



## Full wwPDB EM Validation Report ⓘ

Aug 4, 2025 – 07:51 PM EDT

PDB ID : 9O6T / pdb\_00009o6t  
EMDB ID : EMD-70180  
Title : Structure of the human prohibitin complex in the open state  
Authors : Rose, K.; Herrmann, E.; Hurley, J.H.  
Deposited on : 2025-04-14  
Resolution : 22.00 Å(reported)  
Based on initial model : .

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.dev126  
MolProbity : 4-5-2 with Phenix2.0rc1  
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) : 2.45.1

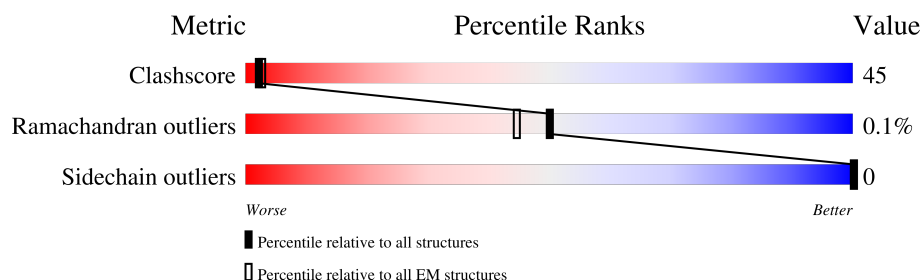
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

*ELECTRON MICROSCOPY*

The reported resolution of this entry is 22.00 Å.

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



| Metric                | Whole archive<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   | A     | 299    |                  |
| 1   | C     | 299    |                  |
| 1   | E     | 299    |                  |
| 1   | G     | 299    |                  |
| 1   | I     | 299    |                  |
| 1   | K     | 299    |                  |
| 1   | M     | 299    |                  |
| 1   | O     | 299    |                  |

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| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|------------------|
| 1   | Q     | 299    |                  |
| 1   | S     | 299    |                  |
| 1   | U     | 299    |                  |
| 1   | W     | 299    |                  |
| 2   | B     | 272    |                  |
| 2   | D     | 272    |                  |
| 2   | F     | 272    |                  |
| 2   | H     | 272    |                  |
| 2   | J     | 272    |                  |
| 2   | L     | 272    |                  |
| 2   | N     | 272    |                  |
| 2   | P     | 272    |                  |
| 2   | R     | 272    |                  |
| 2   | T     | 272    |                  |
| 2   | V     | 272    |                  |
| 2   | X     | 272    |                  |

## 2 Entry composition

There are 2 unique types of molecules in this entry. The entry contains 88189 atoms, of which 44759 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 Prohibitin-2.

| Mol | Chain | Residues | Atoms |      |      |     |     |   | AltConf | Trace |
|-----|-------|----------|-------|------|------|-----|-----|---|---------|-------|
| 1   | A     | 109      | Total | C    | H    | N   | O   | S | 0       | 0     |
|     |       |          | 1742  | 528  | 887  | 159 | 167 | 1 |         |       |
| 1   | C     | 109      | Total | C    | H    | N   | O   | S | 0       | 0     |
|     |       |          | 1742  | 528  | 887  | 159 | 167 | 1 |         |       |
| 1   | E     | 109      | Total | C    | H    | N   | O   | S | 0       | 0     |
|     |       |          | 1742  | 528  | 887  | 159 | 167 | 1 |         |       |
| 1   | G     | 299      | Total | C    | H    | N   | O   | S | 0       | 0     |
|     |       |          | 4779  | 1477 | 2434 | 428 | 435 | 5 |         |       |
| 1   | I     | 299      | Total | C    | H    | N   | O   | S | 0       | 0     |
|     |       |          | 4779  | 1477 | 2434 | 428 | 435 | 5 |         |       |
| 1   | K     | 299      | Total | C    | H    | N   | O   | S | 0       | 0     |
|     |       |          | 4779  | 1477 | 2434 | 428 | 435 | 5 |         |       |
| 1   | M     | 299      | Total | C    | H    | N   | O   | S | 0       | 0     |
|     |       |          | 4779  | 1477 | 2434 | 428 | 435 | 5 |         |       |
| 1   | O     | 299      | Total | C    | H    | N   | O   | S | 0       | 0     |
|     |       |          | 4779  | 1477 | 2434 | 428 | 435 | 5 |         |       |
| 1   | Q     | 299      | Total | C    | H    | N   | O   | S | 0       | 0     |
|     |       |          | 4779  | 1477 | 2434 | 428 | 435 | 5 |         |       |
| 1   | S     | 299      | Total | C    | H    | N   | O   | S | 0       | 0     |
|     |       |          | 4779  | 1477 | 2434 | 428 | 435 | 5 |         |       |
| 1   | U     | 299      | Total | C    | H    | N   | O   | S | 0       | 0     |
|     |       |          | 4779  | 1477 | 2434 | 428 | 435 | 5 |         |       |
| 1   | W     | 299      | Total | C    | H    | N   | O   | S | 0       | 0     |
|     |       |          | 4779  | 1477 | 2434 | 428 | 435 | 5 |         |       |

- Molecule 2 is a protein called Prohibitin 1.

| Mol | Chain | Residues | Atoms |     |     |     |     | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|-----|---------|-------|
| 2   | B     | 96       | Total | C   | H   | N   | O   | 0       | 0     |
|     |       |          | 1482  | 456 | 748 | 129 | 149 |         |       |
| 2   | D     | 96       | Total | C   | H   | N   | O   | 0       | 0     |
|     |       |          | 1482  | 456 | 748 | 129 | 149 |         |       |
| 2   | F     | 96       | Total | C   | H   | N   | O   | 0       | 0     |
|     |       |          | 1482  | 456 | 748 | 129 | 149 |         |       |

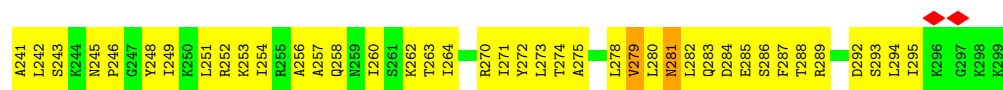
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| Mol | Chain | Residues | Atoms |      |      |     |     |   | AltConf | Trace |
|-----|-------|----------|-------|------|------|-----|-----|---|---------|-------|
| 2   | H     | 272      | Total | C    | H    | N   | O   | S | 0       | 0     |
|     |       |          | 4253  | 1331 | 2150 | 370 | 400 | 2 |         |       |
| 2   | J     | 272      | Total | C    | H    | N   | O   | S | 0       | 0     |
|     |       |          | 4253  | 1331 | 2150 | 370 | 400 | 2 |         |       |
| 2   | L     | 272      | Total | C    | H    | N   | O   | S | 0       | 0     |
|     |       |          | 4253  | 1331 | 2150 | 370 | 400 | 2 |         |       |
| 2   | N     | 272      | Total | C    | H    | N   | O   | S | 0       | 0     |
|     |       |          | 4253  | 1331 | 2150 | 370 | 400 | 2 |         |       |
| 2   | P     | 272      | Total | C    | H    | N   | O   | S | 0       | 0     |
|     |       |          | 4253  | 1331 | 2150 | 370 | 400 | 2 |         |       |
| 2   | R     | 272      | Total | C    | H    | N   | O   | S | 0       | 0     |
|     |       |          | 4253  | 1331 | 2150 | 370 | 400 | 2 |         |       |
| 2   | T     | 272      | Total | C    | H    | N   | O   | S | 0       | 0     |
|     |       |          | 4253  | 1331 | 2150 | 370 | 400 | 2 |         |       |
| 2   | V     | 272      | Total | C    | H    | N   | O   | S | 0       | 0     |
|     |       |          | 4253  | 1331 | 2150 | 370 | 400 | 2 |         |       |
| 2   | X     | 96       | Total | C    | H    | N   | O   |   | 0       | 0     |
|     |       |          | 1482  | 456  | 748  | 129 | 149 |   |         |       |



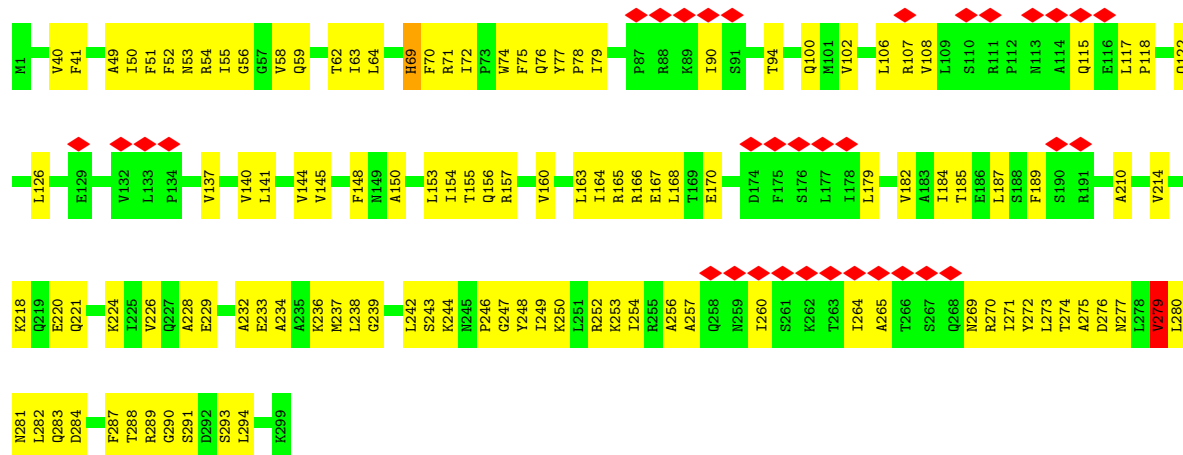




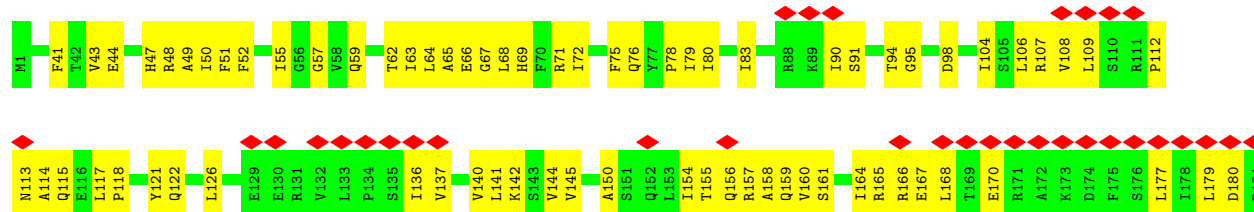
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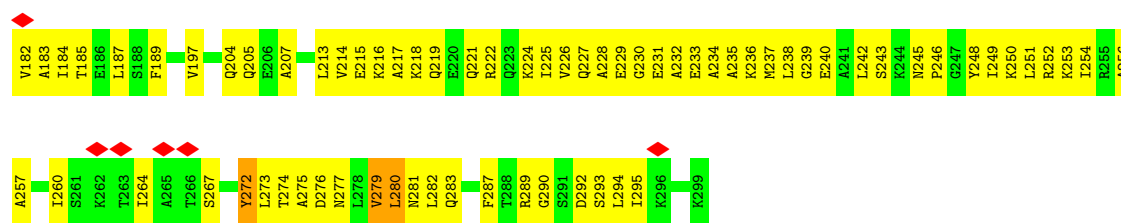


• Molecule 1: Prohibitin-2

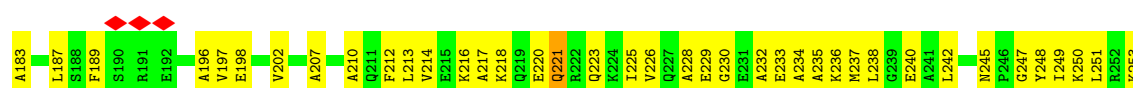
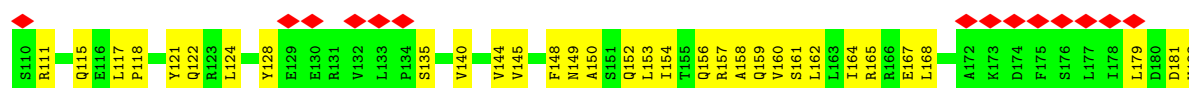
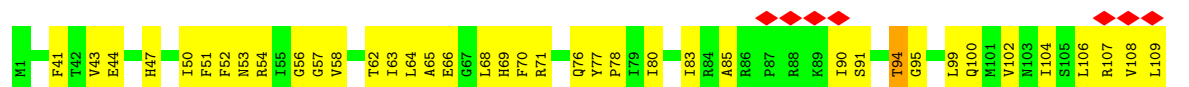


• Molecule 1: Prohibitin-2

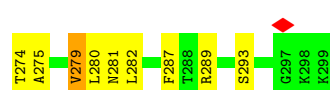
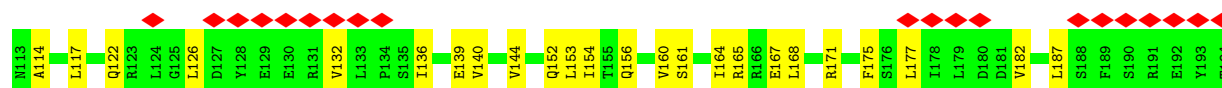




• Molecule 1: Prohibitin-2

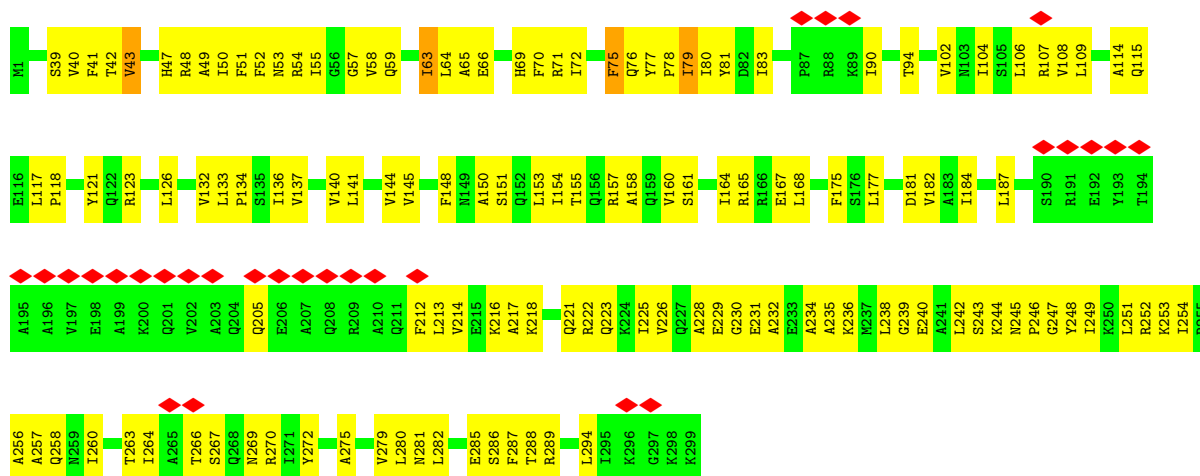


• Molecule 1: Prohibitin-2

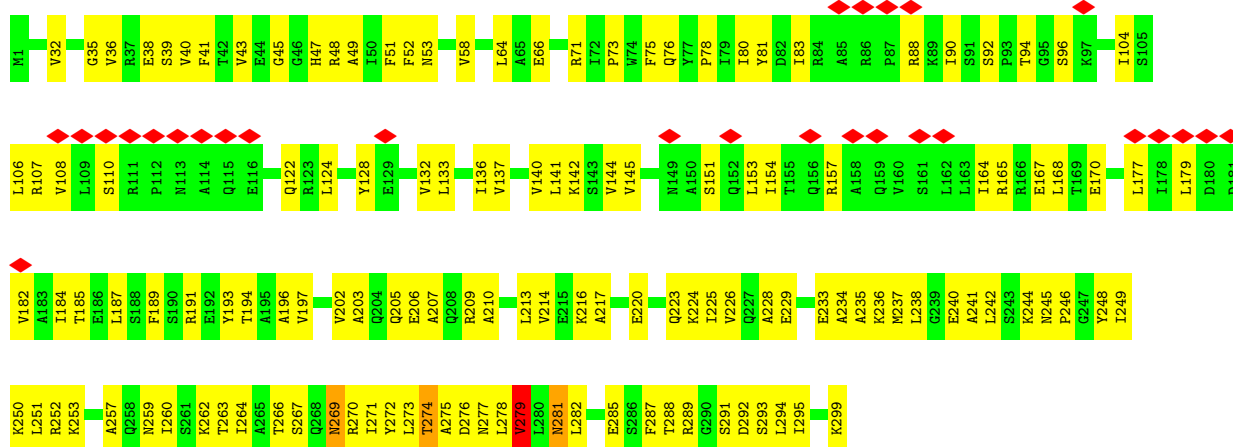


• Molecule 1: Prohibitin-2

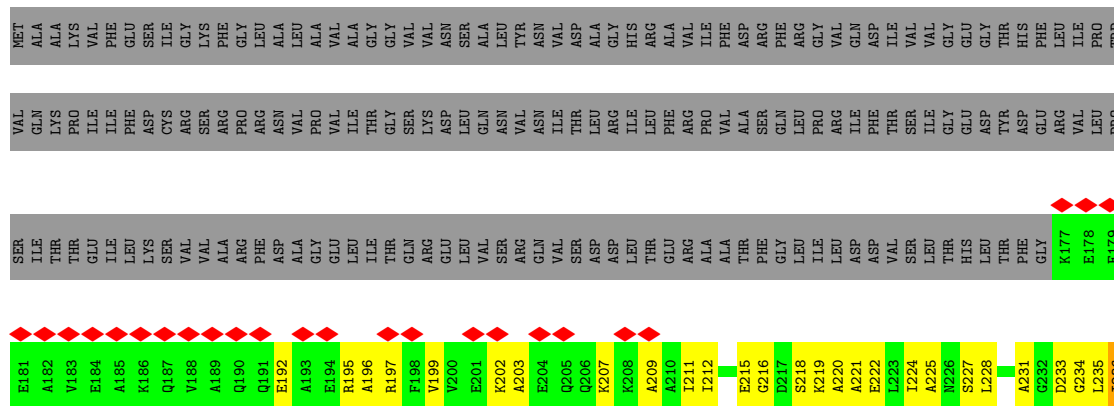




• Molecule 1: Prohibitin-2

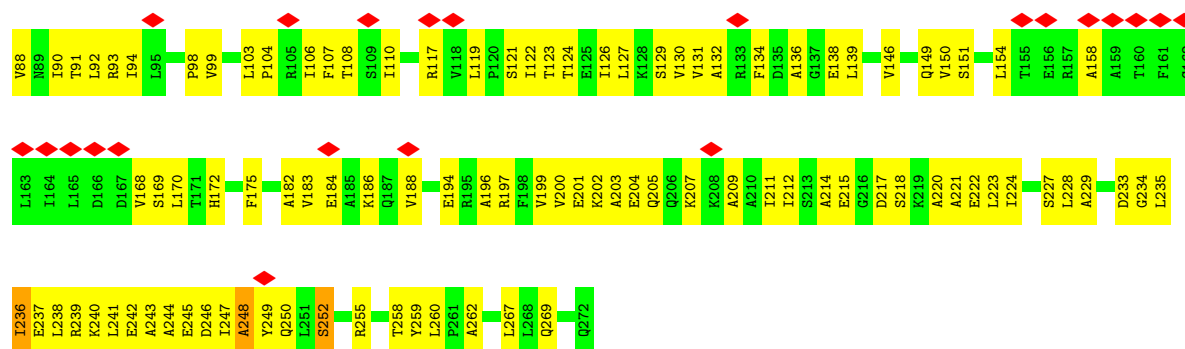


• Molecule 2: Prohibitin 1

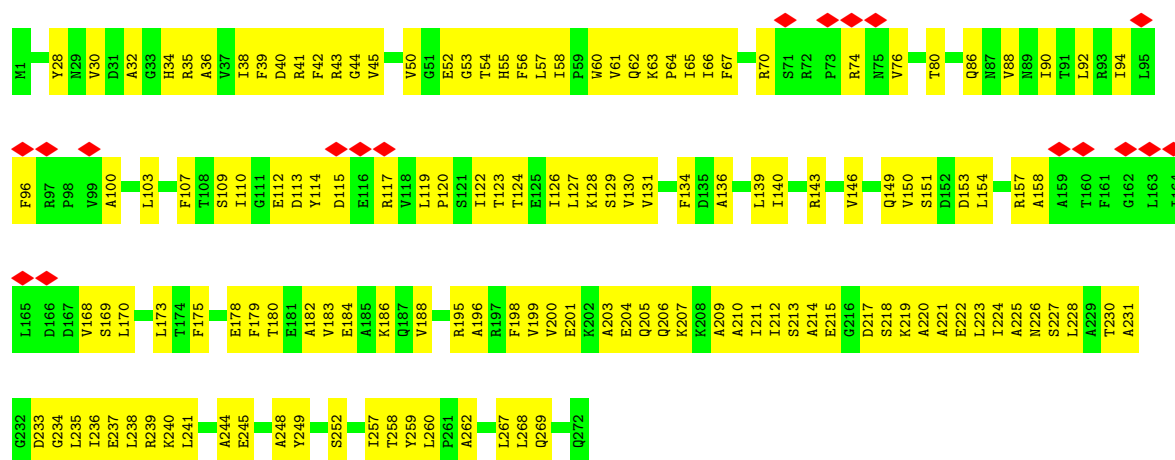








• Molecule 2: Prohibitin 1

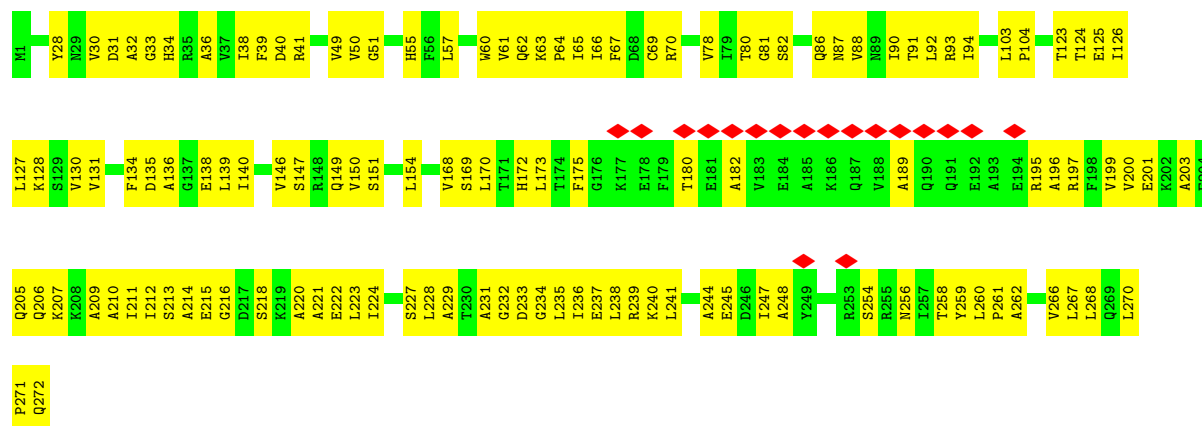


• Molecule 2: Prohibitin 1

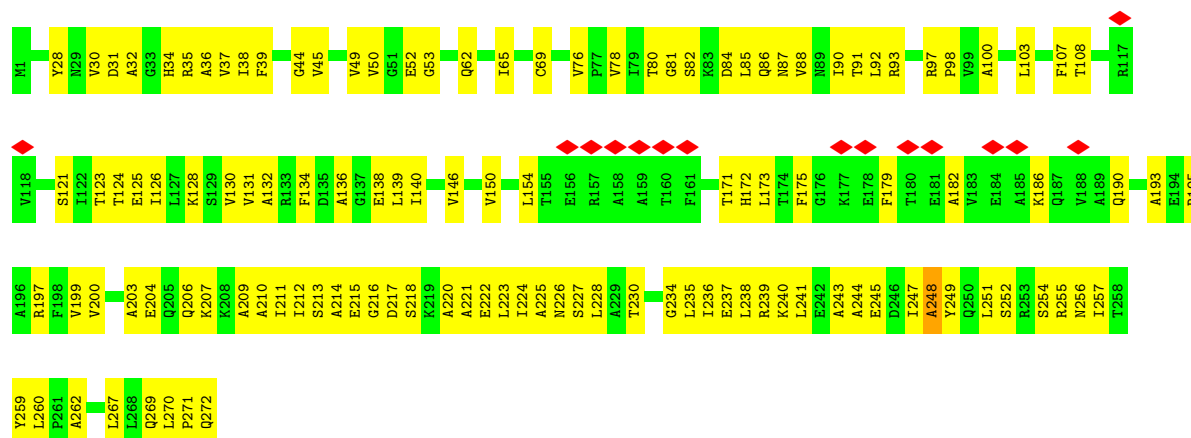


• Molecule 2: Prohibitin 1

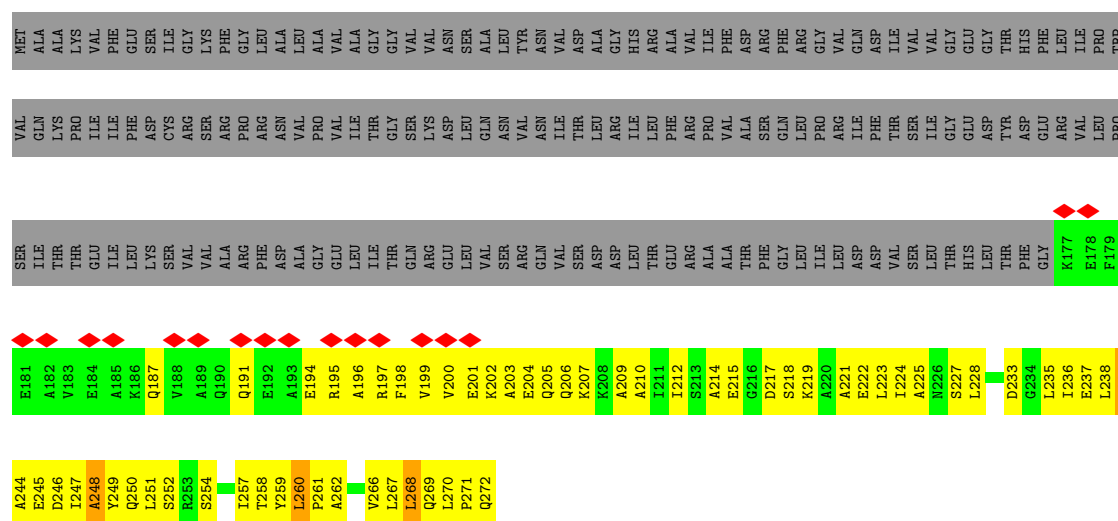




### • Molecule 2: Prohibitin 1



### • Molecule 2: Prohibitin 1



## 4 Experimental information

| Property                             | Value                                                                                 | Source    |
|--------------------------------------|---------------------------------------------------------------------------------------|-----------|
| EM reconstruction method             | SUBTOMOGRAM AVERAGING                                                                 | Depositor |
| Imposed symmetry                     | POINT, C1                                                                             | Depositor |
| Number of subtomograms used          | 1193                                                                                  | Depositor |
| Resolution determination method      | FSC 0.143 CUT-OFF                                                                     | Depositor |
| CTF correction method                | PHASE FLIPPING AND AMPLITUDE CORRECTION                                               | Depositor |
| Microscope                           | TFS KRIOS, TFS KRIOS, TFS KRIOS                                                       | Depositor |
| Voltage (kV)                         | 300, 300, 300                                                                         | Depositor |
| Electron dose ( $e^-/\text{\AA}^2$ ) | 90, 120, 120                                                                          | Depositor |
| Minimum defocus (nm)                 | 2000, 2000, 2000                                                                      | Depositor |
| Maximum defocus (nm)                 | 6000, 6000, 6000                                                                      | Depositor |
| Magnification                        | 43000, 64000, 42000                                                                   | Depositor |
| Image detector                       | GATAN K3 BIOQUANTUM (6k x 4k), FEI FALCON IV (4k x 4k), GATAN K3 BIOQUANTUM (6k x 4k) | Depositor |
| Maximum map value                    | 0.002                                                                                 | Depositor |
| Minimum map value                    | -0.001                                                                                | Depositor |
| Average map value                    | 0.000                                                                                 | Depositor |
| Map value standard deviation         | 0.000                                                                                 | Depositor |
| Recommended contour level            | 0.0001                                                                                | Depositor |
| Map size (Å)                         | 503.99997, 503.99997, 503.99997                                                       | wwPDB     |
| Map dimensions                       | 120, 120, 120                                                                         | wwPDB     |
| Map angles (°)                       | 90.0, 90.0, 90.0                                                                      | wwPDB     |
| Pixel spacing (Å)                    | 4.2, 4.2, 4.2                                                                         | Depositor |

## 5 Model quality

### 5.1 Standard geometry

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

| Mol | Chain | Bond lengths |                | Bond angles |                 |
|-----|-------|--------------|----------------|-------------|-----------------|
|     |       | RMSZ         | # Z  >5        | RMSZ        | # Z  >5         |
| 1   | A     | 0.38         | 0/860          | 0.77        | 1/1148 (0.1%)   |
| 1   | C     | 0.33         | 0/860          | 0.64        | 0/1148          |
| 1   | E     | 0.33         | 0/860          | 0.62        | 0/1148          |
| 1   | G     | 0.23         | 0/2376         | 0.50        | 0/3198          |
| 1   | I     | 0.33         | 0/2376         | 0.62        | 0/3198          |
| 1   | K     | 0.25         | 0/2376         | 0.51        | 0/3198          |
| 1   | M     | 0.23         | 0/2376         | 0.46        | 0/3198          |
| 1   | O     | 0.28         | 0/2376         | 0.55        | 0/3198          |
| 1   | Q     | 0.34         | 1/2376 (0.0%)  | 0.52        | 2/3198 (0.1%)   |
| 1   | S     | 0.18         | 0/2376         | 0.42        | 0/3198          |
| 1   | U     | 0.27         | 0/2376         | 0.52        | 2/3198 (0.1%)   |
| 1   | W     | 0.24         | 0/2376         | 0.54        | 0/3198          |
| 2   | B     | 0.31         | 0/739          | 0.68        | 1/993 (0.1%)    |
| 2   | D     | 0.35         | 0/739          | 0.71        | 0/993           |
| 2   | F     | 0.33         | 0/739          | 0.68        | 0/993           |
| 2   | H     | 0.27         | 0/2133         | 0.56        | 0/2887          |
| 2   | J     | 0.27         | 0/2133         | 0.56        | 1/2887 (0.0%)   |
| 2   | L     | 0.26         | 0/2133         | 0.54        | 0/2887          |
| 2   | N     | 0.27         | 0/2133         | 0.61        | 2/2887 (0.1%)   |
| 2   | P     | 0.25         | 0/2133         | 0.50        | 0/2887          |
| 2   | R     | 0.24         | 0/2133         | 0.52        | 0/2887          |
| 2   | T     | 0.22         | 0/2133         | 0.48        | 0/2887          |
| 2   | V     | 0.24         | 0/2133         | 0.48        | 0/2887          |
| 2   | X     | 0.51         | 1/739 (0.1%)   | 0.93        | 1/993 (0.1%)    |
| All | All   | 0.28         | 2/43984 (0.0%) | 0.56        | 10/59294 (0.0%) |

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

| Mol | Chain | #Chirality outliers | #Planarity outliers |
|-----|-------|---------------------|---------------------|
| 1   | A     | 0                   | 4                   |

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| Mol | Chain | #Chirality outliers | #Planarity outliers |
|-----|-------|---------------------|---------------------|
| 1   | C     | 0                   | 3                   |
| 1   | E     | 0                   | 3                   |
| 1   | G     | 0                   | 6                   |
| 1   | I     | 0                   | 8                   |
| 1   | K     | 0                   | 2                   |
| 1   | M     | 0                   | 2                   |
| 1   | O     | 0                   | 3                   |
| 1   | Q     | 0                   | 1                   |
| 1   | S     | 0                   | 1                   |
| 1   | U     | 0                   | 3                   |
| 1   | W     | 0                   | 6                   |
| 2   | B     | 0                   | 1                   |
| 2   | F     | 0                   | 3                   |
| 2   | H     | 0                   | 1                   |
| 2   | J     | 0                   | 3                   |
| 2   | L     | 0                   | 3                   |
| 2   | N     | 0                   | 3                   |
| 2   | R     | 0                   | 1                   |
| 2   | V     | 0                   | 1                   |
| 2   | X     | 0                   | 3                   |
| All | All   | 0                   | 61                  |

All (2) bond length outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z      | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|-------|--------|-------------|----------|
| 1   | Q     | 94  | THR  | C-N   | -10.92 | 1.28        | 1.33     |
| 2   | X     | 260 | LEU  | N-CA  | 6.67   | 1.54        | 1.45     |

All (10) bond angle outliers are listed below:

| Mol | Chain | Res | Type | Atoms   | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 2   | N     | 61  | VAL  | N-CA-C  | -8.49 | 104.47      | 112.96   |
| 2   | B     | 236 | ILE  | N-CA-C  | -7.28 | 102.66      | 110.23   |
| 1   | A     | 274 | THR  | CB-CA-C | 6.23  | 122.81      | 110.42   |
| 2   | J     | 28  | TYR  | CB-CA-C | 6.21  | 119.72      | 109.72   |
| 2   | X     | 260 | LEU  | N-CA-C  | 6.20  | 118.45      | 109.84   |
| 2   | N     | 236 | ILE  | N-CA-C  | -6.03 | 103.96      | 110.23   |
| 1   | U     | 75  | PHE  | N-CA-C  | -5.95 | 106.66      | 114.04   |
| 1   | Q     | 221 | GLN  | N-CA-CB | 5.78  | 118.55      | 109.94   |
| 1   | U     | 79  | ILE  | N-CA-C  | -5.22 | 102.47      | 109.30   |
| 1   | Q     | 221 | GLN  | N-CA-C  | -5.00 | 105.11      | 111.11   |

There are no chirality outliers.

All (61) planarity outliers are listed below:

| Mol | Chain | Res | Type | Group   |
|-----|-------|-----|------|---------|
| 1   | A     | 272 | TYR  | Peptide |
| 1   | A     | 275 | ALA  | Peptide |
| 1   | A     | 278 | LEU  | Peptide |
| 1   | A     | 280 | LEU  | Peptide |
| 2   | B     | 252 | SER  | Peptide |
| 1   | C     | 261 | SER  | Peptide |
| 1   | C     | 288 | THR  | Peptide |
| 1   | C     | 291 | SER  | Peptide |
| 1   | E     | 272 | TYR  | Peptide |
| 1   | E     | 273 | LEU  | Peptide |
| 1   | E     | 291 | SER  | Peptide |
| 2   | F     | 200 | VAL  | Peptide |
| 2   | F     | 219 | LYS  | Peptide |
| 2   | F     | 239 | ARG  | Peptide |
| 1   | G     | 189 | PHE  | Peptide |
| 1   | G     | 191 | ARG  | Peptide |
| 1   | G     | 233 | GLU  | Peptide |
| 1   | G     | 279 | VAL  | Peptide |
| 1   | G     | 280 | LEU  | Peptide |
| 1   | G     | 281 | ASN  | Peptide |
| 2   | H     | 248 | ALA  | Peptide |
| 1   | I     | 189 | PHE  | Peptide |
| 1   | I     | 191 | ARG  | Peptide |
| 1   | I     | 279 | VAL  | Peptide |
| 1   | I     | 281 | ASN  | Peptide |
| 1   | I     | 54  | ARG  | Peptide |
| 1   | I     | 63  | ILE  | Peptide |
| 1   | I     | 69  | HIS  | Peptide |
| 1   | I     | 76  | GLN  | Peptide |
| 2   | J     | 248 | ALA  | Peptide |
| 2   | J     | 28  | TYR  | Peptide |
| 2   | J     | 33  | GLY  | Peptide |
| 1   | K     | 275 | ALA  | Peptide |
| 1   | K     | 281 | ASN  | Peptide |
| 2   | L     | 248 | ALA  | Peptide |
| 2   | L     | 55  | HIS  | Peptide |
| 2   | L     | 63  | LYS  | Peptide |
| 1   | M     | 279 | VAL  | Peptide |
| 1   | M     | 69  | HIS  | Peptide |
| 2   | N     | 248 | ALA  | Peptide |

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| Mol | Chain | Res | Type | Group     |
|-----|-------|-----|------|-----------|
| 2   | N     | 252 | SER  | Peptide   |
| 2   | N     | 43  | ARG  | Sidechain |
| 1   | O     | 272 | TYR  | Peptide   |
| 1   | O     | 279 | VAL  | Peptide   |
| 1   | O     | 280 | LEU  | Peptide   |
| 1   | Q     | 279 | VAL  | Peptide   |
| 2   | R     | 43  | ARG  | Peptide   |
| 1   | S     | 279 | VAL  | Peptide   |
| 1   | U     | 244 | LYS  | Peptide   |
| 1   | U     | 43  | VAL  | Peptide   |
| 1   | U     | 63  | ILE  | Peptide   |
| 2   | V     | 248 | ALA  | Peptide   |
| 1   | W     | 191 | ARG  | Peptide   |
| 1   | W     | 224 | LYS  | Peptide   |
| 1   | W     | 269 | ASN  | Peptide   |
| 1   | W     | 274 | THR  | Peptide   |
| 1   | W     | 279 | VAL  | Peptide   |
| 1   | W     | 281 | ASN  | Peptide   |
| 2   | X     | 239 | ARG  | Peptide   |
| 2   | X     | 248 | ALA  | Peptide   |
| 2   | X     | 268 | LEU  | Peptide   |

## 5.2 Too-close contacts ⓘ

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

| Mol | Chain | Non-H | H(model) | H(added) | Clashes | Symm-Clashes |
|-----|-------|-------|----------|----------|---------|--------------|
| 1   | A     | 855   | 887      | 886      | 190     | 0            |
| 1   | C     | 855   | 887      | 886      | 185     | 0            |
| 1   | E     | 855   | 887      | 886      | 205     | 0            |
| 1   | G     | 2345  | 2434     | 2434     | 275     | 0            |
| 1   | I     | 2345  | 2434     | 2434     | 430     | 0            |
| 1   | K     | 2345  | 2434     | 2434     | 297     | 0            |
| 1   | M     | 2345  | 2434     | 2434     | 204     | 0            |
| 1   | O     | 2345  | 2434     | 2434     | 254     | 0            |
| 1   | Q     | 2345  | 2434     | 2434     | 176     | 0            |
| 1   | S     | 2345  | 2434     | 2434     | 130     | 0            |
| 1   | U     | 2345  | 2434     | 2434     | 256     | 0            |
| 1   | W     | 2345  | 2434     | 2434     | 250     | 0            |

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| Mol | Chain | Non-H | H(model) | H(added) | Clashes | Symm-Clashes |
|-----|-------|-------|----------|----------|---------|--------------|
| 2   | B     | 734   | 748      | 747      | 162     | 0            |
| 2   | D     | 734   | 748      | 747      | 182     | 0            |
| 2   | F     | 734   | 748      | 747      | 187     | 0            |
| 2   | H     | 2103  | 2150     | 2150     | 329     | 0            |
| 2   | J     | 2103  | 2150     | 2150     | 342     | 0            |
| 2   | L     | 2103  | 2150     | 2150     | 236     | 0            |
| 2   | N     | 2103  | 2150     | 2150     | 228     | 0            |
| 2   | P     | 2103  | 2150     | 2150     | 218     | 0            |
| 2   | R     | 2103  | 2150     | 2150     | 180     | 0            |
| 2   | T     | 2103  | 2150     | 2150     | 204     | 0            |
| 2   | V     | 2103  | 2150     | 2150     | 228     | 0            |
| 2   | X     | 734   | 748      | 747      | 186     | 0            |
| All | All   | 43430 | 44759    | 44752    | 4008    | 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 45.

All (4008) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:228:ALA:HB3  | 2:B:220:ALA:HB1  | 1.21                     | 1.15              |
| 1:M:238:LEU:HD13 | 2:N:235:LEU:HD13 | 1.29                     | 1.14              |
| 1:I:238:LEU:HD13 | 2:J:235:LEU:HD13 | 1.40                     | 1.01              |
| 1:U:214:VAL:HG12 | 2:V:209:ALA:HB3  | 1.42                     | 1.00              |
| 1:Q:214:VAL:HG13 | 2:R:209:ALA:HB3  | 1.45                     | 0.99              |
| 1:E:228:ALA:HB3  | 2:F:220:ALA:HB1  | 1.45                     | 0.96              |
| 2:F:251:LEU:HD13 | 2:F:257:ILE:HG21 | 1.47                     | 0.96              |
| 1:A:275:ALA:HB2  | 2:V:260:LEU:HD22 | 1.44                     | 0.96              |
| 1:W:214:VAL:HG22 | 2:X:212:ILE:HD12 | 1.48                     | 0.95              |
| 1:C:251:LEU:HA   | 1:C:254:ILE:HD12 | 1.48                     | 0.95              |
| 1:S:214:VAL:HG13 | 2:T:209:ALA:HB3  | 1.48                     | 0.95              |
| 2:P:228:LEU:HD13 | 2:P:236:ILE:HD11 | 1.48                     | 0.95              |
| 1:W:225:ILE:HD13 | 2:X:219:LYS:HE2  | 1.49                     | 0.94              |
| 1:I:107:ARG:O    | 1:I:182:VAL:HG13 | 1.69                     | 0.92              |
| 2:F:243:ALA:HB1  | 1:G:254:ILE:HD13 | 1.51                     | 0.92              |
| 2:V:251:LEU:HD13 | 1:W:273:LEU:HD11 | 1.51                     | 0.92              |
| 1:E:257:ALA:HB1  | 1:G:279:VAL:HG13 | 1.49                     | 0.92              |
| 1:I:256:ALA:HB3  | 2:J:241:LEU:HD12 | 1.51                     | 0.92              |
| 1:Q:214:VAL:CG1  | 2:R:209:ALA:HB3  | 2.00                     | 0.91              |
| 1:U:50:ILE:HD12  | 1:U:58:VAL:HG11  | 1.53                     | 0.91              |
| 2:L:244:ALA:O    | 2:L:248:ALA:HB3  | 1.70                     | 0.91              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:238:LEU:HD13 | 2:P:235:LEU:HD13 | 1.51                     | 0.91              |
| 2:N:196:ALA:O    | 2:N:200:VAL:HG23 | 1.71                     | 0.90              |
| 2:H:224:ILE:HD12 | 1:I:248:TYR:HA   | 1.53                     | 0.90              |
| 1:W:260:ILE:HG23 | 1:W:264:ILE:HD12 | 1.51                     | 0.90              |
| 1:K:145:VAL:HG13 | 1:K:153:LEU:HD11 | 1.55                     | 0.89              |
| 2:N:236:ILE:HG22 | 2:N:240:LYS:HZ1  | 1.36                     | 0.89              |
| 1:A:251:LEU:HD13 | 2:X:228:LEU:HD11 | 1.53                     | 0.89              |
| 2:T:228:LEU:HD11 | 1:U:251:LEU:HB2  | 1.53                     | 0.88              |
| 1:C:272:TYR:CD2  | 2:D:260:LEU:HD22 | 2.09                     | 0.88              |
| 1:G:260:ILE:HG23 | 1:G:264:ILE:HB   | 1.54                     | 0.88              |
| 2:F:200:VAL:HG11 | 1:G:223:GLN:O    | 1.74                     | 0.88              |
| 2:H:228:LEU:HD13 | 2:H:236:ILE:HD11 | 1.55                     | 0.88              |
| 1:A:228:ALA:HB1  | 2:B:224:ILE:HD11 | 1.53                     | 0.88              |
| 2:F:247:ILE:HG12 | 1:I:280:LEU:HD22 | 1.53                     | 0.88              |
| 1:G:264:ILE:HD11 | 2:H:248:ALA:HB1  | 1.56                     | 0.88              |
| 1:I:106:LEU:HD23 | 1:I:137:VAL:HG13 | 1.57                     | 0.87              |
| 1:M:242:LEU:HD13 | 2:N:238:LEU:HB2  | 1.56                     | 0.87              |
| 1:C:282:LEU:HD21 | 2:X:240:LYS:HE3  | 1.56                     | 0.86              |
| 2:J:130:VAL:HG21 | 2:J:150:VAL:HG22 | 1.58                     | 0.86              |
| 1:A:226:VAL:HG11 | 2:X:207:LYS:HD2  | 1.57                     | 0.86              |
| 2:R:260:LEU:HD22 | 2:R:268:LEU:HD13 | 1.55                     | 0.86              |
| 1:U:242:LEU:HD13 | 1:U:249:ILE:HD11 | 1.55                     | 0.86              |
| 2:B:238:LEU:HD23 | 2:B:241:LEU:HD12 | 1.57                     | 0.86              |
| 1:A:262:LYS:HA   | 2:X:251:LEU:HD21 | 1.58                     | 0.86              |
| 1:I:210:ALA:O    | 1:I:214:VAL:HG23 | 1.75                     | 0.86              |
| 2:T:92:LEU:HD21  | 2:T:168:VAL:HG13 | 1.55                     | 0.86              |
| 2:B:236:ILE:O    | 1:C:254:ILE:HD13 | 1.74                     | 0.85              |
| 1:G:214:VAL:HG13 | 2:H:209:ALA:HB2  | 1.58                     | 0.85              |
| 2:H:130:VAL:HG21 | 2:H:150:VAL:HG22 | 1.57                     | 0.85              |
| 2:J:39:PHE:HB2   | 2:J:65:ILE:HD11  | 1.58                     | 0.85              |
| 2:F:204:GLU:HG2  | 1:G:226:VAL:HG11 | 1.58                     | 0.85              |
| 1:S:132:VAL:HG11 | 1:S:177:LEU:HD12 | 1.57                     | 0.85              |
| 1:K:140:VAL:HG22 | 1:K:167:GLU:OE1  | 1.76                     | 0.85              |
| 1:U:214:VAL:CG1  | 2:V:209:ALA:HB3  | 2.07                     | 0.85              |
| 1:G:104:ILE:HD11 | 1:G:153:LEU:HD13 | 1.58                     | 0.85              |
| 2:T:224:ILE:HD11 | 1:U:251:LEU:HD23 | 1.57                     | 0.85              |
| 1:W:217:ALA:HB3  | 2:X:212:ILE:HG22 | 1.59                     | 0.85              |
| 2:T:267:LEU:HD12 | 2:V:267:LEU:CD2  | 2.06                     | 0.84              |
| 2:H:85:LEU:HD11  | 1:I:154:ILE:HD13 | 1.59                     | 0.84              |
| 1:G:217:ALA:HB3  | 2:H:209:ALA:HB1  | 1.58                     | 0.84              |
| 1:W:260:ILE:CG2  | 1:W:264:ILE:HD12 | 2.07                     | 0.84              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:S:249:ILE:HD13 | 2:T:237:GLU:HG3  | 1.60                     | 0.84              |
| 1:A:228:ALA:HB3  | 2:B:220:ALA:CB   | 2.05                     | 0.83              |
| 2:N:239:ARG:HG3  | 2:N:242:GLU:HB2  | 1.61                     | 0.83              |
| 2:B:195:ARG:O    | 2:B:199:VAL:HG23 | 1.77                     | 0.83              |
| 2:F:260:LEU:HD12 | 2:F:268:LEU:HD12 | 1.61                     | 0.83              |
| 1:A:279:VAL:HG21 | 1:A:286:SER:O    | 1.78                     | 0.83              |
| 1:M:273:LEU:HB3  | 1:O:280:LEU:HD23 | 1.60                     | 0.82              |
| 1:A:263:THR:HG21 | 2:B:249:TYR:CE1  | 2.14                     | 0.82              |
| 2:V:90:ILE:CD1   | 2:V:131:VAL:HG21 | 2.08                     | 0.82              |
| 2:J:30:VAL:HG13  | 2:J:54:THR:OG1   | 1.79                     | 0.82              |
| 1:M:277:ASN:HB2  | 1:O:280:LEU:HD21 | 1.62                     | 0.82              |
| 1:G:274:THR:HG22 | 1:G:275:ALA:H    | 1.45                     | 0.82              |
| 2:N:39:PHE:CD1   | 2:N:45:VAL:HG22  | 2.14                     | 0.82              |
| 1:W:264:ILE:HG23 | 2:X:252:SER:CB   | 2.10                     | 0.82              |
| 1:A:226:VAL:HG21 | 2:X:206:GLN:NE2  | 1.94                     | 0.82              |
| 2:P:130:VAL:HG22 | 2:P:149:GLN:OE1  | 1.79                     | 0.82              |
| 2:L:260:LEU:O    | 1:M:275:ALA:HB2  | 1.80                     | 0.81              |
| 2:F:247:ILE:HG23 | 1:I:280:LEU:HD13 | 1.60                     | 0.81              |
| 2:L:235:LEU:HD12 | 2:L:238:LEU:HB3  | 1.62                     | 0.81              |
| 1:U:51:PHE:O     | 1:U:58:VAL:HG13  | 1.80                     | 0.81              |
| 2:H:235:LEU:HD12 | 2:H:238:LEU:HB3  | 1.63                     | 0.81              |
| 1:I:106:LEU:HD21 | 1:I:165:ARG:NH2  | 1.94                     | 0.81              |
| 1:K:106:LEU:HD23 | 1:K:137:VAL:HG13 | 1.63                     | 0.81              |
| 1:A:271:ILE:HG22 | 2:B:258:THR:HA   | 1.61                     | 0.81              |
| 2:V:131:VAL:HG13 | 2:V:139:LEU:HD11 | 1.61                     | 0.81              |
| 2:H:228:LEU:CD1  | 2:H:236:ILE:HD11 | 2.10                     | 0.81              |
| 2:D:236:ILE:O    | 1:E:254:ILE:HD13 | 1.80                     | 0.80              |
| 1:I:43:VAL:HG12  | 1:I:47:HIS:HB2   | 1.63                     | 0.80              |
| 2:J:228:LEU:HD13 | 2:J:236:ILE:HD11 | 1.62                     | 0.80              |
| 2:N:130:VAL:HG22 | 2:N:149:GLN:OE1  | 1.80                     | 0.80              |
| 1:K:107:ARG:O    | 1:K:182:VAL:HG13 | 1.81                     | 0.80              |
| 1:M:238:LEU:HD22 | 2:N:238:LEU:HD23 | 1.64                     | 0.80              |
| 1:S:165:ARG:HH12 | 1:S:168:LEU:HD23 | 1.46                     | 0.80              |
| 1:A:237:MET:HE3  | 2:X:218:SER:O    | 1.81                     | 0.80              |
| 1:Q:43:VAL:HG12  | 1:Q:47:HIS:HB2   | 1.64                     | 0.80              |
| 2:P:154:LEU:HD23 | 2:P:168:VAL:HG22 | 1.64                     | 0.80              |
| 1:W:272:TYR:CE1  | 2:X:258:THR:HG22 | 2.17                     | 0.80              |
| 2:R:50:VAL:HG13  | 2:R:55:HIS:HB2   | 1.61                     | 0.80              |
| 2:B:251:LEU:HD13 | 2:B:257:ILE:HG22 | 1.64                     | 0.79              |
| 1:K:260:ILE:HG23 | 1:K:264:ILE:HD12 | 1.62                     | 0.79              |
| 1:I:279:VAL:HB   | 1:I:280:LEU:HD23 | 1.63                     | 0.79              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:108:VAL:HA   | 1:K:182:VAL:HG22 | 1.65                     | 0.79              |
| 2:L:214:ALA:HB2  | 1:M:234:ALA:HB1  | 1.64                     | 0.79              |
| 2:V:28:TYR:OH    | 2:V:50:VAL:HG11  | 1.82                     | 0.79              |
| 1:I:243:SER:OG   | 2:J:231:ALA:HB1  | 1.83                     | 0.79              |
| 1:I:104:ILE:HD12 | 1:I:145:VAL:HG21 | 1.63                     | 0.78              |
| 1:M:242:LEU:HD22 | 1:M:249:ILE:HG13 | 1.65                     | 0.78              |
| 2:N:260:LEU:O    | 1:O:275:ALA:HB2  | 1.83                     | 0.78              |
| 2:V:259:TYR:C    | 2:V:260:LEU:HD12 | 2.09                     | 0.78              |
| 2:X:240:LYS:O    | 2:X:244:ALA:HB2  | 1.83                     | 0.78              |
| 2:N:28:TYR:OH    | 2:N:50:VAL:HG21  | 1.82                     | 0.78              |
| 2:B:203:ALA:HB1  | 1:C:226:VAL:HG11 | 1.64                     | 0.78              |
| 1:E:222:ARG:O    | 1:E:226:VAL:HG23 | 1.84                     | 0.78              |
| 1:G:136:ILE:O    | 1:G:140:VAL:HG23 | 1.84                     | 0.78              |
| 1:I:235:ALA:HB2  | 2:J:235:LEU:HD23 | 1.65                     | 0.78              |
| 2:L:236:ILE:HD13 | 1:M:250:LYS:HD3  | 1.66                     | 0.78              |
| 2:T:92:LEU:HD13  | 2:T:150:VAL:HG11 | 1.65                     | 0.78              |
| 1:I:253:LYS:HA   | 2:J:241:LEU:HD11 | 1.66                     | 0.78              |
| 1:I:43:VAL:HG13  | 1:I:80:ILE:HG23  | 1.64                     | 0.78              |
| 2:P:92:LEU:HD21  | 2:P:168:VAL:HG13 | 1.66                     | 0.78              |
| 1:W:133:LEU:HD23 | 1:W:136:ILE:HD11 | 1.66                     | 0.78              |
| 1:K:58:VAL:HG23  | 2:L:52:GLU:HB3   | 1.67                     | 0.77              |
| 2:R:30:VAL:HG13  | 2:R:34:HIS:O     | 1.83                     | 0.77              |
| 2:N:214:ALA:HB2  | 1:O:234:ALA:HB1  | 1.66                     | 0.77              |
| 2:T:90:ILE:HD11  | 2:T:139:LEU:HD13 | 1.66                     | 0.77              |
| 1:A:242:LEU:HD13 | 1:A:249:ILE:HG13 | 1.63                     | 0.77              |
| 2:F:204:GLU:CG   | 1:G:226:VAL:HG11 | 2.13                     | 0.77              |
| 2:R:45:VAL:HG21  | 2:R:107:PHE:CD1  | 2.19                     | 0.77              |
| 1:S:246:PRO:HB3  | 1:S:249:ILE:HD12 | 1.65                     | 0.77              |
| 2:J:195:ARG:O    | 2:J:199:VAL:HG23 | 1.85                     | 0.77              |
| 2:J:85:LEU:HD21  | 1:K:189:PHE:CE1  | 2.19                     | 0.77              |
| 2:N:50:VAL:HG13  | 2:N:55:HIS:HB2   | 1.64                     | 0.77              |
| 2:N:92:LEU:HD21  | 2:N:168:VAL:HG13 | 1.65                     | 0.77              |
| 1:C:238:LEU:HD12 | 2:D:235:LEU:HD13 | 1.67                     | 0.77              |
| 2:B:221:ALA:HB1  | 1:C:248:TYR:CD2  | 2.20                     | 0.77              |
| 2:L:90:ILE:HD11  | 2:L:139:LEU:HD13 | 1.66                     | 0.77              |
| 2:L:28:TYR:OH    | 2:L:50:VAL:HG11  | 1.85                     | 0.77              |
| 2:J:244:ALA:O    | 2:J:248:ALA:HB3  | 1.85                     | 0.76              |
| 1:W:132:VAL:HG11 | 1:W:177:LEU:HD12 | 1.66                     | 0.76              |
| 2:J:228:LEU:HD22 | 2:J:233:ASP:HA   | 1.64                     | 0.76              |
| 2:T:41:ARG:HE    | 1:U:65:ALA:HB3   | 1.51                     | 0.76              |
| 1:K:221:GLN:OE1  | 2:L:212:ILE:HG23 | 1.86                     | 0.76              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:242:LEU:HD13 | 2:P:238:LEU:HB2  | 1.67                     | 0.76              |
| 1:M:250:LYS:HG2  | 1:O:279:VAL:HG22 | 1.67                     | 0.76              |
| 2:T:228:LEU:HD12 | 1:U:247:GLY:O    | 1.86                     | 0.76              |
| 2:H:218:SER:O    | 2:H:221:ALA:HB3  | 1.86                     | 0.76              |
| 1:I:140:VAL:HG21 | 1:I:168:LEU:HB2  | 1.67                     | 0.76              |
| 2:J:126:ILE:O    | 2:J:130:VAL:HG23 | 1.86                     | 0.76              |
| 1:W:249:ILE:HG23 | 2:X:241:LEU:HD21 | 1.67                     | 0.76              |
| 1:W:272:TYR:HE1  | 2:X:258:THR:HG22 | 1.48                     | 0.76              |
| 2:J:36:ALA:HB1   | 2:J:62:GLN:NE2   | 2.00                     | 0.76              |
| 2:P:235:LEU:HD11 | 2:P:239:ARG:HG3  | 1.68                     | 0.76              |
| 2:P:236:ILE:HG22 | 2:P:240:LYS:HZ1  | 1.51                     | 0.76              |
| 1:O:221:GLN:HB2  | 2:P:212:ILE:HG22 | 1.67                     | 0.75              |
| 1:O:238:LEU:CD1  | 2:P:235:LEU:HD13 | 2.16                     | 0.75              |
| 2:B:247:ILE:HD12 | 1:C:278:LEU:HD21 | 1.68                     | 0.75              |
| 2:H:63:LYS:O     | 2:H:65:ILE:HD12  | 1.86                     | 0.75              |
| 1:M:214:VAL:HG22 | 2:N:209:ALA:HB2  | 1.67                     | 0.75              |
| 1:I:157:ARG:NH2  | 1:I:184:ILE:HG22 | 2.02                     | 0.75              |
| 2:D:247:ILE:CD1  | 1:E:278:LEU:HD21 | 2.16                     | 0.75              |
| 2:D:258:THR:OG1  | 2:D:260:LEU:HD21 | 1.86                     | 0.75              |
| 1:M:50:ILE:HG21  | 1:M:117:LEU:HB2  | 1.69                     | 0.75              |
| 1:Q:198:GLU:O    | 1:Q:202:VAL:HG23 | 1.86                     | 0.75              |
| 1:A:225:ILE:HA   | 2:B:220:ALA:HB2  | 1.69                     | 0.75              |
| 1:G:249:ILE:HG21 | 2:H:237:GLU:HB3  | 1.68                     | 0.75              |
| 1:I:136:ILE:O    | 1:I:140:VAL:HG23 | 1.85                     | 0.75              |
| 1:M:144:VAL:HG21 | 1:M:164:ILE:HG12 | 1.67                     | 0.75              |
| 2:V:49:VAL:HG21  | 2:V:100:ALA:O    | 1.85                     | 0.75              |
| 1:I:102:VAL:HG13 | 1:I:189:PHE:HE1  | 1.51                     | 0.74              |
| 1:K:58:VAL:HG23  | 2:L:52:GLU:CB    | 2.16                     | 0.74              |
| 1:I:260:ILE:HD11 | 2:J:244:ALA:HB1  | 1.68                     | 0.74              |
| 1:I:263:THR:HG23 | 2:J:249:TYR:CE2  | 2.22                     | 0.74              |
| 1:W:217:ALA:CB   | 2:X:212:ILE:HG22 | 2.16                     | 0.74              |
| 1:E:272:TYR:CD1  | 2:F:260:LEU:HD22 | 2.22                     | 0.74              |
| 1:W:228:ALA:HB1  | 2:X:223:LEU:HB3  | 1.68                     | 0.74              |
| 1:E:228:ALA:HB3  | 2:F:220:ALA:CB   | 2.18                     | 0.74              |
| 2:N:40:ASP:HA    | 2:N:61:VAL:HG22  | 1.69                     | 0.74              |
| 2:T:260:LEU:CD2  | 2:T:268:LEU:HD21 | 2.18                     | 0.74              |
| 2:N:61:VAL:HG23  | 1:O:67:GLY:CA    | 2.18                     | 0.73              |
| 1:G:250:LYS:HA   | 1:I:279:VAL:HG22 | 1.70                     | 0.73              |
| 2:X:218:SER:O    | 2:X:221:ALA:HB3  | 1.88                     | 0.73              |
| 1:A:265:ALA:HB2  | 2:X:251:LEU:HD23 | 1.70                     | 0.73              |
| 2:H:28:TYR:CZ    | 2:H:36:ALA:HB3   | 2.24                     | 0.73              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:H:240:LYS:HZ1  | 1:K:282:LEU:HG   | 1.53                     | 0.73              |
| 2:V:30:VAL:HG21  | 2:V:53:GLY:O     | 1.87                     | 0.73              |
| 1:G:242:LEU:HD13 | 1:G:249:ILE:HD11 | 1.70                     | 0.73              |
| 1:G:260:ILE:HG12 | 1:G:264:ILE:HD12 | 1.70                     | 0.73              |
| 1:A:275:ALA:O    | 1:W:274:THR:HG21 | 1.88                     | 0.73              |
| 2:R:130:VAL:HG22 | 2:R:149:GLN:OE1  | 1.88                     | 0.73              |
| 1:W:108:VAL:HA   | 1:W:182:VAL:HG22 | 1.71                     | 0.73              |
| 2:N:90:ILE:HD11  | 2:N:139:LEU:HD13 | 1.70                     | 0.73              |
| 1:O:154:ILE:HD11 | 1:O:189:PHE:HE1  | 1.53                     | 0.73              |
| 1:Q:217:ALA:HB1  | 2:R:213:SER:HB2  | 1.71                     | 0.73              |
| 1:S:274:THR:HG22 | 1:S:275:ALA:H    | 1.54                     | 0.73              |
| 1:I:99:LEU:HD13  | 2:J:179:PHE:CZ   | 2.24                     | 0.73              |
| 1:O:51:PHE:CD2   | 1:O:62:THR:HG21  | 2.23                     | 0.73              |
| 1:O:154:ILE:HD11 | 1:O:189:PHE:CE1  | 2.23                     | 0.72              |
| 1:A:249:ILE:HG21 | 1:C:294:LEU:HG   | 1.71                     | 0.72              |
| 2:J:92:LEU:HD21  | 2:J:168:VAL:HG13 | 1.70                     | 0.72              |
| 1:A:237:MET:HE2  | 2:X:222:GLU:HG2  | 1.72                     | 0.72              |
| 1:G:256:ALA:HB3  | 2:H:241:LEU:HD12 | 1.72                     | 0.72              |
| 1:I:79:ILE:HD12  | 1:I:121:TYR:OH   | 1.89                     | 0.72              |
| 1:Q:52:PHE:CE1   | 2:R:32:ALA:HB2   | 2.25                     | 0.72              |
| 1:G:106:LEU:HD21 | 1:G:165:ARG:CZ   | 2.20                     | 0.72              |
| 2:J:207:LYS:HZ1  | 1:K:229:GLU:HB2  | 1.55                     | 0.72              |
| 2:T:92:LEU:HD21  | 2:T:168:VAL:CG1  | 2.19                     | 0.72              |
| 2:V:195:ARG:O    | 2:V:199:VAL:HG23 | 1.89                     | 0.72              |
| 2:F:240:LYS:HB3  | 1:I:282:LEU:HB2  | 1.71                     | 0.72              |
| 1:G:217:ALA:CB   | 2:H:209:ALA:HB1  | 2.19                     | 0.72              |
| 2:J:239:ARG:HB3  | 1:K:254:ILE:HD13 | 1.71                     | 0.72              |
| 2:B:267:LEU:HD23 | 2:X:267:LEU:HD21 | 1.70                     | 0.72              |
| 2:D:250:GLN:HE22 | 2:D:251:LEU:HD23 | 1.55                     | 0.72              |
| 1:Q:207:ALA:HB3  | 2:R:198:PHE:CE2  | 2.25                     | 0.71              |
| 2:T:224:ILE:HG23 | 1:U:248:TYR:HA   | 1.72                     | 0.71              |
| 1:U:107:ARG:O    | 1:U:182:VAL:HG13 | 1.90                     | 0.71              |
| 1:I:56:GLY:O     | 2:J:50:VAL:HG12  | 1.90                     | 0.71              |
| 1:M:264:ILE:HG23 | 2:N:249:TYR:CD1  | 2.25                     | 0.71              |
| 2:R:86:GLN:HB2   | 2:R:136:ALA:HB2  | 1.71                     | 0.71              |
| 2:V:88:VAL:HG11  | 2:V:139:LEU:HD13 | 1.71                     | 0.71              |
| 1:S:221:GLN:HB2  | 2:T:212:ILE:HG22 | 1.73                     | 0.71              |
| 1:E:271:ILE:CD1  | 1:G:280:LEU:HD23 | 2.20                     | 0.71              |
| 2:D:224:ILE:HG21 | 1:E:251:LEU:HD22 | 1.72                     | 0.71              |
| 2:F:195:ARG:O    | 2:F:199:VAL:HG23 | 1.90                     | 0.71              |
| 2:N:228:LEU:HD13 | 2:N:236:ILE:HD11 | 1.72                     | 0.71              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:S:217:ALA:HB1  | 2:T:213:SER:HB2  | 1.71                     | 0.71              |
| 1:E:273:LEU:HD23 | 1:G:280:LEU:O    | 1.90                     | 0.71              |
| 1:I:55:ILE:HG23  | 1:I:55:ILE:O     | 1.90                     | 0.71              |
| 1:K:106:LEU:HD21 | 1:K:165:ARG:NH2  | 2.06                     | 0.71              |
| 2:B:270:LEU:HD23 | 1:E:272:TYR:CE1  | 2.26                     | 0.71              |
| 2:F:260:LEU:HD12 | 2:F:268:LEU:CD1  | 2.20                     | 0.71              |
| 1:G:250:LYS:HB3  | 1:I:279:VAL:HG13 | 1.73                     | 0.71              |
| 2:L:270:LEU:HD13 | 2:N:258:THR:CG2  | 2.21                     | 0.71              |
| 1:M:264:ILE:HG23 | 2:N:249:TYR:HD1  | 1.54                     | 0.71              |
| 1:U:260:ILE:HG23 | 1:U:264:ILE:HB   | 1.73                     | 0.71              |
| 2:L:228:LEU:CD1  | 2:L:236:ILE:HD11 | 2.20                     | 0.71              |
| 1:A:262:LYS:CA   | 2:X:251:LEU:HD21 | 2.19                     | 0.71              |
| 1:I:214:VAL:HG21 | 2:J:205:GLN:HB3  | 1.72                     | 0.70              |
| 1:W:43:VAL:HG13  | 1:W:80:ILE:HG23  | 1.72                     | 0.70              |
| 1:M:238:LEU:HD13 | 2:N:235:LEU:CD1  | 2.17                     | 0.70              |
| 1:O:249:ILE:HD13 | 2:P:237:GLU:CB   | 2.20                     | 0.70              |
| 2:V:218:SER:OG   | 1:W:241:ALA:HB3  | 1.91                     | 0.70              |
| 2:F:221:ALA:HB2  | 1:G:248:TYR:CD2  | 2.26                     | 0.70              |
| 1:S:214:VAL:HG13 | 2:T:209:ALA:CB   | 2.20                     | 0.70              |
| 2:L:126:ILE:O    | 2:L:130:VAL:HG23 | 1.91                     | 0.70              |
| 2:L:223:LEU:HD12 | 2:L:224:ILE:N    | 2.06                     | 0.70              |
| 1:C:253:LYS:N    | 2:D:241:LEU:HD13 | 2.07                     | 0.70              |
| 1:G:43:VAL:HG13  | 1:G:80:ILE:HG23  | 1.74                     | 0.70              |
| 2:H:146:VAL:HG12 | 2:H:170:LEU:HD11 | 1.73                     | 0.70              |
| 1:K:136:ILE:HD12 | 1:K:172:ALA:HB2  | 1.74                     | 0.70              |
| 2:P:178:GLU:CD   | 1:Q:202:VAL:HG22 | 2.17                     | 0.70              |
| 2:P:179:PHE:O    | 2:P:183:VAL:HG23 | 1.90                     | 0.70              |
| 1:Q:232:ALA:HB3  | 2:R:223:LEU:HD22 | 1.73                     | 0.70              |
| 2:R:151:SER:HA   | 2:R:168:VAL:HG11 | 1.72                     | 0.70              |
| 1:G:105:SER:O    | 1:G:184:ILE:HG23 | 1.90                     | 0.70              |
| 1:I:83:ILE:HA    | 1:I:112:PRO:HG2  | 1.74                     | 0.70              |
| 1:I:151:SER:HA   | 1:I:154:ILE:HD12 | 1.73                     | 0.70              |
| 1:K:157:ARG:NH2  | 1:K:184:ILE:HG22 | 2.06                     | 0.70              |
| 2:P:28:TYR:CD1   | 2:P:57:LEU:HD23  | 2.27                     | 0.70              |
| 2:T:261:PRO:HG2  | 2:T:266:VAL:HG11 | 1.73                     | 0.70              |
| 1:U:106:LEU:HD21 | 1:U:165:ARG:HH22 | 1.54                     | 0.70              |
| 1:W:274:THR:HG22 | 1:W:275:ALA:H    | 1.55                     | 0.70              |
| 2:F:200:VAL:HA   | 2:F:203:ALA:HB3  | 1.71                     | 0.70              |
| 2:V:247:ILE:HG22 | 2:V:251:LEU:HD12 | 1.73                     | 0.70              |
| 2:B:268:LEU:HD11 | 2:D:260:LEU:HB3  | 1.71                     | 0.69              |
| 1:G:79:ILE:HD12  | 1:G:121:TYR:OH   | 1.91                     | 0.69              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:Q:99:LEU:HD21  | 2:R:140:ILE:HD13 | 1.72                     | 0.69              |
| 1:U:246:PRO:CB   | 1:U:249:ILE:HD12 | 2.22                     | 0.69              |
| 1:G:256:ALA:CB   | 2:H:241:LEU:HD12 | 2.22                     | 0.69              |
| 1:K:105:SER:O    | 1:K:184:ILE:HG23 | 1.91                     | 0.69              |
| 2:N:30:VAL:HG13  | 2:N:34:HIS:O     | 1.91                     | 0.69              |
| 1:U:106:LEU:HD21 | 1:U:165:ARG:NH2  | 2.06                     | 0.69              |
| 1:I:249:ILE:HG21 | 2:J:237:GLU:HB3  | 1.75                     | 0.69              |
| 2:N:236:ILE:HG22 | 2:N:240:LYS:NZ   | 2.06                     | 0.69              |
| 1:O:275:ALA:HB1  | 1:O:281:ASN:ND2  | 2.07                     | 0.69              |
| 1:A:274:THR:HG22 | 1:A:275:ALA:H    | 1.56                     | 0.69              |
| 1:E:263:THR:O    | 1:E:266:THR:HG22 | 1.92                     | 0.69              |
| 1:K:214:VAL:HG22 | 2:L:209:ALA:HB2  | 1.73                     | 0.69              |
| 2:P:178:GLU:OE1  | 1:Q:202:VAL:HG22 | 1.91                     | 0.69              |
| 1:U:132:VAL:HG11 | 1:U:177:LEU:HD12 | 1.73                     | 0.69              |
| 2:X:195:ARG:O    | 2:X:199:VAL:HG23 | 1.92                     | 0.69              |
| 2:B:247:ILE:CD1  | 1:C:278:LEU:HD21 | 2.23                     | 0.69              |
| 2:B:267:LEU:HD12 | 2:B:267:LEU:O    | 1.92                     | 0.69              |
| 2:H:156:GLU:O    | 2:H:160:THR:HG23 | 1.92                     | 0.69              |
| 1:I:214:VAL:HG22 | 2:J:209:ALA:HB2  | 1.74                     | 0.69              |
| 1:M:107:ARG:O    | 1:M:182:VAL:HG13 | 1.92                     | 0.69              |
| 2:R:26:ALA:HA    | 2:R:57:LEU:HD11  | 1.75                     | 0.69              |
| 1:S:153:LEU:CD2  | 1:S:160:VAL:HG11 | 2.22                     | 0.69              |
| 1:A:237:MET:HE2  | 2:X:222:GLU:CG   | 2.22                     | 0.69              |
| 1:E:232:ALA:O    | 1:E:235:ALA:HB3  | 1.92                     | 0.69              |
| 1:I:75:PHE:HA    | 2:J:28:TYR:HA    | 1.75                     | 0.69              |
| 1:W:203:ALA:HB1  | 2:X:201:GLU:CB   | 2.22                     | 0.69              |
| 1:C:214:VAL:HG13 | 2:D:212:ILE:CD1  | 2.23                     | 0.69              |
| 1:G:264:ILE:HD11 | 2:H:248:ALA:CB   | 2.23                     | 0.69              |
| 2:T:94:ILE:HG12  | 2:T:154:LEU:HD21 | 1.74                     | 0.69              |
| 2:H:49:VAL:HG21  | 2:H:100:ALA:O    | 1.93                     | 0.69              |
| 1:I:136:ILE:HD12 | 1:I:172:ALA:HB2  | 1.73                     | 0.69              |
| 2:P:90:ILE:HD11  | 2:P:139:LEU:HD13 | 1.75                     | 0.69              |
| 2:R:82:SER:HA    | 2:R:131:VAL:HG12 | 1.75                     | 0.69              |
| 2:V:39:PHE:HA    | 2:V:45:VAL:HG22  | 1.74                     | 0.69              |
| 1:W:106:LEU:HD23 | 1:W:137:VAL:HG13 | 1.73                     | 0.69              |
| 2:H:221:ALA:HA   | 1:I:248:TYR:HB3  | 1.75                     | 0.69              |
| 2:J:270:LEU:HD22 | 1:K:272:TYR:CZ   | 2.29                     | 0.69              |
| 2:R:35:ARG:O     | 2:R:103:LEU:HD13 | 1.93                     | 0.69              |
| 2:H:30:VAL:HG11  | 2:H:52:GLU:HA    | 1.75                     | 0.68              |
| 1:K:41:PHE:CZ    | 1:K:64:LEU:HD13  | 2.28                     | 0.68              |
| 1:S:246:PRO:CB   | 1:S:249:ILE:HD12 | 2.23                     | 0.68              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:V:126:ILE:O    | 2:V:130:VAL:HG12 | 1.92                     | 0.68              |
| 1:G:277:ASN:CG   | 1:G:278:LEU:HD12 | 2.17                     | 0.68              |
| 2:J:36:ALA:HB1   | 2:J:62:GLN:HE22  | 1.58                     | 0.68              |
| 1:M:41:PHE:CE2   | 1:M:49:ALA:HB3   | 2.28                     | 0.68              |
| 1:S:63:ILE:HG23  | 1:S:117:LEU:HD12 | 1.74                     | 0.68              |
| 2:D:259:TYR:O    | 2:D:260:LEU:HD23 | 1.92                     | 0.68              |
| 2:P:239:ARG:HB3  | 1:Q:254:ILE:HG21 | 1.75                     | 0.68              |
| 1:W:203:ALA:HB1  | 2:X:201:GLU:HB3  | 1.74                     | 0.68              |
| 2:D:235:LEU:HD11 | 2:D:239:ARG:NH1  | 2.08                     | 0.68              |
| 2:N:244:ALA:HA   | 2:N:248:ALA:HB3  | 1.75                     | 0.68              |
| 1:W:136:ILE:HG13 | 1:W:168:LEU:HD11 | 1.75                     | 0.68              |
| 2:D:268:LEU:HD11 | 2:F:260:LEU:HD13 | 1.75                     | 0.68              |
| 2:L:65:ILE:HD13  | 2:L:107:PHE:CZ   | 2.28                     | 0.68              |
| 1:O:122:GLN:HA   | 2:P:32:ALA:HB1   | 1.76                     | 0.68              |
| 1:I:75:PHE:CD2   | 2:J:29:ASN:HB3   | 2.29                     | 0.68              |
| 2:L:228:LEU:HD11 | 2:L:236:ILE:HD11 | 1.75                     | 0.68              |
| 2:P:195:ARG:O    | 2:P:199:VAL:HG23 | 1.93                     | 0.68              |
| 1:U:263:THR:HG21 | 2:V:245:GLU:HB3  | 1.74                     | 0.68              |
| 1:I:107:ARG:NH2  | 1:I:185:THR:HG21 | 2.08                     | 0.68              |
| 1:K:140:VAL:HG12 | 1:K:164:ILE:HG23 | 1.75                     | 0.68              |
| 1:O:217:ALA:HB3  | 2:P:209:ALA:HB1  | 1.75                     | 0.68              |
| 1:K:274:THR:HG21 | 1:M:284:ASP:CG   | 2.18                     | 0.68              |
| 2:P:214:ALA:CB   | 1:Q:234:ALA:HB1  | 2.24                     | 0.68              |
| 2:V:132:ALA:HB1  | 1:W:154:ILE:HG23 | 1.75                     | 0.68              |
| 1:I:55:ILE:HA    | 2:J:28:TYR:CE2   | 2.29                     | 0.68              |
| 2:D:259:TYR:HB2  | 1:E:273:LEU:HD12 | 1.76                     | 0.68              |
| 1:I:79:ILE:HD13  | 1:I:126:LEU:HD11 | 1.74                     | 0.68              |
| 2:L:251:LEU:O    | 2:L:257:ILE:HD11 | 1.93                     | 0.68              |
| 2:P:30:VAL:HG13  | 2:P:34:HIS:O     | 1.94                     | 0.68              |
| 1:W:41:PHE:HD1   | 1:W:43:VAL:HG23  | 1.58                     | 0.68              |
| 1:E:232:ALA:HB2  | 2:F:224:ILE:HG13 | 1.76                     | 0.67              |
| 2:H:200:VAL:HG22 | 1:I:223:GLN:HA   | 1.76                     | 0.67              |
| 1:I:253:LYS:HD2  | 2:J:241:LEU:HD21 | 1.76                     | 0.67              |
| 2:L:233:ASP:CB   | 2:L:236:ILE:HD12 | 2.24                     | 0.67              |
| 2:P:57:LEU:HD22  | 2:P:62:GLN:OE1   | 1.95                     | 0.67              |
| 2:H:92:LEU:HD22  | 2:H:150:VAL:HG12 | 1.77                     | 0.67              |
| 1:C:222:ARG:O    | 1:C:226:VAL:HG23 | 1.94                     | 0.67              |
| 2:F:228:LEU:HD13 | 2:F:236:ILE:HG13 | 1.77                     | 0.67              |
| 1:G:150:ALA:HB1  | 1:G:189:PHE:CE1  | 2.30                     | 0.67              |
| 2:J:199:VAL:HG12 | 1:K:223:GLN:NE2  | 2.09                     | 0.67              |
| 1:O:214:VAL:HG13 | 2:P:209:ALA:CB   | 2.25                     | 0.67              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:225:ILE:HG23 | 2:P:219:LYS:HD3  | 1.75                     | 0.67              |
| 2:H:96:PHE:CD1   | 2:H:119:LEU:HD11 | 2.29                     | 0.67              |
| 1:K:74:TRP:CD1   | 1:K:77:TYR:HH    | 2.12                     | 0.67              |
| 2:P:134:PHE:CD2  | 2:P:146:VAL:HG22 | 2.29                     | 0.67              |
| 1:E:209:ARG:NH1  | 1:E:213:LEU:HD11 | 2.10                     | 0.67              |
| 1:G:43:VAL:HG12  | 1:G:47:HIS:HB2   | 1.74                     | 0.67              |
| 2:N:239:ARG:HH12 | 1:O:257:ALA:HB3  | 1.60                     | 0.67              |
| 1:Q:253:LYS:O    | 1:Q:257:ALA:HB2  | 1.95                     | 0.67              |
| 2:J:260:LEU:HD21 | 1:K:272:TYR:CE1  | 2.30                     | 0.67              |
| 2:L:221:ALA:HB1  | 1:M:242:LEU:CD2  | 2.24                     | 0.67              |
| 1:O:273:LEU:HD22 | 1:Q:280:LEU:HD23 | 1.76                     | 0.67              |
| 2:R:140:ILE:HD11 | 2:R:175:PHE:CE2  | 2.29                     | 0.67              |
| 2:B:251:LEU:HD13 | 2:B:257:ILE:CG2  | 2.25                     | 0.67              |
| 1:C:214:VAL:HG13 | 2:D:212:ILE:HD11 | 1.76                     | 0.67              |
| 2:J:90:ILE:HG21  | 2:J:170:LEU:HD22 | 1.76                     | 0.67              |
| 2:B:239:ARG:O    | 2:B:243:ALA:HB3  | 1.94                     | 0.67              |
| 1:C:282:LEU:HD21 | 2:X:240:LYS:CE   | 2.24                     | 0.67              |
| 1:G:235:ALA:HB3  | 2:H:224:ILE:HG12 | 1.77                     | 0.67              |
| 2:H:260:LEU:HD21 | 2:H:268:LEU:HD11 | 1.77                     | 0.67              |
| 1:I:132:VAL:HG11 | 1:I:177:LEU:HD12 | 1.77                     | 0.67              |
| 1:S:214:VAL:CG1  | 2:T:209:ALA:HB3  | 2.25                     | 0.67              |
| 2:T:130:VAL:HG22 | 2:T:149:GLN:OE1  | 1.94                     | 0.67              |
| 1:U:218:LYS:O    | 1:U:221:GLN:HB3  | 1.95                     | 0.67              |
| 1:K:260:ILE:CG2  | 1:K:264:ILE:HD12 | 2.24                     | 0.67              |
| 1:Q:150:ALA:HB1  | 1:Q:189:PHE:CE2  | 2.30                     | 0.67              |
| 2:R:200:VAL:HG13 | 1:S:222:ARG:NH1  | 2.09                     | 0.67              |
| 1:E:228:ALA:CB   | 2:F:220:ALA:HB1  | 2.25                     | 0.67              |
| 2:F:258:THR:OG1  | 2:F:260:LEU:HD21 | 1.95                     | 0.67              |
| 2:H:40:ASP:HA    | 2:H:61:VAL:HG22  | 1.76                     | 0.67              |
| 1:Q:264:ILE:HG22 | 1:Q:264:ILE:O    | 1.93                     | 0.67              |
| 2:V:225:ALA:HB1  | 1:W:244:LYS:HB2  | 1.76                     | 0.67              |
| 2:J:260:LEU:HD22 | 2:J:268:LEU:HD21 | 1.76                     | 0.66              |
| 2:R:32:ALA:HB3   | 2:R:70:ARG:HH21  | 1.60                     | 0.66              |
| 1:S:210:ALA:O    | 1:S:214:VAL:HG23 | 1.95                     | 0.66              |
| 1:W:128:TYR:CE1  | 1:W:177:LEU:HD21 | 2.30                     | 0.66              |
| 1:A:264:ILE:HD13 | 1:A:271:ILE:HD11 | 1.77                     | 0.66              |
| 2:J:214:ALA:HB2  | 1:K:234:ALA:HA   | 1.76                     | 0.66              |
| 1:O:249:ILE:HD13 | 2:P:237:GLU:HB3  | 1.77                     | 0.66              |
| 2:F:219:LYS:HA   | 2:F:222:GLU:OE1  | 1.94                     | 0.66              |
| 1:M:71:ARG:HB3   | 1:M:78:PRO:HG3   | 1.76                     | 0.66              |
| 2:R:109:SER:OG   | 2:R:110:ILE:HD12 | 1.95                     | 0.66              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:235:ALA:HB2  | 2:F:235:LEU:HD23 | 1.75                     | 0.66              |
| 1:K:271:ILE:HG23 | 2:L:259:TYR:CE1  | 2.30                     | 0.66              |
| 2:V:136:ALA:HB1  | 2:V:175:PHE:CE1  | 2.30                     | 0.66              |
| 2:P:94:ILE:HG12  | 2:P:154:LEU:HD21 | 1.77                     | 0.66              |
| 2:P:203:ALA:O    | 2:P:207:LYS:HG3  | 1.95                     | 0.66              |
| 2:B:270:LEU:HD11 | 2:D:271:PRO:CD   | 2.25                     | 0.66              |
| 1:I:252:ARG:HE   | 1:I:256:ALA:HB2  | 1.58                     | 0.66              |
| 1:I:270:ARG:HH11 | 2:J:258:THR:HG22 | 1.60                     | 0.66              |
| 2:L:221:ALA:HB1  | 1:M:242:LEU:HD21 | 1.76                     | 0.66              |
| 1:Q:232:ALA:CB   | 2:R:223:LEU:HD22 | 2.25                     | 0.66              |
| 1:U:232:ALA:HB3  | 2:V:223:LEU:HD22 | 1.78                     | 0.66              |
| 1:A:219:GLN:OE1  | 2:X:200:VAL:HG13 | 1.95                     | 0.66              |
| 2:B:265:SER:O    | 2:X:267:LEU:HD12 | 1.96                     | 0.66              |
| 2:D:207:LYS:HE2  | 1:E:229:GLU:OE1  | 1.95                     | 0.66              |
| 1:G:156:GLN:OE1  | 1:G:160:VAL:HG23 | 1.95                     | 0.66              |
| 1:I:140:VAL:HG22 | 1:I:167:GLU:OE1  | 1.96                     | 0.66              |
| 1:I:41:PHE:HD2   | 1:I:43:VAL:HG23  | 1.61                     | 0.66              |
| 2:N:28:TYR:CE1   | 2:N:57:LEU:HD23  | 2.31                     | 0.66              |
| 2:F:196:ALA:HB1  | 1:G:223:GLN:OE1  | 1.95                     | 0.66              |
| 1:G:253:LYS:HD2  | 2:H:241:LEU:HD21 | 1.76                     | 0.66              |
| 2:H:210:ALA:C    | 1:I:234:ALA:HB2  | 2.20                     | 0.66              |
| 2:N:215:GLU:CD   | 1:O:237:MET:HE3  | 2.21                     | 0.66              |
| 1:W:264:ILE:HG12 | 2:X:249:TYR:HA   | 1.77                     | 0.66              |
| 2:D:268:LEU:HD21 | 2:F:260:LEU:HD13 | 1.78                     | 0.65              |
| 1:G:79:ILE:HD13  | 1:G:126:LEU:HD11 | 1.77                     | 0.65              |
| 2:J:90:ILE:CD1   | 2:J:131:VAL:HG21 | 2.26                     | 0.65              |
| 2:J:228:LEU:HD12 | 1:K:247:GLY:HA3  | 1.78                     | 0.65              |
| 1:K:136:ILE:O    | 1:K:140:VAL:HG23 | 1.96                     | 0.65              |
| 2:R:214:ALA:HB2  | 1:S:234:ALA:HB1  | 1.77                     | 0.65              |
| 1:A:274:THR:HG21 | 2:X:268:LEU:HD21 | 1.78                     | 0.65              |
| 2:J:37:VAL:HG11  | 2:J:104:PRO:HG3  | 1.78                     | 0.65              |
| 2:L:86:GLN:O     | 2:L:88:VAL:HG23  | 1.96                     | 0.65              |
| 2:T:228:LEU:HD11 | 1:U:251:LEU:CB   | 2.24                     | 0.65              |
| 1:W:140:VAL:HG22 | 1:W:167:GLU:OE1  | 1.96                     | 0.65              |
| 1:G:253:LYS:CD   | 2:H:241:LEU:HD21 | 2.26                     | 0.65              |
| 2:P:41:ARG:HA    | 1:Q:65:ALA:HB3   | 1.76                     | 0.65              |
| 1:S:218:LYS:CE   | 2:T:212:ILE:HD13 | 2.26                     | 0.65              |
| 1:K:63:ILE:HG21  | 1:K:114:ALA:O    | 1.96                     | 0.65              |
| 2:X:244:ALA:HA   | 2:X:248:ALA:HB3  | 1.79                     | 0.65              |
| 1:A:249:ILE:HD13 | 1:C:294:LEU:HG   | 1.78                     | 0.65              |
| 2:H:203:ALA:HB3  | 1:I:226:VAL:HG13 | 1.76                     | 0.65              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:M:154:ILE:HD11 | 1:M:189:PHE:CZ   | 2.32                     | 0.65              |
| 1:M:238:LEU:HD22 | 2:N:238:LEU:CD2  | 2.26                     | 0.65              |
| 1:M:243:SER:O    | 1:O:294:LEU:HB2  | 1.97                     | 0.65              |
| 2:P:154:LEU:HD23 | 2:P:168:VAL:CG2  | 2.25                     | 0.65              |
| 2:P:196:ALA:O    | 2:P:200:VAL:HG23 | 1.97                     | 0.65              |
| 1:Q:274:THR:HG22 | 1:Q:275:ALA:H    | 1.62                     | 0.65              |
| 1:G:106:LEU:HD21 | 1:G:165:ARG:NH2  | 2.11                     | 0.65              |
| 2:H:203:ALA:CB   | 1:I:226:VAL:HG13 | 2.27                     | 0.65              |
| 2:H:258:THR:OG1  | 1:I:272:TYR:HB2  | 1.97                     | 0.65              |
| 1:K:50:ILE:HG21  | 1:K:118:PRO:HA   | 1.78                     | 0.65              |
| 2:L:29:ASN:O     | 2:L:66:ILE:HG21  | 1.97                     | 0.65              |
| 1:S:153:LEU:HD23 | 1:S:160:VAL:HG11 | 1.78                     | 0.65              |
| 2:V:239:ARG:O    | 2:V:243:ALA:HB3  | 1.97                     | 0.65              |
| 1:A:251:LEU:HD13 | 2:X:228:LEU:CD1  | 2.27                     | 0.65              |
| 2:B:251:LEU:HD22 | 2:B:257:ILE:HG21 | 1.78                     | 0.65              |
| 1:I:41:PHE:HE1   | 1:I:64:LEU:HD13  | 1.62                     | 0.65              |
| 1:I:50:ILE:HG22  | 1:I:81:TYR:HE2   | 1.61                     | 0.65              |
| 1:I:263:THR:HG21 | 2:J:245:GLU:HA   | 1.79                     | 0.65              |
| 1:K:281:ASN:O    | 1:K:287:PHE:HB3  | 1.97                     | 0.65              |
| 2:N:124:THR:HG21 | 1:O:185:THR:HA   | 1.79                     | 0.65              |
| 2:D:215:GLU:HG3  | 1:E:237:MET:HE1  | 1.78                     | 0.65              |
| 1:I:72:ILE:HD12  | 1:I:75:PHE:CD2   | 2.31                     | 0.65              |
| 1:M:165:ARG:HH12 | 1:M:168:LEU:HD23 | 1.60                     | 0.65              |
| 2:P:236:ILE:O    | 2:P:240:LYS:HG3  | 1.97                     | 0.65              |
| 1:W:107:ARG:O    | 1:W:182:VAL:HG13 | 1.97                     | 0.65              |
| 1:C:253:LYS:HZ1  | 1:E:279:VAL:HB   | 1.61                     | 0.65              |
| 1:C:261:SER:CB   | 1:C:264:ILE:HD12 | 2.27                     | 0.65              |
| 2:H:78:VAL:HG21  | 2:H:127:LEU:HB2  | 1.79                     | 0.65              |
| 1:Q:256:ALA:HB3  | 2:R:241:LEU:HD12 | 1.79                     | 0.65              |
| 2:R:28:TYR:HD1   | 2:R:57:LEU:HD23  | 1.61                     | 0.65              |
| 2:T:136:ALA:HB1  | 2:T:175:PHE:CE1  | 2.32                     | 0.65              |
| 1:W:157:ARG:NH2  | 1:W:184:ILE:HG22 | 2.11                     | 0.65              |
| 2:B:270:LEU:HD11 | 2:D:271:PRO:HD3  | 1.77                     | 0.64              |
| 1:G:214:VAL:HG21 | 2:H:205:GLN:HB3  | 1.79                     | 0.64              |
| 1:I:120:MET:HA   | 1:I:124:LEU:HD12 | 1.80                     | 0.64              |
| 1:E:221:GLN:NE2  | 1:E:225:ILE:HD11 | 2.11                     | 0.64              |
| 1:G:236:LYS:O    | 1:G:240:GLU:OE1  | 2.15                     | 0.64              |
| 2:H:92:LEU:HD22  | 2:H:150:VAL:CG1  | 2.27                     | 0.64              |
| 2:H:207:LYS:HA   | 1:I:230:GLY:HA2  | 1.79                     | 0.64              |
| 1:K:50:ILE:HD13  | 1:K:118:PRO:HA   | 1.79                     | 0.64              |
| 2:T:214:ALA:HB2  | 1:U:234:ALA:HB1  | 1.79                     | 0.64              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:271:ILE:HG23 | 2:H:259:TYR:CD1  | 2.31                     | 0.64              |
| 2:H:162:GLY:O    | 2:H:163:LEU:HD23 | 1.96                     | 0.64              |
| 2:J:243:ALA:HB2  | 1:K:254:ILE:HG23 | 1.79                     | 0.64              |
| 1:U:157:ARG:NH2  | 1:U:184:ILE:HG22 | 2.13                     | 0.64              |
| 2:V:217:ASP:OD2  | 2:X:238:LEU:HD13 | 1.97                     | 0.64              |
| 1:W:96:SER:HA    | 1:W:145:VAL:HG12 | 1.78                     | 0.64              |
| 1:A:250:LYS:HG2  | 1:C:288:THR:HG21 | 1.78                     | 0.64              |
| 1:K:140:VAL:HG21 | 1:K:168:LEU:HA   | 1.79                     | 0.64              |
| 2:N:197:ARG:HH22 | 1:O:222:ARG:HE   | 1.43                     | 0.64              |
| 2:N:241:LEU:O    | 2:N:244:ALA:HB3  | 1.98                     | 0.64              |
| 2:T:228:LEU:HD23 | 2:T:232:GLY:O    | 1.98                     | 0.64              |
| 1:W:140:VAL:HG11 | 1:W:168:LEU:HB2  | 1.79                     | 0.64              |
| 1:E:214:VAL:HG13 | 2:F:212:ILE:CD1  | 2.27                     | 0.64              |
| 2:N:151:SER:HA   | 2:N:168:VAL:HG11 | 1.79                     | 0.64              |
| 2:F:257:ILE:HG23 | 1:G:271:ILE:O    | 1.97                     | 0.64              |
| 1:I:144:VAL:HG11 | 1:I:164:ILE:HG13 | 1.79                     | 0.64              |
| 1:M:253:LYS:HG3  | 1:O:279:VAL:HG21 | 1.79                     | 0.64              |
| 1:Q:207:ALA:HB3  | 2:R:198:PHE:CD2  | 2.32                     | 0.64              |
| 2:D:244:ALA:HB1  | 1:E:278:LEU:HD22 | 1.78                     | 0.64              |
| 2:D:262:ALA:HB3  | 1:E:274:THR:CG2  | 2.28                     | 0.64              |
| 1:E:242:LEU:HD21 | 1:E:248:TYR:HB3  | 1.78                     | 0.64              |
| 1:I:63:ILE:HG21  | 1:I:115:GLN:HA   | 1.80                     | 0.64              |
| 1:K:90:ILE:HB    | 1:K:137:VAL:HG11 | 1.80                     | 0.64              |
| 2:N:27:LEU:HD11  | 2:N:54:THR:HG21  | 1.80                     | 0.64              |
| 1:S:136:ILE:HD12 | 2:T:93:ARG:HH12  | 1.62                     | 0.64              |
| 1:E:235:ALA:HB1  | 2:F:228:LEU:HD21 | 1.80                     | 0.64              |
| 1:G:221:GLN:O    | 1:G:225:ILE:HG12 | 1.98                     | 0.64              |
| 2:H:69:CYS:HB3   | 2:H:103:LEU:HD11 | 1.79                     | 0.64              |
| 1:K:51:PHE:CD1   | 1:K:64:LEU:HD11  | 2.32                     | 0.64              |
| 1:S:222:ARG:NH1  | 1:S:226:VAL:HG21 | 2.13                     | 0.64              |
| 1:I:122:GLN:OE1  | 2:J:31:ASP:OD2   | 2.16                     | 0.64              |
| 1:K:221:GLN:O    | 1:K:225:ILE:HG12 | 1.98                     | 0.64              |
| 1:M:249:ILE:HD13 | 2:N:238:LEU:N    | 2.13                     | 0.64              |
| 2:N:82:SER:HA    | 2:N:131:VAL:HG12 | 1.80                     | 0.64              |
| 1:Q:165:ARG:HH12 | 1:Q:168:LEU:HD23 | 1.63                     | 0.64              |
| 1:K:129:GLU:HA   | 1:K:177:LEU:HD11 | 1.80                     | 0.64              |
| 1:U:90:ILE:HB    | 1:U:137:VAL:HG11 | 1.79                     | 0.64              |
| 2:V:270:LEU:HD23 | 2:X:269:GLN:O    | 1.98                     | 0.64              |
| 2:D:204:GLU:O    | 2:D:207:LYS:HG2  | 1.98                     | 0.63              |
| 1:I:243:SER:HA   | 1:K:294:LEU:HB3  | 1.80                     | 0.63              |
| 2:L:196:ALA:O    | 2:L:200:VAL:HG23 | 1.99                     | 0.63              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:P:39:PHE:CD1   | 2:P:45:VAL:HG22  | 2.33                     | 0.63              |
| 2:P:45:VAL:HG21  | 2:P:107:PHE:HD2  | 1.63                     | 0.63              |
| 2:R:228:LEU:HD11 | 2:R:236:ILE:HD11 | 1.80                     | 0.63              |
| 1:A:275:ALA:CB   | 2:V:260:LEU:HD22 | 2.26                     | 0.63              |
| 2:B:218:SER:OG   | 1:C:238:LEU:HD21 | 1.99                     | 0.63              |
| 2:J:196:ALA:O    | 2:J:200:VAL:HG23 | 1.98                     | 0.63              |
| 2:V:207:LYS:HE3  | 1:W:229:GLU:HB3  | 1.79                     | 0.63              |
| 1:C:256:ALA:HB1  | 2:D:241:LEU:O    | 1.98                     | 0.63              |
| 2:D:262:ALA:HB3  | 1:E:274:THR:HG23 | 1.81                     | 0.63              |
| 1:G:260:ILE:HG23 | 1:G:264:ILE:CB   | 2.26                     | 0.63              |
| 1:K:150:ALA:HB1  | 1:K:189:PHE:CZ   | 2.33                     | 0.63              |
| 1:M:250:LYS:O    | 1:M:254:ILE:HD12 | 1.98                     | 0.63              |
| 1:Q:51:PHE:CD2   | 1:Q:62:THR:HG21  | 2.33                     | 0.63              |
| 1:Q:218:LYS:HE2  | 2:R:212:ILE:HD13 | 1.80                     | 0.63              |
| 2:B:270:LEU:HD22 | 2:D:258:THR:HG21 | 1.80                     | 0.63              |
| 2:F:244:ALA:CB   | 2:F:247:ILE:HD12 | 2.28                     | 0.63              |
| 1:G:44:GLU:OE1   | 1:G:80:ILE:HD13  | 1.99                     | 0.63              |
| 1:I:53:ASN:ND2   | 1:I:55:ILE:HG22  | 2.13                     | 0.63              |
| 2:N:57:LEU:HD22  | 2:N:62:GLN:OE1   | 1.98                     | 0.63              |
| 2:P:122:ILE:HG22 | 2:P:157:ARG:CG   | 2.29                     | 0.63              |
| 1:K:221:GLN:HB2  | 2:L:212:ILE:CG2  | 2.28                     | 0.63              |
| 2:T:206:GLN:O    | 2:T:210:ALA:HB3  | 1.98                     | 0.63              |
| 1:U:48:ARG:HG2   | 1:U:83:ILE:HD13  | 1.79                     | 0.63              |
| 1:A:262:LYS:HA   | 2:X:251:LEU:CD2  | 2.27                     | 0.63              |
| 1:C:232:ALA:HB2  | 2:D:224:ILE:CG1  | 2.28                     | 0.63              |
| 2:J:225:ALA:HB3  | 1:K:244:LYS:HZ2  | 1.64                     | 0.63              |
| 1:O:107:ARG:HG2  | 1:O:183:ALA:HB3  | 1.79                     | 0.63              |
| 2:P:122:ILE:CD1  | 2:P:158:ALA:HB2  | 2.28                     | 0.63              |
| 2:T:228:LEU:HD13 | 2:T:236:ILE:HD11 | 1.81                     | 0.63              |
| 2:V:207:LYS:HD3  | 1:W:226:VAL:O    | 1.99                     | 0.63              |
| 2:V:224:ILE:HG21 | 1:W:248:TYR:HB2  | 1.80                     | 0.63              |
| 2:V:251:LEU:HD22 | 1:W:273:LEU:HD21 | 1.80                     | 0.63              |
| 2:B:235:LEU:HD11 | 2:B:239:ARG:HH11 | 1.63                     | 0.63              |
| 1:C:272:TYR:OH   | 2:X:270:LEU:HD21 | 1.99                     | 0.63              |
| 2:D:260:LEU:HD12 | 1:E:272:TYR:CZ   | 2.34                     | 0.63              |
| 2:H:239:ARG:HD3  | 1:I:251:LEU:HD11 | 1.81                     | 0.63              |
| 1:I:235:ALA:CB   | 2:J:224:ILE:HD13 | 2.29                     | 0.63              |
| 1:I:263:THR:HG23 | 2:J:249:TYR:CZ   | 2.33                     | 0.63              |
| 2:J:225:ALA:HB3  | 1:K:244:LYS:NZ   | 2.13                     | 0.63              |
| 1:K:53:ASN:HB2   | 1:K:58:VAL:HG22  | 1.81                     | 0.63              |
| 2:L:39:PHE:HD1   | 2:L:45:VAL:HG22  | 1.63                     | 0.63              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:N:41:ARG:HG3   | 1:O:65:ALA:C     | 2.24                     | 0.63              |
| 2:P:38:ILE:HD12  | 2:P:57:LEU:HA    | 1.81                     | 0.63              |
| 2:V:125:GLU:HB2  | 1:W:185:THR:HG22 | 1.81                     | 0.63              |
| 1:A:237:MET:CE   | 2:X:218:SER:O    | 2.46                     | 0.63              |
| 2:F:235:LEU:HD11 | 2:F:239:ARG:HG2  | 1.80                     | 0.63              |
| 2:T:224:ILE:HD11 | 1:U:251:LEU:CD2  | 2.29                     | 0.63              |
| 2:T:224:ILE:CD1  | 1:U:251:LEU:HD23 | 2.29                     | 0.63              |
| 1:U:217:ALA:HB1  | 2:V:213:SER:HB2  | 1.81                     | 0.63              |
| 1:U:246:PRO:HB2  | 1:U:249:ILE:HD12 | 1.81                     | 0.63              |
| 2:V:84:ASP:O     | 1:W:197:VAL:HG21 | 1.99                     | 0.63              |
| 2:J:132:ALA:HB1  | 1:K:154:ILE:O    | 1.98                     | 0.63              |
| 2:L:35:ARG:HD2   | 2:L:100:ALA:HB1  | 1.81                     | 0.63              |
| 1:M:260:ILE:HG23 | 1:M:264:ILE:HB   | 1.81                     | 0.63              |
| 2:N:126:ILE:O    | 2:N:130:VAL:HG23 | 1.99                     | 0.63              |
| 1:O:107:ARG:O    | 1:O:182:VAL:HG13 | 1.99                     | 0.63              |
| 2:V:228:LEU:HD13 | 2:V:236:ILE:HD11 | 1.79                     | 0.63              |
| 1:W:260:ILE:HG23 | 1:W:264:ILE:CD1  | 2.28                     | 0.63              |
| 2:J:126:ILE:HD11 | 2:J:157:ARG:CB   | 2.29                     | 0.62              |
| 1:K:221:GLN:HB2  | 2:L:212:ILE:HG23 | 1.81                     | 0.62              |
| 1:O:52:PHE:CE1   | 2:P:32:ALA:HB2   | 2.34                     | 0.62              |
| 2:V:267:LEU:HD11 | 2:X:267:LEU:HD13 | 1.81                     | 0.62              |
| 1:A:261:SER:HA   | 1:A:264:ILE:HD12 | 1.81                     | 0.62              |
| 1:I:257:ALA:HA   | 1:I:260:ILE:HB   | 1.79                     | 0.62              |
| 2:J:90:ILE:CG2   | 2:J:170:LEU:HD22 | 2.29                     | 0.62              |
| 2:L:92:LEU:HD11  | 2:L:168:VAL:HG12 | 1.81                     | 0.62              |
| 1:M:148:PHE:HZ   | 1:M:163:LEU:HD23 | 1.63                     | 0.62              |
| 2:V:228:LEU:CD1  | 2:V:236:ILE:HD11 | 2.29                     | 0.62              |
| 1:G:157:ARG:HH21 | 1:G:184:ILE:HG22 | 1.65                     | 0.62              |
| 1:I:102:VAL:HG11 | 1:I:153:LEU:HD13 | 1.81                     | 0.62              |
| 2:J:268:LEU:HB3  | 2:J:270:LEU:HD21 | 1.81                     | 0.62              |
| 1:K:232:ALA:CB   | 2:L:223:LEU:HD11 | 2.29                     | 0.62              |
| 1:K:271:ILE:HG23 | 2:L:259:TYR:HE1  | 1.64                     | 0.62              |
| 2:L:34:HIS:ND1   | 2:L:66:ILE:HG22  | 2.14                     | 0.62              |
| 2:L:130:VAL:HG13 | 2:L:149:GLN:OE1  | 1.99                     | 0.62              |
| 1:M:140:VAL:HG21 | 1:M:168:LEU:HD12 | 1.81                     | 0.62              |
| 1:M:221:GLN:HB2  | 2:N:212:ILE:HG22 | 1.81                     | 0.62              |
| 1:O:214:VAL:HG13 | 2:P:209:ALA:HB3  | 1.81                     | 0.62              |
| 1:U:108:VAL:HG11 | 1:U:133:LEU:HD22 | 1.81                     | 0.62              |
| 2:X:203:ALA:O    | 2:X:207:LYS:HG2  | 1.99                     | 0.62              |
| 2:D:238:LEU:HD23 | 2:D:241:LEU:HD12 | 1.80                     | 0.62              |
| 1:I:124:LEU:HD11 | 1:I:176:SER:HB2  | 1.80                     | 0.62              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:J:27:LEU:HD13  | 2:J:56:PHE:CZ    | 2.34                     | 0.62              |
| 2:P:136:ALA:HB1  | 2:P:175:PHE:CE1  | 2.34                     | 0.62              |
| 2:P:151:SER:HA   | 2:P:168:VAL:HG11 | 1.80                     | 0.62              |
| 1:Q:106:LEU:HD11 | 1:Q:165:ARG:NH2  | 2.15                     | 0.62              |
| 1:S:136:ILE:HD11 | 1:S:171:ARG:CB   | 2.29                     | 0.62              |
| 2:F:228:LEU:HD22 | 2:F:236:ILE:H    | 1.64                     | 0.62              |
| 2:H:94:ILE:HG23  | 2:H:165:LEU:HD13 | 1.80                     | 0.62              |
| 2:H:118:VAL:HG11 | 2:H:163:LEU:HD12 | 1.82                     | 0.62              |
| 2:J:92:LEU:HD22  | 2:J:127:LEU:HD11 | 1.81                     | 0.62              |
| 1:K:41:PHE:CE2   | 1:K:64:LEU:HD13  | 2.34                     | 0.62              |
| 2:P:146:VAL:HG12 | 2:P:170:LEU:HD11 | 1.81                     | 0.62              |
| 2:R:126:ILE:O    | 2:R:130:VAL:HG23 | 2.00                     | 0.62              |
| 2:B:267:LEU:HD23 | 2:X:267:LEU:CD2  | 2.28                     | 0.62              |
| 1:I:58:VAL:HG21  | 2:J:34:HIS:HB2   | 1.81                     | 0.62              |
| 1:K:72:ILE:HD13  | 1:K:75:PHE:CD2   | 2.35                     | 0.62              |
| 1:Q:144:VAL:HG11 | 1:Q:164:ILE:CG1  | 2.30                     | 0.62              |
| 1:W:144:VAL:HG11 | 1:W:164:ILE:HG13 | 1.80                     | 0.62              |
| 2:B:267:LEU:HD11 | 2:X:269:GLN:HB2  | 1.81                     | 0.62              |
| 2:N:28:TYR:HE1   | 2:N:57:LEU:HD23  | 1.64                     | 0.62              |
| 1:U:41:PHE:CD1   | 1:U:43:VAL:HG23  | 2.34                     | 0.62              |
| 1:U:41:PHE:CZ    | 1:U:69:HIS:HB2   | 2.35                     | 0.62              |
| 2:V:248:ALA:CB   | 1:W:278:LEU:HD21 | 2.30                     | 0.62              |
| 2:H:243:ALA:O    | 2:H:244:ALA:C    | 2.42                     | 0.62              |
| 1:I:43:VAL:CG1   | 1:I:47:HIS:HB2   | 2.28                     | 0.62              |
| 1:K:140:VAL:HG21 | 1:K:168:LEU:CA   | 2.30                     | 0.62              |
| 1:Q:242:LEU:HD13 | 1:Q:249:ILE:HD11 | 1.81                     | 0.62              |
| 2:R:217:ASP:OD1  | 1:S:248:TYR:CZ   | 2.53                     | 0.62              |
| 1:W:165:ARG:NH1  | 1:W:182:VAL:HG21 | 2.15                     | 0.62              |
| 1:A:262:LYS:HG2  | 2:X:247:ILE:HG22 | 1.82                     | 0.62              |
| 1:C:242:LEU:HD13 | 1:C:249:ILE:HG13 | 1.82                     | 0.62              |
| 1:C:279:VAL:HG11 | 1:C:287:PHE:O    | 2.00                     | 0.62              |
| 2:L:28:TYR:CD1   | 2:L:57:LEU:HD23  | 2.35                     | 0.62              |
| 2:H:45:VAL:HG21  | 2:H:107:PHE:CD2  | 2.35                     | 0.62              |
| 2:H:214:ALA:O    | 2:H:215:GLU:C    | 2.42                     | 0.62              |
| 1:I:104:ILE:HD12 | 1:I:145:VAL:CG2  | 2.29                     | 0.62              |
| 2:J:239:ARG:CB   | 1:K:254:ILE:HD13 | 2.29                     | 0.62              |
| 2:P:228:LEU:HD13 | 2:P:236:ILE:CD1  | 2.26                     | 0.62              |
| 2:V:221:ALA:O    | 2:V:224:ILE:HG22 | 2.00                     | 0.62              |
| 1:I:278:LEU:HD23 | 1:I:278:LEU:O    | 2.00                     | 0.61              |
| 2:P:126:ILE:O    | 2:P:130:VAL:HG23 | 1.99                     | 0.61              |
| 2:H:93:ARG:O     | 2:H:168:VAL:HG13 | 2.00                     | 0.61              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:H:195:ARG:O    | 2:H:199:VAL:HG23 | 2.00                     | 0.61              |
| 2:H:200:VAL:HG22 | 1:I:223:GLN:CA   | 2.30                     | 0.61              |
| 2:N:236:ILE:HD13 | 1:O:250:LYS:HD2  | 1.83                     | 0.61              |
| 2:T:87:ASN:OD1   | 1:U:154:ILE:HG21 | 1.99                     | 0.61              |
| 2:V:222:GLU:HG3  | 1:W:241:ALA:HB1  | 1.81                     | 0.61              |
| 1:I:165:ARG:NH1  | 1:I:182:VAL:HG11 | 2.15                     | 0.61              |
| 1:E:299:LYS:O    | 1:G:295:ILE:HD11 | 2.00                     | 0.61              |
| 2:F:200:VAL:O    | 2:F:200:VAL:HG12 | 2.00                     | 0.61              |
| 2:H:92:LEU:HD21  | 2:H:168:VAL:HG11 | 1.82                     | 0.61              |
| 1:O:235:ALA:HB2  | 2:P:235:LEU:HD23 | 1.82                     | 0.61              |
| 1:S:236:LYS:O    | 1:S:240:GLU:OE1  | 2.18                     | 0.61              |
| 2:F:222:GLU:OE2  | 1:G:241:ALA:HB2  | 2.01                     | 0.61              |
| 1:I:225:ILE:HD13 | 2:J:219:LYS:HD3  | 1.82                     | 0.61              |
| 2:L:126:ILE:HD11 | 2:L:157:ARG:HB2  | 1.81                     | 0.61              |
| 1:M:51:PHE:CE1   | 1:M:64:LEU:HD11  | 2.36                     | 0.61              |
| 2:P:129:SER:HB2  | 1:Q:158:ALA:HB2  | 1.81                     | 0.61              |
| 2:V:88:VAL:HG12  | 2:V:90:ILE:CG1   | 2.30                     | 0.61              |
| 2:H:203:ALA:HA   | 2:H:206:GLN:HG3  | 1.81                     | 0.61              |
| 1:K:132:VAL:HG11 | 1:K:177:LEU:HD12 | 1.83                     | 0.61              |
| 1:K:140:VAL:HG21 | 1:K:168:LEU:HB2  | 1.82                     | 0.61              |
| 2:L:207:LYS:HE2  | 1:M:226:VAL:HG13 | 1.83                     | 0.61              |
| 2:T:221:ALA:HA   | 1:U:248:TYR:CD1  | 2.35                     | 0.61              |
| 1:U:90:ILE:HD13  | 1:U:134:PRO:HA   | 1.80                     | 0.61              |
| 2:H:28:TYR:OH    | 2:H:50:VAL:HG11  | 2.00                     | 0.61              |
| 1:O:52:PHE:HE1   | 2:P:32:ALA:HB2   | 1.65                     | 0.61              |
| 1:O:165:ARG:HH12 | 1:O:168:LEU:HD23 | 1.65                     | 0.61              |
| 2:P:65:ILE:HD13  | 2:P:107:PHE:CZ   | 2.35                     | 0.61              |
| 2:R:195:ARG:O    | 2:R:199:VAL:HG23 | 2.00                     | 0.61              |
| 1:A:251:LEU:HG   | 2:X:236:ILE:HD13 | 1.83                     | 0.61              |
| 1:G:51:PHE:CE1   | 1:G:64:LEU:HD11  | 2.35                     | 0.61              |
| 1:G:132:VAL:HG11 | 1:G:177:LEU:HD12 | 1.83                     | 0.61              |
| 1:G:140:VAL:HG22 | 1:G:167:GLU:OE1  | 2.01                     | 0.61              |
| 2:J:38:ILE:O     | 2:J:45:VAL:HG13  | 2.01                     | 0.61              |
| 1:K:50:ILE:HG21  | 1:K:118:PRO:CA   | 2.30                     | 0.61              |
| 1:K:232:ALA:HB1  | 2:L:223:LEU:HD11 | 1.83                     | 0.61              |
| 1:M:41:PHE:HZ    | 1:M:64:LEU:HD13  | 1.65                     | 0.61              |
| 1:M:260:ILE:HD11 | 2:N:245:GLU:HA   | 1.83                     | 0.61              |
| 1:Q:140:VAL:HG22 | 1:Q:167:GLU:OE1  | 2.01                     | 0.61              |
| 2:T:139:LEU:HA   | 2:T:146:VAL:HG21 | 1.82                     | 0.61              |
| 2:T:140:ILE:HD11 | 2:T:175:PHE:CE2  | 2.36                     | 0.61              |
| 1:C:251:LEU:HD21 | 1:C:255:ARG:NH2  | 2.15                     | 0.61              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:257:ALA:CB   | 1:G:279:VAL:HG13 | 2.24                     | 0.61              |
| 1:G:253:LYS:HD2  | 2:H:241:LEU:HD11 | 1.82                     | 0.61              |
| 2:H:220:ALA:HB1  | 1:I:248:TYR:CD1  | 2.35                     | 0.61              |
| 1:I:55:ILE:O     | 1:I:56:GLY:C     | 2.43                     | 0.61              |
| 1:I:141:LEU:HD23 | 1:I:164:ILE:HD13 | 1.83                     | 0.61              |
| 2:J:57:LEU:HB2   | 2:J:62:GLN:HB3   | 1.82                     | 0.61              |
| 1:M:40:VAL:O     | 1:M:40:VAL:HG13  | 2.00                     | 0.61              |
| 1:Q:100:GLN:O    | 1:Q:102:VAL:HG23 | 2.01                     | 0.61              |
| 1:A:264:ILE:CD1  | 1:A:271:ILE:HD11 | 2.31                     | 0.61              |
| 2:B:203:ALA:HB1  | 1:C:226:VAL:CG1  | 2.31                     | 0.61              |
| 2:B:267:LEU:HB3  | 2:X:267:LEU:HD21 | 1.81                     | 0.60              |
| 1:C:238:LEU:HD22 | 2:D:238:LEU:HD12 | 1.83                     | 0.60              |
| 1:K:228:ALA:HB1  | 2:L:220:ALA:HB2  | 1.83                     | 0.60              |
| 1:A:272:TYR:OH   | 2:B:260:LEU:HD23 | 2.02                     | 0.60              |
| 1:E:273:LEU:HD22 | 1:E:277:ASN:HB2  | 1.82                     | 0.60              |
| 1:G:161:SER:O    | 1:G:165:ARG:HG2  | 2.01                     | 0.60              |
| 1:G:224:LYS:O    | 1:G:228:ALA:HB3  | 2.00                     | 0.60              |
| 1:I:133:LEU:HD23 | 1:I:136:ILE:HD11 | 1.82                     | 0.60              |
| 2:L:92:LEU:HD11  | 2:L:168:VAL:CG1  | 2.31                     | 0.60              |
| 1:M:51:PHE:CD2   | 1:M:62:THR:HG21  | 2.36                     | 0.60              |
| 1:Q:218:LYS:O    | 1:Q:221:GLN:HG2  | 2.01                     | 0.60              |
| 2:V:200:VAL:HG22 | 1:W:223:GLN:HB2  | 1.83                     | 0.60              |
| 2:V:222:GLU:CG   | 1:W:241:ALA:HB1  | 2.31                     | 0.60              |
| 1:W:285:GLU:O    | 1:W:289:ARG:HG3  | 2.01                     | 0.60              |
| 1:K:282:LEU:HD12 | 1:K:287:PHE:CE1  | 2.36                     | 0.60              |
| 1:Q:50:ILE:HG22  | 1:Q:63:ILE:HA    | 1.82                     | 0.60              |
| 2:T:195:ARG:CZ   | 2:T:199:VAL:HG21 | 2.31                     | 0.60              |
| 1:W:264:ILE:HG23 | 2:X:252:SER:OG   | 2.01                     | 0.60              |
| 1:G:136:ILE:HG13 | 1:G:168:LEU:HD11 | 1.82                     | 0.60              |
| 1:S:136:ILE:HD11 | 1:S:171:ARG:HB3  | 1.83                     | 0.60              |
| 1:W:124:LEU:HD13 | 1:W:132:VAL:HG21 | 1.84                     | 0.60              |
| 1:A:203:ALA:HB1  | 2:B:202:LYS:HD2  | 1.83                     | 0.60              |
| 1:A:274:THR:HB   | 2:X:261:PRO:HD2  | 1.83                     | 0.60              |
| 2:F:266:VAL:HG12 | 2:F:268:LEU:H    | 1.66                     | 0.60              |
| 1:I:54:ARG:NE    | 2:J:66:ILE:HD11  | 2.16                     | 0.60              |
| 2:J:126:ILE:HD11 | 2:J:157:ARG:HB2  | 1.84                     | 0.60              |
| 1:K:50:ILE:HG21  | 1:K:118:PRO:N    | 2.16                     | 0.60              |
| 1:O:264:ILE:HG23 | 2:P:249:TYR:HD1  | 1.66                     | 0.60              |
| 1:E:232:ALA:HB2  | 2:F:224:ILE:CG1  | 2.32                     | 0.60              |
| 2:F:251:LEU:CD1  | 2:F:257:ILE:HG21 | 2.29                     | 0.60              |
| 2:H:37:VAL:HG21  | 2:H:104:PRO:N    | 2.17                     | 0.60              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:H:38:ILE:HA    | 2:H:62:GLN:HG3   | 1.83                     | 0.60              |
| 1:I:225:ILE:HD11 | 2:J:215:GLU:OE1  | 2.02                     | 0.60              |
| 2:N:200:VAL:HG11 | 1:O:222:ARG:CZ   | 2.32                     | 0.60              |
| 2:N:224:ILE:HG12 | 1:O:251:LEU:HD22 | 1.83                     | 0.60              |
| 2:N:262:ALA:HB3  | 1:O:289:ARG:NH2  | 2.16                     | 0.60              |
| 2:X:196:ALA:O    | 2:X:200:VAL:HG23 | 2.00                     | 0.60              |
| 1:C:228:ALA:HB3  | 2:D:220:ALA:CB   | 2.32                     | 0.60              |
| 1:I:99:LEU:HD13  | 2:J:179:PHE:HZ   | 1.65                     | 0.60              |
| 2:J:259:TYR:OH   | 1:M:280:LEU:HD21 | 2.02                     | 0.60              |
| 2:L:110:ILE:HG21 | 2:L:114:TYR:HA   | 1.84                     | 0.60              |
| 2:R:217:ASP:OD2  | 2:T:238:LEU:HD22 | 2.02                     | 0.60              |
| 2:H:37:VAL:HG11  | 2:H:104:PRO:HB3  | 1.84                     | 0.60              |
| 1:M:157:ARG:NH2  | 1:M:184:ILE:HG22 | 2.16                     | 0.60              |
| 1:M:242:LEU:HB3  | 1:M:249:ILE:HD11 | 1.84                     | 0.60              |
| 1:O:253:LYS:O    | 1:O:257:ALA:HB2  | 2.02                     | 0.60              |
| 2:P:86:GLN:O     | 2:P:88:VAL:HG23  | 2.01                     | 0.60              |
| 2:T:134:PHE:CD2  | 2:T:146:VAL:HG22 | 2.36                     | 0.60              |
| 2:B:268:LEU:HB3  | 2:D:266:VAL:HG13 | 1.84                     | 0.60              |
| 2:D:261:PRO:HA   | 1:E:275:ALA:H    | 1.67                     | 0.60              |
| 1:E:229:GLU:HG2  | 2:F:223:LEU:HD13 | 1.83                     | 0.60              |
| 1:I:76:GLN:HB2   | 2:J:29:ASN:ND2   | 2.16                     | 0.60              |
| 1:Q:144:VAL:HG11 | 1:Q:164:ILE:HG12 | 1.82                     | 0.60              |
| 1:A:209:ARG:NH1  | 1:A:213:LEU:HD11 | 2.17                     | 0.60              |
| 1:A:219:GLN:HB3  | 2:X:200:VAL:HG22 | 1.84                     | 0.60              |
| 2:D:200:VAL:HG21 | 1:E:222:ARG:HB2  | 1.82                     | 0.60              |
| 1:E:254:ILE:O    | 1:E:257:ALA:HB3  | 2.02                     | 0.60              |
| 2:F:258:THR:HG22 | 1:G:272:TYR:HB2  | 1.83                     | 0.60              |
| 1:I:43:VAL:CG1   | 1:I:47:HIS:CB    | 2.79                     | 0.60              |
| 2:J:235:LEU:HD12 | 2:J:238:LEU:HB3  | 1.83                     | 0.60              |
| 1:K:235:ALA:CB   | 2:L:224:ILE:HD13 | 2.32                     | 0.60              |
| 2:N:65:ILE:HD13  | 2:N:107:PHE:CE2  | 2.37                     | 0.60              |
| 1:Q:64:LEU:HD22  | 1:Q:69:HIS:CG    | 2.36                     | 0.60              |
| 1:E:264:ILE:HG23 | 1:E:267:SER:HB3  | 1.83                     | 0.59              |
| 2:L:134:PHE:CD2  | 2:L:146:VAL:HG22 | 2.37                     | 0.59              |
| 2:N:247:ILE:HG13 | 1:O:257:ALA:HB1  | 1.83                     | 0.59              |
| 1:O:140:VAL:HG21 | 1:O:168:LEU:HD13 | 1.84                     | 0.59              |
| 2:H:62:GLN:HE22  | 2:H:64:PRO:HA    | 1.66                     | 0.59              |
| 2:J:235:LEU:HD11 | 2:J:239:ARG:HG3  | 1.84                     | 0.59              |
| 2:L:86:GLN:HB2   | 2:L:136:ALA:HB2  | 1.85                     | 0.59              |
| 2:N:98:PRO:HB2   | 2:N:103:LEU:HD21 | 1.83                     | 0.59              |
| 1:G:270:ARG:O    | 2:H:258:THR:HG22 | 2.02                     | 0.59              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:H:118:VAL:HG13 | 2:H:161:PHE:CB   | 2.32                     | 0.59              |
| 1:I:46:GLY:O     | 1:I:83:ILE:HG13  | 2.01                     | 0.59              |
| 2:J:88:VAL:HG11  | 2:J:139:LEU:CD1  | 2.32                     | 0.59              |
| 2:J:241:LEU:O    | 2:J:244:ALA:HB3  | 2.02                     | 0.59              |
| 2:L:49:VAL:HG21  | 2:L:100:ALA:O    | 2.02                     | 0.59              |
| 2:N:236:ILE:O    | 2:N:240:LYS:HG3  | 2.03                     | 0.59              |
| 1:Q:104:ILE:HD12 | 1:Q:145:VAL:HG21 | 1.84                     | 0.59              |
| 2:D:251:LEU:HD21 | 1:G:280:LEU:CD2  | 2.33                     | 0.59              |
| 2:L:57:LEU:HD22  | 2:L:62:GLN:OE1   | 2.03                     | 0.59              |
| 2:X:236:ILE:HG22 | 2:X:236:ILE:O    | 2.01                     | 0.59              |
| 1:C:235:ALA:HA   | 2:D:235:LEU:CB   | 2.33                     | 0.59              |
| 2:H:224:ILE:HD12 | 1:I:248:TYR:CA   | 2.31                     | 0.59              |
| 1:I:140:VAL:HG21 | 1:I:168:LEU:CB   | 2.32                     | 0.59              |
| 1:M:41:PHE:HE2   | 1:M:49:ALA:HB3   | 1.65                     | 0.59              |
| 2:N:146:VAL:HG12 | 2:N:170:LEU:HD11 | 1.83                     | 0.59              |
| 1:Q:221:GLN:OE1  | 2:R:212:ILE:HG23 | 2.02                     | 0.59              |
| 2:R:195:ARG:CZ   | 2:R:199:VAL:HG21 | 2.33                     | 0.59              |
| 1:S:238:LEU:HD13 | 2:T:238:LEU:HD23 | 1.83                     | 0.59              |
| 1:W:104:ILE:CD1  | 1:W:145:VAL:HG21 | 2.33                     | 0.59              |
| 1:A:237:MET:SD   | 1:A:238:LEU:HG   | 2.42                     | 0.59              |
| 1:E:225:ILE:HA   | 2:F:220:ALA:HB2  | 1.83                     | 0.59              |
| 2:F:211:ILE:HD13 | 1:G:233:GLU:OE2  | 2.02                     | 0.59              |
| 1:G:232:ALA:HA   | 2:H:224:ILE:HD11 | 1.84                     | 0.59              |
| 1:K:94:THR:HG23  | 1:K:142:LYS:HD2  | 1.84                     | 0.59              |
| 2:P:207:LYS:HE3  | 1:Q:226:VAL:CG1  | 2.33                     | 0.59              |
| 2:R:241:LEU:O    | 2:R:244:ALA:HB3  | 2.03                     | 0.59              |
| 1:A:249:ILE:HD11 | 2:B:234:GLY:HA2  | 1.85                     | 0.59              |
| 2:D:250:GLN:NE2  | 2:D:251:LEU:HD23 | 2.18                     | 0.59              |
| 1:E:269:ASN:HB3  | 2:F:257:ILE:HB   | 1.85                     | 0.59              |
| 1:G:242:LEU:HD22 | 1:G:249:ILE:HG13 | 1.84                     | 0.59              |
| 2:H:39:PHE:HA    | 2:H:45:VAL:HA    | 1.85                     | 0.59              |
| 2:H:45:VAL:HB    | 2:H:108:THR:HG22 | 1.85                     | 0.59              |
| 1:K:43:VAL:HG12  | 1:K:47:HIS:HB2   | 1.84                     | 0.59              |
| 1:A:254:ILE:HG23 | 1:C:282:LEU:CD1  | 2.33                     | 0.59              |
| 2:D:267:LEU:O    | 2:F:267:LEU:CD2  | 2.50                     | 0.59              |
| 1:G:253:LYS:HA   | 2:H:241:LEU:HD11 | 1.84                     | 0.59              |
| 2:H:126:ILE:HD11 | 2:H:157:ARG:HB2  | 1.84                     | 0.59              |
| 1:I:21:THR:HG21  | 2:J:6:PHE:CD1    | 2.38                     | 0.59              |
| 1:I:102:VAL:HG22 | 1:I:189:PHE:CE1  | 2.38                     | 0.59              |
| 1:U:144:VAL:HG11 | 1:U:164:ILE:CG1  | 2.33                     | 0.59              |
| 2:V:206:GLN:O    | 2:V:210:ALA:HB3  | 2.03                     | 0.59              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:L:267:LEU:HD12 | 2:N:267:LEU:CD2  | 2.33                     | 0.59              |
| 1:M:154:ILE:HD11 | 1:M:189:PHE:HZ   | 1.67                     | 0.59              |
| 2:R:92:LEU:HD21  | 2:R:168:VAL:HG13 | 1.84                     | 0.59              |
| 1:S:242:LEU:HD12 | 2:T:234:GLY:HA2  | 1.84                     | 0.59              |
| 2:V:241:LEU:O    | 2:V:244:ALA:HB3  | 2.02                     | 0.59              |
| 1:A:278:LEU:HD12 | 2:X:259:TYR:CD1  | 2.38                     | 0.59              |
| 1:C:238:LEU:HD22 | 2:D:238:LEU:CD1  | 2.33                     | 0.59              |
| 1:I:161:SER:O    | 1:I:165:ARG:HG2  | 2.03                     | 0.59              |
| 2:L:28:TYR:CE2   | 2:L:30:VAL:HG22  | 2.37                     | 0.59              |
| 2:P:180:THR:O    | 2:P:184:GLU:OE1  | 2.21                     | 0.59              |
| 2:T:30:VAL:HG12  | 2:T:34:HIS:O     | 2.03                     | 0.59              |
| 1:A:278:LEU:CD2  | 1:C:282:LEU:HB3  | 2.32                     | 0.58              |
| 1:C:252:ARG:HE   | 1:C:256:ALA:HB2  | 1.68                     | 0.58              |
| 2:D:247:ILE:HD13 | 1:E:278:LEU:HD21 | 1.85                     | 0.58              |
| 2:F:236:ILE:O    | 2:F:240:LYS:HG3  | 2.02                     | 0.58              |
| 2:H:79:ILE:O     | 2:H:79:ILE:HG23  | 2.03                     | 0.58              |
| 2:P:122:ILE:HG22 | 2:P:157:ARG:HG2  | 1.83                     | 0.58              |
| 2:R:93:ARG:CZ    | 2:R:171:THR:HG21 | 2.33                     | 0.58              |
| 2:R:207:LYS:HE2  | 1:S:226:VAL:HG13 | 1.85                     | 0.58              |
| 2:T:201:GLU:O    | 2:T:205:GLN:OE1  | 2.21                     | 0.58              |
| 1:U:221:GLN:HB2  | 2:V:212:ILE:HG22 | 1.85                     | 0.58              |
| 2:F:240:LYS:O    | 2:F:244:ALA:HB2  | 2.03                     | 0.58              |
| 1:I:165:ARG:NE   | 1:I:165:ARG:HA   | 2.18                     | 0.58              |
| 1:K:107:ARG:NH2  | 1:K:185:THR:HG21 | 2.18                     | 0.58              |
| 2:T:237:GLU:HA   | 2:T:240:LYS:HB2  | 1.85                     | 0.58              |
| 2:J:267:LEU:HD23 | 2:J:268:LEU:N    | 2.18                     | 0.58              |
| 2:J:268:LEU:HD11 | 2:L:261:PRO:HD3  | 1.83                     | 0.58              |
| 1:K:52:PHE:CZ    | 2:L:31:ASP:HA    | 2.39                     | 0.58              |
| 1:K:150:ALA:O    | 1:K:154:ILE:HD12 | 2.02                     | 0.58              |
| 1:K:250:LYS:HA   | 1:K:253:LYS:HG2  | 1.84                     | 0.58              |
| 2:L:236:ILE:HG22 | 2:L:240:LYS:NZ   | 2.17                     | 0.58              |
| 1:M:148:PHE:CZ   | 1:M:163:LEU:HD23 | 2.37                     | 0.58              |
| 1:U:254:ILE:O    | 1:U:257:ALA:HB3  | 2.03                     | 0.58              |
| 1:U:264:ILE:O    | 1:U:264:ILE:HG22 | 2.03                     | 0.58              |
| 1:W:136:ILE:CG1  | 1:W:168:LEU:HD11 | 2.33                     | 0.58              |
| 2:F:200:VAL:CG2  | 1:G:223:GLN:HB2  | 2.33                     | 0.58              |
| 1:G:168:LEU:HD12 | 1:G:171:ARG:HB2  | 1.86                     | 0.58              |
| 2:H:50:VAL:HG22  | 2:H:55:HIS:HB2   | 1.85                     | 0.58              |
| 2:L:262:ALA:HB3  | 1:M:289:ARG:NH2  | 2.18                     | 0.58              |
| 2:P:90:ILE:HG21  | 2:P:170:LEU:HD22 | 1.85                     | 0.58              |
| 2:T:240:LYS:NZ   | 1:W:282:LEU:HD23 | 2.18                     | 0.58              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:L:239:ARG:HG2  | 1:M:254:ILE:HG21 | 1.84                     | 0.58              |
| 2:N:74:ARG:HG3   | 2:N:119:LEU:HD13 | 1.86                     | 0.58              |
| 2:P:130:VAL:HG21 | 2:P:150:VAL:HA   | 1.85                     | 0.58              |
| 1:S:228:ALA:HB2  | 2:T:220:ALA:HA   | 1.86                     | 0.58              |
| 1:U:218:LYS:NZ   | 2:V:212:ILE:HD13 | 2.18                     | 0.58              |
| 2:V:179:PHE:HA   | 1:W:202:VAL:HG22 | 1.85                     | 0.58              |
| 1:W:94:THR:HG23  | 1:W:142:LYS:HA   | 1.84                     | 0.58              |
| 1:C:279:VAL:HG12 | 1:C:287:PHE:CD1  | 2.38                     | 0.58              |
| 1:E:222:ARG:HA   | 1:E:225:ILE:HD12 | 1.85                     | 0.58              |
| 1:G:164:ILE:HG22 | 1:G:165:ARG:HH21 | 1.68                     | 0.58              |
| 2:H:76:VAL:HB    | 2:H:123:THR:HG21 | 1.84                     | 0.58              |
| 2:L:50:VAL:HG13  | 2:L:55:HIS:HB2   | 1.85                     | 0.58              |
| 1:M:106:LEU:HD11 | 1:M:165:ARG:NH2  | 2.18                     | 0.58              |
| 1:M:166:ARG:O    | 1:M:170:GLU:OE1  | 2.22                     | 0.58              |
| 1:O:47:HIS:H     | 1:O:66:GLU:HB2   | 1.67                     | 0.58              |
| 2:T:126:ILE:O    | 2:T:130:VAL:HG23 | 2.04                     | 0.58              |
| 2:D:218:SER:O    | 2:D:222:GLU:OE1  | 2.22                     | 0.58              |
| 1:E:279:VAL:HG21 | 1:E:290:GLY:HA3  | 1.85                     | 0.58              |
| 2:H:217:ASP:OD2  | 2:J:238:LEU:HD13 | 2.04                     | 0.58              |
| 1:I:53:ASN:HD21  | 1:I:58:VAL:HG22  | 1.68                     | 0.58              |
| 1:I:59:GLN:HB3   | 2:J:30:VAL:HB    | 1.86                     | 0.58              |
| 1:I:106:LEU:HD21 | 1:I:165:ARG:HH21 | 1.67                     | 0.58              |
| 1:K:53:ASN:HB2   | 1:K:58:VAL:HA    | 1.86                     | 0.58              |
| 1:K:157:ARG:CZ   | 1:K:184:ILE:HG22 | 2.33                     | 0.58              |
| 2:P:211:ILE:HD11 | 1:Q:230:GLY:HA2  | 1.85                     | 0.58              |
| 2:R:90:ILE:CG2   | 2:R:170:LEU:HD22 | 2.34                     | 0.58              |
| 2:H:92:LEU:HD21  | 2:H:168:VAL:CG1  | 2.33                     | 0.58              |
| 1:I:260:ILE:HG23 | 1:I:264:ILE:HB   | 1.86                     | 0.58              |
| 1:K:229:GLU:HG2  | 2:L:219:LYS:NZ   | 2.19                     | 0.58              |
| 1:W:207:ALA:HA   | 2:X:205:GLN:HG2  | 1.86                     | 0.58              |
| 1:A:226:VAL:HG21 | 2:X:206:GLN:HE22 | 1.66                     | 0.58              |
| 2:B:257:ILE:HG23 | 1:C:271:ILE:CG1  | 2.34                     | 0.58              |
| 1:C:249:ILE:HG21 | 1:E:294:LEU:HG   | 1.85                     | 0.58              |
| 1:K:288:THR:HA   | 1:K:292:ASP:HB3  | 1.85                     | 0.58              |
| 2:L:27:LEU:HD12  | 2:L:28:TYR:N     | 2.19                     | 0.58              |
| 2:P:221:ALA:HA   | 1:Q:248:TYR:CG   | 2.39                     | 0.58              |
| 2:V:88:VAL:HG22  | 2:V:175:PHE:CE1  | 2.39                     | 0.58              |
| 2:F:212:ILE:HA   | 2:F:215:GLU:HB2  | 1.85                     | 0.58              |
| 1:I:52:PHE:HB3   | 1:I:77:TYR:O     | 2.03                     | 0.58              |
| 2:J:207:LYS:HE2  | 2:J:207:LYS:HA   | 1.86                     | 0.58              |
| 2:L:126:ILE:HD11 | 2:L:157:ARG:CB   | 2.34                     | 0.58              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:79:ILE:CG2   | 1:O:126:LEU:HD23 | 2.34                     | 0.58              |
| 1:Q:221:GLN:O    | 1:Q:225:ILE:HG12 | 2.04                     | 0.58              |
| 2:T:240:LYS:HZ2  | 1:W:282:LEU:HD23 | 1.69                     | 0.58              |
| 1:A:277:ASN:HB2  | 2:X:260:LEU:O    | 2.04                     | 0.57              |
| 1:C:284:ASP:OD2  | 2:X:262:ALA:HB3  | 2.04                     | 0.57              |
| 1:G:52:PHE:CD1   | 1:G:58:VAL:HG21  | 2.39                     | 0.57              |
| 1:G:253:LYS:HB2  | 1:I:279:VAL:CG2  | 2.34                     | 0.57              |
| 2:H:240:LYS:HG2  | 1:K:282:LEU:HD23 | 1.86                     | 0.57              |
| 2:N:30:VAL:HG21  | 2:N:53:GLY:O     | 2.04                     | 0.57              |
| 2:P:90:ILE:CG2   | 2:P:170:LEU:HD22 | 2.34                     | 0.57              |
| 1:Q:102:VAL:HG22 | 1:Q:189:PHE:CE2  | 2.39                     | 0.57              |
| 2:X:261:PRO:HG2  | 2:X:266:VAL:HG11 | 1.85                     | 0.57              |
| 1:A:253:LYS:HE2  | 1:C:288:THR:HA   | 1.86                     | 0.57              |
| 1:A:274:THR:HB   | 2:X:261:PRO:CD   | 2.34                     | 0.57              |
| 1:E:214:VAL:HG13 | 2:F:212:ILE:HD11 | 1.87                     | 0.57              |
| 1:K:40:VAL:O     | 1:K:40:VAL:HG13  | 2.04                     | 0.57              |
| 1:M:153:LEU:HB3  | 1:M:187:LEU:HD21 | 1.85                     | 0.57              |
| 2:R:151:SER:CA   | 2:R:168:VAL:HG11 | 2.34                     | 0.57              |
| 1:S:48:ARG:HG3   | 1:S:83:ILE:HG21  | 1.86                     | 0.57              |
| 1:U:266:THR:HG1  | 2:V:249:TYR:HE1  | 1.51                     | 0.57              |
| 1:A:228:ALA:HB1  | 2:B:224:ILE:CD1  | 2.31                     | 0.57              |
| 2:L:39:PHE:HD2   | 2:L:61:VAL:O     | 1.87                     | 0.57              |
| 2:P:35:ARG:HD2   | 2:P:100:ALA:HB1  | 1.86                     | 0.57              |
| 2:T:203:ALA:C    | 1:U:226:VAL:HG11 | 2.29                     | 0.57              |
| 1:U:50:ILE:HG21  | 1:U:117:LEU:HB2  | 1.86                     | 0.57              |
| 2:F:251:LEU:HD21 | 1:I:280:LEU:HD12 | 1.86                     | 0.57              |
| 1:G:140:VAL:HG21 | 1:G:168:LEU:HD13 | 1.85                     | 0.57              |
| 1:G:220:GLU:HA   | 1:G:223:GLN:HG2  | 1.86                     | 0.57              |
| 1:G:270:ARG:O    | 2:H:258:THR:HA   | 2.04                     | 0.57              |
| 1:M:64:LEU:HB3   | 1:M:69:HIS:CG    | 2.39                     | 0.57              |
| 1:U:48:ARG:HG3   | 1:U:83:ILE:HG21  | 1.86                     | 0.57              |
| 1:A:225:ILE:CA   | 2:B:220:ALA:HB2  | 2.35                     | 0.57              |
| 2:H:31:ASP:O     | 2:H:32:ALA:C     | 2.46                     | 0.57              |
| 1:Q:154:ILE:HD11 | 1:Q:189:PHE:CE1  | 2.38                     | 0.57              |
| 2:V:262:ALA:HB3  | 1:W:289:ARG:HH22 | 1.69                     | 0.57              |
| 1:A:273:LEU:HB3  | 2:X:260:LEU:N    | 2.20                     | 0.57              |
| 1:E:273:LEU:HD23 | 1:G:280:LEU:C    | 2.30                     | 0.57              |
| 2:F:211:ILE:CG1  | 1:G:234:ALA:HB2  | 2.34                     | 0.57              |
| 2:H:50:VAL:HG13  | 2:H:55:HIS:HB2   | 1.87                     | 0.57              |
| 2:H:237:GLU:O    | 2:H:240:LYS:HB2  | 2.04                     | 0.57              |
| 1:I:90:ILE:HD13  | 1:I:134:PRO:HA   | 1.85                     | 0.57              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:72:ILE:HD13  | 1:K:75:PHE:CE2   | 2.40                     | 0.57              |
| 2:R:209:ALA:HA   | 2:R:212:ILE:HB   | 1.86                     | 0.57              |
| 1:S:260:ILE:HG23 | 1:S:264:ILE:HB   | 1.86                     | 0.57              |
| 2:T:125:GLU:O    | 1:U:158:ALA:HB2  | 2.05                     | 0.57              |
| 2:V:203:ALA:O    | 2:V:207:LYS:HG2  | 2.04                     | 0.57              |
| 2:B:269:GLN:HG3  | 2:D:269:GLN:HB3  | 1.87                     | 0.57              |
| 2:B:270:LEU:HD12 | 2:B:271:PRO:O    | 2.04                     | 0.57              |
| 2:F:251:LEU:HD21 | 1:I:280:LEU:CD1  | 2.35                     | 0.57              |
| 1:I:229:GLU:O    | 1:I:233:GLU:HB2  | 2.04                     | 0.57              |
| 1:K:150:ALA:HB1  | 1:K:189:PHE:CE2  | 2.40                     | 0.57              |
| 1:K:164:ILE:HG22 | 1:K:165:ARG:HH21 | 1.69                     | 0.57              |
| 1:O:150:ALA:HB1  | 1:O:189:PHE:CZ   | 2.39                     | 0.57              |
| 1:O:221:GLN:OE1  | 2:P:212:ILE:O    | 2.23                     | 0.57              |
| 2:P:110:ILE:HG21 | 2:P:114:TYR:HA   | 1.87                     | 0.57              |
| 1:W:132:VAL:HG12 | 1:W:136:ILE:HD13 | 1.86                     | 0.57              |
| 2:B:218:SER:O    | 2:B:221:ALA:HB3  | 2.04                     | 0.57              |
| 2:D:247:ILE:HD12 | 1:E:278:LEU:HD21 | 1.87                     | 0.57              |
| 1:G:273:LEU:CD1  | 1:I:280:LEU:HD12 | 2.35                     | 0.57              |
| 1:I:50:ILE:HG22  | 1:I:81:TYR:CE2   | 2.39                     | 0.57              |
| 2:J:203:ALA:CB   | 1:K:226:VAL:HG13 | 2.33                     | 0.57              |
| 1:O:144:VAL:HG21 | 1:O:164:ILE:HG12 | 1.87                     | 0.57              |
| 1:S:136:ILE:HD12 | 2:T:93:ARG:NH1   | 2.19                     | 0.57              |
| 1:U:140:VAL:HG22 | 1:U:167:GLU:OE1  | 2.05                     | 0.57              |
| 1:A:219:GLN:CG   | 2:X:200:VAL:HG22 | 2.35                     | 0.57              |
| 1:I:71:ARG:HB2   | 1:I:76:GLN:HG3   | 1.85                     | 0.57              |
| 1:I:107:ARG:O    | 1:I:107:ARG:HG3  | 2.05                     | 0.57              |
| 1:I:137:VAL:HG22 | 1:I:168:LEU:HD22 | 1.86                     | 0.57              |
| 1:I:253:LYS:CD   | 2:J:241:LEU:HD21 | 2.34                     | 0.57              |
| 1:K:52:PHE:HA    | 2:L:32:ALA:HB2   | 1.87                     | 0.57              |
| 1:K:107:ARG:C    | 1:K:182:VAL:HG13 | 2.29                     | 0.57              |
| 1:O:274:THR:HG22 | 1:O:275:ALA:H    | 1.70                     | 0.57              |
| 2:R:30:VAL:HG13  | 2:R:34:HIS:C     | 2.30                     | 0.57              |
| 1:U:238:LEU:HD11 | 2:V:238:LEU:HD23 | 1.86                     | 0.57              |
| 2:D:270:LEU:HD11 | 2:F:270:LEU:HA   | 1.86                     | 0.57              |
| 1:E:273:LEU:HA   | 1:G:280:LEU:O    | 2.04                     | 0.57              |
| 1:U:235:ALA:HB2  | 2:V:235:LEU:HB3  | 1.85                     | 0.57              |
| 1:U:253:LYS:HD2  | 2:V:241:LEU:HD11 | 1.86                     | 0.57              |
| 2:V:251:LEU:CD2  | 1:W:271:ILE:HG21 | 2.35                     | 0.57              |
| 1:C:229:GLU:HA   | 1:C:232:ALA:HB3  | 1.87                     | 0.56              |
| 1:I:252:ARG:NE   | 1:I:256:ALA:HB2  | 2.20                     | 0.56              |
| 1:O:215:GLU:O    | 1:O:219:GLN:HG2  | 2.05                     | 0.56              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:P:117:ARG:O    | 1:Q:109:LEU:HD11 | 2.05                     | 0.56              |
| 2:R:134:PHE:CD2  | 2:R:146:VAL:HG22 | 2.40                     | 0.56              |
| 1:U:55:ILE:HA    | 2:V:53:GLY:HA2   | 1.87                     | 0.56              |
| 1:U:64:LEU:HD22  | 1:U:69:HIS:ND1   | 2.20                     | 0.56              |
| 2:X:239:ARG:O    | 2:X:243:ALA:HB3  | 2.04                     | 0.56              |
| 2:H:123:THR:HG22 | 2:H:127:LEU:HD13 | 1.87                     | 0.56              |
| 1:I:235:ALA:HB2  | 2:J:235:LEU:CD2  | 2.35                     | 0.56              |
| 2:L:30:VAL:HG21  | 2:L:53:GLY:O     | 2.05                     | 0.56              |
| 2:L:233:ASP:CG   | 2:L:236:ILE:HD12 | 2.31                     | 0.56              |
| 1:M:228:ALA:O    | 1:M:232:ALA:HB3  | 2.06                     | 0.56              |
| 2:P:220:ALA:O    | 2:P:224:ILE:HG22 | 2.05                     | 0.56              |
| 2:R:270:LEU:HD12 | 2:T:268:LEU:HD23 | 1.87                     | 0.56              |
| 1:A:232:ALA:HB2  | 2:B:224:ILE:HG13 | 1.86                     | 0.56              |
| 1:A:261:SER:O    | 2:X:251:LEU:HD21 | 2.05                     | 0.56              |
| 1:A:273:LEU:HB2  | 2:X:258:THR:C    | 2.30                     | 0.56              |
| 1:A:288:THR:HG21 | 1:W:299:LYS:NZ   | 2.20                     | 0.56              |
| 1:G:243:SER:OG   | 2:H:231:ALA:HB1  | 2.05                     | 0.56              |
| 2:H:67:PHE:HB3   | 2:H:103:LEU:HD22 | 1.87                     | 0.56              |
| 1:I:102:VAL:HG13 | 1:I:189:PHE:CE1  | 2.38                     | 0.56              |
| 2:J:28:TYR:CE1   | 2:J:57:LEU:HD23  | 2.40                     | 0.56              |
| 2:J:240:LYS:HE3  | 1:M:282:LEU:HD23 | 1.87                     | 0.56              |
| 1:K:51:PHE:CE2   | 1:K:62:THR:HG21  | 2.40                     | 0.56              |
| 1:K:154:ILE:HA   | 1:K:187:LEU:HD23 | 1.86                     | 0.56              |
| 1:K:266:THR:HG23 | 1:K:266:THR:O    | 2.03                     | 0.56              |
| 1:O:264:ILE:HG23 | 2:P:249:TYR:CD1  | 2.41                     | 0.56              |
| 2:P:50:VAL:HG13  | 2:P:55:HIS:HB2   | 1.88                     | 0.56              |
| 2:P:207:LYS:O    | 2:P:211:ILE:HD12 | 2.05                     | 0.56              |
| 2:P:236:ILE:HD13 | 1:Q:250:LYS:HD2  | 1.87                     | 0.56              |
| 2:R:40:ASP:HA    | 2:R:61:VAL:HG22  | 1.85                     | 0.56              |
| 2:R:90:ILE:HG21  | 2:R:170:LEU:HD22 | 1.87                     | 0.56              |
| 2:T:207:LYS:HE2  | 1:U:226:VAL:HG13 | 1.87                     | 0.56              |
| 1:U:49:ALA:O     | 1:U:64:LEU:HD12  | 2.05                     | 0.56              |
| 1:U:153:LEU:CD2  | 1:U:160:VAL:HG11 | 2.35                     | 0.56              |
| 1:U:221:GLN:OE1  | 2:V:215:GLU:CB   | 2.53                     | 0.56              |
| 2:X:244:ALA:O    | 2:X:245:GLU:C    | 2.46                     | 0.56              |
| 1:A:218:LYS:O    | 1:A:221:GLN:HB3  | 2.04                     | 0.56              |
| 2:B:257:ILE:HG23 | 1:C:271:ILE:HG12 | 1.87                     | 0.56              |
| 2:N:122:ILE:CD1  | 2:N:158:ALA:HB2  | 2.35                     | 0.56              |
| 1:Q:50:ILE:HG21  | 1:Q:117:LEU:HB2  | 1.87                     | 0.56              |
| 1:Q:150:ALA:HB1  | 1:Q:189:PHE:CZ   | 2.41                     | 0.56              |
| 2:T:268:LEU:O    | 2:V:269:GLN:OE1  | 2.22                     | 0.56              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:W:207:ALA:HA   | 2:X:205:GLN:CG   | 2.34                     | 0.56              |
| 2:B:218:SER:O    | 2:B:222:GLU:OE1  | 2.23                     | 0.56              |
| 1:E:271:ILE:HD11 | 1:G:280:LEU:HD23 | 1.86                     | 0.56              |
| 1:G:232:ALA:C    | 2:H:223:LEU:HD22 | 2.30                     | 0.56              |
| 1:M:150:ALA:HB1  | 1:M:189:PHE:CE1  | 2.40                     | 0.56              |
| 1:M:264:ILE:O    | 1:M:264:ILE:HG22 | 2.06                     | 0.56              |
| 2:N:136:ALA:HB1  | 2:N:175:PHE:CE1  | 2.39                     | 0.56              |
| 1:O:260:ILE:HG23 | 1:O:264:ILE:HB   | 1.87                     | 0.56              |
| 2:P:244:ALA:HA   | 2:P:248:ALA:HB3  | 1.87                     | 0.56              |
| 2:R:92:LEU:HD12  | 2:R:169:SER:O    | 2.05                     | 0.56              |
| 1:W:269:ASN:CB   | 1:W:271:ILE:HG13 | 2.36                     | 0.56              |
| 1:A:232:ALA:HB2  | 2:B:224:ILE:CG1  | 2.35                     | 0.56              |
| 1:G:137:VAL:HG22 | 1:G:168:LEU:HD22 | 1.88                     | 0.56              |
| 1:G:217:ALA:O    | 1:G:220:GLU:HB2  | 2.05                     | 0.56              |
| 1:I:51:PHE:CE1   | 1:I:64:LEU:HD11  | 2.40                     | 0.56              |
| 1:I:53:ASN:HB3   | 2:J:29:ASN:OD1   | 2.05                     | 0.56              |
| 1:K:41:PHE:CD1   | 1:K:43:VAL:HG23  | 2.41                     | 0.56              |
| 1:K:257:ALA:HA   | 1:K:260:ILE:HB   | 1.88                     | 0.56              |
| 2:N:258:THR:H    | 1:O:272:TYR:CB   | 2.19                     | 0.56              |
| 2:R:37:VAL:HG11  | 2:R:45:VAL:CG1   | 2.36                     | 0.56              |
| 1:U:50:ILE:CD1   | 1:U:58:VAL:HG11  | 2.33                     | 0.56              |
| 1:W:71:ARG:HB2   | 1:W:76:GLN:HB3   | 1.87                     | 0.56              |
| 2:H:240:LYS:HE3  | 1:K:282:LEU:HB3  | 1.86                     | 0.56              |
| 1:I:58:VAL:CG1   | 2:J:31:ASP:C     | 2.79                     | 0.56              |
| 1:I:253:LYS:O    | 1:I:257:ALA:CB   | 2.53                     | 0.56              |
| 1:K:242:LEU:HD13 | 2:L:238:LEU:HB2  | 1.88                     | 0.56              |
| 2:N:207:LYS:NZ   | 1:O:226:VAL:HG11 | 2.20                     | 0.56              |
| 2:X:248:ALA:HA   | 2:X:251:LEU:HB2  | 1.88                     | 0.56              |
| 2:D:218:SER:OG   | 1:E:238:LEU:HG   | 2.06                     | 0.56              |
| 2:F:251:LEU:CD1  | 1:G:278:LEU:HD11 | 2.35                     | 0.56              |
| 2:J:57:LEU:HD22  | 2:J:62:GLN:O     | 2.06                     | 0.56              |
| 1:K:43:VAL:HG21  | 1:K:49:ALA:HB2   | 1.88                     | 0.56              |
| 2:N:214:ALA:CB   | 1:O:234:ALA:HB1  | 2.35                     | 0.56              |
| 2:P:184:GLU:O    | 2:P:188:VAL:HG23 | 2.06                     | 0.56              |
| 2:D:212:ILE:HA   | 2:D:215:GLU:HB2  | 1.88                     | 0.56              |
| 2:H:94:ILE:CG2   | 2:H:165:LEU:HD22 | 2.36                     | 0.56              |
| 1:I:51:PHE:HA    | 1:I:76:GLN:CD    | 2.31                     | 0.56              |
| 1:I:140:VAL:HG12 | 1:I:164:ILE:HG23 | 1.86                     | 0.56              |
| 1:I:253:LYS:O    | 1:I:257:ALA:HB2  | 2.06                     | 0.56              |
| 1:I:253:LYS:HB3  | 1:K:279:VAL:HG22 | 1.88                     | 0.56              |
| 1:K:140:VAL:HG21 | 1:K:168:LEU:CB   | 2.35                     | 0.56              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:238:LEU:HD22 | 2:L:238:LEU:HD23 | 1.88                     | 0.56              |
| 2:L:110:ILE:HG23 | 2:L:111:GLY:N    | 2.20                     | 0.56              |
| 1:M:140:VAL:HG21 | 1:M:168:LEU:CD1  | 2.36                     | 0.56              |
| 1:O:43:VAL:HG22  | 1:O:80:ILE:HG12  | 1.88                     | 0.56              |
| 1:U:246:PRO:HG2  | 1:W:292:ASP:HA   | 1.88                     | 0.56              |
| 1:A:264:ILE:HA   | 1:A:267:SER:HB3  | 1.86                     | 0.56              |
| 2:D:196:ALA:O    | 2:D:200:VAL:HG23 | 2.05                     | 0.56              |
| 2:H:67:PHE:HB2   | 2:H:103:LEU:HD13 | 1.88                     | 0.56              |
| 2:J:268:LEU:HD12 | 2:L:268:LEU:CD2  | 2.36                     | 0.56              |
| 2:L:27:LEU:HB2   | 2:L:54:THR:HG21  | 1.88                     | 0.56              |
| 2:L:30:VAL:HG11  | 2:L:53:GLY:N     | 2.21                     | 0.56              |
| 2:N:199:VAL:HG13 | 2:N:202:LYS:HE3  | 1.87                     | 0.56              |
| 1:S:140:VAL:HG21 | 1:S:168:LEU:HA   | 1.88                     | 0.56              |
| 1:W:253:LYS:O    | 1:W:257:ALA:HB2  | 2.06                     | 0.56              |
| 1:A:237:MET:SD   | 1:A:238:LEU:N    | 2.80                     | 0.55              |
| 2:D:236:ILE:HG23 | 1:E:254:ILE:HD12 | 1.88                     | 0.55              |
| 2:D:251:LEU:HD22 | 2:D:257:ILE:HG21 | 1.88                     | 0.55              |
| 1:E:238:LEU:HD12 | 2:F:235:LEU:HD13 | 1.88                     | 0.55              |
| 1:E:269:ASN:O    | 1:E:271:ILE:HG23 | 2.06                     | 0.55              |
| 1:G:140:VAL:HG12 | 1:G:164:ILE:HG23 | 1.88                     | 0.55              |
| 1:G:225:ILE:HD13 | 2:H:219:LYS:HE3  | 1.88                     | 0.55              |
| 1:I:52:PHE:HA    | 2:J:31:ASP:OD2   | 2.06                     | 0.55              |
| 1:I:145:VAL:HG13 | 1:I:153:LEU:HD11 | 1.88                     | 0.55              |
| 2:J:126:ILE:HD13 | 2:J:154:LEU:HA   | 1.87                     | 0.55              |
| 2:J:203:ALA:HB1  | 1:K:226:VAL:HG13 | 1.87                     | 0.55              |
| 2:L:90:ILE:HD11  | 2:L:139:LEU:CD1  | 2.33                     | 0.55              |
| 2:L:221:ALA:HB1  | 1:M:242:LEU:CG   | 2.35                     | 0.55              |
| 1:M:63:ILE:HD13  | 1:M:115:GLN:HA   | 1.87                     | 0.55              |
| 2:N:121:SER:CB   | 1:O:183:ALA:HB2  | 2.36                     | 0.55              |
| 2:N:221:ALA:O    | 2:N:222:GLU:C    | 2.49                     | 0.55              |
| 1:Q:94:THR:HG21  | 1:Q:145:VAL:HB   | 1.88                     | 0.55              |
| 1:U:106:LEU:HB2  | 1:U:141:LEU:HD11 | 1.89                     | 0.55              |
| 1:W:289:ARG:O    | 1:W:293:SER:HB3  | 2.05                     | 0.55              |
| 1:A:293:SER:O    | 1:A:299:LYS:HG2  | 2.06                     | 0.55              |
| 1:I:75:PHE:CG    | 2:J:29:ASN:HB3   | 2.41                     | 0.55              |
| 1:K:132:VAL:CG1  | 1:K:177:LEU:HD12 | 2.37                     | 0.55              |
| 1:M:273:LEU:HB3  | 1:O:280:LEU:CD2  | 2.35                     | 0.55              |
| 1:U:252:ARG:HE   | 1:U:256:ALA:HB2  | 1.71                     | 0.55              |
| 2:F:259:TYR:O    | 2:F:260:LEU:HD23 | 2.05                     | 0.55              |
| 2:H:235:LEU:HD11 | 2:H:239:ARG:HG3  | 1.88                     | 0.55              |
| 1:I:53:ASN:C     | 1:I:53:ASN:OD1   | 2.49                     | 0.55              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:238:LEU:HD22 | 2:L:238:LEU:CD2  | 2.37                     | 0.55              |
| 2:N:223:LEU:HD23 | 2:N:224:ILE:N    | 2.21                     | 0.55              |
| 2:N:243:ALA:O    | 2:N:244:ALA:C    | 2.48                     | 0.55              |
| 1:Q:242:LEU:HD12 | 2:R:234:GLY:CA   | 2.37                     | 0.55              |
| 1:S:144:VAL:HG11 | 1:S:164:ILE:CG1  | 2.36                     | 0.55              |
| 2:V:215:GLU:N    | 1:W:237:MET:HE1  | 2.21                     | 0.55              |
| 1:W:43:VAL:HG22  | 1:W:80:ILE:HG12  | 1.88                     | 0.55              |
| 1:A:274:THR:HB   | 2:X:260:LEU:HD23 | 1.87                     | 0.55              |
| 1:E:277:ASN:HA   | 1:G:283:GLN:HB3  | 1.89                     | 0.55              |
| 1:I:251:LEU:HA   | 1:I:254:ILE:HD12 | 1.87                     | 0.55              |
| 1:K:50:ILE:HG23  | 1:K:117:LEU:HB3  | 1.87                     | 0.55              |
| 2:L:37:VAL:HG11  | 2:L:104:PRO:HA   | 1.87                     | 0.55              |
| 2:L:126:ILE:HD13 | 2:L:154:LEU:HA   | 1.86                     | 0.55              |
| 1:O:51:PHE:HA    | 1:O:76:GLN:CD    | 2.31                     | 0.55              |
| 2:R:88:VAL:HG11  | 2:R:139:LEU:HD13 | 1.89                     | 0.55              |
| 1:W:48:ARG:HD3   | 1:W:83:ILE:HD13  | 1.88                     | 0.55              |
| 1:W:257:ALA:HA   | 1:W:260:ILE:HB   | 1.87                     | 0.55              |
| 1:A:252:ARG:C    | 2:B:241:LEU:HD13 | 2.32                     | 0.55              |
| 1:C:272:TYR:HD2  | 2:D:260:LEU:HD22 | 1.66                     | 0.55              |
| 1:E:214:VAL:HG22 | 2:F:208:LYS:CB   | 2.35                     | 0.55              |
| 2:F:186:LYS:HG3  | 1:G:212:PHE:CD2  | 2.42                     | 0.55              |
| 1:G:79:ILE:HG21  | 1:G:126:LEU:HD21 | 1.89                     | 0.55              |
| 2:H:39:PHE:CD1   | 2:H:45:VAL:HG22  | 2.42                     | 0.55              |
| 2:H:195:ARG:CZ   | 2:H:199:VAL:HG21 | 2.37                     | 0.55              |
| 2:J:90:ILE:HD11  | 2:J:139:LEU:HD13 | 1.89                     | 0.55              |
| 2:J:237:GLU:O    | 2:J:240:LYS:HB2  | 2.07                     | 0.55              |
| 2:T:30:VAL:HG11  | 2:T:51:GLY:O     | 2.07                     | 0.55              |
| 1:U:164:ILE:HG22 | 1:U:165:ARG:HH21 | 1.72                     | 0.55              |
| 2:B:236:ILE:HG23 | 1:C:254:ILE:HD11 | 1.88                     | 0.55              |
| 2:H:259:TYR:CE1  | 1:I:273:LEU:HD12 | 2.42                     | 0.55              |
| 2:J:92:LEU:HD11  | 2:J:168:VAL:CG1  | 2.36                     | 0.55              |
| 2:J:94:ILE:CG2   | 2:J:165:LEU:HD22 | 2.37                     | 0.55              |
| 1:K:137:VAL:HG22 | 1:K:168:LEU:HD21 | 1.88                     | 0.55              |
| 1:O:275:ALA:HB1  | 1:O:281:ASN:HD22 | 1.71                     | 0.55              |
| 2:R:27:LEU:HD11  | 2:R:54:THR:HG21  | 1.87                     | 0.55              |
| 2:T:69:CYS:HB3   | 2:T:103:LEU:HD11 | 1.87                     | 0.55              |
| 2:T:82:SER:HA    | 2:T:131:VAL:HG12 | 1.87                     | 0.55              |
| 1:U:228:ALA:HB2  | 2:V:220:ALA:HA   | 1.88                     | 0.55              |
| 2:F:204:GLU:O    | 2:F:207:LYS:HG2  | 2.07                     | 0.55              |
| 2:H:37:VAL:HG11  | 2:H:104:PRO:HA   | 1.89                     | 0.55              |
| 2:H:221:ALA:O    | 2:H:222:GLU:C    | 2.49                     | 0.55              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:N:108:THR:O    | 1:O:83:ILE:HD12  | 2.06                     | 0.55              |
| 2:P:28:TYR:OH    | 2:P:50:VAL:HG21  | 2.06                     | 0.55              |
| 2:P:244:ALA:O    | 2:P:245:GLU:C    | 2.49                     | 0.55              |
| 2:R:58:ILE:HG13  | 2:R:61:VAL:CG1   | 2.36                     | 0.55              |
| 2:T:92:LEU:HB2   | 2:T:170:LEU:HD23 | 1.88                     | 0.55              |
| 1:W:292:ASP:OD2  | 1:W:295:ILE:HD11 | 2.06                     | 0.55              |
| 2:D:260:LEU:HB2  | 1:E:272:TYR:CD2  | 2.42                     | 0.55              |
| 2:F:239:ARG:O    | 2:F:243:ALA:HB3  | 2.05                     | 0.55              |
| 2:H:35:ARG:CD    | 2:H:100:ALA:HB1  | 2.37                     | 0.55              |
| 2:H:35:ARG:HB2   | 2:H:103:LEU:HD12 | 1.87                     | 0.55              |
| 1:I:48:ARG:HG3   | 1:I:83:ILE:HG21  | 1.88                     | 0.55              |
| 1:U:165:ARG:NH1  | 1:U:182:VAL:HB   | 2.22                     | 0.55              |
| 2:B:260:LEU:HD11 | 2:B:268:LEU:HG   | 1.88                     | 0.55              |
| 2:D:204:GLU:HA   | 2:D:207:LYS:CD   | 2.37                     | 0.55              |
| 1:G:157:ARG:NH2  | 1:G:184:ILE:HG22 | 2.21                     | 0.55              |
| 1:I:81:TYR:HD2   | 1:I:117:LEU:HD22 | 1.72                     | 0.55              |
| 1:K:263:THR:HG21 | 2:L:249:TYR:OH   | 2.06                     | 0.55              |
| 1:M:72:ILE:O     | 1:M:76:GLN:HB3   | 2.07                     | 0.55              |
| 1:O:218:LYS:HD3  | 2:P:212:ILE:HG21 | 1.88                     | 0.55              |
| 2:P:236:ILE:HD13 | 1:Q:250:LYS:HB2  | 1.89                     | 0.55              |
| 1:U:79:ILE:HB    | 1:U:126:LEU:HD21 | 1.88                     | 0.55              |
| 1:E:273:LEU:HD11 | 1:E:278:LEU:HG   | 1.88                     | 0.55              |
| 2:F:267:LEU:HD12 | 2:H:267:LEU:HD22 | 1.89                     | 0.55              |
| 1:I:260:ILE:HA   | 1:I:263:THR:HB   | 1.88                     | 0.55              |
| 1:I:273:LEU:HD13 | 1:K:280:LEU:HB3  | 1.89                     | 0.55              |
| 2:J:31:ASP:OD1   | 2:J:32:ALA:N     | 2.40                     | 0.55              |
| 1:K:161:SER:O    | 1:K:165:ARG:HG2  | 2.06                     | 0.55              |
| 2:L:221:ALA:HB1  | 1:M:242:LEU:HG   | 1.89                     | 0.55              |
| 1:Q:140:VAL:HG13 | 1:Q:167:GLU:OE1  | 2.06                     | 0.55              |
| 2:R:38:ILE:HA    | 2:R:62:GLN:HG3   | 1.89                     | 0.55              |
| 2:T:260:LEU:HD22 | 2:T:268:LEU:HD21 | 1.89                     | 0.55              |
| 1:U:238:LEU:HD11 | 2:V:238:LEU:CD2  | 2.37                     | 0.55              |
| 2:V:35:ARG:HB2   | 2:V:103:LEU:CD1  | 2.37                     | 0.55              |
| 2:V:236:ILE:O    | 2:V:240:LYS:HG3  | 2.07                     | 0.55              |
| 1:W:164:ILE:HG22 | 1:W:165:ARG:HH21 | 1.72                     | 0.55              |
| 2:F:200:VAL:HB   | 1:G:223:GLN:HB2  | 1.88                     | 0.54              |
| 1:I:107:ARG:C    | 1:I:182:VAL:HG13 | 2.31                     | 0.54              |
| 1:I:235:ALA:HA   | 2:J:235:LEU:HB2  | 1.89                     | 0.54              |
| 1:M:289:ARG:HA   | 1:M:293:SER:HB3  | 1.89                     | 0.54              |
| 2:N:92:LEU:HD22  | 2:N:127:LEU:HD11 | 1.89                     | 0.54              |
| 1:Q:63:ILE:HG12  | 1:Q:118:PRO:HD3  | 1.89                     | 0.54              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:R:122:ILE:HD12 | 2:R:158:ALA:HB2  | 1.90                     | 0.54              |
| 2:R:236:ILE:HG22 | 2:R:240:LYS:NZ   | 2.22                     | 0.54              |
| 2:T:90:ILE:CG2   | 2:T:170:LEU:HD22 | 2.37                     | 0.54              |
| 2:B:203:ALA:CB   | 1:C:226:VAL:HG11 | 2.35                     | 0.54              |
| 2:B:261:PRO:HD2  | 2:X:268:LEU:HD12 | 1.89                     | 0.54              |
| 1:E:271:ILE:HD12 | 2:F:259:TYR:OH   | 2.07                     | 0.54              |
| 1:G:218:LYS:O    | 1:G:221:GLN:HB3  | 2.07                     | 0.54              |
| 1:I:52:PHE:HA    | 2:J:31:ASP:CG    | 2.32                     | 0.54              |
| 1:I:75:PHE:O     | 2:J:29:ASN:CG    | 2.50                     | 0.54              |
| 1:I:235:ALA:HB1  | 2:J:224:ILE:HD13 | 1.88                     | 0.54              |
| 1:Q:214:VAL:HG12 | 2:R:209:ALA:HB3  | 1.85                     | 0.54              |
| 2:R:37:VAL:HG12  | 2:R:38:ILE:N     | 2.22                     | 0.54              |
| 2:T:267:LEU:HD12 | 2:V:267:LEU:HD22 | 1.88                     | 0.54              |
| 1:U:252:ARG:O    | 1:U:256:ALA:HB3  | 2.06                     | 0.54              |
| 1:A:274:THR:O    | 2:X:259:TYR:O    | 2.25                     | 0.54              |
| 1:E:242:LEU:HD22 | 1:E:249:ILE:N    | 2.22                     | 0.54              |
| 1:G:253:LYS:HB2  | 1:I:279:VAL:HG21 | 1.89                     | 0.54              |
| 2:H:99:VAL:CG1   | 2:H:164:ILE:HD12 | 2.38                     | 0.54              |
| 2:H:270:LEU:HD12 | 2:J:268:LEU:CD2  | 2.37                     | 0.54              |
| 1:I:55:ILE:HD11  | 2:J:56:PHE:HA    | 1.89                     | 0.54              |
| 1:I:116:GLU:C    | 1:I:118:PRO:CD   | 2.80                     | 0.54              |
| 1:Q:253:LYS:HA   | 2:R:241:LEU:HD11 | 1.89                     | 0.54              |
| 2:R:240:LYS:NZ   | 1:U:282:LEU:HD22 | 2.22                     | 0.54              |
| 1:S:107:ARG:O    | 1:S:182:VAL:HG13 | 2.07                     | 0.54              |
| 1:U:217:ALA:HB1  | 2:V:213:SER:CB   | 2.38                     | 0.54              |
| 2:V:92:LEU:HD22  | 2:V:150:VAL:HG11 | 1.89                     | 0.54              |
| 1:W:165:ARG:HH22 | 1:W:168:LEU:HD23 | 1.73                     | 0.54              |
| 1:A:238:LEU:HD12 | 2:B:235:LEU:HD13 | 1.89                     | 0.54              |
| 2:B:211:ILE:HG23 | 1:C:233:GLU:OE1  | 2.08                     | 0.54              |
| 2:B:258:THR:HG23 | 1:C:272:TYR:CD1  | 2.42                     | 0.54              |
| 1:G:270:ARG:HH11 | 2:H:258:THR:HG21 | 1.71                     | 0.54              |
| 1:I:48:ARG:HE    | 1:I:114:ALA:HB1  | 1.73                     | 0.54              |
| 2:N:239:ARG:NH1  | 1:O:254:ILE:O    | 2.40                     | 0.54              |
| 2:R:90:ILE:HD11  | 2:R:139:LEU:HD13 | 1.89                     | 0.54              |
| 1:S:249:ILE:HG23 | 2:T:237:GLU:HB3  | 1.89                     | 0.54              |
| 1:U:78:PRO:O     | 1:U:79:ILE:C     | 2.49                     | 0.54              |
| 2:X:240:LYS:O    | 2:X:244:ALA:CB   | 2.53                     | 0.54              |
| 1:A:222:ARG:O    | 1:A:226:VAL:HG22 | 2.08                     | 0.54              |
| 1:A:238:LEU:HD22 | 2:B:238:LEU:CD1  | 2.37                     | 0.54              |
| 2:H:28:TYR:CD1   | 2:H:57:LEU:HD23  | 2.42                     | 0.54              |
| 2:H:136:ALA:HB1  | 2:H:175:PHE:CE1  | 2.42                     | 0.54              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:218:LYS:HA   | 2:J:212:ILE:HD12 | 1.89                     | 0.54              |
| 1:I:286:SER:HA   | 1:I:289:ARG:HE   | 1.72                     | 0.54              |
| 1:K:137:VAL:HG22 | 1:K:168:LEU:CD2  | 2.37                     | 0.54              |
| 1:K:220:GLU:HA   | 1:K:223:GLN:HB3  | 1.90                     | 0.54              |
| 1:K:235:ALA:HB1  | 2:L:224:ILE:HD13 | 1.90                     | 0.54              |
| 2:L:88:VAL:HG11  | 2:L:139:LEU:CD1  | 2.38                     | 0.54              |
| 2:L:94:ILE:CG2   | 2:L:165:LEU:HD22 | 2.38                     | 0.54              |
| 2:L:214:ALA:O    | 2:L:215:GLU:C    | 2.50                     | 0.54              |
| 2:P:28:TYR:CE1   | 2:P:57:LEU:HD23  | 2.42                     | 0.54              |
| 1:Q:196:ALA:HB1  | 2:R:191:GLN:HG3  | 1.90                     | 0.54              |
| 2:R:92:LEU:HD23  | 2:R:123:THR:HG23 | 1.89                     | 0.54              |
| 1:S:122:GLN:OE1  | 2:T:32:ALA:HB3   | 2.07                     | 0.54              |
| 1:S:242:LEU:HD12 | 2:T:234:GLY:O    | 2.07                     | 0.54              |
| 1:W:145:VAL:HG13 | 1:W:153:LEU:HD11 | 1.88                     | 0.54              |
| 1:C:232:ALA:HB2  | 2:D:224:ILE:HG13 | 1.88                     | 0.54              |
| 2:D:260:LEU:HD12 | 1:E:272:TYR:CE2  | 2.42                     | 0.54              |
| 2:F:197:ARG:HA   | 2:F:197:ARG:HE   | 1.73                     | 0.54              |
| 1:G:52:PHE:HZ    | 2:H:30:VAL:O     | 1.89                     | 0.54              |
| 2:J:76:VAL:HB    | 2:J:123:THR:HG21 | 1.89                     | 0.54              |
| 1:Q:217:ALA:HB1  | 2:R:213:SER:CB   | 2.36                     | 0.54              |
| 2:V:254:SER:HB2  | 1:W:271:ILE:C    | 2.32                     | 0.54              |
| 1:W:236:LYS:O    | 1:W:240:GLU:OE1  | 2.25                     | 0.54              |
| 2:X:236:ILE:O    | 2:X:240:LYS:HG3  | 2.08                     | 0.54              |
| 2:B:240:LYS:HG3  | 1:C:254:ILE:HG12 | 1.88                     | 0.54              |
| 1:I:50:ILE:H     | 1:I:117:LEU:HD13 | 1.71                     | 0.54              |
| 1:I:107:ARG:CZ   | 1:I:185:THR:HG21 | 2.37                     | 0.54              |
| 1:K:106:LEU:HD21 | 1:K:165:ARG:HH22 | 1.73                     | 0.54              |
| 1:M:210:ALA:O    | 1:M:214:VAL:HG23 | 2.08                     | 0.54              |
| 1:O:49:ALA:O     | 1:O:117:LEU:HD13 | 2.08                     | 0.54              |
| 1:O:140:VAL:HG22 | 1:O:167:GLU:OE1  | 2.08                     | 0.54              |
| 1:W:210:ALA:HB2  | 2:X:205:GLN:HB3  | 1.89                     | 0.54              |
| 2:D:259:TYR:C    | 2:D:260:LEU:HD23 | 2.33                     | 0.54              |
| 1:E:221:GLN:HG2  | 2:F:216:GLY:N    | 2.22                     | 0.54              |
| 2:F:207:LYS:HD2  | 1:G:230:GLY:HA3  | 1.90                     | 0.54              |
| 1:G:104:ILE:HG12 | 1:G:187:LEU:HD13 | 1.90                     | 0.54              |
| 2:H:110:ILE:HG21 | 2:H:114:TYR:HA   | 1.89                     | 0.54              |
| 1:I:99:LEU:HD13  | 2:J:179:PHE:CE2  | 2.41                     | 0.54              |
| 2:R:65:ILE:HG21  | 2:R:67:PHE:CZ    | 2.42                     | 0.54              |
| 1:S:221:GLN:O    | 1:S:225:ILE:HG12 | 2.08                     | 0.54              |
| 2:T:221:ALA:O    | 2:T:222:GLU:C    | 2.51                     | 0.54              |
| 1:U:43:VAL:HG12  | 1:U:47:HIS:CB    | 2.37                     | 0.54              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:214:VAL:HG22 | 2:F:208:LYS:HB3  | 1.90                     | 0.54              |
| 1:G:165:ARG:HH12 | 1:G:168:LEU:HD23 | 1.72                     | 0.54              |
| 2:H:131:VAL:HG13 | 2:H:139:LEU:HD11 | 1.90                     | 0.54              |
| 2:J:236:ILE:O    | 2:J:240:LYS:HG3  | 2.07                     | 0.54              |
| 2:N:182:ALA:HB1  | 1:O:205:GLN:HB2  | 1.90                     | 0.54              |
| 2:R:244:ALA:O    | 2:R:245:GLU:C    | 2.49                     | 0.54              |
| 1:S:218:LYS:HE2  | 2:T:212:ILE:HD13 | 1.90                     | 0.54              |
| 2:V:270:LEU:HB2  | 2:V:271:PRO:CD   | 2.37                     | 0.54              |
| 1:W:41:PHE:CE1   | 1:W:49:ALA:HB3   | 2.42                     | 0.54              |
| 2:J:207:LYS:NZ   | 1:K:229:GLU:HB2  | 2.22                     | 0.54              |
| 2:N:204:GLU:HA   | 2:N:207:LYS:HZ3  | 1.72                     | 0.54              |
| 2:N:237:GLU:O    | 2:N:240:LYS:HB2  | 2.07                     | 0.54              |
| 1:O:238:LEU:HB2  | 2:P:235:LEU:HB2  | 1.89                     | 0.54              |
| 2:R:214:ALA:O    | 2:R:215:GLU:C    | 2.51                     | 0.54              |
| 1:S:238:LEU:CD1  | 2:T:238:LEU:HD23 | 2.38                     | 0.54              |
| 1:W:107:ARG:HH22 | 1:W:185:THR:HG21 | 1.71                     | 0.54              |
| 1:E:209:ARG:NH2  | 1:E:213:LEU:HD21 | 2.23                     | 0.53              |
| 1:G:172:ALA:HB1  | 1:G:177:LEU:HB2  | 1.89                     | 0.53              |
| 2:H:200:VAL:HG13 | 1:I:226:VAL:HG11 | 1.90                     | 0.53              |
| 2:H:270:LEU:HD12 | 2:J:268:LEU:HD23 | 1.89                     | 0.53              |
| 1:I:41:PHE:CD2   | 1:I:43:VAL:HG23  | 2.40                     | 0.53              |
| 1:O:246:PRO:HD3  | 1:Q:294:LEU:HD12 | 1.90                     | 0.53              |
| 1:O:277:ASN:ND2  | 1:Q:280:LEU:HD21 | 2.23                     | 0.53              |
| 1:U:64:LEU:HB3   | 1:U:69:HIS:CD2   | 2.44                     | 0.53              |
| 2:B:235:LEU:HD11 | 2:B:239:ARG:NH1  | 2.24                     | 0.53              |
| 1:C:267:SER:HA   | 2:D:252:SER:OG   | 2.09                     | 0.53              |
| 2:F:211:ILE:HG12 | 1:G:234:ALA:HB2  | 1.90                     | 0.53              |
| 1:K:54:ARG:HB2   | 1:K:75:PHE:HA    | 1.89                     | 0.53              |
| 1:O:140:VAL:HG21 | 1:O:168:LEU:CD1  | 2.39                     | 0.53              |
| 1:U:236:LYS:O    | 1:U:240:GLU:OE1  | 2.26                     | 0.53              |
| 1:W:43:VAL:CG1   | 1:W:47:HIS:HB2   | 2.39                     | 0.53              |
| 2:B:258:THR:HG23 | 1:C:272:TYR:CE1  | 2.44                     | 0.53              |
| 1:C:288:THR:O    | 1:C:292:ASP:HB2  | 2.08                     | 0.53              |
| 2:D:240:LYS:O    | 2:D:244:ALA:HB2  | 2.08                     | 0.53              |
| 1:E:199:ALA:O    | 1:E:203:ALA:HB2  | 2.08                     | 0.53              |
| 1:G:214:VAL:HG21 | 2:H:205:GLN:CB   | 2.37                     | 0.53              |
| 2:H:35:ARG:CZ    | 2:H:52:GLU:HG3   | 2.38                     | 0.53              |
| 1:M:51:PHE:HA    | 1:M:76:GLN:CD    | 2.33                     | 0.53              |
| 1:M:140:VAL:HG13 | 1:M:167:GLU:OE1  | 2.09                     | 0.53              |
| 1:M:243:SER:O    | 1:M:244:LYS:C    | 2.50                     | 0.53              |
| 2:N:61:VAL:HG23  | 1:O:67:GLY:HA2   | 1.87                     | 0.53              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:N:86:GLN:O     | 2:N:88:VAL:HG23  | 2.08                     | 0.53              |
| 2:N:129:SER:HB2  | 1:O:158:ALA:HB2  | 1.90                     | 0.53              |
| 2:P:178:GLU:OE2  | 2:P:182:ALA:HB2  | 2.08                     | 0.53              |
| 1:S:154:ILE:CG1  | 1:S:187:LEU:HD23 | 2.39                     | 0.53              |
| 1:S:252:ARG:HE   | 1:S:256:ALA:HB2  | 1.72                     | 0.53              |
| 2:T:207:LYS:CG   | 1:U:226:VAL:HG13 | 2.38                     | 0.53              |
| 1:U:253:LYS:HB3  | 1:W:279:VAL:HG13 | 1.90                     | 0.53              |
| 1:W:282:LEU:HD12 | 1:W:287:PHE:CE2  | 2.44                     | 0.53              |
| 2:D:267:LEU:HB2  | 2:F:267:LEU:HD22 | 1.90                     | 0.53              |
| 2:H:240:LYS:HE3  | 1:K:282:LEU:HD23 | 1.89                     | 0.53              |
| 1:I:106:LEU:HD13 | 1:I:184:ILE:HG12 | 1.88                     | 0.53              |
| 1:I:274:THR:HG22 | 1:I:275:ALA:H    | 1.72                     | 0.53              |
| 2:L:228:LEU:HD11 | 1:M:247:GLY:HA2  | 1.91                     | 0.53              |
| 1:M:107:ARG:NH2  | 1:M:185:THR:HG21 | 2.23                     | 0.53              |
| 1:O:104:ILE:HD12 | 1:O:145:VAL:HG21 | 1.89                     | 0.53              |
| 1:S:51:PHE:HB2   | 1:S:59:GLN:HE22  | 1.73                     | 0.53              |
| 1:S:58:VAL:O     | 2:T:32:ALA:HB2   | 2.09                     | 0.53              |
| 2:X:247:ILE:O    | 2:X:250:GLN:HB3  | 2.09                     | 0.53              |
| 2:B:261:PRO:HB3  | 1:C:275:ALA:HB3  | 1.89                     | 0.53              |
| 1:E:264:ILE:HA   | 1:E:267:SER:HB3  | 1.90                     | 0.53              |
| 1:G:102:VAL:CG1  | 1:G:187:LEU:HD11 | 2.38                     | 0.53              |
| 1:G:133:LEU:HD23 | 1:G:136:ILE:HD11 | 1.90                     | 0.53              |
| 1:I:74:TRP:CD1   | 1:I:77:TYR:HH    | 2.27                     | 0.53              |
| 2:J:270:LEU:HD22 | 1:K:272:TYR:OH   | 2.09                     | 0.53              |
| 1:K:41:PHE:CD2   | 1:K:78:PRO:HG3   | 2.43                     | 0.53              |
| 2:L:110:ILE:HG23 | 2:L:111:GLY:H    | 1.73                     | 0.53              |
| 1:M:250:LYS:HG2  | 1:O:279:VAL:HG13 | 1.90                     | 0.53              |
| 1:S:144:VAL:HG11 | 1:S:164:ILE:HG12 | 1.90                     | 0.53              |
| 2:T:196:ALA:O    | 2:T:200:VAL:HG23 | 2.09                     | 0.53              |
| 1:W:51:PHE:CE1   | 1:W:64:LEU:HD11  | 2.43                     | 0.53              |
| 1:A:237:MET:HA   | 1:A:240:GLU:HG3  | 1.91                     | 0.53              |
| 1:C:264:ILE:HA   | 1:C:267:SER:CB   | 2.38                     | 0.53              |
| 2:H:123:THR:HG23 | 2:H:154:LEU:HD22 | 1.90                     | 0.53              |
| 1:I:243:SER:CB   | 2:J:231:ALA:HB1  | 2.38                     | 0.53              |
| 1:I:260:ILE:HD11 | 2:J:244:ALA:CB   | 2.36                     | 0.53              |
| 1:M:257:ALA:HA   | 1:M:260:ILE:HB   | 1.89                     | 0.53              |
| 2:N:28:TYR:CE2   | 2:N:36:ALA:HB3   | 2.43                     | 0.53              |
| 2:P:39:PHE:CE2   | 1:Q:66:GLU:HB3   | 2.43                     | 0.53              |
| 2:P:62:GLN:NE2   | 2:P:65:ILE:H     | 2.05                     | 0.53              |
| 2:P:151:SER:CA   | 2:P:168:VAL:HG11 | 2.38                     | 0.53              |
| 2:R:110:ILE:HG21 | 2:R:114:TYR:HA   | 1.89                     | 0.53              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:T:244:ALA:O    | 2:T:245:GLU:C    | 2.52                     | 0.53              |
| 2:V:214:ALA:HB2  | 1:W:234:ALA:HA   | 1.90                     | 0.53              |
| 1:A:260:ILE:O    | 1:A:264:ILE:HG13 | 2.08                     | 0.53              |
| 1:E:260:ILE:HB   | 1:G:279:VAL:HG22 | 1.90                     | 0.53              |
| 1:G:140:VAL:O    | 1:G:144:VAL:HG23 | 2.09                     | 0.53              |
| 1:G:150:ALA:HB1  | 1:G:189:PHE:CZ   | 2.43                     | 0.53              |
| 1:G:281:ASN:O    | 1:G:287:PHE:CG   | 2.62                     | 0.53              |
| 1:M:50:ILE:HD13  | 1:M:117:LEU:C    | 2.34                     | 0.53              |
| 2:R:236:ILE:O    | 2:R:240:LYS:HG3  | 2.09                     | 0.53              |
| 2:R:262:ALA:HB3  | 1:S:289:ARG:HH22 | 1.73                     | 0.53              |
| 1:W:249:ILE:CG2  | 2:X:241:LEU:HD21 | 2.38                     | 0.53              |
| 1:A:260:ILE:HD11 | 2:B:244:ALA:HB1  | 1.91                     | 0.53              |
| 1:C:253:LYS:HB3  | 1:E:287:PHE:CZ   | 2.44                     | 0.53              |
| 1:G:144:VAL:HG12 | 1:G:148:PHE:CD2  | 2.44                     | 0.53              |
| 1:K:58:VAL:HG23  | 2:L:52:GLU:HB2   | 1.88                     | 0.53              |
| 2:N:123:THR:O    | 2:N:127:LEU:HD13 | 2.09                     | 0.53              |
| 2:P:200:VAL:HG22 | 1:Q:223:GLN:HB2  | 1.90                     | 0.53              |
| 2:R:80:THR:HG21  | 2:R:90:ILE:HD12  | 1.90                     | 0.53              |
| 2:R:206:GLN:O    | 2:R:207:LYS:C    | 2.51                     | 0.53              |
| 1:S:264:ILE:HD11 | 2:T:244:ALA:C    | 2.34                     | 0.53              |
| 2:T:49:VAL:O     | 2:T:49:VAL:HG13  | 2.07                     | 0.53              |
| 1:U:63:ILE:HD13  | 1:U:115:GLN:HA   | 1.89                     | 0.53              |
| 1:G:243:SER:CB   | 2:H:231:ALA:HB1  | 2.38                     | 0.53              |
| 2:H:217:ASP:CG   | 2:J:238:LEU:HD22 | 2.34                     | 0.53              |
| 1:I:104:ILE:HG23 | 1:I:184:ILE:HG23 | 1.90                     | 0.53              |
| 1:I:137:VAL:HG22 | 1:I:168:LEU:CD2  | 2.39                     | 0.53              |
| 1:I:233:GLU:HG3  | 2:J:223:LEU:HD11 | 1.91                     | 0.53              |
| 2:J:39:PHE:O     | 2:J:61:VAL:O     | 2.27                     | 0.53              |
| 1:K:218:LYS:O    | 1:K:221:GLN:HB3  | 2.08                     | 0.53              |
| 2:N:30:VAL:O     | 2:N:30:VAL:HG12  | 2.07                     | 0.53              |
| 2:P:207:LYS:HE3  | 1:Q:226:VAL:HG12 | 1.90                     | 0.53              |
| 1:Q:274:THR:HG22 | 1:Q:275:ALA:N    | 2.24                     | 0.53              |
| 2:T:81:GLY:HA3   | 1:U:155:THR:HG22 | 1.91                     | 0.53              |
| 1:U:214:VAL:HG13 | 2:V:209:ALA:C    | 2.33                     | 0.53              |
| 1:U:218:LYS:HZ3  | 2:V:212:ILE:HD13 | 1.72                     | 0.53              |
| 2:V:259:TYR:O    | 2:V:260:LEU:HD12 | 2.09                     | 0.53              |
| 1:E:236:LYS:O    | 1:E:240:GLU:OE1  | 2.26                     | 0.53              |
| 2:F:267:LEU:HB2  | 2:H:267:LEU:HB3  | 1.90                     | 0.53              |
| 1:G:220:GLU:O    | 1:G:221:GLN:C    | 2.52                     | 0.53              |
| 1:G:294:LEU:HG   | 1:I:283:GLN:NE2  | 2.25                     | 0.53              |
| 2:H:37:VAL:HG11  | 2:H:104:PRO:CB   | 2.39                     | 0.53              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:H:233:ASP:CB   | 2:H:236:ILE:HD12 | 2.38                     | 0.53              |
| 1:I:55:ILE:O     | 1:I:57:GLY:O     | 2.27                     | 0.53              |
| 2:L:236:ILE:HG22 | 2:L:240:LYS:HZ3  | 1.74                     | 0.53              |
| 1:O:225:ILE:O    | 1:O:228:ALA:HB3  | 2.08                     | 0.53              |
| 2:R:90:ILE:HD12  | 2:R:131:VAL:HG21 | 1.90                     | 0.53              |
| 2:T:241:LEU:O    | 2:T:244:ALA:HB3  | 2.09                     | 0.53              |
| 2:V:248:ALA:O    | 2:V:252:SER:HB2  | 2.09                     | 0.53              |
| 2:B:257:ILE:HG23 | 1:C:271:ILE:HD11 | 1.91                     | 0.52              |
| 1:C:272:TYR:HB2  | 2:D:261:PRO:HD2  | 1.91                     | 0.52              |
| 2:F:259:TYR:CZ   | 1:G:278:LEU:O    | 2.63                     | 0.52              |
| 2:H:74:ARG:HB3   | 2:H:119:LEU:HD13 | 1.92                     | 0.52              |
| 2:H:118:VAL:HG11 | 2:H:163:LEU:CD1  | 2.39                     | 0.52              |
| 2:H:236:ILE:O    | 2:H:240:LYS:HG3  | 2.08                     | 0.52              |
| 1:I:41:PHE:HD2   | 1:I:43:VAL:CG2   | 2.21                     | 0.52              |
| 1:I:140:VAL:CG1  | 1:I:164:ILE:HG23 | 2.39                     | 0.52              |
| 1:I:263:THR:HG21 | 2:J:245:GLU:O    | 2.09                     | 0.52              |
| 1:K:51:PHE:O     | 1:K:58:VAL:HG13  | 2.09                     | 0.52              |
| 1:K:72:ILE:O     | 1:K:76:GLN:HB3   | 2.08                     | 0.52              |
| 1:O:50:ILE:CG2   | 1:O:117:LEU:HB3  | 2.40                     | 0.52              |
| 2:P:260:LEU:HD22 | 2:P:268:LEU:CD1  | 2.39                     | 0.52              |
| 1:Q:47:HIS:CD2   | 1:Q:80:ILE:HG22  | 2.44                     | 0.52              |
| 1:S:58:VAL:HG12  | 1:S:59:GLN:O     | 2.09                     | 0.52              |
| 1:U:251:LEU:HD12 | 1:U:254:ILE:HB   | 1.90                     | 0.52              |
| 2:D:240:LYS:C    | 2:D:244:ALA:HB2  | 2.35                     | 0.52              |
| 2:F:197:ARG:NH2  | 1:G:222:ARG:HB3  | 2.25                     | 0.52              |
| 2:F:218:SER:HB2  | 2:H:238:LEU:HD22 | 1.91                     | 0.52              |
| 2:F:237:GLU:HB2  | 1:G:294:LEU:HD11 | 1.90                     | 0.52              |
| 1:G:79:ILE:CG2   | 1:G:126:LEU:HD21 | 2.40                     | 0.52              |
| 1:G:242:LEU:HD13 | 2:H:238:LEU:HB2  | 1.91                     | 0.52              |
| 2:J:57:LEU:CB    | 2:J:62:GLN:HB3   | 2.39                     | 0.52              |
| 1:K:235:ALA:HA   | 2:L:235:LEU:CD2  | 2.40                     | 0.52              |
| 1:M:154:ILE:CG1  | 1:M:187:LEU:HD23 | 2.39                     | 0.52              |
| 2:T:203:ALA:O    | 2:T:206:GLN:HG3  | 2.09                     | 0.52              |
| 1:U:236:LYS:HA   | 2:V:227:SER:OG   | 2.10                     | 0.52              |
| 1:U:246:PRO:HB3  | 1:U:249:ILE:HD12 | 1.91                     | 0.52              |
| 1:W:236:LYS:HB2  | 2:X:227:SER:OG   | 2.10                     | 0.52              |
| 1:A:226:VAL:CG1  | 2:X:207:LYS:HD2  | 2.33                     | 0.52              |
| 1:A:233:GLU:OE1  | 2:X:214:ALA:HB1  | 2.10                     | 0.52              |
| 1:A:280:LEU:HB3  | 1:W:273:LEU:HB3  | 1.90                     | 0.52              |
| 1:C:260:ILE:HG23 | 2:D:248:ALA:HB2  | 1.91                     | 0.52              |
| 2:H:58:ILE:HD12  | 2:H:61:VAL:HG11  | 1.90                     | 0.52              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:J:220:ALA:O    | 2:J:224:ILE:HG22 | 2.09                     | 0.52              |
| 2:N:239:ARG:HG2  | 2:N:239:ARG:O    | 2.10                     | 0.52              |
| 1:Q:220:GLU:O    | 1:Q:221:GLN:C    | 2.48                     | 0.52              |
| 2:T:228:LEU:CD2  | 2:T:232:GLY:O    | 2.57                     | 0.52              |
| 2:V:76:VAL:HB    | 2:V:123:THR:HG21 | 1.91                     | 0.52              |
| 2:V:244:ALA:O    | 2:V:245:GLU:C    | 2.52                     | 0.52              |
| 1:W:238:LEU:HD11 | 2:X:238:LEU:HD22 | 1.91                     | 0.52              |
| 1:C:264:ILE:HA   | 1:C:267:SER:HB3  | 1.90                     | 0.52              |
| 1:E:204:GLN:HA   | 2:F:198:PHE:CE2  | 2.45                     | 0.52              |
| 2:F:251:LEU:HD22 | 2:F:257:ILE:HG12 | 1.91                     | 0.52              |
| 1:I:53:ASN:ND2   | 2:J:31:ASP:H     | 2.07                     | 0.52              |
| 1:I:53:ASN:CG    | 2:J:31:ASP:HB3   | 2.35                     | 0.52              |
| 2:J:268:LEU:HD11 | 2:L:261:PRO:CD   | 2.38                     | 0.52              |
| 1:K:72:ILE:HD12  | 1:K:72:ILE:H     | 1.73                     | 0.52              |
| 2:L:130:VAL:HG11 | 2:L:150:VAL:HG23 | 1.91                     | 0.52              |
| 1:M:100:GLN:O    | 1:M:102:VAL:HG23 | 2.10                     | 0.52              |
| 2:N:197:ARG:CZ   | 1:O:219:GLN:OE1  | 2.57                     | 0.52              |
| 2:R:203:ALA:HB1  | 1:S:226:VAL:HG12 | 1.90                     | 0.52              |
| 1:S:43:VAL:HG12  | 1:S:47:HIS:HB2   | 1.90                     | 0.52              |
| 1:S:140:VAL:O    | 1:S:144:VAL:HG23 | 2.09                     | 0.52              |
| 1:S:242:LEU:HD13 | 1:S:249:ILE:HG12 | 1.91                     | 0.52              |
| 2:T:211:ILE:HG13 | 1:U:230:GLY:HA2  | 1.92                     | 0.52              |
| 2:V:121:SER:OG   | 1:W:107:ARG:NH1  | 2.43                     | 0.52              |
| 1:A:242:LEU:CD2  | 2:X:225:ALA:HB1  | 2.39                     | 0.52              |
| 2:D:268:LEU:CD1  | 2:F:260:LEU:HB3  | 2.38                     | 0.52              |
| 1:G:57:GLY:O     | 2:H:52:GLU:O     | 2.27                     | 0.52              |
| 1:G:232:ALA:O    | 1:G:235:ALA:HB3  | 2.10                     | 0.52              |
| 2:H:28:TYR:CE2   | 2:H:36:ALA:HB3   | 2.43                     | 0.52              |
| 2:H:146:VAL:HG12 | 2:H:170:LEU:CD1  | 2.38                     | 0.52              |
| 1:I:218:LYS:O    | 1:I:221:GLN:HB3  | 2.10                     | 0.52              |
| 1:I:260:ILE:HG23 | 1:I:264:ILE:CB   | 2.38                     | 0.52              |
| 1:K:236:LYS:O    | 1:K:240:GLU:OE1  | 2.28                     | 0.52              |
| 1:O:214:VAL:HG21 | 2:P:205:GLN:HB3  | 1.91                     | 0.52              |
| 1:Q:165:ARG:NH1  | 1:Q:182:VAL:HG11 | 2.24                     | 0.52              |
| 1:U:157:ARG:HH21 | 1:U:184:ILE:HG22 | 1.73                     | 0.52              |
| 1:A:235:ALA:HA   | 2:B:235:LEU:CB   | 2.40                     | 0.52              |
| 2:D:257:ILE:HG13 | 1:E:269:ASN:O    | 2.09                     | 0.52              |
| 1:E:258:GLN:C    | 1:E:261:SER:HG   | 2.16                     | 0.52              |
| 1:E:269:ASN:O    | 1:E:269:ASN:OD1  | 2.27                     | 0.52              |
| 2:F:221:ALA:CB   | 1:G:242:LEU:HD21 | 2.39                     | 0.52              |
| 2:F:228:LEU:HD13 | 2:F:236:ILE:CG1  | 2.39                     | 0.52              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:103:ASN:O    | 1:G:187:LEU:HD12 | 2.10                     | 0.52              |
| 2:H:203:ALA:HB3  | 1:I:226:VAL:CG1  | 2.40                     | 0.52              |
| 1:I:118:PRO:HB3  | 2:J:32:ALA:HB3   | 1.91                     | 0.52              |
| 1:I:214:VAL:HA   | 2:J:209:ALA:HB2  | 1.92                     | 0.52              |
| 2:J:65:ILE:HD13  | 2:J:107:PHE:CG   | 2.45                     | 0.52              |
| 2:J:221:ALA:HA   | 1:K:248:TYR:HB2  | 1.91                     | 0.52              |
| 1:S:71:ARG:HD3   | 1:S:78:PRO:HG3   | 1.90                     | 0.52              |
| 2:B:268:LEU:HD23 | 2:B:268:LEU:C    | 2.33                     | 0.52              |
| 1:C:235:ALA:HA   | 2:D:235:LEU:HB2  | 1.90                     | 0.52              |
| 2:D:196:ALA:HB3  | 1:E:219:GLN:CB   | 2.40                     | 0.52              |
| 1:Q:109:LEU:O    | 1:Q:179:LEU:HD22 | 2.10                     | 0.52              |
| 2:T:195:ARG:O    | 2:T:199:VAL:HG23 | 2.09                     | 0.52              |
| 1:U:181:ASP:O    | 1:U:182:VAL:HG23 | 2.09                     | 0.52              |
| 2:V:45:VAL:HB    | 2:V:108:THR:CG2  | 2.40                     | 0.52              |
| 1:W:140:VAL:HG13 | 1:W:167:GLU:OE1  | 2.10                     | 0.52              |
| 2:B:254:SER:HB2  | 1:C:268:GLN:HA   | 1.92                     | 0.52              |
| 2:H:35:ARG:HH11  | 2:H:51:GLY:HA2   | 1.75                     | 0.52              |
| 1:I:249:ILE:O    | 1:I:253:LYS:HG2  | 2.10                     | 0.52              |
| 2:J:129:SER:CB   | 1:K:158:ALA:HB2  | 2.39                     | 0.52              |
| 2:J:226:ASN:O    | 2:J:230:THR:HG23 | 2.10                     | 0.52              |
| 2:L:228:LEU:HD22 | 2:L:233:ASP:HA   | 1.90                     | 0.52              |
| 2:N:244:ALA:O    | 2:N:245:GLU:C    | 2.52                     | 0.52              |
| 1:O:166:ARG:O    | 1:O:170:GLU:OE1  | 2.28                     | 0.52              |
| 1:O:233:GLU:HG3  | 2:P:223:LEU:HD11 | 1.91                     | 0.52              |
| 2:P:139:LEU:HD23 | 2:P:146:VAL:HG21 | 1.92                     | 0.52              |
| 2:P:226:ASN:O    | 2:P:230:THR:HG23 | 2.09                     | 0.52              |
| 1:Q:210:ALA:O    | 1:Q:214:VAL:HG23 | 2.09                     | 0.52              |
| 1:W:220:GLU:HA   | 1:W:223:GLN:HB3  | 1.92                     | 0.52              |
| 1:W:294:LEU:HD22 | 1:W:299:LYS:HE2  | 1.92                     | 0.52              |
| 2:D:262:ALA:HB2  | 2:F:264:GLN:NE2  | 2.25                     | 0.52              |
| 1:G:235:ALA:HA   | 2:H:235:LEU:CD2  | 2.40                     | 0.52              |
| 2:H:131:VAL:HG13 | 2:H:139:LEU:HD21 | 1.91                     | 0.52              |
| 1:I:74:TRP:HD1   | 1:I:77:TYR:HH    | 1.58                     | 0.52              |
| 1:I:81:TYR:CD2   | 1:I:117:LEU:HD22 | 2.45                     | 0.52              |
| 1:I:90:ILE:HB    | 1:I:137:VAL:HG11 | 1.92                     | 0.52              |
| 1:I:239:GLY:HA2  | 2:J:234:GLY:HA3  | 1.90                     | 0.52              |
| 1:K:54:ARG:C     | 2:L:53:GLY:HA2   | 2.35                     | 0.52              |
| 2:L:233:ASP:HB3  | 2:L:236:ILE:HD12 | 1.89                     | 0.52              |
| 1:Q:102:VAL:HG11 | 1:Q:187:LEU:HD11 | 1.92                     | 0.52              |
| 2:R:28:TYR:OH    | 2:R:50:VAL:HG11  | 2.10                     | 0.52              |
| 2:R:228:LEU:CD1  | 2:R:236:ILE:HD11 | 2.40                     | 0.52              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:U:253:LYS:HE3  | 1:W:279:VAL:HG22 | 1.92                     | 0.52              |
| 2:V:224:ILE:HG21 | 1:W:248:TYR:CB   | 2.39                     | 0.52              |
| 2:X:214:ALA:O    | 2:X:215:GLU:C    | 2.53                     | 0.52              |
| 2:B:259:TYR:CD2  | 1:C:275:ALA:HA   | 2.45                     | 0.52              |
| 1:G:260:ILE:HG23 | 1:G:264:ILE:CG2  | 2.40                     | 0.52              |
| 1:I:136:ILE:HG23 | 2:J:93:ARG:NE    | 2.24                     | 0.52              |
| 1:I:233:GLU:HA   | 1:I:236:LYS:HB3  | 1.91                     | 0.52              |
| 1:K:52:PHE:O     | 1:K:76:GLN:HA    | 2.09                     | 0.52              |
| 1:K:74:TRP:HD1   | 1:K:77:TYR:HH    | 1.53                     | 0.52              |
| 1:K:264:ILE:O    | 1:K:264:ILE:HG22 | 2.08                     | 0.52              |
| 1:M:50:ILE:O     | 1:M:78:PRO:HB3   | 2.10                     | 0.52              |
| 2:R:206:GLN:O    | 2:R:210:ALA:HB3  | 2.10                     | 0.52              |
| 2:R:221:ALA:HA   | 1:S:248:TYR:HB2  | 1.92                     | 0.52              |
| 1:U:79:ILE:HG21  | 1:U:126:LEU:HD13 | 1.91                     | 0.52              |
| 1:U:153:LEU:HB3  | 1:U:187:LEU:HD21 | 1.92                     | 0.52              |
| 2:V:80:THR:OG1   | 2:V:128:LYS:HA   | 2.10                     | 0.52              |
| 1:W:108:VAL:HG22 | 1:W:182:VAL:HG11 | 1.92                     | 0.52              |
| 1:W:264:ILE:HG23 | 2:X:252:SER:HB2  | 1.91                     | 0.52              |
| 1:W:273:LEU:HD12 | 1:W:277:ASN:ND2  | 2.25                     | 0.52              |
| 2:F:193:ALA:HB1  | 1:G:219:GLN:HG2  | 1.92                     | 0.51              |
| 2:F:243:ALA:CB   | 1:G:254:ILE:HD13 | 2.31                     | 0.51              |
| 1:I:71:ARG:O     | 1:I:72:ILE:HG13  | 2.09                     | 0.51              |
| 1:I:118:PRO:HA   | 2:J:70:ARG:CZ    | 2.40                     | 0.51              |
| 1:I:118:PRO:HA   | 2:J:70:ARG:NH2   | 2.24                     | 0.51              |
| 1:I:225:ILE:HD13 | 2:J:219:LYS:CD   | 2.40                     | 0.51              |
| 1:I:249:ILE:HA   | 1:I:252:ARG:HB3  | 1.92                     | 0.51              |
| 2:J:88:VAL:HG11  | 2:J:139:LEU:HD13 | 1.90                     | 0.51              |
| 2:J:204:GLU:O    | 2:J:207:LYS:HB2  | 2.10                     | 0.51              |
| 1:O:221:GLN:CB   | 2:P:212:ILE:HG22 | 2.38                     | 0.51              |
| 2:T:127:LEU:O    | 2:T:131:VAL:HG23 | 2.10                     | 0.51              |
| 2:T:130:VAL:HG21 | 2:T:150:VAL:HG22 | 1.91                     | 0.51              |
| 1:U:269:ASN:OD1  | 2:V:257:ILE:HD13 | 2.10                     | 0.51              |
| 2:V:130:VAL:HG11 | 2:V:150:VAL:HG22 | 1.91                     | 0.51              |
| 2:V:214:ALA:O    | 2:V:215:GLU:C    | 2.53                     | 0.51              |
| 1:W:249:ILE:HG23 | 2:X:241:LEU:CD2  | 2.38                     | 0.51              |
| 1:A:219:GLN:CB   | 2:X:200:VAL:HG22 | 2.41                     | 0.51              |
| 1:A:275:ALA:N    | 2:X:261:PRO:HD3  | 2.25                     | 0.51              |
| 1:C:251:LEU:HD23 | 1:C:251:LEU:O    | 2.10                     | 0.51              |
| 1:I:47:HIS:O     | 1:I:66:GLU:OE1   | 2.28                     | 0.51              |
| 1:I:72:ILE:HD12  | 1:I:75:PHE:CE2   | 2.45                     | 0.51              |
| 2:J:203:ALA:O    | 1:K:226:VAL:HG22 | 2.08                     | 0.51              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:136:ILE:O    | 1:O:140:VAL:HG23 | 2.11                     | 0.51              |
| 2:P:146:VAL:O    | 2:P:150:VAL:HG23 | 2.10                     | 0.51              |
| 2:P:235:LEU:HD12 | 2:P:238:LEU:HB3  | 1.92                     | 0.51              |
| 1:Q:235:ALA:HB2  | 2:R:235:LEU:CD2  | 2.40                     | 0.51              |
| 2:R:134:PHE:HD2  | 2:R:146:VAL:HG22 | 1.74                     | 0.51              |
| 1:S:59:GLN:HE21  | 1:S:62:THR:HB    | 1.75                     | 0.51              |
| 1:W:110:SER:HB2  | 1:W:177:LEU:HD22 | 1.92                     | 0.51              |
| 1:W:269:ASN:OD1  | 2:X:252:SER:HA   | 2.10                     | 0.51              |
| 2:B:240:LYS:HG2  | 1:E:282:LEU:O    | 2.11                     | 0.51              |
| 1:C:277:ASN:CG   | 1:E:281:ASN:HA   | 2.35                     | 0.51              |
| 1:E:257:ALA:HB1  | 1:G:279:VAL:CG1  | 2.31                     | 0.51              |
| 1:G:238:LEU:HD13 | 2:H:235:LEU:HD13 | 1.92                     | 0.51              |
| 2:J:236:ILE:HD13 | 1:K:250:LYS:CD   | 2.40                     | 0.51              |
| 1:M:153:LEU:HD23 | 1:M:160:VAL:HG11 | 1.91                     | 0.51              |
| 2:R:37:VAL:CG1   | 2:R:38:ILE:N     | 2.74                     | 0.51              |
| 2:T:30:VAL:HG13  | 2:T:36:ALA:H     | 1.75                     | 0.51              |
| 2:T:203:ALA:HB1  | 1:U:226:VAL:CG1  | 2.41                     | 0.51              |
| 2:T:207:LYS:HG3  | 1:U:226:VAL:HG13 | 1.91                     | 0.51              |
| 2:T:214:ALA:HB2  | 1:U:234:ALA:CB   | 2.40                     | 0.51              |
| 2:V:207:LYS:O    | 2:V:211:ILE:HD12 | 2.10                     | 0.51              |
| 1:W:206:GLU:C    | 2:X:205:GLN:HG2  | 2.35                     | 0.51              |
| 1:A:281:ASN:ND2  | 1:W:274:THR:HG22 | 2.25                     | 0.51              |
| 2:B:221:ALA:HB1  | 1:C:248:TYR:CE2  | 2.44                     | 0.51              |
| 2:H:92:LEU:HD11  | 2:H:168:VAL:HG12 | 1.92                     | 0.51              |
| 2:H:94:ILE:HG23  | 2:H:165:LEU:HD22 | 1.93                     | 0.51              |
| 2:H:207:LYS:HA   | 1:I:230:GLY:CA   | 2.40                     | 0.51              |
| 1:I:40:VAL:HG13  | 1:I:40:VAL:O     | 2.10                     | 0.51              |
| 1:K:54:ARG:O     | 2:L:54:THR:N     | 2.44                     | 0.51              |
| 1:O:214:VAL:HG21 | 2:P:205:GLN:C    | 2.35                     | 0.51              |
| 1:O:224:LYS:HA   | 1:O:227:GLN:HB3  | 1.92                     | 0.51              |
| 1:O:264:ILE:O    | 1:O:264:ILE:HG22 | 2.10                     | 0.51              |
| 2:P:224:ILE:HG12 | 1:Q:251:LEU:HD22 | 1.92                     | 0.51              |
| 1:Q:236:LYS:O    | 1:Q:240:GLU:OE1  | 2.29                     | 0.51              |
| 2:R:208:LYS:O    | 2:R:212:ILE:HD12 | 2.09                     | 0.51              |
| 1:A:219:GLN:HG3  | 2:X:200:VAL:HG22 | 1.91                     | 0.51              |
| 1:C:274:THR:HB   | 1:C:277:ASN:CG   | 2.35                     | 0.51              |
| 2:D:259:TYR:HB2  | 1:E:273:LEU:CD1  | 2.41                     | 0.51              |
| 1:I:133:LEU:HA   | 1:I:136:ILE:HD11 | 1.93                     | 0.51              |
| 2:L:191:GLN:O    | 2:L:195:ARG:HD3  | 2.11                     | 0.51              |
| 2:L:257:ILE:HG22 | 2:L:259:TYR:CE1  | 2.46                     | 0.51              |
| 2:N:65:ILE:HD13  | 2:N:107:PHE:CD2  | 2.45                     | 0.51              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:N:221:ALA:HB1  | 1:O:242:LEU:HD21 | 1.92                     | 0.51              |
| 2:R:39:PHE:O     | 2:R:62:GLN:HA    | 2.11                     | 0.51              |
| 1:W:140:VAL:HG21 | 1:W:168:LEU:HD13 | 1.93                     | 0.51              |
| 2:D:260:LEU:O    | 1:E:273:LEU:O    | 2.29                     | 0.51              |
| 2:J:142:GLN:O    | 2:J:146:VAL:HG23 | 2.10                     | 0.51              |
| 1:K:140:VAL:CG1  | 1:K:164:ILE:HG23 | 2.40                     | 0.51              |
| 1:K:253:LYS:HD2  | 2:L:241:LEU:HD11 | 1.91                     | 0.51              |
| 1:M:248:TYR:O    | 1:M:252:ARG:HB2  | 2.11                     | 0.51              |
| 2:N:233:ASP:HA   | 2:N:236:ILE:HD12 | 1.93                     | 0.51              |
| 1:O:41:PHE:HB3   | 1:O:78:PRO:HG3   | 1.92                     | 0.51              |
| 1:O:43:VAL:HG13  | 1:O:80:ILE:HG23  | 1.93                     | 0.51              |
| 2:P:65:ILE:HG23  | 2:P:112:GLU:HG2  | 1.92                     | 0.51              |
| 2:P:195:ARG:CZ   | 2:P:199:VAL:HG21 | 2.39                     | 0.51              |
| 2:R:33:GLY:C     | 2:R:69:CYS:SG    | 2.94                     | 0.51              |
| 2:T:91:THR:HB    | 2:T:172:HIS:HB3  | 1.93                     | 0.51              |
| 2:T:206:GLN:O    | 2:T:207:LYS:C    | 2.54                     | 0.51              |
| 1:U:221:GLN:O    | 1:U:225:ILE:HG12 | 2.10                     | 0.51              |
| 2:V:45:VAL:HG21  | 2:V:107:PHE:CD2  | 2.46                     | 0.51              |
| 2:V:186:LYS:HB2  | 1:W:209:ARG:HB2  | 1.91                     | 0.51              |
| 1:W:49:ALA:O     | 1:W:64:LEU:HD12  | 2.10                     | 0.51              |
| 1:W:106:LEU:HB2  | 1:W:141:LEU:HD11 | 1.91                     | 0.51              |
| 1:W:233:GLU:HA   | 1:W:236:LYS:HB3  | 1.91                     | 0.51              |
| 1:C:248:TYR:CE2  | 1:C:252:ARG:HB2  | 2.46                     | 0.51              |
| 1:G:51:PHE:CE2   | 1:G:62:THR:HG21  | 2.45                     | 0.51              |
| 2:H:90:ILE:CG2   | 2:H:170:LEU:HD22 | 2.41                     | 0.51              |
| 1:I:43:VAL:HA    | 1:I:80:ILE:HG12  | 1.92                     | 0.51              |
| 1:K:54:ARG:HD2   | 1:K:74:TRP:O     | 2.11                     | 0.51              |
| 2:L:241:LEU:O    | 2:L:244:ALA:HB3  | 2.11                     | 0.51              |
| 1:U:52:PHE:O     | 1:U:76:GLN:OE1   | 2.27                     | 0.51              |
| 1:U:144:VAL:HG11 | 1:U:164:ILE:HG12 | 1.93                     | 0.51              |
| 2:V:131:VAL:CG1  | 2:V:139:LEU:HD11 | 2.37                     | 0.51              |
| 1:E:210:ALA:HA   | 1:E:213:LEU:HB2  | 1.93                     | 0.51              |
| 2:F:244:ALA:HA   | 2:F:247:ILE:HD12 | 1.93                     | 0.51              |
| 1:G:224:LYS:O    | 1:G:228:ALA:CB   | 2.59                     | 0.51              |
| 2:H:217:ASP:O    | 2:H:220:ALA:HB3  | 2.11                     | 0.51              |
| 1:I:41:PHE:CZ    | 1:I:69:HIS:HB2   | 2.45                     | 0.51              |
| 1:I:62:THR:HG22  | 1:I:64:LEU:HD21  | 1.92                     | 0.51              |
| 1:I:249:ILE:HD13 | 2:J:238:LEU:N    | 2.26                     | 0.51              |
| 2:J:195:ARG:NH1  | 2:J:199:VAL:HG21 | 2.25                     | 0.51              |
| 2:L:25:SER:O     | 2:L:57:LEU:HD11  | 2.11                     | 0.51              |
| 2:N:235:LEU:HD12 | 2:N:238:LEU:HB3  | 1.93                     | 0.51              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:P:221:ALA:O    | 2:P:222:GLU:C    | 2.52                     | 0.51              |
| 1:Q:109:LEU:HD13 | 1:Q:181:ASP:O    | 2.11                     | 0.51              |
| 2:V:182:ALA:CB   | 1:W:202:VAL:HG13 | 2.40                     | 0.51              |
| 2:B:260:LEU:CD1  | 2:B:268:LEU:HG   | 2.41                     | 0.51              |
| 1:C:279:VAL:HG23 | 1:E:283:GLN:HB2  | 1.92                     | 0.51              |
| 2:D:207:LYS:O    | 2:D:211:ILE:HD12 | 2.11                     | 0.51              |
| 2:D:215:GLU:O    | 2:D:216:GLY:C    | 2.53                     | 0.51              |
| 2:F:221:ALA:HB2  | 1:G:248:TYR:HD2  | 1.73                     | 0.51              |
| 2:H:267:LEU:HD21 | 2:J:267:LEU:CB   | 2.41                     | 0.51              |
| 1:I:161:SER:HA   | 1:I:184:ILE:HD12 | 1.92                     | 0.51              |
| 2:J:94:ILE:HG12  | 2:J:154:LEU:HD21 | 1.93                     | 0.51              |
| 2:J:206:GLN:NE2  | 1:K:227:GLN:HA   | 2.25                     | 0.51              |
| 2:L:258:THR:OG1  | 1:M:272:TYR:HB2  | 2.10                     | 0.51              |
| 1:M:249:ILE:HD13 | 2:N:237:GLU:C    | 2.36                     | 0.51              |
| 1:Q:207:ALA:HB3  | 2:R:198:PHE:HE2  | 1.74                     | 0.51              |
| 2:B:268:LEU:HD23 | 2:B:269:GLN:N    | 2.26                     | 0.51              |
| 1:E:276:ASP:C    | 1:E:279:VAL:HG22 | 2.36                     | 0.51              |
| 1:G:58:VAL:HG11  | 1:G:122:GLN:OE1  | 2.10                     | 0.51              |
| 2:H:123:THR:HG23 | 2:H:154:LEU:CD2  | 2.41                     | 0.51              |
| 1:I:50:ILE:N     | 1:I:117:LEU:HD13 | 2.26                     | 0.51              |
| 2:J:80:THR:HG21  | 2:J:90:ILE:HD12  | 1.93                     | 0.51              |
| 2:J:267:LEU:HD12 | 2:L:267:LEU:HD22 | 1.93                     | 0.51              |
| 1:K:165:ARG:NE   | 1:K:165:ARG:HA   | 2.25                     | 0.51              |
| 1:K:238:LEU:HD13 | 2:L:235:LEU:HD13 | 1.92                     | 0.51              |
| 1:K:253:LYS:O    | 1:K:257:ALA:HB2  | 2.10                     | 0.51              |
| 2:L:35:ARG:HG2   | 2:L:52:GLU:HG3   | 1.93                     | 0.51              |
| 1:O:72:ILE:O     | 1:O:76:GLN:HB3   | 2.11                     | 0.51              |
| 1:O:232:ALA:C    | 2:P:223:LEU:HD22 | 2.36                     | 0.51              |
| 2:V:262:ALA:HB3  | 1:W:289:ARG:NH2  | 2.24                     | 0.51              |
| 2:D:268:LEU:HB3  | 2:F:266:VAL:HG13 | 1.92                     | 0.50              |
| 2:D:268:LEU:HG   | 1:E:272:TYR:CZ   | 2.47                     | 0.50              |
| 1:G:249:ILE:O    | 1:G:249:ILE:HG22 | 2.11                     | 0.50              |
| 2:H:42:PHE:HE1   | 1:I:68:LEU:HD11  | 1.77                     | 0.50              |
| 2:H:232:GLY:HA3  | 1:I:294:LEU:HD22 | 1.92                     | 0.50              |
| 1:I:56:GLY:HA2   | 2:J:36:ALA:O     | 2.11                     | 0.50              |
| 1:I:59:GLN:N     | 2:J:52:GLU:O     | 2.43                     | 0.50              |
| 1:I:118:PRO:HG3  | 2:J:32:ALA:CB    | 2.41                     | 0.50              |
| 1:O:228:ALA:HB2  | 2:P:220:ALA:N    | 2.26                     | 0.50              |
| 2:P:237:GLU:O    | 2:P:240:LYS:HB2  | 2.11                     | 0.50              |
| 1:S:108:VAL:HG22 | 1:S:182:VAL:CG1  | 2.41                     | 0.50              |
| 2:T:90:ILE:HD11  | 2:T:139:LEU:CD1  | 2.39                     | 0.50              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:T:90:ILE:HD12  | 2:T:131:VAL:HG21 | 1.93                     | 0.50              |
| 2:T:146:VAL:HG12 | 2:T:170:LEU:HD11 | 1.92                     | 0.50              |
| 2:T:147:SER:OG   | 2:T:169:SER:HA   | 2.11                     | 0.50              |
| 2:T:233:ASP:OD1  | 2:T:236:ILE:HD12 | 2.11                     | 0.50              |
| 2:V:39:PHE:CB    | 2:V:65:ILE:HD11  | 2.41                     | 0.50              |
| 1:W:47:HIS:O     | 1:W:66:GLU:HB2   | 2.10                     | 0.50              |
| 1:W:271:ILE:HG22 | 1:W:272:TYR:N    | 2.26                     | 0.50              |
| 1:A:273:LEU:HB3  | 2:X:260:LEU:HG   | 1.94                     | 0.50              |
| 2:D:215:GLU:CG   | 1:E:237:MET:HE1  | 2.40                     | 0.50              |
| 2:D:222:GLU:OE2  | 1:E:237:MET:HG2  | 2.12                     | 0.50              |
| 1:E:271:ILE:HD12 | 1:G:280:LEU:HD23 | 1.94                     | 0.50              |
| 2:H:42:PHE:CE1   | 1:I:68:LEU:HD11  | 2.46                     | 0.50              |
| 2:H:226:ASN:O    | 2:H:230:THR:HG23 | 2.11                     | 0.50              |
| 2:H:247:ILE:HD11 | 1:I:258:GLN:CG   | 2.42                     | 0.50              |
| 1:I:71:ARG:CB    | 1:I:76:GLN:HG3   | 2.41                     | 0.50              |
| 1:K:72:ILE:HB    | 1:K:75:PHE:HD2   | 1.75                     | 0.50              |
| 1:K:225:ILE:HG23 | 2:L:219:LYS:HZ1  | 1.75                     | 0.50              |
| 2:N:62:GLN:OE1   | 2:N:64:PRO:HA    | 2.11                     | 0.50              |
| 2:N:218:SER:HB2  | 1:O:238:LEU:HD21 | 1.93                     | 0.50              |
| 1:O:281:ASN:O    | 1:O:287:PHE:CB   | 2.60                     | 0.50              |
| 1:W:217:ALA:HA   | 1:W:220:GLU:HB2  | 1.93                     | 0.50              |
| 2:D:260:LEU:HD12 | 1:E:272:TYR:CE1  | 2.46                     | 0.50              |
| 2:H:228:LEU:HD11 | 2:H:236:ILE:HD11 | 1.92                     | 0.50              |
| 2:H:240:LYS:HZ1  | 1:K:282:LEU:CG   | 2.22                     | 0.50              |
| 1:I:48:ARG:HD2   | 1:I:64:LEU:O     | 2.12                     | 0.50              |
| 1:I:76:GLN:OE1   | 1:I:76:GLN:HA    | 2.11                     | 0.50              |
| 1:I:136:ILE:HD12 | 1:I:168:LEU:HD11 | 1.93                     | 0.50              |
| 2:J:92:LEU:HB2   | 2:J:127:LEU:HD21 | 1.92                     | 0.50              |
| 2:J:244:ALA:O    | 2:J:245:GLU:C    | 2.53                     | 0.50              |
| 1:O:154:ILE:HG12 | 1:O:187:LEU:HD23 | 1.94                     | 0.50              |
| 1:Q:260:ILE:HG23 | 1:Q:264:ILE:HB   | 1.93                     | 0.50              |
| 2:T:130:VAL:HG12 | 2:T:146:VAL:HG13 | 1.93                     | 0.50              |
| 2:B:241:LEU:CD2  | 1:E:283:GLN:NE2  | 2.75                     | 0.50              |
| 1:G:121:TYR:HE1  | 1:G:126:LEU:HG   | 1.77                     | 0.50              |
| 2:H:96:PHE:CD2   | 2:H:163:LEU:HD22 | 2.47                     | 0.50              |
| 2:H:196:ALA:O    | 2:H:200:VAL:HG23 | 2.11                     | 0.50              |
| 1:I:58:VAL:CG2   | 2:J:34:HIS:HB2   | 2.41                     | 0.50              |
| 1:K:53:ASN:H     | 2:L:32:ALA:HB2   | 1.76                     | 0.50              |
| 2:N:203:ALA:O    | 2:N:207:LYS:HG3  | 2.11                     | 0.50              |
| 2:T:197:ARG:O    | 2:T:201:GLU:OE1  | 2.29                     | 0.50              |
| 2:V:193:ALA:HA   | 1:W:216:LYS:HA   | 1.94                     | 0.50              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:W:214:VAL:HG13 | 2:X:212:ILE:HD13 | 1.93                     | 0.50              |
| 2:B:236:ILE:HD13 | 1:C:250:LYS:HD3  | 1.92                     | 0.50              |
| 2:B:269:GLN:OE1  | 2:X:269:GLN:NE2  | 2.45                     | 0.50              |
| 2:B:270:LEU:HD11 | 2:D:271:PRO:CG   | 2.41                     | 0.50              |
| 1:G:156:GLN:HE21 | 1:G:159:GLN:HB3  | 1.77                     | 0.50              |
| 2:H:54:THR:O     | 2:H:54:THR:HG22  | 2.10                     | 0.50              |
| 2:H:210:ALA:O    | 1:I:234:ALA:HB2  | 2.11                     | 0.50              |
| 1:I:120:MET:O    | 1:I:124:LEU:HB2  | 2.11                     | 0.50              |
| 2:J:250:GLN:HG3  | 1:K:261:SER:HA   | 1.94                     | 0.50              |
| 1:M:214:VAL:HG21 | 2:N:205:GLN:HB3  | 1.94                     | 0.50              |
| 1:M:228:ALA:O    | 1:M:229:GLU:C    | 2.55                     | 0.50              |
| 2:N:74:ARG:NH1   | 2:N:75:ASN:O     | 2.44                     | 0.50              |
| 2:N:182:ALA:HB1  | 1:O:205:GLN:CB   | 2.42                     | 0.50              |
| 2:N:247:ILE:HD11 | 1:O:257:ALA:O    | 2.11                     | 0.50              |
| 2:P:206:GLN:O    | 2:P:210:ALA:HB3  | 2.11                     | 0.50              |
| 1:U:43:VAL:HG12  | 1:U:47:HIS:HB2   | 1.92                     | 0.50              |
| 1:U:153:LEU:CB   | 1:U:187:LEU:HD21 | 2.41                     | 0.50              |
| 1:A:258:GLN:OE1  | 1:C:282:LEU:HD22 | 2.12                     | 0.50              |
| 1:C:204:GLN:HA   | 2:D:198:PHE:CE1  | 2.46                     | 0.50              |
| 1:E:235:ALA:HB1  | 2:F:228:LEU:CD2  | 2.41                     | 0.50              |
| 1:E:274:THR:HG22 | 1:E:276:ASP:OD1  | 2.11                     | 0.50              |
| 2:H:88:VAL:HG11  | 2:H:139:LEU:HD13 | 1.94                     | 0.50              |
| 1:I:285:GLU:O    | 1:I:289:ARG:HG3  | 2.11                     | 0.50              |
| 2:J:37:VAL:HG11  | 2:J:104:PRO:CG   | 2.41                     | 0.50              |
| 2:J:86:GLN:HB2   | 2:J:136:ALA:HB2  | 1.93                     | 0.50              |
| 1:K:72:ILE:N     | 1:K:76:GLN:HB3   | 2.27                     | 0.50              |
| 2:L:214:ALA:HB2  | 1:M:234:ALA:CB   | 2.38                     | 0.50              |
| 2:L:236:ILE:HD13 | 1:M:250:LYS:CD   | 2.37                     | 0.50              |
| 1:O:228:ALA:O    | 1:O:232:ALA:HB3  | 2.11                     | 0.50              |
| 2:P:139:LEU:CD2  | 2:P:146:VAL:HG11 | 2.41                     | 0.50              |
| 2:T:126:ILE:HD13 | 2:T:154:LEU:HA   | 1.93                     | 0.50              |
| 2:T:200:VAL:HG22 | 1:U:223:GLN:HB2  | 1.92                     | 0.50              |
| 2:X:221:ALA:HA   | 2:X:224:ILE:HG22 | 1.93                     | 0.50              |
| 1:C:221:GLN:OE1  | 2:D:212:ILE:HG23 | 2.12                     | 0.50              |
| 1:C:270:ARG:O    | 2:D:258:THR:HA   | 2.11                     | 0.50              |
| 1:I:81:TYR:CE1   | 1:I:121:TYR:CD1  | 3.00                     | 0.50              |
| 2:J:45:VAL:HG21  | 2:J:107:PHE:CD2  | 2.47                     | 0.50              |
| 2:L:76:VAL:HB    | 2:L:123:THR:HG21 | 1.93                     | 0.50              |
| 2:L:76:VAL:HG11  | 2:L:123:THR:HB   | 1.94                     | 0.50              |
| 2:N:90:ILE:HA    | 2:N:172:HIS:O    | 2.12                     | 0.50              |
| 1:O:71:ARG:HB2   | 1:O:76:GLN:CG    | 2.40                     | 0.50              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:236:LYS:HA   | 2:P:227:SER:OG   | 2.11                     | 0.50              |
| 1:O:249:ILE:HD13 | 2:P:237:GLU:HB2  | 1.91                     | 0.50              |
| 2:P:32:ALA:HB3   | 2:P:70:ARG:NH2   | 2.27                     | 0.50              |
| 2:P:206:GLN:O    | 2:P:207:LYS:C    | 2.55                     | 0.50              |
| 1:U:221:GLN:OE1  | 2:V:216:GLY:N    | 2.45                     | 0.50              |
| 2:V:88:VAL:HG12  | 2:V:90:ILE:HG13  | 1.92                     | 0.50              |
| 1:W:235:ALA:HB2  | 2:X:235:LEU:HB2  | 1.94                     | 0.50              |
| 1:A:199:ALA:O    | 1:A:203:ALA:HB2  | 2.12                     | 0.50              |
| 2:B:265:SER:O    | 2:X:267:LEU:CD1  | 2.59                     | 0.50              |
| 2:D:219:LYS:HA   | 2:D:222:GLU:OE1  | 2.11                     | 0.50              |
| 2:D:244:ALA:HB1  | 1:E:278:LEU:CD2  | 2.41                     | 0.50              |
| 2:D:261:PRO:HA   | 1:E:275:ALA:N    | 2.26                     | 0.50              |
| 1:E:235:ALA:HA   | 2:F:235:LEU:CB   | 2.41                     | 0.50              |
| 1:E:235:ALA:HA   | 2:F:235:LEU:HB3  | 1.93                     | 0.50              |
| 1:E:260:ILE:HD11 | 2:F:244:ALA:HB3  | 1.92                     | 0.50              |
| 2:H:37:VAL:HG23  | 2:H:67:PHE:CE2   | 2.47                     | 0.50              |
| 1:I:41:PHE:N     | 1:I:71:ARG:HG2   | 2.27                     | 0.50              |
| 1:I:235:ALA:HB3  | 2:J:224:ILE:HD13 | 1.94                     | 0.50              |
| 2:N:27:LEU:CD1   | 2:N:54:THR:HG21  | 2.42                     | 0.50              |
| 2:N:224:ILE:HG21 | 1:O:248:TYR:HD1  | 1.76                     | 0.50              |
| 1:O:214:VAL:HG13 | 2:P:209:ALA:HB2  | 1.94                     | 0.50              |
| 1:S:79:ILE:HG21  | 1:S:126:LEU:HD22 | 1.94                     | 0.50              |
| 2:T:139:LEU:CD2  | 2:T:146:VAL:HG11 | 2.42                     | 0.50              |
| 1:U:51:PHE:CG    | 1:U:64:LEU:HD11  | 2.47                     | 0.50              |
| 1:U:154:ILE:CG1  | 1:U:187:LEU:HD23 | 2.42                     | 0.50              |
| 1:U:253:LYS:CE   | 1:W:279:VAL:HG22 | 2.42                     | 0.50              |
| 1:C:261:SER:HB3  | 1:C:264:ILE:HD12 | 1.93                     | 0.50              |
| 1:C:272:TYR:HB2  | 2:D:261:PRO:CD   | 2.42                     | 0.50              |
| 2:H:58:ILE:HD12  | 2:H:61:VAL:CG1   | 2.41                     | 0.50              |
| 1:K:52:PHE:O     | 1:K:76:GLN:OE1   | 2.30                     | 0.50              |
| 1:O:279:VAL:O    | 1:O:282:LEU:HA   | 2.12                     | 0.50              |
| 2:R:28:TYR:CD1   | 2:R:57:LEU:HD23  | 2.43                     | 0.50              |
| 2:R:119:LEU:HB2  | 2:R:120:PRO:HD3  | 1.94                     | 0.50              |
| 1:A:281:ASN:HD22 | 1:W:275:ALA:HB3  | 1.77                     | 0.49              |
| 1:C:269:ASN:HD22 | 2:D:257:ILE:C    | 2.20                     | 0.49              |
| 1:E:238:LEU:HD22 | 2:F:238:LEU:HD12 | 1.93                     | 0.49              |
| 1:G:168:LEU:HD23 | 1:G:179:LEU:HD11 | 1.94                     | 0.49              |
| 1:G:222:ARG:HA   | 1:G:225:ILE:HG12 | 1.93                     | 0.49              |
| 1:G:228:ALA:HB1  | 2:H:220:ALA:HB2  | 1.93                     | 0.49              |
| 2:H:130:VAL:HG13 | 2:H:149:GLN:OE1  | 2.11                     | 0.49              |
| 2:H:240:LYS:CG   | 1:K:282:LEU:HD23 | 2.41                     | 0.49              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:55:ILE:HD13  | 2:J:28:TYR:O     | 2.11                     | 0.49              |
| 2:J:37:VAL:O     | 2:J:62:GLN:HG2   | 2.12                     | 0.49              |
| 1:K:281:ASN:O    | 1:K:287:PHE:CB   | 2.60                     | 0.49              |
| 2:L:31:ASP:O     | 2:L:32:ALA:C     | 2.54                     | 0.49              |
| 2:L:267:LEU:HD23 | 2:L:268:LEU:N    | 2.27                     | 0.49              |
| 2:N:197:ARG:O    | 2:N:201:GLU:OE1  | 2.29                     | 0.49              |
| 1:O:47:HIS:CD2   | 1:O:80:ILE:HG22  | 2.46                     | 0.49              |
| 1:Q:140:VAL:HG21 | 1:Q:168:LEU:CD1  | 2.42                     | 0.49              |
| 2:R:35:ARG:HD2   | 2:R:100:ALA:HB1  | 1.94                     | 0.49              |
| 1:S:263:THR:HG21 | 2:T:245:GLU:HB3  | 1.93                     | 0.49              |
| 2:V:224:ILE:O    | 2:V:228:LEU:HG   | 2.12                     | 0.49              |
| 1:A:273:LEU:HD12 | 2:X:258:THR:O    | 2.12                     | 0.49              |
| 1:A:283:GLN:O    | 1:W:276:ASP:HB2  | 2.11                     | 0.49              |
| 2:D:250:GLN:NE2  | 1:E:261:SER:HB2  | 2.28                     | 0.49              |
| 2:D:251:LEU:HD21 | 1:G:280:LEU:HD22 | 1.92                     | 0.49              |
| 2:H:118:VAL:HG13 | 2:H:161:PHE:HB2  | 1.94                     | 0.49              |
| 2:J:146:VAL:HG12 | 2:J:170:LEU:HD11 | 1.94                     | 0.49              |
| 1:K:120:MET:O    | 1:K:124:LEU:HB2  | 2.11                     | 0.49              |
| 2:L:235:LEU:O    | 2:L:235:LEU:HG   | 2.11                     | 0.49              |
| 1:M:239:GLY:HA2  | 2:N:234:GLY:HA3  | 1.94                     | 0.49              |
| 1:M:253:LYS:O    | 1:M:257:ALA:HB2  | 2.13                     | 0.49              |
| 2:N:67:PHE:CG    | 2:N:103:LEU:HD22 | 2.47                     | 0.49              |
| 2:N:221:ALA:HA   | 1:O:248:TYR:CB   | 2.43                     | 0.49              |
| 2:P:123:THR:O    | 2:P:127:LEU:HD13 | 2.11                     | 0.49              |
| 1:Q:68:LEU:HG    | 1:Q:68:LEU:O     | 2.12                     | 0.49              |
| 1:Q:228:ALA:O    | 1:Q:229:GLU:C    | 2.55                     | 0.49              |
| 2:R:260:LEU:HD22 | 2:R:268:LEU:CD1  | 2.35                     | 0.49              |
| 1:S:273:LEU:HD22 | 1:U:280:LEU:HD13 | 1.93                     | 0.49              |
| 2:T:125:GLU:HA   | 1:U:158:ALA:HA   | 1.93                     | 0.49              |
| 1:U:228:ALA:O    | 1:U:229:GLU:C    | 2.55                     | 0.49              |
| 2:V:260:LEU:H    | 1:W:275:ALA:HB2  | 1.77                     | 0.49              |
| 2:B:270:LEU:HD12 | 2:B:270:LEU:C    | 2.38                     | 0.49              |
| 2:D:262:ALA:HB2  | 2:F:264:GLN:HE21 | 1.76                     | 0.49              |
| 1:I:116:GLU:C    | 1:I:118:PRO:HD2  | 2.37                     | 0.49              |
| 2:N:239:ARG:HD3  | 1:O:254:ILE:HG23 | 1.94                     | 0.49              |
| 1:Q:273:LEU:HD22 | 1:S:280:LEU:HD13 | 1.94                     | 0.49              |
| 2:T:41:ARG:NE    | 1:U:69:HIS:NE2   | 2.60                     | 0.49              |
| 1:U:41:PHE:CD1   | 1:U:43:VAL:CG2   | 2.95                     | 0.49              |
| 1:U:41:PHE:CD1   | 1:U:41:PHE:O     | 2.65                     | 0.49              |
| 1:U:102:VAL:HG12 | 1:U:104:ILE:HG13 | 1.93                     | 0.49              |
| 1:W:196:ALA:HA   | 2:X:198:PHE:CZ   | 2.47                     | 0.49              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:W:213:LEU:O    | 1:W:216:LYS:HG2  | 2.11                     | 0.49              |
| 1:C:232:ALA:HB2  | 2:D:224:ILE:HG12 | 1.94                     | 0.49              |
| 2:H:239:ARG:HB3  | 1:I:254:ILE:HD13 | 1.93                     | 0.49              |
| 1:I:164:ILE:HD12 | 1:I:184:ILE:CD1  | 2.43                     | 0.49              |
| 2:J:151:SER:HA   | 2:J:168:VAL:HG21 | 1.93                     | 0.49              |
| 1:K:50:ILE:HG21  | 1:K:117:LEU:C    | 2.37                     | 0.49              |
| 1:M:122:GLN:HG3  | 2:N:52:GLU:OE1   | 2.11                     | 0.49              |
| 2:N:90:ILE:HD11  | 2:N:139:LEU:CD1  | 2.42                     | 0.49              |
| 1:O:221:GLN:HB2  | 2:P:212:ILE:CG2  | 2.40                     | 0.49              |
| 2:P:34:HIS:ND1   | 2:P:66:ILE:HG22  | 2.28                     | 0.49              |
| 2:R:80:THR:HG23  | 2:R:131:VAL:HG11 | 1.94                     | 0.49              |
| 1:U:54:ARG:HA    | 2:V:30:VAL:O     | 2.12                     | 0.49              |
| 2:X:237:GLU:O    | 2:X:241:LEU:HD23 | 2.12                     | 0.49              |
| 2:D:268:LEU:O    | 2:F:267:LEU:HD23 | 2.12                     | 0.49              |
| 1:G:210:ALA:HB1  | 2:H:202:LYS:HG2  | 1.93                     | 0.49              |
| 1:G:281:ASN:HB2  | 1:G:287:PHE:CD1  | 2.48                     | 0.49              |
| 2:H:203:ALA:HA   | 2:H:206:GLN:CG   | 2.43                     | 0.49              |
| 2:H:244:ALA:O    | 2:H:248:ALA:HB3  | 2.11                     | 0.49              |
| 2:H:246:ASP:O    | 2:H:249:TYR:HB3  | 2.13                     | 0.49              |
| 1:I:51:PHE:HA    | 1:I:76:GLN:OE1   | 2.12                     | 0.49              |
| 2:J:90:ILE:HD13  | 2:J:131:VAL:HG21 | 1.95                     | 0.49              |
| 2:J:224:ILE:CG2  | 1:K:248:TYR:HB2  | 2.42                     | 0.49              |
| 1:K:79:ILE:HG21  | 1:K:126:LEU:HD11 | 1.94                     | 0.49              |
| 1:K:152:GLN:HA   | 1:K:155:THR:OG1  | 2.12                     | 0.49              |
| 1:M:276:ASP:OD2  | 1:M:290:GLY:HA3  | 2.11                     | 0.49              |
| 2:N:92:LEU:HD12  | 2:N:169:SER:O    | 2.12                     | 0.49              |
| 1:Q:235:ALA:HB2  | 2:R:235:LEU:HD23 | 1.94                     | 0.49              |
| 1:W:58:VAL:HB    | 1:W:122:GLN:OE1  | 2.13                     | 0.49              |
| 1:A:221:GLN:HB2  | 2:B:212:ILE:HG13 | 1.94                     | 0.49              |
| 2:B:207:LYS:HG3  | 1:C:226:VAL:HG13 | 1.94                     | 0.49              |
| 2:D:207:LYS:HE2  | 1:E:229:GLU:CD   | 2.37                     | 0.49              |
| 1:G:277:ASN:HA   | 1:I:280:LEU:O    | 2.13                     | 0.49              |
| 1:I:52:PHE:CG    | 1:I:121:TYR:HE2  | 2.30                     | 0.49              |
| 1:I:157:ARG:CZ   | 1:I:184:ILE:HG22 | 2.42                     | 0.49              |
| 2:J:83:LYS:HD2   | 1:K:155:THR:HG21 | 1.93                     | 0.49              |
| 1:K:108:VAL:HG11 | 1:K:133:LEU:CD2  | 2.43                     | 0.49              |
| 2:L:54:THR:HG22  | 2:L:56:PHE:CD2   | 2.48                     | 0.49              |
| 2:L:74:ARG:NH1   | 2:L:75:ASN:O     | 2.45                     | 0.49              |
| 2:L:244:ALA:O    | 2:L:248:ALA:CB   | 2.54                     | 0.49              |
| 2:N:41:ARG:HD2   | 1:O:69:HIS:HB2   | 1.94                     | 0.49              |
| 1:Q:53:ASN:H     | 1:Q:58:VAL:HG13  | 1.75                     | 0.49              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:T:78:VAL:HG12  | 2:T:128:LYS:HE2  | 1.94                     | 0.49              |
| 2:V:259:TYR:CD1  | 1:W:275:ALA:HA   | 2.48                     | 0.49              |
| 2:B:196:ALA:HA   | 2:B:199:VAL:HB   | 1.94                     | 0.49              |
| 2:B:209:ALA:O    | 2:B:212:ILE:HG22 | 2.13                     | 0.49              |
| 2:F:267:LEU:O    | 2:F:268:LEU:C    | 2.55                     | 0.49              |
| 1:I:54:ARG:HD3   | 2:J:64:PRO:HB2   | 1.94                     | 0.49              |
| 1:I:73:PRO:C     | 1:I:75:PHE:H     | 2.20                     | 0.49              |
| 1:I:222:ARG:O    | 1:I:226:VAL:HG12 | 2.12                     | 0.49              |
| 1:I:242:LEU:HD13 | 2:J:234:GLY:O    | 2.12                     | 0.49              |
| 2:J:27:LEU:HD12  | 2:J:28:TYR:H     | 1.78                     | 0.49              |
| 2:J:29:ASN:OD1   | 2:J:29:ASN:C     | 2.54                     | 0.49              |
| 1:K:104:ILE:HD13 | 1:K:145:VAL:HG21 | 1.94                     | 0.49              |
| 2:L:105:ARG:O    | 2:L:108:THR:OG1  | 2.27                     | 0.49              |
| 1:M:49:ALA:O     | 1:M:64:LEU:HB2   | 2.11                     | 0.49              |
| 2:N:130:VAL:HG21 | 2:N:150:VAL:HG22 | 1.95                     | 0.49              |
| 2:N:224:ILE:CG2  | 1:O:248:TYR:HB2  | 2.43                     | 0.49              |
| 1:O:264:ILE:HG22 | 1:O:267:SER:HB2  | 1.95                     | 0.49              |
| 2:P:262:ALA:HB3  | 1:Q:289:ARG:NH2  | 2.27                     | 0.49              |
| 1:U:41:PHE:HD2   | 1:U:71:ARG:HB3   | 1.78                     | 0.49              |
| 1:U:165:ARG:CZ   | 1:U:182:VAL:HB   | 2.43                     | 0.49              |
| 2:X:202:LYS:HA   | 2:X:205:GLN:OE1  | 2.12                     | 0.49              |
| 1:A:269:ASN:HB2  | 1:A:271:ILE:HG23 | 1.95                     | 0.49              |
| 2:D:203:ALA:C    | 1:E:226:VAL:HG11 | 2.37                     | 0.49              |
| 1:E:250:LYS:HA   | 1:E:253:LYS:HD3  | 1.94                     | 0.49              |
| 1:E:260:ILE:O    | 1:E:264:ILE:HG13 | 2.12                     | 0.49              |
| 1:I:48:ARG:HB3   | 1:I:117:LEU:HD11 | 1.94                     | 0.49              |
| 1:I:150:ALA:HB1  | 1:I:189:PHE:CE2  | 2.47                     | 0.49              |
| 2:J:32:ALA:O     | 2:J:70:ARG:NH2   | 2.46                     | 0.49              |
| 2:J:46:GLN:O     | 2:J:104:PRO:HB3  | 2.11                     | 0.49              |
| 2:J:122:ILE:HG22 | 2:J:157:ARG:CG   | 2.42                     | 0.49              |
| 2:J:268:LEU:HD22 | 2:J:270:LEU:HD21 | 1.94                     | 0.49              |
| 1:K:79:ILE:O     | 1:K:81:TYR:CD1   | 2.66                     | 0.49              |
| 1:K:189:PHE:HB2  | 1:K:193:TYR:CD1  | 2.47                     | 0.49              |
| 1:K:292:ASP:OD2  | 1:K:295:ILE:HD12 | 2.13                     | 0.49              |
| 2:L:218:SER:O    | 2:L:221:ALA:HB3  | 2.12                     | 0.49              |
| 1:M:243:SER:O    | 1:O:294:LEU:CB   | 2.61                     | 0.49              |
| 2:N:31:ASP:O     | 2:N:32:ALA:C     | 2.55                     | 0.49              |
| 2:N:85:LEU:HD11  | 1:O:154:ILE:HD12 | 1.95                     | 0.49              |
| 1:O:90:ILE:HG22  | 1:O:91:SER:N     | 2.28                     | 0.49              |
| 2:P:32:ALA:HB3   | 2:P:70:ARG:HH21  | 1.77                     | 0.49              |
| 2:R:38:ILE:HG12  | 2:R:46:GLN:NE2   | 2.28                     | 0.49              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:S:100:GLN:O    | 1:S:102:VAL:HG23 | 2.13                     | 0.49              |
| 1:U:49:ALA:CB    | 1:U:78:PRO:HB2   | 2.43                     | 0.49              |
| 1:U:140:VAL:HG21 | 1:U:168:LEU:HD13 | 1.93                     | 0.49              |
| 2:V:88:VAL:HG22  | 2:V:175:PHE:HE1  | 1.76                     | 0.49              |
| 1:W:145:VAL:HG13 | 1:W:153:LEU:CD1  | 2.42                     | 0.49              |
| 1:W:157:ARG:HH21 | 1:W:184:ILE:HG22 | 1.75                     | 0.49              |
| 1:W:165:ARG:CZ   | 1:W:182:VAL:HB   | 2.43                     | 0.49              |
| 1:A:274:THR:HG22 | 2:X:261:PRO:HD3  | 1.95                     | 0.49              |
| 1:I:51:PHE:O     | 2:J:31:ASP:OD1   | 2.30                     | 0.49              |
| 2:J:35:ARG:CD    | 2:J:100:ALA:HB1  | 2.43                     | 0.49              |
| 1:K:52:PHE:HA    | 2:L:32:ALA:CB    | 2.42                     | 0.49              |
| 1:K:224:LYS:O    | 1:K:228:ALA:HB3  | 2.12                     | 0.49              |
| 1:K:273:LEU:CD1  | 1:M:280:LEU:HB3  | 2.43                     | 0.49              |
| 2:L:30:VAL:HG21  | 2:L:53:GLY:C     | 2.37                     | 0.49              |
| 2:R:65:ILE:HD12  | 2:R:112:GLU:HG2  | 1.94                     | 0.49              |
| 2:R:122:ILE:CD1  | 2:R:158:ALA:HB2  | 2.43                     | 0.49              |
| 1:S:41:PHE:CE2   | 1:S:43:VAL:HG22  | 2.48                     | 0.49              |
| 1:S:161:SER:O    | 1:S:165:ARG:HG2  | 2.13                     | 0.49              |
| 2:T:256:ASN:CB   | 1:U:270:ARG:HE   | 2.26                     | 0.49              |
| 1:U:51:PHE:C     | 1:U:76:GLN:OE1   | 2.56                     | 0.49              |
| 1:U:71:ARG:HA    | 1:U:76:GLN:HG2   | 1.95                     | 0.49              |
| 2:V:37:VAL:HG12  | 2:V:38:ILE:N     | 2.26                     | 0.49              |
| 2:X:261:PRO:HG2  | 2:X:266:VAL:HG21 | 1.95                     | 0.49              |
| 2:B:267:LEU:O    | 2:B:268:LEU:C    | 2.55                     | 0.49              |
| 1:C:269:ASN:HA   | 2:D:257:ILE:O    | 2.12                     | 0.49              |
| 1:C:287:PHE:CD2  | 1:C:288:THR:HG23 | 2.48                     | 0.49              |
| 2:D:258:THR:CG2  | 1:E:271:ILE:O    | 2.61                     | 0.49              |
| 2:F:267:LEU:C    | 2:H:267:LEU:HB3  | 2.38                     | 0.49              |
| 1:I:218:LYS:HD2  | 2:J:212:ILE:CD1  | 2.42                     | 0.49              |
| 1:I:273:LEU:HA   | 1:K:281:ASN:OD1  | 2.13                     | 0.49              |
| 2:J:122:ILE:HG22 | 2:J:157:ARG:HG2  | 1.94                     | 0.49              |
| 2:J:146:VAL:O    | 2:J:150:VAL:HG23 | 2.12                     | 0.49              |
| 1:K:51:PHE:HB3   | 1:K:53:ASN:OD1   | 2.13                     | 0.49              |
| 2:L:221:ALA:HA   | 1:M:248:TYR:HB2  | 1.95                     | 0.49              |
| 1:M:54:ARG:HB3   | 2:N:53:GLY:HA2   | 1.93                     | 0.49              |
| 1:M:156:GLN:OE1  | 1:M:160:VAL:HG23 | 2.13                     | 0.49              |
| 2:N:50:VAL:HG13  | 2:N:55:HIS:CB    | 2.39                     | 0.49              |
| 1:Q:237:MET:HA   | 1:Q:240:GLU:OE1  | 2.12                     | 0.49              |
| 2:T:236:ILE:HG23 | 1:U:254:ILE:HD12 | 1.95                     | 0.49              |
| 1:W:217:ALA:HB1  | 2:X:212:ILE:O    | 2.13                     | 0.49              |
| 2:B:247:ILE:HG23 | 2:B:251:LEU:HD11 | 1.95                     | 0.48              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:260:ILE:O    | 1:C:264:ILE:HG13 | 2.13                     | 0.48              |
| 2:D:247:ILE:HD13 | 1:G:280:LEU:HD11 | 1.95                     | 0.48              |
| 1:G:225:ILE:HD13 | 2:H:219:LYS:NZ   | 2.27                     | 0.48              |
| 2:H:71:SER:HA    | 2:H:97:ARG:HB3   | 1.95                     | 0.48              |
| 1:I:41:PHE:CE1   | 1:I:64:LEU:HD13  | 2.46                     | 0.48              |
| 1:I:242:LEU:HD13 | 1:I:249:ILE:HD12 | 1.94                     | 0.48              |
| 1:K:223:GLN:OE1  | 1:K:227:GLN:HB2  | 2.13                     | 0.48              |
| 1:K:273:LEU:HD13 | 1:M:280:LEU:H    | 1.78                     | 0.48              |
| 1:M:51:PHE:CD1   | 1:M:64:LEU:HD11  | 2.47                     | 0.48              |
| 1:O:156:GLN:HE21 | 1:O:159:GLN:HB3  | 1.77                     | 0.48              |
| 1:O:252:ARG:O    | 1:O:253:LYS:C    | 2.55                     | 0.48              |
| 2:P:129:SER:CB   | 1:Q:158:ALA:HB2  | 2.43                     | 0.48              |
| 1:Q:52:PHE:N     | 1:Q:76:GLN:HE22  | 2.11                     | 0.48              |
| 2:R:45:VAL:HG11  | 2:R:107:PHE:HB3  | 1.95                     | 0.48              |
| 2:R:92:LEU:HD22  | 2:R:127:LEU:HD11 | 1.95                     | 0.48              |
| 2:R:126:ILE:HD13 | 2:R:153:ASP:C    | 2.38                     | 0.48              |
| 2:R:201:GLU:O    | 2:R:205:GLN:OE1  | 2.30                     | 0.48              |
| 1:U:72:ILE:H     | 1:U:72:ILE:HD12  | 1.78                     | 0.48              |
| 1:U:79:ILE:O     | 1:U:81:TYR:CD1   | 2.66                     | 0.48              |
| 2:V:88:VAL:HG11  | 2:V:139:LEU:CD1  | 2.40                     | 0.48              |
| 1:W:32:VAL:O     | 1:W:36:VAL:HG23  | 2.12                     | 0.48              |
| 1:W:40:VAL:HG13  | 1:W:40:VAL:O     | 2.12                     | 0.48              |
| 1:W:281:ASN:O    | 1:W:287:PHE:CB   | 2.61                     | 0.48              |
| 2:B:243:ALA:HB1  | 1:C:258:GLN:HG3  | 1.95                     | 0.48              |
| 2:D:218:SER:O    | 2:D:221:ALA:HB3  | 2.13                     | 0.48              |
| 1:G:52:PHE:CZ    | 2:H:30:VAL:O     | 2.65                     | 0.48              |
| 1:G:222:ARG:O    | 1:G:225:ILE:HB   | 2.12                     | 0.48              |
| 1:G:264:ILE:O    | 1:G:264:ILE:HG22 | 2.13                     | 0.48              |
| 1:I:72:ILE:HB    | 1:I:75:PHE:HB3   | 1.95                     | 0.48              |
| 2:J:50:VAL:HG12  | 2:J:55:HIS:HB3   | 1.95                     | 0.48              |
| 2:L:31:ASP:O     | 2:L:34:HIS:CD2   | 2.66                     | 0.48              |
| 1:M:221:GLN:CB   | 2:N:212:ILE:HG22 | 2.43                     | 0.48              |
| 1:O:63:ILE:HG23  | 1:O:114:ALA:O    | 2.13                     | 0.48              |
| 1:O:290:GLY:O    | 1:Q:283:GLN:HB3  | 2.13                     | 0.48              |
| 2:T:88:VAL:HG22  | 2:T:175:PHE:CE1  | 2.48                     | 0.48              |
| 2:T:224:ILE:CG1  | 1:U:251:LEU:HD23 | 2.43                     | 0.48              |
| 1:U:71:ARG:HA    | 1:U:76:GLN:CG    | 2.42                     | 0.48              |
| 1:A:254:ILE:HG23 | 1:C:282:LEU:HD13 | 1.93                     | 0.48              |
| 1:C:232:ALA:O    | 1:C:235:ALA:HB3  | 2.14                     | 0.48              |
| 1:G:62:THR:HG22  | 1:G:64:LEU:HD21  | 1.94                     | 0.48              |
| 1:G:154:ILE:HD13 | 1:G:187:LEU:HD23 | 1.95                     | 0.48              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:43:VAL:CG1   | 1:I:47:HIS:HB3   | 2.43                     | 0.48              |
| 1:I:50:ILE:HB    | 1:I:117:LEU:HB2  | 1.95                     | 0.48              |
| 1:I:273:LEU:HD22 | 1:K:280:LEU:HB2  | 1.94                     | 0.48              |
| 1:K:108:VAL:HG11 | 1:K:133:LEU:HD22 | 1.94                     | 0.48              |
| 1:K:223:GLN:O    | 1:K:226:VAL:HG12 | 2.13                     | 0.48              |
| 2:L:270:LEU:HD13 | 2:N:258:THR:HG21 | 1.93                     | 0.48              |
| 1:M:53:ASN:O     | 1:M:58:VAL:HG22  | 2.13                     | 0.48              |
| 2:N:40:ASP:OD2   | 2:N:43:ARG:NH1   | 2.47                     | 0.48              |
| 1:O:216:LYS:HA   | 1:O:219:GLN:HG2  | 1.94                     | 0.48              |
| 1:O:229:GLU:O    | 1:O:233:GLU:HB2  | 2.13                     | 0.48              |
| 2:P:38:ILE:HD12  | 2:P:57:LEU:CA    | 2.41                     | 0.48              |
| 2:P:80:THR:HG21  | 2:P:90:ILE:HD12  | 1.94                     | 0.48              |
| 1:S:51:PHE:CE1   | 1:S:64:LEU:HD11  | 2.48                     | 0.48              |
| 1:S:228:ALA:O    | 1:S:229:GLU:C    | 2.55                     | 0.48              |
| 1:U:72:ILE:N     | 1:U:76:GLN:HB3   | 2.28                     | 0.48              |
| 1:A:221:GLN:HE22 | 2:B:215:GLU:CB   | 2.25                     | 0.48              |
| 1:A:237:MET:SD   | 1:A:237:MET:C    | 2.97                     | 0.48              |
| 1:A:238:LEU:HD21 | 2:X:221:ALA:HB1  | 1.95                     | 0.48              |
| 1:A:249:ILE:HG21 | 1:C:294:LEU:CG   | 2.40                     | 0.48              |
| 1:C:211:GLN:O    | 1:C:214:VAL:HB   | 2.13                     | 0.48              |
| 1:C:253:LYS:HD2  | 1:E:291:SER:HB2  | 1.95                     | 0.48              |
| 1:G:221:GLN:HB2  | 2:H:212:ILE:CG2  | 2.43                     | 0.48              |
| 2:H:38:ILE:HA    | 2:H:62:GLN:CG    | 2.44                     | 0.48              |
| 2:H:91:THR:HB    | 2:H:172:HIS:HB3  | 1.95                     | 0.48              |
| 2:H:203:ALA:C    | 1:I:226:VAL:HG22 | 2.39                     | 0.48              |
| 1:I:56:GLY:H     | 2:J:36:ALA:HB3   | 1.77                     | 0.48              |
| 1:I:72:ILE:H     | 1:I:76:GLN:HB3   | 1.77                     | 0.48              |
| 1:I:118:PRO:HG3  | 2:J:32:ALA:HB3   | 1.95                     | 0.48              |
| 1:I:165:ARG:CD   | 1:I:182:VAL:HB   | 2.44                     | 0.48              |
| 1:I:228:ALA:O    | 1:I:229:GLU:C    | 2.56                     | 0.48              |
| 1:I:249:ILE:O    | 1:I:249:ILE:HG22 | 2.13                     | 0.48              |
| 2:J:27:LEU:HD13  | 2:J:56:PHE:CE1   | 2.48                     | 0.48              |
| 1:K:242:LEU:HD11 | 2:L:238:LEU:HD22 | 1.96                     | 0.48              |
| 2:L:50:VAL:HG13  | 2:L:55:HIS:CB    | 2.43                     | 0.48              |
| 1:M:249:ILE:CG2  | 2:N:241:LEU:HD23 | 2.43                     | 0.48              |
| 1:M:250:LYS:CG   | 1:O:279:VAL:HG22 | 2.41                     | 0.48              |
| 2:N:233:ASP:HB3  | 2:N:236:ILE:HB   | 1.95                     | 0.48              |
| 2:P:54:THR:HG22  | 2:P:56:PHE:CE1   | 2.47                     | 0.48              |
| 2:P:113:ASP:HB2  | 1:Q:85:ALA:HB3   | 1.94                     | 0.48              |
| 1:Q:41:PHE:HB3   | 1:Q:71:ARG:HD3   | 1.94                     | 0.48              |
| 1:Q:217:ALA:O    | 1:Q:220:GLU:HB2  | 2.13                     | 0.48              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:R:88:VAL:HG11  | 2:R:139:LEU:CD1  | 2.43                     | 0.48              |
| 1:S:101:MET:HE3  | 2:T:180:THR:OG1  | 2.13                     | 0.48              |
| 2:V:78:VAL:HG13  | 2:V:124:THR:HG23 | 1.95                     | 0.48              |
| 1:W:264:ILE:CG2  | 1:W:264:ILE:O    | 2.62                     | 0.48              |
| 1:A:237:MET:HG2  | 2:X:218:SER:OG   | 2.13                     | 0.48              |
| 1:C:277:ASN:O    | 1:E:283:GLN:N    | 2.46                     | 0.48              |
| 2:D:271:PRO:HD2  | 1:E:270:ARG:HD3  | 1.94                     | 0.48              |
| 2:F:207:LYS:HG3  | 2:F:208:LYS:N    | 2.27                     | 0.48              |
| 1:G:274:THR:HG22 | 1:G:275:ALA:N    | 2.22                     | 0.48              |
| 1:I:41:PHE:CD2   | 1:I:49:ALA:HB3   | 2.48                     | 0.48              |
| 1:I:106:LEU:HD22 | 1:I:141:LEU:HD21 | 1.96                     | 0.48              |
| 2:J:32:ALA:HB3   | 2:J:70:ARG:HH21  | 1.78                     | 0.48              |
| 1:K:165:ARG:CZ   | 1:K:182:VAL:HB   | 2.44                     | 0.48              |
| 2:L:228:LEU:HD13 | 2:L:236:ILE:HD11 | 1.96                     | 0.48              |
| 2:N:42:PHE:HD1   | 1:O:69:HIS:CE1   | 2.32                     | 0.48              |
| 2:N:43:ARG:HE    | 2:N:46:GLN:CA    | 2.26                     | 0.48              |
| 2:N:103:LEU:HD23 | 2:N:106:ILE:HD11 | 1.96                     | 0.48              |
| 1:O:221:GLN:O    | 1:O:225:ILE:HG12 | 2.13                     | 0.48              |
| 2:P:35:ARG:CD    | 2:P:100:ALA:HB1  | 2.43                     | 0.48              |
| 2:P:40:ASP:OD2   | 2:P:42:PHE:CZ    | 2.66                     | 0.48              |
| 2:R:139:LEU:HD23 | 2:R:146:VAL:HG21 | 1.96                     | 0.48              |
| 1:W:206:GLU:O    | 2:X:205:GLN:HG2  | 2.14                     | 0.48              |
| 1:A:248:TYR:HB2  | 2:X:225:ALA:HA   | 1.96                     | 0.48              |
| 2:B:247:ILE:HG13 | 1:C:258:GLN:HE22 | 1.79                     | 0.48              |
| 2:D:235:LEU:HG   | 2:D:239:ARG:HG2  | 1.95                     | 0.48              |
| 2:D:237:GLU:CB   | 1:E:294:LEU:HD21 | 2.43                     | 0.48              |
| 2:D:246:ASP:O    | 2:D:250:GLN:HG3  | 2.13                     | 0.48              |
| 1:E:264:ILE:HA   | 1:E:267:SER:CB   | 2.43                     | 0.48              |
| 1:G:144:VAL:HG11 | 1:G:164:ILE:HG12 | 1.94                     | 0.48              |
| 1:G:161:SER:HA   | 1:G:184:ILE:HD11 | 1.96                     | 0.48              |
| 2:H:233:ASP:HA   | 2:H:236:ILE:HD12 | 1.95                     | 0.48              |
| 2:H:235:LEU:HG   | 2:H:235:LEU:O    | 2.12                     | 0.48              |
| 1:I:94:THR:HG21  | 1:I:145:VAL:HB   | 1.95                     | 0.48              |
| 2:J:268:LEU:HB3  | 2:J:270:LEU:CD2  | 2.43                     | 0.48              |
| 2:L:211:ILE:HA   | 1:M:233:GLU:OE2  | 2.12                     | 0.48              |
| 2:L:256:ASN:HD22 | 1:M:270:ARG:HE   | 1.61                     | 0.48              |
| 1:M:78:PRO:O     | 1:M:79:ILE:C     | 2.56                     | 0.48              |
| 1:M:90:ILE:HB    | 1:M:137:VAL:HG11 | 1.95                     | 0.48              |
| 1:O:144:VAL:HG21 | 1:O:164:ILE:CG1  | 2.43                     | 0.48              |
| 2:P:54:THR:HG22  | 2:P:56:PHE:HE1   | 1.79                     | 0.48              |
| 1:Q:68:LEU:H     | 1:Q:68:LEU:HD23  | 1.78                     | 0.48              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:R:80:THR:HG21  | 2:R:131:VAL:HG21 | 1.95                     | 0.48              |
| 1:W:128:TYR:HE1  | 1:W:177:LEU:HD21 | 1.73                     | 0.48              |
| 2:B:225:ALA:HB2  | 1:C:242:LEU:HD21 | 1.95                     | 0.48              |
| 2:B:228:LEU:HD22 | 2:B:236:ILE:HG13 | 1.95                     | 0.48              |
| 1:C:225:ILE:O    | 1:C:229:GLU:CB   | 2.61                     | 0.48              |
| 1:G:54:ARG:O     | 2:H:54:THR:N     | 2.46                     | 0.48              |
| 2:H:233:ASP:CG   | 2:H:236:ILE:HD12 | 2.38                     | 0.48              |
| 2:H:235:LEU:HD12 | 2:H:238:LEU:CB   | 2.40                     | 0.48              |
| 1:I:155:THR:C    | 1:I:157:ARG:H    | 2.20                     | 0.48              |
| 2:J:217:ASP:HB3  | 1:K:238:LEU:HD21 | 1.95                     | 0.48              |
| 1:K:106:LEU:HD22 | 1:K:141:LEU:HD21 | 1.96                     | 0.48              |
| 2:L:260:LEU:HD12 | 2:N:259:TYR:HB2  | 1.94                     | 0.48              |
| 1:M:157:ARG:HA   | 1:M:160:VAL:HB   | 1.95                     | 0.48              |
| 1:M:250:LYS:HG2  | 1:O:279:VAL:CG2  | 2.41                     | 0.48              |
| 1:O:52:PHE:O     | 1:O:76:GLN:OE1   | 2.31                     | 0.48              |
| 1:Q:52:PHE:CD1   | 1:Q:121:TYR:CD2  | 3.02                     | 0.48              |
| 2:R:260:LEU:HD12 | 1:S:274:THR:HG23 | 1.94                     | 0.48              |
| 2:T:63:LYS:O     | 2:T:65:ILE:HG13  | 2.14                     | 0.48              |
| 1:U:151:SER:O    | 1:U:155:THR:HG23 | 2.12                     | 0.48              |
| 1:W:213:LEU:HD22 | 2:X:209:ALA:HB1  | 1.96                     | 0.48              |
| 1:C:269:ASN:HD21 | 2:D:251:LEU:HB3  | 1.78                     | 0.48              |
| 2:F:257:ILE:HA   | 1:G:272:TYR:HA   | 1.96                     | 0.48              |
| 2:F:259:TYR:HB3  | 1:G:277:ASN:HB3  | 1.95                     | 0.48              |
| 1:G:274:THR:HG23 | 2:H:262:ALA:N    | 2.29                     | 0.48              |
| 2:H:126:ILE:HD12 | 2:H:154:LEU:HD13 | 1.96                     | 0.48              |
| 2:H:197:ARG:O    | 2:H:201:GLU:OE1  | 2.32                     | 0.48              |
| 2:H:261:PRO:HG2  | 2:H:266:VAL:HG21 | 1.95                     | 0.48              |
| 1:I:263:THR:HG23 | 2:J:249:TYR:CD2  | 2.49                     | 0.48              |
| 1:K:233:GLU:O    | 1:K:236:LYS:HB2  | 2.14                     | 0.48              |
| 2:L:90:ILE:CD1   | 2:L:131:VAL:HG21 | 2.44                     | 0.48              |
| 2:L:233:ASP:HB3  | 2:L:236:ILE:HB   | 1.95                     | 0.48              |
| 2:N:41:ARG:HE    | 1:O:66:GLU:C     | 2.22                     | 0.48              |
| 2:N:218:SER:HB2  | 1:O:238:LEU:CD2  | 2.44                     | 0.48              |
| 2:P:123:THR:HA   | 2:P:154:LEU:HD13 | 1.96                     | 0.48              |
| 1:S:264:ILE:O    | 1:S:264:ILE:HG22 | 2.14                     | 0.48              |
| 1:U:48:ARG:CG    | 1:U:83:ILE:HD13  | 2.43                     | 0.48              |
| 1:U:49:ALA:HA    | 1:U:81:TYR:CD2   | 2.49                     | 0.48              |
| 2:X:235:LEU:O    | 2:X:239:ARG:HB2  | 2.14                     | 0.48              |
| 2:B:251:LEU:O    | 2:B:257:ILE:HD13 | 2.14                     | 0.48              |
| 2:B:270:LEU:HA   | 1:C:272:TYR:OH   | 2.14                     | 0.48              |
| 2:D:251:LEU:HD22 | 2:D:257:ILE:CG2  | 2.44                     | 0.48              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:210:ALA:C    | 2:F:205:GLN:HB3  | 2.38                     | 0.48              |
| 1:E:267:SER:OG   | 1:E:269:ASN:CG   | 2.57                     | 0.48              |
| 2:F:204:GLU:HG3  | 1:G:226:VAL:HG11 | 1.91                     | 0.48              |
| 1:G:210:ALA:O    | 1:G:214:VAL:HG23 | 2.14                     | 0.48              |
| 1:G:224:LYS:O    | 1:G:225:ILE:C    | 2.56                     | 0.48              |
| 1:I:232:ALA:HA   | 1:I:235:ALA:HB3  | 1.96                     | 0.48              |
| 1:I:242:LEU:O    | 1:K:294:LEU:HD12 | 2.13                     | 0.48              |
| 2:J:206:GLN:HE22 | 1:K:230:GLY:HA3  | 1.77                     | 0.48              |
| 2:L:78:VAL:HG21  | 2:L:127:LEU:HB2  | 1.95                     | 0.48              |
| 1:M:53:ASN:HB2   | 1:M:59:GLN:OE1   | 2.14                     | 0.48              |
| 2:N:207:LYS:CE   | 1:O:226:VAL:HG11 | 2.44                     | 0.48              |
| 1:O:109:LEU:O    | 1:O:179:LEU:HD22 | 2.14                     | 0.48              |
| 1:O:276:ASP:HB2  | 1:Q:282:LEU:HD21 | 1.95                     | 0.48              |
| 2:P:217:ASP:O    | 2:P:220:ALA:HB3  | 2.14                     | 0.48              |
| 1:Q:63:ILE:HD13  | 1:Q:115:GLN:C    | 2.38                     | 0.48              |
| 2:T:87:ASN:OD1   | 1:U:154:ILE:HD13 | 2.13                     | 0.48              |
| 1:U:52:PHE:N     | 1:U:76:GLN:OE1   | 2.46                     | 0.48              |
| 2:V:239:ARG:HD3  | 1:W:251:LEU:HD11 | 1.95                     | 0.48              |
| 1:A:269:ASN:O    | 1:A:269:ASN:OD1  | 2.32                     | 0.48              |
| 1:A:274:THR:CB   | 2:X:260:LEU:HD23 | 2.44                     | 0.48              |
| 2:B:256:ASN:CB   | 1:C:270:ARG:HG2  | 2.44                     | 0.48              |
| 2:D:215:GLU:HG2  | 1:E:237:MET:SD   | 2.54                     | 0.48              |
| 1:E:277:ASN:ND2  | 1:G:281:ASN:C    | 2.72                     | 0.48              |
| 2:H:37:VAL:HG21  | 2:H:104:PRO:CD   | 2.44                     | 0.48              |
| 1:I:135:SER:HB2  | 2:J:93:ARG:HH11  | 1.79                     | 0.48              |
| 1:K:54:ARG:NE    | 2:L:29:ASN:HA    | 2.28                     | 0.48              |
| 2:L:220:ALA:O    | 2:L:223:LEU:HG   | 2.13                     | 0.48              |
| 2:N:61:VAL:HG23  | 1:O:67:GLY:HA3   | 1.95                     | 0.48              |
| 1:O:274:THR:HG21 | 1:Q:281:ASN:HA   | 1.96                     | 0.48              |
| 2:P:221:ALA:HA   | 1:Q:248:TYR:CD1  | 2.49                     | 0.48              |
| 1:S:63:ILE:HG21  | 1:S:114:ALA:O    | 2.11                     | 0.48              |
| 1:S:242:LEU:HD13 | 1:S:249:ILE:CG1  | 2.44                     | 0.48              |
| 1:S:253:LYS:O    | 1:S:257:ALA:HB2  | 2.13                     | 0.48              |
| 1:U:236:LYS:CA   | 2:V:227:SER:OG   | 2.62                     | 0.48              |
| 1:A:277:ASN:N    | 2:X:260:LEU:O    | 2.46                     | 0.47              |
| 2:B:235:LEU:HD11 | 2:B:239:ARG:HG2  | 1.95                     | 0.47              |
| 1:E:274:THR:H    | 1:E:277:ASN:ND2  | 2.12                     | 0.47              |
| 1:G:264:ILE:CG2  | 1:G:264:ILE:O    | 2.62                     | 0.47              |
| 2:H:69:CYS:HA    | 2:H:98:PRO:HG2   | 1.96                     | 0.47              |
| 2:H:74:ARG:CB    | 2:H:119:LEU:HD13 | 2.43                     | 0.47              |
| 1:I:51:PHE:HD2   | 2:J:30:VAL:O     | 1.98                     | 0.47              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:71:ARG:CB    | 1:I:76:GLN:CG    | 2.92                     | 0.47              |
| 1:I:279:VAL:HA   | 1:I:287:PHE:CZ   | 2.49                     | 0.47              |
| 2:J:63:LYS:O     | 2:J:64:PRO:C     | 2.57                     | 0.47              |
| 2:L:92:LEU:HD22  | 2:L:150:VAL:CG1  | 2.44                     | 0.47              |
| 2:L:239:ARG:CG   | 1:M:254:ILE:HG21 | 2.44                     | 0.47              |
| 1:O:106:LEU:HD23 | 1:O:137:VAL:HG13 | 1.96                     | 0.47              |
| 1:O:228:ALA:O    | 1:O:229:GLU:C    | 2.55                     | 0.47              |
| 1:Q:94:THR:HG22  | 1:Q:95:GLY:N     | 2.29                     | 0.47              |
| 2:R:244:ALA:O    | 2:R:248:ALA:HB3  | 2.13                     | 0.47              |
| 1:U:39:SER:O     | 1:U:71:ARG:N     | 2.47                     | 0.47              |
| 1:U:54:ARG:O     | 2:V:53:GLY:HA2   | 2.14                     | 0.47              |
| 1:U:94:THR:HG21  | 1:U:145:VAL:HB   | 1.96                     | 0.47              |
| 2:V:204:GLU:CD   | 1:W:226:VAL:HG11 | 2.39                     | 0.47              |
| 2:V:221:ALA:O    | 2:V:222:GLU:C    | 2.57                     | 0.47              |
| 1:W:264:ILE:O    | 1:W:264:ILE:HG22 | 2.14                     | 0.47              |
| 1:A:249:ILE:HG21 | 1:C:294:LEU:CD2  | 2.44                     | 0.47              |
| 2:D:268:LEU:HD22 | 2:F:266:VAL:HG13 | 1.96                     | 0.47              |
| 2:H:35:ARG:HB3   | 2:H:50:VAL:O     | 2.13                     | 0.47              |
| 2:H:222:GLU:HG3  | 1:I:241:ALA:CB   | 2.44                     | 0.47              |
| 2:H:243:ALA:HB1  | 2:H:247:ILE:HB   | 1.96                     | 0.47              |
| 1:I:49:ALA:HA    | 1:I:81:TYR:CD2   | 2.49                     | 0.47              |
| 2:N:258:THR:H    | 1:O:272:TYR:HB2  | 1.78                     | 0.47              |
| 1:Q:106:LEU:HD12 | 1:Q:183:ALA:O    | 2.14                     | 0.47              |
| 2:V:88:VAL:CG1   | 2:V:173:LEU:HD12 | 2.44                     | 0.47              |
| 2:V:228:LEU:HD13 | 2:V:236:ILE:CD1  | 2.44                     | 0.47              |
| 1:W:107:ARG:HH12 | 1:W:185:THR:HG21 | 1.79                     | 0.47              |
| 1:W:252:ARG:HG3  | 2:X:241:LEU:HD12 | 1.96                     | 0.47              |
| 1:A:221:GLN:HE22 | 2:B:215:GLU:HB3  | 1.79                     | 0.47              |
| 1:A:265:ALA:HA   | 2:X:254:SER:CB   | 2.44                     | 0.47              |
| 2:D:235:LEU:HA   | 2:D:238:LEU:HB2  | 1.95                     | 0.47              |
| 1:E:270:ARG:N    | 2:F:257:ILE:O    | 2.47                     | 0.47              |
| 1:E:270:ARG:O    | 2:F:258:THR:HA   | 2.14                     | 0.47              |
| 1:G:213:LEU:O    | 1:G:216:LYS:HG2  | 2.15                     | 0.47              |
| 1:G:235:ALA:HA   | 2:H:235:LEU:HD22 | 1.96                     | 0.47              |
| 2:H:76:VAL:HG11  | 2:H:123:THR:HB   | 1.96                     | 0.47              |
| 2:H:128:LYS:O    | 2:H:132:ALA:HB2  | 2.14                     | 0.47              |
| 2:H:204:GLU:HA   | 2:H:207:LYS:HG3  | 1.95                     | 0.47              |
| 2:H:267:LEU:HG   | 2:J:267:LEU:N    | 2.29                     | 0.47              |
| 2:J:203:ALA:O    | 2:J:206:GLN:HG3  | 2.14                     | 0.47              |
| 1:K:224:LYS:O    | 1:K:225:ILE:C    | 2.57                     | 0.47              |
| 2:L:49:VAL:HG22  | 2:L:50:VAL:O     | 2.14                     | 0.47              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:L:201:GLU:O    | 2:L:205:GLN:OE1  | 2.32                     | 0.47              |
| 1:M:117:LEU:N    | 1:M:118:PRO:CD   | 2.76                     | 0.47              |
| 2:N:103:LEU:N    | 2:N:104:PRO:CD   | 2.77                     | 0.47              |
| 1:O:47:HIS:O     | 1:O:66:GLU:HB2   | 2.14                     | 0.47              |
| 2:P:63:LYS:O     | 2:P:64:PRO:C     | 2.57                     | 0.47              |
| 1:Q:257:ALA:HA   | 1:Q:260:ILE:HB   | 1.95                     | 0.47              |
| 1:U:144:VAL:HG11 | 1:U:164:ILE:HG13 | 1.94                     | 0.47              |
| 1:U:272:TYR:CE1  | 2:V:259:TYR:O    | 2.67                     | 0.47              |
| 1:W:213:LEU:HG   | 1:W:216:LYS:HD3  | 1.96                     | 0.47              |
| 1:A:261:SER:C    | 2:X:251:LEU:HD21 | 2.40                     | 0.47              |
| 1:A:273:LEU:HD23 | 2:B:259:TYR:OH   | 2.14                     | 0.47              |
| 2:D:224:ILE:HG22 | 2:D:228:LEU:CD1  | 2.45                     | 0.47              |
| 2:F:197:ARG:HH22 | 1:G:222:ARG:HB3  | 1.79                     | 0.47              |
| 1:G:48:ARG:CG    | 1:G:83:ILE:HD13  | 2.44                     | 0.47              |
| 2:H:268:LEU:HD12 | 2:J:261:PRO:HG3  | 1.95                     | 0.47              |
| 1:I:41:PHE:HZ    | 1:I:64:LEU:HB3   | 1.79                     | 0.47              |
| 1:I:122:GLN:NE2  | 2:J:34:HIS:CE1   | 2.82                     | 0.47              |
| 2:J:88:VAL:HG11  | 2:J:139:LEU:HD12 | 1.96                     | 0.47              |
| 1:K:135:SER:HB3  | 2:L:93:ARG:HD3   | 1.96                     | 0.47              |
| 2:L:89:ASN:OD1   | 2:L:89:ASN:O     | 2.31                     | 0.47              |
| 2:L:267:LEU:HD11 | 2:P:269:GLN:OE1  | 2.14                     | 0.47              |
| 1:M:74:TRP:O     | 1:M:74:TRP:CG    | 2.67                     | 0.47              |
| 1:M:243:SER:HA   | 1:O:294:LEU:HD13 | 1.95                     | 0.47              |
| 1:O:41:PHE:CD1   | 1:O:43:VAL:HG23  | 2.49                     | 0.47              |
| 1:O:50:ILE:C     | 1:O:64:LEU:HD12  | 2.40                     | 0.47              |
| 1:O:218:LYS:O    | 1:O:221:GLN:HB3  | 2.13                     | 0.47              |
| 2:P:157:ARG:HH22 | 1:Q:162:LEU:HD13 | 1.79                     | 0.47              |
| 2:R:31:ASP:O     | 2:R:32:ALA:C     | 2.57                     | 0.47              |
| 2:R:39:PHE:CZ    | 1:S:45:GLY:HA3   | 2.49                     | 0.47              |
| 1:S:136:ILE:HD13 | 1:S:175:PHE:CE1  | 2.50                     | 0.47              |
| 1:S:167:GLU:O    | 1:S:171:ARG:HG2  | 2.15                     | 0.47              |
| 1:U:51:PHE:CE2   | 1:U:70:PHE:CZ    | 3.03                     | 0.47              |
| 1:W:294:LEU:HD22 | 1:W:299:LYS:CE   | 2.44                     | 0.47              |
| 1:C:272:TYR:HE1  | 2:X:270:LEU:CD1  | 2.27                     | 0.47              |
| 1:E:273:LEU:HG   | 1:G:280:LEU:HG   | 1.96                     | 0.47              |
| 1:I:58:VAL:HG12  | 2:J:31:ASP:O     | 2.14                     | 0.47              |
| 1:K:225:ILE:HD11 | 2:L:215:GLU:OE1  | 2.15                     | 0.47              |
| 2:L:88:VAL:HG11  | 2:L:139:LEU:HD13 | 1.94                     | 0.47              |
| 2:L:224:ILE:O    | 2:L:228:LEU:HG   | 2.15                     | 0.47              |
| 1:M:106:LEU:HD21 | 1:M:165:ARG:HH22 | 1.78                     | 0.47              |
| 2:N:92:LEU:HD12  | 2:N:169:SER:C    | 2.39                     | 0.47              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:112:PRO:HA   | 1:O:177:LEU:HD23 | 1.96                     | 0.47              |
| 2:P:260:LEU:HD22 | 2:P:268:LEU:HD11 | 1.95                     | 0.47              |
| 1:Q:264:ILE:O    | 1:Q:264:ILE:CG2  | 2.62                     | 0.47              |
| 1:S:281:ASN:O    | 1:S:287:PHE:CB   | 2.62                     | 0.47              |
| 2:T:139:LEU:HD23 | 2:T:146:VAL:HG11 | 1.96                     | 0.47              |
| 2:V:211:ILE:HD11 | 1:W:233:GLU:OE1  | 2.15                     | 0.47              |
| 2:V:255:ARG:HE   | 1:W:270:ARG:HG2  | 1.79                     | 0.47              |
| 2:V:270:LEU:CD2  | 2:X:269:GLN:O    | 2.62                     | 0.47              |
| 1:W:104:ILE:HD13 | 1:W:145:VAL:HG21 | 1.96                     | 0.47              |
| 1:A:226:VAL:HA   | 1:A:229:GLU:HB3  | 1.96                     | 0.47              |
| 1:E:229:GLU:HG2  | 2:F:223:LEU:CD1  | 2.45                     | 0.47              |
| 2:F:267:LEU:HB2  | 2:H:267:LEU:CB   | 2.44                     | 0.47              |
| 1:I:58:VAL:N     | 2:J:52:GLU:HA    | 2.30                     | 0.47              |
| 1:I:120:MET:HG3  | 1:I:128:TYR:CG   | 2.50                     | 0.47              |
| 2:J:34:HIS:O     | 2:J:35:ARG:HG3   | 2.15                     | 0.47              |
| 2:J:219:LYS:O    | 2:J:222:GLU:HG3  | 2.15                     | 0.47              |
| 1:K:51:PHE:CE1   | 1:K:64:LEU:HD21  | 2.50                     | 0.47              |
| 1:K:54:ARG:C     | 1:K:55:ILE:HG13  | 2.40                     | 0.47              |
| 1:K:103:ASN:O    | 1:K:187:LEU:HD12 | 2.15                     | 0.47              |
| 1:K:167:GLU:O    | 1:K:171:ARG:HG2  | 2.15                     | 0.47              |
| 1:M:52:PHE:C     | 1:M:76:GLN:OE1   | 2.57                     | 0.47              |
| 1:O:57:GLY:CA    | 2:P:52:GLU:HB3   | 2.44                     | 0.47              |
| 2:P:92:LEU:HB2   | 2:P:127:LEU:HD11 | 1.97                     | 0.47              |
| 2:T:34:HIS:HB3   | 2:T:66:ILE:HG22  | 1.97                     | 0.47              |
| 2:T:235:LEU:HB3  | 1:U:251:LEU:HD21 | 1.96                     | 0.47              |
| 2:T:239:ARG:HD3  | 1:U:254:ILE:HG22 | 1.96                     | 0.47              |
| 1:U:221:GLN:OE1  | 2:V:215:GLU:HB2  | 2.15                     | 0.47              |
| 2:V:217:ASP:C    | 2:V:217:ASP:OD1  | 2.58                     | 0.47              |
| 2:V:254:SER:OG   | 2:V:257:ILE:HD11 | 2.14                     | 0.47              |
| 1:A:226:VAL:HG11 | 2:X:206:GLN:HE22 | 1.80                     | 0.47              |
| 1:A:235:ALA:HA   | 2:B:235:LEU:HB3  | 1.97                     | 0.47              |
| 1:A:252:ARG:HD2  | 1:A:255:ARG:HB3  | 1.96                     | 0.47              |
| 1:A:259:ASN:HA   | 1:A:262:LYS:HB2  | 1.96                     | 0.47              |
| 1:A:283:GLN:OE1  | 1:W:291:SER:HB2  | 2.14                     | 0.47              |
| 2:B:257:ILE:HG23 | 1:C:271:ILE:CD1  | 2.45                     | 0.47              |
| 1:C:269:ASN:ND2  | 2:D:257:ILE:HB   | 2.30                     | 0.47              |
| 2:D:196:ALA:HB3  | 1:E:219:GLN:HB2  | 1.95                     | 0.47              |
| 2:D:238:LEU:O    | 2:D:242:GLU:HB2  | 2.14                     | 0.47              |
| 1:E:264:ILE:CA   | 1:E:267:SER:HB3  | 2.44                     | 0.47              |
| 2:F:195:ARG:NH1  | 2:F:199:VAL:HG21 | 2.29                     | 0.47              |
| 2:F:259:TYR:C    | 2:F:260:LEU:HD23 | 2.40                     | 0.47              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:214:VAL:HA   | 2:H:209:ALA:CB   | 2.45                     | 0.47              |
| 1:G:217:ALA:O    | 2:H:212:ILE:CG2  | 2.63                     | 0.47              |
| 1:G:271:ILE:O    | 1:G:271:ILE:HG22 | 2.13                     | 0.47              |
| 1:G:274:THR:HG23 | 2:H:262:ALA:H    | 1.80                     | 0.47              |
| 2:H:140:ILE:HD11 | 2:H:175:PHE:CD2  | 2.50                     | 0.47              |
| 2:H:199:VAL:HG11 | 1:I:223:GLN:NE2  | 2.30                     | 0.47              |
| 1:I:51:PHE:CE1   | 1:I:70:PHE:O     | 2.67                     | 0.47              |
| 1:I:122:GLN:OE1  | 2:J:70:ARG:CZ    | 2.63                     | 0.47              |
| 1:I:132:VAL:HG22 | 1:I:175:PHE:HB3  | 1.97                     | 0.47              |
| 1:I:274:THR:HG22 | 1:I:275:ALA:N    | 2.29                     | 0.47              |
| 2:J:125:GLU:HB2  | 1:K:183:ALA:HB1  | 1.97                     | 0.47              |
| 2:J:130:VAL:CG2  | 2:J:150:VAL:HG22 | 2.39                     | 0.47              |
| 2:J:224:ILE:HG23 | 2:J:225:ALA:N    | 2.29                     | 0.47              |
| 2:J:262:ALA:HB1  | 1:K:289:ARG:HH22 | 1.79                     | 0.47              |
| 2:L:30:VAL:HG13  | 2:L:34:HIS:O     | 2.13                     | 0.47              |
| 2:L:179:PHE:O    | 2:L:183:VAL:HG23 | 2.14                     | 0.47              |
| 1:M:52:PHE:O     | 1:M:52:PHE:CD2   | 2.68                     | 0.47              |
| 1:M:249:ILE:HG12 | 2:N:238:LEU:HA   | 1.97                     | 0.47              |
| 1:O:242:LEU:HD13 | 1:O:249:ILE:HD11 | 1.95                     | 0.47              |
| 2:P:76:VAL:HB    | 2:P:123:THR:HG21 | 1.95                     | 0.47              |
| 2:P:122:ILE:HD12 | 2:P:158:ALA:HB2  | 1.95                     | 0.47              |
| 2:P:214:ALA:O    | 2:P:215:GLU:C    | 2.58                     | 0.47              |
| 2:R:37:VAL:HG23  | 2:R:67:PHE:CE2   | 2.50                     | 0.47              |
| 2:R:182:ALA:HB1  | 1:S:209:ARG:CZ   | 2.45                     | 0.47              |
| 1:S:57:GLY:CA    | 2:T:31:ASP:HA    | 2.45                     | 0.47              |
| 2:T:220:ALA:O    | 2:T:224:ILE:HG22 | 2.15                     | 0.47              |
| 1:U:256:ALA:O    | 1:U:260:ILE:HB   | 2.15                     | 0.47              |
| 1:W:104:ILE:HG23 | 1:W:184:ILE:HG23 | 1.97                     | 0.47              |
| 2:X:201:GLU:O    | 2:X:205:GLN:OE1  | 2.32                     | 0.47              |
| 2:B:237:GLU:O    | 2:B:241:LEU:HG   | 2.15                     | 0.47              |
| 1:G:164:ILE:HG22 | 1:G:165:ARG:HE   | 1.79                     | 0.47              |
| 2:H:39:PHE:N     | 2:H:62:GLN:HG2   | 2.30                     | 0.47              |
| 2:H:41:ARG:HD2   | 1:I:66:GLU:HG3   | 1.97                     | 0.47              |
| 2:H:268:LEU:HD12 | 2:J:261:PRO:HD3  | 1.97                     | 0.47              |
| 1:I:41:PHE:CD2   | 1:I:43:VAL:CG2   | 2.98                     | 0.47              |
| 1:I:58:VAL:HB    | 2:J:34:HIS:O     | 2.15                     | 0.47              |
| 1:K:52:PHE:HD1   | 1:K:121:TYR:CE2  | 2.33                     | 0.47              |
| 2:L:221:ALA:CB   | 1:M:242:LEU:HD21 | 2.45                     | 0.47              |
| 2:N:37:VAL:HG12  | 2:N:38:ILE:N     | 2.30                     | 0.47              |
| 2:T:33:GLY:HA3   | 2:T:70:ARG:HE    | 1.80                     | 0.47              |
| 1:U:43:VAL:HG11  | 1:U:48:ARG:O     | 2.14                     | 0.47              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:U:43:VAL:HG13  | 1:U:80:ILE:HG23  | 1.96                     | 0.47              |
| 2:V:91:THR:HB    | 2:V:172:HIS:HB3  | 1.97                     | 0.47              |
| 1:W:165:ARG:HA   | 1:W:165:ARG:NE   | 2.30                     | 0.47              |
| 1:A:242:LEU:CD1  | 2:B:238:LEU:HD11 | 2.45                     | 0.47              |
| 1:A:285:GLU:OE1  | 1:W:289:ARG:HB2  | 2.14                     | 0.47              |
| 1:C:267:SER:HA   | 2:D:252:SER:CB   | 2.45                     | 0.47              |
| 2:D:196:ALA:HA   | 2:D:199:VAL:HB   | 1.97                     | 0.47              |
| 1:G:225:ILE:HA   | 2:H:219:LYS:CE   | 2.45                     | 0.47              |
| 1:G:283:GLN:HG2  | 1:G:283:GLN:O    | 2.15                     | 0.47              |
| 2:H:41:ARG:CD    | 1:I:66:GLU:CG    | 2.93                     | 0.47              |
| 1:I:108:VAL:HA   | 1:I:182:VAL:HG22 | 1.97                     | 0.47              |
| 1:I:122:GLN:H    | 2:J:70:ARG:HH11  | 1.62                     | 0.47              |
| 1:I:132:VAL:HG13 | 1:I:175:PHE:CB   | 2.44                     | 0.47              |
| 1:I:213:LEU:O    | 1:I:216:LYS:HG2  | 2.15                     | 0.47              |
| 2:J:99:VAL:O     | 2:J:103:LEU:HG   | 2.15                     | 0.47              |
| 2:J:267:LEU:CD1  | 2:L:267:LEU:HD22 | 2.45                     | 0.47              |
| 1:M:233:GLU:O    | 1:M:236:LYS:HB3  | 2.15                     | 0.47              |
| 2:N:121:SER:HB2  | 1:O:183:ALA:HB2  | 1.97                     | 0.47              |
| 2:R:39:PHE:HB3   | 2:R:62:GLN:HG2   | 1.95                     | 0.47              |
| 1:S:136:ILE:O    | 1:S:140:VAL:HG23 | 2.14                     | 0.47              |
| 1:S:218:LYS:HE3  | 2:T:212:ILE:HD13 | 1.95                     | 0.47              |
| 1:S:239:GLY:O    | 2:T:231:ALA:HB1  | 2.15                     | 0.47              |
| 1:U:165:ARG:HA   | 1:U:165:ARG:NE   | 2.30                     | 0.47              |
| 1:U:221:GLN:NE2  | 1:U:225:ILE:HD11 | 2.30                     | 0.47              |
| 2:V:239:ARG:NH1  | 1:W:251:LEU:HD11 | 2.30                     | 0.47              |
| 1:W:229:GLU:O    | 1:W:233:GLU:CG   | 2.63                     | 0.47              |
| 1:A:253:LYS:HE2  | 1:C:288:THR:HG22 | 1.97                     | 0.47              |
| 1:C:271:ILE:HA   | 2:D:260:LEU:HD21 | 1.97                     | 0.47              |
| 2:F:259:TYR:CE2  | 1:G:278:LEU:HB2  | 2.49                     | 0.47              |
| 2:H:247:ILE:HD11 | 1:I:258:GLN:HG3  | 1.97                     | 0.47              |
| 1:I:57:GLY:O     | 1:I:58:VAL:CG2   | 2.63                     | 0.47              |
| 1:I:57:GLY:HA2   | 2:J:35:ARG:HA    | 1.96                     | 0.47              |
| 1:I:122:GLN:HB2  | 2:J:70:ARG:HD2   | 1.97                     | 0.47              |
| 1:I:158:ALA:O    | 1:I:162:LEU:HG   | 2.14                     | 0.47              |
| 1:I:165:ARG:HH22 | 1:I:168:LEU:HD23 | 1.80                     | 0.47              |
| 1:I:233:GLU:CG   | 2:J:223:LEU:HD11 | 2.45                     | 0.47              |
| 2:J:67:PHE:CB    | 2:J:103:LEU:HD13 | 2.46                     | 0.47              |
| 1:K:79:ILE:HB    | 1:K:126:LEU:HD21 | 1.97                     | 0.47              |
| 1:M:40:VAL:HA    | 1:M:69:HIS:O     | 2.15                     | 0.47              |
| 1:M:220:GLU:OE2  | 1:M:224:LYS:HD2  | 2.14                     | 0.47              |
| 1:M:246:PRO:HB3  | 1:M:249:ILE:HD12 | 1.96                     | 0.47              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:N:86:GLN:HE22  | 1:O:197:VAL:HG11 | 1.80                     | 0.47              |
| 2:N:262:ALA:HB3  | 1:O:289:ARG:HH22 | 1.80                     | 0.47              |
| 2:N:267:LEU:HG   | 2:P:267:LEU:HD22 | 1.97                     | 0.47              |
| 1:O:157:ARG:HA   | 1:O:160:VAL:HB   | 1.95                     | 0.47              |
| 1:O:252:ARG:C    | 1:O:254:ILE:N    | 2.71                     | 0.47              |
| 2:T:80:THR:C     | 1:U:154:ILE:HG22 | 2.40                     | 0.47              |
| 2:T:214:ALA:CB   | 1:U:234:ALA:HB1  | 2.44                     | 0.47              |
| 2:V:85:LEU:HG    | 1:W:193:TYR:CG   | 2.50                     | 0.47              |
| 2:V:126:ILE:HD11 | 2:V:154:LEU:HD13 | 1.97                     | 0.47              |
| 1:W:260:ILE:HG23 | 1:W:264:ILE:HB   | 1.96                     | 0.47              |
| 1:A:229:GLU:HA   | 1:A:232:ALA:HB3  | 1.96                     | 0.46              |
| 2:B:236:ILE:HD13 | 1:C:250:LYS:CD   | 2.46                     | 0.46              |
| 1:E:225:ILE:HD13 | 2:F:219:LYS:HD2  | 1.96                     | 0.46              |
| 1:E:260:ILE:HD11 | 2:F:244:ALA:CB   | 2.45                     | 0.46              |
| 1:G:277:ASN:OD1  | 1:I:280:LEU:O    | 2.33                     | 0.46              |
| 1:I:121:TYR:CD2  | 1:I:122:GLN:HG3  | 2.49                     | 0.46              |
| 2:J:92:LEU:HD11  | 2:J:168:VAL:HG13 | 1.97                     | 0.46              |
| 1:K:63:ILE:HG22  | 1:K:64:LEU:H     | 1.80                     | 0.46              |
| 2:L:208:LYS:O    | 2:L:212:ILE:HG13 | 2.15                     | 0.46              |
| 2:L:237:GLU:HG2  | 1:O:282:LEU:CD2  | 2.45                     | 0.46              |
| 1:O:108:VAL:HG12 | 1:O:109:LEU:N    | 2.29                     | 0.46              |
| 1:Q:90:ILE:HG22  | 1:Q:91:SER:N     | 2.30                     | 0.46              |
| 1:Q:242:LEU:HD13 | 1:Q:249:ILE:CD1  | 2.45                     | 0.46              |
| 2:R:39:PHE:N     | 2:R:62:GLN:HG2   | 2.30                     | 0.46              |
| 1:U:132:VAL:HG13 | 1:U:175:PHE:CD2  | 2.50                     | 0.46              |
| 2:B:260:LEU:O    | 1:C:274:THR:HA   | 2.16                     | 0.46              |
| 1:C:250:LYS:HG2  | 1:E:288:THR:HG22 | 1.97                     | 0.46              |
| 1:G:225:ILE:HD13 | 2:H:219:LYS:CE   | 2.44                     | 0.46              |
| 1:G:271:ILE:HA   | 2:H:258:THR:HA   | 1.98                     | 0.46              |
| 2:J:85:LEU:HG    | 1:K:193:TYR:CD2  | 2.50                     | 0.46              |
| 1:K:154:ILE:O    | 1:K:157:ARG:HB2  | 2.15                     | 0.46              |
| 2:L:35:ARG:HB2   | 2:L:103:LEU:CD1  | 2.46                     | 0.46              |
| 2:L:204:GLU:O    | 2:L:207:LYS:HB2  | 2.16                     | 0.46              |
| 2:N:37:VAL:CG1   | 2:N:38:ILE:N     | 2.78                     | 0.46              |
| 2:P:262:ALA:HB3  | 1:Q:289:ARG:HH22 | 1.80                     | 0.46              |
| 2:R:30:VAL:HG21  | 2:R:53:GLY:O     | 2.15                     | 0.46              |
| 2:R:136:ALA:HB1  | 2:R:175:PHE:HE1  | 1.80                     | 0.46              |
| 2:T:62:GLN:HE22  | 2:T:65:ILE:H     | 1.64                     | 0.46              |
| 2:V:251:LEU:HD23 | 1:W:271:ILE:HG21 | 1.96                     | 0.46              |
| 2:B:247:ILE:O    | 2:B:251:LEU:HG   | 2.16                     | 0.46              |
| 1:C:267:SER:OG   | 1:C:269:ASN:HB2  | 2.16                     | 0.46              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:272:TYR:HD1  | 2:F:260:LEU:HD22 | 1.72                     | 0.46              |
| 2:F:196:ALA:HB1  | 1:G:223:GLN:CD   | 2.40                     | 0.46              |
| 2:F:197:ARG:NH2  | 1:G:219:GLN:O    | 2.48                     | 0.46              |
| 2:F:224:ILE:HD13 | 1:G:248:TYR:CD1  | 2.49                     | 0.46              |
| 2:F:224:ILE:HG21 | 1:G:248:TYR:HB2  | 1.96                     | 0.46              |
| 2:F:236:ILE:O    | 2:F:240:LYS:HE3  | 2.15                     | 0.46              |
| 2:F:247:ILE:HG21 | 1:G:278:LEU:HG   | 1.96                     | 0.46              |
| 1:G:235:ALA:HB2  | 1:I:251:LEU:HD22 | 1.96                     | 0.46              |
| 2:H:32:ALA:HB3   | 2:H:70:ARG:HH21  | 1.79                     | 0.46              |
| 2:H:221:ALA:HB2  | 1:I:242:LEU:CD2  | 2.45                     | 0.46              |
| 1:I:52:PHE:N     | 1:I:76:GLN:OE1   | 2.49                     | 0.46              |
| 1:I:108:VAL:CG1  | 1:I:179:LEU:HD22 | 2.46                     | 0.46              |
| 2:J:44:GLY:O     | 2:J:45:VAL:C     | 2.57                     | 0.46              |
| 2:L:80:THR:CG2   | 2:L:131:VAL:HG11 | 2.45                     | 0.46              |
| 2:L:243:ALA:O    | 2:L:244:ALA:C    | 2.58                     | 0.46              |
| 2:N:129:SER:CB   | 1:O:158:ALA:HB2  | 2.44                     | 0.46              |
| 2:P:130:VAL:HG21 | 2:P:150:VAL:HG22 | 1.97                     | 0.46              |
| 1:S:232:ALA:HB3  | 2:T:223:LEU:HD22 | 1.98                     | 0.46              |
| 2:T:267:LEU:HD12 | 2:V:267:LEU:HD21 | 1.96                     | 0.46              |
| 2:T:270:LEU:HD12 | 2:V:271:PRO:HD3  | 1.97                     | 0.46              |
| 1:U:235:ALA:HB2  | 2:V:235:LEU:CB   | 2.44                     | 0.46              |
| 1:W:206:GLU:OE1  | 2:X:205:GLN:OE1  | 2.33                     | 0.46              |
| 2:B:250:GLN:HE22 | 1:C:265:ALA:H    | 1.62                     | 0.46              |
| 1:C:246:PRO:HG3  | 1:E:291:SER:O    | 2.15                     | 0.46              |
| 1:C:249:ILE:HD13 | 1:E:294:LEU:HD11 | 1.97                     | 0.46              |
| 2:F:259:TYR:CE1  | 1:G:278:LEU:O    | 2.69                     | 0.46              |
| 1:G:219:GLN:O    | 1:G:223:GLN:HG2  | 2.16                     | 0.46              |
| 1:I:68:LEU:O     | 1:I:69:HIS:CD2   | 2.68                     | 0.46              |
| 1:I:165:ARG:HD2  | 1:I:182:VAL:HB   | 1.97                     | 0.46              |
| 1:K:50:ILE:HG23  | 1:K:117:LEU:CB   | 2.45                     | 0.46              |
| 1:K:71:ARG:CB    | 1:K:76:GLN:HG3   | 2.45                     | 0.46              |
| 1:K:72:ILE:HD13  | 1:K:75:PHE:HD2   | 1.80                     | 0.46              |
| 1:K:156:GLN:O    | 1:K:160:VAL:HG23 | 2.15                     | 0.46              |
| 2:L:200:VAL:O    | 2:L:203:ALA:HB3  | 2.15                     | 0.46              |
| 1:M:236:LYS:HZ3  | 2:N:224:ILE:HD12 | 1.80                     | 0.46              |
| 1:O:43:VAL:O     | 1:O:66:GLU:OE1   | 2.33                     | 0.46              |
| 2:P:39:PHE:N     | 2:P:62:GLN:HG3   | 2.31                     | 0.46              |
| 2:P:130:VAL:HG21 | 2:P:150:VAL:CA   | 2.44                     | 0.46              |
| 2:P:211:ILE:HD11 | 1:Q:230:GLY:CA   | 2.46                     | 0.46              |
| 2:P:244:ALA:O    | 2:P:248:ALA:HB3  | 2.15                     | 0.46              |
| 2:P:267:LEU:HD23 | 2:P:268:LEU:N    | 2.30                     | 0.46              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:R:58:ILE:HG13  | 2:R:61:VAL:HG12  | 1.98                     | 0.46              |
| 2:R:236:ILE:HG22 | 2:R:240:LYS:HZ2  | 1.81                     | 0.46              |
| 1:U:51:PHE:HA    | 1:U:76:GLN:CD    | 2.39                     | 0.46              |
| 2:V:88:VAL:HG12  | 2:V:90:ILE:HG12  | 1.96                     | 0.46              |
| 1:A:278:LEU:O    | 1:A:280:LEU:HG   | 2.16                     | 0.46              |
| 2:D:259:TYR:HB2  | 1:E:273:LEU:CG   | 2.45                     | 0.46              |
| 1:E:242:LEU:HD22 | 1:E:249:ILE:HG13 | 1.96                     | 0.46              |
| 2:F:197:ARG:HA   | 2:F:197:ARG:NE   | 2.31                     | 0.46              |
| 2:F:197:ARG:NH2  | 1:G:219:GLN:HA   | 2.31                     | 0.46              |
| 2:H:235:LEU:HD13 | 2:H:238:LEU:HD23 | 1.98                     | 0.46              |
| 1:I:231:GLU:O    | 1:I:234:ALA:HB3  | 2.15                     | 0.46              |
| 1:I:260:ILE:HG23 | 1:I:264:ILE:CG1  | 2.45                     | 0.46              |
| 2:J:35:ARG:HB2   | 2:J:103:LEU:CD1  | 2.45                     | 0.46              |
| 1:M:288:THR:O    | 1:M:293:SER:HB3  | 2.15                     | 0.46              |
| 2:N:37:VAL:HG11  | 2:N:45:VAL:CG1   | 2.45                     | 0.46              |
| 2:N:221:ALA:HB1  | 1:O:242:LEU:CD2  | 2.45                     | 0.46              |
| 1:O:41:PHE:HD1   | 1:O:43:VAL:HG23  | 1.81                     | 0.46              |
| 1:O:217:ALA:HB1  | 2:P:213:SER:HB2  | 1.96                     | 0.46              |
| 2:P:109:SER:O    | 1:Q:111:ARG:HD3  | 2.15                     | 0.46              |
| 1:U:52:PHE:CE2   | 1:U:77:TYR:HB2   | 2.51                     | 0.46              |
| 2:V:221:ALA:HB2  | 1:W:242:LEU:HD12 | 1.96                     | 0.46              |
| 2:V:248:ALA:HA   | 2:V:251:LEU:HB2  | 1.97                     | 0.46              |
| 1:A:221:GLN:HA   | 2:B:216:GLY:CA   | 2.45                     | 0.46              |
| 1:A:228:ALA:O    | 2:B:224:ILE:HD11 | 2.15                     | 0.46              |
| 1:A:276:ASP:O    | 1:A:276:ASP:OD1  | 2.33                     | 0.46              |
| 2:B:240:LYS:HA   | 1:C:254:ILE:HG23 | 1.97                     | 0.46              |
| 1:C:277:ASN:O    | 1:E:283:GLN:HB2  | 2.16                     | 0.46              |
| 1:C:277:ASN:ND2  | 1:E:281:ASN:HA   | 2.31                     | 0.46              |
| 1:G:63:ILE:HD13  | 1:G:115:GLN:HA   | 1.98                     | 0.46              |
| 1:I:214:VAL:HG13 | 2:J:209:ALA:HB2  | 1.95                     | 0.46              |
| 2:J:260:LEU:HD21 | 1:K:272:TYR:CD1  | 2.50                     | 0.46              |
| 1:K:214:VAL:HG11 | 2:L:205:GLN:O    | 2.15                     | 0.46              |
| 1:M:250:LYS:O    | 1:M:253:LYS:HB2  | 2.16                     | 0.46              |
| 2:N:41:ARG:HE    | 1:O:67:GLY:N     | 2.14                     | 0.46              |
| 1:O:48:ARG:HD3   | 1:O:65:ALA:HA    | 1.98                     | 0.46              |
| 1:O:228:ALA:CB   | 2:P:220:ALA:HA   | 2.45                     | 0.46              |
| 2:P:130:VAL:HG21 | 2:P:150:VAL:CG2  | 2.45                     | 0.46              |
| 1:Q:52:PHE:HE1   | 2:R:32:ALA:HB2   | 1.77                     | 0.46              |
| 2:R:80:THR:CG2   | 2:R:131:VAL:HG11 | 2.46                     | 0.46              |
| 1:S:136:ILE:HD11 | 1:S:171:ARG:HB2  | 1.97                     | 0.46              |
| 1:S:235:ALA:CB   | 2:T:224:ILE:HD11 | 2.46                     | 0.46              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:T:258:THR:O    | 1:U:272:TYR:HA   | 2.16                     | 0.46              |
| 1:U:144:VAL:HG12 | 1:U:148:PHE:CD2  | 2.50                     | 0.46              |
| 2:V:186:LYS:HA   | 1:W:209:ARG:CG   | 2.45                     | 0.46              |
| 1:A:215:GLU:O    | 1:A:219:GLN:HG2  | 2.15                     | 0.46              |
| 1:A:282:LEU:HD12 | 1:A:287:PHE:CE1  | 2.51                     | 0.46              |
| 1:C:239:GLY:HA2  | 2:D:234:GLY:HA3  | 1.97                     | 0.46              |
| 1:C:274:THR:O    | 1:C:277:ASN:HB2  | 2.16                     | 0.46              |
| 2:D:250:GLN:OE1  | 1:E:264:ILE:HG22 | 2.16                     | 0.46              |
| 1:G:221:GLN:CA   | 2:H:212:ILE:HG23 | 2.45                     | 0.46              |
| 1:G:256:ALA:HB3  | 2:H:241:LEU:CD1  | 2.44                     | 0.46              |
| 2:H:118:VAL:CG1  | 2:H:163:LEU:HD12 | 2.46                     | 0.46              |
| 1:I:55:ILE:CG1   | 2:J:28:TYR:O     | 2.64                     | 0.46              |
| 2:J:203:ALA:HA   | 2:J:206:GLN:HG3  | 1.98                     | 0.46              |
| 1:K:64:LEU:HB3   | 1:K:69:HIS:CB    | 2.46                     | 0.46              |
| 1:K:239:GLY:HA2  | 2:L:235:LEU:H    | 1.81                     | 0.46              |
| 2:L:50:VAL:HG13  | 2:L:55:HIS:H     | 1.81                     | 0.46              |
| 2:N:45:VAL:HG12  | 2:N:104:PRO:HB3  | 1.97                     | 0.46              |
| 2:P:228:LEU:HD12 | 1:Q:247:GLY:C    | 2.41                     | 0.46              |
| 1:Q:53:ASN:O     | 1:Q:58:VAL:HG22  | 2.15                     | 0.46              |
| 1:Q:117:LEU:N    | 1:Q:118:PRO:CD   | 2.78                     | 0.46              |
| 1:Q:250:LYS:HG2  | 1:S:282:LEU:HD11 | 1.97                     | 0.46              |
| 1:S:239:GLY:HA2  | 2:T:234:GLY:HA3  | 1.98                     | 0.46              |
| 2:V:209:ALA:HA   | 2:V:212:ILE:HB   | 1.97                     | 0.46              |
| 1:W:71:ARG:NH1   | 1:W:78:PRO:HD3   | 2.30                     | 0.46              |
| 1:W:151:SER:O    | 1:W:154:ILE:HB   | 2.14                     | 0.46              |
| 2:X:236:ILE:O    | 2:X:236:ILE:CG2  | 2.64                     | 0.46              |
| 1:A:242:LEU:HD21 | 2:X:225:ALA:HB1  | 1.96                     | 0.46              |
| 1:A:261:SER:OG   | 2:X:251:LEU:HD13 | 2.16                     | 0.46              |
| 2:B:219:LYS:HA   | 2:B:222:GLU:OE1  | 2.16                     | 0.46              |
| 2:B:270:LEU:HD23 | 1:E:272:TYR:HE1  | 1.79                     | 0.46              |
| 2:D:239:ARG:HD3  | 2:D:243:ALA:HB2  | 1.98                     | 0.46              |
| 1:E:217:ALA:O    | 2:F:212:ILE:HG22 | 2.16                     | 0.46              |
| 2:F:200:VAL:CB   | 1:G:223:GLN:HB2  | 2.46                     | 0.46              |
| 1:G:273:LEU:HD23 | 2:H:259:TYR:CB   | 2.46                     | 0.46              |
| 2:H:86:GLN:O     | 2:H:88:VAL:HG23  | 2.16                     | 0.46              |
| 2:H:214:ALA:CB   | 1:I:234:ALA:HA   | 2.45                     | 0.46              |
| 1:I:193:TYR:O    | 1:I:197:VAL:HG23 | 2.16                     | 0.46              |
| 1:K:253:LYS:HE2  | 1:M:279:VAL:HG22 | 1.98                     | 0.46              |
| 1:K:264:ILE:O    | 1:K:264:ILE:CG2  | 2.63                     | 0.46              |
| 1:M:246:PRO:HA   | 1:M:249:ILE:HD12 | 1.98                     | 0.46              |
| 2:N:244:ALA:HA   | 2:N:248:ALA:CB   | 2.44                     | 0.46              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:V:84:ASP:HB2   | 1:W:197:VAL:HG11 | 1.98                     | 0.46              |
| 2:V:236:ILE:HD13 | 1:W:250:LYS:HD2  | 1.97                     | 0.46              |
| 2:V:256:ASN:HB2  | 1:W:272:TYR:CE2  | 2.51                     | 0.46              |
| 1:A:251:LEU:HD21 | 2:X:236:ILE:CD1  | 2.46                     | 0.46              |
| 1:A:253:LYS:HD2  | 1:C:291:SER:HB2  | 1.98                     | 0.46              |
| 1:A:263:THR:HG21 | 2:B:249:TYR:HE1  | 1.77                     | 0.46              |
| 2:B:197:ARG:CG   | 1:C:219:GLN:NE2  | 2.79                     | 0.46              |
| 1:E:199:ALA:O    | 1:E:203:ALA:CB   | 2.63                     | 0.46              |
| 1:E:274:THR:O    | 1:E:277:ASN:CG   | 2.59                     | 0.46              |
| 2:F:235:LEU:HD12 | 2:F:239:ARG:N    | 2.31                     | 0.46              |
| 1:G:287:PHE:CZ   | 1:G:291:SER:HB3  | 2.51                     | 0.46              |
| 2:H:259:TYR:OH   | 1:I:278:LEU:HB2  | 2.16                     | 0.46              |
| 1:I:57:GLY:O     | 1:I:58:VAL:HG23  | 2.16                     | 0.46              |
| 1:I:75:PHE:CE1   | 2:J:29:ASN:HA    | 2.51                     | 0.46              |
| 1:I:102:VAL:HG12 | 1:I:104:ILE:HG13 | 1.98                     | 0.46              |
| 1:K:107:ARG:O    | 1:K:182:VAL:HA   | 2.16                     | 0.46              |
| 1:K:165:ARG:NH1  | 1:K:182:VAL:HB   | 2.31                     | 0.46              |
| 1:K:229:GLU:HG2  | 2:L:219:LYS:HZ3  | 1.81                     | 0.46              |
| 2:L:203:ALA:HB1  | 1:M:226:VAL:CG1  | 2.45                     | 0.46              |
| 2:L:211:ILE:CG1  | 1:M:233:GLU:OE2  | 2.64                     | 0.46              |
| 2:P:92:LEU:HD12  | 2:P:169:SER:C    | 2.40                     | 0.46              |
| 2:R:28:TYR:OH    | 2:R:36:ALA:HB3   | 2.16                     | 0.46              |
| 2:R:46:GLN:NE2   | 2:R:48:ILE:O     | 2.49                     | 0.46              |
| 1:U:40:VAL:O     | 1:U:40:VAL:HG13  | 2.15                     | 0.46              |
| 1:U:63:ILE:HG21  | 1:U:114:ALA:O    | 2.16                     | 0.46              |
| 1:U:136:ILE:HG13 | 1:U:168:LEU:HD11 | 1.96                     | 0.46              |
| 1:A:237:MET:CE   | 2:X:222:GLU:HG3  | 2.46                     | 0.46              |
| 2:D:259:TYR:O    | 2:D:259:TYR:CD1  | 2.69                     | 0.46              |
| 1:E:269:ASN:CB   | 2:F:257:ILE:HB   | 2.45                     | 0.46              |
| 2:F:211:ILE:HG13 | 1:G:234:ALA:HB2  | 1.98                     | 0.46              |
| 2:H:36:ALA:O     | 2:H:50:VAL:HB    | 2.15                     | 0.46              |
| 2:H:204:GLU:HG2  | 1:I:226:VAL:HG21 | 1.97                     | 0.46              |
| 1:I:242:LEU:CD1  | 1:I:249:ILE:HD12 | 2.46                     | 0.46              |
| 2:J:228:LEU:HD13 | 2:J:236:ILE:CD1  | 2.42                     | 0.46              |
| 1:M:108:VAL:HG12 | 1:M:179:LEU:HD22 | 1.98                     | 0.46              |
| 1:M:270:ARG:HD3  | 2:N:255:ARG:HG3  | 1.96                     | 0.46              |
| 1:M:291:SER:O    | 1:M:294:LEU:HG   | 2.16                     | 0.46              |
| 1:Q:41:PHE:CG    | 1:Q:78:PRO:HG2   | 2.51                     | 0.46              |
| 2:R:36:ALA:C     | 2:R:50:VAL:HB    | 2.40                     | 0.46              |
| 1:S:108:VAL:HG22 | 1:S:182:VAL:HG11 | 1.97                     | 0.46              |
| 2:T:38:ILE:HG22  | 2:T:39:PHE:N     | 2.31                     | 0.46              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:T:233:ASP:CG   | 2:T:236:ILE:HD12 | 2.41                     | 0.46              |
| 1:U:161:SER:O    | 1:U:165:ARG:HG2  | 2.16                     | 0.46              |
| 2:V:215:GLU:HG2  | 1:W:237:MET:HE2  | 1.97                     | 0.46              |
| 2:B:228:LEU:HD22 | 2:B:236:ILE:N    | 2.32                     | 0.45              |
| 2:B:235:LEU:HG   | 2:B:235:LEU:O    | 2.15                     | 0.45              |
| 2:H:45:VAL:HG21  | 2:H:107:PHE:HD2  | 1.80                     | 0.45              |
| 1:I:43:VAL:HG21  | 1:I:49:ALA:HB2   | 1.98                     | 0.45              |
| 2:J:35:ARG:HD3   | 2:J:100:ALA:HB1  | 1.98                     | 0.45              |
| 2:J:92:LEU:HD11  | 2:J:168:VAL:HG12 | 1.97                     | 0.45              |
| 1:M:233:GLU:HA   | 1:M:236:LYS:HB2  | 1.97                     | 0.45              |
| 2:N:126:ILE:HD11 | 2:N:154:LEU:HD13 | 1.98                     | 0.45              |
| 2:P:28:TYR:CE2   | 2:P:36:ALA:HB3   | 2.51                     | 0.45              |
| 1:S:79:ILE:HG21  | 1:S:126:LEU:CD2  | 2.46                     | 0.45              |
| 2:V:224:ILE:HG21 | 1:W:248:TYR:N    | 2.30                     | 0.45              |
| 2:V:257:ILE:HA   | 1:W:272:TYR:HB2  | 1.97                     | 0.45              |
| 2:V:272:GLN:C    | 2:X:271:PRO:HA   | 2.40                     | 0.45              |
| 1:W:269:ASN:HB3  | 1:W:271:ILE:HG13 | 1.99                     | 0.45              |
| 2:B:222:GLU:HG3  | 1:C:241:ALA:HB1  | 1.98                     | 0.45              |
| 2:B:222:GLU:OE2  | 1:C:237:MET:SD   | 2.74                     | 0.45              |
| 1:G:118:PRO:O    | 1:G:122:GLN:HG3  | 2.16                     | 0.45              |
| 2:H:130:VAL:CG1  | 2:H:146:VAL:HG13 | 2.46                     | 0.45              |
| 2:H:207:LYS:HE2  | 1:I:226:VAL:HG23 | 1.97                     | 0.45              |
| 2:H:244:ALA:O    | 2:H:245:GLU:C    | 2.58                     | 0.45              |
| 1:I:106:LEU:HD11 | 1:I:165:ARG:NE   | 2.31                     | 0.45              |
| 1:I:252:ARG:HG3  | 2:J:241:LEU:HG   | 1.98                     | 0.45              |
| 2:J:130:VAL:HG21 | 2:J:150:VAL:CG2  | 2.37                     | 0.45              |
| 1:K:144:VAL:HG11 | 1:K:164:ILE:HG13 | 1.98                     | 0.45              |
| 2:P:203:ALA:HA   | 2:P:206:GLN:HG3  | 1.96                     | 0.45              |
| 1:Q:63:ILE:HD13  | 1:Q:115:GLN:HA   | 1.98                     | 0.45              |
| 2:R:57:LEU:HB2   | 2:R:62:GLN:HB3   | 1.98                     | 0.45              |
| 2:R:267:LEU:HD21 | 2:T:267:LEU:HD13 | 1.99                     | 0.45              |
| 1:S:218:LYS:O    | 1:S:221:GLN:HB3  | 2.16                     | 0.45              |
| 2:V:86:GLN:CG    | 2:V:136:ALA:HB2  | 2.47                     | 0.45              |
| 1:W:43:VAL:HA    | 1:W:80:ILE:HG12  | 1.99                     | 0.45              |
| 1:W:51:PHE:HA    | 1:W:76:GLN:OE1   | 2.15                     | 0.45              |
| 1:W:229:GLU:HG2  | 2:X:223:LEU:HD11 | 1.98                     | 0.45              |
| 2:X:201:GLU:C    | 2:X:205:GLN:OE1  | 2.59                     | 0.45              |
| 1:A:237:MET:SD   | 2:X:218:SER:OG   | 2.74                     | 0.45              |
| 1:A:253:LYS:CE   | 1:C:288:THR:HG22 | 2.46                     | 0.45              |
| 1:A:280:LEU:HD22 | 1:W:273:LEU:HD13 | 1.99                     | 0.45              |
| 1:C:234:ALA:HA   | 1:C:237:MET:HE3  | 1.99                     | 0.45              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:253:LYS:HA   | 2:D:241:LEU:HD22 | 1.97                     | 0.45              |
| 2:F:244:ALA:HB2  | 2:F:247:ILE:HD12 | 1.98                     | 0.45              |
| 1:G:106:LEU:HD11 | 1:G:165:ARG:NE   | 2.31                     | 0.45              |
| 1:G:107:ARG:CZ   | 1:G:185:THR:HG21 | 2.46                     | 0.45              |
| 1:G:144:VAL:HG12 | 1:G:144:VAL:O    | 2.17                     | 0.45              |
| 1:G:239:GLY:HA2  | 2:H:234:GLY:HA3  | 1.97                     | 0.45              |
| 1:G:281:ASN:O    | 1:G:287:PHE:CB   | 2.65                     | 0.45              |
| 2:H:37:VAL:HG11  | 2:H:104:PRO:CA   | 2.45                     | 0.45              |
| 2:H:132:ALA:CB   | 1:I:155:THR:O    | 2.64                     | 0.45              |
| 2:H:218:SER:O    | 1:I:241:ALA:HB1  | 2.16                     | 0.45              |
| 1:I:51:PHE:HB2   | 2:J:31:ASP:HA    | 1.98                     | 0.45              |
| 2:J:36:ALA:HA    | 2:J:67:PHE:HD2   | 1.82                     | 0.45              |
| 2:J:45:VAL:HG21  | 2:J:107:PHE:HD2  | 1.81                     | 0.45              |
| 1:K:253:LYS:CE   | 1:M:279:VAL:HG22 | 2.47                     | 0.45              |
| 2:L:118:VAL:HG13 | 2:L:161:PHE:CD1  | 2.51                     | 0.45              |
| 2:N:211:ILE:HD11 | 1:O:230:GLY:HA2  | 1.99                     | 0.45              |
| 1:O:250:LYS:HG2  | 1:Q:279:VAL:HG13 | 1.97                     | 0.45              |
| 1:O:274:THR:HG22 | 1:O:275:ALA:N    | 2.30                     | 0.45              |
| 1:Q:213:LEU:HA   | 1:Q:216:LYS:HG2  | 1.98                     | 0.45              |
| 2:T:123:THR:O    | 2:T:127:LEU:HD13 | 2.15                     | 0.45              |
| 2:V:90:ILE:HD11  | 2:V:131:VAL:HG21 | 1.91                     | 0.45              |
| 2:V:204:GLU:O    | 2:V:207:LYS:HB2  | 2.17                     | 0.45              |
| 1:W:266:THR:O    | 2:X:249:TYR:HE1  | 1.99                     | 0.45              |
| 1:A:237:MET:CE   | 2:X:222:GLU:CG   | 2.93                     | 0.45              |
| 1:A:249:ILE:O    | 1:A:253:LYS:HG3  | 2.16                     | 0.45              |
| 1:G:236:LYS:HA   | 2:H:227:SER:HB2  | 1.98                     | 0.45              |
| 2:H:63:LYS:O     | 2:H:65:ILE:CD1   | 2.62                     | 0.45              |
| 2:H:153:ASP:O    | 2:H:156:GLU:HG3  | 2.16                     | 0.45              |
| 1:I:44:GLU:O     | 1:I:47:HIS:HB2   | 2.15                     | 0.45              |
| 2:L:122:ILE:HG13 | 2:L:123:THR:N    | 2.32                     | 0.45              |
| 2:N:183:VAL:HG23 | 2:N:186:LYS:HE2  | 1.97                     | 0.45              |
| 2:P:224:ILE:HG23 | 1:Q:248:TYR:HA   | 1.98                     | 0.45              |
| 1:Q:56:GLY:CA    | 2:R:53:GLY:HA2   | 2.46                     | 0.45              |
| 2:T:200:VAL:O    | 2:T:203:ALA:HB3  | 2.15                     | 0.45              |
| 1:U:213:LEU:HD23 | 1:U:213:LEU:C    | 2.40                     | 0.45              |
| 2:V:69:CYS:HA    | 2:V:98:PRO:HG2   | 1.98                     | 0.45              |
| 2:V:252:SER:HA   | 2:V:257:ILE:HD11 | 1.98                     | 0.45              |
| 1:W:164:ILE:HG22 | 1:W:165:ARG:NH2  | 2.31                     | 0.45              |
| 1:W:206:GLU:O    | 1:W:209:ARG:HB3  | 2.17                     | 0.45              |
| 1:A:249:ILE:HD13 | 1:C:294:LEU:CD1  | 2.47                     | 0.45              |
| 1:A:283:GLN:HG3  | 2:V:240:LYS:HD3  | 1.99                     | 0.45              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:248:TYR:CD2  | 1:C:248:TYR:O    | 2.69                     | 0.45              |
| 1:C:256:ALA:HB3  | 2:D:241:LEU:HB3  | 1.98                     | 0.45              |
| 1:C:263:THR:HB   | 2:D:248:ALA:HB3  | 1.97                     | 0.45              |
| 1:C:278:LEU:O    | 1:C:279:VAL:C    | 2.59                     | 0.45              |
| 1:G:218:LYS:HA   | 2:H:212:ILE:HG21 | 1.98                     | 0.45              |
| 2:H:37:VAL:HG21  | 2:H:104:PRO:CA   | 2.46                     | 0.45              |
| 2:H:40:ASP:CA    | 2:H:61:VAL:HG22  | 2.45                     | 0.45              |
| 2:H:221:ALA:HA   | 1:I:248:TYR:CB   | 2.46                     | 0.45              |
| 2:H:225:ALA:HA   | 1:I:245:ASN:HB3  | 1.99                     | 0.45              |
| 2:H:240:LYS:CE   | 1:K:282:LEU:HD23 | 2.46                     | 0.45              |
| 1:I:278:LEU:O    | 1:I:280:LEU:HG   | 2.16                     | 0.45              |
| 2:J:28:TYR:CZ    | 2:J:57:LEU:HD23  | 2.51                     | 0.45              |
| 2:J:218:SER:CB   | 1:K:237:MET:SD   | 3.04                     | 0.45              |
| 1:K:90:ILE:HD13  | 1:K:134:PRO:HA   | 1.99                     | 0.45              |
| 1:K:132:VAL:HB   | 1:K:177:LEU:HD12 | 1.98                     | 0.45              |
| 1:K:132:VAL:CB   | 1:K:177:LEU:HD12 | 2.47                     | 0.45              |
| 2:N:246:ASP:O    | 2:N:249:TYR:HB3  | 2.16                     | 0.45              |
| 1:O:71:ARG:HB2   | 1:O:76:GLN:HG3   | 1.98                     | 0.45              |
| 1:O:249:ILE:HG23 | 2:P:241:LEU:HD23 | 1.98                     | 0.45              |
| 1:S:235:ALA:HB3  | 2:T:224:ILE:CD1  | 2.47                     | 0.45              |
| 2:V:34:HIS:O     | 2:V:52:GLU:HA    | 2.16                     | 0.45              |
| 2:V:267:LEU:CD1  | 2:X:267:LEU:HD13 | 2.47                     | 0.45              |
| 1:A:276:ASP:HB2  | 1:A:281:ASN:OD1  | 2.17                     | 0.45              |
| 2:B:271:PRO:O    | 2:D:271:PRO:HB3  | 2.16                     | 0.45              |
| 1:C:272:TYR:HE1  | 2:X:270:LEU:HD11 | 1.81                     | 0.45              |
| 2:D:200:VAL:HG21 | 1:E:222:ARG:CB   | 2.47                     | 0.45              |
| 2:D:262:ALA:CB   | 1:E:274:THR:HG23 | 2.46                     | 0.45              |
| 2:D:268:LEU:HD12 | 1:E:272:TYR:CE2  | 2.52                     | 0.45              |
| 2:F:268:LEU:HD13 | 2:H:261:PRO:HG3  | 1.97                     | 0.45              |
| 2:H:37:VAL:HG23  | 2:H:67:PHE:HE2   | 1.81                     | 0.45              |
| 2:H:65:ILE:HG23  | 2:H:112:GLU:CG   | 2.46                     | 0.45              |
| 2:H:67:PHE:CB    | 2:H:103:LEU:HD22 | 2.47                     | 0.45              |
| 1:I:47:HIS:CD2   | 1:I:82:ASP:HA    | 2.51                     | 0.45              |
| 1:I:57:GLY:CA    | 2:J:35:ARG:HA    | 2.46                     | 0.45              |
| 1:K:237:MET:HA   | 1:K:240:GLU:OE1  | 2.15                     | 0.45              |
| 2:L:36:ALA:HA    | 2:L:67:PHE:HD2   | 1.81                     | 0.45              |
| 2:L:218:SER:OG   | 1:M:238:LEU:HG   | 2.15                     | 0.45              |
| 2:N:43:ARG:HE    | 2:N:46:GLN:HA    | 1.81                     | 0.45              |
| 2:N:110:ILE:HD11 | 1:O:180:ASP:OD2  | 2.17                     | 0.45              |
| 2:N:221:ALA:HA   | 1:O:248:TYR:CG   | 2.51                     | 0.45              |
| 1:O:43:VAL:CG1   | 1:O:47:HIS:HB2   | 2.47                     | 0.45              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:289:ARG:C    | 1:O:293:SER:HB3  | 2.41                     | 0.45              |
| 2:P:92:LEU:HD13  | 2:P:150:VAL:HG11 | 1.99                     | 0.45              |
| 2:P:122:ILE:HG13 | 2:P:154:LEU:HD11 | 1.97                     | 0.45              |
| 2:R:35:ARG:HB2   | 2:R:103:LEU:CD1  | 2.47                     | 0.45              |
| 2:R:37:VAL:HG21  | 2:R:104:PRO:HA   | 1.97                     | 0.45              |
| 2:T:256:ASN:HB2  | 1:U:270:ARG:HE   | 1.81                     | 0.45              |
| 2:V:49:VAL:CG2   | 2:V:103:LEU:HD12 | 2.47                     | 0.45              |
| 2:V:93:ARG:CD    | 2:V:171:THR:HG21 | 2.45                     | 0.45              |
| 2:X:246:ASP:O    | 2:X:249:TYR:HB3  | 2.17                     | 0.45              |
| 2:X:267:LEU:C    | 2:X:267:LEU:HD23 | 2.41                     | 0.45              |
| 1:A:242:LEU:HD21 | 2:X:225:ALA:CB   | 2.46                     | 0.45              |
| 1:A:254:ILE:HG12 | 1:C:282:LEU:CD1  | 2.47                     | 0.45              |
| 2:F:257:ILE:HA   | 1:G:271:ILE:O    | 2.17                     | 0.45              |
| 1:I:144:VAL:O    | 1:I:144:VAL:HG12 | 2.15                     | 0.45              |
| 2:J:239:ARG:O    | 2:J:243:ALA:HB3  | 2.17                     | 0.45              |
| 1:K:149:ASN:N    | 1:K:152:GLN:HE21 | 2.14                     | 0.45              |
| 1:M:51:PHE:CZ    | 1:M:70:PHE:O     | 2.70                     | 0.45              |
| 1:M:58:VAL:HG12  | 1:M:59:GLN:O     | 2.16                     | 0.45              |
| 1:M:77:TYR:HB3   | 1:M:79:ILE:HD11  | 1.98                     | 0.45              |
| 2:P:38:ILE:HD12  | 2:P:57:LEU:CB    | 2.46                     | 0.45              |
| 2:P:204:GLU:HA   | 2:P:207:LYS:HZ3  | 1.82                     | 0.45              |
| 1:Q:50:ILE:CD1   | 1:Q:118:PRO:HA   | 2.47                     | 0.45              |
| 1:Q:161:SER:O    | 1:Q:165:ARG:HG2  | 2.16                     | 0.45              |
| 2:R:44:GLY:HA2   | 1:S:66:GLU:CG    | 2.47                     | 0.45              |
| 2:T:86:GLN:O     | 2:T:88:VAL:HG23  | 2.16                     | 0.45              |
| 2:T:247:ILE:HG13 | 1:U:257:ALA:HB1  | 1.98                     | 0.45              |
| 1:U:133:LEU:HD23 | 1:U:136:ILE:HD11 | 1.99                     | 0.45              |
| 2:V:82:SER:HA    | 2:V:131:VAL:O    | 2.17                     | 0.45              |
| 2:V:87:ASN:N     | 1:W:194:THR:OG1  | 2.49                     | 0.45              |
| 1:W:92:SER:HB3   | 1:W:141:LEU:HD12 | 1.97                     | 0.45              |
| 1:W:229:GLU:O    | 1:W:233:GLU:HG3  | 2.17                     | 0.45              |
| 1:A:273:LEU:C    | 2:X:258:THR:OG1  | 2.60                     | 0.45              |
| 2:F:215:GLU:HG2  | 1:G:237:MET:SD   | 2.56                     | 0.45              |
| 1:I:210:ALA:CB   | 2:J:202:LYS:HG2  | 2.47                     | 0.45              |
| 2:J:35:ARG:NH2   | 2:J:52:GLU:OE2   | 2.50                     | 0.45              |
| 1:K:51:PHE:C     | 1:K:76:GLN:OE1   | 2.60                     | 0.45              |
| 1:K:214:VAL:HG21 | 2:L:205:GLN:C    | 2.41                     | 0.45              |
| 2:L:228:LEU:HD11 | 1:M:247:GLY:CA   | 2.47                     | 0.45              |
| 1:M:236:LYS:CE   | 2:N:227:SER:HB3  | 2.47                     | 0.45              |
| 2:N:197:ARG:NH1  | 1:O:219:GLN:HB3  | 2.31                     | 0.45              |
| 1:O:43:VAL:HG21  | 1:O:49:ALA:HB2   | 1.99                     | 0.45              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:71:ARG:HD3   | 1:O:78:PRO:HG3   | 1.98                     | 0.45              |
| 2:P:140:ILE:HG12 | 2:P:173:LEU:HD23 | 1.98                     | 0.45              |
| 1:Q:64:LEU:CD2   | 1:Q:69:HIS:CG    | 3.00                     | 0.45              |
| 1:U:213:LEU:O    | 1:U:216:LYS:HG2  | 2.17                     | 0.45              |
| 1:U:243:SER:HA   | 1:W:294:LEU:O    | 2.17                     | 0.45              |
| 2:V:91:THR:CB    | 2:V:172:HIS:HB3  | 2.47                     | 0.45              |
| 2:V:244:ALA:O    | 2:V:248:ALA:HB3  | 2.17                     | 0.45              |
| 1:W:154:ILE:HD11 | 1:W:189:PHE:CZ   | 2.51                     | 0.45              |
| 1:A:275:ALA:C    | 2:X:259:TYR:O    | 2.60                     | 0.45              |
| 2:B:235:LEU:HA   | 2:B:238:LEU:HB2  | 1.99                     | 0.45              |
| 2:D:228:LEU:HD11 | 1:E:251:LEU:HD13 | 1.99                     | 0.45              |
| 1:E:218:LYS:O    | 1:E:221:GLN:HB3  | 2.17                     | 0.45              |
| 1:E:271:ILE:HG13 | 1:E:272:TYR:N    | 2.32                     | 0.45              |
| 2:F:197:ARG:HE   | 2:F:197:ARG:CA   | 2.28                     | 0.45              |
| 1:G:50:ILE:CG2   | 1:G:117:LEU:HB2  | 2.46                     | 0.45              |
| 2:H:118:VAL:HG22 | 2:H:161:PHE:HB3  | 1.97                     | 0.45              |
| 1:I:51:PHE:CB    | 2:J:31:ASP:HA    | 2.47                     | 0.45              |
| 2:J:31:ASP:OD1   | 2:J:70:ARG:NH2   | 2.50                     | 0.45              |
| 2:J:207:LYS:NZ   | 1:K:229:GLU:CB   | 2.80                     | 0.45              |
| 2:J:270:LEU:HD13 | 1:K:272:TYR:OH   | 2.17                     | 0.45              |
| 1:K:43:VAL:CG1   | 1:K:47:HIS:HB2   | 2.47                     | 0.45              |
| 1:K:48:ARG:HG3   | 1:K:83:ILE:HD13  | 1.99                     | 0.45              |
| 1:K:54:ARG:HA    | 2:L:30:VAL:HB    | 1.98                     | 0.45              |
| 1:K:104:ILE:CD1  | 1:K:145:VAL:HG21 | 2.47                     | 0.45              |
| 1:K:229:GLU:CG   | 2:L:219:LYS:HZ3  | 2.29                     | 0.45              |
| 2:L:45:VAL:HB    | 2:L:108:THR:CG2  | 2.46                     | 0.45              |
| 2:N:76:VAL:HB    | 2:N:123:THR:HG21 | 1.99                     | 0.45              |
| 1:O:94:THR:HG23  | 1:O:142:LYS:CD   | 2.47                     | 0.45              |
| 1:O:94:THR:HG23  | 1:O:142:LYS:HD3  | 1.99                     | 0.45              |
| 1:O:253:LYS:HG3  | 1:Q:279:VAL:HG21 | 1.99                     | 0.45              |
| 2:R:258:THR:OG1  | 1:S:272:TYR:HB2  | 2.17                     | 0.45              |
| 1:S:144:VAL:HG11 | 1:S:164:ILE:HG13 | 1.99                     | 0.45              |
| 1:S:222:ARG:C    | 1:S:222:ARG:HD3  | 2.41                     | 0.45              |
| 1:S:242:LEU:HD12 | 2:T:234:GLY:CA   | 2.46                     | 0.45              |
| 2:T:40:ASP:CB    | 2:T:61:VAL:HG22  | 2.47                     | 0.45              |
| 2:V:30:VAL:HG13  | 2:V:34:HIS:O     | 2.17                     | 0.45              |
| 2:V:236:ILE:HG21 | 1:W:250:LYS:HD3  | 1.99                     | 0.45              |
| 1:W:140:VAL:CG2  | 1:W:168:LEU:HD13 | 2.47                     | 0.45              |
| 1:W:206:GLU:OE1  | 2:X:205:GLN:HB2  | 2.17                     | 0.45              |
| 1:A:254:ILE:HG23 | 1:C:282:LEU:HD11 | 1.97                     | 0.45              |
| 1:A:278:LEU:HD12 | 2:X:259:TYR:HD1  | 1.77                     | 0.45              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:B:228:LEU:HD11 | 1:C:251:LEU:HD13 | 1.98                     | 0.45              |
| 2:B:268:LEU:HD22 | 1:E:272:TYR:CE2  | 2.52                     | 0.45              |
| 2:D:259:TYR:HA   | 1:E:273:LEU:H    | 1.82                     | 0.45              |
| 2:D:267:LEU:O    | 2:D:267:LEU:HD12 | 2.17                     | 0.45              |
| 1:E:273:LEU:HD21 | 1:G:280:LEU:HD12 | 1.98                     | 0.45              |
| 2:H:31:ASP:O     | 2:H:34:HIS:N     | 2.49                     | 0.45              |
| 1:I:118:PRO:HB3  | 2:J:32:ALA:CB    | 2.47                     | 0.45              |
| 1:K:106:LEU:HD13 | 1:K:184:ILE:HG12 | 1.98                     | 0.45              |
| 1:K:242:LEU:CD2  | 1:K:248:TYR:HB3  | 2.46                     | 0.45              |
| 2:L:58:ILE:HG13  | 2:L:61:VAL:HG12  | 1.98                     | 0.45              |
| 2:L:229:ALA:HB3  | 1:M:244:LYS:HZ1  | 1.82                     | 0.45              |
| 2:N:38:ILE:HA    | 2:N:62:GLN:HG3   | 1.98                     | 0.45              |
| 2:P:39:PHE:CZ    | 1:Q:83:ILE:HD11  | 2.52                     | 0.45              |
| 2:P:221:ALA:HB1  | 1:Q:242:LEU:HD21 | 1.99                     | 0.45              |
| 2:P:241:LEU:O    | 2:P:244:ALA:HB3  | 2.16                     | 0.45              |
| 1:Q:221:GLN:OE1  | 2:R:212:ILE:CG2  | 2.64                     | 0.45              |
| 1:Q:235:ALA:HA   | 2:R:235:LEU:HB2  | 1.98                     | 0.45              |
| 2:R:37:VAL:HG12  | 2:R:38:ILE:C     | 2.42                     | 0.45              |
| 1:S:164:ILE:HG22 | 1:S:165:ARG:NH2  | 2.31                     | 0.45              |
| 1:S:279:VAL:CG1  | 1:S:282:LEU:HD13 | 2.47                     | 0.45              |
| 1:U:64:LEU:HD22  | 1:U:69:HIS:CE1   | 2.51                     | 0.45              |
| 2:V:37:VAL:CG1   | 2:V:38:ILE:N     | 2.80                     | 0.45              |
| 2:V:85:LEU:O     | 1:W:193:TYR:HB2  | 2.17                     | 0.45              |
| 1:A:237:MET:HE1  | 2:X:222:GLU:N    | 2.32                     | 0.44              |
| 1:A:277:ASN:OD1  | 1:C:284:ASP:CB   | 2.66                     | 0.44              |
| 1:E:229:GLU:HA   | 1:E:232:ALA:HB3  | 1.98                     | 0.44              |
| 1:G:220:GLU:O    | 1:G:224:LYS:HB2  | 2.18                     | 0.44              |
| 2:H:123:THR:HA   | 2:H:154:LEU:HD13 | 1.98                     | 0.44              |
| 2:H:214:ALA:HB2  | 1:I:234:ALA:CA   | 2.46                     | 0.44              |
| 1:I:57:GLY:C     | 1:I:58:VAL:HG23  | 2.42                     | 0.44              |
| 1:I:154:ILE:HD11 | 1:I:189:PHE:CE2  | 2.51                     | 0.44              |
| 1:K:76:GLN:HE21  | 1:K:78:PRO:HB3   | 1.82                     | 0.44              |
| 1:M:41:PHE:CZ    | 1:M:64:LEU:HD13  | 2.50                     | 0.44              |
| 2:N:90:ILE:HD12  | 2:N:131:VAL:HG21 | 1.99                     | 0.44              |
| 2:R:233:ASP:HB3  | 2:R:236:ILE:HB   | 1.98                     | 0.44              |
| 1:S:229:GLU:O    | 1:S:233:GLU:HB2  | 2.18                     | 0.44              |
| 1:U:58:VAL:HG23  | 2:V:32:ALA:HB1   | 1.98                     | 0.44              |
| 1:U:218:LYS:HD3  | 2:V:212:ILE:HG21 | 1.97                     | 0.44              |
| 2:V:247:ILE:HG23 | 1:W:257:ALA:HB1  | 1.99                     | 0.44              |
| 1:W:90:ILE:HB    | 1:W:137:VAL:HG11 | 1.98                     | 0.44              |
| 2:X:223:LEU:C    | 2:X:223:LEU:HD23 | 2.42                     | 0.44              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:273:LEU:HB2  | 2:X:259:TYR:N    | 2.32                     | 0.44              |
| 1:C:270:ARG:O    | 2:D:258:THR:CB   | 2.65                     | 0.44              |
| 2:H:94:ILE:HG21  | 2:H:119:LEU:HD22 | 1.99                     | 0.44              |
| 2:H:267:LEU:HD21 | 2:J:267:LEU:HB2  | 1.98                     | 0.44              |
| 1:I:58:VAL:CG1   | 2:J:31:ASP:O     | 2.66                     | 0.44              |
| 1:I:59:GLN:HB3   | 2:J:30:VAL:CB    | 2.46                     | 0.44              |
| 1:I:71:ARG:HB2   | 1:I:76:GLN:CG    | 2.47                     | 0.44              |
| 1:I:260:ILE:HG23 | 1:I:264:ILE:HG13 | 1.99                     | 0.44              |
| 2:J:40:ASP:OD1   | 2:J:44:GLY:O     | 2.35                     | 0.44              |
| 2:J:132:ALA:HB1  | 1:K:155:THR:HA   | 1.99                     | 0.44              |
| 2:J:218:SER:HA   | 2:J:221:ALA:HB3  | 1.99                     | 0.44              |
| 2:J:239:ARG:HB3  | 1:K:254:ILE:HG21 | 1.99                     | 0.44              |
| 2:J:247:ILE:HD12 | 1:K:257:ALA:C    | 2.42                     | 0.44              |
| 1:K:106:LEU:HD11 | 1:K:165:ARG:NH2  | 2.32                     | 0.44              |
| 2:L:38:ILE:HD12  | 2:L:57:LEU:HA    | 1.99                     | 0.44              |
| 2:L:211:ILE:HG12 | 1:M:233:GLU:OE2  | 2.18                     | 0.44              |
| 2:N:28:TYR:O     | 2:N:54:THR:HG23  | 2.16                     | 0.44              |
| 2:N:57:LEU:HB2   | 2:N:62:GLN:CB    | 2.48                     | 0.44              |
| 2:N:235:LEU:HG   | 2:N:235:LEU:O    | 2.18                     | 0.44              |
| 1:O:51:PHE:CE1   | 1:O:64:LEU:HD11  | 2.52                     | 0.44              |
| 1:O:251:LEU:HA   | 1:O:254:ILE:HD12 | 1.99                     | 0.44              |
| 2:P:35:ARG:O     | 2:P:103:LEU:HD13 | 2.17                     | 0.44              |
| 2:P:80:THR:CG2   | 2:P:90:ILE:HD12  | 2.48                     | 0.44              |
| 2:P:252:SER:HA   | 2:P:257:ILE:HD11 | 2.00                     | 0.44              |
| 1:Q:238:LEU:CD1  | 2:R:235:LEU:HD13 | 2.47                     | 0.44              |
| 1:Q:260:ILE:CG2  | 1:Q:264:ILE:HD12 | 2.47                     | 0.44              |
| 2:R:39:PHE:HD2   | 2:R:62:GLN:HA    | 1.82                     | 0.44              |
| 2:T:221:ALA:HA   | 1:U:248:TYR:CG   | 2.51                     | 0.44              |
| 1:U:52:PHE:O     | 1:U:76:GLN:HA    | 2.17                     | 0.44              |
| 1:U:140:VAL:HG11 | 1:U:168:LEU:HB2  | 1.97                     | 0.44              |
| 1:W:71:ARG:CB    | 1:W:76:GLN:HB3   | 2.46                     | 0.44              |
| 1:W:73:PRO:C     | 1:W:75:PHE:H     | 2.24                     | 0.44              |
| 1:W:154:ILE:HA   | 1:W:187:LEU:HD21 | 2.00                     | 0.44              |
| 1:A:252:ARG:HG2  | 2:B:238:LEU:HD22 | 2.00                     | 0.44              |
| 2:B:267:LEU:O    | 2:B:267:LEU:CD1  | 2.61                     | 0.44              |
| 1:E:257:ALA:HA   | 1:G:279:VAL:HG22 | 1.98                     | 0.44              |
| 1:G:40:VAL:O     | 1:G:40:VAL:HG13  | 2.17                     | 0.44              |
| 1:G:153:LEU:HB3  | 1:G:187:LEU:HD21 | 2.00                     | 0.44              |
| 1:I:51:PHE:CE2   | 1:I:62:THR:HG21  | 2.51                     | 0.44              |
| 1:I:53:ASN:N     | 2:J:31:ASP:HB2   | 2.31                     | 0.44              |
| 1:I:236:LYS:HG3  | 2:J:227:SER:HB2  | 1.99                     | 0.44              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:280:LEU:O    | 1:I:282:LEU:N    | 2.50                     | 0.44              |
| 1:K:54:ARG:CZ    | 2:L:29:ASN:HA    | 2.46                     | 0.44              |
| 1:K:141:LEU:O    | 1:K:145:VAL:HG23 | 2.17                     | 0.44              |
| 1:K:142:LYS:HG2  | 2:L:143:ARG:CZ   | 2.47                     | 0.44              |
| 1:M:153:LEU:CB   | 1:M:187:LEU:HD21 | 2.46                     | 0.44              |
| 1:O:254:ILE:O    | 1:O:257:ALA:HB3  | 2.17                     | 0.44              |
| 1:S:64:LEU:HB3   | 1:S:69:HIS:CG    | 2.52                     | 0.44              |
| 1:S:243:SER:HA   | 1:U:294:LEU:HD13 | 1.99                     | 0.44              |
| 1:S:273:LEU:HD22 | 1:U:280:LEU:HD22 | 2.00                     | 0.44              |
| 1:U:48:ARG:HD2   | 1:U:64:LEU:O     | 2.17                     | 0.44              |
| 1:U:221:GLN:HE22 | 1:U:225:ILE:HD11 | 1.82                     | 0.44              |
| 1:U:231:GLU:O    | 1:U:234:ALA:HB3  | 2.18                     | 0.44              |
| 1:U:281:ASN:O    | 1:U:282:LEU:C    | 2.60                     | 0.44              |
| 2:V:85:LEU:O     | 1:W:193:TYR:HD1  | 2.00                     | 0.44              |
| 2:V:259:TYR:OH   | 1:W:278:LEU:HB2  | 2.18                     | 0.44              |
| 1:W:281:ASN:O    | 1:W:287:PHE:HB2  | 2.17                     | 0.44              |
| 1:A:270:ARG:O    | 2:B:258:THR:HB   | 2.18                     | 0.44              |
| 1:C:272:TYR:N    | 2:D:260:LEU:HD23 | 2.33                     | 0.44              |
| 1:E:267:SER:HA   | 2:F:252:SER:HB3  | 1.99                     | 0.44              |
| 1:G:107:ARG:O    | 1:G:182:VAL:HG13 | 2.17                     | 0.44              |
| 1:G:278:LEU:O    | 1:G:279:VAL:HB   | 2.17                     | 0.44              |
| 2:H:257:ILE:HG23 | 1:I:271:ILE:O    | 2.17                     | 0.44              |
| 1:I:50:ILE:CD1   | 1:I:63:ILE:HG12  | 2.46                     | 0.44              |
| 2:J:86:GLN:O     | 2:J:88:VAL:HG23  | 2.17                     | 0.44              |
| 2:J:95:LEU:O     | 2:J:165:LEU:HA   | 2.17                     | 0.44              |
| 2:J:134:PHE:CD2  | 2:J:146:VAL:HG22 | 2.52                     | 0.44              |
| 2:J:207:LYS:HE3  | 1:K:226:VAL:CG2  | 2.48                     | 0.44              |
| 2:J:221:ALA:HA   | 1:K:248:TYR:CB   | 2.47                     | 0.44              |
| 2:J:236:ILE:HD13 | 1:K:250:LYS:HD2  | 2.00                     | 0.44              |
| 1:K:285:GLU:HA   | 1:K:288:THR:OG1  | 2.17                     | 0.44              |
| 2:L:244:ALA:O    | 2:L:245:GLU:C    | 2.58                     | 0.44              |
| 1:M:294:LEU:HD23 | 1:O:283:GLN:OE1  | 2.18                     | 0.44              |
| 2:N:63:LYS:O     | 2:N:64:PRO:C     | 2.60                     | 0.44              |
| 2:N:258:THR:H    | 1:O:272:TYR:HB3  | 1.82                     | 0.44              |
| 1:O:52:PHE:HE1   | 2:P:32:ALA:H     | 1.66                     | 0.44              |
| 1:Q:229:GLU:O    | 1:Q:233:GLU:HB2  | 2.18                     | 0.44              |
| 1:Q:242:LEU:HD12 | 2:R:234:GLY:C    | 2.43                     | 0.44              |
| 2:R:57:LEU:C     | 2:R:57:LEU:HD12  | 2.41                     | 0.44              |
| 2:R:203:ALA:HA   | 2:R:206:GLN:HG3  | 1.99                     | 0.44              |
| 2:R:204:GLU:O    | 2:R:207:LYS:HB2  | 2.17                     | 0.44              |
| 1:S:154:ILE:HG12 | 1:S:187:LEU:HD23 | 1.99                     | 0.44              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:S:271:ILE:HG12 | 2:T:259:TYR:CE1  | 2.53                     | 0.44              |
| 1:U:286:SER:HA   | 1:U:289:ARG:NE   | 2.33                     | 0.44              |
| 2:V:267:LEU:CD2  | 2:X:267:LEU:HD22 | 2.48                     | 0.44              |
| 1:W:260:ILE:O    | 1:W:264:ILE:N    | 2.49                     | 0.44              |
| 1:A:235:ALA:HA   | 2:B:235:LEU:HB2  | 1.99                     | 0.44              |
| 1:E:236:LYS:HB2  | 2:F:227:SER:HB2  | 2.00                     | 0.44              |
| 1:G:58:VAL:CB    | 1:G:122:GLN:OE1  | 2.65                     | 0.44              |
| 1:I:47:HIS:NE2   | 1:I:82:ASP:CG    | 2.75                     | 0.44              |
| 1:I:192:GLU:HG3  | 2:J:188:VAL:CG2  | 2.48                     | 0.44              |
| 2:J:61:VAL:HG13  | 2:J:62:GLN:N     | 2.32                     | 0.44              |
| 2:J:260:LEU:HD22 | 2:J:268:LEU:CD2  | 2.47                     | 0.44              |
| 1:K:53:ASN:N     | 2:L:32:ALA:HB2   | 2.32                     | 0.44              |
| 1:K:104:ILE:HG12 | 1:K:187:LEU:HD13 | 1.98                     | 0.44              |
| 1:K:264:ILE:O    | 1:K:265:ALA:C    | 2.60                     | 0.44              |
| 2:L:39:PHE:H     | 2:L:62:GLN:HG3   | 1.83                     | 0.44              |
| 1:M:55:ILE:O     | 1:M:56:GLY:C     | 2.60                     | 0.44              |
| 1:M:250:LYS:HE2  | 1:O:287:PHE:HZ   | 1.83                     | 0.44              |
| 2:N:239:ARG:HD3  | 1:O:254:ILE:CG2  | 2.48                     | 0.44              |
| 1:O:161:SER:O    | 1:O:165:ARG:HG2  | 2.18                     | 0.44              |
| 2:P:218:SER:HB3  | 1:Q:237:MET:HE1  | 2.00                     | 0.44              |
| 1:U:235:ALA:HA   | 2:V:235:LEU:HB2  | 1.98                     | 0.44              |
| 2:V:39:PHE:HB2   | 2:V:65:ILE:HD11  | 1.99                     | 0.44              |
| 2:V:81:GLY:HA2   | 2:V:86:GLN:O     | 2.16                     | 0.44              |
| 2:V:248:ALA:HB1  | 1:W:278:LEU:HD21 | 1.98                     | 0.44              |
| 2:V:254:SER:HB2  | 1:W:271:ILE:O    | 2.18                     | 0.44              |
| 2:B:228:LEU:HD22 | 2:B:236:ILE:H    | 1.82                     | 0.44              |
| 2:D:207:LYS:HB3  | 1:E:226:VAL:HG12 | 1.99                     | 0.44              |
| 1:G:106:LEU:HD11 | 1:G:165:ARG:HD2  | 1.99                     | 0.44              |
| 2:H:32:ALA:HB3   | 2:H:70:ARG:NH2   | 2.33                     | 0.44              |
| 2:J:80:THR:CG2   | 2:J:131:VAL:HG11 | 2.47                     | 0.44              |
| 2:J:207:LYS:HE3  | 1:K:226:VAL:O    | 2.18                     | 0.44              |
| 2:J:268:LEU:HD13 | 2:J:270:LEU:HD21 | 1.99                     | 0.44              |
| 1:K:210:ALA:O    | 1:K:214:VAL:HG23 | 2.18                     | 0.44              |
| 2:L:74:ARG:HD3   | 2:L:75:ASN:N     | 2.33                     | 0.44              |
| 1:M:71:ARG:HD3   | 1:M:78:PRO:CG    | 2.46                     | 0.44              |
| 1:M:79:ILE:HB    | 1:M:126:LEU:HD21 | 2.00                     | 0.44              |
| 1:M:218:LYS:HD3  | 2:N:212:ILE:HG21 | 2.00                     | 0.44              |
| 2:N:224:ILE:HG23 | 1:O:248:TYR:HB2  | 1.99                     | 0.44              |
| 2:N:229:ALA:HB2  | 1:O:245:ASN:HD22 | 1.82                     | 0.44              |
| 1:O:236:LYS:O    | 1:O:240:GLU:OE1  | 2.36                     | 0.44              |
| 1:O:272:TYR:OH   | 2:P:258:THR:HB   | 2.18                     | 0.44              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:P:41:ARG:HG2   | 1:Q:65:ALA:C     | 2.42                     | 0.44              |
| 2:P:260:LEU:O    | 1:Q:275:ALA:HB2  | 2.18                     | 0.44              |
| 1:Q:51:PHE:CZ    | 1:Q:70:PHE:O     | 2.71                     | 0.44              |
| 2:R:68:ASP:OD1   | 2:R:70:ARG:HD2   | 2.17                     | 0.44              |
| 2:R:235:LEU:O    | 2:R:235:LEU:HG   | 2.18                     | 0.44              |
| 2:T:134:PHE:HB3  | 2:T:138:GLU:OE1  | 2.18                     | 0.44              |
| 2:T:272:GLN:NE2  | 2:V:272:GLN:OE1  | 2.50                     | 0.44              |
| 1:U:53:ASN:H     | 1:U:58:VAL:HG22  | 1.82                     | 0.44              |
| 2:V:272:GLN:HE21 | 2:X:269:GLN:NE2  | 2.14                     | 0.44              |
| 1:A:221:GLN:OE1  | 2:B:216:GLY:HA2  | 2.18                     | 0.44              |
| 1:A:262:LYS:HA   | 2:X:251:LEU:CG   | 2.48                     | 0.44              |
| 2:B:268:LEU:CD2  | 1:E:272:TYR:OH   | 2.66                     | 0.44              |
| 2:D:236:ILE:HG23 | 1:E:254:ILE:CD1  | 2.46                     | 0.44              |
| 1:E:258:GLN:HA   | 1:E:261:SER:OG   | 2.18                     | 0.44              |
| 1:E:267:SER:HA   | 2:F:252:SER:CB   | 2.48                     | 0.44              |
| 2:F:211:ILE:HG12 | 1:G:234:ALA:CA   | 2.48                     | 0.44              |
| 1:G:108:VAL:HG22 | 1:G:165:ARG:NH1  | 2.31                     | 0.44              |
| 2:H:214:ALA:HB1  | 1:I:237:MET:SD   | 2.57                     | 0.44              |
| 1:I:71:ARG:C     | 1:I:72:ILE:HG13  | 2.43                     | 0.44              |
| 2:J:37:VAL:HG12  | 2:J:45:VAL:HG12  | 1.99                     | 0.44              |
| 2:L:35:ARG:HA    | 2:L:51:GLY:O     | 2.17                     | 0.44              |
| 2:L:49:VAL:HA    | 2:L:104:PRO:HG3  | 1.98                     | 0.44              |
| 1:M:54:ARG:NH2   | 2:N:30:VAL:O     | 2.51                     | 0.44              |
| 1:M:107:ARG:HH22 | 1:M:185:THR:HG21 | 1.82                     | 0.44              |
| 1:O:51:PHE:CD1   | 1:O:64:LEU:HD11  | 2.53                     | 0.44              |
| 1:O:62:THR:O     | 1:O:118:PRO:HG3  | 2.17                     | 0.44              |
| 1:O:94:THR:HG22  | 1:O:95:GLY:N     | 2.33                     | 0.44              |
| 1:O:243:SER:OG   | 2:P:231:ALA:HB1  | 2.18                     | 0.44              |
| 1:Q:107:ARG:HG2  | 1:Q:183:ALA:HB3  | 2.00                     | 0.44              |
| 2:T:91:THR:CB    | 2:T:172:HIS:HB3  | 2.48                     | 0.44              |
| 2:T:135:ASP:O    | 2:T:139:LEU:HG   | 2.18                     | 0.44              |
| 1:U:260:ILE:HG23 | 1:U:264:ILE:CB   | 2.44                     | 0.44              |
| 2:V:190:GLN:O    | 2:V:193:ALA:HB3  | 2.18                     | 0.44              |
| 2:V:228:LEU:HB2  | 1:W:245:ASN:HD21 | 1.82                     | 0.44              |
| 2:B:258:THR:O    | 1:C:272:TYR:HA   | 2.18                     | 0.44              |
| 1:C:209:ARG:NH1  | 1:C:213:LEU:HD11 | 2.32                     | 0.44              |
| 1:C:259:ASN:HA   | 1:C:262:LYS:HB2  | 1.99                     | 0.44              |
| 1:C:279:VAL:C    | 1:C:281:ASN:H    | 2.26                     | 0.44              |
| 2:D:236:ILE:HG12 | 1:E:251:LEU:HB2  | 2.00                     | 0.44              |
| 2:D:260:LEU:O    | 1:E:274:THR:HA   | 2.18                     | 0.44              |
| 2:F:218:SER:O    | 2:F:221:ALA:HB3  | 2.18                     | 0.44              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:F:250:GLN:HB2  | 2:F:253:ARG:HH12 | 1.83                     | 0.44              |
| 2:F:267:LEU:O    | 2:H:267:LEU:HB3  | 2.18                     | 0.44              |
| 1:G:136:ILE:CG1  | 1:G:168:LEU:HD11 | 2.47                     | 0.44              |
| 2:H:126:ILE:HD11 | 2:H:157:ARG:CB   | 2.48                     | 0.44              |
| 1:I:44:GLU:O     | 1:I:66:GLU:OE2   | 2.36                     | 0.44              |
| 1:I:76:GLN:O     | 1:I:78:PRO:HD3   | 2.18                     | 0.44              |
| 1:I:260:ILE:C    | 1:I:262:LYS:N    | 2.75                     | 0.44              |
| 1:I:283:GLN:O    | 1:I:284:ASP:C    | 2.61                     | 0.44              |
| 1:I:292:ASP:OD2  | 1:I:295:ILE:HD12 | 2.17                     | 0.44              |
| 2:L:131:VAL:HG13 | 2:L:139:LEU:HD21 | 2.00                     | 0.44              |
| 2:L:132:ALA:HB1  | 1:M:155:THR:HA   | 1.99                     | 0.44              |
| 1:M:246:PRO:CB   | 1:M:249:ILE:HD12 | 2.48                     | 0.44              |
| 2:N:40:ASP:HA    | 2:N:61:VAL:CG2   | 2.45                     | 0.44              |
| 1:O:49:ALA:C     | 1:O:64:LEU:HB2   | 2.43                     | 0.44              |
| 1:O:207:ALA:HB1  | 2:P:201:GLU:OE1  | 2.18                     | 0.44              |
| 1:S:281:ASN:O    | 1:S:287:PHE:HB3  | 2.17                     | 0.44              |
| 2:T:258:THR:C    | 1:U:272:TYR:HB3  | 2.42                     | 0.44              |
| 1:U:48:ARG:CG    | 1:U:83:ILE:HG21  | 2.48                     | 0.44              |
| 1:U:76:GLN:O     | 1:U:78:PRO:HD3   | 2.17                     | 0.44              |
| 2:V:28:TYR:OH    | 2:V:36:ALA:HB3   | 2.17                     | 0.44              |
| 2:V:131:VAL:HG22 | 2:V:139:LEU:CD2  | 2.48                     | 0.44              |
| 2:V:270:LEU:HD22 | 2:X:268:LEU:HD22 | 2.00                     | 0.44              |
| 2:X:270:LEU:H    | 2:X:270:LEU:HD23 | 1.82                     | 0.44              |
| 2:B:207:LYS:HD2  | 1:C:230:GLY:CA   | 2.48                     | 0.44              |
| 2:B:224:ILE:HD13 | 1:C:255:ARG:HH12 | 1.82                     | 0.44              |
| 1:C:254:ILE:O    | 1:C:258:GLN:HG2  | 2.18                     | 0.44              |
| 2:F:203:ALA:O    | 2:F:207:LYS:HG2  | 2.17                     | 0.44              |
| 2:F:217:ASP:OD2  | 2:H:238:LEU:CD1  | 2.66                     | 0.44              |
| 1:G:217:ALA:O    | 2:H:212:ILE:HG21 | 2.18                     | 0.44              |
| 2:H:147:SER:N    | 2:H:170:LEU:HD12 | 2.32                     | 0.44              |
| 1:I:117:LEU:N    | 1:I:118:PRO:CD   | 2.81                     | 0.44              |
| 1:I:229:GLU:O    | 1:I:233:GLU:CB   | 2.65                     | 0.44              |
| 1:I:235:ALA:HB1  | 2:J:224:ILE:CD1  | 2.47                     | 0.44              |
| 1:I:263:THR:HG21 | 2:J:245:GLU:CA   | 2.46                     | 0.44              |
| 2:J:90:ILE:HD12  | 2:J:131:VAL:HG21 | 1.99                     | 0.44              |
| 2:J:140:ILE:HG13 | 2:J:173:LEU:HD21 | 2.00                     | 0.44              |
| 1:M:53:ASN:H     | 1:M:58:VAL:HG13  | 1.83                     | 0.44              |
| 1:M:269:ASN:HB3  | 2:N:252:SER:OG   | 2.18                     | 0.44              |
| 2:N:28:TYR:O     | 2:N:28:TYR:CD2   | 2.71                     | 0.44              |
| 2:N:117:ARG:HD3  | 1:O:109:LEU:HG   | 2.00                     | 0.44              |
| 1:O:157:ARG:CZ   | 1:O:184:ILE:HG22 | 2.47                     | 0.44              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:243:SER:O    | 1:Q:294:LEU:HD13 | 2.18                     | 0.44              |
| 2:R:140:ILE:HD11 | 2:R:175:PHE:CD2  | 2.52                     | 0.44              |
| 2:T:36:ALA:HA    | 2:T:67:PHE:HD2   | 1.83                     | 0.44              |
| 2:T:80:THR:HG21  | 2:T:90:ILE:HD12  | 1.99                     | 0.44              |
| 2:T:218:SER:HA   | 2:T:221:ALA:HB3  | 2.00                     | 0.44              |
| 1:U:108:VAL:HA   | 1:U:182:VAL:HG22 | 2.00                     | 0.44              |
| 1:U:248:TYR:CE1  | 1:U:252:ARG:HB2  | 2.53                     | 0.44              |
| 1:W:110:SER:HA   | 1:W:179:LEU:HD23 | 1.99                     | 0.44              |
| 1:A:262:LYS:O    | 2:X:250:GLN:OE1  | 2.34                     | 0.43              |
| 1:A:263:THR:OG1  | 2:B:248:ALA:HB3  | 2.18                     | 0.43              |
| 1:C:282:LEU:HA   | 1:C:287:PHE:CE1  | 2.53                     | 0.43              |
| 2:F:258:THR:HG23 | 1:G:273:LEU:O    | 2.17                     | 0.43              |
| 2:F:268:LEU:HD13 | 2:H:261:PRO:CG   | 2.48                     | 0.43              |
| 1:I:76:GLN:HB2   | 2:J:29:ASN:HD22  | 1.83                     | 0.43              |
| 1:I:122:GLN:HB3  | 2:J:68:ASP:CG    | 2.43                     | 0.43              |
| 1:I:135:SER:HB2  | 2:J:93:ARG:HD2   | 2.00                     | 0.43              |
| 1:I:246:PRO:HD3  | 1:K:294:LEU:HB2  | 1.99                     | 0.43              |
| 2:J:65:ILE:HG23  | 2:J:112:GLU:HG3  | 2.00                     | 0.43              |
| 2:J:96:PHE:HA    | 2:J:164:ILE:O    | 2.18                     | 0.43              |
| 2:J:131:VAL:HG13 | 2:J:139:LEU:HD21 | 2.00                     | 0.43              |
| 1:K:236:LYS:HG2  | 2:L:223:LEU:HD13 | 1.99                     | 0.43              |
| 1:K:250:LYS:HG2  | 1:M:282:LEU:HD11 | 2.00                     | 0.43              |
| 2:L:57:LEU:C     | 2:L:57:LEU:HD12  | 2.43                     | 0.43              |
| 2:L:95:LEU:O     | 2:L:165:LEU:HA   | 2.18                     | 0.43              |
| 1:M:154:ILE:HG12 | 1:M:187:LEU:HD23 | 1.99                     | 0.43              |
| 1:M:252:ARG:HE   | 1:M:256:ALA:HB2  | 1.83                     | 0.43              |
| 2:P:214:ALA:HB1  | 1:Q:234:ALA:HB1  | 1.98                     | 0.43              |
| 2:P:224:ILE:HD11 | 2:P:228:LEU:HD21 | 1.99                     | 0.43              |
| 2:R:74:ARG:HE    | 2:R:119:LEU:HD13 | 1.82                     | 0.43              |
| 2:T:229:ALA:CB   | 1:U:245:ASN:HD21 | 2.31                     | 0.43              |
| 2:T:267:LEU:CD2  | 2:V:269:GLN:OE1  | 2.66                     | 0.43              |
| 1:U:72:ILE:HB    | 1:U:75:PHE:HD2   | 1.83                     | 0.43              |
| 1:U:280:LEU:HD23 | 1:U:280:LEU:O    | 2.18                     | 0.43              |
| 1:W:260:ILE:O    | 1:W:264:ILE:HB   | 2.18                     | 0.43              |
| 1:A:237:MET:O    | 1:A:240:GLU:HG3  | 2.18                     | 0.43              |
| 2:B:237:GLU:HB2  | 1:C:294:LEU:HD11 | 2.00                     | 0.43              |
| 2:D:268:LEU:HD12 | 1:E:272:TYR:CD2  | 2.53                     | 0.43              |
| 2:D:270:LEU:HD11 | 2:F:271:PRO:HD3  | 1.98                     | 0.43              |
| 2:F:200:VAL:O    | 2:F:200:VAL:CG1  | 2.65                     | 0.43              |
| 2:F:223:LEU:C    | 2:F:223:LEU:HD12 | 2.43                     | 0.43              |
| 2:F:267:LEU:CA   | 2:H:267:LEU:HB3  | 2.47                     | 0.43              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:144:VAL:HG11 | 1:G:164:ILE:CG1  | 2.48                     | 0.43              |
| 2:H:240:LYS:O    | 2:H:243:ALA:HB3  | 2.17                     | 0.43              |
| 1:I:68:LEU:O     | 1:I:68:LEU:HG    | 2.17                     | 0.43              |
| 2:J:214:ALA:CB   | 1:K:234:ALA:HA   | 2.45                     | 0.43              |
| 1:K:52:PHE:HD2   | 1:K:77:TYR:H     | 1.66                     | 0.43              |
| 1:K:113:ASN:ND2  | 1:K:116:GLU:HB3  | 2.34                     | 0.43              |
| 1:K:165:ARG:HH22 | 1:K:168:LEU:HD23 | 1.83                     | 0.43              |
| 1:K:277:ASN:ND2  | 1:M:280:LEU:HD11 | 2.34                     | 0.43              |
| 2:L:94:ILE:HG22  | 2:L:165:LEU:HD22 | 2.00                     | 0.43              |
| 2:L:221:ALA:HA   | 1:M:248:TYR:CB   | 2.48                     | 0.43              |
| 2:L:247:ILE:HD12 | 1:M:257:ALA:HB1  | 1.99                     | 0.43              |
| 2:L:258:THR:OG1  | 1:M:272:TYR:CB   | 2.65                     | 0.43              |
| 1:M:248:TYR:O    | 1:M:252:ARG:CB   | 2.66                     | 0.43              |
| 2:N:235:LEU:O    | 2:N:236:ILE:C    | 2.59                     | 0.43              |
| 1:O:108:VAL:C    | 1:O:109:LEU:HD12 | 2.42                     | 0.43              |
| 2:P:40:ASP:HA    | 2:P:61:VAL:HG22  | 2.00                     | 0.43              |
| 1:Q:52:PHE:HE1   | 2:R:32:ALA:CB    | 2.31                     | 0.43              |
| 2:T:244:ALA:O    | 2:T:248:ALA:HB3  | 2.18                     | 0.43              |
| 1:U:257:ALA:HA   | 1:U:260:ILE:HB   | 2.00                     | 0.43              |
| 2:X:221:ALA:HA   | 2:X:224:ILE:CG2  | 2.48                     | 0.43              |
| 2:B:227:SER:O    | 2:B:231:ALA:HB3  | 2.18                     | 0.43              |
| 1:C:293:SER:HA   | 1:C:298:LYS:HB2  | 2.01                     | 0.43              |
| 2:D:247:ILE:O    | 2:D:251:LEU:HG   | 2.19                     | 0.43              |
| 2:D:251:LEU:HD11 | 1:G:280:LEU:HD21 | 2.00                     | 0.43              |
| 1:E:214:VAL:HG22 | 2:F:208:LYS:HB2  | 1.98                     | 0.43              |
| 1:E:257:ALA:CA   | 1:G:279:VAL:HG13 | 2.48                     | 0.43              |
| 2:H:96:PHE:CE1   | 2:H:119:LEU:HD11 | 2.54                     | 0.43              |
| 2:J:224:ILE:O    | 2:J:228:LEU:HG   | 2.19                     | 0.43              |
| 1:K:135:SER:CB   | 2:L:93:ARG:HD3   | 2.48                     | 0.43              |
| 1:K:152:GLN:O    | 1:K:156:GLN:HB3  | 2.18                     | 0.43              |
| 1:K:242:LEU:HB3  | 1:K:249:ILE:HD12 | 2.00                     | 0.43              |
| 1:K:287:PHE:C    | 1:K:290:GLY:H    | 2.26                     | 0.43              |
| 2:L:132:ALA:HB1  | 1:M:155:THR:O    | 2.18                     | 0.43              |
| 1:M:228:ALA:HB1  | 2:N:220:ALA:HA   | 1.98                     | 0.43              |
| 2:N:35:ARG:O     | 2:N:67:PHE:HB2   | 2.18                     | 0.43              |
| 2:N:61:VAL:HB    | 1:O:68:LEU:CD2   | 2.48                     | 0.43              |
| 2:N:67:PHE:CD1   | 2:N:103:LEU:HD22 | 2.53                     | 0.43              |
| 2:N:184:GLU:O    | 2:N:188:VAL:HG23 | 2.19                     | 0.43              |
| 1:O:290:GLY:O    | 1:Q:282:LEU:HG   | 2.19                     | 0.43              |
| 1:Q:256:ALA:CB   | 2:R:241:LEU:HD12 | 2.46                     | 0.43              |
| 2:R:58:ILE:HG13  | 2:R:61:VAL:HG11  | 1.99                     | 0.43              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:S:232:ALA:HB1  | 2:T:224:ILE:HD13 | 2.00                     | 0.43              |
| 1:U:246:PRO:HG3  | 1:W:294:LEU:HG   | 2.00                     | 0.43              |
| 2:V:132:ALA:CB   | 1:W:154:ILE:HG23 | 2.46                     | 0.43              |
| 2:V:206:GLN:O    | 2:V:207:LYS:C    | 2.57                     | 0.43              |
| 2:X:236:ILE:HG22 | 2:X:240:LYS:HG3  | 2.00                     | 0.43              |
| 1:A:274:THR:O    | 2:X:259:TYR:C    | 2.61                     | 0.43              |
| 1:C:218:LYS:HA   | 1:C:221:GLN:HB3  | 2.00                     | 0.43              |
| 1:C:228:ALA:HB3  | 2:D:220:ALA:HB1  | 2.00                     | 0.43              |
| 1:E:238:LEU:CD1  | 2:F:235:LEU:HD13 | 2.48                     | 0.43              |
| 2:F:244:ALA:HA   | 2:F:247:ILE:CG1  | 2.48                     | 0.43              |
| 1:G:228:ALA:CB   | 2:H:220:ALA:HB2  | 2.49                     | 0.43              |
| 1:G:272:TYR:CD2  | 2:H:258:THR:HB   | 2.53                     | 0.43              |
| 2:H:128:LYS:HE2  | 1:I:157:ARG:HD3  | 1.99                     | 0.43              |
| 1:I:58:VAL:HG21  | 2:J:34:HIS:CB    | 2.45                     | 0.43              |
| 1:I:157:ARG:HH22 | 1:I:186:GLU:N    | 2.17                     | 0.43              |
| 2:J:129:SER:OG   | 1:K:158:ALA:HB2  | 2.19                     | 0.43              |
| 2:L:270:LEU:HD13 | 2:N:258:THR:HG22 | 1.98                     | 0.43              |
| 1:O:51:PHE:HB3   | 1:O:59:GLN:HE22  | 1.83                     | 0.43              |
| 1:O:98:ASP:OD1   | 1:O:98:ASP:O     | 2.37                     | 0.43              |
| 2:P:36:ALA:O     | 2:P:50:VAL:HB    | 2.18                     | 0.43              |
| 2:P:186:LYS:HG3  | 1:Q:212:PHE:CD2  | 2.53                     | 0.43              |
| 1:Q:50:ILE:CG2   | 1:Q:117:LEU:HB2  | 2.48                     | 0.43              |
| 2:R:39:PHE:HA    | 2:R:45:VAL:HG22  | 2.00                     | 0.43              |
| 2:R:72:ARG:HB2   | 2:R:96:PHE:CZ    | 2.54                     | 0.43              |
| 2:R:92:LEU:HD11  | 2:R:169:SER:N    | 2.34                     | 0.43              |
| 2:R:267:LEU:HD21 | 2:T:267:LEU:HD22 | 2.00                     | 0.43              |
| 2:T:80:THR:HG23  | 2:T:131:VAL:HG11 | 1.99                     | 0.43              |
| 1:U:50:ILE:CG2   | 1:U:117:LEU:HB2  | 2.48                     | 0.43              |
| 2:V:44:GLY:CA    | 1:W:45:GLY:HA2   | 2.49                     | 0.43              |
| 1:W:229:GLU:O    | 1:W:233:GLU:HB2  | 2.19                     | 0.43              |
| 2:D:266:VAL:HG11 | 2:F:264:GLN:NE2  | 2.34                     | 0.43              |
| 2:F:261:PRO:HA   | 1:G:281:ASN:ND2  | 2.33                     | 0.43              |
| 1:G:109:LEU:H    | 1:G:182:VAL:HG22 | 1.83                     | 0.43              |
| 1:G:291:SER:HA   | 1:I:283:GLN:HB3  | 2.00                     | 0.43              |
| 2:H:32:ALA:O     | 2:H:70:ARG:NE    | 2.51                     | 0.43              |
| 1:I:53:ASN:ND2   | 1:I:58:VAL:HG22  | 2.34                     | 0.43              |
| 1:I:156:GLN:O    | 1:I:160:VAL:HG23 | 2.18                     | 0.43              |
| 2:J:78:VAL:HG21  | 2:J:127:LEU:HB2  | 2.01                     | 0.43              |
| 2:J:94:ILE:HD11  | 2:J:123:THR:HG21 | 1.99                     | 0.43              |
| 2:J:207:LYS:HE3  | 1:K:226:VAL:HG23 | 2.00                     | 0.43              |
| 2:L:58:ILE:HG13  | 2:L:61:VAL:CG1   | 2.49                     | 0.43              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:L:203:ALA:HA   | 2:L:206:GLN:HG3  | 2.00                     | 0.43              |
| 2:L:267:LEU:HD21 | 2:N:269:GLN:HB2  | 2.00                     | 0.43              |
| 1:O:44:GLU:C     | 1:O:47:HIS:HD1   | 2.27                     | 0.43              |
| 1:O:52:PHE:HE1   | 2:P:32:ALA:N     | 2.16                     | 0.43              |
| 1:O:154:ILE:HA   | 1:O:187:LEU:HD23 | 2.01                     | 0.43              |
| 1:O:239:GLY:HA2  | 2:P:234:GLY:HA3  | 1.99                     | 0.43              |
| 1:O:292:ASP:O    | 1:O:295:ILE:HD12 | 2.18                     | 0.43              |
| 2:P:126:ILE:HD13 | 2:P:154:LEU:HA   | 1.99                     | 0.43              |
| 2:R:99:VAL:O     | 2:R:103:LEU:HG   | 2.19                     | 0.43              |
| 2:T:82:SER:HA    | 2:T:131:VAL:O    | 2.18                     | 0.43              |
| 2:T:203:ALA:HB1  | 1:U:226:VAL:HG11 | 2.00                     | 0.43              |
| 2:T:236:ILE:HA   | 1:U:254:ILE:HD12 | 2.00                     | 0.43              |
| 1:U:108:VAL:HG21 | 1:U:137:VAL:HG22 | 1.99                     | 0.43              |
| 1:U:154:ILE:HG13 | 1:U:187:LEU:HD23 | 1.99                     | 0.43              |
| 2:V:39:PHE:H     | 2:V:62:GLN:HG2   | 1.83                     | 0.43              |
| 2:V:134:PHE:HB3  | 2:V:138:GLU:OE1  | 2.17                     | 0.43              |
| 1:W:144:VAL:HG11 | 1:W:164:ILE:CG1  | 2.47                     | 0.43              |
| 2:B:236:ILE:O    | 2:B:240:LYS:HB2  | 2.19                     | 0.43              |
| 2:F:260:LEU:N    | 1:G:275:ALA:HA   | 2.33                     | 0.43              |
| 2:H:196:ALA:HB3  | 1:I:219:GLN:CB   | 2.49                     | 0.43              |
| 2:H:237:GLU:O    | 2:H:241:LEU:HD23 | 2.18                     | 0.43              |
| 2:H:257:ILE:CG2  | 1:I:273:LEU:HD11 | 2.49                     | 0.43              |
| 2:H:268:LEU:HD12 | 2:J:261:PRO:CG   | 2.49                     | 0.43              |
| 1:I:210:ALA:HB3  | 2:J:202:LYS:HG2  | 2.01                     | 0.43              |
| 2:J:225:ALA:HB1  | 1:K:245:ASN:HB3  | 2.00                     | 0.43              |
| 1:K:52:PHE:H     | 1:K:76:GLN:HE22  | 1.66                     | 0.43              |
| 2:L:57:LEU:CD2   | 2:L:62:GLN:OE1   | 2.65                     | 0.43              |
| 1:M:229:GLU:O    | 1:M:233:GLU:HG3  | 2.19                     | 0.43              |
| 1:M:252:ARG:O    | 1:M:256:ALA:HB3  | 2.18                     | 0.43              |
| 2:N:236:ILE:HA   | 1:O:254:ILE:HD11 | 2.00                     | 0.43              |
| 1:Q:47:HIS:HD2   | 1:Q:80:ILE:HG22  | 1.84                     | 0.43              |
| 1:Q:50:ILE:HG21  | 1:Q:117:LEU:CB   | 2.47                     | 0.43              |
| 1:S:205:GLN:HB3  | 1:S:209:ARG:NH2  | 2.34                     | 0.43              |
| 2:T:50:VAL:HG13  | 2:T:55:HIS:CG    | 2.54                     | 0.43              |
| 1:U:43:VAL:HG13  | 1:U:80:ILE:HA    | 2.01                     | 0.43              |
| 2:V:31:ASP:O     | 2:V:32:ALA:C     | 2.61                     | 0.43              |
| 2:V:272:GLN:CD   | 2:X:272:GLN:HE21 | 2.27                     | 0.43              |
| 1:W:267:SER:OG   | 2:X:252:SER:OG   | 2.30                     | 0.43              |
| 2:X:254:SER:HG   | 2:X:257:ILE:HD11 | 1.83                     | 0.43              |
| 1:A:251:LEU:CB   | 2:X:228:LEU:HD13 | 2.48                     | 0.43              |
| 1:A:253:LYS:HZ2  | 1:C:291:SER:HB2  | 1.83                     | 0.43              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:288:THR:HB   | 1:C:292:ASP:CG   | 2.43                     | 0.43              |
| 1:E:254:ILE:HA   | 1:G:282:LEU:HD11 | 2.01                     | 0.43              |
| 1:E:268:GLN:HB3  | 2:F:255:ARG:HA   | 2.00                     | 0.43              |
| 2:F:219:LYS:CA   | 2:F:222:GLU:OE1  | 2.64                     | 0.43              |
| 1:G:165:ARG:HD2  | 1:G:182:VAL:CG1  | 2.49                     | 0.43              |
| 1:G:242:LEU:CD1  | 2:H:238:LEU:HB2  | 2.48                     | 0.43              |
| 2:H:106:ILE:HG23 | 2:H:114:TYR:CB   | 2.48                     | 0.43              |
| 2:H:235:LEU:CD1  | 2:H:238:LEU:HD23 | 2.49                     | 0.43              |
| 2:J:61:VAL:CG1   | 2:J:62:GLN:N     | 2.82                     | 0.43              |
| 2:J:118:VAL:HG21 | 2:J:161:PHE:HB3  | 2.00                     | 0.43              |
| 2:J:258:THR:OG1  | 1:K:272:TYR:HB3  | 2.19                     | 0.43              |
| 1:K:79:ILE:O     | 1:K:81:TYR:CE1   | 2.71                     | 0.43              |
| 2:N:224:ILE:HG23 | 1:O:248:TYR:HA   | 2.01                     | 0.43              |
| 1:Q:71:ARG:HD3   | 1:Q:78:PRO:HG3   | 1.99                     | 0.43              |
| 1:Q:157:ARG:HA   | 1:Q:160:VAL:HB   | 2.00                     | 0.43              |
| 1:S:221:GLN:HA   | 2:T:216:GLY:HA3  | 2.01                     | 0.43              |
| 2:V:30:VAL:HG11  | 2:V:52:GLU:C     | 2.44                     | 0.43              |
| 2:V:92:LEU:HD22  | 2:V:150:VAL:CG1  | 2.48                     | 0.43              |
| 2:V:224:ILE:O    | 2:V:227:SER:HB3  | 2.19                     | 0.43              |
| 1:W:53:ASN:H     | 1:W:58:VAL:HG22  | 1.83                     | 0.43              |
| 2:D:257:ILE:HG23 | 1:E:271:ILE:HG12 | 2.00                     | 0.43              |
| 2:D:258:THR:HG1  | 2:D:260:LEU:HD21 | 1.81                     | 0.43              |
| 2:F:224:ILE:CD1  | 1:G:248:TYR:CD1  | 3.01                     | 0.43              |
| 2:F:259:TYR:CB   | 1:G:277:ASN:HB3  | 2.48                     | 0.43              |
| 1:G:214:VAL:HG22 | 2:H:209:ALA:HB3  | 2.01                     | 0.43              |
| 1:I:242:LEU:HB2  | 2:J:234:GLY:HA2  | 2.00                     | 0.43              |
| 1:K:253:LYS:O    | 1:K:257:ALA:CB   | 2.66                     | 0.43              |
| 2:L:28:TYR:CD1   | 2:L:57:LEU:CD2   | 3.01                     | 0.43              |
| 2:L:63:LYS:O     | 2:L:64:PRO:C     | 2.62                     | 0.43              |
| 2:N:30:VAL:HG13  | 2:N:34:HIS:C     | 2.43                     | 0.43              |
| 1:O:48:ARG:CD    | 1:O:65:ALA:HA    | 2.48                     | 0.43              |
| 1:Q:148:PHE:HB2  | 1:Q:153:LEU:HD21 | 2.00                     | 0.43              |
| 2:R:34:HIS:HA    | 2:R:67:PHE:O     | 2.19                     | 0.43              |
| 1:S:71:ARG:HB2   | 1:S:76:GLN:HG3   | 2.00                     | 0.43              |
| 2:T:94:ILE:HD11  | 2:T:123:THR:HG21 | 2.01                     | 0.43              |
| 2:T:130:VAL:HG21 | 2:T:150:VAL:CG2  | 2.49                     | 0.43              |
| 1:U:50:ILE:HG12  | 1:U:81:TYR:HE2   | 1.83                     | 0.43              |
| 1:U:51:PHE:CD1   | 1:U:64:LEU:HD11  | 2.53                     | 0.43              |
| 1:U:133:LEU:N    | 1:U:134:PRO:HD2  | 2.34                     | 0.43              |
| 1:U:260:ILE:HA   | 1:U:263:THR:H    | 1.83                     | 0.43              |
| 2:X:251:LEU:HD23 | 2:X:251:LEU:HA   | 1.55                     | 0.43              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:D:195:ARG:O    | 2:D:199:VAL:HG23 | 2.19                     | 0.43              |
| 2:D:233:ASP:HB2  | 1:E:294:LEU:HA   | 2.01                     | 0.43              |
| 2:F:195:ARG:O    | 2:F:199:VAL:CG2  | 2.65                     | 0.43              |
| 2:H:214:ALA:HB2  | 1:I:234:ALA:HA   | 2.01                     | 0.43              |
| 2:H:247:ILE:HD12 | 1:I:257:ALA:HB3  | 2.01                     | 0.43              |
| 1:I:176:SER:O    | 1:I:177:LEU:HD23 | 2.19                     | 0.43              |
| 2:J:38:ILE:HA    | 2:J:62:GLN:CG    | 2.49                     | 0.43              |
| 2:J:140:ILE:CG1  | 2:J:173:LEU:HD21 | 2.49                     | 0.43              |
| 2:J:222:GLU:HA   | 1:K:244:LYS:CE   | 2.49                     | 0.43              |
| 1:K:253:LYS:CD   | 2:L:241:LEU:HD21 | 2.49                     | 0.43              |
| 1:K:290:GLY:O    | 1:M:283:GLN:OE1  | 2.36                     | 0.43              |
| 2:N:224:ILE:HG12 | 1:O:251:LEU:CD2  | 2.48                     | 0.43              |
| 2:P:126:ILE:HD13 | 2:P:153:ASP:C    | 2.44                     | 0.43              |
| 2:P:203:ALA:O    | 2:P:206:GLN:HG3  | 2.19                     | 0.43              |
| 1:Q:108:VAL:HA   | 1:Q:182:VAL:HG22 | 2.01                     | 0.43              |
| 2:T:209:ALA:HA   | 2:T:212:ILE:HB   | 2.00                     | 0.43              |
| 2:T:224:ILE:O    | 2:T:227:SER:HB2  | 2.19                     | 0.43              |
| 1:U:50:ILE:HD13  | 1:U:118:PRO:N    | 2.34                     | 0.43              |
| 1:U:281:ASN:O    | 1:U:287:PHE:CB   | 2.67                     | 0.43              |
| 2:D:203:ALA:O    | 1:E:226:VAL:HG11 | 2.19                     | 0.43              |
| 1:E:235:ALA:HB1  | 2:F:228:LEU:CG   | 2.49                     | 0.43              |
| 1:G:252:ARG:HG3  | 2:H:241:LEU:HG   | 2.00                     | 0.43              |
| 2:H:92:LEU:HD22  | 2:H:150:VAL:HG11 | 2.01                     | 0.43              |
| 2:H:220:ALA:HB1  | 1:I:248:TYR:CE1  | 2.54                     | 0.43              |
| 1:I:45:GLY:O     | 1:I:84:ARG:HD3   | 2.19                     | 0.43              |
| 1:I:51:PHE:O     | 2:J:31:ASP:CG    | 2.62                     | 0.43              |
| 1:I:243:SER:O    | 1:K:294:LEU:O    | 2.36                     | 0.43              |
| 2:J:52:GLU:C     | 2:J:53:GLY:O     | 2.60                     | 0.43              |
| 1:K:117:LEU:N    | 1:K:118:PRO:CD   | 2.82                     | 0.43              |
| 1:K:157:ARG:HE   | 1:K:187:LEU:HD22 | 1.84                     | 0.43              |
| 1:K:235:ALA:HB1  | 2:L:224:ILE:CD1  | 2.49                     | 0.43              |
| 2:L:36:ALA:C     | 2:L:50:VAL:HB    | 2.43                     | 0.43              |
| 2:L:50:VAL:HG22  | 2:L:55:HIS:HB2   | 2.00                     | 0.43              |
| 2:L:110:ILE:HD11 | 2:L:117:ARG:NE   | 2.34                     | 0.43              |
| 1:M:272:TYR:CE2  | 2:N:258:THR:HA   | 2.54                     | 0.43              |
| 2:N:244:ALA:O    | 2:N:248:ALA:HB3  | 2.18                     | 0.43              |
| 1:O:57:GLY:HA3   | 2:P:52:GLU:HB3   | 2.00                     | 0.43              |
| 1:O:251:LEU:O    | 1:O:254:ILE:HB   | 2.19                     | 0.43              |
| 2:P:235:LEU:HD21 | 2:P:239:ARG:CD   | 2.49                     | 0.43              |
| 2:R:86:GLN:CB    | 2:R:136:ALA:HB2  | 2.44                     | 0.43              |
| 2:T:63:LYS:O     | 2:T:64:PRO:C     | 2.61                     | 0.43              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:U:57:GLY:HA3   | 2:V:52:GLU:OE1   | 2.19                     | 0.43              |
| 1:U:77:TYR:O     | 1:U:79:ILE:HD12  | 2.19                     | 0.43              |
| 1:U:109:LEU:HD12 | 1:U:109:LEU:N    | 2.34                     | 0.43              |
| 2:V:186:LYS:HD3  | 1:W:205:GLN:O    | 2.19                     | 0.43              |
| 2:V:267:LEU:HG   | 2:X:267:LEU:HD22 | 2.01                     | 0.43              |
| 1:W:104:ILE:HG21 | 1:W:141:LEU:HD22 | 2.00                     | 0.43              |
| 1:W:242:LEU:HD21 | 1:W:246:PRO:HA   | 2.00                     | 0.43              |
| 2:B:221:ALA:HB1  | 1:C:248:TYR:CG   | 2.52                     | 0.42              |
| 2:B:233:ASP:OD1  | 2:B:236:ILE:HD12 | 2.19                     | 0.42              |
| 2:B:254:SER:CB   | 1:C:267:SER:O    | 2.66                     | 0.42              |
| 2:D:224:ILE:HG21 | 1:E:248:TYR:HD2  | 1.84                     | 0.42              |
| 1:E:238:LEU:HD13 | 2:F:238:LEU:HD12 | 2.00                     | 0.42              |
| 2:H:41:ARG:CD    | 1:I:66:GLU:HG3   | 2.49                     | 0.42              |
| 1:I:203:ALA:HB2  | 2:J:195:ARG:HG2  | 2.01                     | 0.42              |
| 1:I:242:LEU:HB2  | 2:J:234:GLY:CA   | 2.49                     | 0.42              |
| 2:J:214:ALA:HB1  | 1:K:237:MET:SD   | 2.59                     | 0.42              |
| 2:J:246:ASP:O    | 2:J:249:TYR:HB2  | 2.19                     | 0.42              |
| 1:K:260:ILE:HG23 | 1:K:264:ILE:HB   | 2.01                     | 0.42              |
| 1:M:229:GLU:O    | 1:M:233:GLU:CG   | 2.67                     | 0.42              |
| 1:M:264:ILE:O    | 1:M:265:ALA:C    | 2.62                     | 0.42              |
| 2:N:41:ARG:HG3   | 1:O:65:ALA:HB3   | 2.01                     | 0.42              |
| 2:N:82:SER:HA    | 2:N:131:VAL:O    | 2.18                     | 0.42              |
| 2:N:130:VAL:HG11 | 2:N:150:VAL:HG23 | 2.00                     | 0.42              |
| 1:O:156:GLN:OE1  | 1:O:160:VAL:HG23 | 2.18                     | 0.42              |
| 2:P:96:PHE:CZ    | 2:P:115:ASP:CB   | 3.01                     | 0.42              |
| 1:Q:253:LYS:O    | 1:Q:257:ALA:CB   | 2.65                     | 0.42              |
| 2:T:235:LEU:O    | 2:T:235:LEU:HG   | 2.19                     | 0.42              |
| 1:U:79:ILE:HD12  | 1:U:79:ILE:H     | 1.83                     | 0.42              |
| 1:W:104:ILE:CG2  | 1:W:184:ILE:HG23 | 2.48                     | 0.42              |
| 1:A:239:GLY:HA3  | 2:B:231:ALA:HB1  | 2.01                     | 0.42              |
| 1:C:252:ARG:CZ   | 2:D:242:GLU:HG2  | 2.49                     | 0.42              |
| 2:D:224:ILE:CG2  | 1:E:248:TYR:HD2  | 2.32                     | 0.42              |
| 2:D:254:SER:CB   | 1:E:268:GLN:HA   | 2.49                     | 0.42              |
| 1:E:256:ALA:CB   | 2:F:241:LEU:HB3  | 2.49                     | 0.42              |
| 2:F:253:ARG:NH2  | 1:G:260:ILE:HG21 | 2.33                     | 0.42              |
| 1:G:242:LEU:HD22 | 1:G:249:ILE:CG1  | 2.47                     | 0.42              |
| 2:H:224:ILE:CD1  | 1:I:248:TYR:HA   | 2.38                     | 0.42              |
| 1:I:82:ASP:HB2   | 1:I:86:ARG:NH2   | 2.35                     | 0.42              |
| 2:J:62:GLN:O     | 2:J:62:GLN:OE1   | 2.38                     | 0.42              |
| 1:K:58:VAL:HB    | 2:L:52:GLU:OE1   | 2.19                     | 0.42              |
| 1:K:107:ARG:O    | 1:K:107:ARG:HG3  | 2.19                     | 0.42              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:225:ILE:HA   | 2:L:219:LYS:NZ   | 2.34                     | 0.42              |
| 1:K:287:PHE:CZ   | 1:K:291:SER:HB3  | 2.54                     | 0.42              |
| 2:L:63:LYS:O     | 2:L:65:ILE:HG13  | 2.19                     | 0.42              |
| 2:L:258:THR:H    | 1:M:272:TYR:HB2  | 1.84                     | 0.42              |
| 1:M:52:PHE:CD1   | 1:M:58:VAL:HG21  | 2.54                     | 0.42              |
| 1:M:72:ILE:H     | 1:M:72:ILE:HD12  | 1.84                     | 0.42              |
| 2:N:239:ARG:HH11 | 1:O:254:ILE:HG23 | 1.84                     | 0.42              |
| 1:O:204:GLN:HB2  | 2:P:198:PHE:CZ   | 2.53                     | 0.42              |
| 2:P:43:ARG:HG3   | 2:P:43:ARG:O     | 2.19                     | 0.42              |
| 1:Q:140:VAL:HG21 | 1:Q:168:LEU:HD12 | 2.01                     | 0.42              |
| 2:R:46:GLN:O     | 2:R:104:PRO:HB2  | 2.19                     | 0.42              |
| 1:S:49:ALA:HA    | 1:S:81:TYR:CD2   | 2.53                     | 0.42              |
| 1:S:57:GLY:HA3   | 2:T:31:ASP:HA    | 2.00                     | 0.42              |
| 1:S:152:GLN:O    | 1:S:156:GLN:HB3  | 2.19                     | 0.42              |
| 1:U:43:VAL:HG12  | 1:U:47:HIS:HB3   | 2.00                     | 0.42              |
| 2:V:45:VAL:HG21  | 2:V:107:PHE:CE2  | 2.53                     | 0.42              |
| 2:V:186:LYS:HA   | 1:W:209:ARG:HG2  | 2.01                     | 0.42              |
| 1:W:88:ARG:HB3   | 1:W:133:LEU:HD13 | 2.01                     | 0.42              |
| 1:W:228:ALA:CB   | 2:X:223:LEU:HB3  | 2.45                     | 0.42              |
| 1:A:238:LEU:HD13 | 2:B:238:LEU:HD12 | 2.01                     | 0.42              |
| 2:B:222:GLU:CG   | 1:C:241:ALA:HB1  | 2.49                     | 0.42              |
| 2:B:233:ASP:HA   | 2:B:236:ILE:HD12 | 2.00                     | 0.42              |
| 1:C:267:SER:C    | 1:C:269:ASN:H    | 2.26                     | 0.42              |
| 2:H:247:ILE:CD1  | 1:I:258:GLN:N    | 2.82                     | 0.42              |
| 1:I:167:GLU:O    | 1:I:170:GLU:HG3  | 2.20                     | 0.42              |
| 1:I:220:GLU:OE1  | 2:J:213:SER:HA   | 2.18                     | 0.42              |
| 2:J:48:ILE:HG22  | 2:J:49:VAL:O     | 2.20                     | 0.42              |
| 1:K:260:ILE:HG23 | 1:K:264:ILE:CD1  | 2.41                     | 0.42              |
| 1:M:233:GLU:HA   | 1:M:236:LYS:CB   | 2.49                     | 0.42              |
| 2:N:138:GLU:OE1  | 2:N:146:VAL:CG2  | 2.68                     | 0.42              |
| 1:O:225:ILE:HD12 | 2:P:219:LYS:HD3  | 2.01                     | 0.42              |
| 1:Q:43:VAL:HB    | 1:Q:66:GLU:OE1   | 2.20                     | 0.42              |
| 1:Q:57:GLY:HA2   | 2:R:30:VAL:O     | 2.19                     | 0.42              |
| 1:Q:232:ALA:HA   | 1:Q:235:ALA:HB3  | 2.02                     | 0.42              |
| 2:R:130:VAL:HG11 | 2:R:150:VAL:HG23 | 2.01                     | 0.42              |
| 2:R:136:ALA:HB1  | 2:R:175:PHE:CE1  | 2.54                     | 0.42              |
| 2:R:197:ARG:O    | 2:R:200:VAL:HB   | 2.20                     | 0.42              |
| 1:S:218:LYS:CE   | 2:T:212:ILE:HG21 | 2.48                     | 0.42              |
| 2:T:78:VAL:HG13  | 2:T:124:THR:HG23 | 2.02                     | 0.42              |
| 2:T:221:ALA:CB   | 1:U:248:TYR:CG   | 3.02                     | 0.42              |
| 1:U:52:PHE:CD2   | 1:U:77:TYR:O     | 2.72                     | 0.42              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:U:235:ALA:CA   | 2:V:235:LEU:HB2  | 2.49                     | 0.42              |
| 2:X:204:GLU:HA   | 2:X:207:LYS:HG2  | 2.00                     | 0.42              |
| 1:A:263:THR:OG1  | 2:B:248:ALA:CB   | 2.67                     | 0.42              |
| 1:C:196:ALA:HB3  | 2:D:191:GLN:HB3  | 2.00                     | 0.42              |
| 1:C:264:ILE:O    | 1:C:264:ILE:HG22 | 2.19                     | 0.42              |
| 1:C:267:SER:C    | 1:C:269:ASN:N    | 2.77                     | 0.42              |
| 2:D:260:LEU:C    | 1:E:275:ALA:H    | 2.27                     | 0.42              |
| 2:F:211:ILE:CD1  | 1:G:233:GLU:OE2  | 2.67                     | 0.42              |
| 2:F:237:GLU:HB2  | 1:G:294:LEU:CD1  | 2.49                     | 0.42              |
| 2:F:270:LEU:HD21 | 2:H:270:LEU:HD23 | 2.01                     | 0.42              |
| 1:G:140:VAL:HG13 | 1:G:167:GLU:OE1  | 2.19                     | 0.42              |
| 2:J:65:ILE:HD13  | 2:J:107:PHE:CD1  | 2.54                     | 0.42              |
| 1:K:249:ILE:HD13 | 2:L:237:GLU:CB   | 2.49                     | 0.42              |
| 1:O:213:LEU:HA   | 1:O:216:LYS:HG2  | 2.00                     | 0.42              |
| 2:P:131:VAL:HG13 | 2:P:139:LEU:HD11 | 2.00                     | 0.42              |
| 1:Q:52:PHE:CD1   | 1:Q:121:TYR:HD2  | 2.37                     | 0.42              |
| 1:Q:156:GLN:HE21 | 1:Q:159:GLN:HB3  | 1.83                     | 0.42              |
| 1:Q:235:ALA:HA   | 2:R:235:LEU:CB   | 2.50                     | 0.42              |
| 2:R:96:PHE:HB3   | 2:R:119:LEU:HD21 | 2.00                     | 0.42              |
| 2:T:200:VAL:HG11 | 1:U:222:ARG:CZ   | 2.50                     | 0.42              |
| 2:T:203:ALA:HA   | 2:T:206:GLN:HG3  | 2.02                     | 0.42              |
| 1:U:51:PHE:CE1   | 1:U:70:PHE:O     | 2.73                     | 0.42              |
| 1:U:123:ARG:HD2  | 2:V:97:ARG:HD3   | 2.01                     | 0.42              |
| 2:V:45:VAL:HG23  | 1:W:45:GLY:HA3   | 2.01                     | 0.42              |
| 2:X:197:ARG:O    | 2:X:200:VAL:HB   | 2.19                     | 0.42              |
| 1:A:231:GLU:OE1  | 2:B:239:ARG:NE   | 2.51                     | 0.42              |
| 1:A:241:ALA:HB1  | 2:X:225:ALA:HB3  | 2.02                     | 0.42              |
| 1:A:273:LEU:O    | 2:X:258:THR:OG1  | 2.31                     | 0.42              |
| 1:A:277:ASN:O    | 1:A:279:VAL:N    | 2.52                     | 0.42              |
| 2:B:247:ILE:HD12 | 1:C:278:LEU:CD2  | 2.43                     | 0.42              |
| 2:B:267:LEU:HB2  | 2:D:267:LEU:CG   | 2.50                     | 0.42              |
| 1:C:210:ALA:HB3  | 2:D:205:GLN:HB2  | 2.00                     | 0.42              |
| 1:C:264:ILE:CA   | 1:C:267:SER:HB3  | 2.48                     | 0.42              |
| 2:D:268:LEU:CD2  | 2:F:268:LEU:HA   | 2.50                     | 0.42              |
| 1:E:229:GLU:OE2  | 1:E:233:GLU:HB2  | 2.19                     | 0.42              |
| 1:G:121:TYR:O    | 1:G:125:GLY:HA2  | 2.20                     | 0.42              |
| 1:G:131:ARG:HH12 | 2:H:70:ARG:HB3   | 1.84                     | 0.42              |
| 2:H:36:ALA:HA    | 2:H:67:PHE:CD2   | 2.54                     | 0.42              |
| 1:I:72:ILE:HB    | 1:I:75:PHE:HD2   | 1.83                     | 0.42              |
| 1:I:144:VAL:HG13 | 1:I:163:LEU:HD22 | 2.00                     | 0.42              |
| 1:I:273:LEU:CD2  | 1:K:280:LEU:HB2  | 2.50                     | 0.42              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:J:130:VAL:HG12 | 2:J:134:PHE:CE2  | 2.55                     | 0.42              |
| 1:K:39:SER:HA    | 1:K:71:ARG:O     | 2.20                     | 0.42              |
| 1:K:148:PHE:CD2  | 1:K:160:VAL:HG22 | 2.53                     | 0.42              |
| 2:N:90:ILE:CG2   | 2:N:170:LEU:HD22 | 2.49                     | 0.42              |
| 1:O:231:GLU:O    | 1:O:234:ALA:HB3  | 2.19                     | 0.42              |
| 1:O:235:ALA:CB   | 2:P:224:ILE:HD13 | 2.49                     | 0.42              |
| 1:O:289:ARG:C    | 1:O:289:ARG:HD2  | 2.44                     | 0.42              |
| 2:P:57:LEU:HD12  | 2:P:58:ILE:O     | 2.20                     | 0.42              |
| 2:P:107:PHE:HE1  | 2:P:112:GLU:HG3  | 1.83                     | 0.42              |
| 2:R:260:LEU:CD1  | 2:T:261:PRO:HB3  | 2.49                     | 0.42              |
| 1:S:279:VAL:HG12 | 1:S:282:LEU:HD13 | 2.01                     | 0.42              |
| 2:T:78:VAL:CG1   | 2:T:128:LYS:HE2  | 2.49                     | 0.42              |
| 2:T:262:ALA:HB3  | 1:U:275:ALA:HB3  | 2.02                     | 0.42              |
| 1:U:59:GLN:O     | 1:U:59:GLN:HG2   | 2.18                     | 0.42              |
| 1:U:235:ALA:CB   | 2:V:224:ILE:CD1  | 2.97                     | 0.42              |
| 1:U:249:ILE:O    | 1:U:253:LYS:HG2  | 2.20                     | 0.42              |
| 1:A:228:ALA:O    | 1:A:231:GLU:HB2  | 2.19                     | 0.42              |
| 2:B:254:SER:CB   | 1:C:268:GLN:HA   | 2.49                     | 0.42              |
| 1:C:277:ASN:HB3  | 1:E:281:ASN:HA   | 2.01                     | 0.42              |
| 2:D:204:GLU:HA   | 2:D:207:LYS:HD3  | 2.01                     | 0.42              |
| 2:D:221:ALA:HB1  | 1:E:248:TYR:CD1  | 2.54                     | 0.42              |
| 2:F:259:TYR:HA   | 1:G:274:THR:O    | 2.20                     | 0.42              |
| 1:G:232:ALA:HA   | 2:H:224:ILE:CD1  | 2.49                     | 0.42              |
| 1:G:273:LEU:HB3  | 1:I:281:ASN:OD1  | 2.20                     | 0.42              |
| 2:H:57:LEU:HD12  | 2:H:58:ILE:N     | 2.35                     | 0.42              |
| 1:I:43:VAL:HG11  | 1:I:48:ARG:N     | 2.34                     | 0.42              |
| 1:I:53:ASN:HD21  | 1:I:58:VAL:HG13  | 1.84                     | 0.42              |
| 1:I:94:THR:OG1   | 1:I:142:LYS:HA   | 2.20                     | 0.42              |
| 1:I:150:ALA:HB1  | 1:I:189:PHE:CD2  | 2.55                     | 0.42              |
| 2:J:92:LEU:HA    | 2:J:169:SER:O    | 2.20                     | 0.42              |
| 2:J:153:ASP:O    | 2:J:156:GLU:HG3  | 2.20                     | 0.42              |
| 2:J:204:GLU:HA   | 2:J:207:LYS:HG2  | 2.01                     | 0.42              |
| 1:K:41:PHE:CD1   | 1:K:43:VAL:CG2   | 3.02                     | 0.42              |
| 1:K:48:ARG:HG3   | 1:K:83:ILE:HG21  | 2.01                     | 0.42              |
| 2:L:38:ILE:O     | 2:L:45:VAL:HG13  | 2.20                     | 0.42              |
| 2:N:40:ASP:O     | 2:N:44:GLY:O     | 2.37                     | 0.42              |
| 2:N:132:ALA:CB   | 1:O:155:THR:O    | 2.67                     | 0.42              |
| 2:N:146:VAL:O    | 2:N:150:VAL:HG23 | 2.19                     | 0.42              |
| 1:O:41:PHE:HB3   | 1:O:71:ARG:HE    | 1.84                     | 0.42              |
| 1:S:140:VAL:HG22 | 1:S:167:GLU:OE1  | 2.20                     | 0.42              |
| 2:T:103:LEU:HB2  | 2:T:104:PRO:HD3  | 2.02                     | 0.42              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:U:232:ALA:CB   | 2:V:223:LEU:HD22 | 2.47                     | 0.42              |
| 2:V:131:VAL:HG22 | 2:V:139:LEU:HD21 | 2.00                     | 0.42              |
| 2:X:212:ILE:O    | 2:X:215:GLU:HB2  | 2.19                     | 0.42              |
| 2:X:212:ILE:HA   | 2:X:215:GLU:HB2  | 2.01                     | 0.42              |
| 1:A:273:LEU:HB3  | 2:X:260:LEU:H    | 1.83                     | 0.42              |
| 1:A:280:LEU:C    | 1:A:282:LEU:N    | 2.77                     | 0.42              |
| 1:C:264:ILE:O    | 1:C:267:SER:HB3  | 2.20                     | 0.42              |
| 2:D:196:ALA:HB3  | 1:E:219:GLN:HB3  | 2.01                     | 0.42              |
| 2:D:233:ASP:HA   | 2:D:236:ILE:HD12 | 2.01                     | 0.42              |
| 2:D:262:ALA:N    | 1:E:274:THR:HG23 | 2.35                     | 0.42              |
| 1:G:234:ALA:C    | 1:G:238:LEU:HD12 | 2.45                     | 0.42              |
| 2:H:40:ASP:CB    | 2:H:61:VAL:HG22  | 2.50                     | 0.42              |
| 2:H:130:VAL:HG11 | 2:H:146:VAL:HG13 | 2.02                     | 0.42              |
| 2:H:218:SER:HB2  | 1:I:238:LEU:HG   | 2.01                     | 0.42              |
| 2:H:268:LEU:HD13 | 2:H:270:LEU:HD21 | 2.01                     | 0.42              |
| 1:I:64:LEU:HB3   | 1:I:69:HIS:HB3   | 2.02                     | 0.42              |
| 1:I:214:VAL:HG22 | 2:J:209:ALA:CB   | 2.48                     | 0.42              |
| 2:J:40:ASP:HB2   | 2:J:42:PHE:CE2   | 2.54                     | 0.42              |
| 2:J:259:TYR:HD2  | 1:K:275:ALA:HA   | 1.84                     | 0.42              |
| 2:L:90:ILE:HD12  | 2:L:131:VAL:HG21 | 2.01                     | 0.42              |
| 2:N:20:GLY:O     | 2:N:23:VAL:HG12  | 2.20                     | 0.42              |
| 2:N:46:GLN:O     | 2:N:104:PRO:CB   | 2.67                     | 0.42              |
| 2:N:91:THR:CB    | 2:N:172:HIS:HB3  | 2.49                     | 0.42              |
| 1:O:249:ILE:CG2  | 2:P:241:LEU:HD23 | 2.50                     | 0.42              |
| 1:Q:54:ARG:O     | 2:R:29:ASN:OD1   | 2.37                     | 0.42              |
| 1:S:156:GLN:O    | 1:S:160:VAL:HG23 | 2.20                     | 0.42              |
| 1:S:232:ALA:CB   | 2:T:224:ILE:HD13 | 2.50                     | 0.42              |
| 1:S:282:LEU:HD12 | 1:S:287:PHE:CZ   | 2.55                     | 0.42              |
| 2:T:40:ASP:HA    | 2:T:61:VAL:HG22  | 2.01                     | 0.42              |
| 2:T:126:ILE:HD13 | 2:T:154:LEU:CA   | 2.50                     | 0.42              |
| 2:T:261:PRO:CG   | 2:T:266:VAL:HG11 | 2.46                     | 0.42              |
| 1:U:140:VAL:CG2  | 1:U:168:LEU:HD13 | 2.50                     | 0.42              |
| 1:U:221:GLN:OE1  | 2:V:215:GLU:HB3  | 2.19                     | 0.42              |
| 1:U:249:ILE:CD1  | 2:V:237:GLU:HB3  | 2.49                     | 0.42              |
| 2:X:206:GLN:O    | 2:X:210:ALA:HB3  | 2.20                     | 0.42              |
| 1:A:237:MET:CG   | 2:X:218:SER:OG   | 2.67                     | 0.42              |
| 1:A:253:LYS:CD   | 1:C:291:SER:HB2  | 2.50                     | 0.42              |
| 1:A:273:LEU:C    | 2:X:258:THR:HG1  | 2.26                     | 0.42              |
| 2:B:215:GLU:O    | 2:B:219:LYS:HB2  | 2.20                     | 0.42              |
| 1:E:242:LEU:HB3  | 1:E:249:ILE:CD1  | 2.49                     | 0.42              |
| 1:E:277:ASN:OD1  | 1:G:284:ASP:N    | 2.52                     | 0.42              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:F:240:LYS:O    | 2:F:244:ALA:N    | 2.52                     | 0.42              |
| 1:G:287:PHE:HA   | 1:G:290:GLY:HA3  | 2.01                     | 0.42              |
| 2:H:35:ARG:NH2   | 2:H:52:GLU:HG3   | 2.34                     | 0.42              |
| 2:H:151:SER:CB   | 2:H:168:VAL:HB   | 2.50                     | 0.42              |
| 1:I:54:ARG:C     | 2:J:28:TYR:HE2   | 2.28                     | 0.42              |
| 1:I:55:ILE:CG2   | 2:J:29:ASN:O     | 2.68                     | 0.42              |
| 1:I:58:VAL:HG12  | 2:J:32:ALA:HA    | 2.02                     | 0.42              |
| 1:I:64:LEU:HB3   | 1:I:69:HIS:CB    | 2.50                     | 0.42              |
| 1:I:175:PHE:CG   | 2:J:95:LEU:HD11  | 2.55                     | 0.42              |
| 2:J:54:THR:HG22  | 2:J:56:PHE:HE1   | 1.84                     | 0.42              |
| 1:K:57:GLY:HA2   | 2:L:52:GLU:N     | 2.35                     | 0.42              |
| 1:O:252:ARG:O    | 1:O:256:ALA:HB3  | 2.20                     | 0.42              |
| 2:P:57:LEU:CD2   | 2:P:62:GLN:OE1   | 2.67                     | 0.42              |
| 2:P:74:ARG:HG3   | 2:P:119:LEU:HD13 | 2.02                     | 0.42              |
| 2:R:31:ASP:O     | 2:R:34:HIS:N     | 2.53                     | 0.42              |
| 2:R:76:VAL:HB    | 2:R:123:THR:HG21 | 2.02                     | 0.42              |
| 2:T:88:VAL:HG11  | 2:T:173:LEU:HD12 | 2.02                     | 0.42              |
| 2:T:228:LEU:HB2  | 1:U:247:GLY:HA3  | 2.02                     | 0.42              |
| 2:V:237:GLU:HG3  | 1:W:294:LEU:HD11 | 1.99                     | 0.42              |
| 1:W:107:ARG:HH12 | 1:W:185:THR:CG2  | 2.32                     | 0.42              |
| 2:X:187:GLN:O    | 2:X:191:GLN:HG2  | 2.19                     | 0.42              |
| 2:D:224:ILE:HG22 | 2:D:228:LEU:HD11 | 2.01                     | 0.42              |
| 1:E:274:THR:CG2  | 1:E:276:ASP:OD1  | 2.68                     | 0.42              |
| 2:F:235:LEU:HD12 | 2:F:238:LEU:C    | 2.45                     | 0.42              |
| 1:G:253:LYS:HD3  | 2:H:241:LEU:HD21 | 2.01                     | 0.42              |
| 1:I:248:TYR:O    | 1:I:248:TYR:CG   | 2.73                     | 0.42              |
| 1:I:249:ILE:O    | 1:I:249:ILE:CG2  | 2.67                     | 0.42              |
| 2:J:233:ASP:HB2  | 1:M:283:GLN:NE2  | 2.35                     | 0.42              |
| 1:K:47:HIS:CD2   | 1:K:82:ASP:HA    | 2.55                     | 0.42              |
| 1:M:94:THR:HG21  | 1:M:145:VAL:HB   | 2.02                     | 0.42              |
| 1:M:108:VAL:CG1  | 1:M:179:LEU:HD22 | 2.50                     | 0.42              |
| 1:M:239:GLY:HA2  | 2:N:234:GLY:CA   | 2.50                     | 0.42              |
| 2:N:80:THR:CG2   | 2:N:90:ILE:HD12  | 2.50                     | 0.42              |
| 1:O:104:ILE:HB   | 1:O:141:LEU:HD21 | 2.01                     | 0.42              |
| 1:Q:52:PHE:HD2   | 1:Q:77:TYR:HB2   | 1.85                     | 0.42              |
| 2:R:82:SER:HA    | 2:R:131:VAL:O    | 2.19                     | 0.42              |
| 2:R:134:PHE:HB3  | 2:R:138:GLU:OE1  | 2.20                     | 0.42              |
| 2:T:233:ASP:HB3  | 2:T:236:ILE:HB   | 2.00                     | 0.42              |
| 2:T:239:ARG:HG2  | 2:T:239:ARG:O    | 2.20                     | 0.42              |
| 1:U:270:ARG:HG3  | 1:U:270:ARG:O    | 2.19                     | 0.42              |
| 1:W:271:ILE:CG2  | 1:W:272:TYR:N    | 2.83                     | 0.42              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:W:281:ASN:O    | 1:W:287:PHE:HB3  | 2.19                     | 0.42              |
| 2:D:250:GLN:CD   | 2:D:251:LEU:N    | 2.78                     | 0.42              |
| 2:D:267:LEU:HA   | 2:F:265:SER:O    | 2.20                     | 0.42              |
| 1:E:263:THR:HG23 | 2:F:249:TYR:CD1  | 2.55                     | 0.42              |
| 1:E:264:ILE:HG23 | 1:E:267:SER:CB   | 2.49                     | 0.42              |
| 1:E:276:ASP:O    | 1:E:279:VAL:HG22 | 2.20                     | 0.42              |
| 2:F:200:VAL:HA   | 2:F:203:ALA:CB   | 2.46                     | 0.42              |
| 2:H:145:LEU:C    | 2:H:145:LEU:HD23 | 2.45                     | 0.42              |
| 1:I:52:PHE:CE2   | 1:I:77:TYR:HD2   | 2.37                     | 0.42              |
| 1:I:55:ILE:C     | 1:I:57:GLY:O     | 2.63                     | 0.42              |
| 2:J:50:VAL:CG1   | 2:J:55:HIS:HB3   | 2.50                     | 0.42              |
| 2:J:259:TYR:HA   | 1:K:273:LEU:O    | 2.20                     | 0.42              |
| 2:L:47:ASP:O     | 2:L:105:ARG:NH1  | 2.53                     | 0.42              |
| 2:N:194:GLU:HA   | 2:N:197:ARG:HG2  | 2.02                     | 0.42              |
| 1:O:79:ILE:HD13  | 1:O:121:TYR:OH   | 2.20                     | 0.42              |
| 1:Q:135:SER:O    | 2:R:93:ARG:NH2   | 2.52                     | 0.42              |
| 1:S:248:TYR:CD1  | 1:S:248:TYR:C    | 2.98                     | 0.42              |
| 2:T:60:TRP:CH2   | 1:U:66:GLU:O     | 2.73                     | 0.42              |
| 2:V:65:ILE:HD13  | 2:V:107:PHE:CE1  | 2.55                     | 0.42              |
| 2:V:207:LYS:CD   | 1:W:226:VAL:O    | 2.67                     | 0.42              |
| 1:W:242:LEU:HD13 | 1:W:249:ILE:HD12 | 2.02                     | 0.42              |
| 1:A:224:LYS:O    | 2:B:220:ALA:HB2  | 2.20                     | 0.41              |
| 1:A:251:LEU:HG   | 2:X:236:ILE:CD1  | 2.49                     | 0.41              |
| 1:C:277:ASN:O    | 1:E:283:GLN:CB   | 2.68                     | 0.41              |
| 2:D:233:ASP:O    | 2:D:234:GLY:C    | 2.62                     | 0.41              |
| 2:F:204:GLU:O    | 2:F:207:LYS:CG   | 2.67                     | 0.41              |
| 1:G:232:ALA:HA   | 2:H:224:ILE:CG1  | 2.49                     | 0.41              |
| 1:G:254:ILE:O    | 1:G:257:ALA:HB3  | 2.20                     | 0.41              |
| 2:H:80:THR:HG21  | 2:H:131:VAL:HB   | 2.01                     | 0.41              |
| 2:H:92:LEU:CD2   | 2:H:150:VAL:HG12 | 2.46                     | 0.41              |
| 1:I:71:ARG:HD3   | 1:I:78:PRO:HG3   | 2.01                     | 0.41              |
| 1:I:135:SER:O    | 2:J:171:THR:HB   | 2.20                     | 0.41              |
| 1:I:252:ARG:O    | 1:I:253:LYS:C    | 2.62                     | 0.41              |
| 2:J:65:ILE:HG23  | 2:J:112:GLU:CG   | 2.49                     | 0.41              |
| 2:L:28:TYR:HE2   | 2:L:36:ALA:HB2   | 1.85                     | 0.41              |
| 2:L:62:GLN:HG2   | 2:L:65:ILE:HD12  | 2.01                     | 0.41              |
| 1:M:51:PHE:CE2   | 1:M:62:THR:HG21  | 2.54                     | 0.41              |
| 2:T:28:TYR:CE1   | 2:T:57:LEU:HD23  | 2.55                     | 0.41              |
| 1:U:52:PHE:HD1   | 2:V:32:ALA:HB3   | 1.85                     | 0.41              |
| 2:V:224:ILE:HD11 | 2:V:228:LEU:HD21 | 2.02                     | 0.41              |
| 2:V:226:ASN:O    | 2:V:230:THR:HG23 | 2.20                     | 0.41              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:W:167:GLU:O    | 1:W:170:GLU:HG3  | 2.20                     | 0.41              |
| 1:W:207:ALA:CA   | 2:X:205:GLN:HG2  | 2.50                     | 0.41              |
| 1:W:264:ILE:HG12 | 2:X:249:TYR:CA   | 2.46                     | 0.41              |
| 1:W:288:THR:HA   | 1:W:292:ASP:HB3  | 2.01                     | 0.41              |
| 2:X:203:ALA:HA   | 2:X:206:GLN:HE21 | 1.85                     | 0.41              |
| 2:X:217:ASP:C    | 2:X:217:ASP:OD1  | 2.62                     | 0.41              |
| 1:A:223:GLN:O    | 1:A:226:VAL:CG2  | 2.68                     | 0.41              |
| 1:A:240:GLU:N    | 2:B:231:ALA:HB1  | 2.34                     | 0.41              |
| 1:A:260:ILE:O    | 2:B:248:ALA:CB   | 2.67                     | 0.41              |
| 1:A:268:GLN:O    | 1:A:269:ASN:C    | 2.63                     | 0.41              |
| 2:B:247:ILE:HG23 | 2:B:251:LEU:CD1  | 2.50                     | 0.41              |
| 2:B:270:LEU:HG   | 2:D:269:GLN:O    | 2.20                     | 0.41              |
| 1:C:206:GLU:O    | 1:C:210:ALA:HB2  | 2.20                     | 0.41              |
| 1:E:221:GLN:HA   | 2:F:216:GLY:HA3  | 2.03                     | 0.41              |
| 1:E:273:LEU:HD22 | 1:E:277:ASN:CB   | 2.49                     | 0.41              |
| 1:G:236:LYS:HB2  | 2:H:223:LEU:HD21 | 2.03                     | 0.41              |
| 2:H:49:VAL:O     | 2:H:49:VAL:HG13  | 2.19                     | 0.41              |
| 1:I:189:PHE:HB2  | 1:I:193:TYR:CE1  | 2.55                     | 0.41              |
| 1:I:207:ALA:HA   | 2:J:202:LYS:HB2  | 2.01                     | 0.41              |
| 2:J:28:TYR:OH    | 2:J:57:LEU:HD23  | 2.21                     | 0.41              |
| 2:J:35:ARG:O     | 2:J:67:PHE:HD2   | 2.03                     | 0.41              |
| 2:J:121:SER:HA   | 1:K:107:ARG:NH1  | 2.35                     | 0.41              |
| 2:L:80:THR:HG23  | 2:L:131:VAL:HG11 | 2.00                     | 0.41              |
| 1:M:242:LEU:C    | 2:N:234:GLY:HA2  | 2.44                     | 0.41              |
| 1:M:271:ILE:HG22 | 1:M:273:LEU:HG   | 2.00                     | 0.41              |
| 1:M:277:ASN:CA   | 1:O:280:LEU:HD11 | 2.50                     | 0.41              |
| 1:M:281:ASN:O    | 1:M:287:PHE:CB   | 2.68                     | 0.41              |
| 1:O:140:VAL:HG13 | 1:O:167:GLU:OE1  | 2.20                     | 0.41              |
| 1:O:142:LYS:HE3  | 2:P:143:ARG:NH1  | 2.35                     | 0.41              |
| 1:O:214:VAL:O    | 2:P:209:ALA:CB   | 2.68                     | 0.41              |
| 1:O:251:LEU:O    | 1:O:251:LEU:HG   | 2.20                     | 0.41              |
| 2:R:62:GLN:OE1   | 2:R:62:GLN:O     | 2.38                     | 0.41              |
| 1:U:285:GLU:HA   | 1:U:288:THR:OG1  | 2.20                     | 0.41              |
| 2:V:197:ARG:HA   | 2:V:200:VAL:HG23 | 2.02                     | 0.41              |
| 2:V:200:VAL:HG22 | 1:W:223:GLN:CA   | 2.50                     | 0.41              |
| 1:A:251:LEU:HB2  | 2:X:228:LEU:HD13 | 2.01                     | 0.41              |
| 1:A:273:LEU:HD22 | 2:X:260:LEU:HG   | 2.02                     | 0.41              |
| 2:D:212:ILE:O    | 2:D:215:GLU:HB2  | 2.21                     | 0.41              |
| 2:D:235:LEU:HG   | 2:D:235:LEU:O    | 2.20                     | 0.41              |
| 2:D:253:ARG:HD3  | 1:E:265:ALA:HB1  | 2.02                     | 0.41              |
| 1:E:264:ILE:O    | 1:E:267:SER:HB3  | 2.19                     | 0.41              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:276:ASP:C    | 1:E:276:ASP:OD1  | 2.63                     | 0.41              |
| 2:F:269:GLN:OE1  | 2:H:269:GLN:HB2  | 2.21                     | 0.41              |
| 1:G:165:ARG:HH12 | 1:G:168:LEU:CD2  | 2.31                     | 0.41              |
| 1:G:235:ALA:HA   | 2:H:235:LEU:CB   | 2.50                     | 0.41              |
| 2:H:29:ASN:OD1   | 2:H:29:ASN:O     | 2.38                     | 0.41              |
| 2:H:67:PHE:CG    | 2:H:103:LEU:HD22 | 2.56                     | 0.41              |
| 1:I:79:ILE:O     | 1:I:81:TYR:CD1   | 2.73                     | 0.41              |
| 1:I:221:GLN:NE2  | 2:J:212:ILE:HA   | 2.35                     | 0.41              |
| 2:J:88:VAL:HG22  | 2:J:175:PHE:HE1  | 1.86                     | 0.41              |
| 1:K:73:PRO:C     | 1:K:75:PHE:H     | 2.29                     | 0.41              |
| 1:K:214:VAL:HA   | 1:K:217:ALA:HB3  | 2.02                     | 0.41              |
| 1:K:273:LEU:HD12 | 1:M:280:LEU:HB3  | 2.01                     | 0.41              |
| 2:L:46:GLN:O     | 2:L:104:PRO:HB3  | 2.21                     | 0.41              |
| 2:L:255:ARG:HG2  | 1:M:270:ARG:HB3  | 2.02                     | 0.41              |
| 2:N:88:VAL:HG12  | 2:N:90:ILE:HG13  | 2.03                     | 0.41              |
| 1:O:106:LEU:HD11 | 1:O:165:ARG:NH2  | 2.35                     | 0.41              |
| 2:P:86:GLN:HE22  | 1:Q:197:VAL:HG13 | 1.85                     | 0.41              |
| 2:P:225:ALA:HB1  | 1:Q:245:ASN:OD1  | 2.20                     | 0.41              |
| 1:Q:214:VAL:HG11 | 2:R:205:GLN:O    | 2.20                     | 0.41              |
| 2:R:46:GLN:O     | 2:R:104:PRO:CB   | 2.69                     | 0.41              |
| 2:R:57:LEU:HD12  | 2:R:58:ILE:C     | 2.45                     | 0.41              |
| 2:R:63:LYS:O     | 2:R:65:ILE:HG12  | 2.21                     | 0.41              |
| 1:S:140:VAL:HG11 | 1:S:168:LEU:HB2  | 2.02                     | 0.41              |
| 2:T:60:TRP:O     | 2:T:60:TRP:CG    | 2.73                     | 0.41              |
| 1:U:81:TYR:CZ    | 1:U:121:TYR:CD1  | 3.09                     | 0.41              |
| 1:U:221:GLN:HA   | 2:V:216:GLY:HA3  | 2.01                     | 0.41              |
| 2:V:215:GLU:HG2  | 1:W:237:MET:CE   | 2.50                     | 0.41              |
| 1:W:41:PHE:CD1   | 1:W:43:VAL:HG23  | 2.47                     | 0.41              |
| 1:W:214:VAL:CG2  | 2:X:212:ILE:HD12 | 2.34                     | 0.41              |
| 1:W:235:ALA:CB   | 2:X:235:LEU:HB2  | 2.50                     | 0.41              |
| 1:W:237:MET:HA   | 1:W:240:GLU:OE1  | 2.20                     | 0.41              |
| 1:A:225:ILE:O    | 1:A:229:GLU:HB2  | 2.20                     | 0.41              |
| 1:A:233:GLU:O    | 1:A:236:LYS:HG3  | 2.19                     | 0.41              |
| 1:C:232:ALA:CB   | 2:D:223:LEU:CD1  | 2.99                     | 0.41              |
| 1:E:225:ILE:CD1  | 2:F:219:LYS:HD2  | 2.50                     | 0.41              |
| 1:G:48:ARG:HG2   | 1:G:83:ILE:HD13  | 2.02                     | 0.41              |
| 1:G:249:ILE:HD13 | 2:H:237:GLU:CB   | 2.51                     | 0.41              |
| 1:G:279:VAL:HG12 | 1:G:280:LEU:HD13 | 2.02                     | 0.41              |
| 2:H:39:PHE:CD1   | 2:H:40:ASP:N     | 2.88                     | 0.41              |
| 2:H:85:LEU:O     | 2:H:85:LEU:CG    | 2.68                     | 0.41              |
| 2:J:268:LEU:HD12 | 2:L:268:LEU:HD22 | 2.03                     | 0.41              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:71:ARG:HB3   | 1:K:78:PRO:HG3   | 2.03                     | 0.41              |
| 2:L:39:PHE:H     | 2:L:62:GLN:HB2   | 1.85                     | 0.41              |
| 2:L:57:LEU:HB2   | 2:L:62:GLN:HB3   | 2.02                     | 0.41              |
| 2:L:142:GLN:O    | 2:L:146:VAL:HG23 | 2.21                     | 0.41              |
| 2:L:218:SER:CB   | 1:M:237:MET:SD   | 3.08                     | 0.41              |
| 2:N:236:ILE:HA   | 1:O:254:ILE:CD1  | 2.50                     | 0.41              |
| 1:O:249:ILE:HG23 | 2:P:241:LEU:CD2  | 2.50                     | 0.41              |
| 2:P:38:ILE:HA    | 2:P:62:GLN:HG3   | 2.01                     | 0.41              |
| 1:Q:62:THR:C     | 1:Q:63:ILE:HG13  | 2.45                     | 0.41              |
| 2:R:207:LYS:CE   | 1:S:226:VAL:HG13 | 2.50                     | 0.41              |
| 1:S:139:GLU:OE1  | 2:T:169:SER:HB2  | 2.20                     | 0.41              |
| 1:U:41:PHE:HB2   | 1:U:43:VAL:HG23  | 2.01                     | 0.41              |
| 1:W:278:LEU:C    | 1:W:279:VAL:HG23 | 2.44                     | 0.41              |
| 2:D:235:LEU:CG   | 2:D:239:ARG:HG2  | 2.50                     | 0.41              |
| 2:D:268:LEU:HD11 | 2:F:260:LEU:HB3  | 2.02                     | 0.41              |
| 1:E:252:ARG:HG2  | 2:F:238:LEU:HD22 | 2.01                     | 0.41              |
| 2:F:259:TYR:O    | 2:F:259:TYR:CD1  | 2.73                     | 0.41              |
| 1:G:221:GLN:HB2  | 2:H:212:ILE:HG23 | 2.01                     | 0.41              |
| 1:G:221:GLN:HA   | 2:H:212:ILE:HG23 | 2.02                     | 0.41              |
| 2:H:93:ARG:CD    | 2:H:171:THR:HG21 | 2.50                     | 0.41              |
| 1:I:54:ARG:HB2   | 2:J:28:TYR:CE2   | 2.56                     | 0.41              |
| 1:I:278:LEU:HD23 | 1:I:280:LEU:HG   | 2.02                     | 0.41              |
| 2:J:39:PHE:HD1   | 2:J:45:VAL:HG22  | 1.86                     | 0.41              |
| 2:J:239:ARG:O    | 2:J:243:ALA:CB   | 2.68                     | 0.41              |
| 1:K:150:ALA:HA   | 1:K:153:LEU:HD12 | 2.02                     | 0.41              |
| 2:L:39:PHE:HB2   | 2:L:107:PHE:HE2  | 1.86                     | 0.41              |
| 2:L:239:ARG:HG2  | 1:M:254:ILE:CG2  | 2.49                     | 0.41              |
| 1:O:41:PHE:CD1   | 1:O:43:VAL:CG2   | 3.03                     | 0.41              |
| 2:R:138:GLU:OE1  | 2:R:146:VAL:CG2  | 2.68                     | 0.41              |
| 1:S:249:ILE:O    | 1:S:253:LYS:HG2  | 2.20                     | 0.41              |
| 2:T:134:PHE:HD2  | 2:T:146:VAL:HG13 | 1.85                     | 0.41              |
| 1:U:90:ILE:HD12  | 1:U:137:VAL:HG21 | 2.02                     | 0.41              |
| 1:U:150:ALA:HA   | 1:U:153:LEU:HB2  | 2.02                     | 0.41              |
| 1:U:154:ILE:HG12 | 1:U:187:LEU:HD23 | 2.01                     | 0.41              |
| 1:W:242:LEU:HD23 | 1:W:242:LEU:C    | 2.45                     | 0.41              |
| 2:B:218:SER:OG   | 1:C:237:MET:SD   | 2.73                     | 0.41              |
| 2:B:237:GLU:O    | 2:B:241:LEU:N    | 2.54                     | 0.41              |
| 2:D:250:GLN:OE1  | 1:E:264:ILE:HB   | 2.20                     | 0.41              |
| 2:H:247:ILE:CD1  | 1:I:254:ILE:O    | 2.69                     | 0.41              |
| 1:I:288:THR:O    | 1:I:292:ASP:HB3  | 2.20                     | 0.41              |
| 1:K:49:ALA:O     | 1:K:64:LEU:HB2   | 2.21                     | 0.41              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:L:45:VAL:HB    | 2:L:108:THR:HG23 | 2.03                     | 0.41              |
| 2:L:49:VAL:O     | 2:L:49:VAL:HG13  | 2.21                     | 0.41              |
| 1:M:140:VAL:HG11 | 1:M:168:LEU:HD13 | 2.02                     | 0.41              |
| 2:N:39:PHE:CE1   | 2:N:45:VAL:HG22  | 2.54                     | 0.41              |
| 2:N:197:ARG:N    | 2:N:197:ARG:HD2  | 2.35                     | 0.41              |
| 2:P:60:TRP:CD2   | 2:P:60:TRP:O     | 2.74                     | 0.41              |
| 2:P:120:PRO:O    | 2:P:124:THR:HG22 | 2.21                     | 0.41              |
| 2:P:223:LEU:C    | 2:P:223:LEU:HD23 | 2.45                     | 0.41              |
| 1:Q:249:ILE:HG21 | 2:R:237:GLU:HB3  | 2.03                     | 0.41              |
| 2:R:224:ILE:O    | 2:R:228:LEU:HG   | 2.21                     | 0.41              |
| 1:S:236:LYS:HA   | 2:T:227:SER:HB3  | 2.02                     | 0.41              |
| 2:T:126:ILE:CD1  | 2:T:154:LEU:HA   | 2.50                     | 0.41              |
| 1:U:42:THR:O     | 1:U:43:VAL:C     | 2.64                     | 0.41              |
| 1:U:165:ARG:CD   | 1:U:182:VAL:HB   | 2.50                     | 0.41              |
| 1:W:110:SER:HB3  | 1:W:133:LEU:HD21 | 2.03                     | 0.41              |
| 1:W:229:GLU:O    | 1:W:233:GLU:CB   | 2.69                     | 0.41              |
| 2:B:247:ILE:HG23 | 2:B:251:LEU:CG   | 2.51                     | 0.41              |
| 1:C:244:LYS:HG3  | 1:C:245:ASN:N    | 2.36                     | 0.41              |
| 1:C:263:THR:HG21 | 2:D:249:TYR:CG   | 2.56                     | 0.41              |
| 2:D:239:ARG:HD3  | 2:D:243:ALA:CB   | 2.50                     | 0.41              |
| 1:E:252:ARG:O    | 1:E:256:ALA:HB3  | 2.20                     | 0.41              |
| 2:F:219:LYS:O    | 2:F:223:LEU:HG   | 2.21                     | 0.41              |
| 2:F:260:LEU:H    | 1:G:275:ALA:HA   | 1.85                     | 0.41              |
| 2:F:267:LEU:O    | 2:F:267:LEU:HG   | 2.20                     | 0.41              |
| 2:H:90:ILE:HD11  | 2:H:139:LEU:HD13 | 2.01                     | 0.41              |
| 2:H:131:VAL:HG13 | 2:H:139:LEU:CD1  | 2.51                     | 0.41              |
| 2:H:225:ALA:HB1  | 1:I:245:ASN:N    | 2.35                     | 0.41              |
| 2:H:241:LEU:N    | 2:H:241:LEU:HD22 | 2.36                     | 0.41              |
| 1:I:46:GLY:O     | 1:I:84:ARG:HG3   | 2.20                     | 0.41              |
| 1:I:50:ILE:CD1   | 1:I:118:PRO:HG3  | 2.50                     | 0.41              |
| 1:I:274:THR:CG2  | 1:I:275:ALA:H    | 2.34                     | 0.41              |
| 2:J:27:LEU:O     | 2:J:28:TYR:HB3   | 2.20                     | 0.41              |
| 2:J:35:ARG:CZ    | 2:J:52:GLU:HG3   | 2.51                     | 0.41              |
| 2:J:122:ILE:HG13 | 2:J:123:THR:N    | 2.36                     | 0.41              |
| 2:J:123:THR:O    | 2:J:127:LEU:HD13 | 2.21                     | 0.41              |
| 2:J:243:ALA:O    | 2:J:244:ALA:C    | 2.64                     | 0.41              |
| 1:K:150:ALA:O    | 1:K:153:LEU:HB2  | 2.21                     | 0.41              |
| 2:L:240:LYS:HE2  | 1:O:280:LEU:HD13 | 2.02                     | 0.41              |
| 1:M:141:LEU:O    | 1:M:145:VAL:HG23 | 2.20                     | 0.41              |
| 1:M:260:ILE:O    | 1:M:264:ILE:N    | 2.53                     | 0.41              |
| 2:N:78:VAL:HG13  | 2:N:124:THR:HG23 | 2.02                     | 0.41              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:P:90:ILE:HD12  | 2:P:131:VAL:HG21 | 2.02                     | 0.41              |
| 2:P:233:ASP:CG   | 2:P:236:ILE:HD12 | 2.45                     | 0.41              |
| 2:P:239:ARG:HH22 | 1:Q:255:ARG:HA   | 1.85                     | 0.41              |
| 1:Q:149:ASN:N    | 1:Q:152:GLN:HE21 | 2.18                     | 0.41              |
| 1:Q:154:ILE:HA   | 1:Q:187:LEU:HD23 | 2.02                     | 0.41              |
| 1:S:47:HIS:CD2   | 1:S:80:ILE:HG22  | 2.55                     | 0.41              |
| 1:S:63:ILE:HG12  | 1:S:117:LEU:HB2  | 2.02                     | 0.41              |
| 2:T:80:THR:CG2   | 2:T:90:ILE:HD12  | 2.51                     | 0.41              |
| 2:T:146:VAL:CG1  | 2:T:170:LEU:HD11 | 2.50                     | 0.41              |
| 2:V:31:ASP:O     | 2:V:34:HIS:HB2   | 2.20                     | 0.41              |
| 2:V:203:ALA:C    | 1:W:226:VAL:HG12 | 2.46                     | 0.41              |
| 2:V:251:LEU:O    | 2:V:254:SER:OG   | 2.39                     | 0.41              |
| 1:W:107:ARG:C    | 1:W:182:VAL:HG13 | 2.46                     | 0.41              |
| 1:W:259:ASN:HA   | 1:W:262:LYS:HE2  | 2.03                     | 0.41              |
| 1:A:226:VAL:CG2  | 2:X:206:GLN:NE2  | 2.77                     | 0.41              |
| 1:A:250:LYS:HB3  | 2:X:233:ASP:OD2  | 2.20                     | 0.41              |
| 1:A:273:LEU:HB2  | 2:X:258:THR:O    | 2.21                     | 0.41              |
| 2:B:271:PRO:HB2  | 2:X:272:GLN:O    | 2.21                     | 0.41              |
| 1:C:229:GLU:HA   | 1:C:232:ALA:CB   | 2.50                     | 0.41              |
| 1:C:263:THR:HG22 | 1:C:263:THR:O    | 2.21                     | 0.41              |
| 1:C:272:TYR:N    | 2:D:260:LEU:CD2  | 2.84                     | 0.41              |
| 1:E:281:ASN:O    | 1:E:287:PHE:CD1  | 2.73                     | 0.41              |
| 2:F:246:ASP:CB   | 1:G:254:ILE:HG23 | 2.51                     | 0.41              |
| 1:G:217:ALA:HB3  | 2:H:209:ALA:CB   | 2.39                     | 0.41              |
| 1:G:263:THR:HG21 | 2:H:245:GLU:O    | 2.21                     | 0.41              |
| 2:H:98:PRO:HG3   | 2:H:114:TYR:CE2  | 2.56                     | 0.41              |
| 1:I:48:ARG:NE    | 1:I:114:ALA:HB1  | 2.35                     | 0.41              |
| 1:I:53:ASN:ND2   | 1:I:58:VAL:HG13  | 2.35                     | 0.41              |
| 1:I:236:LYS:HA   | 2:J:227:SER:CB   | 2.50                     | 0.41              |
| 1:I:257:ALA:HA   | 1:I:260:ILE:HD12 | 2.02                     | 0.41              |
| 1:K:41:PHE:CZ    | 1:K:69:HIS:CB    | 3.04                     | 0.41              |
| 1:K:53:ASN:OD1   | 1:K:75:PHE:CE2   | 2.74                     | 0.41              |
| 2:L:60:TRP:HA    | 2:L:63:LYS:HA    | 2.02                     | 0.41              |
| 2:L:242:GLU:O    | 2:L:246:ASP:OD1  | 2.39                     | 0.41              |
| 2:L:267:LEU:HD21 | 2:N:269:GLN:CB   | 2.50                     | 0.41              |
| 1:M:274:THR:HG22 | 1:M:275:ALA:N    | 2.36                     | 0.41              |
| 2:N:57:LEU:HD12  | 2:N:58:ILE:C     | 2.46                     | 0.41              |
| 2:N:80:THR:HG23  | 2:N:131:VAL:HG11 | 2.01                     | 0.41              |
| 2:N:217:ASP:OD1  | 1:O:248:TYR:HE2  | 2.04                     | 0.41              |
| 2:N:221:ALA:CB   | 1:O:242:LEU:HD21 | 2.51                     | 0.41              |
| 2:P:92:LEU:HD22  | 2:P:127:LEU:HD11 | 2.03                     | 0.41              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:Q:263:THR:HG21 | 2:R:245:GLU:HB3  | 2.03                     | 0.41              |
| 1:Q:272:TYR:OH   | 2:R:258:THR:HB   | 2.21                     | 0.41              |
| 2:R:37:VAL:HG21  | 2:R:104:PRO:CA   | 2.51                     | 0.41              |
| 1:S:289:ARG:HA   | 1:S:293:SER:HB3  | 2.03                     | 0.41              |
| 2:X:202:LYS:O    | 2:X:206:GLN:HG3  | 2.21                     | 0.41              |
| 1:A:238:LEU:HD13 | 2:B:238:LEU:HB2  | 2.02                     | 0.41              |
| 1:A:249:ILE:HD13 | 1:C:294:LEU:CG   | 2.46                     | 0.41              |
| 2:B:262:ALA:CB   | 1:C:274:THR:HG21 | 2.51                     | 0.41              |
| 2:B:267:LEU:CA   | 2:D:267:LEU:HG   | 2.51                     | 0.41              |
| 1:C:225:ILE:O    | 1:C:229:GLU:HB2  | 2.21                     | 0.41              |
| 1:C:276:ASP:O    | 1:C:279:VAL:HG22 | 2.21                     | 0.41              |
| 1:E:261:SER:HA   | 1:E:264:ILE:HB   | 2.03                     | 0.41              |
| 1:E:268:GLN:O    | 1:E:269:ASN:C    | 2.63                     | 0.41              |
| 1:E:282:LEU:O    | 1:E:283:GLN:CG   | 2.69                     | 0.41              |
| 1:E:290:GLY:O    | 1:G:283:GLN:OE1  | 2.38                     | 0.41              |
| 2:F:233:ASP:OD1  | 2:F:233:ASP:O    | 2.39                     | 0.41              |
| 2:F:251:LEU:HD12 | 1:G:278:LEU:HD11 | 2.03                     | 0.41              |
| 1:G:210:ALA:HB1  | 2:H:202:LYS:CG   | 2.51                     | 0.41              |
| 1:G:277:ASN:ND2  | 1:I:280:LEU:HB2  | 2.36                     | 0.41              |
| 2:H:43:ARG:NE    | 2:H:43:ARG:HA    | 2.36                     | 0.41              |
| 2:H:99:VAL:O     | 2:H:100:ALA:C    | 2.64                     | 0.41              |
| 1:I:51:PHE:HA    | 1:I:76:GLN:NE2   | 2.36                     | 0.41              |
| 1:I:53:ASN:ND2   | 2:J:29:ASN:O     | 2.49                     | 0.41              |
| 1:I:74:TRP:HD1   | 1:I:77:TYR:OH    | 2.04                     | 0.41              |
| 1:I:221:GLN:HE22 | 2:J:215:GLU:HB3  | 1.86                     | 0.41              |
| 2:J:49:VAL:HG21  | 2:J:100:ALA:O    | 2.20                     | 0.41              |
| 2:J:103:LEU:N    | 2:J:104:PRO:CD   | 2.83                     | 0.41              |
| 1:K:55:ILE:HB    | 1:K:75:PHE:CE1   | 2.56                     | 0.41              |
| 1:K:55:ILE:HG22  | 1:K:56:GLY:N     | 2.36                     | 0.41              |
| 1:K:249:ILE:HG21 | 2:L:237:GLU:HB3  | 2.03                     | 0.41              |
| 1:K:274:THR:HG22 | 1:K:275:ALA:H    | 1.86                     | 0.41              |
| 2:L:51:GLY:C     | 2:L:53:GLY:H     | 2.29                     | 0.41              |
| 2:L:228:LEU:CD1  | 1:M:247:GLY:HA2  | 2.51                     | 0.41              |
| 1:M:55:ILE:HG13  | 1:M:75:PHE:CE2   | 2.56                     | 0.41              |
| 1:M:252:ARG:O    | 1:M:253:LYS:C    | 2.63                     | 0.41              |
| 2:N:214:ALA:O    | 2:N:215:GLU:C    | 2.64                     | 0.41              |
| 2:N:247:ILE:O    | 2:N:250:GLN:HB3  | 2.20                     | 0.41              |
| 2:N:260:LEU:HD11 | 2:P:259:TYR:O    | 2.21                     | 0.41              |
| 1:O:113:ASN:O    | 1:O:117:LEU:HG   | 2.21                     | 0.41              |
| 1:O:150:ALA:HB1  | 1:O:189:PHE:HZ   | 1.84                     | 0.41              |
| 2:P:128:LYS:HB3  | 1:Q:157:ARG:HB3  | 2.03                     | 0.41              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:Q:43:VAL:O     | 1:Q:44:GLU:C     | 2.63                     | 0.41              |
| 1:Q:274:THR:CG2  | 1:Q:275:ALA:H    | 2.33                     | 0.41              |
| 2:R:28:TYR:CE2   | 2:R:36:ALA:CB    | 3.04                     | 0.41              |
| 2:R:96:PHE:CZ    | 2:R:115:ASP:HB2  | 2.56                     | 0.41              |
| 1:S:53:ASN:H     | 1:S:58:VAL:HG22  | 1.84                     | 0.41              |
| 1:S:217:ALA:HB3  | 2:T:209:ALA:HB1  | 2.03                     | 0.41              |
| 1:S:249:ILE:HD13 | 2:T:237:GLU:CG   | 2.43                     | 0.41              |
| 2:T:214:ALA:O    | 2:T:215:GLU:C    | 2.64                     | 0.41              |
| 2:T:221:ALA:HA   | 1:U:248:TYR:HB2  | 2.01                     | 0.41              |
| 2:T:239:ARG:NE   | 1:U:258:GLN:HG2  | 2.36                     | 0.41              |
| 1:U:63:ILE:C     | 1:U:64:LEU:HD23  | 2.46                     | 0.41              |
| 1:U:108:VAL:HA   | 1:U:182:VAL:CG2  | 2.51                     | 0.41              |
| 1:U:214:VAL:O    | 1:U:217:ALA:HB3  | 2.20                     | 0.41              |
| 1:U:238:LEU:HD22 | 2:V:238:LEU:HB2  | 2.02                     | 0.41              |
| 1:U:248:TYR:O    | 1:U:252:ARG:CB   | 2.69                     | 0.41              |
| 2:V:76:VAL:HG11  | 2:V:123:THR:HB   | 2.03                     | 0.41              |
| 2:V:193:ALA:HB2  | 1:W:216:LYS:HB3  | 2.03                     | 0.41              |
| 1:W:38:GLU:OE1   | 1:W:73:PRO:HA    | 2.21                     | 0.41              |
| 1:W:285:GLU:HA   | 1:W:288:THR:OG1  | 2.20                     | 0.41              |
| 2:X:219:LYS:HA   | 2:X:222:GLU:HG3  | 2.03                     | 0.41              |
| 1:A:260:ILE:HG22 | 1:A:264:ILE:HD11 | 2.02                     | 0.41              |
| 2:B:192:GLU:O    | 2:B:196:ALA:CB   | 2.69                     | 0.41              |
| 2:B:238:LEU:O    | 2:B:242:GLU:OE1  | 2.38                     | 0.41              |
| 2:B:261:PRO:CA   | 1:C:275:ALA:HB3  | 2.51                     | 0.41              |
| 1:C:235:ALA:HA   | 2:D:235:LEU:HB3  | 2.02                     | 0.41              |
| 1:G:288:THR:O    | 1:G:292:ASP:HB3  | 2.21                     | 0.41              |
| 2:H:127:LEU:HD11 | 2:H:150:VAL:HG11 | 2.03                     | 0.41              |
| 1:I:123:ARG:HG3  | 2:J:72:ARG:HB2   | 2.02                     | 0.41              |
| 2:J:206:GLN:HA   | 2:J:209:ALA:HB3  | 2.02                     | 0.41              |
| 2:L:60:TRP:O     | 2:L:60:TRP:CG    | 2.74                     | 0.41              |
| 2:L:203:ALA:HB1  | 1:M:226:VAL:HG11 | 2.02                     | 0.41              |
| 1:M:239:GLY:HA2  | 2:N:235:LEU:H    | 1.86                     | 0.41              |
| 1:M:243:SER:CA   | 1:O:294:LEU:HD13 | 2.51                     | 0.41              |
| 1:M:276:ASP:OD1  | 1:M:287:PHE:HA   | 2.21                     | 0.41              |
| 2:N:39:PHE:HB3   | 2:N:62:GLN:HG2   | 2.03                     | 0.41              |
| 2:N:74:ARG:HD3   | 2:N:75:ASN:N     | 2.35                     | 0.41              |
| 2:N:92:LEU:HD23  | 2:N:94:ILE:HD11  | 2.03                     | 0.41              |
| 2:N:207:LYS:HD3  | 1:O:226:VAL:CG1  | 2.51                     | 0.41              |
| 1:O:63:ILE:HD13  | 1:O:115:GLN:HA   | 2.03                     | 0.41              |
| 2:P:57:LEU:HD22  | 2:P:62:GLN:O     | 2.21                     | 0.41              |
| 2:P:90:ILE:CD1   | 2:P:131:VAL:HG21 | 2.50                     | 0.41              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:P:200:VAL:O    | 2:P:203:ALA:HB3  | 2.21                     | 0.41              |
| 2:R:36:ALA:HA    | 2:R:67:PHE:HD2   | 1.86                     | 0.41              |
| 2:T:254:SER:HB2  | 1:U:269:ASN:O    | 2.21                     | 0.41              |
| 1:U:39:SER:O     | 1:U:71:ARG:CG    | 2.69                     | 0.41              |
| 1:U:51:PHE:CD2   | 1:U:64:LEU:HD11  | 2.56                     | 0.41              |
| 1:U:72:ILE:O     | 1:U:76:GLN:HB3   | 2.21                     | 0.41              |
| 2:V:80:THR:HG23  | 2:V:131:VAL:HG11 | 2.03                     | 0.41              |
| 2:V:85:LEU:O     | 1:W:193:TYR:CD1  | 2.74                     | 0.41              |
| 2:V:140:ILE:HD11 | 2:V:175:PHE:CE2  | 2.56                     | 0.41              |
| 2:V:237:GLU:CD   | 2:V:240:LYS:HZ3  | 2.28                     | 0.41              |
| 2:V:237:GLU:O    | 2:V:240:LYS:HB2  | 2.21                     | 0.41              |
| 2:V:270:LEU:CD2  | 2:X:268:LEU:HD22 | 2.51                     | 0.41              |
| 1:W:49:ALA:HA    | 1:W:81:TYR:CD2   | 2.56                     | 0.41              |
| 2:B:224:ILE:HG21 | 1:C:251:LEU:HD22 | 2.03                     | 0.40              |
| 2:B:261:PRO:CB   | 1:C:275:ALA:HB3  | 2.51                     | 0.40              |
| 1:C:272:TYR:CB   | 2:D:261:PRO:HD2  | 2.51                     | 0.40              |
| 1:E:271:ILE:O    | 1:E:272:TYR:HD1  | 2.04                     | 0.40              |
| 2:F:196:ALA:O    | 2:F:197:ARG:C    | 2.64                     | 0.40              |
| 1:G:148:PHE:CE2  | 1:G:160:VAL:HG22 | 2.56                     | 0.40              |
| 1:G:214:VAL:CG1  | 2:H:209:ALA:HB2  | 2.39                     | 0.40              |
| 1:G:223:GLN:HG3  | 1:G:224:LYS:N    | 2.36                     | 0.40              |
| 1:G:238:LEU:CD1  | 2:H:235:LEU:HD13 | 2.51                     | 0.40              |
| 2:H:38:ILE:HG23  | 2:H:62:GLN:HG3   | 2.03                     | 0.40              |
| 2:H:65:ILE:HG23  | 2:H:112:GLU:HG2  | 2.03                     | 0.40              |
| 2:H:86:GLN:CG    | 2:H:136:ALA:HB2  | 2.51                     | 0.40              |
| 2:H:218:SER:CB   | 1:I:237:MET:SD   | 3.08                     | 0.40              |
| 1:I:57:GLY:HA3   | 2:J:51:GLY:O     | 2.22                     | 0.40              |
| 1:I:214:VAL:CG2  | 2:J:209:ALA:HB2  | 2.47                     | 0.40              |
| 1:M:52:PHE:N     | 1:M:76:GLN:HE22  | 2.19                     | 0.40              |
| 1:M:54:ARG:HB3   | 2:N:53:GLY:CA    | 2.52                     | 0.40              |
| 1:M:246:PRO:HB2  | 1:M:249:ILE:HB   | 2.03                     | 0.40              |
| 2:N:57:LEU:HD13  | 2:N:62:GLN:HB3   | 2.03                     | 0.40              |
| 2:N:58:ILE:HG13  | 2:N:61:VAL:CG1   | 2.50                     | 0.40              |
| 1:O:52:PHE:HE1   | 2:P:32:ALA:CB    | 2.31                     | 0.40              |
| 2:P:28:TYR:CD1   | 2:P:57:LEU:CD2   | 3.01                     | 0.40              |
| 2:P:30:VAL:O     | 2:P:30:VAL:HG12  | 2.21                     | 0.40              |
| 1:Q:68:LEU:O     | 1:Q:69:HIS:ND1   | 2.54                     | 0.40              |
| 1:Q:124:LEU:HB3  | 1:Q:128:TYR:HA   | 2.03                     | 0.40              |
| 2:R:31:ASP:HB3   | 2:R:34:HIS:CD2   | 2.56                     | 0.40              |
| 2:T:125:GLU:CG   | 1:U:158:ALA:HB1  | 2.51                     | 0.40              |
| 2:T:151:SER:HA   | 2:T:168:VAL:HB   | 2.03                     | 0.40              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:T:182:ALA:HB1  | 1:U:205:GLN:CB   | 2.50                     | 0.40              |
| 2:T:271:PRO:CD   | 1:U:270:ARG:NH2  | 2.84                     | 0.40              |
| 1:U:239:GLY:N    | 2:V:234:GLY:HA3  | 2.37                     | 0.40              |
| 2:V:239:ARG:O    | 2:V:243:ALA:CB   | 2.68                     | 0.40              |
| 1:A:238:LEU:CD1  | 2:B:235:LEU:HD13 | 2.51                     | 0.40              |
| 2:D:240:LYS:HG3  | 1:G:282:LEU:HG   | 2.02                     | 0.40              |
| 1:E:225:ILE:HG12 | 2:F:219:LYS:HB3  | 2.02                     | 0.40              |
| 2:F:219:LYS:C    | 2:F:221:ALA:N    | 2.79                     | 0.40              |
| 1:I:63:ILE:HD13  | 1:I:115:GLN:O    | 2.21                     | 0.40              |
| 1:I:165:ARG:HH22 | 1:I:168:LEU:CD2  | 2.33                     | 0.40              |
| 1:I:167:GLU:O    | 1:I:171:ARG:HG2  | 2.21                     | 0.40              |
| 1:I:289:ARG:O    | 1:I:293:SER:HB3  | 2.21                     | 0.40              |
| 1:K:272:TYR:CD1  | 1:K:272:TYR:C    | 2.99                     | 0.40              |
| 2:L:235:LEU:HD12 | 2:L:238:LEU:CB   | 2.41                     | 0.40              |
| 2:L:259:TYR:HB3  | 1:M:275:ALA:HA   | 2.02                     | 0.40              |
| 1:M:52:PHE:O     | 1:M:76:GLN:OE1   | 2.40                     | 0.40              |
| 1:M:260:ILE:HG23 | 1:M:264:ILE:CB   | 2.50                     | 0.40              |
| 1:M:264:ILE:HD11 | 2:N:245:GLU:O    | 2.22                     | 0.40              |
| 2:N:45:VAL:HG21  | 2:N:107:PHE:HB3  | 2.03                     | 0.40              |
| 2:N:91:THR:HB    | 2:N:172:HIS:HB3  | 2.03                     | 0.40              |
| 2:N:134:PHE:HB3  | 2:N:138:GLU:OE1  | 2.21                     | 0.40              |
| 1:O:48:ARG:HG2   | 1:O:83:ILE:CG2   | 2.51                     | 0.40              |
| 1:O:51:PHE:CB    | 1:O:59:GLN:HE22  | 2.34                     | 0.40              |
| 2:P:40:ASP:O     | 2:P:44:GLY:O     | 2.38                     | 0.40              |
| 1:Q:118:PRO:O    | 1:Q:122:GLN:HG3  | 2.21                     | 0.40              |
| 1:S:51:PHE:CE1   | 1:S:70:PHE:O     | 2.74                     | 0.40              |
| 2:T:189:ALA:HB1  | 1:U:212:PHE:HB3  | 2.03                     | 0.40              |
| 2:V:146:VAL:O    | 2:V:150:VAL:HG23 | 2.21                     | 0.40              |
| 2:V:200:VAL:CG2  | 1:W:223:GLN:HB2  | 2.51                     | 0.40              |
| 2:V:255:ARG:NE   | 1:W:270:ARG:HG2  | 2.36                     | 0.40              |
| 2:V:272:GLN:HG3  | 2:X:269:GLN:NE2  | 2.37                     | 0.40              |
| 1:W:52:PHE:HB2   | 1:W:81:TYR:OH    | 2.22                     | 0.40              |
| 1:W:207:ALA:HA   | 2:X:205:GLN:HG3  | 2.02                     | 0.40              |
| 1:W:259:ASN:O    | 1:W:263:THR:HG23 | 2.20                     | 0.40              |
| 1:A:219:GLN:HG3  | 2:X:200:VAL:CG2  | 2.51                     | 0.40              |
| 1:A:273:LEU:HD21 | 1:C:280:LEU:HB3  | 2.04                     | 0.40              |
| 1:A:279:VAL:HG11 | 1:A:287:PHE:CA   | 2.52                     | 0.40              |
| 2:B:224:ILE:HG22 | 2:B:228:LEU:CD1  | 2.51                     | 0.40              |
| 2:B:268:LEU:HD22 | 1:E:272:TYR:HE2  | 1.86                     | 0.40              |
| 1:C:225:ILE:HG13 | 2:D:216:GLY:HA2  | 2.03                     | 0.40              |
| 1:C:272:TYR:CB   | 2:D:261:PRO:CD   | 2.99                     | 0.40              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:D:236:ILE:CG2  | 1:E:250:LYS:HB3  | 2.51                     | 0.40              |
| 2:D:258:THR:O    | 1:E:271:ILE:CG1  | 2.70                     | 0.40              |
| 1:E:210:ALA:CB   | 2:F:205:GLN:HB2  | 2.51                     | 0.40              |
| 1:E:282:LEU:O    | 1:E:283:GLN:HG2  | 2.21                     | 0.40              |
| 2:F:256:ASN:HB2  | 1:G:270:ARG:HG2  | 2.02                     | 0.40              |
| 1:G:168:LEU:O    | 1:G:168:LEU:HG   | 2.19                     | 0.40              |
| 1:G:236:LYS:HA   | 2:H:227:SER:CB   | 2.51                     | 0.40              |
| 2:H:40:ASP:OD1   | 2:H:44:GLY:O     | 2.39                     | 0.40              |
| 2:H:85:LEU:O     | 2:H:85:LEU:HG    | 2.22                     | 0.40              |
| 2:H:114:TYR:CD2  | 2:H:115:ASP:N    | 2.89                     | 0.40              |
| 2:H:130:VAL:HG22 | 2:H:149:GLN:OE1  | 2.21                     | 0.40              |
| 2:H:247:ILE:O    | 2:H:250:GLN:HB3  | 2.21                     | 0.40              |
| 2:H:266:VAL:HG12 | 2:H:267:LEU:N    | 2.37                     | 0.40              |
| 1:I:128:TYR:HD2  | 1:I:177:LEU:HD21 | 1.86                     | 0.40              |
| 1:I:133:LEU:N    | 1:I:134:PRO:CD   | 2.84                     | 0.40              |
| 1:I:224:LYS:HA   | 1:I:227:GLN:HB3  | 2.03                     | 0.40              |
| 1:K:54:ARG:O     | 1:K:55:ILE:HG13  | 2.21                     | 0.40              |
| 1:M:72:ILE:N     | 1:M:76:GLN:HB3   | 2.36                     | 0.40              |
| 2:N:63:LYS:O     | 2:N:65:ILE:HG13  | 2.21                     | 0.40              |
| 2:N:80:THR:HG21  | 2:N:90:ILE:HD12  | 2.03                     | 0.40              |
| 2:N:131:VAL:O    | 2:N:134:PHE:O    | 2.38                     | 0.40              |
| 1:O:55:ILE:HB    | 1:O:75:PHE:CZ    | 2.56                     | 0.40              |
| 1:S:248:TYR:CZ   | 1:S:252:ARG:HB2  | 2.57                     | 0.40              |
| 2:T:41:ARG:CZ    | 1:U:69:HIS:NE2   | 2.84                     | 0.40              |
| 1:U:52:PHE:HA    | 1:U:58:VAL:HG22  | 2.02                     | 0.40              |
| 1:U:71:ARG:HD3   | 1:U:78:PRO:CG    | 2.52                     | 0.40              |
| 2:V:93:ARG:HD3   | 2:V:171:THR:HG21 | 2.03                     | 0.40              |
| 1:W:106:LEU:HD21 | 1:W:165:ARG:HH22 | 1.87                     | 0.40              |
| 1:W:107:ARG:NH2  | 1:W:185:THR:HG21 | 2.36                     | 0.40              |
| 1:W:210:ALA:O    | 1:W:214:VAL:HG23 | 2.21                     | 0.40              |
| 2:X:194:GLU:O    | 2:X:198:PHE:CD2  | 2.75                     | 0.40              |
| 1:A:277:ASN:O    | 1:C:283:GLN:HB2  | 2.21                     | 0.40              |
| 1:A:282:LEU:CD2  | 2:V:240:LYS:HG2  | 2.51                     | 0.40              |
| 1:C:258:GLN:O    | 1:C:262:LYS:N    | 2.53                     | 0.40              |
| 2:D:236:ILE:HG21 | 1:E:250:LYS:HB3  | 2.02                     | 0.40              |
| 1:E:242:LEU:HD11 | 2:F:238:LEU:HD11 | 2.03                     | 0.40              |
| 1:G:54:ARG:NH1   | 2:H:27:LEU:HD21  | 2.36                     | 0.40              |
| 1:G:88:ARG:O     | 1:G:107:ARG:HA   | 2.22                     | 0.40              |
| 2:H:78:VAL:HG22  | 2:H:124:THR:HA   | 2.04                     | 0.40              |
| 2:H:146:VAL:O    | 2:H:150:VAL:HG23 | 2.21                     | 0.40              |
| 1:I:96:SER:HA    | 1:I:146:ALA:HA   | 2.04                     | 0.40              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:116:GLU:CD   | 1:I:118:PRO:HD2  | 2.46                     | 0.40              |
| 2:J:203:ALA:HB3  | 1:K:226:VAL:CG1  | 2.52                     | 0.40              |
| 2:J:208:LYS:O    | 2:J:212:ILE:HG12 | 2.21                     | 0.40              |
| 1:K:39:SER:CA    | 1:K:71:ARG:O     | 2.69                     | 0.40              |
| 2:L:215:GLU:O    | 2:L:219:LYS:HG3  | 2.22                     | 0.40              |
| 2:N:75:ASN:OD1   | 2:N:93:ARG:HG2   | 2.22                     | 0.40              |
| 2:N:221:ALA:HB1  | 1:O:242:LEU:HG   | 2.03                     | 0.40              |
| 2:N:247:ILE:CG1  | 1:O:257:ALA:HB1  | 2.50                     | 0.40              |
| 1:O:55:ILE:HA    | 2:P:53:GLY:HA2   | 2.04                     | 0.40              |
| 1:O:57:GLY:HA3   | 2:P:52:GLU:CB    | 2.51                     | 0.40              |
| 1:O:122:GLN:HG3  | 2:P:32:ALA:HB1   | 2.04                     | 0.40              |
| 1:O:144:VAL:HG13 | 1:O:145:VAL:N    | 2.36                     | 0.40              |
| 2:P:211:ILE:CD1  | 1:Q:230:GLY:HA2  | 2.50                     | 0.40              |
| 1:Q:207:ALA:HB1  | 2:R:202:LYS:HB2  | 2.03                     | 0.40              |
| 1:U:50:ILE:HD13  | 1:U:118:PRO:CD   | 2.52                     | 0.40              |
| 2:V:131:VAL:O    | 2:V:134:PHE:O    | 2.39                     | 0.40              |
| 1:W:35:GLY:O     | 1:W:39:SER:CB    | 2.70                     | 0.40              |
| 1:A:278:LEU:HD21 | 1:C:282:LEU:HB3  | 2.04                     | 0.40              |
| 1:A:282:LEU:HG   | 2:V:240:LYS:HE3  | 2.02                     | 0.40              |
| 2:B:237:GLU:HB2  | 1:C:294:LEU:HD21 | 2.04                     | 0.40              |
| 2:D:211:ILE:CD1  | 1:E:233:GLU:HB3  | 2.51                     | 0.40              |
| 1:G:145:VAL:HG13 | 1:G:153:LEU:HD11 | 2.02                     | 0.40              |
| 2:H:207:LYS:CE   | 1:I:226:VAL:HG23 | 2.52                     | 0.40              |
| 1:I:55:ILE:HB    | 2:J:29:ASN:O     | 2.21                     | 0.40              |
| 1:I:117:LEU:N    | 1:I:118:PRO:HD3  | 2.36                     | 0.40              |
| 1:I:164:ILE:HD12 | 1:I:184:ILE:HD11 | 2.03                     | 0.40              |
| 1:I:234:ALA:O    | 1:I:238:LEU:HD12 | 2.22                     | 0.40              |
| 2:J:38:ILE:HG23  | 2:J:61:VAL:HG13  | 2.04                     | 0.40              |
| 2:J:123:THR:HA   | 2:J:154:LEU:HD13 | 2.04                     | 0.40              |
| 2:J:169:SER:O    | 2:J:171:THR:HG23 | 2.21                     | 0.40              |
| 2:J:186:LYS:HG3  | 1:K:212:PHE:HD2  | 1.87                     | 0.40              |
| 1:K:51:PHE:HA    | 1:K:76:GLN:CD    | 2.47                     | 0.40              |
| 1:K:236:LYS:HD3  | 2:L:223:LEU:O    | 2.22                     | 0.40              |
| 2:L:57:LEU:HD22  | 2:L:64:PRO:HA    | 2.04                     | 0.40              |
| 2:N:99:VAL:O     | 2:N:103:LEU:HG   | 2.21                     | 0.40              |
| 1:O:235:ALA:HA   | 2:P:235:LEU:HD22 | 2.02                     | 0.40              |
| 2:P:67:PHE:HB3   | 2:P:103:LEU:HD22 | 2.03                     | 0.40              |
| 2:P:199:VAL:HG12 | 1:Q:223:GLN:OE1  | 2.22                     | 0.40              |
| 1:Q:282:LEU:HD23 | 1:Q:283:GLN:H    | 1.86                     | 0.40              |
| 2:R:88:VAL:HG21  | 2:R:139:LEU:HD12 | 2.02                     | 0.40              |
| 2:T:81:GLY:H     | 1:U:155:THR:HA   | 1.87                     | 0.40              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:T:203:ALA:O    | 1:U:226:VAL:CG1  | 2.70                     | 0.40              |
| 2:T:239:ARG:HB3  | 1:U:254:ILE:HG21 | 2.03                     | 0.40              |
| 1:U:41:PHE:HB3   | 1:U:78:PRO:HG3   | 2.03                     | 0.40              |
| 1:U:64:LEU:HB3   | 1:U:69:HIS:CG    | 2.56                     | 0.40              |
| 1:U:81:TYR:CE1   | 1:U:121:TYR:CD1  | 3.09                     | 0.40              |
| 1:U:243:SER:O    | 1:W:294:LEU:O    | 2.40                     | 0.40              |
| 1:U:264:ILE:HG22 | 1:U:267:SER:HB2  | 2.03                     | 0.40              |
| 2:V:221:ALA:HB1  | 1:W:242:LEU:HA   | 2.03                     | 0.40              |
| 1:W:214:VAL:HG13 | 2:X:212:ILE:CD1  | 2.51                     | 0.40              |
| 2:X:206:GLN:O    | 2:X:207:LYS:C    | 2.60                     | 0.40              |

There are no symmetry-related clashes.

## 5.3 Torsion angles ⓘ

### 5.3.1 Protein backbone ⓘ

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

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

| Mol | Chain | Analysed      | Favoured  | Allowed  | Outliers | Percentiles |     |
|-----|-------|---------------|-----------|----------|----------|-------------|-----|
| 1   | A     | 107/299 (36%) | 93 (87%)  | 14 (13%) | 0        | 100         | 100 |
| 1   | C     | 107/299 (36%) | 86 (80%)  | 20 (19%) | 1 (1%)   | 14          | 52  |
| 1   | E     | 107/299 (36%) | 89 (83%)  | 17 (16%) | 1 (1%)   | 14          | 52  |
| 1   | G     | 297/299 (99%) | 254 (86%) | 43 (14%) | 0        | 100         | 100 |
| 1   | I     | 297/299 (99%) | 243 (82%) | 54 (18%) | 0        | 100         | 100 |
| 1   | K     | 297/299 (99%) | 251 (84%) | 45 (15%) | 1 (0%)   | 37          | 73  |
| 1   | M     | 297/299 (99%) | 255 (86%) | 41 (14%) | 1 (0%)   | 37          | 73  |
| 1   | O     | 297/299 (99%) | 261 (88%) | 36 (12%) | 0        | 100         | 100 |
| 1   | Q     | 297/299 (99%) | 257 (86%) | 40 (14%) | 0        | 100         | 100 |
| 1   | S     | 297/299 (99%) | 259 (87%) | 38 (13%) | 0        | 100         | 100 |
| 1   | U     | 297/299 (99%) | 254 (86%) | 42 (14%) | 1 (0%)   | 37          | 73  |
| 1   | W     | 297/299 (99%) | 251 (84%) | 45 (15%) | 1 (0%)   | 37          | 73  |

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| Mol | Chain | Analysed        | Favoured   | Allowed   | Outliers | Percentiles |     |
|-----|-------|-----------------|------------|-----------|----------|-------------|-----|
| 2   | B     | 94/272 (35%)    | 83 (88%)   | 11 (12%)  | 0        | 100         | 100 |
| 2   | D     | 94/272 (35%)    | 85 (90%)   | 9 (10%)   | 0        | 100         | 100 |
| 2   | F     | 94/272 (35%)    | 85 (90%)   | 9 (10%)   | 0        | 100         | 100 |
| 2   | H     | 270/272 (99%)   | 228 (84%)  | 41 (15%)  | 1 (0%)   | 30          | 68  |
| 2   | J     | 270/272 (99%)   | 238 (88%)  | 32 (12%)  | 0        | 100         | 100 |
| 2   | L     | 270/272 (99%)   | 236 (87%)  | 34 (13%)  | 0        | 100         | 100 |
| 2   | N     | 270/272 (99%)   | 235 (87%)  | 34 (13%)  | 1 (0%)   | 30          | 68  |
| 2   | P     | 270/272 (99%)   | 235 (87%)  | 35 (13%)  | 0        | 100         | 100 |
| 2   | R     | 270/272 (99%)   | 238 (88%)  | 32 (12%)  | 0        | 100         | 100 |
| 2   | T     | 270/272 (99%)   | 237 (88%)  | 33 (12%)  | 0        | 100         | 100 |
| 2   | V     | 270/272 (99%)   | 237 (88%)  | 33 (12%)  | 0        | 100         | 100 |
| 2   | X     | 94/272 (35%)    | 84 (89%)   | 10 (11%)  | 0        | 100         | 100 |
| All | All   | 5530/6852 (81%) | 4774 (86%) | 748 (14%) | 8 (0%)   | 50          | 83  |

All (8) Ramachandran outliers are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1   | K     | 279 | VAL  |
| 2   | H     | 245 | GLU  |
| 2   | N     | 47  | ASP  |
| 1   | M     | 279 | VAL  |
| 1   | E     | 279 | VAL  |
| 1   | C     | 279 | VAL  |
| 1   | W     | 279 | VAL  |
| 1   | U     | 279 | VAL  |

### 5.3.2 Protein sidechains ⓘ

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

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

| Mol | Chain | Analysed     | Rotameric | Outliers | Percentiles |     |
|-----|-------|--------------|-----------|----------|-------------|-----|
| 1   | A     | 88/248 (36%) | 88 (100%) | 0        | 100         | 100 |

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| Mol | Chain | Analysed        | Rotameric   | Outliers | Percentiles |     |
|-----|-------|-----------------|-------------|----------|-------------|-----|
| 1   | C     | 88/248 (36%)    | 88 (100%)   | 0        | 100         | 100 |
| 1   | E     | 88/248 (36%)    | 88 (100%)   | 0        | 100         | 100 |
| 1   | G     | 248/248 (100%)  | 248 (100%)  | 0        | 100         | 100 |
| 1   | I     | 248/248 (100%)  | 248 (100%)  | 0        | 100         | 100 |
| 1   | K     | 248/248 (100%)  | 248 (100%)  | 0        | 100         | 100 |
| 1   | M     | 248/248 (100%)  | 248 (100%)  | 0        | 100         | 100 |
| 1   | O     | 248/248 (100%)  | 248 (100%)  | 0        | 100         | 100 |
| 1   | Q     | 248/248 (100%)  | 248 (100%)  | 0        | 100         | 100 |
| 1   | S     | 248/248 (100%)  | 248 (100%)  | 0        | 100         | 100 |
| 1   | U     | 248/248 (100%)  | 248 (100%)  | 0        | 100         | 100 |
| 1   | W     | 248/248 (100%)  | 248 (100%)  | 0        | 100         | 100 |
| 2   | B     | 74/224 (33%)    | 74 (100%)   | 0        | 100         | 100 |
| 2   | D     | 74/224 (33%)    | 74 (100%)   | 0        | 100         | 100 |
| 2   | F     | 74/224 (33%)    | 74 (100%)   | 0        | 100         | 100 |
| 2   | H     | 224/224 (100%)  | 224 (100%)  | 0        | 100         | 100 |
| 2   | J     | 224/224 (100%)  | 224 (100%)  | 0        | 100         | 100 |
| 2   | L     | 224/224 (100%)  | 224 (100%)  | 0        | 100         | 100 |
| 2   | N     | 224/224 (100%)  | 224 (100%)  | 0        | 100         | 100 |
| 2   | P     | 224/224 (100%)  | 224 (100%)  | 0        | 100         | 100 |
| 2   | R     | 224/224 (100%)  | 224 (100%)  | 0        | 100         | 100 |
| 2   | T     | 224/224 (100%)  | 224 (100%)  | 0        | 100         | 100 |
| 2   | V     | 224/224 (100%)  | 224 (100%)  | 0        | 100         | 100 |
| 2   | X     | 74/224 (33%)    | 74 (100%)   | 0        | 100         | 100 |
| All | All   | 4584/5664 (81%) | 4584 (100%) | 0        | 100         | 100 |

There are no protein residues with a non-rotameric sidechain to report.

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (47) such sidechains are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1   | A     | 277 | ASN  |
| 2   | B     | 269 | GLN  |
| 2   | B     | 272 | GLN  |
| 1   | C     | 219 | GLN  |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1   | C     | 258 | GLN  |
| 1   | C     | 269 | ASN  |
| 2   | D     | 226 | ASN  |
| 1   | E     | 205 | GLN  |
| 1   | E     | 268 | GLN  |
| 1   | G     | 281 | ASN  |
| 2   | H     | 55  | HIS  |
| 2   | H     | 62  | GLN  |
| 1   | I     | 47  | HIS  |
| 1   | I     | 122 | GLN  |
| 1   | I     | 201 | GLN  |
| 1   | I     | 205 | GLN  |
| 1   | I     | 258 | GLN  |
| 2   | J     | 206 | GLN  |
| 1   | K     | 100 | GLN  |
| 1   | K     | 152 | GLN  |
| 2   | L     | 226 | ASN  |
| 1   | M     | 69  | HIS  |
| 1   | M     | 283 | GLN  |
| 2   | N     | 191 | GLN  |
| 1   | O     | 53  | ASN  |
| 1   | O     | 113 | ASN  |
| 1   | O     | 205 | GLN  |
| 2   | P     | 75  | ASN  |
| 2   | P     | 272 | GLN  |
| 1   | Q     | 76  | GLN  |
| 1   | Q     | 122 | GLN  |
| 1   | Q     | 201 | GLN  |
| 2   | R     | 29  | ASN  |
| 2   | R     | 46  | GLN  |
| 2   | T     | 206 | GLN  |
| 2   | T     | 226 | ASN  |
| 2   | T     | 272 | GLN  |
| 1   | U     | 152 | GLN  |
| 2   | V     | 142 | GLN  |
| 2   | V     | 226 | ASN  |
| 2   | V     | 269 | GLN  |
| 1   | W     | 69  | HIS  |
| 1   | W     | 138 | ASN  |
| 1   | W     | 156 | GLN  |
| 2   | X     | 206 | GLN  |
| 2   | X     | 269 | GLN  |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 2   | X     | 272 | 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 ⓘ

There are no oligosaccharides in this entry.

### 5.6 Ligand geometry ⓘ

There are no ligands in this entry.

### 5.7 Other polymers ⓘ

There are no such residues in this entry.

### 5.8 Polymer linkage issues ⓘ

There are no chain breaks in this entry.

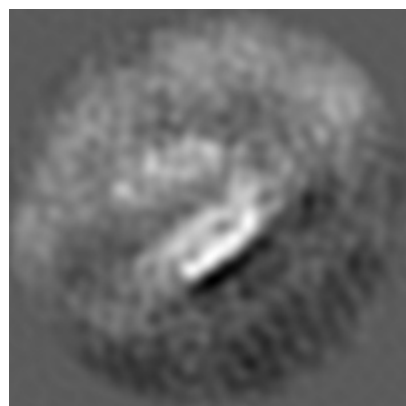
## 6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-70180. These allow visual inspection of the internal detail of the map and identification of artifacts.

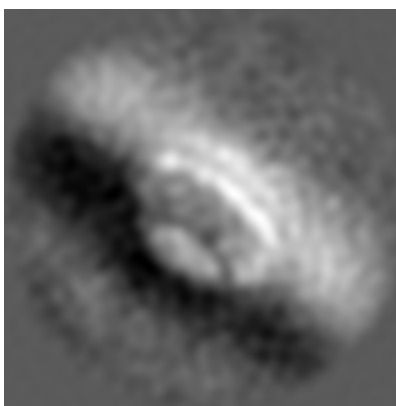
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

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

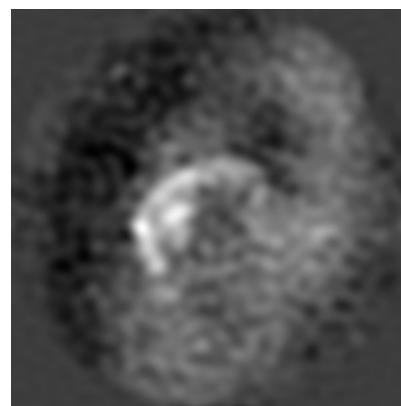
#### 6.1.1 Primary map



X

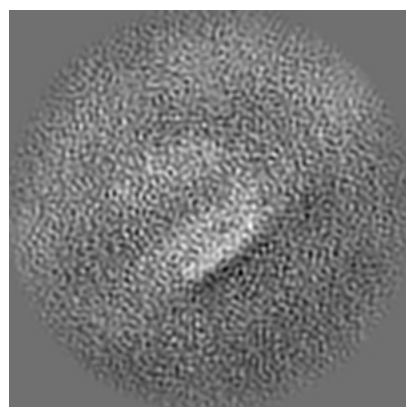


Y

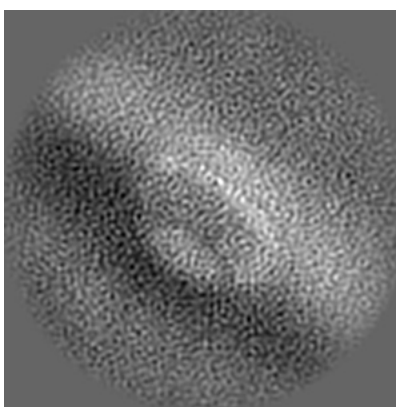


Z

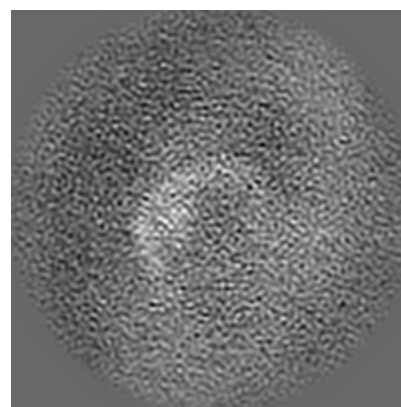
#### 6.1.2 Raw map



X



Y

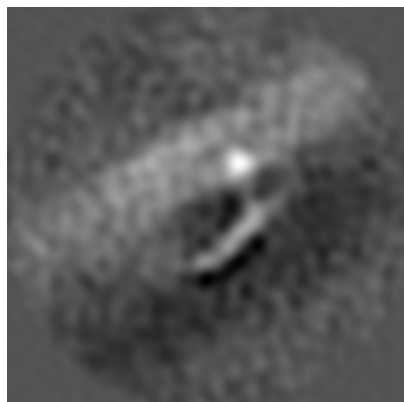


Z

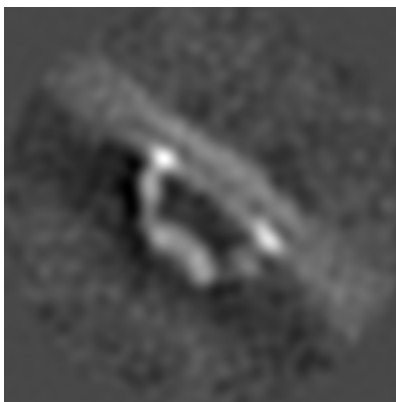
The images above show the map projected in three orthogonal directions.

## 6.2 Central slices [i](#)

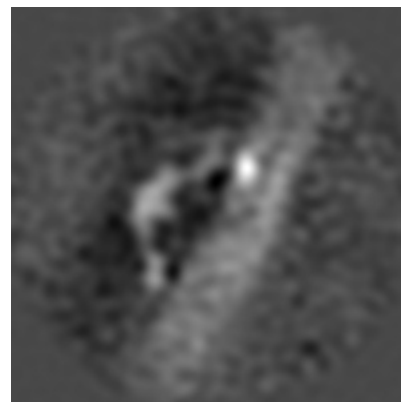
### 6.2.1 Primary map



X Index: 60

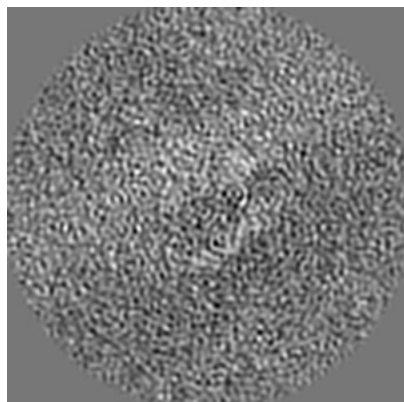


Y Index: 60

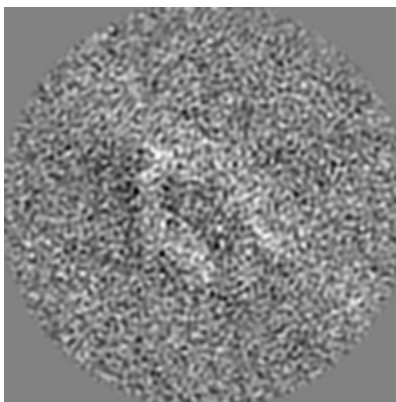


Z Index: 60

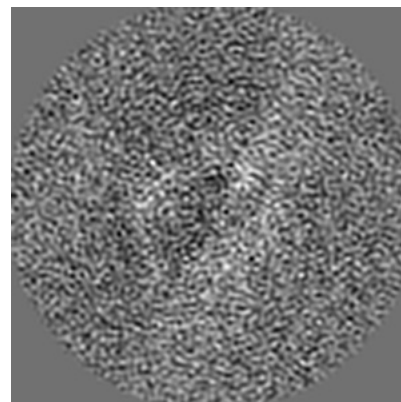
### 6.2.2 Raw map



X Index: 60



Y Index: 60

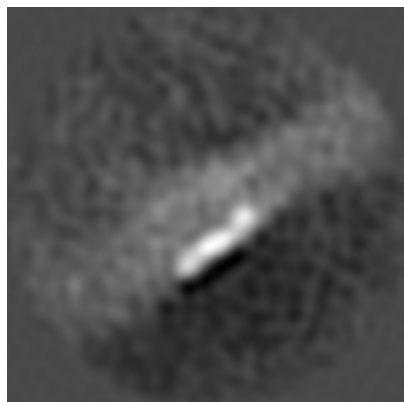


Z Index: 60

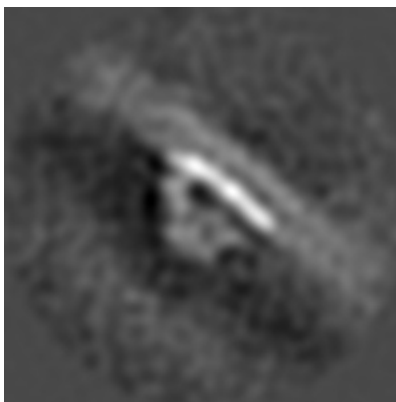
The images above show central slices of the map in three orthogonal directions.

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

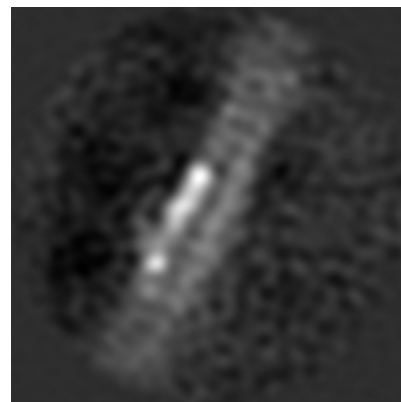
### 6.3.1 Primary map



X Index: 73

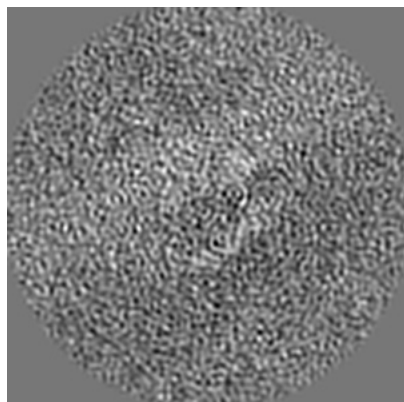


Y Index: 70

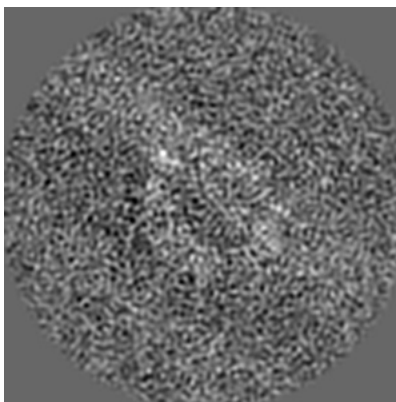


Z Index: 77

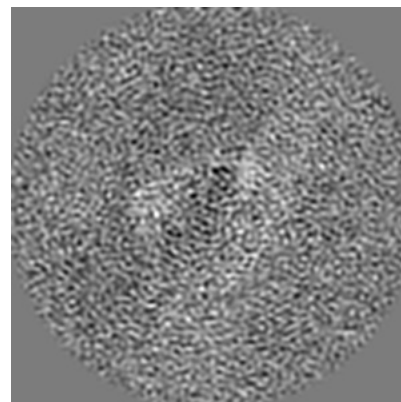
### 6.3.2 Raw map



X Index: 60



Y Index: 61

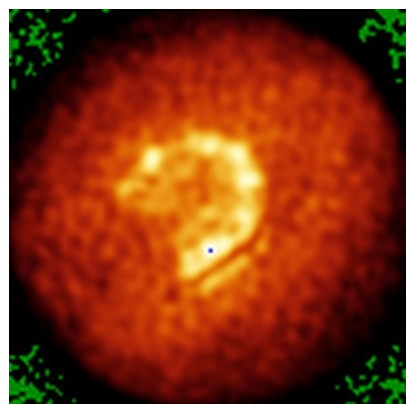


Z Index: 58

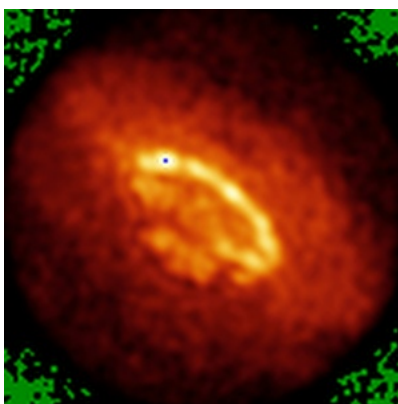
The images above show the largest variance slices of the map in three orthogonal directions.

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

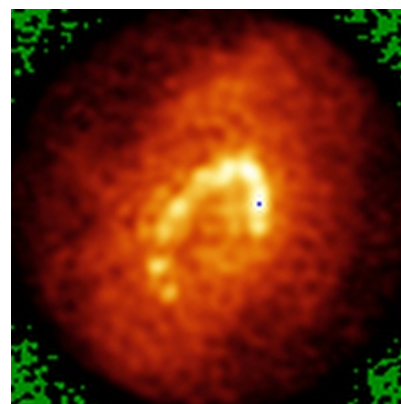
### 6.4.1 Primary map



X

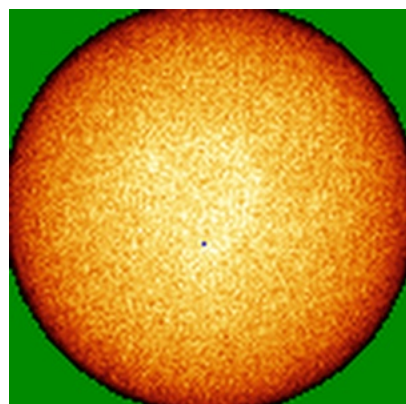


Y

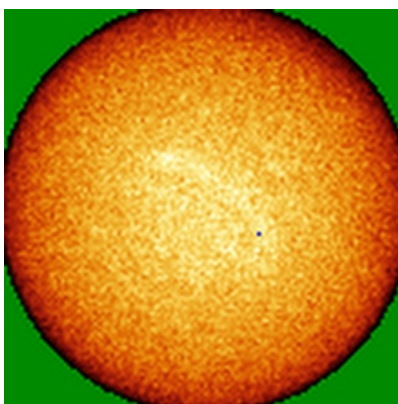


Z

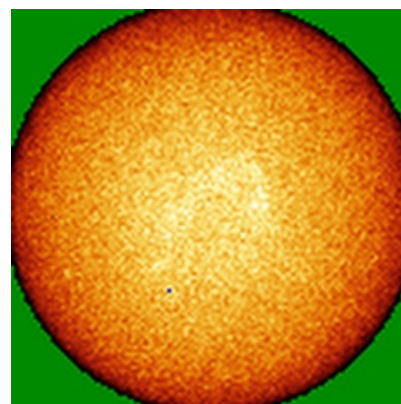
### 6.4.2 Raw map



X



Y

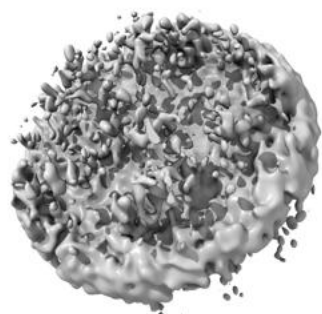


Z

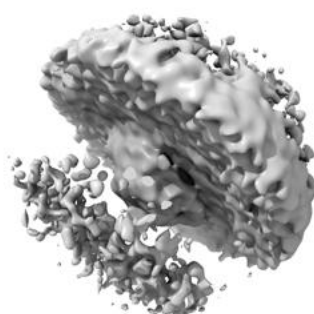
The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

## 6.5 Orthogonal surface views [i](#)

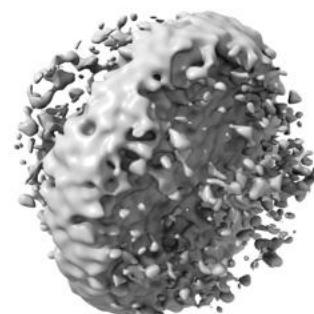
### 6.5.1 Primary map



X



Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.0001. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

### 6.5.2 Raw map



X



Y



Z

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

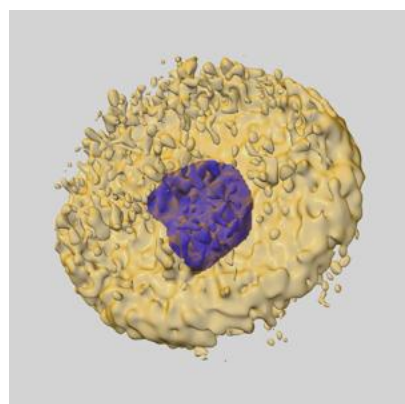
## 6.6 Mask visualisation [i](#)

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

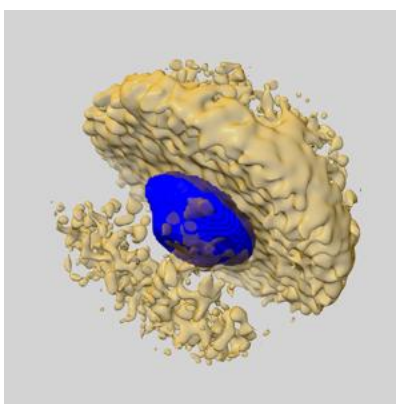
A mask typically either:

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

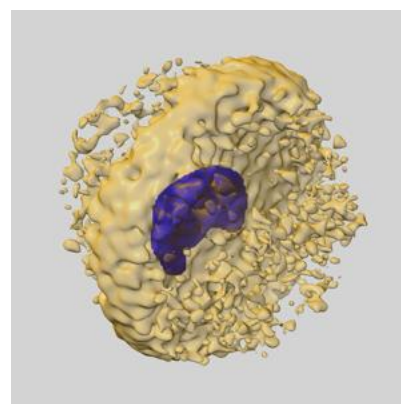
### 6.6.1 emd\_70180\_msk\_1.map [i](#)



X



Y

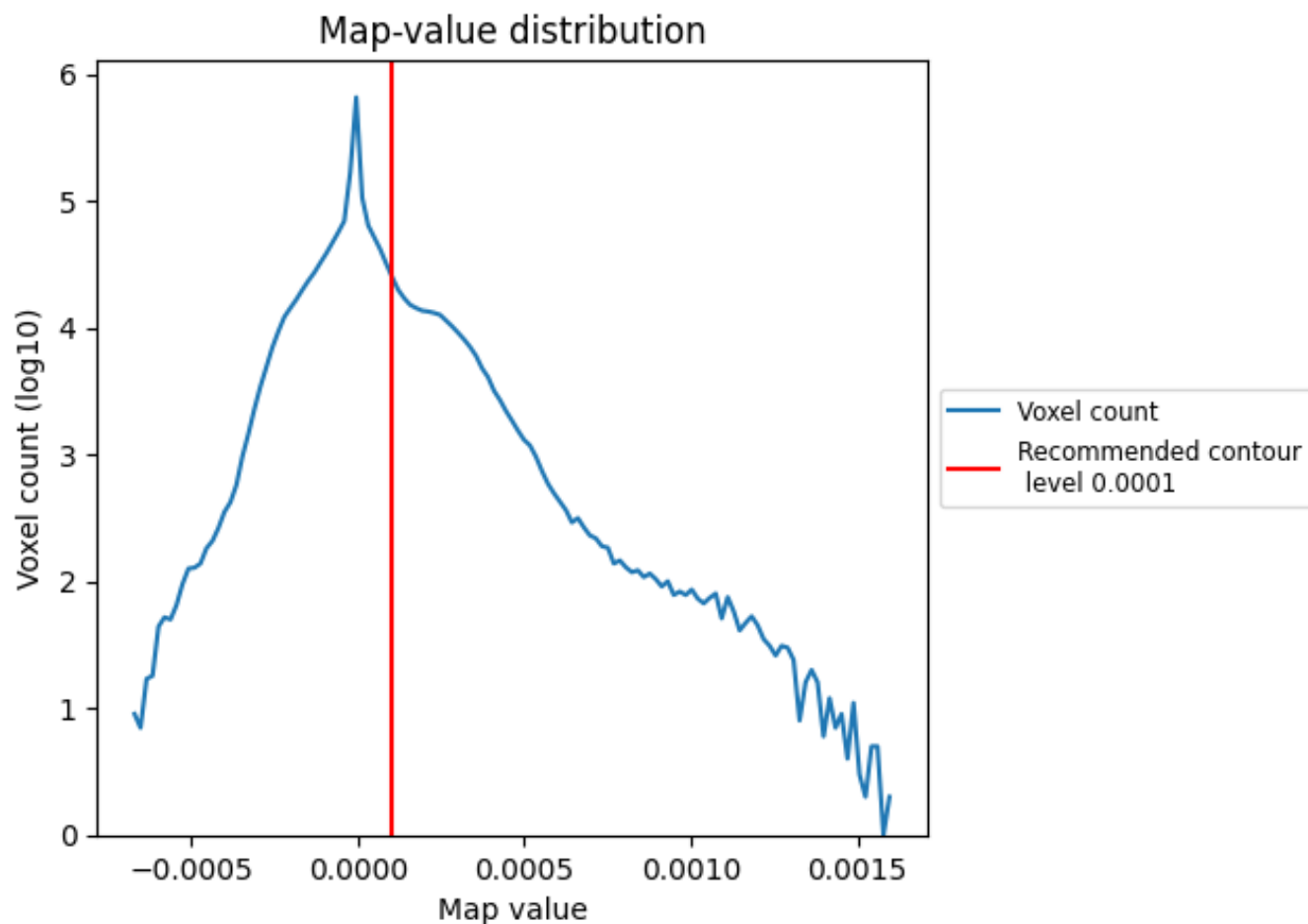


Z

## 7 Map analysis [i](#)

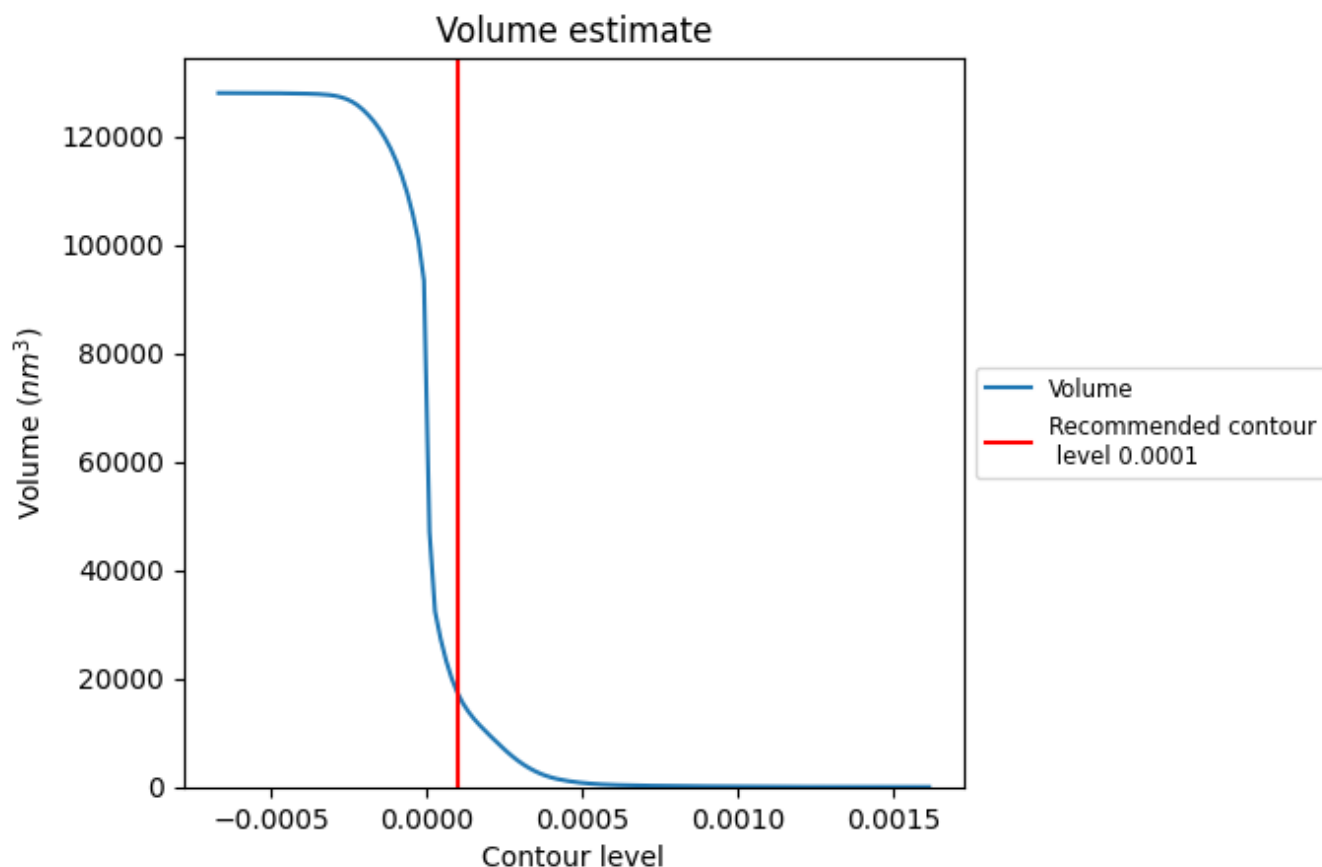
This section contains the results of statistical analysis of the map.

### 7.1 Map-value distribution [i](#)



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

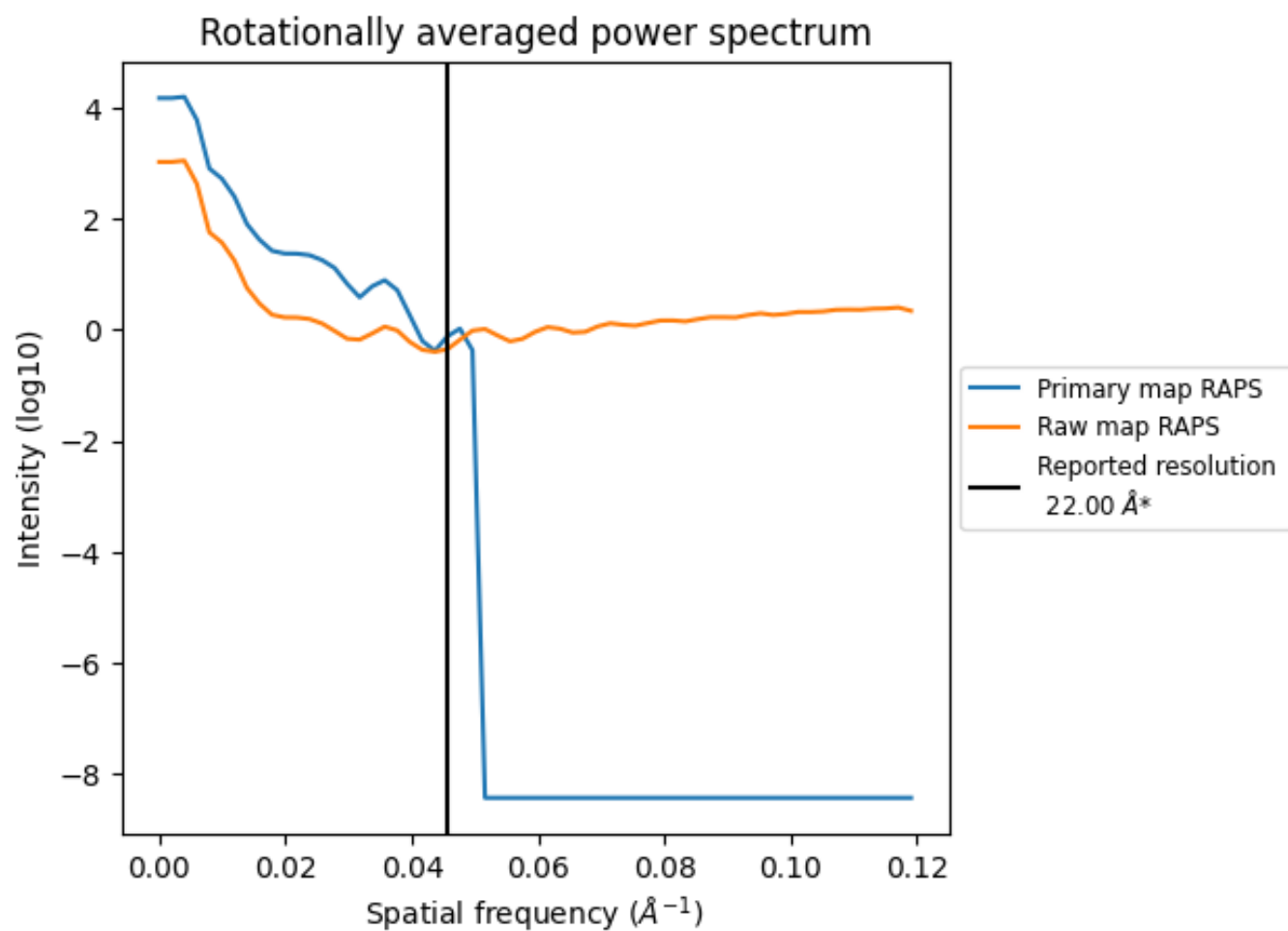
## 7.2 Volume estimate [i](#)



The volume at the recommended contour level is 17141  $\text{nm}^3$ ; this corresponds to an approximate mass of 15484 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 ⓘ

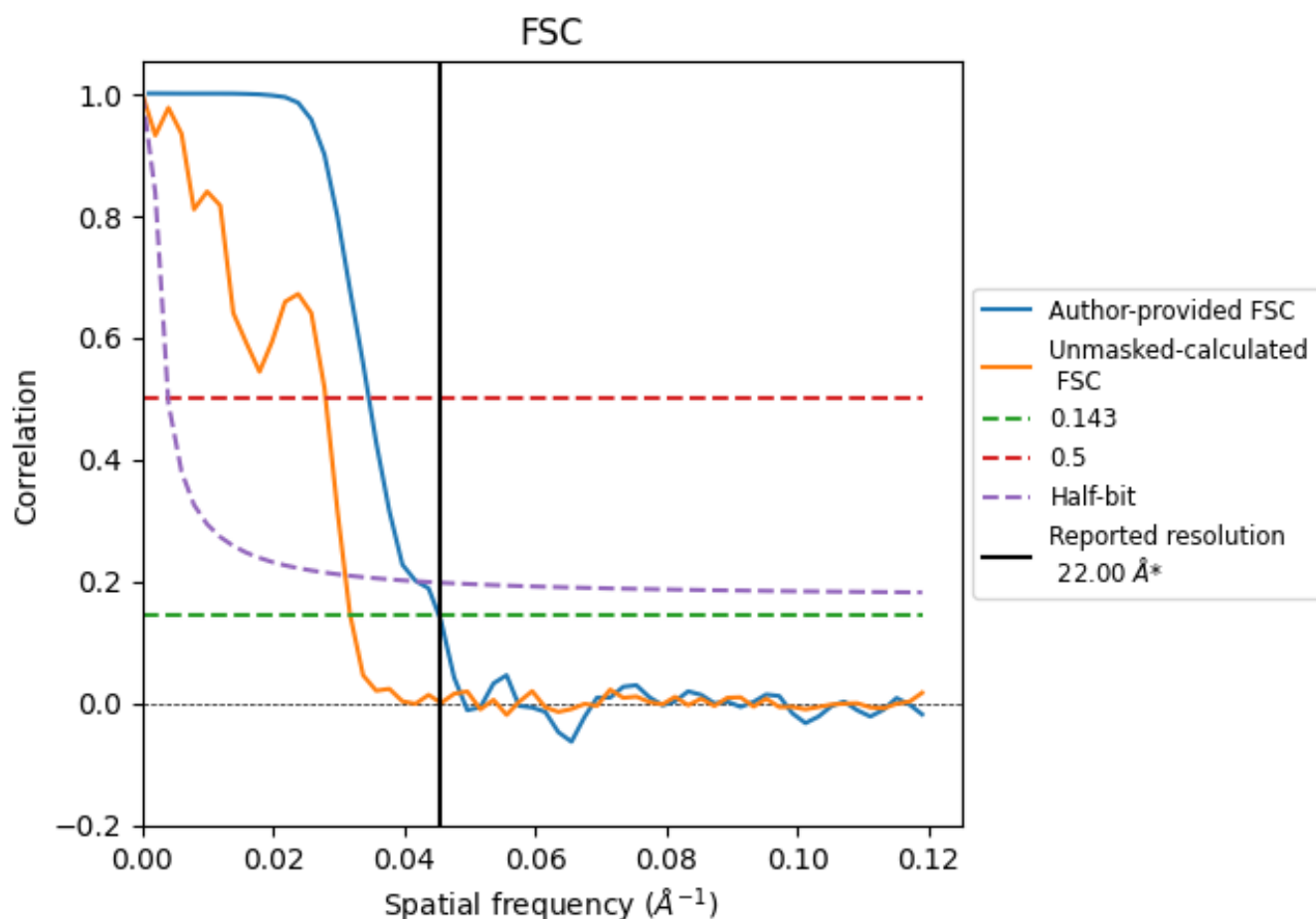


\*Reported resolution corresponds to spatial frequency of 0.045 Å<sup>-1</sup>

## 8 Fourier-Shell correlation [i](#)

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

### 8.1 FSC [i](#)



\*Reported resolution corresponds to spatial frequency of  $0.045 \text{ \AA}^{-1}$

## 8.2 Resolution estimates [i](#)

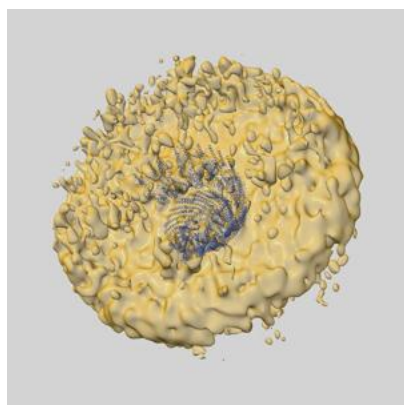
| Resolution estimate (Å)   | Estimation criterion (FSC cut-off) |       |          |
|---------------------------|------------------------------------|-------|----------|
|                           | 0.143                              | 0.5   | Half-bit |
| Reported by author        | 22.00                              | -     | -        |
| Author-provided FSC curve | 22.08                              | 28.90 | 23.81    |
| Unmasked-calculated*      | 31.45                              | 35.84 | 32.26    |

\*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 31.45 differs from the reported value 22.0 by more than 10 %

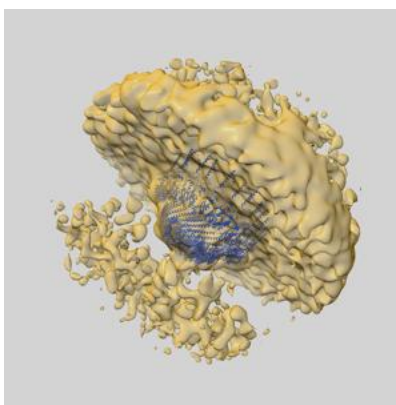
## 9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-70180 and PDB model 9O6T. Per-residue inclusion information can be found in section [3](#) on page [6](#).

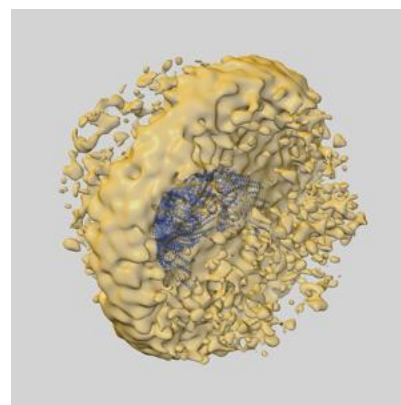
### 9.1 Map-model overlay [i](#)



X



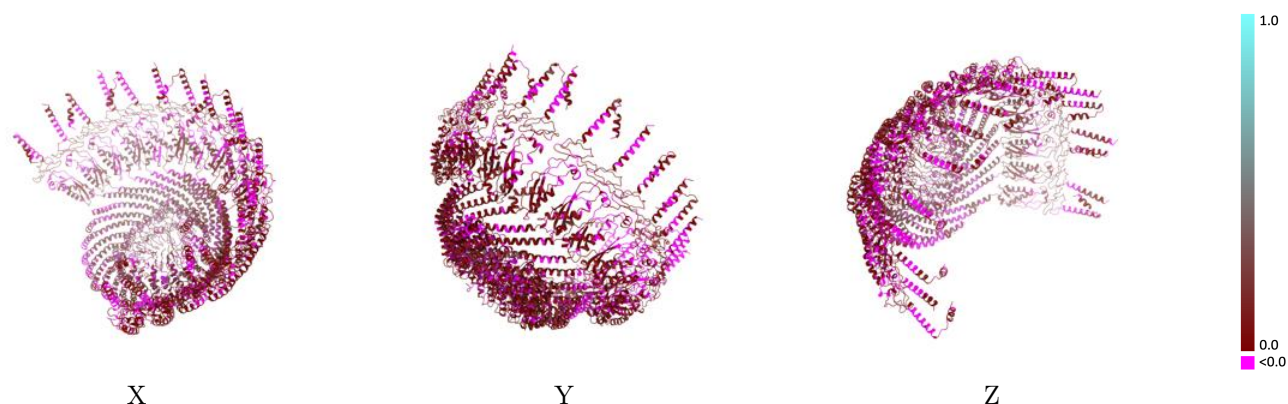
Y



Z

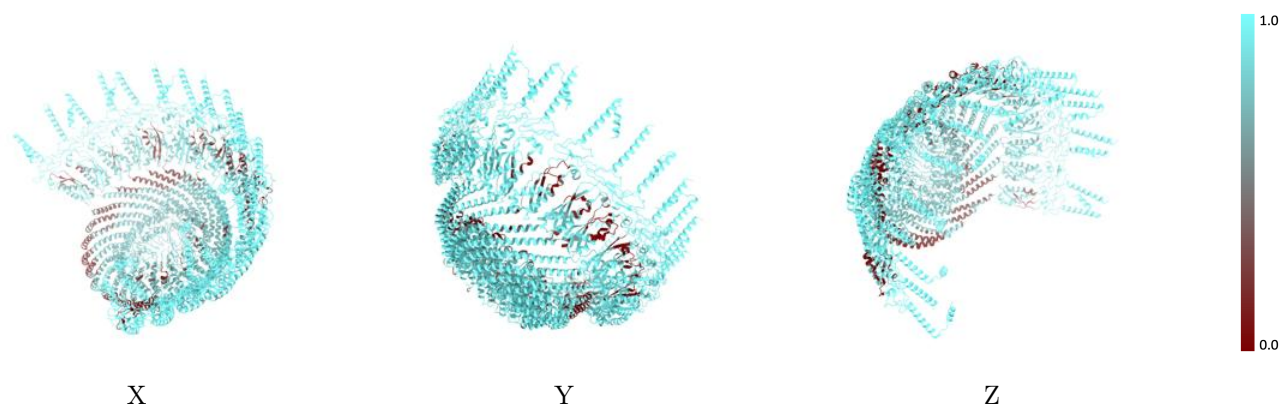
The images above show the 3D surface view of the map at the recommended contour level 0.0001 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



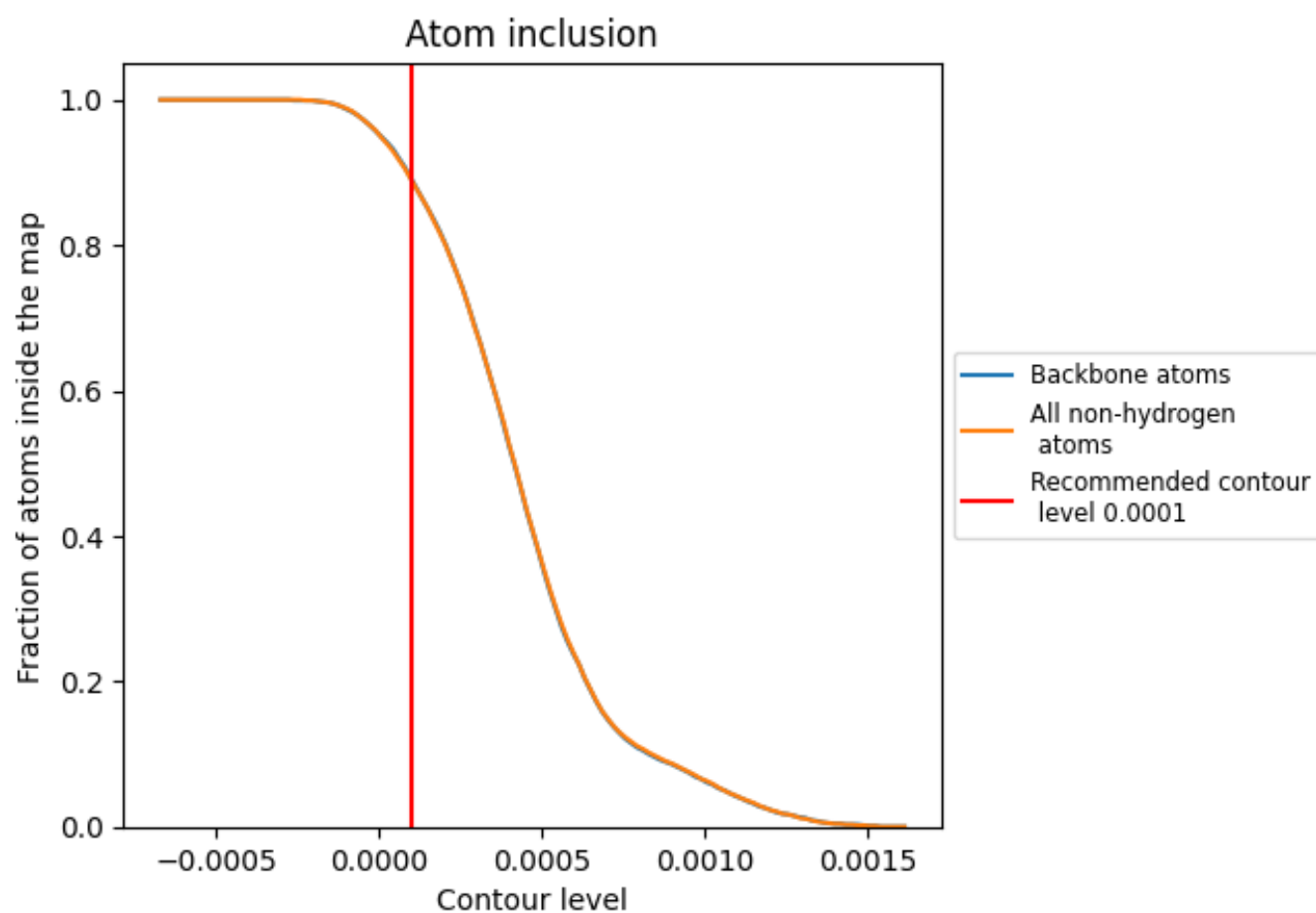
The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

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



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.0001).

## 9.4 Atom inclusion ⓘ



At the recommended contour level, 89% of all backbone atoms, 89% of all non-hydrogen atoms, are inside the map.

## 9.5 Map-model fit summary ⓘ

The table lists the average atom inclusion at the recommended contour level (0.0001) and Q-score for the entire model and for each chain.

| Chain | Atom inclusion                                                                             | Q-score                                                                                    |
|-------|--------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| All   |  0.8900   |  0.0470   |
| A     |  0.7670   |  0.0410   |
| B     |  0.6940   |  0.0300   |
| C     |  0.8070   |  0.0290   |
| D     |  0.7690   |  0.0460   |
| E     |  0.8850   |  0.0570   |
| F     |  0.8460   |  0.0340   |
| G     |  0.8540   |  0.0330   |
| H     |  0.9160   |  0.0550   |
| I     |  0.9480   |  0.0620   |
| J     |  0.9860   |  0.0670   |
| K     |  0.9870   |  0.0710   |
| L     |  0.9550   |  0.0530   |
| M     |  0.8550   |  0.0390   |
| N     |  0.8880  |  0.0460  |
| O     |  0.8410 |  0.0450 |
| P     |  0.9110 |  0.0600 |
| Q     |  0.8800 |  0.0430 |
| R     |  0.9750 |  0.0490 |
| S     |  0.8380 |  0.0130 |
| T     |  0.9300 |  0.0460 |
| U     |  0.8960 |  0.0470 |
| V     |  0.9270 |  0.0390 |
| W     |  0.8880 |  0.0480 |
| X     |  0.7890 |  0.0520 |

