



## Full wwPDB EM Validation Report ⓘ

Oct 22, 2024 – 03:35 AM EDT

PDB ID : 3GZT  
EMDB ID : EMD-1571  
Title : VP7 recoated rotavirus DLP  
Authors : Chen, J.Z.; Settembre, E.C.; Harrison, S.C.; Grigorieff, N.  
Deposited on : 2009-04-07  
Resolution : 3.80 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](mailto: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>.

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

EMDB validation analysis : 0.0.1.dev113  
Mogul : 2022.3.0, CSD as543be (2022)  
MolProbity : 4.02b-467  
Percentile statistics : 20231227.v01 (using entries in the PDB archive December 27th 2023)  
MapQ : 1.9.13  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
Validation Pipeline (wwPDB-VP) : 2.39

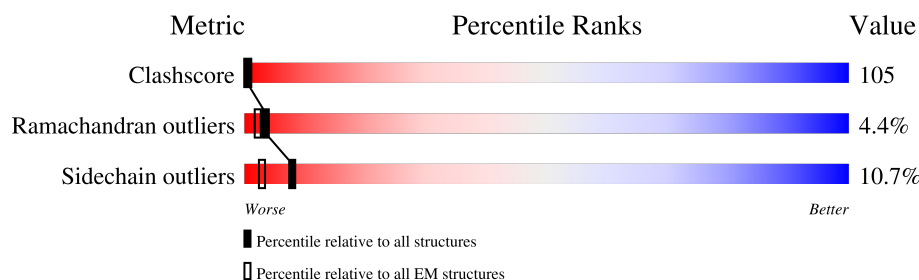
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

*ELECTRON MICROSCOPY*

The reported resolution of this entry is 3.80 Å.

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



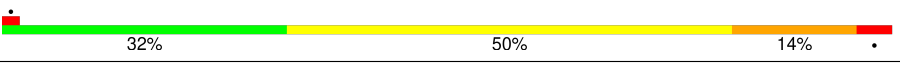
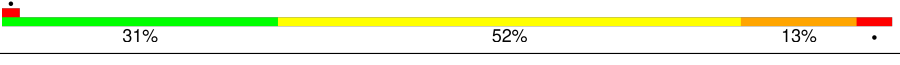

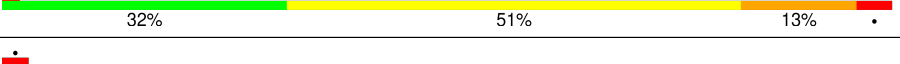
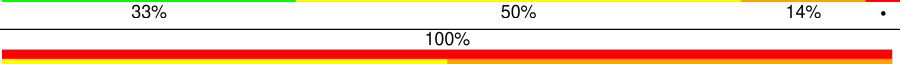

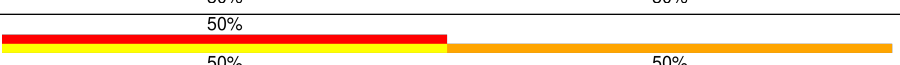
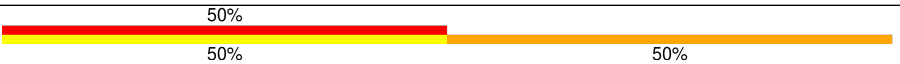
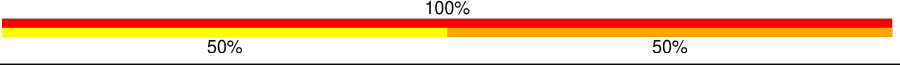
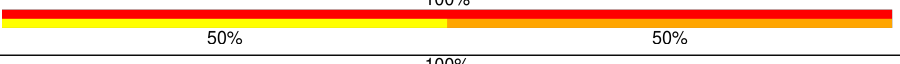



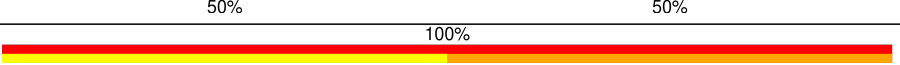
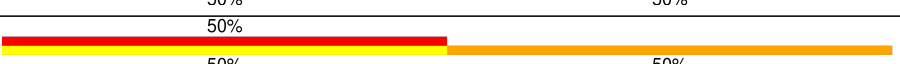
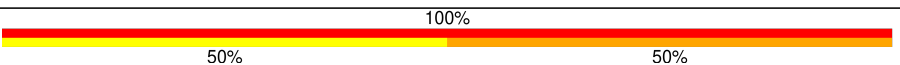


| Metric                | Whole archive<br>(#Entries) | EM structures<br>(#Entries) |
|-----------------------|-----------------------------|-----------------------------|
| Clashscore            | 210492                      | 15764                       |
| Ramachandran outliers | 207382                      | 16835                       |
| Sidechain outliers    | 206894                      | 16415                       |

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  $\geq 3$ , 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   | B     | 255    |                  |
| 1   | F     | 255    |                  |
| 1   | G     | 255    |                  |
| 1   | H     | 255    |                  |
| 1   | I     | 255    |                  |
| 1   | J     | 255    |                  |
| 1   | K     | 255    |                  |
| 1   | L     | 255    |                  |

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| Mol | Chain | Length | Quality of chain   |
|-----|-------|--------|--|
| 1   | M     | 255    |    |
| 1   | N     | 255    |    |
| 1   | O     | 255    |    |
| 1   | P     | 255    |    |
| 1   | Q     | 255    |    |
| 2   | A     | 2      |    |
| 2   | C     | 2      |    |
| 2   | D     | 2      |    |
| 2   | E     | 2      |    |
| 2   | R     | 2      |    |
| 2   | S     | 2      |   |
| 2   | T     | 2      |  |
| 2   | U     | 2      |  |
| 2   | V     | 2      |  |
| 2   | W     | 2      |  |
| 2   | X     | 2      |  |
| 2   | Y     | 2      |  |
| 2   | Z     | 2      |  |

## 2 Entry composition [i](#)

There are 3 unique types of molecules in this entry. The entry contains 26537 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 Outer capsid glycoprotein VP7.

| Mol | Chain | Residues | Atoms         |           |          |          |         | AltConf | Trace |
|-----|-------|----------|---------------|-----------|----------|----------|---------|---------|-------|
| 1   | B     | 255      | Total<br>2011 | C<br>1277 | N<br>314 | O<br>404 | S<br>16 | 0       | 0     |
| 1   | F     | 255      | Total<br>2011 | C<br>1277 | N<br>314 | O<br>404 | S<br>16 | 0       | 0     |
| 1   | G     | 255      | Total<br>2011 | C<br>1277 | N<br>314 | O<br>404 | S<br>16 | 0       | 0     |
| 1   | H     | 255      | Total<br>2011 | C<br>1277 | N<br>314 | O<br>404 | S<br>16 | 0       | 0     |
| 1   | I     | 255      | Total<br>2011 | C<br>1277 | N<br>314 | O<br>404 | S<br>16 | 0       | 0     |
| 1   | J     | 255      | Total<br>2011 | C<br>1277 | N<br>314 | O<br>404 | S<br>16 | 0       | 0     |
| 1   | K     | 255      | Total<br>2011 | C<br>1277 | N<br>314 | O<br>404 | S<br>16 | 0       | 0     |
| 1   | L     | 255      | Total<br>2011 | C<br>1277 | N<br>314 | O<br>404 | S<br>16 | 0       | 0     |
| 1   | M     | 255      | Total<br>2011 | C<br>1277 | N<br>314 | O<br>404 | S<br>16 | 0       | 0     |
| 1   | N     | 255      | Total<br>2011 | C<br>1277 | N<br>314 | O<br>404 | S<br>16 | 0       | 0     |
| 1   | O     | 255      | Total<br>2011 | C<br>1277 | N<br>314 | O<br>404 | S<br>16 | 0       | 0     |
| 1   | P     | 255      | Total<br>2011 | C<br>1277 | N<br>314 | O<br>404 | S<br>16 | 0       | 0     |
| 1   | Q     | 255      | Total<br>2011 | C<br>1277 | N<br>314 | O<br>404 | S<br>16 | 0       | 0     |

There are 13 discrepancies between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference  |
|-------|---------|----------|--------|---------|------------|
| B     | 171     | THR      | ALA    | variant | UNP P12476 |
| F     | 171     | THR      | ALA    | variant | UNP P12476 |
| G     | 171     | THR      | ALA    | variant | UNP P12476 |
| H     | 171     | THR      | ALA    | variant | UNP P12476 |

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| Chain | Residue | Modelled | Actual | Comment | Reference  |
|-------|---------|----------|--------|---------|------------|
| I     | 171     | THR      | ALA    | variant | UNP P12476 |
| J     | 171     | THR      | ALA    | variant | UNP P12476 |
| K     | 171     | THR      | ALA    | variant | UNP P12476 |
| L     | 171     | THR      | ALA    | variant | UNP P12476 |
| M     | 171     | THR      | ALA    | variant | UNP P12476 |
| N     | 171     | THR      | ALA    | variant | UNP P12476 |
| O     | 171     | THR      | ALA    | variant | UNP P12476 |
| P     | 171     | THR      | ALA    | variant | UNP P12476 |
| Q     | 171     | THR      | ALA    | variant | UNP P12476 |

- Molecule 2 is an oligosaccharide called 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose.



| Mol | Chain | Residues | Atoms |    |   |    | AltConf | Trace |
|-----|-------|----------|-------|----|---|----|---------|-------|
| 2   | A     | 2        | Total | C  | N | O  | 0       | 0     |
|     |       |          | 28    | 16 | 2 | 10 |         |       |
| 2   | C     | 2        | Total | C  | N | O  | 0       | 0     |
|     |       |          | 28    | 16 | 2 | 10 |         |       |
| 2   | D     | 2        | Total | C  | N | O  | 0       | 0     |
|     |       |          | 28    | 16 | 2 | 10 |         |       |
| 2   | E     | 2        | Total | C  | N | O  | 0       | 0     |
|     |       |          | 28    | 16 | 2 | 10 |         |       |
| 2   | R     | 2        | Total | C  | N | O  | 0       | 0     |
|     |       |          | 28    | 16 | 2 | 10 |         |       |
| 2   | S     | 2        | Total | C  | N | O  | 0       | 0     |
|     |       |          | 28    | 16 | 2 | 10 |         |       |
| 2   | T     | 2        | Total | C  | N | O  | 0       | 0     |
|     |       |          | 28    | 16 | 2 | 10 |         |       |
| 2   | U     | 2        | Total | C  | N | O  | 0       | 0     |
|     |       |          | 28    | 16 | 2 | 10 |         |       |
| 2   | V     | 2        | Total | C  | N | O  | 0       | 0     |
|     |       |          | 28    | 16 | 2 | 10 |         |       |
| 2   | W     | 2        | Total | C  | N | O  | 0       | 0     |
|     |       |          | 28    | 16 | 2 | 10 |         |       |
| 2   | X     | 2        | Total | C  | N | O  | 0       | 0     |
|     |       |          | 28    | 16 | 2 | 10 |         |       |
| 2   | Y     | 2        | Total | C  | N | O  | 0       | 0     |
|     |       |          | 28    | 16 | 2 | 10 |         |       |

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| Mol | Chain | Residues | Atoms |    |   |    | AltConf | Trace |
|-----|-------|----------|-------|----|---|----|---------|-------|
| 2   | Z     | 2        | Total | C  | N | O  | 0       | 0     |
|     |       |          | 28    | 16 | 2 | 10 |         |       |

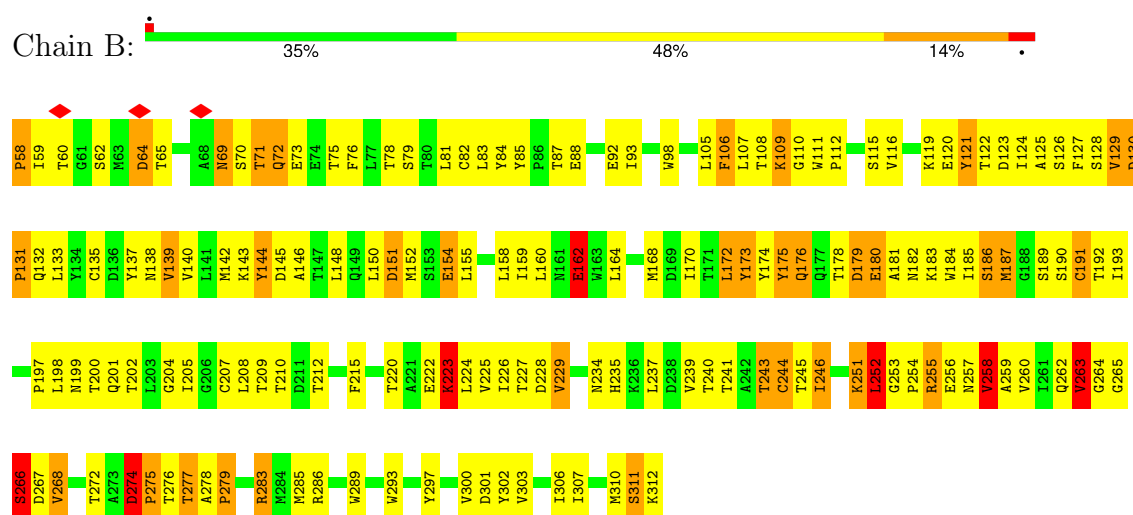
- Molecule 3 is CALCIUM ION (three-letter code: CA) (formula: Ca).

| Mol | Chain | Residues | Atoms |    | AltConf |
|-----|-------|----------|-------|----|---------|
| 3   | B     | 4        | Total | Ca | 0       |
|     |       |          | 4     | 4  |         |
| 3   | F     | 2        | Total | Ca | 0       |
|     |       |          | 2     | 2  |         |
| 3   | G     | 2        | Total | Ca | 0       |
|     |       |          | 2     | 2  |         |
| 3   | H     | 2        | Total | Ca | 0       |
|     |       |          | 2     | 2  |         |
| 3   | I     | 2        | Total | Ca | 0       |
|     |       |          | 2     | 2  |         |
| 3   | J     | 2        | Total | Ca | 0       |
|     |       |          | 2     | 2  |         |
| 3   | K     | 2        | Total | Ca | 0       |
|     |       |          | 2     | 2  |         |
| 3   | L     | 2        | Total | Ca | 0       |
|     |       |          | 2     | 2  |         |
| 3   | M     | 2        | Total | Ca | 0       |
|     |       |          | 2     | 2  |         |
| 3   | N     | 2        | Total | Ca | 0       |
|     |       |          | 2     | 2  |         |
| 3   | O     | 2        | Total | Ca | 0       |
|     |       |          | 2     | 2  |         |
| 3   | P     | 2        | Total | Ca | 0       |
|     |       |          | 2     | 2  |         |
| 3   | Q     | 3        | Total | Ca | 0       |
|     |       |          | 3     | 3  |         |
| 3   | X     | 1        | Total | Ca | 0       |
|     |       |          | 1     | 1  |         |

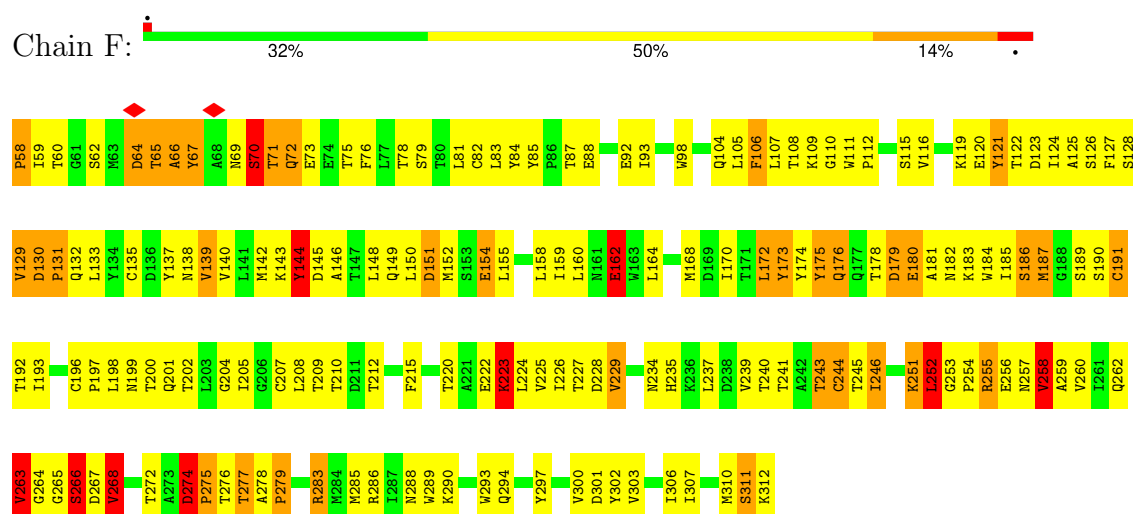
### 3 Residue-property plots

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

#### • Molecule 1: Outer capsid glycoprotein VP7

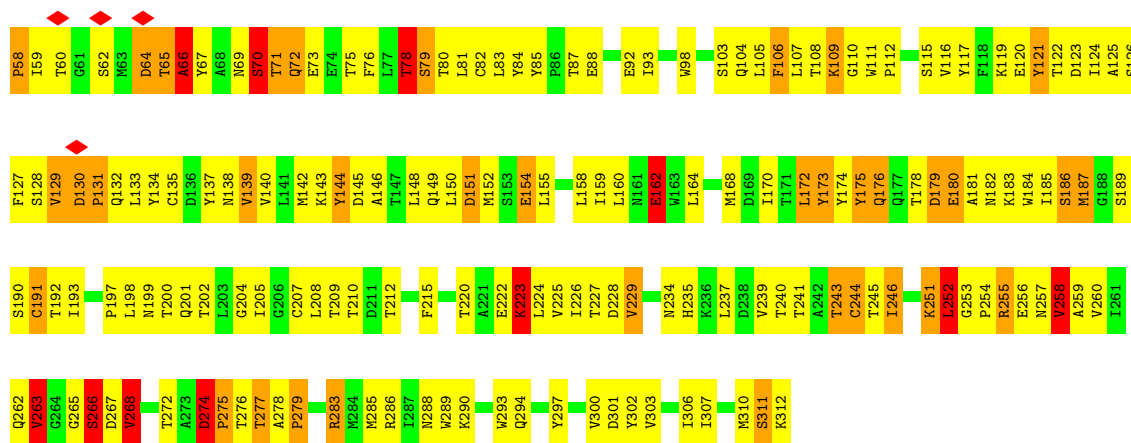


#### • Molecule 1: Outer capsid glycoprotein VP7

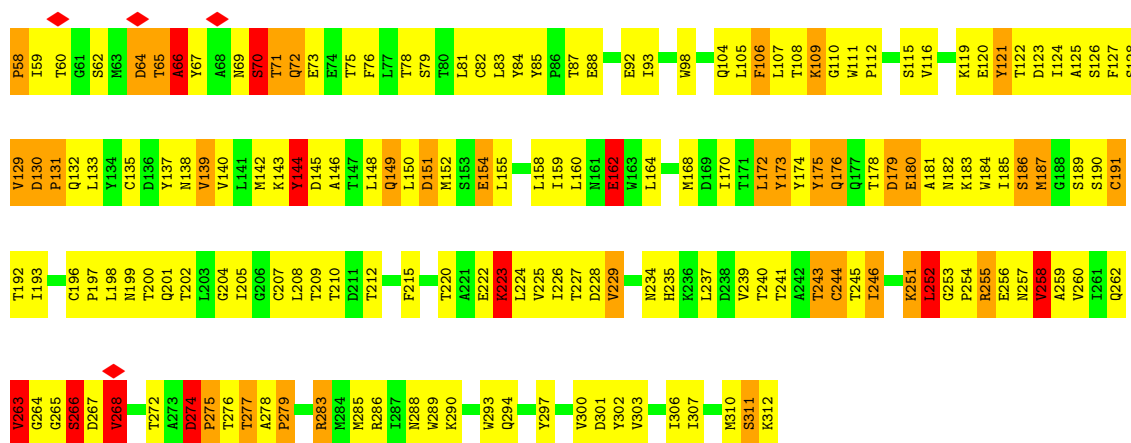
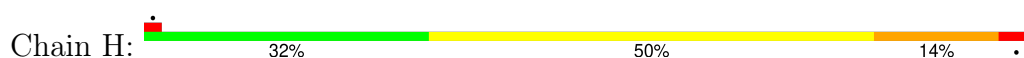


#### • Molecule 1: Outer capsid glycoprotein VP7

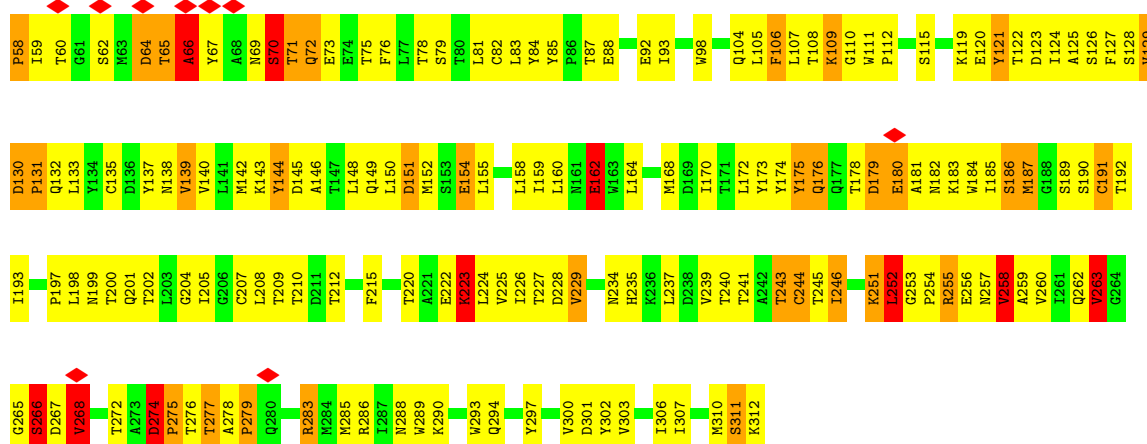




• Molecule 1: Outer capsid glycoprotein VP7

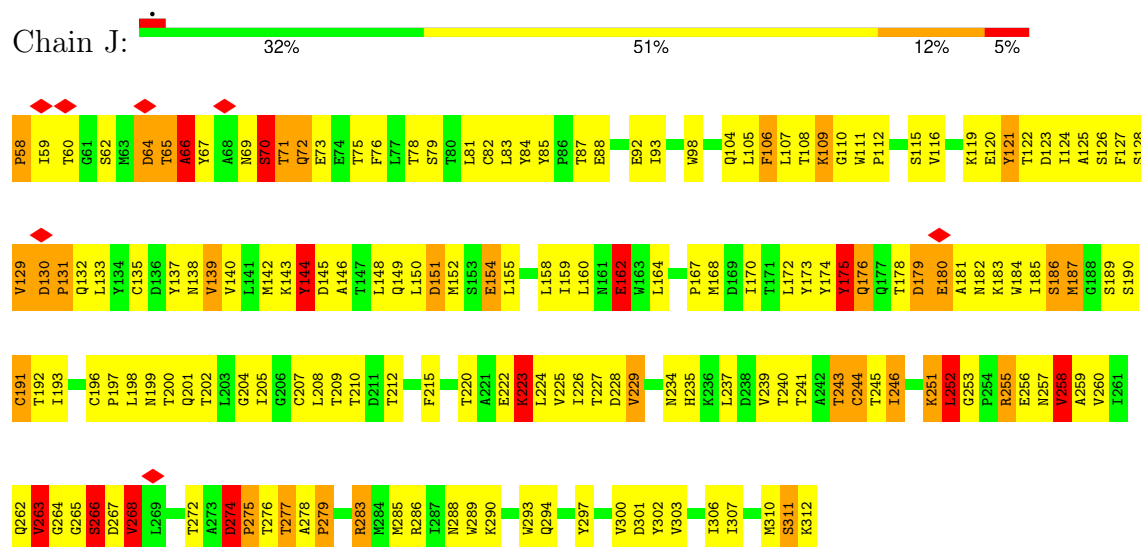


• Molecule 1: Outer capsid glycoprotein VP7

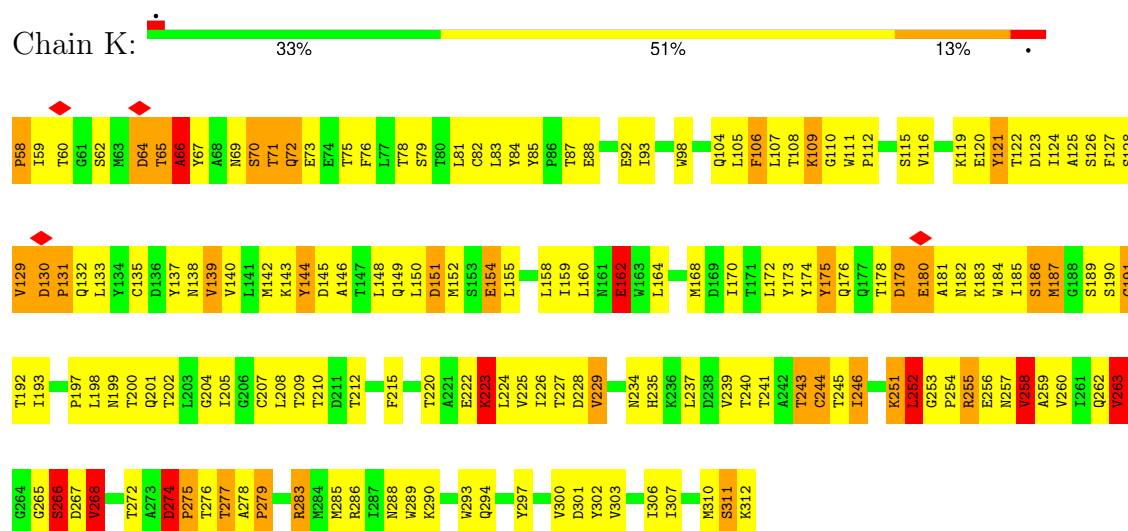


• Molecule 1: Outer capsid glycoprotein VP7

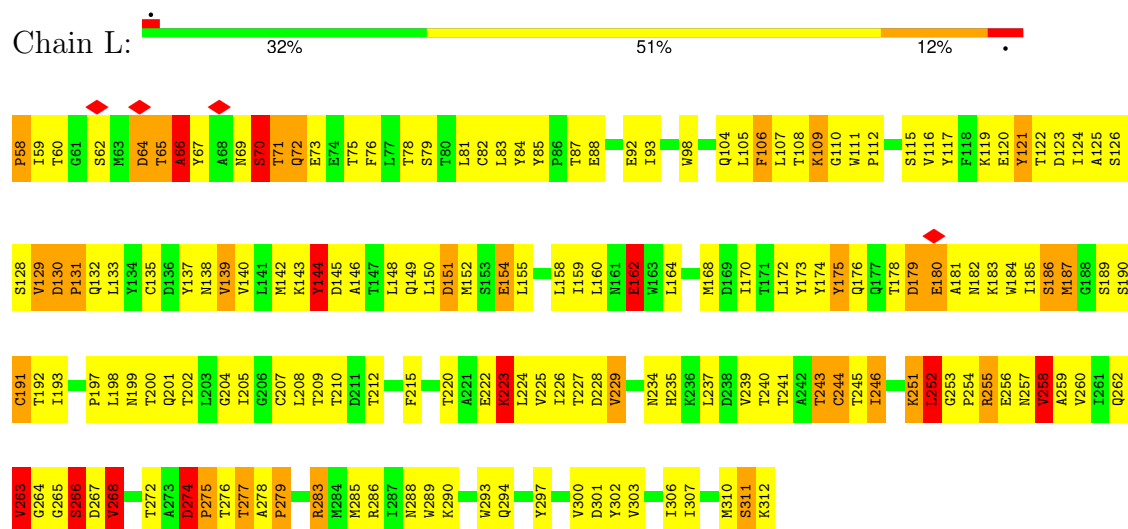




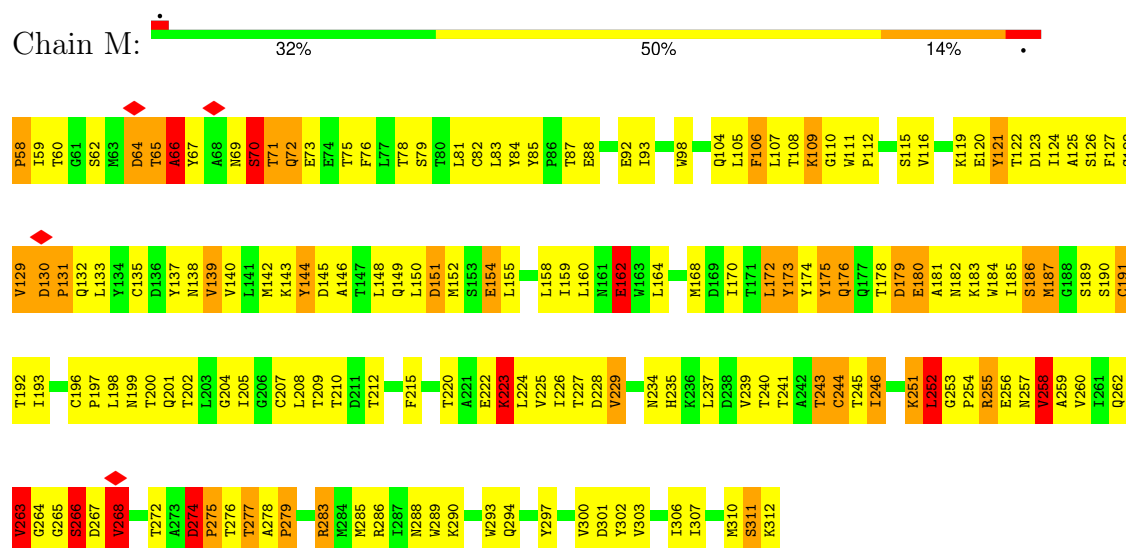
• Molecule 1: Outer capsid glycoprotein VP7



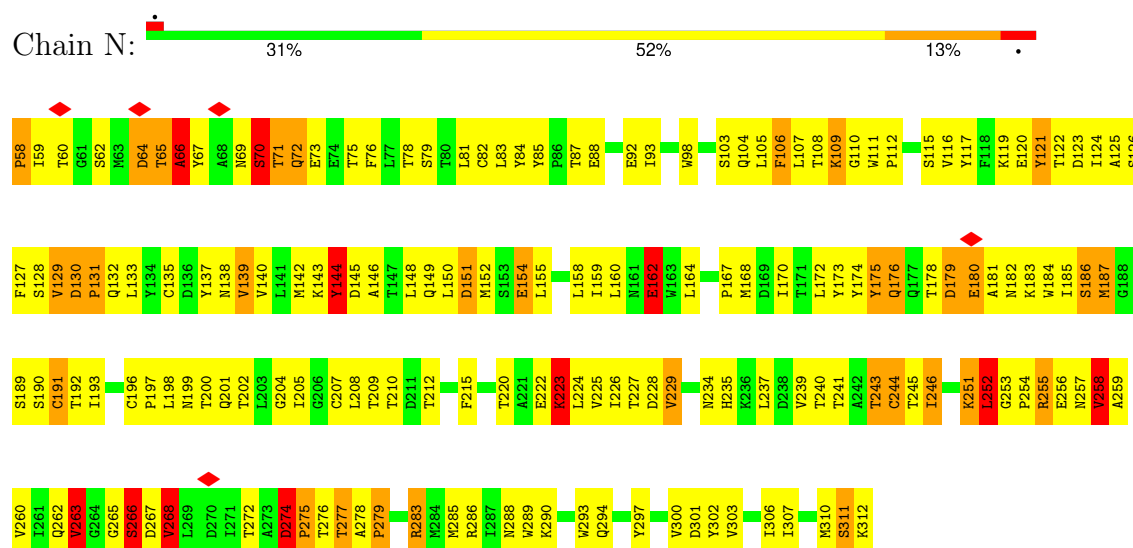
• Molecule 1: Outer capsid glycoprotein VP7



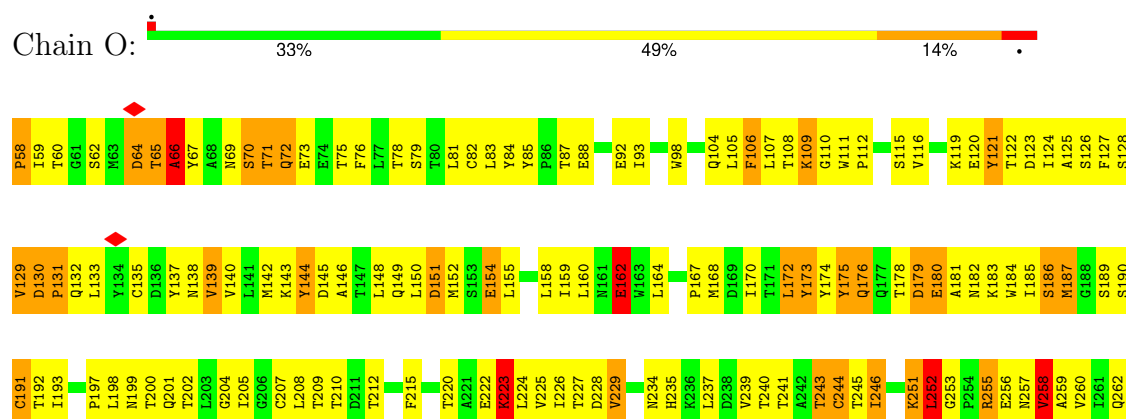
• Molecule 1: Outer capsid glycoprotein VP7



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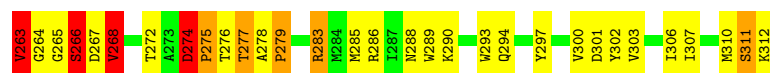
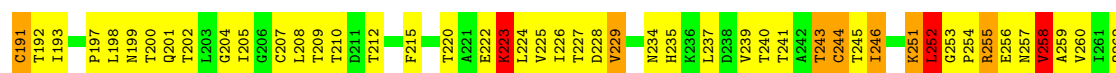
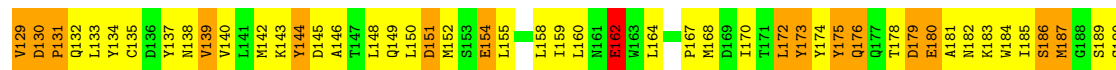


• Molecule 1: Outer capsid glycoprotein VP7

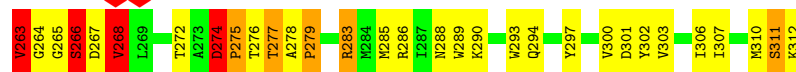
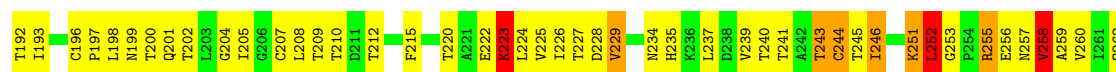
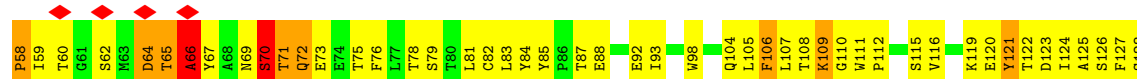
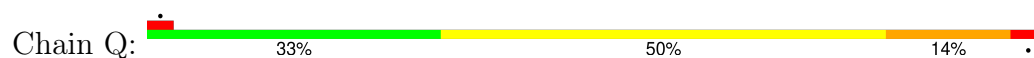




• Molecule 1: Outer capsid glycoprotein VP7



• Molecule 1: Outer capsid glycoprotein VP7



• Molecule 2: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose



• Molecule 2: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose



- Molecule 2: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose



- Molecule 2: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose



- Molecule 2: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose



- Molecule 2: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose



- Molecule 2: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose



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- Molecule 2: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose





## 4 Experimental information

| Property                             | Value               | Source    |
|--------------------------------------|---------------------|-----------|
| EM reconstruction method             | SINGLE PARTICLE     | Depositor |
| Imposed symmetry                     | POINT, I            | Depositor |
| Number of particles used             | 3780                | Depositor |
| Resolution determination method      | Not provided        |           |
| CTF correction method                | individual particle | Depositor |
| Microscope                           | FEI TECNAI F30      | Depositor |
| Voltage (kV)                         | 300                 | Depositor |
| Electron dose ( $e^-/\text{\AA}^2$ ) | 25                  | Depositor |
| Minimum defocus (nm)                 | 1200                | Depositor |
| Maximum defocus (nm)                 | 3500                | Depositor |
| Magnification                        | 58168               | Depositor |
| Image detector                       | GENERIC FILM        | Depositor |
| Maximum map value                    | 7.179               | Depositor |
| Minimum map value                    | -3.263              | Depositor |
| Average map value                    | 0.000               | Depositor |
| Map value standard deviation         | 1.000               | Depositor |
| Recommended contour level            | 2                   | Depositor |
| Map size ( $\text{\AA}$ )            | 986.4, 986.4, 986.4 | wwPDB     |
| Map dimensions                       | 800, 800, 800       | wwPDB     |
| Map angles ( $^\circ$ )              | 90.0, 90.0, 90.0    | wwPDB     |
| Pixel spacing ( $\text{\AA}$ )       | 1.233, 1.233, 1.233 | Depositor |

## 5 Model quality ⓘ

### 5.1 Standard geometry ⓘ

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

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   | B     | 0.81         | 10/2053 (0.5%)   | 1.32        | 32/2806 (1.1%)   |
| 1   | F     | 0.82         | 10/2053 (0.5%)   | 1.41        | 39/2806 (1.4%)   |
| 1   | G     | 0.95         | 13/2053 (0.6%)   | 1.46        | 38/2806 (1.4%)   |
| 1   | H     | 0.87         | 12/2053 (0.6%)   | 1.46        | 39/2806 (1.4%)   |
| 1   | I     | 0.88         | 12/2053 (0.6%)   | 1.46        | 37/2806 (1.3%)   |
| 1   | J     | 0.87         | 11/2053 (0.5%)   | 1.46        | 41/2806 (1.5%)   |
| 1   | K     | 0.87         | 11/2053 (0.5%)   | 1.45        | 37/2806 (1.3%)   |
| 1   | L     | 0.87         | 12/2053 (0.6%)   | 1.45        | 39/2806 (1.4%)   |
| 1   | M     | 0.87         | 11/2053 (0.5%)   | 1.45        | 38/2806 (1.4%)   |
| 1   | N     | 0.87         | 11/2053 (0.5%)   | 1.46        | 38/2806 (1.4%)   |
| 1   | O     | 0.87         | 11/2053 (0.5%)   | 1.46        | 37/2806 (1.3%)   |
| 1   | P     | 0.87         | 11/2053 (0.5%)   | 1.45        | 38/2806 (1.4%)   |
| 1   | Q     | 0.87         | 11/2053 (0.5%)   | 1.45        | 38/2806 (1.4%)   |
| All | All   | 0.87         | 146/26689 (0.5%) | 1.44        | 491/36478 (1.3%) |

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

| Mol | Chain | #Chirality outliers | #Planarity outliers |
|-----|-------|---------------------|---------------------|
| 1   | B     | 0                   | 3                   |
| 1   | F     | 0                   | 3                   |
| 1   | G     | 0                   | 5                   |
| 1   | H     | 0                   | 4                   |
| 1   | I     | 0                   | 4                   |
| 1   | J     | 0                   | 4                   |
| 1   | K     | 0                   | 4                   |
| 1   | L     | 0                   | 4                   |
| 1   | M     | 0                   | 4                   |
| 1   | N     | 0                   | 4                   |

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| Mol | Chain | #Chirality outliers | #Planarity outliers |
|-----|-------|---------------------|---------------------|
| 1   | O     | 0                   | 4                   |
| 1   | P     | 0                   | 4                   |
| 1   | Q     | 0                   | 4                   |
| All | All   | 0                   | 51                  |

All (146) bond length outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z      | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|-------|--------|-------------|----------|
| 1   | G     | 79  | SER  | C-N   | 15.53  | 1.69        | 1.34     |
| 1   | L     | 66  | ALA  | C-N   | -14.04 | 1.01        | 1.34     |
| 1   | Q     | 66  | ALA  | C-N   | -14.03 | 1.01        | 1.34     |
| 1   | I     | 66  | ALA  | C-N   | -14.01 | 1.01        | 1.34     |
| 1   | N     | 66  | ALA  | C-N   | -14.01 | 1.01        | 1.34     |
| 1   | P     | 66  | ALA  | C-N   | -14.00 | 1.01        | 1.34     |
| 1   | J     | 66  | ALA  | C-N   | -14.00 | 1.01        | 1.34     |
| 1   | G     | 66  | ALA  | C-N   | -13.99 | 1.01        | 1.34     |
| 1   | O     | 66  | ALA  | C-N   | -13.99 | 1.01        | 1.34     |
| 1   | K     | 66  | ALA  | C-N   | -13.99 | 1.01        | 1.34     |
| 1   | H     | 66  | ALA  | C-N   | -13.98 | 1.01        | 1.34     |
| 1   | M     | 66  | ALA  | C-N   | -13.97 | 1.01        | 1.34     |
| 1   | J     | 129 | VAL  | C-N   | 9.90   | 1.56        | 1.34     |
| 1   | H     | 129 | VAL  | C-N   | 9.88   | 1.56        | 1.34     |
| 1   | G     | 129 | VAL  | C-N   | 9.86   | 1.56        | 1.34     |
| 1   | I     | 129 | VAL  | C-N   | 9.86   | 1.56        | 1.34     |
| 1   | B     | 129 | VAL  | C-N   | 9.85   | 1.56        | 1.34     |
| 1   | N     | 129 | VAL  | C-N   | 9.85   | 1.56        | 1.34     |
| 1   | F     | 129 | VAL  | C-N   | 9.85   | 1.56        | 1.34     |
| 1   | Q     | 129 | VAL  | C-N   | 9.84   | 1.56        | 1.34     |
| 1   | M     | 129 | VAL  | C-N   | 9.84   | 1.56        | 1.34     |
| 1   | O     | 129 | VAL  | C-N   | 9.83   | 1.56        | 1.34     |
| 1   | P     | 129 | VAL  | C-N   | 9.83   | 1.56        | 1.34     |
| 1   | K     | 129 | VAL  | C-N   | 9.82   | 1.56        | 1.34     |
| 1   | L     | 129 | VAL  | C-N   | 9.82   | 1.56        | 1.34     |
| 1   | G     | 78  | THR  | C-N   | -8.57  | 1.14        | 1.34     |
| 1   | I     | 258 | VAL  | C-N   | 8.57   | 1.53        | 1.34     |
| 1   | O     | 258 | VAL  | C-N   | 8.56   | 1.53        | 1.34     |
| 1   | J     | 258 | VAL  | C-N   | 8.55   | 1.53        | 1.34     |
| 1   | G     | 258 | VAL  | C-N   | 8.52   | 1.53        | 1.34     |
| 1   | M     | 258 | VAL  | C-N   | 8.52   | 1.53        | 1.34     |
| 1   | B     | 258 | VAL  | C-N   | 8.51   | 1.53        | 1.34     |
| 1   | Q     | 258 | VAL  | C-N   | 8.51   | 1.53        | 1.34     |
| 1   | P     | 258 | VAL  | C-N   | 8.50   | 1.53        | 1.34     |

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| Mol | Chain | Res | Type | Atoms  | Z    | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|--------|------|-------------|----------|
| 1   | F     | 258 | VAL  | C-N    | 8.50 | 1.53        | 1.34     |
| 1   | H     | 258 | VAL  | C-N    | 8.50 | 1.53        | 1.34     |
| 1   | L     | 258 | VAL  | C-N    | 8.49 | 1.53        | 1.34     |
| 1   | N     | 258 | VAL  | C-N    | 8.48 | 1.53        | 1.34     |
| 1   | K     | 258 | VAL  | C-N    | 8.46 | 1.53        | 1.34     |
| 1   | G     | 58  | PRO  | C-N    | 8.30 | 1.53        | 1.34     |
| 1   | H     | 58  | PRO  | C-N    | 8.29 | 1.53        | 1.34     |
| 1   | F     | 58  | PRO  | C-N    | 8.28 | 1.53        | 1.34     |
| 1   | K     | 58  | PRO  | C-N    | 8.28 | 1.53        | 1.34     |
| 1   | Q     | 58  | PRO  | C-N    | 8.28 | 1.53        | 1.34     |
| 1   | B     | 58  | PRO  | C-N    | 8.27 | 1.53        | 1.34     |
| 1   | I     | 58  | PRO  | C-N    | 8.27 | 1.53        | 1.34     |
| 1   | M     | 58  | PRO  | C-N    | 8.27 | 1.53        | 1.34     |
| 1   | J     | 58  | PRO  | C-N    | 8.27 | 1.53        | 1.34     |
| 1   | L     | 58  | PRO  | C-N    | 8.26 | 1.53        | 1.34     |
| 1   | N     | 58  | PRO  | C-N    | 8.26 | 1.53        | 1.34     |
| 1   | P     | 58  | PRO  | C-N    | 8.25 | 1.53        | 1.34     |
| 1   | O     | 58  | PRO  | C-N    | 8.24 | 1.52        | 1.34     |
| 1   | Q     | 62  | SER  | C-N    | 6.74 | 1.49        | 1.34     |
| 1   | H     | 62  | SER  | C-N    | 6.73 | 1.49        | 1.34     |
| 1   | O     | 62  | SER  | C-N    | 6.72 | 1.49        | 1.34     |
| 1   | N     | 62  | SER  | C-N    | 6.72 | 1.49        | 1.34     |
| 1   | L     | 62  | SER  | C-N    | 6.71 | 1.49        | 1.34     |
| 1   | J     | 62  | SER  | C-N    | 6.71 | 1.49        | 1.34     |
| 1   | K     | 62  | SER  | C-N    | 6.70 | 1.49        | 1.34     |
| 1   | B     | 62  | SER  | C-N    | 6.69 | 1.49        | 1.34     |
| 1   | F     | 62  | SER  | C-N    | 6.68 | 1.49        | 1.34     |
| 1   | P     | 62  | SER  | C-N    | 6.67 | 1.49        | 1.34     |
| 1   | G     | 62  | SER  | C-N    | 6.66 | 1.49        | 1.34     |
| 1   | M     | 62  | SER  | C-N    | 6.66 | 1.49        | 1.34     |
| 1   | I     | 62  | SER  | C-N    | 6.64 | 1.49        | 1.34     |
| 1   | J     | 245 | THR  | CB-OG1 | 6.44 | 1.56        | 1.43     |
| 1   | I     | 245 | THR  | CB-OG1 | 6.44 | 1.56        | 1.43     |
| 1   | M     | 245 | THR  | CB-OG1 | 6.43 | 1.56        | 1.43     |
| 1   | F     | 245 | THR  | CB-OG1 | 6.42 | 1.56        | 1.43     |
| 1   | H     | 245 | THR  | CB-OG1 | 6.42 | 1.56        | 1.43     |
| 1   | P     | 245 | THR  | CB-OG1 | 6.42 | 1.56        | 1.43     |
| 1   | K     | 245 | THR  | CB-OG1 | 6.41 | 1.56        | 1.43     |
| 1   | O     | 245 | THR  | CB-OG1 | 6.41 | 1.56        | 1.43     |
| 1   | B     | 245 | THR  | CB-OG1 | 6.41 | 1.56        | 1.43     |
| 1   | N     | 245 | THR  | CB-OG1 | 6.40 | 1.56        | 1.43     |
| 1   | L     | 245 | THR  | CB-OG1 | 6.40 | 1.56        | 1.43     |

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| Mol | Chain | Res | Type | Atoms  | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|--------|-------|-------------|----------|
| 1   | Q     | 245 | THR  | CB-OG1 | 6.39  | 1.56        | 1.43     |
| 1   | G     | 245 | THR  | CB-OG1 | 6.37  | 1.55        | 1.43     |
| 1   | G     | 246 | ILE  | CB-CG2 | 6.18  | 1.72        | 1.52     |
| 1   | M     | 246 | ILE  | CB-CG2 | 6.18  | 1.72        | 1.52     |
| 1   | H     | 246 | ILE  | CB-CG2 | 6.18  | 1.72        | 1.52     |
| 1   | J     | 246 | ILE  | CB-CG2 | 6.17  | 1.72        | 1.52     |
| 1   | L     | 246 | ILE  | CB-CG2 | 6.17  | 1.72        | 1.52     |
| 1   | P     | 246 | ILE  | CB-CG2 | 6.17  | 1.72        | 1.52     |
| 1   | N     | 246 | ILE  | CB-CG2 | 6.17  | 1.72        | 1.52     |
| 1   | B     | 246 | ILE  | CB-CG2 | 6.17  | 1.72        | 1.52     |
| 1   | O     | 246 | ILE  | CB-CG2 | 6.17  | 1.72        | 1.52     |
| 1   | Q     | 246 | ILE  | CB-CG2 | 6.16  | 1.72        | 1.52     |
| 1   | F     | 246 | ILE  | CB-CG2 | 6.15  | 1.72        | 1.52     |
| 1   | I     | 246 | ILE  | CB-CG2 | 6.15  | 1.72        | 1.52     |
| 1   | K     | 246 | ILE  | CB-CG2 | 6.10  | 1.71        | 1.52     |
| 1   | L     | 172 | LEU  | C-N    | 6.08  | 1.48        | 1.34     |
| 1   | J     | 172 | LEU  | C-N    | 6.08  | 1.48        | 1.34     |
| 1   | N     | 172 | LEU  | C-N    | 6.08  | 1.48        | 1.34     |
| 1   | Q     | 172 | LEU  | C-N    | 6.06  | 1.48        | 1.34     |
| 1   | O     | 172 | LEU  | C-N    | 6.05  | 1.48        | 1.34     |
| 1   | B     | 172 | LEU  | C-N    | 6.04  | 1.48        | 1.34     |
| 1   | M     | 172 | LEU  | C-N    | 6.04  | 1.48        | 1.34     |
| 1   | G     | 172 | LEU  | C-N    | 6.04  | 1.48        | 1.34     |
| 1   | P     | 172 | LEU  | C-N    | 6.03  | 1.48        | 1.34     |
| 1   | K     | 172 | LEU  | C-N    | 6.03  | 1.48        | 1.34     |
| 1   | F     | 172 | LEU  | C-N    | 6.02  | 1.47        | 1.34     |
| 1   | I     | 172 | LEU  | C-N    | 6.02  | 1.47        | 1.34     |
| 1   | H     | 172 | LEU  | C-N    | 6.01  | 1.47        | 1.34     |
| 1   | Q     | 154 | GLU  | CB-CG  | -5.92 | 1.41        | 1.52     |
| 1   | G     | 154 | GLU  | CB-CG  | -5.89 | 1.41        | 1.52     |
| 1   | B     | 154 | GLU  | CB-CG  | -5.89 | 1.41        | 1.52     |
| 1   | F     | 154 | GLU  | CB-CG  | -5.89 | 1.41        | 1.52     |
| 1   | I     | 154 | GLU  | CB-CG  | -5.88 | 1.41        | 1.52     |
| 1   | O     | 154 | GLU  | CB-CG  | -5.88 | 1.41        | 1.52     |
| 1   | H     | 154 | GLU  | CB-CG  | -5.87 | 1.41        | 1.52     |
| 1   | L     | 154 | GLU  | CB-CG  | -5.87 | 1.41        | 1.52     |
| 1   | N     | 154 | GLU  | CB-CG  | -5.87 | 1.41        | 1.52     |
| 1   | P     | 154 | GLU  | CB-CG  | -5.87 | 1.41        | 1.52     |
| 1   | K     | 154 | GLU  | CB-CG  | -5.87 | 1.41        | 1.52     |
| 1   | M     | 154 | GLU  | CB-CG  | -5.86 | 1.41        | 1.52     |
| 1   | J     | 154 | GLU  | CB-CG  | -5.86 | 1.41        | 1.52     |
| 1   | G     | 151 | ASP  | C-N    | 5.67  | 1.47        | 1.34     |

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| Mol | Chain | Res | Type | Atoms | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|-------|-------|-------------|----------|
| 1   | O     | 151 | ASP  | C-N   | 5.66  | 1.47        | 1.34     |
| 1   | P     | 151 | ASP  | C-N   | 5.65  | 1.47        | 1.34     |
| 1   | J     | 151 | ASP  | C-N   | 5.65  | 1.47        | 1.34     |
| 1   | I     | 151 | ASP  | C-N   | 5.64  | 1.47        | 1.34     |
| 1   | M     | 151 | ASP  | C-N   | 5.63  | 1.47        | 1.34     |
| 1   | B     | 151 | ASP  | C-N   | 5.63  | 1.47        | 1.34     |
| 1   | K     | 151 | ASP  | C-N   | 5.63  | 1.47        | 1.34     |
| 1   | H     | 151 | ASP  | C-N   | 5.62  | 1.47        | 1.34     |
| 1   | F     | 151 | ASP  | C-N   | 5.62  | 1.47        | 1.34     |
| 1   | Q     | 151 | ASP  | C-N   | 5.62  | 1.47        | 1.34     |
| 1   | N     | 151 | ASP  | C-N   | 5.62  | 1.47        | 1.34     |
| 1   | L     | 151 | ASP  | C-N   | 5.59  | 1.47        | 1.34     |
| 1   | P     | 132 | GLN  | C-N   | -5.54 | 1.21        | 1.34     |
| 1   | H     | 132 | GLN  | C-N   | -5.54 | 1.21        | 1.34     |
| 1   | M     | 132 | GLN  | C-N   | -5.54 | 1.21        | 1.34     |
| 1   | N     | 132 | GLN  | C-N   | -5.54 | 1.21        | 1.34     |
| 1   | Q     | 132 | GLN  | C-N   | -5.53 | 1.21        | 1.34     |
| 1   | G     | 132 | GLN  | C-N   | -5.53 | 1.21        | 1.34     |
| 1   | B     | 132 | GLN  | C-N   | -5.51 | 1.21        | 1.34     |
| 1   | O     | 132 | GLN  | C-N   | -5.51 | 1.21        | 1.34     |
| 1   | L     | 132 | GLN  | C-N   | -5.50 | 1.21        | 1.34     |
| 1   | I     | 132 | GLN  | C-N   | -5.49 | 1.21        | 1.34     |
| 1   | J     | 132 | GLN  | C-N   | -5.48 | 1.21        | 1.34     |
| 1   | F     | 132 | GLN  | C-N   | -5.47 | 1.21        | 1.34     |
| 1   | K     | 132 | GLN  | C-N   | -5.47 | 1.21        | 1.34     |
| 1   | H     | 121 | TYR  | C-N   | -5.03 | 1.22        | 1.34     |
| 1   | I     | 121 | TYR  | C-N   | -5.02 | 1.22        | 1.34     |
| 1   | L     | 121 | TYR  | C-N   | -5.00 | 1.22        | 1.34     |

All (491) bond angle outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z      | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------|--------|-------------|----------|
| 1   | M     | 66  | ALA  | O-C-N | -20.72 | 89.55       | 122.70   |
| 1   | N     | 66  | ALA  | O-C-N | -20.71 | 89.57       | 122.70   |
| 1   | G     | 66  | ALA  | O-C-N | -20.70 | 89.57       | 122.70   |
| 1   | H     | 66  | ALA  | O-C-N | -20.70 | 89.57       | 122.70   |
| 1   | P     | 66  | ALA  | O-C-N | -20.70 | 89.57       | 122.70   |
| 1   | O     | 66  | ALA  | O-C-N | -20.68 | 89.61       | 122.70   |
| 1   | I     | 66  | ALA  | O-C-N | -20.68 | 89.61       | 122.70   |
| 1   | Q     | 66  | ALA  | O-C-N | -20.68 | 89.62       | 122.70   |
| 1   | K     | 66  | ALA  | O-C-N | -20.67 | 89.63       | 122.70   |
| 1   | L     | 66  | ALA  | O-C-N | -20.64 | 89.68       | 122.70   |

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| Mol | Chain | Res | Type | Atoms  | Z      | Observed(°) | Ideal(°) |
|-----|-------|-----|------|--------|--------|-------------|----------|
| 1   | J     | 66  | ALA  | O-C-N  | -20.62 | 89.70       | 122.70   |
| 1   | H     | 58  | PRO  | CA-C-N | -16.41 | 81.10       | 117.20   |
| 1   | L     | 58  | PRO  | CA-C-N | -16.41 | 81.10       | 117.20   |
| 1   | G     | 58  | PRO  | CA-C-N | -16.41 | 81.11       | 117.20   |
| 1   | N     | 58  | PRO  | CA-C-N | -16.41 | 81.11       | 117.20   |
| 1   | Q     | 58  | PRO  | CA-C-N | -16.40 | 81.11       | 117.20   |
| 1   | P     | 58  | PRO  | CA-C-N | -16.40 | 81.12       | 117.20   |
| 1   | J     | 58  | PRO  | CA-C-N | -16.40 | 81.13       | 117.20   |
| 1   | B     | 58  | PRO  | CA-C-N | -16.39 | 81.13       | 117.20   |
| 1   | F     | 58  | PRO  | CA-C-N | -16.39 | 81.14       | 117.20   |
| 1   | O     | 58  | PRO  | CA-C-N | -16.39 | 81.14       | 117.20   |
| 1   | K     | 58  | PRO  | CA-C-N | -16.39 | 81.14       | 117.20   |
| 1   | M     | 58  | PRO  | CA-C-N | -16.38 | 81.16       | 117.20   |
| 1   | I     | 58  | PRO  | CA-C-N | -16.37 | 81.18       | 117.20   |
| 1   | L     | 64  | ASP  | O-C-N  | 16.03  | 148.35      | 122.70   |
| 1   | N     | 64  | ASP  | O-C-N  | 16.03  | 148.34      | 122.70   |
| 1   | M     | 64  | ASP  | O-C-N  | 16.02  | 148.34      | 122.70   |
| 1   | H     | 64  | ASP  | O-C-N  | 16.02  | 148.32      | 122.70   |
| 1   | F     | 64  | ASP  | O-C-N  | 16.01  | 148.32      | 122.70   |
| 1   | J     | 64  | ASP  | O-C-N  | 16.00  | 148.31      | 122.70   |
| 1   | K     | 64  | ASP  | O-C-N  | 16.00  | 148.31      | 122.70   |
| 1   | P     | 64  | ASP  | O-C-N  | 15.98  | 148.27      | 122.70   |
| 1   | Q     | 64  | ASP  | O-C-N  | 15.98  | 148.28      | 122.70   |
| 1   | O     | 64  | ASP  | O-C-N  | 15.97  | 148.26      | 122.70   |
| 1   | I     | 64  | ASP  | O-C-N  | 15.96  | 148.24      | 122.70   |
| 1   | G     | 64  | ASP  | O-C-N  | 15.95  | 148.23      | 122.70   |
| 1   | N     | 58  | PRO  | O-C-N  | 14.72  | 146.25      | 122.70   |
| 1   | H     | 58  | PRO  | O-C-N  | 14.69  | 146.21      | 122.70   |
| 1   | J     | 58  | PRO  | O-C-N  | 14.69  | 146.21      | 122.70   |
| 1   | O     | 58  | PRO  | O-C-N  | 14.69  | 146.21      | 122.70   |
| 1   | L     | 58  | PRO  | O-C-N  | 14.69  | 146.20      | 122.70   |
| 1   | Q     | 58  | PRO  | O-C-N  | 14.68  | 146.19      | 122.70   |
| 1   | M     | 58  | PRO  | O-C-N  | 14.68  | 146.19      | 122.70   |
| 1   | P     | 58  | PRO  | O-C-N  | 14.68  | 146.19      | 122.70   |
| 1   | G     | 58  | PRO  | O-C-N  | 14.68  | 146.18      | 122.70   |
| 1   | B     | 58  | PRO  | O-C-N  | 14.67  | 146.18      | 122.70   |
| 1   | I     | 58  | PRO  | O-C-N  | 14.67  | 146.18      | 122.70   |
| 1   | F     | 58  | PRO  | O-C-N  | 14.66  | 146.16      | 122.70   |
| 1   | K     | 58  | PRO  | O-C-N  | 14.66  | 146.15      | 122.70   |
| 1   | L     | 64  | ASP  | CA-C-N | -13.22 | 88.12       | 117.20   |
| 1   | M     | 64  | ASP  | CA-C-N | -13.21 | 88.13       | 117.20   |
| 1   | F     | 64  | ASP  | CA-C-N | -13.21 | 88.13       | 117.20   |

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| Mol | Chain | Res | Type | Atoms  | Z      | Observed(°) | Ideal(°) |
|-----|-------|-----|------|--------|--------|-------------|----------|
| 1   | J     | 64  | ASP  | CA-C-N | -13.21 | 88.14       | 117.20   |
| 1   | H     | 64  | ASP  | CA-C-N | -13.21 | 88.14       | 117.20   |
| 1   | N     | 64  | ASP  | CA-C-N | -13.21 | 88.14       | 117.20   |
| 1   | G     | 64  | ASP  | CA-C-N | -13.19 | 88.18       | 117.20   |
| 1   | Q     | 64  | ASP  | CA-C-N | -13.19 | 88.18       | 117.20   |
| 1   | K     | 64  | ASP  | CA-C-N | -13.19 | 88.19       | 117.20   |
| 1   | O     | 64  | ASP  | CA-C-N | -13.19 | 88.19       | 117.20   |
| 1   | P     | 64  | ASP  | CA-C-N | -13.18 | 88.20       | 117.20   |
| 1   | I     | 64  | ASP  | CA-C-N | -13.17 | 88.22       | 117.20   |
| 1   | K     | 121 | TYR  | O-C-N  | -12.18 | 103.22      | 122.70   |
| 1   | M     | 121 | TYR  | O-C-N  | -12.16 | 103.25      | 122.70   |
| 1   | N     | 121 | TYR  | O-C-N  | -12.15 | 103.25      | 122.70   |
| 1   | O     | 121 | TYR  | O-C-N  | -12.14 | 103.27      | 122.70   |
| 1   | B     | 121 | TYR  | O-C-N  | -12.14 | 103.28      | 122.70   |
| 1   | I     | 121 | TYR  | O-C-N  | -12.13 | 103.29      | 122.70   |
| 1   | J     | 121 | TYR  | O-C-N  | -12.13 | 103.29      | 122.70   |
| 1   | P     | 121 | TYR  | O-C-N  | -12.13 | 103.29      | 122.70   |
| 1   | H     | 121 | TYR  | O-C-N  | -12.13 | 103.30      | 122.70   |
| 1   | Q     | 121 | TYR  | O-C-N  | -12.13 | 103.30      | 122.70   |
| 1   | G     | 121 | TYR  | O-C-N  | -12.12 | 103.30      | 122.70   |
| 1   | F     | 121 | TYR  | O-C-N  | -12.12 | 103.31      | 122.70   |
| 1   | L     | 121 | TYR  | O-C-N  | -12.11 | 103.32      | 122.70   |
| 1   | M     | 172 | LEU  | O-C-N  | -10.62 | 105.71      | 122.70   |
| 1   | J     | 172 | LEU  | O-C-N  | -10.61 | 105.73      | 122.70   |
| 1   | B     | 172 | LEU  | O-C-N  | -10.59 | 105.76      | 122.70   |
| 1   | O     | 172 | LEU  | O-C-N  | -10.59 | 105.76      | 122.70   |
| 1   | N     | 172 | LEU  | O-C-N  | -10.59 | 105.76      | 122.70   |
| 1   | P     | 172 | LEU  | O-C-N  | -10.58 | 105.77      | 122.70   |
| 1   | K     | 172 | LEU  | O-C-N  | -10.58 | 105.77      | 122.70   |
| 1   | Q     | 172 | LEU  | O-C-N  | -10.58 | 105.77      | 122.70   |
| 1   | I     | 172 | LEU  | O-C-N  | -10.58 | 105.78      | 122.70   |
| 1   | G     | 172 | LEU  | O-C-N  | -10.57 | 105.78      | 122.70   |
| 1   | L     | 172 | LEU  | O-C-N  | -10.57 | 105.79      | 122.70   |
| 1   | F     | 172 | LEU  | O-C-N  | -10.57 | 105.79      | 122.70   |
| 1   | H     | 172 | LEU  | O-C-N  | -10.53 | 105.84      | 122.70   |
| 1   | H     | 258 | VAL  | CA-C-N | -9.92  | 95.38       | 117.20   |
| 1   | P     | 258 | VAL  | CA-C-N | -9.90  | 95.41       | 117.20   |
| 1   | I     | 258 | VAL  | CA-C-N | -9.90  | 95.42       | 117.20   |
| 1   | L     | 258 | VAL  | CA-C-N | -9.90  | 95.42       | 117.20   |
| 1   | M     | 258 | VAL  | CA-C-N | -9.89  | 95.44       | 117.20   |
| 1   | O     | 258 | VAL  | CA-C-N | -9.89  | 95.44       | 117.20   |
| 1   | J     | 258 | VAL  | CA-C-N | -9.88  | 95.45       | 117.20   |

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| Mol | Chain | Res | Type | Atoms  | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|--------|-------|-------------|----------|
| 1   | N     | 258 | VAL  | CA-C-N | -9.88 | 95.46       | 117.20   |
| 1   | F     | 258 | VAL  | CA-C-N | -9.88 | 95.46       | 117.20   |
| 1   | K     | 258 | VAL  | CA-C-N | -9.88 | 95.46       | 117.20   |
| 1   | B     | 258 | VAL  | CA-C-N | -9.88 | 95.46       | 117.20   |
| 1   | Q     | 258 | VAL  | CA-C-N | -9.88 | 95.47       | 117.20   |
| 1   | G     | 258 | VAL  | CA-C-N | -9.87 | 95.49       | 117.20   |
| 1   | O     | 172 | LEU  | CA-C-N | 9.04  | 137.09      | 117.20   |
| 1   | M     | 172 | LEU  | CA-C-N | 9.04  | 137.08      | 117.20   |
| 1   | P     | 172 | LEU  | CA-C-N | 9.02  | 137.05      | 117.20   |
| 1   | J     | 172 | LEU  | CA-C-N | 9.02  | 137.05      | 117.20   |
| 1   | N     | 172 | LEU  | CA-C-N | 9.02  | 137.05      | 117.20   |
| 1   | B     | 172 | LEU  | CA-C-N | 9.02  | 137.03      | 117.20   |
| 1   | K     | 172 | LEU  | CA-C-N | 9.02  | 137.04      | 117.20   |
| 1   | F     | 172 | LEU  | CA-C-N | 9.02  | 137.03      | 117.20   |
| 1   | I     | 172 | LEU  | CA-C-N | 9.02  | 137.03      | 117.20   |
| 1   | H     | 172 | LEU  | CA-C-N | 9.01  | 137.02      | 117.20   |
| 1   | L     | 172 | LEU  | CA-C-N | 9.01  | 137.02      | 117.20   |
| 1   | G     | 172 | LEU  | CA-C-N | 8.99  | 136.98      | 117.20   |
| 1   | Q     | 172 | LEU  | CA-C-N | 8.99  | 136.97      | 117.20   |
| 1   | P     | 258 | VAL  | O-C-N  | 8.97  | 137.06      | 122.70   |
| 1   | M     | 258 | VAL  | O-C-N  | 8.96  | 137.03      | 122.70   |
| 1   | H     | 258 | VAL  | O-C-N  | 8.95  | 137.03      | 122.70   |
| 1   | K     | 258 | VAL  | O-C-N  | 8.95  | 137.01      | 122.70   |
| 1   | L     | 258 | VAL  | O-C-N  | 8.94  | 137.00      | 122.70   |
| 1   | I     | 258 | VAL  | O-C-N  | 8.93  | 136.99      | 122.70   |
| 1   | Q     | 258 | VAL  | O-C-N  | 8.93  | 136.99      | 122.70   |
| 1   | B     | 258 | VAL  | O-C-N  | 8.92  | 136.98      | 122.70   |
| 1   | J     | 258 | VAL  | O-C-N  | 8.92  | 136.98      | 122.70   |
| 1   | N     | 258 | VAL  | O-C-N  | 8.92  | 136.98      | 122.70   |
| 1   | F     | 258 | VAL  | O-C-N  | 8.91  | 136.95      | 122.70   |
| 1   | G     | 258 | VAL  | O-C-N  | 8.90  | 136.93      | 122.70   |
| 1   | O     | 258 | VAL  | O-C-N  | 8.87  | 136.90      | 122.70   |
| 1   | G     | 268 | VAL  | N-CA-C | -8.71 | 87.47       | 111.00   |
| 1   | J     | 268 | VAL  | N-CA-C | -8.71 | 87.47       | 111.00   |
| 1   | K     | 268 | VAL  | N-CA-C | -8.71 | 87.48       | 111.00   |
| 1   | N     | 268 | VAL  | N-CA-C | -8.71 | 87.49       | 111.00   |
| 1   | B     | 268 | VAL  | N-CA-C | -8.70 | 87.52       | 111.00   |
| 1   | M     | 268 | VAL  | N-CA-C | -8.70 | 87.52       | 111.00   |
| 1   | O     | 268 | VAL  | N-CA-C | -8.69 | 87.53       | 111.00   |
| 1   | H     | 268 | VAL  | N-CA-C | -8.69 | 87.53       | 111.00   |
| 1   | L     | 268 | VAL  | N-CA-C | -8.69 | 87.54       | 111.00   |
| 1   | P     | 268 | VAL  | N-CA-C | -8.69 | 87.55       | 111.00   |

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| Mol | Chain | Res | Type | Atoms   | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 1   | F     | 268 | VAL  | N-CA-C  | -8.68 | 87.56       | 111.00   |
| 1   | G     | 121 | TYR  | CA-C-N  | 8.68  | 136.29      | 117.20   |
| 1   | I     | 268 | VAL  | N-CA-C  | -8.68 | 87.57       | 111.00   |
| 1   | N     | 121 | TYR  | CA-C-N  | 8.68  | 136.29      | 117.20   |
| 1   | Q     | 268 | VAL  | N-CA-C  | -8.68 | 87.57       | 111.00   |
| 1   | K     | 121 | TYR  | CA-C-N  | 8.67  | 136.28      | 117.20   |
| 1   | L     | 121 | TYR  | CA-C-N  | 8.67  | 136.28      | 117.20   |
| 1   | I     | 121 | TYR  | CA-C-N  | 8.67  | 136.27      | 117.20   |
| 1   | H     | 121 | TYR  | CA-C-N  | 8.66  | 136.26      | 117.20   |
| 1   | Q     | 121 | TYR  | CA-C-N  | 8.66  | 136.26      | 117.20   |
| 1   | B     | 121 | TYR  | CA-C-N  | 8.66  | 136.25      | 117.20   |
| 1   | F     | 121 | TYR  | CA-C-N  | 8.65  | 136.23      | 117.20   |
| 1   | O     | 121 | TYR  | CA-C-N  | 8.64  | 136.22      | 117.20   |
| 1   | J     | 121 | TYR  | CA-C-N  | 8.64  | 136.21      | 117.20   |
| 1   | M     | 121 | TYR  | CA-C-N  | 8.64  | 136.20      | 117.20   |
| 1   | P     | 121 | TYR  | CA-C-N  | 8.64  | 136.20      | 117.20   |
| 1   | H     | 65  | THR  | O-C-N   | -8.56 | 109.00      | 122.70   |
| 1   | Q     | 65  | THR  | O-C-N   | -8.56 | 109.00      | 122.70   |
| 1   | J     | 65  | THR  | O-C-N   | -8.56 | 109.01      | 122.70   |
| 1   | N     | 65  | THR  | O-C-N   | -8.55 | 109.01      | 122.70   |
| 1   | I     | 65  | THR  | O-C-N   | -8.55 | 109.02      | 122.70   |
| 1   | L     | 65  | THR  | O-C-N   | -8.55 | 109.02      | 122.70   |
| 1   | H     | 164 | LEU  | CB-CA-C | 8.55  | 126.44      | 110.20   |
| 1   | K     | 65  | THR  | O-C-N   | -8.54 | 109.03      | 122.70   |
| 1   | I     | 164 | LEU  | CB-CA-C | 8.54  | 126.42      | 110.20   |
| 1   | G     | 65  | THR  | O-C-N   | -8.54 | 109.04      | 122.70   |
| 1   | P     | 65  | THR  | O-C-N   | -8.53 | 109.06      | 122.70   |
| 1   | H     | 266 | SER  | N-CA-C  | -8.52 | 87.98       | 111.00   |
| 1   | P     | 164 | LEU  | CB-CA-C | 8.52  | 126.39      | 110.20   |
| 1   | I     | 266 | SER  | N-CA-C  | -8.52 | 88.00       | 111.00   |
| 1   | O     | 164 | LEU  | CB-CA-C | 8.52  | 126.38      | 110.20   |
| 1   | L     | 266 | SER  | N-CA-C  | -8.51 | 88.02       | 111.00   |
| 1   | P     | 266 | SER  | N-CA-C  | -8.51 | 88.01       | 111.00   |
| 1   | K     | 266 | SER  | N-CA-C  | -8.51 | 88.03       | 111.00   |
| 1   | M     | 164 | LEU  | CB-CA-C | 8.51  | 126.37      | 110.20   |
| 1   | Q     | 266 | SER  | N-CA-C  | -8.51 | 88.03       | 111.00   |
| 1   | J     | 164 | LEU  | CB-CA-C | 8.51  | 126.36      | 110.20   |
| 1   | J     | 266 | SER  | N-CA-C  | -8.51 | 88.03       | 111.00   |
| 1   | B     | 164 | LEU  | CB-CA-C | 8.51  | 126.36      | 110.20   |
| 1   | M     | 65  | THR  | O-C-N   | -8.51 | 109.09      | 122.70   |
| 1   | M     | 266 | SER  | N-CA-C  | -8.50 | 88.04       | 111.00   |
| 1   | G     | 164 | LEU  | CB-CA-C | 8.50  | 126.35      | 110.20   |

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| Mol | Chain | Res | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 1   | O     | 65  | THR  | O-C-N     | -8.50 | 109.09      | 122.70   |
| 1   | B     | 266 | SER  | N-CA-C    | -8.50 | 88.06       | 111.00   |
| 1   | N     | 164 | LEU  | CB-CA-C   | 8.50  | 126.34      | 110.20   |
| 1   | N     | 266 | SER  | N-CA-C    | -8.49 | 88.06       | 111.00   |
| 1   | K     | 164 | LEU  | CB-CA-C   | 8.49  | 126.33      | 110.20   |
| 1   | L     | 164 | LEU  | CB-CA-C   | 8.49  | 126.33      | 110.20   |
| 1   | O     | 266 | SER  | N-CA-C    | -8.49 | 88.08       | 111.00   |
| 1   | F     | 164 | LEU  | CB-CA-C   | 8.49  | 126.33      | 110.20   |
| 1   | G     | 266 | SER  | N-CA-C    | -8.48 | 88.09       | 111.00   |
| 1   | Q     | 164 | LEU  | CB-CA-C   | 8.47  | 126.30      | 110.20   |
| 1   | G     | 58  | PRO  | C-N-CA    | -8.47 | 100.53      | 121.70   |
| 1   | F     | 58  | PRO  | C-N-CA    | -8.47 | 100.54      | 121.70   |
| 1   | J     | 58  | PRO  | C-N-CA    | -8.46 | 100.55      | 121.70   |
| 1   | F     | 266 | SER  | N-CA-C    | -8.46 | 88.17       | 111.00   |
| 1   | K     | 58  | PRO  | C-N-CA    | -8.46 | 100.56      | 121.70   |
| 1   | H     | 58  | PRO  | C-N-CA    | -8.45 | 100.58      | 121.70   |
| 1   | Q     | 58  | PRO  | C-N-CA    | -8.45 | 100.58      | 121.70   |
| 1   | M     | 58  | PRO  | C-N-CA    | -8.45 | 100.58      | 121.70   |
| 1   | N     | 58  | PRO  | C-N-CA    | -8.45 | 100.59      | 121.70   |
| 1   | B     | 58  | PRO  | C-N-CA    | -8.44 | 100.59      | 121.70   |
| 1   | I     | 58  | PRO  | C-N-CA    | -8.44 | 100.59      | 121.70   |
| 1   | L     | 58  | PRO  | C-N-CA    | -8.44 | 100.60      | 121.70   |
| 1   | P     | 58  | PRO  | C-N-CA    | -8.43 | 100.62      | 121.70   |
| 1   | O     | 58  | PRO  | C-N-CA    | -8.42 | 100.64      | 121.70   |
| 1   | G     | 246 | ILE  | CA-CB-CG2 | -7.96 | 94.98       | 110.90   |
| 1   | M     | 246 | ILE  | CA-CB-CG2 | -7.95 | 95.00       | 110.90   |
| 1   | H     | 246 | ILE  | CA-CB-CG2 | -7.95 | 95.01       | 110.90   |
| 1   | J     | 246 | ILE  | CA-CB-CG2 | -7.95 | 95.01       | 110.90   |
| 1   | L     | 246 | ILE  | CA-CB-CG2 | -7.95 | 95.01       | 110.90   |
| 1   | P     | 246 | ILE  | CA-CB-CG2 | -7.95 | 95.01       | 110.90   |
| 1   | B     | 246 | ILE  | CA-CB-CG2 | -7.93 | 95.03       | 110.90   |
| 1   | O     | 246 | ILE  | CA-CB-CG2 | -7.93 | 95.03       | 110.90   |
| 1   | Q     | 246 | ILE  | CA-CB-CG2 | -7.93 | 95.03       | 110.90   |
| 1   | N     | 246 | ILE  | CA-CB-CG2 | -7.93 | 95.04       | 110.90   |
| 1   | F     | 246 | ILE  | CA-CB-CG2 | -7.93 | 95.05       | 110.90   |
| 1   | N     | 263 | VAL  | CA-C-N    | -7.91 | 100.37      | 116.20   |
| 1   | I     | 246 | ILE  | CA-CB-CG2 | -7.91 | 95.08       | 110.90   |
| 1   | F     | 263 | VAL  | CA-C-N    | -7.91 | 100.39      | 116.20   |
| 1   | P     | 263 | VAL  | CA-C-N    | -7.91 | 100.39      | 116.20   |
| 1   | K     | 246 | ILE  | CA-CB-CG2 | -7.90 | 95.09       | 110.90   |
| 1   | I     | 263 | VAL  | CA-C-N    | -7.88 | 100.43      | 116.20   |
| 1   | B     | 263 | VAL  | CA-C-N    | -7.88 | 100.44      | 116.20   |

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| Mol | Chain | Res | Type | Atoms   | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 1   | K     | 263 | VAL  | CA-C-N  | -7.88 | 100.44      | 116.20   |
| 1   | M     | 263 | VAL  | CA-C-N  | -7.88 | 100.45      | 116.20   |
| 1   | J     | 263 | VAL  | CA-C-N  | -7.86 | 100.47      | 116.20   |
| 1   | L     | 263 | VAL  | CA-C-N  | -7.86 | 100.48      | 116.20   |
| 1   | H     | 263 | VAL  | CA-C-N  | -7.86 | 100.49      | 116.20   |
| 1   | G     | 263 | VAL  | CA-C-N  | -7.85 | 100.51      | 116.20   |
| 1   | O     | 263 | VAL  | CA-C-N  | -7.85 | 100.50      | 116.20   |
| 1   | Q     | 263 | VAL  | CA-C-N  | -7.85 | 100.51      | 116.20   |
| 1   | K     | 129 | VAL  | O-C-N   | 7.63  | 134.91      | 122.70   |
| 1   | M     | 129 | VAL  | O-C-N   | 7.62  | 134.90      | 122.70   |
| 1   | L     | 129 | VAL  | O-C-N   | 7.62  | 134.89      | 122.70   |
| 1   | O     | 129 | VAL  | O-C-N   | 7.61  | 134.87      | 122.70   |
| 1   | Q     | 129 | VAL  | O-C-N   | 7.61  | 134.87      | 122.70   |
| 1   | P     | 129 | VAL  | O-C-N   | 7.60  | 134.87      | 122.70   |
| 1   | G     | 129 | VAL  | O-C-N   | 7.60  | 134.86      | 122.70   |
| 1   | N     | 129 | VAL  | O-C-N   | 7.58  | 134.83      | 122.70   |
| 1   | B     | 129 | VAL  | O-C-N   | 7.58  | 134.82      | 122.70   |
| 1   | F     | 129 | VAL  | O-C-N   | 7.57  | 134.80      | 122.70   |
| 1   | H     | 129 | VAL  | O-C-N   | 7.56  | 134.79      | 122.70   |
| 1   | J     | 129 | VAL  | O-C-N   | 7.55  | 134.78      | 122.70   |
| 1   | I     | 129 | VAL  | O-C-N   | 7.52  | 134.73      | 122.70   |
| 1   | F     | 65  | THR  | O-C-N   | -7.51 | 110.69      | 122.70   |
| 1   | G     | 78  | THR  | O-C-N   | -7.47 | 110.75      | 122.70   |
| 1   | H     | 151 | ASP  | O-C-N   | 7.43  | 134.59      | 122.70   |
| 1   | N     | 151 | ASP  | O-C-N   | 7.42  | 134.57      | 122.70   |
| 1   | Q     | 151 | ASP  | O-C-N   | 7.42  | 134.57      | 122.70   |
| 1   | I     | 151 | ASP  | O-C-N   | 7.41  | 134.56      | 122.70   |
| 1   | L     | 151 | ASP  | O-C-N   | 7.41  | 134.56      | 122.70   |
| 1   | B     | 151 | ASP  | O-C-N   | 7.40  | 134.54      | 122.70   |
| 1   | M     | 151 | ASP  | O-C-N   | 7.39  | 134.53      | 122.70   |
| 1   | F     | 151 | ASP  | O-C-N   | 7.39  | 134.53      | 122.70   |
| 1   | P     | 151 | ASP  | O-C-N   | 7.39  | 134.52      | 122.70   |
| 1   | K     | 151 | ASP  | O-C-N   | 7.38  | 134.51      | 122.70   |
| 1   | G     | 151 | ASP  | O-C-N   | 7.38  | 134.50      | 122.70   |
| 1   | J     | 151 | ASP  | O-C-N   | 7.37  | 134.49      | 122.70   |
| 1   | O     | 151 | ASP  | O-C-N   | 7.36  | 134.48      | 122.70   |
| 1   | G     | 66  | ALA  | CB-CA-C | -6.65 | 100.13      | 110.10   |
| 1   | K     | 66  | ALA  | CB-CA-C | -6.64 | 100.14      | 110.10   |
| 1   | H     | 66  | ALA  | CB-CA-C | -6.64 | 100.14      | 110.10   |
| 1   | P     | 66  | ALA  | CB-CA-C | -6.63 | 100.15      | 110.10   |
| 1   | N     | 66  | ALA  | CB-CA-C | -6.63 | 100.16      | 110.10   |
| 1   | M     | 66  | ALA  | CB-CA-C | -6.63 | 100.16      | 110.10   |

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| Mol | Chain | Res | Type | Atoms   | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 1   | O     | 66  | ALA  | CB-CA-C | -6.62 | 100.17      | 110.10   |
| 1   | Q     | 66  | ALA  | CB-CA-C | -6.61 | 100.19      | 110.10   |
| 1   | J     | 66  | ALA  | CB-CA-C | -6.60 | 100.21      | 110.10   |
| 1   | I     | 66  | ALA  | CB-CA-C | -6.58 | 100.24      | 110.10   |
| 1   | L     | 66  | ALA  | CB-CA-C | -6.56 | 100.26      | 110.10   |
| 1   | P     | 258 | VAL  | C-N-CA  | -6.56 | 105.30      | 121.70   |
| 1   | I     | 258 | VAL  | C-N-CA  | -6.56 | 105.31      | 121.70   |
| 1   | M     | 258 | VAL  | C-N-CA  | -6.55 | 105.33      | 121.70   |
| 1   | J     | 258 | VAL  | C-N-CA  | -6.54 | 105.34      | 121.70   |
| 1   | O     | 258 | VAL  | C-N-CA  | -6.54 | 105.34      | 121.70   |
| 1   | H     | 258 | VAL  | C-N-CA  | -6.54 | 105.35      | 121.70   |
| 1   | N     | 258 | VAL  | C-N-CA  | -6.54 | 105.35      | 121.70   |
| 1   | K     | 258 | VAL  | C-N-CA  | -6.54 | 105.36      | 121.70   |
| 1   | L     | 258 | VAL  | C-N-CA  | -6.54 | 105.36      | 121.70   |
| 1   | B     | 258 | VAL  | C-N-CA  | -6.53 | 105.37      | 121.70   |
| 1   | Q     | 258 | VAL  | C-N-CA  | -6.53 | 105.37      | 121.70   |
| 1   | F     | 258 | VAL  | C-N-CA  | -6.51 | 105.42      | 121.70   |
| 1   | G     | 258 | VAL  | C-N-CA  | -6.51 | 105.42      | 121.70   |
| 1   | F     | 144 | TYR  | CA-C-N  | -6.45 | 103.00      | 117.20   |
| 1   | J     | 263 | VAL  | C-N-CA  | 6.28  | 135.48      | 122.30   |
| 1   | Q     | 263 | VAL  | C-N-CA  | 6.27  | 135.47      | 122.30   |
| 1   | P     | 162 | GLU  | O-C-N   | -6.26 | 112.68      | 122.70   |
| 1   | H     | 263 | VAL  | C-N-CA  | 6.26  | 135.44      | 122.30   |
| 1   | N     | 162 | GLU  | O-C-N   | -6.26 | 112.69      | 122.70   |
| 1   | L     | 263 | VAL  | C-N-CA  | 6.25  | 135.44      | 122.30   |
| 1   | I     | 263 | VAL  | C-N-CA  | 6.25  | 135.43      | 122.30   |
| 1   | B     | 263 | VAL  | C-N-CA  | 6.25  | 135.42      | 122.30   |
| 1   | K     | 263 | VAL  | C-N-CA  | 6.25  | 135.42      | 122.30   |
| 1   | O     | 263 | VAL  | C-N-CA  | 6.24  | 135.41      | 122.30   |
| 1   | F     | 263 | VAL  | C-N-CA  | 6.24  | 135.41      | 122.30   |
| 1   | M     | 263 | VAL  | C-N-CA  | 6.23  | 135.38      | 122.30   |
| 1   | G     | 162 | GLU  | O-C-N   | -6.22 | 112.74      | 122.70   |
| 1   | G     | 263 | VAL  | C-N-CA  | 6.22  | 135.37      | 122.30   |
| 1   | J     | 162 | GLU  | O-C-N   | -6.22 | 112.75      | 122.70   |
| 1   | N     | 263 | VAL  | C-N-CA  | 6.22  | 135.36      | 122.30   |
| 1   | B     | 162 | GLU  | O-C-N   | -6.22 | 112.75      | 122.70   |
| 1   | H     | 144 | TYR  | C-N-CA  | 6.22  | 137.24      | 121.70   |
| 1   | I     | 162 | GLU  | O-C-N   | -6.21 | 112.76      | 122.70   |
| 1   | P     | 263 | VAL  | C-N-CA  | 6.21  | 135.34      | 122.30   |
| 1   | O     | 162 | GLU  | O-C-N   | -6.21 | 112.77      | 122.70   |
| 1   | H     | 162 | GLU  | O-C-N   | -6.21 | 112.77      | 122.70   |
| 1   | K     | 162 | GLU  | O-C-N   | -6.20 | 112.77      | 122.70   |

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| Mol | Chain | Res | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 1   | L     | 162 | GLU  | O-C-N     | -6.20 | 112.78      | 122.70   |
| 1   | F     | 162 | GLU  | O-C-N     | -6.20 | 112.78      | 122.70   |
| 1   | M     | 162 | GLU  | O-C-N     | -6.20 | 112.78      | 122.70   |
| 1   | Q     | 223 | LYS  | CD-CE-NZ  | 6.17  | 125.90      | 111.70   |
| 1   | H     | 223 | LYS  | CD-CE-NZ  | 6.17  | 125.89      | 111.70   |
| 1   | F     | 144 | TYR  | C-N-CA    | 6.16  | 137.11      | 121.70   |
| 1   | I     | 223 | LYS  | CD-CE-NZ  | 6.16  | 125.88      | 111.70   |
| 1   | M     | 223 | LYS  | CD-CE-NZ  | 6.16  | 125.86      | 111.70   |
| 1   | Q     | 162 | GLU  | O-C-N     | -6.16 | 112.85      | 122.70   |
| 1   | G     | 223 | LYS  | CD-CE-NZ  | 6.15  | 125.86      | 111.70   |
| 1   | J     | 223 | LYS  | CD-CE-NZ  | 6.15  | 125.85      | 111.70   |
| 1   | F     | 223 | LYS  | CD-CE-NZ  | 6.15  | 125.85      | 111.70   |
| 1   | B     | 223 | LYS  | CD-CE-NZ  | 6.15  | 125.85      | 111.70   |
| 1   | N     | 223 | LYS  | CD-CE-NZ  | 6.15  | 125.84      | 111.70   |
| 1   | O     | 223 | LYS  | CD-CE-NZ  | 6.15  | 125.84      | 111.70   |
| 1   | K     | 223 | LYS  | CD-CE-NZ  | 6.14  | 125.82      | 111.70   |
| 1   | P     | 223 | LYS  | CD-CE-NZ  | 6.13  | 125.80      | 111.70   |
| 1   | L     | 223 | LYS  | CD-CE-NZ  | 6.13  | 125.79      | 111.70   |
| 1   | M     | 245 | THR  | CA-CB-OG1 | -6.06 | 96.28       | 109.00   |
| 1   | N     | 245 | THR  | CA-CB-OG1 | -6.05 | 96.28       | 109.00   |
| 1   | H     | 245 | THR  | CA-CB-OG1 | -6.05 | 96.30       | 109.00   |
| 1   | Q     | 245 | THR  | CA-CB-OG1 | -6.05 | 96.30       | 109.00   |
| 1   | F     | 245 | THR  | CA-CB-OG1 | -6.04 | 96.31       | 109.00   |
| 1   | J     | 245 | THR  | CA-CB-OG1 | -6.04 | 96.32       | 109.00   |
| 1   | K     | 245 | THR  | CA-CB-OG1 | -6.04 | 96.32       | 109.00   |
| 1   | L     | 245 | THR  | CA-CB-OG1 | -6.03 | 96.34       | 109.00   |
| 1   | B     | 245 | THR  | CA-CB-OG1 | -6.03 | 96.34       | 109.00   |
| 1   | I     | 245 | THR  | CA-CB-OG1 | -6.02 | 96.35       | 109.00   |
| 1   | G     | 245 | THR  | CA-CB-OG1 | -6.02 | 96.36       | 109.00   |
| 1   | O     | 245 | THR  | CA-CB-OG1 | -6.01 | 96.37       | 109.00   |
| 1   | P     | 245 | THR  | CA-CB-OG1 | -6.01 | 96.38       | 109.00   |
| 1   | J     | 144 | TYR  | C-N-CA    | 5.91  | 136.48      | 121.70   |
| 1   | N     | 244 | CYS  | CA-CB-SG  | -5.83 | 103.50      | 114.00   |
| 1   | L     | 244 | CYS  | CA-CB-SG  | -5.83 | 103.51      | 114.00   |
| 1   | F     | 244 | CYS  | CA-CB-SG  | -5.82 | 103.53      | 114.00   |
| 1   | B     | 244 | CYS  | CA-CB-SG  | -5.81 | 103.54      | 114.00   |
| 1   | K     | 244 | CYS  | CA-CB-SG  | -5.81 | 103.54      | 114.00   |
| 1   | Q     | 244 | CYS  | CA-CB-SG  | -5.81 | 103.54      | 114.00   |
| 1   | J     | 244 | CYS  | CA-CB-SG  | -5.80 | 103.55      | 114.00   |
| 1   | I     | 244 | CYS  | CA-CB-SG  | -5.80 | 103.56      | 114.00   |
| 1   | O     | 244 | CYS  | CA-CB-SG  | -5.80 | 103.56      | 114.00   |
| 1   | M     | 244 | CYS  | CA-CB-SG  | -5.80 | 103.56      | 114.00   |

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| Mol | Chain | Res | Type | Atoms    | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|----------|-------|-------------|----------|
| 1   | P     | 244 | CYS  | CA-CB-SG | -5.80 | 103.56      | 114.00   |
| 1   | H     | 244 | CYS  | CA-CB-SG | -5.80 | 103.56      | 114.00   |
| 1   | G     | 244 | CYS  | CA-CB-SG | -5.79 | 103.58      | 114.00   |
| 1   | H     | 151 | ASP  | CA-C-N   | -5.78 | 104.49      | 117.20   |
| 1   | K     | 173 | TYR  | O-C-N    | 5.78  | 131.94      | 122.70   |
| 1   | L     | 72  | GLN  | CA-CB-CG | -5.78 | 100.69      | 113.40   |
| 1   | L     | 173 | TYR  | O-C-N    | 5.77  | 131.94      | 122.70   |
| 1   | P     | 65  | THR  | CA-C-O   | 5.77  | 132.22      | 120.10   |
| 1   | H     | 65  | THR  | CA-C-O   | 5.77  | 132.22      | 120.10   |
| 1   | F     | 64  | ASP  | C-N-CA   | -5.77 | 107.29      | 121.70   |
| 1   | H     | 72  | GLN  | CA-CB-CG | -5.76 | 100.72      | 113.40   |
| 1   | G     | 151 | ASP  | CA-C-N   | -5.76 | 104.52      | 117.20   |
| 1   | I     | 72  | GLN  | CA-CB-CG | -5.76 | 100.72      | 113.40   |
| 1   | Q     | 72  | GLN  | CA-CB-CG | -5.76 | 100.72      | 113.40   |
| 1   | L     | 151 | ASP  | CA-C-N   | -5.76 | 104.53      | 117.20   |
| 1   | L     | 64  | ASP  | C-N-CA   | -5.76 | 107.31      | 121.70   |
| 1   | B     | 72  | GLN  | CA-CB-CG | -5.75 | 100.74      | 113.40   |
| 1   | G     | 72  | GLN  | CA-CB-CG | -5.75 | 100.74      | 113.40   |
| 1   | B     | 151 | ASP  | CA-C-N   | -5.75 | 104.55      | 117.20   |
| 1   | F     | 65  | THR  | CA-C-O   | 5.75  | 132.18      | 120.10   |
| 1   | N     | 151 | ASP  | CA-C-N   | -5.75 | 104.55      | 117.20   |
| 1   | K     | 72  | GLN  | CA-CB-CG | -5.75 | 100.75      | 113.40   |
| 1   | M     | 72  | GLN  | CA-CB-CG | -5.75 | 100.75      | 113.40   |
| 1   | O     | 72  | GLN  | CA-CB-CG | -5.75 | 100.75      | 113.40   |
| 1   | O     | 151 | ASP  | CA-C-N   | -5.75 | 104.55      | 117.20   |
| 1   | F     | 72  | GLN  | CA-CB-CG | -5.75 | 100.76      | 113.40   |
| 1   | I     | 65  | THR  | CA-C-O   | 5.75  | 132.17      | 120.10   |
| 1   | I     | 151 | ASP  | CA-C-N   | -5.75 | 104.56      | 117.20   |
| 1   | J     | 151 | ASP  | CA-C-N   | -5.75 | 104.56      | 117.20   |
| 1   | N     | 64  | ASP  | C-N-CA   | -5.75 | 107.33      | 121.70   |
| 1   | Q     | 151 | ASP  | CA-C-N   | -5.75 | 104.56      | 117.20   |
| 1   | K     | 65  | THR  | CA-C-O   | 5.75  | 132.16      | 120.10   |
| 1   | M     | 64  | ASP  | C-N-CA   | -5.75 | 107.34      | 121.70   |
| 1   | P     | 72  | GLN  | CA-CB-CG | -5.75 | 100.76      | 113.40   |
| 1   | P     | 151 | ASP  | CA-C-N   | -5.75 | 104.56      | 117.20   |
| 1   | J     | 64  | ASP  | C-N-CA   | -5.74 | 107.34      | 121.70   |
| 1   | K     | 64  | ASP  | C-N-CA   | -5.74 | 107.34      | 121.70   |
| 1   | N     | 65  | THR  | CA-C-O   | 5.74  | 132.16      | 120.10   |
| 1   | J     | 72  | GLN  | CA-CB-CG | -5.74 | 100.77      | 113.40   |
| 1   | L     | 65  | THR  | CA-C-O   | 5.74  | 132.16      | 120.10   |
| 1   | M     | 151 | ASP  | CA-C-N   | -5.74 | 104.57      | 117.20   |
| 1   | G     | 64  | ASP  | C-N-CA   | -5.74 | 107.35      | 121.70   |

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| Mol | Chain | Res | Type | Atoms    | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|----------|-------|-------------|----------|
| 1   | F     | 151 | ASP  | CA-C-N   | -5.74 | 104.58      | 117.20   |
| 1   | Q     | 65  | THR  | CA-C-O   | 5.74  | 132.15      | 120.10   |
| 1   | G     | 65  | THR  | CA-C-O   | 5.73  | 132.14      | 120.10   |
| 1   | Q     | 64  | ASP  | C-N-CA   | -5.73 | 107.37      | 121.70   |
| 1   | G     | 173 | TYR  | O-C-N    | 5.73  | 131.87      | 122.70   |
| 1   | H     | 173 | TYR  | O-C-N    | 5.73  | 131.87      | 122.70   |
| 1   | I     | 64  | ASP  | C-N-CA   | -5.73 | 107.37      | 121.70   |
| 1   | H     | 64  | ASP  | C-N-CA   | -5.73 | 107.38      | 121.70   |
| 1   | O     | 64  | ASP  | C-N-CA   | -5.72 | 107.39      | 121.70   |
| 1   | J     | 65  | THR  | CA-C-O   | 5.72  | 132.11      | 120.10   |
| 1   | J     | 173 | TYR  | O-C-N    | 5.72  | 131.85      | 122.70   |
| 1   | K     | 151 | ASP  | CA-C-N   | -5.72 | 104.61      | 117.20   |
| 1   | N     | 173 | TYR  | O-C-N    | 5.72  | 131.85      | 122.70   |
| 1   | N     | 72  | GLN  | CA-CB-CG | -5.72 | 100.82      | 113.40   |
| 1   | O     | 65  | THR  | CA-C-O   | 5.72  | 132.11      | 120.10   |
| 1   | B     | 173 | TYR  | O-C-N    | 5.72  | 131.85      | 122.70   |
| 1   | P     | 64  | ASP  | C-N-CA   | -5.72 | 107.41      | 121.70   |
| 1   | F     | 173 | TYR  | O-C-N    | 5.71  | 131.84      | 122.70   |
| 1   | M     | 65  | THR  | CA-C-O   | 5.70  | 132.06      | 120.10   |
| 1   | O     | 173 | TYR  | O-C-N    | 5.70  | 131.81      | 122.70   |
| 1   | M     | 173 | TYR  | O-C-N    | 5.69  | 131.80      | 122.70   |
| 1   | I     | 173 | TYR  | O-C-N    | 5.68  | 131.79      | 122.70   |
| 1   | P     | 173 | TYR  | O-C-N    | 5.68  | 131.79      | 122.70   |
| 1   | Q     | 173 | TYR  | O-C-N    | 5.67  | 131.77      | 122.70   |
| 1   | J     | 274 | ASP  | CB-CA-C  | 5.52  | 121.45      | 110.40   |
| 1   | P     | 274 | ASP  | CB-CA-C  | 5.52  | 121.43      | 110.40   |
| 1   | Q     | 274 | ASP  | CB-CA-C  | 5.51  | 121.43      | 110.40   |
| 1   | M     | 129 | VAL  | CA-C-N   | -5.50 | 105.11      | 117.20   |
| 1   | O     | 274 | ASP  | CB-CA-C  | 5.49  | 121.39      | 110.40   |
| 1   | B     | 274 | ASP  | CB-CA-C  | 5.49  | 121.38      | 110.40   |
| 1   | I     | 274 | ASP  | CB-CA-C  | 5.49  | 121.38      | 110.40   |
| 1   | H     | 129 | VAL  | CA-C-N   | -5.49 | 105.12      | 117.20   |
| 1   | K     | 129 | VAL  | CA-C-N   | -5.49 | 105.13      | 117.20   |
| 1   | M     | 274 | ASP  | CB-CA-C  | 5.49  | 121.38      | 110.40   |
| 1   | O     | 129 | VAL  | CA-C-N   | -5.49 | 105.13      | 117.20   |
| 1   | F     | 274 | ASP  | CB-CA-C  | 5.49  | 121.37      | 110.40   |
| 1   | G     | 274 | ASP  | CB-CA-C  | 5.49  | 121.37      | 110.40   |
| 1   | J     | 129 | VAL  | CA-C-N   | -5.48 | 105.14      | 117.20   |
| 1   | P     | 129 | VAL  | CA-C-N   | -5.48 | 105.14      | 117.20   |
| 1   | G     | 129 | VAL  | CA-C-N   | -5.48 | 105.14      | 117.20   |
| 1   | H     | 274 | ASP  | CB-CA-C  | 5.48  | 121.37      | 110.40   |
| 1   | K     | 274 | ASP  | CB-CA-C  | 5.48  | 121.36      | 110.40   |

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| Mol | Chain | Res | Type | Atoms   | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 1   | L     | 274 | ASP  | CB-CA-C | 5.48  | 121.36      | 110.40   |
| 1   | L     | 129 | VAL  | CA-C-N  | -5.48 | 105.14      | 117.20   |
| 1   | B     | 129 | VAL  | CA-C-N  | -5.48 | 105.15      | 117.20   |
| 1   | F     | 129 | VAL  | CA-C-N  | -5.47 | 105.16      | 117.20   |
| 1   | Q     | 129 | VAL  | CA-C-N  | -5.47 | 105.17      | 117.20   |
| 1   | L     | 144 | TYR  | C-N-CA  | 5.46  | 135.36      | 121.70   |
| 1   | I     | 129 | VAL  | CA-C-N  | -5.46 | 105.18      | 117.20   |
| 1   | N     | 274 | ASP  | CB-CA-C | 5.46  | 121.32      | 110.40   |
| 1   | N     | 129 | VAL  | CA-C-N  | -5.46 | 105.19      | 117.20   |
| 1   | J     | 66  | ALA  | C-N-CA  | -5.29 | 108.47      | 121.70   |
| 1   | N     | 66  | ALA  | C-N-CA  | -5.29 | 108.48      | 121.70   |
| 1   | G     | 66  | ALA  | C-N-CA  | -5.28 | 108.51      | 121.70   |
| 1   | H     | 66  | ALA  | C-N-CA  | -5.28 | 108.51      | 121.70   |
| 1   | Q     | 66  | ALA  | C-N-CA  | -5.28 | 108.51      | 121.70   |
| 1   | L     | 66  | ALA  | C-N-CA  | -5.27 | 108.51      | 121.70   |
| 1   | P     | 66  | ALA  | C-N-CA  | -5.27 | 108.52      | 121.70   |
| 1   | I     | 66  | ALA  | C-N-CA  | -5.26 | 108.54      | 121.70   |
| 1   | N     | 144 | TYR  | C-N-CA  | 5.25  | 134.83      | 121.70   |
| 1   | O     | 66  | ALA  | C-N-CA  | -5.25 | 108.58      | 121.70   |
| 1   | K     | 66  | ALA  | C-N-CA  | -5.24 | 108.59      | 121.70   |
| 1   | B     | 64  | ASP  | CA-C-N  | -5.24 | 105.67      | 117.20   |
| 1   | M     | 66  | ALA  | C-N-CA  | -5.23 | 108.62      | 121.70   |
| 1   | F     | 66  | ALA  | N-CA-C  | 5.23  | 125.11      | 111.00   |
| 1   | F     | 252 | LEU  | CB-CA-C | -5.22 | 100.28      | 110.20   |
| 1   | L     | 252 | LEU  | CB-CA-C | -5.22 | 100.29      | 110.20   |
| 1   | N     | 252 | LEU  | CB-CA-C | -5.22 | 100.28      | 110.20   |
| 1   | P     | 263 | VAL  | O-C-N   | 5.22  | 132.07      | 123.20   |
| 1   | G     | 252 | LEU  | CB-CA-C | -5.22 | 100.29      | 110.20   |
| 1   | K     | 263 | VAL  | O-C-N   | 5.21  | 132.06      | 123.20   |
| 1   | N     | 263 | VAL  | O-C-N   | 5.21  | 132.06      | 123.20   |
| 1   | H     | 252 | LEU  | CB-CA-C | -5.21 | 100.30      | 110.20   |
| 1   | I     | 252 | LEU  | CB-CA-C | -5.21 | 100.31      | 110.20   |
| 1   | B     | 252 | LEU  | CB-CA-C | -5.20 | 100.31      | 110.20   |
| 1   | J     | 252 | LEU  | CB-CA-C | -5.20 | 100.31      | 110.20   |
| 1   | Q     | 252 | LEU  | CB-CA-C | -5.20 | 100.31      | 110.20   |
| 1   | M     | 252 | LEU  | CB-CA-C | -5.20 | 100.32      | 110.20   |
| 1   | K     | 252 | LEU  | CB-CA-C | -5.20 | 100.33      | 110.20   |
| 1   | F     | 263 | VAL  | O-C-N   | 5.19  | 132.02      | 123.20   |
| 1   | I     | 263 | VAL  | O-C-N   | 5.18  | 132.01      | 123.20   |
| 1   | B     | 263 | VAL  | O-C-N   | 5.18  | 132.00      | 123.20   |
| 1   | O     | 252 | LEU  | CB-CA-C | -5.17 | 100.38      | 110.20   |
| 1   | M     | 263 | VAL  | O-C-N   | 5.17  | 131.98      | 123.20   |

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| Mol | Chain | Res | Type | Atoms   | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 1   | G     | 263 | VAL  | O-C-N   | 5.17  | 131.98      | 123.20   |
| 1   | P     | 252 | LEU  | CB-CA-C | -5.17 | 100.39      | 110.20   |
| 1   | Q     | 263 | VAL  | O-C-N   | 5.16  | 131.98      | 123.20   |
| 1   | O     | 263 | VAL  | O-C-N   | 5.16  | 131.97      | 123.20   |
| 1   | J     | 263 | VAL  | O-C-N   | 5.15  | 131.95      | 123.20   |
| 1   | L     | 263 | VAL  | O-C-N   | 5.14  | 131.94      | 123.20   |
| 1   | H     | 263 | VAL  | O-C-N   | 5.14  | 131.94      | 123.20   |
| 1   | J     | 175 | TYR  | C-N-CA  | 5.11  | 134.46      | 121.70   |
| 1   | F     | 144 | TYR  | O-C-N   | 5.07  | 130.81      | 122.70   |
| 1   | B     | 64  | ASP  | O-C-N   | 5.06  | 130.79      | 122.70   |
| 1   | J     | 144 | TYR  | CA-C-N  | -5.04 | 106.12      | 117.20   |
| 1   | Q     | 264 | GLY  | CA-C-N  | -5.03 | 106.14      | 116.20   |
| 1   | F     | 264 | GLY  | CA-C-N  | -5.01 | 106.18      | 116.20   |
| 1   | H     | 264 | GLY  | CA-C-N  | -5.01 | 106.19      | 116.20   |
| 1   | B     | 264 | GLY  | CA-C-N  | -5.00 | 106.19      | 116.20   |
| 1   | J     | 264 | GLY  | CA-C-N  | -5.00 | 106.19      | 116.20   |
| 1   | M     | 264 | GLY  | CA-C-N  | -5.00 | 106.19      | 116.20   |
| 1   | P     | 264 | GLY  | CA-C-N  | -5.00 | 106.19      | 116.20   |
| 1   | L     | 264 | GLY  | CA-C-N  | -5.00 | 106.19      | 116.20   |

There are no chirality outliers.

All (51) planarity outliers are listed below:

| Mol | Chain | Res | Type | Group     |
|-----|-------|-----|------|-----------|
| 1   | B     | 130 | ASP  | Mainchain |
| 1   | B     | 162 | GLU  | Mainchain |
| 1   | B     | 58  | PRO  | Mainchain |
| 1   | F     | 130 | ASP  | Mainchain |
| 1   | F     | 162 | GLU  | Mainchain |
| 1   | F     | 58  | PRO  | Mainchain |
| 1   | G     | 130 | ASP  | Mainchain |
| 1   | G     | 162 | GLU  | Mainchain |
| 1   | G     | 58  | PRO  | Mainchain |
| 1   | G     | 66  | ALA  | Mainchain |
| 1   | G     | 78  | THR  | Mainchain |
| 1   | H     | 130 | ASP  | Mainchain |
| 1   | H     | 162 | GLU  | Mainchain |
| 1   | H     | 58  | PRO  | Mainchain |
| 1   | H     | 66  | ALA  | Mainchain |
| 1   | I     | 130 | ASP  | Mainchain |
| 1   | I     | 162 | GLU  | Mainchain |
| 1   | I     | 58  | PRO  | Mainchain |

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| Mol | Chain | Res | Type | Group     |
|-----|-------|-----|------|-----------|
| 1   | I     | 66  | ALA  | Mainchain |
| 1   | J     | 130 | ASP  | Mainchain |
| 1   | J     | 162 | GLU  | Mainchain |
| 1   | J     | 58  | PRO  | Mainchain |
| 1   | J     | 66  | ALA  | Mainchain |
| 1   | K     | 130 | ASP  | Mainchain |
| 1   | K     | 162 | GLU  | Mainchain |
| 1   | K     | 58  | PRO  | Mainchain |
| 1   | K     | 66  | ALA  | Mainchain |
| 1   | L     | 130 | ASP  | Mainchain |
| 1   | L     | 162 | GLU  | Mainchain |
| 1   | L     | 58  | PRO  | Mainchain |
| 1   | L     | 66  | ALA  | Mainchain |
| 1   | M     | 130 | ASP  | Mainchain |
| 1   | M     | 162 | GLU  | Mainchain |
| 1   | M     | 58  | PRO  | Mainchain |
| 1   | M     | 66  | ALA  | Mainchain |
| 1   | N     | 130 | ASP  | Mainchain |
| 1   | N     | 162 | GLU  | Mainchain |
| 1   | N     | 58  | PRO  | Mainchain |
| 1   | N     | 66  | ALA  | Mainchain |
| 1   | O     | 130 | ASP  | Mainchain |
| 1   | O     | 162 | GLU  | Mainchain |
| 1   | O     | 58  | PRO  | Mainchain |
| 1   | O     | 66  | ALA  | Mainchain |
| 1   | P     | 130 | ASP  | Mainchain |
| 1   | P     | 162 | GLU  | Mainchain |
| 1   | P     | 58  | PRO  | Mainchain |
| 1   | P     | 66  | ALA  | Mainchain |
| 1   | Q     | 130 | ASP  | Mainchain |
| 1   | Q     | 162 | GLU  | Mainchain |
| 1   | Q     | 58  | PRO  | Mainchain |
| 1   | Q     | 66  | ALA  | Mainchain |

## 5.2 Too-close contacts ⓘ

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

| Mol | Chain | Non-H | H(model) | H(added) | Clashes | Symm-Clashes |
|-----|-------|-------|----------|----------|---------|--------------|
| 1   | B     | 2011  | 0        | 1955     | 359     | 0            |
| 1   | F     | 2011  | 0        | 1952     | 486     | 0            |
| 1   | G     | 2011  | 0        | 1949     | 494     | 0            |
| 1   | H     | 2011  | 0        | 1951     | 489     | 0            |
| 1   | I     | 2011  | 0        | 1951     | 484     | 0            |
| 1   | J     | 2011  | 0        | 1950     | 487     | 0            |
| 1   | K     | 2011  | 0        | 1951     | 487     | 0            |
| 1   | L     | 2011  | 0        | 1950     | 496     | 0            |
| 1   | M     | 2011  | 0        | 1951     | 488     | 0            |
| 1   | N     | 2011  | 0        | 1951     | 495     | 0            |
| 1   | O     | 2011  | 0        | 1951     | 495     | 0            |
| 1   | P     | 2011  | 0        | 1951     | 498     | 0            |
| 1   | Q     | 2011  | 0        | 1951     | 483     | 0            |
| 2   | A     | 28    | 0        | 25       | 2       | 0            |
| 2   | C     | 28    | 0        | 25       | 2       | 0            |
| 2   | D     | 28    | 0        | 25       | 2       | 0            |
| 2   | E     | 28    | 0        | 25       | 2       | 0            |
| 2   | R     | 28    | 0        | 25       | 2       | 0            |
| 2   | S     | 28    | 0        | 25       | 2       | 0            |
| 2   | T     | 28    | 0        | 25       | 2       | 0            |
| 2   | U     | 28    | 0        | 25       | 2       | 0            |
| 2   | V     | 28    | 0        | 25       | 2       | 0            |
| 2   | W     | 28    | 0        | 25       | 2       | 0            |
| 2   | X     | 28    | 0        | 25       | 2       | 0            |
| 2   | Y     | 28    | 0        | 25       | 2       | 0            |
| 2   | Z     | 28    | 0        | 25       | 2       | 0            |
| 3   | B     | 4     | 0        | 0        | 0       | 0            |
| 3   | F     | 2     | 0        | 0        | 0       | 0            |
| 3   | G     | 2     | 0        | 0        | 0       | 0            |
| 3   | H     | 2     | 0        | 0        | 0       | 0            |
| 3   | I     | 2     | 0        | 0        | 0       | 0            |
| 3   | J     | 2     | 0        | 0        | 0       | 0            |
| 3   | K     | 2     | 0        | 0        | 0       | 0            |
| 3   | L     | 2     | 0        | 0        | 0       | 0            |
| 3   | M     | 2     | 0        | 0        | 0       | 0            |
| 3   | N     | 2     | 0        | 0        | 0       | 0            |
| 3   | O     | 2     | 0        | 0        | 0       | 0            |
| 3   | P     | 2     | 0        | 0        | 0       | 0            |
| 3   | Q     | 3     | 0        | 0        | 0       | 0            |
| 3   | X     | 1     | 0        | 0        | 0       | 0            |
| All | All   | 26537 | 0        | 25689    | 5475    | 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 105.

All (5475) 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:H:142:MET:HE3  | 1:H:152:MET:CE   | 1.33                     | 1.59              |
| 1:L:142:MET:CE   | 1:L:152:MET:HE2  | 1.31                     | 1.59              |
| 1:B:159:ILE:CG2  | 1:B:258:VAL:HG21 | 1.14                     | 1.58              |
| 1:G:142:MET:CE   | 1:G:152:MET:HE2  | 1.31                     | 1.58              |
| 1:H:159:ILE:CG2  | 1:H:258:VAL:HG21 | 1.14                     | 1.58              |
| 1:F:159:ILE:CG2  | 1:F:258:VAL:HG21 | 1.14                     | 1.57              |
| 1:P:142:MET:CE   | 1:P:152:MET:HE2  | 1.31                     | 1.57              |
| 1:Q:142:MET:CE   | 1:Q:152:MET:HE2  | 1.26                     | 1.57              |
| 1:Q:159:ILE:CG2  | 1:Q:258:VAL:HG21 | 1.14                     | 1.57              |
| 1:O:159:ILE:CG2  | 1:O:258:VAL:HG21 | 1.14                     | 1.56              |
| 1:I:159:ILE:CG2  | 1:I:258:VAL:HG21 | 1.14                     | 1.56              |
| 1:F:142:MET:HE3  | 1:F:152:MET:CE   | 1.34                     | 1.55              |
| 1:K:159:ILE:CG2  | 1:K:258:VAL:HG21 | 1.14                     | 1.55              |
| 1:M:142:MET:CE   | 1:M:152:MET:HE2  | 1.31                     | 1.55              |
| 1:M:159:ILE:CG2  | 1:M:258:VAL:HG21 | 1.14                     | 1.55              |
| 1:L:159:ILE:CG2  | 1:L:258:VAL:HG21 | 1.14                     | 1.55              |
| 1:P:142:MET:HE3  | 1:P:152:MET:CE   | 1.33                     | 1.55              |
| 1:J:142:MET:HE3  | 1:J:152:MET:CE   | 1.34                     | 1.55              |
| 1:I:142:MET:HE3  | 1:I:152:MET:CE   | 1.33                     | 1.54              |
| 1:J:159:ILE:CG2  | 1:J:258:VAL:HG21 | 1.14                     | 1.54              |
| 1:P:159:ILE:CG2  | 1:P:258:VAL:HG21 | 1.14                     | 1.54              |
| 1:N:159:ILE:CG2  | 1:N:258:VAL:HG21 | 1.14                     | 1.54              |
| 1:G:159:ILE:CG2  | 1:G:258:VAL:HG21 | 1.14                     | 1.54              |
| 1:J:142:MET:CE   | 1:J:152:MET:HE2  | 1.34                     | 1.53              |
| 1:K:142:MET:HE3  | 1:K:152:MET:CE   | 1.32                     | 1.53              |
| 1:P:150:LEU:CD2  | 1:Q:290:LYS:HD3  | 1.38                     | 1.53              |
| 1:F:150:LEU:CD2  | 1:G:290:LYS:HD3  | 1.38                     | 1.52              |
| 1:I:290:LYS:HD3  | 1:K:150:LEU:CD2  | 1.38                     | 1.52              |
| 1:J:150:LEU:CD2  | 1:K:290:LYS:HD3  | 1.38                     | 1.52              |
| 1:N:142:MET:HE3  | 1:N:152:MET:CE   | 1.36                     | 1.52              |
| 1:I:142:MET:CE   | 1:I:152:MET:HE2  | 1.39                     | 1.52              |
| 1:L:150:LEU:CD2  | 1:M:290:LYS:HD3  | 1.38                     | 1.52              |
| 1:O:150:LEU:CD2  | 1:P:290:LYS:HD3  | 1.38                     | 1.52              |
| 1:O:290:LYS:HD3  | 1:Q:150:LEU:CD2  | 1.38                     | 1.52              |
| 1:M:142:MET:HE3  | 1:M:152:MET:CE   | 1.36                     | 1.52              |
| 1:L:290:LYS:HD3  | 1:N:150:LEU:CD2  | 1.38                     | 1.51              |
| 1:Q:142:MET:HE3  | 1:Q:152:MET:CE   | 1.38                     | 1.51              |
| 1:B:142:MET:HE3  | 1:B:152:MET:CE   | 1.34                     | 1.51              |
| 1:F:150:LEU:HD21 | 1:G:290:LYS:CD   | 1.40                     | 1.51              |
| 1:F:142:MET:CE   | 1:F:152:MET:HE2  | 1.39                     | 1.50              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:150:LEU:CD2  | 1:J:290:LYS:HD3  | 1.38                     | 1.50              |
| 1:O:290:LYS:CD   | 1:Q:150:LEU:HD21 | 1.40                     | 1.50              |
| 1:P:150:LEU:HD21 | 1:Q:290:LYS:CD   | 1.39                     | 1.50              |
| 1:J:150:LEU:HD21 | 1:K:290:LYS:CD   | 1.39                     | 1.49              |
| 1:F:290:LYS:HD3  | 1:H:150:LEU:CD2  | 1.38                     | 1.49              |
| 1:G:150:LEU:CD2  | 1:H:290:LYS:HD3  | 1.38                     | 1.49              |
| 1:I:285:MET:HE1  | 1:K:276:THR:CA   | 1.41                     | 1.49              |
| 1:I:290:LYS:CD   | 1:K:150:LEU:HD21 | 1.40                     | 1.49              |
| 1:L:142:MET:HE3  | 1:L:152:MET:CE   | 1.37                     | 1.49              |
| 1:L:290:LYS:CD   | 1:N:150:LEU:HD21 | 1.40                     | 1.49              |
| 1:N:142:MET:CE   | 1:N:152:MET:HE2  | 1.38                     | 1.49              |
| 1:G:142:MET:HE3  | 1:G:152:MET:CE   | 1.39                     | 1.49              |
| 1:F:290:LYS:CD   | 1:H:150:LEU:HD21 | 1.40                     | 1.48              |
| 1:G:150:LEU:HD21 | 1:H:290:LYS:CD   | 1.39                     | 1.48              |
| 1:O:142:MET:HE3  | 1:O:152:MET:CE   | 1.38                     | 1.48              |
| 1:M:72:GLN:O     | 1:M:76:PHE:CD1   | 1.67                     | 1.48              |
| 1:O:276:THR:CA   | 1:P:285:MET:HE1  | 1.42                     | 1.48              |
| 1:B:72:GLN:O     | 1:B:76:PHE:CD1   | 1.67                     | 1.47              |
| 1:K:72:GLN:O     | 1:K:76:PHE:CD1   | 1.67                     | 1.47              |
| 1:L:150:LEU:HD21 | 1:M:290:LYS:CD   | 1.40                     | 1.47              |
| 1:G:72:GLN:O     | 1:G:76:PHE:CD1   | 1.67                     | 1.47              |
| 1:I:276:THR:HA   | 1:J:285:MET:CE   | 1.00                     | 1.47              |
| 1:N:72:GLN:O     | 1:N:76:PHE:CD1   | 1.67                     | 1.47              |
| 1:O:150:LEU:HD21 | 1:P:290:LYS:CD   | 1.39                     | 1.47              |
| 1:O:229:VAL:HG11 | 1:O:235:HIS:CE1  | 1.50                     | 1.47              |
| 1:M:150:LEU:HD21 | 1:N:290:LYS:CD   | 1.40                     | 1.47              |
| 1:Q:72:GLN:O     | 1:Q:76:PHE:CD1   | 1.67                     | 1.47              |
| 1:I:150:LEU:HD21 | 1:J:290:LYS:CD   | 1.40                     | 1.46              |
| 1:M:150:LEU:CD2  | 1:N:290:LYS:HD3  | 1.38                     | 1.46              |
| 1:I:276:THR:CA   | 1:J:285:MET:HE1  | 1.45                     | 1.46              |
| 1:M:276:THR:CA   | 1:N:285:MET:HE1  | 1.45                     | 1.46              |
| 1:O:142:MET:CE   | 1:O:152:MET:HE2  | 1.43                     | 1.46              |
| 1:P:72:GLN:O     | 1:P:76:PHE:CD1   | 1.67                     | 1.46              |
| 1:G:276:THR:HA   | 1:H:285:MET:CE   | 1.00                     | 1.46              |
| 1:H:72:GLN:O     | 1:H:76:PHE:CD1   | 1.67                     | 1.46              |
| 1:I:229:VAL:HG11 | 1:I:235:HIS:CE1  | 1.50                     | 1.46              |
| 1:Q:229:VAL:HG11 | 1:Q:235:HIS:CE1  | 1.50                     | 1.46              |
| 1:I:285:MET:CE   | 1:K:276:THR:HA   | 1.00                     | 1.46              |
| 1:J:72:GLN:O     | 1:J:76:PHE:CD1   | 1.67                     | 1.46              |
| 1:O:72:GLN:O     | 1:O:76:PHE:CD1   | 1.67                     | 1.46              |
| 1:L:82:CYS:HB2   | 1:L:135:CYS:SG   | 1.56                     | 1.45              |

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| Atom-1           | Atom-2          | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-----------------|--------------------------|-------------------|
| 1:L:276:THR:HA   | 1:M:285:MET:CE  | 1.00                     | 1.45              |
| 1:L:276:THR:CA   | 1:M:285:MET:HE1 | 1.45                     | 1.45              |
| 1:O:82:CYS:HB2   | 1:O:135:CYS:SG  | 1.56                     | 1.45              |
| 1:G:82:CYS:HB2   | 1:G:135:CYS:SG  | 1.56                     | 1.45              |
| 1:J:229:VAL:HG11 | 1:J:235:HIS:CE1 | 1.50                     | 1.45              |
| 1:M:229:VAL:HG11 | 1:M:235:HIS:CE1 | 1.50                     | 1.45              |
| 1:O:285:MET:CE   | 1:Q:276:THR:HA  | 1.00                     | 1.45              |
| 1:F:72:GLN:O     | 1:F:76:PHE:CD1  | 1.67                     | 1.45              |
| 1:H:142:MET:CE   | 1:H:152:MET:CE  | 1.93                     | 1.44              |
| 1:J:82:CYS:HB2   | 1:J:135:CYS:SG  | 1.56                     | 1.44              |
| 1:F:229:VAL:HG11 | 1:F:235:HIS:CE1 | 1.50                     | 1.44              |
| 1:I:82:CYS:HB2   | 1:I:135:CYS:SG  | 1.57                     | 1.44              |
| 1:L:229:VAL:HG11 | 1:L:235:HIS:CE1 | 1.50                     | 1.44              |
| 1:B:82:CYS:HB2   | 1:B:135:CYS:SG  | 1.56                     | 1.44              |
| 1:B:142:MET:CE   | 1:B:152:MET:CE  | 1.93                     | 1.44              |
| 1:I:72:GLN:O     | 1:I:76:PHE:CD1  | 1.67                     | 1.44              |
| 1:N:82:CYS:HB2   | 1:N:135:CYS:SG  | 1.56                     | 1.44              |
| 1:B:229:VAL:HG11 | 1:B:235:HIS:CE1 | 1.50                     | 1.44              |
| 1:G:229:VAL:HG11 | 1:G:235:HIS:CE1 | 1.50                     | 1.44              |
| 1:P:229:VAL:HG11 | 1:P:235:HIS:CE1 | 1.50                     | 1.44              |
| 1:K:142:MET:CE   | 1:K:152:MET:CE  | 1.93                     | 1.44              |
| 1:F:82:CYS:HB2   | 1:F:135:CYS:SG  | 1.56                     | 1.43              |
| 1:F:276:THR:HA   | 1:G:285:MET:CE  | 1.00                     | 1.43              |
| 1:J:276:THR:CA   | 1:K:285:MET:CE  | 1.94                     | 1.43              |
| 1:Q:82:CYS:HB2   | 1:Q:135:CYS:SG  | 1.56                     | 1.43              |
| 1:K:229:VAL:HG11 | 1:K:235:HIS:CE1 | 1.50                     | 1.43              |
| 1:P:82:CYS:HB2   | 1:P:135:CYS:SG  | 1.57                     | 1.43              |
| 1:H:82:CYS:HB2   | 1:H:135:CYS:SG  | 1.57                     | 1.43              |
| 1:K:82:CYS:HB2   | 1:K:135:CYS:SG  | 1.56                     | 1.43              |
| 1:G:79:SER:C     | 1:G:80:THR:N    | 1.69                     | 1.42              |
| 1:M:276:THR:HA   | 1:N:285:MET:CE  | 1.00                     | 1.42              |
| 1:N:229:VAL:HG11 | 1:N:235:HIS:CE1 | 1.50                     | 1.42              |
| 1:F:276:THR:CA   | 1:G:285:MET:HE1 | 1.47                     | 1.42              |
| 1:H:229:VAL:HG11 | 1:H:235:HIS:CE1 | 1.50                     | 1.42              |
| 1:K:142:MET:CE   | 1:K:152:MET:HE3 | 1.47                     | 1.42              |
| 1:L:72:GLN:O     | 1:L:76:PHE:CD1  | 1.67                     | 1.42              |
| 1:G:276:THR:CA   | 1:H:285:MET:HE1 | 1.48                     | 1.42              |
| 1:L:285:MET:CE   | 1:N:276:THR:HA  | 1.00                     | 1.42              |
| 1:M:82:CYS:HB2   | 1:M:135:CYS:SG  | 1.56                     | 1.42              |
| 1:N:128:SER:HA   | 1:N:155:LEU:CD1 | 1.50                     | 1.42              |
| 1:F:128:SER:HA   | 1:F:155:LEU:CD1 | 1.50                     | 1.41              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:L:285:MET:CE   | 1:N:276:THR:CA   | 1.94                     | 1.41              |
| 1:F:285:MET:CE   | 1:H:276:THR:HA   | 1.00                     | 1.41              |
| 1:Q:128:SER:HA   | 1:Q:155:LEU:CD1  | 1.51                     | 1.41              |
| 1:N:142:MET:CE   | 1:N:152:MET:CE   | 1.93                     | 1.41              |
| 1:B:142:MET:CE   | 1:B:152:MET:HE2  | 1.44                     | 1.40              |
| 1:H:142:MET:CE   | 1:H:152:MET:HE2  | 1.46                     | 1.40              |
| 1:I:142:MET:CE   | 1:I:152:MET:CE   | 1.94                     | 1.40              |
| 1:F:142:MET:CE   | 1:F:152:MET:CE   | 1.93                     | 1.40              |
| 1:K:128:SER:HA   | 1:K:155:LEU:CD1  | 1.50                     | 1.40              |
| 1:M:128:SER:HA   | 1:M:155:LEU:CD1  | 1.50                     | 1.40              |
| 1:I:128:SER:HA   | 1:I:155:LEU:CD1  | 1.51                     | 1.40              |
| 1:F:290:LYS:CG   | 1:H:150:LEU:HD21 | 1.53                     | 1.39              |
| 1:O:276:THR:HA   | 1:P:285:MET:CE   | 1.00                     | 1.39              |
| 1:G:128:SER:HA   | 1:G:155:LEU:CD1  | 1.51                     | 1.39              |
| 1:J:128:SER:HA   | 1:J:155:LEU:CD1  | 1.50                     | 1.39              |
| 1:L:150:LEU:HD21 | 1:M:290:LYS:CG   | 1.53                     | 1.39              |
| 1:L:290:LYS:CG   | 1:N:150:LEU:HD21 | 1.53                     | 1.39              |
| 1:I:150:LEU:HD21 | 1:J:290:LYS:CG   | 1.53                     | 1.39              |
| 1:J:276:THR:HA   | 1:K:285:MET:CE   | 1.00                     | 1.39              |
| 1:H:128:SER:HA   | 1:H:155:LEU:CD1  | 1.50                     | 1.38              |
| 1:O:142:MET:CE   | 1:O:152:MET:CE   | 1.94                     | 1.38              |
| 1:O:128:SER:HA   | 1:O:155:LEU:CD1  | 1.50                     | 1.38              |
| 1:O:285:MET:CE   | 1:Q:276:THR:CA   | 1.94                     | 1.38              |
| 1:B:128:SER:HA   | 1:B:155:LEU:CD1  | 1.50                     | 1.38              |
| 1:G:168:MET:HE2  | 1:G:175:TYR:CZ   | 1.56                     | 1.38              |
| 1:J:150:LEU:HD21 | 1:K:290:LYS:CG   | 1.53                     | 1.38              |
| 1:M:150:LEU:HD21 | 1:N:290:LYS:CG   | 1.53                     | 1.38              |
| 1:P:276:THR:HA   | 1:Q:285:MET:CE   | 1.00                     | 1.38              |
| 1:F:285:MET:HE1  | 1:H:276:THR:CA   | 1.51                     | 1.37              |
| 1:O:290:LYS:CG   | 1:Q:150:LEU:HD21 | 1.53                     | 1.37              |
| 1:L:128:SER:HA   | 1:L:155:LEU:CD1  | 1.50                     | 1.37              |
| 1:P:128:SER:HA   | 1:P:155:LEU:CD1  | 1.50                     | 1.37              |
| 1:J:276:THR:CA   | 1:K:285:MET:HE1  | 1.50                     | 1.37              |
| 1:F:150:LEU:HD21 | 1:G:290:LYS:CG   | 1.53                     | 1.37              |
| 1:P:276:THR:CA   | 1:Q:285:MET:HE1  | 1.47                     | 1.37              |
| 1:O:150:LEU:HD21 | 1:P:290:LYS:CG   | 1.53                     | 1.36              |
| 1:G:150:LEU:HD21 | 1:H:290:LYS:CG   | 1.53                     | 1.36              |
| 1:M:64:ASP:O     | 1:M:65:THR:HG22  | 1.18                     | 1.36              |
| 1:O:191:CYS:HA   | 1:O:244:CYS:SG   | 1.66                     | 1.36              |
| 1:Q:191:CYS:HA   | 1:Q:244:CYS:SG   | 1.66                     | 1.36              |
| 1:I:290:LYS:CG   | 1:K:150:LEU:HD21 | 1.53                     | 1.36              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:M:162:GLU:O    | 1:M:252:LEU:HD21 | 1.18                     | 1.36              |
| 1:N:191:CYS:HA   | 1:N:244:CYS:SG   | 1.66                     | 1.36              |
| 1:G:150:LEU:HD12 | 1:H:288:ASN:OD1  | 1.18                     | 1.35              |
| 1:J:191:CYS:HA   | 1:J:244:CYS:SG   | 1.66                     | 1.35              |
| 1:N:64:ASP:O     | 1:N:65:THR:HG22  | 1.18                     | 1.35              |
| 1:Q:64:ASP:O     | 1:Q:65:THR:HG22  | 1.18                     | 1.35              |
| 1:G:64:ASP:O     | 1:G:65:THR:HG22  | 1.18                     | 1.35              |
| 1:J:142:MET:CE   | 1:J:152:MET:CE   | 1.93                     | 1.35              |
| 1:P:150:LEU:HD21 | 1:Q:290:LYS:CG   | 1.53                     | 1.35              |
| 1:P:191:CYS:HA   | 1:P:244:CYS:SG   | 1.66                     | 1.35              |
| 1:H:191:CYS:HA   | 1:H:244:CYS:SG   | 1.66                     | 1.35              |
| 1:I:82:CYS:CB    | 1:I:135:CYS:SG   | 2.15                     | 1.35              |
| 1:J:82:CYS:CB    | 1:J:135:CYS:SG   | 2.15                     | 1.35              |
| 1:I:150:LEU:HD12 | 1:J:288:ASN:OD1  | 1.18                     | 1.34              |
| 1:K:191:CYS:HA   | 1:K:244:CYS:SG   | 1.66                     | 1.34              |
| 1:M:191:CYS:HA   | 1:M:244:CYS:SG   | 1.66                     | 1.34              |
| 1:O:82:CYS:CB    | 1:O:135:CYS:SG   | 2.15                     | 1.34              |
| 1:B:82:CYS:CB    | 1:B:135:CYS:SG   | 2.15                     | 1.34              |
| 1:B:162:GLU:O    | 1:B:252:LEU:CD2  | 1.75                     | 1.34              |
| 1:I:191:CYS:HA   | 1:I:244:CYS:SG   | 1.66                     | 1.34              |
| 1:J:162:GLU:O    | 1:J:252:LEU:CD2  | 1.75                     | 1.34              |
| 1:K:162:GLU:O    | 1:K:252:LEU:CD2  | 1.75                     | 1.34              |
| 1:L:191:CYS:HA   | 1:L:244:CYS:SG   | 1.66                     | 1.34              |
| 1:M:162:GLU:O    | 1:M:252:LEU:CD2  | 1.75                     | 1.34              |
| 1:O:162:GLU:O    | 1:O:252:LEU:CD2  | 1.75                     | 1.34              |
| 1:B:191:CYS:HA   | 1:B:244:CYS:SG   | 1.66                     | 1.34              |
| 1:G:191:CYS:HA   | 1:G:244:CYS:SG   | 1.66                     | 1.34              |
| 1:N:82:CYS:CB    | 1:N:135:CYS:SG   | 2.15                     | 1.34              |
| 1:P:82:CYS:CB    | 1:P:135:CYS:SG   | 2.15                     | 1.34              |
| 1:P:162:GLU:O    | 1:P:252:LEU:CD2  | 1.75                     | 1.34              |
| 1:F:82:CYS:CB    | 1:F:135:CYS:SG   | 2.15                     | 1.33              |
| 1:F:191:CYS:HA   | 1:F:244:CYS:SG   | 1.66                     | 1.33              |
| 1:G:82:CYS:CB    | 1:G:135:CYS:SG   | 2.15                     | 1.33              |
| 1:L:82:CYS:CB    | 1:L:135:CYS:SG   | 2.15                     | 1.33              |
| 1:G:142:MET:CE   | 1:G:152:MET:CE   | 1.94                     | 1.33              |
| 1:N:162:GLU:O    | 1:N:252:LEU:CD2  | 1.75                     | 1.33              |
| 1:F:125:ALA:CB   | 1:F:223:LYS:HD3  | 1.59                     | 1.33              |
| 1:M:82:CYS:CB    | 1:M:135:CYS:SG   | 2.15                     | 1.33              |
| 1:P:125:ALA:CB   | 1:P:223:LYS:HD3  | 1.59                     | 1.33              |
| 1:Q:82:CYS:CB    | 1:Q:135:CYS:SG   | 2.15                     | 1.33              |
| 1:L:162:GLU:O    | 1:L:252:LEU:CD2  | 1.75                     | 1.33              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:125:ALA:CB   | 1:G:223:LYS:HD3  | 1.59                     | 1.33              |
| 1:H:162:GLU:O    | 1:H:252:LEU:CD2  | 1.75                     | 1.33              |
| 1:I:162:GLU:O    | 1:I:252:LEU:CD2  | 1.75                     | 1.33              |
| 1:L:150:LEU:HD12 | 1:M:288:ASN:OD1  | 1.18                     | 1.33              |
| 1:Q:125:ALA:CB   | 1:Q:223:LYS:HD3  | 1.59                     | 1.33              |
| 1:F:162:GLU:O    | 1:F:252:LEU:CD2  | 1.76                     | 1.32              |
| 1:H:82:CYS:CB    | 1:H:135:CYS:SG   | 2.15                     | 1.32              |
| 1:K:82:CYS:CB    | 1:K:135:CYS:SG   | 2.15                     | 1.32              |
| 1:M:125:ALA:CB   | 1:M:223:LYS:HD3  | 1.59                     | 1.32              |
| 1:L:142:MET:CE   | 1:L:152:MET:CE   | 1.93                     | 1.32              |
| 1:P:64:ASP:O     | 1:P:65:THR:HG22  | 1.18                     | 1.32              |
| 1:H:64:ASP:O     | 1:H:65:THR:HG22  | 1.18                     | 1.32              |
| 1:L:125:ALA:CB   | 1:L:223:LYS:HD3  | 1.59                     | 1.32              |
| 1:M:150:LEU:HD12 | 1:N:288:ASN:OD1  | 1.18                     | 1.32              |
| 1:Q:162:GLU:O    | 1:Q:252:LEU:CD2  | 1.75                     | 1.32              |
| 1:I:125:ALA:CB   | 1:I:223:LYS:HD3  | 1.59                     | 1.31              |
| 1:J:125:ALA:CB   | 1:J:223:LYS:HD3  | 1.59                     | 1.31              |
| 1:K:125:ALA:CB   | 1:K:223:LYS:HD3  | 1.59                     | 1.31              |
| 1:K:162:GLU:O    | 1:K:252:LEU:HD21 | 1.18                     | 1.31              |
| 1:F:285:MET:CE   | 1:H:276:THR:CA   | 1.94                     | 1.30              |
| 1:G:162:GLU:O    | 1:G:252:LEU:CD2  | 1.75                     | 1.30              |
| 1:N:125:ALA:CB   | 1:N:223:LYS:HD3  | 1.59                     | 1.30              |
| 1:O:125:ALA:CB   | 1:O:223:LYS:HD3  | 1.59                     | 1.30              |
| 1:Q:142:MET:CE   | 1:Q:152:MET:CE   | 1.93                     | 1.30              |
| 1:B:125:ALA:CB   | 1:B:223:LYS:HD3  | 1.59                     | 1.30              |
| 1:Q:159:ILE:CG2  | 1:Q:258:VAL:CG2  | 2.10                     | 1.30              |
| 1:Q:162:GLU:O    | 1:Q:252:LEU:HD21 | 1.18                     | 1.29              |
| 1:L:285:MET:HE1  | 1:N:276:THR:CA   | 1.54                     | 1.29              |
| 1:L:288:ASN:OD1  | 1:N:150:LEU:HD12 | 1.18                     | 1.29              |
| 1:O:288:ASN:OD1  | 1:Q:150:LEU:HD12 | 1.18                     | 1.29              |
| 1:G:159:ILE:CG2  | 1:G:258:VAL:CG2  | 2.10                     | 1.29              |
| 1:H:162:GLU:O    | 1:H:252:LEU:HD21 | 1.18                     | 1.29              |
| 1:P:150:LEU:HD12 | 1:Q:288:ASN:OD1  | 1.18                     | 1.29              |
| 1:H:125:ALA:CB   | 1:H:223:LYS:HD3  | 1.59                     | 1.29              |
| 1:I:64:ASP:O     | 1:I:65:THR:HG22  | 1.18                     | 1.29              |
| 1:M:159:ILE:CG2  | 1:M:258:VAL:CG2  | 2.10                     | 1.29              |
| 1:J:159:ILE:CG2  | 1:J:258:VAL:CG2  | 2.10                     | 1.29              |
| 1:L:162:GLU:O    | 1:L:252:LEU:HD21 | 1.18                     | 1.29              |
| 1:Q:105:LEU:O    | 1:Q:108:THR:HG22 | 1.33                     | 1.28              |
| 1:G:162:GLU:O    | 1:G:252:LEU:HD21 | 1.19                     | 1.28              |
| 1:J:64:ASP:O     | 1:J:65:THR:HG22  | 1.18                     | 1.28              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:L:159:ILE:CG2  | 1:L:258:VAL:CG2  | 2.10                     | 1.28              |
| 1:B:162:GLU:O    | 1:B:252:LEU:HD21 | 1.18                     | 1.28              |
| 1:G:129:VAL:C    | 1:G:131:PRO:HD2  | 1.54                     | 1.28              |
| 1:H:129:VAL:C    | 1:H:131:PRO:HD2  | 1.54                     | 1.28              |
| 1:I:129:VAL:C    | 1:I:131:PRO:HD2  | 1.54                     | 1.28              |
| 1:I:159:ILE:CG2  | 1:I:258:VAL:CG2  | 2.10                     | 1.28              |
| 1:I:168:MET:HE2  | 1:I:175:TYR:CZ   | 1.69                     | 1.28              |
| 1:F:159:ILE:CG2  | 1:F:258:VAL:CG2  | 2.10                     | 1.28              |
| 1:L:129:VAL:C    | 1:L:131:PRO:HD2  | 1.54                     | 1.28              |
| 1:B:127:PHE:CD2  | 1:B:155:LEU:HD21 | 1.69                     | 1.27              |
| 1:J:105:LEU:O    | 1:J:108:THR:HG22 | 1.33                     | 1.27              |
| 1:K:129:VAL:C    | 1:K:131:PRO:HD2  | 1.54                     | 1.27              |
| 1:P:159:ILE:CG2  | 1:P:258:VAL:CG2  | 2.10                     | 1.27              |
| 1:F:64:ASP:O     | 1:F:65:THR:HG22  | 1.18                     | 1.27              |
| 1:I:127:PHE:CD2  | 1:I:155:LEU:HD21 | 1.69                     | 1.27              |
| 1:N:159:ILE:CG2  | 1:N:258:VAL:CG2  | 2.10                     | 1.27              |
| 1:N:168:MET:HE1  | 1:N:175:TYR:CZ   | 1.68                     | 1.27              |
| 1:O:162:GLU:O    | 1:O:252:LEU:HD21 | 1.18                     | 1.27              |
| 1:P:162:GLU:O    | 1:P:252:LEU:HD21 | 1.18                     | 1.27              |
| 1:L:127:PHE:CD2  | 1:L:155:LEU:HD21 | 1.69                     | 1.27              |
| 1:N:129:VAL:C    | 1:N:131:PRO:HD2  | 1.54                     | 1.27              |
| 1:F:162:GLU:O    | 1:F:252:LEU:HD21 | 1.18                     | 1.27              |
| 1:F:289:TRP:O    | 1:H:150:LEU:HD22 | 1.35                     | 1.27              |
| 1:O:159:ILE:CG2  | 1:O:258:VAL:CG2  | 2.10                     | 1.27              |
| 1:Q:129:VAL:C    | 1:Q:131:PRO:HD2  | 1.54                     | 1.27              |
| 1:F:127:PHE:CD2  | 1:F:155:LEU:HD21 | 1.69                     | 1.27              |
| 1:F:288:ASN:OD1  | 1:H:150:LEU:HD12 | 1.18                     | 1.27              |
| 1:G:276:THR:CA   | 1:H:285:MET:CE   | 1.94                     | 1.27              |
| 1:J:150:LEU:HD12 | 1:K:288:ASN:OD1  | 1.18                     | 1.27              |
| 1:J:162:GLU:O    | 1:J:252:LEU:HD21 | 1.18                     | 1.27              |
| 1:L:64:ASP:O     | 1:L:65:THR:HG22  | 1.18                     | 1.27              |
| 1:M:127:PHE:CD2  | 1:M:155:LEU:HD21 | 1.69                     | 1.27              |
| 1:P:129:VAL:C    | 1:P:131:PRO:HD2  | 1.54                     | 1.27              |
| 1:H:159:ILE:CG2  | 1:H:258:VAL:CG2  | 2.10                     | 1.26              |
| 1:I:288:ASN:OD1  | 1:K:150:LEU:HD12 | 1.18                     | 1.26              |
| 1:B:129:VAL:C    | 1:B:131:PRO:HD2  | 1.54                     | 1.26              |
| 1:F:150:LEU:HD12 | 1:G:288:ASN:OD1  | 1.18                     | 1.26              |
| 1:G:168:MET:CE   | 1:G:175:TYR:CE1  | 2.18                     | 1.26              |
| 1:J:129:VAL:C    | 1:J:131:PRO:HD2  | 1.54                     | 1.26              |
| 1:K:168:MET:CE   | 1:K:175:TYR:CE1  | 2.18                     | 1.26              |
| 1:M:142:MET:CE   | 1:M:152:MET:CE   | 1.93                     | 1.26              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:N:127:PHE:CD2  | 1:N:155:LEU:HD21 | 1.69                     | 1.26              |
| 1:O:105:LEU:O    | 1:O:108:THR:HG22 | 1.33                     | 1.26              |
| 1:Q:168:MET:CE   | 1:Q:175:TYR:CE1  | 2.18                     | 1.26              |
| 1:N:168:MET:CE   | 1:N:175:TYR:CE1  | 2.18                     | 1.26              |
| 1:O:127:PHE:CD2  | 1:O:155:LEU:HD21 | 1.69                     | 1.26              |
| 1:O:150:LEU:HD12 | 1:P:288:ASN:OD1  | 1.18                     | 1.26              |
| 1:G:127:PHE:CD2  | 1:G:155:LEU:HD21 | 1.69                     | 1.26              |
| 1:K:64:ASP:O     | 1:K:65:THR:HG22  | 1.18                     | 1.26              |
| 1:K:159:ILE:CG2  | 1:K:258:VAL:CG2  | 2.10                     | 1.26              |
| 1:L:168:MET:CE   | 1:L:175:TYR:CE1  | 2.18                     | 1.26              |
| 1:L:168:MET:HE1  | 1:L:175:TYR:CZ   | 1.69                     | 1.26              |
| 1:N:105:LEU:O    | 1:N:108:THR:HG22 | 1.33                     | 1.26              |
| 1:P:168:MET:CE   | 1:P:175:TYR:CE1  | 2.18                     | 1.26              |
| 1:B:159:ILE:CG2  | 1:B:258:VAL:CG2  | 2.10                     | 1.26              |
| 1:B:168:MET:CE   | 1:B:175:TYR:CE1  | 2.18                     | 1.26              |
| 1:G:105:LEU:O    | 1:G:108:THR:HG22 | 1.33                     | 1.26              |
| 1:G:150:LEU:HD22 | 1:H:289:TRP:O    | 1.35                     | 1.26              |
| 1:G:229:VAL:CG1  | 1:G:235:HIS:HE1  | 1.49                     | 1.26              |
| 1:K:127:PHE:CD2  | 1:K:155:LEU:HD21 | 1.69                     | 1.26              |
| 1:O:129:VAL:C    | 1:O:131:PRO:HD2  | 1.54                     | 1.26              |
| 1:F:168:MET:CE   | 1:F:175:TYR:CE1  | 2.18                     | 1.25              |
| 1:I:229:VAL:CG1  | 1:I:235:HIS:HE1  | 1.49                     | 1.25              |
| 1:J:127:PHE:CD2  | 1:J:155:LEU:HD21 | 1.69                     | 1.25              |
| 1:O:64:ASP:O     | 1:O:65:THR:HG22  | 1.18                     | 1.25              |
| 1:F:150:LEU:HD22 | 1:G:289:TRP:O    | 1.35                     | 1.25              |
| 1:H:127:PHE:CD2  | 1:H:155:LEU:HD21 | 1.69                     | 1.25              |
| 1:M:105:LEU:O    | 1:M:108:THR:HG22 | 1.33                     | 1.25              |
| 1:M:129:VAL:C    | 1:M:131:PRO:HD2  | 1.54                     | 1.25              |
| 1:N:162:GLU:O    | 1:N:252:LEU:HD21 | 1.18                     | 1.25              |
| 1:Q:127:PHE:CD2  | 1:Q:155:LEU:HD21 | 1.69                     | 1.25              |
| 1:I:168:MET:CE   | 1:I:175:TYR:CE1  | 2.18                     | 1.25              |
| 1:K:105:LEU:O    | 1:K:108:THR:HG22 | 1.33                     | 1.25              |
| 1:F:265:GLY:O    | 1:H:149:GLN:NE2  | 1.69                     | 1.25              |
| 1:M:168:MET:CE   | 1:M:175:TYR:CE1  | 2.18                     | 1.25              |
| 1:P:229:VAL:CG1  | 1:P:235:HIS:HE1  | 1.49                     | 1.25              |
| 1:F:229:VAL:CG1  | 1:F:235:HIS:HE1  | 1.49                     | 1.25              |
| 1:H:229:VAL:CG1  | 1:H:235:HIS:HE1  | 1.49                     | 1.25              |
| 1:J:150:LEU:HD22 | 1:K:289:TRP:O    | 1.35                     | 1.25              |
| 1:M:150:LEU:HD22 | 1:N:289:TRP:O    | 1.35                     | 1.25              |
| 1:M:229:VAL:CG1  | 1:M:235:HIS:HE1  | 1.49                     | 1.25              |
| 1:O:168:MET:CE   | 1:O:175:TYR:CE1  | 2.18                     | 1.25              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:105:LEU:O    | 1:F:108:THR:HG22 | 1.33                     | 1.25              |
| 1:F:129:VAL:C    | 1:F:131:PRO:HD2  | 1.54                     | 1.25              |
| 1:P:127:PHE:CD2  | 1:P:155:LEU:HD21 | 1.69                     | 1.25              |
| 1:H:168:MET:CE   | 1:H:175:TYR:CE1  | 2.18                     | 1.24              |
| 1:I:105:LEU:O    | 1:I:108:THR:HG22 | 1.33                     | 1.24              |
| 1:L:150:LEU:HD22 | 1:M:289:TRP:O    | 1.35                     | 1.24              |
| 1:P:142:MET:CE   | 1:P:152:MET:CE   | 1.93                     | 1.24              |
| 1:I:162:GLU:O    | 1:I:252:LEU:HD21 | 1.18                     | 1.24              |
| 1:O:150:LEU:HD22 | 1:P:289:TRP:O    | 1.35                     | 1.24              |
| 1:J:168:MET:CE   | 1:J:175:TYR:CE1  | 2.18                     | 1.24              |
| 1:L:149:GLN:NE2  | 1:M:265:GLY:O    | 1.68                     | 1.24              |
| 1:N:167:PRO:HG3  | 1:P:134:TYR:OH   | 1.31                     | 1.24              |
| 1:J:229:VAL:CG1  | 1:J:235:HIS:HE1  | 1.49                     | 1.24              |
| 1:O:289:TRP:O    | 1:Q:150:LEU:HD22 | 1.35                     | 1.24              |
| 1:P:276:THR:CA   | 1:Q:285:MET:CE   | 1.94                     | 1.24              |
| 1:M:251:LYS:HG3  | 1:M:252:LEU:N    | 1.40                     | 1.24              |
| 1:I:150:LEU:HD22 | 1:J:289:TRP:O    | 1.35                     | 1.23              |
| 1:K:229:VAL:CG1  | 1:K:235:HIS:HE1  | 1.49                     | 1.23              |
| 1:B:229:VAL:CG1  | 1:B:235:HIS:HE1  | 1.49                     | 1.23              |
| 1:H:105:LEU:O    | 1:H:108:THR:HG22 | 1.33                     | 1.23              |
| 1:N:229:VAL:CG1  | 1:N:235:HIS:HE1  | 1.49                     | 1.23              |
| 1:Q:229:VAL:CG1  | 1:Q:235:HIS:HE1  | 1.49                     | 1.23              |
| 1:L:105:LEU:O    | 1:L:108:THR:HG22 | 1.33                     | 1.23              |
| 1:L:229:VAL:CG1  | 1:L:235:HIS:HE1  | 1.49                     | 1.23              |
| 1:O:229:VAL:CG1  | 1:O:235:HIS:HE1  | 1.49                     | 1.23              |
| 1:I:285:MET:HG2  | 1:K:275:PRO:CB   | 1.62                     | 1.23              |
| 1:M:168:MET:HE1  | 1:M:175:TYR:CE1  | 1.74                     | 1.22              |
| 1:Q:251:LYS:HG3  | 1:Q:252:LEU:N    | 1.40                     | 1.22              |
| 1:J:251:LYS:HG3  | 1:J:252:LEU:N    | 1.39                     | 1.22              |
| 1:P:105:LEU:O    | 1:P:108:THR:HG22 | 1.33                     | 1.22              |
| 1:B:105:LEU:O    | 1:B:108:THR:HG22 | 1.33                     | 1.22              |
| 1:O:168:MET:HE1  | 1:O:175:TYR:CE1  | 1.75                     | 1.22              |
| 1:H:168:MET:HE1  | 1:H:175:TYR:CE1  | 1.74                     | 1.22              |
| 1:J:149:GLN:NE2  | 1:K:265:GLY:O    | 1.71                     | 1.22              |
| 1:M:149:GLN:NE2  | 1:N:265:GLY:O    | 1.71                     | 1.22              |
| 1:L:265:GLY:O    | 1:N:149:GLN:NE2  | 1.71                     | 1.22              |
| 1:P:150:LEU:HD22 | 1:Q:289:TRP:O    | 1.35                     | 1.22              |
| 1:I:265:GLY:O    | 1:K:149:GLN:NE2  | 1.71                     | 1.21              |
| 1:L:251:LYS:HG3  | 1:L:252:LEU:N    | 1.39                     | 1.21              |
| 1:P:149:GLN:NE2  | 1:Q:265:GLY:O    | 1.71                     | 1.21              |
| 1:F:205:ILE:CD1  | 1:G:104:GLN:OE1  | 1.89                     | 1.21              |

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| Atom-1          | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|-----------------|------------------|--------------------------|-------------------|
| 1:G:205:ILE:CD1 | 1:H:104:GLN:OE1  | 1.89                     | 1.21              |
| 1:L:104:GLN:OE1 | 1:N:205:ILE:CD1  | 1.89                     | 1.21              |
| 1:O:104:GLN:OE1 | 1:Q:205:ILE:CD1  | 1.89                     | 1.21              |
| 1:Q:168:MET:HE2 | 1:Q:175:TYR:CE1  | 1.76                     | 1.21              |
| 1:J:150:LEU:CD2 | 1:K:290:LYS:CD   | 2.07                     | 1.21              |
| 1:M:205:ILE:CD1 | 1:N:104:GLN:OE1  | 1.89                     | 1.21              |
| 1:O:205:ILE:CD1 | 1:P:104:GLN:OE1  | 1.89                     | 1.21              |
| 1:G:149:GLN:NE2 | 1:H:265:GLY:O    | 1.71                     | 1.21              |
| 1:G:275:PRO:CB  | 1:H:285:MET:HG2  | 1.62                     | 1.21              |
| 1:I:289:TRP:O   | 1:K:150:LEU:HD22 | 1.35                     | 1.21              |
| 1:P:168:MET:HE1 | 1:P:175:TYR:CE1  | 1.74                     | 1.21              |
| 1:B:64:ASP:O    | 1:B:65:THR:HG22  | 1.39                     | 1.21              |
| 1:L:289:TRP:O   | 1:N:150:LEU:HD22 | 1.35                     | 1.21              |
| 1:F:149:GLN:NE2 | 1:G:265:GLY:O    | 1.71                     | 1.20              |
| 1:I:149:GLN:NE2 | 1:J:265:GLY:O    | 1.71                     | 1.20              |
| 1:L:257:ASN:O   | 1:L:258:VAL:O    | 1.60                     | 1.20              |
| 1:I:205:ILE:CD1 | 1:J:104:GLN:OE1  | 1.89                     | 1.20              |
| 1:J:205:ILE:CD1 | 1:K:104:GLN:OE1  | 1.89                     | 1.20              |
| 1:J:257:ASN:O   | 1:J:258:VAL:O    | 1.60                     | 1.20              |
| 1:M:257:ASN:O   | 1:M:258:VAL:O    | 1.60                     | 1.20              |
| 1:B:128:SER:CB  | 1:B:155:LEU:HD13 | 1.72                     | 1.20              |
| 1:F:104:GLN:OE1 | 1:H:205:ILE:CD1  | 1.89                     | 1.20              |
| 1:H:128:SER:CB  | 1:H:155:LEU:HD13 | 1.72                     | 1.20              |
| 1:H:257:ASN:O   | 1:H:258:VAL:O    | 1.60                     | 1.20              |
| 1:I:275:PRO:CB  | 1:J:285:MET:HG2  | 1.62                     | 1.20              |
| 1:J:168:MET:HE1 | 1:J:175:TYR:CE1  | 1.74                     | 1.20              |
| 1:O:149:GLN:NE2 | 1:P:265:GLY:O    | 1.71                     | 1.20              |
| 1:O:285:MET:HG2 | 1:Q:275:PRO:CB   | 1.62                     | 1.20              |
| 1:P:205:ILE:CD1 | 1:Q:104:GLN:OE1  | 1.89                     | 1.20              |
| 1:I:104:GLN:OE1 | 1:K:205:ILE:CD1  | 1.89                     | 1.20              |
| 1:M:276:THR:CA  | 1:N:285:MET:CE   | 1.94                     | 1.20              |
| 1:P:128:SER:CB  | 1:P:155:LEU:HD13 | 1.72                     | 1.20              |
| 1:L:205:ILE:CD1 | 1:M:104:GLN:OE1  | 1.89                     | 1.20              |
| 1:F:285:MET:HG2 | 1:H:275:PRO:CB   | 1.62                     | 1.19              |
| 1:G:257:ASN:O   | 1:G:258:VAL:O    | 1.60                     | 1.19              |
| 1:L:150:LEU:CD1 | 1:M:288:ASN:OD1  | 1.91                     | 1.19              |
| 1:O:265:GLY:O   | 1:Q:149:GLN:NE2  | 1.71                     | 1.19              |
| 1:F:150:LEU:CD1 | 1:G:288:ASN:OD1  | 1.91                     | 1.19              |
| 1:F:168:MET:HE1 | 1:F:175:TYR:CE1  | 1.74                     | 1.19              |
| 1:F:288:ASN:OD1 | 1:H:150:LEU:CD1  | 1.91                     | 1.19              |
| 1:F:290:LYS:CD  | 1:H:150:LEU:CD2  | 2.07                     | 1.19              |

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| Atom-1          | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|-----------------|------------------|--------------------------|-------------------|
| 1:N:257:ASN:O   | 1:N:258:VAL:O    | 1.60                     | 1.19              |
| 1:I:290:LYS:CD  | 1:K:150:LEU:CD2  | 2.07                     | 1.19              |
| 1:J:128:SER:CB  | 1:J:155:LEU:HD13 | 1.72                     | 1.19              |
| 1:K:168:MET:HE1 | 1:K:175:TYR:CZ   | 1.78                     | 1.19              |
| 1:L:150:LEU:CD2 | 1:M:290:LYS:CD   | 2.07                     | 1.19              |
| 1:O:285:MET:HE1 | 1:Q:276:THR:CA   | 1.59                     | 1.19              |
| 1:P:69:ASN:HD22 | 2:Y:1:NAG:C1     | 1.56                     | 1.19              |
| 1:P:82:CYS:SG   | 1:P:135:CYS:HB3  | 1.83                     | 1.19              |
| 1:P:150:LEU:CD1 | 1:Q:288:ASN:OD1  | 1.90                     | 1.19              |
| 1:B:82:CYS:SG   | 1:B:135:CYS:HB3  | 1.83                     | 1.18              |
| 1:G:82:CYS:SG   | 1:G:135:CYS:HB3  | 1.83                     | 1.18              |
| 1:I:257:ASN:O   | 1:I:258:VAL:O    | 1.60                     | 1.18              |
| 1:L:288:ASN:OD1 | 1:N:150:LEU:CD1  | 1.91                     | 1.18              |
| 1:M:150:LEU:CD1 | 1:N:288:ASN:OD1  | 1.90                     | 1.18              |
| 1:B:168:MET:HE2 | 1:B:175:TYR:CZ   | 1.78                     | 1.18              |
| 1:F:257:ASN:O   | 1:F:258:VAL:O    | 1.60                     | 1.18              |
| 1:H:82:CYS:SG   | 1:H:135:CYS:HB3  | 1.84                     | 1.18              |
| 1:I:128:SER:CB  | 1:I:155:LEU:HD13 | 1.72                     | 1.18              |
| 1:L:128:SER:CB  | 1:L:155:LEU:HD13 | 1.72                     | 1.18              |
| 1:M:150:LEU:CD2 | 1:N:290:LYS:CD   | 2.07                     | 1.18              |
| 1:O:288:ASN:OD1 | 1:Q:150:LEU:CD1  | 1.91                     | 1.18              |
| 1:O:290:LYS:CD  | 1:Q:150:LEU:CD2  | 2.07                     | 1.18              |
| 1:J:69:ASN:HD22 | 2:S:1:NAG:C1     | 1.56                     | 1.18              |
| 1:M:128:SER:CB  | 1:M:155:LEU:HD13 | 1.72                     | 1.18              |
| 1:N:69:ASN:HD22 | 2:W:1:NAG:C1     | 1.56                     | 1.18              |
| 1:B:168:MET:HE1 | 1:B:175:TYR:CE1  | 1.75                     | 1.18              |
| 1:F:82:CYS:SG   | 1:F:135:CYS:HB3  | 1.83                     | 1.18              |
| 1:G:128:SER:CB  | 1:G:155:LEU:HD13 | 1.72                     | 1.18              |
| 1:G:150:LEU:CD1 | 1:H:288:ASN:OD1  | 1.91                     | 1.18              |
| 1:H:130:ASP:N   | 1:H:131:PRO:CD   | 2.07                     | 1.18              |
| 1:I:150:LEU:CD2 | 1:J:290:LYS:CD   | 2.07                     | 1.18              |
| 1:I:150:LEU:CD1 | 1:J:288:ASN:OD1  | 1.91                     | 1.18              |
| 1:J:130:ASP:N   | 1:J:131:PRO:CD   | 2.07                     | 1.18              |
| 1:J:150:LEU:CD1 | 1:K:288:ASN:OD1  | 1.91                     | 1.18              |
| 1:K:128:SER:CB  | 1:K:155:LEU:HD13 | 1.72                     | 1.18              |
| 1:M:275:PRO:CB  | 1:N:285:MET:HG2  | 1.62                     | 1.18              |
| 1:F:128:SER:CB  | 1:F:155:LEU:HD13 | 1.72                     | 1.18              |
| 1:I:285:MET:HE3 | 1:K:276:THR:HA   | 1.18                     | 1.18              |
| 1:K:82:CYS:SG   | 1:K:135:CYS:HB3  | 1.83                     | 1.18              |
| 1:M:130:ASP:N   | 1:M:131:PRO:CD   | 2.07                     | 1.18              |
| 1:N:130:ASP:N   | 1:N:131:PRO:CD   | 2.07                     | 1.18              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:82:CYS:SG    | 1:O:135:CYS:HB3  | 1.83                     | 1.18              |
| 1:O:128:SER:CB   | 1:O:155:LEU:HD13 | 1.72                     | 1.18              |
| 1:Q:82:CYS:SG    | 1:Q:135:CYS:HB3  | 1.83                     | 1.18              |
| 1:Q:257:ASN:O    | 1:Q:258:VAL:O    | 1.60                     | 1.18              |
| 1:F:150:LEU:CD2  | 1:G:290:LYS:CD   | 2.07                     | 1.17              |
| 1:G:130:ASP:N    | 1:G:131:PRO:CD   | 2.07                     | 1.17              |
| 1:L:130:ASP:N    | 1:L:131:PRO:CD   | 2.07                     | 1.17              |
| 1:N:128:SER:CB   | 1:N:155:LEU:HD13 | 1.72                     | 1.17              |
| 1:O:130:ASP:N    | 1:O:131:PRO:CD   | 2.07                     | 1.17              |
| 1:F:130:ASP:N    | 1:F:131:PRO:CD   | 2.07                     | 1.17              |
| 1:K:257:ASN:O    | 1:K:258:VAL:O    | 1.60                     | 1.17              |
| 1:L:168:MET:HE1  | 1:L:175:TYR:CE1  | 1.78                     | 1.17              |
| 1:O:150:LEU:CD1  | 1:P:288:ASN:OD1  | 1.91                     | 1.17              |
| 1:O:159:ILE:HG22 | 1:O:258:VAL:HG21 | 1.24                     | 1.17              |
| 1:Q:168:MET:HE2  | 1:Q:175:TYR:CZ   | 1.78                     | 1.17              |
| 1:L:82:CYS:SG    | 1:L:135:CYS:HB3  | 1.83                     | 1.17              |
| 1:Q:128:SER:CB   | 1:Q:155:LEU:HD13 | 1.72                     | 1.17              |
| 1:B:130:ASP:N    | 1:B:131:PRO:CD   | 2.07                     | 1.17              |
| 1:B:257:ASN:O    | 1:B:258:VAL:O    | 1.60                     | 1.17              |
| 1:I:82:CYS:SG    | 1:I:135:CYS:HB3  | 1.83                     | 1.17              |
| 1:J:128:SER:CA   | 1:J:155:LEU:HD13 | 1.75                     | 1.17              |
| 1:N:82:CYS:SG    | 1:N:135:CYS:HB3  | 1.83                     | 1.17              |
| 1:P:257:ASN:O    | 1:P:258:VAL:O    | 1.60                     | 1.17              |
| 1:I:288:ASN:OD1  | 1:K:150:LEU:CD1  | 1.90                     | 1.17              |
| 1:K:130:ASP:N    | 1:K:131:PRO:CD   | 2.07                     | 1.17              |
| 1:L:128:SER:CA   | 1:L:155:LEU:HD13 | 1.75                     | 1.17              |
| 1:M:128:SER:CA   | 1:M:155:LEU:HD13 | 1.75                     | 1.17              |
| 1:P:275:PRO:CB   | 1:Q:285:MET:HG2  | 1.62                     | 1.17              |
| 1:Q:128:SER:CA   | 1:Q:155:LEU:HD13 | 1.75                     | 1.17              |
| 1:G:128:SER:CA   | 1:G:155:LEU:HD13 | 1.75                     | 1.16              |
| 1:I:130:ASP:N    | 1:I:131:PRO:CD   | 2.07                     | 1.16              |
| 1:J:82:CYS:SG    | 1:J:135:CYS:HB3  | 1.84                     | 1.16              |
| 1:K:159:ILE:HG22 | 1:K:258:VAL:HG21 | 1.24                     | 1.16              |
| 1:L:69:ASN:HD22  | 2:U:1:NAG:C1     | 1.59                     | 1.16              |
| 1:L:159:ILE:HG22 | 1:L:258:VAL:HG21 | 1.24                     | 1.16              |
| 1:L:285:MET:HG2  | 1:N:275:PRO:CB   | 1.62                     | 1.16              |
| 1:M:69:ASN:HD22  | 2:V:1:NAG:C1     | 1.56                     | 1.16              |
| 1:Q:130:ASP:N    | 1:Q:131:PRO:CD   | 2.07                     | 1.16              |
| 1:K:142:MET:CE   | 1:K:152:MET:HE2  | 1.73                     | 1.16              |
| 1:M:82:CYS:SG    | 1:M:135:CYS:HB3  | 1.83                     | 1.16              |
| 1:O:128:SER:CA   | 1:O:155:LEU:HD13 | 1.75                     | 1.16              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:128:SER:CA   | 1:B:155:LEU:HD13 | 1.75                     | 1.16              |
| 1:H:159:ILE:HG22 | 1:H:258:VAL:HG21 | 1.24                     | 1.16              |
| 1:O:257:ASN:O    | 1:O:258:VAL:O    | 1.60                     | 1.16              |
| 1:G:69:ASN:HD22  | 2:D:1:NAG:C1     | 1.57                     | 1.16              |
| 1:I:168:MET:HE1  | 1:I:175:TYR:CE1  | 1.78                     | 1.16              |
| 1:F:69:ASN:HD22  | 2:C:1:NAG:C1     | 1.58                     | 1.15              |
| 1:F:128:SER:CA   | 1:F:155:LEU:HD13 | 1.75                     | 1.15              |
| 1:H:69:ASN:HD22  | 2:E:1:NAG:C1     | 1.59                     | 1.15              |
| 1:K:168:MET:HE1  | 1:K:175:TYR:CE1  | 1.75                     | 1.15              |
| 1:L:174:TYR:CD1  | 1:L:198:LEU:CD1  | 2.29                     | 1.15              |
| 1:M:174:TYR:CD1  | 1:M:198:LEU:CD1  | 2.29                     | 1.15              |
| 1:N:128:SER:CA   | 1:N:155:LEU:HD13 | 1.75                     | 1.15              |
| 1:P:130:ASP:N    | 1:P:131:PRO:CD   | 2.07                     | 1.15              |
| 1:H:128:SER:CA   | 1:H:155:LEU:HD13 | 1.75                     | 1.15              |
| 1:H:174:TYR:CD1  | 1:H:198:LEU:CD1  | 2.29                     | 1.15              |
| 1:I:128:SER:CA   | 1:I:155:LEU:HD13 | 1.75                     | 1.15              |
| 1:O:251:LYS:HG3  | 1:O:252:LEU:N    | 1.39                     | 1.15              |
| 1:B:191:CYS:CA   | 1:B:244:CYS:SG   | 2.35                     | 1.15              |
| 1:K:128:SER:CA   | 1:K:155:LEU:HD13 | 1.75                     | 1.15              |
| 1:F:191:CYS:CA   | 1:F:244:CYS:SG   | 2.35                     | 1.15              |
| 1:H:191:CYS:CA   | 1:H:244:CYS:SG   | 2.35                     | 1.15              |
| 1:O:174:TYR:CD1  | 1:O:198:LEU:CD1  | 2.29                     | 1.15              |
| 1:K:174:TYR:CD1  | 1:K:198:LEU:CD1  | 2.29                     | 1.15              |
| 1:K:251:LYS:HG3  | 1:K:252:LEU:N    | 1.39                     | 1.15              |
| 1:L:276:THR:CA   | 1:M:285:MET:CE   | 1.94                     | 1.15              |
| 1:P:150:LEU:CD2  | 1:Q:290:LYS:CD   | 2.07                     | 1.15              |
| 1:P:191:CYS:CA   | 1:P:244:CYS:SG   | 2.35                     | 1.15              |
| 1:G:174:TYR:CD1  | 1:G:198:LEU:CD1  | 2.29                     | 1.14              |
| 1:N:168:MET:HE1  | 1:N:175:TYR:CE1  | 1.78                     | 1.14              |
| 1:O:142:MET:CE   | 1:O:152:MET:HE1  | 1.78                     | 1.14              |
| 1:Q:191:CYS:CA   | 1:Q:244:CYS:SG   | 2.35                     | 1.14              |
| 1:B:174:TYR:CD1  | 1:B:198:LEU:CD1  | 2.29                     | 1.14              |
| 1:F:174:TYR:CD1  | 1:F:198:LEU:CD1  | 2.29                     | 1.14              |
| 1:F:275:PRO:CB   | 1:G:285:MET:HG2  | 1.62                     | 1.14              |
| 1:P:128:SER:CA   | 1:P:155:LEU:HD13 | 1.75                     | 1.14              |
| 1:H:229:VAL:CG1  | 1:H:235:HIS:CE1  | 2.27                     | 1.14              |
| 1:I:128:SER:HA   | 1:I:155:LEU:HD11 | 1.29                     | 1.14              |
| 1:I:174:TYR:CD1  | 1:I:198:LEU:CD1  | 2.29                     | 1.14              |
| 1:J:174:TYR:CD1  | 1:J:198:LEU:CD1  | 2.29                     | 1.14              |
| 1:N:191:CYS:CA   | 1:N:244:CYS:SG   | 2.35                     | 1.14              |
| 1:O:191:CYS:CA   | 1:O:244:CYS:SG   | 2.35                     | 1.14              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:P:174:TYR:CD1  | 1:P:198:LEU:CD1  | 2.29                     | 1.14              |
| 1:B:159:ILE:HG22 | 1:B:258:VAL:HG21 | 1.24                     | 1.14              |
| 1:I:69:ASN:HD22  | 2:R:1:NAG:C1     | 1.60                     | 1.14              |
| 1:J:191:CYS:CA   | 1:J:244:CYS:SG   | 2.35                     | 1.14              |
| 1:N:159:ILE:HG22 | 1:N:258:VAL:HG21 | 1.24                     | 1.14              |
| 1:N:174:TYR:CD1  | 1:N:198:LEU:CD1  | 2.29                     | 1.14              |
| 1:Q:174:TYR:CD1  | 1:Q:198:LEU:CD1  | 2.29                     | 1.14              |
| 1:I:191:CYS:CA   | 1:I:244:CYS:SG   | 2.35                     | 1.14              |
| 1:L:290:LYS:HG2  | 1:N:150:LEU:HD21 | 1.30                     | 1.14              |
| 1:Q:69:ASN:HD22  | 2:Z:1:NAG:C1     | 1.61                     | 1.14              |
| 1:G:150:LEU:CD2  | 1:H:290:LYS:CD   | 2.07                     | 1.13              |
| 1:H:126:SER:HA   | 1:H:223:LYS:HZ1  | 1.08                     | 1.13              |
| 1:M:128:SER:HA   | 1:M:155:LEU:HD11 | 1.29                     | 1.13              |
| 1:M:191:CYS:CA   | 1:M:244:CYS:SG   | 2.35                     | 1.13              |
| 1:F:229:VAL:CG1  | 1:F:235:HIS:CE1  | 2.27                     | 1.13              |
| 1:G:191:CYS:CA   | 1:G:244:CYS:SG   | 2.35                     | 1.13              |
| 1:L:191:CYS:CA   | 1:L:244:CYS:SG   | 2.35                     | 1.13              |
| 1:G:150:LEU:HD21 | 1:H:290:LYS:HG2  | 1.30                     | 1.13              |
| 1:M:159:ILE:HG22 | 1:M:258:VAL:HG21 | 1.24                     | 1.13              |
| 1:B:168:MET:CE   | 1:B:175:TYR:CZ   | 2.32                     | 1.13              |
| 1:G:229:VAL:CG1  | 1:G:235:HIS:CE1  | 2.27                     | 1.13              |
| 1:I:168:MET:CE   | 1:I:175:TYR:CZ   | 2.32                     | 1.13              |
| 1:K:126:SER:HA   | 1:K:223:LYS:HZ1  | 1.13                     | 1.13              |
| 1:P:229:VAL:CG1  | 1:P:235:HIS:CE1  | 2.27                     | 1.13              |
| 1:B:142:MET:CE   | 1:B:152:MET:HE1  | 1.76                     | 1.12              |
| 1:B:257:ASN:O    | 1:B:310:MET:SD   | 2.07                     | 1.13              |
| 1:I:126:SER:HA   | 1:I:223:LYS:HZ1  | 1.10                     | 1.13              |
| 1:I:174:TYR:CD1  | 1:I:198:LEU:HD12 | 1.85                     | 1.12              |
| 1:K:69:ASN:HD22  | 2:T:1:NAG:C1     | 1.60                     | 1.12              |
| 1:K:257:ASN:O    | 1:K:310:MET:SD   | 2.07                     | 1.13              |
| 1:L:275:PRO:CB   | 1:M:285:MET:HG2  | 1.62                     | 1.13              |
| 1:N:257:ASN:O    | 1:N:310:MET:SD   | 2.07                     | 1.13              |
| 1:O:275:PRO:CB   | 1:P:285:MET:HG2  | 1.62                     | 1.13              |
| 1:K:191:CYS:CA   | 1:K:244:CYS:SG   | 2.35                     | 1.12              |
| 1:O:168:MET:CE   | 1:O:175:TYR:CZ   | 2.32                     | 1.12              |
| 1:P:128:SER:HA   | 1:P:155:LEU:HD11 | 1.29                     | 1.12              |
| 1:P:174:TYR:CD1  | 1:P:198:LEU:HD12 | 1.84                     | 1.12              |
| 1:Q:174:TYR:CD1  | 1:Q:198:LEU:HD12 | 1.85                     | 1.12              |
| 1:Q:257:ASN:O    | 1:Q:310:MET:SD   | 2.07                     | 1.12              |
| 1:G:168:MET:CE   | 1:G:175:TYR:CZ   | 2.32                     | 1.12              |
| 1:H:168:MET:CE   | 1:H:175:TYR:CZ   | 2.32                     | 1.12              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:J:257:ASN:O    | 1:J:310:MET:SD   | 2.07                     | 1.12              |
| 1:P:159:ILE:HG22 | 1:P:258:VAL:HG21 | 1.24                     | 1.12              |
| 1:B:174:TYR:CD1  | 1:B:198:LEU:HD12 | 1.85                     | 1.12              |
| 1:F:128:SER:HA   | 1:F:155:LEU:HD11 | 1.29                     | 1.12              |
| 1:H:257:ASN:O    | 1:H:310:MET:SD   | 2.07                     | 1.12              |
| 1:I:159:ILE:HG22 | 1:I:258:VAL:HG21 | 1.24                     | 1.12              |
| 1:P:257:ASN:O    | 1:P:310:MET:SD   | 2.07                     | 1.12              |
| 1:Q:72:GLN:O     | 1:Q:76:PHE:HD1   | 1.10                     | 1.12              |
| 1:G:257:ASN:O    | 1:G:310:MET:SD   | 2.07                     | 1.12              |
| 1:K:174:TYR:CD1  | 1:K:198:LEU:HD12 | 1.85                     | 1.12              |
| 1:L:174:TYR:CD1  | 1:L:198:LEU:HD12 | 1.85                     | 1.12              |
| 1:N:229:VAL:CG1  | 1:N:235:HIS:CE1  | 2.27                     | 1.12              |
| 1:K:168:MET:CE   | 1:K:175:TYR:CZ   | 2.32                     | 1.12              |
| 1:M:168:MET:CE   | 1:M:175:TYR:CZ   | 2.32                     | 1.12              |
| 1:N:64:ASP:O     | 1:N:65:THR:CG2   | 1.98                     | 1.12              |
| 1:N:174:TYR:CD1  | 1:N:198:LEU:HD12 | 1.85                     | 1.12              |
| 1:F:168:MET:CE   | 1:F:175:TYR:CZ   | 2.32                     | 1.11              |
| 1:F:257:ASN:O    | 1:F:310:MET:SD   | 2.07                     | 1.11              |
| 1:G:64:ASP:O     | 1:G:65:THR:CG2   | 1.98                     | 1.11              |
| 1:J:168:MET:CE   | 1:J:175:TYR:CZ   | 2.32                     | 1.11              |
| 1:J:174:TYR:CD1  | 1:J:198:LEU:HD12 | 1.85                     | 1.11              |
| 1:M:174:TYR:CD1  | 1:M:198:LEU:HD12 | 1.85                     | 1.11              |
| 1:M:257:ASN:O    | 1:M:310:MET:SD   | 2.07                     | 1.11              |
| 1:O:257:ASN:O    | 1:O:310:MET:SD   | 2.07                     | 1.11              |
| 1:Q:159:ILE:HG22 | 1:Q:258:VAL:HG21 | 1.24                     | 1.11              |
| 1:F:276:THR:HA   | 1:G:285:MET:HE3  | 1.13                     | 1.11              |
| 1:G:251:LYS:HG3  | 1:G:252:LEU:N    | 1.39                     | 1.11              |
| 1:I:290:LYS:HG2  | 1:K:150:LEU:HD21 | 1.30                     | 1.11              |
| 1:O:168:MET:HE1  | 1:O:175:TYR:CZ   | 1.84                     | 1.11              |
| 1:P:168:MET:CE   | 1:P:175:TYR:CZ   | 2.32                     | 1.11              |
| 1:L:257:ASN:O    | 1:L:310:MET:SD   | 2.07                     | 1.11              |
| 1:O:174:TYR:CD1  | 1:O:198:LEU:HD12 | 1.85                     | 1.11              |
| 1:G:174:TYR:CD1  | 1:G:198:LEU:HD12 | 1.85                     | 1.11              |
| 1:H:174:TYR:CD1  | 1:H:198:LEU:HD12 | 1.85                     | 1.11              |
| 1:I:64:ASP:O     | 1:I:65:THR:CG2   | 1.98                     | 1.11              |
| 1:I:144:TYR:CE2  | 1:I:146:ALA:HB2  | 1.85                     | 1.11              |
| 1:K:229:VAL:CG1  | 1:K:235:HIS:CE1  | 2.27                     | 1.11              |
| 1:L:168:MET:CE   | 1:L:175:TYR:CZ   | 2.32                     | 1.11              |
| 1:M:69:ASN:ND2   | 2:V:1:NAG:C1     | 2.13                     | 1.11              |
| 1:O:69:ASN:HD22  | 2:X:1:NAG:C1     | 1.63                     | 1.11              |
| 1:O:72:GLN:O     | 1:O:76:PHE:HD1   | 1.10                     | 1.11              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:P:126:SER:HA   | 1:P:223:LYS:HZ1  | 1.05                     | 1.11              |
| 1:Q:168:MET:CE   | 1:Q:175:TYR:CZ   | 2.32                     | 1.11              |
| 1:H:64:ASP:O     | 1:H:65:THR:CG2   | 1.98                     | 1.11              |
| 1:H:251:LYS:HG3  | 1:H:252:LEU:N    | 1.40                     | 1.11              |
| 1:J:69:ASN:ND2   | 2:S:1:NAG:C1     | 2.14                     | 1.11              |
| 1:Q:66:ALA:O     | 1:Q:67:TYR:C     | 1.80                     | 1.11              |
| 1:I:150:LEU:HD21 | 1:J:290:LYS:HG2  | 1.30                     | 1.10              |
| 1:J:64:ASP:O     | 1:J:65:THR:CG2   | 1.98                     | 1.10              |
| 1:N:117:TYR:CE2  | 1:P:167:PRO:O    | 2.04                     | 1.10              |
| 1:B:69:ASN:ND2   | 2:A:1:NAG:C1     | 2.14                     | 1.10              |
| 1:I:257:ASN:O    | 1:I:310:MET:SD   | 2.07                     | 1.10              |
| 1:J:150:LEU:HD21 | 1:K:290:LYS:HG2  | 1.30                     | 1.10              |
| 1:L:229:VAL:CG1  | 1:L:235:HIS:CE1  | 2.27                     | 1.10              |
| 1:M:64:ASP:O     | 1:M:65:THR:CG2   | 1.98                     | 1.10              |
| 1:O:290:LYS:HG2  | 1:Q:150:LEU:HD21 | 1.30                     | 1.10              |
| 1:P:144:TYR:CE2  | 1:P:146:ALA:HB2  | 1.86                     | 1.10              |
| 1:J:275:PRO:CB   | 1:K:285:MET:HG2  | 1.62                     | 1.10              |
| 1:N:251:LYS:HG3  | 1:N:252:LEU:N    | 1.39                     | 1.10              |
| 1:B:72:GLN:O     | 1:B:76:PHE:HD1   | 1.10                     | 1.10              |
| 1:F:64:ASP:O     | 1:F:65:THR:CG2   | 1.98                     | 1.10              |
| 1:F:290:LYS:HG2  | 1:H:150:LEU:HD21 | 1.30                     | 1.10              |
| 1:G:276:THR:HA   | 1:H:285:MET:HE3  | 1.12                     | 1.10              |
| 1:O:124:ILE:HD13 | 1:O:152:MET:HG2  | 1.34                     | 1.10              |
| 1:P:64:ASP:O     | 1:P:65:THR:CG2   | 1.98                     | 1.10              |
| 1:I:229:VAL:CG1  | 1:I:235:HIS:CE1  | 2.27                     | 1.10              |
| 1:J:276:THR:HA   | 1:K:285:MET:HE3  | 1.10                     | 1.10              |
| 1:K:64:ASP:O     | 1:K:65:THR:CG2   | 1.98                     | 1.10              |
| 1:L:124:ILE:HD13 | 1:L:152:MET:HG2  | 1.34                     | 1.10              |
| 1:L:275:PRO:HB2  | 1:M:285:MET:CG   | 1.82                     | 1.10              |
| 1:N:128:SER:HA   | 1:N:155:LEU:HD11 | 1.29                     | 1.10              |
| 1:G:125:ALA:HB1  | 1:G:223:LYS:CD   | 1.82                     | 1.09              |
| 1:I:251:LYS:HG3  | 1:I:252:LEU:N    | 1.39                     | 1.09              |
| 1:L:128:SER:HA   | 1:L:155:LEU:HD11 | 1.29                     | 1.09              |
| 1:N:144:TYR:CE2  | 1:N:146:ALA:HB2  | 1.86                     | 1.09              |
| 1:O:64:ASP:O     | 1:O:65:THR:CG2   | 1.98                     | 1.09              |
| 1:O:66:ALA:O     | 1:O:67:TYR:C     | 1.80                     | 1.09              |
| 1:F:144:TYR:CE2  | 1:F:146:ALA:HB2  | 1.87                     | 1.09              |
| 1:G:124:ILE:HD13 | 1:G:152:MET:HG2  | 1.34                     | 1.09              |
| 1:G:128:SER:HA   | 1:G:155:LEU:HD11 | 1.29                     | 1.09              |
| 1:H:142:MET:CE   | 1:H:152:MET:HE1  | 1.74                     | 1.09              |
| 1:J:128:SER:HA   | 1:J:155:LEU:HD11 | 1.29                     | 1.09              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:L:126:SER:HA   | 1:L:223:LYS:HZ1  | 1.05                     | 1.09              |
| 1:N:168:MET:CE   | 1:N:175:TYR:CZ   | 2.32                     | 1.09              |
| 1:B:128:SER:CA   | 1:B:155:LEU:CD1  | 2.30                     | 1.09              |
| 1:F:275:PRO:HB2  | 1:G:285:MET:CG   | 1.82                     | 1.09              |
| 1:I:66:ALA:O     | 1:I:67:TYR:C     | 1.80                     | 1.09              |
| 1:I:285:MET:CG   | 1:K:275:PRO:HB2  | 1.82                     | 1.09              |
| 1:J:159:ILE:HG22 | 1:J:258:VAL:HG21 | 1.24                     | 1.09              |
| 1:O:159:ILE:HG23 | 1:O:258:VAL:HG21 | 1.34                     | 1.09              |
| 1:I:142:MET:CE   | 1:I:152:MET:HE1  | 1.82                     | 1.09              |
| 1:P:69:ASN:ND2   | 2:Y:1:NAG:C1     | 2.14                     | 1.09              |
| 1:P:275:PRO:HB2  | 1:Q:285:MET:CG   | 1.82                     | 1.09              |
| 1:Q:125:ALA:HB1  | 1:Q:223:LYS:CD   | 1.82                     | 1.09              |
| 1:Q:229:VAL:CG1  | 1:Q:235:HIS:CE1  | 2.27                     | 1.09              |
| 1:F:285:MET:CG   | 1:H:275:PRO:HB2  | 1.82                     | 1.09              |
| 1:I:72:GLN:O     | 1:I:76:PHE:HD1   | 1.10                     | 1.09              |
| 1:I:275:PRO:HB2  | 1:J:285:MET:CG   | 1.82                     | 1.09              |
| 1:L:290:LYS:CD   | 1:N:150:LEU:CD2  | 2.07                     | 1.09              |
| 1:M:159:ILE:HG23 | 1:M:258:VAL:HG21 | 1.35                     | 1.09              |
| 1:N:69:ASN:ND2   | 2:W:1:NAG:C1     | 2.14                     | 1.09              |
| 1:N:124:ILE:HD13 | 1:N:152:MET:HG2  | 1.34                     | 1.09              |
| 1:O:285:MET:CG   | 1:Q:275:PRO:HB2  | 1.82                     | 1.09              |
| 1:Q:64:ASP:O     | 1:Q:65:THR:CG2   | 1.98                     | 1.09              |
| 1:Q:144:TYR:CE2  | 1:Q:146:ALA:HB2  | 1.88                     | 1.09              |
| 1:G:144:TYR:CE2  | 1:G:146:ALA:HB2  | 1.88                     | 1.08              |
| 1:G:275:PRO:HB2  | 1:H:285:MET:CG   | 1.82                     | 1.08              |
| 1:H:124:ILE:HD13 | 1:H:152:MET:HG2  | 1.34                     | 1.08              |
| 1:I:125:ALA:HB1  | 1:I:223:LYS:CD   | 1.82                     | 1.08              |
| 1:L:174:TYR:CE1  | 1:L:234:ASN:HB3  | 1.89                     | 1.08              |
| 1:N:128:SER:CA   | 1:N:155:LEU:CD1  | 2.30                     | 1.08              |
| 1:O:275:PRO:HB2  | 1:P:285:MET:CG   | 1.82                     | 1.08              |
| 1:O:276:THR:HA   | 1:P:285:MET:HE3  | 1.17                     | 1.08              |
| 1:F:174:TYR:CD1  | 1:F:198:LEU:HD12 | 1.84                     | 1.08              |
| 1:G:117:TYR:CE2  | 1:O:167:PRO:O    | 2.06                     | 1.08              |
| 1:H:174:TYR:CE1  | 1:H:234:ASN:HB3  | 1.89                     | 1.08              |
| 1:I:124:ILE:HD13 | 1:I:152:MET:HG2  | 1.34                     | 1.08              |
| 1:I:276:THR:HA   | 1:J:285:MET:HE3  | 1.14                     | 1.08              |
| 1:K:159:ILE:HG21 | 1:K:258:VAL:HG21 | 1.09                     | 1.08              |
| 1:L:64:ASP:O     | 1:L:65:THR:CG2   | 1.98                     | 1.08              |
| 1:N:125:ALA:HB1  | 1:N:223:LYS:CD   | 1.82                     | 1.08              |
| 1:O:125:ALA:HB1  | 1:O:223:LYS:CD   | 1.82                     | 1.08              |
| 1:B:125:ALA:HB1  | 1:B:223:LYS:CD   | 1.82                     | 1.08              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:159:ILE:HG23 | 1:B:258:VAL:HG21 | 1.34                     | 1.08              |
| 1:F:159:ILE:HG23 | 1:F:258:VAL:HG21 | 1.34                     | 1.08              |
| 1:I:174:TYR:CE1  | 1:I:234:ASN:HB3  | 1.89                     | 1.08              |
| 1:J:125:ALA:HB1  | 1:J:223:LYS:CD   | 1.82                     | 1.08              |
| 1:J:275:PRO:HB2  | 1:K:285:MET:CG   | 1.82                     | 1.08              |
| 1:K:72:GLN:O     | 1:K:76:PHE:HD1   | 1.10                     | 1.08              |
| 1:L:150:LEU:HD23 | 1:M:290:LYS:HD3  | 1.08                     | 1.08              |
| 1:M:125:ALA:HB1  | 1:M:223:LYS:CD   | 1.82                     | 1.08              |
| 1:M:275:PRO:HB2  | 1:N:285:MET:CG   | 1.82                     | 1.08              |
| 1:P:128:SER:CA   | 1:P:155:LEU:CD1  | 2.31                     | 1.08              |
| 1:P:174:TYR:CE1  | 1:P:234:ASN:HB3  | 1.89                     | 1.08              |
| 1:B:251:LYS:HG3  | 1:B:252:LEU:N    | 1.39                     | 1.08              |
| 1:G:69:ASN:ND2   | 2:D:1:NAG:C1     | 2.16                     | 1.08              |
| 1:H:125:ALA:HB1  | 1:H:223:LYS:CD   | 1.82                     | 1.08              |
| 1:J:128:SER:CA   | 1:J:155:LEU:CD1  | 2.30                     | 1.08              |
| 1:K:125:ALA:HB1  | 1:K:223:LYS:CD   | 1.82                     | 1.08              |
| 1:L:125:ALA:HB1  | 1:L:223:LYS:CD   | 1.82                     | 1.08              |
| 1:L:276:THR:HA   | 1:M:285:MET:HE3  | 1.14                     | 1.08              |
| 1:J:126:SER:HA   | 1:J:223:LYS:HZ1  | 1.09                     | 1.08              |
| 1:L:159:ILE:HG21 | 1:L:258:VAL:HG21 | 1.09                     | 1.08              |
| 1:O:128:SER:HA   | 1:O:155:LEU:HD11 | 1.29                     | 1.08              |
| 1:F:125:ALA:HB1  | 1:F:223:LYS:CD   | 1.82                     | 1.07              |
| 1:F:159:ILE:HG22 | 1:F:258:VAL:HG21 | 1.24                     | 1.07              |
| 1:K:124:ILE:HD13 | 1:K:152:MET:HG2  | 1.34                     | 1.07              |
| 1:L:285:MET:CG   | 1:N:275:PRO:HB2  | 1.82                     | 1.07              |
| 1:O:128:SER:CA   | 1:O:155:LEU:CD1  | 2.30                     | 1.07              |
| 1:F:128:SER:CA   | 1:F:155:LEU:CD1  | 2.30                     | 1.07              |
| 1:O:144:TYR:CE2  | 1:O:146:ALA:HB2  | 1.90                     | 1.07              |
| 1:O:150:LEU:CD2  | 1:P:290:LYS:CD   | 2.07                     | 1.07              |
| 1:P:72:GLN:O     | 1:P:76:PHE:HD1   | 1.10                     | 1.07              |
| 1:P:125:ALA:HB1  | 1:P:223:LYS:CD   | 1.82                     | 1.07              |
| 1:B:174:TYR:CE1  | 1:B:234:ASN:HB3  | 1.89                     | 1.07              |
| 1:H:72:GLN:O     | 1:H:76:PHE:HD1   | 1.10                     | 1.07              |
| 1:J:124:ILE:HD13 | 1:J:152:MET:HG2  | 1.34                     | 1.07              |
| 1:P:251:LYS:HG3  | 1:P:252:LEU:N    | 1.39                     | 1.07              |
| 1:G:159:ILE:HG22 | 1:G:258:VAL:HG21 | 1.24                     | 1.07              |
| 1:K:128:SER:HA   | 1:K:155:LEU:HD11 | 1.29                     | 1.07              |
| 1:N:159:ILE:HG21 | 1:N:258:VAL:HG21 | 1.09                     | 1.07              |
| 1:O:174:TYR:CE1  | 1:O:234:ASN:HB3  | 1.89                     | 1.07              |
| 1:P:159:ILE:HG21 | 1:P:258:VAL:HG21 | 1.09                     | 1.07              |
| 1:B:159:ILE:HG21 | 1:B:258:VAL:HG21 | 1.09                     | 1.07              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:150:LEU:HD21 | 1:G:290:LYS:HG2  | 1.30                     | 1.07              |
| 1:F:174:TYR:CE1  | 1:F:234:ASN:HB3  | 1.89                     | 1.07              |
| 1:G:66:ALA:O     | 1:G:67:TYR:C     | 1.80                     | 1.07              |
| 1:G:174:TYR:CE1  | 1:G:234:ASN:HB3  | 1.89                     | 1.07              |
| 1:I:128:SER:CA   | 1:I:155:LEU:CD1  | 2.30                     | 1.07              |
| 1:M:150:LEU:HD21 | 1:N:290:LYS:HG2  | 1.30                     | 1.07              |
| 1:M:150:LEU:HD23 | 1:N:290:LYS:HD3  | 1.08                     | 1.07              |
| 1:M:174:TYR:CE1  | 1:M:234:ASN:HB3  | 1.89                     | 1.07              |
| 1:Q:128:SER:HA   | 1:Q:155:LEU:HD11 | 1.29                     | 1.07              |
| 1:Q:174:TYR:CE1  | 1:Q:234:ASN:HB3  | 1.89                     | 1.07              |
| 1:J:159:ILE:HG23 | 1:J:258:VAL:HG21 | 1.35                     | 1.06              |
| 1:M:128:SER:CA   | 1:M:155:LEU:CD1  | 2.30                     | 1.06              |
| 1:N:126:SER:HA   | 1:N:223:LYS:HZ1  | 1.19                     | 1.06              |
| 1:O:150:LEU:HD21 | 1:P:290:LYS:HG2  | 1.30                     | 1.06              |
| 1:B:128:SER:HA   | 1:B:155:LEU:HD11 | 1.29                     | 1.06              |
| 1:F:285:MET:HE3  | 1:H:276:THR:HA   | 1.09                     | 1.06              |
| 1:H:128:SER:HA   | 1:H:155:LEU:HD11 | 1.29                     | 1.06              |
| 1:J:174:TYR:CE1  | 1:J:234:ASN:HB3  | 1.89                     | 1.06              |
| 1:L:150:LEU:HD21 | 1:M:290:LYS:HG2  | 1.30                     | 1.06              |
| 1:N:174:TYR:CE1  | 1:N:234:ASN:HB3  | 1.89                     | 1.06              |
| 1:B:168:MET:HE2  | 1:B:175:TYR:CE2  | 1.91                     | 1.06              |
| 1:I:276:THR:CA   | 1:J:285:MET:CE   | 1.94                     | 1.06              |
| 1:K:174:TYR:CE1  | 1:K:234:ASN:HB3  | 1.89                     | 1.06              |
| 1:F:251:LYS:HG3  | 1:F:252:LEU:N    | 1.39                     | 1.06              |
| 1:F:276:THR:CA   | 1:G:285:MET:CE   | 1.94                     | 1.06              |
| 1:F:290:LYS:HD3  | 1:H:150:LEU:HD23 | 1.08                     | 1.06              |
| 1:I:150:LEU:HD23 | 1:J:290:LYS:HD3  | 1.08                     | 1.06              |
| 1:K:159:ILE:HG23 | 1:K:258:VAL:HG21 | 1.35                     | 1.06              |
| 1:O:126:SER:HA   | 1:O:223:LYS:HZ1  | 1.13                     | 1.06              |
| 1:O:150:LEU:HD23 | 1:P:290:LYS:HD3  | 1.08                     | 1.06              |
| 1:G:159:ILE:HG21 | 1:G:258:VAL:HG21 | 1.09                     | 1.06              |
| 1:G:168:MET:HE1  | 1:G:175:TYR:CE1  | 1.86                     | 1.06              |
| 1:I:159:ILE:HG23 | 1:I:258:VAL:HG21 | 1.34                     | 1.06              |
| 1:H:128:SER:CA   | 1:H:155:LEU:CD1  | 2.30                     | 1.05              |
| 1:O:229:VAL:CG1  | 1:O:235:HIS:CE1  | 2.27                     | 1.05              |
| 1:H:144:TYR:CE2  | 1:H:146:ALA:HB2  | 1.92                     | 1.05              |
| 1:L:128:SER:CA   | 1:L:155:LEU:CD1  | 2.30                     | 1.05              |
| 1:K:128:SER:CA   | 1:K:155:LEU:CD1  | 2.30                     | 1.05              |
| 1:L:290:LYS:HD3  | 1:N:150:LEU:HD23 | 1.08                     | 1.05              |
| 1:M:276:THR:HA   | 1:N:285:MET:HE3  | 1.14                     | 1.05              |
| 1:G:128:SER:CA   | 1:G:155:LEU:CD1  | 2.30                     | 1.05              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:M:124:ILE:HD13 | 1:M:152:MET:HG2  | 1.34                     | 1.05              |
| 1:M:229:VAL:CG1  | 1:M:235:HIS:CE1  | 2.27                     | 1.05              |
| 1:P:124:ILE:HD13 | 1:P:152:MET:HG2  | 1.34                     | 1.05              |
| 1:Q:159:ILE:HG21 | 1:Q:258:VAL:HG21 | 1.09                     | 1.05              |
| 1:B:124:ILE:HD13 | 1:B:152:MET:HG2  | 1.34                     | 1.05              |
| 1:B:229:VAL:CG1  | 1:B:235:HIS:CE1  | 2.27                     | 1.05              |
| 1:N:159:ILE:HG23 | 1:N:258:VAL:HG21 | 1.34                     | 1.05              |
| 1:P:276:THR:HA   | 1:Q:285:MET:HE3  | 1.13                     | 1.05              |
| 1:Q:126:SER:HA   | 1:Q:223:LYS:NZ   | 1.72                     | 1.05              |
| 1:Q:128:SER:HA   | 1:Q:155:LEU:HD13 | 1.35                     | 1.05              |
| 1:F:159:ILE:HG21 | 1:F:258:VAL:HG21 | 1.09                     | 1.04              |
| 1:H:126:SER:HA   | 1:H:223:LYS:NZ   | 1.72                     | 1.04              |
| 1:O:205:ILE:HD11 | 1:P:104:GLN:CD   | 1.78                     | 1.04              |
| 1:P:168:MET:HE2  | 1:P:175:TYR:CZ   | 1.92                     | 1.04              |
| 1:I:205:ILE:HD11 | 1:J:104:GLN:CD   | 1.78                     | 1.04              |
| 1:I:290:LYS:HD3  | 1:K:150:LEU:HD23 | 1.08                     | 1.04              |
| 1:J:159:ILE:HG21 | 1:J:258:VAL:HG21 | 1.09                     | 1.04              |
| 1:F:69:ASN:ND2   | 2:C:1:NAG:C1     | 2.19                     | 1.04              |
| 1:H:159:ILE:HG21 | 1:H:258:VAL:HG21 | 1.09                     | 1.04              |
| 1:J:144:TYR:CE2  | 1:J:146:ALA:HB2  | 1.93                     | 1.04              |
| 1:J:229:VAL:CG1  | 1:J:235:HIS:CE1  | 2.27                     | 1.04              |
| 1:M:205:ILE:HD11 | 1:N:104:GLN:CD   | 1.78                     | 1.04              |
| 1:N:126:SER:HA   | 1:N:223:LYS:NZ   | 1.72                     | 1.04              |
| 1:F:168:MET:HE2  | 1:F:175:TYR:CZ   | 1.91                     | 1.04              |
| 1:H:69:ASN:ND2   | 2:E:1:NAG:C1     | 2.20                     | 1.04              |
| 1:H:159:ILE:HG23 | 1:H:258:VAL:HG21 | 1.34                     | 1.04              |
| 1:J:150:LEU:HD23 | 1:K:290:LYS:HD3  | 1.08                     | 1.04              |
| 1:J:205:ILE:HD11 | 1:K:104:GLN:CD   | 1.78                     | 1.04              |
| 1:L:205:ILE:HD11 | 1:M:104:GLN:CD   | 1.78                     | 1.04              |
| 1:M:126:SER:HA   | 1:M:223:LYS:NZ   | 1.72                     | 1.04              |
| 1:O:126:SER:HA   | 1:O:223:LYS:NZ   | 1.72                     | 1.04              |
| 1:O:290:LYS:HD3  | 1:Q:150:LEU:HD23 | 1.08                     | 1.04              |
| 1:Q:124:ILE:HD13 | 1:Q:152:MET:HG2  | 1.34                     | 1.04              |
| 1:M:159:ILE:HG21 | 1:M:258:VAL:HG21 | 1.09                     | 1.04              |
| 1:N:66:ALA:O     | 1:N:67:TYR:C     | 1.80                     | 1.04              |
| 1:P:205:ILE:HD11 | 1:Q:104:GLN:CD   | 1.78                     | 1.04              |
| 1:B:126:SER:HA   | 1:B:223:LYS:NZ   | 1.72                     | 1.03              |
| 1:G:72:GLN:O     | 1:G:76:PHE:HD1   | 1.10                     | 1.03              |
| 1:N:82:CYS:SG    | 1:N:135:CYS:CB   | 2.46                     | 1.03              |
| 1:B:82:CYS:SG    | 1:B:135:CYS:CB   | 2.46                     | 1.03              |
| 1:F:128:SER:HA   | 1:F:155:LEU:HD13 | 1.35                     | 1.03              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:205:ILE:HD11 | 1:G:104:GLN:CD   | 1.78                     | 1.03              |
| 1:G:205:ILE:HD11 | 1:H:104:GLN:CD   | 1.78                     | 1.03              |
| 1:J:142:MET:CE   | 1:J:152:MET:HE1  | 1.87                     | 1.03              |
| 1:J:168:MET:HE1  | 1:J:175:TYR:CZ   | 1.90                     | 1.03              |
| 1:L:104:GLN:CD   | 1:N:205:ILE:HD11 | 1.78                     | 1.03              |
| 1:L:159:ILE:HG23 | 1:L:258:VAL:HG21 | 1.34                     | 1.03              |
| 1:O:104:GLN:CD   | 1:Q:205:ILE:HD11 | 1.78                     | 1.03              |
| 1:P:159:ILE:HG23 | 1:P:258:VAL:HG21 | 1.34                     | 1.03              |
| 1:F:82:CYS:SG    | 1:F:135:CYS:CB   | 2.46                     | 1.03              |
| 1:F:124:ILE:HD13 | 1:F:152:MET:HG2  | 1.34                     | 1.03              |
| 1:F:126:SER:HA   | 1:F:223:LYS:NZ   | 1.72                     | 1.03              |
| 1:I:82:CYS:SG    | 1:I:135:CYS:CB   | 2.46                     | 1.03              |
| 1:K:126:SER:HA   | 1:K:223:LYS:NZ   | 1.72                     | 1.03              |
| 1:L:69:ASN:ND2   | 2:U:1:NAG:C1     | 2.20                     | 1.03              |
| 1:L:128:SER:HA   | 1:L:155:LEU:HD13 | 1.35                     | 1.03              |
| 1:M:168:MET:HE1  | 1:M:175:TYR:CZ   | 1.89                     | 1.03              |
| 1:O:159:ILE:HG21 | 1:O:258:VAL:HG21 | 1.09                     | 1.03              |
| 1:P:150:LEU:HD23 | 1:Q:290:LYS:HD3  | 1.08                     | 1.03              |
| 1:Q:82:CYS:SG    | 1:Q:135:CYS:CB   | 2.46                     | 1.03              |
| 1:B:126:SER:HA   | 1:B:223:LYS:HZ1  | 1.16                     | 1.03              |
| 1:I:159:ILE:HG21 | 1:I:258:VAL:HG21 | 1.09                     | 1.03              |
| 1:I:168:MET:HE2  | 1:I:175:TYR:CE2  | 1.91                     | 1.03              |
| 1:L:285:MET:HE3  | 1:N:276:THR:HA   | 1.06                     | 1.03              |
| 1:K:66:ALA:O     | 1:K:67:TYR:C     | 1.80                     | 1.03              |
| 1:L:72:GLN:O     | 1:L:76:PHE:HD1   | 1.10                     | 1.03              |
| 1:P:126:SER:HA   | 1:P:223:LYS:NZ   | 1.72                     | 1.03              |
| 1:Q:159:ILE:HG23 | 1:Q:258:VAL:HG21 | 1.34                     | 1.03              |
| 1:B:144:TYR:CE2  | 1:B:146:ALA:HB2  | 1.93                     | 1.02              |
| 1:G:150:LEU:HD23 | 1:H:290:LYS:HD3  | 1.08                     | 1.02              |
| 1:I:72:GLN:HB3   | 1:I:76:PHE:HE1   | 1.24                     | 1.02              |
| 1:I:104:GLN:CD   | 1:K:205:ILE:HD11 | 1.78                     | 1.02              |
| 1:J:257:ASN:O    | 1:J:310:MET:CG   | 2.08                     | 1.02              |
| 1:M:128:SER:HA   | 1:M:155:LEU:HD13 | 1.35                     | 1.02              |
| 1:B:191:CYS:CB   | 1:B:244:CYS:HG   | 1.70                     | 1.02              |
| 1:F:257:ASN:O    | 1:F:310:MET:CG   | 2.08                     | 1.02              |
| 1:G:82:CYS:SG    | 1:G:135:CYS:CB   | 2.46                     | 1.02              |
| 1:I:126:SER:HA   | 1:I:223:LYS:NZ   | 1.72                     | 1.02              |
| 1:J:82:CYS:SG    | 1:J:135:CYS:CB   | 2.46                     | 1.02              |
| 1:J:126:SER:HA   | 1:J:223:LYS:NZ   | 1.72                     | 1.02              |
| 1:L:82:CYS:SG    | 1:L:135:CYS:CB   | 2.46                     | 1.02              |
| 1:Q:128:SER:CA   | 1:Q:155:LEU:CD1  | 2.31                     | 1.02              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:104:GLN:CD   | 1:H:205:ILE:HD11 | 1.78                     | 1.02              |
| 1:F:150:LEU:HD23 | 1:G:290:LYS:HD3  | 1.08                     | 1.02              |
| 1:K:69:ASN:ND2   | 2:T:1:NAG:C1     | 2.21                     | 1.02              |
| 1:L:144:TYR:CE2  | 1:L:146:ALA:HB2  | 1.93                     | 1.02              |
| 1:M:158:LEU:HD11 | 1:M:224:LEU:HD11 | 1.42                     | 1.02              |
| 1:N:142:MET:CE   | 1:N:152:MET:HE1  | 1.82                     | 1.02              |
| 1:P:150:LEU:HD21 | 1:Q:290:LYS:HG2  | 1.30                     | 1.02              |
| 1:K:257:ASN:O    | 1:K:310:MET:CG   | 2.08                     | 1.02              |
| 1:M:82:CYS:SG    | 1:M:135:CYS:CB   | 2.46                     | 1.02              |
| 1:M:257:ASN:O    | 1:M:310:MET:CG   | 2.08                     | 1.02              |
| 1:N:257:ASN:O    | 1:N:310:MET:CG   | 2.08                     | 1.02              |
| 1:O:72:GLN:HB3   | 1:O:76:PHE:HE1   | 1.24                     | 1.02              |
| 1:Q:158:LEU:HD11 | 1:Q:224:LEU:HD11 | 1.42                     | 1.02              |
| 1:F:142:MET:CE   | 1:F:152:MET:HE1  | 1.82                     | 1.02              |
| 1:F:158:LEU:HD11 | 1:F:224:LEU:HD11 | 1.42                     | 1.02              |
| 1:G:159:ILE:HG23 | 1:G:258:VAL:HG21 | 1.34                     | 1.02              |
| 1:G:257:ASN:O    | 1:G:310:MET:CG   | 2.08                     | 1.02              |
| 1:H:129:VAL:C    | 1:H:131:PRO:CD   | 2.29                     | 1.02              |
| 1:K:300:VAL:O    | 1:K:303:VAL:HG23 | 1.60                     | 1.02              |
| 1:L:257:ASN:O    | 1:L:310:MET:CG   | 2.08                     | 1.02              |
| 1:O:82:CYS:SG    | 1:O:135:CYS:CB   | 2.46                     | 1.02              |
| 1:P:82:CYS:SG    | 1:P:135:CYS:CB   | 2.46                     | 1.02              |
| 1:G:158:LEU:HD11 | 1:G:224:LEU:HD11 | 1.42                     | 1.01              |
| 1:H:82:CYS:SG    | 1:H:135:CYS:CB   | 2.46                     | 1.01              |
| 1:I:300:VAL:O    | 1:I:303:VAL:HG23 | 1.60                     | 1.01              |
| 1:J:300:VAL:O    | 1:J:303:VAL:HG23 | 1.60                     | 1.01              |
| 1:L:126:SER:HA   | 1:L:223:LYS:NZ   | 1.72                     | 1.01              |
| 1:Q:69:ASN:ND2   | 2:Z:1:NAG:C1     | 2.23                     | 1.01              |
| 1:Q:257:ASN:O    | 1:Q:310:MET:CG   | 2.08                     | 1.01              |
| 1:B:257:ASN:O    | 1:B:310:MET:CG   | 2.08                     | 1.01              |
| 1:F:300:VAL:O    | 1:F:303:VAL:HG23 | 1.60                     | 1.01              |
| 1:G:126:SER:HA   | 1:G:223:LYS:NZ   | 1.72                     | 1.01              |
| 1:I:158:LEU:HD11 | 1:I:224:LEU:HD11 | 1.42                     | 1.01              |
| 1:K:82:CYS:SG    | 1:K:135:CYS:CB   | 2.46                     | 1.01              |
| 1:O:129:VAL:C    | 1:O:131:PRO:CD   | 2.29                     | 1.01              |
| 1:O:158:LEU:HD11 | 1:O:224:LEU:HD11 | 1.42                     | 1.01              |
| 1:B:129:VAL:C    | 1:B:131:PRO:CD   | 2.29                     | 1.01              |
| 1:H:257:ASN:O    | 1:H:310:MET:CG   | 2.08                     | 1.01              |
| 1:H:300:VAL:O    | 1:H:303:VAL:HG23 | 1.60                     | 1.01              |
| 1:I:69:ASN:ND2   | 2:R:1:NAG:C1     | 2.22                     | 1.01              |
| 1:M:66:ALA:O     | 1:M:67:TYR:C     | 1.80                     | 1.01              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:300:VAL:O    | 1:O:303:VAL:HG23 | 1.60                     | 1.01              |
| 1:P:300:VAL:O    | 1:P:303:VAL:HG23 | 1.60                     | 1.01              |
| 1:F:168:MET:HE2  | 1:F:175:TYR:CE2  | 1.95                     | 1.01              |
| 1:H:158:LEU:HD11 | 1:H:224:LEU:HD11 | 1.42                     | 1.01              |
| 1:H:168:MET:HE1  | 1:H:175:TYR:CZ   | 1.91                     | 1.01              |
| 1:I:129:VAL:C    | 1:I:131:PRO:CD   | 2.29                     | 1.01              |
| 1:Q:126:SER:HA   | 1:Q:223:LYS:HZ1  | 1.26                     | 1.01              |
| 1:F:126:SER:HA   | 1:F:223:LYS:HZ1  | 1.21                     | 1.01              |
| 1:I:128:SER:HA   | 1:I:155:LEU:HD13 | 1.35                     | 1.01              |
| 1:J:72:GLN:O     | 1:J:76:PHE:HD1   | 1.10                     | 1.01              |
| 1:P:168:MET:HE2  | 1:P:175:TYR:CE2  | 1.95                     | 1.01              |
| 1:Q:72:GLN:HB3   | 1:Q:76:PHE:HE1   | 1.24                     | 1.01              |
| 1:F:72:GLN:HB3   | 1:F:76:PHE:HE1   | 1.24                     | 1.00              |
| 1:F:129:VAL:C    | 1:F:131:PRO:CD   | 2.29                     | 1.00              |
| 1:G:300:VAL:O    | 1:G:303:VAL:HG23 | 1.60                     | 1.00              |
| 1:I:257:ASN:O    | 1:I:310:MET:CG   | 2.08                     | 1.00              |
| 1:J:129:VAL:C    | 1:J:131:PRO:CD   | 2.29                     | 1.00              |
| 1:M:72:GLN:O     | 1:M:76:PHE:HD1   | 1.10                     | 1.00              |
| 1:M:142:MET:CE   | 1:M:152:MET:HE1  | 1.91                     | 1.00              |
| 1:P:158:LEU:HD11 | 1:P:224:LEU:HD11 | 1.42                     | 1.00              |
| 1:P:257:ASN:O    | 1:P:310:MET:CG   | 2.08                     | 1.00              |
| 1:B:72:GLN:HB3   | 1:B:76:PHE:HE1   | 1.24                     | 1.00              |
| 1:M:144:TYR:CE2  | 1:M:146:ALA:HB2  | 1.95                     | 1.00              |
| 1:N:129:VAL:C    | 1:N:131:PRO:CD   | 2.29                     | 1.00              |
| 1:P:66:ALA:O     | 1:P:67:TYR:C     | 1.80                     | 1.00              |
| 1:Q:300:VAL:O    | 1:Q:303:VAL:HG23 | 1.60                     | 1.00              |
| 1:B:300:VAL:O    | 1:B:303:VAL:HG23 | 1.60                     | 1.00              |
| 1:L:129:VAL:C    | 1:L:131:PRO:CD   | 2.29                     | 1.00              |
| 1:O:128:SER:HA   | 1:O:155:LEU:HD13 | 1.34                     | 1.00              |
| 1:O:257:ASN:O    | 1:O:310:MET:CG   | 2.08                     | 1.00              |
| 1:Q:129:VAL:C    | 1:Q:131:PRO:CD   | 2.29                     | 1.00              |
| 1:M:129:VAL:C    | 1:M:131:PRO:CD   | 2.29                     | 1.00              |
| 1:M:300:VAL:O    | 1:M:303:VAL:HG23 | 1.60                     | 1.00              |
| 1:G:142:MET:CE   | 1:G:152:MET:HE1  | 1.92                     | 1.00              |
| 1:J:72:GLN:HB3   | 1:J:76:PHE:HE1   | 1.24                     | 1.00              |
| 1:L:300:VAL:O    | 1:L:303:VAL:HG23 | 1.60                     | 1.00              |
| 1:M:72:GLN:HB3   | 1:M:76:PHE:HE1   | 1.24                     | 1.00              |
| 1:N:300:VAL:O    | 1:N:303:VAL:HG23 | 1.60                     | 1.00              |
| 1:L:72:GLN:HB3   | 1:L:76:PHE:HE1   | 1.24                     | 1.00              |
| 1:P:129:VAL:C    | 1:P:131:PRO:CD   | 2.29                     | 0.99              |
| 1:K:129:VAL:C    | 1:K:131:PRO:CD   | 2.29                     | 0.99              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:H:66:ALA:O     | 1:H:67:TYR:C     | 1.80                     | 0.99              |
| 1:H:257:ASN:O    | 1:H:310:MET:HG2  | 1.62                     | 0.99              |
| 1:O:285:MET:HE3  | 1:Q:276:THR:HA   | 1.02                     | 0.99              |
| 1:I:257:ASN:O    | 1:I:310:MET:HG2  | 1.63                     | 0.99              |
| 1:K:72:GLN:HB3   | 1:K:76:PHE:HE1   | 1.24                     | 0.99              |
| 1:L:66:ALA:O     | 1:L:67:TYR:C     | 1.80                     | 0.99              |
| 1:N:128:SER:HA   | 1:N:155:LEU:HD13 | 1.34                     | 0.99              |
| 1:Q:257:ASN:O    | 1:Q:310:MET:HG2  | 1.62                     | 0.99              |
| 1:F:257:ASN:O    | 1:F:310:MET:HG2  | 1.63                     | 0.99              |
| 1:G:129:VAL:C    | 1:G:131:PRO:CD   | 2.29                     | 0.99              |
| 1:B:257:ASN:O    | 1:B:310:MET:HG2  | 1.62                     | 0.99              |
| 1:P:257:ASN:O    | 1:P:310:MET:HG2  | 1.62                     | 0.99              |
| 1:I:72:GLN:HB3   | 1:I:76:PHE:CE1   | 1.98                     | 0.99              |
| 1:P:72:GLN:HB3   | 1:P:76:PHE:HE1   | 1.24                     | 0.99              |
| 1:Q:72:GLN:HB3   | 1:Q:76:PHE:CE1   | 1.98                     | 0.99              |
| 1:F:130:ASP:N    | 1:F:131:PRO:HD3  | 1.78                     | 0.99              |
| 1:N:158:LEU:HD11 | 1:N:224:LEU:HD11 | 1.42                     | 0.99              |
| 1:B:130:ASP:N    | 1:B:131:PRO:HD3  | 1.78                     | 0.99              |
| 1:B:158:LEU:HD11 | 1:B:224:LEU:HD11 | 1.42                     | 0.99              |
| 1:K:144:TYR:CE2  | 1:K:146:ALA:HB2  | 1.98                     | 0.99              |
| 1:K:257:ASN:O    | 1:K:310:MET:HG2  | 1.63                     | 0.99              |
| 1:L:104:GLN:OE1  | 1:N:205:ILE:HD11 | 1.63                     | 0.99              |
| 1:N:257:ASN:O    | 1:N:310:MET:HG2  | 1.63                     | 0.99              |
| 1:G:130:ASP:N    | 1:G:131:PRO:HD3  | 1.78                     | 0.99              |
| 1:K:158:LEU:HD11 | 1:K:224:LEU:HD11 | 1.42                     | 0.99              |
| 1:P:130:ASP:N    | 1:P:131:PRO:HD3  | 1.78                     | 0.99              |
| 1:F:72:GLN:O     | 1:F:76:PHE:HD1   | 1.10                     | 0.98              |
| 1:G:72:GLN:HB3   | 1:G:76:PHE:CE1   | 1.98                     | 0.98              |
| 1:O:69:ASN:ND2   | 2:X:1:NAG:C1     | 2.25                     | 0.98              |
| 1:O:72:GLN:HB3   | 1:O:76:PHE:CE1   | 1.98                     | 0.98              |
| 1:O:104:GLN:OE1  | 1:Q:205:ILE:HD11 | 1.63                     | 0.98              |
| 1:O:257:ASN:O    | 1:O:310:MET:HG2  | 1.63                     | 0.98              |
| 1:G:72:GLN:HB3   | 1:G:76:PHE:HE1   | 1.24                     | 0.98              |
| 1:N:72:GLN:HB3   | 1:N:76:PHE:HE1   | 1.24                     | 0.98              |
| 1:P:72:GLN:HB3   | 1:P:76:PHE:CE1   | 1.98                     | 0.98              |
| 1:P:205:ILE:HD11 | 1:Q:104:GLN:OE1  | 1.63                     | 0.98              |
| 1:F:72:GLN:HB3   | 1:F:76:PHE:CE1   | 1.98                     | 0.98              |
| 1:G:126:SER:HA   | 1:G:223:LYS:HZ1  | 1.21                     | 0.98              |
| 1:M:130:ASP:N    | 1:M:131:PRO:HD3  | 1.78                     | 0.98              |
| 1:N:72:GLN:HB3   | 1:N:76:PHE:CE1   | 1.98                     | 0.98              |
| 1:P:128:SER:HA   | 1:P:155:LEU:HD13 | 1.34                     | 0.98              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:257:ASN:O    | 1:G:310:MET:HG2  | 1.62                     | 0.98              |
| 1:J:158:LEU:HD11 | 1:J:224:LEU:HD11 | 1.42                     | 0.98              |
| 1:H:168:MET:HE2  | 1:H:175:TYR:CE2  | 1.99                     | 0.98              |
| 1:J:72:GLN:HB3   | 1:J:76:PHE:CE1   | 1.98                     | 0.98              |
| 1:H:130:ASP:N    | 1:H:131:PRO:HD3  | 1.78                     | 0.98              |
| 1:J:257:ASN:O    | 1:J:310:MET:HG2  | 1.62                     | 0.98              |
| 1:L:257:ASN:O    | 1:L:310:MET:HG2  | 1.62                     | 0.98              |
| 1:H:72:GLN:HB3   | 1:H:76:PHE:CE1   | 1.98                     | 0.98              |
| 1:H:72:GLN:HB3   | 1:H:76:PHE:HE1   | 1.24                     | 0.98              |
| 1:M:257:ASN:O    | 1:M:310:MET:HG2  | 1.62                     | 0.98              |
| 1:J:66:ALA:O     | 1:J:67:TYR:C     | 1.80                     | 0.98              |
| 1:O:205:ILE:HD11 | 1:P:104:GLN:OE1  | 1.63                     | 0.98              |
| 1:J:168:MET:HE2  | 1:J:175:TYR:CE2  | 1.99                     | 0.97              |
| 1:M:72:GLN:HB3   | 1:M:76:PHE:CE1   | 1.98                     | 0.97              |
| 1:H:130:ASP:N    | 1:H:131:PRO:HD2  | 1.73                     | 0.97              |
| 1:K:130:ASP:N    | 1:K:131:PRO:HD3  | 1.78                     | 0.97              |
| 1:B:72:GLN:HB3   | 1:B:76:PHE:CE1   | 1.98                     | 0.97              |
| 1:L:158:LEU:HD11 | 1:L:224:LEU:HD11 | 1.42                     | 0.97              |
| 1:L:142:MET:CE   | 1:L:152:MET:HE1  | 1.91                     | 0.97              |
| 1:J:205:ILE:HD11 | 1:K:104:GLN:CB   | 1.95                     | 0.97              |
| 1:L:205:ILE:HD11 | 1:M:104:GLN:OE1  | 1.63                     | 0.97              |
| 1:L:205:ILE:HD11 | 1:M:104:GLN:CB   | 1.95                     | 0.97              |
| 1:O:205:ILE:HD11 | 1:P:104:GLN:CB   | 1.95                     | 0.97              |
| 1:F:104:GLN:CB   | 1:H:205:ILE:HD11 | 1.95                     | 0.97              |
| 1:G:205:ILE:HD11 | 1:H:104:GLN:CB   | 1.95                     | 0.97              |
| 1:I:104:GLN:CB   | 1:K:205:ILE:HD11 | 1.95                     | 0.97              |
| 1:L:72:GLN:HB3   | 1:L:76:PHE:CE1   | 1.98                     | 0.97              |
| 1:L:268:VAL:HG11 | 1:M:267:ASP:O    | 1.65                     | 0.97              |
| 1:Q:130:ASP:N    | 1:Q:131:PRO:HD3  | 1.78                     | 0.97              |
| 1:I:205:ILE:HD11 | 1:J:104:GLN:CB   | 1.95                     | 0.97              |
| 1:I:268:VAL:HG11 | 1:J:267:ASP:O    | 1.65                     | 0.97              |
| 1:L:130:ASP:N    | 1:L:131:PRO:HD3  | 1.78                     | 0.97              |
| 1:F:104:GLN:OE1  | 1:H:205:ILE:HD11 | 1.63                     | 0.96              |
| 1:F:144:TYR:HE2  | 1:F:146:ALA:HB2  | 1.30                     | 0.96              |
| 1:K:72:GLN:HB3   | 1:K:76:PHE:CE1   | 1.98                     | 0.96              |
| 1:M:168:MET:HE2  | 1:M:175:TYR:CE2  | 2.00                     | 0.96              |
| 1:J:268:VAL:HG11 | 1:K:267:ASP:O    | 1.65                     | 0.96              |
| 1:L:267:ASP:O    | 1:N:268:VAL:HG11 | 1.65                     | 0.96              |
| 1:M:205:ILE:HD11 | 1:N:104:GLN:OE1  | 1.63                     | 0.96              |
| 1:G:251:LYS:CG   | 1:G:252:LEU:N    | 2.29                     | 0.96              |
| 1:I:205:ILE:HD11 | 1:J:104:GLN:OE1  | 1.63                     | 0.96              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:P:268:VAL:HG11 | 1:Q:267:ASP:O    | 1.65                     | 0.96              |
| 1:M:205:ILE:HD11 | 1:N:104:GLN:CB   | 1.95                     | 0.96              |
| 1:G:268:VAL:HG11 | 1:H:267:ASP:O    | 1.65                     | 0.96              |
| 1:F:205:ILE:HD11 | 1:G:104:GLN:CB   | 1.95                     | 0.96              |
| 1:M:268:VAL:HG11 | 1:N:267:ASP:O    | 1.65                     | 0.96              |
| 1:M:251:LYS:CG   | 1:M:252:LEU:N    | 2.29                     | 0.96              |
| 1:O:268:VAL:HG11 | 1:P:267:ASP:O    | 1.65                     | 0.96              |
| 1:H:251:LYS:CG   | 1:H:252:LEU:N    | 2.29                     | 0.96              |
| 1:I:130:ASP:N    | 1:I:131:PRO:HD3  | 1.78                     | 0.96              |
| 1:J:168:MET:HE2  | 1:J:175:TYR:CZ   | 2.00                     | 0.96              |
| 1:L:104:GLN:CB   | 1:N:205:ILE:HD11 | 1.95                     | 0.96              |
| 1:L:142:MET:HE2  | 1:L:152:MET:CE   | 1.94                     | 0.96              |
| 1:O:64:ASP:C     | 1:O:65:THR:HG22  | 1.86                     | 0.96              |
| 1:O:104:GLN:CB   | 1:Q:205:ILE:HD11 | 1.95                     | 0.96              |
| 1:Q:142:MET:HE2  | 1:Q:152:MET:CE   | 1.92                     | 0.96              |
| 1:L:251:LYS:CG   | 1:L:252:LEU:N    | 2.28                     | 0.96              |
| 1:G:142:MET:HE2  | 1:G:152:MET:CE   | 1.93                     | 0.95              |
| 1:J:64:ASP:C     | 1:J:65:THR:HG22  | 1.87                     | 0.95              |
| 1:P:64:ASP:C     | 1:P:65:THR:HG22  | 1.87                     | 0.95              |
| 1:P:205:ILE:HD11 | 1:Q:104:GLN:CB   | 1.95                     | 0.95              |
| 1:K:251:LYS:CG   | 1:K:252:LEU:N    | 2.29                     | 0.95              |
| 1:O:130:ASP:N    | 1:O:131:PRO:HD2  | 1.73                     | 0.95              |
| 1:O:142:MET:HE2  | 1:O:152:MET:CE   | 1.93                     | 0.95              |
| 1:H:168:MET:HE2  | 1:H:175:TYR:CZ   | 1.98                     | 0.95              |
| 1:J:130:ASP:N    | 1:J:131:PRO:HD3  | 1.78                     | 0.95              |
| 1:N:130:ASP:N    | 1:N:131:PRO:HD3  | 1.78                     | 0.95              |
| 1:B:125:ALA:HB1  | 1:B:223:LYS:HD3  | 0.95                     | 0.95              |
| 1:H:73:GLU:O     | 1:H:73:GLU:HG2   | 1.61                     | 0.95              |
| 1:N:64:ASP:C     | 1:N:65:THR:HG22  | 1.87                     | 0.95              |
| 1:P:142:MET:CE   | 1:P:152:MET:HE1  | 1.91                     | 0.95              |
| 1:F:125:ALA:HB1  | 1:F:223:LYS:HD3  | 0.96                     | 0.95              |
| 1:F:267:ASP:O    | 1:H:268:VAL:HG11 | 1.65                     | 0.95              |
| 1:H:125:ALA:HB1  | 1:H:223:LYS:HD3  | 0.95                     | 0.95              |
| 1:G:130:ASP:N    | 1:G:131:PRO:HD2  | 1.74                     | 0.95              |
| 1:N:72:GLN:O     | 1:N:76:PHE:HD1   | 1.10                     | 0.95              |
| 1:Q:251:LYS:CG   | 1:Q:252:LEU:N    | 2.29                     | 0.95              |
| 1:J:167:PRO:O    | 1:L:117:TYR:CE2  | 2.20                     | 0.95              |
| 1:M:168:MET:HE2  | 1:M:175:TYR:CZ   | 2.01                     | 0.95              |
| 1:F:268:VAL:HG11 | 1:G:267:ASP:O    | 1.65                     | 0.95              |
| 1:K:64:ASP:C     | 1:K:65:THR:HG22  | 1.87                     | 0.95              |
| 1:L:256:GLU:OE1  | 1:L:283:ARG:NH1  | 2.00                     | 0.95              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:130:ASP:N    | 1:O:131:PRO:HD3  | 1.78                     | 0.95              |
| 1:B:256:GLU:OE1  | 1:B:283:ARG:NH1  | 2.00                     | 0.95              |
| 1:G:64:ASP:C     | 1:G:65:THR:HG22  | 1.87                     | 0.95              |
| 1:M:64:ASP:C     | 1:M:65:THR:HG22  | 1.87                     | 0.95              |
| 1:N:256:GLU:OE1  | 1:N:283:ARG:NH1  | 2.00                     | 0.95              |
| 1:O:73:GLU:HG2   | 1:O:73:GLU:O     | 1.67                     | 0.95              |
| 1:P:251:LYS:CG   | 1:P:252:LEU:N    | 2.29                     | 0.95              |
| 1:P:256:GLU:OE1  | 1:P:283:ARG:NH1  | 2.00                     | 0.95              |
| 1:F:162:GLU:HG3  | 1:F:252:LEU:HD11 | 1.49                     | 0.94              |
| 1:H:128:SER:HA   | 1:H:155:LEU:HD13 | 1.34                     | 0.94              |
| 1:J:256:GLU:OE1  | 1:J:283:ARG:NH1  | 2.00                     | 0.94              |
| 1:O:267:ASP:O    | 1:Q:268:VAL:HG11 | 1.65                     | 0.94              |
| 1:Q:64:ASP:C     | 1:Q:65:THR:HG22  | 1.87                     | 0.94              |
| 1:Q:125:ALA:HB1  | 1:Q:223:LYS:HD3  | 0.95                     | 0.94              |
| 1:F:251:LYS:CG   | 1:F:252:LEU:N    | 2.29                     | 0.94              |
| 1:I:162:GLU:HG3  | 1:I:252:LEU:HD11 | 1.50                     | 0.94              |
| 1:K:125:ALA:HB1  | 1:K:223:LYS:HD3  | 0.95                     | 0.94              |
| 1:P:125:ALA:HB1  | 1:P:223:LYS:HD3  | 0.95                     | 0.94              |
| 1:I:125:ALA:HB1  | 1:I:223:LYS:HD3  | 0.95                     | 0.94              |
| 1:M:256:GLU:OE1  | 1:M:283:ARG:NH1  | 2.00                     | 0.94              |
| 1:N:125:ALA:HB1  | 1:N:223:LYS:HD3  | 0.95                     | 0.94              |
| 1:Q:174:TYR:HE1  | 1:Q:234:ASN:CB   | 1.81                     | 0.94              |
| 1:L:64:ASP:C     | 1:L:65:THR:HG22  | 1.86                     | 0.94              |
| 1:B:174:TYR:HE1  | 1:B:234:ASN:CB   | 1.81                     | 0.94              |
| 1:I:64:ASP:C     | 1:I:65:THR:HG22  | 1.87                     | 0.94              |
| 1:I:72:GLN:CB    | 1:I:76:PHE:HE1   | 1.81                     | 0.94              |
| 1:I:267:ASP:O    | 1:K:268:VAL:HG11 | 1.65                     | 0.94              |
| 1:O:174:TYR:HE1  | 1:O:234:ASN:CB   | 1.81                     | 0.94              |
| 1:P:168:MET:HE1  | 1:P:175:TYR:CZ   | 1.97                     | 0.94              |
| 1:M:142:MET:HE2  | 1:M:152:MET:CE   | 1.97                     | 0.94              |
| 1:N:174:TYR:HE1  | 1:N:234:ASN:CB   | 1.81                     | 0.94              |
| 1:P:174:TYR:HE1  | 1:P:234:ASN:CB   | 1.81                     | 0.94              |
| 1:I:162:GLU:CB   | 1:I:253:GLY:O    | 2.16                     | 0.94              |
| 1:I:256:GLU:OE1  | 1:I:283:ARG:NH1  | 2.00                     | 0.94              |
| 1:K:162:GLU:HG3  | 1:K:252:LEU:HD11 | 1.50                     | 0.94              |
| 1:K:174:TYR:HE1  | 1:K:234:ASN:CB   | 1.81                     | 0.94              |
| 1:M:125:ALA:HB1  | 1:M:223:LYS:HD3  | 0.95                     | 0.94              |
| 1:M:130:ASP:N    | 1:M:131:PRO:HD2  | 1.73                     | 0.94              |
| 1:F:205:ILE:HD11 | 1:G:104:GLN:OE1  | 1.63                     | 0.94              |
| 1:G:162:GLU:HG3  | 1:G:252:LEU:HD11 | 1.50                     | 0.94              |
| 1:J:72:GLN:O     | 1:J:76:PHE:CE1   | 2.21                     | 0.94              |

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| Atom-1          | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|-----------------|------------------|--------------------------|-------------------|
| 1:J:162:GLU:CB  | 1:J:253:GLY:O    | 2.16                     | 0.94              |
| 1:K:256:GLU:OE1 | 1:K:283:ARG:NH1  | 2.00                     | 0.94              |
| 1:F:256:GLU:OE1 | 1:F:283:ARG:NH1  | 2.00                     | 0.94              |
| 1:H:64:ASP:C    | 1:H:65:THR:HG22  | 1.87                     | 0.94              |
| 1:L:125:ALA:HB1 | 1:L:223:LYS:HD3  | 0.96                     | 0.94              |
| 1:M:72:GLN:CB   | 1:M:76:PHE:HE1   | 1.81                     | 0.94              |
| 1:N:162:GLU:HG3 | 1:N:252:LEU:HD11 | 1.49                     | 0.94              |
| 1:O:162:GLU:HG3 | 1:O:252:LEU:HD11 | 1.49                     | 0.94              |
| 1:B:130:ASP:N   | 1:B:131:PRO:HD2  | 1.73                     | 0.93              |
| 1:F:64:ASP:C    | 1:F:65:THR:HG22  | 1.87                     | 0.93              |
| 1:J:174:TYR:HE1 | 1:J:234:ASN:CB   | 1.81                     | 0.93              |
| 1:B:175:TYR:OH  | 1:B:237:LEU:HD23 | 1.69                     | 0.93              |
| 1:F:72:GLN:CB   | 1:F:76:PHE:HE1   | 1.81                     | 0.93              |
| 1:G:162:GLU:CB  | 1:G:253:GLY:O    | 2.16                     | 0.93              |
| 1:Q:142:MET:CE  | 1:Q:152:MET:HE1  | 1.98                     | 0.93              |
| 1:Q:144:TYR:HE2 | 1:Q:146:ALA:HB2  | 1.28                     | 0.93              |
| 1:B:72:GLN:CB   | 1:B:76:PHE:HE1   | 1.81                     | 0.93              |
| 1:F:174:TYR:HE1 | 1:F:234:ASN:CB   | 1.81                     | 0.93              |
| 1:G:175:TYR:OH  | 1:G:237:LEU:HD23 | 1.68                     | 0.93              |
| 1:I:174:TYR:HE1 | 1:I:234:ASN:CB   | 1.81                     | 0.93              |
| 1:L:127:PHE:HD2 | 1:L:155:LEU:HD21 | 1.12                     | 0.93              |
| 1:M:174:TYR:HE1 | 1:M:234:ASN:CB   | 1.81                     | 0.93              |
| 1:O:72:GLN:O    | 1:O:76:PHE:CE1   | 2.21                     | 0.93              |
| 1:G:125:ALA:HB1 | 1:G:223:LYS:HD3  | 0.95                     | 0.93              |
| 1:H:175:TYR:OH  | 1:H:237:LEU:HD23 | 1.69                     | 0.93              |
| 1:I:252:LEU:HG  | 1:I:253:GLY:N    | 1.84                     | 0.93              |
| 1:L:162:GLU:CB  | 1:L:253:GLY:O    | 2.16                     | 0.93              |
| 1:P:72:GLN:O    | 1:P:76:PHE:CE1   | 2.21                     | 0.93              |
| 1:Q:72:GLN:CB   | 1:Q:76:PHE:HE1   | 1.81                     | 0.93              |
| 1:F:72:GLN:O    | 1:F:76:PHE:CE1   | 2.21                     | 0.93              |
| 1:G:168:MET:HE2 | 1:G:175:TYR:CE2  | 2.03                     | 0.93              |
| 1:I:72:GLN:O    | 1:I:76:PHE:CE1   | 2.21                     | 0.93              |
| 1:K:162:GLU:CB  | 1:K:253:GLY:O    | 2.16                     | 0.93              |
| 1:L:72:GLN:CB   | 1:L:76:PHE:HE1   | 1.81                     | 0.93              |
| 1:L:162:GLU:HG3 | 1:L:252:LEU:HD11 | 1.50                     | 0.93              |
| 1:M:72:GLN:O    | 1:M:76:PHE:CE1   | 2.21                     | 0.93              |
| 1:N:162:GLU:CB  | 1:N:253:GLY:O    | 2.16                     | 0.93              |
| 1:Q:256:GLU:OE1 | 1:Q:283:ARG:NH1  | 2.00                     | 0.93              |
| 1:G:256:GLU:OE1 | 1:G:283:ARG:NH1  | 2.00                     | 0.93              |
| 1:H:174:TYR:CD1 | 1:H:234:ASN:HB3  | 2.04                     | 0.93              |
| 1:M:126:SER:HA  | 1:M:223:LYS:HZ1  | 1.25                     | 0.93              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:72:GLN:CB    | 1:O:76:PHE:HE1   | 1.81                     | 0.93              |
| 1:O:125:ALA:HB1  | 1:O:223:LYS:HD3  | 0.95                     | 0.93              |
| 1:G:127:PHE:HD2  | 1:G:155:LEU:HD21 | 1.12                     | 0.93              |
| 1:H:162:GLU:CB   | 1:H:253:GLY:O    | 2.16                     | 0.93              |
| 1:I:127:PHE:HD2  | 1:I:155:LEU:HD21 | 1.12                     | 0.93              |
| 1:O:168:MET:HE2  | 1:O:175:TYR:CE2  | 2.04                     | 0.93              |
| 1:P:162:GLU:CB   | 1:P:253:GLY:O    | 2.16                     | 0.93              |
| 1:Q:158:LEU:HD12 | 1:Q:224:LEU:HD21 | 1.51                     | 0.93              |
| 1:B:174:TYR:CD1  | 1:B:234:ASN:HB3  | 2.04                     | 0.93              |
| 1:G:174:TYR:CD1  | 1:G:234:ASN:HB3  | 2.04                     | 0.93              |
| 1:I:158:LEU:HD12 | 1:I:224:LEU:HD21 | 1.51                     | 0.93              |
| 1:L:72:GLN:O     | 1:L:76:PHE:CE1   | 2.21                     | 0.93              |
| 1:N:72:GLN:CB    | 1:N:76:PHE:HE1   | 1.81                     | 0.93              |
| 1:N:251:LYS:CG   | 1:N:252:LEU:N    | 2.29                     | 0.93              |
| 1:P:158:LEU:HD12 | 1:P:224:LEU:HD21 | 1.51                     | 0.93              |
| 1:Q:162:GLU:CB   | 1:Q:253:GLY:O    | 2.16                     | 0.93              |
| 1:Q:175:TYR:OH   | 1:Q:237:LEU:HD23 | 1.69                     | 0.93              |
| 1:B:162:GLU:HG3  | 1:B:252:LEU:HD11 | 1.49                     | 0.93              |
| 1:B:162:GLU:CB   | 1:B:253:GLY:O    | 2.16                     | 0.93              |
| 1:F:127:PHE:HD2  | 1:F:155:LEU:HD21 | 1.12                     | 0.93              |
| 1:F:175:TYR:OH   | 1:F:237:LEU:HD23 | 1.69                     | 0.93              |
| 1:G:174:TYR:HE1  | 1:G:234:ASN:CB   | 1.81                     | 0.93              |
| 1:H:72:GLN:CB    | 1:H:76:PHE:HE1   | 1.81                     | 0.93              |
| 1:J:125:ALA:HB1  | 1:J:223:LYS:HD3  | 0.95                     | 0.93              |
| 1:J:127:PHE:HD2  | 1:J:155:LEU:HD21 | 1.12                     | 0.93              |
| 1:J:175:TYR:OH   | 1:J:237:LEU:HD23 | 1.69                     | 0.93              |
| 1:J:251:LYS:CG   | 1:J:252:LEU:N    | 2.29                     | 0.93              |
| 1:L:174:TYR:CD1  | 1:L:234:ASN:HB3  | 2.04                     | 0.93              |
| 1:L:174:TYR:HE1  | 1:L:234:ASN:CB   | 1.81                     | 0.93              |
| 1:O:256:GLU:OE1  | 1:O:283:ARG:NH1  | 2.00                     | 0.93              |
| 1:O:290:LYS:CG   | 1:Q:150:LEU:CD2  | 2.44                     | 0.93              |
| 1:P:72:GLN:CB    | 1:P:76:PHE:HE1   | 1.81                     | 0.93              |
| 1:P:162:GLU:HG3  | 1:P:252:LEU:HD11 | 1.49                     | 0.93              |
| 1:P:174:TYR:CD1  | 1:P:234:ASN:HB3  | 2.04                     | 0.93              |
| 1:Q:162:GLU:HG3  | 1:Q:252:LEU:HD11 | 1.50                     | 0.93              |
| 1:Q:174:TYR:CD1  | 1:Q:234:ASN:HB3  | 2.04                     | 0.93              |
| 1:H:174:TYR:HE1  | 1:H:234:ASN:CB   | 1.81                     | 0.93              |
| 1:H:256:GLU:OE1  | 1:H:283:ARG:NH1  | 2.00                     | 0.93              |
| 1:I:128:SER:HB3  | 1:I:155:LEU:HD13 | 1.51                     | 0.93              |
| 1:J:72:GLN:CB    | 1:J:76:PHE:HE1   | 1.81                     | 0.93              |
| 1:N:72:GLN:O     | 1:N:76:PHE:CE1   | 2.21                     | 0.93              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:N:127:PHE:HD2  | 1:N:155:LEU:HD21 | 1.12                     | 0.93              |
| 1:O:162:GLU:CB   | 1:O:253:GLY:O    | 2.16                     | 0.93              |
| 1:O:276:THR:CA   | 1:P:285:MET:CE   | 1.94                     | 0.93              |
| 1:B:64:ASP:O     | 1:B:65:THR:CG2   | 2.17                     | 0.92              |
| 1:B:72:GLN:O     | 1:B:76:PHE:CE1   | 2.21                     | 0.92              |
| 1:B:162:GLU:HB3  | 1:B:253:GLY:O    | 1.70                     | 0.92              |
| 1:I:144:TYR:HE2  | 1:I:146:ALA:HB2  | 1.28                     | 0.92              |
| 1:M:128:SER:HB3  | 1:M:155:LEU:HD13 | 1.51                     | 0.92              |
| 1:N:142:MET:HE2  | 1:N:152:MET:CE   | 1.96                     | 0.92              |
| 1:O:127:PHE:HD2  | 1:O:155:LEU:HD21 | 1.11                     | 0.92              |
| 1:Q:128:SER:HB3  | 1:Q:155:LEU:HD13 | 1.51                     | 0.92              |
| 1:F:130:ASP:N    | 1:F:131:PRO:HD2  | 1.73                     | 0.92              |
| 1:H:252:LEU:HG   | 1:H:253:GLY:N    | 1.84                     | 0.92              |
| 1:I:162:GLU:HB3  | 1:I:253:GLY:O    | 1.69                     | 0.92              |
| 1:I:175:TYR:OH   | 1:I:237:LEU:HD23 | 1.69                     | 0.92              |
| 1:M:150:LEU:CD2  | 1:N:290:LYS:CG   | 2.44                     | 0.92              |
| 1:N:252:LEU:HG   | 1:N:253:GLY:N    | 1.83                     | 0.92              |
| 1:Q:162:GLU:HB3  | 1:Q:253:GLY:O    | 1.70                     | 0.92              |
| 1:G:72:GLN:O     | 1:G:76:PHE:CE1   | 2.21                     | 0.92              |
| 1:J:174:TYR:CD1  | 1:J:234:ASN:HB3  | 2.04                     | 0.92              |
| 1:M:162:GLU:CB   | 1:M:253:GLY:O    | 2.16                     | 0.92              |
| 1:O:158:LEU:HD12 | 1:O:224:LEU:HD21 | 1.51                     | 0.92              |
| 1:P:175:TYR:OH   | 1:P:237:LEU:HD23 | 1.69                     | 0.92              |
| 1:Q:72:GLN:O     | 1:Q:76:PHE:CE1   | 2.21                     | 0.92              |
| 1:B:158:LEU:HD12 | 1:B:224:LEU:HD21 | 1.51                     | 0.92              |
| 1:B:252:LEU:HG   | 1:B:253:GLY:N    | 1.83                     | 0.92              |
| 1:F:128:SER:HB3  | 1:F:155:LEU:HD13 | 1.51                     | 0.92              |
| 1:F:162:GLU:CB   | 1:F:253:GLY:O    | 2.16                     | 0.92              |
| 1:K:72:GLN:O     | 1:K:76:PHE:CE1   | 2.21                     | 0.92              |
| 1:M:174:TYR:CD1  | 1:M:234:ASN:HB3  | 2.04                     | 0.92              |
| 1:O:162:GLU:HB3  | 1:O:253:GLY:O    | 1.69                     | 0.92              |
| 1:B:73:GLU:HG2   | 1:B:73:GLU:O     | 1.68                     | 0.92              |
| 1:G:128:SER:HA   | 1:G:155:LEU:HD13 | 1.35                     | 0.92              |
| 1:G:158:LEU:HD12 | 1:G:224:LEU:HD21 | 1.51                     | 0.92              |
| 1:L:252:LEU:CG   | 1:L:253:GLY:N    | 2.31                     | 0.92              |
| 1:M:162:GLU:HB3  | 1:M:253:GLY:O    | 1.70                     | 0.92              |
| 1:N:175:TYR:OH   | 1:N:237:LEU:HD23 | 1.69                     | 0.92              |
| 1:J:252:LEU:HG   | 1:J:253:GLY:N    | 1.83                     | 0.92              |
| 1:L:144:TYR:HE2  | 1:L:146:ALA:HB2  | 1.35                     | 0.92              |
| 1:N:162:GLU:HB3  | 1:N:253:GLY:O    | 1.69                     | 0.92              |
| 1:O:175:TYR:OH   | 1:O:237:LEU:HD23 | 1.69                     | 0.92              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:P:162:GLU:HB3  | 1:P:253:GLY:O    | 1.69                     | 0.92              |
| 1:G:205:ILE:HD11 | 1:H:104:GLN:OE1  | 1.63                     | 0.92              |
| 1:H:162:GLU:HG3  | 1:H:252:LEU:HD11 | 1.49                     | 0.92              |
| 1:K:174:TYR:CD1  | 1:K:234:ASN:HB3  | 2.04                     | 0.92              |
| 1:I:251:LYS:CG   | 1:I:252:LEU:N    | 2.29                     | 0.92              |
| 1:P:252:LEU:CG   | 1:P:253:GLY:N    | 2.31                     | 0.92              |
| 1:J:162:GLU:HG3  | 1:J:252:LEU:HD11 | 1.49                     | 0.92              |
| 1:P:130:ASP:N    | 1:P:131:PRO:HD2  | 1.73                     | 0.92              |
| 1:P:144:TYR:HE2  | 1:P:146:ALA:HB2  | 1.28                     | 0.92              |
| 1:B:87:THR:OG1   | 1:B:122:THR:HG22 | 1.71                     | 0.91              |
| 1:H:162:GLU:HB3  | 1:H:253:GLY:O    | 1.69                     | 0.91              |
| 1:J:158:LEU:HD12 | 1:J:224:LEU:HD21 | 1.51                     | 0.91              |
| 1:L:130:ASP:N    | 1:L:131:PRO:HD2  | 1.74                     | 0.91              |
| 1:N:144:TYR:HE2  | 1:N:146:ALA:HB2  | 1.26                     | 0.91              |
| 1:B:251:LYS:HG3  | 1:B:252:LEU:H    | 1.09                     | 0.91              |
| 1:B:251:LYS:CG   | 1:B:252:LEU:N    | 2.29                     | 0.91              |
| 1:H:128:SER:HB3  | 1:H:155:LEU:HD13 | 1.51                     | 0.91              |
| 1:H:158:LEU:HD12 | 1:H:224:LEU:HD21 | 1.51                     | 0.91              |
| 1:K:158:LEU:HD12 | 1:K:224:LEU:HD21 | 1.51                     | 0.91              |
| 1:K:175:TYR:OH   | 1:K:237:LEU:HD23 | 1.69                     | 0.91              |
| 1:L:158:LEU:HD12 | 1:L:224:LEU:HD21 | 1.51                     | 0.91              |
| 1:M:87:THR:OG1   | 1:M:122:THR:HG22 | 1.71                     | 0.91              |
| 1:N:128:SER:HB3  | 1:N:155:LEU:HD13 | 1.51                     | 0.91              |
| 1:P:252:LEU:HG   | 1:P:253:GLY:N    | 1.83                     | 0.91              |
| 1:F:162:GLU:HB3  | 1:F:253:GLY:O    | 1.70                     | 0.91              |
| 1:K:87:THR:OG1   | 1:K:122:THR:HG22 | 1.71                     | 0.91              |
| 1:K:128:SER:HA   | 1:K:155:LEU:HD13 | 1.35                     | 0.91              |
| 1:L:162:GLU:HB3  | 1:L:253:GLY:O    | 1.70                     | 0.91              |
| 1:M:175:TYR:OH   | 1:M:237:LEU:HD23 | 1.69                     | 0.91              |
| 1:M:252:LEU:HG   | 1:M:253:GLY:N    | 1.84                     | 0.91              |
| 1:N:174:TYR:CD1  | 1:N:234:ASN:HB3  | 2.04                     | 0.91              |
| 1:N:252:LEU:CG   | 1:N:253:GLY:N    | 2.31                     | 0.91              |
| 1:O:252:LEU:HG   | 1:O:253:GLY:N    | 1.83                     | 0.91              |
| 1:P:127:PHE:HD2  | 1:P:155:LEU:HD21 | 1.12                     | 0.91              |
| 1:G:72:GLN:CB    | 1:G:76:PHE:HE1   | 1.81                     | 0.91              |
| 1:H:72:GLN:O     | 1:H:76:PHE:CE1   | 2.21                     | 0.91              |
| 1:J:162:GLU:HB3  | 1:J:253:GLY:O    | 1.69                     | 0.91              |
| 1:L:175:TYR:OH   | 1:L:237:LEU:HD23 | 1.69                     | 0.91              |
| 1:B:142:MET:HE2  | 1:B:152:MET:CE   | 1.99                     | 0.91              |
| 1:F:127:PHE:CE2  | 1:F:155:LEU:HD21 | 2.06                     | 0.91              |
| 1:F:168:MET:HE1  | 1:F:175:TYR:CZ   | 1.99                     | 0.91              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:87:THR:OG1   | 1:G:122:THR:HG22 | 1.70                     | 0.91              |
| 1:G:117:TYR:HE2  | 1:O:167:PRO:O    | 1.54                     | 0.91              |
| 1:J:87:THR:OG1   | 1:J:122:THR:HG22 | 1.71                     | 0.91              |
| 1:P:128:SER:HB3  | 1:P:155:LEU:HD13 | 1.51                     | 0.91              |
| 1:H:87:THR:OG1   | 1:H:122:THR:HG22 | 1.71                     | 0.91              |
| 1:I:87:THR:OG1   | 1:I:122:THR:HG22 | 1.71                     | 0.91              |
| 1:I:104:GLN:OE1  | 1:K:205:ILE:HD11 | 1.63                     | 0.91              |
| 1:F:174:TYR:CD1  | 1:F:234:ASN:HB3  | 2.04                     | 0.91              |
| 1:G:162:GLU:HB3  | 1:G:253:GLY:O    | 1.69                     | 0.91              |
| 1:L:87:THR:OG1   | 1:L:122:THR:HG22 | 1.71                     | 0.91              |
| 1:Q:87:THR:OG1   | 1:Q:122:THR:HG22 | 1.71                     | 0.91              |
| 1:G:127:PHE:CE2  | 1:G:155:LEU:HD21 | 2.06                     | 0.91              |
| 1:K:162:GLU:HB3  | 1:K:253:GLY:O    | 1.69                     | 0.91              |
| 1:M:162:GLU:HG3  | 1:M:252:LEU:HD11 | 1.50                     | 0.91              |
| 1:N:158:LEU:HD12 | 1:N:224:LEU:HD21 | 1.51                     | 0.91              |
| 1:O:87:THR:OG1   | 1:O:122:THR:HG22 | 1.71                     | 0.91              |
| 1:O:128:SER:HB3  | 1:O:155:LEU:HD13 | 1.51                     | 0.91              |
| 1:O:174:TYR:CD1  | 1:O:234:ASN:HB3  | 2.04                     | 0.91              |
| 1:G:128:SER:HB3  | 1:G:155:LEU:HD13 | 1.51                     | 0.91              |
| 1:K:128:SER:HB3  | 1:K:155:LEU:HD13 | 1.52                     | 0.91              |
| 1:J:142:MET:HE2  | 1:J:152:MET:CE   | 2.00                     | 0.91              |
| 1:K:72:GLN:CB    | 1:K:76:PHE:HE1   | 1.81                     | 0.91              |
| 1:O:275:PRO:HB2  | 1:P:285:MET:HG2  | 0.91                     | 0.91              |
| 1:B:127:PHE:CE2  | 1:B:155:LEU:HD21 | 2.06                     | 0.90              |
| 1:F:87:THR:OG1   | 1:F:122:THR:HG22 | 1.71                     | 0.90              |
| 1:I:127:PHE:CE2  | 1:I:155:LEU:HD21 | 2.06                     | 0.90              |
| 1:I:174:TYR:CD1  | 1:I:234:ASN:HB3  | 2.04                     | 0.90              |
| 1:J:130:ASP:N    | 1:J:131:PRO:HD2  | 1.73                     | 0.90              |
| 1:O:150:LEU:CD2  | 1:P:290:LYS:CG   | 2.44                     | 0.90              |
| 1:G:252:LEU:HG   | 1:G:253:GLY:N    | 1.84                     | 0.90              |
| 1:J:127:PHE:CE2  | 1:J:155:LEU:HD21 | 2.06                     | 0.90              |
| 1:K:252:LEU:HG   | 1:K:253:GLY:N    | 1.84                     | 0.90              |
| 1:I:252:LEU:CG   | 1:I:253:GLY:N    | 2.32                     | 0.90              |
| 1:K:127:PHE:CE2  | 1:K:155:LEU:HD21 | 2.06                     | 0.90              |
| 1:Q:127:PHE:HD2  | 1:Q:155:LEU:HD21 | 1.12                     | 0.90              |
| 1:F:252:LEU:HG   | 1:F:253:GLY:N    | 1.84                     | 0.90              |
| 1:H:252:LEU:CG   | 1:H:253:GLY:N    | 2.31                     | 0.90              |
| 1:J:205:ILE:HD11 | 1:K:104:GLN:OE1  | 1.63                     | 0.90              |
| 1:L:252:LEU:HG   | 1:L:253:GLY:N    | 1.84                     | 0.90              |
| 1:M:175:TYR:OH   | 1:M:237:LEU:CD2  | 2.20                     | 0.90              |
| 1:N:127:PHE:CE2  | 1:N:155:LEU:HD21 | 2.06                     | 0.90              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:127:PHE:CE2  | 1:O:155:LEU:HD21 | 2.06                     | 0.90              |
| 1:Q:127:PHE:CE2  | 1:Q:155:LEU:HD21 | 2.06                     | 0.90              |
| 1:H:127:PHE:CE2  | 1:H:155:LEU:HD21 | 2.06                     | 0.90              |
| 1:O:285:MET:HG2  | 1:Q:275:PRO:HB2  | 0.91                     | 0.90              |
| 1:F:251:LYS:HG3  | 1:F:252:LEU:H    | 1.09                     | 0.90              |
| 1:J:275:PRO:HB2  | 1:K:285:MET:HG2  | 0.91                     | 0.90              |
| 1:L:285:MET:HG2  | 1:N:275:PRO:HB2  | 0.91                     | 0.90              |
| 1:N:175:TYR:OH   | 1:N:237:LEU:CD2  | 2.20                     | 0.90              |
| 1:O:175:TYR:OH   | 1:O:237:LEU:CD2  | 2.20                     | 0.90              |
| 1:G:144:TYR:HE2  | 1:G:146:ALA:HB2  | 1.30                     | 0.90              |
| 1:G:175:TYR:OH   | 1:G:237:LEU:CD2  | 2.20                     | 0.90              |
| 1:I:127:PHE:O    | 1:I:131:PRO:CG   | 2.20                     | 0.90              |
| 1:J:205:ILE:HD12 | 1:K:104:GLN:OE1  | 1.72                     | 0.90              |
| 1:L:168:MET:CE   | 1:L:175:TYR:CD1  | 2.55                     | 0.90              |
| 1:M:168:MET:CE   | 1:M:175:TYR:CD1  | 2.55                     | 0.90              |
| 1:N:87:THR:OG1   | 1:N:122:THR:HG22 | 1.71                     | 0.90              |
| 1:N:167:PRO:CG   | 1:P:134:TYR:OH   | 2.17                     | 0.90              |
| 1:F:127:PHE:O    | 1:F:131:PRO:CG   | 2.20                     | 0.90              |
| 1:F:175:TYR:OH   | 1:F:237:LEU:CD2  | 2.20                     | 0.90              |
| 1:G:251:LYS:HG3  | 1:G:252:LEU:H    | 1.09                     | 0.90              |
| 1:H:175:TYR:OH   | 1:H:237:LEU:CD2  | 2.20                     | 0.90              |
| 1:M:127:PHE:CE2  | 1:M:155:LEU:HD21 | 2.06                     | 0.90              |
| 1:P:175:TYR:OH   | 1:P:237:LEU:CD2  | 2.20                     | 0.90              |
| 1:B:127:PHE:O    | 1:B:131:PRO:CG   | 2.20                     | 0.90              |
| 1:H:127:PHE:HD2  | 1:H:155:LEU:HD21 | 1.11                     | 0.90              |
| 1:J:127:PHE:O    | 1:J:131:PRO:CG   | 2.20                     | 0.90              |
| 1:L:104:GLN:OE1  | 1:N:205:ILE:HD12 | 1.72                     | 0.90              |
| 1:L:127:PHE:O    | 1:L:131:PRO:CG   | 2.20                     | 0.90              |
| 1:N:127:PHE:O    | 1:N:131:PRO:CG   | 2.20                     | 0.90              |
| 1:P:87:THR:OG1   | 1:P:122:THR:HG22 | 1.70                     | 0.90              |
| 1:F:158:LEU:HD12 | 1:F:224:LEU:HD21 | 1.51                     | 0.89              |
| 1:F:285:MET:HG2  | 1:H:275:PRO:HB2  | 0.91                     | 0.89              |
| 1:G:127:PHE:O    | 1:G:131:PRO:CG   | 2.20                     | 0.89              |
| 1:H:127:PHE:O    | 1:H:131:PRO:CG   | 2.20                     | 0.89              |
| 1:J:168:MET:CE   | 1:J:175:TYR:CD1  | 2.55                     | 0.89              |
| 1:L:127:PHE:CE2  | 1:L:155:LEU:HD21 | 2.06                     | 0.89              |
| 1:L:175:TYR:OH   | 1:L:237:LEU:CD2  | 2.20                     | 0.89              |
| 1:M:158:LEU:HD12 | 1:M:224:LEU:HD21 | 1.51                     | 0.89              |
| 1:I:275:PRO:HB2  | 1:J:285:MET:HG2  | 0.91                     | 0.89              |
| 1:K:175:TYR:OH   | 1:K:237:LEU:CD2  | 2.20                     | 0.89              |
| 1:L:275:PRO:HB2  | 1:M:285:MET:HG2  | 0.91                     | 0.89              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:M:275:PRO:HB2  | 1:N:285:MET:HG2  | 0.91                     | 0.89              |
| 1:P:127:PHE:CE2  | 1:P:155:LEU:HD21 | 2.06                     | 0.89              |
| 1:Q:168:MET:CE   | 1:Q:175:TYR:CD1  | 2.55                     | 0.89              |
| 1:F:168:MET:CE   | 1:F:175:TYR:CD1  | 2.55                     | 0.89              |
| 1:I:168:MET:CE   | 1:I:175:TYR:CD1  | 2.55                     | 0.89              |
| 1:J:175:TYR:OH   | 1:J:237:LEU:CD2  | 2.20                     | 0.89              |
| 1:K:127:PHE:O    | 1:K:131:PRO:CG   | 2.20                     | 0.89              |
| 1:Q:175:TYR:OH   | 1:Q:237:LEU:CD2  | 2.20                     | 0.89              |
| 1:Q:252:LEU:HG   | 1:Q:253:GLY:N    | 1.83                     | 0.89              |
| 1:H:142:MET:HE2  | 1:H:152:MET:HE1  | 1.54                     | 0.89              |
| 1:J:251:LYS:HG3  | 1:J:252:LEU:H    | 1.09                     | 0.89              |
| 1:L:128:SER:HB3  | 1:L:155:LEU:HD13 | 1.51                     | 0.89              |
| 1:L:191:CYS:CB   | 1:L:244:CYS:HG   | 1.84                     | 0.89              |
| 1:N:168:MET:CE   | 1:N:175:TYR:CD1  | 2.55                     | 0.89              |
| 1:O:144:TYR:HE2  | 1:O:146:ALA:HB2  | 1.33                     | 0.89              |
| 1:P:127:PHE:O    | 1:P:131:PRO:CG   | 2.20                     | 0.89              |
| 1:B:175:TYR:OH   | 1:B:237:LEU:CD2  | 2.20                     | 0.89              |
| 1:I:175:TYR:OH   | 1:I:237:LEU:CD2  | 2.20                     | 0.89              |
| 1:P:205:ILE:HD12 | 1:Q:104:GLN:OE1  | 1.72                     | 0.89              |
| 1:F:104:GLN:OE1  | 1:H:205:ILE:HD12 | 1.72                     | 0.89              |
| 1:J:144:TYR:HE2  | 1:J:146:ALA:HB2  | 1.33                     | 0.89              |
| 1:J:252:LEU:CG   | 1:J:253:GLY:N    | 2.31                     | 0.89              |
| 1:B:168:MET:CE   | 1:B:175:TYR:CD1  | 2.55                     | 0.89              |
| 1:I:104:GLN:OE1  | 1:K:205:ILE:HD12 | 1.72                     | 0.89              |
| 1:K:142:MET:HE2  | 1:K:152:MET:HE2  | 1.54                     | 0.89              |
| 1:M:251:LYS:HG3  | 1:M:252:LEU:H    | 1.09                     | 0.89              |
| 1:O:127:PHE:O    | 1:O:131:PRO:CG   | 2.20                     | 0.89              |
| 1:B:158:LEU:CD1  | 1:B:224:LEU:HD11 | 2.03                     | 0.89              |
| 1:J:128:SER:HB3  | 1:J:155:LEU:HD13 | 1.51                     | 0.89              |
| 1:O:158:LEU:CD1  | 1:O:224:LEU:HD11 | 2.03                     | 0.89              |
| 1:O:252:LEU:CG   | 1:O:253:GLY:N    | 2.31                     | 0.89              |
| 1:Q:127:PHE:O    | 1:Q:131:PRO:CG   | 2.20                     | 0.89              |
| 1:G:158:LEU:CD1  | 1:G:224:LEU:HD11 | 2.03                     | 0.89              |
| 1:G:159:ILE:HG21 | 1:G:258:VAL:CG2  | 1.91                     | 0.89              |
| 1:G:275:PRO:HB2  | 1:H:285:MET:HG2  | 0.91                     | 0.89              |
| 1:O:285:MET:HE1  | 1:Q:276:THR:HA   | 0.89                     | 0.89              |
| 1:M:144:TYR:HE2  | 1:M:146:ALA:HB2  | 1.36                     | 0.89              |
| 1:O:168:MET:CE   | 1:O:175:TYR:CD1  | 2.55                     | 0.89              |
| 1:L:251:LYS:HG3  | 1:L:252:LEU:H    | 1.09                     | 0.88              |
| 1:P:168:MET:CE   | 1:P:175:TYR:CD1  | 2.55                     | 0.88              |
| 1:I:150:LEU:CD2  | 1:J:290:LYS:CG   | 2.44                     | 0.88              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:285:MET:HG2  | 1:K:275:PRO:HB2  | 0.91                     | 0.88              |
| 1:J:275:PRO:CB   | 1:K:285:MET:CG   | 2.48                     | 0.88              |
| 1:K:168:MET:CE   | 1:K:175:TYR:CD1  | 2.55                     | 0.88              |
| 1:M:205:ILE:HD12 | 1:N:104:GLN:OE1  | 1.72                     | 0.88              |
| 1:F:158:LEU:CD1  | 1:F:224:LEU:HD11 | 2.03                     | 0.88              |
| 1:G:183:LYS:HE2  | 1:G:228:ASP:OD2  | 1.74                     | 0.88              |
| 1:K:251:LYS:HG3  | 1:K:252:LEU:H    | 1.09                     | 0.88              |
| 1:N:158:LEU:CD1  | 1:N:224:LEU:HD11 | 2.03                     | 0.88              |
| 1:Q:158:LEU:CD1  | 1:Q:224:LEU:HD11 | 2.03                     | 0.88              |
| 1:F:142:MET:HE2  | 1:F:152:MET:CE   | 2.00                     | 0.88              |
| 1:M:127:PHE:O    | 1:M:131:PRO:CG   | 2.20                     | 0.88              |
| 1:P:275:PRO:HB2  | 1:Q:285:MET:HG2  | 0.91                     | 0.88              |
| 1:Q:183:LYS:HE2  | 1:Q:228:ASP:OD2  | 1.74                     | 0.88              |
| 1:B:128:SER:HB3  | 1:B:155:LEU:HD13 | 1.51                     | 0.88              |
| 1:K:251:LYS:CG   | 1:K:252:LEU:H    | 1.87                     | 0.88              |
| 1:P:183:LYS:HE2  | 1:P:228:ASP:OD2  | 1.74                     | 0.88              |
| 1:B:69:ASN:HD22  | 2:A:1:NAG:C1     | 1.78                     | 0.88              |
| 1:B:183:LYS:HE2  | 1:B:228:ASP:OD2  | 1.74                     | 0.88              |
| 1:G:168:MET:CE   | 1:G:175:TYR:CD1  | 2.55                     | 0.88              |
| 1:H:168:MET:CE   | 1:H:175:TYR:CD1  | 2.55                     | 0.88              |
| 1:J:158:LEU:CD1  | 1:J:224:LEU:HD11 | 2.03                     | 0.88              |
| 1:O:251:LYS:HG3  | 1:O:252:LEU:H    | 1.09                     | 0.88              |
| 1:G:251:LYS:CG   | 1:G:252:LEU:H    | 1.87                     | 0.88              |
| 1:H:144:TYR:N    | 1:H:263:VAL:O    | 2.07                     | 0.88              |
| 1:O:205:ILE:HD12 | 1:P:104:GLN:OE1  | 1.72                     | 0.88              |
| 1:B:159:ILE:HG21 | 1:B:258:VAL:CG2  | 1.91                     | 0.88              |
| 1:B:191:CYS:CA   | 1:B:244:CYS:HG   | 1.82                     | 0.88              |
| 1:I:130:ASP:N    | 1:I:131:PRO:HD2  | 1.73                     | 0.88              |
| 1:P:174:TYR:CE1  | 1:P:234:ASN:CB   | 2.56                     | 0.88              |
| 1:F:183:LYS:HE2  | 1:F:228:ASP:OD2  | 1.74                     | 0.88              |
| 1:P:142:MET:HE2  | 1:P:152:MET:CE   | 2.02                     | 0.88              |
| 1:I:142:MET:HE2  | 1:I:152:MET:CE   | 2.03                     | 0.87              |
| 1:I:144:TYR:HE2  | 1:I:146:ALA:CB   | 1.86                     | 0.87              |
| 1:I:205:ILE:HD12 | 1:J:104:GLN:OE1  | 1.72                     | 0.87              |
| 1:I:251:LYS:HG3  | 1:I:252:LEU:H    | 1.09                     | 0.87              |
| 1:K:168:MET:HE2  | 1:K:175:TYR:CE2  | 2.09                     | 0.87              |
| 1:O:104:GLN:OE1  | 1:Q:205:ILE:HD12 | 1.72                     | 0.87              |
| 1:Q:144:TYR:HE2  | 1:Q:146:ALA:CB   | 1.87                     | 0.87              |
| 1:F:150:LEU:CD2  | 1:G:290:LYS:CG   | 2.44                     | 0.87              |
| 1:F:205:ILE:HD12 | 1:G:104:GLN:OE1  | 1.72                     | 0.87              |
| 1:K:158:LEU:CD1  | 1:K:224:LEU:HD11 | 2.03                     | 0.87              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:290:LYS:CG   | 1:H:150:LEU:CD2  | 2.44                     | 0.87              |
| 1:L:205:ILE:HD12 | 1:M:104:GLN:OE1  | 1.72                     | 0.87              |
| 1:M:183:LYS:HE2  | 1:M:228:ASP:OD2  | 1.74                     | 0.87              |
| 1:N:183:LYS:HE2  | 1:N:228:ASP:OD2  | 1.74                     | 0.87              |
| 1:Q:251:LYS:HG3  | 1:Q:252:LEU:H    | 1.09                     | 0.87              |
| 1:I:158:LEU:CD1  | 1:I:224:LEU:HD11 | 2.03                     | 0.87              |
| 1:K:144:TYR:HE2  | 1:K:146:ALA:HB2  | 1.37                     | 0.87              |
| 1:P:150:LEU:CD2  | 1:Q:290:LYS:CG   | 2.44                     | 0.87              |
| 1:O:251:LYS:CG   | 1:O:252:LEU:H    | 1.87                     | 0.87              |
| 1:P:275:PRO:CB   | 1:Q:285:MET:CG   | 2.48                     | 0.87              |
| 1:Q:130:ASP:N    | 1:Q:131:PRO:HD2  | 1.73                     | 0.87              |
| 1:Q:174:TYR:CE1  | 1:Q:234:ASN:CB   | 2.56                     | 0.87              |
| 1:I:183:LYS:HE2  | 1:I:228:ASP:OD2  | 1.74                     | 0.87              |
| 1:I:285:MET:CE   | 1:K:276:THR:CA   | 1.94                     | 0.87              |
| 1:K:127:PHE:HD2  | 1:K:155:LEU:HD21 | 1.12                     | 0.87              |
| 1:L:144:TYR:N    | 1:L:263:VAL:O    | 2.08                     | 0.87              |
| 1:L:158:LEU:CD1  | 1:L:224:LEU:HD11 | 2.03                     | 0.87              |
| 1:L:290:LYS:CG   | 1:N:150:LEU:CD2  | 2.44                     | 0.87              |
| 1:O:183:LYS:HE2  | 1:O:228:ASP:OD2  | 1.74                     | 0.87              |
| 1:P:158:LEU:CD1  | 1:P:224:LEU:HD11 | 2.03                     | 0.87              |
| 1:F:144:TYR:N    | 1:F:263:VAL:O    | 2.08                     | 0.87              |
| 1:F:275:PRO:HB2  | 1:G:285:MET:HG2  | 0.91                     | 0.87              |
| 1:G:252:LEU:CG   | 1:G:253:GLY:N    | 2.32                     | 0.87              |
| 1:G:275:PRO:CB   | 1:H:285:MET:CG   | 2.48                     | 0.87              |
| 1:N:251:LYS:HG3  | 1:N:252:LEU:H    | 1.09                     | 0.87              |
| 1:B:174:TYR:CE1  | 1:B:234:ASN:CB   | 2.56                     | 0.87              |
| 1:I:290:LYS:CG   | 1:K:150:LEU:CD2  | 2.44                     | 0.87              |
| 1:K:174:TYR:CE1  | 1:K:234:ASN:CB   | 2.56                     | 0.87              |
| 1:L:251:LYS:CG   | 1:L:252:LEU:H    | 1.87                     | 0.87              |
| 1:N:174:TYR:CE1  | 1:N:234:ASN:CB   | 2.56                     | 0.87              |
| 1:N:251:LYS:CG   | 1:N:252:LEU:H    | 1.87                     | 0.87              |
| 1:P:251:LYS:HG3  | 1:P:252:LEU:H    | 1.09                     | 0.87              |
| 1:L:183:LYS:HE2  | 1:L:228:ASP:OD2  | 1.74                     | 0.87              |
| 1:Q:168:MET:HE3  | 1:Q:175:TYR:CE2  | 2.09                     | 0.87              |
| 1:B:127:PHE:HD2  | 1:B:155:LEU:HD21 | 1.12                     | 0.86              |
| 1:H:158:LEU:CD1  | 1:H:224:LEU:HD11 | 2.03                     | 0.86              |
| 1:J:183:LYS:HE2  | 1:J:228:ASP:OD2  | 1.74                     | 0.86              |
| 1:J:251:LYS:CG   | 1:J:252:LEU:H    | 1.87                     | 0.86              |
| 1:K:144:TYR:HD2  | 1:K:144:TYR:C    | 1.78                     | 0.86              |
| 1:K:183:LYS:HE2  | 1:K:228:ASP:OD2  | 1.74                     | 0.86              |
| 1:M:127:PHE:HD2  | 1:M:155:LEU:HD21 | 1.12                     | 0.86              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:N:144:TYR:HE2  | 1:N:146:ALA:CB   | 1.87                     | 0.86              |
| 1:H:183:LYS:HE2  | 1:H:228:ASP:OD2  | 1.74                     | 0.86              |
| 1:L:191:CYS:CB   | 1:L:244:CYS:SG   | 2.64                     | 0.86              |
| 1:M:158:LEU:CD1  | 1:M:224:LEU:HD11 | 2.03                     | 0.86              |
| 1:Q:191:CYS:CB   | 1:Q:244:CYS:SG   | 2.63                     | 0.86              |
| 1:G:205:ILE:HD12 | 1:H:104:GLN:OE1  | 1.72                     | 0.86              |
| 1:L:174:TYR:CE1  | 1:L:234:ASN:CB   | 2.56                     | 0.86              |
| 1:H:142:MET:HE2  | 1:H:152:MET:CE   | 2.01                     | 0.86              |
| 1:H:144:TYR:HE2  | 1:H:146:ALA:HB2  | 1.31                     | 0.86              |
| 1:H:174:TYR:CE1  | 1:H:234:ASN:CB   | 2.56                     | 0.86              |
| 1:J:159:ILE:HG21 | 1:J:258:VAL:CG2  | 1.91                     | 0.86              |
| 1:B:252:LEU:CG   | 1:B:253:GLY:N    | 2.31                     | 0.86              |
| 1:K:191:CYS:CB   | 1:K:244:CYS:SG   | 2.64                     | 0.86              |
| 1:O:285:MET:CG   | 1:Q:275:PRO:CB   | 2.48                     | 0.86              |
| 1:G:144:TYR:N    | 1:G:263:VAL:O    | 2.08                     | 0.86              |
| 1:H:251:LYS:HG3  | 1:H:252:LEU:H    | 1.09                     | 0.86              |
| 1:O:168:MET:HE2  | 1:O:175:TYR:CZ   | 2.06                     | 0.86              |
| 1:Q:252:LEU:CG   | 1:Q:253:GLY:N    | 2.31                     | 0.86              |
| 1:H:191:CYS:CB   | 1:H:244:CYS:SG   | 2.64                     | 0.86              |
| 1:N:191:CYS:CB   | 1:N:244:CYS:SG   | 2.63                     | 0.86              |
| 1:O:191:CYS:CB   | 1:O:244:CYS:SG   | 2.64                     | 0.86              |
| 1:F:174:TYR:CE1  | 1:F:234:ASN:CB   | 2.56                     | 0.86              |
| 1:M:191:CYS:CB   | 1:M:244:CYS:SG   | 2.64                     | 0.86              |
| 1:N:82:CYS:N     | 1:N:135:CYS:SG   | 2.49                     | 0.86              |
| 1:B:64:ASP:C     | 1:B:65:THR:HG22  | 1.96                     | 0.85              |
| 1:F:191:CYS:CB   | 1:F:244:CYS:SG   | 2.64                     | 0.85              |
| 1:I:174:TYR:CE1  | 1:I:234:ASN:CB   | 2.56                     | 0.85              |
| 1:I:191:CYS:CB   | 1:I:244:CYS:SG   | 2.64                     | 0.85              |
| 1:K:82:CYS:N     | 1:K:135:CYS:SG   | 2.49                     | 0.85              |
| 1:M:82:CYS:N     | 1:M:135:CYS:SG   | 2.49                     | 0.85              |
| 1:M:252:LEU:CG   | 1:M:253:GLY:N    | 2.31                     | 0.85              |
| 1:Q:251:LYS:CG   | 1:Q:252:LEU:H    | 1.87                     | 0.85              |
| 1:F:150:LEU:CD1  | 1:G:288:ASN:CG   | 2.45                     | 0.85              |
| 1:J:82:CYS:N     | 1:J:135:CYS:SG   | 2.50                     | 0.85              |
| 1:J:150:LEU:CD1  | 1:K:288:ASN:CG   | 2.45                     | 0.85              |
| 1:N:142:MET:HE2  | 1:N:152:MET:HE1  | 1.56                     | 0.85              |
| 1:O:105:LEU:O    | 1:O:108:THR:CG2  | 2.23                     | 0.85              |
| 1:O:150:LEU:CD1  | 1:P:288:ASN:CG   | 2.45                     | 0.85              |
| 1:P:150:LEU:CD1  | 1:Q:288:ASN:CG   | 2.45                     | 0.85              |
| 1:P:191:CYS:CB   | 1:P:244:CYS:SG   | 2.64                     | 0.85              |
| 1:I:150:LEU:CD1  | 1:J:288:ASN:CG   | 2.45                     | 0.85              |

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| Atom-1           | Atom-2          | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-----------------|--------------------------|-------------------|
| 1:J:191:CYS:CB   | 1:J:244:CYS:SG  | 2.64                     | 0.85              |
| 1:M:251:LYS:CG   | 1:M:252:LEU:H   | 1.87                     | 0.85              |
| 1:L:82:CYS:N     | 1:L:135:CYS:SG  | 2.49                     | 0.85              |
| 1:P:82:CYS:N     | 1:P:135:CYS:SG  | 2.49                     | 0.85              |
| 1:F:105:LEU:O    | 1:F:108:THR:CG2 | 2.24                     | 0.85              |
| 1:G:82:CYS:N     | 1:G:135:CYS:SG  | 2.49                     | 0.85              |
| 1:G:150:LEU:CD2  | 1:H:290:LYS:CG  | 2.44                     | 0.85              |
| 1:G:191:CYS:CB   | 1:G:244:CYS:SG  | 2.64                     | 0.85              |
| 1:I:82:CYS:N     | 1:I:135:CYS:SG  | 2.49                     | 0.85              |
| 1:K:252:LEU:CG   | 1:K:253:GLY:N   | 2.31                     | 0.85              |
| 1:M:105:LEU:O    | 1:M:108:THR:CG2 | 2.24                     | 0.85              |
| 1:F:144:TYR:HD2  | 1:F:145:ASP:N   | 1.74                     | 0.85              |
| 1:K:130:ASP:N    | 1:K:131:PRO:HD2 | 1.74                     | 0.85              |
| 1:L:168:MET:HE3  | 1:L:175:TYR:CE1 | 2.11                     | 0.85              |
| 1:N:159:ILE:HG21 | 1:N:258:VAL:CG2 | 1.91                     | 0.85              |
| 1:F:82:CYS:N     | 1:F:135:CYS:SG  | 2.50                     | 0.85              |
| 1:F:142:MET:HE2  | 1:F:152:MET:HE1 | 1.57                     | 0.85              |
| 1:G:150:LEU:CD1  | 1:H:288:ASN:CG  | 2.45                     | 0.85              |
| 1:G:174:TYR:CE1  | 1:G:234:ASN:CB  | 2.56                     | 0.85              |
| 1:H:82:CYS:N     | 1:H:135:CYS:SG  | 2.49                     | 0.85              |
| 1:P:144:TYR:HE2  | 1:P:146:ALA:CB  | 1.88                     | 0.85              |
| 1:B:82:CYS:N     | 1:B:135:CYS:SG  | 2.49                     | 0.85              |
| 1:H:105:LEU:O    | 1:H:108:THR:CG2 | 2.24                     | 0.85              |
| 1:I:73:GLU:O     | 1:I:73:GLU:HG2  | 1.74                     | 0.85              |
| 1:B:142:MET:HE2  | 1:B:152:MET:HE1 | 1.54                     | 0.85              |
| 1:F:252:LEU:CG   | 1:F:253:GLY:N   | 2.31                     | 0.85              |
| 1:L:105:LEU:O    | 1:L:108:THR:CG2 | 2.24                     | 0.85              |
| 1:O:144:TYR:HE2  | 1:O:146:ALA:CB  | 1.90                     | 0.85              |
| 1:O:174:TYR:CE1  | 1:O:234:ASN:CB  | 2.56                     | 0.85              |
| 1:J:174:TYR:CE1  | 1:J:234:ASN:CB  | 2.56                     | 0.85              |
| 1:G:144:TYR:HE2  | 1:G:146:ALA:CB  | 1.89                     | 0.84              |
| 1:M:174:TYR:CE1  | 1:M:234:ASN:CB  | 2.56                     | 0.84              |
| 1:N:105:LEU:O    | 1:N:108:THR:CG2 | 2.23                     | 0.84              |
| 1:O:288:ASN:CG   | 1:Q:150:LEU:CD1 | 2.45                     | 0.84              |
| 1:Q:82:CYS:N     | 1:Q:135:CYS:SG  | 2.49                     | 0.84              |
| 1:I:142:MET:HE2  | 1:I:152:MET:HE1 | 1.58                     | 0.84              |
| 1:O:275:PRO:CB   | 1:P:285:MET:CG  | 2.48                     | 0.84              |
| 1:P:168:MET:HE3  | 1:P:175:TYR:CD1 | 2.13                     | 0.84              |
| 1:L:288:ASN:CG   | 1:N:150:LEU:CD1 | 2.45                     | 0.84              |
| 1:M:159:ILE:HG21 | 1:M:258:VAL:CG2 | 1.91                     | 0.84              |
| 1:O:82:CYS:N     | 1:O:135:CYS:SG  | 2.50                     | 0.84              |

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| Atom-1           | Atom-2          | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-----------------|--------------------------|-------------------|
| 1:B:144:TYR:HE2  | 1:B:146:ALA:HB2 | 1.35                     | 0.84              |
| 1:L:285:MET:HE1  | 1:N:276:THR:HA  | 0.85                     | 0.84              |
| 1:M:150:LEU:CD1  | 1:N:288:ASN:CG  | 2.45                     | 0.84              |
| 1:F:251:LYS:CG   | 1:F:252:LEU:H   | 1.87                     | 0.84              |
| 1:I:251:LYS:O    | 1:I:252:LEU:HB3 | 1.78                     | 0.84              |
| 1:L:275:PRO:CB   | 1:M:285:MET:CG  | 2.48                     | 0.84              |
| 1:F:144:TYR:HE2  | 1:F:146:ALA:CB  | 1.90                     | 0.84              |
| 1:L:150:LEU:CD1  | 1:M:288:ASN:CG  | 2.45                     | 0.84              |
| 1:F:288:ASN:CG   | 1:H:150:LEU:CD1 | 2.45                     | 0.84              |
| 1:I:285:MET:CG   | 1:K:275:PRO:CB  | 2.48                     | 0.84              |
| 1:I:288:ASN:CG   | 1:K:150:LEU:CD1 | 2.45                     | 0.84              |
| 1:N:168:MET:HE3  | 1:N:175:TYR:CE1 | 2.10                     | 0.84              |
| 1:P:251:LYS:O    | 1:P:252:LEU:HB3 | 1.78                     | 0.84              |
| 1:H:168:MET:HE3  | 1:H:175:TYR:CD1 | 2.13                     | 0.84              |
| 1:L:150:LEU:CD2  | 1:M:290:LYS:CG  | 2.44                     | 0.84              |
| 1:H:251:LYS:CG   | 1:H:252:LEU:H   | 1.87                     | 0.84              |
| 1:B:251:LYS:O    | 1:B:252:LEU:HB3 | 1.78                     | 0.84              |
| 1:B:191:CYS:CB   | 1:B:244:CYS:SG  | 2.64                     | 0.83              |
| 1:F:251:LYS:O    | 1:F:252:LEU:HB3 | 1.78                     | 0.83              |
| 1:H:129:VAL:HG13 | 1:H:187:MET:HG3 | 1.61                     | 0.83              |
| 1:I:105:LEU:O    | 1:I:108:THR:CG2 | 2.23                     | 0.83              |
| 1:P:144:TYR:N    | 1:P:263:VAL:O   | 2.11                     | 0.83              |
| 1:K:129:VAL:HG13 | 1:K:187:MET:HG3 | 1.61                     | 0.83              |
| 1:K:168:MET:HE2  | 1:K:175:TYR:CZ  | 2.13                     | 0.83              |
| 1:P:251:LYS:CG   | 1:P:252:LEU:H   | 1.87                     | 0.83              |
| 1:F:129:VAL:HG13 | 1:F:187:MET:HG3 | 1.61                     | 0.83              |
| 1:N:129:VAL:HG13 | 1:N:187:MET:HG3 | 1.61                     | 0.83              |
| 1:H:191:CYS:CB   | 1:H:244:CYS:HG  | 1.92                     | 0.83              |
| 1:J:150:LEU:CD2  | 1:K:290:LYS:CG  | 2.44                     | 0.83              |
| 1:P:144:TYR:CZ   | 1:P:146:ALA:HB2 | 2.14                     | 0.83              |
| 1:F:285:MET:CG   | 1:H:275:PRO:CB  | 2.48                     | 0.83              |
| 1:G:129:VAL:HG13 | 1:G:187:MET:HG3 | 1.61                     | 0.83              |
| 1:H:144:TYR:HE2  | 1:H:146:ALA:CB  | 1.91                     | 0.83              |
| 1:B:168:MET:HE3  | 1:B:175:TYR:CD1 | 2.13                     | 0.83              |
| 1:B:251:LYS:CG   | 1:B:252:LEU:H   | 1.87                     | 0.83              |
| 1:J:251:LYS:O    | 1:J:252:LEU:HB3 | 1.78                     | 0.83              |
| 1:M:168:MET:HE3  | 1:M:175:TYR:CD1 | 2.13                     | 0.83              |
| 1:P:159:ILE:HG21 | 1:P:258:VAL:CG2 | 1.91                     | 0.83              |
| 1:H:66:ALA:O     | 1:H:67:TYR:O    | 1.97                     | 0.83              |
| 1:I:144:TYR:CE2  | 1:I:146:ALA:CB  | 2.61                     | 0.83              |
| 1:J:144:TYR:HD2  | 1:J:145:ASP:N   | 1.76                     | 0.83              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:M:252:LEU:CG   | 1:M:253:GLY:H    | 1.83                     | 0.83              |
| 1:N:191:CYS:CB   | 1:N:244:CYS:HG   | 1.92                     | 0.83              |
| 1:O:168:MET:HE3  | 1:O:175:TYR:CD1  | 2.14                     | 0.83              |
| 1:F:168:MET:HE3  | 1:F:175:TYR:CD1  | 2.13                     | 0.83              |
| 1:I:168:MET:HE3  | 1:I:175:TYR:CD1  | 2.14                     | 0.83              |
| 1:I:129:VAL:HG13 | 1:I:187:MET:HG3  | 1.61                     | 0.82              |
| 1:J:168:MET:HE3  | 1:J:175:TYR:CD1  | 2.13                     | 0.82              |
| 1:L:286:ARG:HH12 | 1:N:268:VAL:CG1  | 1.92                     | 0.82              |
| 1:M:268:VAL:CG1  | 1:N:286:ARG:HH12 | 1.92                     | 0.82              |
| 1:N:251:LYS:O    | 1:N:252:LEU:HB3  | 1.78                     | 0.82              |
| 1:Q:105:LEU:O    | 1:Q:108:THR:CG2  | 2.24                     | 0.82              |
| 1:Q:144:TYR:N    | 1:Q:263:VAL:O    | 2.12                     | 0.82              |
| 1:I:144:TYR:CZ   | 1:I:146:ALA:HB2  | 2.12                     | 0.82              |
| 1:I:205:ILE:HD11 | 1:J:104:GLN:HB2  | 1.61                     | 0.82              |
| 1:I:251:LYS:CG   | 1:I:252:LEU:H    | 1.87                     | 0.82              |
| 1:O:129:VAL:HG13 | 1:O:187:MET:HG3  | 1.61                     | 0.82              |
| 1:O:205:ILE:HD11 | 1:P:104:GLN:HB2  | 1.61                     | 0.82              |
| 1:Q:168:MET:HE3  | 1:Q:175:TYR:CZ   | 2.13                     | 0.82              |
| 1:G:268:VAL:CG1  | 1:H:286:ARG:HH12 | 1.92                     | 0.82              |
| 1:L:144:TYR:HD2  | 1:L:145:ASP:N    | 1.77                     | 0.82              |
| 1:M:73:GLU:HG2   | 1:M:73:GLU:O     | 1.79                     | 0.82              |
| 1:M:129:VAL:HG13 | 1:M:187:MET:HG3  | 1.61                     | 0.82              |
| 1:B:129:VAL:HG13 | 1:B:187:MET:HG3  | 1.61                     | 0.82              |
| 1:J:268:VAL:CG1  | 1:K:286:ARG:HH12 | 1.92                     | 0.82              |
| 1:K:105:LEU:O    | 1:K:108:THR:CG2  | 2.23                     | 0.82              |
| 1:N:66:ALA:O     | 1:N:67:TYR:O     | 1.97                     | 0.82              |
| 1:P:66:ALA:O     | 1:P:67:TYR:O     | 1.97                     | 0.82              |
| 1:K:142:MET:HE2  | 1:K:152:MET:CE   | 2.04                     | 0.82              |
| 1:L:251:LYS:O    | 1:L:252:LEU:HB3  | 1.78                     | 0.82              |
| 1:G:66:ALA:O     | 1:G:67:TYR:O     | 1.97                     | 0.82              |
| 1:H:144:TYR:HD2  | 1:H:145:ASP:N    | 1.77                     | 0.82              |
| 1:M:144:TYR:N    | 1:M:263:VAL:O    | 2.12                     | 0.82              |
| 1:F:286:ARG:HH12 | 1:H:268:VAL:CG1  | 1.92                     | 0.82              |
| 1:J:66:ALA:O     | 1:J:67:TYR:O     | 1.97                     | 0.82              |
| 1:J:205:ILE:HD11 | 1:K:104:GLN:HB2  | 1.62                     | 0.82              |
| 1:O:144:TYR:N    | 1:O:263:VAL:O    | 2.12                     | 0.82              |
| 1:O:286:ARG:HH12 | 1:Q:268:VAL:CG1  | 1.92                     | 0.82              |
| 1:P:144:TYR:CE2  | 1:P:146:ALA:CB   | 2.63                     | 0.82              |
| 1:J:129:VAL:HG13 | 1:J:187:MET:HG3  | 1.61                     | 0.82              |
| 1:H:174:TYR:CE1  | 1:H:198:LEU:CD1  | 2.63                     | 0.82              |
| 1:I:104:GLN:HB2  | 1:K:205:ILE:HD11 | 1.61                     | 0.82              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:275:PRO:CB   | 1:J:285:MET:CG   | 2.48                     | 0.82              |
| 1:L:66:ALA:O     | 1:L:67:TYR:O     | 1.97                     | 0.82              |
| 1:O:251:LYS:O    | 1:O:252:LEU:HB3  | 1.78                     | 0.82              |
| 1:G:251:LYS:O    | 1:G:252:LEU:HB3  | 1.78                     | 0.81              |
| 1:I:286:ARG:HH12 | 1:K:268:VAL:CG1  | 1.92                     | 0.81              |
| 1:K:251:LYS:O    | 1:K:252:LEU:HB3  | 1.78                     | 0.81              |
| 1:M:66:ALA:O     | 1:M:67:TYR:O     | 1.97                     | 0.81              |
| 1:O:159:ILE:HG21 | 1:O:258:VAL:CG2  | 1.91                     | 0.81              |
| 1:I:174:TYR:CE1  | 1:I:198:LEU:CD1  | 2.63                     | 0.81              |
| 1:L:129:VAL:HG13 | 1:L:187:MET:HG3  | 1.61                     | 0.81              |
| 1:N:144:TYR:N    | 1:N:263:VAL:O    | 2.12                     | 0.81              |
| 1:P:268:VAL:CG1  | 1:Q:286:ARG:HH12 | 1.92                     | 0.81              |
| 1:Q:66:ALA:O     | 1:Q:67:TYR:O     | 1.97                     | 0.81              |
| 1:Q:251:LYS:O    | 1:Q:252:LEU:HB3  | 1.78                     | 0.81              |
| 1:F:138:ASN:O    | 1:F:258:VAL:HA   | 1.81                     | 0.81              |
| 1:F:144:TYR:CZ   | 1:F:146:ALA:HB2  | 2.14                     | 0.81              |
| 1:F:268:VAL:CG1  | 1:G:286:ARG:HH12 | 1.92                     | 0.81              |
| 1:F:285:MET:HE1  | 1:H:276:THR:HA   | 0.82                     | 0.81              |
| 1:G:127:PHE:HD2  | 1:G:155:LEU:CD2  | 1.93                     | 0.81              |
| 1:J:277:THR:HG22 | 1:J:279:PRO:HD3  | 1.63                     | 0.81              |
| 1:K:127:PHE:HD2  | 1:K:155:LEU:CD2  | 1.93                     | 0.81              |
| 1:M:69:ASN:O     | 1:M:70:SER:HB2   | 1.80                     | 0.81              |
| 1:M:251:LYS:O    | 1:M:252:LEU:HB3  | 1.78                     | 0.81              |
| 1:O:144:TYR:CZ   | 1:O:146:ALA:HB2  | 2.15                     | 0.81              |
| 1:H:277:THR:HG22 | 1:H:279:PRO:HD3  | 1.63                     | 0.81              |
| 1:L:205:ILE:HD11 | 1:M:104:GLN:HB2  | 1.61                     | 0.81              |
| 1:N:117:TYR:HE2  | 1:P:167:PRO:O    | 1.63                     | 0.81              |
| 1:N:138:ASN:O    | 1:N:258:VAL:HA   | 1.81                     | 0.81              |
| 1:N:144:TYR:HD2  | 1:N:145:ASP:N    | 1.78                     | 0.81              |
| 1:O:268:VAL:CG1  | 1:P:286:ARG:HH12 | 1.92                     | 0.81              |
| 1:Q:129:VAL:HG13 | 1:Q:187:MET:HG3  | 1.61                     | 0.81              |
| 1:J:144:TYR:HE2  | 1:J:146:ALA:CB   | 1.92                     | 0.81              |
| 1:K:138:ASN:O    | 1:K:258:VAL:HA   | 1.81                     | 0.81              |
| 1:L:138:ASN:O    | 1:L:258:VAL:HA   | 1.81                     | 0.81              |
| 1:H:121:TYR:HB2  | 1:H:127:PHE:HB2  | 1.63                     | 0.81              |
| 1:L:144:TYR:HE2  | 1:L:146:ALA:CB   | 1.94                     | 0.81              |
| 1:L:174:TYR:CE1  | 1:L:198:LEU:CD1  | 2.63                     | 0.81              |
| 1:L:268:VAL:CG1  | 1:M:286:ARG:HH12 | 1.92                     | 0.81              |
| 1:P:129:VAL:HG13 | 1:P:187:MET:HG3  | 1.61                     | 0.81              |
| 1:B:174:TYR:CE1  | 1:B:198:LEU:CD1  | 2.63                     | 0.81              |
| 1:G:138:ASN:O    | 1:G:258:VAL:HA   | 1.81                     | 0.81              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:174:TYR:CE1  | 1:G:198:LEU:CD1  | 2.63                     | 0.81              |
| 1:I:138:ASN:O    | 1:I:258:VAL:HA   | 1.81                     | 0.81              |
| 1:J:142:MET:HE2  | 1:J:152:MET:HE1  | 1.60                     | 0.81              |
| 1:K:144:TYR:C    | 1:K:144:TYR:CD2  | 2.49                     | 0.81              |
| 1:K:159:ILE:HG21 | 1:K:258:VAL:CG2  | 1.91                     | 0.81              |
| 1:O:104:GLN:HB2  | 1:Q:205:ILE:HD11 | 1.61                     | 0.81              |
| 1:O:138:ASN:O    | 1:O:258:VAL:HA   | 1.81                     | 0.81              |
| 1:P:174:TYR:CE1  | 1:P:198:LEU:CD1  | 2.63                     | 0.81              |
| 1:F:252:LEU:CG   | 1:F:253:GLY:H    | 1.83                     | 0.81              |
| 1:I:66:ALA:O     | 1:I:67:TYR:O     | 1.97                     | 0.81              |
| 1:I:268:VAL:CG1  | 1:J:286:ARG:HH12 | 1.92                     | 0.81              |
| 1:J:144:TYR:N    | 1:J:263:VAL:O    | 2.12                     | 0.81              |
| 1:J:174:TYR:CE1  | 1:J:198:LEU:CD1  | 2.63                     | 0.81              |
| 1:K:168:MET:HE3  | 1:K:175:TYR:CD1  | 2.15                     | 0.81              |
| 1:O:66:ALA:O     | 1:O:67:TYR:O     | 1.97                     | 0.81              |
| 1:P:121:TYR:HB2  | 1:P:127:PHE:HB2  | 1.63                     | 0.81              |
| 1:B:105:LEU:O    | 1:B:108:THR:CG2  | 2.24                     | 0.81              |
| 1:F:144:TYR:CE2  | 1:F:146:ALA:CB   | 2.64                     | 0.81              |
| 1:F:277:THR:HG22 | 1:F:279:PRO:HD3  | 1.63                     | 0.81              |
| 1:H:258:VAL:CG1  | 1:H:259:ALA:N    | 2.44                     | 0.81              |
| 1:J:69:ASN:O     | 1:J:70:SER:HB2   | 1.80                     | 0.81              |
| 1:J:121:TYR:HB2  | 1:J:127:PHE:HB2  | 1.63                     | 0.81              |
| 1:K:174:TYR:CE1  | 1:K:198:LEU:CD1  | 2.63                     | 0.81              |
| 1:M:121:TYR:HB2  | 1:M:127:PHE:HB2  | 1.63                     | 0.81              |
| 1:B:277:THR:HG22 | 1:B:279:PRO:HD3  | 1.63                     | 0.81              |
| 1:G:105:LEU:O    | 1:G:108:THR:CG2  | 2.23                     | 0.81              |
| 1:K:66:ALA:O     | 1:K:67:TYR:O     | 1.97                     | 0.81              |
| 1:K:121:TYR:HB2  | 1:K:127:PHE:HB2  | 1.63                     | 0.81              |
| 1:M:191:CYS:CB   | 1:M:244:CYS:HG   | 1.94                     | 0.81              |
| 1:P:229:VAL:HG11 | 1:P:235:HIS:ND1  | 1.96                     | 0.81              |
| 1:P:258:VAL:CG1  | 1:P:259:ALA:N    | 2.44                     | 0.81              |
| 1:Q:127:PHE:HD2  | 1:Q:155:LEU:CD2  | 1.93                     | 0.81              |
| 1:Q:174:TYR:CE1  | 1:Q:198:LEU:CD1  | 2.63                     | 0.81              |
| 1:G:144:TYR:CZ   | 1:G:146:ALA:HB2  | 2.16                     | 0.80              |
| 1:I:258:VAL:CG1  | 1:I:259:ALA:N    | 2.44                     | 0.80              |
| 1:N:127:PHE:O    | 1:N:131:PRO:HG3  | 1.82                     | 0.80              |
| 1:O:174:TYR:CE1  | 1:O:198:LEU:CD1  | 2.63                     | 0.80              |
| 1:P:138:ASN:O    | 1:P:258:VAL:HA   | 1.81                     | 0.80              |
| 1:Q:138:ASN:O    | 1:Q:258:VAL:HA   | 1.81                     | 0.80              |
| 1:F:174:TYR:CE1  | 1:F:198:LEU:CD1  | 2.63                     | 0.80              |
| 1:M:154:GLU:OE1  | 1:M:225:VAL:HA   | 1.82                     | 0.80              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:M:258:VAL:CG1  | 1:M:259:ALA:N    | 2.44                     | 0.80              |
| 1:Q:69:ASN:O     | 1:Q:70:SER:HB2   | 1.81                     | 0.80              |
| 1:F:258:VAL:CG1  | 1:F:259:ALA:N    | 2.44                     | 0.80              |
| 1:H:251:LYS:O    | 1:H:252:LEU:HB3  | 1.78                     | 0.80              |
| 1:J:138:ASN:O    | 1:J:258:VAL:HA   | 1.81                     | 0.80              |
| 1:J:229:VAL:HG11 | 1:J:235:HIS:ND1  | 1.97                     | 0.80              |
| 1:M:144:TYR:HE2  | 1:M:146:ALA:CB   | 1.94                     | 0.80              |
| 1:M:174:TYR:CE1  | 1:M:198:LEU:CD1  | 2.63                     | 0.80              |
| 1:O:144:TYR:HD2  | 1:O:145:ASP:N    | 1.79                     | 0.80              |
| 1:G:144:TYR:CE2  | 1:G:146:ALA:CB   | 2.64                     | 0.80              |
| 1:H:127:PHE:O    | 1:H:131:PRO:HG3  | 1.81                     | 0.80              |
| 1:I:154:GLU:OE1  | 1:I:225:VAL:HA   | 1.82                     | 0.80              |
| 1:L:229:VAL:HG11 | 1:L:235:HIS:ND1  | 1.97                     | 0.80              |
| 1:N:69:ASN:O     | 1:N:70:SER:HB2   | 1.80                     | 0.80              |
| 1:O:127:PHE:O    | 1:O:131:PRO:HG3  | 1.82                     | 0.80              |
| 1:Q:191:CYS:CB   | 1:Q:244:CYS:HG   | 1.94                     | 0.80              |
| 1:B:138:ASN:O    | 1:B:258:VAL:HA   | 1.81                     | 0.80              |
| 1:F:205:ILE:HD11 | 1:G:104:GLN:HB2  | 1.62                     | 0.80              |
| 1:G:251:LYS:C    | 1:G:252:LEU:HD23 | 2.02                     | 0.80              |
| 1:I:121:TYR:HB2  | 1:I:127:PHE:HB2  | 1.63                     | 0.80              |
| 1:J:276:THR:HA   | 1:K:285:MET:HE1  | 0.80                     | 0.80              |
| 1:M:138:ASN:O    | 1:M:258:VAL:HA   | 1.81                     | 0.80              |
| 1:Q:277:THR:HG22 | 1:Q:279:PRO:HD3  | 1.63                     | 0.80              |
| 1:F:229:VAL:HG11 | 1:F:235:HIS:ND1  | 1.97                     | 0.80              |
| 1:F:251:LYS:C    | 1:F:252:LEU:HD23 | 2.02                     | 0.80              |
| 1:H:138:ASN:O    | 1:H:258:VAL:HA   | 1.81                     | 0.80              |
| 1:H:229:VAL:HG11 | 1:H:235:HIS:ND1  | 1.97                     | 0.80              |
| 1:L:104:GLN:HB2  | 1:N:205:ILE:HD11 | 1.61                     | 0.80              |
| 1:L:121:TYR:HB2  | 1:L:127:PHE:HB2  | 1.63                     | 0.80              |
| 1:L:258:VAL:CG1  | 1:L:259:ALA:N    | 2.44                     | 0.80              |
| 1:L:285:MET:CG   | 1:N:275:PRO:CB   | 2.48                     | 0.80              |
| 1:N:127:PHE:HD2  | 1:N:155:LEU:CD2  | 1.93                     | 0.80              |
| 1:N:229:VAL:HG11 | 1:N:235:HIS:ND1  | 1.97                     | 0.80              |
| 1:O:129:VAL:O    | 1:O:131:PRO:HD2  | 1.82                     | 0.80              |
| 1:P:300:VAL:O    | 1:P:303:VAL:CG2  | 2.30                     | 0.80              |
| 1:Q:121:TYR:HB2  | 1:Q:127:PHE:HB2  | 1.63                     | 0.80              |
| 1:Q:168:MET:HE1  | 1:Q:175:TYR:CD1  | 2.15                     | 0.80              |
| 1:B:121:TYR:HB2  | 1:B:127:PHE:HB2  | 1.63                     | 0.80              |
| 1:F:191:CYS:CB   | 1:F:244:CYS:HG   | 1.94                     | 0.80              |
| 1:G:205:ILE:HD11 | 1:H:104:GLN:HB2  | 1.62                     | 0.80              |
| 1:I:144:TYR:N    | 1:I:263:VAL:O    | 2.12                     | 0.80              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:M:127:PHE:HD2  | 1:M:155:LEU:CD2  | 1.93                     | 0.80              |
| 1:Q:73:GLU:O     | 1:Q:73:GLU:HG2   | 1.82                     | 0.80              |
| 1:B:144:TYR:N    | 1:B:263:VAL:O    | 2.12                     | 0.80              |
| 1:B:251:LYS:C    | 1:B:252:LEU:HD23 | 2.02                     | 0.80              |
| 1:B:258:VAL:CG1  | 1:B:259:ALA:N    | 2.44                     | 0.80              |
| 1:G:154:GLU:OE1  | 1:G:225:VAL:HA   | 1.82                     | 0.80              |
| 1:K:154:GLU:OE1  | 1:K:225:VAL:HA   | 1.82                     | 0.80              |
| 1:K:277:THR:HG22 | 1:K:279:PRO:HD3  | 1.63                     | 0.80              |
| 1:L:69:ASN:O     | 1:L:70:SER:HB2   | 1.81                     | 0.80              |
| 1:L:154:GLU:OE1  | 1:L:225:VAL:HA   | 1.82                     | 0.80              |
| 1:L:277:THR:HG22 | 1:L:279:PRO:HD3  | 1.63                     | 0.80              |
| 1:M:127:PHE:O    | 1:M:131:PRO:HG3  | 1.82                     | 0.80              |
| 1:M:205:ILE:HD11 | 1:N:104:GLN:HB2  | 1.62                     | 0.80              |
| 1:N:258:VAL:CG1  | 1:N:259:ALA:N    | 2.44                     | 0.80              |
| 1:P:205:ILE:HD11 | 1:Q:104:GLN:HB2  | 1.62                     | 0.80              |
| 1:P:251:LYS:C    | 1:P:252:LEU:HD23 | 2.02                     | 0.80              |
| 1:G:229:VAL:HG11 | 1:G:235:HIS:ND1  | 1.97                     | 0.80              |
| 1:I:300:VAL:O    | 1:I:303:VAL:CG2  | 2.30                     | 0.80              |
| 1:O:258:VAL:CG1  | 1:O:259:ALA:N    | 2.44                     | 0.80              |
| 1:P:73:GLU:O     | 1:P:73:GLU:HG2   | 1.79                     | 0.80              |
| 1:Q:251:LYS:C    | 1:Q:252:LEU:HD23 | 2.02                     | 0.80              |
| 1:Q:300:VAL:O    | 1:Q:303:VAL:CG2  | 2.30                     | 0.80              |
| 1:B:127:PHE:O    | 1:B:131:PRO:HG3  | 1.82                     | 0.80              |
| 1:F:275:PRO:CB   | 1:G:285:MET:CG   | 2.48                     | 0.80              |
| 1:I:127:PHE:O    | 1:I:131:PRO:HG3  | 1.82                     | 0.80              |
| 1:J:154:GLU:OE1  | 1:J:225:VAL:HA   | 1.82                     | 0.80              |
| 1:K:144:TYR:HE2  | 1:K:146:ALA:CB   | 1.94                     | 0.80              |
| 1:L:251:LYS:C    | 1:L:252:LEU:HD23 | 2.02                     | 0.80              |
| 1:M:300:VAL:O    | 1:M:303:VAL:CG2  | 2.30                     | 0.80              |
| 1:N:144:TYR:CZ   | 1:N:146:ALA:HB2  | 2.17                     | 0.80              |
| 1:N:174:TYR:CE1  | 1:N:198:LEU:CD1  | 2.63                     | 0.80              |
| 1:O:121:TYR:HB2  | 1:O:127:PHE:HB2  | 1.63                     | 0.80              |
| 1:B:300:VAL:O    | 1:B:303:VAL:CG2  | 2.30                     | 0.79              |
| 1:F:300:VAL:O    | 1:F:303:VAL:CG2  | 2.30                     | 0.79              |
| 1:G:258:VAL:CG1  | 1:G:259:ALA:N    | 2.44                     | 0.79              |
| 1:J:258:VAL:CG1  | 1:J:259:ALA:N    | 2.44                     | 0.79              |
| 1:K:127:PHE:O    | 1:K:131:PRO:HG3  | 1.82                     | 0.79              |
| 1:K:251:LYS:C    | 1:K:252:LEU:HD23 | 2.02                     | 0.79              |
| 1:K:300:VAL:O    | 1:K:303:VAL:CG2  | 2.30                     | 0.79              |
| 1:O:251:LYS:C    | 1:O:252:LEU:HD23 | 2.02                     | 0.79              |
| 1:Q:159:ILE:HG21 | 1:Q:258:VAL:CG2  | 1.91                     | 0.79              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:Q:258:VAL:CG1  | 1:Q:259:ALA:N    | 2.44                     | 0.79              |
| 1:J:125:ALA:HB3  | 1:J:223:LYS:HD3  | 1.65                     | 0.79              |
| 1:L:168:MET:HE3  | 1:L:175:TYR:CD1  | 2.18                     | 0.79              |
| 1:M:129:VAL:O    | 1:M:131:PRO:HD2  | 1.82                     | 0.79              |
| 1:N:129:VAL:O    | 1:N:131:PRO:HD2  | 1.82                     | 0.79              |
| 1:O:142:MET:HE2  | 1:O:152:MET:HE1  | 1.54                     | 0.79              |
| 1:P:105:LEU:O    | 1:P:108:THR:CG2  | 2.24                     | 0.79              |
| 1:B:252:LEU:CG   | 1:B:253:GLY:H    | 1.83                     | 0.79              |
| 1:F:69:ASN:O     | 1:F:70:SER:HB2   | 1.81                     | 0.79              |
| 1:F:127:PHE:HD2  | 1:F:155:LEU:CD2  | 1.93                     | 0.79              |
| 1:H:154:GLU:OE1  | 1:H:225:VAL:HA   | 1.82                     | 0.79              |
| 1:I:229:VAL:HG11 | 1:I:235:HIS:ND1  | 1.97                     | 0.79              |
| 1:L:300:VAL:O    | 1:L:303:VAL:CG2  | 2.30                     | 0.79              |
| 1:M:277:THR:HG22 | 1:M:279:PRO:HD3  | 1.63                     | 0.79              |
| 1:N:144:TYR:CE2  | 1:N:146:ALA:CB   | 2.63                     | 0.79              |
| 1:N:277:THR:HG22 | 1:N:279:PRO:HD3  | 1.63                     | 0.79              |
| 1:P:69:ASN:O     | 1:P:70:SER:HB2   | 1.81                     | 0.79              |
| 1:Q:144:TYR:CZ   | 1:Q:146:ALA:HB2  | 2.17                     | 0.79              |
| 1:B:129:VAL:O    | 1:B:131:PRO:HD2  | 1.82                     | 0.79              |
| 1:G:277:THR:HG22 | 1:G:279:PRO:HD3  | 1.63                     | 0.79              |
| 1:H:300:VAL:O    | 1:H:303:VAL:CG2  | 2.30                     | 0.79              |
| 1:J:129:VAL:O    | 1:J:131:PRO:HD2  | 1.82                     | 0.79              |
| 1:J:251:LYS:C    | 1:J:252:LEU:HD23 | 2.02                     | 0.79              |
| 1:K:129:VAL:O    | 1:K:131:PRO:HD2  | 1.82                     | 0.79              |
| 1:K:229:VAL:HG11 | 1:K:235:HIS:ND1  | 1.97                     | 0.79              |
| 1:M:229:VAL:HG11 | 1:M:235:HIS:ND1  | 1.97                     | 0.79              |
| 1:O:289:TRP:O    | 1:Q:150:LEU:CD2  | 2.27                     | 0.79              |
| 1:O:300:VAL:O    | 1:O:303:VAL:CG2  | 2.30                     | 0.79              |
| 1:P:142:MET:HE2  | 1:P:152:MET:HE1  | 1.63                     | 0.79              |
| 1:B:144:TYR:HE2  | 1:B:146:ALA:CB   | 1.94                     | 0.79              |
| 1:I:251:LYS:C    | 1:I:252:LEU:HD23 | 2.02                     | 0.79              |
| 1:N:121:TYR:HB2  | 1:N:127:PHE:HB2  | 1.63                     | 0.79              |
| 1:N:251:LYS:C    | 1:N:252:LEU:HD23 | 2.02                     | 0.79              |
| 1:P:277:THR:HG22 | 1:P:279:PRO:HD3  | 1.63                     | 0.79              |
| 1:F:129:VAL:O    | 1:F:131:PRO:HD2  | 1.82                     | 0.79              |
| 1:J:105:LEU:O    | 1:J:108:THR:CG2  | 2.23                     | 0.79              |
| 1:K:258:VAL:CG1  | 1:K:259:ALA:N    | 2.44                     | 0.79              |
| 1:M:144:TYR:HD2  | 1:M:144:TYR:C    | 1.85                     | 0.79              |
| 1:O:144:TYR:CE2  | 1:O:146:ALA:CB   | 2.64                     | 0.79              |
| 1:F:154:GLU:OE1  | 1:F:225:VAL:HA   | 1.82                     | 0.79              |
| 1:G:159:ILE:HG22 | 1:G:258:VAL:CG2  | 1.98                     | 0.79              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:H:129:VAL:O    | 1:H:131:PRO:HD2  | 1.82                     | 0.79              |
| 1:O:144:TYR:C    | 1:O:144:TYR:CD2  | 2.55                     | 0.79              |
| 1:O:150:LEU:CD2  | 1:P:289:TRP:O    | 2.27                     | 0.79              |
| 1:O:277:THR:HG22 | 1:O:279:PRO:HD3  | 1.63                     | 0.79              |
| 1:Q:125:ALA:HB3  | 1:Q:223:LYS:HD3  | 1.64                     | 0.79              |
| 1:Q:127:PHE:O    | 1:Q:131:PRO:HG3  | 1.82                     | 0.79              |
| 1:G:121:TYR:HB2  | 1:G:127:PHE:HB2  | 1.63                     | 0.79              |
| 1:H:69:ASN:O     | 1:H:70:SER:HB2   | 1.81                     | 0.79              |
| 1:M:275:PRO:CB   | 1:N:285:MET:CG   | 2.48                     | 0.79              |
| 1:B:229:VAL:HG11 | 1:B:235:HIS:ND1  | 1.97                     | 0.79              |
| 1:F:127:PHE:O    | 1:F:131:PRO:HG3  | 1.82                     | 0.79              |
| 1:H:251:LYS:C    | 1:H:252:LEU:HD23 | 2.02                     | 0.79              |
| 1:O:150:LEU:CD2  | 1:P:290:LYS:HG2  | 2.12                     | 0.79              |
| 1:O:154:GLU:OE1  | 1:O:225:VAL:HA   | 1.82                     | 0.79              |
| 1:P:129:VAL:O    | 1:P:131:PRO:HD2  | 1.82                     | 0.79              |
| 1:P:144:TYR:HD2  | 1:P:144:TYR:C    | 1.86                     | 0.79              |
| 1:F:121:TYR:HB2  | 1:F:127:PHE:HB2  | 1.63                     | 0.79              |
| 1:F:150:LEU:CD2  | 1:G:290:LYS:HG2  | 2.12                     | 0.79              |
| 1:L:127:PHE:O    | 1:L:131:PRO:HG3  | 1.82                     | 0.79              |
| 1:L:129:VAL:O    | 1:L:131:PRO:HD2  | 1.82                     | 0.79              |
| 1:O:159:ILE:HG22 | 1:O:258:VAL:CG2  | 1.98                     | 0.79              |
| 1:F:104:GLN:HB2  | 1:H:205:ILE:HD11 | 1.61                     | 0.78              |
| 1:G:69:ASN:O     | 1:G:70:SER:HB2   | 1.81                     | 0.78              |
| 1:I:69:ASN:O     | 1:I:70:SER:HB2   | 1.81                     | 0.78              |
| 1:I:277:THR:HG22 | 1:I:279:PRO:HD3  | 1.63                     | 0.78              |
| 1:J:300:VAL:O    | 1:J:303:VAL:CG2  | 2.30                     | 0.78              |
| 1:L:127:PHE:HD2  | 1:L:155:LEU:CD2  | 1.93                     | 0.78              |
| 1:M:144:TYR:C    | 1:M:144:TYR:CD2  | 2.57                     | 0.78              |
| 1:Q:129:VAL:O    | 1:Q:131:PRO:HD2  | 1.82                     | 0.78              |
| 1:G:127:PHE:O    | 1:G:131:PRO:HG3  | 1.82                     | 0.78              |
| 1:G:300:VAL:O    | 1:G:303:VAL:CG2  | 2.30                     | 0.78              |
| 1:I:159:ILE:HG21 | 1:I:258:VAL:CG2  | 1.91                     | 0.78              |
| 1:L:126:SER:CA   | 1:L:223:LYS:HZ1  | 1.92                     | 0.78              |
| 1:N:300:VAL:O    | 1:N:303:VAL:CG2  | 2.30                     | 0.78              |
| 1:O:276:THR:C    | 1:P:285:MET:HE1  | 2.03                     | 0.78              |
| 1:G:276:THR:HA   | 1:H:285:MET:HE1  | 0.78                     | 0.78              |
| 1:I:285:MET:HE1  | 1:K:276:THR:C    | 2.03                     | 0.78              |
| 1:B:154:GLU:OE1  | 1:B:225:VAL:HA   | 1.82                     | 0.78              |
| 1:N:154:GLU:OE1  | 1:N:225:VAL:HA   | 1.82                     | 0.78              |
| 1:O:127:PHE:HD2  | 1:O:155:LEU:CD2  | 1.93                     | 0.78              |
| 1:O:229:VAL:HG11 | 1:O:235:HIS:ND1  | 1.97                     | 0.78              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:266:SER:HA   | 1:B:286:ARG:HH22 | 1.49                     | 0.78              |
| 1:F:125:ALA:HB3  | 1:F:223:LYS:HD3  | 1.64                     | 0.78              |
| 1:H:127:PHE:HD2  | 1:H:155:LEU:CD2  | 1.93                     | 0.78              |
| 1:P:125:ALA:HB3  | 1:P:223:LYS:HD3  | 1.64                     | 0.78              |
| 1:P:266:SER:HA   | 1:P:286:ARG:HH22 | 1.49                     | 0.78              |
| 1:J:150:LEU:CD2  | 1:K:289:TRP:O    | 2.27                     | 0.78              |
| 1:F:73:GLU:O     | 1:F:73:GLU:HG2   | 1.82                     | 0.78              |
| 1:P:154:GLU:OE1  | 1:P:225:VAL:HA   | 1.82                     | 0.78              |
| 1:G:129:VAL:O    | 1:G:131:PRO:HD2  | 1.82                     | 0.78              |
| 1:M:251:LYS:C    | 1:M:252:LEU:HD23 | 2.02                     | 0.78              |
| 1:N:266:SER:HA   | 1:N:286:ARG:HH22 | 1.49                     | 0.78              |
| 1:G:150:LEU:CD2  | 1:H:290:LYS:HG2  | 2.12                     | 0.78              |
| 1:G:258:VAL:HG12 | 1:G:259:ALA:N    | 1.99                     | 0.78              |
| 1:H:258:VAL:HG12 | 1:H:259:ALA:N    | 1.99                     | 0.78              |
| 1:I:129:VAL:O    | 1:I:131:PRO:HD2  | 1.82                     | 0.78              |
| 1:M:267:ASP:OD1  | 1:M:286:ARG:HD2  | 1.84                     | 0.78              |
| 1:Q:154:GLU:OE1  | 1:Q:225:VAL:HA   | 1.82                     | 0.78              |
| 1:B:267:ASP:OD1  | 1:B:286:ARG:HD2  | 1.84                     | 0.78              |
| 1:H:159:ILE:HG21 | 1:H:258:VAL:CG2  | 1.91                     | 0.78              |
| 1:K:144:TYR:N    | 1:K:263:VAL:O    | 2.14                     | 0.78              |
| 1:P:127:PHE:O    | 1:P:131:PRO:HG3  | 1.82                     | 0.78              |
| 1:Q:267:ASP:OD1  | 1:Q:286:ARG:HD2  | 1.84                     | 0.78              |
| 1:I:127:PHE:HD2  | 1:I:155:LEU:CD2  | 1.93                     | 0.77              |
| 1:L:267:ASP:OD1  | 1:L:286:ARG:HD2  | 1.84                     | 0.77              |
| 1:O:144:TYR:HD2  | 1:O:144:TYR:C    | 1.86                     | 0.77              |
| 1:O:266:SER:HA   | 1:O:286:ARG:HH22 | 1.49                     | 0.77              |
| 1:P:150:LEU:CD2  | 1:Q:290:LYS:HG2  | 2.12                     | 0.77              |
| 1:Q:266:SER:HA   | 1:Q:286:ARG:HH22 | 1.49                     | 0.77              |
| 1:J:127:PHE:O    | 1:J:131:PRO:HG3  | 1.82                     | 0.77              |
| 1:J:258:VAL:HG12 | 1:J:259:ALA:N    | 1.99                     | 0.77              |
| 1:L:266:SER:HA   | 1:L:286:ARG:HH22 | 1.49                     | 0.77              |
| 1:J:127:PHE:HD2  | 1:J:155:LEU:CD2  | 1.93                     | 0.77              |
| 1:J:150:LEU:CD2  | 1:K:290:LYS:HG2  | 2.12                     | 0.77              |
| 1:K:266:SER:HA   | 1:K:286:ARG:HH22 | 1.49                     | 0.77              |
| 1:L:258:VAL:HG12 | 1:L:259:ALA:N    | 1.99                     | 0.77              |
| 1:P:127:PHE:HD2  | 1:P:155:LEU:CD2  | 1.93                     | 0.77              |
| 1:F:159:ILE:HG21 | 1:F:258:VAL:CG2  | 1.91                     | 0.77              |
| 1:K:267:ASP:OD1  | 1:K:286:ARG:HD2  | 1.84                     | 0.77              |
| 1:M:276:THR:C    | 1:N:285:MET:HE1  | 2.04                     | 0.77              |
| 1:B:144:TYR:HD2  | 1:B:145:ASP:N    | 1.82                     | 0.77              |
| 1:B:258:VAL:HG12 | 1:B:259:ALA:N    | 1.99                     | 0.77              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:J:159:ILE:HG22 | 1:J:258:VAL:CG2  | 1.98                     | 0.77              |
| 1:J:262:GLN:OE1  | 1:J:267:ASP:OD2  | 2.03                     | 0.77              |
| 1:N:130:ASP:N    | 1:N:131:PRO:HD2  | 1.74                     | 0.77              |
| 1:P:191:CYS:CB   | 1:P:244:CYS:HG   | 1.96                     | 0.77              |
| 1:B:174:TYR:CE1  | 1:B:198:LEU:HD12 | 2.20                     | 0.77              |
| 1:F:276:THR:HA   | 1:G:285:MET:HE1  | 0.77                     | 0.77              |
| 1:F:289:TRP:O    | 1:H:150:LEU:CD2  | 2.27                     | 0.77              |
| 1:H:267:ASP:OD1  | 1:H:286:ARG:HD2  | 1.84                     | 0.77              |
| 1:L:142:MET:HE2  | 1:L:152:MET:HE1  | 1.60                     | 0.77              |
| 1:N:258:VAL:HG12 | 1:N:259:ALA:N    | 1.99                     | 0.77              |
| 1:F:150:LEU:CD2  | 1:G:289:TRP:O    | 2.27                     | 0.77              |
| 1:I:150:LEU:CD2  | 1:J:289:TRP:O    | 2.27                     | 0.77              |
| 1:K:258:VAL:HG12 | 1:K:259:ALA:N    | 1.99                     | 0.77              |
| 1:N:262:GLN:OE1  | 1:N:267:ASP:OD2  | 2.03                     | 0.77              |
| 1:O:174:TYR:CE1  | 1:O:198:LEU:HD12 | 2.20                     | 0.77              |
| 1:O:267:ASP:OD1  | 1:O:286:ARG:HD2  | 1.84                     | 0.77              |
| 1:P:268:VAL:CG1  | 1:Q:286:ARG:NH1  | 2.48                     | 0.77              |
| 1:Q:258:VAL:HG12 | 1:Q:259:ALA:N    | 1.99                     | 0.77              |
| 1:G:150:LEU:CD2  | 1:H:289:TRP:O    | 2.27                     | 0.77              |
| 1:G:174:TYR:CE1  | 1:G:198:LEU:HD12 | 2.20                     | 0.77              |
| 1:H:262:GLN:OE1  | 1:H:267:ASP:OD2  | 2.03                     | 0.77              |
| 1:H:266:SER:HA   | 1:H:286:ARG:HH22 | 1.49                     | 0.77              |
| 1:I:290:LYS:HG2  | 1:K:150:LEU:CD2  | 2.12                     | 0.77              |
| 1:L:150:LEU:CD2  | 1:M:289:TRP:O    | 2.27                     | 0.77              |
| 1:P:262:GLN:OE1  | 1:P:267:ASP:OD2  | 2.03                     | 0.77              |
| 1:Q:262:GLN:OE1  | 1:Q:267:ASP:OD2  | 2.03                     | 0.77              |
| 1:F:262:GLN:OE1  | 1:F:267:ASP:OD2  | 2.03                     | 0.77              |
| 1:F:268:VAL:CG1  | 1:G:286:ARG:NH1  | 2.48                     | 0.77              |
| 1:J:266:SER:HA   | 1:J:286:ARG:HH22 | 1.49                     | 0.77              |
| 1:L:159:ILE:HG21 | 1:L:258:VAL:CG2  | 1.91                     | 0.77              |
| 1:M:262:GLN:OE1  | 1:M:267:ASP:OD2  | 2.03                     | 0.77              |
| 1:M:266:SER:HA   | 1:M:286:ARG:HH22 | 1.49                     | 0.77              |
| 1:M:268:VAL:CG1  | 1:N:286:ARG:NH1  | 2.48                     | 0.77              |
| 1:N:168:MET:HE3  | 1:N:175:TYR:CD1  | 2.18                     | 0.77              |
| 1:N:267:ASP:OD1  | 1:N:286:ARG:HD2  | 1.84                     | 0.77              |
| 1:P:174:TYR:CE1  | 1:P:198:LEU:HD12 | 2.20                     | 0.77              |
| 1:B:159:ILE:HG22 | 1:B:258:VAL:CG2  | 1.98                     | 0.77              |
| 1:G:276:THR:C    | 1:H:285:MET:HE1  | 2.06                     | 0.77              |
| 1:L:73:GLU:HG2   | 1:L:73:GLU:O     | 1.86                     | 0.77              |
| 1:L:268:VAL:CG1  | 1:M:286:ARG:NH1  | 2.48                     | 0.77              |
| 1:P:150:LEU:CD2  | 1:Q:289:TRP:O    | 2.27                     | 0.77              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:Q:229:VAL:HG11 | 1:Q:235:HIS:ND1  | 1.97                     | 0.77              |
| 1:F:258:VAL:HG12 | 1:F:259:ALA:N    | 1.99                     | 0.76              |
| 1:G:267:ASP:OD1  | 1:G:286:ARG:HD2  | 1.84                     | 0.76              |
| 1:I:267:ASP:OD1  | 1:I:286:ARG:HD2  | 1.84                     | 0.76              |
| 1:N:162:GLU:N    | 1:N:253:GLY:O    | 2.19                     | 0.76              |
| 1:O:262:GLN:OE1  | 1:O:267:ASP:OD2  | 2.03                     | 0.76              |
| 1:P:258:VAL:HG12 | 1:P:259:ALA:N    | 1.99                     | 0.76              |
| 1:Q:174:TYR:CE1  | 1:Q:198:LEU:HD12 | 2.20                     | 0.76              |
| 1:G:73:GLU:HG2   | 1:G:73:GLU:O     | 1.84                     | 0.76              |
| 1:G:125:ALA:CB   | 1:G:223:LYS:CD   | 2.53                     | 0.76              |
| 1:K:262:GLN:OE1  | 1:K:267:ASP:OD2  | 2.03                     | 0.76              |
| 1:L:168:MET:HE2  | 1:L:175:TYR:CE2  | 2.20                     | 0.76              |
| 1:L:276:THR:C    | 1:M:285:MET:HE1  | 2.04                     | 0.76              |
| 1:L:286:ARG:NH1  | 1:N:268:VAL:CG1  | 2.48                     | 0.76              |
| 1:M:258:VAL:HG12 | 1:M:259:ALA:N    | 1.99                     | 0.76              |
| 1:P:276:THR:HA   | 1:Q:285:MET:HE1  | 0.77                     | 0.76              |
| 1:P:276:THR:C    | 1:Q:285:MET:HE1  | 2.05                     | 0.76              |
| 1:B:127:PHE:HD2  | 1:B:155:LEU:CD2  | 1.93                     | 0.76              |
| 1:B:144:TYR:CZ   | 1:B:146:ALA:HB2  | 2.19                     | 0.76              |
| 1:G:268:VAL:CG1  | 1:H:286:ARG:NH1  | 2.48                     | 0.76              |
| 1:H:174:TYR:CE1  | 1:H:198:LEU:HD12 | 2.20                     | 0.76              |
| 1:I:276:THR:C    | 1:J:285:MET:HE1  | 2.04                     | 0.76              |
| 1:M:162:GLU:O    | 1:M:252:LEU:HD23 | 1.85                     | 0.76              |
| 1:P:162:GLU:N    | 1:P:253:GLY:O    | 2.19                     | 0.76              |
| 1:F:276:THR:C    | 1:G:285:MET:HE1  | 2.05                     | 0.76              |
| 1:I:266:SER:HA   | 1:I:286:ARG:HH22 | 1.49                     | 0.76              |
| 1:I:268:VAL:CG1  | 1:J:286:ARG:NH1  | 2.48                     | 0.76              |
| 1:J:268:VAL:CG1  | 1:K:286:ARG:NH1  | 2.48                     | 0.76              |
| 1:L:262:GLN:OE1  | 1:L:267:ASP:OD2  | 2.03                     | 0.76              |
| 1:N:174:TYR:CE1  | 1:N:198:LEU:HD12 | 2.20                     | 0.76              |
| 1:I:262:GLN:OE1  | 1:I:267:ASP:OD2  | 2.03                     | 0.76              |
| 1:K:159:ILE:HG22 | 1:K:258:VAL:CG2  | 1.98                     | 0.76              |
| 1:B:162:GLU:N    | 1:B:253:GLY:O    | 2.19                     | 0.76              |
| 1:H:293:TRP:CE3  | 1:H:297:TYR:CE1  | 2.74                     | 0.76              |
| 1:L:162:GLU:N    | 1:L:253:GLY:O    | 2.19                     | 0.76              |
| 1:O:162:GLU:N    | 1:O:253:GLY:O    | 2.19                     | 0.76              |
| 1:O:258:VAL:HG12 | 1:O:259:ALA:N    | 1.99                     | 0.76              |
| 1:F:174:TYR:CE1  | 1:F:198:LEU:HD12 | 2.20                     | 0.76              |
| 1:F:293:TRP:CE3  | 1:F:297:TYR:CE1  | 2.74                     | 0.76              |
| 1:I:162:GLU:N    | 1:I:253:GLY:O    | 2.19                     | 0.76              |
| 1:I:286:ARG:NH1  | 1:K:268:VAL:CG1  | 2.48                     | 0.76              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:J:293:TRP:CE3  | 1:J:297:TYR:CE1  | 2.74                     | 0.76              |
| 1:L:289:TRP:O    | 1:N:150:LEU:CD2  | 2.27                     | 0.76              |
| 1:F:267:ASP:OD1  | 1:F:286:ARG:HD2  | 1.84                     | 0.76              |
| 1:G:293:TRP:CE3  | 1:G:297:TYR:CE1  | 2.74                     | 0.76              |
| 1:I:258:VAL:HG12 | 1:I:259:ALA:N    | 1.99                     | 0.76              |
| 1:J:162:GLU:N    | 1:J:253:GLY:O    | 2.19                     | 0.76              |
| 1:J:267:ASP:OD1  | 1:J:286:ARG:HD2  | 1.84                     | 0.76              |
| 1:P:126:SER:CA   | 1:P:223:LYS:HZ1  | 1.92                     | 0.76              |
| 1:Q:162:GLU:N    | 1:Q:253:GLY:O    | 2.19                     | 0.76              |
| 1:Q:293:TRP:CE3  | 1:Q:297:TYR:CE1  | 2.74                     | 0.76              |
| 1:G:168:MET:HE3  | 1:G:175:TYR:CD1  | 2.20                     | 0.76              |
| 1:L:144:TYR:CZ   | 1:L:146:ALA:HB2  | 2.20                     | 0.76              |
| 1:O:212:THR:HA   | 1:O:215:PHE:CD1  | 2.21                     | 0.76              |
| 1:O:286:ARG:NH1  | 1:Q:268:VAL:CG1  | 2.48                     | 0.76              |
| 1:B:293:TRP:CE3  | 1:B:297:TYR:CE1  | 2.74                     | 0.76              |
| 1:G:262:GLN:OE1  | 1:G:267:ASP:OD2  | 2.03                     | 0.76              |
| 1:I:154:GLU:OE1  | 1:I:226:ILE:N    | 2.19                     | 0.76              |
| 1:J:154:GLU:OE1  | 1:J:226:ILE:N    | 2.19                     | 0.76              |
| 1:K:174:TYR:CE1  | 1:K:198:LEU:HD12 | 2.20                     | 0.76              |
| 1:L:174:TYR:CE1  | 1:L:198:LEU:HD12 | 2.20                     | 0.76              |
| 1:M:212:THR:HA   | 1:M:215:PHE:CD1  | 2.21                     | 0.76              |
| 1:P:212:THR:HA   | 1:P:215:PHE:CD1  | 2.21                     | 0.76              |
| 1:P:267:ASP:OD1  | 1:P:286:ARG:HD2  | 1.84                     | 0.76              |
| 1:J:174:TYR:CE1  | 1:J:198:LEU:HD12 | 2.20                     | 0.75              |
| 1:L:293:TRP:CE3  | 1:L:297:TYR:CE1  | 2.74                     | 0.75              |
| 1:O:125:ALA:HB3  | 1:O:223:LYS:HD3  | 1.64                     | 0.75              |
| 1:P:144:TYR:C    | 1:P:144:TYR:CD2  | 2.58                     | 0.75              |
| 1:Q:144:TYR:CE2  | 1:Q:146:ALA:CB   | 2.64                     | 0.75              |
| 1:F:266:SER:HA   | 1:F:286:ARG:HH22 | 1.49                     | 0.75              |
| 1:G:162:GLU:N    | 1:G:253:GLY:O    | 2.19                     | 0.75              |
| 1:H:144:TYR:CZ   | 1:H:146:ALA:HB2  | 2.21                     | 0.75              |
| 1:H:154:GLU:OE1  | 1:H:226:ILE:N    | 2.19                     | 0.75              |
| 1:I:293:TRP:CE3  | 1:I:297:TYR:CE1  | 2.74                     | 0.75              |
| 1:M:293:TRP:CE3  | 1:M:297:TYR:CE1  | 2.74                     | 0.75              |
| 1:O:268:VAL:CG1  | 1:P:286:ARG:NH1  | 2.48                     | 0.75              |
| 1:J:191:CYS:CB   | 1:J:244:CYS:HG   | 1.98                     | 0.75              |
| 1:L:276:THR:HA   | 1:M:285:MET:HE1  | 0.75                     | 0.75              |
| 1:N:293:TRP:CE3  | 1:N:297:TYR:CE1  | 2.74                     | 0.75              |
| 1:F:286:ARG:NH1  | 1:H:268:VAL:CG1  | 2.48                     | 0.75              |
| 1:I:125:ALA:HB3  | 1:I:223:LYS:HD3  | 1.64                     | 0.75              |
| 1:K:293:TRP:CE3  | 1:K:297:TYR:CE1  | 2.74                     | 0.75              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:M:154:GLU:OE1  | 1:M:226:ILE:N    | 2.19                     | 0.75              |
| 1:N:212:THR:HA   | 1:N:215:PHE:CD1  | 2.21                     | 0.75              |
| 1:P:293:TRP:CE3  | 1:P:297:TYR:CE1  | 2.74                     | 0.75              |
| 1:G:266:SER:HA   | 1:G:286:ARG:HH22 | 1.49                     | 0.75              |
| 1:I:212:THR:HA   | 1:I:215:PHE:CD1  | 2.21                     | 0.75              |
| 1:I:276:THR:HA   | 1:J:285:MET:HE1  | 0.76                     | 0.75              |
| 1:I:289:TRP:O    | 1:K:150:LEU:CD2  | 2.27                     | 0.75              |
| 1:I:150:LEU:CD2  | 1:J:290:LYS:HG2  | 2.12                     | 0.75              |
| 1:N:154:GLU:OE1  | 1:N:226:ILE:N    | 2.19                     | 0.75              |
| 1:N:159:ILE:HG22 | 1:N:258:VAL:CG2  | 1.98                     | 0.75              |
| 1:Q:212:THR:HA   | 1:Q:215:PHE:CD1  | 2.21                     | 0.75              |
| 1:H:162:GLU:N    | 1:H:253:GLY:O    | 2.19                     | 0.75              |
| 1:J:212:THR:HA   | 1:J:215:PHE:CD1  | 2.21                     | 0.75              |
| 1:K:154:GLU:OE1  | 1:K:226:ILE:N    | 2.19                     | 0.75              |
| 1:K:168:MET:HE3  | 1:K:175:TYR:CE1  | 2.16                     | 0.75              |
| 1:N:168:MET:HE2  | 1:N:175:TYR:CE2  | 2.21                     | 0.75              |
| 1:G:162:GLU:O    | 1:G:252:LEU:HD23 | 1.85                     | 0.75              |
| 1:H:126:SER:CA   | 1:H:223:LYS:HZ1  | 1.95                     | 0.75              |
| 1:H:212:THR:HA   | 1:H:215:PHE:CD1  | 2.21                     | 0.75              |
| 1:I:191:CYS:CB   | 1:I:244:CYS:HG   | 1.99                     | 0.75              |
| 1:K:162:GLU:N    | 1:K:253:GLY:O    | 2.19                     | 0.75              |
| 1:O:293:TRP:CE3  | 1:O:297:TYR:CE1  | 2.74                     | 0.75              |
| 1:P:252:LEU:CG   | 1:P:253:GLY:H    | 1.83                     | 0.75              |
| 1:F:162:GLU:N    | 1:F:253:GLY:O    | 2.19                     | 0.75              |
| 1:F:212:THR:HA   | 1:F:215:PHE:CD1  | 2.21                     | 0.75              |
| 1:F:290:LYS:HG2  | 1:H:150:LEU:CD2  | 2.12                     | 0.75              |
| 1:L:162:GLU:O    | 1:L:252:LEU:HD23 | 1.85                     | 0.75              |
| 1:M:276:THR:HA   | 1:N:285:MET:HE1  | 0.76                     | 0.75              |
| 1:O:205:ILE:CD1  | 1:P:104:GLN:CD   | 2.47                     | 0.75              |
| 1:Q:64:ASP:C     | 1:Q:65:THR:CG2   | 2.51                     | 0.75              |
| 1:F:285:MET:HE1  | 1:H:276:THR:C    | 2.07                     | 0.74              |
| 1:G:125:ALA:HB3  | 1:G:223:LYS:HD3  | 1.64                     | 0.74              |
| 1:M:174:TYR:CE1  | 1:M:198:LEU:HD12 | 2.20                     | 0.74              |
| 1:I:174:TYR:CE1  | 1:I:198:LEU:HD12 | 2.20                     | 0.74              |
| 1:J:162:GLU:O    | 1:J:252:LEU:HD23 | 1.85                     | 0.74              |
| 1:J:276:THR:C    | 1:K:285:MET:HE1  | 2.06                     | 0.74              |
| 1:M:150:LEU:CD2  | 1:N:289:TRP:O    | 2.27                     | 0.74              |
| 1:N:117:TYR:CZ   | 1:P:167:PRO:O    | 2.40                     | 0.74              |
| 1:Q:154:GLU:OE1  | 1:Q:226:ILE:N    | 2.19                     | 0.74              |
| 1:B:293:TRP:HE3  | 1:B:297:TYR:CE1  | 2.06                     | 0.74              |
| 1:G:212:THR:HA   | 1:G:215:PHE:CD1  | 2.21                     | 0.74              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:H:135:CYS:SG   | 1:H:137:TYR:O    | 2.46                     | 0.74              |
| 1:H:237:LEU:HD21 | 1:H:246:ILE:HD13 | 1.70                     | 0.74              |
| 1:L:154:GLU:OE1  | 1:L:226:ILE:N    | 2.19                     | 0.74              |
| 1:L:212:THR:HA   | 1:L:215:PHE:CD1  | 2.21                     | 0.74              |
| 1:K:73:GLU:O     | 1:K:73:GLU:HG2   | 1.87                     | 0.74              |
| 1:K:124:ILE:HD13 | 1:K:152:MET:CG   | 2.17                     | 0.74              |
| 1:M:135:CYS:SG   | 1:M:137:TYR:O    | 2.45                     | 0.74              |
| 1:O:144:TYR:OH   | 1:O:146:ALA:HB2  | 1.88                     | 0.74              |
| 1:P:293:TRP:HE3  | 1:P:297:TYR:CE1  | 2.06                     | 0.74              |
| 1:Q:293:TRP:HE3  | 1:Q:297:TYR:CE1  | 2.06                     | 0.74              |
| 1:B:262:GLN:OE1  | 1:B:267:ASP:OD2  | 2.03                     | 0.74              |
| 1:I:124:ILE:HD13 | 1:I:152:MET:CG   | 2.17                     | 0.74              |
| 1:I:237:LEU:HD21 | 1:I:246:ILE:HD13 | 1.70                     | 0.74              |
| 1:I:293:TRP:HE3  | 1:I:297:TYR:CE1  | 2.06                     | 0.74              |
| 1:K:212:THR:HA   | 1:K:215:PHE:CD1  | 2.21                     | 0.74              |
| 1:M:293:TRP:HE3  | 1:M:297:TYR:CE1  | 2.06                     | 0.74              |
| 1:N:135:CYS:SG   | 1:N:137:TYR:O    | 2.46                     | 0.74              |
| 1:O:293:TRP:HE3  | 1:O:297:TYR:CE1  | 2.06                     | 0.74              |
| 1:B:154:GLU:OE1  | 1:B:226:ILE:N    | 2.19                     | 0.74              |
| 1:I:162:GLU:HB3  | 1:I:252:LEU:HG   | 1.70                     | 0.74              |
| 1:L:268:VAL:HG12 | 1:M:286:ARG:HH12 | 1.53                     | 0.74              |
| 1:M:162:GLU:N    | 1:M:253:GLY:O    | 2.19                     | 0.74              |
| 1:O:162:GLU:HB3  | 1:O:252:LEU:HG   | 1.70                     | 0.74              |
| 1:P:135:CYS:SG   | 1:P:137:TYR:O    | 2.45                     | 0.74              |
| 1:B:125:ALA:CB   | 1:B:223:LYS:CD   | 2.53                     | 0.74              |
| 1:F:135:CYS:SG   | 1:F:137:TYR:O    | 2.46                     | 0.74              |
| 1:F:154:GLU:OE1  | 1:F:226:ILE:N    | 2.19                     | 0.74              |
| 1:G:162:GLU:HB3  | 1:G:252:LEU:HG   | 1.70                     | 0.74              |
| 1:P:237:LEU:HD21 | 1:P:246:ILE:HD13 | 1.70                     | 0.74              |
| 1:B:237:LEU:HD21 | 1:B:246:ILE:HD13 | 1.70                     | 0.74              |
| 1:F:162:GLU:O    | 1:F:252:LEU:HD23 | 1.85                     | 0.74              |
| 1:L:290:LYS:HG2  | 1:N:150:LEU:CD2  | 2.12                     | 0.74              |
| 1:O:168:MET:HE3  | 1:O:175:TYR:CE1  | 2.20                     | 0.74              |
| 1:B:162:GLU:HB3  | 1:B:252:LEU:HG   | 1.70                     | 0.74              |
| 1:I:277:THR:CG2  | 1:I:279:PRO:HD3  | 2.18                     | 0.74              |
| 1:J:293:TRP:HE3  | 1:J:297:TYR:CE1  | 2.06                     | 0.74              |
| 1:K:237:LEU:HD21 | 1:K:246:ILE:HD13 | 1.70                     | 0.74              |
| 1:M:144:TYR:CE2  | 1:M:146:ALA:CB   | 2.70                     | 0.74              |
| 1:O:135:CYS:SG   | 1:O:137:TYR:O    | 2.46                     | 0.74              |
| 1:B:212:THR:HA   | 1:B:215:PHE:CD1  | 2.21                     | 0.74              |
| 1:M:159:ILE:HG22 | 1:M:258:VAL:CG2  | 1.98                     | 0.74              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:J:237:LEU:HD21 | 1:J:246:ILE:HD13 | 1.70                     | 0.73              |
| 1:K:293:TRP:HE3  | 1:K:297:TYR:CE1  | 2.06                     | 0.73              |
| 1:L:286:ARG:HH12 | 1:N:268:VAL:HG12 | 1.53                     | 0.73              |
| 1:M:205:ILE:CD1  | 1:N:104:GLN:CD   | 2.47                     | 0.73              |
| 1:P:154:GLU:OE1  | 1:P:226:ILE:N    | 2.19                     | 0.73              |
| 1:G:135:CYS:SG   | 1:G:137:TYR:O    | 2.46                     | 0.73              |
| 1:H:293:TRP:HE3  | 1:H:297:TYR:CE1  | 2.06                     | 0.73              |
| 1:K:252:LEU:CG   | 1:K:253:GLY:H    | 1.83                     | 0.73              |
| 1:N:162:GLU:O    | 1:N:252:LEU:HD23 | 1.85                     | 0.73              |
| 1:P:162:GLU:HB3  | 1:P:252:LEU:HG   | 1.70                     | 0.73              |
| 1:Q:144:TYR:HD2  | 1:Q:144:TYR:C    | 1.92                     | 0.73              |
| 1:B:135:CYS:SG   | 1:B:137:TYR:O    | 2.46                     | 0.73              |
| 1:H:252:LEU:CG   | 1:H:253:GLY:H    | 1.83                     | 0.73              |
| 1:J:277:THR:CG2  | 1:J:279:PRO:HD3  | 2.18                     | 0.73              |
| 1:O:252:LEU:CG   | 1:O:253:GLY:H    | 1.83                     | 0.73              |
| 1:Q:135:CYS:SG   | 1:Q:137:TYR:O    | 2.45                     | 0.73              |
| 1:J:144:TYR:CZ   | 1:J:146:ALA:HB2  | 2.22                     | 0.73              |
| 1:K:162:GLU:HB3  | 1:K:252:LEU:HG   | 1.70                     | 0.73              |
| 1:K:277:THR:CG2  | 1:K:279:PRO:HD3  | 2.18                     | 0.73              |
| 1:N:78:THR:O     | 1:N:78:THR:HG22  | 1.88                     | 0.73              |
| 1:O:83:LEU:HD23  | 1:O:139:VAL:HG13 | 1.71                     | 0.73              |
| 1:F:124:ILE:HD13 | 1:F:152:MET:CG   | 2.17                     | 0.73              |
| 1:G:237:LEU:HD21 | 1:G:246:ILE:HD13 | 1.70                     | 0.73              |
| 1:J:135:CYS:SG   | 1:J:137:TYR:O    | 2.45                     | 0.73              |
| 1:K:135:CYS:SG   | 1:K:137:TYR:O    | 2.45                     | 0.73              |
| 1:M:158:LEU:HD21 | 1:M:185:ILE:HD13 | 1.71                     | 0.73              |
| 1:B:144:TYR:C    | 1:B:144:TYR:CD2  | 2.61                     | 0.73              |
| 1:G:205:ILE:CD1  | 1:H:104:GLN:CD   | 2.47                     | 0.73              |
| 1:I:135:CYS:SG   | 1:I:137:TYR:O    | 2.46                     | 0.73              |
| 1:K:158:LEU:HD21 | 1:K:185:ILE:HD13 | 1.71                     | 0.73              |
| 1:L:124:ILE:HD13 | 1:L:152:MET:CG   | 2.17                     | 0.73              |
| 1:M:277:THR:CG2  | 1:M:279:PRO:HD3  | 2.18                     | 0.73              |
| 1:O:127:PHE:O    | 1:O:131:PRO:CD   | 2.37                     | 0.73              |
| 1:Q:277:THR:CG2  | 1:Q:279:PRO:HD3  | 2.18                     | 0.73              |
| 1:B:125:ALA:HB3  | 1:B:223:LYS:HD3  | 1.64                     | 0.73              |
| 1:B:158:LEU:HD21 | 1:B:185:ILE:HD13 | 1.71                     | 0.73              |
| 1:F:158:LEU:HD21 | 1:F:185:ILE:HD13 | 1.71                     | 0.73              |
| 1:F:268:VAL:HG12 | 1:G:286:ARG:HH12 | 1.53                     | 0.73              |
| 1:G:154:GLU:OE1  | 1:G:226:ILE:N    | 2.19                     | 0.73              |
| 1:G:158:LEU:HD21 | 1:G:185:ILE:HD13 | 1.71                     | 0.73              |
| 1:G:229:VAL:HG12 | 1:G:235:HIS:HE1  | 1.52                     | 0.73              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:277:THR:CG2  | 1:G:279:PRO:HD3  | 2.18                     | 0.73              |
| 1:G:293:TRP:HE3  | 1:G:297:TYR:CE1  | 2.06                     | 0.73              |
| 1:H:162:GLU:O    | 1:H:252:LEU:HD23 | 1.85                     | 0.73              |
| 1:N:237:LEU:HD21 | 1:N:246:ILE:HD13 | 1.70                     | 0.73              |
| 1:O:277:THR:CG2  | 1:O:279:PRO:HD3  | 2.18                     | 0.73              |
| 1:P:144:TYR:HD2  | 1:P:145:ASP:N    | 1.87                     | 0.73              |
| 1:P:277:THR:CG2  | 1:P:279:PRO:HD3  | 2.18                     | 0.73              |
| 1:Q:127:PHE:O    | 1:Q:131:PRO:CD   | 2.37                     | 0.73              |
| 1:Q:162:GLU:HB3  | 1:Q:252:LEU:HG   | 1.70                     | 0.73              |
| 1:G:150:LEU:HD21 | 1:H:290:LYS:CE   | 2.19                     | 0.73              |
| 1:H:159:ILE:HG22 | 1:H:258:VAL:CG2  | 1.98                     | 0.73              |
| 1:I:127:PHE:O    | 1:I:131:PRO:CD   | 2.37                     | 0.73              |
| 1:O:150:LEU:HD21 | 1:P:290:LYS:CE   | 2.19                     | 0.73              |
| 1:O:154:GLU:OE1  | 1:O:226:ILE:N    | 2.19                     | 0.73              |
| 1:F:162:GLU:HB3  | 1:F:252:LEU:HG   | 1.70                     | 0.73              |
| 1:F:286:ARG:HH12 | 1:H:268:VAL:HG12 | 1.53                     | 0.73              |
| 1:H:168:MET:HE3  | 1:H:175:TYR:CE1  | 2.23                     | 0.73              |
| 1:K:69:ASN:O     | 1:K:70:SER:HB2   | 1.87                     | 0.73              |
| 1:K:127:PHE:O    | 1:K:131:PRO:CD   | 2.37                     | 0.73              |
| 1:L:83:LEU:HD23  | 1:L:139:VAL:HG13 | 1.71                     | 0.73              |
| 1:L:135:CYS:SG   | 1:L:137:TYR:O    | 2.45                     | 0.73              |
| 1:L:159:ILE:HG22 | 1:L:258:VAL:CG2  | 1.98                     | 0.73              |
| 1:M:144:TYR:CZ   | 1:M:146:ALA:HB2  | 2.23                     | 0.73              |
| 1:O:158:LEU:HD21 | 1:O:185:ILE:HD13 | 1.71                     | 0.73              |
| 1:P:83:LEU:HD23  | 1:P:139:VAL:HG13 | 1.71                     | 0.73              |
| 1:Q:83:LEU:HD23  | 1:Q:139:VAL:HG13 | 1.71                     | 0.73              |
| 1:F:293:TRP:HE3  | 1:F:297:TYR:CE1  | 2.06                     | 0.73              |
| 1:H:127:PHE:O    | 1:H:131:PRO:CD   | 2.37                     | 0.73              |
| 1:J:150:LEU:HD21 | 1:K:290:LYS:CE   | 2.19                     | 0.73              |
| 1:J:158:LEU:HD21 | 1:J:185:ILE:HD13 | 1.71                     | 0.73              |
| 1:L:127:PHE:O    | 1:L:131:PRO:CD   | 2.37                     | 0.73              |
| 1:L:168:MET:HE2  | 1:L:175:TYR:CZ   | 2.24                     | 0.73              |
| 1:M:127:PHE:O    | 1:M:131:PRO:CD   | 2.37                     | 0.73              |
| 1:M:150:LEU:CD2  | 1:N:290:LYS:HG2  | 2.12                     | 0.73              |
| 1:N:277:THR:CG2  | 1:N:279:PRO:HD3  | 2.18                     | 0.73              |
| 1:B:277:THR:CG2  | 1:B:279:PRO:HD3  | 2.18                     | 0.72              |
| 1:G:268:VAL:HG12 | 1:H:286:ARG:HH12 | 1.53                     | 0.72              |
| 1:H:162:GLU:HB3  | 1:H:252:LEU:HG   | 1.70                     | 0.72              |
| 1:I:83:LEU:HD23  | 1:I:139:VAL:HG13 | 1.71                     | 0.72              |
| 1:I:144:TYR:HD2  | 1:I:144:TYR:C    | 1.91                     | 0.72              |
| 1:J:162:GLU:HB3  | 1:J:252:LEU:HG   | 1.70                     | 0.72              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:L:293:TRP:HE3  | 1:L:297:TYR:CE1  | 2.06                     | 0.72              |
| 1:M:268:VAL:HG12 | 1:N:286:ARG:HH12 | 1.53                     | 0.72              |
| 1:N:127:PHE:O    | 1:N:131:PRO:CD   | 2.37                     | 0.72              |
| 1:O:290:LYS:CE   | 1:Q:150:LEU:HD21 | 2.19                     | 0.72              |
| 1:F:144:TYR:OH   | 1:F:146:ALA:HB2  | 1.90                     | 0.72              |
| 1:H:125:ALA:HB3  | 1:H:223:LYS:HD3  | 1.64                     | 0.72              |
| 1:H:229:VAL:HG12 | 1:H:235:HIS:HE1  | 1.52                     | 0.72              |
| 1:I:144:TYR:C    | 1:I:144:TYR:CD2  | 2.61                     | 0.72              |
| 1:L:150:LEU:HD21 | 1:M:290:LYS:CE   | 2.19                     | 0.72              |
| 1:M:125:ALA:HB3  | 1:M:223:LYS:HD3  | 1.64                     | 0.72              |
| 1:N:158:LEU:HD21 | 1:N:185:ILE:HD13 | 1.71                     | 0.72              |
| 1:O:290:LYS:HG2  | 1:Q:150:LEU:CD2  | 2.12                     | 0.72              |
| 1:P:127:PHE:O    | 1:P:131:PRO:CD   | 2.37                     | 0.72              |
| 1:H:277:THR:CG2  | 1:H:279:PRO:HD3  | 2.18                     | 0.72              |
| 1:K:83:LEU:HD23  | 1:K:139:VAL:HG13 | 1.71                     | 0.72              |
| 1:L:158:LEU:HD21 | 1:L:185:ILE:HD13 | 1.71                     | 0.72              |
| 1:L:237:LEU:HD21 | 1:L:246:ILE:HD13 | 1.70                     | 0.72              |
| 1:L:277:THR:CG2  | 1:L:279:PRO:HD3  | 2.18                     | 0.72              |
| 1:M:162:GLU:HB3  | 1:M:252:LEU:HG   | 1.70                     | 0.72              |
| 1:O:237:LEU:HD21 | 1:O:246:ILE:HD13 | 1.70                     | 0.72              |
| 1:O:268:VAL:HG12 | 1:P:286:ARG:HH12 | 1.53                     | 0.72              |
| 1:O:276:THR:HA   | 1:P:285:MET:HE1  | 0.73                     | 0.72              |
| 1:Q:125:ALA:CB   | 1:Q:223:LYS:CD   | 2.53                     | 0.72              |
| 1:Q:237:LEU:HD21 | 1:Q:246:ILE:HD13 | 1.70                     | 0.72              |
| 1:J:83:LEU:HD23  | 1:J:139:VAL:HG13 | 1.71                     | 0.72              |
| 1:J:205:ILE:CD1  | 1:K:104:GLN:CD   | 2.48                     | 0.72              |
| 1:L:285:MET:HE1  | 1:N:276:THR:C    | 2.09                     | 0.72              |
| 1:M:237:LEU:HD21 | 1:M:246:ILE:HD13 | 1.70                     | 0.72              |
| 1:N:125:ALA:HB3  | 1:N:223:LYS:HD3  | 1.64                     | 0.72              |
| 1:Q:144:TYR:HE2  | 1:Q:146:ALA:CA   | 2.02                     | 0.72              |
| 1:Q:168:MET:HE3  | 1:Q:175:TYR:CD2  | 2.24                     | 0.72              |
| 1:Q:168:MET:HE1  | 1:Q:175:TYR:CE1  | 2.16                     | 0.72              |
| 1:B:144:TYR:HD2  | 1:B:144:TYR:C    | 1.92                     | 0.72              |
| 1:I:162:GLU:O    | 1:I:252:LEU:HD23 | 1.85                     | 0.72              |
| 1:N:162:GLU:HB3  | 1:N:252:LEU:HG   | 1.70                     | 0.72              |
| 1:O:124:ILE:HD13 | 1:O:152:MET:CG   | 2.17                     | 0.72              |
| 1:O:286:ARG:HH12 | 1:Q:268:VAL:HG12 | 1.53                     | 0.72              |
| 1:P:158:LEU:HD21 | 1:P:185:ILE:HD13 | 1.71                     | 0.72              |
| 1:H:124:ILE:HD13 | 1:H:152:MET:CG   | 2.17                     | 0.72              |
| 1:J:126:SER:CA   | 1:J:223:LYS:HZ1  | 1.97                     | 0.72              |
| 1:L:252:LEU:CG   | 1:L:253:GLY:H    | 1.83                     | 0.72              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:127:PHE:O    | 1:B:131:PRO:CD   | 2.37                     | 0.72              |
| 1:I:288:ASN:CG   | 1:K:150:LEU:HD12 | 2.08                     | 0.72              |
| 1:N:293:TRP:HE3  | 1:N:297:TYR:CE1  | 2.06                     | 0.72              |
| 1:Q:142:MET:HE2  | 1:Q:152:MET:HE1  | 1.63                     | 0.72              |
| 1:G:191:CYS:CB   | 1:G:244:CYS:HG   | 2.00                     | 0.72              |
| 1:H:144:TYR:CE2  | 1:H:146:ALA:CB   | 2.67                     | 0.72              |
| 1:J:124:ILE:HD13 | 1:J:152:MET:CG   | 2.17                     | 0.72              |
| 1:J:127:PHE:O    | 1:J:131:PRO:CD   | 2.37                     | 0.72              |
| 1:L:290:LYS:CE   | 1:N:150:LEU:HD21 | 2.19                     | 0.72              |
| 1:P:124:ILE:HD13 | 1:P:152:MET:CG   | 2.17                     | 0.72              |
| 1:B:144:TYR:CE2  | 1:B:146:ALA:CB   | 2.69                     | 0.72              |
| 1:F:104:GLN:CD   | 1:H:205:ILE:CD1  | 2.47                     | 0.72              |
| 1:F:127:PHE:O    | 1:F:131:PRO:CD   | 2.37                     | 0.72              |
| 1:I:158:LEU:HD21 | 1:I:185:ILE:HD13 | 1.71                     | 0.72              |
| 1:I:268:VAL:HG12 | 1:J:286:ARG:HH12 | 1.53                     | 0.72              |
| 1:K:125:ALA:HB3  | 1:K:223:LYS:HD3  | 1.64                     | 0.72              |
| 1:Q:144:TYR:C    | 1:Q:144:TYR:CD2  | 2.63                     | 0.72              |
| 1:G:127:PHE:O    | 1:G:131:PRO:CD   | 2.37                     | 0.71              |
| 1:H:83:LEU:HD23  | 1:H:139:VAL:HG13 | 1.71                     | 0.71              |
| 1:I:229:VAL:HG12 | 1:I:235:HIS:HE1  | 1.52                     | 0.71              |
| 1:K:144:TYR:CE2  | 1:K:146:ALA:CB   | 2.71                     | 0.71              |
| 1:N:191:CYS:HG   | 1:N:244:CYS:CB   | 2.02                     | 0.71              |
| 1:B:83:LEU:HD23  | 1:B:139:VAL:HG13 | 1.71                     | 0.71              |
| 1:B:162:GLU:O    | 1:B:252:LEU:HD23 | 1.85                     | 0.71              |
| 1:F:277:THR:CG2  | 1:F:279:PRO:HD3  | 2.18                     | 0.71              |
| 1:H:158:LEU:HD21 | 1:H:185:ILE:HD13 | 1.71                     | 0.71              |
| 1:I:144:TYR:HE2  | 1:I:146:ALA:CA   | 2.03                     | 0.71              |
| 1:M:83:LEU:HD23  | 1:M:139:VAL:HG13 | 1.71                     | 0.71              |
| 1:P:162:GLU:O    | 1:P:252:LEU:HD23 | 1.85                     | 0.71              |
| 1:F:229:VAL:HG12 | 1:F:235:HIS:HE1  | 1.52                     | 0.71              |
| 1:G:78:THR:HG22  | 1:G:78:THR:O     | 1.90                     | 0.71              |
| 1:J:144:TYR:CE2  | 1:J:146:ALA:CB   | 2.68                     | 0.71              |
| 1:J:268:VAL:HG12 | 1:K:286:ARG:HH12 | 1.53                     | 0.71              |
| 1:L:162:GLU:HB3  | 1:L:252:LEU:HG   | 1.70                     | 0.71              |
| 1:G:124:ILE:HD13 | 1:G:152:MET:CG   | 2.17                     | 0.71              |
| 1:G:142:MET:HE2  | 1:G:152:MET:HE1  | 1.60                     | 0.71              |
| 1:I:286:ARG:HH12 | 1:K:268:VAL:HG12 | 1.53                     | 0.71              |
| 1:K:168:MET:HE2  | 1:K:175:TYR:CD2  | 2.24                     | 0.71              |
| 1:L:205:ILE:CD1  | 1:M:104:GLN:CD   | 2.47                     | 0.71              |
| 1:M:142:MET:HE2  | 1:M:152:MET:HE1  | 1.61                     | 0.71              |
| 1:O:168:MET:HE2  | 1:O:175:TYR:CD2  | 2.25                     | 0.71              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:P:229:VAL:HG12 | 1:P:235:HIS:HE1  | 1.52                     | 0.71              |
| 1:P:246:ILE:HG23 | 1:P:246:ILE:O    | 1.91                     | 0.71              |
| 1:I:144:TYR:HD2  | 1:I:145:ASP:N    | 1.88                     | 0.71              |
| 1:I:290:LYS:CE   | 1:K:150:LEU:HD21 | 2.19                     | 0.71              |
| 1:L:246:ILE:O    | 1:L:246:ILE:HG23 | 1.91                     | 0.71              |
| 1:M:150:LEU:HD21 | 1:N:290:LYS:CE   | 2.19                     | 0.71              |
| 1:P:268:VAL:HG12 | 1:Q:286:ARG:HH12 | 1.53                     | 0.71              |
| 1:K:144:TYR:HD2  | 1:K:145:ASP:N    | 1.88                     | 0.71              |
| 1:N:168:MET:HE2  | 1:N:175:TYR:CD2  | 2.26                     | 0.71              |
| 1:O:144:TYR:HE2  | 1:O:146:ALA:CA   | 2.04                     | 0.71              |
| 1:Q:246:ILE:O    | 1:Q:246:ILE:HG23 | 1.91                     | 0.71              |
| 1:F:150:LEU:HD21 | 1:G:290:LYS:CE   | 2.19                     | 0.71              |
| 1:H:246:ILE:HG23 | 1:H:246:ILE:O    | 1.91                     | 0.71              |
| 1:H:252:LEU:N    | 1:H:252:LEU:HD23 | 2.06                     | 0.71              |
| 1:J:252:LEU:N    | 1:J:252:LEU:HD23 | 2.06                     | 0.71              |
| 1:K:144:TYR:HE2  | 1:K:146:ALA:CA   | 2.03                     | 0.71              |
| 1:K:252:LEU:N    | 1:K:252:LEU:HD23 | 2.06                     | 0.71              |
| 1:L:168:MET:HE2  | 1:L:175:TYR:CD2  | 2.26                     | 0.71              |
| 1:M:252:LEU:N    | 1:M:252:LEU:HD23 | 2.06                     | 0.71              |
| 1:M:266:SER:HA   | 1:M:286:ARG:NH2  | 2.06                     | 0.71              |
| 1:O:252:LEU:N    | 1:O:252:LEU:HD23 | 2.06                     | 0.71              |
| 1:F:237:LEU:HD21 | 1:F:246:ILE:HD13 | 1.70                     | 0.71              |
| 1:G:144:TYR:OH   | 1:G:146:ALA:HB2  | 1.91                     | 0.71              |
| 1:I:285:MET:HE1  | 1:K:276:THR:HA   | 0.71                     | 0.71              |
| 1:G:144:TYR:C    | 1:G:144:TYR:CD2  | 2.64                     | 0.71              |
| 1:N:83:LEU:HD23  | 1:N:139:VAL:HG13 | 1.71                     | 0.71              |
| 1:P:266:SER:HA   | 1:P:286:ARG:NH2  | 2.06                     | 0.71              |
| 1:I:159:ILE:HG22 | 1:I:258:VAL:CG2  | 1.98                     | 0.71              |
| 1:J:73:GLU:HG2   | 1:J:73:GLU:O     | 1.91                     | 0.71              |
| 1:L:266:SER:HA   | 1:L:286:ARG:NH2  | 2.06                     | 0.71              |
| 1:N:246:ILE:HG23 | 1:N:246:ILE:O    | 1.91                     | 0.71              |
| 1:N:266:SER:HA   | 1:N:286:ARG:NH2  | 2.06                     | 0.71              |
| 1:Q:252:LEU:CG   | 1:Q:253:GLY:H    | 1.83                     | 0.71              |
| 1:F:125:ALA:CB   | 1:F:223:LYS:CD   | 2.53                     | 0.70              |
| 1:H:64:ASP:C     | 1:H:65:THR:CG2   | 2.51                     | 0.70              |
| 1:I:246:ILE:O    | 1:I:246:ILE:HG23 | 1.91                     | 0.70              |
| 1:J:246:ILE:HG23 | 1:J:246:ILE:O    | 1.91                     | 0.70              |
| 1:L:150:LEU:HD12 | 1:M:288:ASN:CG   | 2.08                     | 0.70              |
| 1:F:83:LEU:HD23  | 1:F:139:VAL:HG13 | 1.71                     | 0.70              |
| 1:G:83:LEU:HD23  | 1:G:139:VAL:HG13 | 1.71                     | 0.70              |
| 1:L:252:LEU:N    | 1:L:252:LEU:HD23 | 2.06                     | 0.70              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:P:252:LEU:N    | 1:P:252:LEU:HD23 | 2.06                     | 0.70              |
| 1:B:123:ASP:OD1  | 1:B:126:SER:HB3  | 1.92                     | 0.70              |
| 1:H:266:SER:HA   | 1:H:286:ARG:NH2  | 2.06                     | 0.70              |
| 1:J:266:SER:HA   | 1:J:286:ARG:NH2  | 2.06                     | 0.70              |
| 1:M:168:MET:HE2  | 1:M:175:TYR:CD2  | 2.26                     | 0.70              |
| 1:O:144:TYR:CE2  | 1:O:146:ALA:N    | 2.60                     | 0.70              |
| 1:Q:144:TYR:HD2  | 1:Q:145:ASP:N    | 1.88                     | 0.70              |
| 1:Q:162:GLU:O    | 1:Q:252:LEU:HD23 | 1.85                     | 0.70              |
| 1:Q:252:LEU:N    | 1:Q:252:LEU:HD23 | 2.06                     | 0.70              |
| 1:Q:266:SER:HA   | 1:Q:286:ARG:NH2  | 2.06                     | 0.70              |
| 1:G:144:TYR:C    | 1:G:144:TYR:HD2  | 1.94                     | 0.70              |
| 1:L:59:ILE:HG22  | 1:L:60:THR:O     | 1.92                     | 0.70              |
| 1:O:144:TYR:HE2  | 1:O:146:ALA:N    | 1.88                     | 0.70              |
| 1:P:123:ASP:OD1  | 1:P:126:SER:HB3  | 1.92                     | 0.70              |
| 1:P:144:TYR:OH   | 1:P:146:ALA:HB2  | 1.90                     | 0.70              |
| 1:I:144:TYR:OH   | 1:I:146:ALA:HB2  | 1.90                     | 0.70              |
| 1:I:266:SER:HA   | 1:I:286:ARG:NH2  | 2.06                     | 0.70              |
| 1:O:246:ILE:HG23 | 1:O:246:ILE:O    | 1.91                     | 0.70              |
| 1:F:288:ASN:CG   | 1:H:150:LEU:HD13 | 2.12                     | 0.70              |
| 1:I:205:ILE:CG1  | 1:J:104:GLN:OE1  | 2.40                     | 0.70              |
| 1:I:252:LEU:N    | 1:I:252:LEU:HD23 | 2.06                     | 0.70              |
| 1:K:266:SER:HA   | 1:K:286:ARG:NH2  | 2.06                     | 0.70              |
| 1:L:150:LEU:CD2  | 1:M:290:LYS:HG2  | 2.12                     | 0.70              |
| 1:M:59:ILE:HG22  | 1:M:60:THR:O     | 1.92                     | 0.70              |
| 1:M:168:MET:HE3  | 1:M:175:TYR:CE1  | 2.22                     | 0.70              |
| 1:N:124:ILE:HD13 | 1:N:152:MET:CG   | 2.17                     | 0.70              |
| 1:O:251:LYS:CG   | 1:O:252:LEU:N    | 2.29                     | 0.70              |
| 1:O:285:MET:HE1  | 1:Q:276:THR:C    | 2.11                     | 0.70              |
| 1:B:252:LEU:N    | 1:B:252:LEU:HD23 | 2.06                     | 0.70              |
| 1:F:59:ILE:HG22  | 1:F:60:THR:O     | 1.92                     | 0.70              |
| 1:F:266:SER:HA   | 1:F:286:ARG:NH2  | 2.06                     | 0.70              |
| 1:G:252:LEU:N    | 1:G:252:LEU:HD23 | 2.06                     | 0.70              |
| 1:N:123:ASP:OD1  | 1:N:126:SER:HB3  | 1.92                     | 0.70              |
| 1:B:59:ILE:HG22  | 1:B:60:THR:O     | 1.92                     | 0.70              |
| 1:B:144:TYR:OH   | 1:B:146:ALA:HB2  | 1.92                     | 0.70              |
| 1:G:266:SER:HA   | 1:G:286:ARG:NH2  | 2.06                     | 0.70              |
| 1:H:123:ASP:OD1  | 1:H:126:SER:HB3  | 1.92                     | 0.70              |
| 1:M:205:ILE:CG1  | 1:N:104:GLN:OE1  | 2.40                     | 0.70              |
| 1:N:252:LEU:N    | 1:N:252:LEU:HD23 | 2.06                     | 0.70              |
| 1:O:59:ILE:HG22  | 1:O:60:THR:O     | 1.92                     | 0.70              |
| 1:O:126:SER:CA   | 1:O:223:LYS:HZ1  | 2.01                     | 0.70              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:229:VAL:HG12 | 1:O:235:HIS:HE1  | 1.52                     | 0.70              |
| 1:P:205:ILE:CD1  | 1:Q:104:GLN:CD   | 2.47                     | 0.70              |
| 1:Q:124:ILE:HD13 | 1:Q:152:MET:CG   | 2.17                     | 0.70              |
| 1:F:246:ILE:HG23 | 1:F:246:ILE:O    | 1.91                     | 0.70              |
| 1:G:123:ASP:OD1  | 1:G:126:SER:HB3  | 1.92                     | 0.70              |
| 1:H:168:MET:HE2  | 1:H:175:TYR:CD2  | 2.27                     | 0.70              |
| 1:J:167:PRO:O    | 1:L:117:TYR:CZ   | 2.44                     | 0.70              |
| 1:K:144:TYR:CZ   | 1:K:146:ALA:HB2  | 2.27                     | 0.70              |
| 1:K:234:ASN:O    | 1:K:235:HIS:HD2  | 1.75                     | 0.70              |
| 1:F:123:ASP:OD1  | 1:F:126:SER:HB3  | 1.92                     | 0.70              |
| 1:G:150:LEU:HD13 | 1:H:288:ASN:CG   | 2.12                     | 0.70              |
| 1:H:59:ILE:HG22  | 1:H:60:THR:O     | 1.92                     | 0.70              |
| 1:J:123:ASP:OD1  | 1:J:126:SER:HB3  | 1.92                     | 0.70              |
| 1:J:168:MET:HE2  | 1:J:175:TYR:CD2  | 2.26                     | 0.70              |
| 1:L:205:ILE:CG1  | 1:M:104:GLN:OE1  | 2.40                     | 0.70              |
| 1:N:234:ASN:O    | 1:N:235:HIS:HD2  | 1.75                     | 0.70              |
| 1:O:123:ASP:OD1  | 1:O:126:SER:HB3  | 1.92                     | 0.70              |
| 1:O:266:SER:HA   | 1:O:286:ARG:NH2  | 2.06                     | 0.70              |
| 1:B:246:ILE:HG23 | 1:B:246:ILE:O    | 1.91                     | 0.69              |
| 1:F:252:LEU:N    | 1:F:252:LEU:HD23 | 2.06                     | 0.69              |
| 1:I:108:THR:HG23 | 1:I:109:LYS:N    | 2.07                     | 0.69              |
| 1:K:123:ASP:OD1  | 1:K:126:SER:HB3  | 1.92                     | 0.69              |
| 1:L:125:ALA:HB3  | 1:L:223:LYS:HD3  | 1.65                     | 0.69              |
| 1:O:108:THR:HG23 | 1:O:109:LYS:N    | 2.07                     | 0.69              |
| 1:O:288:ASN:CG   | 1:Q:150:LEU:HD13 | 2.12                     | 0.69              |
| 1:P:205:ILE:CG1  | 1:Q:104:GLN:OE1  | 2.40                     | 0.69              |
| 1:G:59:ILE:HG22  | 1:G:60:THR:O     | 1.92                     | 0.69              |
| 1:J:59:ILE:HG22  | 1:J:60:THR:O     | 1.92                     | 0.69              |
| 1:J:108:THR:HG23 | 1:J:109:LYS:N    | 2.07                     | 0.69              |
| 1:K:246:ILE:HG23 | 1:K:246:ILE:O    | 1.91                     | 0.69              |
| 1:O:104:GLN:OE1  | 1:Q:205:ILE:CG1  | 2.40                     | 0.69              |
| 1:O:191:CYS:CB   | 1:O:244:CYS:HG   | 2.02                     | 0.69              |
| 1:P:59:ILE:HG22  | 1:P:60:THR:O     | 1.92                     | 0.69              |
| 1:P:150:LEU:HD21 | 1:Q:290:LYS:CE   | 2.19                     | 0.69              |
| 1:Q:158:LEU:HD21 | 1:Q:185:ILE:HD13 | 1.71                     | 0.69              |
| 1:Q:229:VAL:HG12 | 1:Q:235:HIS:HE1  | 1.52                     | 0.69              |
| 1:B:266:SER:HA   | 1:B:286:ARG:NH2  | 2.06                     | 0.69              |
| 1:F:104:GLN:OE1  | 1:H:205:ILE:CG1  | 2.40                     | 0.69              |
| 1:F:205:ILE:CG1  | 1:G:104:GLN:OE1  | 2.40                     | 0.69              |
| 1:G:205:ILE:CG1  | 1:H:104:GLN:OE1  | 2.40                     | 0.69              |
| 1:G:246:ILE:HG23 | 1:G:246:ILE:O    | 1.91                     | 0.69              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:M:108:THR:HG23 | 1:M:109:LYS:N    | 2.07                     | 0.69              |
| 1:M:246:ILE:HG23 | 1:M:246:ILE:O    | 1.91                     | 0.69              |
| 1:I:59:ILE:HG22  | 1:I:60:THR:O     | 1.92                     | 0.69              |
| 1:M:123:ASP:OD1  | 1:M:126:SER:HB3  | 1.92                     | 0.69              |
| 1:O:144:TYR:CE2  | 1:O:146:ALA:CA   | 2.75                     | 0.69              |
| 1:P:234:ASN:O    | 1:P:235:HIS:HD2  | 1.76                     | 0.69              |
| 1:F:158:LEU:HD12 | 1:F:224:LEU:CD2  | 2.23                     | 0.69              |
| 1:I:123:ASP:OD1  | 1:I:126:SER:HB3  | 1.92                     | 0.69              |
| 1:J:144:TYR:HE2  | 1:J:146:ALA:CA   | 2.06                     | 0.69              |
| 1:K:59:ILE:HG22  | 1:K:60:THR:O     | 1.92                     | 0.69              |
| 1:L:123:ASP:OD1  | 1:L:126:SER:HB3  | 1.92                     | 0.69              |
| 1:M:124:ILE:HD13 | 1:M:152:MET:CG   | 2.17                     | 0.69              |
| 1:N:82:CYS:HG    | 1:N:135:CYS:HB3  | 1.55                     | 0.69              |
| 1:N:252:LEU:CG   | 1:N:253:GLY:H    | 1.83                     | 0.69              |
| 1:O:234:ASN:O    | 1:O:235:HIS:HD2  | 1.75                     | 0.69              |
| 1:P:150:LEU:HD13 | 1:Q:288:ASN:CG   | 2.12                     | 0.69              |
| 1:B:234:ASN:O    | 1:B:235:HIS:HD2  | 1.75                     | 0.69              |
| 1:K:144:TYR:CE2  | 1:K:146:ALA:CA   | 2.75                     | 0.69              |
| 1:N:125:ALA:CB   | 1:N:223:LYS:CD   | 2.53                     | 0.69              |
| 1:P:144:TYR:HE2  | 1:P:146:ALA:CA   | 2.06                     | 0.69              |
| 1:I:288:ASN:CG   | 1:K:150:LEU:HD13 | 2.12                     | 0.69              |
| 1:J:234:ASN:O    | 1:J:235:HIS:HD2  | 1.75                     | 0.69              |
| 1:L:144:TYR:OH   | 1:L:146:ALA:HB2  | 1.92                     | 0.69              |
| 1:L:150:LEU:HD13 | 1:M:288:ASN:CG   | 2.12                     | 0.69              |
| 1:O:150:LEU:HD13 | 1:P:288:ASN:CG   | 2.12                     | 0.69              |
| 1:Q:59:ILE:HG22  | 1:Q:60:THR:O     | 1.92                     | 0.69              |
| 1:B:229:VAL:HG12 | 1:B:235:HIS:HE1  | 1.52                     | 0.69              |
| 1:F:205:ILE:CD1  | 1:G:104:GLN:CD   | 2.47                     | 0.69              |
| 1:G:234:ASN:O    | 1:G:235:HIS:HD2  | 1.75                     | 0.69              |
| 1:H:108:THR:HG23 | 1:H:109:LYS:N    | 2.07                     | 0.69              |
| 1:I:144:TYR:HE2  | 1:I:146:ALA:N    | 1.91                     | 0.69              |
| 1:I:234:ASN:O    | 1:I:235:HIS:HD2  | 1.75                     | 0.69              |
| 1:K:158:LEU:HD12 | 1:K:224:LEU:CD2  | 2.23                     | 0.69              |
| 1:L:104:GLN:OE1  | 1:N:205:ILE:CG1  | 2.40                     | 0.69              |
| 1:L:108:THR:HG23 | 1:L:109:LYS:N    | 2.07                     | 0.69              |
| 1:O:205:ILE:CG1  | 1:P:104:GLN:OE1  | 2.40                     | 0.69              |
| 1:Q:126:SER:HA   | 1:Q:223:LYS:HZ2  | 1.57                     | 0.69              |
| 1:Q:144:TYR:OH   | 1:Q:146:ALA:HB2  | 1.92                     | 0.69              |
| 1:Q:234:ASN:O    | 1:Q:235:HIS:HD2  | 1.75                     | 0.69              |
| 1:B:293:TRP:CE3  | 1:B:297:TYR:HE1  | 2.11                     | 0.69              |
| 1:F:290:LYS:CE   | 1:H:150:LEU:HD21 | 2.19                     | 0.69              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:104:GLN:OE1  | 1:K:205:ILE:CG1  | 2.40                     | 0.69              |
| 1:I:252:LEU:CG   | 1:I:253:GLY:H    | 1.83                     | 0.69              |
| 1:I:293:TRP:CE3  | 1:I:297:TYR:HE1  | 2.11                     | 0.69              |
| 1:L:293:TRP:O    | 1:L:297:TYR:HD1  | 1.76                     | 0.69              |
| 1:O:82:CYS:HG    | 1:O:135:CYS:HB3  | 1.57                     | 0.69              |
| 1:Q:159:ILE:HG22 | 1:Q:258:VAL:CG2  | 1.98                     | 0.69              |
| 1:F:251:LYS:C    | 1:F:252:LEU:CD2  | 2.61                     | 0.69              |
| 1:I:144:TYR:CE2  | 1:I:146:ALA:CA   | 2.74                     | 0.69              |
| 1:I:251:LYS:C    | 1:I:252:LEU:CD2  | 2.61                     | 0.69              |
| 1:J:205:ILE:CG1  | 1:K:104:GLN:OE1  | 2.40                     | 0.69              |
| 1:K:108:THR:HG23 | 1:K:109:LYS:N    | 2.07                     | 0.69              |
| 1:K:144:TYR:HE2  | 1:K:146:ALA:N    | 1.91                     | 0.69              |
| 1:M:150:LEU:HD13 | 1:N:288:ASN:CG   | 2.12                     | 0.69              |
| 1:N:108:THR:HG23 | 1:N:109:LYS:N    | 2.07                     | 0.69              |
| 1:O:293:TRP:O    | 1:O:297:TYR:HD1  | 1.76                     | 0.69              |
| 1:P:125:ALA:CB   | 1:P:223:LYS:CD   | 2.53                     | 0.69              |
| 1:P:159:ILE:HG22 | 1:P:258:VAL:CG2  | 1.98                     | 0.69              |
| 1:B:158:LEU:HD12 | 1:B:224:LEU:CD2  | 2.23                     | 0.68              |
| 1:B:293:TRP:O    | 1:B:297:TYR:HD1  | 1.76                     | 0.68              |
| 1:G:252:LEU:CG   | 1:G:253:GLY:H    | 1.83                     | 0.68              |
| 1:I:293:TRP:O    | 1:I:297:TYR:HD1  | 1.76                     | 0.68              |
| 1:O:104:GLN:CD   | 1:Q:205:ILE:CD1  | 2.47                     | 0.68              |
| 1:Q:293:TRP:O    | 1:Q:297:TYR:HD1  | 1.76                     | 0.68              |
| 1:B:251:LYS:C    | 1:B:252:LEU:CD2  | 2.62                     | 0.68              |
| 1:F:150:LEU:HD13 | 1:G:288:ASN:CG   | 2.12                     | 0.68              |
| 1:G:144:TYR:HE2  | 1:G:146:ALA:CA   | 2.05                     | 0.68              |
| 1:G:251:LYS:C    | 1:G:252:LEU:CD2  | 2.62                     | 0.68              |
| 1:M:234:ASN:O    | 1:M:235:HIS:HD2  | 1.75                     | 0.68              |
| 1:P:158:LEU:HD12 | 1:P:224:LEU:CD2  | 2.23                     | 0.68              |
| 1:P:293:TRP:O    | 1:P:297:TYR:HD1  | 1.76                     | 0.68              |
| 1:Q:293:TRP:CE3  | 1:Q:297:TYR:HE1  | 2.11                     | 0.68              |
| 1:G:263:VAL:HG12 | 1:G:289:TRP:HB2  | 1.76                     | 0.68              |
| 1:H:234:ASN:O    | 1:H:235:HIS:HD2  | 1.75                     | 0.68              |
| 1:I:150:LEU:HD13 | 1:J:288:ASN:CG   | 2.12                     | 0.68              |
| 1:J:150:LEU:HD13 | 1:K:288:ASN:CG   | 2.12                     | 0.68              |
| 1:L:178:THR:H    | 1:L:182:ASN:HD22 | 1.41                     | 0.68              |
| 1:L:251:LYS:C    | 1:L:252:LEU:CD2  | 2.62                     | 0.68              |
| 1:L:288:ASN:CG   | 1:N:150:LEU:HD12 | 2.08                     | 0.68              |
| 1:P:178:THR:H    | 1:P:182:ASN:HD22 | 1.41                     | 0.68              |
| 1:B:144:TYR:HE2  | 1:B:146:ALA:N    | 1.91                     | 0.68              |
| 1:L:127:PHE:O    | 1:L:131:PRO:HD3  | 1.94                     | 0.68              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:L:170:ILE:HD13 | 1:L:239:VAL:HG23 | 1.76                     | 0.68              |
| 1:P:174:TYR:CE1  | 1:P:198:LEU:HD13 | 2.29                     | 0.68              |
| 1:P:251:LYS:C    | 1:P:252:LEU:CD2  | 2.62                     | 0.68              |
| 1:Q:144:TYR:CE2  | 1:Q:146:ALA:CA   | 2.76                     | 0.68              |
| 1:B:127:PHE:O    | 1:B:131:PRO:HD3  | 1.94                     | 0.68              |
| 1:F:144:TYR:HE2  | 1:F:146:ALA:N    | 1.92                     | 0.68              |
| 1:G:144:TYR:CE2  | 1:G:146:ALA:CA   | 2.77                     | 0.68              |
| 1:I:104:GLN:CD   | 1:K:205:ILE:CD1  | 2.47                     | 0.68              |
| 1:I:150:LEU:HD21 | 1:J:290:LYS:CE   | 2.19                     | 0.68              |
| 1:I:170:ILE:HD13 | 1:I:239:VAL:HG23 | 1.76                     | 0.68              |
| 1:J:178:THR:H    | 1:J:182:ASN:HD22 | 1.42                     | 0.68              |
| 1:K:127:PHE:O    | 1:K:131:PRO:HD3  | 1.94                     | 0.68              |
| 1:K:293:TRP:CE3  | 1:K:297:TYR:HE1  | 2.11                     | 0.68              |
| 1:N:59:ILE:HG22  | 1:N:60:THR:O     | 1.92                     | 0.68              |
| 1:N:178:THR:H    | 1:N:182:ASN:HD22 | 1.42                     | 0.68              |
| 1:O:69:ASN:O     | 1:O:70:SER:HB2   | 1.93                     | 0.68              |
| 1:O:178:THR:H    | 1:O:182:ASN:HD22 | 1.41                     | 0.68              |
| 1:O:255:ARG:HD2  | 1:O:257:ASN:HD22 | 1.59                     | 0.68              |
| 1:O:263:VAL:HG12 | 1:O:289:TRP:HB2  | 1.76                     | 0.68              |
| 1:Q:108:THR:HG23 | 1:Q:109:LYS:N    | 2.07                     | 0.68              |
| 1:G:108:THR:HG23 | 1:G:109:LYS:N    | 2.07                     | 0.68              |
| 1:H:144:TYR:HE2  | 1:H:146:ALA:CA   | 2.07                     | 0.68              |
| 1:J:174:TYR:CE1  | 1:J:198:LEU:HD13 | 2.29                     | 0.68              |
| 1:K:191:CYS:CB   | 1:K:244:CYS:HG   | 2.04                     | 0.68              |
| 1:K:263:VAL:HG12 | 1:K:289:TRP:HB2  | 1.76                     | 0.68              |
| 1:L:174:TYR:CE1  | 1:L:198:LEU:HD13 | 2.29                     | 0.68              |
| 1:L:234:ASN:O    | 1:L:235:HIS:HD2  | 1.75                     | 0.68              |
| 1:M:127:PHE:O    | 1:M:131:PRO:HD3  | 1.94                     | 0.68              |
| 1:N:144:TYR:HE2  | 1:N:146:ALA:CA   | 2.06                     | 0.68              |
| 1:Q:75:THR:HG23  | 1:Q:79:SER:OG    | 1.93                     | 0.68              |
| 1:B:255:ARG:HD2  | 1:B:257:ASN:HD22 | 1.59                     | 0.68              |
| 1:F:127:PHE:O    | 1:F:131:PRO:HD3  | 1.94                     | 0.68              |
| 1:F:162:GLU:HB3  | 1:F:253:GLY:C    | 2.14                     | 0.68              |
| 1:F:234:ASN:O    | 1:F:235:HIS:HD2  | 1.75                     | 0.68              |
| 1:K:293:TRP:O    | 1:K:297:TYR:HD1  | 1.77                     | 0.68              |
| 1:L:290:LYS:HA   | 1:N:150:LEU:CD2  | 2.24                     | 0.68              |
| 1:O:251:LYS:C    | 1:O:252:LEU:CD2  | 2.61                     | 0.68              |
| 1:P:127:PHE:O    | 1:P:131:PRO:HD3  | 1.94                     | 0.68              |
| 1:Q:123:ASP:OD1  | 1:Q:126:SER:HB3  | 1.92                     | 0.68              |
| 1:F:108:THR:HG23 | 1:F:109:LYS:N    | 2.07                     | 0.68              |
| 1:L:288:ASN:CG   | 1:N:150:LEU:HD13 | 2.12                     | 0.68              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:170:ILE:HD13 | 1:B:239:VAL:HG23 | 1.76                     | 0.68              |
| 1:F:150:LEU:CD2  | 1:G:290:LYS:HA   | 2.24                     | 0.68              |
| 1:G:127:PHE:O    | 1:G:131:PRO:HD3  | 1.94                     | 0.68              |
| 1:G:162:GLU:HB3  | 1:G:253:GLY:C    | 2.14                     | 0.68              |
| 1:G:293:TRP:O    | 1:G:297:TYR:HD1  | 1.76                     | 0.68              |
| 1:I:174:TYR:CE1  | 1:I:198:LEU:HD13 | 2.29                     | 0.68              |
| 1:J:263:VAL:HG12 | 1:J:289:TRP:HB2  | 1.76                     | 0.68              |
| 1:M:144:TYR:HD2  | 1:M:145:ASP:N    | 1.91                     | 0.68              |
| 1:N:127:PHE:O    | 1:N:131:PRO:HD3  | 1.94                     | 0.68              |
| 1:N:144:TYR:OH   | 1:N:146:ALA:HB2  | 1.94                     | 0.68              |
| 1:O:125:ALA:CB   | 1:O:223:LYS:CD   | 2.53                     | 0.68              |
| 1:O:170:ILE:HD13 | 1:O:239:VAL:HG23 | 1.76                     | 0.68              |
| 1:O:293:TRP:CE3  | 1:O:297:TYR:HE1  | 2.11                     | 0.68              |
| 1:Q:251:LYS:C    | 1:Q:252:LEU:CD2  | 2.62                     | 0.68              |
| 1:B:108:THR:HG23 | 1:B:109:LYS:N    | 2.07                     | 0.68              |
| 1:F:290:LYS:HA   | 1:H:150:LEU:CD2  | 2.24                     | 0.68              |
| 1:H:127:PHE:O    | 1:H:131:PRO:HD3  | 1.94                     | 0.68              |
| 1:H:170:ILE:HD13 | 1:H:239:VAL:HG23 | 1.76                     | 0.68              |
| 1:H:251:LYS:C    | 1:H:252:LEU:CD2  | 2.62                     | 0.68              |
| 1:I:178:THR:H    | 1:I:182:ASN:HD22 | 1.42                     | 0.68              |
| 1:K:170:ILE:HD13 | 1:K:239:VAL:HG23 | 1.76                     | 0.68              |
| 1:L:255:ARG:HD2  | 1:L:257:ASN:HD22 | 1.59                     | 0.68              |
| 1:N:158:LEU:HD12 | 1:N:224:LEU:CD2  | 2.23                     | 0.68              |
| 1:N:251:LYS:C    | 1:N:252:LEU:CD2  | 2.62                     | 0.68              |
| 1:P:150:LEU:CD2  | 1:Q:290:LYS:HA   | 2.24                     | 0.68              |
| 1:P:162:GLU:CB   | 1:P:253:GLY:C    | 2.62                     | 0.68              |
| 1:B:178:THR:H    | 1:B:182:ASN:HD22 | 1.41                     | 0.67              |
| 1:F:293:TRP:O    | 1:F:297:TYR:HD1  | 1.76                     | 0.67              |
| 1:H:162:GLU:HB3  | 1:H:253:GLY:C    | 2.14                     | 0.67              |
| 1:I:158:LEU:HD12 | 1:I:224:LEU:CD2  | 2.23                     | 0.67              |
| 1:I:263:VAL:HG12 | 1:I:289:TRP:HB2  | 1.76                     | 0.67              |
| 1:J:162:GLU:CB   | 1:J:253:GLY:C    | 2.62                     | 0.67              |
| 1:K:174:TYR:CE1  | 1:K:198:LEU:HD13 | 2.29                     | 0.67              |
| 1:L:229:VAL:HG12 | 1:L:235:HIS:HE1  | 1.52                     | 0.67              |
| 1:M:158:LEU:HD12 | 1:M:224:LEU:CD2  | 2.23                     | 0.67              |
| 1:M:174:TYR:CE1  | 1:M:198:LEU:HD13 | 2.29                     | 0.67              |
| 1:M:178:THR:H    | 1:M:182:ASN:HD22 | 1.41                     | 0.67              |
| 1:M:251:LYS:C    | 1:M:252:LEU:CD2  | 2.61                     | 0.67              |
| 1:M:293:TRP:CE3  | 1:M:297:TYR:HE1  | 2.11                     | 0.67              |
| 1:N:174:TYR:CE1  | 1:N:198:LEU:HD13 | 2.29                     | 0.67              |
| 1:O:150:LEU:CD2  | 1:P:290:LYS:HA   | 2.24                     | 0.67              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:P:108:THR:HG23 | 1:P:109:LYS:N    | 2.07                     | 0.67              |
| 1:P:162:GLU:HB3  | 1:P:253:GLY:C    | 2.15                     | 0.67              |
| 1:F:174:TYR:CE1  | 1:F:198:LEU:HD13 | 2.29                     | 0.67              |
| 1:H:293:TRP:O    | 1:H:297:TYR:HD1  | 1.76                     | 0.67              |
| 1:I:125:ALA:CB   | 1:I:223:LYS:CD   | 2.53                     | 0.67              |
| 1:I:144:TYR:CE2  | 1:I:146:ALA:N    | 2.63                     | 0.67              |
| 1:I:255:ARG:HD2  | 1:I:257:ASN:HD22 | 1.59                     | 0.67              |
| 1:K:251:LYS:C    | 1:K:252:LEU:CD2  | 2.62                     | 0.67              |
| 1:L:162:GLU:HB3  | 1:L:253:GLY:C    | 2.15                     | 0.67              |
| 1:M:144:TYR:HE2  | 1:M:146:ALA:N    | 1.91                     | 0.67              |
| 1:I:290:LYS:HA   | 1:K:150:LEU:CD2  | 2.24                     | 0.67              |
| 1:M:87:THR:HG1   | 1:M:122:THR:HG22 | 1.56                     | 0.67              |
| 1:M:263:VAL:HG12 | 1:M:289:TRP:HB2  | 1.76                     | 0.67              |
| 1:N:162:GLU:HB3  | 1:N:253:GLY:C    | 2.14                     | 0.67              |
| 1:Q:127:PHE:O    | 1:Q:131:PRO:HD3  | 1.94                     | 0.67              |
| 1:Q:174:TYR:CE1  | 1:Q:198:LEU:HD13 | 2.29                     | 0.67              |
| 1:G:170:ILE:HD13 | 1:G:239:VAL:HG23 | 1.76                     | 0.67              |
| 1:I:162:GLU:CB   | 1:I:253:GLY:C    | 2.62                     | 0.67              |
| 1:J:252:LEU:CG   | 1:J:253:GLY:H    | 1.83                     | 0.67              |
| 1:K:178:THR:H    | 1:K:182:ASN:HD22 | 1.41                     | 0.67              |
| 1:M:162:GLU:CB   | 1:M:253:GLY:C    | 2.62                     | 0.67              |
| 1:N:293:TRP:CE3  | 1:N:297:TYR:HE1  | 2.11                     | 0.67              |
| 1:P:64:ASP:C     | 1:P:65:THR:CG2   | 2.51                     | 0.67              |
| 1:P:168:MET:HE2  | 1:P:175:TYR:CD2  | 2.29                     | 0.67              |
| 1:G:158:LEU:HD12 | 1:G:224:LEU:CD2  | 2.23                     | 0.67              |
| 1:G:178:THR:H    | 1:G:182:ASN:HD22 | 1.41                     | 0.67              |
| 1:H:158:LEU:HD12 | 1:H:224:LEU:CD2  | 2.23                     | 0.67              |
| 1:M:82:CYS:HG    | 1:M:135:CYS:HB3  | 1.55                     | 0.67              |
| 1:N:293:TRP:O    | 1:N:297:TYR:HD1  | 1.76                     | 0.67              |
| 1:P:144:TYR:CE2  | 1:P:146:ALA:CA   | 2.78                     | 0.67              |
| 1:B:124:ILE:HD13 | 1:B:152:MET:CG   | 2.17                     | 0.67              |
| 1:G:144:TYR:HD2  | 1:G:145:ASP:N    | 1.93                     | 0.67              |
| 1:G:162:GLU:CB   | 1:G:253:GLY:C    | 2.62                     | 0.67              |
| 1:H:277:THR:CG2  | 1:H:278:ALA:N    | 2.58                     | 0.67              |
| 1:I:126:SER:CA   | 1:I:223:LYS:NZ   | 2.55                     | 0.67              |
| 1:J:125:ALA:CB   | 1:J:223:LYS:CD   | 2.53                     | 0.67              |
| 1:J:251:LYS:C    | 1:J:252:LEU:CD2  | 2.62                     | 0.67              |
| 1:K:162:GLU:CB   | 1:K:253:GLY:C    | 2.62                     | 0.67              |
| 1:M:293:TRP:O    | 1:M:297:TYR:HD1  | 1.76                     | 0.67              |
| 1:N:170:ILE:HD13 | 1:N:239:VAL:HG23 | 1.76                     | 0.67              |
| 1:Q:263:VAL:HG12 | 1:Q:289:TRP:HB2  | 1.76                     | 0.67              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:162:GLU:CB   | 1:B:253:GLY:C    | 2.62                     | 0.67              |
| 1:B:162:GLU:HB3  | 1:B:253:GLY:C    | 2.15                     | 0.67              |
| 1:F:162:GLU:CB   | 1:F:253:GLY:C    | 2.62                     | 0.67              |
| 1:F:255:ARG:HD2  | 1:F:257:ASN:HD22 | 1.59                     | 0.67              |
| 1:J:150:LEU:CD2  | 1:K:290:LYS:HA   | 2.24                     | 0.67              |
| 1:L:144:TYR:HE2  | 1:L:146:ALA:CA   | 2.06                     | 0.67              |
| 1:L:162:GLU:CB   | 1:L:253:GLY:C    | 2.62                     | 0.67              |
| 1:M:170:ILE:HD13 | 1:M:239:VAL:HG23 | 1.76                     | 0.67              |
| 1:O:162:GLU:CB   | 1:O:253:GLY:C    | 2.62                     | 0.67              |
| 1:F:168:MET:HE2  | 1:F:175:TYR:CD2  | 2.30                     | 0.67              |
| 1:F:263:VAL:HG12 | 1:F:289:TRP:HB2  | 1.76                     | 0.67              |
| 1:G:150:LEU:CD2  | 1:H:290:LYS:HA   | 2.24                     | 0.67              |
| 1:H:162:GLU:CB   | 1:H:253:GLY:C    | 2.62                     | 0.67              |
| 1:J:158:LEU:HD12 | 1:J:224:LEU:CD2  | 2.23                     | 0.67              |
| 1:J:293:TRP:O    | 1:J:297:TYR:HD1  | 1.76                     | 0.67              |
| 1:K:162:GLU:HB3  | 1:K:253:GLY:C    | 2.15                     | 0.67              |
| 1:K:229:VAL:HG12 | 1:K:235:HIS:HE1  | 1.52                     | 0.67              |
| 1:L:205:ILE:HD11 | 1:M:104:GLN:CG   | 2.25                     | 0.67              |
| 1:M:126:SER:HA   | 1:M:223:LYS:HZ2  | 1.59                     | 0.67              |
| 1:N:167:PRO:HG3  | 1:P:134:TYR:CZ   | 2.30                     | 0.67              |
| 1:P:263:VAL:HG12 | 1:P:289:TRP:HB2  | 1.76                     | 0.67              |
| 1:B:263:VAL:HG12 | 1:B:289:TRP:HB2  | 1.76                     | 0.67              |
| 1:I:150:LEU:CD2  | 1:J:290:LYS:HA   | 2.24                     | 0.67              |
| 1:J:170:ILE:HD13 | 1:J:239:VAL:HG23 | 1.76                     | 0.67              |
| 1:L:104:GLN:CG   | 1:N:205:ILE:HD11 | 2.25                     | 0.67              |
| 1:L:158:LEU:HD12 | 1:L:224:LEU:CD2  | 2.23                     | 0.67              |
| 1:M:144:TYR:CE2  | 1:M:146:ALA:N    | 2.63                     | 0.67              |
| 1:M:205:ILE:HD11 | 1:N:104:GLN:CG   | 2.25                     | 0.67              |
| 1:M:257:ASN:O    | 1:M:258:VAL:C    | 2.33                     | 0.67              |
| 1:N:162:GLU:CB   | 1:N:253:GLY:C    | 2.62                     | 0.67              |
| 1:Q:255:ARG:HD2  | 1:Q:257:ASN:HD22 | 1.59                     | 0.67              |
| 1:H:178:THR:H    | 1:H:182:ASN:HD22 | 1.41                     | 0.67              |
| 1:I:104:GLN:CG   | 1:K:205:ILE:HD11 | 2.25                     | 0.67              |
| 1:J:144:TYR:CE2  | 1:J:146:ALA:CA   | 2.78                     | 0.67              |
| 1:J:205:ILE:HD11 | 1:K:104:GLN:CG   | 2.25                     | 0.67              |
| 1:J:293:TRP:CE3  | 1:J:297:TYR:HE1  | 2.11                     | 0.67              |
| 1:K:255:ARG:HD2  | 1:K:257:ASN:HD22 | 1.59                     | 0.67              |
| 1:P:162:GLU:C    | 1:P:252:LEU:HD21 | 2.13                     | 0.67              |
| 1:Q:162:GLU:HB3  | 1:Q:253:GLY:C    | 2.15                     | 0.67              |
| 1:G:255:ARG:HD2  | 1:G:257:ASN:HD22 | 1.59                     | 0.66              |
| 1:H:144:TYR:OH   | 1:H:146:ALA:HB2  | 1.95                     | 0.66              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:127:PHE:O    | 1:I:131:PRO:HD3  | 1.94                     | 0.66              |
| 1:I:189:SER:HB2  | 1:I:243:THR:HB   | 1.78                     | 0.66              |
| 1:J:127:PHE:O    | 1:J:131:PRO:HD3  | 1.94                     | 0.66              |
| 1:K:144:TYR:CE2  | 1:K:146:ALA:N    | 2.63                     | 0.66              |
| 1:K:257:ASN:O    | 1:K:258:VAL:C    | 2.33                     | 0.66              |
| 1:L:150:LEU:CD2  | 1:M:290:LYS:HA   | 2.24                     | 0.66              |
| 1:L:162:GLU:C    | 1:L:252:LEU:HD21 | 2.13                     | 0.66              |
| 1:L:257:ASN:O    | 1:L:258:VAL:C    | 2.33                     | 0.66              |
| 1:M:229:VAL:HG12 | 1:M:235:HIS:HE1  | 1.52                     | 0.66              |
| 1:N:229:VAL:HG12 | 1:N:235:HIS:HE1  | 1.52                     | 0.66              |
| 1:O:189:SER:HB2  | 1:O:243:THR:HB   | 1.78                     | 0.66              |
| 1:O:290:LYS:HA   | 1:Q:150:LEU:CD2  | 2.24                     | 0.66              |
| 1:Q:126:SER:CA   | 1:Q:223:LYS:NZ   | 2.55                     | 0.66              |
| 1:B:277:THR:CG2  | 1:B:278:ALA:N    | 2.58                     | 0.66              |
| 1:F:277:THR:CG2  | 1:F:278:ALA:N    | 2.58                     | 0.66              |
| 1:J:126:SER:CA   | 1:J:223:LYS:NZ   | 2.55                     | 0.66              |
| 1:L:144:TYR:CE2  | 1:L:146:ALA:CB   | 2.69                     | 0.66              |
| 1:L:144:TYR:HE2  | 1:L:146:ALA:N    | 1.92                     | 0.66              |
| 1:N:263:VAL:HG12 | 1:N:289:TRP:HB2  | 1.76                     | 0.66              |
| 1:O:104:GLN:CG   | 1:Q:205:ILE:HD11 | 2.25                     | 0.66              |
| 1:P:170:ILE:HD13 | 1:P:239:VAL:HG23 | 1.76                     | 0.66              |
| 1:Q:162:GLU:CB   | 1:Q:253:GLY:C    | 2.62                     | 0.66              |
| 1:B:174:TYR:CE1  | 1:B:198:LEU:HD13 | 2.29                     | 0.66              |
| 1:F:205:ILE:HD11 | 1:G:104:GLN:CG   | 2.25                     | 0.66              |
| 1:G:189:SER:HB2  | 1:G:243:THR:HB   | 1.78                     | 0.66              |
| 1:G:257:ASN:O    | 1:G:258:VAL:C    | 2.33                     | 0.66              |
| 1:H:293:TRP:CE3  | 1:H:297:TYR:HE1  | 2.11                     | 0.66              |
| 1:I:162:GLU:HB3  | 1:I:253:GLY:C    | 2.15                     | 0.66              |
| 1:M:162:GLU:HB3  | 1:M:253:GLY:C    | 2.15                     | 0.66              |
| 1:M:255:ARG:HD2  | 1:M:257:ASN:HD22 | 1.59                     | 0.66              |
| 1:O:158:LEU:HD12 | 1:O:224:LEU:CD2  | 2.23                     | 0.66              |
| 1:O:174:TYR:CE1  | 1:O:198:LEU:HD13 | 2.29                     | 0.66              |
| 1:P:293:TRP:CE3  | 1:P:297:TYR:HE1  | 2.11                     | 0.66              |
| 1:B:144:TYR:HE2  | 1:B:146:ALA:CA   | 2.08                     | 0.66              |
| 1:F:293:TRP:CE3  | 1:F:297:TYR:HE1  | 2.11                     | 0.66              |
| 1:J:162:GLU:HB3  | 1:J:253:GLY:C    | 2.15                     | 0.66              |
| 1:N:255:ARG:HD2  | 1:N:257:ASN:HD22 | 1.59                     | 0.66              |
| 1:P:205:ILE:HD11 | 1:Q:104:GLN:CG   | 2.25                     | 0.66              |
| 1:B:144:TYR:CE2  | 1:B:146:ALA:N    | 2.63                     | 0.66              |
| 1:F:104:GLN:CG   | 1:H:205:ILE:HD11 | 2.25                     | 0.66              |
| 1:F:162:GLU:C    | 1:F:252:LEU:HD21 | 2.13                     | 0.66              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:J:144:TYR:HE2  | 1:J:146:ALA:N    | 1.94                     | 0.66              |
| 1:K:162:GLU:O    | 1:K:252:LEU:HD23 | 1.85                     | 0.66              |
| 1:L:263:VAL:HG12 | 1:L:289:TRP:HB2  | 1.76                     | 0.66              |
| 1:M:144:TYR:CE2  | 1:M:146:ALA:CA   | 2.79                     | 0.66              |
| 1:N:126:SER:CA   | 1:N:223:LYS:NZ   | 2.55                     | 0.66              |
| 1:N:144:TYR:CE2  | 1:N:146:ALA:CA   | 2.78                     | 0.66              |
| 1:O:127:PHE:O    | 1:O:131:PRO:HD3  | 1.94                     | 0.66              |
| 1:P:277:THR:CG2  | 1:P:278:ALA:N    | 2.58                     | 0.66              |
| 1:Q:257:ASN:O    | 1:Q:258:VAL:C    | 2.33                     | 0.66              |
| 1:H:144:TYR:CE2  | 1:H:146:ALA:CA   | 2.79                     | 0.66              |
| 1:I:162:GLU:C    | 1:I:252:LEU:HD21 | 2.13                     | 0.66              |
| 1:I:277:THR:CG2  | 1:I:278:ALA:N    | 2.58                     | 0.66              |
| 1:K:162:GLU:C    | 1:K:252:LEU:HD21 | 2.13                     | 0.66              |
| 1:L:144:TYR:CE2  | 1:L:146:ALA:N    | 2.64                     | 0.66              |
| 1:M:144:TYR:HE2  | 1:M:146:ALA:CA   | 2.06                     | 0.66              |
| 1:P:144:TYR:HE2  | 1:P:146:ALA:N    | 1.94                     | 0.66              |
| 1:Q:170:ILE:HD13 | 1:Q:239:VAL:HG23 | 1.76                     | 0.66              |
| 1:Q:189:SER:HB2  | 1:Q:243:THR:HB   | 1.78                     | 0.66              |
| 1:F:170:ILE:HD13 | 1:F:239:VAL:HG23 | 1.76                     | 0.66              |
| 1:F:178:THR:H    | 1:F:182:ASN:HD22 | 1.41                     | 0.66              |
| 1:H:255:ARG:HD2  | 1:H:257:ASN:HD22 | 1.59                     | 0.66              |
| 1:I:257:ASN:O    | 1:I:258:VAL:C    | 2.33                     | 0.66              |
| 1:J:255:ARG:HD2  | 1:J:257:ASN:HD22 | 1.59                     | 0.66              |
| 1:K:277:THR:CG2  | 1:K:278:ALA:N    | 2.58                     | 0.66              |
| 1:L:285:MET:HE3  | 1:N:276:THR:CA   | 1.85                     | 0.66              |
| 1:O:205:ILE:HD11 | 1:P:104:GLN:CG   | 2.25                     | 0.66              |
| 1:Q:158:LEU:HD12 | 1:Q:224:LEU:CD2  | 2.23                     | 0.66              |
| 1:H:189:SER:HB2  | 1:H:243:THR:HB   | 1.77                     | 0.66              |
| 1:L:64:ASP:C     | 1:L:65:THR:CG2   | 2.51                     | 0.66              |
| 1:M:144:TYR:OH   | 1:M:146:ALA:HB2  | 1.95                     | 0.66              |
| 1:P:189:SER:HB2  | 1:P:243:THR:HB   | 1.78                     | 0.66              |
| 1:F:189:SER:HB2  | 1:F:243:THR:HB   | 1.78                     | 0.66              |
| 1:I:205:ILE:HD11 | 1:J:104:GLN:CG   | 2.25                     | 0.66              |
| 1:N:144:TYR:HD2  | 1:N:144:TYR:C    | 2.00                     | 0.66              |
| 1:F:257:ASN:O    | 1:F:258:VAL:C    | 2.33                     | 0.66              |
| 1:I:205:ILE:CD1  | 1:J:104:GLN:CD   | 2.47                     | 0.66              |
| 1:K:126:SER:CA   | 1:K:223:LYS:HZ1  | 2.00                     | 0.66              |
| 1:N:162:GLU:C    | 1:N:252:LEU:HD21 | 2.13                     | 0.66              |
| 1:O:126:SER:CA   | 1:O:223:LYS:NZ   | 2.55                     | 0.66              |
| 1:O:277:THR:CG2  | 1:O:278:ALA:N    | 2.58                     | 0.66              |
| 1:Q:178:THR:H    | 1:Q:182:ASN:HD22 | 1.41                     | 0.66              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:144:TYR:HE2  | 1:F:146:ALA:CA   | 2.08                     | 0.65              |
| 1:F:175:TYR:OH   | 1:F:237:LEU:HD22 | 1.96                     | 0.65              |
| 1:H:126:SER:CA   | 1:H:223:LYS:NZ   | 2.55                     | 0.65              |
| 1:L:293:TRP:CE3  | 1:L:297:TYR:HE1  | 2.11                     | 0.65              |
| 1:M:150:LEU:CD2  | 1:N:290:LYS:HA   | 2.24                     | 0.65              |
| 1:N:257:ASN:C    | 1:N:258:VAL:O    | 2.35                     | 0.65              |
| 1:O:64:ASP:C     | 1:O:65:THR:CG2   | 2.51                     | 0.65              |
| 1:O:162:GLU:O    | 1:O:252:LEU:CG   | 2.44                     | 0.65              |
| 1:O:162:GLU:HB3  | 1:O:253:GLY:C    | 2.15                     | 0.65              |
| 1:P:175:TYR:OH   | 1:P:237:LEU:HD22 | 1.96                     | 0.65              |
| 1:P:255:ARG:HD2  | 1:P:257:ASN:HD22 | 1.59                     | 0.65              |
| 1:Q:144:TYR:HE2  | 1:Q:146:ALA:N    | 1.94                     | 0.65              |
| 1:Q:277:THR:CG2  | 1:Q:278:ALA:N    | 2.58                     | 0.65              |
| 1:B:189:SER:HB2  | 1:B:243:THR:HB   | 1.78                     | 0.65              |
| 1:F:144:TYR:CE2  | 1:F:146:ALA:CA   | 2.79                     | 0.65              |
| 1:G:174:TYR:CE1  | 1:G:198:LEU:HD13 | 2.29                     | 0.65              |
| 1:H:174:TYR:CE1  | 1:H:198:LEU:HD13 | 2.29                     | 0.65              |
| 1:J:64:ASP:C     | 1:J:65:THR:CG2   | 2.51                     | 0.65              |
| 1:J:82:CYS:CA    | 1:J:135:CYS:SG   | 2.85                     | 0.65              |
| 1:J:175:TYR:OH   | 1:J:237:LEU:HD22 | 1.96                     | 0.65              |
| 1:M:64:ASP:C     | 1:M:65:THR:CG2   | 2.51                     | 0.65              |
| 1:N:277:THR:CG2  | 1:N:278:ALA:N    | 2.58                     | 0.65              |
| 1:O:257:ASN:O    | 1:O:258:VAL:C    | 2.33                     | 0.65              |
| 1:O:267:ASP:H    | 1:O:286:ARG:NH1  | 1.95                     | 0.65              |
| 1:B:162:GLU:C    | 1:B:252:LEU:HD21 | 2.13                     | 0.65              |
| 1:F:144:TYR:CE2  | 1:F:146:ALA:N    | 2.63                     | 0.65              |
| 1:G:257:ASN:C    | 1:G:258:VAL:O    | 2.35                     | 0.65              |
| 1:H:144:TYR:HE2  | 1:H:146:ALA:N    | 1.94                     | 0.65              |
| 1:H:263:VAL:HG12 | 1:H:289:TRP:HB2  | 1.76                     | 0.65              |
| 1:I:257:ASN:C    | 1:I:258:VAL:O    | 2.35                     | 0.65              |
| 1:J:144:TYR:OH   | 1:J:146:ALA:HB2  | 1.95                     | 0.65              |
| 1:K:162:GLU:O    | 1:K:252:LEU:CG   | 2.44                     | 0.65              |
| 1:L:257:ASN:C    | 1:L:258:VAL:O    | 2.35                     | 0.65              |
| 1:M:82:CYS:CA    | 1:M:135:CYS:SG   | 2.84                     | 0.65              |
| 1:M:267:ASP:H    | 1:M:286:ARG:NH1  | 1.95                     | 0.65              |
| 1:N:144:TYR:C    | 1:N:144:TYR:CD2  | 2.69                     | 0.65              |
| 1:P:130:ASP:OD1  | 1:P:130:ASP:O    | 2.15                     | 0.65              |
| 1:P:257:ASN:C    | 1:P:258:VAL:O    | 2.35                     | 0.65              |
| 1:B:257:ASN:C    | 1:B:258:VAL:O    | 2.35                     | 0.65              |
| 1:F:82:CYS:CA    | 1:F:135:CYS:SG   | 2.85                     | 0.65              |
| 1:G:144:TYR:HE2  | 1:G:146:ALA:N    | 1.95                     | 0.65              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:267:ASP:H    | 1:G:286:ARG:NH1  | 1.95                     | 0.65              |
| 1:J:167:PRO:O    | 1:L:117:TYR:HE2  | 1.77                     | 0.65              |
| 1:J:267:ASP:H    | 1:J:286:ARG:NH1  | 1.95                     | 0.65              |
| 1:L:144:TYR:CE2  | 1:L:146:ALA:CA   | 2.78                     | 0.65              |
| 1:M:175:TYR:OH   | 1:M:237:LEU:HD22 | 1.96                     | 0.65              |
| 1:N:82:CYS:CA    | 1:N:135:CYS:SG   | 2.85                     | 0.65              |
| 1:Q:175:TYR:OH   | 1:Q:237:LEU:HD22 | 1.96                     | 0.65              |
| 1:B:144:TYR:CE2  | 1:B:146:ALA:CA   | 2.79                     | 0.65              |
| 1:G:126:SER:CA   | 1:G:223:LYS:NZ   | 2.55                     | 0.65              |
| 1:G:293:TRP:CE3  | 1:G:297:TYR:HE1  | 2.12                     | 0.65              |
| 1:H:257:ASN:C    | 1:H:258:VAL:O    | 2.35                     | 0.65              |
| 1:O:175:TYR:OH   | 1:O:237:LEU:HD22 | 1.96                     | 0.65              |
| 1:P:255:ARG:HD2  | 1:P:257:ASN:ND2  | 2.12                     | 0.65              |
| 1:F:267:ASP:H    | 1:F:286:ARG:NH1  | 1.95                     | 0.65              |
| 1:G:162:GLU:O    | 1:G:252:LEU:CG   | 2.44                     | 0.65              |
| 1:J:229:VAL:HG12 | 1:J:235:HIS:HE1  | 1.52                     | 0.65              |
| 1:L:130:ASP:O    | 1:L:130:ASP:OD1  | 2.15                     | 0.65              |
| 1:L:162:GLU:O    | 1:L:252:LEU:CG   | 2.44                     | 0.65              |
| 1:L:189:SER:HB2  | 1:L:243:THR:HB   | 1.78                     | 0.65              |
| 1:O:255:ARG:CD   | 1:O:257:ASN:HD22 | 2.10                     | 0.65              |
| 1:Q:130:ASP:O    | 1:Q:130:ASP:OD1  | 2.15                     | 0.65              |
| 1:G:82:CYS:CA    | 1:G:135:CYS:SG   | 2.85                     | 0.65              |
| 1:G:255:ARG:CD   | 1:G:257:ASN:HD22 | 2.10                     | 0.65              |
| 1:I:82:CYS:CA    | 1:I:135:CYS:SG   | 2.84                     | 0.65              |
| 1:I:191:CYS:HG   | 1:I:244:CYS:CB   | 2.09                     | 0.65              |
| 1:M:257:ASN:C    | 1:M:258:VAL:O    | 2.35                     | 0.65              |
| 1:M:277:THR:CG2  | 1:M:278:ALA:N    | 2.58                     | 0.65              |
| 1:O:162:GLU:O    | 1:O:252:LEU:HD23 | 1.85                     | 0.65              |
| 1:G:205:ILE:HD11 | 1:H:104:GLN:CG   | 2.25                     | 0.65              |
| 1:H:255:ARG:HD2  | 1:H:257:ASN:ND2  | 2.12                     | 0.65              |
| 1:L:255:ARG:HD2  | 1:L:257:ASN:ND2  | 2.12                     | 0.65              |
| 1:M:162:GLU:O    | 1:M:252:LEU:CG   | 2.44                     | 0.65              |
| 1:I:130:ASP:O    | 1:I:130:ASP:OD1  | 2.15                     | 0.65              |
| 1:I:267:ASP:H    | 1:I:286:ARG:NH1  | 1.95                     | 0.65              |
| 1:M:126:SER:CA   | 1:M:223:LYS:NZ   | 2.55                     | 0.65              |
| 1:N:144:TYR:HE2  | 1:N:146:ALA:N    | 1.95                     | 0.65              |
| 1:N:162:GLU:O    | 1:N:252:LEU:CG   | 2.44                     | 0.65              |
| 1:O:82:CYS:CA    | 1:O:135:CYS:SG   | 2.85                     | 0.65              |
| 1:H:255:ARG:CD   | 1:H:257:ASN:HD22 | 2.10                     | 0.65              |
| 1:K:82:CYS:CA    | 1:K:135:CYS:SG   | 2.85                     | 0.65              |
| 1:M:78:THR:O     | 1:M:78:THR:HG22  | 1.97                     | 0.65              |

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| Atom-1          | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|-----------------|------------------|--------------------------|-------------------|
| 1:M:255:ARG:HD2 | 1:M:257:ASN:ND2  | 2.12                     | 0.65              |
| 1:P:267:ASP:H   | 1:P:286:ARG:NH1  | 1.95                     | 0.65              |
| 1:B:158:LEU:CD1 | 1:B:224:LEU:HD21 | 2.27                     | 0.64              |
| 1:F:255:ARG:CD  | 1:F:257:ASN:HD22 | 2.10                     | 0.64              |
| 1:G:130:ASP:O   | 1:G:130:ASP:OD1  | 2.15                     | 0.64              |
| 1:J:130:ASP:OD1 | 1:J:130:ASP:O    | 2.15                     | 0.64              |
| 1:J:257:ASN:O   | 1:J:258:VAL:C    | 2.33                     | 0.64              |
| 1:J:277:THR:CG2 | 1:J:278:ALA:N    | 2.58                     | 0.64              |
| 1:K:189:SER:HB2 | 1:K:243:THR:HB   | 1.78                     | 0.64              |
| 1:L:255:ARG:CD  | 1:L:257:ASN:HD22 | 2.10                     | 0.64              |
| 1:L:277:THR:CG2 | 1:L:278:ALA:N    | 2.58                     | 0.64              |
| 1:N:189:SER:HB2 | 1:N:243:THR:HB   | 1.77                     | 0.64              |
| 1:N:267:ASP:H   | 1:N:286:ARG:NH1  | 1.95                     | 0.64              |
| 1:O:257:ASN:C   | 1:O:258:VAL:O    | 2.35                     | 0.64              |
| 1:B:162:GLU:O   | 1:B:252:LEU:CG   | 2.44                     | 0.64              |
| 1:B:175:TYR:OH  | 1:B:237:LEU:HD22 | 1.96                     | 0.64              |
| 1:J:255:ARG:CD  | 1:J:257:ASN:HD22 | 2.10                     | 0.64              |
| 1:L:82:CYS:CA   | 1:L:135:CYS:SG   | 2.84                     | 0.64              |
| 1:Q:255:ARG:HD2 | 1:Q:257:ASN:ND2  | 2.12                     | 0.64              |
| 1:Q:255:ARG:CD  | 1:Q:257:ASN:HD22 | 2.10                     | 0.64              |
| 1:F:255:ARG:HD2 | 1:F:257:ASN:ND2  | 2.12                     | 0.64              |
| 1:G:255:ARG:HD2 | 1:G:257:ASN:ND2  | 2.12                     | 0.64              |
| 1:H:125:ALA:CB  | 1:H:223:LYS:CD   | 2.53                     | 0.64              |
| 1:H:162:GLU:O   | 1:H:252:LEU:CG   | 2.44                     | 0.64              |
| 1:J:144:TYR:CE2 | 1:J:146:ALA:N    | 2.66                     | 0.64              |
| 1:J:162:GLU:O   | 1:J:252:LEU:CG   | 2.44                     | 0.64              |
| 1:K:144:TYR:OH  | 1:K:146:ALA:HB2  | 1.97                     | 0.64              |
| 1:L:104:GLN:CD  | 1:N:205:ILE:CD1  | 2.47                     | 0.64              |
| 1:L:125:ALA:CB  | 1:L:223:LYS:CD   | 2.53                     | 0.64              |
| 1:B:126:SER:CA  | 1:B:223:LYS:NZ   | 2.55                     | 0.64              |
| 1:K:175:TYR:OH  | 1:K:237:LEU:HD22 | 1.96                     | 0.64              |
| 1:N:255:ARG:HD2 | 1:N:257:ASN:ND2  | 2.12                     | 0.64              |
| 1:P:82:CYS:CA   | 1:P:135:CYS:SG   | 2.85                     | 0.64              |
| 1:B:82:CYS:CA   | 1:B:135:CYS:SG   | 2.85                     | 0.64              |
| 1:J:255:ARG:HD2 | 1:J:257:ASN:ND2  | 2.12                     | 0.64              |
| 1:K:267:ASP:H   | 1:K:286:ARG:NH1  | 1.95                     | 0.64              |
| 1:L:158:LEU:CD1 | 1:L:224:LEU:HD21 | 2.27                     | 0.64              |
| 1:Q:82:CYS:CA   | 1:Q:135:CYS:SG   | 2.85                     | 0.64              |
| 1:I:64:ASP:C    | 1:I:65:THR:CG2   | 2.51                     | 0.64              |
| 1:J:189:SER:HB2 | 1:J:243:THR:HB   | 1.78                     | 0.64              |
| 1:K:255:ARG:HD2 | 1:K:257:ASN:ND2  | 2.12                     | 0.64              |

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| Atom-1          | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|-----------------|------------------|--------------------------|-------------------|
| 1:M:189:SER:HB2 | 1:M:243:THR:HB   | 1.78                     | 0.64              |
| 1:P:144:TYR:CE2 | 1:P:146:ALA:N    | 2.66                     | 0.64              |
| 1:F:162:GLU:O   | 1:F:252:LEU:CG   | 2.44                     | 0.64              |
| 1:H:82:CYS:CA   | 1:H:135:CYS:SG   | 2.85                     | 0.64              |
| 1:H:144:TYR:CE2 | 1:H:146:ALA:N    | 2.66                     | 0.64              |
| 1:H:162:GLU:C   | 1:H:252:LEU:HD21 | 2.13                     | 0.64              |
| 1:K:130:ASP:OD1 | 1:K:130:ASP:O    | 2.15                     | 0.64              |
| 1:O:130:ASP:O   | 1:O:130:ASP:OD1  | 2.15                     | 0.64              |
| 1:O:285:MET:HE3 | 1:Q:276:THR:CA   | 1.80                     | 0.64              |
| 1:B:255:ARG:CD  | 1:B:257:ASN:HD22 | 2.10                     | 0.64              |
| 1:B:311:SER:O   | 1:B:312:LYS:HB2  | 1.98                     | 0.64              |
| 1:F:66:ALA:O    | 1:F:67:TYR:C     | 2.35                     | 0.64              |
| 1:F:130:ASP:OD1 | 1:F:130:ASP:O    | 2.15                     | 0.64              |
| 1:H:130:ASP:OD1 | 1:H:130:ASP:O    | 2.15                     | 0.64              |
| 1:I:285:MET:HG3 | 1:I:286:ARG:N    | 2.13                     | 0.64              |
| 1:K:126:SER:CA  | 1:K:223:LYS:NZ   | 2.55                     | 0.64              |
| 1:L:175:TYR:OH  | 1:L:237:LEU:HD22 | 1.96                     | 0.64              |
| 1:M:130:ASP:OD1 | 1:M:130:ASP:O    | 2.15                     | 0.64              |
| 1:B:70:SER:O    | 1:B:71:THR:CB    | 2.45                     | 0.64              |
| 1:B:267:ASP:H   | 1:B:286:ARG:NH1  | 1.95                     | 0.64              |
| 1:F:311:SER:O   | 1:F:312:LYS:HB2  | 1.98                     | 0.64              |
| 1:G:311:SER:O   | 1:G:312:LYS:HB2  | 1.98                     | 0.64              |
| 1:H:251:LYS:O   | 1:H:252:LEU:CB   | 2.46                     | 0.64              |
| 1:I:126:SER:CA  | 1:I:223:LYS:HZ1  | 1.98                     | 0.64              |
| 1:L:267:ASP:H   | 1:L:286:ARG:NH1  | 1.95                     | 0.64              |
| 1:L:285:MET:HG3 | 1:L:286:ARG:N    | 2.13                     | 0.64              |
| 1:M:285:MET:HG3 | 1:M:286:ARG:N    | 2.13                     | 0.64              |
| 1:N:255:ARG:CD  | 1:N:257:ASN:HD22 | 2.10                     | 0.64              |
| 1:N:285:MET:HG3 | 1:N:286:ARG:N    | 2.13                     | 0.64              |
| 1:H:175:TYR:OH  | 1:H:237:LEU:HD22 | 1.96                     | 0.64              |
| 1:I:175:TYR:OH  | 1:I:237:LEU:HD22 | 1.96                     | 0.64              |
| 1:I:255:ARG:CD  | 1:I:257:ASN:HD22 | 2.10                     | 0.64              |
| 1:J:285:MET:HG3 | 1:J:286:ARG:N    | 2.13                     | 0.64              |
| 1:K:255:ARG:CD  | 1:K:257:ASN:HD22 | 2.10                     | 0.64              |
| 1:H:267:ASP:H   | 1:H:286:ARG:NH1  | 1.95                     | 0.63              |
| 1:I:255:ARG:HD2 | 1:I:257:ASN:ND2  | 2.12                     | 0.63              |
| 1:N:130:ASP:OD1 | 1:N:130:ASP:O    | 2.15                     | 0.63              |
| 1:N:167:PRO:HG3 | 1:P:134:TYR:HH   | 1.56                     | 0.63              |
| 1:P:255:ARG:CD  | 1:P:257:ASN:HD22 | 2.10                     | 0.63              |
| 1:P:257:ASN:O   | 1:P:258:VAL:C    | 2.33                     | 0.63              |
| 1:P:285:MET:HG3 | 1:P:286:ARG:N    | 2.13                     | 0.63              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:255:ARG:HD2  | 1:B:257:ASN:ND2  | 2.12                     | 0.63              |
| 1:J:150:LEU:HD12 | 1:K:288:ASN:CG   | 2.08                     | 0.63              |
| 1:J:257:ASN:C    | 1:J:258:VAL:O    | 2.35                     | 0.63              |
| 1:M:255:ARG:CD   | 1:M:257:ASN:HD22 | 2.10                     | 0.63              |
| 1:O:255:ARG:HD2  | 1:O:257:ASN:ND2  | 2.12                     | 0.63              |
| 1:F:159:ILE:HG22 | 1:F:258:VAL:CG2  | 1.98                     | 0.63              |
| 1:K:311:SER:O    | 1:K:312:LYS:HB2  | 1.98                     | 0.63              |
| 1:O:285:MET:HG3  | 1:O:286:ARG:N    | 2.13                     | 0.63              |
| 1:Q:267:ASP:H    | 1:Q:286:ARG:NH1  | 1.95                     | 0.63              |
| 1:G:144:TYR:CE2  | 1:G:146:ALA:N    | 2.66                     | 0.63              |
| 1:G:277:THR:CG2  | 1:G:278:ALA:N    | 2.58                     | 0.63              |
| 1:H:311:SER:O    | 1:H:312:LYS:HB2  | 1.98                     | 0.63              |
| 1:I:170:ILE:HG12 | 1:I:175:TYR:OH   | 1.99                     | 0.63              |
| 1:M:125:ALA:CB   | 1:M:223:LYS:CD   | 2.53                     | 0.63              |
| 1:N:175:TYR:OH   | 1:N:237:LEU:HD22 | 1.96                     | 0.63              |
| 1:O:162:GLU:C    | 1:O:252:LEU:HD21 | 2.13                     | 0.63              |
| 1:Q:162:GLU:O    | 1:Q:252:LEU:CG   | 2.44                     | 0.63              |
| 1:B:130:ASP:OD1  | 1:B:130:ASP:O    | 2.15                     | 0.63              |
| 1:G:168:MET:HE3  | 1:G:175:TYR:CG   | 2.33                     | 0.63              |
| 1:G:170:ILE:HG12 | 1:G:175:TYR:OH   | 1.99                     | 0.63              |
| 1:G:285:MET:HG3  | 1:G:286:ARG:N    | 2.13                     | 0.63              |
| 1:H:170:ILE:HG12 | 1:H:175:TYR:OH   | 1.99                     | 0.63              |
| 1:I:162:GLU:O    | 1:I:252:LEU:CG   | 2.44                     | 0.63              |
| 1:N:311:SER:O    | 1:N:312:LYS:HB2  | 1.98                     | 0.63              |
| 1:Q:144:TYR:CE2  | 1:Q:146:ALA:N    | 2.66                     | 0.63              |
| 1:H:144:TYR:C    | 1:H:144:TYR:CD2  | 2.72                     | 0.63              |
| 1:K:128:SER:CB   | 1:K:155:LEU:CD1  | 2.63                     | 0.63              |
| 1:K:285:MET:HG3  | 1:K:286:ARG:N    | 2.13                     | 0.63              |
| 1:M:162:GLU:C    | 1:M:252:LEU:HD21 | 2.13                     | 0.63              |
| 1:N:144:TYR:CE2  | 1:N:146:ALA:N    | 2.66                     | 0.63              |
| 1:N:170:ILE:HG12 | 1:N:175:TYR:OH   | 1.99                     | 0.63              |
| 1:O:268:VAL:CG1  | 1:P:267:ASP:O    | 2.46                     | 0.63              |
| 1:P:76:PHE:HD2   | 1:P:110:GLY:O    | 1.82                     | 0.63              |
| 1:P:162:GLU:O    | 1:P:252:LEU:CG   | 2.44                     | 0.63              |
| 1:P:311:SER:O    | 1:P:312:LYS:HB2  | 1.98                     | 0.63              |
| 1:B:168:MET:HE1  | 1:B:175:TYR:CZ   | 2.13                     | 0.63              |
| 1:F:126:SER:HA   | 1:F:223:LYS:HZ2  | 1.63                     | 0.63              |
| 1:F:144:TYR:C    | 1:F:144:TYR:CD2  | 2.72                     | 0.63              |
| 1:G:76:PHE:HD2   | 1:G:110:GLY:O    | 1.82                     | 0.63              |
| 1:J:170:ILE:HG12 | 1:J:175:TYR:OH   | 1.99                     | 0.63              |
| 1:M:170:ILE:HG12 | 1:M:175:TYR:OH   | 1.99                     | 0.63              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:285:MET:HG3  | 1:B:286:ARG:N    | 2.13                     | 0.63              |
| 1:F:285:MET:HG3  | 1:F:286:ARG:N    | 2.13                     | 0.63              |
| 1:K:170:ILE:HG12 | 1:K:175:TYR:OH   | 1.99                     | 0.63              |
| 1:P:150:LEU:CD2  | 1:Q:290:LYS:CE   | 2.77                     | 0.63              |
| 1:B:123:ASP:OD1  | 1:B:126:SER:CB   | 2.47                     | 0.63              |
| 1:F:76:PHE:HD2   | 1:F:110:GLY:O    | 1.82                     | 0.63              |
| 1:F:257:ASN:C    | 1:F:258:VAL:O    | 2.35                     | 0.63              |
| 1:J:76:PHE:HD2   | 1:J:110:GLY:O    | 1.82                     | 0.63              |
| 1:L:78:THR:HG22  | 1:L:78:THR:O     | 1.99                     | 0.63              |
| 1:Q:76:PHE:HD2   | 1:Q:110:GLY:O    | 1.82                     | 0.63              |
| 1:Q:125:ALA:C    | 1:Q:223:LYS:HZ2  | 2.01                     | 0.63              |
| 1:Q:257:ASN:C    | 1:Q:258:VAL:O    | 2.35                     | 0.63              |
| 1:K:76:PHE:HD2   | 1:K:110:GLY:O    | 1.82                     | 0.62              |
| 1:L:76:PHE:HD2   | 1:L:110:GLY:O    | 1.82                     | 0.62              |
| 1:M:311:SER:O    | 1:M:312:LYS:HB2  | 1.98                     | 0.62              |
| 1:O:311:SER:O    | 1:O:312:LYS:HB2  | 1.98                     | 0.62              |
| 1:G:150:LEU:CD2  | 1:H:290:LYS:CE   | 2.77                     | 0.62              |
| 1:M:76:PHE:HD2   | 1:M:110:GLY:O    | 1.82                     | 0.62              |
| 1:N:87:THR:HG1   | 1:N:122:THR:HG22 | 1.62                     | 0.62              |
| 1:Q:311:SER:O    | 1:Q:312:LYS:HB2  | 1.98                     | 0.62              |
| 1:B:76:PHE:HD2   | 1:B:110:GLY:O    | 1.82                     | 0.62              |
| 1:I:123:ASP:OD1  | 1:I:126:SER:CB   | 2.47                     | 0.62              |
| 1:B:127:PHE:O    | 1:B:131:PRO:CB   | 2.48                     | 0.62              |
| 1:B:170:ILE:HG12 | 1:B:175:TYR:OH   | 1.99                     | 0.62              |
| 1:F:125:ALA:C    | 1:F:223:LYS:HZ2  | 2.03                     | 0.62              |
| 1:J:311:SER:O    | 1:J:312:LYS:HB2  | 1.98                     | 0.62              |
| 1:L:311:SER:O    | 1:L:312:LYS:HB2  | 1.98                     | 0.62              |
| 1:N:123:ASP:OD1  | 1:N:126:SER:CB   | 2.47                     | 0.62              |
| 1:O:76:PHE:HD2   | 1:O:110:GLY:O    | 1.82                     | 0.62              |
| 1:O:150:LEU:CD2  | 1:P:290:LYS:CE   | 2.77                     | 0.62              |
| 1:Q:170:ILE:HG12 | 1:Q:175:TYR:OH   | 1.99                     | 0.62              |
| 1:B:307:ILE:HD13 | 1:B:310:MET:CE   | 2.30                     | 0.62              |
| 1:F:288:ASN:CG   | 1:H:150:LEU:HD12 | 2.08                     | 0.62              |
| 1:G:128:SER:CB   | 1:G:155:LEU:CD1  | 2.63                     | 0.62              |
| 1:G:268:VAL:CG1  | 1:H:267:ASP:O    | 2.46                     | 0.62              |
| 1:J:123:ASP:OD1  | 1:J:126:SER:CB   | 2.47                     | 0.62              |
| 1:K:127:PHE:O    | 1:K:131:PRO:CB   | 2.48                     | 0.62              |
| 1:L:307:ILE:HD13 | 1:L:310:MET:CE   | 2.30                     | 0.62              |
| 1:M:125:ALA:C    | 1:M:223:LYS:HZ2  | 2.02                     | 0.62              |
| 1:O:307:ILE:HD13 | 1:O:310:MET:CE   | 2.30                     | 0.62              |
| 1:F:268:VAL:CG1  | 1:G:267:ASP:O    | 2.46                     | 0.62              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:126:SER:HA   | 1:G:223:LYS:HZ2  | 1.63                     | 0.62              |
| 1:H:123:ASP:OD1  | 1:H:126:SER:CB   | 2.47                     | 0.62              |
| 1:K:257:ASN:C    | 1:K:258:VAL:O    | 2.35                     | 0.62              |
| 1:L:144:TYR:C    | 1:L:144:TYR:CD2  | 2.73                     | 0.62              |
| 1:P:127:PHE:O    | 1:P:131:PRO:CB   | 2.48                     | 0.62              |
| 1:Q:307:ILE:HD13 | 1:Q:310:MET:CE   | 2.30                     | 0.62              |
| 1:F:170:ILE:HG12 | 1:F:175:TYR:OH   | 1.99                     | 0.62              |
| 1:G:162:GLU:C    | 1:G:252:LEU:HD21 | 2.13                     | 0.62              |
| 1:K:158:LEU:CD1  | 1:K:224:LEU:HD21 | 2.27                     | 0.62              |
| 1:Q:285:MET:HG3  | 1:Q:286:ARG:N    | 2.13                     | 0.62              |
| 1:F:290:LYS:CE   | 1:H:150:LEU:CD2  | 2.77                     | 0.62              |
| 1:G:123:ASP:OD1  | 1:G:126:SER:CB   | 2.47                     | 0.62              |
| 1:K:307:ILE:HD13 | 1:K:310:MET:CE   | 2.30                     | 0.62              |
| 1:M:123:ASP:OD1  | 1:M:126:SER:CB   | 2.47                     | 0.62              |
| 1:M:128:SER:CB   | 1:M:155:LEU:CD1  | 2.63                     | 0.62              |
| 1:O:127:PHE:O    | 1:O:131:PRO:CB   | 2.48                     | 0.62              |
| 1:O:170:ILE:HG12 | 1:O:175:TYR:OH   | 1.99                     | 0.62              |
| 1:F:258:VAL:O    | 1:F:310:MET:HG2  | 2.00                     | 0.62              |
| 1:G:64:ASP:C     | 1:G:65:THR:CG2   | 2.51                     | 0.62              |
| 1:H:285:MET:HG3  | 1:H:286:ARG:N    | 2.13                     | 0.62              |
| 1:L:170:ILE:HG12 | 1:L:175:TYR:OH   | 1.99                     | 0.62              |
| 1:N:158:LEU:CD1  | 1:N:224:LEU:HD21 | 2.27                     | 0.62              |
| 1:N:258:VAL:O    | 1:N:310:MET:HG2  | 2.00                     | 0.62              |
| 1:O:121:TYR:CB   | 1:O:127:PHE:HB2  | 2.30                     | 0.62              |
| 1:P:123:ASP:OD1  | 1:P:126:SER:CB   | 2.47                     | 0.62              |
| 1:P:170:ILE:HG12 | 1:P:175:TYR:OH   | 1.99                     | 0.62              |
| 1:Q:251:LYS:O    | 1:Q:252:LEU:CB   | 2.46                     | 0.62              |
| 1:B:258:VAL:O    | 1:B:310:MET:HG2  | 2.00                     | 0.62              |
| 1:F:150:LEU:CD2  | 1:G:290:LYS:CE   | 2.77                     | 0.62              |
| 1:G:121:TYR:CB   | 1:G:127:PHE:HB2  | 2.30                     | 0.62              |
| 1:G:175:TYR:OH   | 1:G:237:LEU:HD22 | 1.96                     | 0.62              |
| 1:I:150:LEU:CD2  | 1:J:290:LYS:CE   | 2.77                     | 0.62              |
| 1:I:258:VAL:O    | 1:I:310:MET:HG2  | 2.00                     | 0.62              |
| 1:I:311:SER:O    | 1:I:312:LYS:HB2  | 1.98                     | 0.62              |
| 1:J:127:PHE:O    | 1:J:131:PRO:CB   | 2.48                     | 0.62              |
| 1:J:158:LEU:CD1  | 1:J:224:LEU:HD21 | 2.27                     | 0.62              |
| 1:M:276:THR:CA   | 1:N:285:MET:HE3  | 1.95                     | 0.62              |
| 1:F:126:SER:CA   | 1:F:223:LYS:NZ   | 2.55                     | 0.61              |
| 1:H:307:ILE:HD13 | 1:H:310:MET:CE   | 2.30                     | 0.61              |
| 1:K:174:TYR:CD1  | 1:K:198:LEU:HD11 | 2.34                     | 0.61              |
| 1:I:76:PHE:HD2   | 1:I:110:GLY:O    | 1.82                     | 0.61              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:127:PHE:O    | 1:I:131:PRO:CB   | 2.48                     | 0.61              |
| 1:I:267:ASP:O    | 1:K:268:VAL:CG1  | 2.46                     | 0.61              |
| 1:J:307:ILE:HD13 | 1:J:310:MET:CE   | 2.30                     | 0.61              |
| 1:K:123:ASP:OD1  | 1:K:126:SER:CB   | 2.47                     | 0.61              |
| 1:L:123:ASP:OD1  | 1:L:126:SER:CB   | 2.47                     | 0.61              |
| 1:N:127:PHE:O    | 1:N:131:PRO:CB   | 2.48                     | 0.61              |
| 1:N:307:ILE:HD13 | 1:N:310:MET:CE   | 2.30                     | 0.61              |
| 1:Q:123:ASP:OD1  | 1:Q:126:SER:CB   | 2.47                     | 0.61              |
| 1:I:121:TYR:CB   | 1:I:127:PHE:HB2  | 2.30                     | 0.61              |
| 1:I:197:PRO:HG2  | 1:I:205:ILE:CG2  | 2.31                     | 0.61              |
| 1:I:307:ILE:HD13 | 1:I:310:MET:CE   | 2.30                     | 0.61              |
| 1:J:258:VAL:O    | 1:J:310:MET:HG2  | 2.00                     | 0.61              |
| 1:N:76:PHE:HD2   | 1:N:110:GLY:O    | 1.82                     | 0.61              |
| 1:O:123:ASP:OD1  | 1:O:126:SER:CB   | 2.47                     | 0.61              |
| 1:O:197:PRO:HG2  | 1:O:205:ILE:CG2  | 2.31                     | 0.61              |
| 1:P:174:TYR:CD1  | 1:P:198:LEU:HD11 | 2.34                     | 0.61              |
| 1:P:307:ILE:HD13 | 1:P:310:MET:CE   | 2.30                     | 0.61              |
| 1:G:197:PRO:HG2  | 1:G:205:ILE:CG2  | 2.31                     | 0.61              |
| 1:H:197:PRO:HG2  | 1:H:205:ILE:CG2  | 2.31                     | 0.61              |
| 1:J:197:PRO:HG2  | 1:J:205:ILE:CG2  | 2.31                     | 0.61              |
| 1:K:258:VAL:O    | 1:K:310:MET:HG2  | 2.00                     | 0.61              |
| 1:M:197:PRO:HG2  | 1:M:205:ILE:CG2  | 2.31                     | 0.61              |
| 1:M:251:LYS:O    | 1:M:252:LEU:CB   | 2.46                     | 0.61              |
| 1:N:197:PRO:HG2  | 1:N:205:ILE:CG2  | 2.31                     | 0.61              |
| 1:P:258:VAL:O    | 1:P:310:MET:HG2  | 2.00                     | 0.61              |
| 1:Q:127:PHE:O    | 1:Q:131:PRO:CB   | 2.48                     | 0.61              |
| 1:F:123:ASP:OD1  | 1:F:126:SER:CB   | 2.47                     | 0.61              |
| 1:F:197:PRO:HG2  | 1:F:205:ILE:CG2  | 2.31                     | 0.61              |
| 1:H:127:PHE:O    | 1:H:131:PRO:CB   | 2.48                     | 0.61              |
| 1:J:174:TYR:CD1  | 1:J:198:LEU:HD13 | 2.34                     | 0.61              |
| 1:L:258:VAL:O    | 1:L:310:MET:HG2  | 2.00                     | 0.61              |
| 1:M:127:PHE:O    | 1:M:131:PRO:CB   | 2.48                     | 0.61              |
| 1:F:150:LEU:HG   | 1:G:290:LYS:HE2  | 1.83                     | 0.61              |
| 1:G:150:LEU:HG   | 1:H:290:LYS:HE2  | 1.83                     | 0.61              |
| 1:G:258:VAL:O    | 1:G:310:MET:HG2  | 2.00                     | 0.61              |
| 1:I:150:LEU:HG   | 1:J:290:LYS:HE2  | 1.83                     | 0.61              |
| 1:I:158:LEU:CD1  | 1:I:224:LEU:HD21 | 2.27                     | 0.61              |
| 1:K:197:PRO:HG2  | 1:K:205:ILE:CG2  | 2.31                     | 0.61              |
| 1:L:127:PHE:O    | 1:L:131:PRO:CB   | 2.48                     | 0.61              |
| 1:L:237:LEU:CD2  | 1:L:246:ILE:HD13 | 2.31                     | 0.61              |
| 1:M:268:VAL:CG1  | 1:N:267:ASP:O    | 2.46                     | 0.61              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:M:307:ILE:HD13 | 1:M:310:MET:CE   | 2.30                     | 0.61              |
| 1:Q:197:PRO:HG2  | 1:Q:205:ILE:CG2  | 2.31                     | 0.61              |
| 1:Q:258:VAL:O    | 1:Q:310:MET:HG2  | 2.00                     | 0.61              |
| 1:B:128:SER:CB   | 1:B:155:LEU:CD1  | 2.63                     | 0.61              |
| 1:F:127:PHE:O    | 1:F:131:PRO:CB   | 2.48                     | 0.61              |
| 1:G:276:THR:CA   | 1:H:285:MET:HE3  | 1.92                     | 0.61              |
| 1:H:158:LEU:CD1  | 1:H:224:LEU:HD21 | 2.27                     | 0.61              |
| 1:J:150:LEU:HG   | 1:K:290:LYS:HE2  | 1.83                     | 0.61              |
| 1:J:237:LEU:CD2  | 1:J:246:ILE:HD13 | 2.31                     | 0.61              |
| 1:K:125:ALA:CB   | 1:K:223:LYS:CD   | 2.53                     | 0.61              |
| 1:L:126:SER:CA   | 1:L:223:LYS:NZ   | 2.55                     | 0.61              |
| 1:O:150:LEU:HD22 | 1:P:290:LYS:HA   | 1.83                     | 0.61              |
| 1:P:276:THR:CA   | 1:Q:285:MET:HE3  | 1.93                     | 0.61              |
| 1:F:64:ASP:C     | 1:F:65:THR:CG2   | 2.51                     | 0.61              |
| 1:G:127:PHE:O    | 1:G:131:PRO:CB   | 2.48                     | 0.61              |
| 1:G:307:ILE:HD13 | 1:G:310:MET:CE   | 2.30                     | 0.61              |
| 1:H:76:PHE:HD2   | 1:H:110:GLY:O    | 1.82                     | 0.61              |
| 1:L:197:PRO:HG2  | 1:L:205:ILE:CG2  | 2.31                     | 0.61              |
| 1:P:126:SER:CA   | 1:P:223:LYS:NZ   | 2.55                     | 0.61              |
| 1:P:197:PRO:HG2  | 1:P:205:ILE:CG2  | 2.31                     | 0.61              |
| 1:F:290:LYS:HE2  | 1:H:150:LEU:HG   | 1.83                     | 0.61              |
| 1:I:150:LEU:HD22 | 1:J:290:LYS:HA   | 1.83                     | 0.61              |
| 1:J:144:TYR:C    | 1:J:144:TYR:CD2  | 2.74                     | 0.61              |
| 1:N:237:LEU:CD2  | 1:N:246:ILE:HD13 | 2.31                     | 0.61              |
| 1:P:237:LEU:CD2  | 1:P:246:ILE:HD13 | 2.31                     | 0.61              |
| 1:F:149:GLN:CD   | 1:G:265:GLY:O    | 2.39                     | 0.61              |
| 1:H:144:TYR:HD2  | 1:H:144:TYR:C    | 2.04                     | 0.61              |
| 1:H:237:LEU:CD2  | 1:H:246:ILE:HD13 | 2.31                     | 0.61              |
| 1:J:268:VAL:CG1  | 1:K:267:ASP:O    | 2.46                     | 0.61              |
| 1:O:258:VAL:O    | 1:O:310:MET:HG2  | 2.00                     | 0.61              |
| 1:P:158:LEU:CD1  | 1:P:224:LEU:HD21 | 2.27                     | 0.61              |
| 1:B:126:SER:CA   | 1:B:223:LYS:HZ1  | 2.03                     | 0.60              |
| 1:H:258:VAL:O    | 1:H:310:MET:HG2  | 2.00                     | 0.60              |
| 1:J:162:GLU:C    | 1:J:252:LEU:HD21 | 2.13                     | 0.60              |
| 1:K:121:TYR:CB   | 1:K:127:PHE:HB2  | 2.30                     | 0.60              |
| 1:L:150:LEU:CD2  | 1:M:290:LYS:CE   | 2.77                     | 0.60              |
| 1:N:125:ALA:C    | 1:N:223:LYS:HZ2  | 2.04                     | 0.60              |
| 1:Q:237:LEU:CD2  | 1:Q:246:ILE:HD13 | 2.31                     | 0.60              |
| 1:B:197:PRO:HG2  | 1:B:205:ILE:CG2  | 2.31                     | 0.60              |
| 1:G:125:ALA:C    | 1:G:223:LYS:HZ2  | 2.03                     | 0.60              |
| 1:G:150:LEU:HD22 | 1:H:290:LYS:HA   | 1.83                     | 0.60              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:L:290:LYS:HA   | 1:N:150:LEU:HD22 | 1.83                     | 0.60              |
| 1:G:158:LEU:CD1  | 1:G:224:LEU:HD21 | 2.27                     | 0.60              |
| 1:P:174:TYR:CD1  | 1:P:198:LEU:HD13 | 2.34                     | 0.60              |
| 1:F:222:GLU:HB2  | 1:F:225:VAL:HG23 | 1.84                     | 0.60              |
| 1:F:265:GLY:O    | 1:H:149:GLN:CD   | 2.39                     | 0.60              |
| 1:I:222:GLU:HB2  | 1:I:225:VAL:HG23 | 1.84                     | 0.60              |
| 1:M:174:TYR:CD1  | 1:M:198:LEU:HD11 | 2.34                     | 0.60              |
| 1:N:222:GLU:HB2  | 1:N:225:VAL:HG23 | 1.84                     | 0.60              |
| 1:B:257:ASN:O    | 1:B:258:VAL:C    | 2.33                     | 0.60              |
| 1:F:307:ILE:HA   | 1:F:310:MET:CE   | 2.32                     | 0.60              |
| 1:F:307:ILE:HD13 | 1:F:310:MET:CE   | 2.30                     | 0.60              |
| 1:O:150:LEU:HG   | 1:P:290:LYS:HE2  | 1.83                     | 0.60              |
| 1:F:237:LEU:CD2  | 1:F:246:ILE:HD13 | 2.31                     | 0.60              |
| 1:I:174:TYR:CD1  | 1:I:198:LEU:HD11 | 2.34                     | 0.60              |
| 1:J:150:LEU:HD22 | 1:K:290:LYS:HA   | 1.83                     | 0.60              |
| 1:L:307:ILE:HA   | 1:L:310:MET:CE   | 2.32                     | 0.60              |
| 1:M:307:ILE:HA   | 1:M:310:MET:CE   | 2.32                     | 0.60              |
| 1:N:307:ILE:HA   | 1:N:310:MET:CE   | 2.32                     | 0.60              |
| 1:O:237:LEU:CD2  | 1:O:246:ILE:HD13 | 2.31                     | 0.60              |
| 1:P:170:ILE:HD13 | 1:P:239:VAL:CG2  | 2.32                     | 0.60              |
| 1:B:237:LEU:CD2  | 1:B:246:ILE:HD13 | 2.31                     | 0.60              |
| 1:F:175:TYR:CE1  | 1:F:237:LEU:HD22 | 2.37                     | 0.60              |
| 1:H:121:TYR:CB   | 1:H:127:PHE:HB2  | 2.30                     | 0.60              |
| 1:I:170:ILE:HD13 | 1:I:239:VAL:CG2  | 2.32                     | 0.60              |
| 1:J:222:GLU:HB2  | 1:J:225:VAL:HG23 | 1.84                     | 0.60              |
| 1:K:307:ILE:HA   | 1:K:310:MET:CE   | 2.32                     | 0.60              |
| 1:L:150:LEU:HD22 | 1:M:290:LYS:HA   | 1.83                     | 0.60              |
| 1:M:258:VAL:O    | 1:M:310:MET:HG2  | 2.00                     | 0.60              |
| 1:O:170:ILE:HD13 | 1:O:239:VAL:CG2  | 2.32                     | 0.60              |
| 1:B:78:THR:O     | 1:B:78:THR:HG22  | 2.02                     | 0.60              |
| 1:B:121:TYR:CB   | 1:B:127:PHE:HB2  | 2.30                     | 0.60              |
| 1:F:158:LEU:CD1  | 1:F:224:LEU:HD21 | 2.27                     | 0.60              |
| 1:I:175:TYR:CE1  | 1:I:237:LEU:HD22 | 2.37                     | 0.60              |
| 1:L:222:GLU:HB2  | 1:L:225:VAL:HG23 | 1.84                     | 0.60              |
| 1:M:149:GLN:CD   | 1:N:265:GLY:O    | 2.39                     | 0.60              |
| 1:M:237:LEU:CD2  | 1:M:246:ILE:HD13 | 2.31                     | 0.60              |
| 1:O:290:LYS:HA   | 1:Q:150:LEU:HD22 | 1.83                     | 0.60              |
| 1:Q:121:TYR:CB   | 1:Q:127:PHE:HB2  | 2.30                     | 0.60              |
| 1:B:222:GLU:HB2  | 1:B:225:VAL:HG23 | 1.84                     | 0.60              |
| 1:H:170:ILE:CD1  | 1:H:239:VAL:CG2  | 2.80                     | 0.60              |
| 1:J:175:TYR:CE1  | 1:J:237:LEU:HD22 | 2.37                     | 0.60              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:222:GLU:HB2  | 1:K:225:VAL:HG23 | 1.84                     | 0.60              |
| 1:L:150:LEU:HG   | 1:M:290:LYS:HE2  | 1.83                     | 0.60              |
| 1:L:265:GLY:O    | 1:N:149:GLN:CD   | 2.39                     | 0.60              |
| 1:M:150:LEU:HD22 | 1:N:290:LYS:HA   | 1.83                     | 0.60              |
| 1:M:222:GLU:HB2  | 1:M:225:VAL:HG23 | 1.84                     | 0.60              |
| 1:O:288:ASN:CG   | 1:Q:150:LEU:HD12 | 2.08                     | 0.60              |
| 1:O:290:LYS:CE   | 1:Q:150:LEU:CD2  | 2.77                     | 0.60              |
| 1:P:128:SER:CB   | 1:P:155:LEU:CD1  | 2.63                     | 0.60              |
| 1:Q:307:ILE:HA   | 1:Q:310:MET:CE   | 2.32                     | 0.60              |
| 1:B:70:SER:O     | 1:B:71:THR:OG1   | 2.20                     | 0.60              |
| 1:B:125:ALA:C    | 1:B:223:LYS:HZ2  | 2.06                     | 0.60              |
| 1:F:144:TYR:CD2  | 1:F:145:ASP:N    | 2.65                     | 0.60              |
| 1:F:267:ASP:O    | 1:H:268:VAL:CG1  | 2.46                     | 0.60              |
| 1:G:170:ILE:HD13 | 1:G:239:VAL:CG2  | 2.32                     | 0.60              |
| 1:H:307:ILE:HA   | 1:H:310:MET:CE   | 2.32                     | 0.60              |
| 1:M:170:ILE:CD1  | 1:M:239:VAL:CG2  | 2.80                     | 0.60              |
| 1:G:222:GLU:HB2  | 1:G:225:VAL:HG23 | 1.84                     | 0.59              |
| 1:G:237:LEU:CD2  | 1:G:246:ILE:HD13 | 2.31                     | 0.59              |
| 1:G:307:ILE:HA   | 1:G:310:MET:CE   | 2.32                     | 0.59              |
| 1:H:175:TYR:CE1  | 1:H:237:LEU:HD22 | 2.37                     | 0.59              |
| 1:I:237:LEU:CD2  | 1:I:246:ILE:HD13 | 2.31                     | 0.59              |
| 1:I:290:LYS:HA   | 1:K:150:LEU:HD22 | 1.83                     | 0.59              |
| 1:I:290:LYS:HE2  | 1:K:150:LEU:HG   | 1.83                     | 0.59              |
| 1:I:307:ILE:HA   | 1:I:310:MET:CE   | 2.32                     | 0.59              |
| 1:J:121:TYR:CB   | 1:J:127:PHE:HB2  | 2.30                     | 0.59              |
| 1:K:237:LEU:CD2  | 1:K:246:ILE:HD13 | 2.31                     | 0.59              |
| 1:L:185:ILE:HG12 | 1:L:226:ILE:HG12 | 1.84                     | 0.59              |
| 1:O:158:LEU:CD1  | 1:O:224:LEU:HD21 | 2.27                     | 0.59              |
| 1:O:185:ILE:HG12 | 1:O:226:ILE:HG12 | 1.84                     | 0.59              |
| 1:O:290:LYS:HE2  | 1:Q:150:LEU:HG   | 1.83                     | 0.59              |
| 1:O:307:ILE:HA   | 1:O:310:MET:CE   | 2.32                     | 0.59              |
| 1:B:185:ILE:HG12 | 1:B:226:ILE:HG12 | 1.84                     | 0.59              |
| 1:F:125:ALA:HB1  | 1:F:223:LYS:CB   | 2.32                     | 0.59              |
| 1:H:125:ALA:HB1  | 1:H:223:LYS:CB   | 2.33                     | 0.59              |
| 1:H:170:ILE:HD13 | 1:H:239:VAL:CG2  | 2.32                     | 0.59              |
| 1:J:170:ILE:CD1  | 1:J:239:VAL:CG2  | 2.80                     | 0.59              |
| 1:L:170:ILE:HD13 | 1:L:239:VAL:CG2  | 2.32                     | 0.59              |
| 1:L:267:ASP:O    | 1:N:268:VAL:CG1  | 2.46                     | 0.59              |
| 1:O:267:ASP:O    | 1:Q:268:VAL:CG1  | 2.46                     | 0.59              |
| 1:Q:170:ILE:HD13 | 1:Q:239:VAL:CG2  | 2.32                     | 0.59              |
| 1:F:150:LEU:HD22 | 1:G:290:LYS:HA   | 1.83                     | 0.59              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:J:149:GLN:CD   | 1:K:265:GLY:O    | 2.39                     | 0.59              |
| 1:K:72:GLN:C     | 1:K:76:PHE:CD1   | 2.71                     | 0.59              |
| 1:M:150:LEU:HG   | 1:N:290:LYS:HE2  | 1.83                     | 0.59              |
| 1:O:175:TYR:CE1  | 1:O:237:LEU:HD22 | 2.37                     | 0.59              |
| 1:P:121:TYR:CB   | 1:P:127:PHE:HB2  | 2.30                     | 0.59              |
| 1:P:307:ILE:HA   | 1:P:310:MET:CE   | 2.32                     | 0.59              |
| 1:Q:170:ILE:CD1  | 1:Q:239:VAL:CG2  | 2.80                     | 0.59              |
| 1:B:175:TYR:CE1  | 1:B:237:LEU:HD22 | 2.37                     | 0.59              |
| 1:G:274:ASP:OD1  | 1:G:276:THR:OG1  | 2.20                     | 0.59              |
| 1:H:185:ILE:HG12 | 1:H:226:ILE:HG12 | 1.84                     | 0.59              |
| 1:H:222:GLU:HB2  | 1:H:225:VAL:HG23 | 1.84                     | 0.59              |
| 1:I:125:ALA:HB1  | 1:I:223:LYS:CB   | 2.32                     | 0.59              |
| 1:K:75:THR:HG23  | 1:K:79:SER:OG    | 2.02                     | 0.59              |
| 1:L:144:TYR:HD2  | 1:L:144:TYR:C    | 2.05                     | 0.59              |
| 1:M:158:LEU:CD1  | 1:M:224:LEU:HD21 | 2.27                     | 0.59              |
| 1:N:168:MET:HE2  | 1:N:175:TYR:CG   | 2.38                     | 0.59              |
| 1:N:170:ILE:HD13 | 1:N:239:VAL:CG2  | 2.32                     | 0.59              |
| 1:N:175:TYR:CE1  | 1:N:237:LEU:HD22 | 2.37                     | 0.59              |
| 1:Q:158:LEU:CD1  | 1:Q:224:LEU:HD21 | 2.27                     | 0.59              |
| 1:F:121:TYR:CB   | 1:F:127:PHE:HB2  | 2.30                     | 0.59              |
| 1:F:170:ILE:HD13 | 1:F:239:VAL:CG2  | 2.32                     | 0.59              |
| 1:F:276:THR:CA   | 1:G:285:MET:HE3  | 1.93                     | 0.59              |
| 1:H:274:ASP:OD1  | 1:H:276:THR:OG1  | 2.20                     | 0.59              |
| 1:I:149:GLN:CD   | 1:J:265:GLY:O    | 2.39                     | 0.59              |
| 1:I:290:LYS:CE   | 1:K:150:LEU:CD2  | 2.77                     | 0.59              |
| 1:J:150:LEU:CD2  | 1:K:290:LYS:CE   | 2.77                     | 0.59              |
| 1:L:275:PRO:CD   | 1:L:276:THR:N    | 2.66                     | 0.59              |
| 1:L:290:LYS:CE   | 1:N:150:LEU:CD2  | 2.77                     | 0.59              |
| 1:M:275:PRO:CD   | 1:M:276:THR:N    | 2.66                     | 0.59              |
| 1:O:265:GLY:O    | 1:Q:149:GLN:CD   | 2.39                     | 0.59              |
| 1:O:274:ASP:OD1  | 1:O:276:THR:OG1  | 2.20                     | 0.59              |
| 1:P:150:LEU:HG   | 1:Q:290:LYS:HE2  | 1.83                     | 0.59              |
| 1:P:170:ILE:CD1  | 1:P:239:VAL:CG2  | 2.80                     | 0.59              |
| 1:P:185:ILE:HG12 | 1:P:226:ILE:HG12 | 1.85                     | 0.59              |
| 1:B:307:ILE:HA   | 1:B:310:MET:CE   | 2.32                     | 0.59              |
| 1:F:274:ASP:OD1  | 1:F:276:THR:OG1  | 2.20                     | 0.59              |
| 1:I:170:ILE:CD1  | 1:I:239:VAL:CG2  | 2.80                     | 0.59              |
| 1:M:258:VAL:CG1  | 1:M:259:ALA:H    | 2.16                     | 0.59              |
| 1:N:174:TYR:CD1  | 1:N:198:LEU:HD11 | 2.34                     | 0.59              |
| 1:N:275:PRO:CD   | 1:N:276:THR:N    | 2.66                     | 0.59              |
| 1:O:125:ALA:HB1  | 1:O:223:LYS:CB   | 2.32                     | 0.59              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:P:150:LEU:HD22 | 1:Q:290:LYS:HA   | 1.83                     | 0.59              |
| 1:Q:175:TYR:CE1  | 1:Q:237:LEU:HD22 | 2.37                     | 0.59              |
| 1:B:246:ILE:O    | 1:B:246:ILE:CG2  | 2.51                     | 0.59              |
| 1:K:185:ILE:HG12 | 1:K:226:ILE:HG12 | 1.84                     | 0.59              |
| 1:M:121:TYR:CB   | 1:M:127:PHE:HB2  | 2.30                     | 0.59              |
| 1:N:72:GLN:CB    | 1:N:76:PHE:CE1   | 2.70                     | 0.59              |
| 1:N:168:MET:HE2  | 1:N:175:TYR:CZ   | 2.25                     | 0.59              |
| 1:Q:185:ILE:HG12 | 1:Q:226:ILE:HG12 | 1.84                     | 0.59              |
| 1:B:125:ALA:HB1  | 1:B:223:LYS:CB   | 2.32                     | 0.59              |
| 1:F:170:ILE:CD1  | 1:F:239:VAL:CG2  | 2.80                     | 0.59              |
| 1:F:275:PRO:CD   | 1:F:276:THR:N    | 2.66                     | 0.59              |
| 1:H:246:ILE:O    | 1:H:246:ILE:CG2  | 2.51                     | 0.59              |
| 1:K:170:ILE:CD1  | 1:K:239:VAL:CG2  | 2.80                     | 0.59              |
| 1:L:170:ILE:CD1  | 1:L:239:VAL:CG2  | 2.80                     | 0.59              |
| 1:L:251:LYS:O    | 1:L:252:LEU:CB   | 2.46                     | 0.59              |
| 1:L:274:ASP:OD1  | 1:L:276:THR:OG1  | 2.20                     | 0.59              |
| 1:N:170:ILE:CD1  | 1:N:239:VAL:CG2  | 2.80                     | 0.59              |
| 1:G:117:TYR:CZ   | 1:O:167:PRO:O    | 2.55                     | 0.59              |
| 1:J:274:ASP:OD1  | 1:J:276:THR:OG1  | 2.20                     | 0.59              |
| 1:K:175:TYR:CE1  | 1:K:237:LEU:HD22 | 2.37                     | 0.59              |
| 1:K:274:ASP:OD1  | 1:K:276:THR:OG1  | 2.20                     | 0.59              |
| 1:L:168:MET:HE2  | 1:L:175:TYR:CG   | 2.38                     | 0.59              |
| 1:L:175:TYR:CE1  | 1:L:237:LEU:HD22 | 2.37                     | 0.59              |
| 1:L:268:VAL:CG1  | 1:M:267:ASP:O    | 2.46                     | 0.59              |
| 1:N:274:ASP:OD1  | 1:N:276:THR:OG1  | 2.20                     | 0.59              |
| 1:O:258:VAL:CG1  | 1:O:259:ALA:H    | 2.16                     | 0.59              |
| 1:Q:274:ASP:OD1  | 1:Q:276:THR:OG1  | 2.20                     | 0.59              |
| 1:G:175:TYR:CE1  | 1:G:237:LEU:HD22 | 2.37                     | 0.59              |
| 1:J:144:TYR:HD2  | 1:J:144:TYR:C    | 2.06                     | 0.59              |
| 1:K:125:ALA:HB1  | 1:K:223:LYS:CB   | 2.32                     | 0.59              |
| 1:K:258:VAL:CG1  | 1:K:259:ALA:H    | 2.16                     | 0.59              |
| 1:M:170:ILE:HD13 | 1:M:239:VAL:CG2  | 2.32                     | 0.59              |
| 1:N:185:ILE:HG12 | 1:N:226:ILE:HG12 | 1.84                     | 0.59              |
| 1:O:150:LEU:HD22 | 1:P:289:TRP:C    | 2.21                     | 0.59              |
| 1:P:175:TYR:CE1  | 1:P:237:LEU:HD22 | 2.37                     | 0.59              |
| 1:F:290:LYS:HA   | 1:H:150:LEU:HD22 | 1.83                     | 0.58              |
| 1:G:170:ILE:CD1  | 1:G:239:VAL:CG2  | 2.80                     | 0.58              |
| 1:L:125:ALA:HB1  | 1:L:223:LYS:CB   | 2.33                     | 0.58              |
| 1:P:268:VAL:CG1  | 1:Q:267:ASP:O    | 2.46                     | 0.58              |
| 1:Q:246:ILE:O    | 1:Q:246:ILE:CG2  | 2.51                     | 0.58              |
| 1:Q:258:VAL:CG1  | 1:Q:259:ALA:H    | 2.16                     | 0.58              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:78:THR:HG22  | 1:F:78:THR:O     | 2.02                     | 0.58              |
| 1:F:185:ILE:HG12 | 1:F:226:ILE:HG12 | 1.84                     | 0.58              |
| 1:H:275:PRO:CD   | 1:H:276:THR:N    | 2.66                     | 0.58              |
| 1:J:258:VAL:CG1  | 1:J:259:ALA:H    | 2.16                     | 0.58              |
| 1:L:128:SER:CB   | 1:L:155:LEU:CD1  | 2.63                     | 0.58              |
| 1:M:175:TYR:CE1  | 1:M:237:LEU:HD22 | 2.37                     | 0.58              |
| 1:N:128:SER:CB   | 1:N:155:LEU:CD1  | 2.63                     | 0.58              |
| 1:P:149:GLN:CD   | 1:Q:265:GLY:O    | 2.39                     | 0.58              |
| 1:G:255:ARG:CD   | 1:G:257:ASN:ND2  | 2.67                     | 0.58              |
| 1:J:127:PHE:O    | 1:J:131:PRO:HB3  | 2.04                     | 0.58              |
| 1:K:72:GLN:CB    | 1:K:76:PHE:CE1   | 2.70                     | 0.58              |
| 1:L:121:TYR:CB   | 1:L:127:PHE:HB2  | 2.30                     | 0.58              |
| 1:L:150:LEU:HD22 | 1:M:289:TRP:C    | 2.21                     | 0.58              |
| 1:L:290:LYS:HE2  | 1:N:150:LEU:HG   | 1.83                     | 0.58              |
| 1:M:70:SER:O     | 1:M:71:THR:CB    | 2.51                     | 0.58              |
| 1:N:70:SER:O     | 1:N:71:THR:CB    | 2.52                     | 0.58              |
| 1:Q:162:GLU:C    | 1:Q:252:LEU:HD21 | 2.13                     | 0.58              |
| 1:B:170:ILE:CD1  | 1:B:239:VAL:CG2  | 2.80                     | 0.58              |
| 1:B:255:ARG:CD   | 1:B:257:ASN:ND2  | 2.67                     | 0.58              |
| 1:F:307:ILE:HD13 | 1:F:310:MET:HE1  | 1.84                     | 0.58              |
| 1:H:255:ARG:CD   | 1:H:257:ASN:ND2  | 2.67                     | 0.58              |
| 1:I:87:THR:HG1   | 1:I:122:THR:HG22 | 1.67                     | 0.58              |
| 1:I:268:VAL:CG1  | 1:J:267:ASP:O    | 2.46                     | 0.58              |
| 1:J:246:ILE:O    | 1:J:246:ILE:CG2  | 2.51                     | 0.58              |
| 1:K:255:ARG:CD   | 1:K:257:ASN:ND2  | 2.67                     | 0.58              |
| 1:L:127:PHE:O    | 1:L:131:PRO:HB3  | 2.04                     | 0.58              |
| 1:L:246:ILE:O    | 1:L:246:ILE:CG2  | 2.51                     | 0.58              |
| 1:L:255:ARG:CD   | 1:L:257:ASN:ND2  | 2.67                     | 0.58              |
| 1:M:246:ILE:O    | 1:M:246:ILE:CG2  | 2.51                     | 0.58              |
| 1:O:170:ILE:CD1  | 1:O:239:VAL:CG2  | 2.80                     | 0.58              |
| 1:O:255:ARG:CD   | 1:O:257:ASN:ND2  | 2.67                     | 0.58              |
| 1:P:125:ALA:HB1  | 1:P:223:LYS:CB   | 2.32                     | 0.58              |
| 1:B:170:ILE:HD13 | 1:B:239:VAL:CG2  | 2.32                     | 0.58              |
| 1:B:274:ASP:OD1  | 1:B:276:THR:OG1  | 2.20                     | 0.58              |
| 1:G:300:VAL:HA   | 1:G:303:VAL:HG22 | 1.86                     | 0.58              |
| 1:K:262:GLN:HE22 | 1:K:267:ASP:HB3  | 1.69                     | 0.58              |
| 1:M:150:LEU:HD22 | 1:N:289:TRP:C    | 2.21                     | 0.58              |
| 1:M:174:TYR:CD1  | 1:M:198:LEU:HD13 | 2.34                     | 0.58              |
| 1:N:121:TYR:CB   | 1:N:127:PHE:HB2  | 2.30                     | 0.58              |
| 1:O:70:SER:O     | 1:O:71:THR:CB    | 2.51                     | 0.58              |
| 1:O:73:GLU:O     | 1:O:73:GLU:CG    | 2.48                     | 0.58              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:222:GLU:HB2  | 1:O:225:VAL:HG23 | 1.84                     | 0.58              |
| 1:O:246:ILE:O    | 1:O:246:ILE:CG2  | 2.51                     | 0.58              |
| 1:P:255:ARG:CD   | 1:P:257:ASN:ND2  | 2.67                     | 0.58              |
| 1:I:255:ARG:CD   | 1:I:257:ASN:ND2  | 2.67                     | 0.58              |
| 1:J:170:ILE:HD13 | 1:J:239:VAL:CG2  | 2.32                     | 0.58              |
| 1:J:255:ARG:CD   | 1:J:257:ASN:ND2  | 2.67                     | 0.58              |
| 1:M:274:ASP:OD1  | 1:M:276:THR:OG1  | 2.20                     | 0.58              |
| 1:O:72:GLN:CB    | 1:O:76:PHE:CE1   | 2.70                     | 0.58              |
| 1:P:258:VAL:CG1  | 1:P:259:ALA:H    | 2.16                     | 0.58              |
| 1:Q:125:ALA:HB1  | 1:Q:223:LYS:CB   | 2.32                     | 0.58              |
| 1:Q:222:GLU:HB2  | 1:Q:225:VAL:HG23 | 1.84                     | 0.58              |
| 1:F:127:PHE:O    | 1:F:131:PRO:HB3  | 2.04                     | 0.58              |
| 1:I:185:ILE:HG12 | 1:I:226:ILE:HG12 | 1.84                     | 0.58              |
| 1:K:127:PHE:O    | 1:K:131:PRO:HB3  | 2.04                     | 0.58              |
| 1:K:170:ILE:HD13 | 1:K:239:VAL:CG2  | 2.32                     | 0.58              |
| 1:M:127:PHE:O    | 1:M:131:PRO:HB3  | 2.04                     | 0.58              |
| 1:N:246:ILE:O    | 1:N:246:ILE:CG2  | 2.51                     | 0.58              |
| 1:P:222:GLU:HB2  | 1:P:225:VAL:HG23 | 1.84                     | 0.58              |
| 1:P:274:ASP:OD1  | 1:P:276:THR:OG1  | 2.20                     | 0.58              |
| 1:Q:262:GLN:HE22 | 1:Q:267:ASP:HB3  | 1.69                     | 0.58              |
| 1:G:174:TYR:CD1  | 1:G:198:LEU:HD11 | 2.34                     | 0.58              |
| 1:J:307:ILE:HA   | 1:J:310:MET:CE   | 2.32                     | 0.58              |
| 1:M:150:LEU:CD2  | 1:N:290:LYS:CE   | 2.77                     | 0.58              |
| 1:P:127:PHE:O    | 1:P:131:PRO:HB3  | 2.04                     | 0.58              |
| 1:B:300:VAL:HA   | 1:B:303:VAL:HG22 | 1.86                     | 0.58              |
| 1:G:125:ALA:HB1  | 1:G:223:LYS:CB   | 2.33                     | 0.58              |
| 1:H:76:PHE:HE2   | 1:H:109:LYS:O    | 1.87                     | 0.58              |
| 1:H:148:LEU:O    | 1:H:151:ASP:N    | 2.36                     | 0.58              |
| 1:I:127:PHE:O    | 1:I:131:PRO:HB3  | 2.04                     | 0.58              |
| 1:I:274:ASP:OD1  | 1:I:276:THR:OG1  | 2.20                     | 0.58              |
| 1:J:205:ILE:HG13 | 1:K:104:GLN:OE1  | 2.04                     | 0.58              |
| 1:N:125:ALA:HB1  | 1:N:223:LYS:CB   | 2.32                     | 0.58              |
| 1:N:174:TYR:CD1  | 1:N:198:LEU:HD13 | 2.34                     | 0.58              |
| 1:N:255:ARG:CD   | 1:N:257:ASN:ND2  | 2.67                     | 0.58              |
| 1:O:300:VAL:HA   | 1:O:303:VAL:HG22 | 1.86                     | 0.58              |
| 1:P:75:THR:HG23  | 1:P:79:SER:OG    | 2.04                     | 0.58              |
| 1:P:205:ILE:HG13 | 1:Q:104:GLN:OE1  | 2.04                     | 0.58              |
| 1:G:127:PHE:O    | 1:G:131:PRO:HB3  | 2.04                     | 0.58              |
| 1:G:185:ILE:HG12 | 1:G:226:ILE:HG12 | 1.84                     | 0.58              |
| 1:G:246:ILE:O    | 1:G:246:ILE:CG2  | 2.51                     | 0.58              |
| 1:G:258:VAL:CG1  | 1:G:259:ALA:H    | 2.16                     | 0.58              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:300:VAL:HA   | 1:I:303:VAL:HG22 | 1.86                     | 0.58              |
| 1:J:162:GLU:HB2  | 1:J:253:GLY:C    | 2.24                     | 0.58              |
| 1:K:246:ILE:O    | 1:K:246:ILE:CG2  | 2.51                     | 0.58              |
| 1:M:300:VAL:HA   | 1:M:303:VAL:HG22 | 1.86                     | 0.58              |
| 1:N:127:PHE:O    | 1:N:131:PRO:HB3  | 2.04                     | 0.58              |
| 1:O:149:GLN:CD   | 1:P:265:GLY:O    | 2.39                     | 0.58              |
| 1:P:76:PHE:HE2   | 1:P:109:LYS:O    | 1.87                     | 0.58              |
| 1:P:246:ILE:O    | 1:P:246:ILE:CG2  | 2.51                     | 0.58              |
| 1:F:300:VAL:HA   | 1:F:303:VAL:HG22 | 1.86                     | 0.57              |
| 1:H:127:PHE:O    | 1:H:131:PRO:HB3  | 2.04                     | 0.57              |
| 1:I:246:ILE:O    | 1:I:246:ILE:CG2  | 2.51                     | 0.57              |
| 1:I:262:GLN:HE22 | 1:I:267:ASP:HB3  | 1.69                     | 0.57              |
| 1:K:70:SER:O     | 1:K:71:THR:CB    | 2.51                     | 0.57              |
| 1:K:76:PHE:HE2   | 1:K:109:LYS:O    | 1.87                     | 0.57              |
| 1:K:125:ALA:C    | 1:K:223:LYS:HZ2  | 2.07                     | 0.57              |
| 1:L:300:VAL:HA   | 1:L:303:VAL:HG22 | 1.86                     | 0.57              |
| 1:P:300:VAL:HA   | 1:P:303:VAL:HG22 | 1.86                     | 0.57              |
| 1:F:72:GLN:C     | 1:F:76:PHE:CD1   | 2.71                     | 0.57              |
| 1:F:125:ALA:O    | 1:F:129:VAL:HG23 | 2.05                     | 0.57              |
| 1:G:70:SER:O     | 1:G:71:THR:CB    | 2.52                     | 0.57              |
| 1:G:275:PRO:CD   | 1:G:276:THR:N    | 2.66                     | 0.57              |
| 1:K:300:VAL:HA   | 1:K:303:VAL:HG22 | 1.86                     | 0.57              |
| 1:L:262:GLN:HE22 | 1:L:267:ASP:HB3  | 1.69                     | 0.57              |
| 1:M:125:ALA:HB1  | 1:M:223:LYS:CB   | 2.32                     | 0.57              |
| 1:N:73:GLU:O     | 1:N:73:GLU:HG2   | 2.04                     | 0.57              |
| 1:O:174:TYR:HD1  | 1:O:198:LEU:HD12 | 1.63                     | 0.57              |
| 1:P:125:ALA:O    | 1:P:129:VAL:HG23 | 2.05                     | 0.57              |
| 1:B:162:GLU:HB2  | 1:B:253:GLY:C    | 2.25                     | 0.57              |
| 1:G:125:ALA:O    | 1:G:129:VAL:HG23 | 2.04                     | 0.57              |
| 1:I:175:TYR:O    | 1:I:234:ASN:HA   | 2.04                     | 0.57              |
| 1:J:125:ALA:HB1  | 1:J:223:LYS:CB   | 2.32                     | 0.57              |
| 1:J:185:ILE:HG12 | 1:J:226:ILE:HG12 | 1.84                     | 0.57              |
| 1:N:125:ALA:O    | 1:N:129:VAL:HG23 | 2.05                     | 0.57              |
| 1:N:257:ASN:O    | 1:N:258:VAL:C    | 2.33                     | 0.57              |
| 1:O:75:THR:HG23  | 1:O:79:SER:OG    | 2.04                     | 0.57              |
| 1:P:70:SER:O     | 1:P:71:THR:CB    | 2.51                     | 0.57              |
| 1:Q:78:THR:HG22  | 1:Q:78:THR:O     | 2.05                     | 0.57              |
| 1:Q:162:GLU:HB2  | 1:Q:253:GLY:C    | 2.24                     | 0.57              |
| 1:F:246:ILE:O    | 1:F:246:ILE:CG2  | 2.51                     | 0.57              |
| 1:I:76:PHE:HE2   | 1:I:109:LYS:O    | 1.87                     | 0.57              |
| 1:I:104:GLN:OE1  | 1:K:205:ILE:HG13 | 2.04                     | 0.57              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:265:GLY:O    | 1:K:149:GLN:CD   | 2.39                     | 0.57              |
| 1:J:174:TYR:CD1  | 1:J:198:LEU:HD11 | 2.34                     | 0.57              |
| 1:L:84:TYR:HB2   | 1:L:140:VAL:HG23 | 1.87                     | 0.57              |
| 1:L:125:ALA:O    | 1:L:129:VAL:HG23 | 2.04                     | 0.57              |
| 1:L:162:GLU:HB2  | 1:L:253:GLY:C    | 2.25                     | 0.57              |
| 1:N:64:ASP:C     | 1:N:65:THR:CG2   | 2.51                     | 0.57              |
| 1:O:262:GLN:HE22 | 1:O:267:ASP:HB3  | 1.69                     | 0.57              |
| 1:P:168:MET:HE3  | 1:P:175:TYR:CE1  | 2.26                     | 0.57              |
| 1:F:76:PHE:HE2   | 1:F:109:LYS:O    | 1.87                     | 0.57              |
| 1:J:262:GLN:HE22 | 1:J:267:ASP:HB3  | 1.69                     | 0.57              |
| 1:K:275:PRO:CD   | 1:K:276:THR:N    | 2.66                     | 0.57              |
| 1:L:149:GLN:CD   | 1:M:265:GLY:O    | 2.39                     | 0.57              |
| 1:M:185:ILE:HG12 | 1:M:226:ILE:HG12 | 1.84                     | 0.57              |
| 1:M:262:GLN:HE22 | 1:M:267:ASP:HB3  | 1.69                     | 0.57              |
| 1:N:78:THR:O     | 1:N:78:THR:CG2   | 2.51                     | 0.57              |
| 1:O:125:ALA:O    | 1:O:129:VAL:HG23 | 2.05                     | 0.57              |
| 1:O:127:PHE:O    | 1:O:131:PRO:HB3  | 2.04                     | 0.57              |
| 1:O:162:GLU:HB2  | 1:O:253:GLY:C    | 2.25                     | 0.57              |
| 1:Q:125:ALA:O    | 1:Q:129:VAL:HG23 | 2.05                     | 0.57              |
| 1:B:125:ALA:O    | 1:B:129:VAL:HG23 | 2.05                     | 0.57              |
| 1:F:255:ARG:CD   | 1:F:257:ASN:ND2  | 2.67                     | 0.57              |
| 1:F:285:MET:HE3  | 1:H:276:THR:CA   | 1.88                     | 0.57              |
| 1:H:174:TYR:CD1  | 1:H:198:LEU:HD11 | 2.34                     | 0.57              |
| 1:I:205:ILE:HG13 | 1:J:104:GLN:OE1  | 2.04                     | 0.57              |
| 1:K:125:ALA:O    | 1:K:129:VAL:HG23 | 2.05                     | 0.57              |
| 1:M:84:TYR:HB2   | 1:M:140:VAL:HG23 | 1.87                     | 0.57              |
| 1:P:307:ILE:HD13 | 1:P:310:MET:HE1  | 1.85                     | 0.57              |
| 1:Q:208:LEU:C    | 1:Q:210:THR:H    | 2.08                     | 0.57              |
| 1:F:289:TRP:C    | 1:H:150:LEU:HD22 | 2.21                     | 0.57              |
| 1:H:78:THR:O     | 1:H:78:THR:HG22  | 2.02                     | 0.57              |
| 1:I:123:ASP:CG   | 1:I:126:SER:H    | 2.08                     | 0.57              |
| 1:I:150:LEU:HD22 | 1:J:289:TRP:C    | 2.21                     | 0.57              |
| 1:N:262:GLN:HE22 | 1:N:267:ASP:HB3  | 1.69                     | 0.57              |
| 1:O:205:ILE:HG13 | 1:P:104:GLN:OE1  | 2.04                     | 0.57              |
| 1:Q:300:VAL:HA   | 1:Q:303:VAL:HG22 | 1.86                     | 0.57              |
| 1:B:93:ILE:HG23  | 1:B:293:TRP:NE1  | 2.20                     | 0.57              |
| 1:F:307:ILE:HA   | 1:F:310:MET:HE3  | 1.86                     | 0.57              |
| 1:H:300:VAL:HA   | 1:H:303:VAL:HG22 | 1.86                     | 0.57              |
| 1:K:142:MET:HE1  | 1:K:152:MET:HB3  | 1.86                     | 0.57              |
| 1:N:208:LEU:C    | 1:N:210:THR:H    | 2.08                     | 0.57              |
| 1:O:76:PHE:HE2   | 1:O:109:LYS:O    | 1.87                     | 0.57              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:Q:255:ARG:CD   | 1:Q:257:ASN:ND2  | 2.67                     | 0.57              |
| 1:B:208:LEU:C    | 1:B:210:THR:H    | 2.08                     | 0.57              |
| 1:B:262:GLN:HE22 | 1:B:267:ASP:HB3  | 1.69                     | 0.57              |
| 1:I:162:GLU:HB2  | 1:I:253:GLY:C    | 2.24                     | 0.57              |
| 1:J:144:TYR:CD2  | 1:J:145:ASP:N    | 2.68                     | 0.57              |
| 1:L:276:THR:CA   | 1:M:285:MET:HE3  | 1.95                     | 0.57              |
| 1:M:76:PHE:HE2   | 1:M:109:LYS:O    | 1.87                     | 0.57              |
| 1:N:162:GLU:HB2  | 1:N:253:GLY:C    | 2.24                     | 0.57              |
| 1:O:125:ALA:C    | 1:O:223:LYS:HZ2  | 2.07                     | 0.57              |
| 1:P:93:ILE:HG23  | 1:P:293:TRP:NE1  | 2.20                     | 0.57              |
| 1:P:262:GLN:HE22 | 1:P:267:ASP:HB3  | 1.69                     | 0.57              |
| 1:B:127:PHE:O    | 1:B:131:PRO:HB3  | 2.04                     | 0.57              |
| 1:F:104:GLN:OE1  | 1:H:205:ILE:HG13 | 2.04                     | 0.57              |
| 1:G:150:LEU:HD22 | 1:H:289:TRP:C    | 2.21                     | 0.57              |
| 1:H:93:ILE:HG23  | 1:H:293:TRP:NE1  | 2.20                     | 0.57              |
| 1:I:251:LYS:O    | 1:I:252:LEU:CB   | 2.46                     | 0.57              |
| 1:J:123:ASP:CG   | 1:J:126:SER:H    | 2.08                     | 0.57              |
| 1:K:70:SER:O     | 1:K:71:THR:HB    | 2.05                     | 0.57              |
| 1:K:123:ASP:CG   | 1:K:126:SER:H    | 2.08                     | 0.57              |
| 1:K:208:LEU:C    | 1:K:210:THR:H    | 2.08                     | 0.57              |
| 1:L:123:ASP:CG   | 1:L:126:SER:H    | 2.08                     | 0.57              |
| 1:M:93:ILE:HG23  | 1:M:293:TRP:NE1  | 2.20                     | 0.57              |
| 1:M:162:GLU:HB2  | 1:M:253:GLY:C    | 2.24                     | 0.57              |
| 1:M:208:LEU:C    | 1:M:210:THR:H    | 2.08                     | 0.57              |
| 1:N:70:SER:O     | 1:N:71:THR:HB    | 2.05                     | 0.57              |
| 1:N:93:ILE:HG23  | 1:N:293:TRP:NE1  | 2.20                     | 0.57              |
| 1:B:123:ASP:CG   | 1:B:126:SER:H    | 2.08                     | 0.56              |
| 1:B:275:PRO:CD   | 1:B:276:THR:N    | 2.66                     | 0.56              |
| 1:F:208:LEU:C    | 1:F:210:THR:H    | 2.08                     | 0.56              |
| 1:G:75:THR:HG23  | 1:G:79:SER:OG    | 2.05                     | 0.56              |
| 1:G:76:PHE:HE2   | 1:G:109:LYS:O    | 1.87                     | 0.56              |
| 1:G:262:GLN:HE22 | 1:G:267:ASP:HB3  | 1.69                     | 0.56              |
| 1:H:84:TYR:HB2   | 1:H:140:VAL:HG23 | 1.87                     | 0.56              |
| 1:H:262:GLN:HE22 | 1:H:267:ASP:HB3  | 1.69                     | 0.56              |
| 1:I:208:LEU:C    | 1:I:210:THR:H    | 2.08                     | 0.56              |
| 1:L:104:GLN:OE1  | 1:N:205:ILE:HG13 | 2.04                     | 0.56              |
| 1:L:205:ILE:HG13 | 1:M:104:GLN:OE1  | 2.04                     | 0.56              |
| 1:M:307:ILE:HD13 | 1:M:310:MET:HE1  | 1.87                     | 0.56              |
| 1:N:76:PHE:HE2   | 1:N:109:LYS:O    | 1.87                     | 0.56              |
| 1:O:150:LEU:HD12 | 1:P:288:ASN:CG   | 2.08                     | 0.56              |
| 1:Q:127:PHE:CZ   | 1:Q:159:ILE:HD11 | 2.40                     | 0.56              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:Q:174:TYR:HD1  | 1:Q:198:LEU:HD12 | 1.63                     | 0.56              |
| 1:F:123:ASP:CG   | 1:F:126:SER:H    | 2.08                     | 0.56              |
| 1:F:162:GLU:HB2  | 1:F:253:GLY:C    | 2.25                     | 0.56              |
| 1:H:162:GLU:HB2  | 1:H:253:GLY:C    | 2.25                     | 0.56              |
| 1:M:125:ALA:O    | 1:M:129:VAL:HG23 | 2.05                     | 0.56              |
| 1:Q:84:TYR:HB2   | 1:Q:140:VAL:HG23 | 1.87                     | 0.56              |
| 1:Q:127:PHE:O    | 1:Q:131:PRO:HB3  | 2.04                     | 0.56              |
| 1:F:127:PHE:CZ   | 1:F:159:ILE:HD11 | 2.41                     | 0.56              |
| 1:F:174:TYR:CD1  | 1:F:198:LEU:HD11 | 2.34                     | 0.56              |
| 1:G:162:GLU:HB2  | 1:G:253:GLY:C    | 2.24                     | 0.56              |
| 1:H:72:GLN:C     | 1:H:76:PHE:CD1   | 2.71                     | 0.56              |
| 1:H:144:TYR:HD1  | 1:H:265:GLY:HA3  | 1.69                     | 0.56              |
| 1:H:208:LEU:C    | 1:H:210:THR:H    | 2.08                     | 0.56              |
| 1:H:258:VAL:CG1  | 1:H:259:ALA:H    | 2.16                     | 0.56              |
| 1:I:93:ILE:HG23  | 1:I:293:TRP:NE1  | 2.20                     | 0.56              |
| 1:I:125:ALA:O    | 1:I:129:VAL:HG23 | 2.05                     | 0.56              |
| 1:J:76:PHE:HE2   | 1:J:109:LYS:O    | 1.87                     | 0.56              |
| 1:J:275:PRO:CD   | 1:J:276:THR:N    | 2.66                     | 0.56              |
| 1:J:276:THR:CA   | 1:K:285:MET:HE3  | 1.90                     | 0.56              |
| 1:J:307:ILE:HD13 | 1:J:310:MET:HE1  | 1.87                     | 0.56              |
| 1:K:93:ILE:HG23  | 1:K:293:TRP:NE1  | 2.20                     | 0.56              |
| 1:L:93:ILE:HG23  | 1:L:293:TRP:NE1  | 2.20                     | 0.56              |
| 1:M:255:ARG:CD   | 1:M:257:ASN:ND2  | 2.67                     | 0.56              |
| 1:O:104:GLN:OE1  | 1:Q:205:ILE:HG13 | 2.04                     | 0.56              |
| 1:O:127:PHE:CZ   | 1:O:159:ILE:HD11 | 2.40                     | 0.56              |
| 1:O:208:LEU:C    | 1:O:210:THR:H    | 2.08                     | 0.56              |
| 1:P:251:LYS:O    | 1:P:252:LEU:CB   | 2.46                     | 0.56              |
| 1:Q:76:PHE:HE2   | 1:Q:109:LYS:O    | 1.87                     | 0.56              |
| 1:Q:197:PRO:O    | 1:Q:205:ILE:HG22 | 2.06                     | 0.56              |
| 1:F:205:ILE:HG13 | 1:G:104:GLN:OE1  | 2.04                     | 0.56              |
| 1:G:123:ASP:CG   | 1:G:126:SER:H    | 2.08                     | 0.56              |
| 1:G:205:ILE:HG13 | 1:H:104:GLN:OE1  | 2.04                     | 0.56              |
| 1:J:208:LEU:C    | 1:J:210:THR:H    | 2.08                     | 0.56              |
| 1:J:300:VAL:HA   | 1:J:303:VAL:HG22 | 1.86                     | 0.56              |
| 1:M:70:SER:O     | 1:M:71:THR:HB    | 2.06                     | 0.56              |
| 1:N:144:TYR:HD1  | 1:N:265:GLY:HA3  | 1.70                     | 0.56              |
| 1:N:168:MET:CE   | 1:N:175:TYR:CE2  | 2.78                     | 0.56              |
| 1:N:258:VAL:CG1  | 1:N:259:ALA:H    | 2.16                     | 0.56              |
| 1:N:300:VAL:HA   | 1:N:303:VAL:HG22 | 1.86                     | 0.56              |
| 1:P:162:GLU:HB2  | 1:P:253:GLY:C    | 2.24                     | 0.56              |
| 1:P:208:LEU:C    | 1:P:210:THR:H    | 2.08                     | 0.56              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:P:275:PRO:CD   | 1:P:276:THR:N    | 2.66                     | 0.56              |
| 1:Q:128:SER:CB   | 1:Q:155:LEU:CD1  | 2.63                     | 0.56              |
| 1:F:197:PRO:O    | 1:F:205:ILE:HG22 | 2.06                     | 0.56              |
| 1:G:93:ILE:HG23  | 1:G:293:TRP:NE1  | 2.20                     | 0.56              |
| 1:G:149:GLN:CD   | 1:H:265:GLY:O    | 2.39                     | 0.56              |
| 1:H:128:SER:CB   | 1:H:155:LEU:CD1  | 2.63                     | 0.56              |
| 1:J:70:SER:O     | 1:J:71:THR:CB    | 2.52                     | 0.56              |
| 1:J:197:PRO:O    | 1:J:205:ILE:HG22 | 2.06                     | 0.56              |
| 1:L:168:MET:HE2  | 1:L:175:TYR:CD1  | 2.41                     | 0.56              |
| 1:L:197:PRO:O    | 1:L:205:ILE:HG22 | 2.06                     | 0.56              |
| 1:M:205:ILE:HG13 | 1:N:104:GLN:OE1  | 2.04                     | 0.56              |
| 1:O:84:TYR:HB2   | 1:O:140:VAL:HG23 | 1.87                     | 0.56              |
| 1:B:76:PHE:HE2   | 1:B:109:LYS:O    | 1.87                     | 0.56              |
| 1:G:72:GLN:C     | 1:G:76:PHE:CD1   | 2.71                     | 0.56              |
| 1:G:127:PHE:CZ   | 1:G:159:ILE:HD11 | 2.41                     | 0.56              |
| 1:H:127:PHE:CZ   | 1:H:159:ILE:HD11 | 2.41                     | 0.56              |
| 1:J:72:GLN:C     | 1:J:76:PHE:CD1   | 2.71                     | 0.56              |
| 1:M:108:THR:CG2  | 1:M:109:LYS:N    | 2.69                     | 0.56              |
| 1:N:109:LYS:HG3  | 1:N:300:VAL:O    | 2.06                     | 0.56              |
| 1:P:72:GLN:CB    | 1:P:76:PHE:CE1   | 2.70                     | 0.56              |
| 1:P:197:PRO:O    | 1:P:205:ILE:HG22 | 2.06                     | 0.56              |
| 1:F:108:THR:CG2  | 1:F:109:LYS:N    | 2.69                     | 0.56              |
| 1:F:237:LEU:HD21 | 1:F:246:ILE:CD1  | 2.36                     | 0.56              |
| 1:I:127:PHE:CZ   | 1:I:159:ILE:HD11 | 2.41                     | 0.56              |
| 1:I:237:LEU:HD21 | 1:I:246:ILE:CD1  | 2.36                     | 0.56              |
| 1:J:108:THR:CG2  | 1:J:109:LYS:N    | 2.69                     | 0.56              |
| 1:J:125:ALA:O    | 1:J:129:VAL:HG23 | 2.05                     | 0.56              |
| 1:L:76:PHE:HE2   | 1:L:109:LYS:O    | 1.87                     | 0.56              |
| 1:N:159:ILE:HG23 | 1:N:258:VAL:CG2  | 2.11                     | 0.56              |
| 1:O:93:ILE:HG23  | 1:O:293:TRP:NE1  | 2.20                     | 0.56              |
| 1:O:237:LEU:HD21 | 1:O:246:ILE:CD1  | 2.36                     | 0.56              |
| 1:O:251:LYS:O    | 1:O:252:LEU:CB   | 2.46                     | 0.56              |
| 1:P:123:ASP:CG   | 1:P:126:SER:H    | 2.08                     | 0.56              |
| 1:F:70:SER:O     | 1:F:71:THR:CB    | 2.54                     | 0.56              |
| 1:F:109:LYS:HG3  | 1:F:300:VAL:O    | 2.06                     | 0.56              |
| 1:F:258:VAL:CG1  | 1:F:259:ALA:H    | 2.16                     | 0.56              |
| 1:H:197:PRO:O    | 1:H:205:ILE:HG22 | 2.06                     | 0.56              |
| 1:J:127:PHE:CZ   | 1:J:159:ILE:HD11 | 2.41                     | 0.56              |
| 1:K:64:ASP:C     | 1:K:65:THR:CG2   | 2.51                     | 0.56              |
| 1:L:75:THR:HG23  | 1:L:79:SER:OG    | 2.06                     | 0.56              |
| 1:L:109:LYS:HG3  | 1:L:300:VAL:O    | 2.06                     | 0.56              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:M:197:PRO:O    | 1:M:205:ILE:HG22 | 2.06                     | 0.56              |
| 1:O:70:SER:O     | 1:O:71:THR:HB    | 2.05                     | 0.56              |
| 1:Q:72:GLN:CB    | 1:Q:76:PHE:CE1   | 2.70                     | 0.56              |
| 1:Q:123:ASP:CG   | 1:Q:126:SER:H    | 2.08                     | 0.56              |
| 1:B:197:PRO:O    | 1:B:205:ILE:HG22 | 2.06                     | 0.56              |
| 1:B:237:LEU:HD21 | 1:B:246:ILE:CD1  | 2.36                     | 0.56              |
| 1:F:93:ILE:HG23  | 1:F:293:TRP:NE1  | 2.20                     | 0.56              |
| 1:G:84:TYR:HB2   | 1:G:140:VAL:HG23 | 1.87                     | 0.56              |
| 1:H:72:GLN:CB    | 1:H:76:PHE:CE1   | 2.70                     | 0.56              |
| 1:H:174:TYR:HD1  | 1:H:198:LEU:HD12 | 1.63                     | 0.56              |
| 1:I:84:TYR:HB2   | 1:I:140:VAL:HG23 | 1.87                     | 0.56              |
| 1:I:108:THR:CG2  | 1:I:109:LYS:N    | 2.69                     | 0.56              |
| 1:L:108:THR:CG2  | 1:L:109:LYS:N    | 2.69                     | 0.56              |
| 1:L:159:ILE:HG23 | 1:L:258:VAL:CG2  | 2.11                     | 0.56              |
| 1:L:208:LEU:C    | 1:L:210:THR:H    | 2.08                     | 0.56              |
| 1:N:84:TYR:HB2   | 1:N:140:VAL:HG23 | 1.87                     | 0.56              |
| 1:N:123:ASP:CG   | 1:N:126:SER:H    | 2.08                     | 0.56              |
| 1:N:127:PHE:CZ   | 1:N:159:ILE:HD11 | 2.41                     | 0.56              |
| 1:N:168:MET:HE2  | 1:N:175:TYR:CD1  | 2.40                     | 0.56              |
| 1:N:237:LEU:HD21 | 1:N:246:ILE:CD1  | 2.36                     | 0.56              |
| 1:P:84:TYR:HB2   | 1:P:140:VAL:HG23 | 1.87                     | 0.56              |
| 1:Q:275:PRO:CD   | 1:Q:276:THR:N    | 2.66                     | 0.56              |
| 1:B:168:MET:HE2  | 1:B:175:TYR:CD2  | 2.38                     | 0.56              |
| 1:H:123:ASP:CG   | 1:H:126:SER:H    | 2.08                     | 0.56              |
| 1:H:125:ALA:O    | 1:H:129:VAL:HG23 | 2.04                     | 0.56              |
| 1:H:257:ASN:O    | 1:H:258:VAL:C    | 2.33                     | 0.56              |
| 1:J:84:TYR:HB2   | 1:J:140:VAL:HG23 | 1.87                     | 0.56              |
| 1:J:93:ILE:HG23  | 1:J:293:TRP:NE1  | 2.20                     | 0.56              |
| 1:L:70:SER:O     | 1:L:71:THR:CB    | 2.54                     | 0.56              |
| 1:L:258:VAL:CG1  | 1:L:259:ALA:H    | 2.16                     | 0.56              |
| 1:O:123:ASP:CG   | 1:O:126:SER:H    | 2.08                     | 0.56              |
| 1:O:191:CYS:HG   | 1:O:244:CYS:CB   | 2.19                     | 0.56              |
| 1:P:70:SER:O     | 1:P:71:THR:HB    | 2.05                     | 0.56              |
| 1:Q:191:CYS:HG   | 1:Q:244:CYS:CB   | 2.18                     | 0.56              |
| 1:B:144:TYR:HD1  | 1:B:265:GLY:HA3  | 1.71                     | 0.55              |
| 1:H:237:LEU:HD21 | 1:H:246:ILE:CD1  | 2.36                     | 0.55              |
| 1:I:144:TYR:HD1  | 1:I:265:GLY:HA3  | 1.71                     | 0.55              |
| 1:K:84:TYR:HB2   | 1:K:140:VAL:HG23 | 1.87                     | 0.55              |
| 1:K:127:PHE:CZ   | 1:K:159:ILE:HD11 | 2.41                     | 0.55              |
| 1:K:237:LEU:HD21 | 1:K:246:ILE:CD1  | 2.36                     | 0.55              |
| 1:L:144:TYR:HD1  | 1:L:265:GLY:HA3  | 1.71                     | 0.55              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:275:PRO:CD   | 1:O:276:THR:N    | 2.66                     | 0.55              |
| 1:B:72:GLN:C     | 1:B:76:PHE:CD1   | 2.71                     | 0.55              |
| 1:F:84:TYR:HB2   | 1:F:140:VAL:HG23 | 1.87                     | 0.55              |
| 1:F:150:LEU:HD22 | 1:G:289:TRP:C    | 2.21                     | 0.55              |
| 1:F:162:GLU:OE1  | 1:F:162:GLU:HA   | 2.07                     | 0.55              |
| 1:F:262:GLN:HE22 | 1:F:267:ASP:HB3  | 1.69                     | 0.55              |
| 1:G:70:SER:O     | 1:G:71:THR:HB    | 2.06                     | 0.55              |
| 1:I:72:GLN:CB    | 1:I:76:PHE:CE1   | 2.70                     | 0.55              |
| 1:J:251:LYS:O    | 1:J:252:LEU:CB   | 2.46                     | 0.55              |
| 1:K:162:GLU:HB2  | 1:K:253:GLY:C    | 2.24                     | 0.55              |
| 1:L:72:GLN:C     | 1:L:76:PHE:CD1   | 2.71                     | 0.55              |
| 1:L:237:LEU:HD21 | 1:L:246:ILE:CD1  | 2.36                     | 0.55              |
| 1:M:162:GLU:HA   | 1:M:162:GLU:OE1  | 2.07                     | 0.55              |
| 1:P:272:THR:HG21 | 1:P:277:THR:CG2  | 2.37                     | 0.55              |
| 1:Q:174:TYR:CD1  | 1:Q:198:LEU:HD11 | 2.34                     | 0.55              |
| 1:Q:272:THR:HG21 | 1:Q:277:THR:CG2  | 2.37                     | 0.55              |
| 1:B:75:THR:HG23  | 1:B:79:SER:OG    | 2.07                     | 0.55              |
| 1:B:84:TYR:HB2   | 1:B:140:VAL:HG23 | 1.87                     | 0.55              |
| 1:B:197:PRO:HG2  | 1:B:205:ILE:HG22 | 1.89                     | 0.55              |
| 1:G:134:TYR:CD1  | 1:O:167:PRO:HD3  | 1.91                     | 0.55              |
| 1:G:174:TYR:CD1  | 1:G:198:LEU:HD13 | 2.35                     | 0.55              |
| 1:G:197:PRO:HG2  | 1:G:205:ILE:HG22 | 1.88                     | 0.55              |
| 1:H:307:ILE:HD13 | 1:H:310:MET:HE1  | 1.88                     | 0.55              |
| 1:I:272:THR:HG21 | 1:I:277:THR:HG22 | 1.89                     | 0.55              |
| 1:J:197:PRO:HG2  | 1:J:205:ILE:HG22 | 1.89                     | 0.55              |
| 1:K:272:THR:HG21 | 1:K:277:THR:CG2  | 2.37                     | 0.55              |
| 1:L:168:MET:CE   | 1:L:175:TYR:CE2  | 2.78                     | 0.55              |
| 1:M:72:GLN:C     | 1:M:76:PHE:CD1   | 2.71                     | 0.55              |
| 1:N:76:PHE:CD2   | 1:N:110:GLY:O    | 2.60                     | 0.55              |
| 1:O:109:LYS:HG3  | 1:O:300:VAL:O    | 2.06                     | 0.55              |
| 1:B:272:THR:HG21 | 1:B:277:THR:CG2  | 2.37                     | 0.55              |
| 1:F:76:PHE:CD2   | 1:F:110:GLY:O    | 2.60                     | 0.55              |
| 1:F:272:THR:HG21 | 1:F:277:THR:HG22 | 1.89                     | 0.55              |
| 1:F:290:LYS:HE2  | 1:H:150:LEU:CG   | 2.37                     | 0.55              |
| 1:G:126:SER:CA   | 1:G:223:LYS:HZ1  | 2.08                     | 0.55              |
| 1:G:272:THR:HG21 | 1:G:277:THR:CG2  | 2.37                     | 0.55              |
| 1:H:70:SER:O     | 1:H:71:THR:HB    | 2.07                     | 0.55              |
| 1:H:162:GLU:OE1  | 1:H:162:GLU:HA   | 2.07                     | 0.55              |
| 1:H:197:PRO:HG2  | 1:H:205:ILE:HG22 | 1.89                     | 0.55              |
| 1:H:272:THR:HG21 | 1:H:277:THR:CG2  | 2.37                     | 0.55              |
| 1:K:109:LYS:HG3  | 1:K:300:VAL:O    | 2.06                     | 0.55              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:L:150:LEU:CG   | 1:M:290:LYS:HE2  | 2.37                     | 0.55              |
| 1:L:174:TYR:CD1  | 1:L:198:LEU:HD11 | 2.34                     | 0.55              |
| 1:M:109:LYS:HG3  | 1:M:300:VAL:O    | 2.06                     | 0.55              |
| 1:M:123:ASP:CG   | 1:M:126:SER:H    | 2.08                     | 0.55              |
| 1:M:127:PHE:CZ   | 1:M:159:ILE:HD11 | 2.41                     | 0.55              |
| 1:N:162:GLU:OE1  | 1:N:162:GLU:HA   | 2.07                     | 0.55              |
| 1:B:127:PHE:CZ   | 1:B:159:ILE:HD11 | 2.41                     | 0.55              |
| 1:F:144:TYR:HD2  | 1:F:144:TYR:C    | 2.06                     | 0.55              |
| 1:G:109:LYS:HG3  | 1:G:300:VAL:O    | 2.06                     | 0.55              |
| 1:J:109:LYS:HG3  | 1:J:300:VAL:O    | 2.06                     | 0.55              |
| 1:K:108:THR:CG2  | 1:K:109:LYS:N    | 2.69                     | 0.55              |
| 1:K:197:PRO:O    | 1:K:205:ILE:HG22 | 2.06                     | 0.55              |
| 1:L:70:SER:O     | 1:L:71:THR:HB    | 2.07                     | 0.55              |
| 1:L:272:THR:HG21 | 1:L:277:THR:HG22 | 1.89                     | 0.55              |
| 1:N:108:THR:CG2  | 1:N:109:LYS:N    | 2.69                     | 0.55              |
| 1:O:108:THR:CG2  | 1:O:109:LYS:N    | 2.69                     | 0.55              |
| 1:O:197:PRO:O    | 1:O:205:ILE:HG22 | 2.06                     | 0.55              |
| 1:O:272:THR:HG21 | 1:O:277:THR:CG2  | 2.37                     | 0.55              |
| 1:O:289:TRP:C    | 1:Q:150:LEU:HD22 | 2.21                     | 0.55              |
| 1:P:78:THR:O     | 1:P:78:THR:HG22  | 2.06                     | 0.55              |
| 1:Q:109:LYS:HG3  | 1:Q:300:VAL:O    | 2.06                     | 0.55              |
| 1:B:108:THR:CG2  | 1:B:109:LYS:N    | 2.69                     | 0.55              |
| 1:F:144:TYR:HD1  | 1:F:265:GLY:HA3  | 1.71                     | 0.55              |
| 1:I:70:SER:O     | 1:I:71:THR:CB    | 2.55                     | 0.55              |
| 1:L:197:PRO:HG2  | 1:L:205:ILE:HG22 | 1.89                     | 0.55              |
| 1:P:127:PHE:CZ   | 1:P:159:ILE:HD11 | 2.41                     | 0.55              |
| 1:G:72:GLN:CB    | 1:G:76:PHE:CE1   | 2.70                     | 0.55              |
| 1:G:158:LEU:CD1  | 1:G:224:LEU:CD1  | 2.83                     | 0.55              |
| 1:G:277:THR:HG23 | 1:G:278:ALA:N    | 2.22                     | 0.55              |
| 1:I:72:GLN:C     | 1:I:76:PHE:CD1   | 2.71                     | 0.55              |
| 1:K:162:GLU:OE1  | 1:K:162:GLU:HA   | 2.07                     | 0.55              |
| 1:K:174:TYR:HD1  | 1:K:198:LEU:HD12 | 1.63                     | 0.55              |
| 1:K:197:PRO:HG2  | 1:K:205:ILE:HG22 | 1.89                     | 0.55              |
| 1:L:72:GLN:CB    | 1:L:76:PHE:CE1   | 2.70                     | 0.55              |
| 1:O:290:LYS:HE2  | 1:Q:150:LEU:CG   | 2.37                     | 0.55              |
| 1:P:76:PHE:CD2   | 1:P:110:GLY:O    | 2.60                     | 0.55              |
| 1:Q:93:ILE:HG23  | 1:Q:293:TRP:NE1  | 2.20                     | 0.55              |
| 1:B:174:TYR:CD1  | 1:B:198:LEU:HD11 | 2.34                     | 0.55              |
| 1:F:150:LEU:CG   | 1:G:290:LYS:HE2  | 2.37                     | 0.55              |
| 1:F:158:LEU:CD1  | 1:F:224:LEU:CD1  | 2.83                     | 0.55              |
| 1:F:272:THR:HG21 | 1:F:277:THR:CG2  | 2.37                     | 0.55              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:197:PRO:O    | 1:G:205:ILE:HG22 | 2.06                     | 0.55              |
| 1:I:109:LYS:HG3  | 1:I:300:VAL:O    | 2.06                     | 0.55              |
| 1:I:125:ALA:C    | 1:I:223:LYS:HZ2  | 2.09                     | 0.55              |
| 1:I:290:LYS:HE2  | 1:K:150:LEU:CG   | 2.37                     | 0.55              |
| 1:J:70:SER:O     | 1:J:71:THR:HB    | 2.05                     | 0.55              |
| 1:L:277:THR:HG23 | 1:L:278:ALA:N    | 2.22                     | 0.55              |
| 1:N:197:PRO:O    | 1:N:205:ILE:HG22 | 2.06                     | 0.55              |
| 1:F:70:SER:O     | 1:F:71:THR:HB    | 2.07                     | 0.55              |
| 1:F:126:SER:CA   | 1:F:223:LYS:HZ1  | 2.08                     | 0.55              |
| 1:H:108:THR:CG2  | 1:H:109:LYS:N    | 2.69                     | 0.55              |
| 1:I:197:PRO:O    | 1:I:205:ILE:HG22 | 2.06                     | 0.55              |
| 1:J:180:GLU:HG3  | 1:J:180:GLU:O    | 2.07                     | 0.55              |
| 1:K:144:TYR:HD1  | 1:K:265:GLY:HA3  | 1.71                     | 0.55              |
| 1:P:142:MET:HE1  | 1:P:152:MET:CE   | 2.25                     | 0.55              |
| 1:P:144:TYR:HD1  | 1:P:265:GLY:HA3  | 1.71                     | 0.55              |
| 1:Q:75:THR:CG2   | 1:Q:79:SER:OG    | 2.55                     | 0.55              |
| 1:B:109:LYS:HG3  | 1:B:300:VAL:O    | 2.06                     | 0.55              |
| 1:G:108:THR:CG2  | 1:G:109:LYS:N    | 2.69                     | 0.55              |
| 1:I:258:VAL:CG1  | 1:I:259:ALA:H    | 2.16                     | 0.55              |
| 1:L:127:PHE:CZ   | 1:L:159:ILE:HD11 | 2.40                     | 0.55              |
| 1:L:290:LYS:HE2  | 1:N:150:LEU:CG   | 2.37                     | 0.55              |
| 1:M:272:THR:HG21 | 1:M:277:THR:CG2  | 2.37                     | 0.55              |
| 1:O:150:LEU:CG   | 1:P:290:LYS:HE2  | 2.37                     | 0.55              |
| 1:P:109:LYS:HG3  | 1:P:300:VAL:O    | 2.06                     | 0.55              |
| 1:P:162:GLU:OE1  | 1:P:162:GLU:HA   | 2.06                     | 0.55              |
| 1:Q:197:PRO:HG2  | 1:Q:205:ILE:HG22 | 1.88                     | 0.55              |
| 1:B:72:GLN:CB    | 1:B:76:PHE:CE1   | 2.70                     | 0.54              |
| 1:G:79:SER:CA    | 1:G:80:THR:N     | 2.67                     | 0.54              |
| 1:G:144:TYR:HD1  | 1:G:265:GLY:HA3  | 1.71                     | 0.54              |
| 1:J:150:LEU:HD22 | 1:K:289:TRP:C    | 2.21                     | 0.54              |
| 1:J:237:LEU:HD21 | 1:J:246:ILE:CD1  | 2.36                     | 0.54              |
| 1:J:272:THR:HG21 | 1:J:277:THR:CG2  | 2.37                     | 0.54              |
| 1:L:104:GLN:HB3  | 1:N:205:ILE:HD11 | 1.88                     | 0.54              |
| 1:L:162:GLU:OE1  | 1:L:162:GLU:HA   | 2.07                     | 0.54              |
| 1:N:272:THR:HG21 | 1:N:277:THR:CG2  | 2.37                     | 0.54              |
| 1:O:197:PRO:HG2  | 1:O:205:ILE:HG22 | 1.88                     | 0.54              |
| 1:O:272:THR:HG21 | 1:O:277:THR:HG22 | 1.89                     | 0.54              |
| 1:P:142:MET:HE1  | 1:P:152:MET:HB3  | 1.89                     | 0.54              |
| 1:Q:158:LEU:CD1  | 1:Q:224:LEU:CD1  | 2.83                     | 0.54              |
| 1:B:76:PHE:CD2   | 1:B:110:GLY:O    | 2.60                     | 0.54              |
| 1:B:159:ILE:HG23 | 1:B:258:VAL:CG2  | 2.11                     | 0.54              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:162:GLU:HB2  | 1:B:253:GLY:O    | 2.07                     | 0.54              |
| 1:F:191:CYS:HG   | 1:F:244:CYS:CB   | 2.20                     | 0.54              |
| 1:G:208:LEU:C    | 1:G:210:THR:H    | 2.08                     | 0.54              |
| 1:H:109:LYS:HG3  | 1:H:300:VAL:O    | 2.06                     | 0.54              |
| 1:J:162:GLU:HA   | 1:J:162:GLU:OE1  | 2.07                     | 0.54              |
| 1:K:159:ILE:HG23 | 1:K:258:VAL:CG2  | 2.11                     | 0.54              |
| 1:N:197:PRO:HG2  | 1:N:205:ILE:HG22 | 1.88                     | 0.54              |
| 1:P:72:GLN:C     | 1:P:76:PHE:CD1   | 2.71                     | 0.54              |
| 1:P:108:THR:CG2  | 1:P:109:LYS:N    | 2.69                     | 0.54              |
| 1:P:272:THR:HG21 | 1:P:277:THR:HG22 | 1.89                     | 0.54              |
| 1:P:307:ILE:HA   | 1:P:310:MET:HE3  | 1.88                     | 0.54              |
| 1:Q:108:THR:CG2  | 1:Q:109:LYS:N    | 2.69                     | 0.54              |
| 1:Q:162:GLU:OE1  | 1:Q:162:GLU:HA   | 2.07                     | 0.54              |
| 1:Q:277:THR:HG23 | 1:Q:278:ALA:N    | 2.22                     | 0.54              |
| 1:B:258:VAL:CG1  | 1:B:259:ALA:H    | 2.16                     | 0.54              |
| 1:F:128:SER:CB   | 1:F:155:LEU:CD1  | 2.63                     | 0.54              |
| 1:F:150:LEU:O    | 1:F:154:GLU:HG3  | 2.08                     | 0.54              |
| 1:H:70:SER:O     | 1:H:71:THR:CB    | 2.54                     | 0.54              |
| 1:I:70:SER:O     | 1:I:71:THR:HB    | 2.07                     | 0.54              |
| 1:I:73:GLU:O     | 1:I:73:GLU:CG    | 2.53                     | 0.54              |
| 1:J:125:ALA:C    | 1:J:223:LYS:HZ2  | 2.10                     | 0.54              |
| 1:J:150:LEU:CG   | 1:K:290:LYS:HE2  | 2.37                     | 0.54              |
| 1:L:174:TYR:HD1  | 1:L:198:LEU:HD12 | 1.63                     | 0.54              |
| 1:M:150:LEU:CG   | 1:N:290:LYS:HE2  | 2.37                     | 0.54              |
| 1:O:76:PHE:CD2   | 1:O:110:GLY:O    | 2.60                     | 0.54              |
| 1:Q:70:SER:O     | 1:Q:71:THR:CB    | 2.55                     | 0.54              |
| 1:F:197:PRO:HG2  | 1:F:205:ILE:HG22 | 1.88                     | 0.54              |
| 1:G:150:LEU:CG   | 1:H:290:LYS:HE2  | 2.37                     | 0.54              |
| 1:H:125:ALA:C    | 1:H:223:LYS:HZ2  | 2.10                     | 0.54              |
| 1:I:162:GLU:OE1  | 1:I:162:GLU:HA   | 2.07                     | 0.54              |
| 1:I:275:PRO:CD   | 1:I:276:THR:N    | 2.66                     | 0.54              |
| 1:K:277:THR:HG23 | 1:K:278:ALA:N    | 2.22                     | 0.54              |
| 1:L:180:GLU:O    | 1:L:180:GLU:HG3  | 2.08                     | 0.54              |
| 1:M:150:LEU:O    | 1:M:154:GLU:HG3  | 2.08                     | 0.54              |
| 1:M:277:THR:HG23 | 1:M:278:ALA:N    | 2.22                     | 0.54              |
| 1:N:307:ILE:HD13 | 1:N:310:MET:HE1  | 1.89                     | 0.54              |
| 1:P:180:GLU:HG3  | 1:P:180:GLU:O    | 2.07                     | 0.54              |
| 1:Q:272:THR:HG21 | 1:Q:277:THR:HG22 | 1.89                     | 0.54              |
| 1:B:87:THR:HG1   | 1:B:122:THR:HG22 | 1.71                     | 0.54              |
| 1:F:175:TYR:HD1  | 1:F:184:TRP:CZ2  | 2.26                     | 0.54              |
| 1:G:162:GLU:HB2  | 1:G:253:GLY:O    | 2.07                     | 0.54              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:H:144:TYR:CD2  | 1:H:145:ASP:N    | 2.69                     | 0.54              |
| 1:H:272:THR:HG21 | 1:H:277:THR:HG22 | 1.89                     | 0.54              |
| 1:I:142:MET:HE1  | 1:I:152:MET:HB3  | 1.88                     | 0.54              |
| 1:J:76:PHE:CD2   | 1:J:110:GLY:O    | 2.60                     | 0.54              |
| 1:K:175:TYR:HD1  | 1:K:184:TRP:CZ2  | 2.26                     | 0.54              |
| 1:M:307:ILE:HA   | 1:M:310:MET:HE3  | 1.89                     | 0.54              |
| 1:Q:70:SER:O     | 1:Q:71:THR:HB    | 2.07                     | 0.54              |
| 1:B:251:LYS:O    | 1:B:252:LEU:CB   | 2.46                     | 0.54              |
| 1:B:272:THR:HG21 | 1:B:277:THR:HG22 | 1.89                     | 0.54              |
| 1:F:277:THR:HG23 | 1:F:278:ALA:N    | 2.22                     | 0.54              |
| 1:G:237:LEU:HD21 | 1:G:246:ILE:CD1  | 2.36                     | 0.54              |
| 1:H:175:TYR:HD1  | 1:H:184:TRP:CZ2  | 2.26                     | 0.54              |
| 1:H:180:GLU:HG3  | 1:H:180:GLU:O    | 2.07                     | 0.54              |
| 1:I:150:LEU:CG   | 1:J:290:LYS:HE2  | 2.37                     | 0.54              |
| 1:I:197:PRO:HG2  | 1:I:205:ILE:HG22 | 1.88                     | 0.54              |
| 1:I:272:THR:HG21 | 1:I:277:THR:CG2  | 2.37                     | 0.54              |
| 1:I:277:THR:HG23 | 1:I:278:ALA:N    | 2.22                     | 0.54              |
| 1:J:277:THR:HG23 | 1:J:278:ALA:N    | 2.22                     | 0.54              |
| 1:L:272:THR:HG21 | 1:L:277:THR:CG2  | 2.37                     | 0.54              |
| 1:O:144:TYR:HD1  | 1:O:265:GLY:HA3  | 1.71                     | 0.54              |
| 1:P:150:LEU:CG   | 1:Q:290:LYS:HE2  | 2.37                     | 0.54              |
| 1:Q:180:GLU:HG3  | 1:Q:180:GLU:O    | 2.07                     | 0.54              |
| 1:B:162:GLU:HA   | 1:B:162:GLU:OE1  | 2.07                     | 0.54              |
| 1:B:174:TYR:HE1  | 1:B:234:ASN:HB2  | 1.72                     | 0.54              |
| 1:F:180:GLU:HG3  | 1:F:180:GLU:O    | 2.07                     | 0.54              |
| 1:G:272:THR:HG21 | 1:G:277:THR:HG22 | 1.89                     | 0.54              |
| 1:I:158:LEU:CD1  | 1:I:224:LEU:CD1  | 2.83                     | 0.54              |
| 1:I:175:TYR:HD1  | 1:I:184:TRP:CZ2  | 2.25                     | 0.54              |
| 1:J:150:LEU:O    | 1:J:154:GLU:HG3  | 2.08                     | 0.54              |
| 1:J:234:ASN:O    | 1:J:235:HIS:CD2  | 2.60                     | 0.54              |
| 1:K:272:THR:HG21 | 1:K:277:THR:HG22 | 1.89                     | 0.54              |
| 1:M:76:PHE:CD2   | 1:M:110:GLY:O    | 2.60                     | 0.54              |
| 1:M:175:TYR:HD1  | 1:M:184:TRP:CZ2  | 2.26                     | 0.54              |
| 1:O:150:LEU:O    | 1:O:154:GLU:HG3  | 2.08                     | 0.54              |
| 1:O:175:TYR:HD1  | 1:O:184:TRP:CZ2  | 2.26                     | 0.54              |
| 1:Q:144:TYR:HD1  | 1:Q:265:GLY:HA3  | 1.72                     | 0.54              |
| 1:G:150:LEU:O    | 1:G:154:GLU:HG3  | 2.08                     | 0.54              |
| 1:G:175:TYR:HD1  | 1:G:184:TRP:CZ2  | 2.26                     | 0.54              |
| 1:H:277:THR:HG23 | 1:H:278:ALA:N    | 2.22                     | 0.54              |
| 1:J:272:THR:HG21 | 1:J:277:THR:HG22 | 1.89                     | 0.54              |
| 1:L:76:PHE:CD2   | 1:L:110:GLY:O    | 2.60                     | 0.54              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:M:197:PRO:HG2  | 1:M:205:ILE:HG22 | 1.88                     | 0.54              |
| 1:N:150:LEU:O    | 1:N:154:GLU:HG3  | 2.08                     | 0.54              |
| 1:O:234:ASN:O    | 1:O:235:HIS:CD2  | 2.60                     | 0.54              |
| 1:P:197:PRO:HG2  | 1:P:205:ILE:HG22 | 1.88                     | 0.54              |
| 1:P:237:LEU:HD21 | 1:P:246:ILE:CD1  | 2.36                     | 0.54              |
| 1:Q:150:LEU:O    | 1:Q:154:GLU:HG3  | 2.08                     | 0.54              |
| 1:B:158:LEU:CD1  | 1:B:224:LEU:CD1  | 2.83                     | 0.54              |
| 1:B:174:TYR:HD1  | 1:B:198:LEU:HD12 | 1.63                     | 0.54              |
| 1:B:180:GLU:HG3  | 1:B:180:GLU:O    | 2.07                     | 0.54              |
| 1:H:234:ASN:O    | 1:H:235:HIS:CD2  | 2.60                     | 0.54              |
| 1:K:76:PHE:CD2   | 1:K:110:GLY:O    | 2.60                     | 0.54              |
| 1:L:174:TYR:CD1  | 1:L:198:LEU:HD13 | 2.35                     | 0.54              |
| 1:N:180:GLU:HG3  | 1:N:180:GLU:O    | 2.07                     | 0.54              |
| 1:O:162:GLU:OE1  | 1:O:162:GLU:HA   | 2.07                     | 0.54              |
| 1:P:277:THR:HG23 | 1:P:278:ALA:N    | 2.22                     | 0.54              |
| 1:F:72:GLN:C     | 1:F:76:PHE:CE1   | 2.82                     | 0.54              |
| 1:H:76:PHE:CD2   | 1:H:110:GLY:O    | 2.60                     | 0.54              |
| 1:L:228:ASP:O    | 1:M:294:GLN:NE2  | 2.41                     | 0.54              |
| 1:M:144:TYR:HD1  | 1:M:265:GLY:HA3  | 1.71                     | 0.54              |
| 1:N:251:LYS:O    | 1:N:252:LEU:CB   | 2.46                     | 0.54              |
| 1:O:180:GLU:HG3  | 1:O:180:GLU:O    | 2.07                     | 0.54              |
| 1:Q:76:PHE:CD2   | 1:Q:110:GLY:O    | 2.60                     | 0.54              |
| 1:G:228:ASP:O    | 1:H:294:GLN:NE2  | 2.41                     | 0.53              |
| 1:I:76:PHE:CD2   | 1:I:110:GLY:O    | 2.60                     | 0.53              |
| 1:J:307:ILE:HA   | 1:J:310:MET:HE3  | 1.90                     | 0.53              |
| 1:L:234:ASN:O    | 1:L:235:HIS:CD2  | 2.60                     | 0.53              |
| 1:N:123:ASP:OD1  | 1:N:126:SER:N    | 2.40                     | 0.53              |
| 1:N:126:SER:HA   | 1:N:223:LYS:HZ2  | 1.64                     | 0.53              |
| 1:P:72:GLN:C     | 1:P:76:PHE:CE1   | 2.82                     | 0.53              |
| 1:P:175:TYR:HD1  | 1:P:184:TRP:CZ2  | 2.26                     | 0.53              |
| 1:Q:72:GLN:C     | 1:Q:76:PHE:CD1   | 2.71                     | 0.53              |
| 1:Q:234:ASN:O    | 1:Q:235:HIS:CD2  | 2.60                     | 0.53              |
| 1:B:197:PRO:HA   | 1:B:235:HIS:CD2  | 2.44                     | 0.53              |
| 1:G:72:GLN:C     | 1:G:76:PHE:CE1   | 2.82                     | 0.53              |
| 1:I:150:LEU:O    | 1:I:154:GLU:HG3  | 2.08                     | 0.53              |
| 1:I:205:ILE:HD11 | 1:J:104:GLN:HB3  | 1.88                     | 0.53              |
| 1:J:128:SER:CB   | 1:J:155:LEU:CD1  | 2.63                     | 0.53              |
| 1:J:162:GLU:HB2  | 1:J:253:GLY:O    | 2.07                     | 0.53              |
| 1:K:150:LEU:O    | 1:K:154:GLU:HG3  | 2.08                     | 0.53              |
| 1:L:150:LEU:O    | 1:L:154:GLU:HG3  | 2.08                     | 0.53              |
| 1:L:307:ILE:HD13 | 1:L:310:MET:HE1  | 1.90                     | 0.53              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:M:180:GLU:HG3  | 1:M:180:GLU:O    | 2.07                     | 0.53              |
| 1:N:162:GLU:HG3  | 1:N:252:LEU:CD1  | 2.33                     | 0.53              |
| 1:N:272:THR:HG21 | 1:N:277:THR:HG22 | 1.89                     | 0.53              |
| 1:N:277:THR:HG23 | 1:N:278:ALA:N    | 2.22                     | 0.53              |
| 1:P:159:ILE:HG23 | 1:P:258:VAL:CG2  | 2.11                     | 0.53              |
| 1:B:175:TYR:HD1  | 1:B:184:TRP:CZ2  | 2.26                     | 0.53              |
| 1:B:277:THR:HG23 | 1:B:278:ALA:N    | 2.22                     | 0.53              |
| 1:I:75:THR:HG23  | 1:I:79:SER:OG    | 2.09                     | 0.53              |
| 1:N:72:GLN:C     | 1:N:76:PHE:CD1   | 2.71                     | 0.53              |
| 1:O:197:PRO:HA   | 1:O:235:HIS:CD2  | 2.44                     | 0.53              |
| 1:O:277:THR:HG23 | 1:O:278:ALA:N    | 2.22                     | 0.53              |
| 1:Q:307:ILE:HD13 | 1:Q:310:MET:HE1  | 1.90                     | 0.53              |
| 1:G:76:PHE:CD2   | 1:G:110:GLY:O    | 2.60                     | 0.53              |
| 1:J:75:THR:HG23  | 1:J:79:SER:OG    | 2.09                     | 0.53              |
| 1:J:76:PHE:CE2   | 1:J:109:LYS:O    | 2.62                     | 0.53              |
| 1:J:197:PRO:HA   | 1:J:235:HIS:CD2  | 2.44                     | 0.53              |
| 1:K:191:CYS:HG   | 1:K:244:CYS:CB   | 2.22                     | 0.53              |
| 1:M:75:THR:HG23  | 1:M:79:SER:OG    | 2.08                     | 0.53              |
| 1:M:76:PHE:CE2   | 1:M:109:LYS:O    | 2.62                     | 0.53              |
| 1:M:162:GLU:HB2  | 1:M:253:GLY:O    | 2.07                     | 0.53              |
| 1:N:175:TYR:HD1  | 1:N:184:TRP:CZ2  | 2.26                     | 0.53              |
| 1:P:162:GLU:HB2  | 1:P:253:GLY:O    | 2.07                     | 0.53              |
| 1:F:170:ILE:HG12 | 1:F:237:LEU:HD23 | 1.91                     | 0.53              |
| 1:G:180:GLU:HG3  | 1:G:180:GLU:O    | 2.07                     | 0.53              |
| 1:G:197:PRO:HA   | 1:G:235:HIS:CD2  | 2.44                     | 0.53              |
| 1:H:72:GLN:C     | 1:H:76:PHE:CE1   | 2.82                     | 0.53              |
| 1:H:75:THR:HG23  | 1:H:79:SER:OG    | 2.09                     | 0.53              |
| 1:H:162:GLU:HG3  | 1:H:252:LEU:CD1  | 2.33                     | 0.53              |
| 1:J:144:TYR:HD1  | 1:J:265:GLY:HA3  | 1.73                     | 0.53              |
| 1:K:76:PHE:CE2   | 1:K:109:LYS:O    | 2.62                     | 0.53              |
| 1:L:175:TYR:HD1  | 1:L:184:TRP:CZ2  | 2.26                     | 0.53              |
| 1:P:123:ASP:OD1  | 1:P:126:SER:N    | 2.40                     | 0.53              |
| 1:P:197:PRO:HA   | 1:P:235:HIS:CD2  | 2.43                     | 0.53              |
| 1:Q:72:GLN:C     | 1:Q:76:PHE:CE1   | 2.82                     | 0.53              |
| 1:B:72:GLN:C     | 1:B:76:PHE:CE1   | 2.82                     | 0.53              |
| 1:B:234:ASN:O    | 1:B:235:HIS:CD2  | 2.60                     | 0.53              |
| 1:F:76:PHE:CE2   | 1:F:109:LYS:O    | 2.62                     | 0.53              |
| 1:G:162:GLU:OE1  | 1:G:162:GLU:HA   | 2.07                     | 0.53              |
| 1:H:150:LEU:O    | 1:H:154:GLU:HG3  | 2.08                     | 0.53              |
| 1:I:180:GLU:O    | 1:I:180:GLU:HG3  | 2.07                     | 0.53              |
| 1:M:170:ILE:HG12 | 1:M:237:LEU:HD23 | 1.91                     | 0.53              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:174:TYR:HE1  | 1:O:234:ASN:HB2  | 1.72                     | 0.53              |
| 1:O:294:GLN:NE2  | 1:Q:228:ASP:O    | 2.41                     | 0.53              |
| 1:O:307:ILE:HD13 | 1:O:310:MET:HE1  | 1.89                     | 0.53              |
| 1:Q:76:PHE:CE2   | 1:Q:109:LYS:O    | 2.62                     | 0.53              |
| 1:Q:175:TYR:HD1  | 1:Q:184:TRP:CZ2  | 2.26                     | 0.53              |
| 1:Q:197:PRO:HA   | 1:Q:235:HIS:CD2  | 2.44                     | 0.53              |
| 1:J:72:GLN:CB    | 1:J:76:PHE:CE1   | 2.70                     | 0.53              |
| 1:J:175:TYR:HD1  | 1:J:184:TRP:CZ2  | 2.26                     | 0.53              |
| 1:K:307:ILE:HD13 | 1:K:310:MET:HE1  | 1.90                     | 0.53              |
| 1:N:72:GLN:C     | 1:N:76:PHE:CE1   | 2.82                     | 0.53              |
| 1:O:174:TYR:CD1  | 1:O:198:LEU:HD11 | 2.34                     | 0.53              |
| 1:P:150:LEU:HD22 | 1:Q:289:TRP:C    | 2.21                     | 0.53              |
| 1:P:150:LEU:O    | 1:P:154:GLU:HG3  | 2.08                     | 0.53              |
| 1:Q:237:LEU:HD21 | 1:Q:246:ILE:CD1  | 2.36                     | 0.53              |
| 1:B:170:ILE:HG12 | 1:B:237:LEU:HD23 | 1.91                     | 0.53              |
| 1:I:123:ASP:OD1  | 1:I:126:SER:N    | 2.40                     | 0.53              |
| 1:I:162:GLU:HB2  | 1:I:253:GLY:O    | 2.07                     | 0.53              |
| 1:K:180:GLU:HG3  | 1:K:180:GLU:O    | 2.07                     | 0.53              |
| 1:N:170:ILE:HG12 | 1:N:237:LEU:HD23 | 1.91                     | 0.53              |
| 1:O:72:GLN:C     | 1:O:76:PHE:CD1   | 2.71                     | 0.53              |
| 1:O:76:PHE:CE2   | 1:O:109:LYS:O    | 2.62                     | 0.53              |
| 1:O:170:ILE:HG12 | 1:O:237:LEU:HD23 | 1.91                     | 0.53              |
| 1:P:76:PHE:CE2   | 1:P:109:LYS:O    | 2.62                     | 0.53              |
| 1:B:150:LEU:O    | 1:B:154:GLU:HG3  | 2.08                     | 0.53              |
| 1:F:197:PRO:HA   | 1:F:235:HIS:CD2  | 2.44                     | 0.53              |
| 1:G:81:LEU:HD13  | 1:G:307:ILE:HD11 | 1.91                     | 0.53              |
| 1:I:289:TRP:C    | 1:K:150:LEU:HD22 | 2.21                     | 0.53              |
| 1:L:76:PHE:CE2   | 1:L:109:LYS:O    | 2.62                     | 0.53              |
| 1:L:289:TRP:C    | 1:N:150:LEU:HD22 | 2.21                     | 0.53              |
| 1:M:197:PRO:HA   | 1:M:235:HIS:CD2  | 2.44                     | 0.53              |
| 1:M:234:ASN:O    | 1:M:235:HIS:CD2  | 2.60                     | 0.53              |
| 1:M:237:LEU:HD21 | 1:M:246:ILE:CD1  | 2.36                     | 0.53              |
| 1:M:272:THR:HG21 | 1:M:277:THR:HG22 | 1.89                     | 0.53              |
| 1:N:76:PHE:CE2   | 1:N:109:LYS:O    | 2.62                     | 0.53              |
| 1:O:72:GLN:C     | 1:O:76:PHE:CE1   | 2.82                     | 0.53              |
| 1:O:81:LEU:HD13  | 1:O:307:ILE:HD11 | 1.91                     | 0.53              |
| 1:F:294:GLN:NE2  | 1:H:228:ASP:O    | 2.41                     | 0.53              |
| 1:G:76:PHE:CE2   | 1:G:109:LYS:O    | 2.62                     | 0.53              |
| 1:G:307:ILE:HD13 | 1:G:310:MET:HE1  | 1.91                     | 0.53              |
| 1:H:197:PRO:HA   | 1:H:235:HIS:CD2  | 2.44                     | 0.53              |
| 1:J:72:GLN:C     | 1:J:76:PHE:CE1   | 2.82                     | 0.53              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:J:81:LEU:HD13  | 1:J:307:ILE:HD11 | 1.91                     | 0.53              |
| 1:J:174:TYR:CG   | 1:J:198:LEU:CD1  | 2.91                     | 0.53              |
| 1:K:251:LYS:HA   | 1:K:252:LEU:HD23 | 1.91                     | 0.53              |
| 1:L:191:CYS:HG   | 1:L:244:CYS:CB   | 2.21                     | 0.53              |
| 1:O:162:GLU:HB2  | 1:O:253:GLY:O    | 2.07                     | 0.53              |
| 1:P:234:ASN:O    | 1:P:235:HIS:CD2  | 2.60                     | 0.53              |
| 1:B:126:SER:HA   | 1:B:223:LYS:HZ2  | 1.68                     | 0.52              |
| 1:F:205:ILE:HD11 | 1:G:104:GLN:HB3  | 1.88                     | 0.52              |
| 1:H:158:LEU:CD1  | 1:H:224:LEU:CD1  | 2.83                     | 0.52              |
| 1:I:72:GLN:C     | 1:I:76:PHE:CE1   | 2.82                     | 0.52              |
| 1:J:205:ILE:HD11 | 1:K:104:GLN:HB3  | 1.88                     | 0.52              |
| 1:K:72:GLN:C     | 1:K:76:PHE:CE1   | 2.82                     | 0.52              |
| 1:N:81:LEU:HD13  | 1:N:307:ILE:HD11 | 1.91                     | 0.52              |
| 1:N:197:PRO:HA   | 1:N:235:HIS:CD2  | 2.44                     | 0.52              |
| 1:O:82:CYS:HG    | 1:O:135:CYS:CB   | 2.18                     | 0.52              |
| 1:Q:275:PRO:CD   | 1:Q:276:THR:H    | 2.22                     | 0.52              |
| 1:G:170:ILE:HG12 | 1:G:237:LEU:HD23 | 1.91                     | 0.52              |
| 1:J:142:MET:HE1  | 1:J:152:MET:HB3  | 1.92                     | 0.52              |
| 1:K:168:MET:HE2  | 1:K:175:TYR:CG   | 2.44                     | 0.52              |
| 1:K:285:MET:HG3  | 1:K:286:ARG:H    | 1.74                     | 0.52              |
| 1:L:81:LEU:HD13  | 1:L:307:ILE:HD11 | 1.91                     | 0.52              |
| 1:L:197:PRO:HA   | 1:L:235:HIS:CD2  | 2.44                     | 0.52              |
| 1:B:81:LEU:HD13  | 1:B:307:ILE:HD11 | 1.91                     | 0.52              |
| 1:I:76:PHE:CE2   | 1:I:109:LYS:O    | 2.62                     | 0.52              |
| 1:I:197:PRO:HA   | 1:I:235:HIS:CD2  | 2.44                     | 0.52              |
| 1:J:251:LYS:HA   | 1:J:252:LEU:HD23 | 1.92                     | 0.52              |
| 1:K:81:LEU:HD13  | 1:K:307:ILE:HD11 | 1.91                     | 0.52              |
| 1:K:197:PRO:HA   | 1:K:235:HIS:CD2  | 2.44                     | 0.52              |
| 1:L:72:GLN:C     | 1:L:76:PHE:CE1   | 2.82                     | 0.52              |
| 1:L:125:ALA:C    | 1:L:223:LYS:HZ2  | 2.13                     | 0.52              |
| 1:L:158:LEU:CD1  | 1:L:224:LEU:CD1  | 2.83                     | 0.52              |
| 1:L:170:ILE:HG12 | 1:L:237:LEU:HD23 | 1.91                     | 0.52              |
| 1:N:251:LYS:HA   | 1:N:252:LEU:HD23 | 1.92                     | 0.52              |
| 1:O:126:SER:HA   | 1:O:223:LYS:HZ2  | 1.71                     | 0.52              |
| 1:O:158:LEU:CD1  | 1:O:224:LEU:CD1  | 2.83                     | 0.52              |
| 1:O:276:THR:CA   | 1:P:285:MET:HE3  | 1.98                     | 0.52              |
| 1:Q:263:VAL:CG1  | 1:Q:289:TRP:HB2  | 2.40                     | 0.52              |
| 1:G:174:TYR:CG   | 1:G:198:LEU:CD1  | 2.91                     | 0.52              |
| 1:H:142:MET:HE1  | 1:H:152:MET:HB3  | 1.90                     | 0.52              |
| 1:I:251:LYS:HA   | 1:I:252:LEU:HD23 | 1.92                     | 0.52              |
| 1:I:275:PRO:CD   | 1:I:276:THR:H    | 2.23                     | 0.52              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:J:167:PRO:HG2  | 1:L:117:TYR:CD2  | 2.45                     | 0.52              |
| 1:J:167:PRO:HG2  | 1:L:117:TYR:CE2  | 2.44                     | 0.52              |
| 1:K:162:GLU:HB2  | 1:K:253:GLY:O    | 2.07                     | 0.52              |
| 1:K:170:ILE:HG12 | 1:K:237:LEU:HD23 | 1.91                     | 0.52              |
| 1:L:205:ILE:HD11 | 1:M:104:GLN:HB3  | 1.88                     | 0.52              |
| 1:M:251:LYS:HA   | 1:M:252:LEU:HD23 | 1.92                     | 0.52              |
| 1:M:275:PRO:CD   | 1:M:276:THR:H    | 2.22                     | 0.52              |
| 1:O:285:MET:HG3  | 1:O:286:ARG:H    | 1.75                     | 0.52              |
| 1:G:234:ASN:O    | 1:G:235:HIS:CD2  | 2.60                     | 0.52              |
| 1:H:76:PHE:CE2   | 1:H:109:LYS:O    | 2.62                     | 0.52              |
| 1:H:285:MET:HG3  | 1:H:286:ARG:H    | 1.74                     | 0.52              |
| 1:I:228:ASP:O    | 1:J:294:GLN:NE2  | 2.41                     | 0.52              |
| 1:J:159:ILE:HG23 | 1:J:258:VAL:CG2  | 2.11                     | 0.52              |
| 1:K:75:THR:CG2   | 1:K:79:SER:OG    | 2.56                     | 0.52              |
| 1:L:251:LYS:HA   | 1:L:252:LEU:HD23 | 1.92                     | 0.52              |
| 1:B:76:PHE:CE2   | 1:B:109:LYS:O    | 2.62                     | 0.52              |
| 1:F:81:LEU:HD13  | 1:F:307:ILE:HD11 | 1.91                     | 0.52              |
| 1:I:81:LEU:HD13  | 1:I:307:ILE:HD11 | 1.91                     | 0.52              |
| 1:I:128:SER:CB   | 1:I:155:LEU:CD1  | 2.63                     | 0.52              |
| 1:J:170:ILE:HG12 | 1:J:237:LEU:HD23 | 1.91                     | 0.52              |
| 1:K:87:THR:HG1   | 1:K:122:THR:HG22 | 1.74                     | 0.52              |
| 1:L:285:MET:HG3  | 1:L:286:ARG:H    | 1.75                     | 0.52              |
| 1:O:275:PRO:CD   | 1:O:276:THR:H    | 2.23                     | 0.52              |
| 1:P:75:THR:CG2   | 1:P:79:SER:OG    | 2.58                     | 0.52              |
| 1:P:81:LEU:HD13  | 1:P:307:ILE:HD11 | 1.91                     | 0.52              |
| 1:G:275:PRO:CD   | 1:G:276:THR:H    | 2.22                     | 0.52              |
| 1:H:251:LYS:HA   | 1:H:252:LEU:HD23 | 1.92                     | 0.52              |
| 1:I:162:GLU:HG3  | 1:I:252:LEU:CD1  | 2.33                     | 0.52              |
| 1:I:168:MET:HE3  | 1:I:175:TYR:CG   | 2.45                     | 0.52              |
| 1:I:170:ILE:HG12 | 1:I:237:LEU:HD23 | 1.91                     | 0.52              |
| 1:M:72:GLN:C     | 1:M:76:PHE:CE1   | 2.82                     | 0.52              |
| 1:M:123:ASP:OD1  | 1:M:126:SER:N    | 2.40                     | 0.52              |
| 1:M:205:ILE:HD11 | 1:N:104:GLN:HB3  | 1.88                     | 0.52              |
| 1:M:285:MET:HG3  | 1:M:286:ARG:H    | 1.75                     | 0.52              |
| 1:P:170:ILE:HG12 | 1:P:237:LEU:HD23 | 1.91                     | 0.52              |
| 1:P:275:PRO:CD   | 1:P:276:THR:H    | 2.23                     | 0.52              |
| 1:Q:168:MET:HE3  | 1:Q:175:TYR:CG   | 2.44                     | 0.52              |
| 1:B:307:ILE:HD13 | 1:B:310:MET:HE1  | 1.92                     | 0.52              |
| 1:F:162:GLU:HB2  | 1:F:253:GLY:O    | 2.07                     | 0.52              |
| 1:H:170:ILE:HG12 | 1:H:237:LEU:HD23 | 1.91                     | 0.52              |
| 1:J:285:MET:HG3  | 1:J:286:ARG:H    | 1.75                     | 0.52              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:M:205:ILE:CD1  | 1:N:104:GLN:CB   | 2.82                     | 0.52              |
| 1:M:228:ASP:O    | 1:N:294:GLN:NE2  | 2.41                     | 0.52              |
| 1:N:275:PRO:CD   | 1:N:276:THR:H    | 2.22                     | 0.52              |
| 1:H:307:ILE:HA   | 1:H:310:MET:HE3  | 1.91                     | 0.52              |
| 1:L:263:VAL:CG1  | 1:L:289:TRP:HB2  | 2.40                     | 0.52              |
| 1:N:174:TYR:HD1  | 1:N:198:LEU:HD12 | 1.63                     | 0.52              |
| 1:B:123:ASP:OD1  | 1:B:126:SER:N    | 2.40                     | 0.52              |
| 1:H:81:LEU:HD13  | 1:H:307:ILE:HD11 | 1.91                     | 0.52              |
| 1:I:205:ILE:CD1  | 1:J:104:GLN:CB   | 2.81                     | 0.52              |
| 1:Q:170:ILE:HG12 | 1:Q:237:LEU:HD23 | 1.91                     | 0.52              |
| 1:H:263:VAL:CG1  | 1:H:289:TRP:HB2  | 2.40                     | 0.51              |
| 1:I:174:TYR:HD1  | 1:I:198:LEU:HD12 | 1.63                     | 0.51              |
| 1:I:208:LEU:O    | 1:I:210:THR:N    | 2.44                     | 0.51              |
| 1:I:285:MET:HE3  | 1:K:276:THR:CA   | 1.99                     | 0.51              |
| 1:N:285:MET:HG3  | 1:N:286:ARG:H    | 1.75                     | 0.51              |
| 1:P:128:SER:HB2  | 1:P:224:LEU:HD22 | 1.93                     | 0.51              |
| 1:P:208:LEU:O    | 1:P:210:THR:N    | 2.44                     | 0.51              |
| 1:Q:81:LEU:HD13  | 1:Q:307:ILE:HD11 | 1.91                     | 0.51              |
| 1:Q:251:LYS:HA   | 1:Q:252:LEU:HD23 | 1.92                     | 0.51              |
| 1:B:251:LYS:HA   | 1:B:252:LEU:HD23 | 1.92                     | 0.51              |
| 1:F:174:TYR:HE1  | 1:F:234:ASN:HB2  | 1.72                     | 0.51              |
| 1:G:251:LYS:O    | 1:G:252:LEU:CB   | 2.46                     | 0.51              |
| 1:I:234:ASN:O    | 1:I:235:HIS:CD2  | 2.60                     | 0.51              |
| 1:M:72:GLN:CB    | 1:M:76:PHE:CE1   | 2.70                     | 0.51              |
| 1:P:251:LYS:HA   | 1:P:252:LEU:HD23 | 1.92                     | 0.51              |
| 1:I:128:SER:HB2  | 1:I:224:LEU:HD22 | 1.92                     | 0.51              |
| 1:M:81:LEU:HD13  | 1:M:307:ILE:HD11 | 1.91                     | 0.51              |
| 1:M:263:VAL:CG1  | 1:M:289:TRP:HB2  | 2.40                     | 0.51              |
| 1:N:174:TYR:CG   | 1:N:198:LEU:CD1  | 2.91                     | 0.51              |
| 1:P:125:ALA:C    | 1:P:223:LYS:HZ2  | 2.13                     | 0.51              |
| 1:B:162:GLU:HG3  | 1:B:252:LEU:CD1  | 2.33                     | 0.51              |
| 1:F:75:THR:HG23  | 1:F:79:SER:OG    | 2.11                     | 0.51              |
| 1:F:142:MET:HE1  | 1:F:152:MET:HB3  | 1.91                     | 0.51              |
| 1:G:208:LEU:O    | 1:G:210:THR:N    | 2.44                     | 0.51              |
| 1:J:275:PRO:CD   | 1:J:276:THR:H    | 2.23                     | 0.51              |
| 1:K:158:LEU:CD1  | 1:K:224:LEU:CD1  | 2.83                     | 0.51              |
| 1:L:208:LEU:O    | 1:L:210:THR:N    | 2.44                     | 0.51              |
| 1:M:208:LEU:O    | 1:M:210:THR:N    | 2.43                     | 0.51              |
| 1:O:144:TYR:CD2  | 1:O:145:ASP:N    | 2.69                     | 0.51              |
| 1:B:75:THR:CG2   | 1:B:79:SER:OG    | 2.59                     | 0.51              |
| 1:G:168:MET:CE   | 1:G:175:TYR:CE2  | 2.78                     | 0.51              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:159:ILE:HG23 | 1:I:258:VAL:CG2  | 2.11                     | 0.51              |
| 1:I:258:VAL:HG13 | 1:I:259:ALA:H    | 1.76                     | 0.51              |
| 1:K:123:ASP:OD1  | 1:K:126:SER:N    | 2.40                     | 0.51              |
| 1:K:263:VAL:CG1  | 1:K:289:TRP:HB2  | 2.40                     | 0.51              |
| 1:L:174:TYR:HE1  | 1:L:234:ASN:HB2  | 1.72                     | 0.51              |
| 1:O:128:SER:HB2  | 1:O:224:LEU:HD22 | 1.93                     | 0.51              |
| 1:G:128:SER:HB2  | 1:G:224:LEU:HD22 | 1.93                     | 0.51              |
| 1:M:158:LEU:CD1  | 1:M:224:LEU:CD1  | 2.83                     | 0.51              |
| 1:Q:87:THR:HG1   | 1:Q:122:THR:HG22 | 1.74                     | 0.51              |
| 1:B:263:VAL:CG1  | 1:B:289:TRP:HB2  | 2.40                     | 0.51              |
| 1:H:174:TYR:CD1  | 1:H:198:LEU:HD13 | 2.35                     | 0.51              |
| 1:H:208:LEU:O    | 1:H:210:THR:N    | 2.44                     | 0.51              |
| 1:H:258:VAL:HG13 | 1:H:259:ALA:H    | 1.76                     | 0.51              |
| 1:J:158:LEU:CD1  | 1:J:224:LEU:CD1  | 2.83                     | 0.51              |
| 1:N:85:TYR:CE1   | 1:N:120:GLU:HG2  | 2.46                     | 0.51              |
| 1:N:208:LEU:O    | 1:N:210:THR:N    | 2.44                     | 0.51              |
| 1:O:143:LYS:HG2  | 1:O:263:VAL:HB   | 1.93                     | 0.51              |
| 1:O:208:LEU:O    | 1:O:210:THR:N    | 2.44                     | 0.51              |
| 1:P:85:TYR:CE1   | 1:P:120:GLU:HG2  | 2.46                     | 0.51              |
| 1:P:174:TYR:CG   | 1:P:198:LEU:CD1  | 2.91                     | 0.51              |
| 1:Q:174:TYR:CD1  | 1:Q:198:LEU:HD13 | 2.35                     | 0.51              |
| 1:B:85:TYR:CE1   | 1:B:120:GLU:HG2  | 2.46                     | 0.51              |
| 1:F:85:TYR:CE1   | 1:F:120:GLU:HG2  | 2.46                     | 0.51              |
| 1:K:128:SER:HB2  | 1:K:224:LEU:HD22 | 1.93                     | 0.51              |
| 1:K:208:LEU:O    | 1:K:210:THR:N    | 2.44                     | 0.51              |
| 1:N:158:LEU:CD1  | 1:N:224:LEU:CD1  | 2.83                     | 0.51              |
| 1:N:307:ILE:HA   | 1:N:310:MET:HE3  | 1.93                     | 0.51              |
| 1:O:123:ASP:OD1  | 1:O:126:SER:N    | 2.40                     | 0.51              |
| 1:P:258:VAL:HG13 | 1:P:259:ALA:H    | 1.76                     | 0.51              |
| 1:Q:174:TYR:CG   | 1:Q:198:LEU:CD1  | 2.91                     | 0.51              |
| 1:B:258:VAL:HG13 | 1:B:259:ALA:H    | 1.76                     | 0.51              |
| 1:F:143:LYS:HG2  | 1:F:263:VAL:HB   | 1.93                     | 0.51              |
| 1:F:263:VAL:CG1  | 1:F:289:TRP:HB2  | 2.40                     | 0.51              |
| 1:F:285:MET:HG3  | 1:F:286:ARG:H    | 1.75                     | 0.51              |
| 1:G:285:MET:HG3  | 1:G:286:ARG:H    | 1.75                     | 0.51              |
| 1:H:275:PRO:CD   | 1:H:276:THR:H    | 2.22                     | 0.51              |
| 1:J:133:LEU:HD12 | 1:J:255:ARG:HH21 | 1.76                     | 0.51              |
| 1:K:275:PRO:CD   | 1:K:276:THR:H    | 2.23                     | 0.51              |
| 1:L:275:PRO:CD   | 1:L:276:THR:H    | 2.22                     | 0.51              |
| 1:M:128:SER:HB2  | 1:M:224:LEU:HD22 | 1.93                     | 0.51              |
| 1:O:307:ILE:HA   | 1:O:310:MET:HE3  | 1.93                     | 0.51              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:P:285:MET:HG3  | 1:P:286:ARG:H    | 1.75                     | 0.51              |
| 1:Q:143:LYS:HG2  | 1:Q:263:VAL:HB   | 1.93                     | 0.51              |
| 1:B:133:LEU:HD12 | 1:B:255:ARG:HH21 | 1.76                     | 0.51              |
| 1:B:143:LYS:HG2  | 1:B:263:VAL:HB   | 1.93                     | 0.51              |
| 1:B:285:MET:HG3  | 1:B:286:ARG:H    | 1.75                     | 0.51              |
| 1:G:133:LEU:HD12 | 1:G:255:ARG:HH21 | 1.76                     | 0.51              |
| 1:H:128:SER:HB2  | 1:H:224:LEU:HD22 | 1.93                     | 0.51              |
| 1:L:128:SER:HB2  | 1:L:224:LEU:HD22 | 1.93                     | 0.51              |
| 1:N:128:SER:HB2  | 1:N:224:LEU:HD22 | 1.93                     | 0.51              |
| 1:N:143:LYS:HG2  | 1:N:263:VAL:HB   | 1.93                     | 0.51              |
| 1:N:174:TYR:HE1  | 1:N:234:ASN:HB2  | 1.72                     | 0.51              |
| 1:O:162:GLU:HG3  | 1:O:252:LEU:CD1  | 2.33                     | 0.51              |
| 1:O:205:ILE:HD11 | 1:P:104:GLN:HB3  | 1.88                     | 0.51              |
| 1:B:127:PHE:CD2  | 1:B:155:LEU:CD2  | 2.64                     | 0.50              |
| 1:B:275:PRO:CD   | 1:B:276:THR:H    | 2.23                     | 0.50              |
| 1:J:85:TYR:CE1   | 1:J:120:GLU:HG2  | 2.46                     | 0.50              |
| 1:J:128:SER:HB2  | 1:J:224:LEU:HD22 | 1.93                     | 0.50              |
| 1:L:144:TYR:CD2  | 1:L:145:ASP:N    | 2.68                     | 0.50              |
| 1:M:174:TYR:HE1  | 1:M:234:ASN:HB2  | 1.72                     | 0.50              |
| 1:M:174:TYR:HD1  | 1:M:198:LEU:HD12 | 1.63                     | 0.50              |
| 1:P:133:LEU:HD12 | 1:P:255:ARG:HH21 | 1.76                     | 0.50              |
| 1:Q:85:TYR:CE1   | 1:Q:120:GLU:HG2  | 2.46                     | 0.50              |
| 1:Q:208:LEU:O    | 1:Q:210:THR:N    | 2.43                     | 0.50              |
| 1:F:174:TYR:CG   | 1:F:198:LEU:CD1  | 2.91                     | 0.50              |
| 1:F:275:PRO:CD   | 1:F:276:THR:H    | 2.22                     | 0.50              |
| 1:H:162:GLU:HB2  | 1:H:253:GLY:O    | 2.07                     | 0.50              |
| 1:I:285:MET:HG3  | 1:I:286:ARG:H    | 1.74                     | 0.50              |
| 1:L:85:TYR:CE1   | 1:L:120:GLU:HG2  | 2.46                     | 0.50              |
| 1:M:85:TYR:CE1   | 1:M:120:GLU:HG2  | 2.46                     | 0.50              |
| 1:M:162:GLU:HG3  | 1:M:252:LEU:CD1  | 2.33                     | 0.50              |
| 1:O:228:ASP:O    | 1:P:294:GLN:NE2  | 2.41                     | 0.50              |
| 1:O:263:VAL:CG1  | 1:O:289:TRP:HB2  | 2.40                     | 0.50              |
| 1:Q:123:ASP:OD1  | 1:Q:126:SER:N    | 2.40                     | 0.50              |
| 1:B:142:MET:HE1  | 1:B:152:MET:HB3  | 1.93                     | 0.50              |
| 1:B:208:LEU:O    | 1:B:210:THR:N    | 2.44                     | 0.50              |
| 1:F:162:GLU:HG3  | 1:F:252:LEU:CD1  | 2.33                     | 0.50              |
| 1:G:251:LYS:HA   | 1:G:252:LEU:HD23 | 1.92                     | 0.50              |
| 1:G:275:PRO:HD2  | 1:G:276:THR:H    | 1.77                     | 0.50              |
| 1:I:170:ILE:CD1  | 1:I:239:VAL:HB   | 2.42                     | 0.50              |
| 1:K:162:GLU:HG3  | 1:K:252:LEU:CD1  | 2.33                     | 0.50              |
| 1:M:174:TYR:CG   | 1:M:198:LEU:CD1  | 2.91                     | 0.50              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:M:275:PRO:HD2  | 1:M:276:THR:H    | 1.77                     | 0.50              |
| 1:O:133:LEU:HD12 | 1:O:255:ARG:HH21 | 1.76                     | 0.50              |
| 1:P:143:LYS:HA   | 1:P:263:VAL:O    | 2.12                     | 0.50              |
| 1:P:158:LEU:CD1  | 1:P:224:LEU:CD1  | 2.83                     | 0.50              |
| 1:P:228:ASP:O    | 1:Q:294:GLN:NE2  | 2.41                     | 0.50              |
| 1:P:263:VAL:CG1  | 1:P:289:TRP:HB2  | 2.40                     | 0.50              |
| 1:Q:143:LYS:HA   | 1:Q:263:VAL:O    | 2.12                     | 0.50              |
| 1:B:128:SER:HB2  | 1:B:224:LEU:HD22 | 1.93                     | 0.50              |
| 1:F:143:LYS:HA   | 1:F:263:VAL:O    | 2.12                     | 0.50              |
| 1:G:85:TYR:CE1   | 1:G:120:GLU:HG2  | 2.46                     | 0.50              |
| 1:H:174:TYR:HE1  | 1:H:234:ASN:HB2  | 1.72                     | 0.50              |
| 1:I:143:LYS:HA   | 1:I:263:VAL:O    | 2.12                     | 0.50              |
| 1:I:263:VAL:CG1  | 1:I:289:TRP:HB2  | 2.40                     | 0.50              |
| 1:I:276:THR:CA   | 1:J:285:MET:HE3  | 1.95                     | 0.50              |
| 1:J:311:SER:O    | 1:J:312:LYS:CB   | 2.60                     | 0.50              |
| 1:K:143:LYS:HG2  | 1:K:263:VAL:HB   | 1.93                     | 0.50              |
| 1:L:143:LYS:HG2  | 1:L:263:VAL:HB   | 1.93                     | 0.50              |
| 1:L:258:VAL:HG13 | 1:L:259:ALA:H    | 1.76                     | 0.50              |
| 1:N:143:LYS:HA   | 1:N:263:VAL:O    | 2.12                     | 0.50              |
| 1:N:170:ILE:CD1  | 1:N:239:VAL:HB   | 2.42                     | 0.50              |
| 1:N:263:VAL:CG1  | 1:N:289:TRP:HB2  | 2.40                     | 0.50              |
| 1:O:251:LYS:HA   | 1:O:252:LEU:HD23 | 1.92                     | 0.50              |
| 1:Q:251:LYS:CA   | 1:Q:252:LEU:HD23 | 2.42                     | 0.50              |
| 1:Q:285:MET:HG3  | 1:Q:286:ARG:H    | 1.74                     | 0.50              |
| 1:F:123:ASP:OD1  | 1:F:126:SER:N    | 2.40                     | 0.50              |
| 1:F:170:ILE:CD1  | 1:F:239:VAL:HB   | 2.42                     | 0.50              |
| 1:F:251:LYS:O    | 1:F:252:LEU:CB   | 2.46                     | 0.50              |
| 1:G:174:TYR:HE1  | 1:G:234:ASN:HB2  | 1.72                     | 0.50              |
| 1:G:205:ILE:HD11 | 1:H:104:GLN:HB3  | 1.88                     | 0.50              |
| 1:J:142:MET:HE1  | 1:J:152:MET:CE   | 2.26                     | 0.50              |
| 1:J:162:GLU:HG3  | 1:J:252:LEU:CD1  | 2.33                     | 0.50              |
| 1:K:170:ILE:CD1  | 1:K:239:VAL:HB   | 2.42                     | 0.50              |
| 1:K:307:ILE:HA   | 1:K:310:MET:HE3  | 1.94                     | 0.50              |
| 1:L:162:GLU:HB2  | 1:L:253:GLY:O    | 2.07                     | 0.50              |
| 1:N:275:PRO:HD2  | 1:N:276:THR:H    | 1.77                     | 0.50              |
| 1:P:251:LYS:CA   | 1:P:252:LEU:HD23 | 2.42                     | 0.50              |
| 1:F:311:SER:O    | 1:F:312:LYS:CB   | 2.60                     | 0.50              |
| 1:G:143:LYS:HA   | 1:G:263:VAL:O    | 2.12                     | 0.50              |
| 1:I:85:TYR:CE1   | 1:I:120:GLU:HG2  | 2.46                     | 0.50              |
| 1:J:208:LEU:O    | 1:J:210:THR:N    | 2.44                     | 0.50              |
| 1:L:123:ASP:OD1  | 1:L:126:SER:N    | 2.40                     | 0.50              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:L:251:LYS:CA   | 1:L:252:LEU:HD23 | 2.42                     | 0.50              |
| 1:M:133:LEU:HD12 | 1:M:255:ARG:HH21 | 1.76                     | 0.50              |
| 1:M:191:CYS:HG   | 1:M:244:CYS:CB   | 2.23                     | 0.50              |
| 1:O:128:SER:CB   | 1:O:155:LEU:CD1  | 2.63                     | 0.50              |
| 1:O:174:TYR:CG   | 1:O:198:LEU:CD1  | 2.91                     | 0.50              |
| 1:O:258:VAL:HG13 | 1:O:259:ALA:H    | 1.76                     | 0.50              |
| 1:F:251:LYS:HA   | 1:F:252:LEU:HD23 | 1.92                     | 0.50              |
| 1:G:143:LYS:HG2  | 1:G:263:VAL:HB   | 1.93                     | 0.50              |
| 1:H:85:TYR:CE1   | 1:H:120:GLU:HG2  | 2.46                     | 0.50              |
| 1:L:294:GLN:NE2  | 1:N:228:ASP:O    | 2.41                     | 0.50              |
| 1:O:275:PRO:HD2  | 1:O:276:THR:H    | 1.77                     | 0.50              |
| 1:Q:128:SER:HB2  | 1:Q:224:LEU:HD22 | 1.93                     | 0.50              |
| 1:F:104:GLN:HB3  | 1:H:205:ILE:HD11 | 1.88                     | 0.50              |
| 1:F:133:LEU:HD12 | 1:F:255:ARG:HH21 | 1.76                     | 0.50              |
| 1:F:285:MET:HE1  | 1:H:276:THR:O    | 2.12                     | 0.50              |
| 1:I:251:LYS:CA   | 1:I:252:LEU:HD23 | 2.42                     | 0.50              |
| 1:K:133:LEU:HD12 | 1:K:255:ARG:HH21 | 1.76                     | 0.50              |
| 1:K:251:LYS:CA   | 1:K:252:LEU:HD23 | 2.42                     | 0.50              |
| 1:M:78:THR:O     | 1:M:78:THR:CG2   | 2.59                     | 0.50              |
| 1:M:258:VAL:HG13 | 1:M:259:ALA:H    | 1.76                     | 0.50              |
| 1:N:208:LEU:C    | 1:N:210:THR:N    | 2.66                     | 0.50              |
| 1:P:170:ILE:CD1  | 1:P:239:VAL:HB   | 2.42                     | 0.50              |
| 1:F:228:ASP:O    | 1:G:294:GLN:NE2  | 2.41                     | 0.50              |
| 1:G:208:LEU:C    | 1:G:210:THR:N    | 2.66                     | 0.50              |
| 1:H:159:ILE:HG23 | 1:H:258:VAL:CG2  | 2.11                     | 0.50              |
| 1:I:143:LYS:HG2  | 1:I:263:VAL:HB   | 1.93                     | 0.50              |
| 1:J:123:ASP:OD1  | 1:J:126:SER:N    | 2.40                     | 0.50              |
| 1:J:228:ASP:O    | 1:K:294:GLN:NE2  | 2.41                     | 0.50              |
| 1:O:251:LYS:CA   | 1:O:252:LEU:HD23 | 2.42                     | 0.50              |
| 1:P:143:LYS:HG2  | 1:P:263:VAL:HB   | 1.93                     | 0.50              |
| 1:Q:162:GLU:HG3  | 1:Q:252:LEU:CD1  | 2.33                     | 0.50              |
| 1:Q:275:PRO:HD2  | 1:Q:276:THR:H    | 1.76                     | 0.50              |
| 1:B:170:ILE:CD1  | 1:B:239:VAL:HB   | 2.42                     | 0.49              |
| 1:F:128:SER:HB2  | 1:F:224:LEU:HD22 | 1.93                     | 0.49              |
| 1:G:78:THR:O     | 1:G:78:THR:CG2   | 2.58                     | 0.49              |
| 1:H:143:LYS:HA   | 1:H:263:VAL:O    | 2.12                     | 0.49              |
| 1:H:208:LEU:C    | 1:H:210:THR:N    | 2.66                     | 0.49              |
| 1:I:294:GLN:NE2  | 1:K:228:ASP:O    | 2.41                     | 0.49              |
| 1:J:143:LYS:HG2  | 1:J:263:VAL:HB   | 1.93                     | 0.49              |
| 1:K:174:TYR:CD1  | 1:K:198:LEU:HD13 | 2.35                     | 0.49              |
| 1:K:174:TYR:HE1  | 1:K:234:ASN:HB2  | 1.72                     | 0.49              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:L:307:ILE:HA   | 1:L:310:MET:HE3  | 1.94                     | 0.49              |
| 1:M:251:LYS:CA   | 1:M:252:LEU:HD23 | 2.42                     | 0.49              |
| 1:N:234:ASN:O    | 1:N:235:HIS:CD2  | 2.60                     | 0.49              |
| 1:O:311:SER:O    | 1:O:312:LYS:CB   | 2.60                     | 0.49              |
| 1:Q:133:LEU:HD12 | 1:Q:255:ARG:HH21 | 1.76                     | 0.49              |
| 1:F:208:LEU:O    | 1:F:210:THR:N    | 2.44                     | 0.49              |
| 1:H:170:ILE:CD1  | 1:H:239:VAL:HB   | 2.42                     | 0.49              |
| 1:L:133:LEU:HD12 | 1:L:255:ARG:HH21 | 1.76                     | 0.49              |
| 1:M:143:LYS:HA   | 1:M:263:VAL:O    | 2.12                     | 0.49              |
| 1:M:311:SER:O    | 1:M:312:LYS:CB   | 2.60                     | 0.49              |
| 1:N:75:THR:HG23  | 1:N:79:SER:OG    | 2.12                     | 0.49              |
| 1:N:144:TYR:CD2  | 1:N:145:ASP:N    | 2.69                     | 0.49              |
| 1:O:85:TYR:CE1   | 1:O:120:GLU:HG2  | 2.46                     | 0.49              |
| 1:P:311:SER:O    | 1:P:312:LYS:CB   | 2.60                     | 0.49              |
| 1:F:258:VAL:HG13 | 1:F:259:ALA:H    | 1.76                     | 0.49              |
| 1:I:133:LEU:HD12 | 1:I:255:ARG:HH21 | 1.76                     | 0.49              |
| 1:I:311:SER:O    | 1:I:312:LYS:CB   | 2.60                     | 0.49              |
| 1:J:78:THR:O     | 1:J:78:THR:HG22  | 2.12                     | 0.49              |
| 1:J:258:VAL:HG13 | 1:J:259:ALA:H    | 1.76                     | 0.49              |
| 1:L:78:THR:O     | 1:L:78:THR:CG2   | 2.60                     | 0.49              |
| 1:M:170:ILE:CD1  | 1:M:239:VAL:HB   | 2.42                     | 0.49              |
| 1:Q:170:ILE:CD1  | 1:Q:239:VAL:HB   | 2.42                     | 0.49              |
| 1:B:143:LYS:HA   | 1:B:263:VAL:O    | 2.12                     | 0.49              |
| 1:B:158:LEU:HD21 | 1:B:185:ILE:HG21 | 1.95                     | 0.49              |
| 1:B:208:LEU:C    | 1:B:210:THR:N    | 2.66                     | 0.49              |
| 1:I:275:PRO:HD2  | 1:I:276:THR:H    | 1.77                     | 0.49              |
| 1:J:208:LEU:C    | 1:J:210:THR:N    | 2.66                     | 0.49              |
| 1:J:263:VAL:CG1  | 1:J:289:TRP:HB2  | 2.40                     | 0.49              |
| 1:K:143:LYS:HA   | 1:K:263:VAL:O    | 2.12                     | 0.49              |
| 1:K:158:LEU:HD21 | 1:K:185:ILE:HG21 | 1.95                     | 0.49              |
| 1:K:170:ILE:CD1  | 1:K:239:VAL:HG23 | 2.43                     | 0.49              |
| 1:K:258:VAL:HG13 | 1:K:259:ALA:H    | 1.76                     | 0.49              |
| 1:L:143:LYS:HA   | 1:L:263:VAL:O    | 2.12                     | 0.49              |
| 1:L:252:LEU:CD2  | 1:L:252:LEU:N    | 2.75                     | 0.49              |
| 1:M:143:LYS:HG2  | 1:M:263:VAL:HB   | 1.93                     | 0.49              |
| 1:N:190:SER:O    | 1:N:243:THR:OG1  | 2.31                     | 0.49              |
| 1:O:285:MET:HE1  | 1:Q:276:THR:O    | 2.12                     | 0.49              |
| 1:P:205:ILE:CD1  | 1:Q:104:GLN:CB   | 2.81                     | 0.49              |
| 1:P:275:PRO:HD2  | 1:P:276:THR:H    | 1.77                     | 0.49              |
| 1:B:190:SER:O    | 1:B:243:THR:OG1  | 2.31                     | 0.49              |
| 1:F:112:PRO:HG2  | 1:F:115:SER:HB2  | 1.95                     | 0.49              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:162:GLU:HG3  | 1:G:252:LEU:CD1  | 2.33                     | 0.49              |
| 1:G:174:TYR:HD1  | 1:G:198:LEU:HD12 | 1.63                     | 0.49              |
| 1:G:311:SER:O    | 1:G:312:LYS:CB   | 2.60                     | 0.49              |
| 1:H:143:LYS:HG2  | 1:H:263:VAL:HB   | 1.93                     | 0.49              |
| 1:I:142:MET:HE1  | 1:I:152:MET:CE   | 2.25                     | 0.49              |
| 1:K:234:ASN:O    | 1:K:235:HIS:CD2  | 2.60                     | 0.49              |
| 1:N:158:LEU:HD21 | 1:N:185:ILE:HG21 | 1.95                     | 0.49              |
| 1:B:275:PRO:HD2  | 1:B:276:THR:H    | 1.77                     | 0.49              |
| 1:F:190:SER:O    | 1:F:243:THR:OG1  | 2.31                     | 0.49              |
| 1:F:205:ILE:CD1  | 1:G:104:GLN:CB   | 2.81                     | 0.49              |
| 1:G:123:ASP:OD1  | 1:G:126:SER:N    | 2.40                     | 0.49              |
| 1:G:258:VAL:HG13 | 1:G:259:ALA:H    | 1.76                     | 0.49              |
| 1:H:133:LEU:HD12 | 1:H:255:ARG:HH21 | 1.76                     | 0.49              |
| 1:K:208:LEU:C    | 1:K:210:THR:N    | 2.66                     | 0.49              |
| 1:L:174:TYR:CG   | 1:L:198:LEU:CD1  | 2.91                     | 0.49              |
| 1:L:311:SER:O    | 1:L:312:LYS:CB   | 2.60                     | 0.49              |
| 1:M:126:SER:CA   | 1:M:223:LYS:HZ1  | 2.12                     | 0.49              |
| 1:M:208:LEU:C    | 1:M:210:THR:N    | 2.66                     | 0.49              |
| 1:N:251:LYS:CA   | 1:N:252:LEU:HD23 | 2.42                     | 0.49              |
| 1:O:143:LYS:HA   | 1:O:263:VAL:O    | 2.12                     | 0.49              |
| 1:P:208:LEU:C    | 1:P:210:THR:N    | 2.66                     | 0.49              |
| 1:G:112:PRO:HG2  | 1:G:115:SER:HB2  | 1.95                     | 0.49              |
| 1:G:168:MET:HE1  | 1:G:175:TYR:CD1  | 2.36                     | 0.49              |
| 1:G:263:VAL:CG1  | 1:G:289:TRP:HB2  | 2.40                     | 0.49              |
| 1:H:311:SER:O    | 1:H:312:LYS:CB   | 2.60                     | 0.49              |
| 1:K:85:TYR:CE1   | 1:K:120:GLU:HG2  | 2.46                     | 0.49              |
| 1:K:168:MET:HE2  | 1:K:175:TYR:CD1  | 2.46                     | 0.49              |
| 1:L:75:THR:CG2   | 1:L:79:SER:OG    | 2.60                     | 0.49              |
| 1:L:170:ILE:CD1  | 1:L:239:VAL:HB   | 2.42                     | 0.49              |
| 1:L:208:LEU:C    | 1:L:210:THR:N    | 2.66                     | 0.49              |
| 1:M:276:THR:O    | 1:N:285:MET:HE1  | 2.13                     | 0.49              |
| 1:O:190:SER:O    | 1:O:243:THR:OG1  | 2.31                     | 0.49              |
| 1:P:142:MET:HE1  | 1:P:152:MET:HE2  | 1.68                     | 0.49              |
| 1:P:174:TYR:HD1  | 1:P:198:LEU:HD12 | 1.63                     | 0.49              |
| 1:P:205:ILE:HD11 | 1:Q:104:GLN:HB3  | 1.88                     | 0.49              |
| 1:Q:158:LEU:HD21 | 1:Q:185:ILE:HG21 | 1.95                     | 0.49              |
| 1:B:251:LYS:CA   | 1:B:252:LEU:HD23 | 2.42                     | 0.49              |
| 1:G:158:LEU:HD21 | 1:G:185:ILE:HG21 | 1.95                     | 0.49              |
| 1:G:170:ILE:CD1  | 1:G:239:VAL:HB   | 2.42                     | 0.49              |
| 1:H:251:LYS:CA   | 1:H:252:LEU:HD23 | 2.42                     | 0.49              |
| 1:J:143:LYS:HA   | 1:J:263:VAL:O    | 2.12                     | 0.49              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:J:276:THR:O    | 1:K:285:MET:HE1  | 2.12                     | 0.49              |
| 1:K:142:MET:HE1  | 1:K:152:MET:CE   | 2.24                     | 0.49              |
| 1:L:190:SER:O    | 1:L:243:THR:OG1  | 2.31                     | 0.49              |
| 1:N:133:LEU:HD12 | 1:N:255:ARG:HH21 | 1.76                     | 0.49              |
| 1:Q:258:VAL:HG13 | 1:Q:259:ALA:H    | 1.76                     | 0.49              |
| 1:B:112:PRO:HG2  | 1:B:115:SER:HB2  | 1.95                     | 0.49              |
| 1:F:276:THR:O    | 1:G:285:MET:HE1  | 2.13                     | 0.49              |
| 1:H:275:PRO:HD2  | 1:H:276:THR:H    | 1.77                     | 0.49              |
| 1:J:112:PRO:HG2  | 1:J:115:SER:HB2  | 1.95                     | 0.49              |
| 1:K:142:MET:HE3  | 1:K:152:MET:HE3  | 0.56                     | 0.49              |
| 1:K:190:SER:O    | 1:K:243:THR:OG1  | 2.31                     | 0.49              |
| 1:K:275:PRO:HD2  | 1:K:276:THR:H    | 1.77                     | 0.49              |
| 1:K:311:SER:O    | 1:K:312:LYS:CB   | 2.60                     | 0.49              |
| 1:O:159:ILE:HG23 | 1:O:258:VAL:CG2  | 2.11                     | 0.49              |
| 1:O:170:ILE:CD1  | 1:O:239:VAL:HB   | 2.42                     | 0.49              |
| 1:Q:168:MET:HE3  | 1:Q:175:TYR:CD1  | 2.46                     | 0.49              |
| 1:F:108:THR:HG23 | 1:F:109:LYS:H    | 1.78                     | 0.49              |
| 1:J:170:ILE:CD1  | 1:J:239:VAL:HB   | 2.42                     | 0.49              |
| 1:J:251:LYS:CA   | 1:J:252:LEU:HD23 | 2.42                     | 0.49              |
| 1:L:275:PRO:HD2  | 1:L:276:THR:H    | 1.77                     | 0.49              |
| 1:N:258:VAL:HG13 | 1:N:259:ALA:H    | 1.76                     | 0.49              |
| 1:O:75:THR:CG2   | 1:O:79:SER:OG    | 2.60                     | 0.49              |
| 1:F:142:MET:HE1  | 1:F:152:MET:CE   | 2.26                     | 0.48              |
| 1:F:234:ASN:O    | 1:F:235:HIS:CD2  | 2.60                     | 0.48              |
| 1:G:159:ILE:HG23 | 1:G:258:VAL:CG2  | 2.11                     | 0.48              |
| 1:K:168:MET:HE2  | 1:K:175:TYR:CE1  | 2.32                     | 0.48              |
| 1:N:112:PRO:HG2  | 1:N:115:SER:HB2  | 1.95                     | 0.48              |
| 1:F:125:ALA:O    | 1:F:128:SER:OG   | 2.31                     | 0.48              |
| 1:G:134:TYR:CD1  | 1:O:167:PRO:HB3  | 2.26                     | 0.48              |
| 1:G:276:THR:O    | 1:H:285:MET:HE1  | 2.13                     | 0.48              |
| 1:I:307:ILE:HA   | 1:I:310:MET:HE2  | 1.95                     | 0.48              |
| 1:O:208:LEU:C    | 1:O:210:THR:N    | 2.66                     | 0.48              |
| 1:P:127:PHE:CD2  | 1:P:155:LEU:CD2  | 2.64                     | 0.48              |
| 1:P:162:GLU:HG3  | 1:P:252:LEU:CD1  | 2.33                     | 0.48              |
| 1:P:276:THR:O    | 1:Q:285:MET:HE1  | 2.13                     | 0.48              |
| 1:B:311:SER:O    | 1:B:312:LYS:CB   | 2.60                     | 0.48              |
| 1:F:150:LEU:HD12 | 1:G:288:ASN:CG   | 2.08                     | 0.48              |
| 1:F:251:LYS:CA   | 1:F:252:LEU:HD23 | 2.42                     | 0.48              |
| 1:H:142:MET:HE3  | 1:H:152:MET:HE2  | 0.54                     | 0.48              |
| 1:I:208:LEU:C    | 1:I:210:THR:N    | 2.66                     | 0.48              |
| 1:L:276:THR:O    | 1:M:285:MET:HE1  | 2.13                     | 0.48              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:L:285:MET:HE1  | 1:N:276:THR:O    | 2.12                     | 0.48              |
| 1:P:174:TYR:HE1  | 1:P:234:ASN:HB2  | 1.72                     | 0.48              |
| 1:G:159:ILE:HG22 | 1:G:258:VAL:CB   | 2.44                     | 0.48              |
| 1:I:174:TYR:CG   | 1:I:198:LEU:CD1  | 2.91                     | 0.48              |
| 1:J:75:THR:CG2   | 1:J:79:SER:OG    | 2.61                     | 0.48              |
| 1:J:108:THR:HG23 | 1:J:109:LYS:H    | 1.78                     | 0.48              |
| 1:J:158:LEU:HD21 | 1:J:185:ILE:HG21 | 1.95                     | 0.48              |
| 1:J:275:PRO:HD2  | 1:J:276:THR:H    | 1.77                     | 0.48              |
| 1:L:158:LEU:HD21 | 1:L:185:ILE:HG21 | 1.95                     | 0.48              |
| 1:Q:174:TYR:HD1  | 1:Q:234:ASN:HB3  | 1.73                     | 0.48              |
| 1:F:174:TYR:HD1  | 1:F:234:ASN:HB3  | 1.73                     | 0.48              |
| 1:G:251:LYS:CA   | 1:G:252:LEU:HD23 | 2.42                     | 0.48              |
| 1:I:174:TYR:CD1  | 1:I:198:LEU:HD13 | 2.34                     | 0.48              |
| 1:I:190:SER:O    | 1:I:243:THR:OG1  | 2.31                     | 0.48              |
| 1:I:276:THR:O    | 1:J:285:MET:HE1  | 2.13                     | 0.48              |
| 1:J:174:TYR:HE1  | 1:J:234:ASN:HB2  | 1.72                     | 0.48              |
| 1:K:76:PHE:HB3   | 1:K:110:GLY:O    | 2.14                     | 0.48              |
| 1:L:159:ILE:HG22 | 1:L:258:VAL:CB   | 2.44                     | 0.48              |
| 1:M:158:LEU:HD21 | 1:M:185:ILE:HG21 | 1.95                     | 0.48              |
| 1:N:108:THR:HG23 | 1:N:109:LYS:H    | 1.78                     | 0.48              |
| 1:O:104:GLN:CB   | 1:Q:205:ILE:CD1  | 2.81                     | 0.48              |
| 1:O:108:THR:HG23 | 1:O:109:LYS:H    | 1.78                     | 0.48              |
| 1:O:154:GLU:OE1  | 1:O:225:VAL:CA   | 2.59                     | 0.48              |
| 1:O:205:ILE:CD1  | 1:P:104:GLN:HB2  | 2.40                     | 0.48              |
| 1:Q:106:PHE:HE2  | 1:Q:303:VAL:CG2  | 2.27                     | 0.48              |
| 1:Q:112:PRO:HG2  | 1:Q:115:SER:HB2  | 1.95                     | 0.48              |
| 1:Q:307:ILE:HA   | 1:Q:310:MET:HE3  | 1.94                     | 0.48              |
| 1:Q:311:SER:O    | 1:Q:312:LYS:CB   | 2.60                     | 0.48              |
| 1:F:159:ILE:HG22 | 1:F:258:VAL:CB   | 2.44                     | 0.48              |
| 1:G:154:GLU:OE1  | 1:G:225:VAL:CA   | 2.59                     | 0.48              |
| 1:H:75:THR:CG2   | 1:H:79:SER:OG    | 2.62                     | 0.48              |
| 1:H:191:CYS:HG   | 1:H:244:CYS:CB   | 2.26                     | 0.48              |
| 1:I:106:PHE:HE2  | 1:I:303:VAL:CG2  | 2.27                     | 0.48              |
| 1:I:158:LEU:HD21 | 1:I:185:ILE:HG21 | 1.95                     | 0.48              |
| 1:J:167:PRO:O    | 1:L:117:TYR:OH   | 2.28                     | 0.48              |
| 1:J:190:SER:O    | 1:J:243:THR:OG1  | 2.31                     | 0.48              |
| 1:M:190:SER:O    | 1:M:243:THR:OG1  | 2.31                     | 0.48              |
| 1:P:159:ILE:HG22 | 1:P:258:VAL:CB   | 2.44                     | 0.48              |
| 1:B:76:PHE:HB3   | 1:B:110:GLY:O    | 2.14                     | 0.48              |
| 1:F:162:GLU:CA   | 1:F:253:GLY:O    | 2.62                     | 0.48              |
| 1:H:106:PHE:HE2  | 1:H:303:VAL:CG2  | 2.27                     | 0.48              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:170:ILE:HD11 | 1:I:239:VAL:CG2  | 2.44                     | 0.48              |
| 1:K:106:PHE:HE2  | 1:K:303:VAL:CG2  | 2.27                     | 0.48              |
| 1:K:112:PRO:HG2  | 1:K:115:SER:HB2  | 1.95                     | 0.48              |
| 1:K:126:SER:HA   | 1:K:223:LYS:HZ2  | 1.71                     | 0.48              |
| 1:K:159:ILE:HG22 | 1:K:258:VAL:CB   | 2.44                     | 0.48              |
| 1:O:76:PHE:HB3   | 1:O:110:GLY:O    | 2.14                     | 0.48              |
| 1:O:162:GLU:CA   | 1:O:253:GLY:O    | 2.62                     | 0.48              |
| 1:O:174:TYR:HD1  | 1:O:234:ASN:HB3  | 1.73                     | 0.48              |
| 1:F:78:THR:O     | 1:F:78:THR:CG2   | 2.61                     | 0.48              |
| 1:F:275:PRO:HD2  | 1:F:276:THR:H    | 1.77                     | 0.48              |
| 1:G:76:PHE:HB3   | 1:G:110:GLY:O    | 2.14                     | 0.48              |
| 1:G:307:ILE:HA   | 1:G:310:MET:HE3  | 1.95                     | 0.48              |
| 1:H:112:PRO:HG2  | 1:H:115:SER:HB2  | 1.95                     | 0.48              |
| 1:H:159:ILE:HG22 | 1:H:258:VAL:CB   | 2.44                     | 0.48              |
| 1:K:170:ILE:HD11 | 1:K:239:VAL:CG2  | 2.44                     | 0.48              |
| 1:L:106:PHE:HE2  | 1:L:303:VAL:CG2  | 2.27                     | 0.48              |
| 1:L:154:GLU:OE1  | 1:L:225:VAL:CA   | 2.59                     | 0.48              |
| 1:L:175:TYR:HE1  | 1:L:237:LEU:HD22 | 1.79                     | 0.48              |
| 1:M:106:PHE:HE2  | 1:M:303:VAL:CG2  | 2.27                     | 0.48              |
| 1:N:191:CYS:HG   | 1:N:244:CYS:HB3  | 1.78                     | 0.48              |
| 1:O:158:LEU:HD21 | 1:O:185:ILE:HG21 | 1.95                     | 0.48              |
| 1:Q:190:SER:O    | 1:Q:243:THR:OG1  | 2.31                     | 0.48              |
| 1:F:106:PHE:HE2  | 1:F:303:VAL:CG2  | 2.27                     | 0.48              |
| 1:F:204:GLY:HA3  | 1:F:207:CYS:O    | 2.14                     | 0.48              |
| 1:G:175:TYR:HE1  | 1:G:237:LEU:HD22 | 1.79                     | 0.48              |
| 1:G:190:SER:O    | 1:G:243:THR:OG1  | 2.31                     | 0.48              |
| 1:H:162:GLU:CA   | 1:H:253:GLY:O    | 2.62                     | 0.48              |
| 1:H:190:SER:O    | 1:H:243:THR:OG1  | 2.31                     | 0.48              |
| 1:L:76:PHE:HB3   | 1:L:110:GLY:O    | 2.14                     | 0.48              |
| 1:L:104:GLN:CB   | 1:N:205:ILE:CD1  | 2.81                     | 0.48              |
| 1:L:108:THR:HG23 | 1:L:109:LYS:H    | 1.78                     | 0.48              |
| 1:L:174:TYR:HD1  | 1:L:234:ASN:HB3  | 1.73                     | 0.48              |
| 1:M:76:PHE:HB3   | 1:M:110:GLY:O    | 2.14                     | 0.48              |
| 1:M:162:GLU:CA   | 1:M:253:GLY:O    | 2.62                     | 0.48              |
| 1:O:78:THR:O     | 1:O:78:THR:HG22  | 2.13                     | 0.48              |
| 1:O:104:GLN:HB3  | 1:Q:205:ILE:HD11 | 1.88                     | 0.48              |
| 1:P:158:LEU:HD21 | 1:P:185:ILE:HG21 | 1.95                     | 0.48              |
| 1:P:175:TYR:HE1  | 1:P:237:LEU:HD22 | 1.79                     | 0.48              |
| 1:P:175:TYR:O    | 1:P:235:HIS:N    | 2.42                     | 0.48              |
| 1:P:190:SER:O    | 1:P:243:THR:OG1  | 2.31                     | 0.48              |
| 1:B:162:GLU:CA   | 1:B:253:GLY:O    | 2.62                     | 0.48              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:205:ILE:CD1  | 1:G:104:GLN:HB2  | 2.40                     | 0.48              |
| 1:H:158:LEU:HD21 | 1:H:185:ILE:HG21 | 1.95                     | 0.48              |
| 1:J:204:GLY:HA3  | 1:J:207:CYS:O    | 2.14                     | 0.48              |
| 1:K:251:LYS:O    | 1:K:252:LEU:CB   | 2.46                     | 0.48              |
| 1:F:158:LEU:HD21 | 1:F:185:ILE:HG21 | 1.95                     | 0.47              |
| 1:F:208:LEU:C    | 1:F:210:THR:N    | 2.66                     | 0.47              |
| 1:F:258:VAL:CG1  | 1:F:260:VAL:HG23 | 2.44                     | 0.47              |
| 1:H:76:PHE:HB3   | 1:H:110:GLY:O    | 2.14                     | 0.47              |
| 1:I:159:ILE:HG22 | 1:I:258:VAL:CB   | 2.44                     | 0.47              |
| 1:I:285:MET:HE1  | 1:K:276:THR:O    | 2.14                     | 0.47              |
| 1:L:204:GLY:HA3  | 1:L:207:CYS:O    | 2.14                     | 0.47              |
| 1:M:112:PRO:HG2  | 1:M:115:SER:HB2  | 1.95                     | 0.47              |
| 1:M:159:ILE:HG22 | 1:M:258:VAL:CB   | 2.44                     | 0.47              |
| 1:O:170:ILE:HD11 | 1:O:239:VAL:CG2  | 2.44                     | 0.47              |
| 1:P:162:GLU:CA   | 1:P:253:GLY:O    | 2.62                     | 0.47              |
| 1:P:170:ILE:CD1  | 1:P:239:VAL:HG23 | 2.43                     | 0.47              |
| 1:P:170:ILE:HD11 | 1:P:239:VAL:CG2  | 2.44                     | 0.47              |
| 1:I:76:PHE:HB3   | 1:I:110:GLY:O    | 2.14                     | 0.47              |
| 1:J:154:GLU:OE1  | 1:J:225:VAL:CA   | 2.59                     | 0.47              |
| 1:M:193:ILE:CG2  | 1:M:237:LEU:HD11 | 2.45                     | 0.47              |
| 1:M:253:GLY:HA2  | 1:M:254:PRO:HD3  | 1.61                     | 0.47              |
| 1:N:82:CYS:HG    | 1:N:135:CYS:CB   | 2.16                     | 0.47              |
| 1:P:78:THR:O     | 1:P:78:THR:CG2   | 2.63                     | 0.47              |
| 1:Q:204:GLY:HA3  | 1:Q:207:CYS:O    | 2.14                     | 0.47              |
| 1:B:158:LEU:CD2  | 1:B:185:ILE:HD13 | 2.44                     | 0.47              |
| 1:B:170:ILE:HD11 | 1:B:239:VAL:CG2  | 2.44                     | 0.47              |
| 1:B:193:ILE:CG2  | 1:B:237:LEU:HD11 | 2.45                     | 0.47              |
| 1:H:162:GLU:HB3  | 1:H:253:GLY:CA   | 2.45                     | 0.47              |
| 1:I:108:THR:HG23 | 1:I:109:LYS:H    | 1.78                     | 0.47              |
| 1:I:112:PRO:HG2  | 1:I:115:SER:HB2  | 1.95                     | 0.47              |
| 1:L:112:PRO:HG2  | 1:L:115:SER:HB2  | 1.95                     | 0.47              |
| 1:L:170:ILE:HD11 | 1:L:239:VAL:CG2  | 2.44                     | 0.47              |
| 1:L:205:ILE:CD1  | 1:M:104:GLN:HB2  | 2.40                     | 0.47              |
| 1:M:205:ILE:CD1  | 1:N:104:GLN:HB2  | 2.40                     | 0.47              |
| 1:M:258:VAL:CG1  | 1:M:260:VAL:HG23 | 2.45                     | 0.47              |
| 1:N:159:ILE:HG22 | 1:N:258:VAL:CB   | 2.44                     | 0.47              |
| 1:N:162:GLU:CA   | 1:N:253:GLY:O    | 2.62                     | 0.47              |
| 1:N:204:GLY:HA3  | 1:N:207:CYS:O    | 2.14                     | 0.47              |
| 1:O:104:GLN:HB2  | 1:Q:205:ILE:CD1  | 2.40                     | 0.47              |
| 1:O:204:GLY:HA3  | 1:O:207:CYS:O    | 2.14                     | 0.47              |
| 1:P:106:PHE:HE2  | 1:P:303:VAL:CG2  | 2.27                     | 0.47              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:P:175:TYR:CZ   | 1:P:237:LEU:HD22 | 2.50                     | 0.47              |
| 1:F:162:GLU:HB3  | 1:F:253:GLY:CA   | 2.45                     | 0.47              |
| 1:G:106:PHE:HE2  | 1:G:303:VAL:CG2  | 2.27                     | 0.47              |
| 1:G:175:TYR:CZ   | 1:G:237:LEU:HD22 | 2.50                     | 0.47              |
| 1:G:253:GLY:HA2  | 1:G:254:PRO:HD3  | 1.61                     | 0.47              |
| 1:J:150:LEU:HD22 | 1:K:290:LYS:CA   | 2.45                     | 0.47              |
| 1:J:159:ILE:HG22 | 1:J:258:VAL:CB   | 2.44                     | 0.47              |
| 1:L:150:LEU:HD22 | 1:M:290:LYS:CA   | 2.45                     | 0.47              |
| 1:L:162:GLU:HG3  | 1:L:252:LEU:CD1  | 2.33                     | 0.47              |
| 1:M:204:GLY:HA3  | 1:M:207:CYS:O    | 2.14                     | 0.47              |
| 1:N:311:SER:O    | 1:N:312:LYS:CB   | 2.60                     | 0.47              |
| 1:Q:208:LEU:C    | 1:Q:210:THR:N    | 2.66                     | 0.47              |
| 1:F:76:PHE:HB3   | 1:F:110:GLY:O    | 2.14                     | 0.47              |
| 1:F:104:GLN:HB2  | 1:H:205:ILE:CD1  | 2.40                     | 0.47              |
| 1:F:175:TYR:CZ   | 1:F:237:LEU:HD22 | 2.50                     | 0.47              |
| 1:G:193:ILE:CG2  | 1:G:237:LEU:HD11 | 2.45                     | 0.47              |
| 1:H:258:VAL:CG1  | 1:H:260:VAL:HG23 | 2.44                     | 0.47              |
| 1:I:258:VAL:CG1  | 1:I:260:VAL:HG23 | 2.44                     | 0.47              |
| 1:I:307:ILE:HD13 | 1:I:310:MET:HE1  | 1.95                     | 0.47              |
| 1:J:76:PHE:HB3   | 1:J:110:GLY:O    | 2.14                     | 0.47              |
| 1:J:192:THR:HG23 | 1:J:220:THR:HA   | 1.97                     | 0.47              |
| 1:J:193:ILE:CG2  | 1:J:237:LEU:HD11 | 2.45                     | 0.47              |
| 1:J:258:VAL:CG1  | 1:J:260:VAL:HG23 | 2.44                     | 0.47              |
| 1:L:162:GLU:CA   | 1:L:253:GLY:O    | 2.62                     | 0.47              |
| 1:L:290:LYS:CA   | 1:N:150:LEU:HD22 | 2.45                     | 0.47              |
| 1:N:117:TYR:CD2  | 1:P:167:PRO:HG2  | 2.49                     | 0.47              |
| 1:N:193:ILE:CG2  | 1:N:237:LEU:HD11 | 2.45                     | 0.47              |
| 1:O:112:PRO:HG2  | 1:O:115:SER:HB2  | 1.95                     | 0.47              |
| 1:O:175:TYR:HE1  | 1:O:237:LEU:HD22 | 1.79                     | 0.47              |
| 1:P:112:PRO:HG2  | 1:P:115:SER:HB2  | 1.95                     | 0.47              |
| 1:F:128:SER:C    | 1:F:131:PRO:HG3  | 2.35                     | 0.47              |
| 1:G:128:SER:C    | 1:G:131:PRO:HG3  | 2.35                     | 0.47              |
| 1:G:258:VAL:CG1  | 1:G:260:VAL:HG23 | 2.44                     | 0.47              |
| 1:I:162:GLU:HB3  | 1:I:253:GLY:CA   | 2.45                     | 0.47              |
| 1:I:192:THR:HG23 | 1:I:220:THR:HA   | 1.97                     | 0.47              |
| 1:I:204:GLY:HA3  | 1:I:207:CYS:O    | 2.14                     | 0.47              |
| 1:M:83:LEU:CD2   | 1:M:139:VAL:HG13 | 2.43                     | 0.47              |
| 1:M:108:THR:CG2  | 1:M:109:LYS:H    | 2.27                     | 0.47              |
| 1:M:170:ILE:HD11 | 1:M:239:VAL:CG2  | 2.44                     | 0.47              |
| 1:N:162:GLU:HB2  | 1:N:253:GLY:O    | 2.07                     | 0.47              |
| 1:P:150:LEU:HD22 | 1:Q:290:LYS:CA   | 2.45                     | 0.47              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:Q:108:THR:CG2  | 1:Q:109:LYS:H    | 2.28                     | 0.47              |
| 1:B:159:ILE:HG22 | 1:B:258:VAL:CB   | 2.44                     | 0.47              |
| 1:B:175:TYR:CZ   | 1:B:237:LEU:HD22 | 2.50                     | 0.47              |
| 1:B:202:THR:O    | 1:B:202:THR:HG22 | 2.15                     | 0.47              |
| 1:B:204:GLY:HA3  | 1:B:207:CYS:O    | 2.14                     | 0.47              |
| 1:B:222:GLU:HB2  | 1:B:225:VAL:CG2  | 2.45                     | 0.47              |
| 1:F:159:ILE:HG23 | 1:F:258:VAL:CG2  | 2.11                     | 0.47              |
| 1:F:170:ILE:HD11 | 1:F:239:VAL:CG2  | 2.44                     | 0.47              |
| 1:F:290:LYS:CA   | 1:H:150:LEU:CD2  | 2.93                     | 0.47              |
| 1:F:290:LYS:CA   | 1:H:150:LEU:HD22 | 2.45                     | 0.47              |
| 1:G:108:THR:HG23 | 1:G:109:LYS:H    | 1.78                     | 0.47              |
| 1:G:180:GLU:O    | 1:G:180:GLU:CG   | 2.63                     | 0.47              |
| 1:H:108:THR:CG2  | 1:H:109:LYS:H    | 2.28                     | 0.47              |
| 1:H:108:THR:HG23 | 1:H:109:LYS:H    | 1.78                     | 0.47              |
| 1:H:125:ALA:O    | 1:H:128:SER:OG   | 2.31                     | 0.47              |
| 1:H:128:SER:C    | 1:H:131:PRO:HG3  | 2.35                     | 0.47              |
| 1:H:170:ILE:HD11 | 1:H:239:VAL:CG2  | 2.44                     | 0.47              |
| 1:H:175:TYR:CZ   | 1:H:237:LEU:HD22 | 2.49                     | 0.47              |
| 1:H:192:THR:HG23 | 1:H:220:THR:HA   | 1.97                     | 0.47              |
| 1:H:202:THR:HG22 | 1:H:202:THR:O    | 2.15                     | 0.47              |
| 1:I:75:THR:CG2   | 1:I:79:SER:OG    | 2.62                     | 0.47              |
| 1:I:268:VAL:HG13 | 1:J:286:ARG:NH1  | 2.30                     | 0.47              |
| 1:J:106:PHE:HE2  | 1:J:303:VAL:CG2  | 2.27                     | 0.47              |
| 1:J:202:THR:O    | 1:J:202:THR:HG22 | 2.15                     | 0.47              |
| 1:K:78:THR:O     | 1:K:78:THR:HG22  | 2.14                     | 0.47              |
| 1:K:162:GLU:HB3  | 1:K:253:GLY:CA   | 2.45                     | 0.47              |
| 1:K:174:TYR:CG   | 1:K:198:LEU:CD1  | 2.91                     | 0.47              |
| 1:K:175:TYR:CZ   | 1:K:237:LEU:HD22 | 2.50                     | 0.47              |
| 1:K:180:GLU:O    | 1:K:180:GLU:CG   | 2.63                     | 0.47              |
| 1:K:192:THR:HG23 | 1:K:220:THR:HA   | 1.97                     | 0.47              |
| 1:K:253:GLY:HA2  | 1:K:254:PRO:HD3  | 1.61                     | 0.47              |
| 1:L:87:THR:HG1   | 1:L:122:THR:HG22 | 1.77                     | 0.47              |
| 1:L:175:TYR:CZ   | 1:L:237:LEU:HD22 | 2.50                     | 0.47              |
| 1:L:180:GLU:O    | 1:L:180:GLU:CG   | 2.63                     | 0.47              |
| 1:L:193:ILE:CG2  | 1:L:237:LEU:HD11 | 2.45                     | 0.47              |
| 1:L:258:VAL:CG1  | 1:L:260:VAL:HG23 | 2.44                     | 0.47              |
| 1:M:142:MET:HE1  | 1:M:152:MET:HB3  | 1.97                     | 0.47              |
| 1:M:180:GLU:O    | 1:M:180:GLU:CG   | 2.63                     | 0.47              |
| 1:N:76:PHE:HB3   | 1:N:110:GLY:O    | 2.14                     | 0.47              |
| 1:N:106:PHE:HE2  | 1:N:303:VAL:CG2  | 2.27                     | 0.47              |
| 1:N:128:SER:C    | 1:N:131:PRO:HG3  | 2.35                     | 0.47              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:N:170:ILE:HD11 | 1:N:239:VAL:CG2  | 2.44                     | 0.47              |
| 1:O:158:LEU:CD2  | 1:O:185:ILE:HD13 | 2.44                     | 0.47              |
| 1:O:168:MET:HE2  | 1:O:175:TYR:CG   | 2.48                     | 0.47              |
| 1:O:192:THR:HG23 | 1:O:220:THR:HA   | 1.97                     | 0.47              |
| 1:O:202:THR:O    | 1:O:202:THR:HG22 | 2.15                     | 0.47              |
| 1:O:222:GLU:HB2  | 1:O:225:VAL:CG2  | 2.45                     | 0.47              |
| 1:O:258:VAL:CG1  | 1:O:260:VAL:HG23 | 2.44                     | 0.47              |
| 1:O:276:THR:O    | 1:P:285:MET:HE1  | 2.14                     | 0.47              |
| 1:P:125:ALA:O    | 1:P:128:SER:OG   | 2.31                     | 0.47              |
| 1:P:162:GLU:HB3  | 1:P:253:GLY:CA   | 2.45                     | 0.47              |
| 1:P:192:THR:HG23 | 1:P:220:THR:HA   | 1.97                     | 0.47              |
| 1:Q:125:ALA:O    | 1:Q:128:SER:OG   | 2.31                     | 0.47              |
| 1:Q:175:TYR:HE1  | 1:Q:237:LEU:HD22 | 1.79                     | 0.47              |
| 1:B:175:TYR:HE1  | 1:B:237:LEU:HD22 | 1.79                     | 0.47              |
| 1:F:193:ILE:CG2  | 1:F:237:LEU:HD11 | 2.45                     | 0.47              |
| 1:G:162:GLU:HB3  | 1:G:253:GLY:CA   | 2.45                     | 0.47              |
| 1:G:202:THR:O    | 1:G:202:THR:HG22 | 2.15                     | 0.47              |
| 1:G:222:GLU:HB2  | 1:G:225:VAL:CG2  | 2.45                     | 0.47              |
| 1:H:204:GLY:HA3  | 1:H:207:CYS:O    | 2.14                     | 0.47              |
| 1:J:108:THR:CG2  | 1:J:109:LYS:H    | 2.28                     | 0.47              |
| 1:J:162:GLU:CA   | 1:J:253:GLY:O    | 2.62                     | 0.47              |
| 1:J:174:TYR:HD1  | 1:J:198:LEU:HD12 | 1.63                     | 0.47              |
| 1:K:204:GLY:HA3  | 1:K:207:CYS:O    | 2.14                     | 0.47              |
| 1:L:192:THR:HG23 | 1:L:220:THR:HA   | 1.97                     | 0.47              |
| 1:L:286:ARG:NH1  | 1:N:268:VAL:HG13 | 2.30                     | 0.47              |
| 1:M:125:ALA:HB1  | 1:M:223:LYS:CG   | 2.44                     | 0.47              |
| 1:N:154:GLU:OE1  | 1:N:225:VAL:CA   | 2.59                     | 0.47              |
| 1:O:290:LYS:CA   | 1:Q:150:LEU:HD22 | 2.45                     | 0.47              |
| 1:P:204:GLY:HA3  | 1:P:207:CYS:O    | 2.14                     | 0.47              |
| 1:P:258:VAL:CG1  | 1:P:260:VAL:HG23 | 2.44                     | 0.47              |
| 1:Q:154:GLU:OE1  | 1:Q:225:VAL:CA   | 2.59                     | 0.47              |
| 1:Q:202:THR:HG22 | 1:Q:202:THR:O    | 2.15                     | 0.47              |
| 1:B:108:THR:HG23 | 1:B:109:LYS:H    | 1.78                     | 0.47              |
| 1:B:128:SER:C    | 1:B:131:PRO:HG3  | 2.35                     | 0.47              |
| 1:B:258:VAL:CG1  | 1:B:260:VAL:HG23 | 2.44                     | 0.47              |
| 1:H:73:GLU:O     | 1:H:73:GLU:CG    | 2.45                     | 0.47              |
| 1:H:78:THR:O     | 1:H:78:THR:CG2   | 2.63                     | 0.47              |
| 1:H:193:ILE:CG2  | 1:H:237:LEU:HD11 | 2.45                     | 0.47              |
| 1:I:108:THR:CG2  | 1:I:109:LYS:H    | 2.27                     | 0.47              |
| 1:I:180:GLU:O    | 1:I:180:GLU:CG   | 2.63                     | 0.47              |
| 1:J:125:ALA:O    | 1:J:128:SER:OG   | 2.31                     | 0.47              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:J:175:TYR:CZ   | 1:J:237:LEU:HD22 | 2.50                     | 0.47              |
| 1:K:128:SER:C    | 1:K:131:PRO:HG3  | 2.35                     | 0.47              |
| 1:K:202:THR:HG22 | 1:K:202:THR:O    | 2.15                     | 0.47              |
| 1:M:159:ILE:HG23 | 1:M:258:VAL:CG2  | 2.11                     | 0.47              |
| 1:N:108:THR:CG2  | 1:N:109:LYS:H    | 2.28                     | 0.47              |
| 1:N:202:THR:HG22 | 1:N:202:THR:O    | 2.15                     | 0.47              |
| 1:O:106:PHE:HE2  | 1:O:303:VAL:CG2  | 2.27                     | 0.47              |
| 1:O:159:ILE:HG22 | 1:O:258:VAL:CB   | 2.44                     | 0.47              |
| 1:O:268:VAL:HG13 | 1:P:286:ARG:NH1  | 2.30                     | 0.47              |
| 1:P:76:PHE:HB3   | 1:P:110:GLY:O    | 2.14                     | 0.47              |
| 1:P:205:ILE:CG1  | 1:Q:104:GLN:CD   | 2.83                     | 0.47              |
| 1:Q:76:PHE:HB3   | 1:Q:110:GLY:O    | 2.14                     | 0.47              |
| 1:Q:175:TYR:CZ   | 1:Q:237:LEU:HD22 | 2.50                     | 0.47              |
| 1:B:106:PHE:HE2  | 1:B:303:VAL:HG21 | 1.80                     | 0.47              |
| 1:B:125:ALA:O    | 1:B:128:SER:OG   | 2.31                     | 0.47              |
| 1:B:307:ILE:HA   | 1:B:310:MET:HE3  | 1.96                     | 0.47              |
| 1:F:174:TYR:HD1  | 1:F:198:LEU:HD12 | 1.63                     | 0.47              |
| 1:G:75:THR:CG2   | 1:G:79:SER:OG    | 2.63                     | 0.47              |
| 1:I:175:TYR:CZ   | 1:I:237:LEU:HD22 | 2.50                     | 0.47              |
| 1:M:75:THR:CG2   | 1:M:79:SER:OG    | 2.62                     | 0.47              |
| 1:M:128:SER:C    | 1:M:131:PRO:HG3  | 2.35                     | 0.47              |
| 1:M:162:GLU:HB3  | 1:M:253:GLY:CA   | 2.45                     | 0.47              |
| 1:N:106:PHE:HE2  | 1:N:303:VAL:HG21 | 1.80                     | 0.47              |
| 1:N:222:GLU:HB2  | 1:N:225:VAL:CG2  | 2.45                     | 0.47              |
| 1:O:127:PHE:CD2  | 1:O:155:LEU:CD2  | 2.64                     | 0.47              |
| 1:Q:162:GLU:CA   | 1:Q:253:GLY:O    | 2.62                     | 0.47              |
| 1:B:106:PHE:HE2  | 1:B:303:VAL:CG2  | 2.27                     | 0.46              |
| 1:B:192:THR:HG23 | 1:B:220:THR:HA   | 1.97                     | 0.46              |
| 1:F:174:TYR:CD1  | 1:F:198:LEU:HD13 | 2.34                     | 0.46              |
| 1:G:108:THR:CG2  | 1:G:109:LYS:H    | 2.28                     | 0.46              |
| 1:G:205:ILE:CG1  | 1:H:104:GLN:CD   | 2.83                     | 0.46              |
| 1:H:174:TYR:CG   | 1:H:198:LEU:CD1  | 2.91                     | 0.46              |
| 1:I:162:GLU:CA   | 1:I:253:GLY:O    | 2.62                     | 0.46              |
| 1:I:168:MET:HE2  | 1:I:175:TYR:CD2  | 2.47                     | 0.46              |
| 1:I:168:MET:CE   | 1:I:175:TYR:CE2  | 2.78                     | 0.46              |
| 1:I:202:THR:O    | 1:I:202:THR:HG22 | 2.15                     | 0.46              |
| 1:J:106:PHE:HE2  | 1:J:303:VAL:HG21 | 1.80                     | 0.46              |
| 1:L:108:THR:CG2  | 1:L:109:LYS:H    | 2.28                     | 0.46              |
| 1:M:175:TYR:CZ   | 1:M:237:LEU:HD22 | 2.49                     | 0.46              |
| 1:N:175:TYR:CZ   | 1:N:237:LEU:HD22 | 2.50                     | 0.46              |
| 1:N:258:VAL:CG1  | 1:N:260:VAL:HG23 | 2.45                     | 0.46              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:Q:125:ALA:HB1  | 1:Q:223:LYS:HB2  | 1.98                     | 0.46              |
| 1:Q:193:ILE:CG2  | 1:Q:237:LEU:HD11 | 2.45                     | 0.46              |
| 1:Q:199:ASN:HD21 | 1:Q:201:GLN:HG2  | 1.81                     | 0.46              |
| 1:B:174:TYR:CG   | 1:B:198:LEU:CD1  | 2.91                     | 0.46              |
| 1:F:106:PHE:HE2  | 1:F:303:VAL:HG21 | 1.80                     | 0.46              |
| 1:F:192:THR:HG23 | 1:F:220:THR:HA   | 1.97                     | 0.46              |
| 1:F:205:ILE:CG1  | 1:G:104:GLN:CD   | 2.83                     | 0.46              |
| 1:G:174:TYR:HD1  | 1:G:234:ASN:HB3  | 1.73                     | 0.46              |
| 1:H:106:PHE:HE2  | 1:H:303:VAL:HG21 | 1.80                     | 0.46              |
| 1:I:205:ILE:CG1  | 1:J:104:GLN:CD   | 2.83                     | 0.46              |
| 1:J:128:SER:C    | 1:J:131:PRO:HG3  | 2.35                     | 0.46              |
| 1:J:162:GLU:HB3  | 1:J:253:GLY:CA   | 2.45                     | 0.46              |
| 1:K:175:TYR:HE1  | 1:K:237:LEU:HD22 | 1.79                     | 0.46              |
| 1:K:193:ILE:CG2  | 1:K:237:LEU:HD11 | 2.45                     | 0.46              |
| 1:K:275:PRO:HD2  | 1:K:276:THR:N    | 2.31                     | 0.46              |
| 1:M:106:PHE:HE2  | 1:M:303:VAL:HG21 | 1.80                     | 0.46              |
| 1:O:128:SER:C    | 1:O:131:PRO:HG3  | 2.35                     | 0.46              |
| 1:O:150:LEU:HD22 | 1:P:290:LYS:CA   | 2.45                     | 0.46              |
| 1:P:193:ILE:CG2  | 1:P:237:LEU:HD11 | 2.45                     | 0.46              |
| 1:Q:128:SER:C    | 1:Q:131:PRO:HG3  | 2.35                     | 0.46              |
| 1:Q:170:ILE:HD11 | 1:Q:239:VAL:CG2  | 2.44                     | 0.46              |
| 1:Q:180:GLU:O    | 1:Q:180:GLU:CG   | 2.63                     | 0.46              |
| 1:Q:258:VAL:CG1  | 1:Q:260:VAL:HG23 | 2.45                     | 0.46              |
| 1:F:150:LEU:HD22 | 1:G:290:LYS:CA   | 2.45                     | 0.46              |
| 1:G:106:PHE:HE2  | 1:G:303:VAL:HG21 | 1.80                     | 0.46              |
| 1:I:193:ILE:CG2  | 1:I:237:LEU:HD11 | 2.45                     | 0.46              |
| 1:J:180:GLU:O    | 1:J:180:GLU:CG   | 2.63                     | 0.46              |
| 1:J:205:ILE:CG1  | 1:K:104:GLN:CD   | 2.83                     | 0.46              |
| 1:K:258:VAL:CG1  | 1:K:260:VAL:HG23 | 2.44                     | 0.46              |
| 1:L:170:ILE:CD1  | 1:L:239:VAL:HG23 | 2.43                     | 0.46              |
| 1:L:239:VAL:HG12 | 1:L:240:THR:N    | 2.31                     | 0.46              |
| 1:M:143:LYS:CG   | 1:M:263:VAL:HB   | 2.46                     | 0.46              |
| 1:N:162:GLU:HB3  | 1:N:253:GLY:CA   | 2.45                     | 0.46              |
| 1:N:192:THR:HG23 | 1:N:220:THR:HA   | 1.97                     | 0.46              |
| 1:P:108:THR:HG23 | 1:P:109:LYS:H    | 1.78                     | 0.46              |
| 1:P:202:THR:HG22 | 1:P:202:THR:O    | 2.15                     | 0.46              |
| 1:P:222:GLU:HB2  | 1:P:225:VAL:CG2  | 2.45                     | 0.46              |
| 1:P:239:VAL:HG12 | 1:P:240:THR:N    | 2.31                     | 0.46              |
| 1:P:275:PRO:HD2  | 1:P:276:THR:N    | 2.31                     | 0.46              |
| 1:Q:192:THR:HG23 | 1:Q:220:THR:HA   | 1.97                     | 0.46              |
| 1:G:162:GLU:CA   | 1:G:253:GLY:O    | 2.62                     | 0.46              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:199:ASN:HD21 | 1:G:201:GLN:HG2  | 1.81                     | 0.46              |
| 1:H:123:ASP:OD1  | 1:H:126:SER:N    | 2.40                     | 0.46              |
| 1:H:180:GLU:O    | 1:H:180:GLU:CG   | 2.63                     | 0.46              |
| 1:I:170:ILE:CD1  | 1:I:239:VAL:HG23 | 2.43                     | 0.46              |
| 1:J:150:LEU:CD2  | 1:K:290:LYS:CA   | 2.93                     | 0.46              |
| 1:J:239:VAL:HG12 | 1:J:240:THR:N    | 2.31                     | 0.46              |
| 1:J:275:PRO:HD2  | 1:J:276:THR:N    | 2.31                     | 0.46              |
| 1:L:104:GLN:CD   | 1:N:205:ILE:CG1  | 2.83                     | 0.46              |
| 1:L:162:GLU:HB3  | 1:L:253:GLY:CA   | 2.45                     | 0.46              |
| 1:M:108:THR:HG23 | 1:M:109:LYS:H    | 1.78                     | 0.46              |
| 1:M:202:THR:O    | 1:M:202:THR:HG22 | 2.15                     | 0.46              |
| 1:M:205:ILE:O    | 1:M:205:ILE:HG23 | 2.16                     | 0.46              |
| 1:N:148:LEU:HD22 | 1:N:151:ASP:OD2  | 2.16                     | 0.46              |
| 1:N:239:VAL:HG12 | 1:N:240:THR:N    | 2.31                     | 0.46              |
| 1:O:150:LEU:CD2  | 1:P:290:LYS:CA   | 2.93                     | 0.46              |
| 1:O:175:TYR:CZ   | 1:O:237:LEU:HD22 | 2.50                     | 0.46              |
| 1:O:205:ILE:CD1  | 1:P:104:GLN:CB   | 2.81                     | 0.46              |
| 1:B:205:ILE:O    | 1:B:205:ILE:HG23 | 2.16                     | 0.46              |
| 1:B:239:VAL:HG12 | 1:B:240:THR:N    | 2.31                     | 0.46              |
| 1:F:175:TYR:O    | 1:F:234:ASN:HA   | 2.15                     | 0.46              |
| 1:F:239:VAL:HG12 | 1:F:240:THR:N    | 2.31                     | 0.46              |
| 1:F:301:ASP:OD1  | 1:F:301:ASP:O    | 2.34                     | 0.46              |
| 1:G:192:THR:HG23 | 1:G:220:THR:HA   | 1.97                     | 0.46              |
| 1:G:268:VAL:HG13 | 1:H:286:ARG:NH1  | 2.30                     | 0.46              |
| 1:H:143:LYS:CG   | 1:H:263:VAL:HB   | 2.46                     | 0.46              |
| 1:H:239:VAL:HG12 | 1:H:240:THR:N    | 2.31                     | 0.46              |
| 1:I:222:GLU:HB2  | 1:I:225:VAL:CG2  | 2.45                     | 0.46              |
| 1:J:168:MET:HE3  | 1:J:175:TYR:CE1  | 2.22                     | 0.46              |
| 1:K:125:ALA:HB1  | 1:K:223:LYS:CG   | 2.45                     | 0.46              |
| 1:K:239:VAL:HG12 | 1:K:240:THR:N    | 2.31                     | 0.46              |
| 1:M:150:LEU:HD22 | 1:N:290:LYS:CA   | 2.45                     | 0.46              |
| 1:M:205:ILE:CG1  | 1:N:104:GLN:CD   | 2.83                     | 0.46              |
| 1:N:253:GLY:HA2  | 1:N:254:PRO:HD3  | 1.61                     | 0.46              |
| 1:O:148:LEU:HD22 | 1:O:151:ASP:OD2  | 2.16                     | 0.46              |
| 1:O:193:ILE:CG2  | 1:O:237:LEU:HD11 | 2.45                     | 0.46              |
| 1:P:150:LEU:CD2  | 1:Q:290:LYS:CA   | 2.93                     | 0.46              |
| 1:P:186:SER:HB3  | 1:P:246:ILE:HG13 | 1.98                     | 0.46              |
| 1:B:162:GLU:HB3  | 1:B:253:GLY:CA   | 2.45                     | 0.46              |
| 1:B:180:GLU:O    | 1:B:180:GLU:CG   | 2.63                     | 0.46              |
| 1:B:253:GLY:HA2  | 1:B:254:PRO:HD3  | 1.61                     | 0.46              |
| 1:F:143:LYS:CG   | 1:F:263:VAL:HB   | 2.46                     | 0.46              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:205:ILE:HG23 | 1:F:205:ILE:O    | 2.16                     | 0.46              |
| 1:F:275:PRO:HD2  | 1:F:276:THR:N    | 2.31                     | 0.46              |
| 1:G:150:LEU:HD22 | 1:H:290:LYS:CA   | 2.45                     | 0.46              |
| 1:H:205:ILE:HG23 | 1:H:205:ILE:O    | 2.16                     | 0.46              |
| 1:I:106:PHE:HE2  | 1:I:303:VAL:HG21 | 1.80                     | 0.46              |
| 1:J:148:LEU:HD22 | 1:J:151:ASP:OD2  | 2.16                     | 0.46              |
| 1:J:268:VAL:HG13 | 1:K:286:ARG:NH1  | 2.30                     | 0.46              |
| 1:L:125:ALA:O    | 1:L:128:SER:OG   | 2.31                     | 0.46              |
| 1:M:125:ALA:HB1  | 1:M:223:LYS:HB2  | 1.98                     | 0.46              |
| 1:O:301:ASP:OD1  | 1:O:301:ASP:O    | 2.34                     | 0.46              |
| 1:P:205:ILE:HG23 | 1:P:205:ILE:O    | 2.16                     | 0.46              |
| 1:B:143:LYS:CG   | 1:B:263:VAL:HB   | 2.46                     | 0.46              |
| 1:G:125:ALA:O    | 1:G:128:SER:OG   | 2.31                     | 0.46              |
| 1:G:158:LEU:CD2  | 1:G:185:ILE:HD13 | 2.44                     | 0.46              |
| 1:G:204:GLY:HA3  | 1:G:207:CYS:O    | 2.14                     | 0.46              |
| 1:H:148:LEU:HD22 | 1:H:151:ASP:OD2  | 2.16                     | 0.46              |
| 1:I:104:GLN:HB2  | 1:K:205:ILE:CD1  | 2.40                     | 0.46              |
| 1:I:150:LEU:HD22 | 1:J:290:LYS:CA   | 2.45                     | 0.46              |
| 1:I:290:LYS:CA   | 1:K:150:LEU:CD2  | 2.93                     | 0.46              |
| 1:J:125:ALA:HB1  | 1:J:223:LYS:CG   | 2.45                     | 0.46              |
| 1:L:143:LYS:CG   | 1:L:263:VAL:HB   | 2.46                     | 0.46              |
| 1:L:202:THR:O    | 1:L:202:THR:HG22 | 2.15                     | 0.46              |
| 1:M:192:THR:HG23 | 1:M:220:THR:HA   | 1.97                     | 0.46              |
| 1:N:180:GLU:O    | 1:N:180:GLU:CG   | 2.63                     | 0.46              |
| 1:P:108:THR:CG2  | 1:P:109:LYS:H    | 2.28                     | 0.46              |
| 1:Q:83:LEU:CD2   | 1:Q:139:VAL:HG13 | 2.43                     | 0.46              |
| 1:B:154:GLU:OE1  | 1:B:225:VAL:CA   | 2.59                     | 0.46              |
| 1:B:275:PRO:HD2  | 1:B:276:THR:N    | 2.31                     | 0.46              |
| 1:F:175:TYR:HE1  | 1:F:237:LEU:HD22 | 1.79                     | 0.46              |
| 1:F:180:GLU:O    | 1:F:180:GLU:CG   | 2.63                     | 0.46              |
| 1:H:154:GLU:OE1  | 1:H:225:VAL:CA   | 2.59                     | 0.46              |
| 1:H:186:SER:HB3  | 1:H:246:ILE:HG13 | 1.98                     | 0.46              |
| 1:I:186:SER:HB3  | 1:I:246:ILE:HG13 | 1.98                     | 0.46              |
| 1:I:205:ILE:HG23 | 1:I:205:ILE:O    | 2.16                     | 0.46              |
| 1:J:170:ILE:HD11 | 1:J:239:VAL:CG2  | 2.44                     | 0.46              |
| 1:K:186:SER:HB3  | 1:K:246:ILE:HG13 | 1.98                     | 0.46              |
| 1:L:128:SER:C    | 1:L:131:PRO:HG3  | 2.35                     | 0.46              |
| 1:M:170:ILE:CD1  | 1:M:239:VAL:HG23 | 2.43                     | 0.46              |
| 1:M:239:VAL:HG12 | 1:M:240:THR:N    | 2.31                     | 0.46              |
| 1:N:142:MET:HE1  | 1:N:152:MET:HB3  | 1.98                     | 0.46              |
| 1:O:186:SER:HB3  | 1:O:246:ILE:HG13 | 1.98                     | 0.46              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:286:ARG:NH1  | 1:Q:268:VAL:HG13 | 2.30                     | 0.46              |
| 1:Q:158:LEU:CD2  | 1:Q:185:ILE:HD13 | 2.44                     | 0.46              |
| 1:Q:162:GLU:HB3  | 1:Q:253:GLY:CA   | 2.45                     | 0.46              |
| 1:B:144:TYR:CD2  | 1:B:145:ASP:N    | 2.73                     | 0.46              |
| 1:B:179:ASP:C    | 1:B:181:ALA:H    | 2.19                     | 0.46              |
| 1:F:127:PHE:CZ   | 1:F:140:VAL:HG21 | 2.51                     | 0.46              |
| 1:F:199:ASN:HD21 | 1:F:201:GLN:HG2  | 1.81                     | 0.46              |
| 1:G:143:LYS:CG   | 1:G:263:VAL:HB   | 2.46                     | 0.46              |
| 1:G:170:ILE:HD11 | 1:G:239:VAL:CG2  | 2.44                     | 0.46              |
| 1:G:301:ASP:OD1  | 1:G:301:ASP:O    | 2.34                     | 0.46              |
| 1:I:127:PHE:CZ   | 1:I:140:VAL:HG21 | 2.51                     | 0.46              |
| 1:I:128:SER:C    | 1:I:131:PRO:HG3  | 2.35                     | 0.46              |
| 1:J:205:ILE:CD1  | 1:K:104:GLN:HB2  | 2.40                     | 0.46              |
| 1:K:108:THR:CG2  | 1:K:109:LYS:H    | 2.27                     | 0.46              |
| 1:K:179:ASP:C    | 1:K:181:ALA:H    | 2.19                     | 0.46              |
| 1:L:106:PHE:HE2  | 1:L:303:VAL:HG21 | 1.80                     | 0.46              |
| 1:L:170:ILE:HD11 | 1:L:239:VAL:HG21 | 1.98                     | 0.46              |
| 1:M:150:LEU:CD2  | 1:N:290:LYS:CA   | 2.93                     | 0.46              |
| 1:N:125:ALA:HB1  | 1:N:223:LYS:CG   | 2.45                     | 0.46              |
| 1:O:127:PHE:CZ   | 1:O:140:VAL:HG21 | 2.51                     | 0.46              |
| 1:O:143:LYS:CG   | 1:O:263:VAL:HB   | 2.46                     | 0.46              |
| 1:O:162:GLU:HB3  | 1:O:253:GLY:CA   | 2.45                     | 0.46              |
| 1:O:180:GLU:O    | 1:O:180:GLU:CG   | 2.63                     | 0.46              |
| 1:O:199:ASN:HD21 | 1:O:201:GLN:HG2  | 1.81                     | 0.46              |
| 1:O:205:ILE:HG23 | 1:O:205:ILE:O    | 2.16                     | 0.46              |
| 1:P:128:SER:C    | 1:P:131:PRO:HG3  | 2.35                     | 0.46              |
| 1:F:108:THR:CG2  | 1:F:109:LYS:H    | 2.27                     | 0.46              |
| 1:F:202:THR:HG22 | 1:F:202:THR:O    | 2.15                     | 0.46              |
| 1:H:179:ASP:C    | 1:H:181:ALA:H    | 2.19                     | 0.46              |
| 1:I:125:ALA:O    | 1:I:128:SER:OG   | 2.31                     | 0.46              |
| 1:K:162:GLU:CA   | 1:K:253:GLY:O    | 2.62                     | 0.46              |
| 1:K:301:ASP:OD1  | 1:K:301:ASP:O    | 2.34                     | 0.46              |
| 1:L:127:PHE:CZ   | 1:L:140:VAL:HG21 | 2.51                     | 0.46              |
| 1:N:143:LYS:CG   | 1:N:263:VAL:HB   | 2.46                     | 0.46              |
| 1:P:154:GLU:OE1  | 1:P:225:VAL:CA   | 2.59                     | 0.46              |
| 1:P:268:VAL:HG13 | 1:Q:286:ARG:NH1  | 2.30                     | 0.46              |
| 1:P:301:ASP:O    | 1:P:301:ASP:OD1  | 2.34                     | 0.46              |
| 1:Q:78:THR:O     | 1:Q:78:THR:CG2   | 2.64                     | 0.46              |
| 1:Q:108:THR:HG23 | 1:Q:109:LYS:H    | 1.78                     | 0.46              |
| 1:B:301:ASP:O    | 1:B:301:ASP:OD1  | 2.34                     | 0.45              |
| 1:F:170:ILE:CD1  | 1:F:239:VAL:HG23 | 2.43                     | 0.45              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:73:GLU:O     | 1:G:73:GLU:CG    | 2.61                     | 0.45              |
| 1:J:301:ASP:O    | 1:J:301:ASP:OD1  | 2.34                     | 0.45              |
| 1:K:168:MET:CE   | 1:K:175:TYR:CG   | 2.99                     | 0.45              |
| 1:L:125:ALA:HB1  | 1:L:223:LYS:HB2  | 1.98                     | 0.45              |
| 1:L:148:LEU:HD22 | 1:L:151:ASP:OD2  | 2.16                     | 0.45              |
| 1:L:222:GLU:HB2  | 1:L:225:VAL:CG2  | 2.45                     | 0.45              |
| 1:M:222:GLU:HB2  | 1:M:225:VAL:CG2  | 2.45                     | 0.45              |
| 1:N:199:ASN:HD21 | 1:N:201:GLN:HG2  | 1.81                     | 0.45              |
| 1:O:275:PRO:HD2  | 1:O:276:THR:N    | 2.31                     | 0.45              |
| 1:P:199:ASN:HD21 | 1:P:201:GLN:HG2  | 1.81                     | 0.45              |
| 1:Q:106:PHE:HE2  | 1:Q:303:VAL:HG21 | 1.80                     | 0.45              |
| 1:Q:179:ASP:C    | 1:Q:181:ALA:H    | 2.19                     | 0.45              |
| 1:Q:186:SER:HB3  | 1:Q:246:ILE:HG13 | 1.98                     | 0.45              |
| 1:B:186:SER:HB3  | 1:B:246:ILE:HG13 | 1.98                     | 0.45              |
| 1:F:75:THR:CG2   | 1:F:79:SER:OG    | 2.65                     | 0.45              |
| 1:F:148:LEU:HD22 | 1:F:151:ASP:OD2  | 2.16                     | 0.45              |
| 1:F:158:LEU:CD2  | 1:F:185:ILE:HD13 | 2.44                     | 0.45              |
| 1:F:268:VAL:HG13 | 1:G:286:ARG:NH1  | 2.30                     | 0.45              |
| 1:G:170:ILE:HD11 | 1:G:239:VAL:HG21 | 1.98                     | 0.45              |
| 1:I:168:MET:HE1  | 1:I:175:TYR:CZ   | 2.24                     | 0.45              |
| 1:I:199:ASN:HD21 | 1:I:201:GLN:HG2  | 1.81                     | 0.45              |
| 1:K:222:GLU:HB2  | 1:K:225:VAL:CG2  | 2.45                     | 0.45              |
| 1:L:197:PRO:HG2  | 1:L:205:ILE:HG23 | 1.99                     | 0.45              |
| 1:N:179:ASP:C    | 1:N:181:ALA:H    | 2.19                     | 0.45              |
| 1:N:301:ASP:OD1  | 1:N:301:ASP:O    | 2.34                     | 0.45              |
| 1:P:106:PHE:HE2  | 1:P:303:VAL:HG21 | 1.80                     | 0.45              |
| 1:Q:143:LYS:CG   | 1:Q:263:VAL:HB   | 2.46                     | 0.45              |
| 1:Q:168:MET:CE   | 1:Q:175:TYR:CG   | 3.00                     | 0.45              |
| 1:Q:239:VAL:HG12 | 1:Q:240:THR:N    | 2.31                     | 0.45              |
| 1:F:150:LEU:CD2  | 1:G:290:LYS:CA   | 2.93                     | 0.45              |
| 1:H:174:TYR:HD1  | 1:H:234:ASN:HB3  | 1.73                     | 0.45              |
| 1:I:125:ALA:HB1  | 1:I:223:LYS:HB2  | 1.98                     | 0.45              |
| 1:I:290:LYS:CA   | 1:K:150:LEU:HD22 | 2.45                     | 0.45              |
| 1:J:170:ILE:HD11 | 1:J:239:VAL:HG21 | 1.98                     | 0.45              |
| 1:J:179:ASP:C    | 1:J:181:ALA:H    | 2.19                     | 0.45              |
| 1:L:150:LEU:CD2  | 1:M:290:LYS:CA   | 2.93                     | 0.45              |
| 1:L:199:ASN:HD21 | 1:L:201:GLN:HG2  | 1.81                     | 0.45              |
| 1:M:158:LEU:CD2  | 1:M:185:ILE:HD13 | 2.44                     | 0.45              |
| 1:M:179:ASP:C    | 1:M:181:ALA:H    | 2.19                     | 0.45              |
| 1:M:186:SER:HB3  | 1:M:246:ILE:HG13 | 1.98                     | 0.45              |
| 1:M:199:ASN:HD21 | 1:M:201:GLN:HG2  | 1.81                     | 0.45              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:M:301:ASP:O    | 1:M:301:ASP:OD1  | 2.34                     | 0.45              |
| 1:N:170:ILE:CD1  | 1:N:239:VAL:HG23 | 2.43                     | 0.45              |
| 1:O:83:LEU:CD2   | 1:O:139:VAL:HG13 | 2.43                     | 0.45              |
| 1:P:127:PHE:CZ   | 1:P:140:VAL:HG21 | 2.52                     | 0.45              |
| 1:P:143:LYS:CG   | 1:P:263:VAL:HB   | 2.46                     | 0.45              |
| 1:P:168:MET:CE   | 1:P:175:TYR:CG   | 3.00                     | 0.45              |
| 1:P:180:GLU:O    | 1:P:180:GLU:CG   | 2.63                     | 0.45              |
| 1:Q:159:ILE:HG22 | 1:Q:258:VAL:CB   | 2.44                     | 0.45              |
| 1:B:78:THR:O     | 1:B:78:THR:CG2   | 2.63                     | 0.45              |
| 1:F:168:MET:CE   | 1:F:175:TYR:CG   | 3.00                     | 0.45              |
| 1:F:170:ILE:HD11 | 1:F:239:VAL:HG21 | 1.98                     | 0.45              |
| 1:G:239:VAL:HG12 | 1:G:240:THR:N    | 2.31                     | 0.45              |
| 1:I:104:GLN:CD   | 1:K:205:ILE:CG1  | 2.83                     | 0.45              |
| 1:I:174:TYR:HE1  | 1:I:234:ASN:HB2  | 1.72                     | 0.45              |
| 1:I:197:PRO:HG2  | 1:I:205:ILE:HG23 | 1.99                     | 0.45              |
| 1:J:125:ALA:HB1  | 1:J:223:LYS:HB2  | 1.98                     | 0.45              |
| 1:J:143:LYS:CG   | 1:J:263:VAL:HB   | 2.46                     | 0.45              |
| 1:K:143:LYS:CG   | 1:K:263:VAL:HB   | 2.46                     | 0.45              |
| 1:K:197:PRO:HG2  | 1:K:205:ILE:HG23 | 1.99                     | 0.45              |
| 1:K:205:ILE:HG23 | 1:K:205:ILE:O    | 2.16                     | 0.45              |
| 1:L:205:ILE:CD1  | 1:M:104:GLN:CB   | 2.81                     | 0.45              |
| 1:L:205:ILE:HG23 | 1:L:205:ILE:O    | 2.16                     | 0.45              |
| 1:M:197:PRO:HG2  | 1:M:205:ILE:HG23 | 1.99                     | 0.45              |
| 1:N:196:CYS:HA   | 1:N:197:PRO:HD2  | 1.83                     | 0.45              |
| 1:O:104:GLN:CD   | 1:Q:205:ILE:CG1  | 2.83                     | 0.45              |
| 1:O:108:THR:CG2  | 1:O:109:LYS:H    | 2.27                     | 0.45              |
| 1:O:125:ALA:O    | 1:O:128:SER:OG   | 2.31                     | 0.45              |
| 1:O:205:ILE:CG1  | 1:P:104:GLN:CD   | 2.83                     | 0.45              |
| 1:B:125:ALA:HB1  | 1:B:223:LYS:HB2  | 1.98                     | 0.45              |
| 1:F:104:GLN:CD   | 1:H:205:ILE:CG1  | 2.83                     | 0.45              |
| 1:F:125:ALA:HB1  | 1:F:223:LYS:HB2  | 1.98                     | 0.45              |
| 1:F:265:GLY:C    | 1:H:149:GLN:HE22 | 2.03                     | 0.45              |
| 1:G:127:PHE:CZ   | 1:G:140:VAL:HG21 | 2.51                     | 0.45              |
| 1:G:150:LEU:CD2  | 1:H:290:LYS:CA   | 2.93                     | 0.45              |
| 1:H:170:ILE:HD11 | 1:H:239:VAL:HG21 | 1.98                     | 0.45              |
| 1:I:143:LYS:CG   | 1:I:263:VAL:HB   | 2.46                     | 0.45              |
| 1:I:170:ILE:HD11 | 1:I:239:VAL:HG21 | 1.98                     | 0.45              |
| 1:I:239:VAL:HG12 | 1:I:240:THR:N    | 2.31                     | 0.45              |
| 1:I:301:ASP:OD1  | 1:I:301:ASP:O    | 2.34                     | 0.45              |
| 1:K:106:PHE:HE2  | 1:K:303:VAL:HG21 | 1.80                     | 0.45              |
| 1:K:125:ALA:O    | 1:K:128:SER:OG   | 2.31                     | 0.45              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:L:186:SER:HB3  | 1:L:246:ILE:HG13 | 1.98                     | 0.45              |
| 1:L:290:LYS:CA   | 1:N:150:LEU:CD2  | 2.93                     | 0.45              |
| 1:N:205:ILE:HG23 | 1:N:205:ILE:O    | 2.16                     | 0.45              |
| 1:O:168:MET:HE2  | 1:O:175:TYR:CD1  | 2.49                     | 0.45              |
| 1:O:239:VAL:HG12 | 1:O:240:THR:N    | 2.31                     | 0.45              |
| 1:Q:205:ILE:HG23 | 1:Q:205:ILE:O    | 2.16                     | 0.45              |
| 1:Q:301:ASP:OD1  | 1:Q:301:ASP:O    | 2.34                     | 0.45              |
| 1:B:108:THR:CG2  | 1:B:109:LYS:H    | 2.27                     | 0.45              |
| 1:F:197:PRO:HG2  | 1:F:205:ILE:HG23 | 1.99                     | 0.45              |
| 1:G:178:THR:N    | 1:G:182:ASN:HD22 | 2.13                     | 0.45              |
| 1:I:150:LEU:CD2  | 1:J:290:LYS:CA   | 2.93                     | 0.45              |
| 1:I:275:PRO:HD2  | 1:I:276:THR:N    | 2.31                     | 0.45              |
| 1:K:158:LEU:CD2  | 1:K:185:ILE:HD13 | 2.44                     | 0.45              |
| 1:N:197:PRO:HG2  | 1:N:205:ILE:HG23 | 1.99                     | 0.45              |
| 1:O:170:ILE:HD11 | 1:O:239:VAL:HG21 | 1.98                     | 0.45              |
| 1:Q:197:PRO:HG2  | 1:Q:205:ILE:HG23 | 1.99                     | 0.45              |
| 1:H:199:ASN:HD21 | 1:H:201:GLN:HG2  | 1.81                     | 0.45              |
| 1:H:301:ASP:OD1  | 1:H:301:ASP:O    | 2.34                     | 0.45              |
| 1:J:127:PHE:CZ   | 1:J:140:VAL:HG21 | 2.51                     | 0.45              |
| 1:N:175:TYR:HE1  | 1:N:237:LEU:HD22 | 1.79                     | 0.45              |
| 1:O:106:PHE:HE2  | 1:O:303:VAL:HG21 | 1.80                     | 0.45              |
| 1:Q:174:TYR:HE1  | 1:Q:234:ASN:HB2  | 1.72                     | 0.45              |
| 1:B:160:LEU:HD21 | 1:B:283:ARG:O    | 2.17                     | 0.45              |
| 1:B:197:PRO:HG2  | 1:B:205:ILE:HG23 | 1.99                     | 0.45              |
| 1:F:83:LEU:CD2   | 1:F:139:VAL:HG13 | 2.44                     | 0.45              |
| 1:F:186:SER:HB3  | 1:F:246:ILE:HG13 | 1.98                     | 0.45              |
| 1:G:103:SER:CB   | 1:O:173:TYR:OH   | 2.64                     | 0.45              |
| 1:H:127:PHE:CZ   | 1:H:140:VAL:HG21 | 2.51                     | 0.45              |
| 1:I:175:TYR:HE1  | 1:I:237:LEU:HD22 | 1.79                     | 0.45              |
| 1:J:199:ASN:HD21 | 1:J:201:GLN:HG2  | 1.81                     | 0.45              |
| 1:L:301:ASP:OD1  | 1:L:301:ASP:O    | 2.34                     | 0.45              |
| 1:P:125:ALA:HB1  | 1:P:223:LYS:HB2  | 1.98                     | 0.45              |
| 1:Q:125:ALA:HB1  | 1:Q:223:LYS:CG   | 2.44                     | 0.45              |
| 1:Q:148:LEU:HD22 | 1:Q:151:ASP:OD2  | 2.16                     | 0.45              |
| 1:B:127:PHE:CZ   | 1:B:140:VAL:HG21 | 2.52                     | 0.45              |
| 1:G:125:ALA:HB1  | 1:G:223:LYS:HB2  | 1.98                     | 0.45              |
| 1:I:104:GLN:CB   | 1:K:205:ILE:CD1  | 2.82                     | 0.45              |
| 1:J:196:CYS:HA   | 1:J:197:PRO:HD2  | 1.83                     | 0.45              |
| 1:J:205:ILE:O    | 1:J:205:ILE:HG23 | 2.16                     | 0.45              |
| 1:M:170:ILE:HD11 | 1:M:239:VAL:HG21 | 1.98                     | 0.45              |
| 1:N:127:PHE:CZ   | 1:N:140:VAL:HG21 | 2.52                     | 0.45              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:Q:222:GLU:HB2  | 1:Q:225:VAL:CG2  | 2.45                     | 0.45              |
| 1:F:258:VAL:HG11 | 1:F:260:VAL:HG23 | 1.99                     | 0.45              |
| 1:G:186:SER:HB3  | 1:G:246:ILE:HG13 | 1.98                     | 0.45              |
| 1:G:191:CYS:HG   | 1:G:244:CYS:CB   | 2.30                     | 0.45              |
| 1:H:168:MET:CE   | 1:H:175:TYR:CG   | 3.00                     | 0.45              |
| 1:I:179:ASP:C    | 1:I:181:ALA:H    | 2.19                     | 0.45              |
| 1:L:83:LEU:CD2   | 1:L:139:VAL:HG13 | 2.43                     | 0.45              |
| 1:L:179:ASP:C    | 1:L:181:ALA:H    | 2.19                     | 0.45              |
| 1:M:69:ASN:O     | 1:M:70:SER:CB    | 2.58                     | 0.45              |
| 1:M:160:LEU:HD21 | 1:M:283:ARG:O    | 2.17                     | 0.45              |
| 1:M:201:GLN:O    | 1:M:202:THR:HB   | 2.17                     | 0.45              |
| 1:N:160:LEU:HD21 | 1:N:283:ARG:O    | 2.17                     | 0.45              |
| 1:P:170:ILE:HD11 | 1:P:239:VAL:HG21 | 1.98                     | 0.45              |
| 1:Q:127:PHE:CZ   | 1:Q:140:VAL:HG21 | 2.51                     | 0.45              |
| 1:B:199:ASN:HD21 | 1:B:201:GLN:HG2  | 1.81                     | 0.44              |
| 1:F:160:LEU:HD21 | 1:F:283:ARG:O    | 2.17                     | 0.44              |
| 1:F:222:GLU:HB2  | 1:F:225:VAL:CG2  | 2.45                     | 0.44              |
| 1:F:286:ARG:NH1  | 1:H:268:VAL:HG13 | 2.30                     | 0.44              |
| 1:G:150:LEU:HG   | 1:H:290:LYS:CE   | 2.47                     | 0.44              |
| 1:G:197:PRO:HG2  | 1:G:205:ILE:HG23 | 1.99                     | 0.44              |
| 1:G:205:ILE:HG23 | 1:G:205:ILE:O    | 2.16                     | 0.44              |
| 1:J:222:GLU:HB2  | 1:J:225:VAL:CG2  | 2.45                     | 0.44              |
| 1:K:199:ASN:HD21 | 1:K:201:GLN:HG2  | 1.81                     | 0.44              |
| 1:K:201:GLN:O    | 1:K:202:THR:HB   | 2.18                     | 0.44              |
| 1:K:258:VAL:HG11 | 1:K:260:VAL:HG23 | 1.99                     | 0.44              |
| 1:L:104:GLN:HB2  | 1:N:205:ILE:CD1  | 2.40                     | 0.44              |
| 1:M:175:TYR:HE1  | 1:M:237:LEU:HD22 | 1.79                     | 0.44              |
| 1:N:125:ALA:HB1  | 1:N:223:LYS:HB2  | 1.98                     | 0.44              |
| 1:N:170:ILE:HD11 | 1:N:239:VAL:HG21 | 1.98                     | 0.44              |
| 1:O:179:ASP:C    | 1:O:181:ALA:H    | 2.19                     | 0.44              |
| 1:O:258:VAL:HG11 | 1:O:260:VAL:HG23 | 1.99                     | 0.44              |
| 1:P:150:LEU:HG   | 1:Q:290:LYS:CE   | 2.47                     | 0.44              |
| 1:Q:170:ILE:CD1  | 1:Q:239:VAL:HG23 | 2.43                     | 0.44              |
| 1:Q:170:ILE:HD11 | 1:Q:239:VAL:HG21 | 1.98                     | 0.44              |
| 1:F:72:GLN:CB    | 1:F:76:PHE:CE1   | 2.70                     | 0.44              |
| 1:G:160:LEU:HD21 | 1:G:283:ARG:O    | 2.17                     | 0.44              |
| 1:H:125:ALA:HB1  | 1:H:223:LYS:HB2  | 1.98                     | 0.44              |
| 1:H:160:LEU:HD21 | 1:H:283:ARG:O    | 2.17                     | 0.44              |
| 1:I:127:PHE:CD2  | 1:I:155:LEU:CD2  | 2.64                     | 0.44              |
| 1:J:158:LEU:CD2  | 1:J:185:ILE:HD13 | 2.44                     | 0.44              |
| 1:L:125:ALA:HB1  | 1:L:223:LYS:CG   | 2.45                     | 0.44              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:M:127:PHE:CZ   | 1:M:140:VAL:HG21 | 2.51                     | 0.44              |
| 1:M:275:PRO:HD2  | 1:M:276:THR:N    | 2.31                     | 0.44              |
| 1:P:149:GLN:HE22 | 1:Q:265:GLY:C    | 2.07                     | 0.44              |
| 1:P:179:ASP:C    | 1:P:181:ALA:H    | 2.19                     | 0.44              |
| 1:H:222:GLU:HB2  | 1:H:225:VAL:CG2  | 2.45                     | 0.44              |
| 1:L:253:GLY:HA2  | 1:L:254:PRO:HD3  | 1.61                     | 0.44              |
| 1:M:82:CYS:HG    | 1:M:135:CYS:CB   | 2.16                     | 0.44              |
| 1:N:126:SER:CA   | 1:N:223:LYS:HZ1  | 2.07                     | 0.44              |
| 1:O:125:ALA:HB1  | 1:O:223:LYS:HB2  | 1.98                     | 0.44              |
| 1:P:73:GLU:O     | 1:P:73:GLU:CG    | 2.57                     | 0.44              |
| 1:P:158:LEU:CD2  | 1:P:185:ILE:HD13 | 2.44                     | 0.44              |
| 1:Q:160:LEU:HD21 | 1:Q:283:ARG:O    | 2.17                     | 0.44              |
| 1:F:179:ASP:C    | 1:F:181:ALA:H    | 2.19                     | 0.44              |
| 1:G:205:ILE:CD1  | 1:H:104:GLN:CB   | 2.81                     | 0.44              |
| 1:G:205:ILE:CD1  | 1:H:104:GLN:HB2  | 2.40                     | 0.44              |
| 1:H:125:ALA:HB1  | 1:H:223:LYS:CG   | 2.45                     | 0.44              |
| 1:H:170:ILE:CD1  | 1:H:239:VAL:HG23 | 2.43                     | 0.44              |
| 1:H:257:ASN:C    | 1:H:310:MET:SD   | 2.93                     | 0.44              |
| 1:J:178:THR:HB   | 1:J:179:ASP:OD1  | 2.18                     | 0.44              |
| 1:L:160:LEU:HD21 | 1:L:283:ARG:O    | 2.17                     | 0.44              |
| 1:N:201:GLN:O    | 1:N:202:THR:HB   | 2.18                     | 0.44              |
| 1:N:275:PRO:HD2  | 1:N:276:THR:N    | 2.31                     | 0.44              |
| 1:B:83:LEU:CD2   | 1:B:139:VAL:HG13 | 2.43                     | 0.44              |
| 1:B:142:MET:HE1  | 1:B:152:MET:HE1  | 1.89                     | 0.44              |
| 1:B:307:ILE:HA   | 1:B:310:MET:HE2  | 1.99                     | 0.44              |
| 1:H:201:GLN:O    | 1:H:202:THR:HB   | 2.18                     | 0.44              |
| 1:I:78:THR:O     | 1:I:78:THR:HG22  | 2.18                     | 0.44              |
| 1:J:150:LEU:HG   | 1:K:290:LYS:CE   | 2.47                     | 0.44              |
| 1:M:178:THR:HB   | 1:M:179:ASP:OD1  | 2.18                     | 0.44              |
| 1:O:160:LEU:HD21 | 1:O:283:ARG:O    | 2.17                     | 0.44              |
| 1:O:197:PRO:HG2  | 1:O:205:ILE:HG23 | 1.99                     | 0.44              |
| 1:P:174:TYR:HD1  | 1:P:234:ASN:HB3  | 1.73                     | 0.44              |
| 1:B:170:ILE:HD11 | 1:B:239:VAL:HG21 | 1.98                     | 0.44              |
| 1:J:175:TYR:HE1  | 1:J:237:LEU:HD22 | 1.79                     | 0.44              |
| 1:K:125:ALA:HB1  | 1:K:223:LYS:HB2  | 1.98                     | 0.44              |
| 1:M:148:LEU:HD22 | 1:M:151:ASP:OD2  | 2.17                     | 0.44              |
| 1:M:154:GLU:OE1  | 1:M:225:VAL:CA   | 2.59                     | 0.44              |
| 1:N:186:SER:HB3  | 1:N:246:ILE:HG13 | 1.98                     | 0.44              |
| 1:O:168:MET:CE   | 1:O:175:TYR:CG   | 3.00                     | 0.44              |
| 1:P:160:LEU:HD21 | 1:P:283:ARG:O    | 2.17                     | 0.44              |
| 1:P:191:CYS:HG   | 1:P:244:CYS:CB   | 2.30                     | 0.44              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:Q:142:MET:HE3  | 1:Q:152:MET:HE2  | 0.48                     | 0.44              |
| 1:G:258:VAL:HG11 | 1:G:260:VAL:HG23 | 1.99                     | 0.44              |
| 1:I:176:GLN:O    | 1:I:176:GLN:HG3  | 2.18                     | 0.44              |
| 1:I:201:GLN:O    | 1:I:202:THR:HB   | 2.18                     | 0.44              |
| 1:K:127:PHE:CZ   | 1:K:140:VAL:HG21 | 2.52                     | 0.44              |
| 1:K:148:LEU:HD22 | 1:K:151:ASP:OD2  | 2.18                     | 0.44              |
| 1:M:168:MET:HE2  | 1:M:175:TYR:CG   | 2.52                     | 0.44              |
| 1:N:258:VAL:HG11 | 1:N:260:VAL:HG23 | 1.99                     | 0.44              |
| 1:O:150:LEU:HG   | 1:P:290:LYS:CE   | 2.48                     | 0.44              |
| 1:O:176:GLN:HG3  | 1:O:176:GLN:O    | 2.17                     | 0.44              |
| 1:Q:162:GLU:HB2  | 1:Q:253:GLY:O    | 2.07                     | 0.44              |
| 1:F:178:THR:N    | 1:F:182:ASN:HD22 | 2.13                     | 0.44              |
| 1:G:307:ILE:HA   | 1:G:310:MET:HE2  | 2.00                     | 0.44              |
| 1:H:107:LEU:HD23 | 1:H:111:TRP:O    | 2.18                     | 0.44              |
| 1:J:168:MET:HE2  | 1:J:175:TYR:CG   | 2.53                     | 0.44              |
| 1:K:160:LEU:HD21 | 1:K:283:ARG:O    | 2.17                     | 0.44              |
| 1:L:178:THR:HB   | 1:L:179:ASP:OD1  | 2.18                     | 0.44              |
| 1:Q:178:THR:HB   | 1:Q:179:ASP:OD1  | 2.18                     | 0.44              |
| 1:Q:275:PRO:HD2  | 1:Q:276:THR:N    | 2.31                     | 0.44              |
| 1:F:178:THR:HB   | 1:F:179:ASP:OD1  | 2.18                     | 0.44              |
| 1:G:83:LEU:CD2   | 1:G:139:VAL:HG13 | 2.43                     | 0.44              |
| 1:H:178:THR:HB   | 1:H:179:ASP:OD1  | 2.18                     | 0.44              |
| 1:J:160:LEU:HD21 | 1:J:283:ARG:O    | 2.17                     | 0.44              |
| 1:J:186:SER:HB3  | 1:J:246:ILE:HG13 | 1.98                     | 0.44              |
| 1:K:83:LEU:CD2   | 1:K:139:VAL:HG13 | 2.43                     | 0.44              |
| 1:K:170:ILE:HD11 | 1:K:239:VAL:HG21 | 1.98                     | 0.44              |
| 1:N:176:GLN:O    | 1:N:176:GLN:HG3  | 2.17                     | 0.44              |
| 1:Q:176:GLN:O    | 1:Q:176:GLN:HG3  | 2.17                     | 0.44              |
| 1:B:125:ALA:HB1  | 1:B:223:LYS:CG   | 2.45                     | 0.43              |
| 1:B:178:THR:N    | 1:B:182:ASN:HD22 | 2.13                     | 0.43              |
| 1:G:275:PRO:HD2  | 1:G:276:THR:N    | 2.31                     | 0.43              |
| 1:H:176:GLN:O    | 1:H:176:GLN:HG3  | 2.16                     | 0.43              |
| 1:H:197:PRO:HG2  | 1:H:205:ILE:HG23 | 1.99                     | 0.43              |
| 1:H:275:PRO:HD2  | 1:H:276:THR:N    | 2.31                     | 0.43              |
| 1:I:205:ILE:CD1  | 1:J:104:GLN:HB2  | 2.40                     | 0.43              |
| 1:J:83:LEU:CD2   | 1:J:139:VAL:HG13 | 2.44                     | 0.43              |
| 1:J:107:LEU:HD23 | 1:J:111:TRP:O    | 2.18                     | 0.43              |
| 1:J:174:TYR:CG   | 1:J:198:LEU:HD11 | 2.53                     | 0.43              |
| 1:J:258:VAL:HG11 | 1:J:260:VAL:HG23 | 1.99                     | 0.43              |
| 1:K:108:THR:HG23 | 1:K:109:LYS:H    | 1.78                     | 0.43              |
| 1:K:178:THR:HB   | 1:K:179:ASP:OD1  | 2.18                     | 0.43              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:L:149:GLN:HE22 | 1:M:265:GLY:C    | 2.03                     | 0.43              |
| 1:L:258:VAL:HG11 | 1:L:260:VAL:HG23 | 1.99                     | 0.43              |
| 1:L:275:PRO:HD2  | 1:L:276:THR:N    | 2.31                     | 0.43              |
| 1:M:168:MET:CE   | 1:M:175:TYR:CG   | 3.00                     | 0.43              |
| 1:O:174:TYR:CD1  | 1:O:198:LEU:HD13 | 2.34                     | 0.43              |
| 1:O:201:GLN:O    | 1:O:202:THR:HB   | 2.18                     | 0.43              |
| 1:F:104:GLN:CB   | 1:H:205:ILE:CD1  | 2.81                     | 0.43              |
| 1:G:179:ASP:C    | 1:G:181:ALA:H    | 2.19                     | 0.43              |
| 1:G:201:GLN:O    | 1:G:202:THR:HB   | 2.18                     | 0.43              |
| 1:H:170:ILE:CG2  | 1:H:237:LEU:O    | 2.67                     | 0.43              |
| 1:I:160:LEU:HD21 | 1:I:283:ARG:O    | 2.17                     | 0.43              |
| 1:I:258:VAL:HG11 | 1:I:260:VAL:HG23 | 1.99                     | 0.43              |
| 1:K:107:LEU:HD23 | 1:K:111:TRP:O    | 2.18                     | 0.43              |
| 1:L:150:LEU:HG   | 1:M:290:LYS:CE   | 2.48                     | 0.43              |
| 1:L:290:LYS:CE   | 1:N:150:LEU:HG   | 2.48                     | 0.43              |
| 1:M:125:ALA:O    | 1:M:128:SER:OG   | 2.31                     | 0.43              |
| 1:M:142:MET:HE2  | 1:M:142:MET:HB3  | 1.79                     | 0.43              |
| 1:N:107:LEU:HD23 | 1:N:111:TRP:O    | 2.18                     | 0.43              |
| 1:Q:201:GLN:O    | 1:Q:202:THR:HB   | 2.18                     | 0.43              |
| 1:Q:302:TYR:O    | 1:Q:306:ILE:HG13 | 2.18                     | 0.43              |
| 1:B:107:LEU:HD23 | 1:B:111:TRP:O    | 2.18                     | 0.43              |
| 1:B:201:GLN:O    | 1:B:202:THR:HB   | 2.18                     | 0.43              |
| 1:G:144:TYR:HH   | 1:G:146:ALA:HB2  | 1.80                     | 0.43              |
| 1:J:201:GLN:O    | 1:J:202:THR:HB   | 2.18                     | 0.43              |
| 1:K:73:GLU:O     | 1:K:73:GLU:CG    | 2.63                     | 0.43              |
| 1:K:111:TRP:HA   | 1:K:112:PRO:HD2  | 1.85                     | 0.43              |
| 1:K:174:TYR:CG   | 1:K:198:LEU:HD11 | 2.53                     | 0.43              |
| 1:L:158:LEU:CD2  | 1:L:185:ILE:HD13 | 2.44                     | 0.43              |
| 1:L:201:GLN:O    | 1:L:202:THR:HB   | 2.17                     | 0.43              |
| 1:L:205:ILE:CG1  | 1:M:104:GLN:CD   | 2.83                     | 0.43              |
| 1:L:302:TYR:O    | 1:L:306:ILE:HG13 | 2.19                     | 0.43              |
| 1:M:150:LEU:HG   | 1:N:290:LYS:CE   | 2.48                     | 0.43              |
| 1:O:119:LYS:HD3  | 1:O:119:LYS:N    | 2.34                     | 0.43              |
| 1:O:170:ILE:CG2  | 1:O:237:LEU:O    | 2.67                     | 0.43              |
| 1:P:107:LEU:HD23 | 1:P:111:TRP:O    | 2.18                     | 0.43              |
| 1:P:119:LYS:N    | 1:P:119:LYS:HD3  | 2.34                     | 0.43              |
| 1:P:191:CYS:N    | 1:P:244:CYS:SG   | 2.91                     | 0.43              |
| 1:F:107:LEU:HD23 | 1:F:111:TRP:O    | 2.18                     | 0.43              |
| 1:H:175:TYR:HE1  | 1:H:237:LEU:HD22 | 1.79                     | 0.43              |
| 1:H:258:VAL:HG11 | 1:H:260:VAL:HG23 | 1.99                     | 0.43              |
| 1:I:174:TYR:CG   | 1:I:198:LEU:HD11 | 2.53                     | 0.43              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:191:CYS:N    | 1:I:244:CYS:SG   | 2.91                     | 0.43              |
| 1:J:191:CYS:HG   | 1:J:244:CYS:CB   | 2.30                     | 0.43              |
| 1:M:174:TYR:CG   | 1:M:198:LEU:HD11 | 2.53                     | 0.43              |
| 1:M:258:VAL:HG11 | 1:M:260:VAL:HG23 | 1.99                     | 0.43              |
| 1:M:268:VAL:HG13 | 1:N:286:ARG:NH1  | 2.30                     | 0.43              |
| 1:N:191:CYS:N    | 1:N:244:CYS:SG   | 2.91                     | 0.43              |
| 1:O:290:LYS:CA   | 1:Q:150:LEU:CD2  | 2.93                     | 0.43              |
| 1:B:258:VAL:HG11 | 1:B:260:VAL:HG23 | 1.99                     | 0.43              |
| 1:I:125:ALA:HB1  | 1:I:223:LYS:CG   | 2.45                     | 0.43              |
| 1:I:178:THR:HB   | 1:I:179:ASP:OD1  | 2.18                     | 0.43              |
| 1:L:107:LEU:HD23 | 1:L:111:TRP:O    | 2.18                     | 0.43              |
| 1:L:119:LYS:HD3  | 1:L:119:LYS:N    | 2.34                     | 0.43              |
| 1:L:170:ILE:CG2  | 1:L:237:LEU:O    | 2.67                     | 0.43              |
| 1:M:302:TYR:O    | 1:M:306:ILE:HG13 | 2.19                     | 0.43              |
| 1:N:158:LEU:CD2  | 1:N:185:ILE:HD13 | 2.44                     | 0.43              |
| 1:Q:258:VAL:HG11 | 1:Q:260:VAL:HG23 | 1.99                     | 0.43              |
| 1:B:129:VAL:C    | 1:B:131:PRO:HD3  | 2.28                     | 0.43              |
| 1:B:178:THR:HB   | 1:B:179:ASP:OD1  | 2.18                     | 0.43              |
| 1:B:186:SER:HB3  | 1:B:246:ILE:CB   | 2.49                     | 0.43              |
| 1:F:106:PHE:CE2  | 1:F:303:VAL:HG21 | 2.54                     | 0.43              |
| 1:F:186:SER:HB3  | 1:F:246:ILE:CB   | 2.49                     | 0.43              |
| 1:G:176:GLN:O    | 1:G:176:GLN:HG3  | 2.19                     | 0.43              |
| 1:I:107:LEU:HD23 | 1:I:111:TRP:O    | 2.18                     | 0.43              |
| 1:I:119:LYS:HD3  | 1:I:119:LYS:N    | 2.34                     | 0.43              |
| 1:J:119:LYS:N    | 1:J:119:LYS:HD3  | 2.34                     | 0.43              |
| 1:J:168:MET:CE   | 1:J:175:TYR:CG   | 3.00                     | 0.43              |
| 1:J:205:ILE:CD1  | 1:K:104:GLN:CB   | 2.81                     | 0.43              |
| 1:L:106:PHE:CE2  | 1:L:303:VAL:HG21 | 2.54                     | 0.43              |
| 1:M:107:LEU:HD23 | 1:M:111:TRP:O    | 2.18                     | 0.43              |
| 1:M:176:GLN:O    | 1:M:176:GLN:HG3  | 2.19                     | 0.43              |
| 1:O:106:PHE:CE2  | 1:O:303:VAL:HG21 | 2.54                     | 0.43              |
| 1:O:174:TYR:CG   | 1:O:198:LEU:HD11 | 2.53                     | 0.43              |
| 1:O:302:TYR:O    | 1:O:306:ILE:HG13 | 2.19                     | 0.43              |
| 1:P:201:GLN:O    | 1:P:202:THR:HB   | 2.18                     | 0.43              |
| 1:P:258:VAL:HG11 | 1:P:260:VAL:HG23 | 1.99                     | 0.43              |
| 1:Q:174:TYR:CG   | 1:Q:198:LEU:HD11 | 2.53                     | 0.43              |
| 1:F:302:TYR:O    | 1:F:306:ILE:HG13 | 2.19                     | 0.43              |
| 1:H:196:CYS:HA   | 1:H:197:PRO:HD2  | 1.83                     | 0.43              |
| 1:I:92:GLU:O     | 1:I:92:GLU:HG2   | 2.19                     | 0.43              |
| 1:I:170:ILE:CG2  | 1:I:237:LEU:O    | 2.67                     | 0.43              |
| 1:K:119:LYS:N    | 1:K:119:LYS:HD3  | 2.34                     | 0.43              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:186:SER:HB3  | 1:K:246:ILE:CB   | 2.49                     | 0.43              |
| 1:N:75:THR:CG2   | 1:N:79:SER:OG    | 2.67                     | 0.43              |
| 1:P:170:ILE:CG2  | 1:P:237:LEU:O    | 2.67                     | 0.43              |
| 1:P:178:THR:HB   | 1:P:179:ASP:OD1  | 2.18                     | 0.43              |
| 1:P:302:TYR:O    | 1:P:306:ILE:HG13 | 2.19                     | 0.43              |
| 1:Q:92:GLU:HG2   | 1:Q:92:GLU:O     | 2.19                     | 0.43              |
| 1:B:302:TYR:O    | 1:B:306:ILE:HG13 | 2.19                     | 0.43              |
| 1:F:174:TYR:CG   | 1:F:198:LEU:HD11 | 2.53                     | 0.43              |
| 1:H:83:LEU:CD2   | 1:H:139:VAL:HG13 | 2.43                     | 0.43              |
| 1:H:253:GLY:HA2  | 1:H:254:PRO:HD3  | 1.61                     | 0.43              |
| 1:M:186:SER:HB3  | 1:M:246:ILE:CB   | 2.49                     | 0.43              |
| 1:O:178:THR:HB   | 1:O:179:ASP:OD1  | 2.18                     | 0.43              |
| 1:O:178:THR:N    | 1:O:182:ASN:HD22 | 2.13                     | 0.43              |
| 1:P:186:SER:HB3  | 1:P:246:ILE:CB   | 2.49                     | 0.43              |
| 1:P:197:PRO:HG2  | 1:P:205:ILE:HG23 | 1.99                     | 0.43              |
| 1:B:168:MET:CE   | 1:B:175:TYR:CG   | 3.00                     | 0.43              |
| 1:F:176:GLN:O    | 1:F:176:GLN:HG3  | 2.18                     | 0.43              |
| 1:F:290:LYS:CE   | 1:H:150:LEU:HG   | 2.47                     | 0.43              |
| 1:I:106:PHE:CE2  | 1:I:303:VAL:HG21 | 2.54                     | 0.43              |
| 1:J:170:ILE:CG2  | 1:J:237:LEU:O    | 2.67                     | 0.43              |
| 1:K:170:ILE:CG2  | 1:K:237:LEU:O    | 2.67                     | 0.43              |
| 1:L:142:MET:HE1  | 1:L:152:MET:HB3  | 2.00                     | 0.43              |
| 1:L:186:SER:HB3  | 1:L:246:ILE:CB   | 2.49                     | 0.43              |
| 1:M:170:ILE:CG2  | 1:M:237:LEU:O    | 2.67                     | 0.43              |
| 1:N:178:THR:HB   | 1:N:179:ASP:OD1  | 2.18                     | 0.43              |
| 1:O:290:LYS:CE   | 1:Q:150:LEU:HG   | 2.48                     | 0.43              |
| 1:Q:107:LEU:HD23 | 1:Q:111:TRP:O    | 2.18                     | 0.43              |
| 1:G:125:ALA:HB1  | 1:G:223:LYS:CG   | 2.45                     | 0.43              |
| 1:G:302:TYR:O    | 1:G:306:ILE:HG13 | 2.19                     | 0.43              |
| 1:H:168:MET:HE2  | 1:H:175:TYR:CG   | 2.54                     | 0.43              |
| 1:I:150:LEU:HG   | 1:J:290:LYS:CE   | 2.48                     | 0.43              |
| 1:I:257:ASN:C    | 1:I:310:MET:SD   | 2.93                     | 0.43              |
| 1:J:197:PRO:HG2  | 1:J:205:ILE:HG23 | 1.99                     | 0.43              |
| 1:M:119:LYS:HD3  | 1:M:119:LYS:N    | 2.34                     | 0.43              |
| 1:N:174:TYR:CG   | 1:N:198:LEU:HD11 | 2.53                     | 0.43              |
| 1:N:178:THR:N    | 1:N:182:ASN:HD22 | 2.13                     | 0.43              |
| 1:Q:186:SER:HB3  | 1:Q:246:ILE:CB   | 2.49                     | 0.43              |
| 1:B:174:TYR:CG   | 1:B:198:LEU:HD11 | 2.53                     | 0.42              |
| 1:G:107:LEU:HD23 | 1:G:111:TRP:O    | 2.18                     | 0.42              |
| 1:G:170:ILE:CG2  | 1:G:237:LEU:O    | 2.67                     | 0.42              |
| 1:H:69:ASN:O     | 1:H:70:SER:CB    | 2.59                     | 0.42              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:H:119:LYS:N    | 1:H:119:LYS:HD3  | 2.34                     | 0.42              |
| 1:I:290:LYS:CE   | 1:K:150:LEU:HG   | 2.48                     | 0.42              |
| 1:J:87:THR:HG1   | 1:J:122:THR:HG22 | 1.81                     | 0.42              |
| 1:J:126:SER:HA   | 1:J:223:LYS:HZ2  | 1.75                     | 0.42              |
| 1:J:175:TYR:O    | 1:J:235:HIS:N    | 2.41                     | 0.42              |
| 1:K:106:PHE:CE2  | 1:K:303:VAL:HG21 | 2.54                     | 0.42              |
| 1:L:175:TYR:O    | 1:L:235:HIS:N    | 2.43                     | 0.42              |
| 1:M:257:ASN:C    | 1:M:310:MET:SD   | 2.93                     | 0.42              |
| 1:Q:170:ILE:CG2  | 1:Q:237:LEU:O    | 2.67                     | 0.42              |
| 1:B:170:ILE:CG2  | 1:B:237:LEU:O    | 2.67                     | 0.42              |
| 1:F:170:ILE:CG2  | 1:F:237:LEU:O    | 2.67                     | 0.42              |
| 1:F:201:GLN:O    | 1:F:202:THR:HB   | 2.18                     | 0.42              |
| 1:H:302:TYR:O    | 1:H:306:ILE:HG13 | 2.19                     | 0.42              |
| 1:I:104:GLN:HB3  | 1:K:205:ILE:HD11 | 1.88                     | 0.42              |
| 1:I:158:LEU:CD2  | 1:I:185:ILE:HD13 | 2.44                     | 0.42              |
| 1:I:286:ARG:NH1  | 1:K:268:VAL:HG13 | 2.30                     | 0.42              |
| 1:N:106:PHE:CE2  | 1:N:303:VAL:HG21 | 2.54                     | 0.42              |
| 1:N:186:SER:HB3  | 1:N:246:ILE:CB   | 2.49                     | 0.42              |
| 1:N:302:TYR:O    | 1:N:306:ILE:HG13 | 2.19                     | 0.42              |
| 1:O:107:LEU:HD23 | 1:O:111:TRP:O    | 2.18                     | 0.42              |
| 1:P:125:ALA:HB1  | 1:P:223:LYS:CG   | 2.45                     | 0.42              |
| 1:P:257:ASN:C    | 1:P:310:MET:SD   | 2.93                     | 0.42              |
| 1:B:174:TYR:CD1  | 1:B:198:LEU:HD13 | 2.35                     | 0.42              |
| 1:H:191:CYS:N    | 1:H:244:CYS:SG   | 2.91                     | 0.42              |
| 1:J:302:TYR:O    | 1:J:306:ILE:HG13 | 2.19                     | 0.42              |
| 1:M:168:MET:HE2  | 1:M:175:TYR:CD1  | 2.51                     | 0.42              |
| 1:N:103:SER:CB   | 1:P:173:TYR:OH   | 2.66                     | 0.42              |
| 1:N:125:ALA:O    | 1:N:128:SER:OG   | 2.31                     | 0.42              |
| 1:O:257:ASN:C    | 1:O:310:MET:SD   | 2.93                     | 0.42              |
| 1:B:142:MET:HE3  | 1:B:152:MET:HE2  | 0.53                     | 0.42              |
| 1:G:178:THR:HB   | 1:G:179:ASP:OD1  | 2.18                     | 0.42              |
| 1:H:106:PHE:CE2  | 1:H:303:VAL:HG21 | 2.54                     | 0.42              |
| 1:H:148:LEU:O    | 1:H:151:ASP:HB2  | 2.20                     | 0.42              |
| 1:I:174:TYR:HD1  | 1:I:234:ASN:HB3  | 1.73                     | 0.42              |
| 1:J:186:SER:HB3  | 1:J:246:ILE:CB   | 2.49                     | 0.42              |
| 1:K:302:TYR:O    | 1:K:306:ILE:HG13 | 2.19                     | 0.42              |
| 1:N:170:ILE:CG2  | 1:N:237:LEU:O    | 2.67                     | 0.42              |
| 1:Q:119:LYS:HD3  | 1:Q:119:LYS:N    | 2.34                     | 0.42              |
| 1:Q:257:ASN:C    | 1:Q:310:MET:SD   | 2.93                     | 0.42              |
| 1:B:148:LEU:O    | 1:B:151:ASP:N    | 2.53                     | 0.42              |
| 1:B:176:GLN:O    | 1:B:176:GLN:HG3  | 2.20                     | 0.42              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:H:142:MET:HE1  | 1:H:152:MET:HE1  | 1.86                     | 0.42              |
| 1:I:302:TYR:O    | 1:I:306:ILE:HG13 | 2.19                     | 0.42              |
| 1:J:106:PHE:CE2  | 1:J:303:VAL:HG21 | 2.54                     | 0.42              |
| 1:M:106:PHE:CE2  | 1:M:303:VAL:HG21 | 2.54                     | 0.42              |
| 1:P:92:GLU:O     | 1:P:92:GLU:HG2   | 2.19                     | 0.42              |
| 1:Q:307:ILE:HA   | 1:Q:310:MET:HE2  | 2.01                     | 0.42              |
| 1:B:92:GLU:O     | 1:B:92:GLU:HG2   | 2.19                     | 0.42              |
| 1:B:168:MET:HE3  | 1:B:175:TYR:CG   | 2.51                     | 0.42              |
| 1:G:186:SER:HB3  | 1:G:246:ILE:CB   | 2.49                     | 0.42              |
| 1:H:289:TRP:C    | 1:H:289:TRP:CD1  | 2.93                     | 0.42              |
| 1:J:92:GLU:O     | 1:J:92:GLU:HG2   | 2.19                     | 0.42              |
| 1:L:92:GLU:O     | 1:L:92:GLU:HG2   | 2.19                     | 0.42              |
| 1:L:275:PRO:HG2  | 1:M:306:ILE:HG12 | 2.02                     | 0.42              |
| 1:O:81:LEU:HB3   | 1:O:116:VAL:HG22 | 2.02                     | 0.42              |
| 1:O:186:SER:HB3  | 1:O:246:ILE:CB   | 2.49                     | 0.42              |
| 1:B:289:TRP:CD1  | 1:B:289:TRP:C    | 2.93                     | 0.42              |
| 1:G:142:MET:HE2  | 1:G:142:MET:HB3  | 1.72                     | 0.42              |
| 1:H:75:THR:O     | 1:H:79:SER:OG    | 2.33                     | 0.42              |
| 1:H:92:GLU:O     | 1:H:92:GLU:HG2   | 2.19                     | 0.42              |
| 1:H:158:LEU:CD2  | 1:H:185:ILE:HD13 | 2.44                     | 0.42              |
| 1:J:191:CYS:N    | 1:J:244:CYS:SG   | 2.91                     | 0.42              |
| 1:K:154:GLU:OE1  | 1:K:225:VAL:CA   | 2.59                     | 0.42              |
| 1:N:92:GLU:HG2   | 1:N:92:GLU:O     | 2.19                     | 0.42              |
| 1:P:174:TYR:CG   | 1:P:198:LEU:HD11 | 2.53                     | 0.42              |
| 1:P:253:GLY:HA2  | 1:P:254:PRO:HD3  | 1.61                     | 0.42              |
| 1:F:81:LEU:HB3   | 1:F:116:VAL:HG22 | 2.02                     | 0.42              |
| 1:F:306:ILE:HG12 | 1:H:275:PRO:HG2  | 2.02                     | 0.42              |
| 1:J:149:GLN:HE22 | 1:K:265:GLY:C    | 2.07                     | 0.42              |
| 1:L:191:CYS:N    | 1:L:244:CYS:SG   | 2.91                     | 0.42              |
| 1:M:142:MET:HE1  | 1:M:152:MET:CE   | 2.28                     | 0.42              |
| 1:M:303:VAL:HG23 | 1:M:303:VAL:H    | 1.56                     | 0.42              |
| 1:O:175:TYR:O    | 1:O:235:HIS:N    | 2.40                     | 0.42              |
| 1:O:191:CYS:N    | 1:O:244:CYS:SG   | 2.91                     | 0.42              |
| 1:P:144:TYR:CD2  | 1:P:145:ASP:N    | 2.77                     | 0.42              |
| 1:P:303:VAL:O    | 1:P:307:ILE:HG12 | 2.20                     | 0.42              |
| 1:Q:106:PHE:CE2  | 1:Q:303:VAL:HG21 | 2.54                     | 0.42              |
| 1:Q:159:ILE:HG23 | 1:Q:258:VAL:CG2  | 2.11                     | 0.42              |
| 1:B:70:SER:O     | 1:B:71:THR:HB    | 2.19                     | 0.42              |
| 1:B:106:PHE:CE2  | 1:B:303:VAL:HG21 | 2.54                     | 0.42              |
| 1:F:150:LEU:HG   | 1:G:290:LYS:CE   | 2.48                     | 0.42              |
| 1:F:175:TYR:O    | 1:F:235:HIS:N    | 2.48                     | 0.42              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:303:VAL:O    | 1:F:307:ILE:HG12 | 2.20                     | 0.42              |
| 1:G:117:TYR:CD2  | 1:O:167:PRO:HG2  | 2.53                     | 0.42              |
| 1:G:175:TYR:O    | 1:G:234:ASN:HA   | 2.19                     | 0.42              |
| 1:H:186:SER:HB3  | 1:H:246:ILE:CB   | 2.49                     | 0.42              |
| 1:H:303:VAL:O    | 1:H:307:ILE:HG12 | 2.20                     | 0.42              |
| 1:I:253:GLY:HA2  | 1:I:254:PRO:HD3  | 1.61                     | 0.42              |
| 1:J:252:LEU:CD2  | 1:J:252:LEU:N    | 2.75                     | 0.42              |
| 1:J:275:PRO:HG2  | 1:K:306:ILE:HG12 | 2.02                     | 0.42              |
| 1:K:81:LEU:HB3   | 1:K:116:VAL:HG22 | 2.02                     | 0.42              |
| 1:K:92:GLU:O     | 1:K:92:GLU:HG2   | 2.19                     | 0.42              |
| 1:L:111:TRP:HA   | 1:L:112:PRO:HD2  | 1.85                     | 0.42              |
| 1:N:174:TYR:HD1  | 1:N:234:ASN:HB3  | 1.73                     | 0.42              |
| 1:O:92:GLU:O     | 1:O:92:GLU:HG2   | 2.19                     | 0.42              |
| 1:O:303:VAL:O    | 1:O:307:ILE:HG12 | 2.20                     | 0.42              |
| 1:B:81:LEU:HB3   | 1:B:116:VAL:HG22 | 2.02                     | 0.42              |
| 1:B:119:LYS:N    | 1:B:119:LYS:HD3  | 2.34                     | 0.42              |
| 1:F:119:LYS:N    | 1:F:119:LYS:HD3  | 2.34                     | 0.42              |
| 1:F:275:PRO:HG2  | 1:G:306:ILE:HG12 | 2.02                     | 0.42              |
| 1:G:92:GLU:O     | 1:G:92:GLU:HG2   | 2.19                     | 0.42              |
| 1:H:174:TYR:CG   | 1:H:198:LEU:HD11 | 2.53                     | 0.42              |
| 1:J:303:VAL:O    | 1:J:307:ILE:HG12 | 2.20                     | 0.42              |
| 1:O:302:TYR:CD1  | 1:Q:274:ASP:HB2  | 2.55                     | 0.42              |
| 1:P:87:THR:HG1   | 1:P:122:THR:HG22 | 1.77                     | 0.42              |
| 1:B:191:CYS:N    | 1:B:244:CYS:SG   | 2.91                     | 0.41              |
| 1:F:196:CYS:HA   | 1:F:197:PRO:HD2  | 1.83                     | 0.41              |
| 1:G:303:VAL:O    | 1:G:307:ILE:HG12 | 2.20                     | 0.41              |
| 1:I:126:SER:HA   | 1:I:223:LYS:HZ2  | 1.73                     | 0.41              |
| 1:I:148:LEU:HD22 | 1:I:151:ASP:OD2  | 2.20                     | 0.41              |
| 1:I:186:SER:HB3  | 1:I:246:ILE:CB   | 2.49                     | 0.41              |
| 1:I:303:VAL:O    | 1:I:307:ILE:HG12 | 2.20                     | 0.41              |
| 1:L:289:TRP:C    | 1:L:289:TRP:CD1  | 2.93                     | 0.41              |
| 1:L:306:ILE:HG12 | 1:N:275:PRO:HG2  | 2.02                     | 0.41              |
| 1:M:289:TRP:C    | 1:M:289:TRP:CD1  | 2.93                     | 0.41              |
| 1:N:81:LEU:HB3   | 1:N:116:VAL:HG22 | 2.02                     | 0.41              |
| 1:N:119:LYS:HD3  | 1:N:119:LYS:N    | 2.34                     | 0.41              |
| 1:O:142:MET:HE3  | 1:O:152:MET:HE2  | 0.53                     | 0.41              |
| 1:P:106:PHE:CE2  | 1:P:303:VAL:HG21 | 2.54                     | 0.41              |
| 1:P:274:ASP:HB2  | 1:Q:302:TYR:CD1  | 2.55                     | 0.41              |
| 1:P:275:PRO:HG2  | 1:Q:306:ILE:HG12 | 2.02                     | 0.41              |
| 1:B:170:ILE:CD1  | 1:B:239:VAL:HG23 | 2.43                     | 0.41              |
| 1:F:125:ALA:HB1  | 1:F:223:LYS:CG   | 2.45                     | 0.41              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:274:ASP:HB2  | 1:G:302:TYR:CD1  | 2.55                     | 0.41              |
| 1:G:106:PHE:CE2  | 1:G:303:VAL:HG21 | 2.54                     | 0.41              |
| 1:G:119:LYS:N    | 1:G:119:LYS:HD3  | 2.34                     | 0.41              |
| 1:G:148:LEU:O    | 1:G:151:ASP:HB2  | 2.19                     | 0.41              |
| 1:G:289:TRP:C    | 1:G:289:TRP:CD1  | 2.93                     | 0.41              |
| 1:H:140:VAL:CG1  | 1:H:260:VAL:HG22 | 2.51                     | 0.41              |
| 1:J:303:VAL:HG23 | 1:J:303:VAL:H    | 1.56                     | 0.41              |
| 1:K:289:TRP:C    | 1:K:289:TRP:CD1  | 2.93                     | 0.41              |
| 1:M:85:TYR:CZ    | 1:M:98:TRP:CH2   | 3.08                     | 0.41              |
| 1:M:303:VAL:O    | 1:M:307:ILE:HG12 | 2.20                     | 0.41              |
| 1:N:93:ILE:HG23  | 1:N:293:TRP:HE1  | 1.85                     | 0.41              |
| 1:O:85:TYR:CZ    | 1:O:98:TRP:CH2   | 3.08                     | 0.41              |
| 1:P:83:LEU:CD2   | 1:P:139:VAL:HG13 | 2.43                     | 0.41              |
| 1:P:93:ILE:HG23  | 1:P:293:TRP:HE1  | 1.85                     | 0.41              |
| 1:P:142:MET:HE3  | 1:P:152:MET:HE2  | 0.50                     | 0.41              |
| 1:P:256:GLU:OE1  | 1:P:256:GLU:HA   | 2.20                     | 0.41              |
| 1:Q:93:ILE:HG23  | 1:Q:293:TRP:HE1  | 1.85                     | 0.41              |
| 1:Q:289:TRP:C    | 1:Q:289:TRP:CD1  | 2.93                     | 0.41              |
| 1:B:303:VAL:O    | 1:B:307:ILE:HG12 | 2.20                     | 0.41              |
| 1:F:87:THR:HG1   | 1:F:122:THR:HG22 | 1.76                     | 0.41              |
| 1:I:302:TYR:CD1  | 1:K:274:ASP:HB2  | 2.55                     | 0.41              |
| 1:I:306:ILE:HG12 | 1:K:275:PRO:HG2  | 2.02                     | 0.41              |
| 1:J:256:GLU:OE1  | 1:J:256:GLU:HA   | 2.21                     | 0.41              |
| 1:K:303:VAL:O    | 1:K:307:ILE:HG12 | 2.20                     | 0.41              |
| 1:L:307:ILE:HA   | 1:L:310:MET:HE2  | 2.01                     | 0.41              |
| 1:M:81:LEU:HB3   | 1:M:116:VAL:HG22 | 2.02                     | 0.41              |
| 1:M:196:CYS:HA   | 1:M:197:PRO:HD2  | 1.83                     | 0.41              |
| 1:P:83:LEU:HD23  | 1:P:139:VAL:CG1  | 2.48                     | 0.41              |
| 1:P:140:VAL:CG1  | 1:P:260:VAL:HG22 | 2.51                     | 0.41              |
| 1:Q:303:VAL:O    | 1:Q:307:ILE:HG12 | 2.20                     | 0.41              |
| 1:F:92:GLU:O     | 1:F:92:GLU:HG2   | 2.19                     | 0.41              |
| 1:F:256:GLU:OE1  | 1:F:256:GLU:HA   | 2.21                     | 0.41              |
| 1:G:69:ASN:O     | 1:G:70:SER:CB    | 2.59                     | 0.41              |
| 1:G:81:LEU:HB3   | 1:G:116:VAL:HG22 | 2.02                     | 0.41              |
| 1:G:174:TYR:CG   | 1:G:198:LEU:HD11 | 2.53                     | 0.41              |
| 1:G:256:GLU:OE1  | 1:G:256:GLU:HA   | 2.21                     | 0.41              |
| 1:H:85:TYR:CZ    | 1:H:98:TRP:CH2   | 3.08                     | 0.41              |
| 1:J:274:ASP:HB2  | 1:K:302:TYR:CD1  | 2.55                     | 0.41              |
| 1:L:85:TYR:CZ    | 1:L:98:TRP:CH2   | 3.09                     | 0.41              |
| 1:L:274:ASP:HB2  | 1:M:302:TYR:CD1  | 2.55                     | 0.41              |
| 1:L:302:TYR:CD1  | 1:N:274:ASP:HB2  | 2.55                     | 0.41              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:N:83:LEU:CD2   | 1:N:139:VAL:HG13 | 2.44                     | 0.41              |
| 1:N:303:VAL:O    | 1:N:307:ILE:HG12 | 2.20                     | 0.41              |
| 1:O:274:ASP:HB2  | 1:P:302:TYR:CD1  | 2.55                     | 0.41              |
| 1:O:306:ILE:HG12 | 1:Q:275:PRO:HG2  | 2.02                     | 0.41              |
| 1:B:85:TYR:CZ    | 1:B:98:TRP:CH2   | 3.08                     | 0.41              |
| 1:B:174:TYR:HD1  | 1:B:234:ASN:HB3  | 1.73                     | 0.41              |
| 1:G:140:VAL:CG1  | 1:G:260:VAL:HG22 | 2.50                     | 0.41              |
| 1:H:93:ILE:HG23  | 1:H:293:TRP:HE1  | 1.86                     | 0.41              |
| 1:I:93:ILE:HG23  | 1:I:293:TRP:HE1  | 1.85                     | 0.41              |
| 1:J:85:TYR:CZ    | 1:J:98:TRP:CH2   | 3.08                     | 0.41              |
| 1:K:140:VAL:CG1  | 1:K:260:VAL:HG22 | 2.50                     | 0.41              |
| 1:K:256:GLU:OE1  | 1:K:256:GLU:HA   | 2.21                     | 0.41              |
| 1:M:92:GLU:O     | 1:M:92:GLU:HG2   | 2.19                     | 0.41              |
| 1:M:174:TYR:HD1  | 1:M:234:ASN:HB3  | 1.73                     | 0.41              |
| 1:N:289:TRP:C    | 1:N:289:TRP:CD1  | 2.93                     | 0.41              |
| 1:O:140:VAL:CG1  | 1:O:260:VAL:HG22 | 2.50                     | 0.41              |
| 1:P:178:THR:N    | 1:P:182:ASN:HD22 | 2.13                     | 0.41              |
| 1:F:93:ILE:HG23  | 1:F:293:TRP:HE1  | 1.85                     | 0.41              |
| 1:H:81:LEU:HB3   | 1:H:116:VAL:HG22 | 2.02                     | 0.41              |
| 1:I:83:LEU:CD2   | 1:I:139:VAL:HG13 | 2.44                     | 0.41              |
| 1:I:274:ASP:HB2  | 1:J:302:TYR:CD1  | 2.55                     | 0.41              |
| 1:I:275:PRO:HG2  | 1:J:306:ILE:HG12 | 2.02                     | 0.41              |
| 1:J:289:TRP:C    | 1:J:289:TRP:CD1  | 2.93                     | 0.41              |
| 1:K:72:GLN:H     | 1:K:72:GLN:HG3   | 1.71                     | 0.41              |
| 1:K:144:TYR:CE2  | 1:K:146:ALA:HA   | 2.55                     | 0.41              |
| 1:K:174:TYR:HD1  | 1:K:234:ASN:HB3  | 1.73                     | 0.41              |
| 1:L:81:LEU:HB3   | 1:L:116:VAL:HG22 | 2.02                     | 0.41              |
| 1:N:257:ASN:C    | 1:N:310:MET:SD   | 2.93                     | 0.41              |
| 1:P:205:ILE:CD1  | 1:Q:104:GLN:HB2  | 2.40                     | 0.41              |
| 1:Q:85:TYR:CZ    | 1:Q:98:TRP:CH2   | 3.08                     | 0.41              |
| 1:Q:191:CYS:N    | 1:Q:244:CYS:SG   | 2.91                     | 0.41              |
| 1:F:253:GLY:HA2  | 1:F:254:PRO:HD3  | 1.60                     | 0.41              |
| 1:F:302:TYR:CD1  | 1:H:274:ASP:HB2  | 2.55                     | 0.41              |
| 1:G:85:TYR:CZ    | 1:G:98:TRP:CH2   | 3.08                     | 0.41              |
| 1:H:144:TYR:CD1  | 1:H:265:GLY:HA3  | 2.54                     | 0.41              |
| 1:K:137:TYR:CE2  | 1:K:307:ILE:HG23 | 2.56                     | 0.41              |
| 1:L:127:PHE:CD2  | 1:L:155:LEU:CD2  | 2.64                     | 0.41              |
| 1:L:154:GLU:CD   | 1:L:225:VAL:HA   | 2.41                     | 0.41              |
| 1:M:140:VAL:CG1  | 1:M:260:VAL:HG22 | 2.50                     | 0.41              |
| 1:Q:111:TRP:HA   | 1:Q:112:PRO:HD2  | 1.85                     | 0.41              |
| 1:B:140:VAL:CG1  | 1:B:260:VAL:HG22 | 2.50                     | 0.41              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:137:TYR:CE2  | 1:F:307:ILE:HG23 | 2.56                     | 0.41              |
| 1:F:140:VAL:CG1  | 1:F:260:VAL:HG22 | 2.50                     | 0.41              |
| 1:G:142:MET:HE1  | 1:G:152:MET:HB3  | 2.03                     | 0.41              |
| 1:G:144:TYR:CD1  | 1:G:265:GLY:HA3  | 2.55                     | 0.41              |
| 1:K:201:GLN:O    | 1:K:202:THR:CB   | 2.69                     | 0.41              |
| 1:L:174:TYR:CG   | 1:L:198:LEU:HD11 | 2.53                     | 0.41              |
| 1:L:268:VAL:HG13 | 1:M:286:ARG:NH1  | 2.30                     | 0.41              |
| 1:N:85:TYR:CZ    | 1:N:98:TRP:CH2   | 3.08                     | 0.41              |
| 1:O:229:VAL:CB   | 1:O:235:HIS:CE1  | 3.02                     | 0.41              |
| 1:P:81:LEU:HB3   | 1:P:116:VAL:HG22 | 2.02                     | 0.41              |
| 1:B:137:TYR:CE2  | 1:B:307:ILE:HG23 | 2.56                     | 0.41              |
| 1:B:148:LEU:O    | 1:B:151:ASP:HB2  | 2.21                     | 0.41              |
| 1:B:172:LEU:HB2  | 1:B:173:TYR:CD1  | 2.56                     | 0.41              |
| 1:F:191:CYS:N    | 1:F:244:CYS:SG   | 2.91                     | 0.41              |
| 1:F:293:TRP:O    | 1:F:297:TYR:CD1  | 2.66                     | 0.41              |
| 1:G:172:LEU:HB2  | 1:G:173:TYR:CD1  | 2.56                     | 0.41              |
| 1:G:274:ASP:HB2  | 1:H:302:TYR:CD1  | 2.55                     | 0.41              |
| 1:I:256:GLU:OE1  | 1:I:256:GLU:HA   | 2.21                     | 0.41              |
| 1:I:289:TRP:C    | 1:I:289:TRP:CD1  | 2.93                     | 0.41              |
| 1:J:78:THR:O     | 1:J:78:THR:CG2   | 2.69                     | 0.41              |
| 1:J:81:LEU:HB3   | 1:J:116:VAL:HG22 | 2.02                     | 0.41              |
| 1:J:140:VAL:CG1  | 1:J:260:VAL:HG22 | 2.50                     | 0.41              |
| 1:K:85:TYR:CZ    | 1:K:98:TRP:CH2   | 3.08                     | 0.41              |
| 1:L:140:VAL:CG1  | 1:L:260:VAL:HG22 | 2.50                     | 0.41              |
| 1:L:178:THR:N    | 1:L:182:ASN:HD22 | 2.13                     | 0.41              |
| 1:L:252:LEU:HB2  | 1:L:253:GLY:H    | 1.31                     | 0.41              |
| 1:M:137:TYR:CE2  | 1:M:307:ILE:HG23 | 2.56                     | 0.41              |
| 1:M:274:ASP:HB2  | 1:N:302:TYR:CD1  | 2.55                     | 0.41              |
| 1:M:275:PRO:HG2  | 1:N:306:ILE:HG12 | 2.02                     | 0.41              |
| 1:N:140:VAL:CG1  | 1:N:260:VAL:HG22 | 2.51                     | 0.41              |
| 1:O:275:PRO:HG2  | 1:P:306:ILE:HG12 | 2.02                     | 0.41              |
| 1:P:85:TYR:CZ    | 1:P:98:TRP:CH2   | 3.08                     | 0.41              |
| 1:P:148:LEU:HD22 | 1:P:151:ASP:OD2  | 2.21                     | 0.41              |
| 1:Q:196:CYS:HA   | 1:Q:197:PRO:HD2  | 1.83                     | 0.41              |
| 1:Q:256:GLU:OE1  | 1:Q:256:GLU:HA   | 2.21                     | 0.41              |
| 1:I:111:TRP:HE3  | 1:I:115:SER:OG   | 2.04                     | 0.41              |
| 1:L:93:ILE:HG23  | 1:L:293:TRP:HE1  | 1.85                     | 0.41              |
| 1:L:137:TYR:CE2  | 1:L:307:ILE:HG23 | 2.56                     | 0.41              |
| 1:O:172:LEU:HB2  | 1:O:173:TYR:CD1  | 2.56                     | 0.41              |
| 1:P:172:LEU:HB2  | 1:P:173:TYR:CD1  | 2.56                     | 0.41              |
| 1:B:201:GLN:O    | 1:B:202:THR:CB   | 2.69                     | 0.40              |

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| Atom-1          | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|-----------------|------------------|--------------------------|-------------------|
| 1:F:85:TYR:CZ   | 1:F:98:TRP:CH2   | 3.08                     | 0.40              |
| 1:F:154:GLU:OE1 | 1:F:225:VAL:CA   | 2.59                     | 0.40              |
| 1:F:289:TRP:C   | 1:F:289:TRP:CD1  | 2.93                     | 0.40              |
| 1:G:137:TYR:CE2 | 1:G:307:ILE:HG23 | 2.56                     | 0.40              |
| 1:G:252:LEU:CD1 | 1:G:253:GLY:H    | 2.34                     | 0.40              |
| 1:I:142:MET:HE3 | 1:I:152:MET:HE2  | 0.51                     | 0.40              |
| 1:I:154:GLU:CD  | 1:I:225:VAL:HA   | 2.41                     | 0.40              |
| 1:I:191:CYS:HG  | 1:I:244:CYS:HB3  | 1.85                     | 0.40              |
| 1:J:137:TYR:CE2 | 1:J:307:ILE:HG23 | 2.56                     | 0.40              |
| 1:L:142:MET:HE2 | 1:L:142:MET:HB3  | 1.75                     | 0.40              |
| 1:L:303:VAL:O   | 1:L:307:ILE:HG12 | 2.20                     | 0.40              |
| 1:O:256:GLU:OE1 | 1:O:256:GLU:HA   | 2.21                     | 0.40              |
| 1:P:289:TRP:C   | 1:P:289:TRP:CD1  | 2.93                     | 0.40              |
| 1:Q:137:TYR:CE2 | 1:Q:307:ILE:HG23 | 2.56                     | 0.40              |
| 1:Q:140:VAL:CG1 | 1:Q:260:VAL:HG22 | 2.50                     | 0.40              |
| 1:B:191:CYS:HG  | 1:B:244:CYS:CB   | 2.33                     | 0.40              |
| 1:F:142:MET:HE3 | 1:F:152:MET:HE2  | 0.50                     | 0.40              |
| 1:G:170:ILE:CD1 | 1:G:239:VAL:HG23 | 2.43                     | 0.40              |
| 1:H:172:LEU:HB2 | 1:H:173:TYR:CD1  | 2.56                     | 0.40              |
| 1:I:85:TYR:CZ   | 1:I:98:TRP:CH2   | 3.08                     | 0.40              |
| 1:I:140:VAL:CG1 | 1:I:260:VAL:HG22 | 2.50                     | 0.40              |
| 1:I:154:GLU:OE1 | 1:I:225:VAL:CA   | 2.59                     | 0.40              |
| 1:K:252:LEU:CD2 | 1:K:252:LEU:N    | 2.75                     | 0.40              |
| 1:L:201:GLN:O   | 1:L:202:THR:CB   | 2.69                     | 0.40              |
| 1:M:172:LEU:HB2 | 1:M:173:TYR:CD1  | 2.56                     | 0.40              |
| 1:M:175:TYR:O   | 1:M:235:HIS:N    | 2.50                     | 0.40              |
| 1:M:191:CYS:N   | 1:M:244:CYS:SG   | 2.91                     | 0.40              |
| 1:M:256:GLU:OE1 | 1:M:256:GLU:HA   | 2.21                     | 0.40              |
| 1:N:175:TYR:O   | 1:N:235:HIS:N    | 2.41                     | 0.40              |
| 1:O:111:TRP:HE3 | 1:O:115:SER:OG   | 2.04                     | 0.40              |
| 1:O:142:MET:HE1 | 1:O:152:MET:HB3  | 2.02                     | 0.40              |
| 1:P:111:TRP:HE3 | 1:P:115:SER:OG   | 2.05                     | 0.40              |
| 1:P:201:GLN:O   | 1:P:202:THR:CB   | 2.69                     | 0.40              |
| 1:Q:81:LEU:HB3  | 1:Q:116:VAL:HG22 | 2.02                     | 0.40              |
| 1:Q:126:SER:CA  | 1:Q:223:LYS:HZ2  | 2.27                     | 0.40              |
| 1:F:172:LEU:HB2 | 1:F:173:TYR:CD1  | 2.56                     | 0.40              |
| 1:G:111:TRP:HE3 | 1:G:115:SER:OG   | 2.04                     | 0.40              |
| 1:G:129:VAL:C   | 1:G:131:PRO:HD3  | 2.28                     | 0.40              |
| 1:H:256:GLU:OE1 | 1:H:256:GLU:HA   | 2.21                     | 0.40              |
| 1:J:175:TYR:HH  | 1:J:237:LEU:CD2  | 2.27                     | 0.40              |
| 1:P:137:TYR:CE2 | 1:P:307:ILE:HG23 | 2.56                     | 0.40              |

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| Atom-1          | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|-----------------|------------------|--------------------------|-------------------|
| 1:P:176:GLN:O   | 1:P:176:GLN:HG3  | 2.20                     | 0.40              |
| 1:G:275:PRO:HG2 | 1:H:306:ILE:HG12 | 2.02                     | 0.40              |
| 1:H:154:GLU:CD  | 1:H:225:VAL:HA   | 2.41                     | 0.40              |
| 1:I:252:LEU:CD1 | 1:I:253:GLY:H    | 2.34                     | 0.40              |
| 1:J:111:TRP:HE3 | 1:J:115:SER:OG   | 2.05                     | 0.40              |
| 1:L:162:GLU:OE1 | 1:L:162:GLU:CA   | 2.70                     | 0.40              |
| 1:O:78:THR:O    | 1:O:78:THR:CG2   | 2.69                     | 0.40              |
| 1:O:162:GLU:OE1 | 1:O:162:GLU:CA   | 2.70                     | 0.40              |
| 1:O:201:GLN:O   | 1:O:202:THR:CB   | 2.69                     | 0.40              |
| 1:Q:172:LEU:HB2 | 1:Q:173:TYR:CD1  | 2.56                     | 0.40              |
| 1:B:256:GLU:OE1 | 1:B:256:GLU:HA   | 2.21                     | 0.40              |
| 1:F:201:GLN:O   | 1:F:202:THR:CB   | 2.69                     | 0.40              |
| 1:G:191:CYS:N   | 1:G:244:CYS:SG   | 2.91                     | 0.40              |
| 1:H:201:GLN:O   | 1:H:202:THR:CB   | 2.69                     | 0.40              |
| 1:I:201:GLN:O   | 1:I:202:THR:CB   | 2.69                     | 0.40              |
| 1:J:176:GLN:O   | 1:J:176:GLN:HG3  | 2.21                     | 0.40              |
| 1:K:83:LEU:HD23 | 1:K:139:VAL:CG1  | 2.47                     | 0.40              |
| 1:K:111:TRP:HE3 | 1:K:115:SER:OG   | 2.05                     | 0.40              |
| 1:L:257:ASN:C   | 1:L:310:MET:SD   | 2.93                     | 0.40              |
| 1:N:111:TRP:HE3 | 1:N:115:SER:OG   | 2.05                     | 0.40              |
| 1:N:256:GLU:OE1 | 1:N:256:GLU:HA   | 2.21                     | 0.40              |
| 1:O:93:ILE:HG23 | 1:O:293:TRP:HE1  | 1.85                     | 0.40              |
| 1:O:234:ASN:C   | 1:O:235:HIS:CD2  | 2.95                     | 0.40              |

There are no symmetry-related clashes.

## 5.3 Torsion angles [i](#)

### 5.3.1 Protein backbone [i](#)

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

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

| Mol | Chain | Analysed      | Favoured  | Allowed  | Outliers | Percentiles |    |
|-----|-------|---------------|-----------|----------|----------|-------------|----|
| 1   | B     | 253/255 (99%) | 216 (85%) | 26 (10%) | 11 (4%)  | 2           | 20 |
| 1   | F     | 253/255 (99%) | 215 (85%) | 26 (10%) | 12 (5%)  | 2           | 18 |

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| Mol | Chain | Analysed        | Favoured   | Allowed   | Outliers | Percentiles |    |
|-----|-------|-----------------|------------|-----------|----------|-------------|----|
| 1   | G     | 253/255 (99%)   | 215 (85%)  | 27 (11%)  | 11 (4%)  | 2           | 20 |
| 1   | H     | 253/255 (99%)   | 215 (85%)  | 26 (10%)  | 12 (5%)  | 2           | 18 |
| 1   | I     | 253/255 (99%)   | 214 (85%)  | 28 (11%)  | 11 (4%)  | 2           | 20 |
| 1   | J     | 253/255 (99%)   | 216 (85%)  | 26 (10%)  | 11 (4%)  | 2           | 20 |
| 1   | K     | 253/255 (99%)   | 215 (85%)  | 27 (11%)  | 11 (4%)  | 2           | 20 |
| 1   | L     | 253/255 (99%)   | 214 (85%)  | 28 (11%)  | 11 (4%)  | 2           | 20 |
| 1   | M     | 253/255 (99%)   | 215 (85%)  | 27 (11%)  | 11 (4%)  | 2           | 20 |
| 1   | N     | 253/255 (99%)   | 216 (85%)  | 26 (10%)  | 11 (4%)  | 2           | 20 |
| 1   | O     | 253/255 (99%)   | 217 (86%)  | 25 (10%)  | 11 (4%)  | 2           | 20 |
| 1   | P     | 253/255 (99%)   | 216 (85%)  | 26 (10%)  | 11 (4%)  | 2           | 20 |
| 1   | Q     | 253/255 (99%)   | 215 (85%)  | 27 (11%)  | 11 (4%)  | 2           | 20 |
| All | All   | 3289/3315 (99%) | 2799 (85%) | 345 (10%) | 145 (4%) | 3           | 20 |

All (145) Ramachandran outliers are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1   | B     | 69  | ASN  |
| 1   | B     | 71  | THR  |
| 1   | B     | 252 | LEU  |
| 1   | B     | 258 | VAL  |
| 1   | F     | 252 | LEU  |
| 1   | F     | 258 | VAL  |
| 1   | G     | 252 | LEU  |
| 1   | G     | 258 | VAL  |
| 1   | H     | 252 | LEU  |
| 1   | H     | 258 | VAL  |
| 1   | I     | 252 | LEU  |
| 1   | I     | 258 | VAL  |
| 1   | J     | 252 | LEU  |
| 1   | J     | 258 | VAL  |
| 1   | K     | 252 | LEU  |
| 1   | K     | 258 | VAL  |
| 1   | L     | 252 | LEU  |
| 1   | L     | 258 | VAL  |
| 1   | M     | 252 | LEU  |
| 1   | M     | 258 | VAL  |
| 1   | N     | 252 | LEU  |
| 1   | N     | 258 | VAL  |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1   | O     | 252 | LEU  |
| 1   | O     | 258 | VAL  |
| 1   | P     | 252 | LEU  |
| 1   | P     | 258 | VAL  |
| 1   | Q     | 252 | LEU  |
| 1   | Q     | 258 | VAL  |
| 1   | B     | 241 | THR  |
| 1   | B     | 275 | PRO  |
| 1   | F     | 70  | SER  |
| 1   | F     | 71  | THR  |
| 1   | F     | 241 | THR  |
| 1   | F     | 275 | PRO  |
| 1   | G     | 70  | SER  |
| 1   | G     | 71  | THR  |
| 1   | G     | 241 | THR  |
| 1   | G     | 275 | PRO  |
| 1   | H     | 70  | SER  |
| 1   | H     | 71  | THR  |
| 1   | H     | 241 | THR  |
| 1   | H     | 275 | PRO  |
| 1   | I     | 70  | SER  |
| 1   | I     | 71  | THR  |
| 1   | I     | 241 | THR  |
| 1   | I     | 275 | PRO  |
| 1   | J     | 70  | SER  |
| 1   | J     | 71  | THR  |
| 1   | J     | 241 | THR  |
| 1   | J     | 275 | PRO  |
| 1   | K     | 70  | SER  |
| 1   | K     | 71  | THR  |
| 1   | K     | 241 | THR  |
| 1   | K     | 275 | PRO  |
| 1   | L     | 70  | SER  |
| 1   | L     | 71  | THR  |
| 1   | L     | 241 | THR  |
| 1   | L     | 275 | PRO  |
| 1   | M     | 70  | SER  |
| 1   | M     | 71  | THR  |
| 1   | M     | 241 | THR  |
| 1   | M     | 275 | PRO  |
| 1   | N     | 70  | SER  |
| 1   | N     | 71  | THR  |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1   | N     | 241 | THR  |
| 1   | N     | 275 | PRO  |
| 1   | O     | 70  | SER  |
| 1   | O     | 71  | THR  |
| 1   | O     | 241 | THR  |
| 1   | O     | 275 | PRO  |
| 1   | P     | 70  | SER  |
| 1   | P     | 71  | THR  |
| 1   | P     | 241 | THR  |
| 1   | P     | 275 | PRO  |
| 1   | Q     | 70  | SER  |
| 1   | Q     | 71  | THR  |
| 1   | Q     | 241 | THR  |
| 1   | Q     | 275 | PRO  |
| 1   | B     | 131 | PRO  |
| 1   | B     | 200 | THR  |
| 1   | B     | 209 | THR  |
| 1   | F     | 67  | TYR  |
| 1   | F     | 131 | PRO  |
| 1   | F     | 200 | THR  |
| 1   | F     | 209 | THR  |
| 1   | G     | 131 | PRO  |
| 1   | G     | 200 | THR  |
| 1   | G     | 209 | THR  |
| 1   | H     | 131 | PRO  |
| 1   | H     | 200 | THR  |
| 1   | H     | 209 | THR  |
| 1   | I     | 131 | PRO  |
| 1   | I     | 200 | THR  |
| 1   | I     | 209 | THR  |
| 1   | J     | 131 | PRO  |
| 1   | J     | 200 | THR  |
| 1   | J     | 209 | THR  |
| 1   | K     | 131 | PRO  |
| 1   | K     | 200 | THR  |
| 1   | K     | 209 | THR  |
| 1   | L     | 131 | PRO  |
| 1   | L     | 200 | THR  |
| 1   | L     | 209 | THR  |
| 1   | M     | 131 | PRO  |
| 1   | M     | 200 | THR  |
| 1   | M     | 209 | THR  |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1   | N     | 131 | PRO  |
| 1   | N     | 200 | THR  |
| 1   | N     | 209 | THR  |
| 1   | O     | 131 | PRO  |
| 1   | O     | 200 | THR  |
| 1   | O     | 209 | THR  |
| 1   | P     | 131 | PRO  |
| 1   | P     | 200 | THR  |
| 1   | P     | 209 | THR  |
| 1   | Q     | 131 | PRO  |
| 1   | Q     | 200 | THR  |
| 1   | Q     | 209 | THR  |
| 1   | B     | 311 | SER  |
| 1   | F     | 311 | SER  |
| 1   | G     | 311 | SER  |
| 1   | H     | 311 | SER  |
| 1   | I     | 311 | SER  |
| 1   | J     | 311 | SER  |
| 1   | K     | 311 | SER  |
| 1   | L     | 311 | SER  |
| 1   | M     | 311 | SER  |
| 1   | N     | 311 | SER  |
| 1   | O     | 311 | SER  |
| 1   | P     | 311 | SER  |
| 1   | Q     | 311 | SER  |
| 1   | H     | 149 | GLN  |
| 1   | B     | 279 | PRO  |
| 1   | F     | 279 | PRO  |
| 1   | G     | 279 | PRO  |
| 1   | H     | 279 | PRO  |
| 1   | I     | 279 | PRO  |
| 1   | J     | 279 | PRO  |
| 1   | K     | 279 | PRO  |
| 1   | L     | 279 | PRO  |
| 1   | M     | 279 | PRO  |
| 1   | N     | 279 | PRO  |
| 1   | O     | 279 | PRO  |
| 1   | P     | 279 | PRO  |
| 1   | Q     | 279 | PRO  |

### 5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all 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   | B     | 229/229 (100%)   | 205 (90%)  | 24 (10%)  | 5           | 23 |
| 1   | F     | 229/229 (100%)   | 205 (90%)  | 24 (10%)  | 5           | 23 |
| 1   | G     | 229/229 (100%)   | 204 (89%)  | 25 (11%)  | 5           | 22 |
| 1   | H     | 229/229 (100%)   | 204 (89%)  | 25 (11%)  | 5           | 22 |
| 1   | I     | 229/229 (100%)   | 204 (89%)  | 25 (11%)  | 5           | 22 |
| 1   | J     | 229/229 (100%)   | 204 (89%)  | 25 (11%)  | 5           | 22 |
| 1   | K     | 229/229 (100%)   | 205 (90%)  | 24 (10%)  | 5           | 23 |
| 1   | L     | 229/229 (100%)   | 204 (89%)  | 25 (11%)  | 5           | 22 |
| 1   | M     | 229/229 (100%)   | 204 (89%)  | 25 (11%)  | 5           | 22 |
| 1   | N     | 229/229 (100%)   | 204 (89%)  | 25 (11%)  | 5           | 22 |
| 1   | O     | 229/229 (100%)   | 205 (90%)  | 24 (10%)  | 5           | 23 |
| 1   | P     | 229/229 (100%)   | 205 (90%)  | 24 (10%)  | 5           | 23 |
| 1   | Q     | 229/229 (100%)   | 204 (89%)  | 25 (11%)  | 5           | 22 |
| All | All   | 2977/2977 (100%) | 2657 (89%) | 320 (11%) | 8           | 23 |

All (320) residues with a non-rotameric sidechain are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1   | B     | 88  | GLU  |
| 1   | B     | 106 | PHE  |
| 1   | B     | 109 | LYS  |
| 1   | B     | 139 | VAL  |
| 1   | B     | 144 | TYR  |
| 1   | B     | 175 | TYR  |
| 1   | B     | 176 | GLN  |
| 1   | B     | 179 | ASP  |
| 1   | B     | 180 | GLU  |
| 1   | B     | 186 | SER  |
| 1   | B     | 187 | MET  |
| 1   | B     | 191 | CYS  |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1   | B     | 223 | LYS  |
| 1   | B     | 227 | THR  |
| 1   | B     | 229 | VAL  |
| 1   | B     | 243 | THR  |
| 1   | B     | 251 | LYS  |
| 1   | B     | 255 | ARG  |
| 1   | B     | 263 | VAL  |
| 1   | B     | 266 | SER  |
| 1   | B     | 268 | VAL  |
| 1   | B     | 274 | ASP  |
| 1   | B     | 277 | THR  |
| 1   | B     | 283 | ARG  |
| 1   | F     | 70  | SER  |
| 1   | F     | 88  | GLU  |
| 1   | F     | 106 | PHE  |
| 1   | F     | 139 | VAL  |
| 1   | F     | 144 | TYR  |
| 1   | F     | 175 | TYR  |
| 1   | F     | 176 | GLN  |
| 1   | F     | 179 | ASP  |
| 1   | F     | 180 | GLU  |
| 1   | F     | 186 | SER  |
| 1   | F     | 187 | MET  |
| 1   | F     | 191 | CYS  |
| 1   | F     | 223 | LYS  |
| 1   | F     | 227 | THR  |
| 1   | F     | 229 | VAL  |
| 1   | F     | 243 | THR  |
| 1   | F     | 251 | LYS  |
| 1   | F     | 255 | ARG  |
| 1   | F     | 263 | VAL  |
| 1   | F     | 266 | SER  |
| 1   | F     | 268 | VAL  |
| 1   | F     | 274 | ASP  |
| 1   | F     | 277 | THR  |
| 1   | F     | 283 | ARG  |
| 1   | G     | 70  | SER  |
| 1   | G     | 88  | GLU  |
| 1   | G     | 106 | PHE  |
| 1   | G     | 109 | LYS  |
| 1   | G     | 139 | VAL  |
| 1   | G     | 144 | TYR  |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1   | G     | 175 | TYR  |
| 1   | G     | 176 | GLN  |
| 1   | G     | 179 | ASP  |
| 1   | G     | 180 | GLU  |
| 1   | G     | 186 | SER  |
| 1   | G     | 187 | MET  |
| 1   | G     | 191 | CYS  |
| 1   | G     | 223 | LYS  |
| 1   | G     | 227 | THR  |
| 1   | G     | 229 | VAL  |
| 1   | G     | 243 | THR  |
| 1   | G     | 251 | LYS  |
| 1   | G     | 255 | ARG  |
| 1   | G     | 263 | VAL  |
| 1   | G     | 266 | SER  |
| 1   | G     | 268 | VAL  |
| 1   | G     | 274 | ASP  |
| 1   | G     | 277 | THR  |
| 1   | G     | 283 | ARG  |
| 1   | H     | 70  | SER  |
| 1   | H     | 88  | GLU  |
| 1   | H     | 106 | PHE  |
| 1   | H     | 109 | LYS  |
| 1   | H     | 139 | VAL  |
| 1   | H     | 144 | TYR  |
| 1   | H     | 175 | TYR  |
| 1   | H     | 176 | GLN  |
| 1   | H     | 179 | ASP  |
| 1   | H     | 180 | GLU  |
| 1   | H     | 186 | SER  |
| 1   | H     | 187 | MET  |
| 1   | H     | 191 | CYS  |
| 1   | H     | 223 | LYS  |
| 1   | H     | 227 | THR  |
| 1   | H     | 229 | VAL  |
| 1   | H     | 243 | THR  |
| 1   | H     | 251 | LYS  |
| 1   | H     | 255 | ARG  |
| 1   | H     | 263 | VAL  |
| 1   | H     | 266 | SER  |
| 1   | H     | 268 | VAL  |
| 1   | H     | 274 | ASP  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1   | H     | 277 | THR  |
| 1   | H     | 283 | ARG  |
| 1   | I     | 70  | SER  |
| 1   | I     | 88  | GLU  |
| 1   | I     | 106 | PHE  |
| 1   | I     | 109 | LYS  |
| 1   | I     | 139 | VAL  |
| 1   | I     | 144 | TYR  |
| 1   | I     | 175 | TYR  |
| 1   | I     | 176 | GLN  |
| 1   | I     | 179 | ASP  |
| 1   | I     | 180 | GLU  |
| 1   | I     | 186 | SER  |
| 1   | I     | 187 | MET  |
| 1   | I     | 191 | CYS  |
| 1   | I     | 223 | LYS  |
| 1   | I     | 227 | THR  |
| 1   | I     | 229 | VAL  |
| 1   | I     | 243 | THR  |
| 1   | I     | 251 | LYS  |
| 1   | I     | 255 | ARG  |
| 1   | I     | 263 | VAL  |
| 1   | I     | 266 | SER  |
| 1   | I     | 268 | VAL  |
| 1   | I     | 274 | ASP  |
| 1   | I     | 277 | THR  |
| 1   | I     | 283 | ARG  |
| 1   | J     | 70  | SER  |
| 1   | J     | 88  | GLU  |
| 1   | J     | 106 | PHE  |
| 1   | J     | 109 | LYS  |
| 1   | J     | 139 | VAL  |
| 1   | J     | 144 | TYR  |
| 1   | J     | 175 | TYR  |
| 1   | J     | 176 | GLN  |
| 1   | J     | 179 | ASP  |
| 1   | J     | 180 | GLU  |
| 1   | J     | 186 | SER  |
| 1   | J     | 187 | MET  |
| 1   | J     | 191 | CYS  |
| 1   | J     | 223 | LYS  |
| 1   | J     | 227 | THR  |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1   | J     | 229 | VAL  |
| 1   | J     | 243 | THR  |
| 1   | J     | 251 | LYS  |
| 1   | J     | 255 | ARG  |
| 1   | J     | 263 | VAL  |
| 1   | J     | 266 | SER  |
| 1   | J     | 268 | VAL  |
| 1   | J     | 274 | ASP  |
| 1   | J     | 277 | THR  |
| 1   | J     | 283 | ARG  |
| 1   | K     | 88  | GLU  |
| 1   | K     | 106 | PHE  |
| 1   | K     | 109 | LYS  |
| 1   | K     | 139 | VAL  |
| 1   | K     | 144 | TYR  |
| 1   | K     | 175 | TYR  |
| 1   | K     | 176 | GLN  |
| 1   | K     | 179 | ASP  |
| 1   | K     | 180 | GLU  |
| 1   | K     | 186 | SER  |
| 1   | K     | 187 | MET  |
| 1   | K     | 191 | CYS  |
| 1   | K     | 223 | LYS  |
| 1   | K     | 227 | THR  |
| 1   | K     | 229 | VAL  |
| 1   | K     | 243 | THR  |
| 1   | K     | 251 | LYS  |
| 1   | K     | 255 | ARG  |
| 1   | K     | 263 | VAL  |
| 1   | K     | 266 | SER  |
| 1   | K     | 268 | VAL  |
| 1   | K     | 274 | ASP  |
| 1   | K     | 277 | THR  |
| 1   | K     | 283 | ARG  |
| 1   | L     | 70  | SER  |
| 1   | L     | 88  | GLU  |
| 1   | L     | 106 | PHE  |
| 1   | L     | 109 | LYS  |
| 1   | L     | 139 | VAL  |
| 1   | L     | 144 | TYR  |
| 1   | L     | 175 | TYR  |
| 1   | L     | 176 | GLN  |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1   | L     | 179 | ASP  |
| 1   | L     | 180 | GLU  |
| 1   | L     | 186 | SER  |
| 1   | L     | 187 | MET  |
| 1   | L     | 191 | CYS  |
| 1   | L     | 223 | LYS  |
| 1   | L     | 227 | THR  |
| 1   | L     | 229 | VAL  |
| 1   | L     | 243 | THR  |
| 1   | L     | 251 | LYS  |
| 1   | L     | 255 | ARG  |
| 1   | L     | 263 | VAL  |
| 1   | L     | 266 | SER  |
| 1   | L     | 268 | VAL  |
| 1   | L     | 274 | ASP  |
| 1   | L     | 277 | THR  |
| 1   | L     | 283 | ARG  |
| 1   | M     | 70  | SER  |
| 1   | M     | 88  | GLU  |
| 1   | M     | 106 | PHE  |
| 1   | M     | 109 | LYS  |
| 1   | M     | 139 | VAL  |
| 1   | M     | 144 | TYR  |
| 1   | M     | 175 | TYR  |
| 1   | M     | 176 | GLN  |
| 1   | M     | 179 | ASP  |
| 1   | M     | 180 | GLU  |
| 1   | M     | 186 | SER  |
| 1   | M     | 187 | MET  |
| 1   | M     | 191 | CYS  |
| 1   | M     | 223 | LYS  |
| 1   | M     | 227 | THR  |
| 1   | M     | 229 | VAL  |
| 1   | M     | 243 | THR  |
| 1   | M     | 251 | LYS  |
| 1   | M     | 255 | ARG  |
| 1   | M     | 263 | VAL  |
| 1   | M     | 266 | SER  |
| 1   | M     | 268 | VAL  |
| 1   | M     | 274 | ASP  |
| 1   | M     | 277 | THR  |
| 1   | M     | 283 | ARG  |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1   | N     | 70  | SER  |
| 1   | N     | 88  | GLU  |
| 1   | N     | 106 | PHE  |
| 1   | N     | 109 | LYS  |
| 1   | N     | 139 | VAL  |
| 1   | N     | 144 | TYR  |
| 1   | N     | 175 | TYR  |
| 1   | N     | 176 | GLN  |
| 1   | N     | 179 | ASP  |
| 1   | N     | 180 | GLU  |
| 1   | N     | 186 | SER  |
| 1   | N     | 187 | MET  |
| 1   | N     | 191 | CYS  |
| 1   | N     | 223 | LYS  |
| 1   | N     | 227 | THR  |
| 1   | N     | 229 | VAL  |
| 1   | N     | 243 | THR  |
| 1   | N     | 251 | LYS  |
| 1   | N     | 255 | ARG  |
| 1   | N     | 263 | VAL  |
| 1   | N     | 266 | SER  |
| 1   | N     | 268 | VAL  |
| 1   | N     | 274 | ASP  |
| 1   | N     | 277 | THR  |
| 1   | N     | 283 | ARG  |
| 1   | O     | 88  | GLU  |
| 1   | O     | 106 | PHE  |
| 1   | O     | 109 | LYS  |
| 1   | O     | 139 | VAL  |
| 1   | O     | 144 | TYR  |
| 1   | O     | 175 | TYR  |
| 1   | O     | 176 | GLN  |
| 1   | O     | 179 | ASP  |
| 1   | O     | 180 | GLU  |
| 1   | O     | 186 | SER  |
| 1   | O     | 187 | MET  |
| 1   | O     | 191 | CYS  |
| 1   | O     | 223 | LYS  |
| 1   | O     | 227 | THR  |
| 1   | O     | 229 | VAL  |
| 1   | O     | 243 | THR  |
| 1   | O     | 251 | LYS  |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1   | O     | 255 | ARG  |
| 1   | O     | 263 | VAL  |
| 1   | O     | 266 | SER  |
| 1   | O     | 268 | VAL  |
| 1   | O     | 274 | ASP  |
| 1   | O     | 277 | THR  |
| 1   | O     | 283 | ARG  |
| 1   | P     | 70  | SER  |
| 1   | P     | 88  | GLU  |
| 1   | P     | 106 | PHE  |
| 1   | P     | 139 | VAL  |
| 1   | P     | 144 | TYR  |
| 1   | P     | 175 | TYR  |
| 1   | P     | 176 | GLN  |
| 1   | P     | 179 | ASP  |
| 1   | P     | 180 | GLU  |
| 1   | P     | 186 | SER  |
| 1   | P     | 187 | MET  |
| 1   | P     | 191 | CYS  |
| 1   | P     | 223 | LYS  |
| 1   | P     | 227 | THR  |
| 1   | P     | 229 | VAL  |
| 1   | P     | 243 | THR  |
| 1   | P     | 251 | LYS  |
| 1   | P     | 255 | ARG  |
| 1   | P     | 263 | VAL  |
| 1   | P     | 266 | SER  |
| 1   | P     | 268 | VAL  |
| 1   | P     | 274 | ASP  |
| 1   | P     | 277 | THR  |
| 1   | P     | 283 | ARG  |
| 1   | Q     | 70  | SER  |
| 1   | Q     | 88  | GLU  |
| 1   | Q     | 106 | PHE  |
| 1   | Q     | 109 | LYS  |
| 1   | Q     | 139 | VAL  |
| 1   | Q     | 144 | TYR  |
| 1   | Q     | 175 | TYR  |
| 1   | Q     | 176 | GLN  |
| 1   | Q     | 179 | ASP  |
| 1   | Q     | 180 | GLU  |
| 1   | Q     | 186 | SER  |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1   | Q     | 187 | MET  |
| 1   | Q     | 191 | CYS  |
| 1   | Q     | 223 | LYS  |
| 1   | Q     | 227 | THR  |
| 1   | Q     | 229 | VAL  |
| 1   | Q     | 243 | THR  |
| 1   | Q     | 251 | LYS  |
| 1   | Q     | 255 | ARG  |
| 1   | Q     | 263 | VAL  |
| 1   | Q     | 266 | SER  |
| 1   | Q     | 268 | VAL  |
| 1   | Q     | 274 | ASP  |
| 1   | Q     | 277 | THR  |
| 1   | Q     | 283 | ARG  |

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (83) such sidechains are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1   | B     | 69  | ASN  |
| 1   | B     | 182 | ASN  |
| 1   | B     | 235 | HIS  |
| 1   | B     | 248 | ASN  |
| 1   | B     | 257 | ASN  |
| 1   | B     | 262 | GLN  |
| 1   | B     | 288 | ASN  |
| 1   | F     | 69  | ASN  |
| 1   | F     | 182 | ASN  |
| 1   | F     | 235 | HIS  |
| 1   | F     | 248 | ASN  |
| 1   | F     | 257 | ASN  |
| 1   | F     | 262 | GLN  |
| 1   | G     | 69  | ASN  |
| 1   | G     | 182 | ASN  |
| 1   | G     | 235 | HIS  |
| 1   | G     | 248 | ASN  |
| 1   | G     | 257 | ASN  |
| 1   | G     | 262 | GLN  |
| 1   | H     | 69  | ASN  |
| 1   | H     | 182 | ASN  |
| 1   | H     | 235 | HIS  |
| 1   | H     | 248 | ASN  |
| 1   | H     | 257 | ASN  |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1   | H     | 262 | GLN  |
| 1   | I     | 69  | ASN  |
| 1   | I     | 182 | ASN  |
| 1   | I     | 235 | HIS  |
| 1   | I     | 248 | ASN  |
| 1   | I     | 257 | ASN  |
| 1   | I     | 262 | GLN  |
| 1   | J     | 69  | ASN  |
| 1   | J     | 182 | ASN  |
| 1   | J     | 235 | HIS  |
| 1   | J     | 248 | ASN  |
| 1   | J     | 257 | ASN  |
| 1   | J     | 262 | GLN  |
| 1   | K     | 69  | ASN  |
| 1   | K     | 176 | GLN  |
| 1   | K     | 182 | ASN  |
| 1   | K     | 235 | HIS  |
| 1   | K     | 248 | ASN  |
| 1   | K     | 257 | ASN  |
| 1   | K     | 262 | GLN  |
| 1   | L     | 69  | ASN  |
| 1   | L     | 182 | ASN  |
| 1   | L     | 235 | HIS  |
| 1   | L     | 248 | ASN  |
| 1   | L     | 257 | ASN  |
| 1   | L     | 262 | GLN  |
| 1   | M     | 69  | ASN  |
| 1   | M     | 176 | GLN  |
| 1   | M     | 182 | ASN  |
| 1   | M     | 235 | HIS  |
| 1   | M     | 248 | ASN  |
| 1   | M     | 257 | ASN  |
| 1   | M     | 262 | GLN  |
| 1   | N     | 69  | ASN  |
| 1   | N     | 176 | GLN  |
| 1   | N     | 182 | ASN  |
| 1   | N     | 235 | HIS  |
| 1   | N     | 248 | ASN  |
| 1   | N     | 257 | ASN  |
| 1   | N     | 262 | GLN  |
| 1   | O     | 69  | ASN  |
| 1   | O     | 182 | ASN  |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1   | O     | 235 | HIS  |
| 1   | O     | 248 | ASN  |
| 1   | O     | 257 | ASN  |
| 1   | O     | 262 | GLN  |
| 1   | P     | 69  | ASN  |
| 1   | P     | 176 | GLN  |
| 1   | P     | 182 | ASN  |
| 1   | P     | 235 | HIS  |
| 1   | P     | 248 | ASN  |
| 1   | P     | 257 | ASN  |
| 1   | P     | 262 | GLN  |
| 1   | Q     | 69  | ASN  |
| 1   | Q     | 182 | ASN  |
| 1   | Q     | 235 | HIS  |
| 1   | Q     | 248 | ASN  |
| 1   | Q     | 257 | ASN  |
| 1   | Q     | 262 | GLN  |

### 5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

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

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

## 5.5 Carbohydrates ⓘ

26 monosaccharides are modelled in this entry.

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

| Mol | Type | Chain | Res | Link | Bond lengths |      |             | Bond angles |      |             |
|-----|------|-------|-----|------|--------------|------|-------------|-------------|------|-------------|
|     |      |       |     |      | Counts       | RMSZ | $\# Z  > 2$ | Counts      | RMSZ | $\# Z  > 2$ |
| 2   | NAG  | A     | 1   | 2    | 14,14,15     | 0.61 | 0           | 17,19,21    | 1.44 | 2 (11%)     |



| Mol | Type | Chain | Res | Link | Bond lengths |      |          | Bond angles |      |          |
|-----|------|-------|-----|------|--------------|------|----------|-------------|------|----------|
|     |      |       |     |      | Counts       | RMSZ | # Z  > 2 | Counts      | RMSZ | # Z  > 2 |
| 2   | NAG  | A     | 2   | 2    | 14,14,15     | 1.08 | 1 (7%)   | 17,19,21    | 1.74 | 5 (29%)  |
| 2   | NAG  | C     | 1   | 2    | 14,14,15     | 0.63 | 0        | 17,19,21    | 1.45 | 2 (11%)  |
| 2   | NAG  | C     | 2   | 2    | 14,14,15     | 1.08 | 1 (7%)   | 17,19,21    | 1.73 | 5 (29%)  |
| 2   | NAG  | D     | 1   | 2    | 14,14,15     | 0.62 | 0        | 17,19,21    | 1.44 | 2 (11%)  |
| 2   | NAG  | D     | 2   | 2    | 14,14,15     | 1.08 | 1 (7%)   | 17,19,21    | 1.73 | 5 (29%)  |
| 2   | NAG  | E     | 1   | 2    | 14,14,15     | 0.60 | 0        | 17,19,21    | 1.44 | 2 (11%)  |
| 2   | NAG  | E     | 2   | 2    | 14,14,15     | 1.08 | 1 (7%)   | 17,19,21    | 1.73 | 5 (29%)  |
| 2   | NAG  | R     | 1   | 2    | 14,14,15     | 0.60 | 0        | 17,19,21    | 1.44 | 2 (11%)  |
| 2   | NAG  | R     | 2   | 2    | 14,14,15     | 1.08 | 1 (7%)   | 17,19,21    | 1.74 | 5 (29%)  |
| 2   | NAG  | S     | 1   | 2    | 14,14,15     | 0.60 | 0        | 17,19,21    | 1.43 | 2 (11%)  |
| 2   | NAG  | S     | 2   | 2    | 14,14,15     | 1.08 | 1 (7%)   | 17,19,21    | 1.74 | 5 (29%)  |
| 2   | NAG  | T     | 1   | 2    | 14,14,15     | 0.64 | 0        | 17,19,21    | 1.43 | 2 (11%)  |
| 2   | NAG  | T     | 2   | 2    | 14,14,15     | 1.06 | 1 (7%)   | 17,19,21    | 1.74 | 5 (29%)  |
| 2   | NAG  | U     | 1   | 2    | 14,14,15     | 0.61 | 0        | 17,19,21    | 1.44 | 2 (11%)  |
| 2   | NAG  | U     | 2   | 2    | 14,14,15     | 1.07 | 1 (7%)   | 17,19,21    | 1.74 | 5 (29%)  |
| 2   | NAG  | V     | 1   | 2    | 14,14,15     | 0.62 | 0        | 17,19,21    | 1.43 | 2 (11%)  |
| 2   | NAG  | V     | 2   | 2    | 14,14,15     | 1.08 | 1 (7%)   | 17,19,21    | 1.74 | 5 (29%)  |
| 2   | NAG  | W     | 1   | 2    | 14,14,15     | 0.62 | 0        | 17,19,21    | 1.44 | 2 (11%)  |
| 2   | NAG  | W     | 2   | 2    | 14,14,15     | 1.07 | 1 (7%)   | 17,19,21    | 1.74 | 5 (29%)  |
| 2   | NAG  | X     | 1   | 2    | 14,14,15     | 0.62 | 0        | 17,19,21    | 1.44 | 2 (11%)  |
| 2   | NAG  | X     | 2   | 2    | 14,14,15     | 1.08 | 1 (7%)   | 17,19,21    | 1.74 | 5 (29%)  |
| 2   | NAG  | Y     | 1   | 2    | 14,14,15     | 0.61 | 0        | 17,19,21    | 1.44 | 2 (11%)  |
| 2   | NAG  | Y     | 2   | 2    | 14,14,15     | 1.09 | 1 (7%)   | 17,19,21    | 1.74 | 5 (29%)  |
| 2   | NAG  | Z     | 1   | 2    | 14,14,15     | 0.60 | 0        | 17,19,21    | 1.43 | 2 (11%)  |
| 2   | NAG  | Z     | 2   | 2    | 14,14,15     | 1.08 | 1 (7%)   | 17,19,21    | 1.74 | 5 (29%)  |

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

| Mol | Type | Chain | Res | Link | Chirals | Torsions  | Rings   |
|-----|------|-------|-----|------|---------|-----------|---------|
| 2   | NAG  | A     | 1   | 2    | -       | 0/6/23/26 | 0/1/1/1 |
| 2   | NAG  | A     | 2   | 2    | -       | 1/6/23/26 | 0/1/1/1 |
| 2   | NAG  | C     | 1   | 2    | -       | 0/6/23/26 | 0/1/1/1 |
| 2   | NAG  | C     | 2   | 2    | -       | 1/6/23/26 | 0/1/1/1 |
| 2   | NAG  | D     | 1   | 2    | -       | 0/6/23/26 | 0/1/1/1 |

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| Mol | Type | Chain | Res | Link | Chirals | Torsions  | Rings   |
|-----|------|-------|-----|------|---------|-----------|---------|
| 2   | NAG  | D     | 2   | 2    | -       | 2/6/23/26 | 0/1/1/1 |
| 2   | NAG  | E     | 1   | 2    | -       | 0/6/23/26 | 0/1/1/1 |
| 2   | NAG  | E     | 2   | 2    | -       | 1/6/23/26 | 0/1/1/1 |
| 2   | NAG  | R     | 1   | 2    | -       | 0/6/23/26 | 0/1/1/1 |
| 2   | NAG  | R     | 2   | 2    | -       | 1/6/23/26 | 0/1/1/1 |
| 2   | NAG  | S     | 1   | 2    | -       | 0/6/23/26 | 0/1/1/1 |
| 2   | NAG  | S     | 2   | 2    | -       | 1/6/23/26 | 0/1/1/1 |
| 2   | NAG  | T     | 1   | 2    | -       | 0/6/23/26 | 0/1/1/1 |
| 2   | NAG  | T     | 2   | 2    | -       | 1/6/23/26 | 0/1/1/1 |
| 2   | NAG  | U     | 1   | 2    | -       | 0/6/23/26 | 0/1/1/1 |
| 2   | NAG  | U     | 2   | 2    | -       | 1/6/23/26 | 0/1/1/1 |
| 2   | NAG  | V     | 1   | 2    | -       | 0/6/23/26 | 0/1/1/1 |
| 2   | NAG  | V     | 2   | 2    | -       | 1/6/23/26 | 0/1/1/1 |
| 2   | NAG  | W     | 1   | 2    | -       | 0/6/23/26 | 0/1/1/1 |
| 2   | NAG  | W     | 2   | 2    | -       | 1/6/23/26 | 0/1/1/1 |
| 2   | NAG  | X     | 1   | 2    | -       | 0/6/23/26 | 0/1/1/1 |
| 2   | NAG  | X     | 2   | 2    | -       | 1/6/23/26 | 0/1/1/1 |
| 2   | NAG  | Y     | 1   | 2    | -       | 0/6/23/26 | 0/1/1/1 |
| 2   | NAG  | Y     | 2   | 2    | -       | 1/6/23/26 | 0/1/1/1 |
| 2   | NAG  | Z     | 1   | 2    | -       | 0/6/23/26 | 0/1/1/1 |
| 2   | NAG  | Z     | 2   | 2    | -       | 1/6/23/26 | 0/1/1/1 |

All (13) bond length outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z    | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|-------|------|-------------|----------|
| 2   | X     | 2   | NAG  | C1-C2 | 3.05 | 1.56        | 1.52     |
| 2   | C     | 2   | NAG  | C1-C2 | 3.04 | 1.56        | 1.52     |
| 2   | R     | 2   | NAG  | C1-C2 | 3.02 | 1.56        | 1.52     |
| 2   | V     | 2   | NAG  | C1-C2 | 3.00 | 1.56        | 1.52     |
| 2   | Y     | 2   | NAG  | C1-C2 | 3.00 | 1.56        | 1.52     |
| 2   | Z     | 2   | NAG  | C1-C2 | 3.00 | 1.56        | 1.52     |
| 2   | A     | 2   | NAG  | C1-C2 | 2.99 | 1.56        | 1.52     |
| 2   | D     | 2   | NAG  | C1-C2 | 2.99 | 1.56        | 1.52     |
| 2   | S     | 2   | NAG  | C1-C2 | 2.97 | 1.56        | 1.52     |
| 2   | E     | 2   | NAG  | C1-C2 | 2.95 | 1.56        | 1.52     |
| 2   | W     | 2   | NAG  | C1-C2 | 2.94 | 1.56        | 1.52     |
| 2   | U     | 2   | NAG  | C1-C2 | 2.94 | 1.56        | 1.52     |
| 2   | T     | 2   | NAG  | C1-C2 | 2.93 | 1.56        | 1.52     |

All (91) bond angle outliers are listed below:

| Mol | Chain | Res | Type | Atoms    | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|----------|-------|-------------|----------|
| 2   | U     | 2   | NAG  | C2-N2-C7 | 3.88  | 128.10      | 122.90   |
| 2   | V     | 2   | NAG  | C2-N2-C7 | 3.87  | 128.09      | 122.90   |
| 2   | T     | 2   | NAG  | C2-N2-C7 | 3.87  | 128.09      | 122.90   |
| 2   | Z     | 2   | NAG  | C2-N2-C7 | 3.87  | 128.09      | 122.90   |
| 2   | C     | 2   | NAG  | C2-N2-C7 | 3.87  | 128.09      | 122.90   |
| 2   | S     | 2   | NAG  | C2-N2-C7 | 3.87  | 128.08      | 122.90   |
| 2   | A     | 2   | NAG  | C2-N2-C7 | 3.85  | 128.06      | 122.90   |
| 2   | R     | 2   | NAG  | C2-N2-C7 | 3.83  | 128.04      | 122.90   |
| 2   | W     | 2   | NAG  | C2-N2-C7 | 3.83  | 128.04      | 122.90   |
| 2   | D     | 2   | NAG  | C2-N2-C7 | 3.82  | 128.03      | 122.90   |
| 2   | E     | 2   | NAG  | C2-N2-C7 | 3.82  | 128.02      | 122.90   |
| 2   | X     | 2   | NAG  | C2-N2-C7 | 3.82  | 128.02      | 122.90   |
| 2   | Y     | 2   | NAG  | C2-N2-C7 | 3.82  | 128.01      | 122.90   |
| 2   | C     | 1   | NAG  | C1-O5-C5 | 3.71  | 117.16      | 112.19   |
| 2   | W     | 1   | NAG  | C1-O5-C5 | 3.71  | 117.16      | 112.19   |
| 2   | X     | 1   | NAG  | C1-O5-C5 | 3.71  | 117.15      | 112.19   |
| 2   | Y     | 1   | NAG  | C1-O5-C5 | 3.68  | 117.12      | 112.19   |
| 2   | A     | 1   | NAG  | C1-O5-C5 | 3.67  | 117.10      | 112.19   |
| 2   | D     | 1   | NAG  | C1-O5-C5 | 3.67  | 117.10      | 112.19   |
| 2   | R     | 1   | NAG  | C1-O5-C5 | 3.66  | 117.10      | 112.19   |
| 2   | T     | 1   | NAG  | C1-O5-C5 | 3.66  | 117.09      | 112.19   |
| 2   | U     | 1   | NAG  | C1-O5-C5 | 3.66  | 117.09      | 112.19   |
| 2   | E     | 1   | NAG  | C1-O5-C5 | 3.66  | 117.09      | 112.19   |
| 2   | V     | 1   | NAG  | C1-O5-C5 | 3.65  | 117.08      | 112.19   |
| 2   | S     | 1   | NAG  | C1-O5-C5 | 3.63  | 117.06      | 112.19   |
| 2   | Z     | 1   | NAG  | C1-O5-C5 | 3.61  | 117.03      | 112.19   |
| 2   | C     | 1   | NAG  | O5-C1-C2 | -3.28 | 106.22      | 111.29   |
| 2   | U     | 1   | NAG  | O5-C1-C2 | -3.24 | 106.28      | 111.29   |
| 2   | S     | 1   | NAG  | O5-C1-C2 | -3.24 | 106.28      | 111.29   |
| 2   | X     | 1   | NAG  | O5-C1-C2 | -3.23 | 106.29      | 111.29   |
| 2   | E     | 1   | NAG  | O5-C1-C2 | -3.23 | 106.30      | 111.29   |
| 2   | D     | 1   | NAG  | O5-C1-C2 | -3.23 | 106.30      | 111.29   |
| 2   | W     | 1   | NAG  | O5-C1-C2 | -3.23 | 106.30      | 111.29   |
| 2   | A     | 1   | NAG  | O5-C1-C2 | -3.22 | 106.31      | 111.29   |
| 2   | R     | 1   | NAG  | O5-C1-C2 | -3.21 | 106.32      | 111.29   |
| 2   | Y     | 1   | NAG  | O5-C1-C2 | -3.20 | 106.34      | 111.29   |
| 2   | T     | 1   | NAG  | O5-C1-C2 | -3.20 | 106.35      | 111.29   |
| 2   | V     | 1   | NAG  | O5-C1-C2 | -3.19 | 106.35      | 111.29   |
| 2   | Z     | 1   | NAG  | O5-C1-C2 | -3.19 | 106.36      | 111.29   |
| 2   | V     | 2   | NAG  | C4-C3-C2 | 2.76  | 115.06      | 111.02   |
| 2   | X     | 2   | NAG  | C4-C3-C2 | 2.75  | 115.05      | 111.02   |
| 2   | S     | 2   | NAG  | C4-C3-C2 | 2.72  | 115.01      | 111.02   |
| 2   | A     | 2   | NAG  | C4-C3-C2 | 2.72  | 115.01      | 111.02   |

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| Mol | Chain | Res | Type | Atoms    | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|----------|-------|-------------|----------|
| 2   | T     | 2   | NAG  | C4-C3-C2 | 2.72  | 115.01      | 111.02   |
| 2   | D     | 2   | NAG  | C4-C3-C2 | 2.71  | 114.99      | 111.02   |
| 2   | E     | 2   | NAG  | C4-C3-C2 | 2.71  | 114.99      | 111.02   |
| 2   | R     | 2   | NAG  | C4-C3-C2 | 2.71  | 114.99      | 111.02   |
| 2   | W     | 2   | NAG  | C4-C3-C2 | 2.71  | 114.99      | 111.02   |
| 2   | C     | 2   | NAG  | C4-C3-C2 | 2.71  | 114.99      | 111.02   |
| 2   | T     | 2   | NAG  | O7-C7-C8 | -2.70 | 117.24      | 122.05   |
| 2   | Z     | 2   | NAG  | C4-C3-C2 | 2.70  | 114.97      | 111.02   |
| 2   | W     | 2   | NAG  | O7-C7-C8 | -2.69 | 117.26      | 122.05   |
| 2   | U     | 2   | NAG  | C4-C3-C2 | 2.69  | 114.96      | 111.02   |
| 2   | R     | 2   | NAG  | C1-O5-C5 | 2.69  | 115.79      | 112.19   |
| 2   | Y     | 2   | NAG  | O7-C7-C8 | -2.68 | 117.28      | 122.05   |
| 2   | Y     | 2   | NAG  | C4-C3-C2 | 2.68  | 114.95      | 111.02   |
| 2   | Z     | 2   | NAG  | O7-C7-C8 | -2.68 | 117.29      | 122.05   |
| 2   | W     | 2   | NAG  | O7-C7-N2 | 2.67  | 126.71      | 121.98   |
| 2   | X     | 2   | NAG  | O7-C7-C8 | -2.67 | 117.29      | 122.05   |
| 2   | A     | 2   | NAG  | O7-C7-C8 | -2.67 | 117.30      | 122.05   |
| 2   | Y     | 2   | NAG  | C1-O5-C5 | 2.67  | 115.76      | 112.19   |
| 2   | V     | 2   | NAG  | O7-C7-C8 | -2.67 | 117.31      | 122.05   |
| 2   | U     | 2   | NAG  | O7-C7-C8 | -2.66 | 117.32      | 122.05   |
| 2   | C     | 2   | NAG  | O7-C7-C8 | -2.66 | 117.32      | 122.05   |
| 2   | S     | 2   | NAG  | O7-C7-C8 | -2.66 | 117.32      | 122.05   |
| 2   | Y     | 2   | NAG  | O7-C7-N2 | 2.66  | 126.67      | 121.98   |
| 2   | E     | 2   | NAG  | O7-C7-C8 | -2.65 | 117.33      | 122.05   |
| 2   | D     | 2   | NAG  | C1-O5-C5 | 2.65  | 115.74      | 112.19   |
| 2   | X     | 2   | NAG  | C1-O5-C5 | 2.65  | 115.74      | 112.19   |
| 2   | Z     | 2   | NAG  | C1-O5-C5 | 2.65  | 115.74      | 112.19   |
| 2   | W     | 2   | NAG  | C1-O5-C5 | 2.65  | 115.73      | 112.19   |
| 2   | E     | 2   | NAG  | O7-C7-N2 | 2.64  | 126.65      | 121.98   |
| 2   | D     | 2   | NAG  | O7-C7-C8 | -2.64 | 117.35      | 122.05   |
| 2   | R     | 2   | NAG  | O7-C7-C8 | -2.64 | 117.36      | 122.05   |
| 2   | S     | 2   | NAG  | C1-O5-C5 | 2.64  | 115.72      | 112.19   |
| 2   | X     | 2   | NAG  | O7-C7-N2 | 2.63  | 126.63      | 121.98   |
| 2   | A     | 2   | NAG  | C1-O5-C5 | 2.63  | 115.71      | 112.19   |
| 2   | V     | 2   | NAG  | O7-C7-N2 | 2.63  | 126.63      | 121.98   |
| 2   | U     | 2   | NAG  | O7-C7-N2 | 2.63  | 126.63      | 121.98   |
| 2   | S     | 2   | NAG  | O7-C7-N2 | 2.63  | 126.63      | 121.98   |
| 2   | A     | 2   | NAG  | O7-C7-N2 | 2.63  | 126.62      | 121.98   |
| 2   | R     | 2   | NAG  | O7-C7-N2 | 2.63  | 126.62      | 121.98   |
| 2   | T     | 2   | NAG  | O7-C7-N2 | 2.62  | 126.62      | 121.98   |
| 2   | Z     | 2   | NAG  | O7-C7-N2 | 2.62  | 126.61      | 121.98   |
| 2   | U     | 2   | NAG  | C1-O5-C5 | 2.62  | 115.70      | 112.19   |

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| Mol | Chain | Res | Type | Atoms    | Z    | Observed(°) | Ideal(°) |
|-----|-------|-----|------|----------|------|-------------|----------|
| 2   | C     | 2   | NAG  | C1-O5-C5 | 2.62 | 115.69      | 112.19   |
| 2   | D     | 2   | NAG  | O7-C7-N2 | 2.61 | 126.59      | 121.98   |
| 2   | V     | 2   | NAG  | C1-O5-C5 | 2.60 | 115.67      | 112.19   |
| 2   | T     | 2   | NAG  | C1-O5-C5 | 2.60 | 115.67      | 112.19   |
| 2   | E     | 2   | NAG  | C1-O5-C5 | 2.60 | 115.67      | 112.19   |
| 2   | C     | 2   | NAG  | O7-C7-N2 | 2.58 | 126.53      | 121.98   |

There are no chirality outliers.

All (14) torsion outliers are listed below:

| Mol | Chain | Res | Type | Atoms       |
|-----|-------|-----|------|-------------|
| 2   | A     | 2   | NAG  | O5-C5-C6-O6 |
| 2   | C     | 2   | NAG  | O5-C5-C6-O6 |
| 2   | D     | 2   | NAG  | O5-C5-C6-O6 |
| 2   | R     | 2   | NAG  | O5-C5-C6-O6 |
| 2   | S     | 2   | NAG  | O5-C5-C6-O6 |
| 2   | T     | 2   | NAG  | O5-C5-C6-O6 |
| 2   | U     | 2   | NAG  | O5-C5-C6-O6 |
| 2   | V     | 2   | NAG  | O5-C5-C6-O6 |
| 2   | W     | 2   | NAG  | O5-C5-C6-O6 |
| 2   | X     | 2   | NAG  | O5-C5-C6-O6 |
| 2   | Y     | 2   | NAG  | O5-C5-C6-O6 |
| 2   | Z     | 2   | NAG  | O5-C5-C6-O6 |
| 2   | E     | 2   | NAG  | O5-C5-C6-O6 |
| 2   | D     | 2   | NAG  | C4-C5-C6-O6 |

There are no ring outliers.

13 monomers are involved in 26 short contacts:

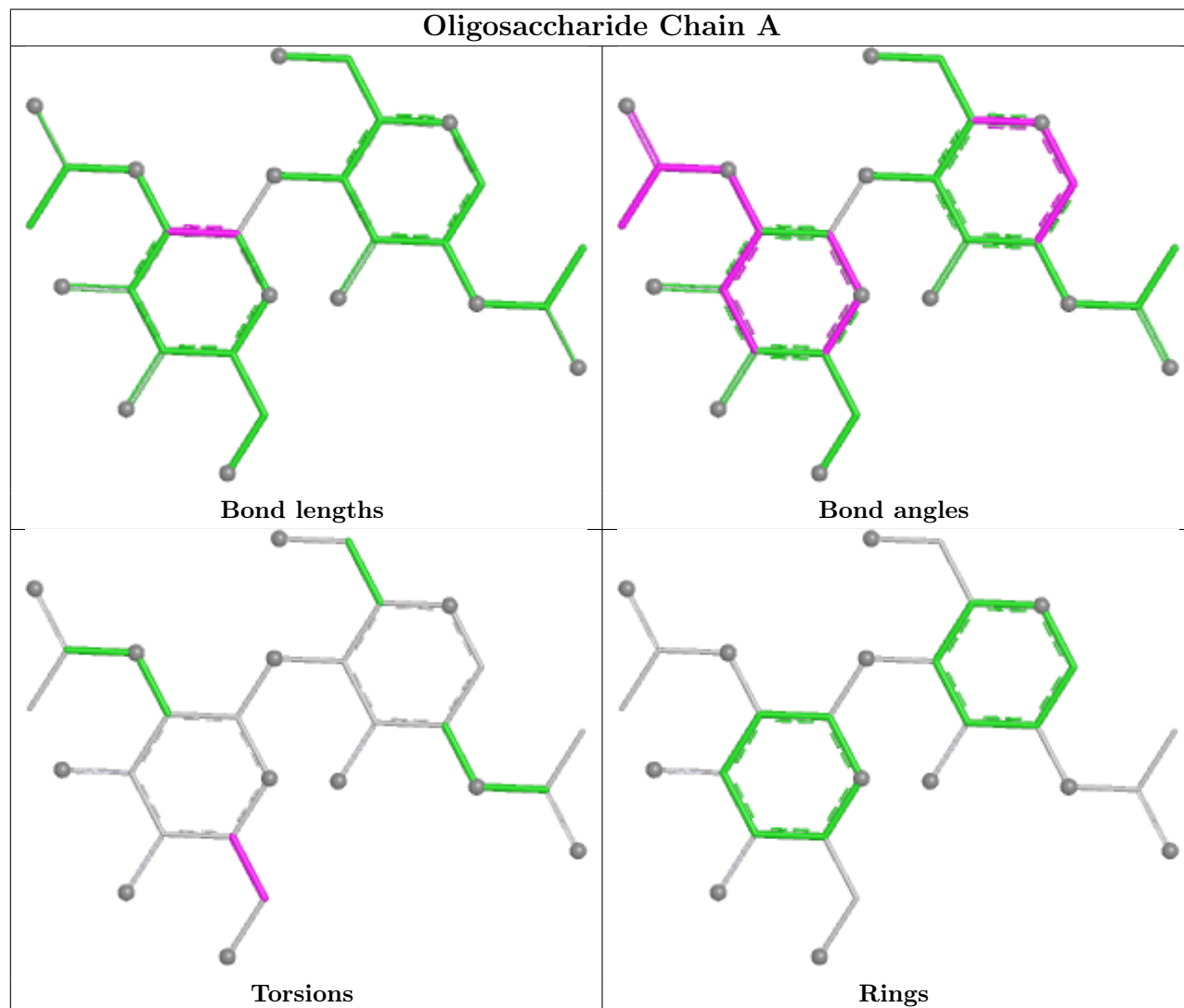
| Mol | Chain | Res | Type | Clashes | Symm-Clashes |
|-----|-------|-----|------|---------|--------------|
| 2   | T     | 1   | NAG  | 2       | 0            |
| 2   | R     | 1   | NAG  | 2       | 0            |
| 2   | Y     | 1   | NAG  | 2       | 0            |
| 2   | A     | 1   | NAG  | 2       | 0            |
| 2   | X     | 1   | NAG  | 2       | 0            |
| 2   | S     | 1   | NAG  | 2       | 0            |
| 2   | C     | 1   | NAG  | 2       | 0            |
| 2   | U     | 1   | NAG  | 2       | 0            |
| 2   | W     | 1   | NAG  | 2       | 0            |
| 2   | D     | 1   | NAG  | 2       | 0            |
| 2   | E     | 1   | NAG  | 2       | 0            |

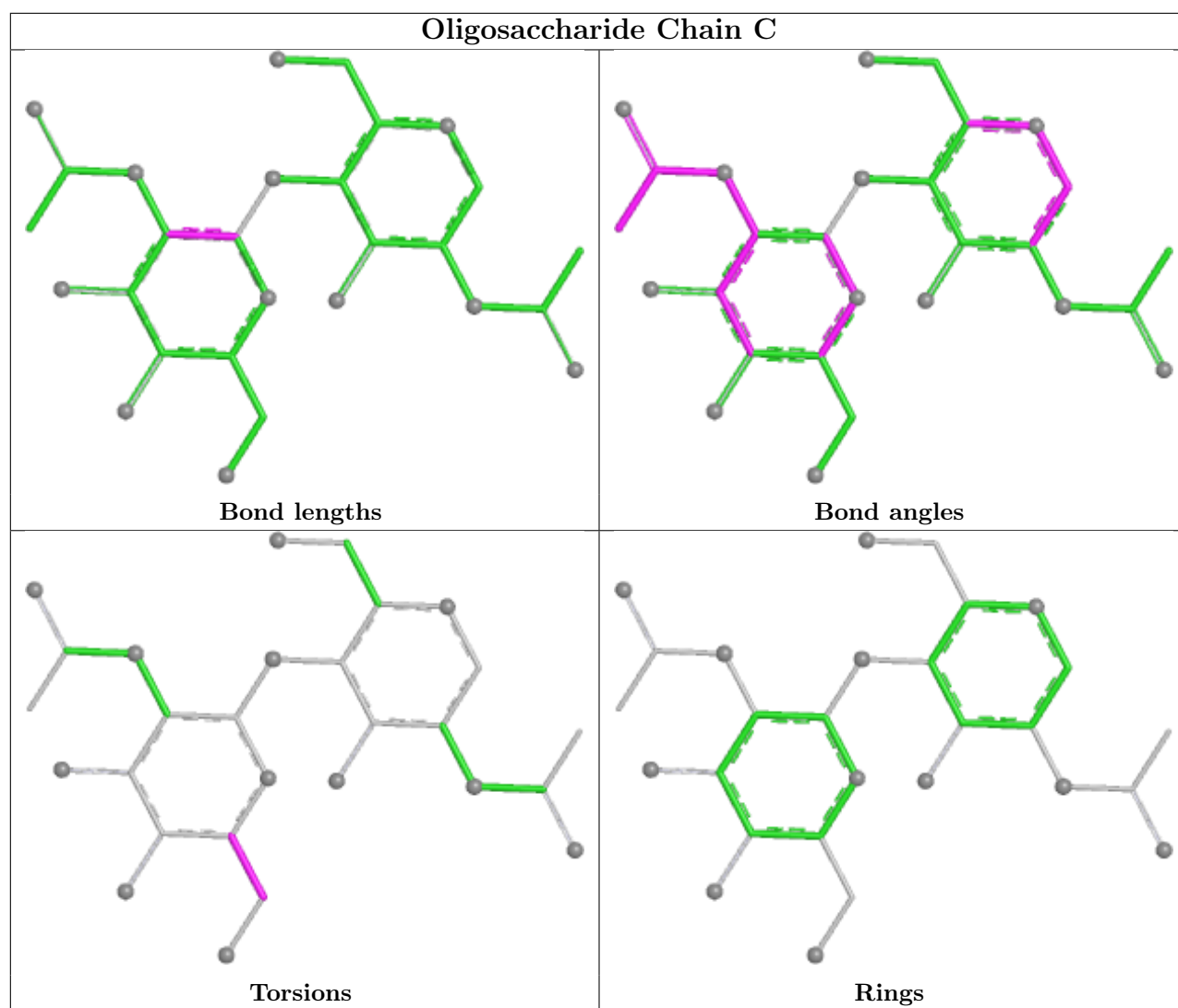
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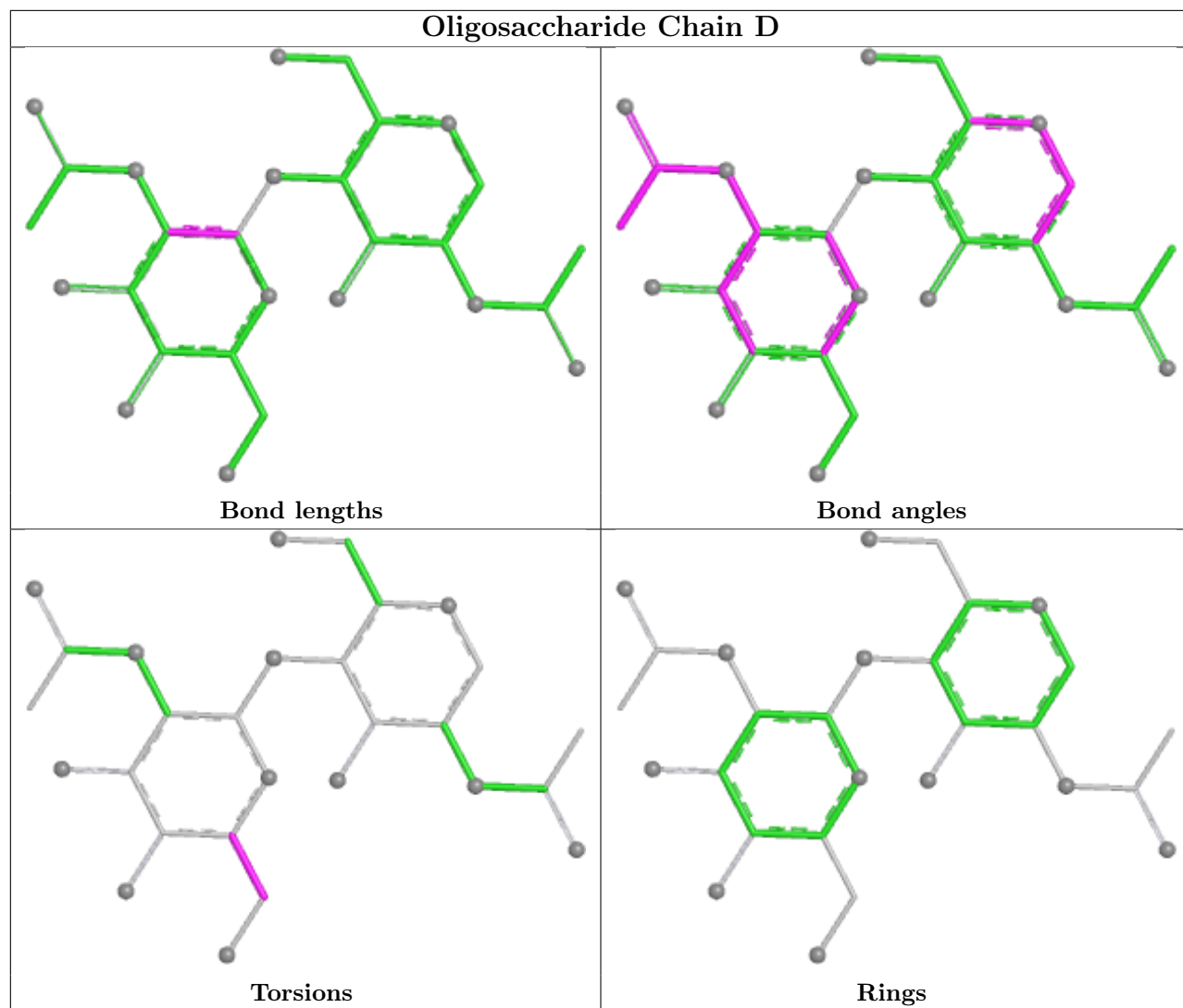
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| Mol | Chain | Res | Type | Clashes | Symm-Clashes |
|-----|-------|-----|------|---------|--------------|
| 2   | V     | 1   | NAG  | 2       | 0            |
| 2   | Z     | 1   | NAG  | 2       | 0            |

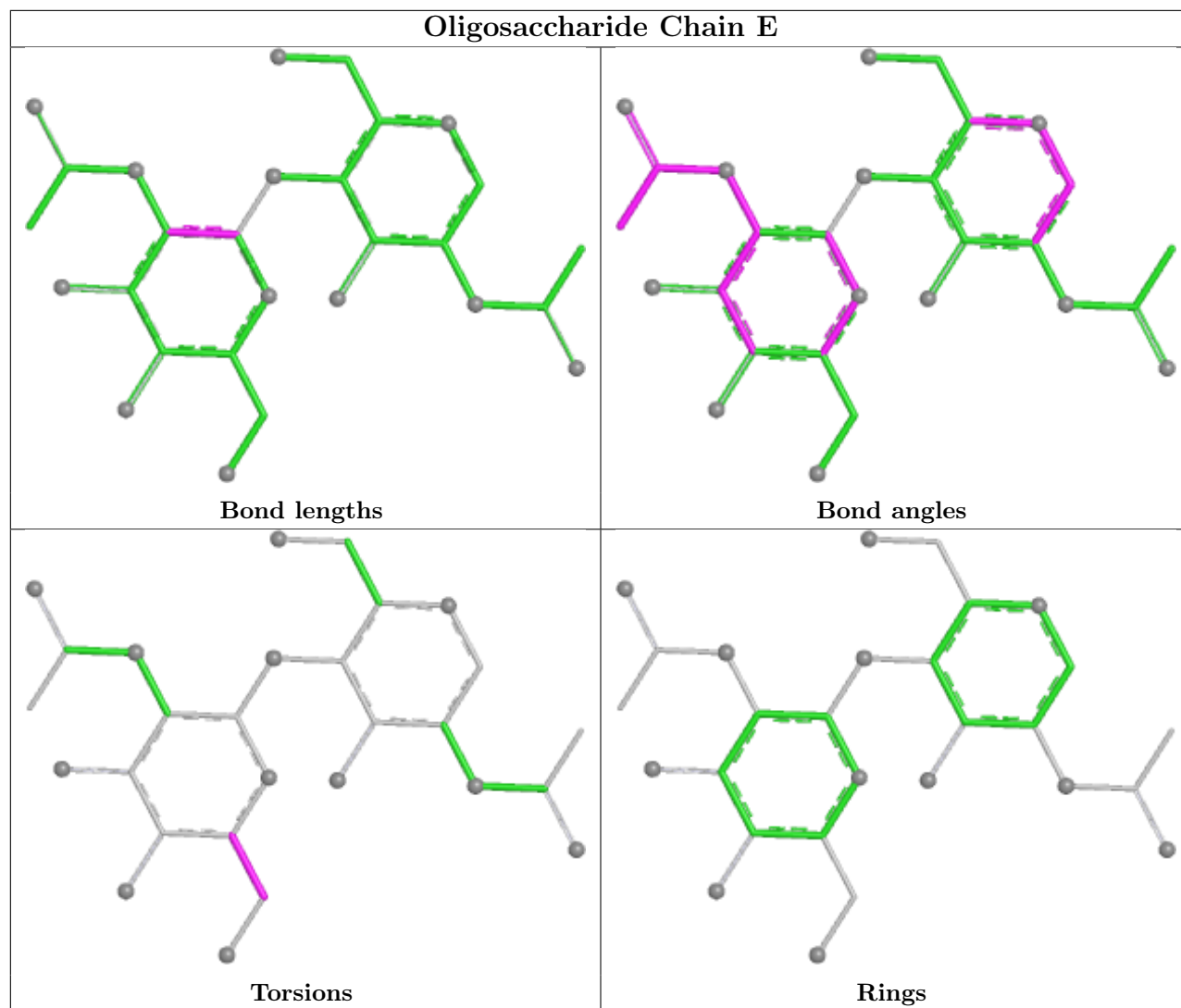
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for oligosaccharide.

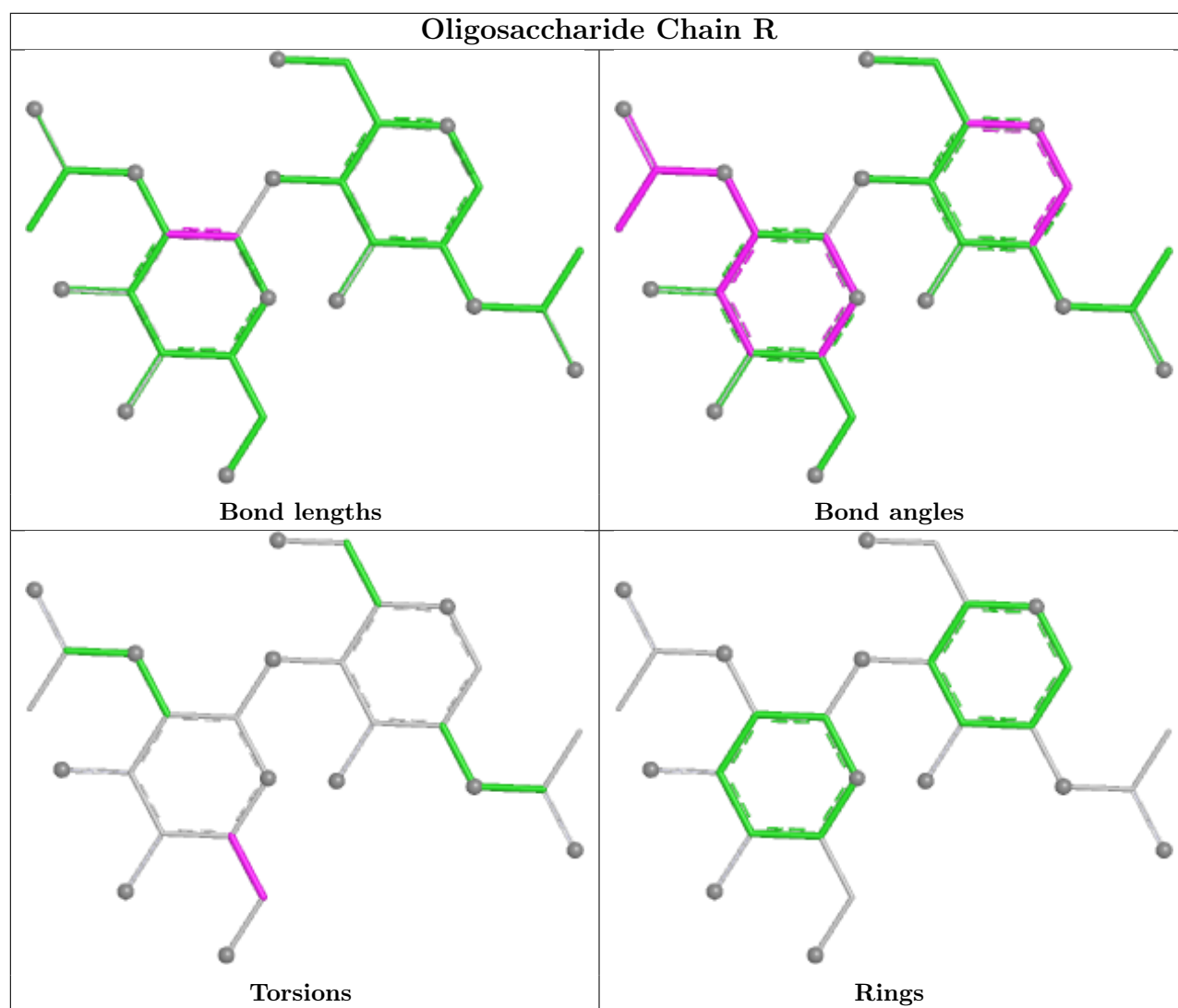


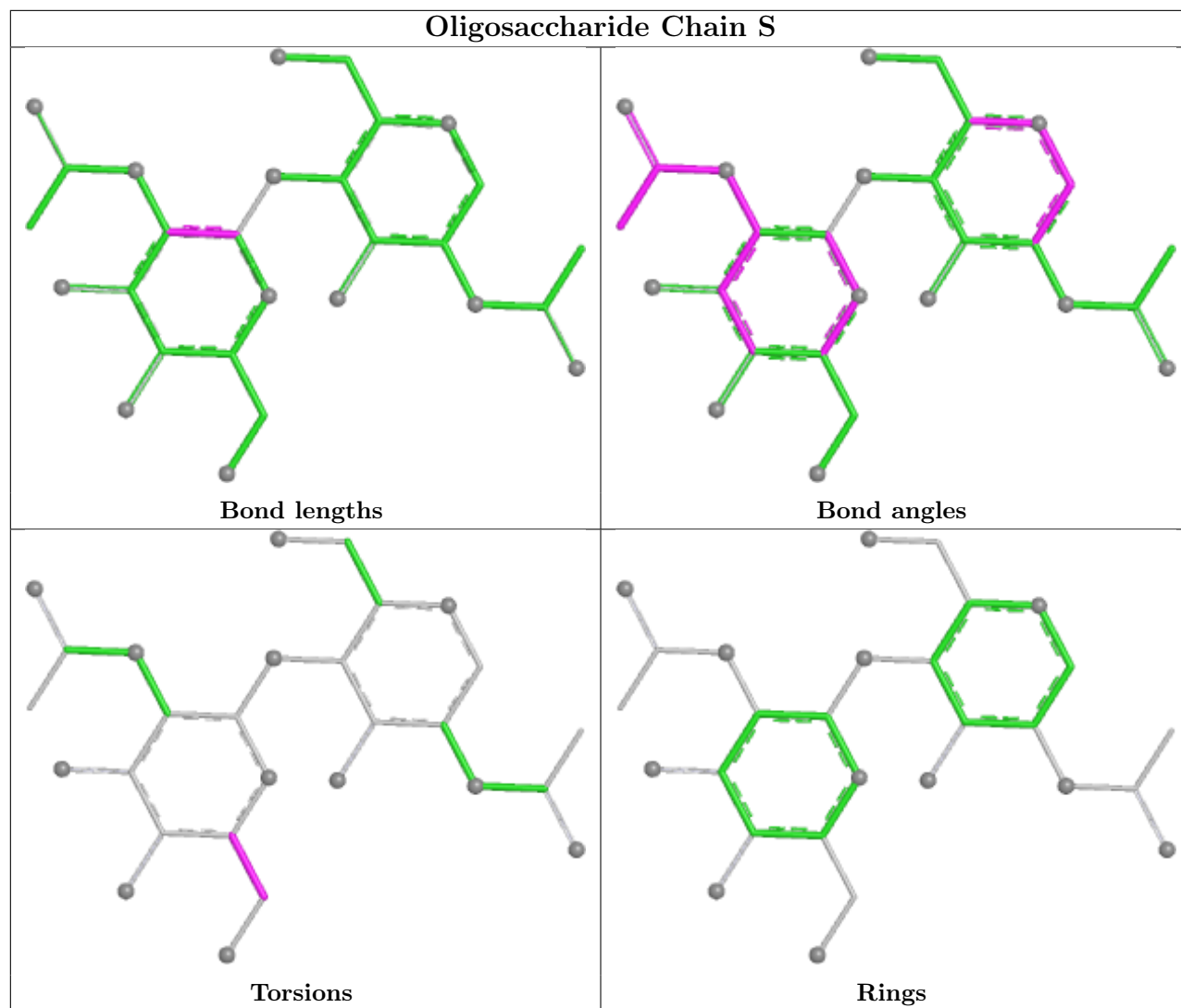


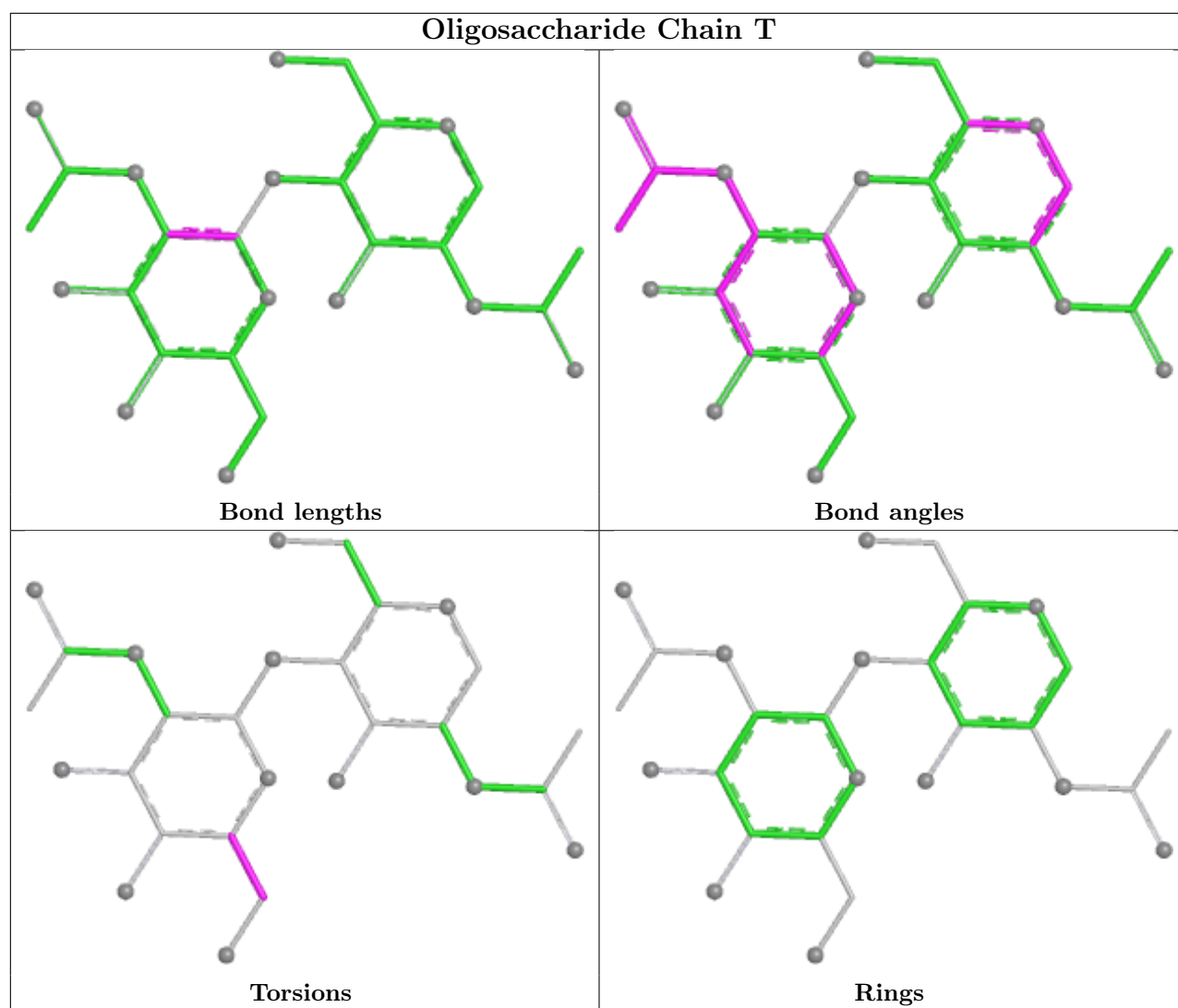


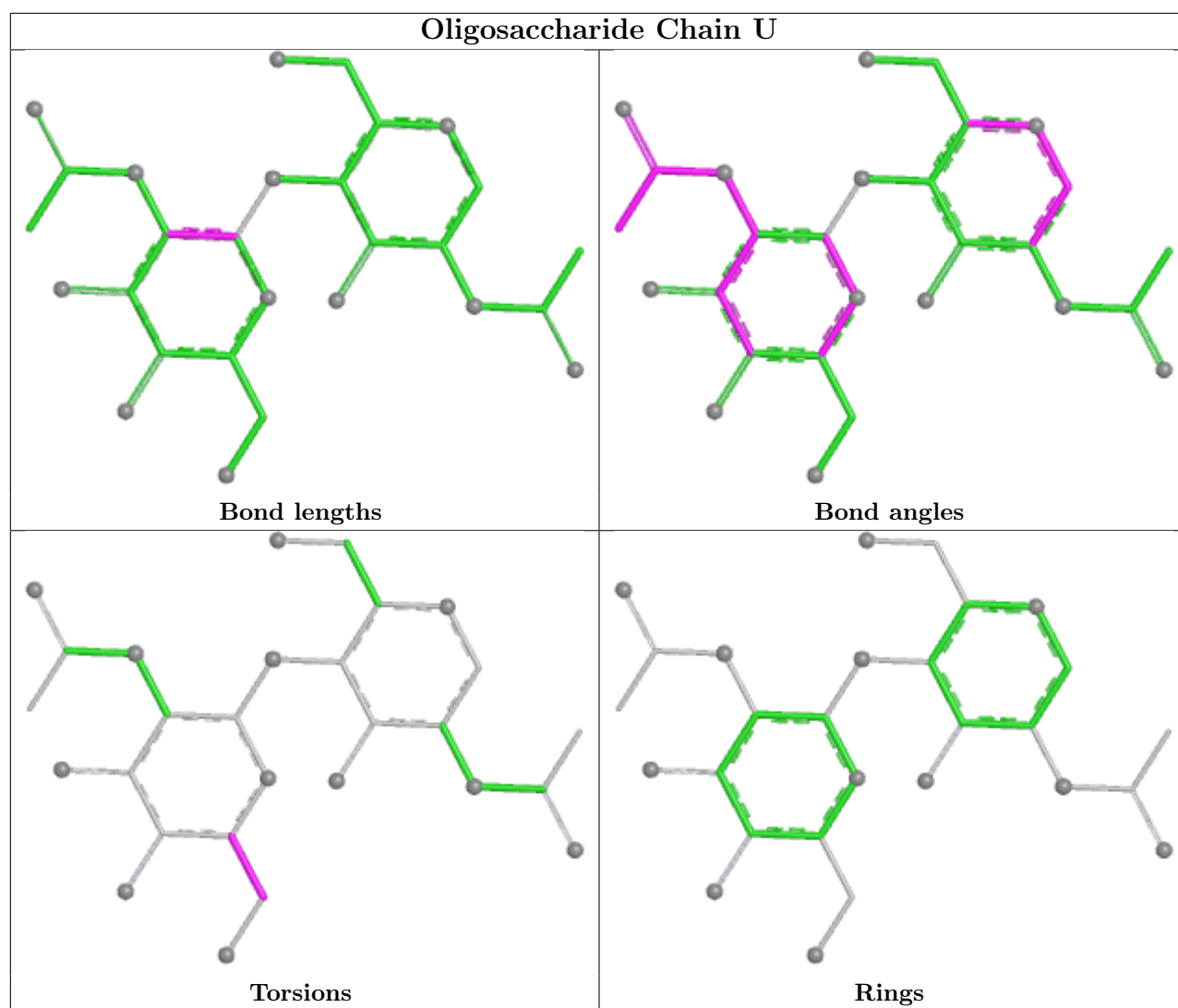


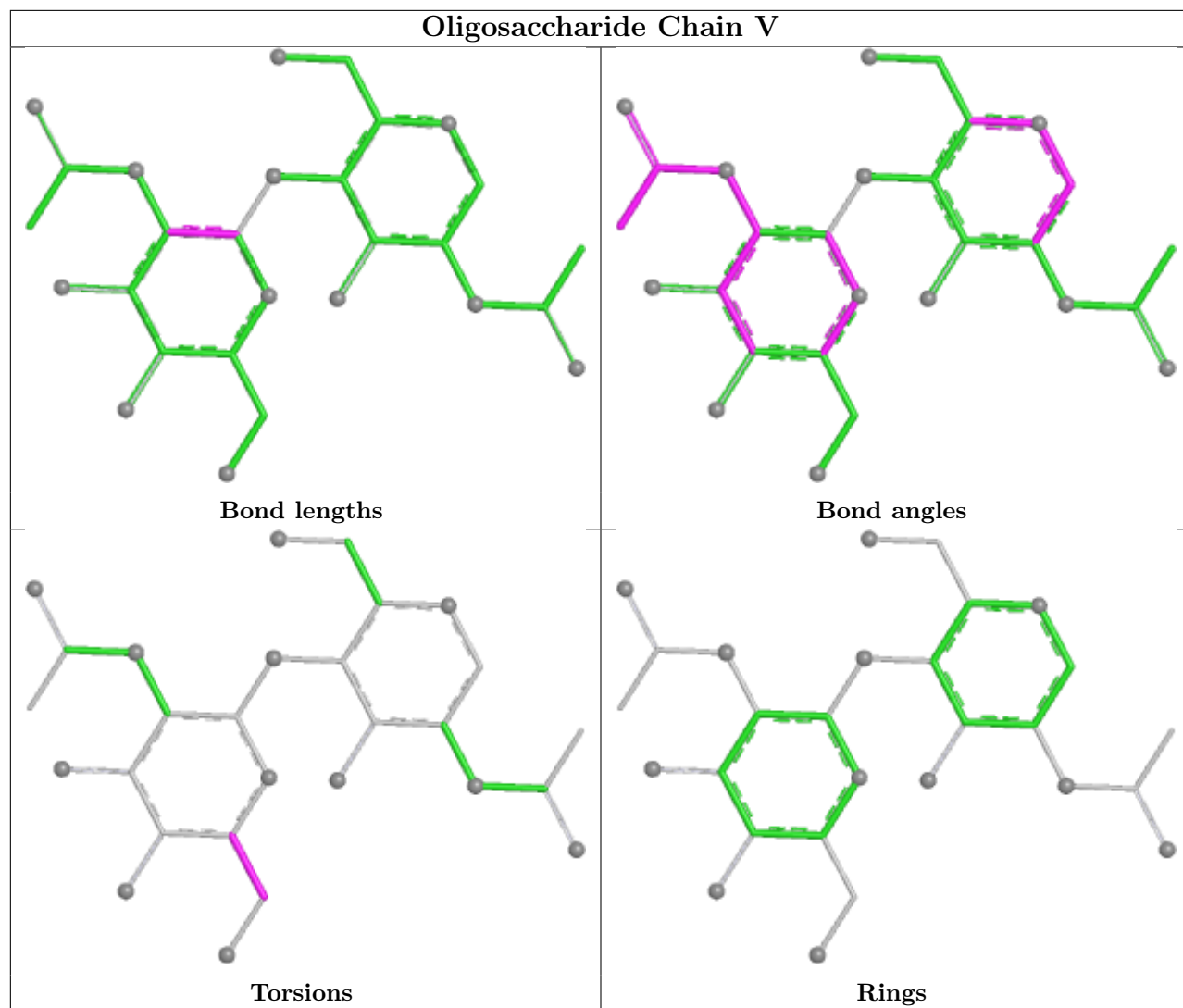


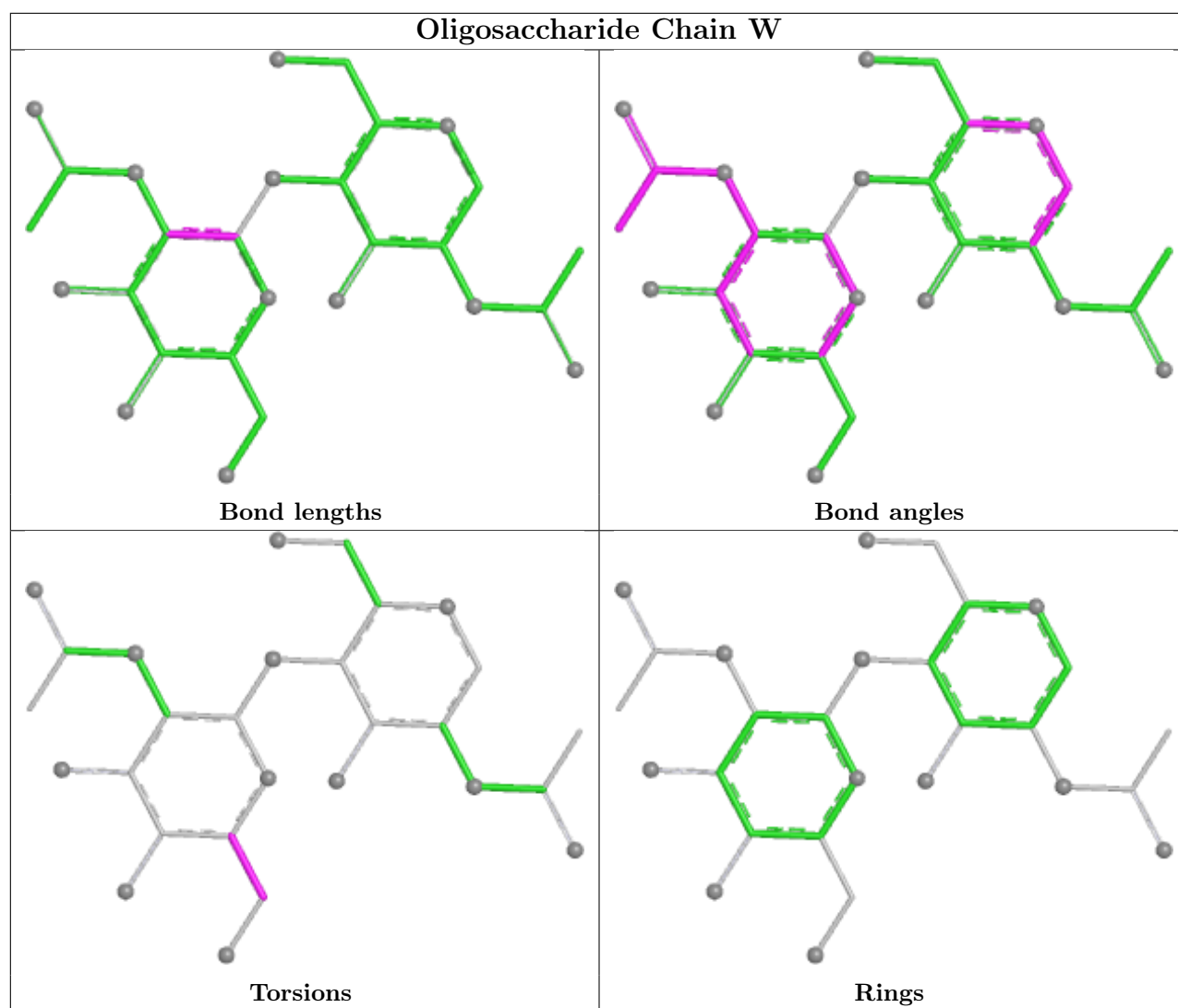


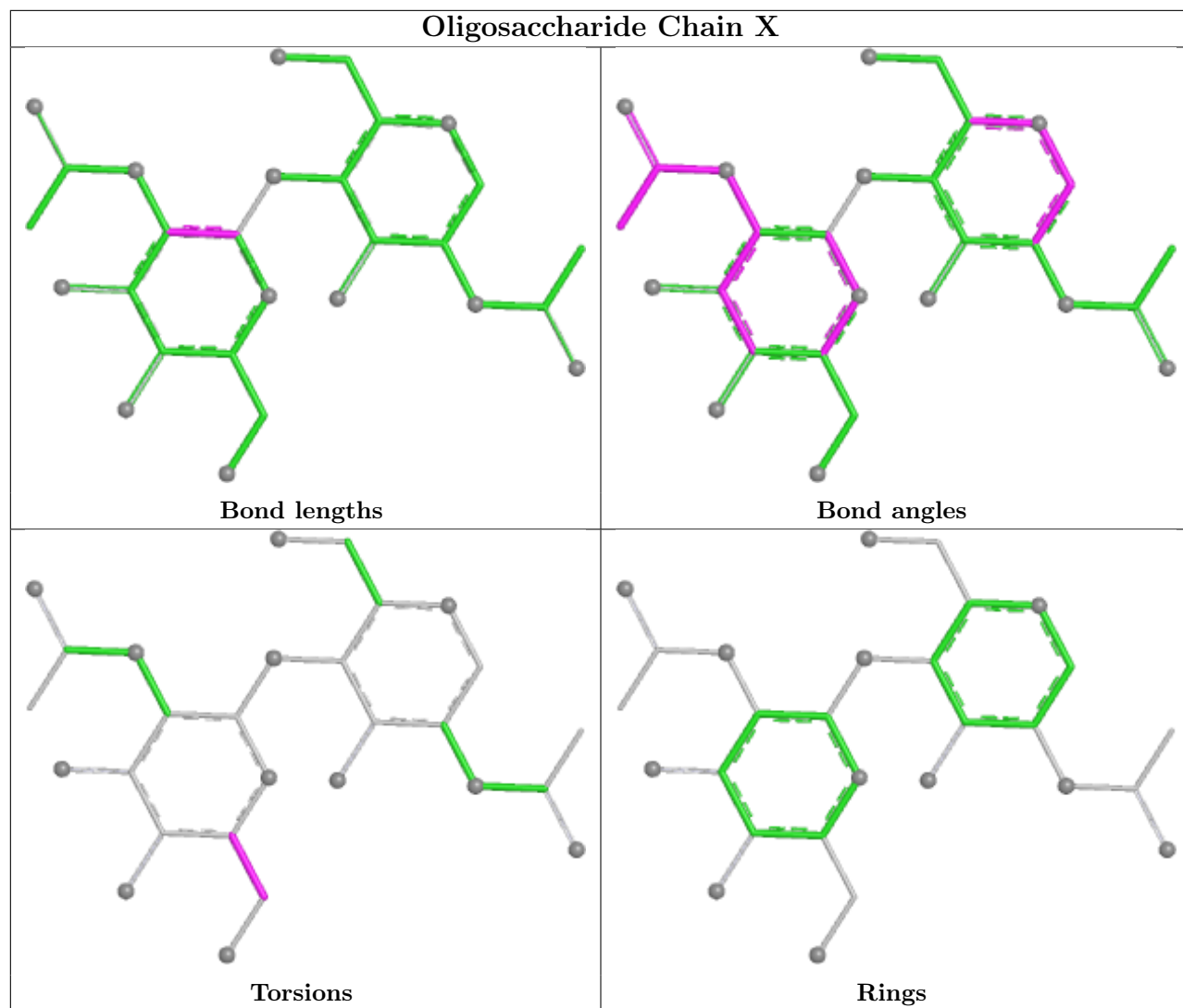




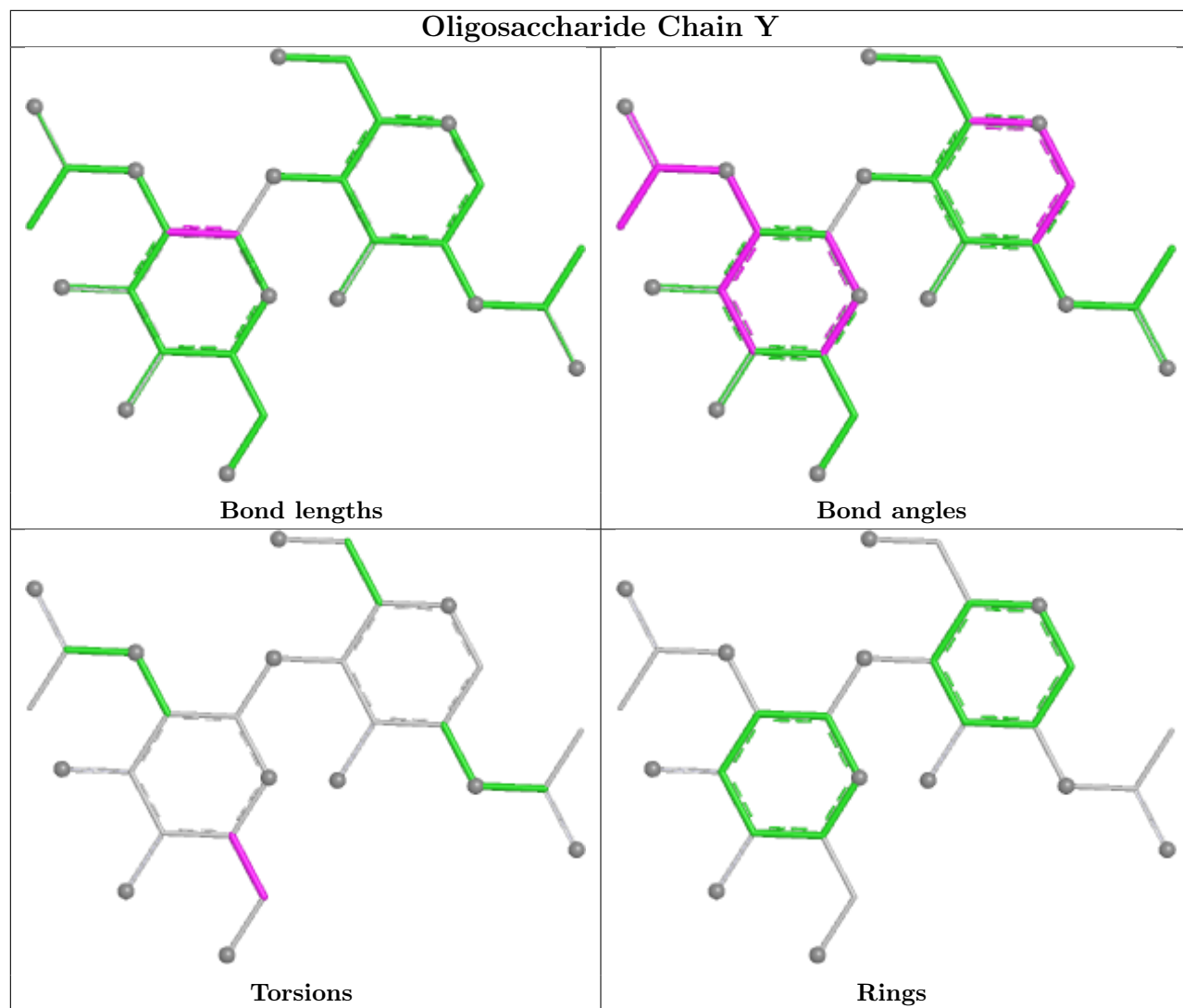


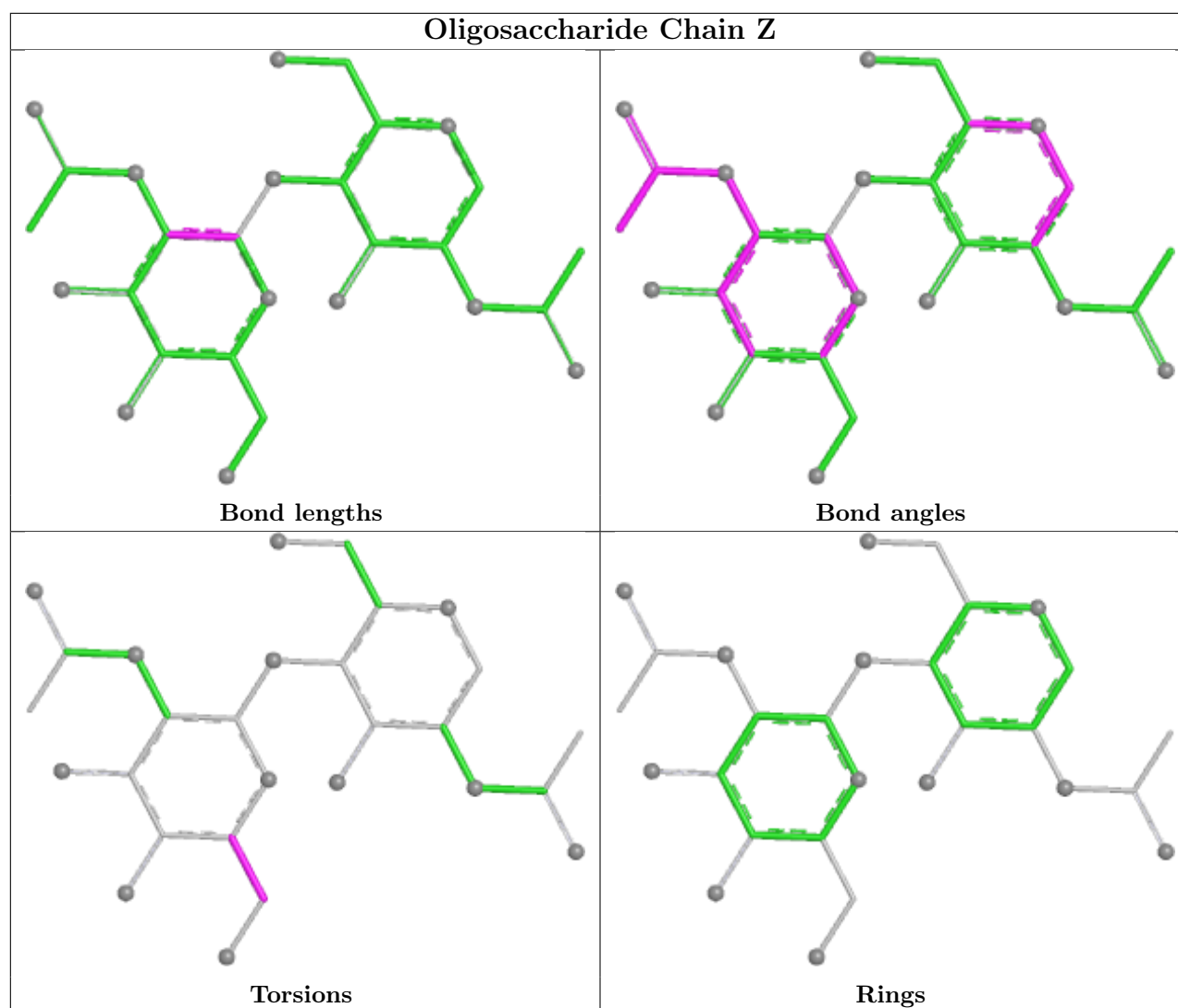












## 5.6 Ligand geometry [i](#)

Of 30 ligands modelled in this entry, 30 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

## 5.7 Other polymers [i](#)

There are no such residues in this entry.

## 5.8 Polymer linkage issues

The following chains have linkage breaks:

| Mol | Chain | Number of breaks |
|-----|-------|------------------|
| 1   | G     | 3                |
| 1   | H     | 1                |
| 1   | I     | 1                |
| 1   | J     | 1                |
| 1   | K     | 1                |
| 1   | L     | 1                |
| 1   | M     | 1                |
| 1   | N     | 1                |
| 1   | O     | 1                |
| 1   | P     | 1                |
| 1   | Q     | 1                |

All chain breaks are listed below:

| Model | Chain | Residue-1 | Atom-1 | Residue-2 | Atom-2 | Distance (Å) |
|-------|-------|-----------|--------|-----------|--------|--------------|
| 1     | G     | 79:SER    | C      | 80:THR    | N      | 1.69         |
| 1     | G     | 78:THR    | C      | 79:SER    | N      | 1.14         |
| 1     | G     | 66:ALA    | C      | 67:TYR    | N      | 1.01         |
| 1     | H     | 66:ALA    | C      | 67:TYR    | N      | 1.01         |
| 1     | I     | 66:ALA    | C      | 67:TYR    | N      | 1.01         |
| 1     | J     | 66:ALA    | C      | 67:TYR    | N      | 1.01         |
| 1     | K     | 66:ALA    | C      | 67:TYR    | N      | 1.01         |
| 1     | L     | 66:ALA    | C      | 67:TYR    | N      | 1.01         |
| 1     | M     | 66:ALA    | C      | 67:TYR    | N      | 1.01         |
| 1     | N     | 66:ALA    | C      | 67:TYR    | N      | 1.01         |
| 1     | O     | 66:ALA    | C      | 67:TYR    | N      | 1.01         |
| 1     | P     | 66:ALA    | C      | 67:TYR    | N      | 1.01         |
| 1     | Q     | 66:ALA    | C      | 67:TYR    | N      | 1.01         |

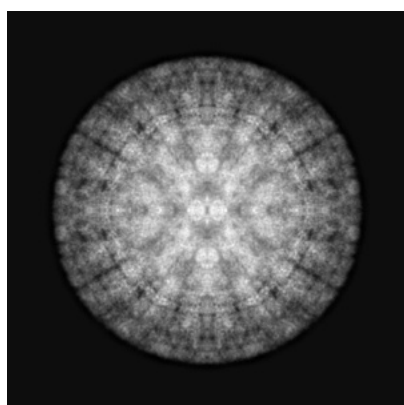
## 6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-1571. These allow visual inspection of the internal detail of the map and identification of artifacts.

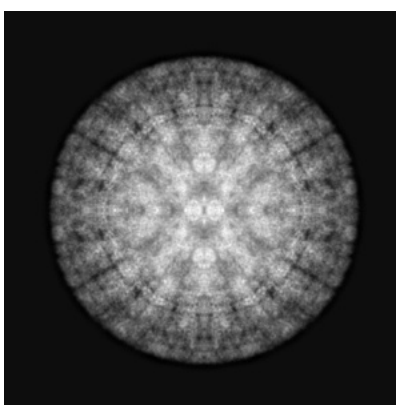
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

### 6.1 Orthogonal projections [i](#)

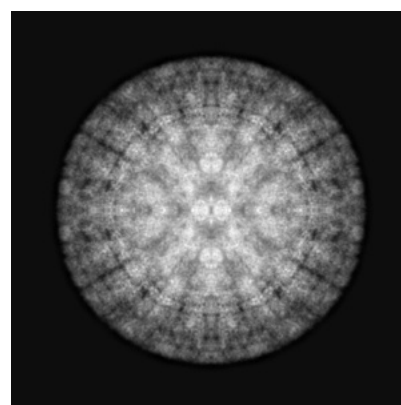
#### 6.1.1 Primary map



X



Y

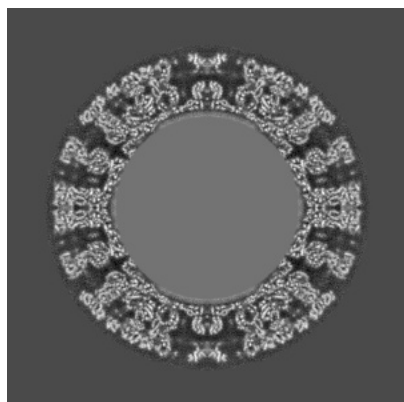


Z

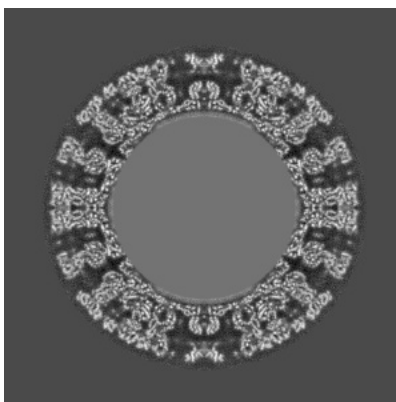
The images above show the map projected in three orthogonal directions.

### 6.2 Central slices [i](#)

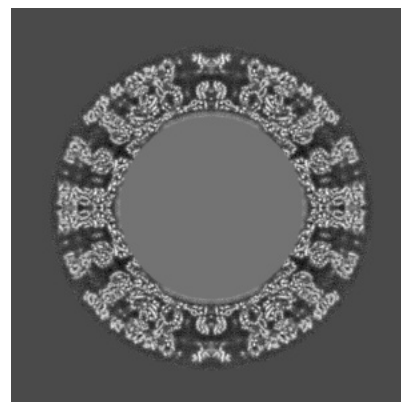
#### 6.2.1 Primary map



X Index: 400



Y Index: 400

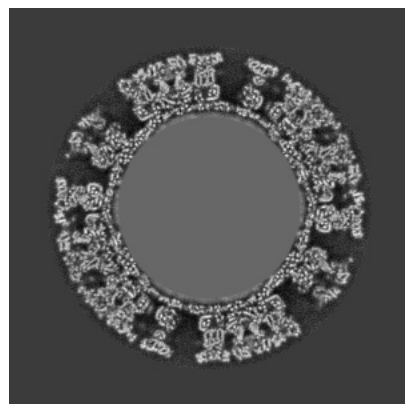


Z Index: 400

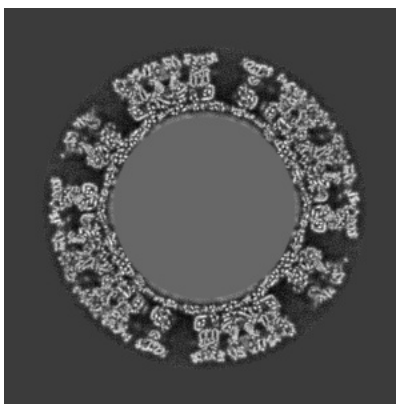
The images above show central slices of the map in three orthogonal directions.

## 6.3 Largest variance slices [i](#)

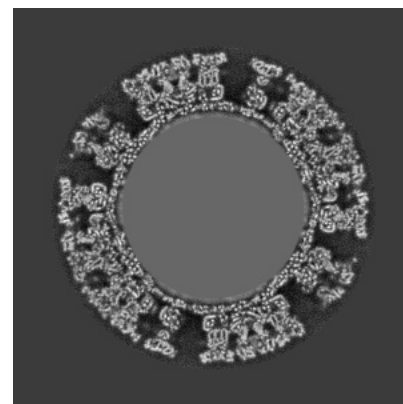
### 6.3.1 Primary map



X Index: 383



Y Index: 383

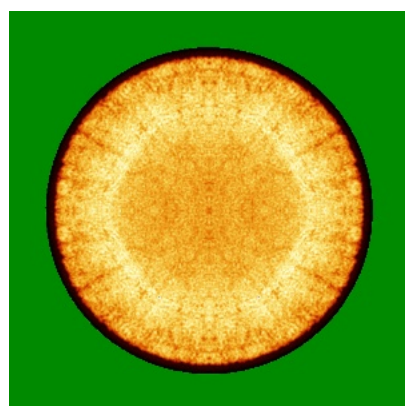


Z Index: 383

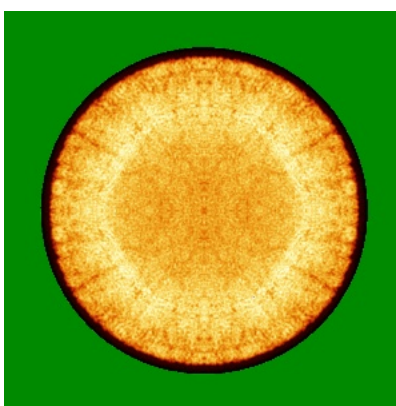
The images above show the largest variance slices of the map in three orthogonal directions.

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

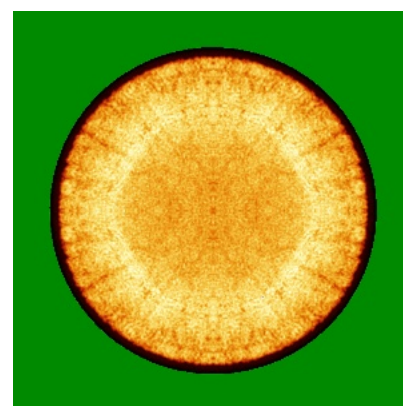
### 6.4.1 Primary map



X



Y

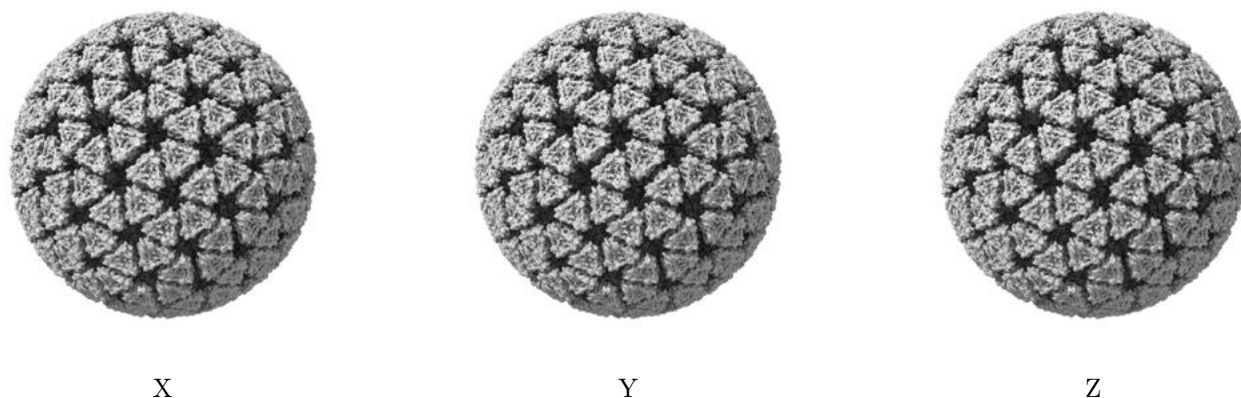


Z

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 2.0. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

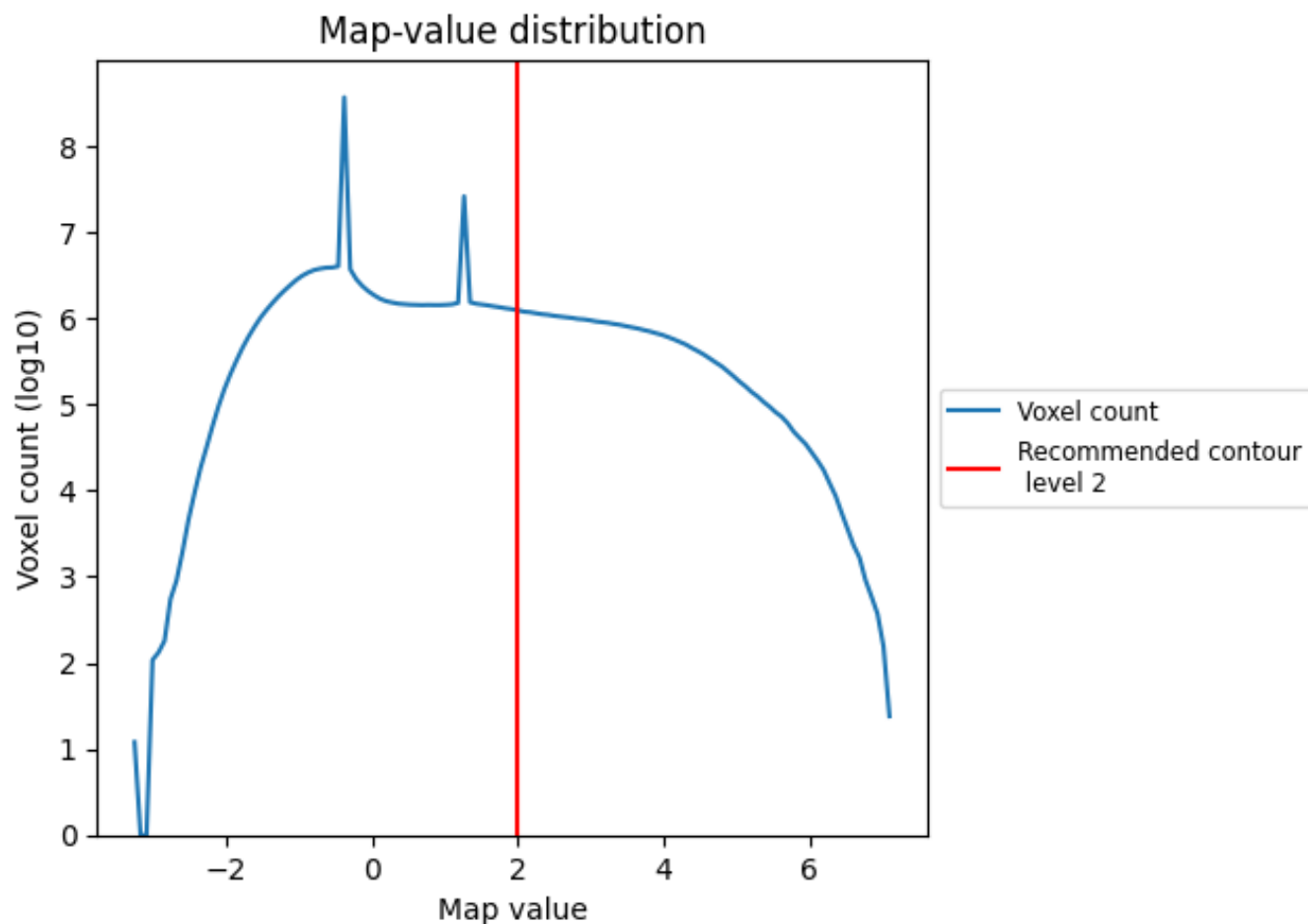
## 6.6 Mask visualisation [i](#)

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

## 7 Map analysis [i](#)

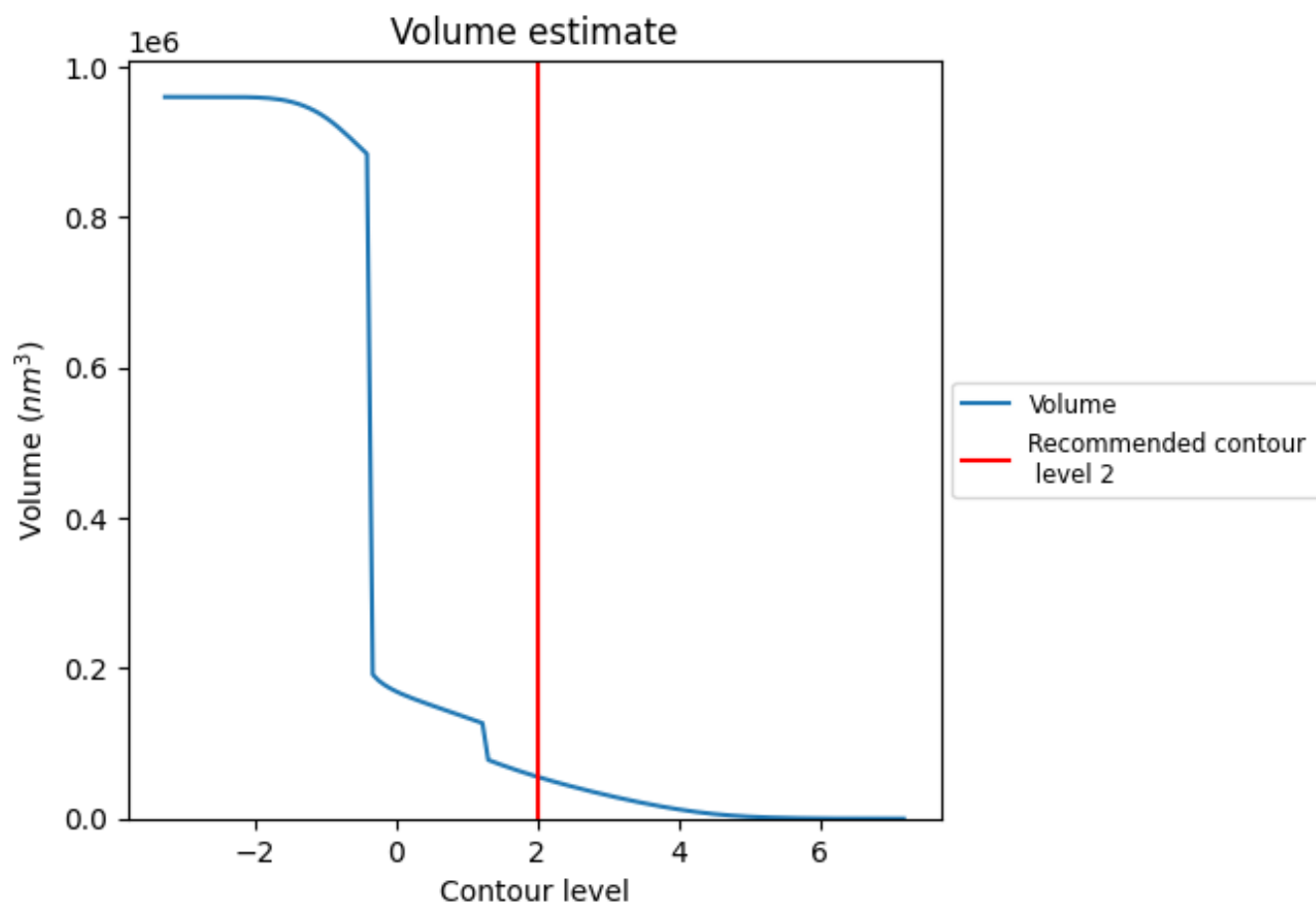
This section contains the results of statistical analysis of the map.

### 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](#)

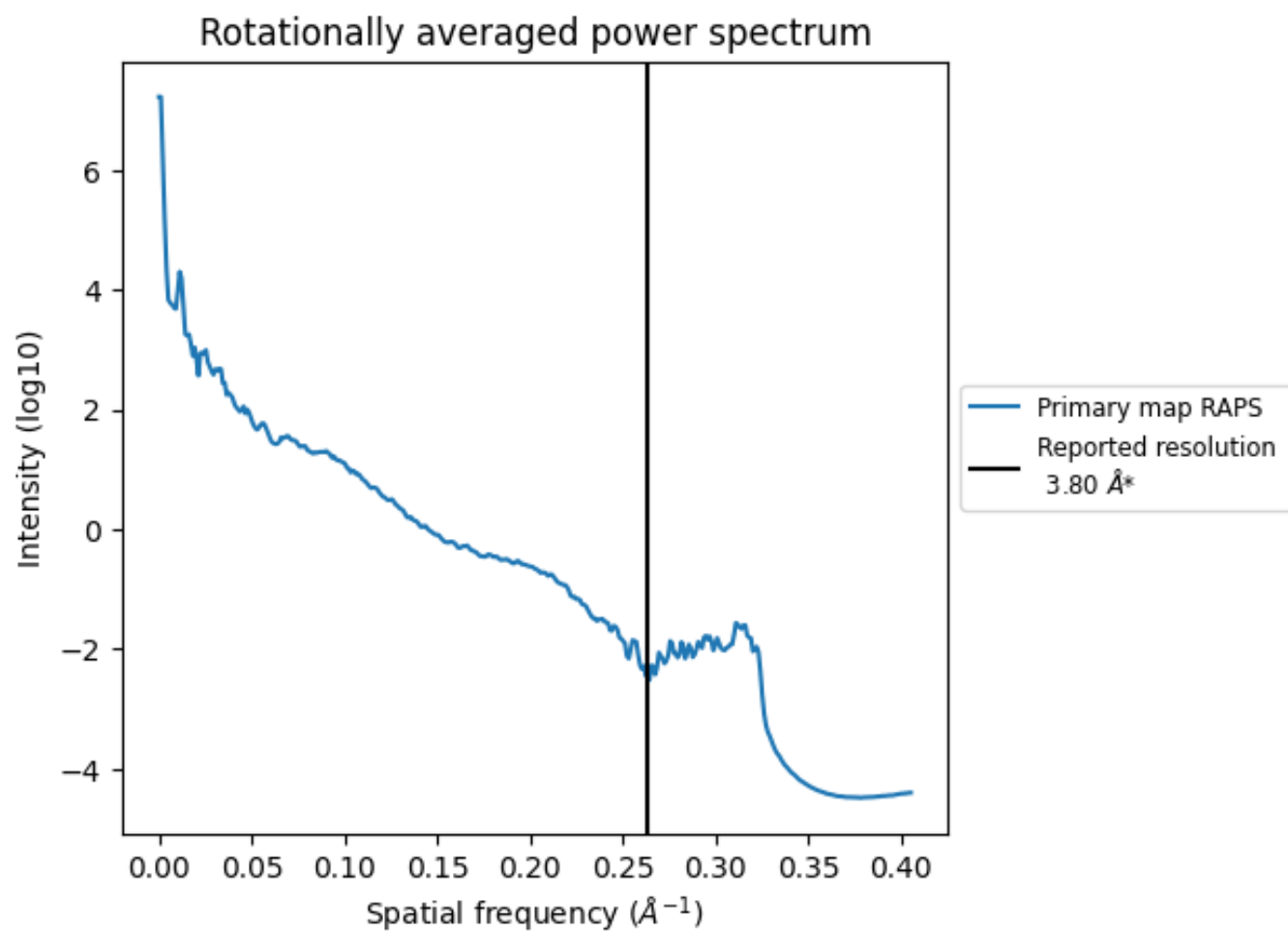


The volume at the recommended contour level is 55668 nm<sup>3</sup>; this corresponds to an approximate mass of 50287 kDa.

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 ⓘ



\*Reported resolution corresponds to spatial frequency of 0.263 Å<sup>-1</sup>

## 8 Fourier-Shell correlation

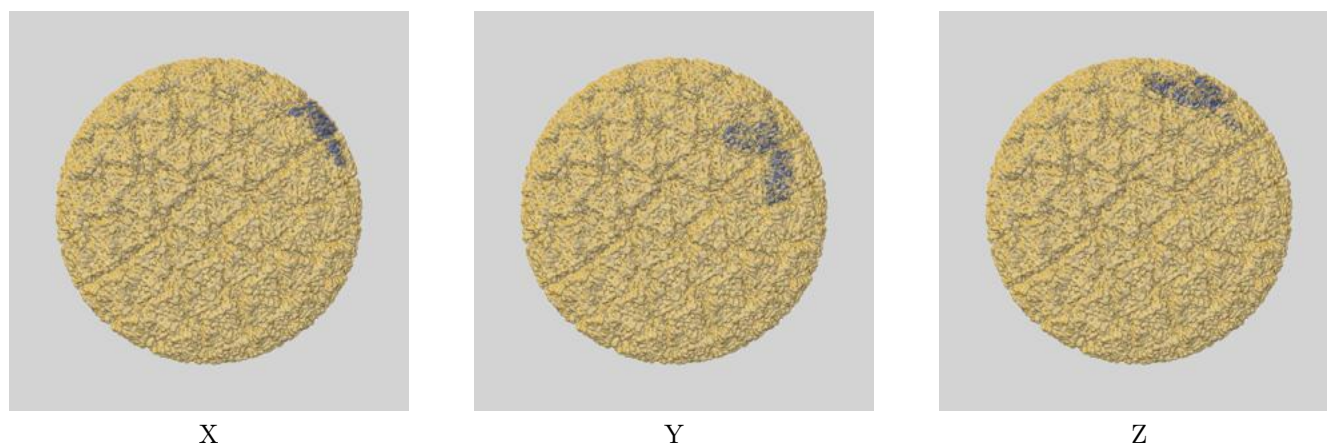
This section was not generated. No FSC curve or half-maps provided.

## 9 Map-model fit [i](#)

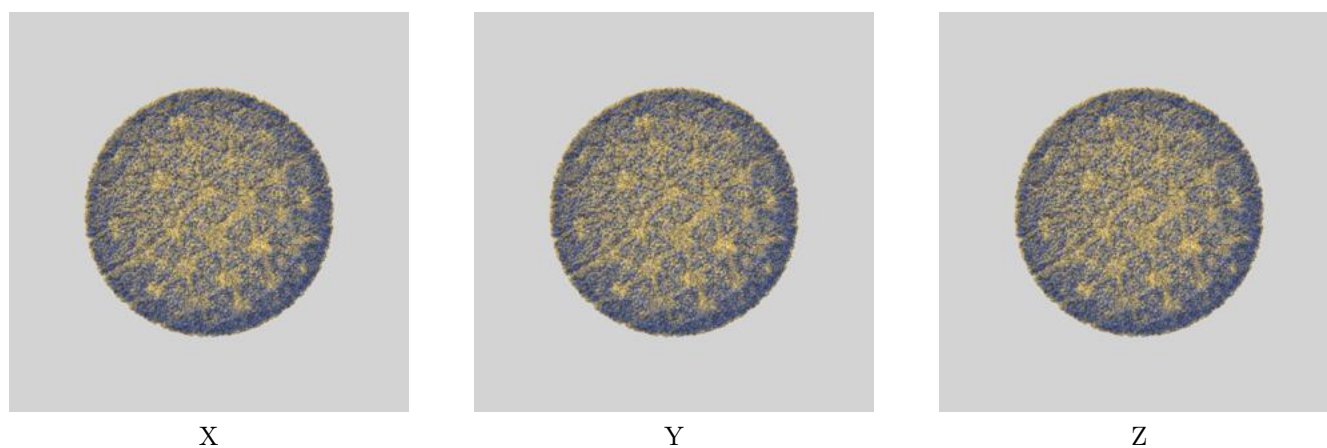
This section contains information regarding the fit between EMDB map EMD-1571 and PDB model 3GZT. Per-residue inclusion information can be found in section 3 on page 7.

### 9.1 Map-model overlays

#### 9.1.1 Map-model overlay [i](#)

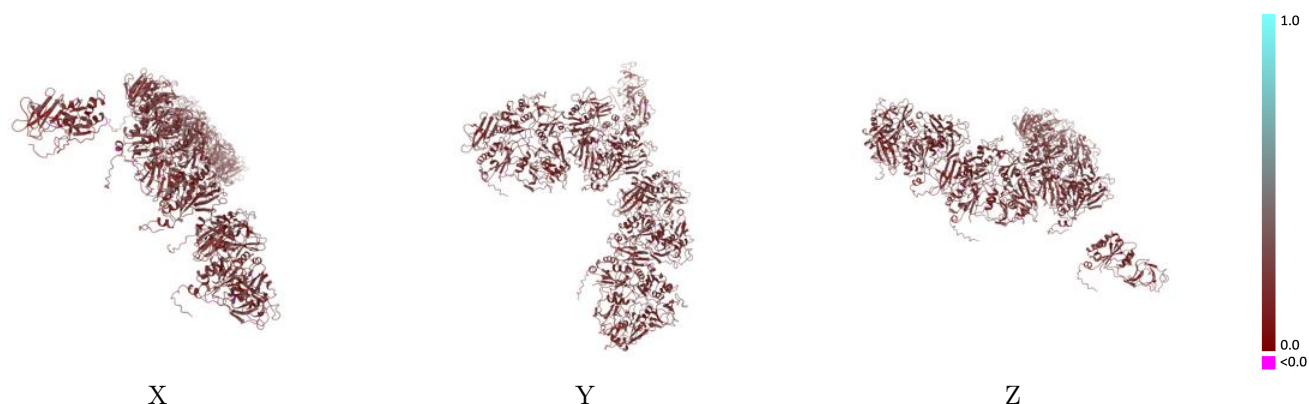


#### 9.1.2 Map-model assembly overlay [i](#)



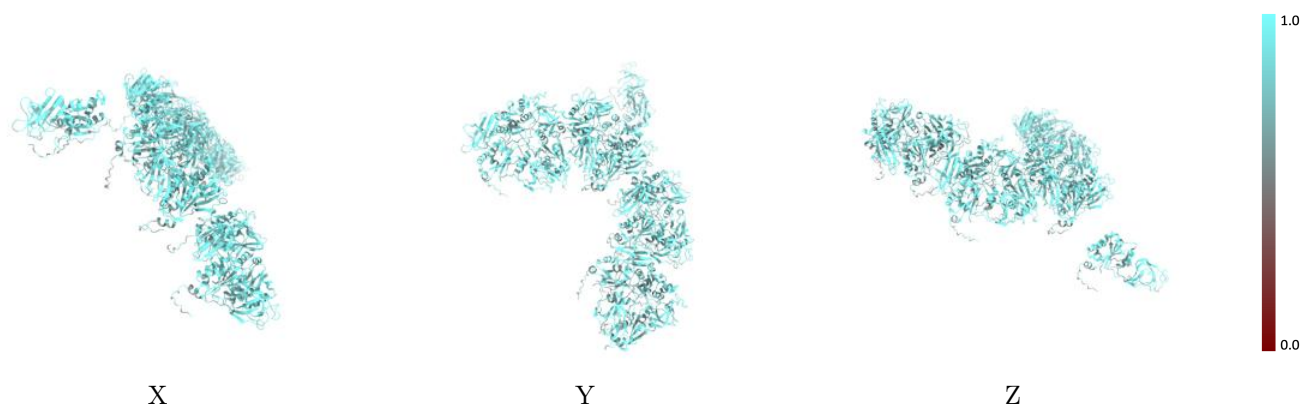
The images above show the 3D surface view of the map at the recommended contour level 2.0 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



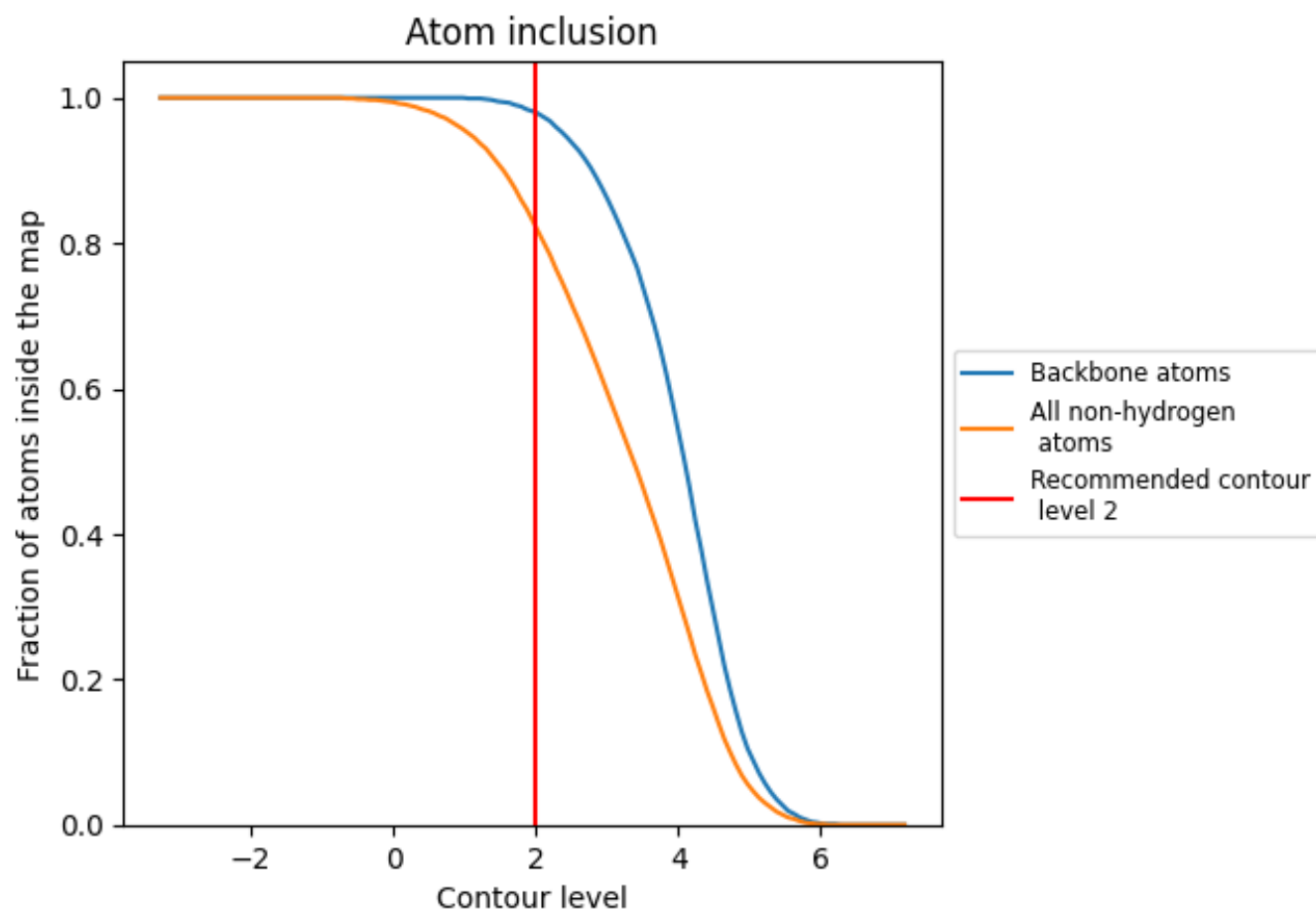
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (2).























































## 9.4 Atom inclusion [i](#)



At the recommended contour level, 98% of all backbone atoms, 82% 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 (2) and Q-score for the entire model and for each chain.

| Chain | Atom inclusion   | Q-score  |
|-------|--|--|
| All   |  0.8230   |  0.2300   |
| A     |  0.1070   |  0.3140   |
| B     |  0.8260   |  0.2120   |
| C     |  0.2140   |  0.2390   |
| D     |  0.2500   |  0.2620   |
| E     |  0.2500   |  0.2520   |
| F     |  0.8550   |  0.2290   |
| G     |  0.8420   |  0.2360   |
| H     |  0.8440   |  0.2320   |
| I     |  0.7980   |  0.2260   |
| J     |  0.8040   |  0.2280   |
| K     |  0.8050   |  0.2340   |
| L     |  0.8340   |  0.2220   |
| M     |  0.8560   |  0.2280   |
| N     |  0.8390  |  0.2350  |
| O     |  0.8420 |  0.2330 |
| P     |  0.8390 |  0.2340 |
| Q     |  0.8340 |  0.2340 |
| R     |  0.0360 |  0.1640 |
| S     |  0.1430 |  0.2570 |
| T     |  0.1790 |  0.1960 |
| U     |  0.2140 |  0.2180 |
| V     |  0.2860 |  0.2410 |
| W     |  0.2500 |  0.3320 |
| X     |  0.1720 |  0.1760 |
| Y     |  0.2500 |  0.2380 |
| Z     |  0.1790 |  0.3550 |

