0/2484 |
| 1 | U | 0.27 | 0/1850 | 0.63 | 0/2484 |
| 1 | V | 0.26 | 0/1850 | 0.63 | 0/2484 |
| 1 | W | 0.26 | 0/1850 | 0.63 | 0/2484 |
| 1 | X | 0.27 | 0/1850 | 0.63 | 0/2484 |
| All | All | 0.27 | 0/44400 | 0.63 | 0/59616 |

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts [i](#)

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

| Mol | Chain | Non-H | H(model) | H(added) | Clashes | Symm-Clashes |
|-----|-------|-------|----------|----------|---------|--------------|
| 1 | A | 1816 | 0 | 1829 | 83 | 0 |
| 1 | B | 1816 | 0 | 1829 | 89 | 0 |
| 1 | C | 1816 | 0 | 1829 | 85 | 0 |
| 1 | D | 1816 | 0 | 1829 | 81 | 0 |
| 1 | E | 1816 | 0 | 1829 | 82 | 0 |
| 1 | F | 1816 | 0 | 1829 | 87 | 0 |
| 1 | G | 1816 | 0 | 1829 | 87 | 0 |
| 1 | H | 1816 | 0 | 1829 | 80 | 0 |
| 1 | I | 1816 | 0 | 1829 | 81 | 0 |
| 1 | J | 1816 | 0 | 1829 | 89 | 0 |
| 1 | K | 1816 | 0 | 1829 | 91 | 0 |
| 1 | L | 1816 | 0 | 1829 | 109 | 0 |
| 1 | M | 1816 | 0 | 1829 | 101 | 0 |
| 1 | N | 1816 | 0 | 1829 | 82 | 0 |
| 1 | O | 1816 | 0 | 1829 | 90 | 0 |
| 1 | P | 1816 | 0 | 1829 | 86 | 0 |
| 1 | Q | 1816 | 0 | 1829 | 80 | 0 |
| 1 | R | 1816 | 0 | 1829 | 86 | 0 |
| 1 | S | 1816 | 0 | 1829 | 89 | 0 |
| 1 | T | 1816 | 0 | 1829 | 91 | 0 |
| 1 | U | 1816 | 0 | 1829 | 104 | 0 |
| 1 | V | 1816 | 0 | 1829 | 102 | 0 |
| 1 | W | 1816 | 0 | 1829 | 90 | 0 |
| 1 | X | 1816 | 0 | 1829 | 84 | 0 |
| All | All | 43584 | 0 | 43896 | 1989 | 0 |

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 23.

All (1989) 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:I:168:GLU:HA | 1:I:199:ILE:O | 1.67 | 0.95 |
| 1:O:168:GLU:HA | 1:O:199:ILE:O | 1.67 | 0.95 |
| 1:H:168:GLU:HA | 1:H:199:ILE:O | 1.67 | 0.95 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:N:168:GLU:HA | 1:N:199:ILE:O | 1.67 | 0.95 |
| 1:R:168:GLU:HA | 1:R:199:ILE:O | 1.67 | 0.95 |
| 1:J:168:GLU:HA | 1:J:199:ILE:O | 1.67 | 0.95 |
| 1:S:168:GLU:HA | 1:S:199:ILE:O | 1.67 | 0.95 |
| 1:Q:168:GLU:HA | 1:Q:199:ILE:O | 1.67 | 0.95 |
| 1:M:168:GLU:HA | 1:M:199:ILE:O | 1.67 | 0.95 |
| 1:W:168:GLU:HA | 1:W:199:ILE:O | 1.67 | 0.94 |
| 1:D:168:GLU:HA | 1:D:199:ILE:O | 1.67 | 0.94 |
| 1:E:168:GLU:HA | 1:E:199:ILE:O | 1.67 | 0.94 |
| 1:K:168:GLU:HA | 1:K:199:ILE:O | 1.67 | 0.94 |
| 1:L:168:GLU:HA | 1:L:199:ILE:O | 1.67 | 0.94 |
| 1:X:168:GLU:HA | 1:X:199:ILE:O | 1.67 | 0.94 |
| 1:F:168:GLU:HA | 1:F:199:ILE:O | 1.67 | 0.94 |
| 1:T:168:GLU:HA | 1:T:199:ILE:O | 1.67 | 0.94 |
| 1:C:168:GLU:HA | 1:C:199:ILE:O | 1.67 | 0.94 |
| 1:V:168:GLU:HA | 1:V:199:ILE:O | 1.67 | 0.94 |
| 1:A:168:GLU:HA | 1:A:199:ILE:O | 1.67 | 0.93 |
| 1:P:168:GLU:HA | 1:P:199:ILE:O | 1.67 | 0.93 |
| 1:B:168:GLU:HA | 1:B:199:ILE:O | 1.67 | 0.93 |
| 1:G:168:GLU:HA | 1:G:199:ILE:O | 1.67 | 0.93 |
| 1:U:168:GLU:HA | 1:U:199:ILE:O | 1.67 | 0.92 |
| 1:G:170:LEU:HD23 | 1:G:199:ILE:HG13 | 1.55 | 0.89 |
| 1:U:97:ILE:HG13 | 1:V:186:HIS:O | 1.71 | 0.89 |
| 1:F:170:LEU:HD23 | 1:F:199:ILE:HG13 | 1.55 | 0.89 |
| 1:A:170:LEU:HD23 | 1:A:199:ILE:HG13 | 1.55 | 0.89 |
| 1:W:85:GLN:O | 1:X:198:THR:OG1 | 1.88 | 0.89 |
| 1:K:97:ILE:HG13 | 1:L:186:HIS:O | 1.73 | 0.89 |
| 1:H:170:LEU:HD23 | 1:H:199:ILE:HG13 | 1.55 | 0.89 |
| 1:X:170:LEU:HD23 | 1:X:199:ILE:HG13 | 1.55 | 0.89 |
| 1:B:170:LEU:HD23 | 1:B:199:ILE:HG13 | 1.55 | 0.88 |
| 1:F:131:ALA:HB2 | 1:G:143:PRO:HG2 | 1.56 | 0.88 |
| 1:E:170:LEU:HD23 | 1:E:199:ILE:HG13 | 1.55 | 0.88 |
| 1:L:170:LEU:HD23 | 1:L:199:ILE:HG13 | 1.55 | 0.88 |
| 1:W:170:LEU:HD23 | 1:W:199:ILE:HG13 | 1.55 | 0.88 |
| 1:L:99:ARG:HD2 | 1:M:185:GLY:HA2 | 1.56 | 0.88 |
| 1:M:170:LEU:HD23 | 1:M:199:ILE:HG13 | 1.55 | 0.88 |
| 1:C:170:LEU:HD23 | 1:C:199:ILE:HG13 | 1.55 | 0.87 |
| 1:K:170:LEU:HD23 | 1:K:199:ILE:HG13 | 1.55 | 0.87 |
| 1:T:16:MET:O | 1:U:27:SER:OG | 1.91 | 0.87 |
| 1:D:170:LEU:HD23 | 1:D:199:ILE:HG13 | 1.55 | 0.87 |
| 1:I:170:LEU:HD23 | 1:I:199:ILE:HG13 | 1.55 | 0.87 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:J:170:LEU:HD23 | 1:J:199:ILE:HG13 | 1.55 | 0.87 |
| 1:R:170:LEU:HD23 | 1:R:199:ILE:HG13 | 1.55 | 0.86 |
| 1:S:170:LEU:HD23 | 1:S:199:ILE:HG13 | 1.55 | 0.86 |
| 1:Q:170:LEU:HD23 | 1:Q:199:ILE:HG13 | 1.55 | 0.86 |
| 1:N:170:LEU:HD23 | 1:N:199:ILE:HG13 | 1.55 | 0.86 |
| 1:T:170:LEU:HD23 | 1:T:199:ILE:HG13 | 1.55 | 0.86 |
| 1:V:170:LEU:HD23 | 1:V:199:ILE:HG13 | 1.55 | 0.86 |
| 1:U:170:LEU:HD23 | 1:U:199:ILE:HG13 | 1.55 | 0.86 |
| 1:O:170:LEU:HD23 | 1:O:199:ILE:HG13 | 1.55 | 0.86 |
| 1:P:170:LEU:HD23 | 1:P:199:ILE:HG13 | 1.55 | 0.86 |
| 1:W:168:GLU:O | 1:W:198:THR:HA | 1.77 | 0.85 |
| 1:O:168:GLU:O | 1:O:198:THR:HA | 1.77 | 0.85 |
| 1:P:168:GLU:O | 1:P:198:THR:HA | 1.77 | 0.85 |
| 1:K:168:GLU:O | 1:K:198:THR:HA | 1.77 | 0.85 |
| 1:N:168:GLU:O | 1:N:198:THR:HA | 1.77 | 0.85 |
| 1:Q:168:GLU:O | 1:Q:198:THR:HA | 1.77 | 0.85 |
| 1:T:168:GLU:O | 1:T:198:THR:HA | 1.77 | 0.85 |
| 1:J:168:GLU:O | 1:J:198:THR:HA | 1.77 | 0.85 |
| 1:M:168:GLU:O | 1:M:198:THR:HA | 1.77 | 0.85 |
| 1:R:168:GLU:O | 1:R:198:THR:HA | 1.77 | 0.85 |
| 1:X:168:GLU:O | 1:X:198:THR:HA | 1.77 | 0.85 |
| 1:C:168:GLU:O | 1:C:198:THR:HA | 1.77 | 0.84 |
| 1:L:168:GLU:O | 1:L:198:THR:HA | 1.77 | 0.84 |
| 1:B:168:GLU:O | 1:B:198:THR:HA | 1.77 | 0.84 |
| 1:S:168:GLU:O | 1:S:198:THR:HA | 1.77 | 0.84 |
| 1:G:168:GLU:O | 1:G:198:THR:HA | 1.77 | 0.84 |
| 1:U:168:GLU:O | 1:U:198:THR:HA | 1.77 | 0.84 |
| 1:H:168:GLU:O | 1:H:198:THR:HA | 1.77 | 0.84 |
| 1:L:85:GLN:O | 1:M:198:THR:OG1 | 1.96 | 0.84 |
| 1:V:168:GLU:O | 1:V:198:THR:HA | 1.77 | 0.84 |
| 1:D:168:GLU:O | 1:D:198:THR:HA | 1.77 | 0.83 |
| 1:F:131:ALA:CB | 1:G:143:PRO:HG2 | 2.07 | 0.83 |
| 1:P:28:LEU:HD12 | 1:P:203:ARG:HG2 | 1.61 | 0.83 |
| 1:Q:28:LEU:HD12 | 1:Q:203:ARG:HG2 | 1.61 | 0.83 |
| 1:G:28:LEU:HD12 | 1:G:203:ARG:HG2 | 1.61 | 0.83 |
| 1:H:28:LEU:HD12 | 1:H:203:ARG:HG2 | 1.61 | 0.83 |
| 1:I:28:LEU:HD12 | 1:I:203:ARG:HG2 | 1.61 | 0.83 |
| 1:O:28:LEU:HD12 | 1:O:203:ARG:HG2 | 1.61 | 0.83 |
| 1:F:168:GLU:O | 1:F:198:THR:HA | 1.77 | 0.83 |
| 1:R:28:LEU:HD12 | 1:R:203:ARG:HG2 | 1.61 | 0.83 |
| 1:T:85:GLN:O | 1:U:198:THR:OG1 | 1.97 | 0.83 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-----------------|------------------|--------------------------|-------------------|
| 1:E:168:GLU:O | 1:E:198:THR:HA | 1.77 | 0.83 |
| 1:F:28:LEU:HD12 | 1:F:203:ARG:HG2 | 1.61 | 0.83 |
| 1:I:168:GLU:O | 1:I:198:THR:HA | 1.77 | 0.83 |
| 1:N:28:LEU:HD12 | 1:N:203:ARG:HG2 | 1.60 | 0.83 |
| 1:A:168:GLU:O | 1:A:198:THR:HA | 1.77 | 0.82 |
| 1:J:28:LEU:HD12 | 1:J:203:ARG:HG2 | 1.61 | 0.82 |
| 1:S:28:LEU:HD12 | 1:S:203:ARG:HG2 | 1.61 | 0.82 |
| 1:T:28:LEU:HD12 | 1:T:203:ARG:HG2 | 1.61 | 0.82 |
| 1:M:28:LEU:HD12 | 1:M:203:ARG:HG2 | 1.61 | 0.82 |
| 1:E:28:LEU:HD12 | 1:E:203:ARG:HG2 | 1.61 | 0.82 |
| 1:K:28:LEU:HD12 | 1:K:203:ARG:HG2 | 1.61 | 0.81 |
| 1:D:28:LEU:HD12 | 1:D:203:ARG:HG2 | 1.60 | 0.81 |
| 1:V:28:LEU:HD12 | 1:V:203:ARG:HG2 | 1.61 | 0.81 |
| 1:L:28:LEU:HD12 | 1:L:203:ARG:HG2 | 1.61 | 0.81 |
| 1:L:94:GLY:HA2 | 1:M:189:TYR:CE1 | 2.15 | 0.81 |
| 1:U:28:LEU:HD12 | 1:U:203:ARG:HG2 | 1.61 | 0.81 |
| 1:W:28:LEU:HD12 | 1:W:203:ARG:HG2 | 1.61 | 0.81 |
| 1:C:28:LEU:HD12 | 1:C:203:ARG:HG2 | 1.61 | 0.80 |
| 1:A:28:LEU:HD12 | 1:A:203:ARG:HG2 | 1.61 | 0.80 |
| 1:X:28:LEU:HD12 | 1:X:203:ARG:HG2 | 1.61 | 0.80 |
| 1:B:28:LEU:HD12 | 1:B:203:ARG:HG2 | 1.61 | 0.80 |
| 1:B:81:LYS:HD2 | 1:C:203:ARG:HH21 | 1.45 | 0.80 |
| 1:L:95:GLU:H | 1:M:189:TYR:HD1 | 1.31 | 0.79 |
| 1:L:91:ASP:HB2 | 1:M:193:GLY:HA2 | 1.67 | 0.76 |
| 1:A:85:GLN:O | 1:B:198:THR:OG1 | 2.03 | 0.75 |
| 1:S:16:MET:O | 1:T:27:SER:OG | 2.02 | 0.74 |
| 1:N:85:GLN:O | 1:O:198:THR:OG1 | 2.03 | 0.73 |
| 1:T:166:LYS:H | 1:T:201:PRO:HA | 1.55 | 0.72 |
| 1:O:166:LYS:H | 1:O:201:PRO:HA | 1.55 | 0.72 |
| 1:Q:166:LYS:H | 1:Q:201:PRO:HA | 1.55 | 0.72 |
| 1:R:166:LYS:H | 1:R:201:PRO:HA | 1.54 | 0.72 |
| 1:P:166:LYS:H | 1:P:201:PRO:HA | 1.55 | 0.72 |
| 1:U:166:LYS:H | 1:U:201:PRO:HA | 1.55 | 0.72 |
| 1:N:166:LYS:H | 1:N:201:PRO:HA | 1.55 | 0.72 |
| 1:K:166:LYS:H | 1:K:201:PRO:HA | 1.55 | 0.72 |
| 1:S:166:LYS:H | 1:S:201:PRO:HA | 1.55 | 0.72 |
| 1:M:166:LYS:H | 1:M:201:PRO:HA | 1.55 | 0.72 |
| 1:A:166:LYS:H | 1:A:201:PRO:HA | 1.55 | 0.72 |
| 1:R:85:GLN:O | 1:S:198:THR:OG1 | 2.07 | 0.72 |
| 1:L:166:LYS:H | 1:L:201:PRO:HA | 1.54 | 0.71 |
| 1:O:16:MET:O | 1:P:27:SER:OG | 2.06 | 0.71 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-----------------|-----------------|--------------------------|-------------------|
| 1:X:166:LYS:H | 1:X:201:PRO:HA | 1.55 | 0.71 |
| 1:G:85:GLN:O | 1:H:198:THR:OG1 | 2.08 | 0.71 |
| 1:V:166:LYS:H | 1:V:201:PRO:HA | 1.55 | 0.71 |
| 1:W:16:MET:O | 1:X:27:SER:OG | 2.08 | 0.71 |
| 1:B:166:LYS:H | 1:B:201:PRO:HA | 1.55 | 0.71 |
| 1:W:166:LYS:H | 1:W:201:PRO:HA | 1.54 | 0.70 |
| 1:J:166:LYS:H | 1:J:201:PRO:HA | 1.55 | 0.70 |
| 1:I:166:LYS:H | 1:I:201:PRO:HA | 1.55 | 0.70 |
| 1:H:166:LYS:H | 1:H:201:PRO:HA | 1.55 | 0.70 |
| 1:F:166:LYS:H | 1:F:201:PRO:HA | 1.55 | 0.70 |
| 1:G:166:LYS:H | 1:G:201:PRO:HA | 1.55 | 0.69 |
| 1:E:166:LYS:H | 1:E:201:PRO:HA | 1.55 | 0.69 |
| 1:C:166:LYS:H | 1:C:201:PRO:HA | 1.55 | 0.69 |
| 1:D:166:LYS:H | 1:D:201:PRO:HA | 1.55 | 0.69 |
| 1:L:94:GLY:CA | 1:M:189:TYR:CE1 | 2.75 | 0.69 |
| 1:V:97:ILE:HD11 | 1:W:186:HIS:HD2 | 1.58 | 0.69 |
| 1:L:97:ILE:HG13 | 1:M:186:HIS:O | 1.92 | 0.69 |
| 1:B:7:GLU:O | 1:B:11:ILE:HD12 | 1.94 | 0.68 |
| 1:H:7:GLU:O | 1:H:11:ILE:HD12 | 1.94 | 0.68 |
| 1:S:7:GLU:O | 1:S:11:ILE:HD12 | 1.94 | 0.68 |
| 1:W:7:GLU:O | 1:W:11:ILE:HD12 | 1.94 | 0.68 |
| 1:E:7:GLU:O | 1:E:11:ILE:HD12 | 1.94 | 0.68 |
| 1:I:7:GLU:O | 1:I:11:ILE:HD12 | 1.94 | 0.68 |
| 1:A:7:GLU:O | 1:A:11:ILE:HD12 | 1.94 | 0.68 |
| 1:M:7:GLU:O | 1:M:11:ILE:HD12 | 1.94 | 0.68 |
| 1:N:7:GLU:O | 1:N:11:ILE:HD12 | 1.94 | 0.68 |
| 1:R:7:GLU:O | 1:R:11:ILE:HD12 | 1.94 | 0.68 |
| 1:T:7:GLU:O | 1:T:11:ILE:HD12 | 1.94 | 0.68 |
| 1:X:7:GLU:O | 1:X:11:ILE:HD12 | 1.94 | 0.68 |
| 1:U:7:GLU:O | 1:U:11:ILE:HD12 | 1.94 | 0.68 |
| 1:J:7:GLU:O | 1:J:11:ILE:HD12 | 1.94 | 0.67 |
| 1:G:7:GLU:O | 1:G:11:ILE:HD12 | 1.94 | 0.67 |
| 1:O:7:GLU:O | 1:O:11:ILE:HD12 | 1.94 | 0.67 |
| 1:D:7:GLU:O | 1:D:11:ILE:HD12 | 1.94 | 0.67 |
| 1:L:7:GLU:O | 1:L:11:ILE:HD12 | 1.94 | 0.67 |
| 1:C:7:GLU:O | 1:C:11:ILE:HD12 | 1.94 | 0.67 |
| 1:K:7:GLU:O | 1:K:11:ILE:HD12 | 1.94 | 0.67 |
| 1:F:7:GLU:O | 1:F:11:ILE:HD12 | 1.94 | 0.67 |
| 1:Q:7:GLU:O | 1:Q:11:ILE:HD12 | 1.94 | 0.67 |
| 1:L:223:GLY:HA3 | 1:M:147:ARG:HD3 | 1.76 | 0.67 |
| 1:V:7:GLU:O | 1:V:11:ILE:HD12 | 1.94 | 0.66 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|------------------|--------------------------|-------------------|
| 1:P:7:GLU:O | 1:P:11:ILE:HD12 | 1.94 | 0.66 |
| 1:U:84:PHE:HD2 | 1:U:120:ILE:HD13 | 1.60 | 0.66 |
| 1:P:84:PHE:HD2 | 1:P:120:ILE:HD13 | 1.60 | 0.66 |
| 1:F:84:PHE:HD2 | 1:F:120:ILE:HD13 | 1.60 | 0.66 |
| 1:G:84:PHE:HD2 | 1:G:120:ILE:HD13 | 1.60 | 0.66 |
| 1:Q:84:PHE:HD2 | 1:Q:120:ILE:HD13 | 1.60 | 0.66 |
| 1:T:84:PHE:HD2 | 1:T:120:ILE:HD13 | 1.60 | 0.66 |
| 1:E:84:PHE:HD2 | 1:E:120:ILE:HD13 | 1.60 | 0.66 |
| 1:V:84:PHE:HD2 | 1:V:120:ILE:HD13 | 1.60 | 0.66 |
| 1:H:84:PHE:HD2 | 1:H:120:ILE:HD13 | 1.60 | 0.66 |
| 1:C:84:PHE:HD2 | 1:C:120:ILE:HD13 | 1.60 | 0.66 |
| 1:D:84:PHE:HD2 | 1:D:120:ILE:HD13 | 1.60 | 0.66 |
| 1:I:84:PHE:HD2 | 1:I:120:ILE:HD13 | 1.60 | 0.66 |
| 1:R:66:GLY:O | 1:R:129:TYR:OH | 2.14 | 0.66 |
| 1:A:84:PHE:HD2 | 1:A:120:ILE:HD13 | 1.60 | 0.65 |
| 1:O:84:PHE:HD2 | 1:O:120:ILE:HD13 | 1.60 | 0.65 |
| 1:B:84:PHE:HD2 | 1:B:120:ILE:HD13 | 1.60 | 0.65 |
| 1:U:66:GLY:O | 1:U:129:TYR:OH | 2.14 | 0.65 |
| 1:X:66:GLY:O | 1:X:129:TYR:OH | 2.14 | 0.65 |
| 1:J:84:PHE:HD2 | 1:J:120:ILE:HD13 | 1.60 | 0.65 |
| 1:R:84:PHE:HD2 | 1:R:120:ILE:HD13 | 1.60 | 0.65 |
| 1:S:84:PHE:HD2 | 1:S:120:ILE:HD13 | 1.60 | 0.65 |
| 1:W:84:PHE:HD2 | 1:W:120:ILE:HD13 | 1.60 | 0.65 |
| 1:X:84:PHE:HD2 | 1:X:120:ILE:HD13 | 1.60 | 0.65 |
| 1:O:81:LYS:HD2 | 1:P:203:ARG:HH21 | 1.62 | 0.65 |
| 1:K:84:PHE:HD2 | 1:K:120:ILE:HD13 | 1.60 | 0.65 |
| 1:Q:66:GLY:O | 1:Q:129:TYR:OH | 2.14 | 0.65 |
| 1:W:81:LYS:HD2 | 1:X:203:ARG:HH21 | 1.61 | 0.65 |
| 1:M:66:GLY:O | 1:M:129:TYR:OH | 2.14 | 0.64 |
| 1:M:84:PHE:HD2 | 1:M:120:ILE:HD13 | 1.60 | 0.64 |
| 1:N:84:PHE:HD2 | 1:N:120:ILE:HD13 | 1.60 | 0.64 |
| 1:C:66:GLY:O | 1:C:129:TYR:OH | 2.14 | 0.64 |
| 1:E:94:GLY:HA2 | 1:F:189:TYR:CE1 | 2.32 | 0.64 |
| 1:L:84:PHE:HD2 | 1:L:120:ILE:HD13 | 1.60 | 0.64 |
| 1:T:81:LYS:HD2 | 1:U:203:ARG:HH21 | 1.62 | 0.64 |
| 1:D:131:ALA:CB | 1:E:143:PRO:HG2 | 2.26 | 0.64 |
| 1:T:66:GLY:O | 1:T:129:TYR:OH | 2.14 | 0.63 |
| 1:W:66:GLY:O | 1:W:129:TYR:OH | 2.14 | 0.63 |
| 1:U:99:ARG:HD2 | 1:V:185:GLY:HA2 | 1.81 | 0.63 |
| 1:F:66:GLY:O | 1:F:129:TYR:OH | 2.14 | 0.63 |
| 1:G:66:GLY:O | 1:G:129:TYR:OH | 2.14 | 0.63 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|------------------|--------------------------|-------------------|
| 1:L:66:GLY:O | 1:L:129:TYR:OH | 2.14 | 0.63 |
| 1:L:97:ILE:O | 1:M:187:LEU:HD12 | 1.99 | 0.63 |
| 1:R:16:MET:O | 1:S:27:SER:OG | 2.07 | 0.63 |
| 1:H:66:GLY:O | 1:H:129:TYR:OH | 2.14 | 0.63 |
| 1:P:66:GLY:O | 1:P:129:TYR:OH | 2.14 | 0.62 |
| 1:J:66:GLY:O | 1:J:129:TYR:OH | 2.14 | 0.62 |
| 1:S:81:LYS:HD2 | 1:T:203:ARG:HH21 | 1.64 | 0.62 |
| 1:V:81:LYS:HD2 | 1:W:203:ARG:HH21 | 1.63 | 0.62 |
| 1:T:81:LYS:HD2 | 1:U:203:ARG:NH2 | 2.14 | 0.62 |
| 1:B:66:GLY:O | 1:B:129:TYR:OH | 2.14 | 0.62 |
| 1:B:81:LYS:HD2 | 1:C:203:ARG:NH2 | 2.15 | 0.62 |
| 1:J:16:MET:CE | 1:K:29:VAL:HG23 | 2.29 | 0.62 |
| 1:T:143:PRO:O | 1:T:147:ARG:NH2 | 2.33 | 0.62 |
| 1:V:143:PRO:O | 1:V:147:ARG:NH2 | 2.33 | 0.62 |
| 1:C:143:PRO:O | 1:C:147:ARG:NH2 | 2.33 | 0.62 |
| 1:E:143:PRO:O | 1:E:147:ARG:NH2 | 2.33 | 0.62 |
| 1:U:143:PRO:O | 1:U:147:ARG:NH2 | 2.33 | 0.62 |
| 1:X:143:PRO:O | 1:X:147:ARG:NH2 | 2.33 | 0.62 |
| 1:H:143:PRO:O | 1:H:147:ARG:NH2 | 2.33 | 0.61 |
| 1:A:143:PRO:O | 1:A:147:ARG:NH2 | 2.33 | 0.61 |
| 1:R:143:PRO:O | 1:R:147:ARG:NH2 | 2.33 | 0.61 |
| 1:W:143:PRO:O | 1:W:147:ARG:NH2 | 2.33 | 0.61 |
| 1:F:143:PRO:O | 1:F:147:ARG:NH2 | 2.33 | 0.61 |
| 1:L:15:GLU:HG2 | 1:M:5:PHE:CE1 | 2.36 | 0.61 |
| 1:A:186:HIS:O | 1:X:97:ILE:HG13 | 2.01 | 0.61 |
| 1:D:143:PRO:O | 1:D:147:ARG:NH2 | 2.33 | 0.61 |
| 1:K:66:GLY:O | 1:K:129:TYR:OH | 2.14 | 0.61 |
| 1:B:143:PRO:O | 1:B:147:ARG:NH2 | 2.33 | 0.61 |
| 1:D:66:GLY:O | 1:D:129:TYR:OH | 2.14 | 0.61 |
| 1:J:143:PRO:O | 1:J:147:ARG:NH2 | 2.33 | 0.61 |
| 1:E:66:GLY:O | 1:E:129:TYR:OH | 2.14 | 0.61 |
| 1:I:66:GLY:O | 1:I:129:TYR:OH | 2.14 | 0.61 |
| 1:L:143:PRO:O | 1:L:147:ARG:NH2 | 2.33 | 0.61 |
| 1:O:143:PRO:O | 1:O:147:ARG:NH2 | 2.33 | 0.61 |
| 1:Q:143:PRO:O | 1:Q:147:ARG:NH2 | 2.33 | 0.61 |
| 1:G:143:PRO:O | 1:G:147:ARG:NH2 | 2.33 | 0.61 |
| 1:K:143:PRO:O | 1:K:147:ARG:NH2 | 2.33 | 0.61 |
| 1:M:143:PRO:O | 1:M:147:ARG:NH2 | 2.33 | 0.61 |
| 1:P:143:PRO:O | 1:P:147:ARG:NH2 | 2.33 | 0.60 |
| 1:S:66:GLY:O | 1:S:129:TYR:OH | 2.14 | 0.60 |
| 1:S:143:PRO:O | 1:S:147:ARG:NH2 | 2.33 | 0.60 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:143:PRO:O | 1:I:147:ARG:NH2 | 2.33 | 0.60 |
| 1:N:143:PRO:O | 1:N:147:ARG:NH2 | 2.33 | 0.60 |
| 1:V:66:GLY:O | 1:V:129:TYR:OH | 2.14 | 0.60 |
| 1:L:94:GLY:CA | 1:M:189:TYR:HE1 | 2.15 | 0.60 |
| 1:N:66:GLY:O | 1:N:129:TYR:OH | 2.14 | 0.60 |
| 1:O:66:GLY:O | 1:O:129:TYR:OH | 2.14 | 0.59 |
| 1:F:223:GLY:HA3 | 1:G:147:ARG:HD3 | 1.84 | 0.59 |
| 1:G:116:GLN:HB2 | 1:G:118:ILE:HG12 | 1.85 | 0.59 |
| 1:F:116:GLN:HB2 | 1:F:118:ILE:HG12 | 1.85 | 0.59 |
| 1:W:81:LYS:HD2 | 1:X:203:ARG:NH2 | 2.17 | 0.59 |
| 1:A:66:GLY:O | 1:A:129:TYR:OH | 2.14 | 0.59 |
| 1:H:116:GLN:HB2 | 1:H:118:ILE:HG12 | 1.85 | 0.59 |
| 1:R:116:GLN:HB2 | 1:R:118:ILE:HG12 | 1.85 | 0.59 |
| 1:S:116:GLN:HB2 | 1:S:118:ILE:HG12 | 1.85 | 0.59 |
| 1:E:116:GLN:HB2 | 1:E:118:ILE:HG12 | 1.85 | 0.58 |
| 1:Q:116:GLN:HB2 | 1:Q:118:ILE:HG12 | 1.85 | 0.58 |
| 1:A:181:GLN:HE21 | 1:A:184:GLN:HA | 1.69 | 0.58 |
| 1:I:116:GLN:HB2 | 1:I:118:ILE:HG12 | 1.85 | 0.58 |
| 1:P:116:GLN:HB2 | 1:P:118:ILE:HG12 | 1.85 | 0.58 |
| 1:T:116:GLN:HB2 | 1:T:118:ILE:HG12 | 1.85 | 0.58 |
| 1:D:116:GLN:HB2 | 1:D:118:ILE:HG12 | 1.85 | 0.58 |
| 1:F:85:GLN:O | 1:G:198:THR:OG1 | 2.22 | 0.58 |
| 1:M:181:GLN:HE21 | 1:M:184:GLN:HA | 1.69 | 0.58 |
| 1:D:181:GLN:HE21 | 1:D:184:GLN:HA | 1.69 | 0.58 |
| 1:J:181:GLN:HE21 | 1:J:184:GLN:HA | 1.69 | 0.58 |
| 1:G:181:GLN:HE21 | 1:G:184:GLN:HA | 1.69 | 0.58 |
| 1:N:181:GLN:HE21 | 1:N:184:GLN:HA | 1.69 | 0.58 |
| 1:K:181:GLN:HE21 | 1:K:184:GLN:HA | 1.69 | 0.58 |
| 1:T:181:GLN:HE21 | 1:T:184:GLN:HA | 1.69 | 0.58 |
| 1:U:81:LYS:HD2 | 1:V:203:ARG:HH21 | 1.68 | 0.58 |
| 1:J:116:GLN:HB2 | 1:J:118:ILE:HG12 | 1.85 | 0.58 |
| 1:O:116:GLN:HB2 | 1:O:118:ILE:HG12 | 1.85 | 0.58 |
| 1:Q:181:GLN:HE21 | 1:Q:184:GLN:HA | 1.69 | 0.58 |
| 1:S:181:GLN:HE21 | 1:S:184:GLN:HA | 1.69 | 0.58 |
| 1:U:181:GLN:HE21 | 1:U:184:GLN:HA | 1.69 | 0.58 |
| 1:V:181:GLN:HE21 | 1:V:184:GLN:HA | 1.69 | 0.58 |
| 1:C:116:GLN:HB2 | 1:C:118:ILE:HG12 | 1.85 | 0.58 |
| 1:U:116:GLN:HB2 | 1:U:118:ILE:HG12 | 1.85 | 0.58 |
| 1:F:202:ASN:C | 1:F:203:ARG:HD2 | 2.24 | 0.58 |
| 1:G:202:ASN:C | 1:G:203:ARG:HD2 | 2.24 | 0.58 |
| 1:R:181:GLN:HE21 | 1:R:184:GLN:HA | 1.69 | 0.58 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:T:202:ASN:C | 1:T:203:ARG:HD2 | 2.24 | 0.58 |
| 1:U:202:ASN:C | 1:U:203:ARG:HD2 | 2.24 | 0.58 |
| 1:V:116:GLN:HB2 | 1:V:118:ILE:HG12 | 1.85 | 0.58 |
| 1:X:181:GLN:HE21 | 1:X:184:GLN:HA | 1.69 | 0.58 |
| 1:E:181:GLN:HE21 | 1:E:184:GLN:HA | 1.69 | 0.58 |
| 1:P:181:GLN:HE21 | 1:P:184:GLN:HA | 1.69 | 0.58 |
| 1:S:202:ASN:C | 1:S:203:ARG:HD2 | 2.24 | 0.58 |
| 1:F:181:GLN:HE21 | 1:F:184:GLN:HA | 1.69 | 0.57 |
| 1:H:202:ASN:C | 1:H:203:ARG:HD2 | 2.24 | 0.57 |
| 1:N:116:GLN:HB2 | 1:N:118:ILE:HG12 | 1.85 | 0.57 |
| 1:O:181:GLN:HE21 | 1:O:184:GLN:HA | 1.69 | 0.57 |
| 1:W:116:GLN:HB2 | 1:W:118:ILE:HG12 | 1.85 | 0.57 |
| 1:I:202:ASN:C | 1:I:203:ARG:HD2 | 2.24 | 0.57 |
| 1:R:202:ASN:C | 1:R:203:ARG:HD2 | 2.24 | 0.57 |
| 1:W:202:ASN:C | 1:W:203:ARG:HD2 | 2.24 | 0.57 |
| 1:B:116:GLN:HB2 | 1:B:118:ILE:HG12 | 1.85 | 0.57 |
| 1:B:181:GLN:HE21 | 1:B:184:GLN:HA | 1.69 | 0.57 |
| 1:H:181:GLN:HE21 | 1:H:184:GLN:HA | 1.69 | 0.57 |
| 1:M:202:ASN:C | 1:M:203:ARG:HD2 | 2.24 | 0.57 |
| 1:P:202:ASN:C | 1:P:203:ARG:HD2 | 2.24 | 0.57 |
| 1:V:202:ASN:C | 1:V:203:ARG:HD2 | 2.24 | 0.57 |
| 1:Q:202:ASN:C | 1:Q:203:ARG:HD2 | 2.24 | 0.57 |
| 1:X:202:ASN:C | 1:X:203:ARG:HD2 | 2.24 | 0.57 |
| 1:A:116:GLN:HB2 | 1:A:118:ILE:HG12 | 1.85 | 0.57 |
| 1:A:202:ASN:C | 1:A:203:ARG:HD2 | 2.24 | 0.57 |
| 1:I:181:GLN:HE21 | 1:I:184:GLN:HA | 1.69 | 0.57 |
| 1:K:116:GLN:HB2 | 1:K:118:ILE:HG12 | 1.85 | 0.57 |
| 1:W:181:GLN:HE21 | 1:W:184:GLN:HA | 1.69 | 0.57 |
| 1:C:181:GLN:HE21 | 1:C:184:GLN:HA | 1.69 | 0.57 |
| 1:E:202:ASN:C | 1:E:203:ARG:HD2 | 2.24 | 0.57 |
| 1:D:31:ALA:HA | 1:D:34:PHE:CD2 | 2.40 | 0.57 |
| 1:L:202:ASN:C | 1:L:203:ARG:HD2 | 2.24 | 0.57 |
| 1:N:202:ASN:C | 1:N:203:ARG:HD2 | 2.24 | 0.57 |
| 1:X:116:GLN:HB2 | 1:X:118:ILE:HG12 | 1.85 | 0.57 |
| 1:A:31:ALA:HA | 1:A:34:PHE:CD2 | 2.40 | 0.57 |
| 1:E:31:ALA:HA | 1:E:34:PHE:CD2 | 2.40 | 0.57 |
| 1:V:31:ALA:HA | 1:V:34:PHE:CD2 | 2.40 | 0.57 |
| 1:C:31:ALA:HA | 1:C:34:PHE:CD2 | 2.40 | 0.57 |
| 1:M:31:ALA:HA | 1:M:34:PHE:CD2 | 2.40 | 0.57 |
| 1:M:116:GLN:HB2 | 1:M:118:ILE:HG12 | 1.85 | 0.57 |
| 1:N:81:LYS:HD2 | 1:O:203:ARG:HH21 | 1.68 | 0.57 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:202:ASN:C | 1:C:203:ARG:HD2 | 2.24 | 0.57 |
| 1:F:131:ALA:HB1 | 1:G:143:PRO:HG2 | 1.86 | 0.57 |
| 1:J:202:ASN:C | 1:J:203:ARG:HD2 | 2.24 | 0.57 |
| 1:L:31:ALA:HA | 1:L:34:PHE:CD2 | 2.40 | 0.57 |
| 1:L:181:GLN:HE21 | 1:L:184:GLN:HA | 1.69 | 0.57 |
| 1:U:31:ALA:HA | 1:U:34:PHE:CD2 | 2.40 | 0.56 |
| 1:W:31:ALA:HA | 1:W:34:PHE:CD2 | 2.40 | 0.56 |
| 1:B:31:ALA:HA | 1:B:34:PHE:CD2 | 2.40 | 0.56 |
| 1:F:31:ALA:HA | 1:F:34:PHE:CD2 | 2.40 | 0.56 |
| 1:L:116:GLN:HB2 | 1:L:118:ILE:HG12 | 1.85 | 0.56 |
| 1:T:31:ALA:HA | 1:T:34:PHE:CD2 | 2.40 | 0.56 |
| 1:B:202:ASN:C | 1:B:203:ARG:HD2 | 2.24 | 0.56 |
| 1:D:202:ASN:C | 1:D:203:ARG:HD2 | 2.24 | 0.56 |
| 1:G:31:ALA:HA | 1:G:34:PHE:CD2 | 2.40 | 0.56 |
| 1:K:202:ASN:C | 1:K:203:ARG:HD2 | 2.24 | 0.56 |
| 1:N:31:ALA:HA | 1:N:34:PHE:CD2 | 2.40 | 0.56 |
| 1:O:202:ASN:C | 1:O:203:ARG:HD2 | 2.24 | 0.56 |
| 1:S:31:ALA:HA | 1:S:34:PHE:CD2 | 2.40 | 0.56 |
| 1:I:31:ALA:HA | 1:I:34:PHE:CD2 | 2.40 | 0.56 |
| 1:L:94:GLY:HA3 | 1:M:189:TYR:HE1 | 1.70 | 0.56 |
| 1:P:31:ALA:HA | 1:P:34:PHE:CD2 | 2.40 | 0.56 |
| 1:E:107:SER:HB3 | 1:E:178:PHE:HA | 1.88 | 0.56 |
| 1:X:31:ALA:HA | 1:X:34:PHE:CD2 | 2.40 | 0.56 |
| 1:D:107:SER:HB3 | 1:D:178:PHE:HA | 1.88 | 0.56 |
| 1:F:107:SER:HB3 | 1:F:178:PHE:HA | 1.88 | 0.56 |
| 1:G:107:SER:HB3 | 1:G:178:PHE:HA | 1.88 | 0.56 |
| 1:H:31:ALA:HA | 1:H:34:PHE:CD2 | 2.40 | 0.56 |
| 1:K:31:ALA:HA | 1:K:34:PHE:CD2 | 2.40 | 0.56 |
| 1:C:107:SER:HB3 | 1:C:178:PHE:HA | 1.88 | 0.56 |
| 1:Q:31:ALA:HA | 1:Q:34:PHE:CD2 | 2.40 | 0.56 |
| 1:R:31:ALA:HA | 1:R:34:PHE:CD2 | 2.40 | 0.56 |
| 1:O:31:ALA:HA | 1:O:34:PHE:CD2 | 2.40 | 0.56 |
| 1:P:129:TYR:O | 1:P:133:LEU:HG | 2.06 | 0.56 |
| 1:R:129:TYR:O | 1:R:133:LEU:HG | 2.06 | 0.56 |
| 1:U:129:TYR:O | 1:U:133:LEU:HG | 2.06 | 0.56 |
| 1:V:91:ASP:HB2 | 1:W:192:LYS:O | 2.06 | 0.56 |
| 1:H:107:SER:HB3 | 1:H:178:PHE:HA | 1.88 | 0.55 |
| 1:P:107:SER:HB3 | 1:P:178:PHE:HA | 1.88 | 0.55 |
| 1:U:95:GLU:HB3 | 1:V:188:SER:O | 2.05 | 0.55 |
| 1:B:107:SER:HB3 | 1:B:178:PHE:HA | 1.88 | 0.55 |
| 1:H:9:THR:HG22 | 1:H:205:LEU:HB3 | 1.89 | 0.55 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-----------------|------------------|--------------------------|-------------------|
| 1:J:31:ALA:HA | 1:J:34:PHE:CD2 | 2.40 | 0.55 |
| 1:O:107:SER:HB3 | 1:O:178:PHE:HA | 1.88 | 0.55 |
| 1:Q:129:TYR:O | 1:Q:133:LEU:HG | 2.06 | 0.55 |
| 1:T:129:TYR:O | 1:T:133:LEU:HG | 2.07 | 0.55 |
| 1:W:129:TYR:O | 1:W:133:LEU:HG | 2.07 | 0.55 |
| 1:D:9:THR:HG22 | 1:D:205:LEU:HB3 | 1.89 | 0.55 |
| 1:E:126:SER:HB3 | 1:E:129:TYR:HB2 | 1.88 | 0.55 |
| 1:Q:107:SER:HB3 | 1:Q:178:PHE:HA | 1.88 | 0.55 |
| 1:C:126:SER:HB3 | 1:C:129:TYR:HB2 | 1.88 | 0.55 |
| 1:F:9:THR:HG22 | 1:F:205:LEU:HB3 | 1.89 | 0.55 |
| 1:F:126:SER:HB3 | 1:F:129:TYR:HB2 | 1.88 | 0.55 |
| 1:I:107:SER:HB3 | 1:I:178:PHE:HA | 1.88 | 0.55 |
| 1:K:81:LYS:HD2 | 1:L:203:ARG:HH21 | 1.70 | 0.55 |
| 1:A:107:SER:HB3 | 1:A:178:PHE:HA | 1.88 | 0.55 |
| 1:B:126:SER:HB3 | 1:B:129:TYR:HB2 | 1.88 | 0.55 |
| 1:J:9:THR:HG22 | 1:J:205:LEU:HB3 | 1.89 | 0.55 |
| 1:J:28:LEU:HA | 1:J:31:ALA:HB3 | 1.89 | 0.55 |
| 1:M:9:THR:HG22 | 1:M:205:LEU:HB3 | 1.89 | 0.55 |
| 1:O:129:TYR:O | 1:O:133:LEU:HG | 2.06 | 0.55 |
| 1:S:81:LYS:HD2 | 1:T:203:ARG:NH2 | 2.21 | 0.55 |
| 1:B:9:THR:HG22 | 1:B:205:LEU:HB3 | 1.89 | 0.55 |
| 1:F:223:GLY:HA3 | 1:G:147:ARG:CD | 2.36 | 0.55 |
| 1:K:129:TYR:O | 1:K:133:LEU:HG | 2.06 | 0.55 |
| 1:L:9:THR:HG22 | 1:L:205:LEU:HB3 | 1.89 | 0.55 |
| 1:N:107:SER:HB3 | 1:N:178:PHE:HA | 1.88 | 0.55 |
| 1:N:129:TYR:O | 1:N:133:LEU:HG | 2.06 | 0.55 |
| 1:P:126:SER:HB3 | 1:P:129:TYR:HB2 | 1.88 | 0.55 |
| 1:V:97:ILE:HG13 | 1:W:186:HIS:O | 2.07 | 0.55 |
| 1:V:129:TYR:O | 1:V:133:LEU:HG | 2.07 | 0.55 |
| 1:X:107:SER:HB3 | 1:X:178:PHE:HA | 1.88 | 0.55 |
| 1:I:17:ASP:OD1 | 1:I:18:ALA:N | 2.40 | 0.55 |
| 1:J:107:SER:HB3 | 1:J:178:PHE:HA | 1.88 | 0.55 |
| 1:J:211:GLN:HB3 | 1:J:222:ALA:HB3 | 1.89 | 0.55 |
| 1:O:126:SER:HB3 | 1:O:129:TYR:HB2 | 1.88 | 0.55 |
| 1:X:9:THR:HG22 | 1:X:205:LEU:HB3 | 1.89 | 0.55 |
| 1:A:129:TYR:O | 1:A:133:LEU:HG | 2.06 | 0.55 |
| 1:I:28:LEU:HA | 1:I:31:ALA:HB3 | 1.89 | 0.55 |
| 1:L:129:TYR:O | 1:L:133:LEU:HG | 2.07 | 0.55 |
| 1:O:33:ARG:O | 1:O:33:ARG:HD3 | 2.07 | 0.55 |
| 1:O:211:GLN:HB3 | 1:O:222:ALA:HB3 | 1.89 | 0.55 |
| 1:Q:126:SER:HB3 | 1:Q:129:TYR:HB2 | 1.88 | 0.55 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-----------------|--------------------------|-------------------|
| 1:S:129:TYR:O | 1:S:133:LEU:HG | 2.06 | 0.55 |
| 1:V:9:THR:HG22 | 1:V:205:LEU:HB3 | 1.89 | 0.55 |
| 1:W:107:SER:HB3 | 1:W:178:PHE:HA | 1.88 | 0.55 |
| 1:B:129:TYR:O | 1:B:133:LEU:HG | 2.06 | 0.55 |
| 1:C:28:LEU:HA | 1:C:31:ALA:HB3 | 1.89 | 0.55 |
| 1:D:126:SER:HB3 | 1:D:129:TYR:HB2 | 1.88 | 0.55 |
| 1:G:17:ASP:OD1 | 1:G:18:ALA:N | 2.40 | 0.55 |
| 1:H:154:ASN:HD21 | 1:H:229:ARG:HA | 1.72 | 0.55 |
| 1:I:131:ALA:HB2 | 1:J:143:PRO:HG2 | 1.88 | 0.55 |
| 1:I:211:GLN:HB3 | 1:I:222:ALA:HB3 | 1.89 | 0.55 |
| 1:I:223:GLY:HA3 | 1:J:147:ARG:HD3 | 1.89 | 0.55 |
| 1:K:9:THR:HG22 | 1:K:205:LEU:HB3 | 1.89 | 0.55 |
| 1:L:97:ILE:CG1 | 1:M:187:LEU:HA | 2.37 | 0.55 |
| 1:N:9:THR:HG22 | 1:N:205:LEU:HB3 | 1.89 | 0.55 |
| 1:O:9:THR:HG22 | 1:O:205:LEU:HB3 | 1.89 | 0.55 |
| 1:O:81:LYS:HD2 | 1:P:203:ARG:NH2 | 2.21 | 0.55 |
| 1:P:33:ARG:O | 1:P:33:ARG:HD3 | 2.07 | 0.55 |
| 1:A:126:SER:HB3 | 1:A:129:TYR:HB2 | 1.89 | 0.55 |
| 1:B:28:LEU:HA | 1:B:31:ALA:HB3 | 1.89 | 0.55 |
| 1:G:126:SER:HB3 | 1:G:129:TYR:HB2 | 1.89 | 0.55 |
| 1:G:154:ASN:HD21 | 1:G:229:ARG:HA | 1.72 | 0.55 |
| 1:I:154:ASN:HD21 | 1:I:229:ARG:HA | 1.72 | 0.55 |
| 1:K:17:ASP:OD1 | 1:K:18:ALA:N | 2.40 | 0.55 |
| 1:M:17:ASP:OD1 | 1:M:18:ALA:N | 2.40 | 0.55 |
| 1:M:129:TYR:O | 1:M:133:LEU:HG | 2.06 | 0.55 |
| 1:N:33:ARG:O | 1:N:33:ARG:HD3 | 2.07 | 0.55 |
| 1:N:211:GLN:HB3 | 1:N:222:ALA:HB3 | 1.89 | 0.55 |
| 1:Q:33:ARG:O | 1:Q:33:ARG:HD3 | 2.07 | 0.55 |
| 1:T:107:SER:HB3 | 1:T:178:PHE:HA | 1.88 | 0.55 |
| 1:U:92:SER:HA | 1:V:191:HIS:HD2 | 1.72 | 0.55 |
| 1:X:126:SER:HB3 | 1:X:129:TYR:HB2 | 1.88 | 0.55 |
| 1:X:129:TYR:O | 1:X:133:LEU:HG | 2.06 | 0.55 |
| 1:A:9:THR:HG22 | 1:A:205:LEU:HB3 | 1.89 | 0.54 |
| 1:C:9:THR:HG22 | 1:C:205:LEU:HB3 | 1.89 | 0.54 |
| 1:C:154:ASN:HD21 | 1:C:229:ARG:HA | 1.72 | 0.54 |
| 1:D:28:LEU:HA | 1:D:31:ALA:HB3 | 1.89 | 0.54 |
| 1:D:154:ASN:HD21 | 1:D:229:ARG:HA | 1.72 | 0.54 |
| 1:E:9:THR:HG22 | 1:E:205:LEU:HB3 | 1.89 | 0.54 |
| 1:F:17:ASP:OD1 | 1:F:18:ALA:N | 2.40 | 0.54 |
| 1:H:126:SER:HB3 | 1:H:129:TYR:HB2 | 1.89 | 0.54 |
| 1:J:154:ASN:HD21 | 1:J:229:ARG:HA | 1.73 | 0.54 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-----------------|--------------------------|-------------------|
| 1:K:154:ASN:HD21 | 1:K:229:ARG:HA | 1.72 | 0.54 |
| 1:O:28:LEU:HA | 1:O:31:ALA:HB3 | 1.89 | 0.54 |
| 1:P:28:LEU:HA | 1:P:31:ALA:HB3 | 1.89 | 0.54 |
| 1:P:211:GLN:HB3 | 1:P:222:ALA:HB3 | 1.89 | 0.54 |
| 1:S:81:LYS:HG2 | 1:S:82:ALA:H | 1.73 | 0.54 |
| 1:V:107:SER:HB3 | 1:V:178:PHE:HA | 1.88 | 0.54 |
| 1:G:129:TYR:O | 1:G:133:LEU:HG | 2.06 | 0.54 |
| 1:I:9:THR:HG22 | 1:I:205:LEU:HB3 | 1.89 | 0.54 |
| 1:K:28:LEU:HA | 1:K:31:ALA:HB3 | 1.89 | 0.54 |
| 1:M:33:ARG:O | 1:M:33:ARG:HD3 | 2.07 | 0.54 |
| 1:P:9:THR:HG22 | 1:P:205:LEU:HB3 | 1.89 | 0.54 |
| 1:Q:9:THR:HG22 | 1:Q:205:LEU:HB3 | 1.89 | 0.54 |
| 1:R:9:THR:HG22 | 1:R:205:LEU:HB3 | 1.89 | 0.54 |
| 1:R:107:SER:HB3 | 1:R:178:PHE:HA | 1.88 | 0.54 |
| 1:D:17:ASP:OD1 | 1:D:18:ALA:N | 2.40 | 0.54 |
| 1:D:129:TYR:O | 1:D:133:LEU:HG | 2.06 | 0.54 |
| 1:E:154:ASN:HD21 | 1:E:229:ARG:HA | 1.72 | 0.54 |
| 1:H:28:LEU:HA | 1:H:31:ALA:HB3 | 1.89 | 0.54 |
| 1:K:211:GLN:HB3 | 1:K:222:ALA:HB3 | 1.89 | 0.54 |
| 1:N:28:LEU:HA | 1:N:31:ALA:HB3 | 1.89 | 0.54 |
| 1:P:17:ASP:OD1 | 1:P:18:ALA:N | 2.40 | 0.54 |
| 1:T:9:THR:HG22 | 1:T:205:LEU:HB3 | 1.89 | 0.54 |
| 1:U:107:SER:HB3 | 1:U:178:PHE:HA | 1.88 | 0.54 |
| 1:A:33:ARG:O | 1:A:33:ARG:HD3 | 2.07 | 0.54 |
| 1:A:178:PHE:O | 1:A:189:TYR:HB3 | 2.08 | 0.54 |
| 1:B:33:ARG:O | 1:B:33:ARG:HD3 | 2.07 | 0.54 |
| 1:B:154:ASN:HD21 | 1:B:229:ARG:HA | 1.72 | 0.54 |
| 1:F:154:ASN:HD21 | 1:F:229:ARG:HA | 1.73 | 0.54 |
| 1:K:126:SER:HB3 | 1:K:129:TYR:HB2 | 1.88 | 0.54 |
| 1:L:154:ASN:HD21 | 1:L:229:ARG:HA | 1.73 | 0.54 |
| 1:W:33:ARG:O | 1:W:33:ARG:HD3 | 2.07 | 0.54 |
| 1:X:178:PHE:O | 1:X:189:TYR:HB3 | 2.08 | 0.54 |
| 1:C:129:TYR:O | 1:C:133:LEU:HG | 2.06 | 0.54 |
| 1:F:129:TYR:O | 1:F:133:LEU:HG | 2.06 | 0.54 |
| 1:H:17:ASP:OD1 | 1:H:18:ALA:N | 2.40 | 0.54 |
| 1:K:107:SER:HB3 | 1:K:178:PHE:HA | 1.88 | 0.54 |
| 1:L:33:ARG:O | 1:L:33:ARG:HD3 | 2.07 | 0.54 |
| 1:N:126:SER:HB3 | 1:N:129:TYR:HB2 | 1.89 | 0.54 |
| 1:O:178:PHE:O | 1:O:189:TYR:HB3 | 2.08 | 0.54 |
| 1:P:178:PHE:O | 1:P:189:TYR:HB3 | 2.08 | 0.54 |
| 1:R:33:ARG:O | 1:R:33:ARG:HD3 | 2.07 | 0.54 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-----------------|--------------------------|-------------------|
| 1:S:107:SER:HB3 | 1:S:178:PHE:HA | 1.88 | 0.54 |
| 1:T:126:SER:HB3 | 1:T:129:TYR:HB2 | 1.89 | 0.54 |
| 1:U:81:LYS:HG2 | 1:U:82:ALA:H | 1.73 | 0.54 |
| 1:V:33:ARG:O | 1:V:33:ARG:HD3 | 2.07 | 0.54 |
| 1:W:15:GLU:HG2 | 1:X:5:PHE:CE1 | 2.43 | 0.54 |
| 1:W:178:PHE:O | 1:W:189:TYR:HB3 | 2.08 | 0.54 |
| 1:X:33:ARG:O | 1:X:33:ARG:HD3 | 2.07 | 0.54 |
| 1:X:81:LYS:HG2 | 1:X:82:ALA:H | 1.73 | 0.54 |
| 1:A:28:LEU:HA | 1:A:31:ALA:HB3 | 1.89 | 0.54 |
| 1:B:178:PHE:O | 1:B:189:TYR:HB3 | 2.08 | 0.54 |
| 1:C:33:ARG:O | 1:C:33:ARG:HD3 | 2.07 | 0.54 |
| 1:E:28:LEU:HA | 1:E:31:ALA:HB3 | 1.89 | 0.54 |
| 1:F:33:ARG:O | 1:F:33:ARG:HD3 | 2.07 | 0.54 |
| 1:H:129:TYR:O | 1:H:133:LEU:HG | 2.06 | 0.54 |
| 1:L:28:LEU:HA | 1:L:31:ALA:HB3 | 1.89 | 0.54 |
| 1:L:126:SER:HB3 | 1:L:129:TYR:HB2 | 1.88 | 0.54 |
| 1:N:154:ASN:HD21 | 1:N:229:ARG:HA | 1.72 | 0.54 |
| 1:N:178:PHE:O | 1:N:189:TYR:HB3 | 2.08 | 0.54 |
| 1:Q:81:LYS:HG2 | 1:Q:82:ALA:H | 1.73 | 0.54 |
| 1:S:154:ASN:HD21 | 1:S:229:ARG:HA | 1.72 | 0.54 |
| 1:V:126:SER:HB3 | 1:V:129:TYR:HB2 | 1.88 | 0.54 |
| 1:W:126:SER:HB3 | 1:W:129:TYR:HB2 | 1.88 | 0.54 |
| 1:B:81:LYS:HG2 | 1:B:82:ALA:H | 1.73 | 0.54 |
| 1:D:131:ALA:HB2 | 1:E:143:PRO:HG2 | 1.89 | 0.54 |
| 1:H:211:GLN:HB3 | 1:H:222:ALA:HB3 | 1.89 | 0.54 |
| 1:I:129:TYR:O | 1:I:133:LEU:HG | 2.06 | 0.54 |
| 1:L:211:GLN:HB3 | 1:L:222:ALA:HB3 | 1.89 | 0.54 |
| 1:M:107:SER:HB3 | 1:M:178:PHE:HA | 1.88 | 0.54 |
| 1:M:154:ASN:HD21 | 1:M:229:ARG:HA | 1.72 | 0.54 |
| 1:M:178:PHE:O | 1:M:189:TYR:HB3 | 2.08 | 0.54 |
| 1:O:17:ASP:OD1 | 1:O:18:ALA:N | 2.40 | 0.54 |
| 1:O:154:ASN:HD21 | 1:O:229:ARG:HA | 1.72 | 0.54 |
| 1:P:154:ASN:HD21 | 1:P:229:ARG:HA | 1.72 | 0.54 |
| 1:Q:28:LEU:HA | 1:Q:31:ALA:HB3 | 1.89 | 0.54 |
| 1:Q:154:ASN:HD21 | 1:Q:229:ARG:HA | 1.72 | 0.54 |
| 1:Q:178:PHE:O | 1:Q:189:TYR:HB3 | 2.08 | 0.54 |
| 1:R:154:ASN:HD21 | 1:R:229:ARG:HA | 1.73 | 0.54 |
| 1:U:33:ARG:O | 1:U:33:ARG:HD3 | 2.07 | 0.54 |
| 1:V:178:PHE:O | 1:V:189:TYR:HB3 | 2.08 | 0.54 |
| 1:W:9:THR:HG22 | 1:W:205:LEU:HB3 | 1.89 | 0.54 |
| 1:J:126:SER:HB3 | 1:J:129:TYR:HB2 | 1.88 | 0.54 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-----------------|--------------------------|-------------------|
| 1:K:33:ARG:O | 1:K:33:ARG:HD3 | 2.07 | 0.54 |
| 1:L:107:SER:HB3 | 1:L:178:PHE:HA | 1.88 | 0.54 |
| 1:L:178:PHE:O | 1:L:189:TYR:HB3 | 2.08 | 0.54 |
| 1:M:211:GLN:HB3 | 1:M:222:ALA:HB3 | 1.89 | 0.54 |
| 1:O:81:LYS:HG2 | 1:O:82:ALA:H | 1.73 | 0.54 |
| 1:R:126:SER:HB3 | 1:R:129:TYR:HB2 | 1.89 | 0.54 |
| 1:U:126:SER:HB3 | 1:U:129:TYR:HB2 | 1.88 | 0.54 |
| 1:U:154:ASN:HD21 | 1:U:229:ARG:HA | 1.72 | 0.54 |
| 1:V:28:LEU:HA | 1:V:31:ALA:HB3 | 1.89 | 0.54 |
| 1:C:178:PHE:O | 1:C:189:TYR:HB3 | 2.08 | 0.54 |
| 1:D:33:ARG:O | 1:D:33:ARG:HD3 | 2.07 | 0.54 |
| 1:D:81:LYS:HG2 | 1:D:82:ALA:H | 1.73 | 0.54 |
| 1:E:33:ARG:O | 1:E:33:ARG:HD3 | 2.07 | 0.54 |
| 1:F:211:GLN:HB3 | 1:F:222:ALA:HB3 | 1.89 | 0.54 |
| 1:G:28:LEU:HA | 1:G:31:ALA:HB3 | 1.89 | 0.54 |
| 1:G:33:ARG:O | 1:G:33:ARG:HD3 | 2.07 | 0.54 |
| 1:I:126:SER:HB3 | 1:I:129:TYR:HB2 | 1.89 | 0.54 |
| 1:Q:211:GLN:HB3 | 1:Q:222:ALA:HB3 | 1.89 | 0.54 |
| 1:R:17:ASP:OD1 | 1:R:18:ALA:N | 2.40 | 0.54 |
| 1:R:178:PHE:O | 1:R:189:TYR:HB3 | 2.08 | 0.54 |
| 1:S:126:SER:HB3 | 1:S:129:TYR:HB2 | 1.89 | 0.54 |
| 1:T:17:ASP:OD1 | 1:T:18:ALA:N | 2.40 | 0.54 |
| 1:T:33:ARG:O | 1:T:33:ARG:HD3 | 2.07 | 0.54 |
| 1:U:178:PHE:O | 1:U:189:TYR:HB3 | 2.08 | 0.54 |
| 1:V:81:LYS:HG2 | 1:V:82:ALA:H | 1.73 | 0.54 |
| 1:W:81:LYS:HG2 | 1:W:82:ALA:H | 1.73 | 0.54 |
| 1:A:17:ASP:OD1 | 1:A:18:ALA:N | 2.40 | 0.54 |
| 1:A:154:ASN:HD21 | 1:A:229:ARG:HA | 1.73 | 0.54 |
| 1:D:178:PHE:O | 1:D:189:TYR:HB3 | 2.08 | 0.54 |
| 1:D:211:GLN:HB3 | 1:D:222:ALA:HB3 | 1.89 | 0.54 |
| 1:E:211:GLN:HB3 | 1:E:222:ALA:HB3 | 1.89 | 0.54 |
| 1:G:9:THR:HG22 | 1:G:205:LEU:HB3 | 1.89 | 0.54 |
| 1:K:178:PHE:O | 1:K:189:TYR:HB3 | 2.08 | 0.54 |
| 1:L:223:GLY:HA3 | 1:M:147:ARG:CD | 2.37 | 0.54 |
| 1:T:154:ASN:HD21 | 1:T:229:ARG:HA | 1.72 | 0.54 |
| 1:T:211:GLN:HB3 | 1:T:222:ALA:HB3 | 1.89 | 0.54 |
| 1:B:17:ASP:OD1 | 1:B:18:ALA:N | 2.40 | 0.53 |
| 1:H:81:LYS:HG2 | 1:H:82:ALA:H | 1.73 | 0.53 |
| 1:S:9:THR:HG22 | 1:S:205:LEU:HB3 | 1.89 | 0.53 |
| 1:F:28:LEU:HA | 1:F:31:ALA:HB3 | 1.89 | 0.53 |
| 1:H:33:ARG:O | 1:H:33:ARG:HD3 | 2.07 | 0.53 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-----------------|--------------------------|-------------------|
| 1:K:81:LYS:HG2 | 1:K:82:ALA:H | 1.73 | 0.53 |
| 1:M:28:LEU:HA | 1:M:31:ALA:HB3 | 1.89 | 0.53 |
| 1:S:33:ARG:O | 1:S:33:ARG:HD3 | 2.07 | 0.53 |
| 1:S:178:PHE:O | 1:S:189:TYR:HB3 | 2.08 | 0.53 |
| 1:S:211:GLN:HB3 | 1:S:222:ALA:HB3 | 1.89 | 0.53 |
| 1:T:28:LEU:HA | 1:T:31:ALA:HB3 | 1.89 | 0.53 |
| 1:W:17:ASP:OD1 | 1:W:18:ALA:N | 2.40 | 0.53 |
| 1:C:17:ASP:OD1 | 1:C:18:ALA:N | 2.40 | 0.53 |
| 1:C:211:GLN:HB3 | 1:C:222:ALA:HB3 | 1.89 | 0.53 |
| 1:F:178:PHE:O | 1:F:189:TYR:HB3 | 2.08 | 0.53 |
| 1:G:211:GLN:HB3 | 1:G:222:ALA:HB3 | 1.89 | 0.53 |
| 1:I:33:ARG:O | 1:I:33:ARG:HD3 | 2.07 | 0.53 |
| 1:J:16:MET:HE3 | 1:K:29:VAL:CG2 | 2.39 | 0.53 |
| 1:J:129:TYR:O | 1:J:133:LEU:HG | 2.06 | 0.53 |
| 1:O:97:ILE:HD11 | 1:P:186:HIS:HD2 | 1.73 | 0.53 |
| 1:U:28:LEU:HA | 1:U:31:ALA:HB3 | 1.89 | 0.53 |
| 1:U:211:GLN:HB3 | 1:U:222:ALA:HB3 | 1.89 | 0.53 |
| 1:C:106:ILE:HG12 | 1:C:178:PHE:HE1 | 1.74 | 0.53 |
| 1:E:178:PHE:O | 1:E:189:TYR:HB3 | 2.08 | 0.53 |
| 1:J:17:ASP:OD1 | 1:J:18:ALA:N | 2.40 | 0.53 |
| 1:V:211:GLN:HB3 | 1:V:222:ALA:HB3 | 1.89 | 0.53 |
| 1:X:154:ASN:HD21 | 1:X:229:ARG:HA | 1.72 | 0.53 |
| 1:A:81:LYS:HG2 | 1:A:82:ALA:H | 1.73 | 0.53 |
| 1:E:129:TYR:O | 1:E:133:LEU:HG | 2.06 | 0.53 |
| 1:F:94:GLY:HA2 | 1:G:189:TYR:CE1 | 2.44 | 0.53 |
| 1:G:81:LYS:HG2 | 1:G:82:ALA:H | 1.73 | 0.53 |
| 1:G:178:PHE:O | 1:G:189:TYR:HB3 | 2.08 | 0.53 |
| 1:M:126:SER:HB3 | 1:M:129:TYR:HB2 | 1.89 | 0.53 |
| 1:N:168:GLU:C | 1:N:199:ILE:H | 2.12 | 0.53 |
| 1:R:106:ILE:HG12 | 1:R:178:PHE:HE1 | 1.74 | 0.53 |
| 1:X:106:ILE:HG12 | 1:X:178:PHE:HE1 | 1.74 | 0.53 |
| 1:B:211:GLN:HB3 | 1:B:222:ALA:HB3 | 1.89 | 0.53 |
| 1:H:178:PHE:O | 1:H:189:TYR:HB3 | 2.08 | 0.53 |
| 1:I:178:PHE:O | 1:I:189:TYR:HB3 | 2.08 | 0.53 |
| 1:J:178:PHE:O | 1:J:189:TYR:HB3 | 2.08 | 0.53 |
| 1:M:168:GLU:C | 1:M:199:ILE:H | 2.12 | 0.53 |
| 1:R:28:LEU:HA | 1:R:31:ALA:HB3 | 1.89 | 0.53 |
| 1:W:28:LEU:HA | 1:W:31:ALA:HB3 | 1.89 | 0.53 |
| 1:W:211:GLN:HB3 | 1:W:222:ALA:HB3 | 1.89 | 0.53 |
| 1:F:106:ILE:HG12 | 1:F:178:PHE:HE1 | 1.74 | 0.53 |
| 1:G:140:ARG:HG3 | 1:G:142:LEU:H | 1.74 | 0.53 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:J:33:ARG:O | 1:J:33:ARG:HD3 | 2.07 | 0.53 |
| 1:K:106:ILE:HG12 | 1:K:178:PHE:HE1 | 1.74 | 0.53 |
| 1:L:168:GLU:C | 1:L:199:ILE:H | 2.12 | 0.53 |
| 1:M:104:ILE:HD11 | 1:M:182:ILE:HD13 | 1.91 | 0.53 |
| 1:N:106:ILE:HG12 | 1:N:178:PHE:HE1 | 1.74 | 0.53 |
| 1:O:106:ILE:HG12 | 1:O:178:PHE:HE1 | 1.74 | 0.53 |
| 1:O:168:GLU:C | 1:O:199:ILE:H | 2.12 | 0.53 |
| 1:U:9:THR:HG22 | 1:U:205:LEU:HB3 | 1.89 | 0.53 |
| 1:V:17:ASP:OD1 | 1:V:18:ALA:N | 2.40 | 0.53 |
| 1:V:154:ASN:HD21 | 1:V:229:ARG:HA | 1.72 | 0.53 |
| 1:X:211:GLN:HB3 | 1:X:222:ALA:HB3 | 1.89 | 0.53 |
| 1:C:81:LYS:HD2 | 1:D:203:ARG:HH21 | 1.74 | 0.53 |
| 1:J:106:ILE:HG12 | 1:J:178:PHE:HE1 | 1.74 | 0.53 |
| 1:L:81:LYS:HG2 | 1:L:82:ALA:H | 1.73 | 0.53 |
| 1:L:104:ILE:HD11 | 1:L:182:ILE:HD13 | 1.91 | 0.53 |
| 1:M:81:LYS:HG2 | 1:M:82:ALA:H | 1.73 | 0.53 |
| 1:Q:17:ASP:OD1 | 1:Q:18:ALA:N | 2.40 | 0.53 |
| 1:Q:106:ILE:HG12 | 1:Q:178:PHE:HE1 | 1.74 | 0.53 |
| 1:Q:168:GLU:C | 1:Q:199:ILE:H | 2.12 | 0.53 |
| 1:T:81:LYS:HG2 | 1:T:82:ALA:H | 1.73 | 0.53 |
| 1:T:178:PHE:O | 1:T:189:TYR:HB3 | 2.08 | 0.53 |
| 1:A:211:GLN:HB3 | 1:A:222:ALA:HB3 | 1.89 | 0.53 |
| 1:B:106:ILE:HG12 | 1:B:178:PHE:HE1 | 1.74 | 0.53 |
| 1:F:140:ARG:HG3 | 1:F:142:LEU:H | 1.74 | 0.53 |
| 1:K:104:ILE:HD11 | 1:K:182:ILE:HD13 | 1.91 | 0.53 |
| 1:N:104:ILE:HD11 | 1:N:182:ILE:HD13 | 1.91 | 0.53 |
| 1:P:168:GLU:C | 1:P:199:ILE:H | 2.12 | 0.53 |
| 1:Q:86:ILE:HB | 1:Q:118:ILE:HB | 1.91 | 0.53 |
| 1:Q:140:ARG:HG3 | 1:Q:142:LEU:H | 1.74 | 0.53 |
| 1:S:28:LEU:HA | 1:S:31:ALA:HB3 | 1.89 | 0.53 |
| 1:B:104:ILE:HD11 | 1:B:182:ILE:HD13 | 1.91 | 0.53 |
| 1:C:104:ILE:HD11 | 1:C:182:ILE:HD13 | 1.91 | 0.53 |
| 1:D:104:ILE:HD11 | 1:D:182:ILE:HD13 | 1.91 | 0.53 |
| 1:E:104:ILE:HD11 | 1:E:182:ILE:HD13 | 1.91 | 0.53 |
| 1:F:37:PHE:O | 1:F:38:HIS:ND1 | 2.43 | 0.53 |
| 1:F:81:LYS:HG2 | 1:F:82:ALA:H | 1.73 | 0.53 |
| 1:K:37:PHE:O | 1:K:38:HIS:ND1 | 2.43 | 0.53 |
| 1:L:94:GLY:HA2 | 1:M:189:TYR:CD1 | 2.44 | 0.53 |
| 1:P:37:PHE:O | 1:P:38:HIS:ND1 | 2.42 | 0.53 |
| 1:S:86:ILE:HB | 1:S:118:ILE:HB | 1.91 | 0.53 |
| 1:S:106:ILE:HG12 | 1:S:178:PHE:HE1 | 1.74 | 0.53 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:U:106:ILE:HG12 | 1:U:178:PHE:HE1 | 1.74 | 0.53 |
| 1:V:106:ILE:HG12 | 1:V:178:PHE:HE1 | 1.74 | 0.53 |
| 1:V:168:GLU:C | 1:V:199:ILE:H | 2.12 | 0.53 |
| 1:W:168:GLU:C | 1:W:199:ILE:H | 2.12 | 0.53 |
| 1:X:28:LEU:HA | 1:X:31:ALA:HB3 | 1.89 | 0.53 |
| 1:A:97:ILE:HD11 | 1:B:186:HIS:HD2 | 1.73 | 0.52 |
| 1:B:97:ILE:HD11 | 1:C:186:HIS:HD2 | 1.72 | 0.52 |
| 1:B:168:GLU:C | 1:B:199:ILE:H | 2.12 | 0.52 |
| 1:C:140:ARG:HG3 | 1:C:142:LEU:H | 1.74 | 0.52 |
| 1:D:140:ARG:HG3 | 1:D:142:LEU:H | 1.74 | 0.52 |
| 1:E:106:ILE:HG12 | 1:E:178:PHE:HE1 | 1.74 | 0.52 |
| 1:E:140:ARG:HG3 | 1:E:142:LEU:H | 1.74 | 0.52 |
| 1:H:104:ILE:HD11 | 1:H:182:ILE:HD13 | 1.91 | 0.52 |
| 1:J:104:ILE:HD11 | 1:J:182:ILE:HD13 | 1.91 | 0.52 |
| 1:L:17:ASP:OD1 | 1:L:18:ALA:N | 2.40 | 0.52 |
| 1:O:104:ILE:HD11 | 1:O:182:ILE:HD13 | 1.91 | 0.52 |
| 1:R:16:MET:CE | 1:S:29:VAL:HG23 | 2.38 | 0.52 |
| 1:R:140:ARG:HG3 | 1:R:142:LEU:H | 1.74 | 0.52 |
| 1:S:17:ASP:OD1 | 1:S:18:ALA:N | 2.40 | 0.52 |
| 1:U:17:ASP:OD1 | 1:U:18:ALA:N | 2.40 | 0.52 |
| 1:W:106:ILE:HG12 | 1:W:178:PHE:HE1 | 1.74 | 0.52 |
| 1:A:104:ILE:HD11 | 1:A:182:ILE:HD13 | 1.91 | 0.52 |
| 1:A:140:ARG:HG3 | 1:A:142:LEU:H | 1.74 | 0.52 |
| 1:B:140:ARG:HG3 | 1:B:142:LEU:H | 1.74 | 0.52 |
| 1:D:168:GLU:C | 1:D:199:ILE:H | 2.12 | 0.52 |
| 1:E:17:ASP:OD1 | 1:E:18:ALA:N | 2.40 | 0.52 |
| 1:K:168:GLU:C | 1:K:199:ILE:H | 2.12 | 0.52 |
| 1:N:81:LYS:HG2 | 1:N:82:ALA:H | 1.73 | 0.52 |
| 1:O:86:ILE:HB | 1:O:118:ILE:HB | 1.91 | 0.52 |
| 1:P:86:ILE:HB | 1:P:118:ILE:HB | 1.91 | 0.52 |
| 1:R:37:PHE:O | 1:R:38:HIS:ND1 | 2.43 | 0.52 |
| 1:R:211:GLN:HB3 | 1:R:222:ALA:HB3 | 1.89 | 0.52 |
| 1:T:37:PHE:O | 1:T:38:HIS:ND1 | 2.43 | 0.52 |
| 1:V:104:ILE:HD11 | 1:V:182:ILE:HD13 | 1.91 | 0.52 |
| 1:B:37:PHE:O | 1:B:38:HIS:ND1 | 2.43 | 0.52 |
| 1:C:37:PHE:O | 1:C:38:HIS:ND1 | 2.43 | 0.52 |
| 1:E:37:PHE:O | 1:E:38:HIS:ND1 | 2.43 | 0.52 |
| 1:F:104:ILE:HD11 | 1:F:182:ILE:HD13 | 1.91 | 0.52 |
| 1:I:81:LYS:HG2 | 1:I:82:ALA:H | 1.73 | 0.52 |
| 1:I:104:ILE:HD11 | 1:I:182:ILE:HD13 | 1.91 | 0.52 |
| 1:J:81:LYS:HG2 | 1:J:82:ALA:H | 1.73 | 0.52 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:N:86:ILE:HB | 1:N:118:ILE:HB | 1.91 | 0.52 |
| 1:P:81:LYS:HG2 | 1:P:82:ALA:H | 1.73 | 0.52 |
| 1:P:104:ILE:HD11 | 1:P:182:ILE:HD13 | 1.91 | 0.52 |
| 1:P:140:ARG:HG3 | 1:P:142:LEU:H | 1.74 | 0.52 |
| 1:P:164:THR:O | 1:P:202:ASN:HA | 2.10 | 0.52 |
| 1:R:104:ILE:HD11 | 1:R:182:ILE:HD13 | 1.91 | 0.52 |
| 1:R:164:THR:O | 1:R:202:ASN:HA | 2.10 | 0.52 |
| 1:T:104:ILE:HD11 | 1:T:182:ILE:HD13 | 1.91 | 0.52 |
| 1:T:106:ILE:HG12 | 1:T:178:PHE:HE1 | 1.74 | 0.52 |
| 1:U:168:GLU:C | 1:U:199:ILE:H | 2.12 | 0.52 |
| 1:V:37:PHE:O | 1:V:38:HIS:ND1 | 2.43 | 0.52 |
| 1:W:104:ILE:HD11 | 1:W:182:ILE:HD13 | 1.91 | 0.52 |
| 1:A:106:ILE:HG12 | 1:A:178:PHE:HE1 | 1.74 | 0.52 |
| 1:E:168:GLU:C | 1:E:199:ILE:H | 2.12 | 0.52 |
| 1:H:37:PHE:O | 1:H:38:HIS:ND1 | 2.43 | 0.52 |
| 1:I:37:PHE:O | 1:I:38:HIS:ND1 | 2.43 | 0.52 |
| 1:Q:104:ILE:HD11 | 1:Q:182:ILE:HD13 | 1.91 | 0.52 |
| 1:Q:164:THR:O | 1:Q:202:ASN:HA | 2.10 | 0.52 |
| 1:R:81:LYS:HG2 | 1:R:82:ALA:H | 1.73 | 0.52 |
| 1:S:104:ILE:HD11 | 1:S:182:ILE:HD13 | 1.91 | 0.52 |
| 1:T:86:ILE:HB | 1:T:118:ILE:HB | 1.91 | 0.52 |
| 1:U:104:ILE:HD11 | 1:U:182:ILE:HD13 | 1.91 | 0.52 |
| 1:U:164:THR:O | 1:U:202:ASN:HA | 2.10 | 0.52 |
| 1:W:154:ASN:HD21 | 1:W:229:ARG:HA | 1.73 | 0.52 |
| 1:X:37:PHE:O | 1:X:38:HIS:ND1 | 2.43 | 0.52 |
| 1:X:104:ILE:HD11 | 1:X:182:ILE:HD13 | 1.91 | 0.52 |
| 1:X:140:ARG:HG3 | 1:X:142:LEU:H | 1.74 | 0.52 |
| 1:X:168:GLU:C | 1:X:199:ILE:H | 2.12 | 0.52 |
| 1:F:168:GLU:C | 1:F:199:ILE:H | 2.12 | 0.52 |
| 1:G:37:PHE:O | 1:G:38:HIS:ND1 | 2.43 | 0.52 |
| 1:G:104:ILE:HD11 | 1:G:182:ILE:HD13 | 1.91 | 0.52 |
| 1:G:106:ILE:HG12 | 1:G:178:PHE:HE1 | 1.74 | 0.52 |
| 1:H:140:ARG:HG3 | 1:H:142:LEU:H | 1.74 | 0.52 |
| 1:J:168:GLU:C | 1:J:199:ILE:H | 2.12 | 0.52 |
| 1:M:37:PHE:O | 1:M:38:HIS:ND1 | 2.43 | 0.52 |
| 1:M:86:ILE:HB | 1:M:118:ILE:HB | 1.91 | 0.52 |
| 1:N:37:PHE:O | 1:N:38:HIS:ND1 | 2.43 | 0.52 |
| 1:R:86:ILE:HB | 1:R:118:ILE:HB | 1.91 | 0.52 |
| 1:S:37:PHE:O | 1:S:38:HIS:ND1 | 2.43 | 0.52 |
| 1:S:168:GLU:C | 1:S:199:ILE:H | 2.12 | 0.52 |
| 1:T:168:GLU:C | 1:T:199:ILE:H | 2.12 | 0.52 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:W:140:ARG:HG3 | 1:W:142:LEU:H | 1.74 | 0.52 |
| 1:X:17:ASP:OD1 | 1:X:18:ALA:N | 2.40 | 0.52 |
| 1:C:81:LYS:HG2 | 1:C:82:ALA:H | 1.73 | 0.52 |
| 1:D:37:PHE:O | 1:D:38:HIS:ND1 | 2.43 | 0.52 |
| 1:E:81:LYS:HG2 | 1:E:82:ALA:H | 1.73 | 0.52 |
| 1:G:168:GLU:C | 1:G:199:ILE:H | 2.12 | 0.52 |
| 1:S:140:ARG:HG3 | 1:S:142:LEU:H | 1.74 | 0.52 |
| 1:T:164:THR:O | 1:T:202:ASN:HA | 2.10 | 0.52 |
| 1:A:37:PHE:O | 1:A:38:HIS:ND1 | 2.43 | 0.52 |
| 1:F:86:ILE:HB | 1:F:118:ILE:HB | 1.91 | 0.52 |
| 1:H:169:THR:O | 1:H:170:LEU:HD22 | 2.10 | 0.52 |
| 1:P:106:ILE:HG12 | 1:P:178:PHE:HE1 | 1.74 | 0.52 |
| 1:R:168:GLU:C | 1:R:199:ILE:H | 2.12 | 0.52 |
| 1:U:86:ILE:HB | 1:U:118:ILE:HB | 1.91 | 0.52 |
| 1:V:140:ARG:HG3 | 1:V:142:LEU:H | 1.74 | 0.52 |
| 1:V:164:THR:O | 1:V:202:ASN:HA | 2.10 | 0.52 |
| 1:V:169:THR:O | 1:V:170:LEU:HD22 | 2.10 | 0.52 |
| 1:D:106:ILE:HG12 | 1:D:178:PHE:HE1 | 1.74 | 0.52 |
| 1:E:86:ILE:HB | 1:E:118:ILE:HB | 1.91 | 0.52 |
| 1:G:164:THR:O | 1:G:202:ASN:HA | 2.10 | 0.52 |
| 1:H:106:ILE:HG12 | 1:H:178:PHE:HE1 | 1.74 | 0.52 |
| 1:I:106:ILE:HG12 | 1:I:178:PHE:HE1 | 1.74 | 0.52 |
| 1:J:16:MET:HE3 | 1:K:29:VAL:HG23 | 1.92 | 0.52 |
| 1:L:86:ILE:HB | 1:L:118:ILE:HB | 1.91 | 0.52 |
| 1:Q:37:PHE:O | 1:Q:38:HIS:ND1 | 2.43 | 0.52 |
| 1:T:169:THR:O | 1:T:170:LEU:HD22 | 2.10 | 0.52 |
| 1:U:169:THR:O | 1:U:170:LEU:HD22 | 2.10 | 0.52 |
| 1:V:86:ILE:HB | 1:V:118:ILE:HB | 1.91 | 0.52 |
| 1:W:169:THR:O | 1:W:170:LEU:HD22 | 2.10 | 0.52 |
| 1:C:86:ILE:HB | 1:C:118:ILE:HB | 1.91 | 0.52 |
| 1:G:86:ILE:HB | 1:G:118:ILE:HB | 1.91 | 0.52 |
| 1:H:168:GLU:C | 1:H:199:ILE:H | 2.12 | 0.52 |
| 1:M:106:ILE:HG12 | 1:M:178:PHE:HE1 | 1.74 | 0.52 |
| 1:O:37:PHE:O | 1:O:38:HIS:ND1 | 2.43 | 0.52 |
| 1:O:140:ARG:HG3 | 1:O:142:LEU:H | 1.74 | 0.52 |
| 1:S:169:THR:O | 1:S:170:LEU:HD22 | 2.10 | 0.52 |
| 1:W:164:THR:O | 1:W:202:ASN:HA | 2.10 | 0.52 |
| 1:G:169:THR:O | 1:G:170:LEU:HD22 | 2.10 | 0.52 |
| 1:I:140:ARG:HG3 | 1:I:142:LEU:H | 1.74 | 0.52 |
| 1:I:168:GLU:C | 1:I:199:ILE:H | 2.12 | 0.52 |
| 1:I:169:THR:O | 1:I:170:LEU:HD22 | 2.10 | 0.52 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:140:ARG:HG3 | 1:K:142:LEU:H | 1.74 | 0.52 |
| 1:L:37:PHE:O | 1:L:38:HIS:ND1 | 2.43 | 0.52 |
| 1:N:17:ASP:OD1 | 1:N:18:ALA:N | 2.40 | 0.52 |
| 1:N:164:THR:O | 1:N:202:ASN:HA | 2.10 | 0.52 |
| 1:O:169:THR:O | 1:O:170:LEU:HD22 | 2.10 | 0.52 |
| 1:S:164:THR:O | 1:S:202:ASN:HA | 2.10 | 0.52 |
| 1:T:140:ARG:HG3 | 1:T:142:LEU:H | 1.74 | 0.52 |
| 1:U:37:PHE:O | 1:U:38:HIS:ND1 | 2.43 | 0.52 |
| 1:W:37:PHE:O | 1:W:38:HIS:ND1 | 2.43 | 0.52 |
| 1:X:169:THR:O | 1:X:170:LEU:HD22 | 2.10 | 0.52 |
| 1:A:168:GLU:C | 1:A:199:ILE:H | 2.12 | 0.51 |
| 1:F:164:THR:O | 1:F:202:ASN:HA | 2.10 | 0.51 |
| 1:J:16:MET:HE1 | 1:K:29:VAL:HG23 | 1.91 | 0.51 |
| 1:K:164:THR:O | 1:K:202:ASN:HA | 2.10 | 0.51 |
| 1:N:169:THR:O | 1:N:170:LEU:HD22 | 2.10 | 0.51 |
| 1:U:140:ARG:HG3 | 1:U:142:LEU:H | 1.74 | 0.51 |
| 1:A:169:THR:O | 1:A:170:LEU:HD22 | 2.10 | 0.51 |
| 1:B:86:ILE:HB | 1:B:118:ILE:HB | 1.91 | 0.51 |
| 1:C:164:THR:O | 1:C:202:ASN:HA | 2.10 | 0.51 |
| 1:D:164:THR:O | 1:D:202:ASN:HA | 2.10 | 0.51 |
| 1:H:164:THR:O | 1:H:202:ASN:HA | 2.10 | 0.51 |
| 1:I:164:THR:O | 1:I:202:ASN:HA | 2.10 | 0.51 |
| 1:J:140:ARG:HG3 | 1:J:142:LEU:H | 1.74 | 0.51 |
| 1:K:86:ILE:HB | 1:K:118:ILE:HB | 1.91 | 0.51 |
| 1:L:164:THR:O | 1:L:202:ASN:HA | 2.10 | 0.51 |
| 1:M:164:THR:O | 1:M:202:ASN:HA | 2.10 | 0.51 |
| 1:Q:169:THR:O | 1:Q:170:LEU:HD22 | 2.10 | 0.51 |
| 1:W:86:ILE:HB | 1:W:118:ILE:HB | 1.91 | 0.51 |
| 1:D:86:ILE:HB | 1:D:118:ILE:HB | 1.91 | 0.51 |
| 1:J:169:THR:O | 1:J:170:LEU:HD22 | 2.10 | 0.51 |
| 1:L:106:ILE:HG12 | 1:L:178:PHE:HE1 | 1.74 | 0.51 |
| 1:L:140:ARG:HG3 | 1:L:142:LEU:H | 1.74 | 0.51 |
| 1:P:169:THR:O | 1:P:170:LEU:HD22 | 2.10 | 0.51 |
| 1:R:169:THR:O | 1:R:170:LEU:HD22 | 2.10 | 0.51 |
| 1:X:86:ILE:HB | 1:X:118:ILE:HB | 1.91 | 0.51 |
| 1:C:168:GLU:C | 1:C:199:ILE:H | 2.12 | 0.51 |
| 1:F:169:THR:O | 1:F:170:LEU:HD22 | 2.10 | 0.51 |
| 1:H:86:ILE:HB | 1:H:118:ILE:HB | 1.91 | 0.51 |
| 1:J:37:PHE:O | 1:J:38:HIS:ND1 | 2.43 | 0.51 |
| 1:K:215:PRO:HD2 | 1:K:219:THR:HA | 1.93 | 0.51 |
| 1:M:140:ARG:HG3 | 1:M:142:LEU:H | 1.74 | 0.51 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-----------------|------------------|--------------------------|-------------------|
| 1:M:169:THR:O | 1:M:170:LEU:HD22 | 2.10 | 0.51 |
| 1:N:140:ARG:HG3 | 1:N:142:LEU:H | 1.74 | 0.51 |
| 1:O:164:THR:O | 1:O:202:ASN:HA | 2.10 | 0.51 |
| 1:O:215:PRO:HD2 | 1:O:219:THR:HA | 1.93 | 0.51 |
| 1:Q:215:PRO:HD2 | 1:Q:219:THR:HA | 1.93 | 0.51 |
| 1:J:86:ILE:HB | 1:J:118:ILE:HB | 1.91 | 0.51 |
| 1:B:164:THR:O | 1:B:202:ASN:HA | 2.10 | 0.51 |
| 1:B:169:THR:O | 1:B:170:LEU:HD22 | 2.10 | 0.51 |
| 1:L:169:THR:O | 1:L:170:LEU:HD22 | 2.10 | 0.51 |
| 1:M:215:PRO:HD2 | 1:M:219:THR:HA | 1.93 | 0.51 |
| 1:S:215:PRO:HD2 | 1:S:219:THR:HA | 1.93 | 0.51 |
| 1:W:88:ASP:HA | 1:X:196:GLU:OE2 | 2.10 | 0.51 |
| 1:A:86:ILE:HB | 1:A:118:ILE:HB | 1.91 | 0.51 |
| 1:C:169:THR:O | 1:C:170:LEU:HD22 | 2.10 | 0.51 |
| 1:E:164:THR:O | 1:E:202:ASN:HA | 2.10 | 0.51 |
| 1:A:9:THR:O | 1:A:13:VAL:HG23 | 2.11 | 0.51 |
| 1:A:164:THR:O | 1:A:202:ASN:HA | 2.10 | 0.51 |
| 1:C:200:PRO:HB2 | 1:C:203:ARG:CZ | 2.41 | 0.51 |
| 1:D:9:THR:O | 1:D:13:VAL:HG23 | 2.11 | 0.51 |
| 1:E:9:THR:O | 1:E:13:VAL:HG23 | 2.11 | 0.51 |
| 1:E:169:THR:O | 1:E:170:LEU:HD22 | 2.10 | 0.51 |
| 1:P:200:PRO:HB2 | 1:P:203:ARG:CZ | 2.41 | 0.51 |
| 1:R:9:THR:O | 1:R:13:VAL:HG23 | 2.11 | 0.51 |
| 1:S:9:THR:O | 1:S:13:VAL:HG23 | 2.11 | 0.51 |
| 1:X:200:PRO:HB2 | 1:X:203:ARG:CZ | 2.41 | 0.51 |
| 1:B:9:THR:O | 1:B:13:VAL:HG23 | 2.11 | 0.51 |
| 1:B:85:GLN:O | 1:C:198:THR:OG1 | 2.16 | 0.51 |
| 1:C:9:THR:O | 1:C:13:VAL:HG23 | 2.11 | 0.51 |
| 1:F:15:GLU:O | 1:G:27:SER:OG | 2.10 | 0.51 |
| 1:I:86:ILE:HB | 1:I:118:ILE:HB | 1.91 | 0.51 |
| 1:L:200:PRO:HB2 | 1:L:203:ARG:CZ | 2.41 | 0.51 |
| 1:T:9:THR:O | 1:T:13:VAL:HG23 | 2.11 | 0.51 |
| 1:T:15:GLU:HG2 | 1:U:5:PHE:CE1 | 2.44 | 0.51 |
| 1:U:97:ILE:HD11 | 1:V:186:HIS:CD2 | 2.46 | 0.51 |
| 1:U:200:PRO:HB2 | 1:U:203:ARG:CZ | 2.41 | 0.51 |
| 1:U:215:PRO:HD2 | 1:U:219:THR:HA | 1.93 | 0.51 |
| 1:V:9:THR:O | 1:V:13:VAL:HG23 | 2.11 | 0.51 |
| 1:W:9:THR:O | 1:W:13:VAL:HG23 | 2.11 | 0.51 |
| 1:W:215:PRO:HD2 | 1:W:219:THR:HA | 1.93 | 0.51 |
| 1:F:9:THR:O | 1:F:13:VAL:HG23 | 2.11 | 0.50 |
| 1:F:200:PRO:HB2 | 1:F:203:ARG:CZ | 2.41 | 0.50 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-----------------|------------------|--------------------------|-------------------|
| 1:I:215:PRO:HD2 | 1:I:219:THR:HA | 1.93 | 0.50 |
| 1:J:215:PRO:HD2 | 1:J:219:THR:HA | 1.93 | 0.50 |
| 1:K:200:PRO:HB2 | 1:K:203:ARG:CZ | 2.41 | 0.50 |
| 1:Q:9:THR:O | 1:Q:13:VAL:HG23 | 2.11 | 0.50 |
| 1:U:9:THR:O | 1:U:13:VAL:HG23 | 2.11 | 0.50 |
| 1:A:200:PRO:HB2 | 1:A:203:ARG:CZ | 2.41 | 0.50 |
| 1:D:169:THR:O | 1:D:170:LEU:HD22 | 2.10 | 0.50 |
| 1:L:215:PRO:HD2 | 1:L:219:THR:HA | 1.93 | 0.50 |
| 1:O:200:PRO:HB2 | 1:O:203:ARG:CZ | 2.41 | 0.50 |
| 1:P:9:THR:O | 1:P:13:VAL:HG23 | 2.11 | 0.50 |
| 1:Q:200:PRO:HB2 | 1:Q:203:ARG:CZ | 2.41 | 0.50 |
| 1:T:215:PRO:HD2 | 1:T:219:THR:HA | 1.93 | 0.50 |
| 1:X:9:THR:O | 1:X:13:VAL:HG23 | 2.12 | 0.50 |
| 1:X:164:THR:O | 1:X:202:ASN:HA | 2.10 | 0.50 |
| 1:G:9:THR:O | 1:G:13:VAL:HG23 | 2.11 | 0.50 |
| 1:A:215:PRO:HD2 | 1:A:219:THR:HA | 1.93 | 0.50 |
| 1:D:200:PRO:HB2 | 1:D:203:ARG:CZ | 2.41 | 0.50 |
| 1:H:215:PRO:HD2 | 1:H:219:THR:HA | 1.93 | 0.50 |
| 1:N:16:MET:O | 1:O:27:SER:OG | 2.18 | 0.50 |
| 1:O:9:THR:O | 1:O:13:VAL:HG23 | 2.11 | 0.50 |
| 1:G:200:PRO:HB2 | 1:G:203:ARG:CZ | 2.41 | 0.50 |
| 1:H:9:THR:O | 1:H:13:VAL:HG23 | 2.11 | 0.50 |
| 1:J:164:THR:O | 1:J:202:ASN:HA | 2.10 | 0.50 |
| 1:K:169:THR:O | 1:K:170:LEU:HD22 | 2.10 | 0.50 |
| 1:M:200:PRO:HB2 | 1:M:203:ARG:CZ | 2.41 | 0.50 |
| 1:N:215:PRO:HD2 | 1:N:219:THR:HA | 1.93 | 0.50 |
| 1:R:215:PRO:HD2 | 1:R:219:THR:HA | 1.93 | 0.50 |
| 1:T:200:PRO:HB2 | 1:T:203:ARG:CZ | 2.41 | 0.50 |
| 1:V:200:PRO:HB2 | 1:V:203:ARG:CZ | 2.41 | 0.50 |
| 1:G:127:GLN:OE1 | 1:G:127:GLN:N | 2.45 | 0.50 |
| 1:G:215:PRO:HD2 | 1:G:219:THR:HA | 1.93 | 0.50 |
| 1:J:200:PRO:HB2 | 1:J:203:ARG:CZ | 2.41 | 0.50 |
| 1:U:91:ASP:HB2 | 1:V:192:LYS:O | 2.11 | 0.50 |
| 1:V:97:ILE:HD11 | 1:W:186:HIS:CD2 | 2.43 | 0.50 |
| 1:V:127:GLN:N | 1:V:127:GLN:OE1 | 2.45 | 0.50 |
| 1:C:215:PRO:HD2 | 1:C:219:THR:HA | 1.93 | 0.50 |
| 1:E:127:GLN:OE1 | 1:E:127:GLN:N | 2.45 | 0.50 |
| 1:H:200:PRO:HB2 | 1:H:203:ARG:CZ | 2.41 | 0.50 |
| 1:I:9:THR:O | 1:I:13:VAL:HG23 | 2.11 | 0.50 |
| 1:N:9:THR:O | 1:N:13:VAL:HG23 | 2.11 | 0.50 |
| 1:N:200:PRO:HB2 | 1:N:203:ARG:CZ | 2.41 | 0.50 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:R:200:PRO:HB2 | 1:R:203:ARG:CZ | 2.41 | 0.50 |
| 1:X:127:GLN:OE1 | 1:X:127:GLN:N | 2.45 | 0.50 |
| 1:A:127:GLN:OE1 | 1:A:127:GLN:N | 2.45 | 0.50 |
| 1:C:127:GLN:N | 1:C:127:GLN:OE1 | 2.45 | 0.50 |
| 1:D:131:ALA:HB1 | 1:E:143:PRO:HG2 | 1.93 | 0.50 |
| 1:E:200:PRO:HB2 | 1:E:203:ARG:CZ | 2.41 | 0.50 |
| 1:E:215:PRO:HD2 | 1:E:219:THR:HA | 1.93 | 0.50 |
| 1:H:127:GLN:OE1 | 1:H:127:GLN:N | 2.45 | 0.50 |
| 1:I:127:GLN:N | 1:I:127:GLN:OE1 | 2.45 | 0.50 |
| 1:P:215:PRO:HD2 | 1:P:219:THR:HA | 1.93 | 0.50 |
| 1:W:127:GLN:OE1 | 1:W:127:GLN:N | 2.45 | 0.50 |
| 1:S:200:PRO:HB2 | 1:S:203:ARG:CZ | 2.41 | 0.49 |
| 1:A:220:MET:HG3 | 1:A:221:SER:H | 1.78 | 0.49 |
| 1:B:127:GLN:OE1 | 1:B:127:GLN:N | 2.45 | 0.49 |
| 1:E:97:ILE:HG13 | 1:F:186:HIS:O | 2.12 | 0.49 |
| 1:J:9:THR:O | 1:J:13:VAL:HG23 | 2.11 | 0.49 |
| 1:J:127:GLN:OE1 | 1:J:127:GLN:N | 2.45 | 0.49 |
| 1:K:104:ILE:HG22 | 1:K:106:ILE:HG13 | 1.94 | 0.49 |
| 1:T:127:GLN:OE1 | 1:T:127:GLN:N | 2.45 | 0.49 |
| 1:V:87:LEU:O | 1:W:196:GLU:OE2 | 2.30 | 0.49 |
| 1:V:215:PRO:HD2 | 1:V:219:THR:HA | 1.93 | 0.49 |
| 1:X:220:MET:HG3 | 1:X:221:SER:H | 1.77 | 0.49 |
| 1:B:200:PRO:HB2 | 1:B:203:ARG:CZ | 2.41 | 0.49 |
| 1:E:104:ILE:HG22 | 1:E:106:ILE:HG13 | 1.95 | 0.49 |
| 1:F:104:ILE:HG22 | 1:F:106:ILE:HG13 | 1.95 | 0.49 |
| 1:F:215:PRO:HD2 | 1:F:219:THR:HA | 1.93 | 0.49 |
| 1:G:104:ILE:HG22 | 1:G:106:ILE:HG13 | 1.95 | 0.49 |
| 1:H:220:MET:HG3 | 1:H:221:SER:H | 1.77 | 0.49 |
| 1:I:220:MET:HG3 | 1:I:221:SER:H | 1.77 | 0.49 |
| 1:K:220:MET:HG3 | 1:K:221:SER:H | 1.77 | 0.49 |
| 1:M:9:THR:O | 1:M:13:VAL:HG23 | 2.11 | 0.49 |
| 1:O:104:ILE:HG22 | 1:O:106:ILE:HG13 | 1.95 | 0.49 |
| 1:Q:34:PHE:HE1 | 1:Q:55:GLY:HA3 | 1.77 | 0.49 |
| 1:W:200:PRO:HB2 | 1:W:203:ARG:CZ | 2.41 | 0.49 |
| 1:B:220:MET:HG3 | 1:B:221:SER:H | 1.77 | 0.49 |
| 1:D:104:ILE:HG22 | 1:D:106:ILE:HG13 | 1.94 | 0.49 |
| 1:F:85:GLN:HE22 | 1:F:119:LYS:HE3 | 1.78 | 0.49 |
| 1:F:127:GLN:N | 1:F:127:GLN:OE1 | 2.45 | 0.49 |
| 1:H:104:ILE:HG22 | 1:H:106:ILE:HG13 | 1.95 | 0.49 |
| 1:I:104:ILE:HG22 | 1:I:106:ILE:HG13 | 1.95 | 0.49 |
| 1:J:104:ILE:HG22 | 1:J:106:ILE:HG13 | 1.95 | 0.49 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:J:220:MET:HG3 | 1:J:221:SER:H | 1.77 | 0.49 |
| 1:L:104:ILE:HG22 | 1:L:106:ILE:HG13 | 1.95 | 0.49 |
| 1:M:104:ILE:HG22 | 1:M:106:ILE:HG13 | 1.94 | 0.49 |
| 1:N:104:ILE:HG22 | 1:N:106:ILE:HG13 | 1.95 | 0.49 |
| 1:P:34:PHE:HE1 | 1:P:55:GLY:HA3 | 1.78 | 0.49 |
| 1:P:104:ILE:HG22 | 1:P:106:ILE:HG13 | 1.95 | 0.49 |
| 1:Q:104:ILE:HG22 | 1:Q:106:ILE:HG13 | 1.95 | 0.49 |
| 1:R:34:PHE:HE1 | 1:R:55:GLY:HA3 | 1.78 | 0.49 |
| 1:S:37:PHE:CE1 | 1:S:133:LEU:HD13 | 2.48 | 0.49 |
| 1:V:104:ILE:HG22 | 1:V:106:ILE:HG13 | 1.95 | 0.49 |
| 1:E:85:GLN:HE22 | 1:E:119:LYS:HE3 | 1.78 | 0.49 |
| 1:F:34:PHE:HE1 | 1:F:55:GLY:HA3 | 1.77 | 0.49 |
| 1:G:220:MET:HG3 | 1:G:221:SER:H | 1.77 | 0.49 |
| 1:I:200:PRO:HB2 | 1:I:203:ARG:CZ | 2.41 | 0.49 |
| 1:K:127:GLN:OE1 | 1:K:127:GLN:N | 2.45 | 0.49 |
| 1:N:81:LYS:HD2 | 1:O:203:ARG:NH2 | 2.27 | 0.49 |
| 1:O:34:PHE:HE1 | 1:O:55:GLY:HA3 | 1.78 | 0.49 |
| 1:R:104:ILE:HG22 | 1:R:106:ILE:HG13 | 1.95 | 0.49 |
| 1:R:127:GLN:OE1 | 1:R:127:GLN:N | 2.45 | 0.49 |
| 1:S:127:GLN:OE1 | 1:S:127:GLN:N | 2.45 | 0.49 |
| 1:T:104:ILE:HG22 | 1:T:106:ILE:HG13 | 1.94 | 0.49 |
| 1:U:127:GLN:OE1 | 1:U:127:GLN:N | 2.45 | 0.49 |
| 1:V:37:PHE:CE1 | 1:V:133:LEU:HD13 | 2.48 | 0.49 |
| 1:W:104:ILE:HG22 | 1:W:106:ILE:HG13 | 1.95 | 0.49 |
| 1:A:104:ILE:HG22 | 1:A:106:ILE:HG13 | 1.95 | 0.49 |
| 1:C:104:ILE:HG22 | 1:C:106:ILE:HG13 | 1.95 | 0.49 |
| 1:D:85:GLN:HE22 | 1:D:119:LYS:HE3 | 1.78 | 0.49 |
| 1:D:202:ASN:O | 1:D:203:ARG:HD2 | 2.13 | 0.49 |
| 1:E:37:PHE:CE1 | 1:E:133:LEU:HD13 | 2.48 | 0.49 |
| 1:F:37:PHE:CE1 | 1:F:133:LEU:HD13 | 2.48 | 0.49 |
| 1:H:85:GLN:HE22 | 1:H:119:LYS:HE3 | 1.78 | 0.49 |
| 1:J:37:PHE:CE1 | 1:J:133:LEU:HD13 | 2.48 | 0.49 |
| 1:N:202:ASN:O | 1:N:203:ARG:HD2 | 2.13 | 0.49 |
| 1:R:85:GLN:HE22 | 1:R:119:LYS:HE3 | 1.78 | 0.49 |
| 1:S:34:PHE:HE1 | 1:S:55:GLY:HA3 | 1.78 | 0.49 |
| 1:X:104:ILE:HG22 | 1:X:106:ILE:HG13 | 1.95 | 0.49 |
| 1:B:104:ILE:HG22 | 1:B:106:ILE:HG13 | 1.94 | 0.49 |
| 1:E:34:PHE:HE1 | 1:E:55:GLY:HA3 | 1.77 | 0.49 |
| 1:E:202:ASN:O | 1:E:203:ARG:HD2 | 2.13 | 0.49 |
| 1:F:220:MET:HG3 | 1:F:221:SER:H | 1.77 | 0.49 |
| 1:G:34:PHE:HE1 | 1:G:55:GLY:HA3 | 1.77 | 0.49 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:85:GLN:HE22 | 1:G:119:LYS:HE3 | 1.78 | 0.49 |
| 1:I:37:PHE:CE1 | 1:I:133:LEU:HD13 | 2.48 | 0.49 |
| 1:L:95:GLU:N | 1:M:189:TYR:HD1 | 2.05 | 0.49 |
| 1:L:127:GLN:OE1 | 1:L:127:GLN:N | 2.45 | 0.49 |
| 1:L:220:MET:HG3 | 1:L:221:SER:H | 1.77 | 0.49 |
| 1:N:34:PHE:HE1 | 1:N:55:GLY:HA3 | 1.78 | 0.49 |
| 1:O:37:PHE:CE1 | 1:O:133:LEU:HD13 | 2.48 | 0.49 |
| 1:O:85:GLN:O | 1:P:198:THR:OG1 | 2.17 | 0.49 |
| 1:P:127:GLN:OE1 | 1:P:127:GLN:N | 2.45 | 0.49 |
| 1:Q:85:GLN:HE22 | 1:Q:119:LYS:HE3 | 1.78 | 0.49 |
| 1:Q:127:GLN:N | 1:Q:127:GLN:OE1 | 2.45 | 0.49 |
| 1:R:37:PHE:CE1 | 1:R:133:LEU:HD13 | 2.48 | 0.49 |
| 1:S:220:MET:HG3 | 1:S:221:SER:H | 1.77 | 0.49 |
| 1:W:220:MET:HG3 | 1:W:221:SER:H | 1.77 | 0.49 |
| 1:X:215:PRO:HD2 | 1:X:219:THR:HA | 1.93 | 0.49 |
| 1:A:202:ASN:O | 1:A:203:ARG:HD2 | 2.13 | 0.49 |
| 1:B:202:ASN:O | 1:B:203:ARG:HD2 | 2.13 | 0.49 |
| 1:C:202:ASN:O | 1:C:203:ARG:HD2 | 2.13 | 0.49 |
| 1:G:202:ASN:O | 1:G:203:ARG:HD2 | 2.13 | 0.49 |
| 1:K:9:THR:O | 1:K:13:VAL:HG23 | 2.11 | 0.49 |
| 1:K:202:ASN:O | 1:K:203:ARG:HD2 | 2.13 | 0.49 |
| 1:M:34:PHE:HE1 | 1:M:55:GLY:HA3 | 1.78 | 0.49 |
| 1:R:220:MET:HG3 | 1:R:221:SER:H | 1.77 | 0.49 |
| 1:S:104:ILE:HG22 | 1:S:106:ILE:HG13 | 1.95 | 0.49 |
| 1:T:34:PHE:HE1 | 1:T:55:GLY:HA3 | 1.78 | 0.49 |
| 1:T:220:MET:HG3 | 1:T:221:SER:H | 1.77 | 0.49 |
| 1:U:104:ILE:HG22 | 1:U:106:ILE:HG13 | 1.95 | 0.49 |
| 1:W:37:PHE:CE1 | 1:W:133:LEU:HD13 | 2.48 | 0.49 |
| 1:C:85:GLN:HE22 | 1:C:119:LYS:HE3 | 1.78 | 0.49 |
| 1:D:37:PHE:CE1 | 1:D:133:LEU:HD13 | 2.48 | 0.49 |
| 1:D:215:PRO:HD2 | 1:D:219:THR:HA | 1.93 | 0.49 |
| 1:E:220:MET:HG3 | 1:E:221:SER:H | 1.77 | 0.49 |
| 1:I:85:GLN:HE22 | 1:I:119:LYS:HE3 | 1.78 | 0.49 |
| 1:J:202:ASN:O | 1:J:203:ARG:HD2 | 2.13 | 0.49 |
| 1:M:220:MET:HG3 | 1:M:221:SER:H | 1.77 | 0.49 |
| 1:N:127:GLN:N | 1:N:127:GLN:OE1 | 2.45 | 0.49 |
| 1:N:220:MET:HG3 | 1:N:221:SER:H | 1.77 | 0.49 |
| 1:S:85:GLN:HE22 | 1:S:119:LYS:HE3 | 1.78 | 0.49 |
| 1:B:215:PRO:HD2 | 1:B:219:THR:HA | 1.93 | 0.49 |
| 1:C:220:MET:HG3 | 1:C:221:SER:H | 1.77 | 0.49 |
| 1:F:202:ASN:O | 1:F:203:ARG:HD2 | 2.13 | 0.49 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-----------------|------------------|--------------------------|-------------------|
| 1:G:37:PHE:CE1 | 1:G:133:LEU:HD13 | 2.48 | 0.49 |
| 1:O:127:GLN:OE1 | 1:O:127:GLN:N | 2.45 | 0.49 |
| 1:P:37:PHE:CE1 | 1:P:133:LEU:HD13 | 2.48 | 0.49 |
| 1:P:139:LYS:HZ1 | 1:P:217:LYS:HE2 | 1.78 | 0.49 |
| 1:U:34:PHE:HE1 | 1:U:55:GLY:HA3 | 1.77 | 0.49 |
| 1:X:85:GLN:HE22 | 1:X:119:LYS:HE3 | 1.78 | 0.49 |
| 1:X:202:ASN:O | 1:X:203:ARG:HD2 | 2.13 | 0.49 |
| 1:D:127:GLN:OE1 | 1:D:127:GLN:N | 2.45 | 0.48 |
| 1:F:139:LYS:HZ1 | 1:F:217:LYS:HE2 | 1.78 | 0.48 |
| 1:K:37:PHE:CE1 | 1:K:133:LEU:HD13 | 2.48 | 0.48 |
| 1:L:9:THR:O | 1:L:13:VAL:HG23 | 2.11 | 0.48 |
| 1:N:37:PHE:CE1 | 1:N:133:LEU:HD13 | 2.48 | 0.48 |
| 1:Q:202:ASN:O | 1:Q:203:ARG:HD2 | 2.13 | 0.48 |
| 1:Q:220:MET:HG3 | 1:Q:221:SER:H | 1.77 | 0.48 |
| 1:R:202:ASN:O | 1:R:203:ARG:HD2 | 2.13 | 0.48 |
| 1:U:37:PHE:CE1 | 1:U:133:LEU:HD13 | 2.48 | 0.48 |
| 1:W:85:GLN:HE22 | 1:W:119:LYS:HE3 | 1.78 | 0.48 |
| 1:W:202:ASN:O | 1:W:203:ARG:HD2 | 2.13 | 0.48 |
| 1:C:139:LYS:HZ1 | 1:C:217:LYS:HE2 | 1.78 | 0.48 |
| 1:J:139:LYS:HZ1 | 1:J:217:LYS:HE2 | 1.78 | 0.48 |
| 1:O:202:ASN:O | 1:O:203:ARG:HD2 | 2.13 | 0.48 |
| 1:P:85:GLN:HE22 | 1:P:119:LYS:HE3 | 1.78 | 0.48 |
| 1:T:37:PHE:CE1 | 1:T:133:LEU:HD13 | 2.48 | 0.48 |
| 1:A:34:PHE:HE1 | 1:A:55:GLY:HA3 | 1.78 | 0.48 |
| 1:A:85:GLN:HE22 | 1:A:119:LYS:HE3 | 1.78 | 0.48 |
| 1:B:37:PHE:CE1 | 1:B:133:LEU:HD13 | 2.48 | 0.48 |
| 1:H:202:ASN:O | 1:H:203:ARG:HD2 | 2.13 | 0.48 |
| 1:J:85:GLN:HE22 | 1:J:119:LYS:HE3 | 1.78 | 0.48 |
| 1:L:34:PHE:HE1 | 1:L:55:GLY:HA3 | 1.78 | 0.48 |
| 1:L:139:LYS:HZ1 | 1:L:217:LYS:HE2 | 1.78 | 0.48 |
| 1:M:127:GLN:OE1 | 1:M:127:GLN:N | 2.45 | 0.48 |
| 1:N:139:LYS:HZ1 | 1:N:217:LYS:HE2 | 1.78 | 0.48 |
| 1:O:220:MET:HG3 | 1:O:221:SER:H | 1.77 | 0.48 |
| 1:Q:85:GLN:O | 1:R:198:THR:OG1 | 2.30 | 0.48 |
| 1:R:139:LYS:HZ1 | 1:R:217:LYS:HE2 | 1.78 | 0.48 |
| 1:X:34:PHE:HE1 | 1:X:55:GLY:HA3 | 1.77 | 0.48 |
| 1:A:37:PHE:CE1 | 1:A:133:LEU:HD13 | 2.48 | 0.48 |
| 1:D:34:PHE:HE1 | 1:D:55:GLY:HA3 | 1.77 | 0.48 |
| 1:Q:139:LYS:HZ1 | 1:Q:217:LYS:HE2 | 1.78 | 0.48 |
| 1:T:223:GLY:HA3 | 1:U:147:ARG:CD | 2.44 | 0.48 |
| 1:V:85:GLN:HE22 | 1:V:119:LYS:HE3 | 1.78 | 0.48 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-----------------|------------------|--------------------------|-------------------|
| 1:B:85:GLN:HE22 | 1:B:119:LYS:HE3 | 1.78 | 0.48 |
| 1:B:139:LYS:HZ1 | 1:B:217:LYS:HE2 | 1.78 | 0.48 |
| 1:C:37:PHE:CE1 | 1:C:133:LEU:HD13 | 2.48 | 0.48 |
| 1:I:139:LYS:HZ1 | 1:I:217:LYS:HE2 | 1.78 | 0.48 |
| 1:K:34:PHE:HE1 | 1:K:55:GLY:HA3 | 1.77 | 0.48 |
| 1:L:37:PHE:CE1 | 1:L:133:LEU:HD13 | 2.48 | 0.48 |
| 1:M:202:ASN:O | 1:M:203:ARG:HD2 | 2.13 | 0.48 |
| 1:P:220:MET:HG3 | 1:P:221:SER:H | 1.77 | 0.48 |
| 1:U:220:MET:HG3 | 1:U:221:SER:H | 1.77 | 0.48 |
| 1:V:220:MET:HG3 | 1:V:221:SER:H | 1.77 | 0.48 |
| 1:W:139:LYS:HZ1 | 1:W:217:LYS:HE2 | 1.78 | 0.48 |
| 1:X:37:PHE:CE1 | 1:X:133:LEU:HD13 | 2.48 | 0.48 |
| 1:X:139:LYS:HZ1 | 1:X:217:LYS:HE2 | 1.79 | 0.48 |
| 1:H:37:PHE:CE1 | 1:H:133:LEU:HD13 | 2.48 | 0.48 |
| 1:I:202:ASN:O | 1:I:203:ARG:HD2 | 2.13 | 0.48 |
| 1:M:37:PHE:CE1 | 1:M:133:LEU:HD13 | 2.48 | 0.48 |
| 1:R:81:LYS:HD2 | 1:S:203:ARG:HH21 | 1.78 | 0.48 |
| 1:V:34:PHE:HE1 | 1:V:55:GLY:HA3 | 1.78 | 0.48 |
| 1:V:202:ASN:O | 1:V:203:ARG:HD2 | 2.13 | 0.48 |
| 1:C:34:PHE:HE1 | 1:C:55:GLY:HA3 | 1.77 | 0.48 |
| 1:E:139:LYS:HZ1 | 1:E:217:LYS:HE2 | 1.79 | 0.48 |
| 1:P:202:ASN:O | 1:P:203:ARG:HD2 | 2.13 | 0.48 |
| 1:T:85:GLN:HE22 | 1:T:119:LYS:HE3 | 1.78 | 0.48 |
| 1:U:85:GLN:HE22 | 1:U:119:LYS:HE3 | 1.78 | 0.48 |
| 1:K:85:GLN:HE22 | 1:K:119:LYS:HE3 | 1.78 | 0.48 |
| 1:L:202:ASN:O | 1:L:203:ARG:HD2 | 2.13 | 0.48 |
| 1:O:85:GLN:HE22 | 1:O:119:LYS:HE3 | 1.78 | 0.48 |
| 1:T:139:LYS:HZ1 | 1:T:217:LYS:HE2 | 1.78 | 0.48 |
| 1:T:202:ASN:O | 1:T:203:ARG:HD2 | 2.13 | 0.48 |
| 1:W:34:PHE:HE1 | 1:W:55:GLY:HA3 | 1.78 | 0.48 |
| 1:B:34:PHE:HE1 | 1:B:55:GLY:HA3 | 1.78 | 0.48 |
| 1:H:139:LYS:HZ1 | 1:H:217:LYS:HE2 | 1.79 | 0.48 |
| 1:J:97:ILE:HG22 | 1:J:107:SER:HA | 1.96 | 0.48 |
| 1:Q:37:PHE:CE1 | 1:Q:133:LEU:HD13 | 2.48 | 0.48 |
| 1:R:81:LYS:HD2 | 1:S:203:ARG:NH2 | 2.29 | 0.48 |
| 1:U:202:ASN:O | 1:U:203:ARG:HD2 | 2.13 | 0.48 |
| 1:D:220:MET:HG3 | 1:D:221:SER:H | 1.77 | 0.48 |
| 1:H:34:PHE:HE1 | 1:H:55:GLY:HA3 | 1.77 | 0.48 |
| 1:H:39:LEU:HD11 | 1:H:58:LEU:HD21 | 1.96 | 0.48 |
| 1:J:39:LEU:HD11 | 1:J:58:LEU:HD21 | 1.96 | 0.48 |
| 1:K:39:LEU:HD11 | 1:K:58:LEU:HD21 | 1.96 | 0.48 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-----------------|-----------------|--------------------------|-------------------|
| 1:F:39:LEU:HD11 | 1:F:58:LEU:HD21 | 1.96 | 0.47 |
| 1:G:39:LEU:HD11 | 1:G:58:LEU:HD21 | 1.96 | 0.47 |
| 1:I:39:LEU:HD11 | 1:I:58:LEU:HD21 | 1.96 | 0.47 |
| 1:L:39:LEU:HD11 | 1:L:58:LEU:HD21 | 1.96 | 0.47 |
| 1:L:85:GLN:HE22 | 1:L:119:LYS:HE3 | 1.78 | 0.47 |
| 1:O:39:LEU:HD11 | 1:O:58:LEU:HD21 | 1.96 | 0.47 |
| 1:S:202:ASN:O | 1:S:203:ARG:HD2 | 2.13 | 0.47 |
| 1:A:139:LYS:HZ1 | 1:A:217:LYS:HE2 | 1.78 | 0.47 |
| 1:D:139:LYS:HZ1 | 1:D:217:LYS:HE2 | 1.78 | 0.47 |
| 1:K:139:LYS:HZ1 | 1:K:217:LYS:HE2 | 1.78 | 0.47 |
| 1:W:10:ARG:HB3 | 1:W:10:ARG:NH1 | 2.29 | 0.47 |
| 1:X:10:ARG:NH1 | 1:X:10:ARG:HB3 | 2.29 | 0.47 |
| 1:B:10:ARG:NH1 | 1:B:10:ARG:HB3 | 2.29 | 0.47 |
| 1:E:94:GLY:HA2 | 1:F:189:TYR:CD1 | 2.49 | 0.47 |
| 1:I:10:ARG:HB3 | 1:I:10:ARG:NH1 | 2.29 | 0.47 |
| 1:I:97:ILE:HG22 | 1:I:107:SER:HA | 1.97 | 0.47 |
| 1:K:97:ILE:HG22 | 1:K:107:SER:HA | 1.97 | 0.47 |
| 1:L:97:ILE:HG22 | 1:L:107:SER:HA | 1.97 | 0.47 |
| 1:M:39:LEU:HD11 | 1:M:58:LEU:HD21 | 1.96 | 0.47 |
| 1:M:85:GLN:HE22 | 1:M:119:LYS:HE3 | 1.78 | 0.47 |
| 1:N:39:LEU:HD11 | 1:N:58:LEU:HD21 | 1.96 | 0.47 |
| 1:R:97:ILE:HG22 | 1:R:107:SER:HA | 1.97 | 0.47 |
| 1:S:10:ARG:NH1 | 1:S:10:ARG:HB3 | 2.29 | 0.47 |
| 1:V:97:ILE:HG22 | 1:V:107:SER:HA | 1.96 | 0.47 |
| 1:W:97:ILE:HG22 | 1:W:107:SER:HA | 1.97 | 0.47 |
| 1:X:97:ILE:HG22 | 1:X:107:SER:HA | 1.97 | 0.47 |
| 1:A:97:ILE:HG22 | 1:A:107:SER:HA | 1.97 | 0.47 |
| 1:D:10:ARG:HB3 | 1:D:10:ARG:NH1 | 2.29 | 0.47 |
| 1:E:10:ARG:NH1 | 1:E:10:ARG:HB3 | 2.30 | 0.47 |
| 1:F:10:ARG:HB3 | 1:F:10:ARG:NH1 | 2.29 | 0.47 |
| 1:H:10:ARG:NH1 | 1:H:10:ARG:HB3 | 2.29 | 0.47 |
| 1:H:97:ILE:HG22 | 1:H:107:SER:HA | 1.97 | 0.47 |
| 1:J:34:PHE:HE1 | 1:J:55:GLY:HA3 | 1.78 | 0.47 |
| 1:M:97:ILE:HG22 | 1:M:107:SER:HA | 1.97 | 0.47 |
| 1:O:97:ILE:HG22 | 1:O:107:SER:HA | 1.96 | 0.47 |
| 1:P:39:LEU:HD11 | 1:P:58:LEU:HD21 | 1.96 | 0.47 |
| 1:R:39:LEU:HD11 | 1:R:58:LEU:HD21 | 1.96 | 0.47 |
| 1:T:39:LEU:HD11 | 1:T:58:LEU:HD21 | 1.96 | 0.47 |
| 1:U:97:ILE:HG22 | 1:U:107:SER:HA | 1.96 | 0.47 |
| 1:A:10:ARG:HB3 | 1:A:10:ARG:NH1 | 2.29 | 0.47 |
| 1:B:97:ILE:HG22 | 1:B:107:SER:HA | 1.96 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-----------------|-----------------|--------------------------|-------------------|
| 1:D:39:LEU:HD11 | 1:D:58:LEU:HD21 | 1.96 | 0.47 |
| 1:E:39:LEU:HD11 | 1:E:58:LEU:HD21 | 1.96 | 0.47 |
| 1:J:16:MET:CE | 1:K:29:VAL:CG2 | 2.93 | 0.47 |
| 1:J:85:GLN:O | 1:K:198:THR:OG1 | 2.29 | 0.47 |
| 1:J:220:MET:HG3 | 1:J:221:SER:N | 2.30 | 0.47 |
| 1:M:10:ARG:NH1 | 1:M:10:ARG:HB3 | 2.29 | 0.47 |
| 1:P:97:ILE:HG22 | 1:P:107:SER:HA | 1.97 | 0.47 |
| 1:Q:39:LEU:HD11 | 1:Q:58:LEU:HD21 | 1.96 | 0.47 |
| 1:S:39:LEU:HD11 | 1:S:58:LEU:HD21 | 1.96 | 0.47 |
| 1:S:97:ILE:HG22 | 1:S:107:SER:HA | 1.97 | 0.47 |
| 1:T:10:ARG:HB3 | 1:T:10:ARG:NH1 | 2.29 | 0.47 |
| 1:V:39:LEU:HD11 | 1:V:58:LEU:HD21 | 1.96 | 0.47 |
| 1:B:164:THR:HB | 1:B:166:LYS:HG3 | 1.97 | 0.47 |
| 1:C:97:ILE:HG22 | 1:C:107:SER:HA | 1.96 | 0.47 |
| 1:D:164:THR:HB | 1:D:166:LYS:HG3 | 1.97 | 0.47 |
| 1:H:220:MET:HG3 | 1:H:221:SER:N | 2.30 | 0.47 |
| 1:I:220:MET:HG3 | 1:I:221:SER:N | 2.30 | 0.47 |
| 1:O:139:LYS:HZ1 | 1:O:217:LYS:HE2 | 1.78 | 0.47 |
| 1:Q:97:ILE:HG22 | 1:Q:107:SER:HA | 1.97 | 0.47 |
| 1:T:97:ILE:HG22 | 1:T:107:SER:HA | 1.97 | 0.47 |
| 1:U:220:MET:HG3 | 1:U:221:SER:N | 2.30 | 0.47 |
| 1:W:164:THR:HB | 1:W:166:LYS:HG3 | 1.97 | 0.47 |
| 1:A:164:THR:HB | 1:A:166:LYS:HG3 | 1.97 | 0.47 |
| 1:B:220:MET:HG3 | 1:B:221:SER:N | 2.30 | 0.47 |
| 1:C:39:LEU:HD11 | 1:C:58:LEU:HD21 | 1.96 | 0.47 |
| 1:D:97:ILE:HG22 | 1:D:107:SER:HA | 1.97 | 0.47 |
| 1:E:97:ILE:HG22 | 1:E:107:SER:HA | 1.97 | 0.47 |
| 1:E:164:THR:HB | 1:E:166:LYS:HG3 | 1.97 | 0.47 |
| 1:F:97:ILE:HG22 | 1:F:107:SER:HA | 1.96 | 0.47 |
| 1:G:97:ILE:HG22 | 1:G:107:SER:HA | 1.96 | 0.47 |
| 1:G:220:MET:HG3 | 1:G:221:SER:N | 2.30 | 0.47 |
| 1:I:34:PHE:HE1 | 1:I:55:GLY:HA3 | 1.78 | 0.47 |
| 1:I:131:ALA:CB | 1:J:143:PRO:HG2 | 2.44 | 0.47 |
| 1:K:220:MET:HG3 | 1:K:221:SER:N | 2.30 | 0.47 |
| 1:L:93:THR:H | 1:M:191:HIS:HD2 | 1.62 | 0.47 |
| 1:M:139:LYS:HZ1 | 1:M:217:LYS:HE2 | 1.78 | 0.47 |
| 1:N:85:GLN:HE22 | 1:N:119:LYS:HE3 | 1.78 | 0.47 |
| 1:N:97:ILE:HG22 | 1:N:107:SER:HA | 1.97 | 0.47 |
| 1:P:10:ARG:NH1 | 1:P:10:ARG:HB3 | 2.29 | 0.47 |
| 1:T:164:THR:HB | 1:T:166:LYS:HG3 | 1.97 | 0.47 |
| 1:U:39:LEU:HD11 | 1:U:58:LEU:HD21 | 1.96 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:U:164:THR:HB | 1:U:166:LYS:HG3 | 1.97 | 0.47 |
| 1:V:10:ARG:HB3 | 1:V:10:ARG:NH1 | 2.29 | 0.47 |
| 1:W:39:LEU:HD11 | 1:W:58:LEU:HD21 | 1.96 | 0.47 |
| 1:X:220:MET:HG3 | 1:X:221:SER:N | 2.30 | 0.47 |
| 1:B:39:LEU:HD11 | 1:B:58:LEU:HD21 | 1.96 | 0.47 |
| 1:C:164:THR:HB | 1:C:166:LYS:HG3 | 1.97 | 0.47 |
| 1:E:220:MET:HG3 | 1:E:221:SER:N | 2.30 | 0.47 |
| 1:G:139:LYS:HZ1 | 1:G:217:LYS:HE2 | 1.79 | 0.47 |
| 1:G:164:THR:HB | 1:G:166:LYS:HG3 | 1.97 | 0.47 |
| 1:I:37:PHE:HZ | 1:I:133:LEU:HD22 | 1.80 | 0.47 |
| 1:L:10:ARG:HB3 | 1:L:10:ARG:NH1 | 2.30 | 0.47 |
| 1:N:10:ARG:HB3 | 1:N:10:ARG:NH1 | 2.29 | 0.47 |
| 1:R:164:THR:HB | 1:R:166:LYS:HG3 | 1.97 | 0.47 |
| 1:U:94:GLY:HA2 | 1:V:189:TYR:CE1 | 2.50 | 0.47 |
| 1:V:164:THR:HB | 1:V:166:LYS:HG3 | 1.97 | 0.47 |
| 1:W:220:MET:HG3 | 1:W:221:SER:N | 2.30 | 0.47 |
| 1:X:39:LEU:HD11 | 1:X:58:LEU:HD21 | 1.96 | 0.47 |
| 1:A:39:LEU:HD11 | 1:A:58:LEU:HD21 | 1.96 | 0.47 |
| 1:C:158:VAL:HG12 | 1:C:207:TYR:HB2 | 1.97 | 0.47 |
| 1:E:158:VAL:HG12 | 1:E:207:TYR:HB2 | 1.97 | 0.47 |
| 1:F:220:MET:HG3 | 1:F:221:SER:N | 2.30 | 0.47 |
| 1:G:214:PHE:HD1 | 1:G:219:THR:HG22 | 1.80 | 0.47 |
| 1:K:10:ARG:NH1 | 1:K:10:ARG:HB3 | 2.29 | 0.47 |
| 1:L:220:MET:HG3 | 1:L:221:SER:N | 2.30 | 0.47 |
| 1:Q:25:VAL:HG12 | 1:Q:205:LEU:O | 2.15 | 0.47 |
| 1:X:158:VAL:HG12 | 1:X:207:TYR:HB2 | 1.97 | 0.47 |
| 1:A:158:VAL:HG12 | 1:A:207:TYR:HB2 | 1.97 | 0.47 |
| 1:B:158:VAL:HG12 | 1:B:207:TYR:HB2 | 1.97 | 0.47 |
| 1:C:10:ARG:NH1 | 1:C:10:ARG:HB3 | 2.29 | 0.47 |
| 1:F:158:VAL:HG12 | 1:F:207:TYR:HB2 | 1.97 | 0.47 |
| 1:F:164:THR:HB | 1:F:166:LYS:HG3 | 1.97 | 0.47 |
| 1:G:37:PHE:HZ | 1:G:133:LEU:HD22 | 1.80 | 0.47 |
| 1:H:37:PHE:HZ | 1:H:133:LEU:HD22 | 1.80 | 0.47 |
| 1:J:10:ARG:NH1 | 1:J:10:ARG:HB3 | 2.29 | 0.47 |
| 1:J:37:PHE:HZ | 1:J:133:LEU:HD22 | 1.80 | 0.47 |
| 1:L:88:ASP:OD1 | 1:M:196:GLU:O | 2.33 | 0.47 |
| 1:M:220:MET:HG3 | 1:M:221:SER:N | 2.30 | 0.47 |
| 1:P:164:THR:HB | 1:P:166:LYS:HG3 | 1.97 | 0.47 |
| 1:Q:10:ARG:HB3 | 1:Q:10:ARG:NH1 | 2.29 | 0.47 |
| 1:S:97:ILE:HD11 | 1:T:186:HIS:HD2 | 1.79 | 0.47 |
| 1:S:158:VAL:HG12 | 1:S:207:TYR:HB2 | 1.97 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:T:25:VAL:HG12 | 1:T:205:LEU:O | 2.15 | 0.47 |
| 1:V:158:VAL:HG12 | 1:V:207:TYR:HB2 | 1.97 | 0.47 |
| 1:X:164:THR:HB | 1:X:166:LYS:HG3 | 1.97 | 0.47 |
| 1:C:220:MET:HG3 | 1:C:221:SER:N | 2.30 | 0.46 |
| 1:G:27:SER:O | 1:G:31:ALA:HB2 | 2.16 | 0.46 |
| 1:G:158:VAL:HG12 | 1:G:207:TYR:HB2 | 1.97 | 0.46 |
| 1:S:164:THR:HB | 1:S:166:LYS:HG3 | 1.97 | 0.46 |
| 1:T:158:VAL:HG12 | 1:T:207:TYR:HB2 | 1.97 | 0.46 |
| 1:U:97:ILE:CG1 | 1:V:187:LEU:HA | 2.45 | 0.46 |
| 1:U:158:VAL:HG12 | 1:U:207:TYR:HB2 | 1.97 | 0.46 |
| 1:V:139:LYS:HZ1 | 1:V:217:LYS:HE2 | 1.79 | 0.46 |
| 1:W:158:VAL:HG12 | 1:W:207:TYR:HB2 | 1.97 | 0.46 |
| 1:B:214:PHE:HD1 | 1:B:219:THR:HG22 | 1.80 | 0.46 |
| 1:D:158:VAL:HG12 | 1:D:207:TYR:HB2 | 1.97 | 0.46 |
| 1:F:27:SER:O | 1:F:31:ALA:HB2 | 2.16 | 0.46 |
| 1:H:158:VAL:HG12 | 1:H:207:TYR:HB2 | 1.97 | 0.46 |
| 1:H:214:PHE:HD1 | 1:H:219:THR:HG22 | 1.80 | 0.46 |
| 1:K:164:THR:HB | 1:K:166:LYS:HG3 | 1.97 | 0.46 |
| 1:L:37:PHE:HZ | 1:L:133:LEU:HD22 | 1.80 | 0.46 |
| 1:M:37:PHE:HZ | 1:M:133:LEU:HD22 | 1.80 | 0.46 |
| 1:R:10:ARG:HB3 | 1:R:10:ARG:NH1 | 2.29 | 0.46 |
| 1:S:25:VAL:HG12 | 1:S:205:LEU:O | 2.15 | 0.46 |
| 1:S:220:MET:HG3 | 1:S:221:SER:N | 2.30 | 0.46 |
| 1:U:25:VAL:HG12 | 1:U:205:LEU:O | 2.15 | 0.46 |
| 1:U:139:LYS:HZ1 | 1:U:217:LYS:HE2 | 1.80 | 0.46 |
| 1:V:25:VAL:HG12 | 1:V:205:LEU:O | 2.15 | 0.46 |
| 1:F:37:PHE:HZ | 1:F:133:LEU:HD22 | 1.80 | 0.46 |
| 1:F:214:PHE:HD1 | 1:F:219:THR:HG22 | 1.80 | 0.46 |
| 1:J:158:VAL:HG12 | 1:J:207:TYR:HB2 | 1.97 | 0.46 |
| 1:K:37:PHE:HZ | 1:K:133:LEU:HD22 | 1.80 | 0.46 |
| 1:O:10:ARG:HB3 | 1:O:10:ARG:NH1 | 2.29 | 0.46 |
| 1:O:25:VAL:HG12 | 1:O:205:LEU:O | 2.15 | 0.46 |
| 1:O:27:SER:O | 1:O:31:ALA:HB2 | 2.16 | 0.46 |
| 1:P:27:SER:O | 1:P:31:ALA:HB2 | 2.16 | 0.46 |
| 1:Q:134:GLU:OE2 | 1:Q:221:SER:OG | 2.34 | 0.46 |
| 1:Q:158:VAL:HG12 | 1:Q:207:TYR:HB2 | 1.97 | 0.46 |
| 1:W:37:PHE:HZ | 1:W:133:LEU:HD22 | 1.80 | 0.46 |
| 1:A:214:PHE:HD1 | 1:A:219:THR:HG22 | 1.80 | 0.46 |
| 1:B:170:LEU:C | 1:B:171:LYS:HD2 | 2.36 | 0.46 |
| 1:C:214:PHE:HD1 | 1:C:219:THR:HG22 | 1.80 | 0.46 |
| 1:D:220:MET:HG3 | 1:D:221:SER:N | 2.30 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:10:ARG:HB3 | 1:G:10:ARG:NH1 | 2.29 | 0.46 |
| 1:I:164:THR:HB | 1:I:166:LYS:HG3 | 1.97 | 0.46 |
| 1:L:214:PHE:HD1 | 1:L:219:THR:HG22 | 1.80 | 0.46 |
| 1:P:25:VAL:HG12 | 1:P:205:LEU:O | 2.15 | 0.46 |
| 1:Q:164:THR:HB | 1:Q:166:LYS:HG3 | 1.97 | 0.46 |
| 1:T:223:GLY:HA3 | 1:U:147:ARG:HD2 | 1.98 | 0.46 |
| 1:U:10:ARG:NH1 | 1:U:10:ARG:HB3 | 2.29 | 0.46 |
| 1:E:27:SER:O | 1:E:31:ALA:HB2 | 2.16 | 0.46 |
| 1:H:25:VAL:HG12 | 1:H:205:LEU:O | 2.15 | 0.46 |
| 1:H:27:SER:O | 1:H:31:ALA:HB2 | 2.16 | 0.46 |
| 1:H:164:THR:HB | 1:H:166:LYS:HG3 | 1.97 | 0.46 |
| 1:K:158:VAL:HG12 | 1:K:207:TYR:HB2 | 1.97 | 0.46 |
| 1:M:27:SER:O | 1:M:31:ALA:HB2 | 2.16 | 0.46 |
| 1:N:27:SER:O | 1:N:31:ALA:HB2 | 2.16 | 0.46 |
| 1:O:134:GLU:OE2 | 1:O:221:SER:OG | 2.34 | 0.46 |
| 1:O:164:THR:HB | 1:O:166:LYS:HG3 | 1.97 | 0.46 |
| 1:Q:27:SER:O | 1:Q:31:ALA:HB2 | 2.16 | 0.46 |
| 1:R:25:VAL:HG12 | 1:R:205:LEU:O | 2.15 | 0.46 |
| 1:R:87:LEU:HD13 | 1:R:117:LYS:HG3 | 1.98 | 0.46 |
| 1:R:158:VAL:HG12 | 1:R:207:TYR:HB2 | 1.97 | 0.46 |
| 1:S:87:LEU:HD13 | 1:S:117:LYS:HG3 | 1.98 | 0.46 |
| 1:T:87:LEU:HD13 | 1:T:117:LYS:HG3 | 1.98 | 0.46 |
| 1:U:87:LEU:HD13 | 1:U:117:LYS:HG3 | 1.98 | 0.46 |
| 1:V:220:MET:HG3 | 1:V:221:SER:N | 2.30 | 0.46 |
| 1:A:25:VAL:HG12 | 1:A:205:LEU:O | 2.15 | 0.46 |
| 1:C:170:LEU:C | 1:C:171:LYS:HD2 | 2.36 | 0.46 |
| 1:I:158:VAL:HG12 | 1:I:207:TYR:HB2 | 1.97 | 0.46 |
| 1:J:164:THR:HB | 1:J:166:LYS:HG3 | 1.97 | 0.46 |
| 1:M:170:LEU:C | 1:M:171:LYS:HD2 | 2.36 | 0.46 |
| 1:N:25:VAL:HG12 | 1:N:205:LEU:O | 2.15 | 0.46 |
| 1:N:214:PHE:HD1 | 1:N:219:THR:HG22 | 1.80 | 0.46 |
| 1:N:220:MET:HG3 | 1:N:221:SER:N | 2.30 | 0.46 |
| 1:P:87:LEU:HD13 | 1:P:117:LYS:HG3 | 1.98 | 0.46 |
| 1:P:214:PHE:HD1 | 1:P:219:THR:HG22 | 1.80 | 0.46 |
| 1:V:28:LEU:HA | 1:V:31:ALA:CB | 2.46 | 0.46 |
| 1:V:214:PHE:HD1 | 1:V:219:THR:HG22 | 1.80 | 0.46 |
| 1:X:37:PHE:HZ | 1:X:133:LEU:HD22 | 1.80 | 0.46 |
| 1:A:28:LEU:HA | 1:A:31:ALA:CB | 2.46 | 0.46 |
| 1:G:25:VAL:HG12 | 1:G:205:LEU:O | 2.15 | 0.46 |
| 1:I:25:VAL:HG12 | 1:I:205:LEU:O | 2.15 | 0.46 |
| 1:K:214:PHE:HD1 | 1:K:219:THR:HG22 | 1.80 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:L:158:VAL:HG12 | 1:L:207:TYR:HB2 | 1.97 | 0.46 |
| 1:L:164:THR:HB | 1:L:166:LYS:HG3 | 1.97 | 0.46 |
| 1:M:214:PHE:HD1 | 1:M:219:THR:HG22 | 1.80 | 0.46 |
| 1:N:164:THR:HB | 1:N:166:LYS:HG3 | 1.97 | 0.46 |
| 1:O:158:VAL:HG12 | 1:O:207:TYR:HB2 | 1.97 | 0.46 |
| 1:O:214:PHE:HD1 | 1:O:219:THR:HG22 | 1.80 | 0.46 |
| 1:P:158:VAL:HG12 | 1:P:207:TYR:HB2 | 1.97 | 0.46 |
| 1:Q:220:MET:HG3 | 1:Q:221:SER:N | 2.30 | 0.46 |
| 1:R:28:LEU:HA | 1:R:31:ALA:CB | 2.46 | 0.46 |
| 1:T:220:MET:HG3 | 1:T:221:SER:N | 2.30 | 0.46 |
| 1:U:28:LEU:HA | 1:U:31:ALA:CB | 2.46 | 0.46 |
| 1:U:214:PHE:HD1 | 1:U:219:THR:HG22 | 1.80 | 0.46 |
| 1:V:37:PHE:HZ | 1:V:133:LEU:HD22 | 1.80 | 0.46 |
| 1:W:25:VAL:HG12 | 1:W:205:LEU:O | 2.15 | 0.46 |
| 1:W:214:PHE:HD1 | 1:W:219:THR:HG22 | 1.80 | 0.46 |
| 1:A:170:LEU:C | 1:A:171:LYS:HD2 | 2.36 | 0.46 |
| 1:A:220:MET:HG3 | 1:A:221:SER:N | 2.30 | 0.46 |
| 1:B:28:LEU:HA | 1:B:31:ALA:CB | 2.46 | 0.46 |
| 1:L:25:VAL:HG12 | 1:L:205:LEU:O | 2.15 | 0.46 |
| 1:L:95:GLU:HB3 | 1:M:188:SER:O | 2.16 | 0.46 |
| 1:N:37:PHE:HZ | 1:N:133:LEU:HD22 | 1.80 | 0.46 |
| 1:N:158:VAL:HG12 | 1:N:207:TYR:HB2 | 1.97 | 0.46 |
| 1:O:87:LEU:HD13 | 1:O:117:LYS:HG3 | 1.98 | 0.46 |
| 1:O:170:LEU:C | 1:O:171:LYS:HD2 | 2.36 | 0.46 |
| 1:Q:28:LEU:HA | 1:Q:31:ALA:CB | 2.46 | 0.46 |
| 1:Q:214:PHE:HD1 | 1:Q:219:THR:HG22 | 1.80 | 0.46 |
| 1:R:27:SER:O | 1:R:31:ALA:HB2 | 2.16 | 0.46 |
| 1:R:214:PHE:HD1 | 1:R:219:THR:HG22 | 1.80 | 0.46 |
| 1:R:220:MET:HG3 | 1:R:221:SER:N | 2.30 | 0.46 |
| 1:U:37:PHE:HZ | 1:U:133:LEU:HD22 | 1.80 | 0.46 |
| 1:X:214:PHE:HD1 | 1:X:219:THR:HG22 | 1.80 | 0.46 |
| 1:B:18:ALA:HB1 | 1:C:2:PHE:HZ | 1.81 | 0.46 |
| 1:C:28:LEU:HA | 1:C:31:ALA:CB | 2.46 | 0.46 |
| 1:D:27:SER:O | 1:D:31:ALA:HB2 | 2.16 | 0.46 |
| 1:D:28:LEU:HA | 1:D:31:ALA:CB | 2.46 | 0.46 |
| 1:D:170:LEU:C | 1:D:171:LYS:HD2 | 2.36 | 0.46 |
| 1:E:37:PHE:HZ | 1:E:133:LEU:HD22 | 1.80 | 0.46 |
| 1:I:27:SER:O | 1:I:31:ALA:HB2 | 2.16 | 0.46 |
| 1:L:15:GLU:HG2 | 1:M:5:PHE:HE1 | 1.81 | 0.46 |
| 1:L:27:SER:O | 1:L:31:ALA:HB2 | 2.16 | 0.46 |
| 1:L:134:GLU:OE2 | 1:L:221:SER:OG | 2.34 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:M:164:THR:HB | 1:M:166:LYS:HG3 | 1.97 | 0.46 |
| 1:P:220:MET:HG3 | 1:P:221:SER:N | 2.30 | 0.46 |
| 1:T:214:PHE:HD1 | 1:T:219:THR:HG22 | 1.80 | 0.46 |
| 1:U:16:MET:O | 1:V:27:SER:OG | 2.25 | 0.46 |
| 1:U:170:LEU:C | 1:U:171:LYS:HD2 | 2.36 | 0.46 |
| 1:X:25:VAL:HG12 | 1:X:205:LEU:O | 2.15 | 0.46 |
| 1:C:25:VAL:HG12 | 1:C:205:LEU:O | 2.15 | 0.46 |
| 1:D:37:PHE:HZ | 1:D:133:LEU:HD22 | 1.80 | 0.46 |
| 1:F:87:LEU:HD13 | 1:F:117:LYS:HG3 | 1.98 | 0.46 |
| 1:K:170:LEU:C | 1:K:171:LYS:HD2 | 2.36 | 0.46 |
| 1:O:220:MET:HG3 | 1:O:221:SER:N | 2.30 | 0.46 |
| 1:Q:87:LEU:HD13 | 1:Q:117:LYS:HG3 | 1.98 | 0.46 |
| 1:Q:170:LEU:C | 1:Q:171:LYS:HD2 | 2.36 | 0.46 |
| 1:D:25:VAL:HG12 | 1:D:205:LEU:O | 2.15 | 0.45 |
| 1:D:214:PHE:HD1 | 1:D:219:THR:HG22 | 1.80 | 0.45 |
| 1:M:158:VAL:HG12 | 1:M:207:TYR:HB2 | 1.97 | 0.45 |
| 1:N:87:LEU:HD13 | 1:N:117:LYS:HG3 | 1.98 | 0.45 |
| 1:O:37:PHE:HZ | 1:O:133:LEU:HD22 | 1.80 | 0.45 |
| 1:P:28:LEU:HA | 1:P:31:ALA:CB | 2.46 | 0.45 |
| 1:S:214:PHE:HD1 | 1:S:219:THR:HG22 | 1.80 | 0.45 |
| 1:T:27:SER:O | 1:T:31:ALA:HB2 | 2.16 | 0.45 |
| 1:T:28:LEU:HA | 1:T:31:ALA:CB | 2.46 | 0.45 |
| 1:T:170:LEU:C | 1:T:171:LYS:HD2 | 2.36 | 0.45 |
| 1:U:27:SER:O | 1:U:31:ALA:HB2 | 2.16 | 0.45 |
| 1:U:85:GLN:O | 1:V:198:THR:OG1 | 2.21 | 0.45 |
| 1:W:28:LEU:HA | 1:W:31:ALA:CB | 2.46 | 0.45 |
| 1:W:87:LEU:HD13 | 1:W:117:LYS:HG3 | 1.98 | 0.45 |
| 1:W:170:LEU:C | 1:W:171:LYS:HD2 | 2.36 | 0.45 |
| 1:X:170:LEU:C | 1:X:171:LYS:HD2 | 2.36 | 0.45 |
| 1:C:37:PHE:HZ | 1:C:133:LEU:HD22 | 1.80 | 0.45 |
| 1:E:87:LEU:HD13 | 1:E:117:LYS:HG3 | 1.98 | 0.45 |
| 1:E:214:PHE:HD1 | 1:E:219:THR:HG22 | 1.80 | 0.45 |
| 1:G:87:LEU:HD13 | 1:G:117:LYS:HG3 | 1.98 | 0.45 |
| 1:I:214:PHE:HD1 | 1:I:219:THR:HG22 | 1.80 | 0.45 |
| 1:K:25:VAL:HG12 | 1:K:205:LEU:O | 2.15 | 0.45 |
| 1:K:87:LEU:HD13 | 1:K:117:LYS:HG3 | 1.98 | 0.45 |
| 1:S:27:SER:O | 1:S:31:ALA:HB2 | 2.16 | 0.45 |
| 1:S:170:LEU:C | 1:S:171:LYS:HD2 | 2.36 | 0.45 |
| 1:X:27:SER:O | 1:X:31:ALA:HB2 | 2.16 | 0.45 |
| 1:A:81:LYS:HD2 | 1:B:203:ARG:HH21 | 1.81 | 0.45 |
| 1:B:25:VAL:HG12 | 1:B:205:LEU:O | 2.15 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:170:LEU:C | 1:E:171:LYS:HD2 | 2.36 | 0.45 |
| 1:F:170:LEU:C | 1:F:171:LYS:HD2 | 2.36 | 0.45 |
| 1:I:170:LEU:C | 1:I:171:LYS:HD2 | 2.36 | 0.45 |
| 1:J:25:VAL:HG12 | 1:J:205:LEU:O | 2.15 | 0.45 |
| 1:M:87:LEU:HD13 | 1:M:117:LYS:HG3 | 1.98 | 0.45 |
| 1:S:139:LYS:HZ1 | 1:S:217:LYS:HE2 | 1.81 | 0.45 |
| 1:T:37:PHE:HZ | 1:T:133:LEU:HD22 | 1.80 | 0.45 |
| 1:V:87:LEU:HD13 | 1:V:117:LYS:HG3 | 1.98 | 0.45 |
| 1:X:37:PHE:HD2 | 1:X:59:MET:SD | 2.40 | 0.45 |
| 1:X:87:LEU:HD13 | 1:X:117:LYS:HG3 | 1.98 | 0.45 |
| 1:J:27:SER:O | 1:J:31:ALA:HB2 | 2.16 | 0.45 |
| 1:N:28:LEU:HA | 1:N:31:ALA:CB | 2.46 | 0.45 |
| 1:N:170:LEU:C | 1:N:171:LYS:HD2 | 2.36 | 0.45 |
| 1:O:88:ASP:HA | 1:P:196:GLU:OE2 | 2.16 | 0.45 |
| 1:R:37:PHE:HZ | 1:R:133:LEU:HD22 | 1.80 | 0.45 |
| 1:V:27:SER:O | 1:V:31:ALA:HB2 | 2.16 | 0.45 |
| 1:V:170:LEU:C | 1:V:171:LYS:HD2 | 2.36 | 0.45 |
| 1:A:37:PHE:HZ | 1:A:133:LEU:HD22 | 1.80 | 0.45 |
| 1:B:37:PHE:HZ | 1:B:133:LEU:HD22 | 1.80 | 0.45 |
| 1:C:27:SER:O | 1:C:31:ALA:HB2 | 2.16 | 0.45 |
| 1:E:25:VAL:HG12 | 1:E:205:LEU:O | 2.15 | 0.45 |
| 1:G:168:GLU:OE2 | 1:G:200:PRO:HA | 2.17 | 0.45 |
| 1:J:168:GLU:OE2 | 1:J:200:PRO:HA | 2.17 | 0.45 |
| 1:J:214:PHE:HD1 | 1:J:219:THR:HG22 | 1.80 | 0.45 |
| 1:K:27:SER:O | 1:K:31:ALA:HB2 | 2.16 | 0.45 |
| 1:L:170:LEU:C | 1:L:171:LYS:HD2 | 2.36 | 0.45 |
| 1:M:25:VAL:HG12 | 1:M:205:LEU:O | 2.15 | 0.45 |
| 1:M:168:GLU:OE2 | 1:M:200:PRO:HA | 2.17 | 0.45 |
| 1:O:28:LEU:HA | 1:O:31:ALA:CB | 2.46 | 0.45 |
| 1:S:28:LEU:HA | 1:S:31:ALA:CB | 2.46 | 0.45 |
| 1:S:37:PHE:HZ | 1:S:133:LEU:HD22 | 1.80 | 0.45 |
| 1:W:27:SER:O | 1:W:31:ALA:HB2 | 2.16 | 0.45 |
| 1:A:27:SER:O | 1:A:31:ALA:HB2 | 2.16 | 0.45 |
| 1:B:27:SER:O | 1:B:31:ALA:HB2 | 2.16 | 0.45 |
| 1:B:118:ILE:HG23 | 1:B:166:LYS:HE2 | 1.99 | 0.45 |
| 1:D:118:ILE:HG23 | 1:D:166:LYS:HE2 | 1.99 | 0.45 |
| 1:F:25:VAL:HG12 | 1:F:205:LEU:O | 2.15 | 0.45 |
| 1:F:118:ILE:HG23 | 1:F:166:LYS:HE2 | 1.99 | 0.45 |
| 1:H:170:LEU:C | 1:H:171:LYS:HD2 | 2.36 | 0.45 |
| 1:K:28:LEU:HA | 1:K:31:ALA:CB | 2.46 | 0.45 |
| 1:O:63:ASP:OD1 | 1:O:64:THR:N | 2.49 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:P:37:PHE:HZ | 1:P:133:LEU:HD22 | 1.80 | 0.45 |
| 1:R:37:PHE:HD2 | 1:R:59:MET:SD | 2.40 | 0.45 |
| 1:U:168:GLU:HB3 | 1:U:198:THR:HB | 1.99 | 0.45 |
| 1:V:18:ALA:HB1 | 1:W:2:PHE:HZ | 1.81 | 0.45 |
| 1:V:168:GLU:HB3 | 1:V:198:THR:HB | 1.99 | 0.45 |
| 1:W:37:PHE:HD2 | 1:W:59:MET:SD | 2.40 | 0.45 |
| 1:A:87:LEU:HD13 | 1:A:117:LYS:HG3 | 1.98 | 0.45 |
| 1:D:87:LEU:HD13 | 1:D:117:LYS:HG3 | 1.98 | 0.45 |
| 1:G:118:ILE:HG23 | 1:G:166:LYS:HE2 | 1.99 | 0.45 |
| 1:K:37:PHE:HD2 | 1:K:59:MET:SD | 2.40 | 0.45 |
| 1:L:37:PHE:HD2 | 1:L:59:MET:SD | 2.40 | 0.45 |
| 1:L:87:LEU:HD13 | 1:L:117:LYS:HG3 | 1.98 | 0.45 |
| 1:N:134:GLU:OE2 | 1:N:221:SER:OG | 2.34 | 0.45 |
| 1:O:168:GLU:HB3 | 1:O:198:THR:HB | 1.99 | 0.45 |
| 1:P:168:GLU:HB3 | 1:P:198:THR:HB | 1.99 | 0.45 |
| 1:Q:37:PHE:HZ | 1:Q:133:LEU:HD22 | 1.80 | 0.45 |
| 1:Q:63:ASP:OD1 | 1:Q:64:THR:N | 2.49 | 0.45 |
| 1:S:168:GLU:HB3 | 1:S:198:THR:HB | 1.99 | 0.45 |
| 1:T:168:GLU:HB3 | 1:T:198:THR:HB | 1.99 | 0.45 |
| 1:A:37:PHE:HD2 | 1:A:59:MET:SD | 2.40 | 0.45 |
| 1:B:37:PHE:HD2 | 1:B:59:MET:SD | 2.40 | 0.45 |
| 1:C:37:PHE:HD2 | 1:C:59:MET:SD | 2.40 | 0.45 |
| 1:D:37:PHE:HD2 | 1:D:59:MET:SD | 2.40 | 0.45 |
| 1:E:118:ILE:HG23 | 1:E:166:LYS:HE2 | 1.99 | 0.45 |
| 1:F:168:GLU:OE2 | 1:F:200:PRO:HA | 2.17 | 0.45 |
| 1:H:28:LEU:HA | 1:H:31:ALA:CB | 2.46 | 0.45 |
| 1:H:118:ILE:HG23 | 1:H:166:LYS:HE2 | 1.99 | 0.45 |
| 1:I:168:GLU:OE2 | 1:I:200:PRO:HA | 2.17 | 0.45 |
| 1:K:168:GLU:HB3 | 1:K:198:THR:HB | 1.99 | 0.45 |
| 1:L:28:LEU:HA | 1:L:31:ALA:CB | 2.46 | 0.45 |
| 1:L:168:GLU:OE2 | 1:L:200:PRO:HA | 2.17 | 0.45 |
| 1:M:28:LEU:HA | 1:M:31:ALA:CB | 2.46 | 0.45 |
| 1:M:37:PHE:HD2 | 1:M:59:MET:SD | 2.40 | 0.45 |
| 1:N:168:GLU:HB3 | 1:N:198:THR:HB | 1.99 | 0.45 |
| 1:P:168:GLU:OE2 | 1:P:200:PRO:HA | 2.17 | 0.45 |
| 1:Q:37:PHE:HD2 | 1:Q:59:MET:SD | 2.40 | 0.45 |
| 1:R:63:ASP:OD1 | 1:R:64:THR:N | 2.49 | 0.45 |
| 1:W:168:GLU:HB3 | 1:W:198:THR:HB | 1.99 | 0.45 |
| 1:W:181:GLN:HA | 1:W:185:GLY:O | 2.17 | 0.45 |
| 1:X:181:GLN:HA | 1:X:185:GLY:O | 2.17 | 0.45 |
| 1:E:37:PHE:HD2 | 1:E:59:MET:SD | 2.40 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-----------------|--------------------------|-------------------|
| 1:G:28:LEU:HA | 1:G:31:ALA:CB | 2.46 | 0.45 |
| 1:I:28:LEU:HA | 1:I:31:ALA:CB | 2.46 | 0.45 |
| 1:J:37:PHE:HD2 | 1:J:59:MET:SD | 2.40 | 0.45 |
| 1:J:118:ILE:HG23 | 1:J:166:LYS:HE2 | 1.99 | 0.45 |
| 1:J:170:LEU:C | 1:J:171:LYS:HD2 | 2.36 | 0.45 |
| 1:M:168:GLU:HB3 | 1:M:198:THR:HB | 1.99 | 0.45 |
| 1:N:37:PHE:HD2 | 1:N:59:MET:SD | 2.40 | 0.45 |
| 1:O:168:GLU:OE2 | 1:O:200:PRO:HA | 2.17 | 0.45 |
| 1:P:63:ASP:OD1 | 1:P:64:THR:N | 2.49 | 0.45 |
| 1:Q:168:GLU:HB3 | 1:Q:198:THR:HB | 1.99 | 0.45 |
| 1:U:97:ILE:HG12 | 1:V:187:LEU:HA | 1.99 | 0.45 |
| 1:U:181:GLN:HA | 1:U:185:GLY:O | 2.17 | 0.45 |
| 1:V:37:PHE:HD2 | 1:V:59:MET:SD | 2.40 | 0.45 |
| 1:X:28:LEU:HA | 1:X:31:ALA:CB | 2.46 | 0.45 |
| 1:C:118:ILE:HG23 | 1:C:166:LYS:HE2 | 1.99 | 0.45 |
| 1:G:170:LEU:C | 1:G:171:LYS:HD2 | 2.36 | 0.45 |
| 1:H:37:PHE:HD2 | 1:H:59:MET:SD | 2.40 | 0.45 |
| 1:I:37:PHE:HD2 | 1:I:59:MET:SD | 2.40 | 0.45 |
| 1:I:118:ILE:HG23 | 1:I:166:LYS:HE2 | 1.99 | 0.45 |
| 1:J:87:LEU:HD13 | 1:J:117:LYS:HG3 | 1.98 | 0.45 |
| 1:L:168:GLU:HB3 | 1:L:198:THR:HB | 1.99 | 0.45 |
| 1:M:63:ASP:OD1 | 1:M:64:THR:N | 2.49 | 0.45 |
| 1:R:170:LEU:C | 1:R:171:LYS:HD2 | 2.36 | 0.45 |
| 1:R:181:GLN:HA | 1:R:185:GLY:O | 2.17 | 0.45 |
| 1:S:37:PHE:HD2 | 1:S:59:MET:SD | 2.40 | 0.45 |
| 1:T:63:ASP:OD1 | 1:T:64:THR:N | 2.49 | 0.45 |
| 1:U:94:GLY:HA2 | 1:V:189:TYR:CD1 | 2.52 | 0.45 |
| 1:X:168:GLU:HB3 | 1:X:198:THR:HB | 1.99 | 0.45 |
| 1:B:87:LEU:HD13 | 1:B:117:LYS:HG3 | 1.98 | 0.44 |
| 1:E:28:LEU:HA | 1:E:31:ALA:CB | 2.46 | 0.44 |
| 1:I:87:LEU:HD13 | 1:I:117:LYS:HG3 | 1.98 | 0.44 |
| 1:J:28:LEU:HA | 1:J:31:ALA:CB | 2.46 | 0.44 |
| 1:K:95:GLU:HB3 | 1:L:188:SER:O | 2.17 | 0.44 |
| 1:P:134:GLU:OE2 | 1:P:221:SER:OG | 2.34 | 0.44 |
| 1:P:170:LEU:C | 1:P:171:LYS:HD2 | 2.36 | 0.44 |
| 1:Q:181:GLN:HA | 1:Q:185:GLY:O | 2.17 | 0.44 |
| 1:R:168:GLU:HB3 | 1:R:198:THR:HB | 1.99 | 0.44 |
| 1:T:37:PHE:HD2 | 1:T:59:MET:SD | 2.40 | 0.44 |
| 1:X:118:ILE:HG23 | 1:X:166:LYS:HE2 | 1.99 | 0.44 |
| 1:A:118:ILE:HG23 | 1:A:166:LYS:HE2 | 1.99 | 0.44 |
| 1:A:168:GLU:HB3 | 1:A:198:THR:HB | 1.99 | 0.44 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:181:GLN:HA | 1:A:185:GLY:O | 2.17 | 0.44 |
| 1:C:87:LEU:HD13 | 1:C:117:LYS:HG3 | 1.98 | 0.44 |
| 1:F:37:PHE:HD2 | 1:F:59:MET:SD | 2.40 | 0.44 |
| 1:G:36:CYS:HA | 1:G:158:VAL:HG22 | 2.00 | 0.44 |
| 1:G:37:PHE:HD2 | 1:G:59:MET:SD | 2.40 | 0.44 |
| 1:H:168:GLU:OE2 | 1:H:200:PRO:HA | 2.17 | 0.44 |
| 1:K:118:ILE:HG23 | 1:K:166:LYS:HE2 | 1.99 | 0.44 |
| 1:P:181:GLN:HA | 1:P:185:GLY:O | 2.17 | 0.44 |
| 1:S:168:GLU:OE2 | 1:S:200:PRO:HA | 2.17 | 0.44 |
| 1:V:181:GLN:HA | 1:V:185:GLY:O | 2.17 | 0.44 |
| 1:C:168:GLU:OE2 | 1:C:200:PRO:HA | 2.17 | 0.44 |
| 1:E:36:CYS:HA | 1:E:158:VAL:HG22 | 2.00 | 0.44 |
| 1:F:28:LEU:HA | 1:F:31:ALA:CB | 2.46 | 0.44 |
| 1:F:36:CYS:HA | 1:F:158:VAL:HG22 | 2.00 | 0.44 |
| 1:U:37:PHE:HD2 | 1:U:59:MET:SD | 2.40 | 0.44 |
| 1:X:168:GLU:OE2 | 1:X:200:PRO:HA | 2.17 | 0.44 |
| 1:D:36:CYS:HA | 1:D:158:VAL:HG22 | 2.00 | 0.44 |
| 1:H:36:CYS:HA | 1:H:158:VAL:HG22 | 2.00 | 0.44 |
| 1:K:181:GLN:HA | 1:K:185:GLY:O | 2.17 | 0.44 |
| 1:R:134:GLU:OE2 | 1:R:221:SER:OG | 2.34 | 0.44 |
| 1:T:181:GLN:HA | 1:T:185:GLY:O | 2.17 | 0.44 |
| 1:W:118:ILE:HG23 | 1:W:166:LYS:HE2 | 1.99 | 0.44 |
| 1:B:168:GLU:OE2 | 1:B:200:PRO:HA | 2.17 | 0.44 |
| 1:C:36:CYS:HA | 1:C:158:VAL:HG22 | 2.00 | 0.44 |
| 1:E:181:GLN:HA | 1:E:185:GLY:O | 2.17 | 0.44 |
| 1:F:181:GLN:HA | 1:F:185:GLY:O | 2.17 | 0.44 |
| 1:L:118:ILE:HG23 | 1:L:166:LYS:HE2 | 1.99 | 0.44 |
| 1:P:37:PHE:HD2 | 1:P:59:MET:SD | 2.40 | 0.44 |
| 1:T:168:GLU:OE2 | 1:T:200:PRO:HA | 2.17 | 0.44 |
| 1:U:97:ILE:HD11 | 1:V:186:HIS:HD2 | 1.82 | 0.44 |
| 1:A:168:GLU:OE2 | 1:A:200:PRO:HA | 2.17 | 0.44 |
| 1:B:168:GLU:HB3 | 1:B:198:THR:HB | 1.99 | 0.44 |
| 1:B:181:GLN:HA | 1:B:185:GLY:O | 2.17 | 0.44 |
| 1:C:168:GLU:HB3 | 1:C:198:THR:HB | 1.99 | 0.44 |
| 1:D:168:GLU:OE2 | 1:D:200:PRO:HA | 2.17 | 0.44 |
| 1:F:15:GLU:HG2 | 1:G:5:PHE:CE1 | 2.53 | 0.44 |
| 1:I:36:CYS:HA | 1:I:158:VAL:HG22 | 2.00 | 0.44 |
| 1:I:181:GLN:HA | 1:I:185:GLY:O | 2.17 | 0.44 |
| 1:J:168:GLU:HB3 | 1:J:198:THR:HB | 1.99 | 0.44 |
| 1:K:63:ASP:OD1 | 1:K:64:THR:N | 2.49 | 0.44 |
| 1:M:118:ILE:HG23 | 1:M:166:LYS:HE2 | 1.99 | 0.44 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:N:63:ASP:OD1 | 1:N:64:THR:N | 2.49 | 0.44 |
| 1:O:37:PHE:HD2 | 1:O:59:MET:SD | 2.40 | 0.44 |
| 1:Q:168:GLU:OE2 | 1:Q:200:PRO:HA | 2.17 | 0.44 |
| 1:S:63:ASP:OD1 | 1:S:64:THR:N | 2.49 | 0.44 |
| 1:S:181:GLN:HA | 1:S:185:GLY:O | 2.17 | 0.44 |
| 1:U:168:GLU:OE2 | 1:U:200:PRO:HA | 2.17 | 0.44 |
| 1:D:168:GLU:HB3 | 1:D:198:THR:HB | 1.99 | 0.44 |
| 1:G:181:GLN:HA | 1:G:185:GLY:O | 2.17 | 0.44 |
| 1:I:168:GLU:HB3 | 1:I:198:THR:HB | 1.99 | 0.44 |
| 1:L:181:GLN:HA | 1:L:185:GLY:O | 2.17 | 0.44 |
| 1:V:118:ILE:HG23 | 1:V:166:LYS:HE2 | 1.99 | 0.44 |
| 1:B:36:CYS:HA | 1:B:158:VAL:HG22 | 2.00 | 0.44 |
| 1:H:87:LEU:HD13 | 1:H:117:LYS:HG3 | 1.98 | 0.44 |
| 1:H:168:GLU:HB3 | 1:H:198:THR:HB | 1.99 | 0.44 |
| 1:R:168:GLU:OE2 | 1:R:200:PRO:HA | 2.17 | 0.44 |
| 1:T:134:GLU:OE2 | 1:T:221:SER:OG | 2.34 | 0.44 |
| 1:W:168:GLU:OE2 | 1:W:200:PRO:HA | 2.17 | 0.44 |
| 1:C:181:GLN:HA | 1:C:185:GLY:O | 2.17 | 0.44 |
| 1:D:181:GLN:HA | 1:D:185:GLY:O | 2.17 | 0.44 |
| 1:E:168:GLU:HB3 | 1:E:198:THR:HB | 1.99 | 0.44 |
| 1:N:168:GLU:OE2 | 1:N:200:PRO:HA | 2.17 | 0.44 |
| 1:B:88:ASP:HA | 1:C:196:GLU:OE2 | 2.17 | 0.43 |
| 1:E:168:GLU:OE2 | 1:E:200:PRO:HA | 2.17 | 0.43 |
| 1:K:168:GLU:OE2 | 1:K:200:PRO:HA | 2.17 | 0.43 |
| 1:G:118:ILE:HG22 | 1:G:120:ILE:HD11 | 2.00 | 0.43 |
| 1:H:181:GLN:HA | 1:H:185:GLY:O | 2.17 | 0.43 |
| 1:J:36:CYS:HA | 1:J:158:VAL:HG22 | 2.00 | 0.43 |
| 1:O:181:GLN:HA | 1:O:185:GLY:O | 2.17 | 0.43 |
| 1:U:81:LYS:HD2 | 1:V:203:ARG:NH2 | 2.33 | 0.43 |
| 1:U:118:ILE:HG22 | 1:U:120:ILE:HD11 | 2.00 | 0.43 |
| 1:U:118:ILE:HG23 | 1:U:166:LYS:HE2 | 1.99 | 0.43 |
| 1:H:118:ILE:HG22 | 1:H:120:ILE:HD11 | 2.00 | 0.43 |
| 1:I:118:ILE:HG22 | 1:I:120:ILE:HD11 | 2.00 | 0.43 |
| 1:J:118:ILE:HG22 | 1:J:120:ILE:HD11 | 2.00 | 0.43 |
| 1:O:118:ILE:HG23 | 1:O:166:LYS:HE2 | 1.99 | 0.43 |
| 1:Q:118:ILE:HG23 | 1:Q:166:LYS:HE2 | 1.99 | 0.43 |
| 1:V:63:ASP:OD1 | 1:V:64:THR:N | 2.49 | 0.43 |
| 1:A:36:CYS:HA | 1:A:158:VAL:HG22 | 2.00 | 0.43 |
| 1:F:168:GLU:HB3 | 1:F:198:THR:HB | 1.99 | 0.43 |
| 1:G:168:GLU:HB3 | 1:G:198:THR:HB | 1.99 | 0.43 |
| 1:K:64:THR:OG1 | 1:K:65:ASP:N | 2.52 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:M:181:GLN:HA | 1:M:185:GLY:O | 2.17 | 0.43 |
| 1:N:118:ILE:HG23 | 1:N:166:LYS:HE2 | 1.99 | 0.43 |
| 1:P:118:ILE:HG23 | 1:P:166:LYS:HE2 | 1.99 | 0.43 |
| 1:V:168:GLU:OE2 | 1:V:200:PRO:HA | 2.17 | 0.43 |
| 1:B:134:GLU:OE2 | 1:B:221:SER:OG | 2.34 | 0.43 |
| 1:F:64:THR:OG1 | 1:F:65:ASP:N | 2.52 | 0.43 |
| 1:F:118:ILE:HG22 | 1:F:120:ILE:HD11 | 2.00 | 0.43 |
| 1:L:118:ILE:HG22 | 1:L:120:ILE:HD11 | 2.00 | 0.43 |
| 1:P:64:THR:OG1 | 1:P:65:ASP:N | 2.52 | 0.43 |
| 1:R:118:ILE:HG23 | 1:R:166:LYS:HE2 | 1.99 | 0.43 |
| 1:S:118:ILE:HG22 | 1:S:120:ILE:HD11 | 2.00 | 0.43 |
| 1:T:118:ILE:HG23 | 1:T:166:LYS:HE2 | 1.99 | 0.43 |
| 1:A:97:ILE:HD11 | 1:B:186:HIS:CD2 | 2.53 | 0.43 |
| 1:H:64:THR:OG1 | 1:H:65:ASP:N | 2.52 | 0.43 |
| 1:C:64:THR:OG1 | 1:C:65:ASP:N | 2.52 | 0.43 |
| 1:E:134:GLU:OE2 | 1:E:221:SER:OG | 2.34 | 0.43 |
| 1:I:64:THR:OG1 | 1:I:65:ASP:N | 2.52 | 0.43 |
| 1:J:181:GLN:HA | 1:J:185:GLY:O | 2.17 | 0.43 |
| 1:L:63:ASP:OD1 | 1:L:64:THR:N | 2.49 | 0.43 |
| 1:L:91:ASP:O | 1:M:191:HIS:NE2 | 2.50 | 0.43 |
| 1:M:64:THR:OG1 | 1:M:65:ASP:N | 2.52 | 0.43 |
| 1:N:181:GLN:HA | 1:N:185:GLY:O | 2.17 | 0.43 |
| 1:R:64:THR:OG1 | 1:R:65:ASP:N | 2.52 | 0.43 |
| 1:T:118:ILE:HG22 | 1:T:120:ILE:HD11 | 2.00 | 0.43 |
| 1:W:118:ILE:HG22 | 1:W:120:ILE:HD11 | 2.00 | 0.43 |
| 1:E:118:ILE:HG22 | 1:E:120:ILE:HD11 | 2.00 | 0.43 |
| 1:I:85:GLN:O | 1:J:198:THR:OG1 | 2.32 | 0.43 |
| 1:L:92:SER:HA | 1:M:191:HIS:CD2 | 2.53 | 0.43 |
| 1:N:64:THR:OG1 | 1:N:65:ASP:N | 2.52 | 0.43 |
| 1:S:118:ILE:HG23 | 1:S:166:LYS:HE2 | 1.99 | 0.43 |
| 1:X:118:ILE:HG22 | 1:X:120:ILE:HD11 | 2.00 | 0.43 |
| 1:E:64:THR:OG1 | 1:E:65:ASP:N | 2.52 | 0.43 |
| 1:R:16:MET:HE1 | 1:S:29:VAL:HG23 | 2.00 | 0.43 |
| 1:R:36:CYS:HA | 1:R:158:VAL:HG22 | 2.00 | 0.43 |
| 1:S:36:CYS:HA | 1:S:158:VAL:HG22 | 2.00 | 0.43 |
| 1:A:134:GLU:OE2 | 1:A:221:SER:OG | 2.34 | 0.43 |
| 1:D:118:ILE:HG22 | 1:D:120:ILE:HD11 | 2.00 | 0.43 |
| 1:M:118:ILE:HG22 | 1:M:120:ILE:HD11 | 2.00 | 0.43 |
| 1:N:118:ILE:HG22 | 1:N:120:ILE:HD11 | 2.00 | 0.43 |
| 1:Q:36:CYS:HA | 1:Q:158:VAL:HG22 | 2.00 | 0.43 |
| 1:R:118:ILE:HG22 | 1:R:120:ILE:HD11 | 2.00 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:T:36:CYS:HA | 1:T:158:VAL:HG22 | 2.00 | 0.43 |
| 1:V:118:ILE:HG22 | 1:V:120:ILE:HD11 | 2.00 | 0.43 |
| 1:W:134:GLU:OE2 | 1:W:221:SER:OG | 2.34 | 0.43 |
| 1:X:64:THR:OG1 | 1:X:65:ASP:N | 2.52 | 0.43 |
| 1:B:64:THR:OG1 | 1:B:65:ASP:N | 2.52 | 0.42 |
| 1:C:134:GLU:OE2 | 1:C:221:SER:OG | 2.34 | 0.42 |
| 1:I:63:ASP:OD1 | 1:I:64:THR:N | 2.49 | 0.42 |
| 1:K:36:CYS:HA | 1:K:158:VAL:HG22 | 2.00 | 0.42 |
| 1:O:64:THR:OG1 | 1:O:65:ASP:N | 2.52 | 0.42 |
| 1:P:36:CYS:HA | 1:P:158:VAL:HG22 | 2.00 | 0.42 |
| 1:Q:118:ILE:HG22 | 1:Q:120:ILE:HD11 | 2.00 | 0.42 |
| 1:U:63:ASP:OD1 | 1:U:64:THR:N | 2.49 | 0.42 |
| 1:U:64:THR:OG1 | 1:U:65:ASP:N | 2.52 | 0.42 |
| 1:X:36:CYS:HA | 1:X:158:VAL:HG22 | 2.00 | 0.42 |
| 1:X:63:ASP:OD1 | 1:X:64:THR:N | 2.49 | 0.42 |
| 1:X:134:GLU:OE2 | 1:X:221:SER:OG | 2.34 | 0.42 |
| 1:A:183:SER:O | 1:A:184:GLN:HG3 | 2.19 | 0.42 |
| 1:D:134:GLU:OE2 | 1:D:221:SER:OG | 2.34 | 0.42 |
| 1:H:10:ARG:HH12 | 1:H:14:LYS:HE3 | 1.84 | 0.42 |
| 1:K:118:ILE:HG22 | 1:K:120:ILE:HD11 | 2.00 | 0.42 |
| 1:O:36:CYS:HA | 1:O:158:VAL:HG22 | 2.00 | 0.42 |
| 1:O:183:SER:O | 1:O:184:GLN:HG3 | 2.20 | 0.42 |
| 1:P:118:ILE:HG22 | 1:P:120:ILE:HD11 | 2.00 | 0.42 |
| 1:U:91:ASP:HB2 | 1:V:193:GLY:HA2 | 2.01 | 0.42 |
| 1:B:118:ILE:HG22 | 1:B:120:ILE:HD11 | 2.00 | 0.42 |
| 1:C:10:ARG:HH12 | 1:C:14:LYS:HE3 | 1.84 | 0.42 |
| 1:C:118:ILE:HG22 | 1:C:120:ILE:HD11 | 2.00 | 0.42 |
| 1:F:183:SER:O | 1:F:184:GLN:HG3 | 2.19 | 0.42 |
| 1:G:183:SER:O | 1:G:184:GLN:HG3 | 2.19 | 0.42 |
| 1:L:36:CYS:HA | 1:L:158:VAL:HG22 | 2.00 | 0.42 |
| 1:L:183:SER:O | 1:L:184:GLN:HG3 | 2.20 | 0.42 |
| 1:V:36:CYS:HA | 1:V:158:VAL:HG22 | 2.00 | 0.42 |
| 1:B:183:SER:O | 1:B:184:GLN:HG3 | 2.20 | 0.42 |
| 1:C:183:SER:O | 1:C:184:GLN:HG3 | 2.20 | 0.42 |
| 1:D:183:SER:O | 1:D:184:GLN:HG3 | 2.20 | 0.42 |
| 1:E:183:SER:O | 1:E:184:GLN:HG3 | 2.19 | 0.42 |
| 1:G:10:ARG:HH12 | 1:G:14:LYS:HE3 | 1.84 | 0.42 |
| 1:J:64:THR:OG1 | 1:J:65:ASP:N | 2.52 | 0.42 |
| 1:K:183:SER:O | 1:K:184:GLN:HG3 | 2.19 | 0.42 |
| 1:M:134:GLU:OE2 | 1:M:221:SER:OG | 2.34 | 0.42 |
| 1:A:118:ILE:HG22 | 1:A:120:ILE:HD11 | 2.00 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:10:ARG:HH12 | 1:B:14:LYS:HE3 | 1.84 | 0.42 |
| 1:D:10:ARG:HH12 | 1:D:14:LYS:HE3 | 1.84 | 0.42 |
| 1:E:10:ARG:HH12 | 1:E:14:LYS:HE3 | 1.84 | 0.42 |
| 1:F:10:ARG:HH12 | 1:F:14:LYS:HE3 | 1.84 | 0.42 |
| 1:H:183:SER:O | 1:H:184:GLN:HG3 | 2.20 | 0.42 |
| 1:K:134:GLU:OE2 | 1:K:221:SER:OG | 2.34 | 0.42 |
| 1:N:36:CYS:HA | 1:N:158:VAL:HG22 | 2.00 | 0.42 |
| 1:U:36:CYS:HA | 1:U:158:VAL:HG22 | 2.00 | 0.42 |
| 1:W:183:SER:O | 1:W:184:GLN:HG3 | 2.20 | 0.42 |
| 1:A:10:ARG:HH12 | 1:A:14:LYS:HE3 | 1.84 | 0.42 |
| 1:E:63:ASP:OD1 | 1:E:64:THR:N | 2.49 | 0.42 |
| 1:I:10:ARG:HH12 | 1:I:14:LYS:HE3 | 1.84 | 0.42 |
| 1:M:149:ILE:O | 1:M:152:ARG:HG3 | 2.20 | 0.42 |
| 1:N:149:ILE:O | 1:N:152:ARG:HG3 | 2.20 | 0.42 |
| 1:P:183:SER:O | 1:P:184:GLN:HG3 | 2.19 | 0.42 |
| 1:S:111:GLN:HE22 | 1:S:175:GLN:HB2 | 1.85 | 0.42 |
| 1:T:64:THR:OG1 | 1:T:65:ASP:N | 2.52 | 0.42 |
| 1:U:94:GLY:CA | 1:V:189:TYR:CE1 | 3.03 | 0.42 |
| 1:V:183:SER:O | 1:V:184:GLN:HG3 | 2.19 | 0.42 |
| 1:W:64:THR:OG1 | 1:W:65:ASP:N | 2.52 | 0.42 |
| 1:X:183:SER:O | 1:X:184:GLN:HG3 | 2.20 | 0.42 |
| 1:B:149:ILE:O | 1:B:152:ARG:HG3 | 2.20 | 0.42 |
| 1:I:183:SER:O | 1:I:184:GLN:HG3 | 2.19 | 0.42 |
| 1:I:223:GLY:HA3 | 1:J:147:ARG:CD | 2.50 | 0.42 |
| 1:K:97:ILE:HD11 | 1:L:186:HIS:CD2 | 2.55 | 0.42 |
| 1:N:183:SER:O | 1:N:184:GLN:HG3 | 2.20 | 0.42 |
| 1:O:118:ILE:HG22 | 1:O:120:ILE:HD11 | 2.00 | 0.42 |
| 1:Q:149:ILE:O | 1:Q:152:ARG:HG3 | 2.20 | 0.42 |
| 1:U:111:GLN:HE22 | 1:U:175:GLN:HB2 | 1.85 | 0.42 |
| 1:V:134:GLU:OE2 | 1:V:221:SER:OG | 2.34 | 0.42 |
| 1:W:36:CYS:HA | 1:W:158:VAL:HG22 | 2.00 | 0.42 |
| 1:A:149:ILE:O | 1:A:152:ARG:HG3 | 2.20 | 0.42 |
| 1:H:149:ILE:O | 1:H:152:ARG:HG3 | 2.20 | 0.42 |
| 1:J:183:SER:O | 1:J:184:GLN:HG3 | 2.20 | 0.42 |
| 1:R:183:SER:O | 1:R:184:GLN:HG3 | 2.20 | 0.42 |
| 1:S:183:SER:O | 1:S:184:GLN:HG3 | 2.19 | 0.42 |
| 1:T:149:ILE:O | 1:T:152:ARG:HG3 | 2.20 | 0.42 |
| 1:V:10:ARG:HH12 | 1:V:14:LYS:HE3 | 1.84 | 0.42 |
| 1:V:149:ILE:O | 1:V:152:ARG:HG3 | 2.20 | 0.42 |
| 1:W:10:ARG:HH12 | 1:W:14:LYS:HE3 | 1.84 | 0.42 |
| 1:W:63:ASP:OD1 | 1:W:64:THR:N | 2.49 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:X:10:ARG:HH12 | 1:X:14:LYS:HE3 | 1.84 | 0.42 |
| 1:C:8:ILE:HG13 | 1:C:9:THR:N | 2.35 | 0.42 |
| 1:D:8:ILE:HG13 | 1:D:9:THR:N | 2.35 | 0.42 |
| 1:E:94:GLY:HA2 | 1:F:189:TYR:HE1 | 1.83 | 0.42 |
| 1:E:111:GLN:HE22 | 1:E:175:GLN:HB2 | 1.85 | 0.42 |
| 1:F:8:ILE:HG13 | 1:F:9:THR:N | 2.35 | 0.42 |
| 1:G:88:ASP:OD1 | 1:H:196:GLU:O | 2.37 | 0.42 |
| 1:J:63:ASP:OD1 | 1:J:64:THR:N | 2.49 | 0.42 |
| 1:K:99:ARG:HD2 | 1:L:185:GLY:HA2 | 2.02 | 0.42 |
| 1:M:36:CYS:HA | 1:M:158:VAL:HG22 | 2.00 | 0.42 |
| 1:Q:111:GLN:HE22 | 1:Q:175:GLN:HB2 | 1.85 | 0.42 |
| 1:S:149:ILE:O | 1:S:152:ARG:HG3 | 2.20 | 0.42 |
| 1:T:183:SER:O | 1:T:184:GLN:HG3 | 2.19 | 0.42 |
| 1:U:134:GLU:OE2 | 1:U:221:SER:OG | 2.34 | 0.42 |
| 1:U:149:ILE:O | 1:U:152:ARG:HG3 | 2.20 | 0.42 |
| 1:B:111:GLN:HE22 | 1:B:175:GLN:HB2 | 1.85 | 0.42 |
| 1:C:149:ILE:O | 1:C:152:ARG:HG3 | 2.20 | 0.42 |
| 1:G:8:ILE:HG13 | 1:G:9:THR:N | 2.35 | 0.42 |
| 1:I:149:ILE:O | 1:I:152:ARG:HG3 | 2.20 | 0.42 |
| 1:L:8:ILE:HG13 | 1:L:9:THR:N | 2.35 | 0.42 |
| 1:L:149:ILE:O | 1:L:152:ARG:HG3 | 2.20 | 0.42 |
| 1:M:8:ILE:HG13 | 1:M:9:THR:N | 2.35 | 0.42 |
| 1:O:111:GLN:HE22 | 1:O:175:GLN:HB2 | 1.85 | 0.42 |
| 1:P:149:ILE:O | 1:P:152:ARG:HG3 | 2.20 | 0.42 |
| 1:Q:64:THR:OG1 | 1:Q:65:ASP:N | 2.52 | 0.42 |
| 1:U:88:ASP:HA | 1:V:196:GLU:OE2 | 2.20 | 0.42 |
| 1:W:111:GLN:HE22 | 1:W:175:GLN:HB2 | 1.85 | 0.42 |
| 1:E:8:ILE:HG13 | 1:E:9:THR:N | 2.35 | 0.41 |
| 1:E:156:TYR:CE2 | 1:E:209:VAL:HG22 | 2.56 | 0.41 |
| 1:H:111:GLN:HE22 | 1:H:175:GLN:HB2 | 1.85 | 0.41 |
| 1:L:111:GLN:HE22 | 1:L:175:GLN:HB2 | 1.85 | 0.41 |
| 1:N:111:GLN:HE22 | 1:N:175:GLN:HB2 | 1.85 | 0.41 |
| 1:U:183:SER:O | 1:U:184:GLN:HG3 | 2.20 | 0.41 |
| 1:B:8:ILE:HG13 | 1:B:9:THR:N | 2.35 | 0.41 |
| 1:C:156:TYR:CE2 | 1:C:209:VAL:HG22 | 2.56 | 0.41 |
| 1:F:156:TYR:CE2 | 1:F:209:VAL:HG22 | 2.56 | 0.41 |
| 1:I:156:TYR:CE2 | 1:I:209:VAL:HG22 | 2.56 | 0.41 |
| 1:J:10:ARG:HH12 | 1:J:14:LYS:HE3 | 1.84 | 0.41 |
| 1:K:8:ILE:HG13 | 1:K:9:THR:N | 2.35 | 0.41 |
| 1:K:149:ILE:O | 1:K:152:ARG:HG3 | 2.20 | 0.41 |
| 1:L:10:ARG:HH12 | 1:L:14:LYS:HE3 | 1.84 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:M:10:ARG:HH12 | 1:M:14:LYS:HE3 | 1.84 | 0.41 |
| 1:M:183:SER:O | 1:M:184:GLN:HG3 | 2.19 | 0.41 |
| 1:O:149:ILE:O | 1:O:152:ARG:HG3 | 2.20 | 0.41 |
| 1:Q:8:ILE:HG13 | 1:Q:9:THR:N | 2.35 | 0.41 |
| 1:R:10:ARG:HH12 | 1:R:14:LYS:HE3 | 1.84 | 0.41 |
| 1:S:10:ARG:HH12 | 1:S:14:LYS:HE3 | 1.84 | 0.41 |
| 1:W:149:ILE:O | 1:W:152:ARG:HG3 | 2.20 | 0.41 |
| 1:W:156:TYR:CG | 1:W:209:VAL:HG13 | 2.56 | 0.41 |
| 1:X:149:ILE:O | 1:X:152:ARG:HG3 | 2.20 | 0.41 |
| 1:B:156:TYR:CE2 | 1:B:209:VAL:HG22 | 2.55 | 0.41 |
| 1:D:156:TYR:CE2 | 1:D:209:VAL:HG22 | 2.56 | 0.41 |
| 1:G:149:ILE:O | 1:G:152:ARG:HG3 | 2.20 | 0.41 |
| 1:G:156:TYR:CE2 | 1:G:209:VAL:HG22 | 2.56 | 0.41 |
| 1:K:111:GLN:HE22 | 1:K:175:GLN:HB2 | 1.85 | 0.41 |
| 1:N:56:LEU:H | 1:N:56:LEU:HD23 | 1.86 | 0.41 |
| 1:P:111:GLN:HE22 | 1:P:175:GLN:HB2 | 1.85 | 0.41 |
| 1:R:8:ILE:HG13 | 1:R:9:THR:N | 2.35 | 0.41 |
| 1:R:149:ILE:O | 1:R:152:ARG:HG3 | 2.20 | 0.41 |
| 1:S:60:ASP:OD1 | 1:S:61:ILE:N | 2.53 | 0.41 |
| 1:T:88:ASP:HA | 1:U:196:GLU:OE2 | 2.20 | 0.41 |
| 1:T:156:TYR:CG | 1:T:209:VAL:HG13 | 2.56 | 0.41 |
| 1:A:8:ILE:HG13 | 1:A:9:THR:N | 2.35 | 0.41 |
| 1:A:111:GLN:HE22 | 1:A:175:GLN:HB2 | 1.85 | 0.41 |
| 1:D:149:ILE:O | 1:D:152:ARG:HG3 | 2.20 | 0.41 |
| 1:G:64:THR:OG1 | 1:G:65:ASP:N | 2.52 | 0.41 |
| 1:H:8:ILE:HG13 | 1:H:9:THR:N | 2.35 | 0.41 |
| 1:J:149:ILE:O | 1:J:152:ARG:HG3 | 2.20 | 0.41 |
| 1:K:156:TYR:CG | 1:K:209:VAL:HG13 | 2.56 | 0.41 |
| 1:L:64:THR:OG1 | 1:L:65:ASP:N | 2.52 | 0.41 |
| 1:M:56:LEU:H | 1:M:56:LEU:HD23 | 1.86 | 0.41 |
| 1:U:10:ARG:HH12 | 1:U:14:LYS:HE3 | 1.84 | 0.41 |
| 1:A:56:LEU:HD23 | 1:A:56:LEU:H | 1.86 | 0.41 |
| 1:A:63:ASP:OD1 | 1:A:64:THR:N | 2.49 | 0.41 |
| 1:A:156:TYR:CE2 | 1:A:209:VAL:HG22 | 2.56 | 0.41 |
| 1:B:63:ASP:OD1 | 1:B:64:THR:N | 2.49 | 0.41 |
| 1:F:134:GLU:OE2 | 1:F:221:SER:OG | 2.34 | 0.41 |
| 1:G:111:GLN:HE22 | 1:G:175:GLN:HB2 | 1.85 | 0.41 |
| 1:H:156:TYR:CE2 | 1:H:209:VAL:HG22 | 2.56 | 0.41 |
| 1:M:111:GLN:HE22 | 1:M:175:GLN:HB2 | 1.85 | 0.41 |
| 1:N:156:TYR:CG | 1:N:209:VAL:HG13 | 2.56 | 0.41 |
| 1:O:56:LEU:H | 1:O:56:LEU:HD23 | 1.86 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:156:TYR:CG | 1:O:209:VAL:HG13 | 2.56 | 0.41 |
| 1:P:8:ILE:HG13 | 1:P:9:THR:N | 2.35 | 0.41 |
| 1:Q:156:TYR:CG | 1:Q:209:VAL:HG13 | 2.56 | 0.41 |
| 1:R:111:GLN:HE22 | 1:R:175:GLN:HB2 | 1.85 | 0.41 |
| 1:R:156:TYR:CG | 1:R:209:VAL:HG13 | 2.56 | 0.41 |
| 1:V:56:LEU:H | 1:V:56:LEU:HD23 | 1.86 | 0.41 |
| 1:C:56:LEU:HD23 | 1:C:56:LEU:H | 1.86 | 0.41 |
| 1:C:84:PHE:CD2 | 1:C:120:ILE:HD13 | 2.49 | 0.41 |
| 1:C:111:GLN:HE22 | 1:C:175:GLN:HB2 | 1.85 | 0.41 |
| 1:D:64:THR:OG1 | 1:D:65:ASP:N | 2.52 | 0.41 |
| 1:I:8:ILE:HG13 | 1:I:9:THR:N | 2.35 | 0.41 |
| 1:J:111:GLN:HE22 | 1:J:175:GLN:HB2 | 1.85 | 0.41 |
| 1:L:56:LEU:H | 1:L:56:LEU:HD23 | 1.86 | 0.41 |
| 1:N:8:ILE:HG13 | 1:N:9:THR:N | 2.35 | 0.41 |
| 1:P:56:LEU:HD23 | 1:P:56:LEU:H | 1.86 | 0.41 |
| 1:P:60:ASP:OD1 | 1:P:61:ILE:N | 2.54 | 0.41 |
| 1:Q:10:ARG:HH12 | 1:Q:14:LYS:HE3 | 1.84 | 0.41 |
| 1:S:8:ILE:HG13 | 1:S:9:THR:N | 2.35 | 0.41 |
| 1:S:56:LEU:HD23 | 1:S:56:LEU:H | 1.86 | 0.41 |
| 1:T:8:ILE:HG13 | 1:T:9:THR:N | 2.35 | 0.41 |
| 1:T:10:ARG:HH12 | 1:T:14:LYS:HE3 | 1.84 | 0.41 |
| 1:T:56:LEU:HD23 | 1:T:56:LEU:H | 1.86 | 0.41 |
| 1:U:56:LEU:HD23 | 1:U:56:LEU:H | 1.86 | 0.41 |
| 1:W:56:LEU:HD23 | 1:W:56:LEU:H | 1.86 | 0.41 |
| 1:B:56:LEU:HD23 | 1:B:56:LEU:H | 1.86 | 0.41 |
| 1:D:56:LEU:HD23 | 1:D:56:LEU:H | 1.86 | 0.41 |
| 1:E:56:LEU:HD23 | 1:E:56:LEU:H | 1.86 | 0.41 |
| 1:F:156:TYR:CG | 1:F:209:VAL:HG13 | 2.56 | 0.41 |
| 1:G:63:ASP:OD1 | 1:G:64:THR:N | 2.49 | 0.41 |
| 1:H:63:ASP:OD1 | 1:H:64:THR:N | 2.49 | 0.41 |
| 1:L:159:THR:H | 1:L:208:ARG:HB2 | 1.86 | 0.41 |
| 1:N:10:ARG:HH12 | 1:N:14:LYS:HE3 | 1.84 | 0.41 |
| 1:O:8:ILE:HG13 | 1:O:9:THR:N | 2.35 | 0.41 |
| 1:P:10:ARG:HH12 | 1:P:14:LYS:HE3 | 1.84 | 0.41 |
| 1:P:154:ASN:O | 1:P:211:GLN:NE2 | 2.42 | 0.41 |
| 1:P:156:TYR:CG | 1:P:209:VAL:HG13 | 2.56 | 0.41 |
| 1:Q:183:SER:O | 1:Q:184:GLN:HG3 | 2.19 | 0.41 |
| 1:S:156:TYR:CG | 1:S:209:VAL:HG13 | 2.56 | 0.41 |
| 1:T:60:ASP:OD1 | 1:T:61:ILE:N | 2.54 | 0.41 |
| 1:X:56:LEU:HD23 | 1:X:56:LEU:H | 1.86 | 0.41 |
| 1:E:94:GLY:CA | 1:F:189:TYR:HE1 | 2.34 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:56:LEU:H | 1:F:56:LEU:HD23 | 1.86 | 0.41 |
| 1:F:111:GLN:HE22 | 1:F:175:GLN:HB2 | 1.85 | 0.41 |
| 1:F:149:ILE:O | 1:F:152:ARG:HG3 | 2.20 | 0.41 |
| 1:G:134:GLU:OE2 | 1:G:221:SER:OG | 2.34 | 0.41 |
| 1:G:156:TYR:CG | 1:G:209:VAL:HG13 | 2.56 | 0.41 |
| 1:J:111:GLN:O | 1:J:174:ARG:HA | 2.21 | 0.41 |
| 1:L:92:SER:HA | 1:M:191:HIS:HD2 | 1.85 | 0.41 |
| 1:N:111:GLN:O | 1:N:174:ARG:HA | 2.21 | 0.41 |
| 1:N:159:THR:H | 1:N:208:ARG:HB2 | 1.86 | 0.41 |
| 1:P:81:LYS:HD2 | 1:Q:203:ARG:HH21 | 1.85 | 0.41 |
| 1:R:156:TYR:CE2 | 1:R:209:VAL:HG22 | 2.56 | 0.41 |
| 1:S:156:TYR:CE2 | 1:S:209:VAL:HG22 | 2.56 | 0.41 |
| 1:X:156:TYR:CE2 | 1:X:209:VAL:HG22 | 2.55 | 0.41 |
| 1:X:156:TYR:CG | 1:X:209:VAL:HG13 | 2.56 | 0.41 |
| 1:A:111:GLN:O | 1:A:174:ARG:HA | 2.21 | 0.41 |
| 1:B:156:TYR:CG | 1:B:209:VAL:HG13 | 2.56 | 0.41 |
| 1:D:111:GLN:O | 1:D:174:ARG:HA | 2.21 | 0.41 |
| 1:G:111:GLN:O | 1:G:174:ARG:HA | 2.21 | 0.41 |
| 1:H:156:TYR:CG | 1:H:209:VAL:HG13 | 2.56 | 0.41 |
| 1:I:156:TYR:CG | 1:I:209:VAL:HG13 | 2.56 | 0.41 |
| 1:J:8:ILE:HG13 | 1:J:9:THR:N | 2.35 | 0.41 |
| 1:J:156:TYR:CE2 | 1:J:209:VAL:HG22 | 2.56 | 0.41 |
| 1:J:159:THR:H | 1:J:208:ARG:HB2 | 1.86 | 0.41 |
| 1:K:10:ARG:HH12 | 1:K:14:LYS:HE3 | 1.84 | 0.41 |
| 1:K:56:LEU:H | 1:K:56:LEU:HD23 | 1.86 | 0.41 |
| 1:L:156:TYR:CG | 1:L:209:VAL:HG13 | 2.56 | 0.41 |
| 1:M:111:GLN:O | 1:M:174:ARG:HA | 2.21 | 0.41 |
| 1:M:156:TYR:HB2 | 1:M:210:LYS:H | 1.86 | 0.41 |
| 1:O:10:ARG:HH12 | 1:O:14:LYS:HE3 | 1.85 | 0.41 |
| 1:O:60:ASP:OD1 | 1:O:61:ILE:N | 2.54 | 0.41 |
| 1:P:159:THR:H | 1:P:208:ARG:HB2 | 1.86 | 0.41 |
| 1:Q:56:LEU:HD23 | 1:Q:56:LEU:H | 1.86 | 0.41 |
| 1:Q:60:ASP:OD1 | 1:Q:61:ILE:N | 2.54 | 0.41 |
| 1:R:56:LEU:HD23 | 1:R:56:LEU:H | 1.86 | 0.41 |
| 1:S:88:ASP:HA | 1:T:196:GLU:OE2 | 2.21 | 0.41 |
| 1:S:111:GLN:O | 1:S:174:ARG:HA | 2.21 | 0.41 |
| 1:U:156:TYR:CE2 | 1:U:209:VAL:HG22 | 2.56 | 0.41 |
| 1:V:8:ILE:HG13 | 1:V:9:THR:N | 2.35 | 0.41 |
| 1:V:156:TYR:CG | 1:V:209:VAL:HG13 | 2.56 | 0.41 |
| 1:W:156:TYR:CE2 | 1:W:209:VAL:HG22 | 2.56 | 0.41 |
| 1:X:111:GLN:O | 1:X:174:ARG:HA | 2.21 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:64:THR:OG1 | 1:A:65:ASP:N | 2.52 | 0.41 |
| 1:A:156:TYR:CG | 1:A:209:VAL:HG13 | 2.56 | 0.41 |
| 1:D:63:ASP:OD1 | 1:D:64:THR:N | 2.49 | 0.41 |
| 1:E:156:TYR:CG | 1:E:209:VAL:HG13 | 2.56 | 0.41 |
| 1:I:111:GLN:HE22 | 1:I:175:GLN:HB2 | 1.85 | 0.41 |
| 1:J:56:LEU:H | 1:J:56:LEU:HD23 | 1.86 | 0.41 |
| 1:K:156:TYR:HB2 | 1:K:210:LYS:H | 1.87 | 0.41 |
| 1:L:156:TYR:HB2 | 1:L:210:LYS:H | 1.86 | 0.41 |
| 1:P:156:TYR:CE2 | 1:P:209:VAL:HG22 | 2.56 | 0.41 |
| 1:R:111:GLN:O | 1:R:174:ARG:HA | 2.21 | 0.41 |
| 1:R:159:THR:H | 1:R:208:ARG:HB2 | 1.86 | 0.41 |
| 1:U:60:ASP:OD1 | 1:U:61:ILE:N | 2.54 | 0.41 |
| 1:U:92:SER:HA | 1:V:191:HIS:CD2 | 2.53 | 0.41 |
| 1:V:60:ASP:OD1 | 1:V:61:ILE:N | 2.54 | 0.41 |
| 1:W:8:ILE:HG13 | 1:W:9:THR:N | 2.35 | 0.41 |
| 1:W:60:ASP:OD1 | 1:W:61:ILE:N | 2.53 | 0.41 |
| 1:W:111:GLN:O | 1:W:174:ARG:HA | 2.21 | 0.41 |
| 1:X:8:ILE:HG13 | 1:X:9:THR:N | 2.35 | 0.41 |
| 1:A:15:GLU:HG2 | 1:B:5:PHE:CE1 | 2.57 | 0.40 |
| 1:D:111:GLN:HE22 | 1:D:175:GLN:HB2 | 1.85 | 0.40 |
| 1:H:111:GLN:O | 1:H:174:ARG:HA | 2.21 | 0.40 |
| 1:K:91:ASP:HB2 | 1:L:192:LYS:O | 2.21 | 0.40 |
| 1:K:97:ILE:HD11 | 1:L:186:HIS:HD2 | 1.86 | 0.40 |
| 1:L:111:GLN:O | 1:L:174:ARG:HA | 2.21 | 0.40 |
| 1:M:60:ASP:OD1 | 1:M:61:ILE:N | 2.54 | 0.40 |
| 1:N:191:HIS:C | 1:N:192:LYS:HD3 | 2.42 | 0.40 |
| 1:Q:160:GLU:O | 1:Q:208:ARG:NH1 | 2.54 | 0.40 |
| 1:Q:191:HIS:C | 1:Q:192:LYS:HD3 | 2.42 | 0.40 |
| 1:R:60:ASP:OD1 | 1:R:61:ILE:N | 2.54 | 0.40 |
| 1:R:160:GLU:O | 1:R:208:ARG:NH1 | 2.54 | 0.40 |
| 1:T:111:GLN:HE22 | 1:T:175:GLN:HB2 | 1.85 | 0.40 |
| 1:U:156:TYR:CG | 1:U:209:VAL:HG13 | 2.56 | 0.40 |
| 1:V:111:GLN:O | 1:V:174:ARG:HA | 2.21 | 0.40 |
| 1:V:156:TYR:CE2 | 1:V:209:VAL:HG22 | 2.56 | 0.40 |
| 1:W:154:ASN:O | 1:W:211:GLN:NE2 | 2.42 | 0.40 |
| 1:D:156:TYR:CG | 1:D:209:VAL:HG13 | 2.56 | 0.40 |
| 1:D:159:THR:H | 1:D:208:ARG:HB2 | 1.86 | 0.40 |
| 1:E:149:ILE:O | 1:E:152:ARG:HG3 | 2.20 | 0.40 |
| 1:G:56:LEU:HD23 | 1:G:56:LEU:H | 1.86 | 0.40 |
| 1:H:191:HIS:C | 1:H:192:LYS:HD3 | 2.42 | 0.40 |
| 1:I:111:GLN:O | 1:I:174:ARG:HA | 2.21 | 0.40 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:160:GLU:O | 1:I:208:ARG:NH1 | 2.54 | 0.40 |
| 1:J:156:TYR:CG | 1:J:209:VAL:HG13 | 2.56 | 0.40 |
| 1:J:160:GLU:O | 1:J:208:ARG:NH1 | 2.54 | 0.40 |
| 1:K:156:TYR:CE2 | 1:K:209:VAL:HG22 | 2.56 | 0.40 |
| 1:N:156:TYR:HB2 | 1:N:210:LYS:H | 1.87 | 0.40 |
| 1:O:156:TYR:CE2 | 1:O:209:VAL:HG22 | 2.56 | 0.40 |
| 1:P:160:GLU:O | 1:P:208:ARG:NH1 | 2.54 | 0.40 |
| 1:Q:156:TYR:HB2 | 1:Q:210:LYS:H | 1.86 | 0.40 |
| 1:R:156:TYR:HB2 | 1:R:210:LYS:H | 1.86 | 0.40 |
| 1:S:156:TYR:HB2 | 1:S:210:LYS:H | 1.86 | 0.40 |
| 1:S:159:THR:H | 1:S:208:ARG:HB2 | 1.86 | 0.40 |
| 1:T:111:GLN:O | 1:T:174:ARG:HA | 2.21 | 0.40 |
| 1:U:8:ILE:HG13 | 1:U:9:THR:N | 2.35 | 0.40 |
| 1:U:191:HIS:C | 1:U:192:LYS:HD3 | 2.42 | 0.40 |
| 1:V:191:HIS:C | 1:V:192:LYS:HD3 | 2.42 | 0.40 |
| 1:X:111:GLN:HE22 | 1:X:175:GLN:HB2 | 1.85 | 0.40 |
| 1:H:160:GLU:O | 1:H:208:ARG:NH1 | 2.54 | 0.40 |
| 1:J:156:TYR:HB2 | 1:J:210:LYS:H | 1.87 | 0.40 |
| 1:K:160:GLU:O | 1:K:208:ARG:NH1 | 2.54 | 0.40 |
| 1:L:60:ASP:OD1 | 1:L:61:ILE:N | 2.54 | 0.40 |
| 1:L:191:HIS:C | 1:L:192:LYS:HD3 | 2.42 | 0.40 |
| 1:O:111:GLN:O | 1:O:174:ARG:HA | 2.21 | 0.40 |
| 1:Q:159:THR:H | 1:Q:208:ARG:HB2 | 1.86 | 0.40 |
| 1:S:134:GLU:OE2 | 1:S:221:SER:OG | 2.34 | 0.40 |
| 1:A:97:ILE:HG13 | 1:B:186:HIS:O | 2.21 | 0.40 |
| 1:B:111:GLN:O | 1:B:174:ARG:HA | 2.21 | 0.40 |
| 1:C:63:ASP:OD1 | 1:C:64:THR:N | 2.49 | 0.40 |
| 1:H:134:GLU:OE2 | 1:H:221:SER:OG | 2.34 | 0.40 |
| 1:H:159:THR:H | 1:H:208:ARG:HB2 | 1.86 | 0.40 |
| 1:I:191:HIS:C | 1:I:192:LYS:HD3 | 2.42 | 0.40 |
| 1:J:129:TYR:CZ | 1:J:133:LEU:HD21 | 2.57 | 0.40 |
| 1:K:60:ASP:OD1 | 1:K:61:ILE:N | 2.54 | 0.40 |
| 1:K:191:HIS:C | 1:K:192:LYS:HD3 | 2.42 | 0.40 |
| 1:L:16:MET:O | 1:M:27:SER:OG | 2.39 | 0.40 |
| 1:O:97:ILE:HD11 | 1:P:186:HIS:CD2 | 2.55 | 0.40 |
| 1:O:156:TYR:HB2 | 1:O:210:LYS:H | 1.86 | 0.40 |
| 1:O:160:GLU:O | 1:O:208:ARG:NH1 | 2.54 | 0.40 |
| 1:S:160:GLU:O | 1:S:208:ARG:NH1 | 2.54 | 0.40 |
| 1:U:129:TYR:CZ | 1:U:133:LEU:HD21 | 2.57 | 0.40 |
| 1:X:159:THR:H | 1:X:208:ARG:HB2 | 1.86 | 0.40 |
| 1:A:156:TYR:HB2 | 1:A:210:LYS:H | 1.87 | 0.40 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:156:TYR:HB2 | 1:B:210:LYS:H | 1.87 | 0.40 |
| 1:B:191:HIS:C | 1:B:192:LYS:HD3 | 2.42 | 0.40 |
| 1:C:156:TYR:HB2 | 1:C:210:LYS:H | 1.86 | 0.40 |
| 1:C:156:TYR:CG | 1:C:209:VAL:HG13 | 2.56 | 0.40 |
| 1:C:159:THR:H | 1:C:208:ARG:HB2 | 1.86 | 0.40 |
| 1:C:191:HIS:C | 1:C:192:LYS:HD3 | 2.42 | 0.40 |
| 1:D:140:ARG:HE | 1:D:142:LEU:HB2 | 1.87 | 0.40 |
| 1:G:84:PHE:CD2 | 1:G:120:ILE:HD13 | 2.49 | 0.40 |
| 1:H:156:TYR:HB2 | 1:H:210:LYS:H | 1.86 | 0.40 |
| 1:I:156:TYR:HB2 | 1:I:210:LYS:H | 1.86 | 0.40 |
| 1:M:129:TYR:CZ | 1:M:133:LEU:HD21 | 2.57 | 0.40 |
| 1:M:156:TYR:CG | 1:M:209:VAL:HG13 | 2.56 | 0.40 |
| 1:N:15:GLU:HG2 | 1:O:5:PHE:CE1 | 2.56 | 0.40 |
| 1:T:156:TYR:CE2 | 1:T:209:VAL:HG22 | 2.56 | 0.40 |
| 1:T:159:THR:H | 1:T:208:ARG:HB2 | 1.86 | 0.40 |
| 1:T:191:HIS:C | 1:T:192:LYS:HD3 | 2.42 | 0.40 |
| 1:V:111:GLN:HE22 | 1:V:175:GLN:HB2 | 1.85 | 0.40 |
| 1:X:156:TYR:HB2 | 1:X:210:LYS:H | 1.87 | 0.40 |

There are no symmetry-related clashes.

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 PDB entries followed by that with respect to all EM entries.

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

| Mol | Chain | Analysed | Favoured | Allowed | Outliers | Percentiles | |
|-----|-------|---------------|-----------|----------|----------|-------------|-----|
| 1 | A | 217/411 (53%) | 191 (88%) | 26 (12%) | 0 | 100 | 100 |
| 1 | B | 217/411 (53%) | 191 (88%) | 26 (12%) | 0 | 100 | 100 |
| 1 | C | 217/411 (53%) | 192 (88%) | 25 (12%) | 0 | 100 | 100 |
| 1 | D | 217/411 (53%) | 192 (88%) | 25 (12%) | 0 | 100 | 100 |
| 1 | E | 217/411 (53%) | 192 (88%) | 25 (12%) | 0 | 100 | 100 |
| 1 | F | 217/411 (53%) | 192 (88%) | 25 (12%) | 0 | 100 | 100 |

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| Mol | Chain | Analysed | Favoured | Allowed | Outliers | Percentiles | |
|-----|-------|-----------------|------------|-----------|----------|-------------|-----|
| 1 | G | 217/411 (53%) | 191 (88%) | 26 (12%) | 0 | 100 | 100 |
| 1 | H | 217/411 (53%) | 192 (88%) | 25 (12%) | 0 | 100 | 100 |
| 1 | I | 217/411 (53%) | 192 (88%) | 25 (12%) | 0 | 100 | 100 |
| 1 | J | 217/411 (53%) | 191 (88%) | 26 (12%) | 0 | 100 | 100 |
| 1 | K | 217/411 (53%) | 192 (88%) | 25 (12%) | 0 | 100 | 100 |
| 1 | L | 217/411 (53%) | 192 (88%) | 25 (12%) | 0 | 100 | 100 |
| 1 | M | 217/411 (53%) | 192 (88%) | 25 (12%) | 0 | 100 | 100 |
| 1 | N | 217/411 (53%) | 191 (88%) | 26 (12%) | 0 | 100 | 100 |
| 1 | O | 217/411 (53%) | 192 (88%) | 25 (12%) | 0 | 100 | 100 |
| 1 | P | 217/411 (53%) | 191 (88%) | 26 (12%) | 0 | 100 | 100 |
| 1 | Q | 217/411 (53%) | 190 (88%) | 27 (12%) | 0 | 100 | 100 |
| 1 | R | 217/411 (53%) | 192 (88%) | 25 (12%) | 0 | 100 | 100 |
| 1 | S | 217/411 (53%) | 191 (88%) | 26 (12%) | 0 | 100 | 100 |
| 1 | T | 217/411 (53%) | 192 (88%) | 25 (12%) | 0 | 100 | 100 |
| 1 | U | 217/411 (53%) | 192 (88%) | 25 (12%) | 0 | 100 | 100 |
| 1 | V | 217/411 (53%) | 191 (88%) | 26 (12%) | 0 | 100 | 100 |
| 1 | W | 217/411 (53%) | 192 (88%) | 25 (12%) | 0 | 100 | 100 |
| 1 | X | 217/411 (53%) | 191 (88%) | 26 (12%) | 0 | 100 | 100 |
| All | All | 5208/9864 (53%) | 4597 (88%) | 611 (12%) | 0 | 100 | 100 |

There are no Ramachandran outliers to report.

5.3.2 Protein sidechains [i](#)

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

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

| Mol | Chain | Analysed | Rotameric | Outliers | Percentiles | |
|-----|-------|---------------|-----------|----------|-------------|----|
| 1 | A | 202/370 (55%) | 200 (99%) | 2 (1%) | 76 | 86 |
| 1 | B | 202/370 (55%) | 200 (99%) | 2 (1%) | 76 | 86 |
| 1 | C | 202/370 (55%) | 200 (99%) | 2 (1%) | 76 | 86 |

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| Mol | Chain | Analysed | Rotameric | Outliers | Percentiles | |
|-----|-------|-----------------|------------|----------|-------------|----|
| 1 | D | 202/370 (55%) | 200 (99%) | 2 (1%) | 76 | 86 |
| 1 | E | 202/370 (55%) | 200 (99%) | 2 (1%) | 76 | 86 |
| 1 | F | 202/370 (55%) | 200 (99%) | 2 (1%) | 76 | 86 |
| 1 | G | 202/370 (55%) | 200 (99%) | 2 (1%) | 76 | 86 |
| 1 | H | 202/370 (55%) | 200 (99%) | 2 (1%) | 76 | 86 |
| 1 | I | 202/370 (55%) | 200 (99%) | 2 (1%) | 76 | 86 |
| 1 | J | 202/370 (55%) | 200 (99%) | 2 (1%) | 76 | 86 |
| 1 | K | 202/370 (55%) | 200 (99%) | 2 (1%) | 76 | 86 |
| 1 | L | 202/370 (55%) | 200 (99%) | 2 (1%) | 76 | 86 |
| 1 | M | 202/370 (55%) | 200 (99%) | 2 (1%) | 76 | 86 |
| 1 | N | 202/370 (55%) | 200 (99%) | 2 (1%) | 76 | 86 |
| 1 | O | 202/370 (55%) | 200 (99%) | 2 (1%) | 76 | 86 |
| 1 | P | 202/370 (55%) | 200 (99%) | 2 (1%) | 76 | 86 |
| 1 | Q | 202/370 (55%) | 200 (99%) | 2 (1%) | 76 | 86 |
| 1 | R | 202/370 (55%) | 200 (99%) | 2 (1%) | 76 | 86 |
| 1 | S | 202/370 (55%) | 200 (99%) | 2 (1%) | 76 | 86 |
| 1 | T | 202/370 (55%) | 200 (99%) | 2 (1%) | 76 | 86 |
| 1 | U | 202/370 (55%) | 200 (99%) | 2 (1%) | 76 | 86 |
| 1 | V | 202/370 (55%) | 200 (99%) | 2 (1%) | 76 | 86 |
| 1 | W | 202/370 (55%) | 200 (99%) | 2 (1%) | 76 | 86 |
| 1 | X | 202/370 (55%) | 200 (99%) | 2 (1%) | 76 | 86 |
| All | All | 4848/8880 (55%) | 4800 (99%) | 48 (1%) | 77 | 86 |

All (48) residues with a non-rotameric sidechain are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | A | 26 | ARG |
| 1 | A | 68 | LYS |
| 1 | B | 26 | ARG |
| 1 | B | 68 | LYS |
| 1 | C | 26 | ARG |
| 1 | C | 68 | LYS |
| 1 | D | 26 | ARG |
| 1 | D | 68 | LYS |
| 1 | E | 26 | ARG |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | E | 68 | LYS |
| 1 | F | 26 | ARG |
| 1 | F | 68 | LYS |
| 1 | G | 26 | ARG |
| 1 | G | 68 | LYS |
| 1 | H | 26 | ARG |
| 1 | H | 68 | LYS |
| 1 | I | 26 | ARG |
| 1 | I | 68 | LYS |
| 1 | J | 26 | ARG |
| 1 | J | 68 | LYS |
| 1 | K | 26 | ARG |
| 1 | K | 68 | LYS |
| 1 | L | 26 | ARG |
| 1 | L | 68 | LYS |
| 1 | M | 26 | ARG |
| 1 | M | 68 | LYS |
| 1 | N | 26 | ARG |
| 1 | N | 68 | LYS |
| 1 | O | 26 | ARG |
| 1 | O | 68 | LYS |
| 1 | P | 26 | ARG |
| 1 | P | 68 | LYS |
| 1 | Q | 26 | ARG |
| 1 | Q | 68 | LYS |
| 1 | R | 26 | ARG |
| 1 | R | 68 | LYS |
| 1 | S | 26 | ARG |
| 1 | S | 68 | LYS |
| 1 | T | 26 | ARG |
| 1 | T | 68 | LYS |
| 1 | U | 26 | ARG |
| 1 | U | 68 | LYS |
| 1 | V | 26 | ARG |
| 1 | V | 68 | LYS |
| 1 | W | 26 | ARG |
| 1 | W | 68 | LYS |
| 1 | X | 26 | ARG |
| 1 | X | 68 | LYS |

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (157) such sidechains are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | A | 51 | HIS |
| 1 | A | 85 | GLN |
| 1 | A | 135 | ASN |
| 1 | A | 154 | ASN |
| 1 | A | 181 | GLN |
| 1 | A | 186 | HIS |
| 1 | A | 216 | ASN |
| 1 | B | 51 | HIS |
| 1 | B | 85 | GLN |
| 1 | B | 135 | ASN |
| 1 | B | 154 | ASN |
| 1 | B | 181 | GLN |
| 1 | B | 186 | HIS |
| 1 | B | 216 | ASN |
| 1 | C | 51 | HIS |
| 1 | C | 85 | GLN |
| 1 | C | 135 | ASN |
| 1 | C | 154 | ASN |
| 1 | C | 181 | GLN |
| 1 | C | 186 | HIS |
| 1 | C | 216 | ASN |
| 1 | D | 51 | HIS |
| 1 | D | 85 | GLN |
| 1 | D | 135 | ASN |
| 1 | D | 154 | ASN |
| 1 | D | 181 | GLN |
| 1 | D | 186 | HIS |
| 1 | D | 216 | ASN |
| 1 | E | 51 | HIS |
| 1 | E | 85 | GLN |
| 1 | E | 135 | ASN |
| 1 | E | 154 | ASN |
| 1 | E | 181 | GLN |
| 1 | E | 186 | HIS |
| 1 | E | 216 | ASN |
| 1 | F | 85 | GLN |
| 1 | F | 135 | ASN |
| 1 | F | 154 | ASN |
| 1 | F | 181 | GLN |
| 1 | F | 186 | HIS |
| 1 | F | 216 | ASN |
| 1 | G | 85 | GLN |
| 1 | G | 135 | ASN |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | G | 154 | ASN |
| 1 | G | 181 | GLN |
| 1 | G | 186 | HIS |
| 1 | G | 216 | ASN |
| 1 | H | 51 | HIS |
| 1 | H | 85 | GLN |
| 1 | H | 135 | ASN |
| 1 | H | 154 | ASN |
| 1 | H | 181 | GLN |
| 1 | H | 186 | HIS |
| 1 | H | 216 | ASN |
| 1 | I | 85 | GLN |
| 1 | I | 135 | ASN |
| 1 | I | 154 | ASN |
| 1 | I | 181 | GLN |
| 1 | I | 186 | HIS |
| 1 | I | 216 | ASN |
| 1 | J | 85 | GLN |
| 1 | J | 135 | ASN |
| 1 | J | 181 | GLN |
| 1 | J | 186 | HIS |
| 1 | J | 216 | ASN |
| 1 | K | 51 | HIS |
| 1 | K | 85 | GLN |
| 1 | K | 135 | ASN |
| 1 | K | 154 | ASN |
| 1 | K | 181 | GLN |
| 1 | K | 186 | HIS |
| 1 | K | 216 | ASN |
| 1 | L | 51 | HIS |
| 1 | L | 85 | GLN |
| 1 | L | 135 | ASN |
| 1 | L | 154 | ASN |
| 1 | L | 181 | GLN |
| 1 | L | 186 | HIS |
| 1 | L | 216 | ASN |
| 1 | M | 51 | HIS |
| 1 | M | 85 | GLN |
| 1 | M | 135 | ASN |
| 1 | M | 154 | ASN |
| 1 | M | 181 | GLN |
| 1 | M | 186 | HIS |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | M | 216 | ASN |
| 1 | N | 51 | HIS |
| 1 | N | 85 | GLN |
| 1 | N | 135 | ASN |
| 1 | N | 154 | ASN |
| 1 | N | 181 | GLN |
| 1 | N | 186 | HIS |
| 1 | N | 216 | ASN |
| 1 | O | 51 | HIS |
| 1 | O | 85 | GLN |
| 1 | O | 135 | ASN |
| 1 | O | 154 | ASN |
| 1 | O | 181 | GLN |
| 1 | O | 186 | HIS |
| 1 | O | 216 | ASN |
| 1 | P | 85 | GLN |
| 1 | P | 135 | ASN |
| 1 | P | 154 | ASN |
| 1 | P | 181 | GLN |
| 1 | P | 186 | HIS |
| 1 | P | 216 | ASN |
| 1 | Q | 51 | HIS |
| 1 | Q | 85 | GLN |
| 1 | Q | 135 | ASN |
| 1 | Q | 154 | ASN |
| 1 | Q | 181 | GLN |
| 1 | Q | 186 | HIS |
| 1 | Q | 216 | ASN |
| 1 | R | 85 | GLN |
| 1 | R | 135 | ASN |
| 1 | R | 154 | ASN |
| 1 | R | 181 | GLN |
| 1 | R | 186 | HIS |
| 1 | R | 216 | ASN |
| 1 | S | 85 | GLN |
| 1 | S | 135 | ASN |
| 1 | S | 154 | ASN |
| 1 | S | 181 | GLN |
| 1 | S | 186 | HIS |
| 1 | S | 216 | ASN |
| 1 | T | 85 | GLN |
| 1 | T | 135 | ASN |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | T | 154 | ASN |
| 1 | T | 181 | GLN |
| 1 | T | 186 | HIS |
| 1 | T | 216 | ASN |
| 1 | U | 51 | HIS |
| 1 | U | 85 | GLN |
| 1 | U | 135 | ASN |
| 1 | U | 154 | ASN |
| 1 | U | 181 | GLN |
| 1 | U | 186 | HIS |
| 1 | U | 216 | ASN |
| 1 | V | 85 | GLN |
| 1 | V | 135 | ASN |
| 1 | V | 154 | ASN |
| 1 | V | 181 | GLN |
| 1 | V | 186 | HIS |
| 1 | V | 216 | ASN |
| 1 | W | 51 | HIS |
| 1 | W | 85 | GLN |
| 1 | W | 135 | ASN |
| 1 | W | 154 | ASN |
| 1 | W | 181 | GLN |
| 1 | W | 186 | HIS |
| 1 | W | 216 | ASN |
| 1 | X | 85 | GLN |
| 1 | X | 135 | ASN |
| 1 | X | 154 | ASN |
| 1 | X | 181 | GLN |
| 1 | X | 186 | HIS |
| 1 | X | 216 | ASN |

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry [i](#)

There are no ligands in this entry.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

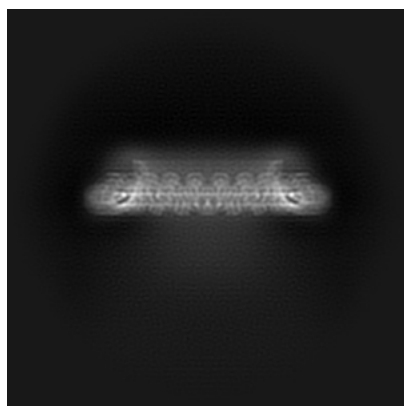
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-28584. These allow visual inspection of the internal detail of the map and identification of artifacts.

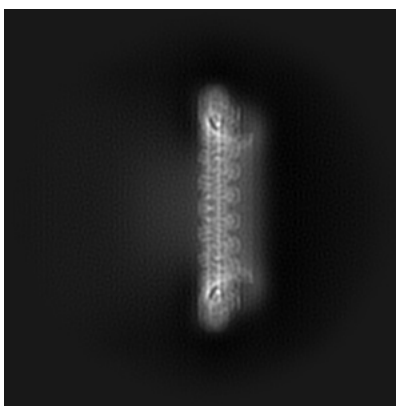
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

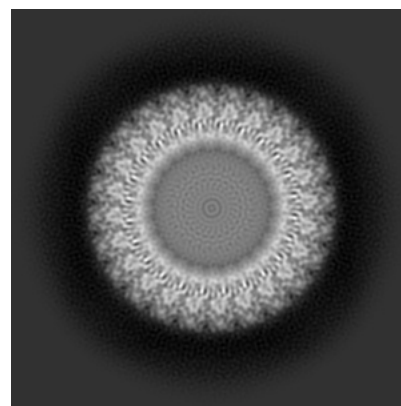
6.1.1 Primary map



X

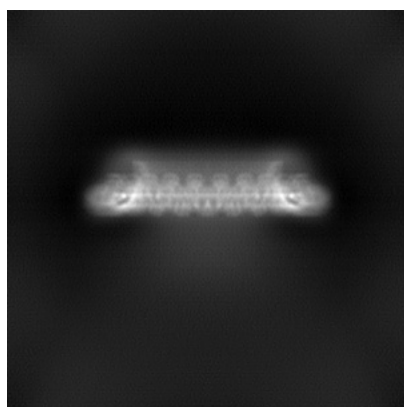


Y

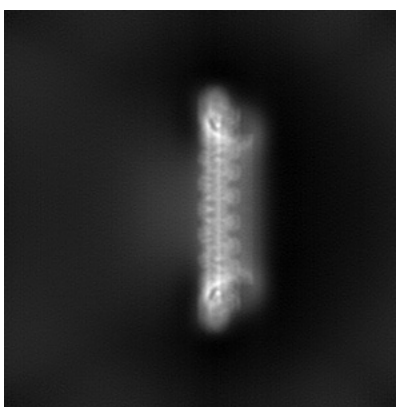


Z

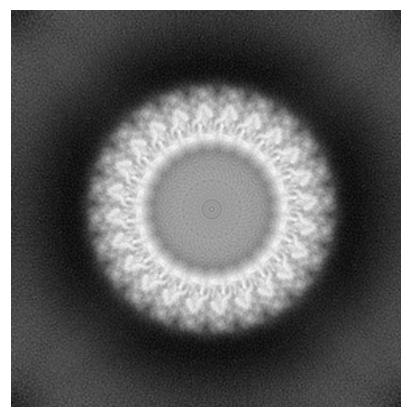
6.1.2 Raw map



X



Y

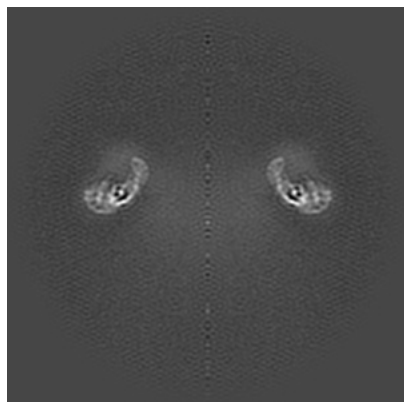


Z

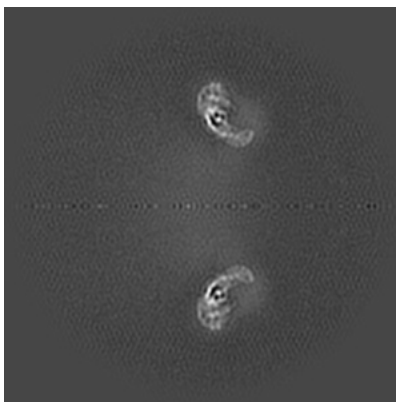
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

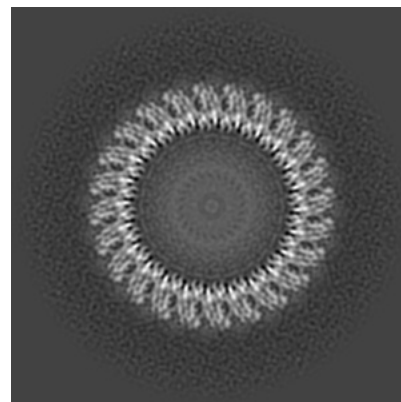
6.2.1 Primary map



X Index: 128

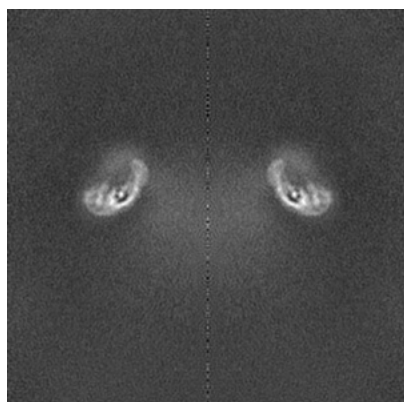


Y Index: 128



Z Index: 128

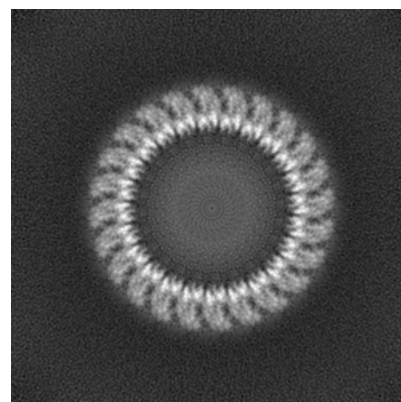
6.2.2 Raw map



X Index: 128



Y Index: 128

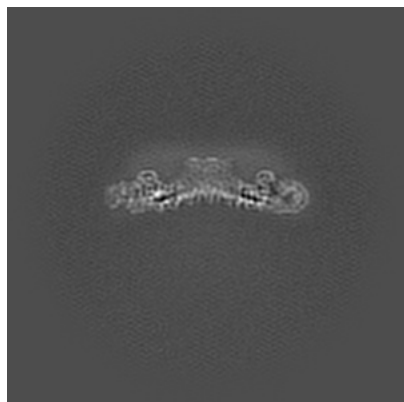


Z Index: 128

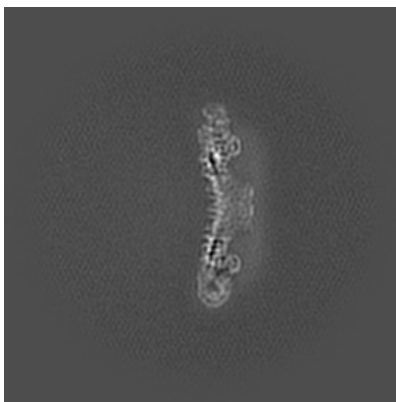
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

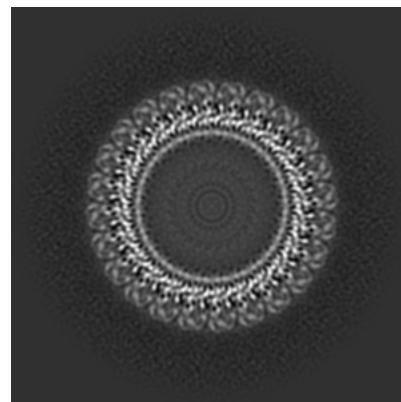
6.3.1 Primary map



X Index: 175

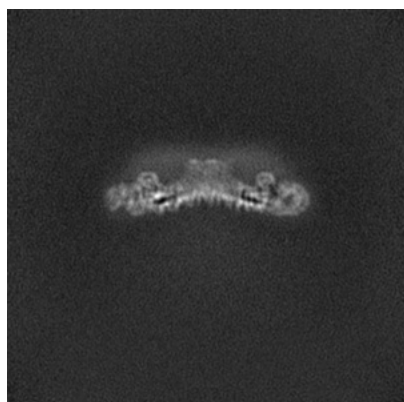


Y Index: 175



Z Index: 137

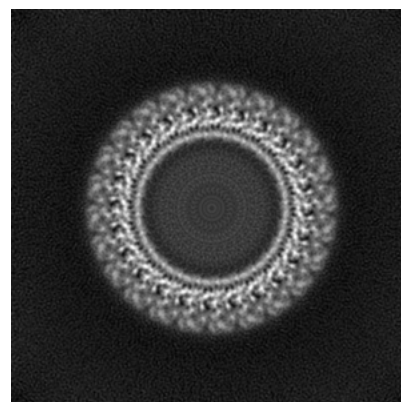
6.3.2 Raw map



X Index: 175



Y Index: 81

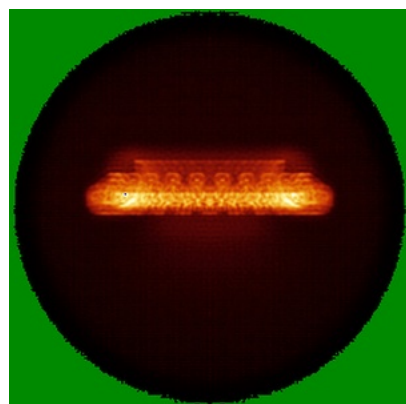


Z Index: 137

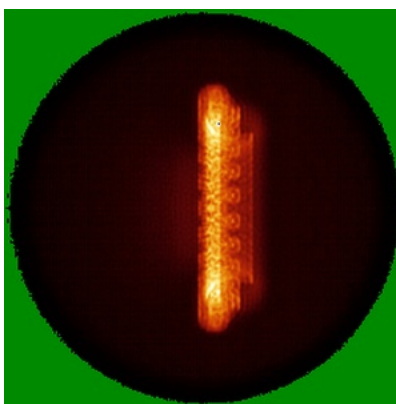
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) [i](#)

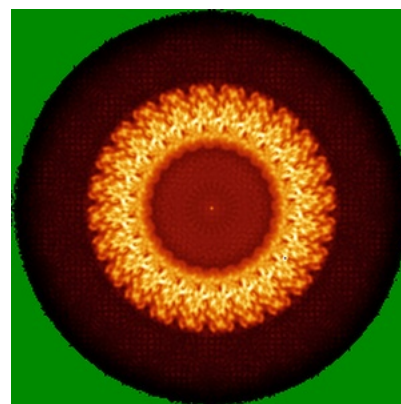
6.4.1 Primary map



X

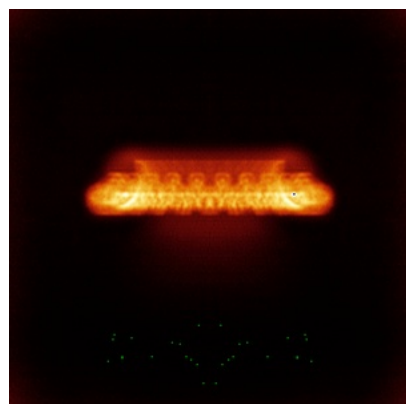


Y

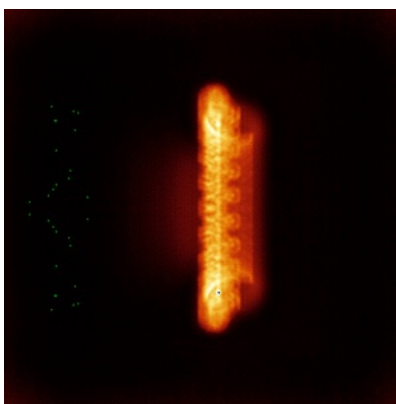


Z

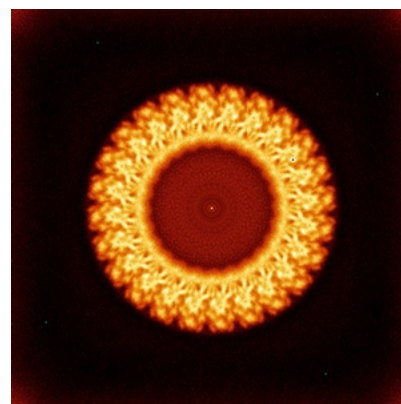
6.4.2 Raw map



X



Y

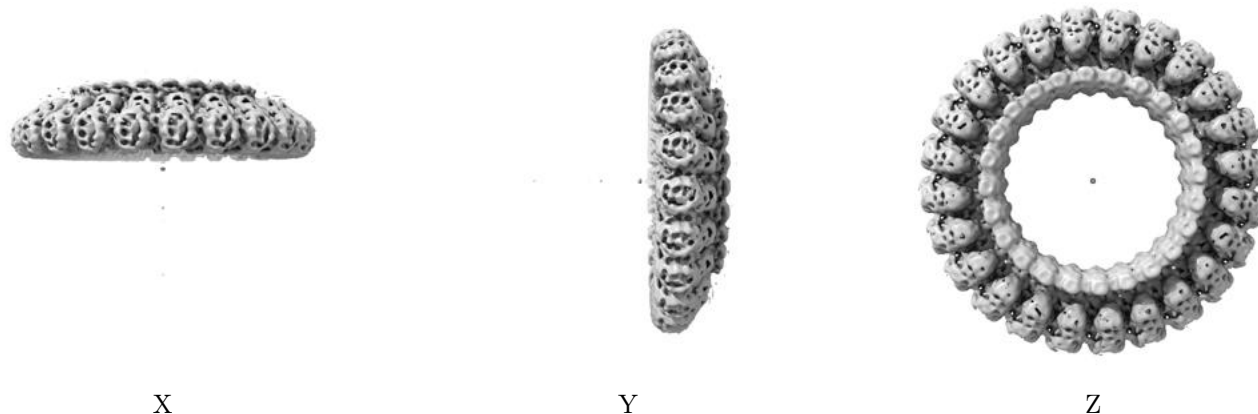


Z

The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.15. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.5.2 Raw map



These images show the 3D surface of the raw map. The raw map's contour level was selected so that its surface encloses the same volume as the primary map does at its recommended contour level.

6.6 Mask visualisation [i](#)

This section shows the 3D surface view of the primary map at 50% transparency overlaid with the specified mask at 0% transparency

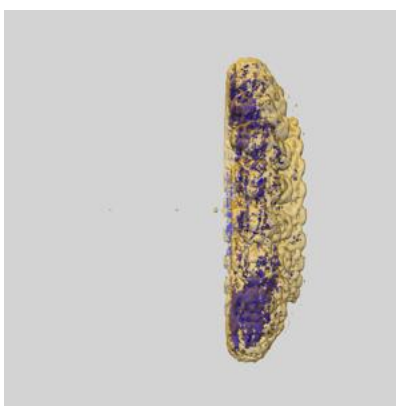
A mask typically either:

- Encompasses the whole structure
- Separates out a domain, a functional unit, a monomer or an area of interest from a larger structure

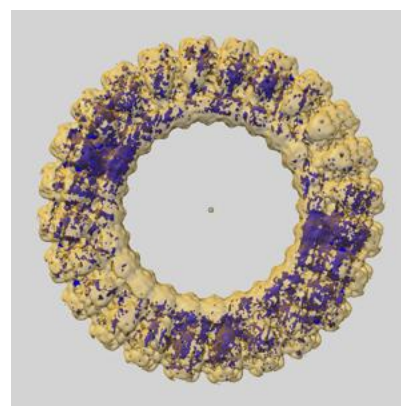
6.6.1 emd_28584_msk_1.map [i](#)



X



Y

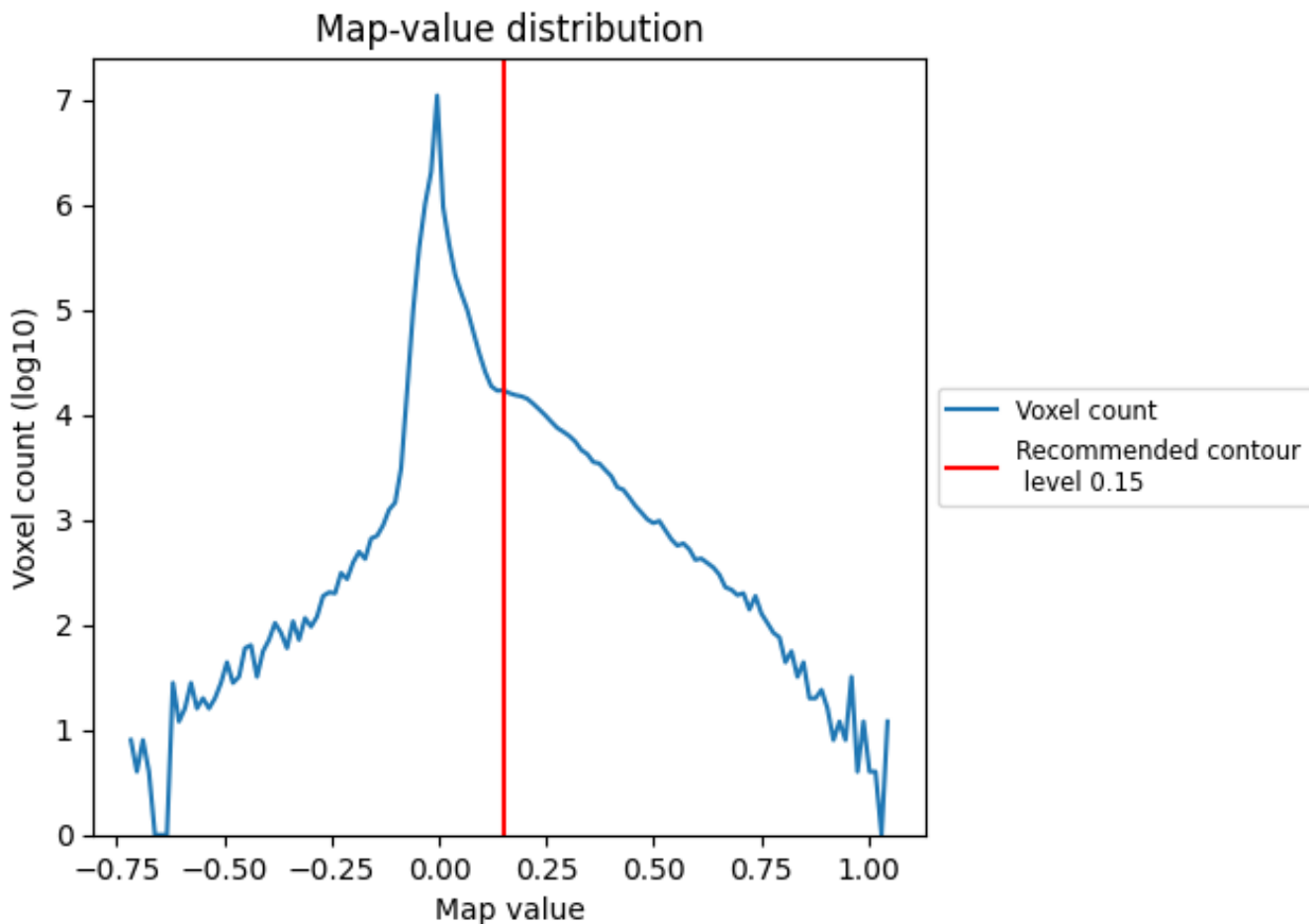


Z

7 Map analysis [i](#)

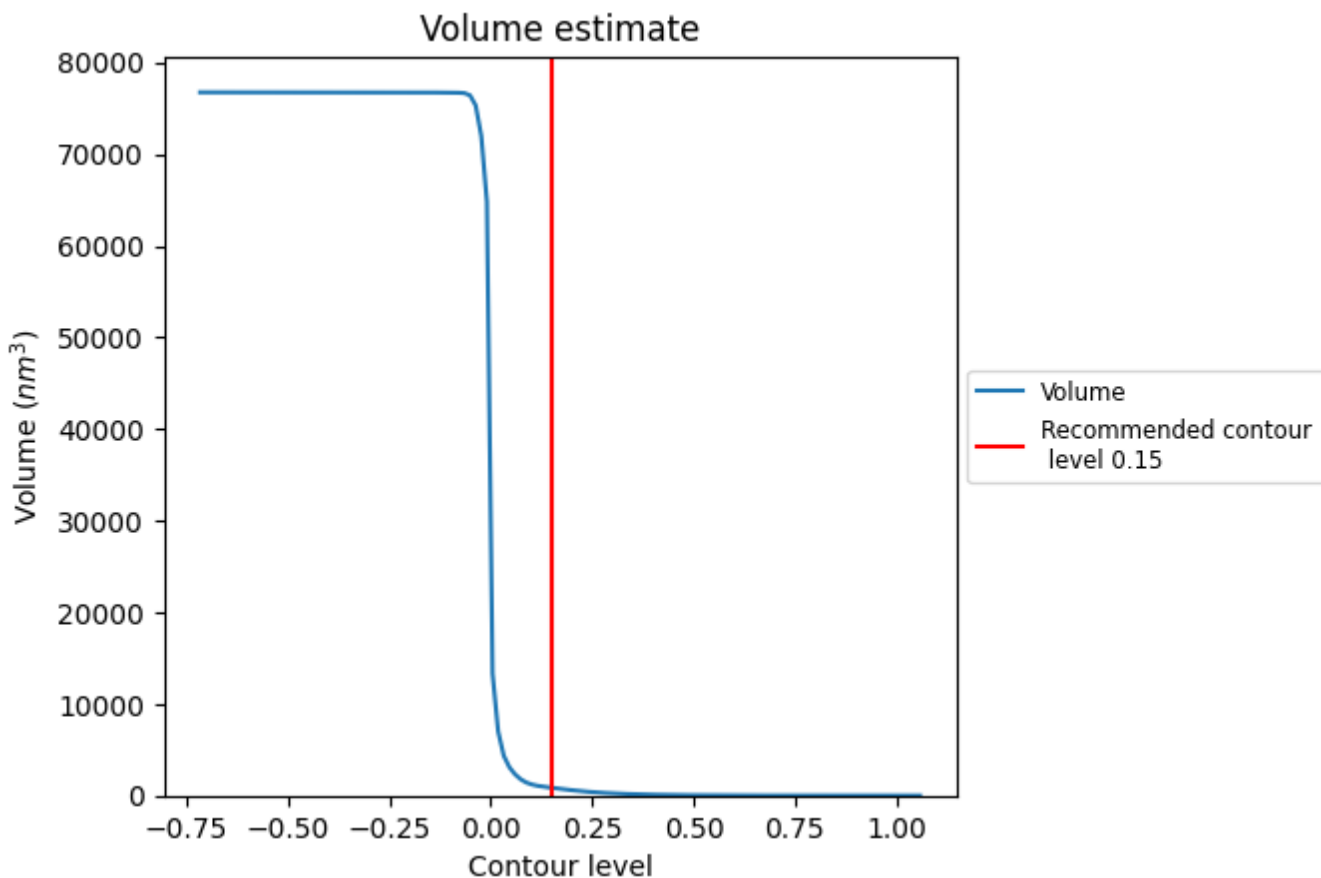
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



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

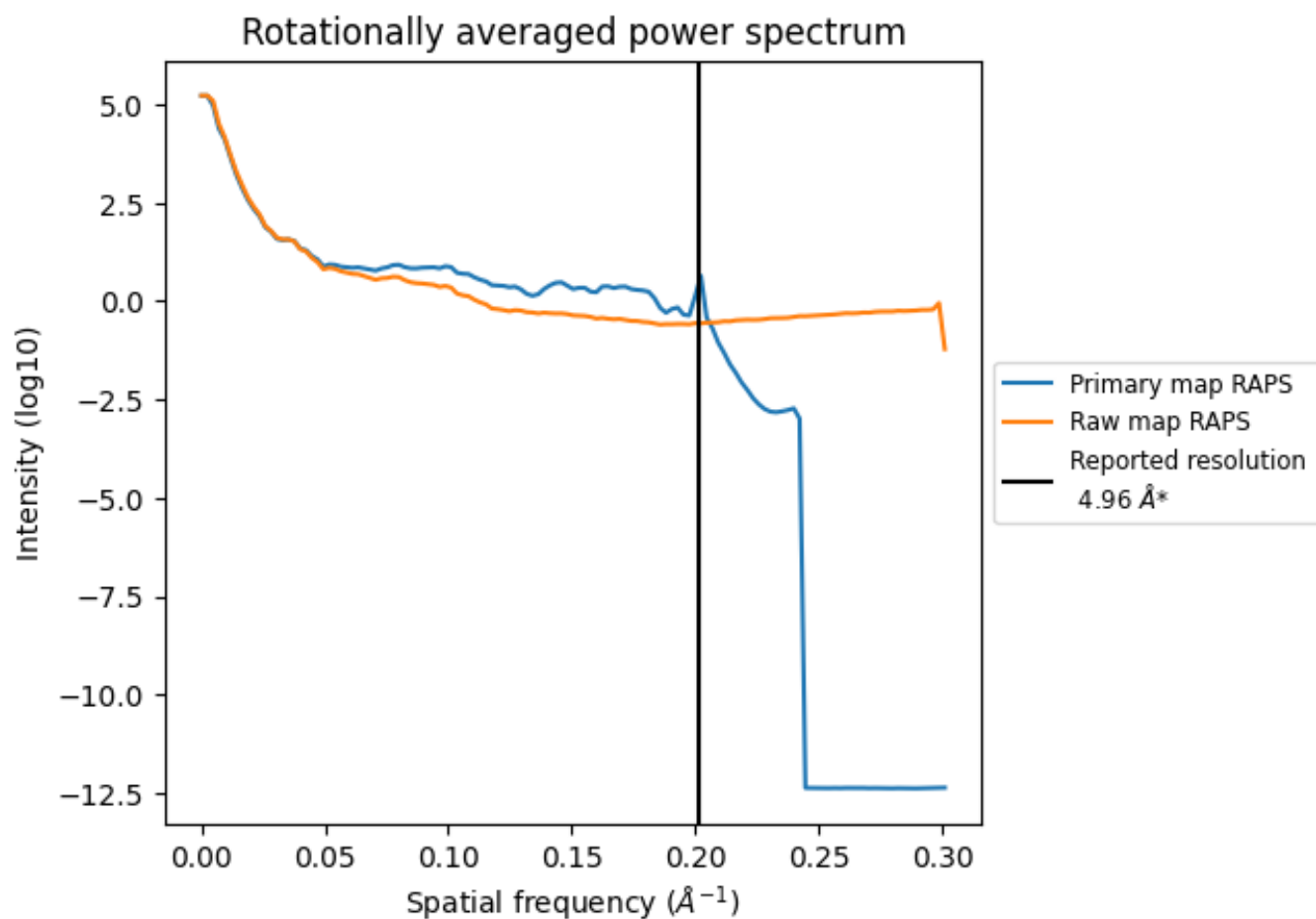
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 852 nm³; this corresponds to an approximate mass of 769 kDa.

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

7.3 Rotationally averaged power spectrum [i](#)

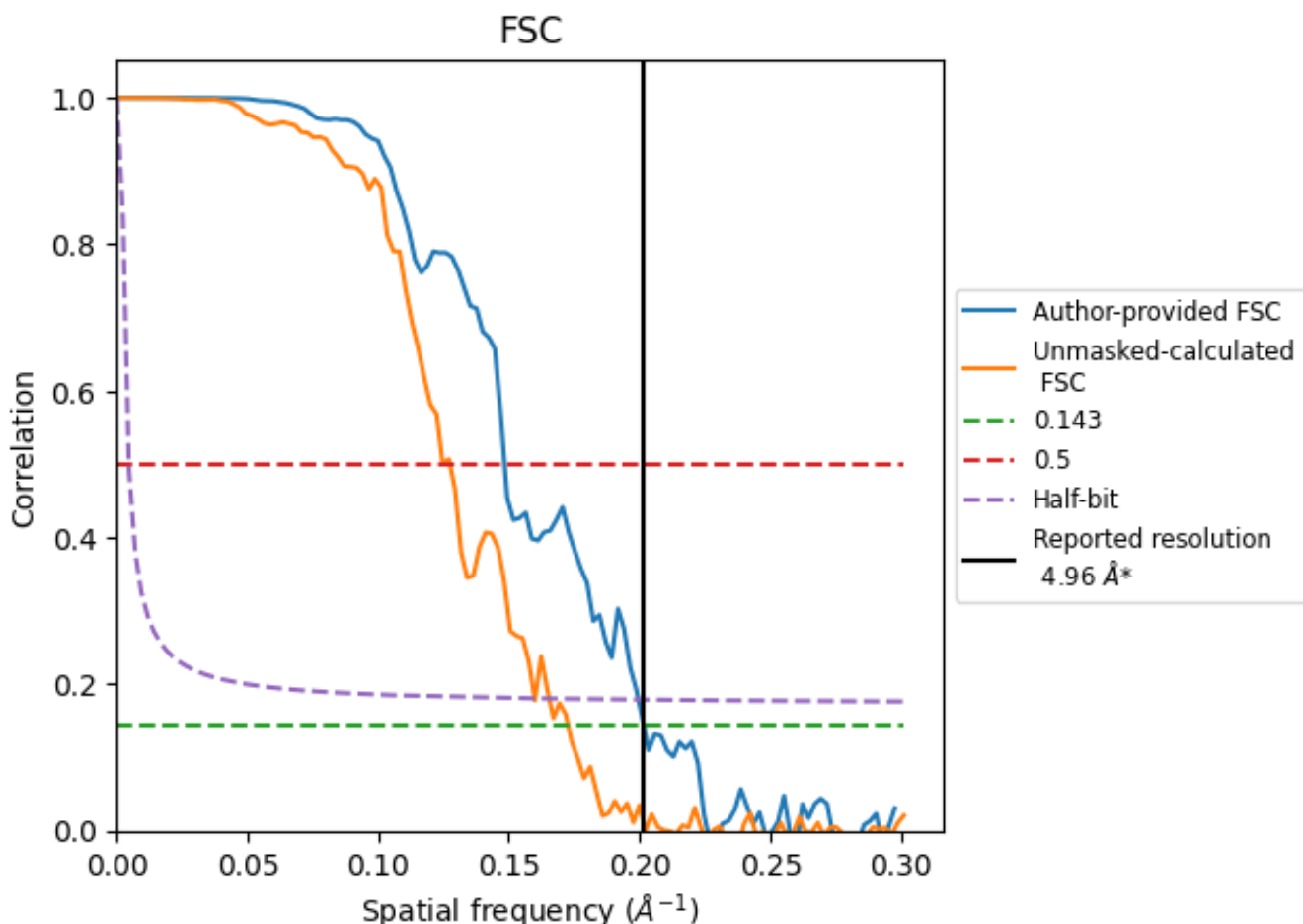


*Reported resolution corresponds to spatial frequency of 0.202 Å⁻¹

8 Fourier-Shell correlation [i](#)

Fourier-Shell Correlation (FSC) is the most commonly used method to estimate the resolution of single-particle and subtomogram-averaged maps. The shape of the curve depends on the imposed symmetry, mask and whether or not the two 3D reconstructions used were processed from a common reference. The reported resolution is shown as a black line. A curve is displayed for the half-bit criterion in addition to lines showing the 0.143 gold standard cut-off and 0.5 cut-off.

8.1 FSC [i](#)



*Reported resolution corresponds to spatial frequency of 0.202 Å⁻¹

8.2 Resolution estimates [i](#)

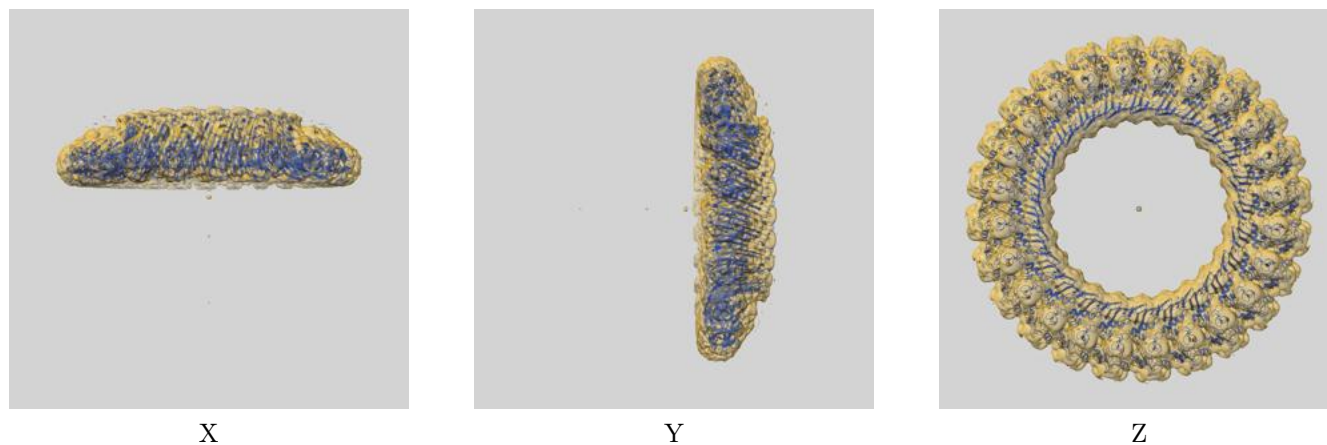
| Resolution estimate (Å) | Estimation criterion (FSC cut-off) | | |
|---------------------------|------------------------------------|------|----------|
| | 0.143 | 0.5 | Half-bit |
| Reported by author | 4.96 | - | - |
| Author-provided FSC curve | 4.96 | 6.74 | 5.01 |
| Unmasked-calculated* | 5.79 | 7.84 | 6.25 |

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 5.79 differs from the reported value 4.96 by more than 10 %

9 Map-model fit [i](#)

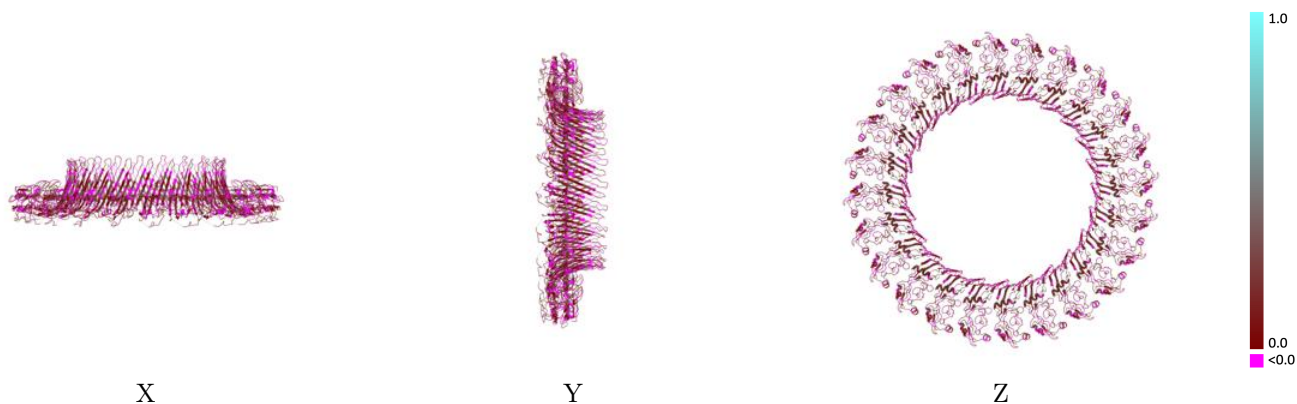
This section contains information regarding the fit between EMDB map EMD-28584 and PDB model 8ET2. Per-residue inclusion information can be found in section 3 on page 6.

9.1 Map-model overlay [i](#)



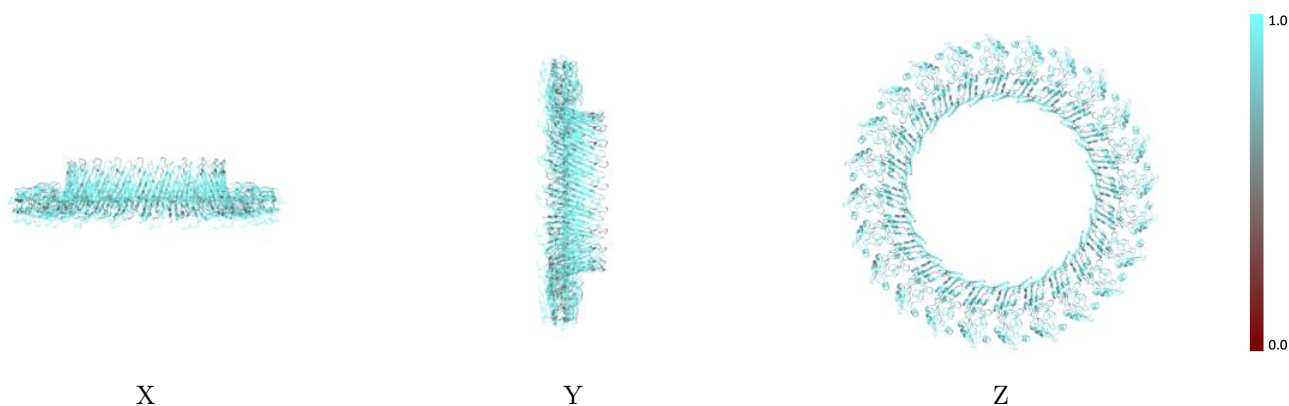
The images above show the 3D surface view of the map at the recommended contour level 0.15 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



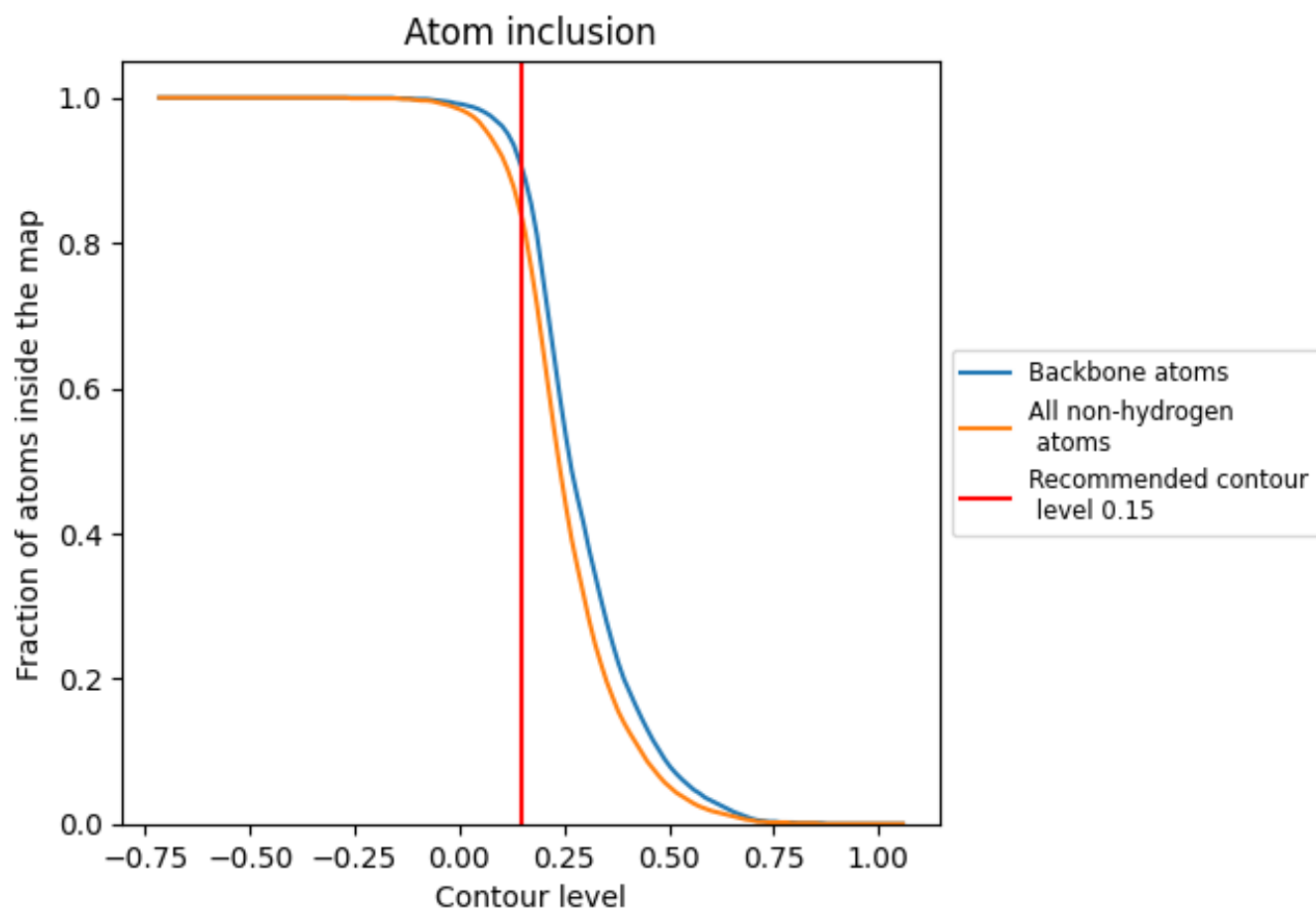
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

9.3 Atom inclusion mapped to coordinate model [\(i\)](#)



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.15).



















































9.4 Atom inclusion [i](#)



At the recommended contour level, 90% of all backbone atoms, 83% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (0.15) and Q-score for the entire model and for each chain.

| Chain | Atom inclusion | Q-score |
|-------|--|--|
| All |  0.8320 |  0.1180 |
| A |  0.8380 |  0.1200 |
| B |  0.8350 |  0.1170 |
| C |  0.8360 |  0.1180 |
| D |  0.8300 |  0.1170 |
| E |  0.8350 |  0.1200 |
| F |  0.8310 |  0.1200 |
| G |  0.8300 |  0.1190 |
| H |  0.8300 |  0.1210 |
| I |  0.8340 |  0.1200 |
| J |  0.8300 |  0.1210 |
| K |  0.8280 |  0.1170 |
| L |  0.8320 |  0.1210 |
| M |  0.8360 |  0.1180 |
| N |  0.8350 |  0.1190 |
| O |  0.8360 |  0.1200 |
| P |  0.8350 |  0.1160 |
| Q |  0.8290 |  0.1140 |
| R |  0.8290 |  0.1180 |
| S |  0.8210 |  0.1140 |
| T |  0.8260 |  0.1150 |
| U |  0.8320 |  0.1170 |
| V |  0.8380 |  0.1150 |
| W |  0.8370 |  0.1180 |
| X |  0.8320 |  0.1160 |

