



## Full wwPDB EM Validation Report ⓘ

Aug 4, 2025 – 07:49 PM EDT

PDB ID : 9O6S / pdb\_00009o6s  
EMDB ID : EMD-70179  
Title : Structure of the human prohibitin complex in the closed state  
Authors : Rose, K.; Herrmann, E.; Hurley, J.H.  
Deposited on : 2025-04-14  
Resolution : 21.00 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

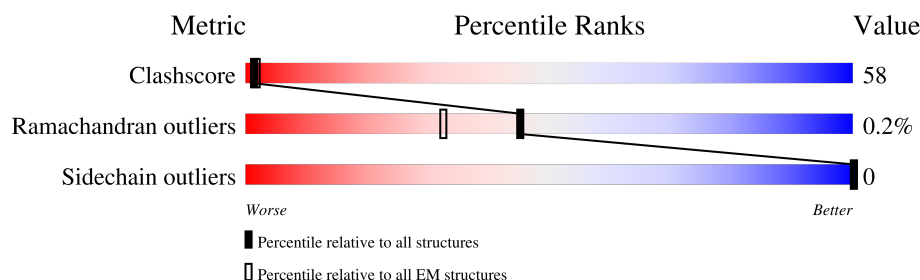
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

*ELECTRON MICROSCOPY*

The reported resolution of this entry is 21.00 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.



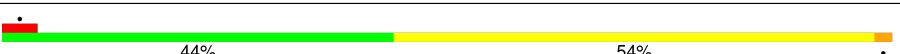
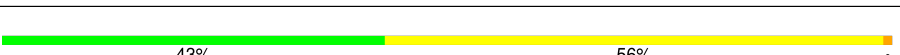
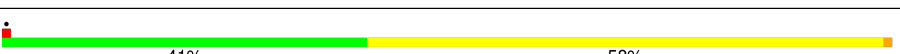
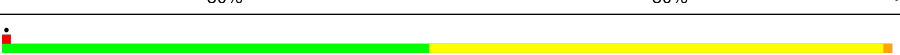
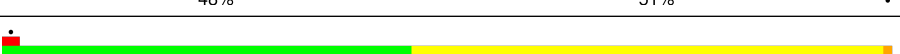
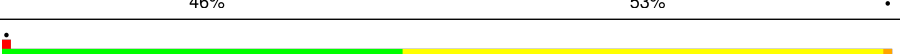
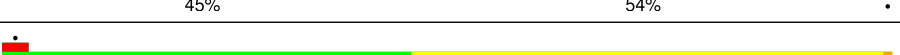
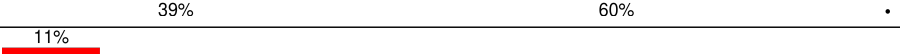
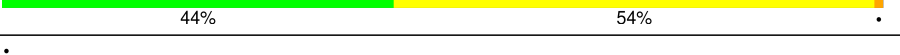
| Metric                | Whole archive<br>(#Entries) | EM structures<br>(#Entries) |
|-----------------------|-----------------------------|-----------------------------|
| Clashscore            | 210492                      | 15764                       |
| Ramachandran outliers | 207382                      | 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 [i](#)

There are 2 unique types of molecules in this entry. The entry contains 53376 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called Prohibitin-2.

| Mol | Chain | Residues | Atoms         |           |          |          |        | AltConf | Trace |
|-----|-------|----------|---------------|-----------|----------|----------|--------|---------|-------|
| 1   | A     | 299      | Total<br>2345 | C<br>1477 | N<br>428 | O<br>435 | S<br>5 | 0       | 0     |
| 1   | C     | 299      | Total<br>2345 | C<br>1477 | N<br>428 | O<br>435 | S<br>5 | 0       | 0     |
| 1   | E     | 299      | Total<br>2345 | C<br>1477 | N<br>428 | O<br>435 | S<br>5 | 0       | 0     |
| 1   | G     | 299      | Total<br>2345 | C<br>1477 | N<br>428 | O<br>435 | S<br>5 | 0       | 0     |
| 1   | I     | 299      | Total<br>2345 | C<br>1477 | N<br>428 | O<br>435 | S<br>5 | 0       | 0     |
| 1   | K     | 299      | Total<br>2345 | C<br>1477 | N<br>428 | O<br>435 | S<br>5 | 0       | 0     |
| 1   | M     | 299      | Total<br>2345 | C<br>1477 | N<br>428 | O<br>435 | S<br>5 | 0       | 0     |
| 1   | O     | 299      | Total<br>2345 | C<br>1477 | N<br>428 | O<br>435 | S<br>5 | 0       | 0     |
| 1   | Q     | 299      | Total<br>2345 | C<br>1477 | N<br>428 | O<br>435 | S<br>5 | 0       | 0     |
| 1   | S     | 299      | Total<br>2345 | C<br>1477 | N<br>428 | O<br>435 | S<br>5 | 0       | 0     |
| 1   | U     | 299      | Total<br>2345 | C<br>1477 | N<br>428 | O<br>435 | S<br>5 | 0       | 0     |
| 1   | W     | 299      | Total<br>2345 | C<br>1477 | N<br>428 | O<br>435 | S<br>5 | 0       | 0     |

- Molecule 2 is a protein called Prohibitin 1.

| Mol | Chain | Residues | Atoms         |           |          |          |        | AltConf | Trace |
|-----|-------|----------|---------------|-----------|----------|----------|--------|---------|-------|
| 2   | B     | 272      | Total<br>2103 | C<br>1331 | N<br>370 | O<br>400 | S<br>2 | 0       | 0     |
| 2   | D     | 272      | Total<br>2103 | C<br>1331 | N<br>370 | O<br>400 | S<br>2 | 0       | 0     |
| 2   | F     | 272      | Total<br>2103 | C<br>1331 | N<br>370 | O<br>400 | S<br>2 | 0       | 0     |

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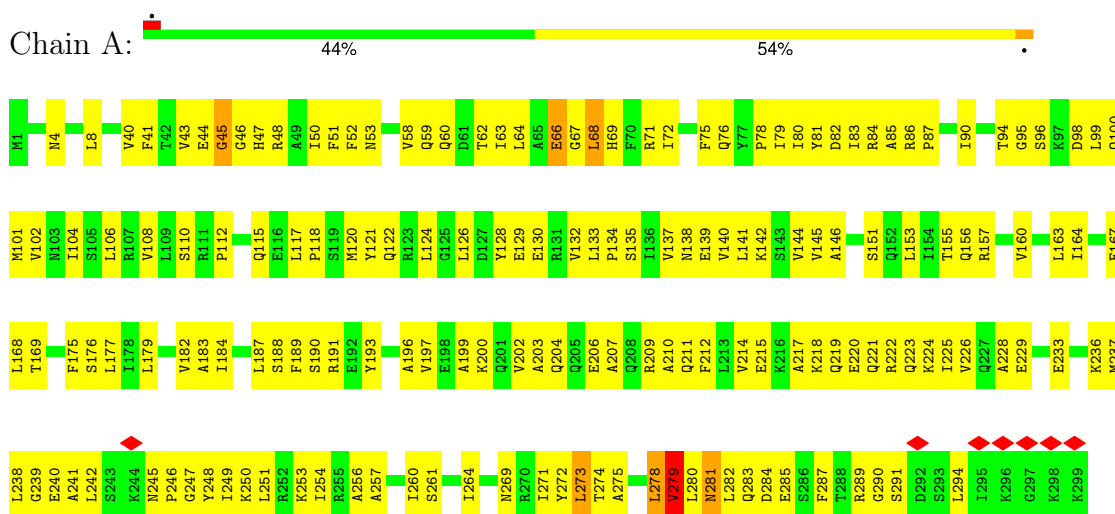
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| Mol | Chain | Residues | Atoms         |           |          |          |        | AltConf | Trace |
|-----|-------|----------|---------------|-----------|----------|----------|--------|---------|-------|
| 2   | H     | 272      | Total<br>2103 | C<br>1331 | N<br>370 | O<br>400 | S<br>2 | 0       | 0     |
| 2   | J     | 272      | Total<br>2103 | C<br>1331 | N<br>370 | O<br>400 | S<br>2 | 0       | 0     |
| 2   | L     | 272      | Total<br>2103 | C<br>1331 | N<br>370 | O<br>400 | S<br>2 | 0       | 0     |
| 2   | N     | 272      | Total<br>2103 | C<br>1331 | N<br>370 | O<br>400 | S<br>2 | 0       | 0     |
| 2   | P     | 272      | Total<br>2103 | C<br>1331 | N<br>370 | O<br>400 | S<br>2 | 0       | 0     |
| 2   | R     | 272      | Total<br>2103 | C<br>1331 | N<br>370 | O<br>400 | S<br>2 | 0       | 0     |
| 2   | T     | 272      | Total<br>2103 | C<br>1331 | N<br>370 | O<br>400 | S<br>2 | 0       | 0     |
| 2   | V     | 272      | Total<br>2103 | C<br>1331 | N<br>370 | O<br>400 | S<br>2 | 0       | 0     |
| 2   | X     | 272      | Total<br>2103 | C<br>1331 | N<br>370 | O<br>400 | S<br>2 | 0       | 0     |

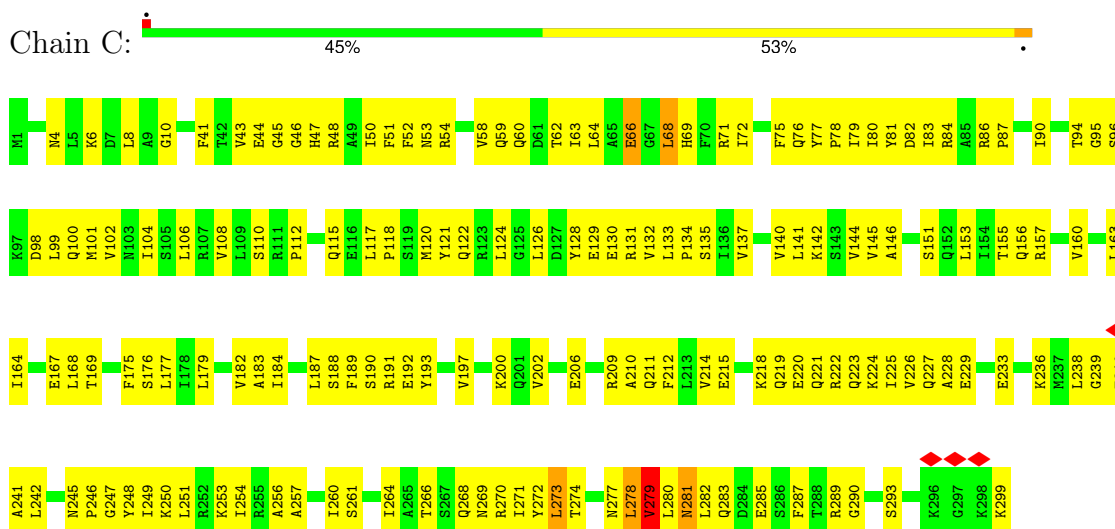
### 3 Residue-property plots

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

#### • Molecule 1: Prohibitin-2

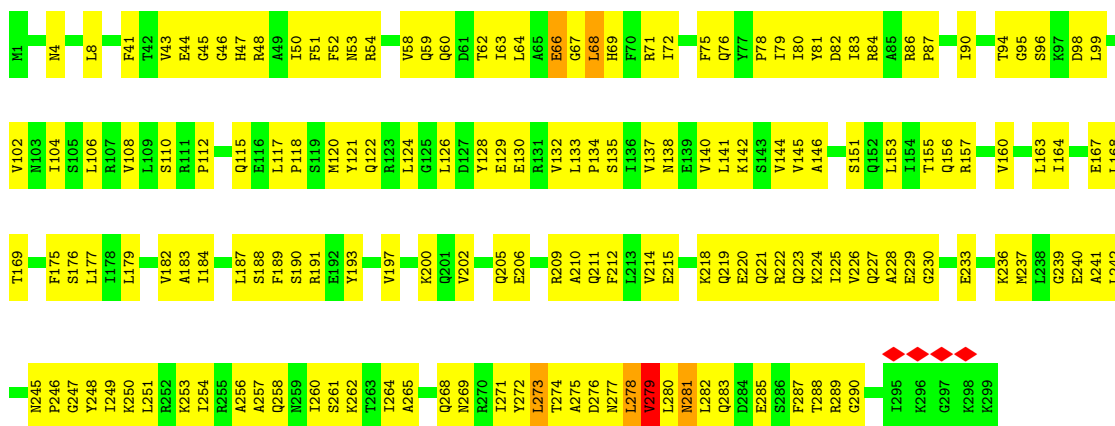


#### • Molecule 1: Prohibitin-2



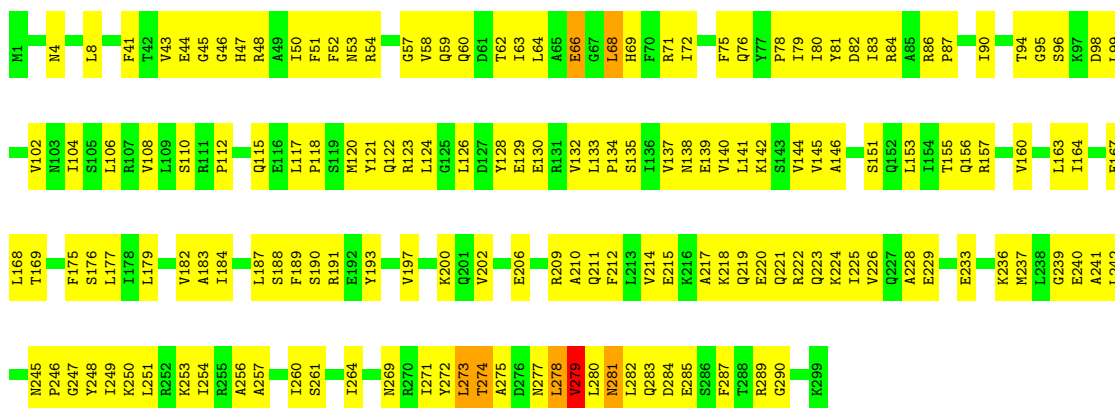
#### • Molecule 1: Prohibitin-2





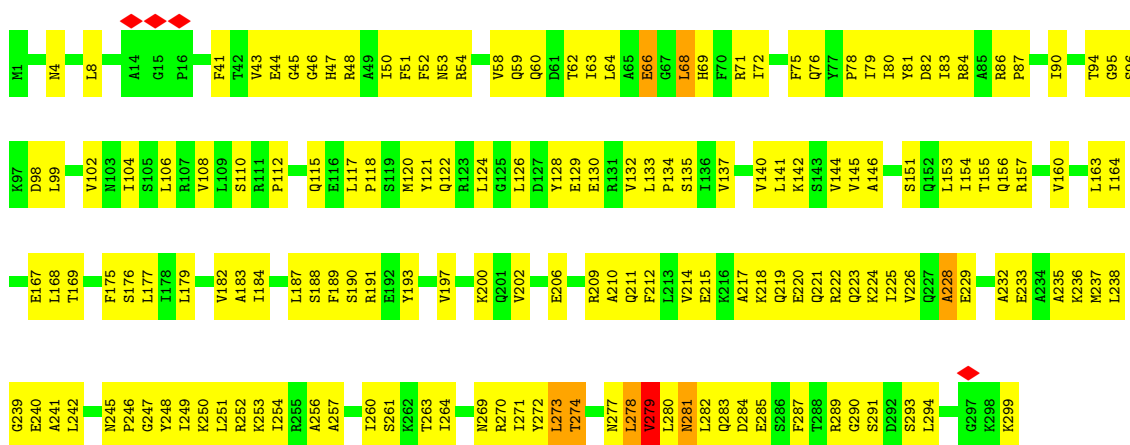
• Molecule 1: Prohibitin-2

Chain G: 47% 51%



• Molecule 1: Prohibitin-2

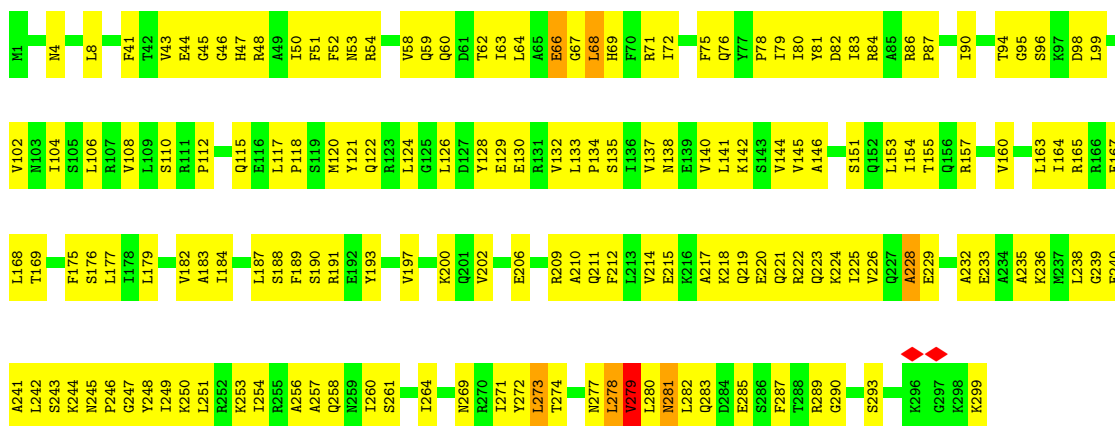
Chain I: 45% 53%



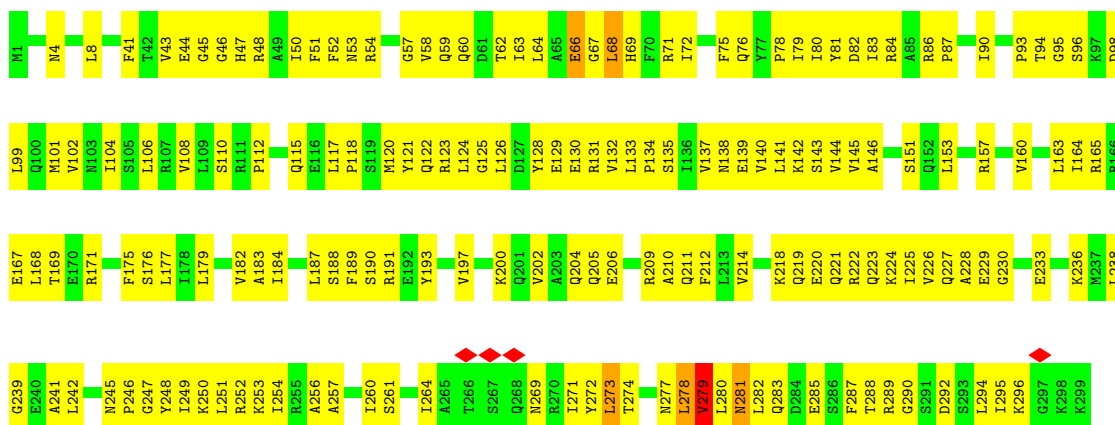
• Molecule 1: Prohibitin-2

Chain K: 45% 52%

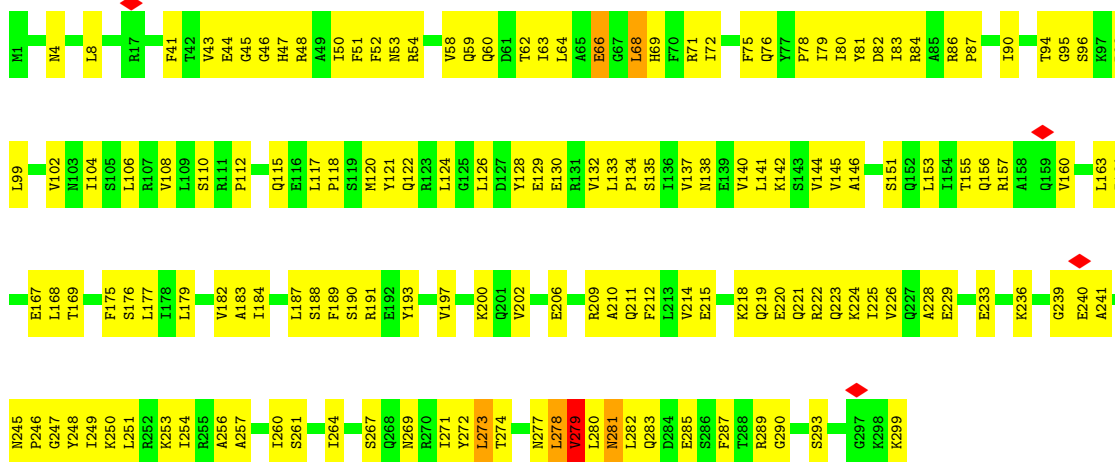




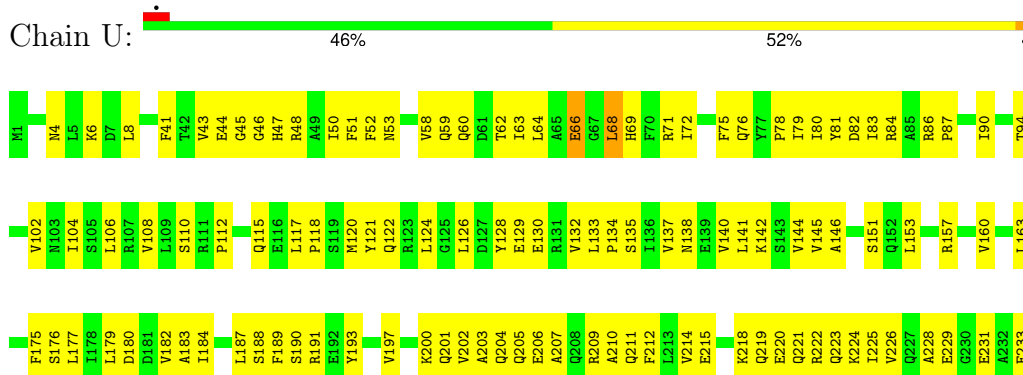
• Molecule 1: Prohibitin-2

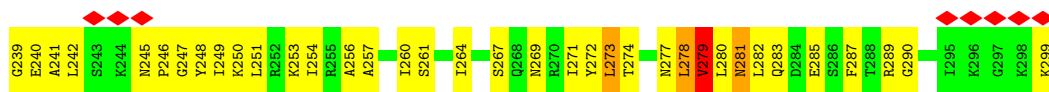


• Molecule 1: Prohibitin-2

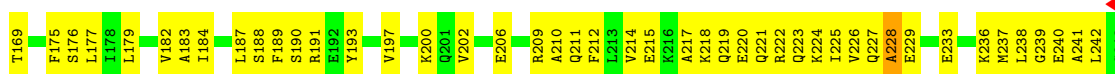
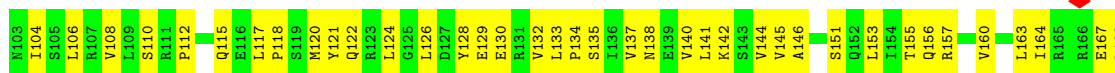


• Molecule 1: Prohibitin-2





• Molecule 1: Prohibitin-2

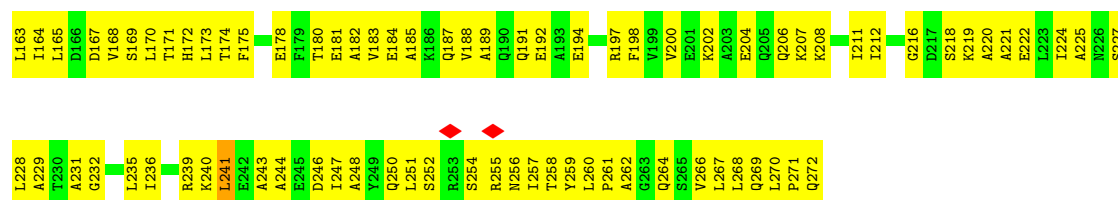


• Molecule 2: Prohibitin 1



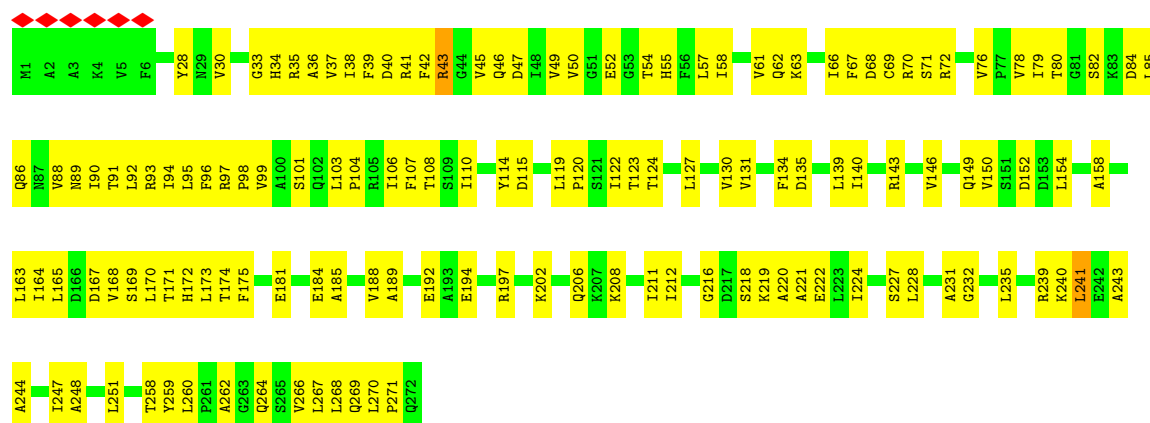
• Molecule 2: Prohibitin 1





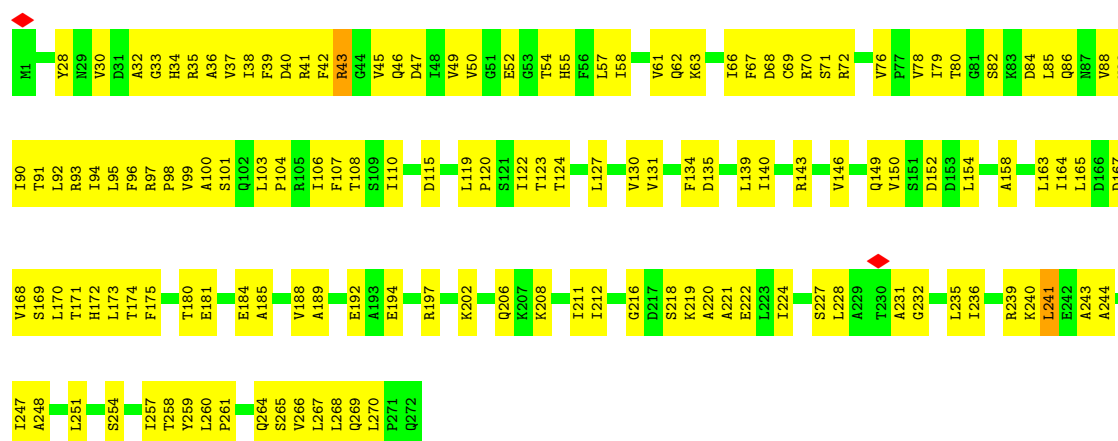
### • Molecule 2: Prohibitin 1

Chain F: 50% 50%



### • Molecule 2: Prohibitin 1

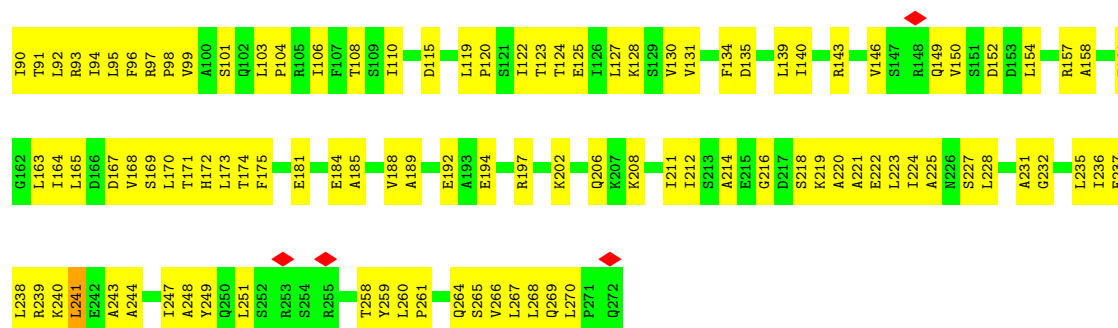
Chain H: 48% 51%



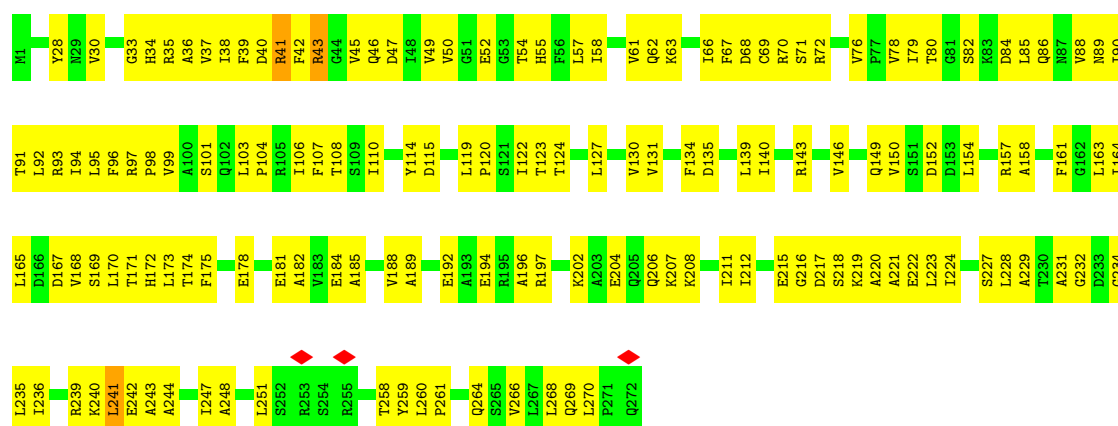
### • Molecule 2: Prohibitin 1

Chain J: 46% 53%

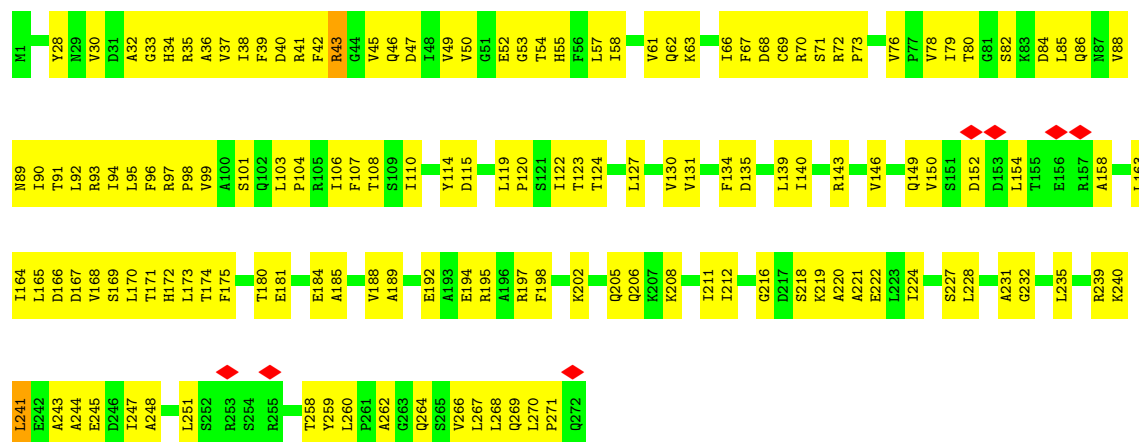




### • Molecule 2: Prohibitin 1

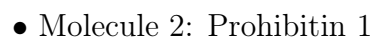


### • Molecule 2: Prohibitin 1

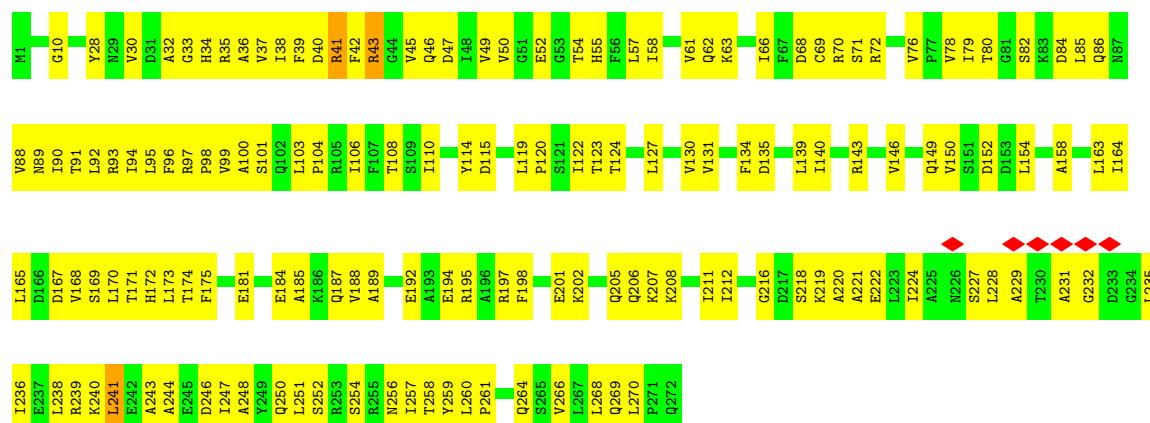


### • Molecule 2: Prohibitin 1



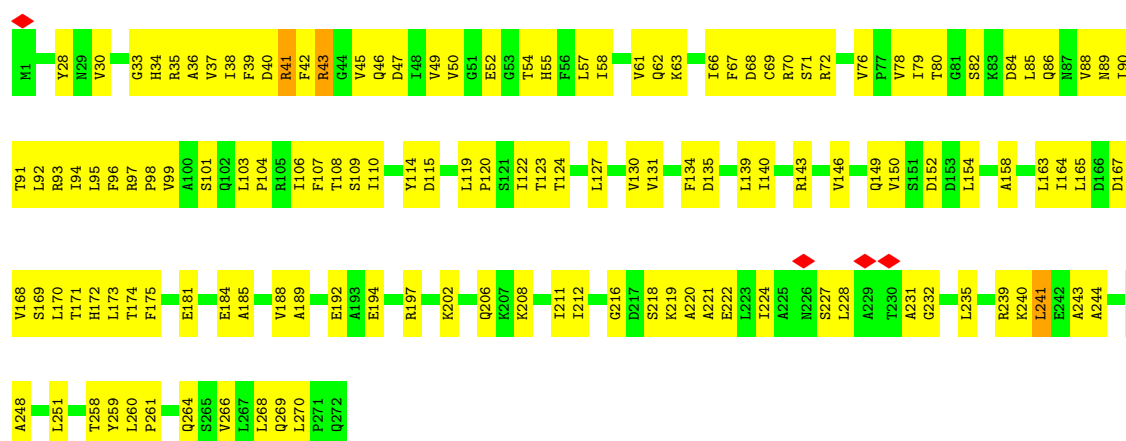


Chain V: 



## ● Molecule 2: Prohibitin 1

Chain X: 



## 4 Experimental information

| Property                             | Value                                                                                 | Source    |
|--------------------------------------|---------------------------------------------------------------------------------------|-----------|
| EM reconstruction method             | SUBTOMOGRAM AVERAGING                                                                 | Depositor |
| Imposed symmetry                     | POINT, C1                                                                             | Depositor |
| Number of subtomograms used          | 1156                                                                                  | 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            | 0.0002                                                                                | Depositor |
| Map size ( $\text{\AA}$ )            | 503.99997, 503.99997, 503.99997                                                       | wwPDB     |
| Map dimensions                       | 120, 120, 120                                                                         | wwPDB     |
| Map angles ( $^\circ$ )              | 90.0, 90.0, 90.0                                                                      | wwPDB     |
| Pixel spacing ( $\text{\AA}$ )       | 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     | 0.32         | 0/2376          | 0.64        | 1/3198 (0.0%)   |
| 1   | C     | 0.32         | 0/2376          | 0.65        | 1/3198 (0.0%)   |
| 1   | E     | 0.32         | 0/2376          | 0.64        | 1/3198 (0.0%)   |
| 1   | G     | 0.32         | 0/2376          | 0.64        | 2/3198 (0.1%)   |
| 1   | I     | 0.32         | 0/2376          | 0.65        | 2/3198 (0.1%)   |
| 1   | K     | 0.32         | 0/2376          | 0.64        | 1/3198 (0.0%)   |
| 1   | M     | 0.32         | 0/2376          | 0.64        | 1/3198 (0.0%)   |
| 1   | O     | 0.32         | 0/2376          | 0.64        | 1/3198 (0.0%)   |
| 1   | Q     | 0.32         | 0/2376          | 0.65        | 2/3198 (0.1%)   |
| 1   | S     | 0.32         | 0/2376          | 0.65        | 2/3198 (0.1%)   |
| 1   | U     | 0.32         | 0/2376          | 0.64        | 1/3198 (0.0%)   |
| 1   | W     | 0.32         | 0/2376          | 0.64        | 2/3198 (0.1%)   |
| 2   | B     | 0.43         | 2/2133 (0.1%)   | 0.82        | 3/2887 (0.1%)   |
| 2   | D     | 0.43         | 2/2133 (0.1%)   | 0.81        | 3/2887 (0.1%)   |
| 2   | F     | 0.43         | 2/2133 (0.1%)   | 0.82        | 4/2887 (0.1%)   |
| 2   | H     | 0.43         | 2/2133 (0.1%)   | 0.82        | 3/2887 (0.1%)   |
| 2   | J     | 0.43         | 2/2133 (0.1%)   | 0.81        | 3/2887 (0.1%)   |
| 2   | L     | 0.43         | 2/2133 (0.1%)   | 0.82        | 3/2887 (0.1%)   |
| 2   | N     | 0.43         | 2/2133 (0.1%)   | 0.82        | 3/2887 (0.1%)   |
| 2   | P     | 0.43         | 2/2133 (0.1%)   | 0.82        | 3/2887 (0.1%)   |
| 2   | R     | 0.43         | 2/2133 (0.1%)   | 0.82        | 3/2887 (0.1%)   |
| 2   | T     | 0.43         | 2/2133 (0.1%)   | 0.82        | 4/2887 (0.1%)   |
| 2   | V     | 0.43         | 2/2133 (0.1%)   | 0.82        | 4/2887 (0.1%)   |
| 2   | X     | 0.43         | 2/2133 (0.1%)   | 0.82        | 3/2887 (0.1%)   |
| All | All   | 0.38         | 24/54108 (0.0%) | 0.73        | 56/73020 (0.1%) |

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                   | 9                   |

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| Mol | Chain | #Chirality outliers | #Planarity outliers |
|-----|-------|---------------------|---------------------|
| 1   | C     | 0                   | 9                   |
| 1   | E     | 0                   | 9                   |
| 1   | G     | 0                   | 9                   |
| 1   | I     | 0                   | 9                   |
| 1   | K     | 0                   | 9                   |
| 1   | M     | 0                   | 9                   |
| 1   | O     | 0                   | 9                   |
| 1   | Q     | 0                   | 9                   |
| 1   | S     | 0                   | 9                   |
| 1   | U     | 0                   | 9                   |
| 1   | W     | 0                   | 9                   |
| 2   | B     | 0                   | 1                   |
| 2   | D     | 0                   | 1                   |
| 2   | F     | 0                   | 1                   |
| 2   | H     | 0                   | 1                   |
| 2   | J     | 0                   | 1                   |
| 2   | L     | 0                   | 1                   |
| 2   | N     | 0                   | 1                   |
| 2   | P     | 0                   | 1                   |
| 2   | R     | 0                   | 1                   |
| 2   | T     | 0                   | 1                   |
| 2   | V     | 0                   | 1                   |
| 2   | X     | 0                   | 1                   |
| All | All   | 0                   | 120                 |

All (24) bond length outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|-------|-------|-------------|----------|
| 2   | N     | 43  | ARG  | CB-CG | 11.44 | 1.86        | 1.52     |
| 2   | J     | 43  | ARG  | CB-CG | 11.43 | 1.86        | 1.52     |
| 2   | L     | 43  | ARG  | CB-CG | 11.42 | 1.86        | 1.52     |
| 2   | T     | 43  | ARG  | CB-CG | 11.42 | 1.86        | 1.52     |
| 2   | R     | 43  | ARG  | CB-CG | 11.41 | 1.86        | 1.52     |
| 2   | D     | 43  | ARG  | CB-CG | 11.41 | 1.86        | 1.52     |
| 2   | F     | 43  | ARG  | CB-CG | 11.41 | 1.86        | 1.52     |
| 2   | V     | 43  | ARG  | CB-CG | 11.40 | 1.86        | 1.52     |
| 2   | B     | 43  | ARG  | CB-CG | 11.40 | 1.86        | 1.52     |
| 2   | P     | 43  | ARG  | CB-CG | 11.39 | 1.86        | 1.52     |
| 2   | H     | 43  | ARG  | CB-CG | 11.39 | 1.86        | 1.52     |
| 2   | X     | 43  | ARG  | CB-CG | 11.38 | 1.86        | 1.52     |
| 2   | X     | 41  | ARG  | CG-CD | 6.04  | 1.70        | 1.52     |
| 2   | N     | 41  | ARG  | CG-CD | 6.03  | 1.70        | 1.52     |

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| Mol | Chain | Res | Type | Atoms | Z    | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|-------|------|-------------|----------|
| 2   | D     | 41  | ARG  | CG-CD | 6.02 | 1.70        | 1.52     |
| 2   | R     | 41  | ARG  | CG-CD | 6.02 | 1.70        | 1.52     |
| 2   | H     | 41  | ARG  | CG-CD | 6.01 | 1.70        | 1.52     |
| 2   | T     | 41  | ARG  | CG-CD | 6.01 | 1.70        | 1.52     |
| 2   | F     | 41  | ARG  | CG-CD | 6.00 | 1.70        | 1.52     |
| 2   | L     | 41  | ARG  | CG-CD | 6.00 | 1.70        | 1.52     |
| 2   | P     | 41  | ARG  | CG-CD | 6.00 | 1.70        | 1.52     |
| 2   | V     | 41  | ARG  | CG-CD | 6.00 | 1.70        | 1.52     |
| 2   | B     | 41  | ARG  | CG-CD | 6.00 | 1.70        | 1.52     |
| 2   | J     | 41  | ARG  | CG-CD | 5.99 | 1.70        | 1.52     |

All (56) bond angle outliers are listed below:

| Mol | Chain | Res | Type | Atoms    | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|----------|-------|-------------|----------|
| 2   | V     | 43  | ARG  | CB-CG-CD | 17.92 | 152.51      | 111.30   |
| 2   | D     | 43  | ARG  | CB-CG-CD | 17.92 | 152.51      | 111.30   |
| 2   | L     | 43  | ARG  | CB-CG-CD | 17.91 | 152.49      | 111.30   |
| 2   | P     | 43  | ARG  | CB-CG-CD | 17.91 | 152.49      | 111.30   |
| 2   | X     | 43  | ARG  | CB-CG-CD | 17.91 | 152.48      | 111.30   |
| 2   | F     | 43  | ARG  | CB-CG-CD | 17.90 | 152.47      | 111.30   |
| 2   | B     | 43  | ARG  | CB-CG-CD | 17.90 | 152.47      | 111.30   |
| 2   | N     | 43  | ARG  | CB-CG-CD | 17.90 | 152.47      | 111.30   |
| 2   | R     | 43  | ARG  | CB-CG-CD | 17.90 | 152.47      | 111.30   |
| 2   | H     | 43  | ARG  | CB-CG-CD | 17.89 | 152.46      | 111.30   |
| 2   | J     | 43  | ARG  | CB-CG-CD | 17.89 | 152.45      | 111.30   |
| 2   | T     | 43  | ARG  | CB-CG-CD | 17.89 | 152.44      | 111.30   |
| 2   | H     | 43  | ARG  | CA-CB-CG | 16.72 | 147.53      | 114.10   |
| 2   | B     | 43  | ARG  | CA-CB-CG | 16.70 | 147.50      | 114.10   |
| 2   | P     | 43  | ARG  | CA-CB-CG | 16.70 | 147.49      | 114.10   |
| 2   | R     | 43  | ARG  | CA-CB-CG | 16.70 | 147.49      | 114.10   |
| 2   | D     | 43  | ARG  | CA-CB-CG | 16.69 | 147.49      | 114.10   |
| 2   | X     | 43  | ARG  | CA-CB-CG | 16.69 | 147.49      | 114.10   |
| 2   | J     | 43  | ARG  | CA-CB-CG | 16.69 | 147.48      | 114.10   |
| 2   | T     | 43  | ARG  | CA-CB-CG | 16.69 | 147.48      | 114.10   |
| 2   | L     | 43  | ARG  | CA-CB-CG | 16.69 | 147.48      | 114.10   |
| 2   | F     | 43  | ARG  | CA-CB-CG | 16.68 | 147.47      | 114.10   |
| 2   | N     | 43  | ARG  | CA-CB-CG | 16.68 | 147.46      | 114.10   |
| 2   | V     | 43  | ARG  | CA-CB-CG | 16.68 | 147.46      | 114.10   |
| 2   | X     | 43  | ARG  | CG-CD-NE | 12.05 | 138.51      | 112.00   |
| 2   | J     | 43  | ARG  | CG-CD-NE | 12.05 | 138.50      | 112.00   |
| 2   | P     | 43  | ARG  | CG-CD-NE | 12.05 | 138.50      | 112.00   |
| 2   | H     | 43  | ARG  | CG-CD-NE | 12.04 | 138.50      | 112.00   |

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| Mol | Chain | Res | Type | Atoms    | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|----------|-------|-------------|----------|
| 2   | N     | 43  | ARG  | CG-CD-NE | 12.04 | 138.49      | 112.00   |
| 2   | F     | 43  | ARG  | CG-CD-NE | 12.04 | 138.49      | 112.00   |
| 2   | V     | 43  | ARG  | CG-CD-NE | 12.04 | 138.48      | 112.00   |
| 2   | R     | 43  | ARG  | CG-CD-NE | 12.04 | 138.48      | 112.00   |
| 2   | B     | 43  | ARG  | CG-CD-NE | 12.03 | 138.47      | 112.00   |
| 2   | L     | 43  | ARG  | CG-CD-NE | 12.03 | 138.47      | 112.00   |
| 2   | T     | 43  | ARG  | CG-CD-NE | 12.03 | 138.46      | 112.00   |
| 2   | D     | 43  | ARG  | CG-CD-NE | 12.02 | 138.44      | 112.00   |
| 1   | W     | 68  | LEU  | CA-CB-CG | 5.96  | 137.17      | 116.30   |
| 1   | M     | 68  | LEU  | CA-CB-CG | 5.96  | 137.16      | 116.30   |
| 1   | Q     | 68  | LEU  | CA-CB-CG | 5.96  | 137.15      | 116.30   |
| 1   | C     | 68  | LEU  | CA-CB-CG | 5.96  | 137.15      | 116.30   |
| 1   | G     | 68  | LEU  | CA-CB-CG | 5.96  | 137.15      | 116.30   |
| 1   | I     | 68  | LEU  | CA-CB-CG | 5.96  | 137.15      | 116.30   |
| 1   | S     | 68  | LEU  | CA-CB-CG | 5.95  | 137.14      | 116.30   |
| 1   | U     | 68  | LEU  | CA-CB-CG | 5.95  | 137.13      | 116.30   |
| 1   | A     | 68  | LEU  | CA-CB-CG | 5.95  | 137.13      | 116.30   |
| 1   | O     | 68  | LEU  | CA-CB-CG | 5.95  | 137.12      | 116.30   |
| 1   | K     | 68  | LEU  | CA-CB-CG | 5.95  | 137.11      | 116.30   |
| 1   | E     | 68  | LEU  | CA-CB-CG | 5.94  | 137.09      | 116.30   |
| 1   | Q     | 274 | THR  | N-CA-C   | 5.03  | 115.02      | 108.07   |
| 1   | I     | 274 | THR  | N-CA-C   | 5.03  | 115.01      | 108.07   |
| 1   | S     | 274 | THR  | N-CA-C   | 5.01  | 114.99      | 108.07   |
| 1   | W     | 274 | THR  | N-CA-C   | 5.01  | 114.99      | 108.07   |
| 2   | F     | 41  | ARG  | CA-CB-CG | 5.01  | 124.11      | 114.10   |
| 1   | G     | 274 | THR  | N-CA-C   | 5.01  | 114.98      | 108.07   |
| 2   | T     | 41  | ARG  | CA-CB-CG | 5.00  | 124.11      | 114.10   |
| 2   | V     | 41  | ARG  | CA-CB-CG | 5.00  | 124.11      | 114.10   |

There are no chirality outliers.

All (120) planarity outliers are listed below:

| Mol | Chain | Res | Type | Group   |
|-----|-------|-----|------|---------|
| 1   | A     | 190 | SER  | Peptide |
| 1   | A     | 191 | ARG  | Peptide |
| 1   | A     | 228 | ALA  | Peptide |
| 1   | A     | 273 | LEU  | Peptide |
| 1   | A     | 278 | LEU  | Peptide |
| 1   | A     | 279 | VAL  | Peptide |
| 1   | A     | 281 | ASN  | Peptide |
| 1   | A     | 45  | GLY  | Peptide |
| 1   | A     | 66  | GLU  | Peptide |

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| Mol | Chain | Res | Type | Group   |
|-----|-------|-----|------|---------|
| 2   | B     | 241 | LEU  | Peptide |
| 1   | C     | 190 | SER  | Peptide |
| 1   | C     | 191 | ARG  | Peptide |
| 1   | C     | 228 | ALA  | Peptide |
| 1   | C     | 273 | LEU  | Peptide |
| 1   | C     | 278 | LEU  | Peptide |
| 1   | C     | 279 | VAL  | Peptide |
| 1   | C     | 281 | ASN  | Peptide |
| 1   | C     | 45  | GLY  | Peptide |
| 1   | C     | 66  | GLU  | Peptide |
| 2   | D     | 241 | LEU  | Peptide |
| 1   | E     | 190 | SER  | Peptide |
| 1   | E     | 191 | ARG  | Peptide |
| 1   | E     | 228 | ALA  | Peptide |
| 1   | E     | 273 | LEU  | Peptide |
| 1   | E     | 278 | LEU  | Peptide |
| 1   | E     | 279 | VAL  | Peptide |
| 1   | E     | 281 | ASN  | Peptide |
| 1   | E     | 45  | GLY  | Peptide |
| 1   | E     | 66  | GLU  | Peptide |
| 2   | F     | 241 | LEU  | Peptide |
| 1   | G     | 190 | SER  | Peptide |
| 1   | G     | 191 | ARG  | Peptide |
| 1   | G     | 228 | ALA  | Peptide |
| 1   | G     | 273 | LEU  | Peptide |
| 1   | G     | 278 | LEU  | Peptide |
| 1   | G     | 279 | VAL  | Peptide |
| 1   | G     | 281 | ASN  | Peptide |
| 1   | G     | 45  | GLY  | Peptide |
| 1   | G     | 66  | GLU  | Peptide |
| 2   | H     | 241 | LEU  | Peptide |
| 1   | I     | 190 | SER  | Peptide |
| 1   | I     | 191 | ARG  | Peptide |
| 1   | I     | 228 | ALA  | Peptide |
| 1   | I     | 273 | LEU  | Peptide |
| 1   | I     | 278 | LEU  | Peptide |
| 1   | I     | 279 | VAL  | Peptide |
| 1   | I     | 281 | ASN  | Peptide |
| 1   | I     | 45  | GLY  | Peptide |
| 1   | I     | 66  | GLU  | Peptide |
| 2   | J     | 241 | LEU  | Peptide |
| 1   | K     | 190 | SER  | Peptide |

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| Mol | Chain | Res | Type | Group   |
|-----|-------|-----|------|---------|
| 1   | K     | 191 | ARG  | Peptide |
| 1   | K     | 228 | ALA  | Peptide |
| 1   | K     | 273 | LEU  | Peptide |
| 1   | K     | 278 | LEU  | Peptide |
| 1   | K     | 279 | VAL  | Peptide |
| 1   | K     | 281 | ASN  | Peptide |
| 1   | K     | 45  | GLY  | Peptide |
| 1   | K     | 66  | GLU  | Peptide |
| 2   | L     | 241 | LEU  | Peptide |
| 1   | M     | 190 | SER  | Peptide |
| 1   | M     | 191 | ARG  | Peptide |
| 1   | M     | 228 | ALA  | Peptide |
| 1   | M     | 273 | LEU  | Peptide |
| 1   | M     | 278 | LEU  | Peptide |
| 1   | M     | 279 | VAL  | Peptide |
| 1   | M     | 281 | ASN  | Peptide |
| 1   | M     | 45  | GLY  | Peptide |
| 1   | M     | 66  | GLU  | Peptide |
| 2   | N     | 241 | LEU  | Peptide |
| 1   | O     | 190 | SER  | Peptide |
| 1   | O     | 191 | ARG  | Peptide |
| 1   | O     | 228 | ALA  | Peptide |
| 1   | O     | 273 | LEU  | Peptide |
| 1   | O     | 278 | LEU  | Peptide |
| 1   | O     | 279 | VAL  | Peptide |
| 1   | O     | 281 | ASN  | Peptide |
| 1   | O     | 45  | GLY  | Peptide |
| 1   | O     | 66  | GLU  | Peptide |
| 2   | P     | 241 | LEU  | Peptide |
| 1   | Q     | 190 | SER  | Peptide |
| 1   | Q     | 191 | ARG  | Peptide |
| 1   | Q     | 228 | ALA  | Peptide |
| 1   | Q     | 273 | LEU  | Peptide |
| 1   | Q     | 278 | LEU  | Peptide |
| 1   | Q     | 279 | VAL  | Peptide |
| 1   | Q     | 281 | ASN  | Peptide |
| 1   | Q     | 45  | GLY  | Peptide |
| 1   | Q     | 66  | GLU  | Peptide |
| 2   | R     | 241 | LEU  | Peptide |
| 1   | S     | 190 | SER  | Peptide |
| 1   | S     | 191 | ARG  | Peptide |
| 1   | S     | 228 | ALA  | Peptide |

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| Mol | Chain | Res | Type | Group   |
|-----|-------|-----|------|---------|
| 1   | S     | 273 | LEU  | Peptide |
| 1   | S     | 278 | LEU  | Peptide |
| 1   | S     | 279 | VAL  | Peptide |
| 1   | S     | 281 | ASN  | Peptide |
| 1   | S     | 45  | GLY  | Peptide |
| 1   | S     | 66  | GLU  | Peptide |
| 2   | T     | 241 | LEU  | Peptide |
| 1   | U     | 190 | SER  | Peptide |
| 1   | U     | 191 | ARG  | Peptide |
| 1   | U     | 228 | ALA  | Peptide |
| 1   | U     | 273 | LEU  | Peptide |
| 1   | U     | 278 | LEU  | Peptide |
| 1   | U     | 279 | VAL  | Peptide |
| 1   | U     | 281 | ASN  | Peptide |
| 1   | U     | 45  | GLY  | Peptide |
| 1   | U     | 66  | GLU  | Peptide |
| 2   | V     | 241 | LEU  | Peptide |
| 1   | W     | 190 | SER  | Peptide |
| 1   | W     | 191 | ARG  | Peptide |
| 1   | W     | 228 | ALA  | Peptide |
| 1   | W     | 273 | LEU  | Peptide |
| 1   | W     | 278 | LEU  | Peptide |
| 1   | W     | 279 | VAL  | Peptide |
| 1   | W     | 281 | ASN  | Peptide |
| 1   | W     | 45  | GLY  | Peptide |
| 1   | W     | 66  | GLU  | Peptide |
| 2   | X     | 241 | LEU  | Peptide |

## 5.2 Too-close contacts [i](#)

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

| Mol | Chain | Non-H | H(model) | H(added) | Clashes | Symm-Clashes |
|-----|-------|-------|----------|----------|---------|--------------|
| 1   | A     | 2345  | 0        | 2434     | 349     | 0            |
| 1   | C     | 2345  | 0        | 2434     | 317     | 0            |
| 1   | E     | 2345  | 0        | 2434     | 381     | 0            |
| 1   | G     | 2345  | 0        | 2434     | 283     | 0            |
| 1   | I     | 2345  | 0        | 2434     | 285     | 0            |
| 1   | K     | 2345  | 0        | 2434     | 357     | 0            |

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| Mol | Chain | Non-H | H(model) | H(added) | Clashes | Symm-Clashes |
|-----|-------|-------|----------|----------|---------|--------------|
| 1   | M     | 2345  | 0        | 2434     | 411     | 0            |
| 1   | O     | 2345  | 0        | 2434     | 204     | 0            |
| 1   | Q     | 2345  | 0        | 2434     | 604     | 0            |
| 1   | S     | 2345  | 0        | 2434     | 411     | 0            |
| 1   | U     | 2345  | 0        | 2434     | 298     | 0            |
| 1   | W     | 2345  | 0        | 2434     | 363     | 0            |
| 2   | B     | 2103  | 0        | 2150     | 339     | 0            |
| 2   | D     | 2103  | 0        | 2150     | 446     | 0            |
| 2   | F     | 2103  | 0        | 2150     | 211     | 0            |
| 2   | H     | 2103  | 0        | 2150     | 262     | 0            |
| 2   | J     | 2103  | 0        | 2150     | 335     | 0            |
| 2   | L     | 2103  | 0        | 2150     | 286     | 0            |
| 2   | N     | 2103  | 0        | 2150     | 336     | 0            |
| 2   | P     | 2103  | 0        | 2150     | 549     | 0            |
| 2   | R     | 2103  | 0        | 2150     | 349     | 0            |
| 2   | T     | 2103  | 0        | 2150     | 359     | 0            |
| 2   | V     | 2103  | 0        | 2150     | 330     | 0            |
| 2   | X     | 2103  | 0        | 2150     | 235     | 0            |
| All | All   | 53376 | 0        | 55008    | 6267    | 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 58.

All (6267) 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) |
|----------------|---------------|--------------------------|-------------------|
| 2:H:43:ARG:CB  | 2:H:43:ARG:CG | 1.86                     | 1.54              |
| 2:L:43:ARG:CG  | 2:L:43:ARG:CB | 1.86                     | 1.53              |
| 2:R:43:ARG:CB  | 2:R:43:ARG:CG | 1.86                     | 1.52              |
| 2:P:43:ARG:CB  | 1:Q:67:GLY:N  | 1.70                     | 1.52              |
| 2:T:43:ARG:CG  | 2:T:43:ARG:CB | 1.86                     | 1.51              |
| 2:B:43:ARG:CB  | 2:B:43:ARG:CG | 1.86                     | 1.51              |
| 2:F:43:ARG:CG  | 2:F:43:ARG:CB | 1.86                     | 1.50              |
| 2:D:43:ARG:CG  | 2:D:43:ARG:CB | 1.86                     | 1.50              |
| 2:N:43:ARG:CB  | 2:N:43:ARG:CG | 1.86                     | 1.50              |
| 2:V:43:ARG:CB  | 2:V:43:ARG:CG | 1.86                     | 1.50              |
| 2:J:43:ARG:CB  | 2:J:43:ARG:CG | 1.86                     | 1.49              |
| 2:P:43:ARG:CB  | 2:P:43:ARG:CG | 1.86                     | 1.49              |
| 2:X:43:ARG:CB  | 2:X:43:ARG:CG | 1.86                     | 1.48              |
| 2:P:41:ARG:HD2 | 1:Q:43:VAL:CA | 1.45                     | 1.43              |
| 2:P:43:ARG:CB  | 1:Q:65:ALA:O  | 1.67                     | 1.40              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:P:43:ARG:HB3   | 1:Q:66:GLU:C     | 1.45                     | 1.40              |
| 2:P:41:ARG:CD    | 1:Q:43:VAL:HA    | 1.56                     | 1.36              |
| 2:J:43:ARG:HA    | 1:K:67:GLY:C     | 1.52                     | 1.34              |
| 2:D:236:ILE:O    | 1:E:254:ILE:HD13 | 1.14                     | 1.31              |
| 2:P:43:ARG:CG    | 1:Q:66:GLU:C     | 2.02                     | 1.31              |
| 2:P:41:ARG:CD    | 1:Q:44:GLU:H     | 1.45                     | 1.29              |
| 2:J:41:ARG:CG    | 1:K:43:VAL:HB    | 1.64                     | 1.27              |
| 2:P:43:ARG:HB3   | 1:Q:67:GLY:N     | 0.95                     | 1.27              |
| 2:P:41:ARG:HB3   | 1:Q:43:VAL:C     | 1.60                     | 1.26              |
| 2:P:43:ARG:C     | 1:Q:66:GLU:HA    | 1.61                     | 1.25              |
| 2:P:41:ARG:HB2   | 1:Q:44:GLU:C     | 1.62                     | 1.24              |
| 2:P:39:PHE:C     | 1:Q:45:GLY:HA3   | 1.60                     | 1.24              |
| 2:P:41:ARG:CG    | 1:Q:43:VAL:HA    | 1.65                     | 1.23              |
| 2:P:41:ARG:CB    | 1:Q:44:GLU:N     | 2.02                     | 1.23              |
| 2:P:39:PHE:CD1   | 1:Q:45:GLY:O     | 1.92                     | 1.22              |
| 1:K:238:LEU:CD1  | 2:L:235:LEU:HD13 | 1.68                     | 1.22              |
| 2:P:46:GLN:HG2   | 1:Q:66:GLU:OE1   | 1.36                     | 1.21              |
| 1:S:253:LYS:CG   | 2:T:241:LEU:HD13 | 1.70                     | 1.20              |
| 2:P:43:ARG:CB    | 1:Q:66:GLU:C     | 2.05                     | 1.20              |
| 2:R:267:LEU:HD21 | 2:T:267:LEU:HD13 | 1.21                     | 1.20              |
| 2:T:41:ARG:HD3   | 1:U:43:VAL:O     | 1.42                     | 1.19              |
| 2:D:228:LEU:HD13 | 1:E:251:LEU:HD21 | 1.23                     | 1.18              |
| 2:P:41:ARG:C     | 1:Q:43:VAL:HG13  | 1.66                     | 1.18              |
| 2:J:41:ARG:HG3   | 1:K:43:VAL:CB    | 1.71                     | 1.18              |
| 2:P:41:ARG:CD    | 1:Q:43:VAL:CA    | 2.17                     | 1.17              |
| 2:J:45:VAL:O     | 1:K:66:GLU:OE1   | 1.56                     | 1.16              |
| 2:P:43:ARG:CB    | 1:Q:66:GLU:CA    | 2.21                     | 1.16              |
| 2:P:189:ALA:HB3  | 1:Q:212:PHE:CD1  | 1.79                     | 1.16              |
| 2:P:41:ARG:CD    | 1:Q:44:GLU:N     | 2.07                     | 1.16              |
| 1:I:239:GLY:CA   | 2:J:231:ALA:HB1  | 1.75                     | 1.15              |
| 1:A:210:ALA:HB3  | 2:B:205:GLN:HB2  | 1.28                     | 1.15              |
| 1:A:67:GLY:HA2   | 2:X:43:ARG:NE    | 1.61                     | 1.15              |
| 2:J:43:ARG:O     | 1:K:67:GLY:N     | 1.81                     | 1.13              |
| 1:S:249:ILE:HG12 | 2:T:241:LEU:HD12 | 1.19                     | 1.13              |
| 2:P:46:GLN:CG    | 1:Q:66:GLU:OE1   | 1.98                     | 1.12              |
| 1:G:98:ASP:O     | 2:H:184:GLU:HB2  | 1.49                     | 1.12              |
| 2:T:41:ARG:CD    | 1:U:43:VAL:O     | 1.97                     | 1.12              |
| 1:A:67:GLY:HA2   | 2:X:43:ARG:HE    | 1.13                     | 1.11              |
| 2:P:41:ARG:HD2   | 1:Q:43:VAL:C     | 1.76                     | 1.11              |
| 2:T:41:ARG:NH2   | 1:U:44:GLU:HG2   | 1.66                     | 1.11              |
| 1:A:68:LEU:H     | 2:X:43:ARG:CZ    | 1.63                     | 1.10              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:142:LYS:HE3  | 2:D:140:ILE:HD13 | 1.31                     | 1.10              |
| 2:R:259:TYR:CE1  | 1:S:276:ASP:HA   | 1.87                     | 1.10              |
| 2:T:41:ARG:CG    | 1:U:43:VAL:O     | 1.99                     | 1.10              |
| 2:V:243:ALA:HB2  | 1:W:254:ILE:HG23 | 1.15                     | 1.10              |
| 1:K:238:LEU:HD13 | 2:L:235:LEU:CD1  | 1.81                     | 1.09              |
| 2:P:178:GLU:OE1  | 1:Q:206:GLU:OE2  | 1.69                     | 1.09              |
| 2:P:42:PHE:HB3   | 1:Q:67:GLY:O     | 1.51                     | 1.09              |
| 1:K:242:LEU:O    | 1:M:294:LEU:HD12 | 1.53                     | 1.09              |
| 2:P:43:ARG:CA    | 1:Q:65:ALA:O     | 2.00                     | 1.09              |
| 2:B:207:LYS:HG3  | 1:C:227:GLN:HA   | 1.36                     | 1.08              |
| 2:P:61:VAL:HG23  | 1:Q:43:VAL:CG1   | 1.82                     | 1.08              |
| 2:P:43:ARG:O     | 1:Q:66:GLU:N     | 1.86                     | 1.07              |
| 1:Q:242:LEU:HD13 | 2:R:238:LEU:HD13 | 1.31                     | 1.07              |
| 2:P:41:ARG:HB2   | 1:Q:44:GLU:O     | 1.55                     | 1.07              |
| 2:J:41:ARG:HG2   | 1:K:43:VAL:HB    | 1.34                     | 1.07              |
| 2:V:221:ALA:HB1  | 1:W:242:LEU:HD21 | 1.32                     | 1.07              |
| 2:H:267:LEU:HD21 | 2:J:267:LEU:HD13 | 1.20                     | 1.06              |
| 1:S:253:LYS:HG3  | 2:T:241:LEU:HD13 | 1.26                     | 1.06              |
| 1:U:257:ALA:HB2  | 1:W:279:VAL:HG11 | 1.19                     | 1.06              |
| 2:P:43:ARG:HG3   | 1:Q:66:GLU:N     | 1.71                     | 1.06              |
| 1:Q:221:GLN:HE21 | 2:R:212:ILE:HG22 | 0.99                     | 1.06              |
| 2:V:259:TYR:CZ   | 1:W:274:THR:O    | 2.08                     | 1.06              |
| 1:M:146:ALA:CB   | 2:N:140:ILE:HG21 | 1.86                     | 1.06              |
| 2:D:236:ILE:O    | 1:E:254:ILE:CD1  | 2.04                     | 1.05              |
| 2:P:43:ARG:HG2   | 1:Q:66:GLU:C     | 1.74                     | 1.05              |
| 2:P:40:ASP:N     | 1:Q:45:GLY:HA3   | 1.70                     | 1.05              |
| 1:I:239:GLY:HA3  | 2:J:231:ALA:CB   | 1.86                     | 1.04              |
| 2:V:257:ILE:HA   | 1:W:271:ILE:O    | 1.56                     | 1.04              |
| 1:C:290:GLY:O    | 1:E:283:GLN:CD   | 2.01                     | 1.03              |
| 1:G:274:THR:HG21 | 1:I:281:ASN:OD1  | 1.55                     | 1.03              |
| 2:J:43:ARG:O     | 1:K:66:GLU:C     | 2.02                     | 1.03              |
| 1:S:260:ILE:HG23 | 2:T:248:ALA:HB1  | 1.35                     | 1.03              |
| 2:D:228:LEU:CD1  | 1:E:251:LEU:HD21 | 1.87                     | 1.02              |
| 2:P:41:ARG:CB    | 1:Q:43:VAL:C     | 2.32                     | 1.02              |
| 2:P:110:ILE:O    | 1:Q:109:LEU:HD11 | 1.60                     | 1.01              |
| 2:T:43:ARG:O     | 1:U:66:GLU:HB3   | 1.59                     | 1.01              |
| 2:J:42:PHE:HB3   | 1:K:68:LEU:HD22  | 1.43                     | 1.01              |
| 2:R:237:GLU:CB   | 1:S:294:LEU:HD13 | 1.89                     | 1.01              |
| 2:V:221:ALA:HB1  | 1:W:242:LEU:CD2  | 1.89                     | 1.01              |
| 1:C:274:THR:HG22 | 2:D:261:PRO:HB3  | 1.39                     | 1.01              |
| 2:V:247:ILE:HG12 | 1:W:257:ALA:HB1  | 1.42                     | 1.00              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:68:LEU:HD22  | 2:X:43:ARG:HD2   | 1.44                     | 1.00              |
| 1:M:125:GLY:HA3  | 2:N:70:ARG:HD3   | 1.42                     | 1.00              |
| 1:A:43:VAL:O     | 2:X:41:ARG:HA    | 1.61                     | 1.00              |
| 2:J:42:PHE:O     | 1:K:68:LEU:HA    | 1.61                     | 0.99              |
| 2:P:43:ARG:CA    | 1:Q:66:GLU:HA    | 1.92                     | 0.99              |
| 2:R:267:LEU:CD2  | 2:T:267:LEU:HD13 | 1.92                     | 0.99              |
| 2:H:270:LEU:HD11 | 2:J:260:LEU:HD21 | 1.42                     | 0.99              |
| 2:J:41:ARG:CG    | 1:K:43:VAL:CB    | 2.35                     | 0.99              |
| 1:Q:221:GLN:HE21 | 2:R:212:ILE:CG2  | 1.73                     | 0.99              |
| 1:Q:221:GLN:NE2  | 2:R:212:ILE:HG22 | 1.76                     | 0.99              |
| 2:B:267:LEU:HD11 | 2:D:267:LEU:HD13 | 1.45                     | 0.98              |
| 1:O:290:GLY:O    | 1:Q:283:GLN:OE1  | 1.81                     | 0.98              |
| 2:P:43:ARG:O     | 1:Q:65:ALA:C     | 2.06                     | 0.98              |
| 2:R:257:ILE:HG23 | 1:S:273:LEU:HD12 | 1.41                     | 0.98              |
| 2:R:259:TYR:HE1  | 1:S:276:ASP:HA   | 1.25                     | 0.98              |
| 1:A:283:GLN:HB2  | 1:W:276:ASP:HB3  | 1.45                     | 0.98              |
| 1:A:67:GLY:HA2   | 2:X:43:ARG:CZ    | 1.92                     | 0.98              |
| 2:P:41:ARG:CG    | 1:Q:44:GLU:N     | 2.27                     | 0.98              |
| 2:P:43:ARG:HG3   | 1:Q:66:GLU:C     | 1.86                     | 0.98              |
| 1:I:272:TYR:CD1  | 2:J:259:TYR:O    | 2.17                     | 0.98              |
| 2:P:41:ARG:CG    | 1:Q:44:GLU:H     | 1.75                     | 0.98              |
| 2:P:61:VAL:HG23  | 1:Q:43:VAL:HG11  | 1.41                     | 0.98              |
| 2:V:258:THR:CB   | 1:W:272:TYR:CD2  | 2.47                     | 0.98              |
| 2:V:258:THR:HB   | 1:W:272:TYR:CD2  | 1.99                     | 0.98              |
| 2:V:218:SER:OG   | 1:W:237:MET:CE   | 2.11                     | 0.98              |
| 2:D:197:ARG:HA   | 1:E:219:GLN:HE22 | 1.28                     | 0.97              |
| 2:P:43:ARG:HG2   | 1:Q:67:GLY:CA    | 1.93                     | 0.97              |
| 2:V:236:ILE:HG23 | 1:W:250:LYS:HD2  | 1.46                     | 0.97              |
| 1:S:252:ARG:HE   | 2:T:245:GLU:CD   | 1.72                     | 0.97              |
| 2:P:41:ARG:HD2   | 1:Q:43:VAL:N     | 1.79                     | 0.97              |
| 2:P:41:ARG:NE    | 1:Q:44:GLU:H     | 1.61                     | 0.97              |
| 2:P:43:ARG:HG2   | 1:Q:67:GLY:HA3   | 1.47                     | 0.97              |
| 2:P:43:ARG:CB    | 1:Q:67:GLY:CA    | 2.43                     | 0.96              |
| 1:A:280:LEU:HB3  | 1:W:273:LEU:HD22 | 1.47                     | 0.96              |
| 2:D:247:ILE:HG12 | 1:E:261:SER:OG   | 1.66                     | 0.96              |
| 2:T:41:ARG:CZ    | 1:U:44:GLU:HG2   | 1.95                     | 0.96              |
| 2:P:41:ARG:HB2   | 1:Q:44:GLU:N     | 1.74                     | 0.96              |
| 2:P:39:PHE:C     | 1:Q:45:GLY:CA    | 2.39                     | 0.95              |
| 2:P:43:ARG:CB    | 1:Q:66:GLU:HA    | 1.91                     | 0.95              |
| 2:P:43:ARG:C     | 1:Q:66:GLU:CA    | 2.39                     | 0.95              |
| 2:P:182:ALA:HB1  | 1:Q:205:GLN:O    | 1.66                     | 0.95              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:D:236:ILE:C    | 1:E:254:ILE:HD13 | 1.91                     | 0.95              |
| 2:P:43:ARG:HB3   | 1:Q:66:GLU:CA    | 1.88                     | 0.95              |
| 1:S:272:TYR:O    | 2:T:259:TYR:O    | 1.82                     | 0.95              |
| 1:A:67:GLY:CA    | 2:X:43:ARG:HE    | 1.80                     | 0.95              |
| 1:Q:249:ILE:HG21 | 1:S:294:LEU:HG   | 1.48                     | 0.95              |
| 1:S:260:ILE:CG1  | 2:T:248:ALA:HB3  | 1.96                     | 0.95              |
| 1:I:217:ALA:HB1  | 2:J:212:ILE:HG21 | 1.48                     | 0.95              |
| 1:M:52:PHE:CD1   | 2:N:32:ALA:HB2   | 2.01                     | 0.95              |
| 2:J:43:ARG:CA    | 1:K:67:GLY:C     | 2.39                     | 0.95              |
| 2:N:267:LEU:HD11 | 2:P:267:LEU:HD22 | 1.45                     | 0.95              |
| 2:B:268:LEU:O    | 2:D:269:GLN:OE1  | 1.85                     | 0.95              |
| 2:L:218:SER:HB2  | 1:M:238:LEU:HD21 | 1.49                     | 0.95              |
| 2:T:240:LYS:O    | 2:T:243:ALA:HB3  | 1.67                     | 0.95              |
| 2:L:240:LYS:O    | 2:L:243:ALA:HB3  | 1.67                     | 0.94              |
| 1:G:249:ILE:HD13 | 1:I:294:LEU:HD21 | 1.48                     | 0.94              |
| 2:B:240:LYS:O    | 2:B:243:ALA:HB3  | 1.67                     | 0.94              |
| 1:K:217:ALA:HB1  | 2:L:212:ILE:HG21 | 1.46                     | 0.94              |
| 2:T:43:ARG:O     | 1:U:66:GLU:OE1   | 1.86                     | 0.94              |
| 2:X:240:LYS:O    | 2:X:243:ALA:HB3  | 1.67                     | 0.94              |
| 2:F:240:LYS:O    | 2:F:243:ALA:HB3  | 1.67                     | 0.94              |
| 2:H:240:LYS:O    | 2:H:243:ALA:HB3  | 1.67                     | 0.94              |
| 2:J:41:ARG:HG3   | 1:K:43:VAL:CG1   | 1.97                     | 0.94              |
| 2:P:43:ARG:CG    | 1:Q:65:ALA:O     | 2.16                     | 0.94              |
| 2:P:178:GLU:HB2  | 1:Q:202:VAL:HG13 | 1.46                     | 0.94              |
| 1:A:67:GLY:HA2   | 2:X:43:ARG:NH2   | 1.82                     | 0.94              |
| 1:A:206:GLU:OE1  | 2:B:202:LYS:HD2  | 1.68                     | 0.94              |
| 1:A:294:LEU:HG   | 1:W:249:ILE:HG21 | 1.48                     | 0.93              |
| 2:N:240:LYS:O    | 2:N:243:ALA:HB3  | 1.67                     | 0.93              |
| 2:P:240:LYS:O    | 2:P:243:ALA:HB3  | 1.67                     | 0.93              |
| 2:P:41:ARG:CA    | 1:Q:43:VAL:HG13  | 1.98                     | 0.93              |
| 2:R:218:SER:OG   | 1:S:241:ALA:HB1  | 1.69                     | 0.93              |
| 2:R:240:LYS:O    | 2:R:243:ALA:HB3  | 1.67                     | 0.93              |
| 2:B:196:ALA:HB3  | 1:C:219:GLN:NE2  | 1.82                     | 0.93              |
| 2:D:240:LYS:O    | 2:D:243:ALA:HB3  | 1.67                     | 0.93              |
| 1:M:146:ALA:HB3  | 2:N:140:ILE:HG21 | 1.47                     | 0.93              |
| 2:P:43:ARG:CB    | 1:Q:65:ALA:C     | 2.40                     | 0.93              |
| 2:P:121:SER:OG   | 1:Q:183:ALA:C    | 2.11                     | 0.93              |
| 2:X:93:ARG:HE    | 2:X:95:LEU:HD21  | 1.34                     | 0.93              |
| 2:J:240:LYS:O    | 2:J:243:ALA:HB3  | 1.67                     | 0.93              |
| 1:G:214:VAL:HG22 | 2:H:208:LYS:HG2  | 1.51                     | 0.93              |
| 2:L:93:ARG:HE    | 2:L:95:LEU:HD21  | 1.34                     | 0.93              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:R:93:ARG:HE    | 2:R:95:LEU:HD21  | 1.33                     | 0.93              |
| 2:B:204:GLU:HG2  | 1:C:226:VAL:HG21 | 1.50                     | 0.93              |
| 2:D:224:ILE:HB   | 1:E:248:TYR:CD1  | 2.04                     | 0.93              |
| 2:P:121:SER:OG   | 1:Q:184:ILE:N    | 2.02                     | 0.93              |
| 2:P:43:ARG:CG    | 1:Q:67:GLY:HA3   | 1.99                     | 0.93              |
| 1:A:66:GLU:OE1   | 2:X:47:ASP:OD2   | 1.85                     | 0.93              |
| 2:V:93:ARG:HE    | 2:V:95:LEU:HD21  | 1.34                     | 0.93              |
| 2:F:93:ARG:HE    | 2:F:95:LEU:HD21  | 1.34                     | 0.92              |
| 2:T:41:ARG:HG2   | 1:U:43:VAL:O     | 1.69                     | 0.92              |
| 2:D:243:ALA:HB2  | 1:E:258:GLN:HG2  | 1.49                     | 0.92              |
| 2:F:241:LEU:HD21 | 1:I:283:GLN:HE21 | 1.33                     | 0.92              |
| 2:J:93:ARG:HE    | 2:J:95:LEU:HD21  | 1.34                     | 0.92              |
| 2:P:41:ARG:HE    | 1:Q:44:GLU:HB2   | 1.32                     | 0.92              |
| 1:Q:249:ILE:CD1  | 2:R:241:LEU:HD12 | 1.99                     | 0.92              |
| 2:R:257:ILE:HG21 | 1:S:278:LEU:HG   | 1.52                     | 0.92              |
| 2:N:93:ARG:HE    | 2:N:95:LEU:HD21  | 1.33                     | 0.92              |
| 1:Q:249:ILE:HG12 | 2:R:241:LEU:HD12 | 1.52                     | 0.92              |
| 1:C:253:LYS:HD3  | 1:E:279:VAL:HG22 | 1.51                     | 0.92              |
| 2:D:222:GLU:OE2  | 1:E:237:MET:O    | 1.87                     | 0.92              |
| 1:G:98:ASP:HB2   | 2:H:184:GLU:HA   | 1.50                     | 0.92              |
| 1:I:263:THR:HG21 | 2:J:249:TYR:CE1  | 2.04                     | 0.91              |
| 2:V:240:LYS:O    | 2:V:243:ALA:HB3  | 1.67                     | 0.91              |
| 1:A:68:LEU:H     | 2:X:43:ARG:NE    | 1.68                     | 0.91              |
| 2:P:44:GLY:C     | 1:Q:66:GLU:HG2   | 1.94                     | 0.91              |
| 2:P:41:ARG:HB2   | 1:Q:44:GLU:CA    | 2.00                     | 0.91              |
| 1:M:124:LEU:HD23 | 2:N:71:SER:HB3   | 1.51                     | 0.91              |
| 1:K:225:ILE:HA   | 2:L:219:LYS:CE   | 2.01                     | 0.91              |
| 2:B:93:ARG:HE    | 2:B:95:LEU:HD21  | 1.34                     | 0.91              |
| 1:I:239:GLY:HA3  | 2:J:231:ALA:HB1  | 0.93                     | 0.91              |
| 1:K:225:ILE:HA   | 2:L:219:LYS:HE2  | 1.53                     | 0.91              |
| 2:P:46:GLN:CA    | 1:Q:66:GLU:OE1   | 2.18                     | 0.91              |
| 2:R:211:ILE:HD11 | 1:S:233:GLU:OE2  | 1.70                     | 0.91              |
| 2:P:259:TYR:CE1  | 1:Q:278:LEU:HB2  | 2.05                     | 0.91              |
| 1:Q:252:ARG:O    | 2:R:245:GLU:OE2  | 1.87                     | 0.91              |
| 2:V:218:SER:OG   | 1:W:237:MET:HE1  | 1.70                     | 0.91              |
| 2:L:259:TYR:O    | 2:L:260:LEU:HD12 | 1.71                     | 0.90              |
| 1:S:260:ILE:HG12 | 2:T:248:ALA:HB3  | 1.50                     | 0.90              |
| 2:B:269:GLN:HG3  | 2:D:269:GLN:CD   | 1.96                     | 0.90              |
| 2:D:93:ARG:HE    | 2:D:95:LEU:HD21  | 1.33                     | 0.90              |
| 2:N:259:TYR:O    | 2:N:260:LEU:HD12 | 1.72                     | 0.90              |
| 2:P:41:ARG:CG    | 1:Q:43:VAL:CA    | 2.46                     | 0.90              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:V:247:ILE:CG1  | 1:W:257:ALA:HB1  | 2.01                     | 0.90              |
| 2:B:204:GLU:CG   | 1:C:226:VAL:HG21 | 2.01                     | 0.90              |
| 1:C:299:LYS:OXT  | 1:E:288:THR:HG21 | 1.72                     | 0.90              |
| 2:D:182:ALA:HB1  | 1:E:205:GLN:HB3  | 1.50                     | 0.90              |
| 2:F:241:LEU:HD21 | 1:I:283:GLN:NE2  | 1.85                     | 0.90              |
| 1:G:260:ILE:CD1  | 1:I:279:VAL:HG21 | 2.01                     | 0.90              |
| 2:T:93:ARG:HE    | 2:T:95:LEU:HD21  | 1.34                     | 0.90              |
| 2:D:224:ILE:C    | 1:E:248:TYR:HB2  | 1.96                     | 0.90              |
| 1:S:164:ILE:HD12 | 1:S:184:ILE:HD11 | 1.54                     | 0.90              |
| 2:X:259:TYR:O    | 2:X:260:LEU:HD12 | 1.71                     | 0.90              |
| 2:V:259:TYR:O    | 2:V:260:LEU:HD12 | 1.71                     | 0.90              |
| 2:V:243:ALA:HB2  | 1:W:254:ILE:CG2  | 2.00                     | 0.90              |
| 2:P:39:PHE:CZ    | 1:Q:44:GLU:HB3   | 2.07                     | 0.90              |
| 2:P:46:GLN:HA    | 1:Q:66:GLU:OE1   | 1.71                     | 0.90              |
| 2:F:259:TYR:O    | 2:F:260:LEU:HD12 | 1.72                     | 0.90              |
| 2:J:259:TYR:O    | 2:J:260:LEU:HD12 | 1.72                     | 0.90              |
| 2:P:85:LEU:CB    | 1:Q:197:VAL:CG1  | 2.50                     | 0.90              |
| 2:H:93:ARG:HE    | 2:H:95:LEU:HD21  | 1.34                     | 0.89              |
| 1:Q:164:ILE:HD12 | 1:Q:184:ILE:HD11 | 1.54                     | 0.89              |
| 2:P:93:ARG:HE    | 2:P:95:LEU:HD21  | 1.34                     | 0.89              |
| 2:P:259:TYR:O    | 2:P:260:LEU:HD12 | 1.72                     | 0.89              |
| 2:T:259:TYR:O    | 2:T:260:LEU:HD12 | 1.72                     | 0.89              |
| 1:U:164:ILE:HD12 | 1:U:184:ILE:HD11 | 1.54                     | 0.89              |
| 2:H:259:TYR:O    | 2:H:260:LEU:HD12 | 1.72                     | 0.89              |
| 1:A:67:GLY:CA    | 2:X:43:ARG:NE    | 2.35                     | 0.89              |
| 2:D:259:TYR:O    | 2:D:260:LEU:HD12 | 1.71                     | 0.89              |
| 2:R:259:TYR:O    | 2:R:260:LEU:HD12 | 1.72                     | 0.89              |
| 1:Q:239:GLY:HA2  | 2:R:235:LEU:HB2  | 1.53                     | 0.89              |
| 1:W:164:ILE:HD12 | 1:W:184:ILE:HD11 | 1.54                     | 0.89              |
| 2:B:259:TYR:O    | 2:B:260:LEU:HD12 | 1.72                     | 0.89              |
| 1:G:249:ILE:HG21 | 1:I:294:LEU:HG   | 1.54                     | 0.89              |
| 2:H:43:ARG:HD2   | 1:I:68:LEU:HD23  | 1.52                     | 0.89              |
| 2:H:270:LEU:CD1  | 2:J:260:LEU:HD11 | 2.03                     | 0.89              |
| 1:A:164:ILE:HD12 | 1:A:184:ILE:HD11 | 1.54                     | 0.89              |
| 2:J:43:ARG:HA    | 1:K:67:GLY:CA    | 2.01                     | 0.89              |
| 2:P:60:TRP:CZ2   | 1:Q:42:THR:HG22  | 2.08                     | 0.89              |
| 1:E:164:ILE:HD12 | 1:E:184:ILE:HD11 | 1.54                     | 0.89              |
| 1:K:164:ILE:HD12 | 1:K:184:ILE:HD11 | 1.54                     | 0.89              |
| 2:L:222:GLU:OE2  | 1:M:241:ALA:HB1  | 1.73                     | 0.89              |
| 2:R:259:TYR:CE2  | 1:S:281:ASN:OD1  | 2.26                     | 0.89              |
| 1:S:260:ILE:HG23 | 2:T:248:ALA:CB   | 2.02                     | 0.88              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:V:221:ALA:CB   | 1:W:242:LEU:HD21 | 2.02                     | 0.88              |
| 1:G:58:VAL:HG23  | 2:H:32:ALA:CB    | 2.03                     | 0.88              |
| 2:P:43:ARG:O     | 1:Q:66:GLU:CA    | 2.19                     | 0.88              |
| 2:D:268:LEU:HD21 | 1:E:272:TYR:CD2  | 2.09                     | 0.88              |
| 1:A:68:LEU:HD23  | 2:X:43:ARG:HH11  | 1.37                     | 0.88              |
| 1:A:294:LEU:HD21 | 1:W:249:ILE:HD13 | 1.55                     | 0.88              |
| 2:D:247:ILE:CD1  | 1:E:261:SER:OG   | 2.22                     | 0.88              |
| 2:P:43:ARG:CG    | 1:Q:65:ALA:C     | 2.46                     | 0.88              |
| 1:O:164:ILE:HD12 | 1:O:184:ILE:HD11 | 1.54                     | 0.88              |
| 2:P:41:ARG:HG2   | 1:Q:43:VAL:HA    | 1.56                     | 0.88              |
| 2:D:247:ILE:CG1  | 1:E:261:SER:OG   | 2.22                     | 0.88              |
| 2:R:259:TYR:CE2  | 1:S:280:LEU:C    | 2.52                     | 0.88              |
| 1:A:210:ALA:CB   | 2:B:205:GLN:HB2  | 2.03                     | 0.88              |
| 1:Q:249:ILE:CD1  | 1:S:294:LEU:HD21 | 2.03                     | 0.88              |
| 2:P:157:ARG:NH2  | 1:Q:165:ARG:NH1  | 2.21                     | 0.87              |
| 1:K:253:LYS:O    | 1:M:279:VAL:CG1  | 2.22                     | 0.87              |
| 1:M:54:ARG:HE    | 2:N:53:GLY:HA2   | 1.37                     | 0.87              |
| 1:S:260:ILE:HD11 | 2:T:244:ALA:O    | 1.74                     | 0.87              |
| 1:M:164:ILE:HD12 | 1:M:184:ILE:HD11 | 1.54                     | 0.87              |
| 2:V:239:ARG:O    | 1:W:254:ILE:HG21 | 1.75                     | 0.87              |
| 1:I:164:ILE:HD12 | 1:I:184:ILE:HD11 | 1.54                     | 0.87              |
| 2:J:43:ARG:CB    | 1:K:67:GLY:HA2   | 2.04                     | 0.87              |
| 1:Q:249:ILE:CG1  | 2:R:241:LEU:HD12 | 2.04                     | 0.87              |
| 1:A:275:ALA:HA   | 2:X:261:PRO:HA   | 1.53                     | 0.87              |
| 1:K:221:GLN:OE1  | 2:L:216:GLY:HA3  | 1.75                     | 0.87              |
| 2:P:186:LYS:HA   | 1:Q:212:PHE:CE2  | 2.09                     | 0.86              |
| 1:I:272:TYR:HD1  | 2:J:259:TYR:O    | 1.57                     | 0.86              |
| 1:M:142:LYS:HG2  | 2:N:173:LEU:HB3  | 1.56                     | 0.86              |
| 2:T:270:LEU:HD13 | 1:U:272:TYR:CD2  | 2.10                     | 0.86              |
| 1:C:164:ILE:HD12 | 1:C:184:ILE:HD11 | 1.54                     | 0.86              |
| 1:G:175:PHE:HZ   | 2:H:95:LEU:HD13  | 1.40                     | 0.86              |
| 1:K:253:LYS:CD   | 1:M:287:PHE:CZ   | 2.59                     | 0.86              |
| 2:P:43:ARG:HB3   | 1:Q:67:GLY:H     | 1.05                     | 0.86              |
| 2:R:211:ILE:CD1  | 1:S:233:GLU:OE2  | 2.23                     | 0.86              |
| 2:D:225:ALA:N    | 1:E:248:TYR:HB2  | 1.89                     | 0.86              |
| 2:V:256:ASN:HB2  | 1:W:270:ARG:HA   | 1.57                     | 0.86              |
| 2:J:41:ARG:HG3   | 1:K:43:VAL:O     | 1.75                     | 0.86              |
| 1:M:256:ALA:HA   | 2:N:245:GLU:OE2  | 1.75                     | 0.86              |
| 1:S:252:ARG:HG3  | 2:T:241:LEU:O    | 1.74                     | 0.86              |
| 1:G:99:LEU:HB2   | 2:H:180:THR:O    | 1.75                     | 0.86              |
| 2:R:241:LEU:HD21 | 1:U:283:GLN:NE2  | 1.89                     | 0.86              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:B:240:LYS:HZ3  | 1:E:282:LEU:HD13 | 1.41                     | 0.86              |
| 1:G:57:GLY:HA3   | 2:H:52:GLU:OE1   | 1.76                     | 0.86              |
| 1:M:99:LEU:HB3   | 2:N:180:THR:HG23 | 1.58                     | 0.86              |
| 2:V:258:THR:HB   | 1:W:272:TYR:CG   | 2.10                     | 0.86              |
| 2:P:85:LEU:HB3   | 1:Q:197:VAL:CG1  | 2.04                     | 0.86              |
| 1:A:68:LEU:CD2   | 2:X:43:ARG:HD2   | 2.06                     | 0.85              |
| 1:K:225:ILE:O    | 2:L:219:LYS:NZ   | 2.08                     | 0.85              |
| 2:T:43:ARG:C     | 1:U:66:GLU:HB3   | 2.00                     | 0.85              |
| 2:P:43:ARG:HG3   | 1:Q:66:GLU:CA    | 2.05                     | 0.85              |
| 1:G:164:ILE:HD12 | 1:G:184:ILE:HD11 | 1.54                     | 0.85              |
| 2:J:85:LEU:HD11  | 1:K:155:THR:HG22 | 1.57                     | 0.85              |
| 2:J:104:PRO:O    | 2:J:108:THR:HG23 | 1.77                     | 0.85              |
| 1:M:139:GLU:CD   | 2:N:169:SER:CB   | 2.50                     | 0.85              |
| 2:P:104:PRO:O    | 2:P:108:THR:HG23 | 1.77                     | 0.85              |
| 2:R:104:PRO:O    | 2:R:108:THR:HG23 | 1.77                     | 0.85              |
| 1:A:84:ARG:HA    | 2:X:109:SER:HA   | 1.58                     | 0.85              |
| 1:I:252:ARG:NH1  | 2:J:238:LEU:HD21 | 1.89                     | 0.85              |
| 2:L:217:ASP:HB3  | 1:M:252:ARG:NH1  | 1.92                     | 0.85              |
| 2:P:118:VAL:HG22 | 1:Q:109:LEU:HD22 | 1.56                     | 0.85              |
| 2:L:189:ALA:HB3  | 1:M:212:PHE:CD1  | 2.11                     | 0.85              |
| 2:N:104:PRO:O    | 2:N:108:THR:HG23 | 1.77                     | 0.85              |
| 1:A:68:LEU:N     | 2:X:43:ARG:NE    | 2.24                     | 0.85              |
| 2:P:43:ARG:CG    | 1:Q:67:GLY:N     | 2.39                     | 0.85              |
| 2:P:117:ARG:HD2  | 1:Q:87:PRO:HG2   | 1.59                     | 0.85              |
| 2:P:186:LYS:HA   | 1:Q:212:PHE:CD2  | 2.11                     | 0.85              |
| 1:Q:260:ILE:HD13 | 2:R:248:ALA:HB3  | 1.59                     | 0.85              |
| 2:T:104:PRO:O    | 2:T:108:THR:HG23 | 1.77                     | 0.85              |
| 2:V:218:SER:CB   | 1:W:237:MET:HE1  | 2.07                     | 0.85              |
| 2:B:270:LEU:HD12 | 2:D:269:GLN:O    | 1.77                     | 0.84              |
| 2:H:104:PRO:O    | 2:H:108:THR:HG23 | 1.77                     | 0.84              |
| 2:H:241:LEU:HD11 | 1:K:283:GLN:NE2  | 1.90                     | 0.84              |
| 1:K:225:ILE:HD13 | 2:L:219:LYS:CG   | 2.07                     | 0.84              |
| 2:B:104:PRO:O    | 2:B:108:THR:HG23 | 1.77                     | 0.84              |
| 2:P:108:THR:O    | 1:Q:111:ARG:HB3  | 1.77                     | 0.84              |
| 1:Q:242:LEU:HD13 | 2:R:238:LEU:CD1  | 2.07                     | 0.84              |
| 2:D:236:ILE:HG23 | 1:E:250:LYS:HB3  | 1.59                     | 0.84              |
| 2:B:204:GLU:HA   | 1:C:226:VAL:CG2  | 2.08                     | 0.84              |
| 2:L:104:PRO:O    | 2:L:108:THR:HG23 | 1.77                     | 0.84              |
| 1:M:54:ARG:NH1   | 2:N:54:THR:OG1   | 2.10                     | 0.84              |
| 2:P:41:ARG:CD    | 1:Q:43:VAL:C     | 2.43                     | 0.84              |
| 2:R:200:VAL:HG13 | 1:S:226:VAL:HG11 | 1.58                     | 0.84              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:D:104:PRO:O    | 2:D:108:THR:HG23 | 1.77                     | 0.84              |
| 1:G:175:PHE:CZ   | 2:H:95:LEU:HD13  | 2.12                     | 0.84              |
| 2:L:222:GLU:OE2  | 1:M:241:ALA:CB   | 2.26                     | 0.84              |
| 2:P:41:ARG:HB3   | 1:Q:43:VAL:CG1   | 2.07                     | 0.84              |
| 2:P:110:ILE:HA   | 1:Q:109:LEU:CD2  | 2.08                     | 0.84              |
| 1:Q:267:SER:OG   | 2:R:252:SER:O    | 1.95                     | 0.84              |
| 1:S:252:ARG:NE   | 2:T:245:GLU:CD   | 2.35                     | 0.84              |
| 1:A:67:GLY:HA2   | 2:X:43:ARG:HH21  | 1.40                     | 0.84              |
| 2:P:200:VAL:HG22 | 1:Q:223:GLN:HB2  | 1.58                     | 0.84              |
| 1:S:252:ARG:HG3  | 2:T:245:GLU:OE1  | 1.77                     | 0.84              |
| 1:A:281:ASN:HA   | 1:W:274:THR:HG21 | 1.59                     | 0.83              |
| 1:A:200:LYS:HA   | 2:B:195:ARG:HA   | 1.58                     | 0.83              |
| 2:J:221:ALA:HA   | 1:K:248:TYR:CD2  | 2.13                     | 0.83              |
| 2:R:237:GLU:HB2  | 1:S:294:LEU:HD13 | 1.58                     | 0.83              |
| 2:V:104:PRO:O    | 2:V:108:THR:HG23 | 1.77                     | 0.83              |
| 2:V:239:ARG:HG3  | 1:W:251:LEU:CD1  | 2.08                     | 0.83              |
| 2:X:104:PRO:O    | 2:X:108:THR:HG23 | 1.77                     | 0.83              |
| 1:K:225:ILE:HD13 | 2:L:219:LYS:HG2  | 1.58                     | 0.83              |
| 2:J:157:ARG:NH2  | 1:K:165:ARG:NH1  | 2.25                     | 0.83              |
| 2:D:240:LYS:HG3  | 1:E:254:ILE:HG23 | 1.59                     | 0.83              |
| 2:J:41:ARG:O     | 1:K:43:VAL:HG11  | 1.78                     | 0.83              |
| 1:A:204:GLN:N    | 2:B:198:PHE:HB3  | 1.92                     | 0.83              |
| 1:G:260:ILE:HD13 | 1:I:279:VAL:HG21 | 1.58                     | 0.83              |
| 2:P:44:GLY:C     | 1:Q:66:GLU:OE2   | 2.15                     | 0.83              |
| 1:A:68:LEU:HD22  | 2:X:43:ARG:CD    | 2.07                     | 0.83              |
| 2:B:269:GLN:HA   | 2:D:269:GLN:HB2  | 1.58                     | 0.83              |
| 2:F:104:PRO:O    | 2:F:108:THR:HG23 | 1.77                     | 0.83              |
| 2:J:41:ARG:HG3   | 1:K:43:VAL:HG12  | 1.60                     | 0.83              |
| 2:J:43:ARG:C     | 1:K:67:GLY:N     | 2.36                     | 0.83              |
| 2:L:189:ALA:CB   | 1:M:212:PHE:CD1  | 2.61                     | 0.83              |
| 2:N:268:LEU:O    | 2:P:269:GLN:HB2  | 1.78                     | 0.83              |
| 2:P:189:ALA:CB   | 1:Q:212:PHE:CD1  | 2.61                     | 0.83              |
| 2:R:241:LEU:HD21 | 1:U:283:GLN:HE22 | 1.44                     | 0.83              |
| 2:F:270:LEU:HD12 | 2:H:260:LEU:HD11 | 1.61                     | 0.83              |
| 1:U:277:ASN:ND2  | 1:W:280:LEU:O    | 2.11                     | 0.83              |
| 1:I:252:ARG:HH11 | 2:J:238:LEU:HD11 | 1.43                     | 0.82              |
| 1:M:135:SER:HB3  | 2:N:171:THR:OG1  | 1.78                     | 0.82              |
| 1:Q:214:VAL:HG22 | 2:R:205:GLN:HB3  | 1.60                     | 0.82              |
| 1:A:68:LEU:N     | 2:X:43:ARG:CZ    | 2.42                     | 0.82              |
| 2:P:61:VAL:HG23  | 1:Q:43:VAL:HG12  | 1.60                     | 0.82              |
| 1:A:196:ALA:HB1  | 2:B:192:GLU:HA   | 1.61                     | 0.82              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:B:218:SER:HB2  | 1:C:238:LEU:HD21 | 1.62                     | 0.82              |
| 1:I:228:ALA:HB3  | 2:J:219:LYS:NZ   | 1.93                     | 0.82              |
| 1:C:100:GLN:NE2  | 2:D:184:GLU:OE2  | 2.12                     | 0.82              |
| 1:M:54:ARG:NE    | 2:N:54:THR:H     | 1.77                     | 0.82              |
| 1:M:123:ARG:O    | 2:N:71:SER:HB2   | 1.79                     | 0.82              |
| 1:U:250:LYS:HE3  | 1:W:291:SER:HB3  | 1.60                     | 0.82              |
| 1:A:264:ILE:HG23 | 1:A:269:ASN:OD1  | 1.80                     | 0.82              |
| 1:G:264:ILE:HG23 | 1:G:269:ASN:OD1  | 1.80                     | 0.82              |
| 2:P:157:ARG:NH2  | 1:Q:165:ARG:CZ   | 2.42                     | 0.82              |
| 1:S:264:ILE:HG23 | 1:S:269:ASN:OD1  | 1.80                     | 0.82              |
| 2:J:157:ARG:HH22 | 1:K:165:ARG:NH1  | 1.78                     | 0.82              |
| 1:O:64:LEU:HD13  | 1:O:69:HIS:CG    | 2.15                     | 0.82              |
| 1:C:64:LEU:HD13  | 1:C:69:HIS:CG    | 2.15                     | 0.82              |
| 1:K:238:LEU:HD13 | 2:L:235:LEU:HD13 | 0.86                     | 0.82              |
| 1:K:264:ILE:HG23 | 1:K:269:ASN:OD1  | 1.80                     | 0.82              |
| 1:Q:264:ILE:HG23 | 1:Q:269:ASN:OD1  | 1.80                     | 0.82              |
| 1:C:264:ILE:HG23 | 1:C:269:ASN:OD1  | 1.80                     | 0.82              |
| 1:W:64:LEU:HD13  | 1:W:69:HIS:CG    | 2.15                     | 0.82              |
| 1:C:131:ARG:HD3  | 2:D:71:SER:HB3   | 1.59                     | 0.82              |
| 1:G:64:LEU:HD13  | 1:G:69:HIS:CG    | 2.15                     | 0.82              |
| 2:J:43:ARG:CG    | 1:K:67:GLY:HA2   | 2.10                     | 0.82              |
| 1:M:121:TYR:CE2  | 2:N:32:ALA:HB3   | 2.13                     | 0.82              |
| 1:A:64:LEU:HD13  | 1:A:69:HIS:CG    | 2.15                     | 0.81              |
| 1:A:99:LEU:HD12  | 2:B:183:VAL:HG11 | 1.62                     | 0.81              |
| 1:M:125:GLY:HA3  | 2:N:70:ARG:CD    | 2.10                     | 0.81              |
| 2:R:259:TYR:CE2  | 1:S:281:ASN:N    | 2.48                     | 0.81              |
| 1:C:290:GLY:O    | 1:E:283:GLN:NE2  | 2.13                     | 0.81              |
| 2:D:251:LEU:HD21 | 1:E:264:ILE:HG22 | 1.60                     | 0.81              |
| 2:D:251:LEU:CD2  | 1:E:264:ILE:HG22 | 2.09                     | 0.81              |
| 1:E:264:ILE:HG23 | 1:E:269:ASN:OD1  | 1.80                     | 0.81              |
| 2:F:270:LEU:HD22 | 1:G:272:TYR:CD2  | 2.15                     | 0.81              |
| 2:J:43:ARG:CA    | 1:K:67:GLY:CA    | 2.58                     | 0.81              |
| 1:K:64:LEU:HD13  | 1:K:69:HIS:CG    | 2.15                     | 0.81              |
| 2:P:41:ARG:NE    | 1:Q:44:GLU:N     | 2.25                     | 0.81              |
| 1:S:64:LEU:HD13  | 1:S:69:HIS:CG    | 2.15                     | 0.81              |
| 2:V:257:ILE:CG1  | 1:W:271:ILE:HB   | 2.11                     | 0.81              |
| 2:V:260:LEU:O    | 1:W:274:THR:C    | 2.23                     | 0.81              |
| 1:M:264:ILE:HG23 | 1:M:269:ASN:OD1  | 1.80                     | 0.81              |
| 2:P:41:ARG:CB    | 1:Q:43:VAL:HG13  | 2.10                     | 0.81              |
| 2:P:39:PHE:CE2   | 1:Q:44:GLU:HB3   | 2.16                     | 0.81              |
| 1:M:135:SER:HB2  | 2:N:93:ARG:CG    | 2.11                     | 0.81              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:P:43:ARG:HB2   | 1:Q:67:GLY:CA    | 2.08                     | 0.81              |
| 2:P:109:SER:OG   | 1:Q:180:ASP:OD2  | 1.97                     | 0.81              |
| 2:R:237:GLU:CB   | 1:S:294:LEU:CD1  | 2.58                     | 0.81              |
| 1:S:274:THR:HG22 | 2:T:260:LEU:HA   | 1.62                     | 0.81              |
| 1:U:264:ILE:HG23 | 1:U:269:ASN:OD1  | 1.80                     | 0.81              |
| 1:I:264:ILE:HG23 | 1:I:269:ASN:OD1  | 1.80                     | 0.81              |
| 2:J:94:ILE:HD13  | 2:J:119:LEU:HB3  | 1.63                     | 0.81              |
| 1:S:253:LYS:O    | 1:S:256:ALA:HB3  | 1.81                     | 0.81              |
| 1:I:64:LEU:HD13  | 1:I:69:HIS:CG    | 2.15                     | 0.81              |
| 1:M:64:LEU:HD13  | 1:M:69:HIS:CG    | 2.15                     | 0.81              |
| 1:S:243:SER:HA   | 2:T:234:GLY:HA2  | 1.63                     | 0.81              |
| 1:U:64:LEU:HD13  | 1:U:69:HIS:CG    | 2.15                     | 0.81              |
| 1:U:253:LYS:O    | 1:U:256:ALA:HB3  | 1.81                     | 0.81              |
| 2:X:94:ILE:HD13  | 2:X:119:LEU:HB3  | 1.63                     | 0.81              |
| 1:G:58:VAL:HG23  | 2:H:32:ALA:HB3   | 1.63                     | 0.81              |
| 2:L:218:SER:CB   | 1:M:238:LEU:HD21 | 2.11                     | 0.81              |
| 1:W:108:VAL:HG21 | 1:W:137:VAL:HG22 | 1.63                     | 0.81              |
| 1:C:253:LYS:O    | 1:C:256:ALA:HB3  | 1.81                     | 0.81              |
| 2:D:94:ILE:HD13  | 2:D:119:LEU:HB3  | 1.63                     | 0.81              |
| 2:P:41:ARG:HE    | 1:Q:44:GLU:CB    | 1.94                     | 0.81              |
| 1:S:252:ARG:CG   | 2:T:241:LEU:O    | 2.29                     | 0.81              |
| 1:W:264:ILE:HG23 | 1:W:269:ASN:OD1  | 1.80                     | 0.81              |
| 2:B:218:SER:HB2  | 1:C:238:LEU:CD2  | 2.11                     | 0.80              |
| 2:P:94:ILE:HD13  | 2:P:119:LEU:HB3  | 1.63                     | 0.80              |
| 2:P:125:GLU:CG   | 1:Q:158:ALA:HA   | 2.10                     | 0.80              |
| 1:G:108:VAL:HG21 | 1:G:137:VAL:HG22 | 1.63                     | 0.80              |
| 1:I:253:LYS:O    | 1:I:256:ALA:HB3  | 1.81                     | 0.80              |
| 1:M:253:LYS:O    | 1:M:256:ALA:HB3  | 1.81                     | 0.80              |
| 1:Q:108:VAL:HG21 | 1:Q:137:VAL:HG22 | 1.63                     | 0.80              |
| 2:T:94:ILE:HD13  | 2:T:119:LEU:HB3  | 1.63                     | 0.80              |
| 1:C:108:VAL:HG21 | 1:C:137:VAL:HG22 | 1.63                     | 0.80              |
| 1:E:64:LEU:HD13  | 1:E:69:HIS:CG    | 2.15                     | 0.80              |
| 1:A:274:THR:C    | 2:X:260:LEU:O    | 2.25                     | 0.80              |
| 2:F:94:ILE:HD13  | 2:F:119:LEU:HB3  | 1.63                     | 0.80              |
| 1:O:253:LYS:O    | 1:O:256:ALA:HB3  | 1.81                     | 0.80              |
| 2:P:43:ARG:HA    | 1:Q:65:ALA:O     | 1.79                     | 0.80              |
| 2:P:185:ALA:HB1  | 1:Q:212:PHE:HZ   | 1.46                     | 0.80              |
| 1:A:108:VAL:HG21 | 1:A:137:VAL:HG22 | 1.63                     | 0.80              |
| 1:O:108:VAL:HG21 | 1:O:137:VAL:HG22 | 1.63                     | 0.80              |
| 2:L:30:VAL:HG13  | 2:L:66:ILE:HG23  | 1.64                     | 0.80              |
| 1:A:217:ALA:HB1  | 2:B:212:ILE:HG21 | 1.64                     | 0.80              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:P:39:PHE:HD1   | 1:Q:45:GLY:O     | 1.61                     | 0.80              |
| 1:Q:249:ILE:HD13 | 1:S:294:LEU:HD21 | 1.64                     | 0.80              |
| 1:O:264:ILE:HG23 | 1:O:269:ASN:OD1  | 1.80                     | 0.80              |
| 1:Q:64:LEU:HD13  | 1:Q:69:HIS:CG    | 2.15                     | 0.80              |
| 1:I:271:ILE:HA   | 2:J:259:TYR:HB3  | 1.64                     | 0.80              |
| 2:P:109:SER:HA   | 1:Q:111:ARG:HB3  | 1.64                     | 0.80              |
| 1:E:253:LYS:O    | 1:E:256:ALA:HB3  | 1.81                     | 0.80              |
| 1:K:253:LYS:O    | 1:K:256:ALA:HB3  | 1.81                     | 0.80              |
| 2:L:49:VAL:HG21  | 2:L:101:SER:HA   | 1.65                     | 0.80              |
| 1:S:253:LYS:NZ   | 2:T:241:LEU:CD1  | 2.44                     | 0.80              |
| 1:U:108:VAL:HG21 | 1:U:137:VAL:HG22 | 1.63                     | 0.80              |
| 1:A:253:LYS:O    | 1:A:256:ALA:HB3  | 1.81                     | 0.79              |
| 1:G:253:LYS:O    | 1:G:256:ALA:HB3  | 1.81                     | 0.79              |
| 2:H:49:VAL:HG21  | 2:H:101:SER:HA   | 1.65                     | 0.79              |
| 2:B:94:ILE:HD13  | 2:B:119:LEU:HB3  | 1.63                     | 0.79              |
| 2:P:49:VAL:HG21  | 2:P:101:SER:HA   | 1.65                     | 0.79              |
| 2:V:229:ALA:CB   | 1:W:244:LYS:HB3  | 2.13                     | 0.79              |
| 2:J:30:VAL:HG13  | 2:J:66:ILE:HG23  | 1.64                     | 0.79              |
| 2:N:94:ILE:HD13  | 2:N:119:LEU:HB3  | 1.63                     | 0.79              |
| 1:Q:253:LYS:O    | 1:Q:256:ALA:HB3  | 1.81                     | 0.79              |
| 1:A:250:LYS:O    | 1:A:254:ILE:HD12 | 1.83                     | 0.79              |
| 2:P:30:VAL:HG13  | 2:P:66:ILE:HG23  | 1.64                     | 0.79              |
| 2:B:30:VAL:HG13  | 2:B:66:ILE:HG23  | 1.64                     | 0.79              |
| 1:I:108:VAL:HG21 | 1:I:137:VAL:HG22 | 1.63                     | 0.79              |
| 1:I:250:LYS:O    | 1:I:254:ILE:HD12 | 1.83                     | 0.79              |
| 1:A:207:ALA:HB2  | 2:B:201:GLU:CB   | 2.11                     | 0.79              |
| 2:D:197:ARG:CA   | 1:E:219:GLN:HE22 | 1.95                     | 0.79              |
| 2:H:94:ILE:HD13  | 2:H:119:LEU:HB3  | 1.63                     | 0.79              |
| 1:K:108:VAL:HG21 | 1:K:137:VAL:HG22 | 1.63                     | 0.79              |
| 1:M:171:ARG:CZ   | 2:N:167:ASP:OD2  | 2.31                     | 0.79              |
| 1:M:250:LYS:O    | 1:M:254:ILE:HD12 | 1.83                     | 0.79              |
| 2:T:49:VAL:HG21  | 2:T:101:SER:HA   | 1.64                     | 0.79              |
| 1:U:250:LYS:O    | 1:U:254:ILE:HD12 | 1.83                     | 0.79              |
| 2:V:235:LEU:HD11 | 2:V:239:ARG:HG2  | 1.65                     | 0.79              |
| 2:V:247:ILE:CD1  | 1:W:257:ALA:HB1  | 2.13                     | 0.79              |
| 2:X:49:VAL:HG21  | 2:X:101:SER:HA   | 1.65                     | 0.79              |
| 2:X:235:LEU:HD11 | 2:X:239:ARG:HG2  | 1.65                     | 0.79              |
| 1:E:250:LYS:O    | 1:E:254:ILE:HD12 | 1.83                     | 0.79              |
| 1:G:250:LYS:O    | 1:G:254:ILE:HD12 | 1.83                     | 0.79              |
| 1:K:253:LYS:HD2  | 1:M:287:PHE:CZ   | 2.17                     | 0.79              |
| 2:L:94:ILE:HD13  | 2:L:119:LEU:HB3  | 1.63                     | 0.79              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:V:94:ILE:HD13  | 2:V:119:LEU:HB3  | 1.63                     | 0.79              |
| 1:W:253:LYS:O    | 1:W:256:ALA:HB3  | 1.81                     | 0.79              |
| 2:X:30:VAL:HG13  | 2:X:66:ILE:HG23  | 1.64                     | 0.79              |
| 1:A:210:ALA:HB3  | 2:B:205:GLN:CB   | 2.12                     | 0.79              |
| 1:E:90:ILE:HD12  | 1:E:137:VAL:HG21 | 1.65                     | 0.79              |
| 2:P:110:ILE:C    | 1:Q:85:ALA:HB3   | 2.07                     | 0.79              |
| 2:R:215:GLU:HG2  | 1:S:237:MET:HE3  | 1.64                     | 0.79              |
| 2:R:257:ILE:HB   | 1:S:278:LEU:HD12 | 1.64                     | 0.79              |
| 1:U:90:ILE:HD12  | 1:U:137:VAL:HG21 | 1.65                     | 0.79              |
| 2:V:30:VAL:HG13  | 2:V:66:ILE:HG23  | 1.64                     | 0.79              |
| 1:G:52:PHE:HE1   | 2:H:32:ALA:HB2   | 1.46                     | 0.79              |
| 2:N:49:VAL:HG21  | 2:N:101:SER:HA   | 1.65                     | 0.79              |
| 2:R:49:VAL:HG21  | 2:R:101:SER:HA   | 1.65                     | 0.79              |
| 2:R:94:ILE:HD13  | 2:R:119:LEU:HB3  | 1.63                     | 0.79              |
| 2:T:235:LEU:HD11 | 2:T:239:ARG:HG2  | 1.65                     | 0.79              |
| 1:W:250:LYS:O    | 1:W:254:ILE:HD12 | 1.83                     | 0.79              |
| 2:B:49:VAL:HG21  | 2:B:101:SER:HA   | 1.64                     | 0.79              |
| 2:D:30:VAL:HG13  | 2:D:66:ILE:HG23  | 1.64                     | 0.79              |
| 1:E:108:VAL:HG21 | 1:E:137:VAL:HG22 | 1.63                     | 0.79              |
| 1:G:289:ARG:NH1  | 1:I:285:GLU:CD   | 2.41                     | 0.79              |
| 2:P:44:GLY:CA    | 1:Q:66:GLU:HG2   | 2.13                     | 0.79              |
| 1:Q:90:ILE:HD12  | 1:Q:137:VAL:HG21 | 1.65                     | 0.79              |
| 2:T:30:VAL:HG13  | 2:T:66:ILE:HG23  | 1.64                     | 0.79              |
| 2:V:257:ILE:CA   | 1:W:271:ILE:O    | 2.29                     | 0.79              |
| 2:D:49:VAL:HG21  | 2:D:101:SER:HA   | 1.64                     | 0.78              |
| 1:G:90:ILE:HD12  | 1:G:137:VAL:HG21 | 1.65                     | 0.78              |
| 2:H:30:VAL:HG13  | 2:H:66:ILE:HG23  | 1.64                     | 0.78              |
| 1:K:90:ILE:HD12  | 1:K:137:VAL:HG21 | 1.65                     | 0.78              |
| 2:L:235:LEU:HD11 | 2:L:239:ARG:HG2  | 1.65                     | 0.78              |
| 1:W:90:ILE:HD12  | 1:W:137:VAL:HG21 | 1.65                     | 0.78              |
| 2:D:243:ALA:CB   | 1:E:258:GLN:HA   | 2.13                     | 0.78              |
| 2:H:267:LEU:CD2  | 2:J:267:LEU:HD13 | 2.09                     | 0.78              |
| 2:L:217:ASP:HB3  | 1:M:252:ARG:HH12 | 1.48                     | 0.78              |
| 1:G:52:PHE:CE1   | 2:H:32:ALA:HB2   | 2.18                     | 0.78              |
| 1:I:228:ALA:HB3  | 2:J:219:LYS:HZ2  | 1.49                     | 0.78              |
| 2:P:196:ALA:HB1  | 1:Q:220:GLU:CG   | 2.13                     | 0.78              |
| 1:Q:214:VAL:CG2  | 2:R:205:GLN:HB3  | 2.13                     | 0.78              |
| 1:A:67:GLY:CA    | 2:X:43:ARG:HH21  | 1.96                     | 0.78              |
| 1:C:250:LYS:O    | 1:C:254:ILE:HD12 | 1.83                     | 0.78              |
| 1:G:206:GLU:OE1  | 2:H:202:LYS:HD2  | 1.83                     | 0.78              |
| 2:R:235:LEU:HD11 | 2:R:239:ARG:HG2  | 1.65                     | 0.78              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:R:237:GLU:HB3  | 1:S:294:LEU:CD1  | 2.13                     | 0.78              |
| 1:W:256:ALA:HB1  | 1:W:260:ILE:CD1  | 2.14                     | 0.78              |
| 2:J:235:LEU:HD11 | 2:J:239:ARG:HG2  | 1.65                     | 0.78              |
| 1:M:108:VAL:HG21 | 1:M:137:VAL:HG22 | 1.63                     | 0.78              |
| 1:M:143:SER:HA   | 2:N:143:ARG:HD3  | 1.65                     | 0.78              |
| 1:S:250:LYS:O    | 1:S:254:ILE:HD12 | 1.83                     | 0.78              |
| 2:T:41:ARG:CZ    | 1:U:44:GLU:CG    | 2.61                     | 0.78              |
| 2:V:49:VAL:HG21  | 2:V:101:SER:HA   | 1.65                     | 0.78              |
| 1:C:100:GLN:HA   | 2:D:184:GLU:HG3  | 1.65                     | 0.78              |
| 2:F:49:VAL:HG21  | 2:F:101:SER:HA   | 1.65                     | 0.78              |
| 1:I:90:ILE:HD12  | 1:I:137:VAL:HG21 | 1.65                     | 0.78              |
| 1:O:256:ALA:HB1  | 1:O:260:ILE:CD1  | 2.14                     | 0.78              |
| 1:S:243:SER:HA   | 2:T:234:GLY:CA   | 2.13                     | 0.78              |
| 2:T:41:ARG:NH2   | 1:U:44:GLU:CG    | 2.45                     | 0.78              |
| 1:A:283:GLN:CD   | 1:W:276:ASP:O    | 2.26                     | 0.78              |
| 2:H:235:LEU:HD11 | 2:H:239:ARG:HG2  | 1.65                     | 0.78              |
| 2:J:41:ARG:HG3   | 1:K:43:VAL:CA    | 2.14                     | 0.78              |
| 2:J:43:ARG:HB2   | 1:K:68:LEU:H     | 1.49                     | 0.78              |
| 1:M:90:ILE:HD12  | 1:M:137:VAL:HG21 | 1.65                     | 0.78              |
| 2:R:30:VAL:HG13  | 2:R:66:ILE:HG23  | 1.64                     | 0.78              |
| 1:S:108:VAL:HG21 | 1:S:137:VAL:HG22 | 1.63                     | 0.78              |
| 1:A:90:ILE:HD12  | 1:A:137:VAL:HG21 | 1.65                     | 0.78              |
| 2:D:236:ILE:HG13 | 1:E:251:LEU:CD2  | 2.14                     | 0.78              |
| 1:G:52:PHE:CE1   | 2:H:32:ALA:N     | 2.51                     | 0.78              |
| 1:K:253:LYS:HD3  | 1:M:287:PHE:CE1  | 2.19                     | 0.78              |
| 1:O:250:LYS:O    | 1:O:254:ILE:HD12 | 1.83                     | 0.78              |
| 2:P:43:ARG:CG    | 1:Q:66:GLU:N     | 2.46                     | 0.78              |
| 1:S:272:TYR:CD1  | 2:T:258:THR:HG23 | 2.19                     | 0.78              |
| 2:V:236:ILE:HG23 | 1:W:250:LYS:CD   | 2.12                     | 0.78              |
| 2:V:243:ALA:CB   | 1:W:254:ILE:HG23 | 2.05                     | 0.78              |
| 2:V:257:ILE:HG13 | 1:W:271:ILE:HB   | 1.64                     | 0.78              |
| 2:B:268:LEU:HB2  | 2:D:267:LEU:O    | 1.84                     | 0.78              |
| 1:C:90:ILE:HD12  | 1:C:137:VAL:HG21 | 1.65                     | 0.78              |
| 1:C:256:ALA:HB1  | 1:C:260:ILE:CD1  | 2.14                     | 0.78              |
| 2:D:250:GLN:O    | 1:E:265:ALA:HB1  | 1.84                     | 0.78              |
| 1:G:98:ASP:CG    | 2:H:184:GLU:HG2  | 2.09                     | 0.78              |
| 2:J:49:VAL:HG21  | 2:J:101:SER:HA   | 1.64                     | 0.78              |
| 1:K:253:LYS:O    | 1:M:279:VAL:HG13 | 1.83                     | 0.78              |
| 1:M:256:ALA:HB1  | 1:M:260:ILE:CD1  | 2.14                     | 0.78              |
| 1:G:256:ALA:HB1  | 1:G:260:ILE:CD1  | 2.14                     | 0.78              |
| 1:S:90:ILE:HD12  | 1:S:137:VAL:HG21 | 1.65                     | 0.78              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:S:267:SER:OG   | 2:T:255:ARG:HA   | 1.83                     | 0.78              |
| 2:B:235:LEU:HD11 | 2:B:239:ARG:HG2  | 1.65                     | 0.77              |
| 2:P:235:LEU:HD11 | 2:P:239:ARG:HG2  | 1.65                     | 0.77              |
| 1:A:256:ALA:HB1  | 1:A:260:ILE:CD1  | 2.14                     | 0.77              |
| 2:D:235:LEU:HD11 | 2:D:239:ARG:HG2  | 1.65                     | 0.77              |
| 2:F:30:VAL:HG13  | 2:F:66:ILE:HG23  | 1.64                     | 0.77              |
| 2:P:43:ARG:HG2   | 1:Q:67:GLY:N     | 1.99                     | 0.77              |
| 1:S:256:ALA:HB1  | 1:S:260:ILE:CD1  | 2.14                     | 0.77              |
| 2:F:235:LEU:HD11 | 2:F:239:ARG:HG2  | 1.65                     | 0.77              |
| 1:I:256:ALA:HB1  | 1:I:260:ILE:CD1  | 2.14                     | 0.77              |
| 2:N:30:VAL:HG13  | 2:N:66:ILE:HG23  | 1.64                     | 0.77              |
| 1:S:249:ILE:CG1  | 2:T:241:LEU:HD12 | 2.08                     | 0.77              |
| 2:T:158:ALA:HB1  | 2:T:163:LEU:HB2  | 1.67                     | 0.77              |
| 2:D:158:ALA:HB1  | 2:D:163:LEU:HB2  | 1.67                     | 0.77              |
| 2:F:93:ARG:O     | 2:F:168:VAL:HG13 | 1.85                     | 0.77              |
| 2:F:158:ALA:HB1  | 2:F:163:LEU:HB2  | 1.67                     | 0.77              |
| 1:K:256:ALA:HB1  | 1:K:260:ILE:CD1  | 2.14                     | 0.77              |
| 2:P:110:ILE:HA   | 1:Q:109:LEU:HD21 | 1.67                     | 0.77              |
| 2:P:158:ALA:HB1  | 2:P:163:LEU:HB2  | 1.67                     | 0.77              |
| 1:Q:221:GLN:HG2  | 2:R:212:ILE:HG23 | 1.65                     | 0.77              |
| 2:R:257:ILE:HG21 | 1:S:278:LEU:CG   | 2.15                     | 0.77              |
| 1:U:256:ALA:HB1  | 1:U:260:ILE:CD1  | 2.14                     | 0.77              |
| 1:K:250:LYS:O    | 1:K:254:ILE:HD12 | 1.83                     | 0.77              |
| 2:N:235:LEU:HD11 | 2:N:239:ARG:HG2  | 1.65                     | 0.77              |
| 1:Q:256:ALA:HB1  | 1:Q:260:ILE:CD1  | 2.14                     | 0.77              |
| 1:E:256:ALA:HB1  | 1:E:260:ILE:CD1  | 2.14                     | 0.77              |
| 2:F:262:ALA:HB3  | 1:G:275:ALA:HB2  | 1.66                     | 0.77              |
| 2:H:158:ALA:HB1  | 2:H:163:LEU:HB2  | 1.67                     | 0.77              |
| 2:H:268:LEU:HD12 | 2:J:266:VAL:HG13 | 1.66                     | 0.77              |
| 1:M:146:ALA:HB1  | 2:N:140:ILE:HG21 | 1.66                     | 0.77              |
| 2:N:158:ALA:HB1  | 2:N:163:LEU:HB2  | 1.67                     | 0.77              |
| 1:O:90:ILE:HD12  | 1:O:137:VAL:HG21 | 1.65                     | 0.77              |
| 2:D:251:LEU:HA   | 1:E:265:ALA:HA   | 1.67                     | 0.77              |
| 2:R:193:ALA:CB   | 1:S:219:GLN:HE22 | 1.97                     | 0.77              |
| 2:R:237:GLU:HB3  | 1:S:294:LEU:HD13 | 1.67                     | 0.77              |
| 2:T:93:ARG:O     | 2:T:168:VAL:HG13 | 1.85                     | 0.77              |
| 1:C:253:LYS:HD3  | 1:E:279:VAL:HG13 | 1.66                     | 0.77              |
| 2:D:236:ILE:CA   | 1:E:251:LEU:HD22 | 2.15                     | 0.77              |
| 1:M:99:LEU:O     | 2:N:180:THR:CG2  | 2.33                     | 0.77              |
| 2:T:179:PHE:CD2  | 1:U:205:GLN:HG3  | 2.20                     | 0.77              |
| 2:D:93:ARG:O     | 2:D:168:VAL:HG13 | 1.85                     | 0.76              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:H:93:ARG:O     | 2:H:168:VAL:HG13 | 1.85                     | 0.76              |
| 1:K:235:ALA:HB1  | 2:L:228:LEU:CD1  | 2.14                     | 0.76              |
| 1:K:236:LYS:NZ   | 2:L:227:SER:HA   | 2.00                     | 0.76              |
| 2:P:93:ARG:O     | 2:P:168:VAL:HG13 | 1.85                     | 0.76              |
| 1:Q:274:THR:HG21 | 2:R:259:TYR:CD2  | 2.20                     | 0.76              |
| 2:V:93:ARG:O     | 2:V:168:VAL:HG13 | 1.85                     | 0.76              |
| 1:Q:250:LYS:O    | 1:Q:254:ILE:HD12 | 1.83                     | 0.76              |
| 2:R:93:ARG:O     | 2:R:168:VAL:HG13 | 1.85                     | 0.76              |
| 1:C:270:ARG:O    | 2:D:258:THR:HA   | 1.84                     | 0.76              |
| 2:F:266:VAL:O    | 2:H:264:GLN:HB3  | 1.85                     | 0.76              |
| 1:K:253:LYS:O    | 1:M:279:VAL:HG11 | 1.86                     | 0.76              |
| 2:R:119:LEU:HD21 | 2:R:163:LEU:HD13 | 1.68                     | 0.76              |
| 1:S:260:ILE:CG2  | 2:T:248:ALA:CB   | 2.64                     | 0.76              |
| 2:V:261:PRO:HA   | 1:W:275:ALA:HA   | 1.67                     | 0.76              |
| 2:X:119:LEU:HD21 | 2:X:163:LEU:HD13 | 1.68                     | 0.76              |
| 2:J:158:ALA:HB1  | 2:J:163:LEU:HB2  | 1.67                     | 0.76              |
| 2:N:119:LEU:HD21 | 2:N:163:LEU:HD13 | 1.68                     | 0.76              |
| 1:W:214:VAL:HG22 | 2:X:208:LYS:HG2  | 1.65                     | 0.76              |
| 2:N:93:ARG:O     | 2:N:168:VAL:HG13 | 1.85                     | 0.76              |
| 1:S:238:LEU:HD13 | 2:T:239:ARG:HD3  | 1.67                     | 0.76              |
| 2:V:158:ALA:HB1  | 2:V:163:LEU:HB2  | 1.67                     | 0.76              |
| 1:A:238:LEU:HD13 | 2:B:235:LEU:HD13 | 1.67                     | 0.76              |
| 2:B:267:LEU:CD1  | 2:D:267:LEU:HD13 | 2.15                     | 0.76              |
| 2:J:42:PHE:HB3   | 1:K:68:LEU:CD2   | 2.14                     | 0.76              |
| 2:P:44:GLY:HA3   | 1:Q:48:ARG:HD3   | 1.68                     | 0.76              |
| 1:Q:249:ILE:HD11 | 2:R:241:LEU:HD12 | 1.66                     | 0.76              |
| 2:R:211:ILE:CG1  | 1:S:233:GLU:OE2  | 2.34                     | 0.76              |
| 2:R:262:ALA:HB3  | 1:S:289:ARG:NH2  | 2.00                     | 0.76              |
| 1:S:253:LYS:HB3  | 1:U:279:VAL:HG13 | 1.66                     | 0.76              |
| 1:C:142:LYS:CE   | 2:D:140:ILE:HG21 | 2.16                     | 0.76              |
| 1:S:249:ILE:HD12 | 2:T:237:GLU:C    | 2.11                     | 0.76              |
| 1:S:253:LYS:HG2  | 2:T:241:LEU:HD22 | 1.65                     | 0.76              |
| 2:B:269:GLN:HG3  | 2:D:269:GLN:HG2  | 1.68                     | 0.76              |
| 2:B:221:ALA:HB1  | 1:C:242:LEU:HD22 | 1.68                     | 0.75              |
| 2:B:240:LYS:HD3  | 1:E:282:LEU:HD13 | 1.68                     | 0.75              |
| 1:C:253:LYS:HD3  | 1:E:279:VAL:CG2  | 2.15                     | 0.75              |
| 1:G:99:LEU:HB3   | 2:H:180:THR:HG23 | 1.68                     | 0.75              |
| 1:K:235:ALA:HB1  | 2:L:228:LEU:HD12 | 1.69                     | 0.75              |
| 2:P:110:ILE:HG23 | 1:Q:109:LEU:HD21 | 1.68                     | 0.75              |
| 1:U:246:PRO:CA   | 1:W:294:LEU:HG   | 2.15                     | 0.75              |
| 2:B:119:LEU:HD21 | 2:B:163:LEU:HD13 | 1.68                     | 0.75              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:271:ILE:HG23 | 2:J:259:TYR:CD2  | 2.21                     | 0.75              |
| 2:L:197:ARG:NH1  | 1:M:222:ARG:HH22 | 1.84                     | 0.75              |
| 2:V:119:LEU:HD21 | 2:V:163:LEU:HD13 | 1.68                     | 0.75              |
| 2:J:93:ARG:O     | 2:J:168:VAL:HG13 | 1.85                     | 0.75              |
| 2:P:40:ASP:O     | 1:Q:45:GLY:HA2   | 1.86                     | 0.75              |
| 2:T:43:ARG:O     | 1:U:66:GLU:CB    | 2.33                     | 0.75              |
| 2:B:93:ARG:O     | 2:B:168:VAL:HG13 | 1.85                     | 0.75              |
| 2:B:158:ALA:HB1  | 2:B:163:LEU:HB2  | 1.67                     | 0.75              |
| 2:J:239:ARG:HE   | 1:K:258:GLN:HE22 | 1.33                     | 0.75              |
| 2:P:41:ARG:HB3   | 1:Q:43:VAL:CA    | 2.15                     | 0.75              |
| 2:P:41:ARG:C     | 1:Q:43:VAL:CG1   | 2.55                     | 0.75              |
| 2:P:85:LEU:HB3   | 1:Q:197:VAL:HG11 | 1.68                     | 0.75              |
| 2:R:193:ALA:HB1  | 1:S:219:GLN:HE22 | 1.50                     | 0.75              |
| 2:D:236:ILE:HA   | 1:E:251:LEU:HD22 | 1.67                     | 0.75              |
| 2:D:268:LEU:HD22 | 1:E:272:TYR:CE2  | 2.22                     | 0.75              |
| 2:F:119:LEU:HD21 | 2:F:163:LEU:HD13 | 1.68                     | 0.75              |
| 2:F:270:LEU:HD11 | 2:H:260:LEU:HG   | 1.69                     | 0.75              |
| 2:P:43:ARG:HG2   | 1:Q:66:GLU:O     | 1.86                     | 0.75              |
| 2:P:119:LEU:HD21 | 2:P:163:LEU:HD13 | 1.68                     | 0.75              |
| 2:X:93:ARG:O     | 2:X:168:VAL:HG13 | 1.85                     | 0.75              |
| 2:P:43:ARG:CG    | 1:Q:66:GLU:CA    | 2.62                     | 0.75              |
| 2:R:158:ALA:HB1  | 2:R:163:LEU:HB2  | 1.67                     | 0.75              |
| 1:A:43:VAL:HB    | 2:X:41:ARG:O     | 1.86                     | 0.75              |
| 1:E:256:ALA:HB1  | 1:E:260:ILE:HD12 | 1.69                     | 0.75              |
| 2:L:93:ARG:O     | 2:L:168:VAL:HG13 | 1.85                     | 0.75              |
| 2:P:39:PHE:O     | 1:Q:45:GLY:N     | 2.19                     | 0.75              |
| 1:A:237:MET:HE1  | 2:X:218:SER:OG   | 1.85                     | 0.75              |
| 1:C:256:ALA:HB1  | 1:C:260:ILE:HD12 | 1.69                     | 0.74              |
| 1:K:221:GLN:OE1  | 2:L:216:GLY:CA   | 2.35                     | 0.74              |
| 1:K:225:ILE:CA   | 2:L:219:LYS:HE2  | 2.17                     | 0.74              |
| 1:K:253:LYS:HD3  | 1:M:287:PHE:CZ   | 2.22                     | 0.74              |
| 1:M:99:LEU:O     | 2:N:180:THR:HG23 | 1.86                     | 0.74              |
| 1:M:256:ALA:HB1  | 1:M:260:ILE:HD12 | 1.69                     | 0.74              |
| 2:P:44:GLY:C     | 1:Q:66:GLU:CG    | 2.60                     | 0.74              |
| 1:S:256:ALA:HB1  | 1:S:260:ILE:HD12 | 1.69                     | 0.74              |
| 2:D:197:ARG:HA   | 1:E:219:GLN:NE2  | 2.00                     | 0.74              |
| 2:D:250:GLN:C    | 1:E:265:ALA:CB   | 2.59                     | 0.74              |
| 2:D:268:LEU:CD2  | 1:E:272:TYR:CE2  | 2.70                     | 0.74              |
| 2:R:259:TYR:CE1  | 1:S:275:ALA:O    | 2.40                     | 0.74              |
| 1:C:101:MET:HE3  | 2:D:180:THR:HG23 | 1.67                     | 0.74              |
| 2:L:119:LEU:HD21 | 2:L:163:LEU:HD13 | 1.68                     | 0.74              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:256:ALA:HB1  | 1:O:260:ILE:HD12 | 1.69                     | 0.74              |
| 2:P:43:ARG:CG    | 1:Q:67:GLY:CA    | 2.58                     | 0.74              |
| 2:P:85:LEU:HB2   | 1:Q:197:VAL:CG1  | 2.17                     | 0.74              |
| 2:P:110:ILE:HA   | 1:Q:109:LEU:CG   | 2.18                     | 0.74              |
| 2:B:269:GLN:HG3  | 2:D:269:GLN:CG   | 2.17                     | 0.74              |
| 1:I:228:ALA:H    | 2:J:219:LYS:HZ1  | 1.35                     | 0.74              |
| 1:W:256:ALA:HB1  | 1:W:260:ILE:HD12 | 1.69                     | 0.74              |
| 2:D:119:LEU:HD21 | 2:D:163:LEU:HD13 | 1.68                     | 0.74              |
| 2:J:119:LEU:HD21 | 2:J:163:LEU:HD13 | 1.68                     | 0.74              |
| 1:K:236:LYS:HE3  | 2:L:227:SER:CB   | 2.17                     | 0.74              |
| 2:P:161:PHE:HZ   | 1:Q:165:ARG:NH2  | 1.85                     | 0.74              |
| 1:S:242:LEU:HD12 | 2:T:235:LEU:HD13 | 1.69                     | 0.74              |
| 1:S:270:ARG:NH1  | 2:T:256:ASN:OD1  | 2.21                     | 0.74              |
| 1:A:225:ILE:HA   | 2:B:219:LYS:HE2  | 1.69                     | 0.74              |
| 2:H:119:LEU:HD21 | 2:H:163:LEU:HD13 | 1.68                     | 0.74              |
| 1:M:58:VAL:CG2   | 2:N:32:ALA:HB1   | 2.18                     | 0.74              |
| 1:G:256:ALA:HB1  | 1:G:260:ILE:HD12 | 1.69                     | 0.74              |
| 2:P:125:GLU:CD   | 1:Q:161:SER:HB3  | 2.13                     | 0.74              |
| 1:Q:104:ILE:HD12 | 1:Q:145:VAL:HG21 | 1.70                     | 0.74              |
| 2:R:237:GLU:HB3  | 1:S:294:LEU:CD2  | 2.18                     | 0.74              |
| 2:X:158:ALA:HB1  | 2:X:163:LEU:HB2  | 1.67                     | 0.74              |
| 1:A:104:ILE:HD12 | 1:A:145:VAL:HG21 | 1.70                     | 0.74              |
| 1:A:207:ALA:HB2  | 2:B:201:GLU:HB3  | 1.68                     | 0.74              |
| 1:C:270:ARG:CD   | 2:D:271:PRO:HG3  | 2.18                     | 0.74              |
| 1:G:135:SER:HB3  | 2:H:171:THR:HG23 | 1.69                     | 0.74              |
| 1:I:256:ALA:HB1  | 1:I:260:ILE:HD12 | 1.69                     | 0.74              |
| 2:L:158:ALA:HB1  | 2:L:163:LEU:HB2  | 1.67                     | 0.74              |
| 2:P:121:SER:OG   | 1:Q:184:ILE:O    | 2.04                     | 0.74              |
| 2:P:268:LEU:O    | 2:R:269:GLN:HB2  | 1.87                     | 0.74              |
| 1:Q:267:SER:CB   | 2:R:252:SER:O    | 2.36                     | 0.74              |
| 1:A:225:ILE:HD13 | 2:B:219:LYS:HG2  | 1.69                     | 0.74              |
| 2:H:268:LEU:HB2  | 2:J:267:LEU:H    | 1.52                     | 0.74              |
| 2:X:134:PHE:HB2  | 2:X:139:LEU:HD23 | 1.70                     | 0.74              |
| 2:P:117:ARG:HD2  | 1:Q:87:PRO:CG    | 2.18                     | 0.73              |
| 2:P:182:ALA:CB   | 1:Q:205:GLN:O    | 2.36                     | 0.73              |
| 1:S:242:LEU:HD13 | 2:T:238:LEU:HD22 | 1.68                     | 0.73              |
| 1:S:269:ASN:HD22 | 2:T:257:ILE:H    | 1.36                     | 0.73              |
| 1:U:256:ALA:HB1  | 1:U:260:ILE:HD12 | 1.69                     | 0.73              |
| 2:V:258:THR:HG21 | 1:W:272:TYR:HD2  | 1.53                     | 0.73              |
| 2:B:204:GLU:HA   | 1:C:226:VAL:HG22 | 1.70                     | 0.73              |
| 1:K:104:ILE:HD12 | 1:K:145:VAL:HG21 | 1.70                     | 0.73              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:106:LEU:HD23 | 1:O:137:VAL:HG13 | 1.71                     | 0.73              |
| 2:V:260:LEU:O    | 1:W:274:THR:HA   | 1.87                     | 0.73              |
| 1:W:104:ILE:HD12 | 1:W:145:VAL:HG21 | 1.70                     | 0.73              |
| 1:O:104:ILE:HD12 | 1:O:145:VAL:HG21 | 1.70                     | 0.73              |
| 1:Q:256:ALA:HB1  | 1:Q:260:ILE:HD12 | 1.69                     | 0.73              |
| 1:U:106:LEU:HD23 | 1:U:137:VAL:HG13 | 1.71                     | 0.73              |
| 1:G:104:ILE:HD12 | 1:G:145:VAL:HG21 | 1.70                     | 0.73              |
| 2:P:196:ALA:HB1  | 1:Q:220:GLU:HG2  | 1.70                     | 0.73              |
| 1:S:99:LEU:HD21  | 2:T:140:ILE:HD13 | 1.70                     | 0.73              |
| 1:C:272:TYR:HE1  | 2:D:258:THR:HG23 | 1.53                     | 0.73              |
| 2:J:41:ARG:CG    | 1:K:43:VAL:CG1   | 2.65                     | 0.73              |
| 1:M:106:LEU:HD23 | 1:M:137:VAL:HG13 | 1.71                     | 0.73              |
| 2:B:134:PHE:HB2  | 2:B:139:LEU:HD23 | 1.70                     | 0.73              |
| 1:C:104:ILE:HD12 | 1:C:145:VAL:HG21 | 1.70                     | 0.73              |
| 1:E:106:LEU:HD23 | 1:E:137:VAL:HG13 | 1.71                     | 0.73              |
| 1:G:249:ILE:CD1  | 1:I:294:LEU:HD21 | 2.18                     | 0.73              |
| 2:J:42:PHE:CD1   | 1:K:68:LEU:HD11  | 2.24                     | 0.73              |
| 1:M:135:SER:HB2  | 2:N:93:ARG:HH11  | 1.51                     | 0.73              |
| 2:P:42:PHE:HB3   | 1:Q:67:GLY:C     | 2.13                     | 0.73              |
| 2:P:43:ARG:CA    | 1:Q:65:ALA:C     | 2.61                     | 0.73              |
| 1:S:104:ILE:HD12 | 1:S:145:VAL:HG21 | 1.70                     | 0.73              |
| 1:S:290:GLY:O    | 1:U:283:GLN:OE1  | 2.05                     | 0.73              |
| 2:H:134:PHE:HB2  | 2:H:139:LEU:HD23 | 1.70                     | 0.73              |
| 2:J:134:PHE:HB2  | 2:J:139:LEU:HD23 | 1.70                     | 0.73              |
| 2:J:260:LEU:HD13 | 2:J:268:LEU:HD21 | 1.71                     | 0.73              |
| 1:S:106:LEU:HD23 | 1:S:137:VAL:HG13 | 1.71                     | 0.73              |
| 2:V:134:PHE:HB2  | 2:V:139:LEU:HD23 | 1.70                     | 0.73              |
| 1:A:256:ALA:HB1  | 1:A:260:ILE:HD12 | 1.69                     | 0.73              |
| 1:A:274:THR:O    | 2:X:260:LEU:O    | 2.07                     | 0.73              |
| 1:E:104:ILE:HD12 | 1:E:145:VAL:HG21 | 1.70                     | 0.73              |
| 1:G:106:LEU:HD23 | 1:G:137:VAL:HG13 | 1.71                     | 0.73              |
| 1:I:252:ARG:HH12 | 2:J:238:LEU:HD21 | 1.54                     | 0.73              |
| 2:J:157:ARG:NH2  | 1:K:165:ARG:CZ   | 2.52                     | 0.73              |
| 2:L:134:PHE:HB2  | 2:L:139:LEU:HD23 | 1.70                     | 0.73              |
| 2:P:108:THR:HB   | 1:Q:111:ARG:HD2  | 1.71                     | 0.73              |
| 2:T:119:LEU:HD21 | 2:T:163:LEU:HD13 | 1.68                     | 0.73              |
| 2:D:94:ILE:HG12  | 2:D:154:LEU:HD21 | 1.71                     | 0.73              |
| 2:D:250:GLN:HB2  | 1:E:265:ALA:HB2  | 1.71                     | 0.73              |
| 1:M:104:ILE:HD12 | 1:M:145:VAL:HG21 | 1.70                     | 0.73              |
| 2:N:94:ILE:HG12  | 2:N:154:LEU:HD21 | 1.71                     | 0.73              |
| 2:R:134:PHE:HB2  | 2:R:139:LEU:HD23 | 1.70                     | 0.73              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:R:260:LEU:HD13 | 2:R:268:LEU:HD21 | 1.71                     | 0.73              |
| 1:C:142:LYS:HE3  | 2:D:140:ILE:HG21 | 1.70                     | 0.73              |
| 2:D:225:ALA:HA   | 1:E:248:TYR:H    | 1.53                     | 0.73              |
| 1:K:256:ALA:HB1  | 1:K:260:ILE:HD12 | 1.69                     | 0.73              |
| 2:L:207:LYS:HG3  | 1:M:227:GLN:HA   | 1.70                     | 0.73              |
| 2:N:260:LEU:HD13 | 2:N:268:LEU:HD21 | 1.71                     | 0.73              |
| 2:P:84:ASP:HB2   | 1:Q:201:GLN:CD   | 2.13                     | 0.73              |
| 1:Q:106:LEU:HD23 | 1:Q:137:VAL:HG13 | 1.71                     | 0.73              |
| 2:D:260:LEU:HD13 | 2:D:268:LEU:HD21 | 1.71                     | 0.72              |
| 2:H:260:LEU:HD13 | 2:H:268:LEU:HD21 | 1.71                     | 0.72              |
| 2:J:240:LYS:HG2  | 1:M:282:LEU:HD13 | 1.71                     | 0.72              |
| 2:N:134:PHE:HB2  | 2:N:139:LEU:HD23 | 1.70                     | 0.72              |
| 2:P:134:PHE:HB2  | 2:P:139:LEU:HD23 | 1.70                     | 0.72              |
| 1:S:94:THR:HG21  | 1:S:145:VAL:HB   | 1.71                     | 0.72              |
| 2:T:134:PHE:HB2  | 2:T:139:LEU:HD23 | 1.70                     | 0.72              |
| 2:V:258:THR:HB   | 1:W:272:TYR:CB   | 2.18                     | 0.72              |
| 2:F:134:PHE:HB2  | 2:F:139:LEU:HD23 | 1.70                     | 0.72              |
| 1:K:232:ALA:HA   | 2:L:224:ILE:HG12 | 1.70                     | 0.72              |
| 2:P:43:ARG:HG3   | 1:Q:65:ALA:C     | 2.11                     | 0.72              |
| 2:P:61:VAL:HA    | 1:Q:43:VAL:O     | 1.89                     | 0.72              |
| 2:P:260:LEU:HD13 | 2:P:268:LEU:HD21 | 1.71                     | 0.72              |
| 2:R:211:ILE:HG12 | 1:S:233:GLU:OE2  | 1.89                     | 0.72              |
| 2:B:196:ALA:HB3  | 1:C:219:GLN:HE21 | 1.54                     | 0.72              |
| 2:F:259:TYR:CE1  | 1:G:278:LEU:HB2  | 2.25                     | 0.72              |
| 2:P:139:LEU:HD12 | 2:P:175:PHE:HE1  | 1.55                     | 0.72              |
| 2:T:139:LEU:HD12 | 2:T:175:PHE:HE1  | 1.54                     | 0.72              |
| 1:W:106:LEU:HD23 | 1:W:137:VAL:HG13 | 1.71                     | 0.72              |
| 2:J:41:ARG:CG    | 1:K:43:VAL:O     | 2.36                     | 0.72              |
| 1:K:106:LEU:HD23 | 1:K:137:VAL:HG13 | 1.71                     | 0.72              |
| 1:Q:94:THR:HG21  | 1:Q:145:VAL:HB   | 1.72                     | 0.72              |
| 2:R:266:VAL:O    | 2:T:265:SER:HB2  | 1.89                     | 0.72              |
| 2:R:268:LEU:HB2  | 2:T:267:LEU:O    | 1.89                     | 0.72              |
| 1:O:94:THR:HG21  | 1:O:145:VAL:HB   | 1.72                     | 0.72              |
| 1:A:94:THR:HG21  | 1:A:145:VAL:HB   | 1.72                     | 0.72              |
| 1:I:104:ILE:HD12 | 1:I:145:VAL:HG21 | 1.70                     | 0.72              |
| 2:P:179:PHE:CD2  | 1:Q:201:GLN:HB3  | 2.24                     | 0.72              |
| 2:T:41:ARG:HG3   | 1:U:44:GLU:HA    | 1.71                     | 0.72              |
| 1:U:94:THR:HG21  | 1:U:145:VAL:HB   | 1.72                     | 0.72              |
| 1:U:104:ILE:HD12 | 1:U:145:VAL:HG21 | 1.70                     | 0.72              |
| 2:X:94:ILE:HG12  | 2:X:154:LEU:HD21 | 1.71                     | 0.72              |
| 1:C:94:THR:HG21  | 1:C:145:VAL:HB   | 1.72                     | 0.72              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:J:41:ARG:HG3   | 1:K:43:VAL:C     | 2.14                     | 0.72              |
| 2:J:43:ARG:C     | 1:K:67:GLY:H     | 1.98                     | 0.72              |
| 2:R:94:ILE:HG12  | 2:R:154:LEU:HD21 | 1.71                     | 0.72              |
| 2:R:217:ASP:HB3  | 1:S:248:TYR:CE2  | 2.25                     | 0.72              |
| 1:S:252:ARG:NH1  | 2:T:242:GLU:HG2  | 2.05                     | 0.72              |
| 2:V:94:ILE:HG12  | 2:V:154:LEU:HD21 | 1.71                     | 0.72              |
| 2:V:259:TYR:HD1  | 1:W:273:LEU:HB2  | 1.54                     | 0.72              |
| 2:B:94:ILE:HG12  | 2:B:154:LEU:HD21 | 1.71                     | 0.72              |
| 2:D:139:LEU:HD12 | 2:D:175:PHE:HE1  | 1.54                     | 0.72              |
| 2:J:94:ILE:HG12  | 2:J:154:LEU:HD21 | 1.71                     | 0.72              |
| 1:A:106:LEU:HD23 | 1:A:137:VAL:HG13 | 1.71                     | 0.72              |
| 1:E:94:THR:HG21  | 1:E:145:VAL:HB   | 1.72                     | 0.72              |
| 1:E:274:THR:HG21 | 1:G:280:LEU:O    | 1.90                     | 0.72              |
| 2:P:43:ARG:HB3   | 1:Q:66:GLU:HA    | 1.59                     | 0.72              |
| 2:P:110:ILE:HA   | 1:Q:109:LEU:HG   | 1.70                     | 0.72              |
| 1:A:204:GLN:HB2  | 2:B:198:PHE:CG   | 2.25                     | 0.71              |
| 1:E:247:GLY:O    | 1:E:251:LEU:HD23 | 1.91                     | 0.71              |
| 1:M:121:TYR:CE2  | 2:N:32:ALA:C     | 2.68                     | 0.71              |
| 2:P:41:ARG:CB    | 1:Q:44:GLU:O     | 2.37                     | 0.71              |
| 1:A:282:LEU:N    | 1:W:277:ASN:ND2  | 2.38                     | 0.71              |
| 1:C:106:LEU:HD23 | 1:C:137:VAL:HG13 | 1.71                     | 0.71              |
| 2:J:128:LYS:HZ3  | 1:K:157:ARG:NH1  | 1.87                     | 0.71              |
| 2:T:94:ILE:HG12  | 2:T:154:LEU:HD21 | 1.71                     | 0.71              |
| 2:T:260:LEU:HD13 | 2:T:268:LEU:HD21 | 1.71                     | 0.71              |
| 2:B:139:LEU:HD12 | 2:B:175:PHE:HE1  | 1.55                     | 0.71              |
| 2:D:134:PHE:HB2  | 2:D:139:LEU:HD23 | 1.70                     | 0.71              |
| 1:G:94:THR:HG21  | 1:G:145:VAL:HB   | 1.72                     | 0.71              |
| 1:G:253:LYS:HE2  | 1:I:291:SER:CB   | 2.20                     | 0.71              |
| 1:G:260:ILE:HD13 | 1:I:279:VAL:CG2  | 2.21                     | 0.71              |
| 2:H:139:LEU:HD12 | 2:H:175:PHE:HE1  | 1.55                     | 0.71              |
| 1:I:106:LEU:HD23 | 1:I:137:VAL:HG13 | 1.71                     | 0.71              |
| 1:K:94:THR:HG21  | 1:K:145:VAL:HB   | 1.72                     | 0.71              |
| 2:L:139:LEU:HD12 | 2:L:175:PHE:HE1  | 1.54                     | 0.71              |
| 2:L:218:SER:HB2  | 1:M:238:LEU:CD2  | 2.21                     | 0.71              |
| 2:P:121:SER:OG   | 1:Q:184:ILE:C    | 2.33                     | 0.71              |
| 1:S:247:GLY:O    | 1:S:251:LEU:HD23 | 1.90                     | 0.71              |
| 2:V:258:THR:N    | 1:W:271:ILE:O    | 2.22                     | 0.71              |
| 1:A:101:MET:HE3  | 2:B:180:THR:CG2  | 2.21                     | 0.71              |
| 2:F:139:LEU:HD12 | 2:F:175:PHE:HE1  | 1.54                     | 0.71              |
| 2:H:94:ILE:HG12  | 2:H:154:LEU:HD21 | 1.71                     | 0.71              |
| 2:L:94:ILE:HG12  | 2:L:154:LEU:HD21 | 1.71                     | 0.71              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:R:268:LEU:HD22 | 2:R:270:LEU:HD21 | 1.73                     | 0.71              |
| 1:G:58:VAL:HG23  | 2:H:32:ALA:HB1   | 1.71                     | 0.71              |
| 1:G:247:GLY:O    | 1:G:251:LEU:HD23 | 1.90                     | 0.71              |
| 2:H:268:LEU:HD22 | 2:H:270:LEU:HD21 | 1.73                     | 0.71              |
| 1:I:94:THR:HG21  | 1:I:145:VAL:HB   | 1.72                     | 0.71              |
| 1:M:94:THR:HG21  | 1:M:145:VAL:HB   | 1.72                     | 0.71              |
| 1:M:131:ARG:HG2  | 2:N:72:ARG:HA    | 1.71                     | 0.71              |
| 1:M:131:ARG:HG2  | 2:N:73:PRO:HD3   | 1.73                     | 0.71              |
| 2:P:118:VAL:CG2  | 1:Q:109:LEU:HD22 | 2.19                     | 0.71              |
| 2:P:268:LEU:HD22 | 2:P:270:LEU:HD21 | 1.73                     | 0.71              |
| 1:Q:247:GLY:O    | 1:Q:251:LEU:HD23 | 1.90                     | 0.71              |
| 2:X:260:LEU:HD13 | 2:X:268:LEU:HD21 | 1.71                     | 0.71              |
| 1:C:269:ASN:ND2  | 2:D:257:ILE:HB   | 2.05                     | 0.71              |
| 2:D:247:ILE:HD13 | 1:E:261:SER:OG   | 1.88                     | 0.71              |
| 2:V:139:LEU:HD12 | 2:V:175:PHE:HE1  | 1.55                     | 0.71              |
| 2:V:256:ASN:CB   | 1:W:270:ARG:HG2  | 2.20                     | 0.71              |
| 1:W:247:GLY:O    | 1:W:251:LEU:HD23 | 1.90                     | 0.71              |
| 2:J:43:ARG:HB2   | 1:K:68:LEU:N     | 2.04                     | 0.71              |
| 1:M:175:PHE:CZ   | 2:N:167:ASP:HB3  | 2.25                     | 0.71              |
| 2:N:268:LEU:HD22 | 2:N:270:LEU:HD21 | 1.73                     | 0.71              |
| 1:A:67:GLY:CA    | 2:X:43:ARG:NH2   | 2.51                     | 0.71              |
| 2:B:260:LEU:HD13 | 2:B:268:LEU:HD21 | 1.71                     | 0.71              |
| 2:F:268:LEU:HD22 | 2:F:270:LEU:HD21 | 1.73                     | 0.71              |
| 2:N:139:LEU:HD12 | 2:N:175:PHE:HE1  | 1.55                     | 0.71              |
| 1:O:247:GLY:O    | 1:O:251:LEU:HD23 | 1.90                     | 0.71              |
| 2:P:94:ILE:HG12  | 2:P:154:LEU:HD21 | 1.71                     | 0.71              |
| 1:C:54:ARG:HH22  | 2:D:52:GLU:HB3   | 1.56                     | 0.71              |
| 2:F:94:ILE:HG12  | 2:F:154:LEU:HD21 | 1.71                     | 0.71              |
| 2:J:268:LEU:HD22 | 2:J:270:LEU:HD21 | 1.73                     | 0.71              |
| 2:L:260:LEU:HD13 | 2:L:268:LEU:HD21 | 1.71                     | 0.71              |
| 2:L:268:LEU:HD22 | 2:L:270:LEU:HD21 | 1.73                     | 0.71              |
| 1:M:124:LEU:O    | 2:N:70:ARG:HB3   | 1.90                     | 0.71              |
| 2:V:260:LEU:HD13 | 2:V:268:LEU:HD21 | 1.71                     | 0.71              |
| 1:A:247:GLY:O    | 1:A:251:LEU:HD23 | 1.90                     | 0.71              |
| 1:C:266:THR:OG1  | 2:D:252:SER:HB2  | 1.90                     | 0.71              |
| 2:D:268:LEU:CD2  | 1:E:272:TYR:CD2  | 2.73                     | 0.71              |
| 1:G:260:ILE:HD12 | 1:I:279:VAL:HG21 | 1.72                     | 0.71              |
| 2:J:139:LEU:HD12 | 2:J:175:PHE:HE1  | 1.54                     | 0.71              |
| 2:P:41:ARG:HD3   | 1:Q:42:THR:O     | 1.89                     | 0.71              |
| 2:R:139:LEU:HD12 | 2:R:175:PHE:HE1  | 1.54                     | 0.71              |
| 1:M:247:GLY:O    | 1:M:251:LEU:HD23 | 1.90                     | 0.70              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:P:118:VAL:HA   | 1:Q:181:ASP:OD2  | 1.91                     | 0.70              |
| 1:S:272:TYR:HD1  | 2:T:258:THR:HG23 | 1.56                     | 0.70              |
| 2:B:268:LEU:HD22 | 2:B:270:LEU:HD21 | 1.73                     | 0.70              |
| 2:D:240:LYS:CE   | 1:E:254:ILE:HG12 | 2.20                     | 0.70              |
| 2:D:268:LEU:HD22 | 2:D:270:LEU:HD21 | 1.73                     | 0.70              |
| 2:F:260:LEU:HD13 | 2:F:268:LEU:HD21 | 1.71                     | 0.70              |
| 2:P:189:ALA:HB3  | 1:Q:212:PHE:CE1  | 2.26                     | 0.70              |
| 1:S:259:ASN:HB2  | 2:T:249:TYR:CE1  | 2.26                     | 0.70              |
| 1:U:247:GLY:O    | 1:U:251:LEU:HD23 | 1.90                     | 0.70              |
| 1:W:94:THR:HG21  | 1:W:145:VAL:HB   | 1.72                     | 0.70              |
| 2:D:182:ALA:HB1  | 1:E:205:GLN:CB   | 2.20                     | 0.70              |
| 2:D:262:ALA:HB3  | 1:E:274:THR:HA   | 1.73                     | 0.70              |
| 1:K:236:LYS:HE3  | 2:L:227:SER:OG   | 1.91                     | 0.70              |
| 1:M:125:GLY:CA   | 2:N:70:ARG:HG2   | 2.20                     | 0.70              |
| 2:P:125:GLU:HG3  | 1:Q:158:ALA:HA   | 1.72                     | 0.70              |
| 2:R:57:LEU:HD12  | 2:R:57:LEU:O     | 1.92                     | 0.70              |
| 2:R:262:ALA:HB3  | 1:S:289:ARG:HH22 | 1.57                     | 0.70              |
| 1:A:294:LEU:HD21 | 1:W:249:ILE:CD1  | 2.22                     | 0.70              |
| 1:C:131:ARG:HG2  | 2:D:71:SER:O     | 1.89                     | 0.70              |
| 1:C:247:GLY:O    | 1:C:251:LEU:HD23 | 1.90                     | 0.70              |
| 1:G:214:VAL:HG22 | 2:H:208:LYS:CG   | 2.20                     | 0.70              |
| 1:I:247:GLY:O    | 1:I:251:LEU:HD23 | 1.90                     | 0.70              |
| 2:J:57:LEU:HD12  | 2:J:57:LEU:O     | 1.92                     | 0.70              |
| 2:D:178:GLU:OE1  | 1:E:202:VAL:HG22 | 1.91                     | 0.70              |
| 1:E:274:THR:CG2  | 1:G:280:LEU:O    | 2.40                     | 0.70              |
| 2:F:42:PHE:CD2   | 2:F:61:VAL:HG21  | 2.27                     | 0.70              |
| 1:M:121:TYR:CE2  | 2:N:32:ALA:O     | 2.43                     | 0.70              |
| 2:D:42:PHE:CD2   | 2:D:61:VAL:HG21  | 2.27                     | 0.70              |
| 2:P:57:LEU:HD12  | 2:P:57:LEU:O     | 1.92                     | 0.70              |
| 2:P:117:ARG:HG2  | 1:Q:107:ARG:CZ   | 2.22                     | 0.70              |
| 2:P:117:ARG:CD   | 1:Q:87:PRO:HG2   | 2.20                     | 0.70              |
| 2:V:57:LEU:O     | 2:V:57:LEU:HD12  | 1.92                     | 0.70              |
| 2:X:139:LEU:HD12 | 2:X:175:PHE:HE1  | 1.55                     | 0.70              |
| 2:B:57:LEU:HD12  | 2:B:57:LEU:O     | 1.92                     | 0.70              |
| 2:N:42:PHE:CD2   | 2:N:61:VAL:HG21  | 2.27                     | 0.70              |
| 1:S:260:ILE:CD1  | 2:T:248:ALA:HB3  | 2.21                     | 0.70              |
| 2:T:57:LEU:HD12  | 2:T:57:LEU:O     | 1.92                     | 0.70              |
| 1:U:214:VAL:HG22 | 2:V:208:LYS:HG2  | 1.74                     | 0.70              |
| 1:C:272:TYR:CE1  | 2:D:258:THR:HG23 | 2.26                     | 0.70              |
| 2:F:241:LEU:CD2  | 1:I:283:GLN:NE2  | 2.53                     | 0.70              |
| 1:K:247:GLY:O    | 1:K:251:LEU:HD23 | 1.90                     | 0.70              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:P:86:GLN:HE21  | 1:Q:201:GLN:HB2  | 1.57                     | 0.70              |
| 2:P:108:THR:O    | 1:Q:111:ARG:CB   | 2.39                     | 0.70              |
| 1:S:99:LEU:CD2   | 2:T:140:ILE:HD13 | 2.22                     | 0.70              |
| 2:V:239:ARG:HG3  | 1:W:251:LEU:HD11 | 1.74                     | 0.70              |
| 2:X:42:PHE:CD2   | 2:X:61:VAL:HG21  | 2.27                     | 0.70              |
| 2:D:85:LEU:HD22  | 1:E:155:THR:HG22 | 1.71                     | 0.70              |
| 2:D:254:SER:HB2  | 1:E:265:ALA:O    | 1.92                     | 0.70              |
| 1:E:64:LEU:HD13  | 1:E:69:HIS:CD2   | 2.27                     | 0.70              |
| 1:G:64:LEU:HD13  | 1:G:69:HIS:CD2   | 2.27                     | 0.70              |
| 2:R:42:PHE:CD2   | 2:R:61:VAL:HG21  | 2.27                     | 0.70              |
| 1:S:269:ASN:ND2  | 2:T:257:ILE:HD12 | 2.05                     | 0.70              |
| 2:D:57:LEU:HD12  | 2:D:57:LEU:O     | 1.91                     | 0.70              |
| 2:J:43:ARG:CB    | 1:K:68:LEU:N     | 2.55                     | 0.70              |
| 2:P:39:PHE:HE1   | 1:Q:84:ARG:HD3   | 1.57                     | 0.70              |
| 1:Q:249:ILE:HD13 | 1:S:294:LEU:CD2  | 2.21                     | 0.70              |
| 1:S:64:LEU:HD13  | 1:S:69:HIS:CD2   | 2.27                     | 0.70              |
| 2:T:42:PHE:CD2   | 2:T:61:VAL:HG21  | 2.27                     | 0.70              |
| 1:U:64:LEU:HD13  | 1:U:69:HIS:CD2   | 2.27                     | 0.70              |
| 1:A:207:ALA:CB   | 2:B:201:GLU:HB3  | 2.21                     | 0.69              |
| 2:D:207:LYS:CD   | 1:E:227:GLN:HG2  | 2.22                     | 0.69              |
| 2:D:270:LEU:HD22 | 1:E:272:TYR:OH   | 1.91                     | 0.69              |
| 2:F:57:LEU:O     | 2:F:57:LEU:HD12  | 1.92                     | 0.69              |
| 2:H:57:LEU:HD12  | 2:H:57:LEU:O     | 1.92                     | 0.69              |
| 2:H:266:VAL:HB   | 2:J:264:GLN:HB3  | 1.74                     | 0.69              |
| 1:S:274:THR:HB   | 2:T:261:PRO:CG   | 2.22                     | 0.69              |
| 1:A:48:ARG:HG2   | 1:A:83:ILE:HD13  | 1.74                     | 0.69              |
| 1:A:64:LEU:HD13  | 1:A:69:HIS:CD2   | 2.27                     | 0.69              |
| 2:B:42:PHE:CD2   | 2:B:61:VAL:HG21  | 2.27                     | 0.69              |
| 2:N:269:GLN:HE21 | 2:P:269:GLN:HG2  | 1.56                     | 0.69              |
| 1:O:83:ILE:HG22  | 1:O:112:PRO:HG2  | 1.75                     | 0.69              |
| 2:P:39:PHE:HE2   | 1:Q:44:GLU:HG2   | 1.55                     | 0.69              |
| 2:P:85:LEU:CB    | 1:Q:197:VAL:HG12 | 2.21                     | 0.69              |
| 2:V:42:PHE:CD2   | 2:V:61:VAL:HG21  | 2.27                     | 0.69              |
| 1:W:64:LEU:HD13  | 1:W:69:HIS:CD2   | 2.27                     | 0.69              |
| 1:W:83:ILE:HG22  | 1:W:112:PRO:HG2  | 1.74                     | 0.69              |
| 1:A:45:GLY:HA3   | 2:X:45:VAL:H     | 1.55                     | 0.69              |
| 1:G:48:ARG:HG2   | 1:G:83:ILE:HD13  | 1.74                     | 0.69              |
| 1:G:52:PHE:HE1   | 2:H:32:ALA:CB    | 2.04                     | 0.69              |
| 1:Q:274:THR:HG21 | 2:R:259:TYR:HD2  | 1.56                     | 0.69              |
| 2:R:262:ALA:HB2  | 2:T:264:GLN:HG2  | 1.74                     | 0.69              |
| 2:X:268:LEU:HD22 | 2:X:270:LEU:HD21 | 1.73                     | 0.69              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:D:250:GLN:C    | 1:E:265:ALA:HB1  | 2.17                     | 0.69              |
| 2:D:250:GLN:CB   | 1:E:265:ALA:HB2  | 2.22                     | 0.69              |
| 1:E:83:ILE:HG22  | 1:E:112:PRO:HG2  | 1.75                     | 0.69              |
| 1:G:135:SER:CB   | 2:H:171:THR:HG23 | 2.23                     | 0.69              |
| 1:I:64:LEU:HD13  | 1:I:69:HIS:CD2   | 2.27                     | 0.69              |
| 2:L:57:LEU:HD12  | 2:L:57:LEU:O     | 1.92                     | 0.69              |
| 1:S:273:LEU:HD23 | 2:T:259:TYR:HB3  | 1.73                     | 0.69              |
| 2:D:42:PHE:CD1   | 1:E:68:LEU:HD23  | 2.27                     | 0.69              |
| 2:N:269:GLN:NE2  | 2:P:269:GLN:HG2  | 2.06                     | 0.69              |
| 1:Q:274:THR:CG2  | 2:R:259:TYR:HD2  | 2.05                     | 0.69              |
| 2:V:268:LEU:HD22 | 2:V:270:LEU:HD21 | 1.73                     | 0.69              |
| 2:X:57:LEU:HD12  | 2:X:57:LEU:O     | 1.92                     | 0.69              |
| 2:B:211:ILE:HD13 | 1:C:233:GLU:OE2  | 1.90                     | 0.69              |
| 1:C:168:LEU:HD23 | 1:C:182:VAL:HG11 | 1.75                     | 0.69              |
| 2:D:224:ILE:CB   | 1:E:248:TYR:CD1  | 2.74                     | 0.69              |
| 1:K:83:ILE:HG22  | 1:K:112:PRO:HG2  | 1.75                     | 0.69              |
| 2:R:259:TYR:CZ   | 1:S:275:ALA:O    | 2.46                     | 0.69              |
| 1:S:168:LEU:HD23 | 1:S:182:VAL:HG11 | 1.75                     | 0.69              |
| 1:U:83:ILE:HG22  | 1:U:112:PRO:HG2  | 1.75                     | 0.69              |
| 1:C:83:ILE:HG22  | 1:C:112:PRO:HG2  | 1.75                     | 0.69              |
| 1:C:293:SER:OG   | 1:E:283:GLN:CD   | 2.36                     | 0.69              |
| 1:I:144:VAL:HG13 | 1:I:163:LEU:HD23 | 1.75                     | 0.69              |
| 1:I:168:LEU:HD23 | 1:I:182:VAL:HG11 | 1.75                     | 0.69              |
| 1:M:64:LEU:HD13  | 1:M:69:HIS:CD2   | 2.27                     | 0.69              |
| 2:V:34:HIS:CD2   | 2:V:66:ILE:HG22  | 2.28                     | 0.69              |
| 1:W:168:LEU:HD23 | 1:W:182:VAL:HG11 | 1.75                     | 0.69              |
| 2:B:28:TYR:CD2   | 2:B:57:LEU:HD23  | 2.28                     | 0.69              |
| 2:B:204:GLU:HA   | 1:C:226:VAL:HG21 | 1.73                     | 0.69              |
| 2:B:272:GLN:CD   | 2:D:272:GLN:NE2  | 2.51                     | 0.69              |
| 2:D:258:THR:HG22 | 2:D:259:TYR:H    | 1.58                     | 0.69              |
| 1:E:48:ARG:HG2   | 1:E:83:ILE:HD13  | 1.74                     | 0.69              |
| 1:E:168:LEU:HD23 | 1:E:182:VAL:HG11 | 1.75                     | 0.69              |
| 1:G:168:LEU:HD23 | 1:G:182:VAL:HG11 | 1.75                     | 0.69              |
| 2:H:241:LEU:HD11 | 1:K:283:GLN:HE21 | 1.54                     | 0.69              |
| 1:K:239:GLY:HA3  | 2:L:228:LEU:HD21 | 1.75                     | 0.69              |
| 2:L:42:PHE:CD2   | 2:L:61:VAL:HG21  | 2.27                     | 0.69              |
| 1:M:175:PHE:CE1  | 2:N:166:ASP:HB2  | 2.27                     | 0.69              |
| 2:N:57:LEU:O     | 2:N:57:LEU:HD12  | 1.92                     | 0.69              |
| 1:Q:144:VAL:HG13 | 1:Q:163:LEU:HD23 | 1.75                     | 0.69              |
| 2:R:28:TYR:CD2   | 2:R:57:LEU:HD23  | 2.28                     | 0.69              |
| 2:R:237:GLU:HB2  | 1:S:294:LEU:CD1  | 2.20                     | 0.69              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:T:259:TYR:CE1  | 1:U:278:LEU:HB2  | 2.28                     | 0.69              |
| 2:T:268:LEU:HD22 | 2:T:270:LEU:HD21 | 1.73                     | 0.69              |
| 2:V:229:ALA:HB2  | 1:W:244:LYS:HB3  | 1.74                     | 0.69              |
| 2:X:28:TYR:CD2   | 2:X:57:LEU:HD23  | 2.28                     | 0.69              |
| 2:B:240:LYS:NZ   | 1:E:282:LEU:HD13 | 2.06                     | 0.69              |
| 1:I:48:ARG:HG2   | 1:I:83:ILE:HD13  | 1.75                     | 0.69              |
| 1:I:224:LYS:O    | 2:J:219:LYS:HE2  | 1.91                     | 0.69              |
| 2:J:43:ARG:CB    | 1:K:67:GLY:CA    | 2.70                     | 0.69              |
| 2:J:258:THR:HG22 | 2:J:259:TYR:H    | 1.58                     | 0.69              |
| 1:K:243:SER:HB2  | 1:M:296:LYS:HE2  | 1.75                     | 0.69              |
| 2:P:42:PHE:CD2   | 2:P:61:VAL:HG21  | 2.27                     | 0.69              |
| 1:S:252:ARG:HE   | 2:T:245:GLU:CG   | 2.05                     | 0.69              |
| 1:S:272:TYR:HB2  | 2:T:258:THR:HG23 | 1.75                     | 0.69              |
| 1:U:144:VAL:HG13 | 1:U:163:LEU:HD23 | 1.75                     | 0.69              |
| 1:A:282:LEU:HD12 | 1:W:277:ASN:HB3  | 1.74                     | 0.69              |
| 2:L:157:ARG:HH22 | 1:M:165:ARG:HH12 | 1.40                     | 0.69              |
| 1:M:168:LEU:HD23 | 1:M:182:VAL:HG11 | 1.75                     | 0.69              |
| 1:Q:64:LEU:HD13  | 1:Q:69:HIS:CD2   | 2.27                     | 0.69              |
| 2:R:259:TYR:CE2  | 1:S:281:ASN:CG   | 2.71                     | 0.69              |
| 1:S:144:VAL:HG13 | 1:S:163:LEU:HD23 | 1.75                     | 0.69              |
| 2:T:34:HIS:CD2   | 2:T:66:ILE:HG22  | 2.28                     | 0.69              |
| 1:A:168:LEU:HD23 | 1:A:182:VAL:HG11 | 1.75                     | 0.68              |
| 2:J:34:HIS:CD2   | 2:J:66:ILE:HG22  | 2.28                     | 0.68              |
| 1:K:48:ARG:HG2   | 1:K:83:ILE:HD13  | 1.74                     | 0.68              |
| 1:K:64:LEU:HD13  | 1:K:69:HIS:CD2   | 2.27                     | 0.68              |
| 1:M:139:GLU:CD   | 2:N:169:SER:HB3  | 2.18                     | 0.68              |
| 2:P:258:THR:HG22 | 2:P:259:TYR:H    | 1.58                     | 0.68              |
| 1:W:144:VAL:HG13 | 1:W:163:LEU:HD23 | 1.75                     | 0.68              |
| 2:X:34:HIS:CD2   | 2:X:66:ILE:HG22  | 2.28                     | 0.68              |
| 2:F:258:THR:HG22 | 2:F:259:TYR:H    | 1.58                     | 0.68              |
| 2:J:42:PHE:CD2   | 2:J:61:VAL:HG21  | 2.27                     | 0.68              |
| 2:R:258:THR:HG22 | 2:R:259:TYR:H    | 1.58                     | 0.68              |
| 2:V:218:SER:OG   | 1:W:237:MET:SD   | 2.49                     | 0.68              |
| 1:C:48:ARG:HG2   | 1:C:83:ILE:HD13  | 1.74                     | 0.68              |
| 1:C:64:LEU:HD13  | 1:C:69:HIS:CD2   | 2.27                     | 0.68              |
| 2:F:28:TYR:CD2   | 2:F:57:LEU:HD23  | 2.28                     | 0.68              |
| 2:H:34:HIS:CD2   | 2:H:66:ILE:HG22  | 2.28                     | 0.68              |
| 2:L:196:ALA:HB1  | 1:M:220:GLU:HG3  | 1.74                     | 0.68              |
| 1:M:83:ILE:HG22  | 1:M:112:PRO:HG2  | 1.75                     | 0.68              |
| 1:M:135:SER:HB2  | 2:N:93:ARG:HG2   | 1.76                     | 0.68              |
| 1:O:144:VAL:HG13 | 1:O:163:LEU:HD23 | 1.75                     | 0.68              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:Q:252:ARG:HG3  | 2:R:245:GLU:OE1  | 1.93                     | 0.68              |
| 2:R:34:HIS:CD2   | 2:R:66:ILE:HG22  | 2.28                     | 0.68              |
| 2:V:28:TYR:CD2   | 2:V:57:LEU:HD23  | 2.28                     | 0.68              |
| 2:B:34:HIS:CD2   | 2:B:66:ILE:HG22  | 2.28                     | 0.68              |
| 1:C:270:ARG:NE   | 2:D:271:PRO:HG3  | 2.07                     | 0.68              |
| 2:H:42:PHE:CD2   | 2:H:61:VAL:HG21  | 2.27                     | 0.68              |
| 1:M:144:VAL:HG13 | 1:M:163:LEU:HD23 | 1.75                     | 0.68              |
| 2:N:28:TYR:CD2   | 2:N:57:LEU:HD23  | 2.28                     | 0.68              |
| 2:N:258:THR:HG22 | 2:N:259:TYR:H    | 1.58                     | 0.68              |
| 2:P:129:SER:HB2  | 1:Q:158:ALA:HB2  | 1.75                     | 0.68              |
| 1:S:48:ARG:HG2   | 1:S:83:ILE:HD13  | 1.74                     | 0.68              |
| 1:A:200:LYS:O    | 2:B:198:PHE:CD2  | 2.45                     | 0.68              |
| 1:A:210:ALA:C    | 2:B:205:GLN:HB3  | 2.19                     | 0.68              |
| 1:C:144:VAL:HG13 | 1:C:163:LEU:HD23 | 1.75                     | 0.68              |
| 2:D:28:TYR:CD2   | 2:D:57:LEU:HD23  | 2.28                     | 0.68              |
| 1:I:252:ARG:NH1  | 2:J:238:LEU:HD11 | 2.09                     | 0.68              |
| 2:L:228:LEU:HA   | 2:L:231:ALA:HB3  | 1.76                     | 0.68              |
| 1:M:175:PHE:HE1  | 2:N:166:ASP:HB2  | 1.56                     | 0.68              |
| 2:V:259:TYR:HA   | 1:W:273:LEU:C    | 2.18                     | 0.68              |
| 2:B:258:THR:HG22 | 2:B:259:TYR:H    | 1.58                     | 0.68              |
| 2:B:259:TYR:CE1  | 1:C:278:LEU:HB2  | 2.29                     | 0.68              |
| 1:C:192:GLU:HB3  | 2:D:188:VAL:CG1  | 2.24                     | 0.68              |
| 1:E:144:VAL:HG13 | 1:E:163:LEU:HD23 | 1.75                     | 0.68              |
| 2:J:28:TYR:CD2   | 2:J:57:LEU:HD23  | 2.28                     | 0.68              |
| 1:K:144:VAL:HG13 | 1:K:163:LEU:HD23 | 1.75                     | 0.68              |
| 1:O:64:LEU:HD13  | 1:O:69:HIS:CD2   | 2.27                     | 0.68              |
| 1:S:253:LYS:CG   | 2:T:241:LEU:CD1  | 2.62                     | 0.68              |
| 1:U:221:GLN:NE2  | 2:V:212:ILE:O    | 2.27                     | 0.68              |
| 1:G:58:VAL:CG2   | 2:H:32:ALA:HB3   | 2.24                     | 0.68              |
| 2:H:270:LEU:HD11 | 2:J:260:LEU:CD2  | 2.21                     | 0.68              |
| 1:I:274:THR:HG22 | 2:J:261:PRO:HB3  | 1.74                     | 0.68              |
| 2:J:228:LEU:HA   | 2:J:231:ALA:HB3  | 1.76                     | 0.68              |
| 1:M:121:TYR:CD2  | 2:N:32:ALA:HB3   | 2.27                     | 0.68              |
| 1:O:256:ALA:CA   | 2:P:245:GLU:OE2  | 2.42                     | 0.68              |
| 2:P:28:TYR:CD2   | 2:P:57:LEU:HD23  | 2.28                     | 0.68              |
| 1:Q:48:ARG:HG2   | 1:Q:83:ILE:HD13  | 1.74                     | 0.68              |
| 1:S:253:LYS:HG3  | 2:T:241:LEU:CD1  | 2.14                     | 0.68              |
| 2:T:28:TYR:CD2   | 2:T:57:LEU:HD23  | 2.28                     | 0.68              |
| 2:V:218:SER:HB3  | 1:W:237:MET:HE1  | 1.75                     | 0.68              |
| 1:W:48:ARG:HG2   | 1:W:83:ILE:HD13  | 1.74                     | 0.68              |
| 1:A:84:ARG:CB    | 2:X:108:THR:O    | 2.42                     | 0.68              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:144:VAL:HG13 | 1:A:163:LEU:HD23 | 1.75                     | 0.68              |
| 2:F:34:HIS:CD2   | 2:F:66:ILE:HG22  | 2.28                     | 0.68              |
| 2:L:28:TYR:CD2   | 2:L:57:LEU:HD23  | 2.28                     | 0.68              |
| 1:M:48:ARG:HG2   | 1:M:83:ILE:HD13  | 1.74                     | 0.68              |
| 1:O:168:LEU:HD23 | 1:O:182:VAL:HG11 | 1.75                     | 0.68              |
| 1:S:267:SER:OG   | 2:T:254:SER:O    | 2.07                     | 0.68              |
| 1:S:274:THR:HB   | 2:T:261:PRO:HB3  | 1.74                     | 0.68              |
| 2:D:34:HIS:CD2   | 2:D:66:ILE:HG22  | 2.28                     | 0.68              |
| 1:I:83:ILE:HG22  | 1:I:112:PRO:HG2  | 1.74                     | 0.68              |
| 2:L:34:HIS:CD2   | 2:L:66:ILE:HG22  | 2.28                     | 0.68              |
| 2:L:221:ALA:HA   | 1:M:248:TYR:CB   | 2.23                     | 0.68              |
| 2:P:34:HIS:CD2   | 2:P:66:ILE:HG22  | 2.28                     | 0.68              |
| 2:X:258:THR:HG22 | 2:X:259:TYR:H    | 1.58                     | 0.68              |
| 1:A:280:LEU:HD13 | 1:W:271:ILE:HG21 | 1.75                     | 0.68              |
| 1:M:93:PRO:HG2   | 2:N:172:HIS:NE2  | 2.09                     | 0.68              |
| 1:M:175:PHE:CZ   | 2:N:167:ASP:CB   | 2.77                     | 0.68              |
| 2:N:34:HIS:CD2   | 2:N:66:ILE:HG22  | 2.28                     | 0.68              |
| 2:R:260:LEU:O    | 1:S:275:ALA:HA   | 1.93                     | 0.68              |
| 2:J:239:ARG:HE   | 1:K:258:GLN:NE2  | 1.91                     | 0.67              |
| 2:N:228:LEU:HA   | 2:N:231:ALA:HB3  | 1.76                     | 0.67              |
| 2:P:228:LEU:HA   | 2:P:231:ALA:HB3  | 1.76                     | 0.67              |
| 1:A:203:ALA:HB1  | 2:B:198:PHE:C    | 2.19                     | 0.67              |
| 1:C:274:THR:CG2  | 2:D:261:PRO:HB3  | 2.19                     | 0.67              |
| 2:H:236:ILE:HG23 | 1:I:250:LYS:HD3  | 1.76                     | 0.67              |
| 2:L:218:SER:CB   | 1:M:238:LEU:CD2  | 2.72                     | 0.67              |
| 1:M:54:ARG:NE    | 2:N:54:THR:N     | 2.41                     | 0.67              |
| 1:O:48:ARG:HG2   | 1:O:83:ILE:HD13  | 1.74                     | 0.67              |
| 1:A:280:LEU:HB3  | 1:W:273:LEU:CD2  | 2.24                     | 0.67              |
| 1:G:83:ILE:HG22  | 1:G:112:PRO:HG2  | 1.75                     | 0.67              |
| 2:L:258:THR:HG22 | 2:L:259:TYR:H    | 1.58                     | 0.67              |
| 1:Q:168:LEU:HD23 | 1:Q:182:VAL:HG11 | 1.75                     | 0.67              |
| 2:R:228:LEU:HA   | 2:R:231:ALA:HB3  | 1.76                     | 0.67              |
| 2:R:259:TYR:CZ   | 1:S:281:ASN:N    | 2.62                     | 0.67              |
| 1:S:83:ILE:HG22  | 1:S:112:PRO:HG2  | 1.75                     | 0.67              |
| 2:T:258:THR:HG22 | 2:T:259:TYR:H    | 1.58                     | 0.67              |
| 1:U:48:ARG:HG2   | 1:U:83:ILE:HD13  | 1.74                     | 0.67              |
| 2:X:88:VAL:HG13  | 2:X:174:THR:O    | 1.95                     | 0.67              |
| 2:H:258:THR:HG22 | 2:H:259:TYR:H    | 1.58                     | 0.67              |
| 1:K:168:LEU:HD23 | 1:K:182:VAL:HG11 | 1.75                     | 0.67              |
| 2:P:85:LEU:HB3   | 1:Q:197:VAL:HG12 | 1.76                     | 0.67              |
| 2:V:258:THR:CG2  | 1:W:272:TYR:HD2  | 2.07                     | 0.67              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:D:88:VAL:HG13  | 2:D:174:THR:O    | 1.95                     | 0.67              |
| 2:F:270:LEU:CD1  | 2:H:260:LEU:HD11 | 2.24                     | 0.67              |
| 2:H:28:TYR:CD2   | 2:H:57:LEU:HD23  | 2.28                     | 0.67              |
| 1:Q:83:ILE:HG22  | 1:Q:112:PRO:HG2  | 1.75                     | 0.67              |
| 2:T:88:VAL:HG13  | 2:T:174:THR:O    | 1.95                     | 0.67              |
| 2:B:270:LEU:HD13 | 1:C:272:TYR:CE2  | 2.30                     | 0.67              |
| 2:D:228:LEU:HD13 | 1:E:251:LEU:CD2  | 2.14                     | 0.67              |
| 2:D:247:ILE:HG23 | 1:E:261:SER:O    | 1.93                     | 0.67              |
| 2:P:39:PHE:CE2   | 1:Q:44:GLU:CB    | 2.77                     | 0.67              |
| 1:Q:253:LYS:NZ   | 2:R:241:LEU:HD13 | 2.10                     | 0.67              |
| 1:S:140:VAL:HG11 | 1:S:164:ILE:O    | 1.95                     | 0.67              |
| 1:A:83:ILE:HG22  | 1:A:112:PRO:HG2  | 1.75                     | 0.67              |
| 1:A:98:ASP:O     | 2:B:183:VAL:HG13 | 1.93                     | 0.67              |
| 2:D:207:LYS:CG   | 1:E:227:GLN:HG2  | 2.25                     | 0.67              |
| 2:F:88:VAL:HG13  | 2:F:174:THR:O    | 1.95                     | 0.67              |
| 2:F:228:LEU:HA   | 2:F:231:ALA:HB3  | 1.76                     | 0.67              |
| 2:P:43:ARG:O     | 1:Q:66:GLU:CG    | 2.43                     | 0.67              |
| 2:B:228:LEU:HA   | 2:B:231:ALA:HB3  | 1.76                     | 0.67              |
| 2:B:270:LEU:HD22 | 1:C:272:TYR:CE2  | 2.30                     | 0.67              |
| 2:H:88:VAL:HG13  | 2:H:174:THR:O    | 1.95                     | 0.67              |
| 1:Q:140:VAL:HG11 | 1:Q:164:ILE:O    | 1.95                     | 0.67              |
| 1:C:253:LYS:CD   | 1:E:279:VAL:HG22 | 2.25                     | 0.67              |
| 1:G:260:ILE:CD1  | 1:I:279:VAL:CG2  | 2.73                     | 0.67              |
| 1:I:224:LYS:C    | 2:J:219:LYS:HE2  | 2.19                     | 0.67              |
| 2:R:237:GLU:HB3  | 1:S:294:LEU:HD22 | 1.77                     | 0.67              |
| 1:U:168:LEU:HD23 | 1:U:182:VAL:HG11 | 1.75                     | 0.67              |
| 2:V:239:ARG:C    | 1:W:254:ILE:HG21 | 2.20                     | 0.67              |
| 2:J:43:ARG:CB    | 1:K:68:LEU:H     | 2.08                     | 0.67              |
| 1:S:253:LYS:CD   | 2:T:241:LEU:HD13 | 2.25                     | 0.67              |
| 2:T:221:ALA:HA   | 1:U:248:TYR:HB2  | 1.75                     | 0.67              |
| 2:V:228:LEU:HA   | 2:V:231:ALA:HB3  | 1.76                     | 0.67              |
| 2:D:224:ILE:HB   | 1:E:248:TYR:CG   | 2.30                     | 0.66              |
| 2:D:224:ILE:CG2  | 1:E:248:TYR:CD1  | 2.77                     | 0.66              |
| 1:G:144:VAL:HG13 | 1:G:163:LEU:HD23 | 1.75                     | 0.66              |
| 2:P:42:PHE:N     | 1:Q:43:VAL:CG1   | 2.58                     | 0.66              |
| 2:P:46:GLN:CB    | 1:Q:66:GLU:OE1   | 2.43                     | 0.66              |
| 1:U:250:LYS:CE   | 1:W:291:SER:HB3  | 2.25                     | 0.66              |
| 2:H:228:LEU:HA   | 2:H:231:ALA:HB3  | 1.76                     | 0.66              |
| 2:J:88:VAL:HG13  | 2:J:174:THR:O    | 1.95                     | 0.66              |
| 1:Q:112:PRO:HB2  | 1:Q:117:LEU:HD21 | 1.77                     | 0.66              |
| 1:U:112:PRO:HB2  | 1:U:117:LEU:HD21 | 1.77                     | 0.66              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:U:142:LYS:NZ   | 2:V:140:ILE:HG21 | 2.10                     | 0.66              |
| 2:V:260:LEU:O    | 1:W:274:THR:CA   | 2.43                     | 0.66              |
| 1:A:112:PRO:HB2  | 1:A:117:LEU:HD21 | 1.77                     | 0.66              |
| 1:C:140:VAL:HG11 | 1:C:164:ILE:O    | 1.95                     | 0.66              |
| 1:K:236:LYS:CE   | 2:L:227:SER:OG   | 2.43                     | 0.66              |
| 2:L:88:VAL:HG13  | 2:L:174:THR:O    | 1.95                     | 0.66              |
| 1:M:135:SER:CB   | 2:N:93:ARG:CG    | 2.74                     | 0.66              |
| 1:M:140:VAL:HG11 | 1:M:164:ILE:O    | 1.95                     | 0.66              |
| 1:O:140:VAL:HG11 | 1:O:164:ILE:O    | 1.95                     | 0.66              |
| 2:P:42:PHE:N     | 1:Q:43:VAL:HG13  | 2.09                     | 0.66              |
| 2:P:43:ARG:CB    | 1:Q:66:GLU:N     | 2.58                     | 0.66              |
| 2:P:60:TRP:HZ2   | 1:Q:42:THR:HG22  | 1.59                     | 0.66              |
| 2:R:259:TYR:HE2  | 1:S:281:ASN:OD1  | 1.73                     | 0.66              |
| 1:W:140:VAL:HG11 | 1:W:164:ILE:O    | 1.95                     | 0.66              |
| 1:A:210:ALA:CB   | 2:B:205:GLN:CB   | 2.71                     | 0.66              |
| 1:S:112:PRO:HB2  | 1:S:117:LEU:HD21 | 1.77                     | 0.66              |
| 1:A:197:VAL:HG22 | 2:B:191:GLN:HB3  | 1.77                     | 0.66              |
| 2:D:246:ASP:HB3  | 1:E:262:LYS:HE2  | 1.78                     | 0.66              |
| 1:E:112:PRO:HB2  | 1:E:117:LEU:HD21 | 1.77                     | 0.66              |
| 2:R:88:VAL:HG13  | 2:R:174:THR:O    | 1.95                     | 0.66              |
| 2:D:228:LEU:HA   | 2:D:231:ALA:HB3  | 1.76                     | 0.66              |
| 2:D:240:LYS:HE2  | 1:E:254:ILE:HG12 | 1.76                     | 0.66              |
| 1:E:140:VAL:HG11 | 1:E:164:ILE:O    | 1.95                     | 0.66              |
| 1:O:256:ALA:HA   | 2:P:245:GLU:OE2  | 1.94                     | 0.66              |
| 2:P:88:VAL:HG13  | 2:P:174:THR:O    | 1.95                     | 0.66              |
| 1:G:98:ASP:O     | 2:H:184:GLU:CB   | 2.36                     | 0.66              |
| 1:I:140:VAL:HG11 | 1:I:164:ILE:O    | 1.95                     | 0.66              |
| 1:M:52:PHE:HD1   | 2:N:32:ALA:HB2   | 1.58                     | 0.66              |
| 1:M:121:TYR:CZ   | 2:N:32:ALA:O     | 2.49                     | 0.66              |
| 1:S:47:HIS:HA    | 1:S:81:TYR:O     | 1.96                     | 0.66              |
| 1:A:47:HIS:HA    | 1:A:81:TYR:O     | 1.96                     | 0.66              |
| 2:D:225:ALA:CB   | 1:E:242:LEU:HD22 | 2.26                     | 0.66              |
| 1:M:54:ARG:CZ    | 2:N:54:THR:OG1   | 2.44                     | 0.66              |
| 2:N:88:VAL:HG13  | 2:N:174:THR:O    | 1.95                     | 0.66              |
| 2:P:40:ASP:C     | 1:Q:45:GLY:HA2   | 2.20                     | 0.66              |
| 1:Q:221:GLN:NE2  | 2:R:212:ILE:CG2  | 2.47                     | 0.66              |
| 1:W:47:HIS:HA    | 1:W:81:TYR:O     | 1.96                     | 0.66              |
| 1:W:248:TYR:HA   | 1:W:251:LEU:HB2  | 1.78                     | 0.66              |
| 2:X:228:LEU:HA   | 2:X:231:ALA:HB3  | 1.76                     | 0.66              |
| 1:A:67:GLY:CA    | 2:X:43:ARG:CZ    | 2.73                     | 0.66              |
| 1:C:47:HIS:HA    | 1:C:81:TYR:O     | 1.96                     | 0.66              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:269:ASN:HA   | 2:D:257:ILE:O    | 1.95                     | 0.66              |
| 1:G:140:VAL:HG11 | 1:G:164:ILE:O    | 1.95                     | 0.66              |
| 1:I:112:PRO:HB2  | 1:I:117:LEU:HD21 | 1.77                     | 0.66              |
| 2:T:228:LEU:HA   | 2:T:231:ALA:HB3  | 1.76                     | 0.66              |
| 2:V:88:VAL:HG13  | 2:V:174:THR:O    | 1.95                     | 0.66              |
| 2:B:88:VAL:HG13  | 2:B:174:THR:O    | 1.95                     | 0.66              |
| 2:B:221:ALA:HA   | 1:C:248:TYR:CB   | 2.26                     | 0.66              |
| 2:B:269:GLN:HG3  | 2:D:269:GLN:NE2  | 2.11                     | 0.66              |
| 2:D:182:ALA:CB   | 1:E:205:GLN:CB   | 2.74                     | 0.66              |
| 1:M:135:SER:HB2  | 2:N:93:ARG:CD    | 2.26                     | 0.66              |
| 1:M:143:SER:HB2  | 2:N:143:ARG:NE   | 2.11                     | 0.66              |
| 1:M:248:TYR:HA   | 1:M:251:LEU:HB2  | 1.78                     | 0.66              |
| 1:S:248:TYR:HA   | 1:S:251:LEU:HB2  | 1.78                     | 0.66              |
| 1:S:253:LYS:CE   | 2:T:241:LEU:CD1  | 2.74                     | 0.66              |
| 1:S:253:LYS:CE   | 2:T:241:LEU:HD13 | 2.26                     | 0.66              |
| 1:S:274:THR:HB   | 2:T:261:PRO:CB   | 2.25                     | 0.66              |
| 1:W:112:PRO:HB2  | 1:W:117:LEU:HD21 | 1.77                     | 0.66              |
| 1:C:253:LYS:HD3  | 1:E:279:VAL:CG1  | 2.27                     | 0.65              |
| 2:D:235:LEU:O    | 1:E:251:LEU:HD13 | 1.96                     | 0.65              |
| 1:G:123:ARG:O    | 2:H:71:SER:HB3   | 1.96                     | 0.65              |
| 1:M:101:MET:HE3  | 2:N:180:THR:HG21 | 1.79                     | 0.65              |
| 1:O:112:PRO:HB2  | 1:O:117:LEU:HD21 | 1.77                     | 0.65              |
| 1:U:231:GLU:OE1  | 1:W:255:ARG:HD2  | 1.96                     | 0.65              |
| 1:U:260:ILE:HG21 | 1:W:278:LEU:CD2  | 2.26                     | 0.65              |
| 2:V:43:ARG:HD2   | 1:W:68:LEU:HD23  | 1.78                     | 0.65              |
| 2:V:258:THR:OG1  | 1:W:272:TYR:CD2  | 2.48                     | 0.65              |
| 1:E:47:HIS:HA    | 1:E:81:TYR:O     | 1.96                     | 0.65              |
| 1:I:248:TYR:HA   | 1:I:251:LEU:HB2  | 1.78                     | 0.65              |
| 1:K:140:VAL:HG11 | 1:K:164:ILE:O    | 1.95                     | 0.65              |
| 2:P:185:ALA:C    | 1:Q:212:PHE:CE2  | 2.74                     | 0.65              |
| 2:V:258:THR:HG22 | 2:V:259:TYR:H    | 1.58                     | 0.65              |
| 1:A:140:VAL:HG11 | 1:A:164:ILE:O    | 1.95                     | 0.65              |
| 1:G:112:PRO:HB2  | 1:G:117:LEU:HD21 | 1.77                     | 0.65              |
| 1:S:249:ILE:CG1  | 2:T:238:LEU:HA   | 2.26                     | 0.65              |
| 1:S:249:ILE:HD12 | 2:T:238:LEU:HA   | 1.77                     | 0.65              |
| 1:O:47:HIS:HA    | 1:O:81:TYR:O     | 1.96                     | 0.65              |
| 1:Q:248:TYR:HA   | 1:Q:251:LEU:HB2  | 1.78                     | 0.65              |
| 1:U:248:TYR:HA   | 1:U:251:LEU:HB2  | 1.78                     | 0.65              |
| 1:G:248:TYR:HA   | 1:G:251:LEU:HB2  | 1.78                     | 0.65              |
| 1:K:47:HIS:HA    | 1:K:81:TYR:O     | 1.96                     | 0.65              |
| 2:P:259:TYR:HE1  | 1:Q:278:LEU:HB2  | 1.58                     | 0.65              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:S:272:TYR:O    | 2:T:259:TYR:HB3  | 1.95                     | 0.65              |
| 1:C:112:PRO:HB2  | 1:C:117:LEU:HD21 | 1.77                     | 0.65              |
| 1:I:168:LEU:HD23 | 1:I:182:VAL:CG1  | 2.27                     | 0.65              |
| 2:J:43:ARG:HA    | 1:K:68:LEU:N     | 2.11                     | 0.65              |
| 1:M:47:HIS:HA    | 1:M:81:TYR:O     | 1.96                     | 0.65              |
| 1:U:47:HIS:HA    | 1:U:81:TYR:O     | 1.96                     | 0.65              |
| 2:B:222:GLU:OE2  | 1:C:241:ALA:HB1  | 1.95                     | 0.65              |
| 1:C:168:LEU:HD23 | 1:C:182:VAL:CG1  | 2.27                     | 0.65              |
| 1:I:47:HIS:HA    | 1:I:81:TYR:O     | 1.96                     | 0.65              |
| 1:M:139:GLU:HA   | 2:N:170:LEU:O    | 1.96                     | 0.65              |
| 2:R:257:ILE:HG23 | 1:S:273:LEU:CD1  | 2.21                     | 0.65              |
| 2:R:259:TYR:HE1  | 1:S:276:ASP:CA   | 2.03                     | 0.65              |
| 2:T:200:VAL:HG22 | 1:U:223:GLN:HA   | 1.79                     | 0.65              |
| 1:U:140:VAL:HG11 | 1:U:164:ILE:O    | 1.95                     | 0.65              |
| 2:B:267:LEU:HD21 | 2:D:267:LEU:HD22 | 1.77                     | 0.65              |
| 2:D:247:ILE:HG23 | 1:E:261:SER:HB2  | 1.79                     | 0.65              |
| 1:K:168:LEU:HD23 | 1:K:182:VAL:CG1  | 2.27                     | 0.65              |
| 1:M:146:ALA:HB3  | 2:N:140:ILE:CG2  | 2.23                     | 0.65              |
| 1:O:248:TYR:HA   | 1:O:251:LEU:HB2  | 1.78                     | 0.65              |
| 1:O:277:ASN:HD22 | 1:Q:282:LEU:HD12 | 1.62                     | 0.65              |
| 1:A:168:LEU:HD23 | 1:A:182:VAL:CG1  | 2.27                     | 0.65              |
| 1:A:294:LEU:CD2  | 1:W:249:ILE:HD13 | 2.25                     | 0.65              |
| 1:G:193:TYR:HD1  | 2:H:188:VAL:HG22 | 1.59                     | 0.65              |
| 1:K:112:PRO:HB2  | 1:K:117:LEU:HD21 | 1.77                     | 0.65              |
| 2:P:108:THR:C    | 1:Q:111:ARG:HB3  | 2.21                     | 0.65              |
| 1:Q:168:LEU:HD23 | 1:Q:182:VAL:CG1  | 2.27                     | 0.65              |
| 2:V:268:LEU:CD1  | 2:X:261:PRO:CD   | 2.75                     | 0.65              |
| 1:A:175:PHE:HZ   | 2:B:167:ASP:HB2  | 1.62                     | 0.65              |
| 2:D:240:LYS:HG3  | 1:E:254:ILE:CG2  | 2.27                     | 0.65              |
| 2:J:78:VAL:HG21  | 2:J:127:LEU:HD23 | 1.79                     | 0.65              |
| 2:J:224:ILE:CG2  | 1:K:251:LEU:HG   | 2.27                     | 0.65              |
| 2:P:41:ARG:HE    | 1:Q:44:GLU:H     | 1.43                     | 0.65              |
| 2:P:117:ARG:HA   | 1:Q:107:ARG:HD3  | 1.79                     | 0.65              |
| 1:Q:47:HIS:HA    | 1:Q:81:TYR:O     | 1.96                     | 0.65              |
| 2:R:257:ILE:CG2  | 1:S:273:LEU:HD12 | 2.24                     | 0.65              |
| 2:D:207:LYS:HG3  | 1:E:227:GLN:HG2  | 1.78                     | 0.64              |
| 1:G:253:LYS:HE2  | 1:I:291:SER:HB3  | 1.77                     | 0.64              |
| 1:M:112:PRO:HB2  | 1:M:117:LEU:HD21 | 1.77                     | 0.64              |
| 1:O:168:LEU:HD23 | 1:O:182:VAL:CG1  | 2.27                     | 0.64              |
| 2:P:157:ARG:NH2  | 1:Q:162:LEU:HD23 | 2.11                     | 0.64              |
| 2:R:251:LEU:HD12 | 1:S:278:LEU:CD2  | 2.26                     | 0.64              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:68:LEU:CD2   | 2:X:43:ARG:CD    | 2.73                     | 0.64              |
| 1:A:102:VAL:HG13 | 1:A:188:SER:O    | 1.97                     | 0.64              |
| 1:M:146:ALA:CB   | 2:N:140:ILE:CG2  | 2.71                     | 0.64              |
| 2:P:78:VAL:HG21  | 2:P:127:LEU:HD23 | 1.79                     | 0.64              |
| 2:P:108:THR:HB   | 1:Q:111:ARG:CD   | 2.27                     | 0.64              |
| 2:P:185:ALA:HB1  | 1:Q:212:PHE:CZ   | 2.32                     | 0.64              |
| 1:S:168:LEU:HD23 | 1:S:182:VAL:CG1  | 2.27                     | 0.64              |
| 2:X:78:VAL:HG21  | 2:X:127:LEU:HD23 | 1.79                     | 0.64              |
| 1:A:248:TYR:HA   | 1:A:251:LEU:HB2  | 1.78                     | 0.64              |
| 1:C:299:LYS:C    | 1:E:288:THR:HG21 | 2.21                     | 0.64              |
| 1:I:224:LYS:O    | 2:J:219:LYS:CE   | 2.44                     | 0.64              |
| 1:O:112:PRO:HA   | 1:O:177:LEU:HD23 | 1.80                     | 0.64              |
| 2:P:111:GLY:N    | 1:Q:85:ALA:HB3   | 2.11                     | 0.64              |
| 1:U:102:VAL:HG13 | 1:U:188:SER:O    | 1.97                     | 0.64              |
| 1:C:112:PRO:HA   | 1:C:177:LEU:HD23 | 1.80                     | 0.64              |
| 2:D:256:ASN:HD22 | 1:E:268:GLN:HG3  | 1.63                     | 0.64              |
| 1:G:52:PHE:CE1   | 2:H:32:ALA:CB    | 2.79                     | 0.64              |
| 2:H:78:VAL:HG21  | 2:H:127:LEU:HD23 | 1.79                     | 0.64              |
| 1:I:263:THR:HG21 | 2:J:249:TYR:HE1  | 1.56                     | 0.64              |
| 1:M:102:VAL:HG13 | 1:M:188:SER:O    | 1.98                     | 0.64              |
| 1:S:269:ASN:HD21 | 2:T:257:ILE:HD12 | 1.60                     | 0.64              |
| 1:U:200:LYS:HA   | 2:V:195:ARG:HA   | 1.79                     | 0.64              |
| 1:A:214:VAL:HG22 | 2:B:208:LYS:HG2  | 1.78                     | 0.64              |
| 2:B:78:VAL:HG21  | 2:B:127:LEU:HD23 | 1.80                     | 0.64              |
| 2:D:146:VAL:O    | 2:D:150:VAL:HG23 | 1.98                     | 0.64              |
| 2:D:251:LEU:HD21 | 1:E:264:ILE:CG2  | 2.27                     | 0.64              |
| 1:E:248:TYR:HA   | 1:E:251:LEU:HB2  | 1.78                     | 0.64              |
| 1:G:47:HIS:HA    | 1:G:81:TYR:O     | 1.96                     | 0.64              |
| 2:H:266:VAL:O    | 2:J:265:SER:HB2  | 1.96                     | 0.64              |
| 1:I:102:VAL:HG13 | 1:I:188:SER:O    | 1.97                     | 0.64              |
| 1:I:252:ARG:HG2  | 2:J:238:LEU:CD1  | 2.28                     | 0.64              |
| 2:L:189:ALA:HB3  | 1:M:212:PHE:CG   | 2.31                     | 0.64              |
| 1:M:52:PHE:CE1   | 2:N:32:ALA:HB2   | 2.33                     | 0.64              |
| 2:R:233:ASP:HB2  | 1:S:296:LYS:HG2  | 1.78                     | 0.64              |
| 1:U:112:PRO:HA   | 1:U:177:LEU:HD23 | 1.80                     | 0.64              |
| 2:V:146:VAL:O    | 2:V:150:VAL:HG23 | 1.98                     | 0.64              |
| 2:V:229:ALA:HB1  | 1:W:244:LYS:HB3  | 1.77                     | 0.64              |
| 2:V:236:ILE:HG12 | 1:W:247:GLY:HA2  | 1.79                     | 0.64              |
| 1:A:101:MET:HE3  | 2:B:180:THR:HG23 | 1.79                     | 0.64              |
| 1:A:280:LEU:HD13 | 1:W:273:LEU:HD21 | 1.78                     | 0.64              |
| 2:B:211:ILE:CG2  | 1:C:233:GLU:OE2  | 2.46                     | 0.64              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:102:VAL:HG13 | 1:C:188:SER:O    | 1.97                     | 0.64              |
| 2:D:250:GLN:C    | 1:E:265:ALA:HB2  | 2.23                     | 0.64              |
| 2:P:44:GLY:N     | 1:Q:66:GLU:HG2   | 2.12                     | 0.64              |
| 2:R:259:TYR:CE1  | 1:S:276:ASP:CA   | 2.74                     | 0.64              |
| 1:S:104:ILE:HD12 | 1:S:145:VAL:CG2  | 2.28                     | 0.64              |
| 2:T:43:ARG:CA    | 1:U:66:GLU:HB3   | 2.28                     | 0.64              |
| 1:U:246:PRO:HB3  | 1:W:294:LEU:HG   | 1.79                     | 0.64              |
| 1:A:221:GLN:OE1  | 1:A:224:LYS:HB2  | 1.98                     | 0.64              |
| 2:D:35:ARG:HB2   | 2:D:103:LEU:HD11 | 1.80                     | 0.64              |
| 1:G:249:ILE:HD13 | 1:I:294:LEU:CD2  | 2.26                     | 0.64              |
| 2:J:208:LYS:HA   | 2:J:211:ILE:HD12 | 1.80                     | 0.64              |
| 2:J:259:TYR:OH   | 1:K:278:LEU:HB2  | 1.98                     | 0.64              |
| 1:K:102:VAL:HG13 | 1:K:188:SER:O    | 1.97                     | 0.64              |
| 2:L:78:VAL:HG21  | 2:L:127:LEU:HD23 | 1.80                     | 0.64              |
| 1:M:168:LEU:HD23 | 1:M:182:VAL:CG1  | 2.27                     | 0.64              |
| 2:N:35:ARG:HB2   | 2:N:103:LEU:HD11 | 1.80                     | 0.64              |
| 2:N:146:VAL:O    | 2:N:150:VAL:HG23 | 1.98                     | 0.64              |
| 1:Q:252:ARG:O    | 2:R:245:GLU:CD   | 2.39                     | 0.64              |
| 2:X:146:VAL:O    | 2:X:150:VAL:HG23 | 1.98                     | 0.64              |
| 2:D:250:GLN:CB   | 1:E:265:ALA:CB   | 2.75                     | 0.64              |
| 1:E:112:PRO:HA   | 1:E:177:LEU:HD23 | 1.80                     | 0.64              |
| 1:E:168:LEU:HD23 | 1:E:182:VAL:CG1  | 2.27                     | 0.64              |
| 2:F:146:VAL:O    | 2:F:150:VAL:HG23 | 1.98                     | 0.64              |
| 1:G:221:GLN:OE1  | 1:G:224:LYS:HB2  | 1.98                     | 0.64              |
| 1:I:221:GLN:OE1  | 1:I:224:LYS:HB2  | 1.98                     | 0.64              |
| 2:L:204:GLU:HG2  | 1:M:226:VAL:HG21 | 1.79                     | 0.64              |
| 1:M:175:PHE:HZ   | 2:N:167:ASP:HB3  | 1.63                     | 0.64              |
| 1:S:260:ILE:CG2  | 2:T:248:ALA:HB1  | 2.17                     | 0.64              |
| 2:T:78:VAL:HG21  | 2:T:127:LEU:HD23 | 1.80                     | 0.64              |
| 1:W:62:THR:HG22  | 1:W:64:LEU:HD21  | 1.80                     | 0.64              |
| 1:C:62:THR:HG22  | 1:C:64:LEU:HD21  | 1.80                     | 0.64              |
| 2:D:225:ALA:HA   | 1:E:248:TYR:CB   | 2.27                     | 0.64              |
| 2:F:35:ARG:HB2   | 2:F:103:LEU:HD11 | 1.80                     | 0.64              |
| 1:G:104:ILE:HD12 | 1:G:145:VAL:CG2  | 2.28                     | 0.64              |
| 1:I:104:ILE:HD12 | 1:I:145:VAL:CG2  | 2.28                     | 0.64              |
| 1:M:221:GLN:OE1  | 1:M:224:LYS:HB2  | 1.98                     | 0.64              |
| 1:Q:112:PRO:HA   | 1:Q:177:LEU:HD23 | 1.80                     | 0.64              |
| 2:T:35:ARG:HB2   | 2:T:103:LEU:HD11 | 1.80                     | 0.64              |
| 2:T:146:VAL:O    | 2:T:150:VAL:HG23 | 1.98                     | 0.64              |
| 1:U:168:LEU:HD23 | 1:U:182:VAL:CG1  | 2.27                     | 0.64              |
| 1:W:102:VAL:HG13 | 1:W:188:SER:O    | 1.97                     | 0.64              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:B:208:LYS:HA   | 2:B:211:ILE:HD12 | 1.80                     | 0.64              |
| 2:B:221:ALA:HA   | 1:C:248:TYR:HB2  | 1.80                     | 0.64              |
| 1:C:248:TYR:HA   | 1:C:251:LEU:HB2  | 1.78                     | 0.64              |
| 2:D:260:LEU:HD13 | 1:E:272:TYR:CE2  | 2.31                     | 0.64              |
| 1:G:102:VAL:HG13 | 1:G:188:SER:O    | 1.97                     | 0.64              |
| 1:I:62:THR:HG22  | 1:I:64:LEU:HD21  | 1.80                     | 0.64              |
| 1:K:221:GLN:OE1  | 1:K:224:LYS:HB2  | 1.98                     | 0.64              |
| 1:M:104:ILE:HG23 | 1:M:184:ILE:HG23 | 1.80                     | 0.64              |
| 2:N:221:ALA:HB2  | 1:O:248:TYR:CD2  | 2.32                     | 0.64              |
| 1:O:221:GLN:OE1  | 1:O:224:LYS:HB2  | 1.98                     | 0.64              |
| 2:P:43:ARG:C     | 1:Q:65:ALA:C     | 2.66                     | 0.64              |
| 1:U:250:LYS:HE3  | 1:W:291:SER:CB   | 2.28                     | 0.64              |
| 1:W:104:ILE:HD12 | 1:W:145:VAL:CG2  | 2.28                     | 0.64              |
| 2:X:35:ARG:HB2   | 2:X:103:LEU:HD11 | 1.80                     | 0.64              |
| 1:C:221:GLN:OE1  | 1:C:224:LYS:HB2  | 1.98                     | 0.63              |
| 1:C:253:LYS:HB3  | 1:E:279:VAL:HG21 | 1.81                     | 0.63              |
| 1:G:168:LEU:HD23 | 1:G:182:VAL:CG1  | 2.27                     | 0.63              |
| 1:M:58:VAL:HG23  | 2:N:32:ALA:HB1   | 1.79                     | 0.63              |
| 2:P:41:ARG:HH21  | 1:Q:44:GLU:CD    | 2.06                     | 0.63              |
| 2:P:157:ARG:HH21 | 1:Q:165:ARG:CZ   | 2.11                     | 0.63              |
| 1:Q:102:VAL:HG13 | 1:Q:188:SER:O    | 1.97                     | 0.63              |
| 2:R:208:LYS:HA   | 2:R:211:ILE:HD12 | 1.80                     | 0.63              |
| 2:T:84:ASP:O     | 1:U:201:GLN:HG3  | 1.97                     | 0.63              |
| 2:V:208:LYS:HA   | 2:V:211:ILE:HD12 | 1.80                     | 0.63              |
| 1:A:104:ILE:HG23 | 1:A:184:ILE:HG23 | 1.80                     | 0.63              |
| 1:C:104:ILE:HD12 | 1:C:145:VAL:CG2  | 2.28                     | 0.63              |
| 2:D:182:ALA:CB   | 1:E:205:GLN:HB3  | 2.23                     | 0.63              |
| 1:E:221:GLN:OE1  | 1:E:224:LYS:HB2  | 1.98                     | 0.63              |
| 2:H:146:VAL:O    | 2:H:150:VAL:HG23 | 1.98                     | 0.63              |
| 2:H:208:LYS:HA   | 2:H:211:ILE:HD12 | 1.80                     | 0.63              |
| 1:K:248:TYR:HA   | 1:K:251:LEU:HB2  | 1.78                     | 0.63              |
| 2:P:43:ARG:CG    | 1:Q:66:GLU:O     | 2.41                     | 0.63              |
| 2:P:108:THR:CB   | 1:Q:111:ARG:HD3  | 2.29                     | 0.63              |
| 1:Q:104:ILE:HD12 | 1:Q:145:VAL:CG2  | 2.28                     | 0.63              |
| 2:R:267:LEU:CG   | 2:T:267:LEU:HD13 | 2.28                     | 0.63              |
| 1:U:62:THR:HG22  | 1:U:64:LEU:HD21  | 1.80                     | 0.63              |
| 1:W:168:LEU:HD23 | 1:W:182:VAL:CG1  | 2.27                     | 0.63              |
| 1:A:291:SER:HB3  | 1:W:253:LYS:HE2  | 1.80                     | 0.63              |
| 2:B:146:VAL:O    | 2:B:150:VAL:HG23 | 1.98                     | 0.63              |
| 2:D:78:VAL:HG21  | 2:D:127:LEU:HD23 | 1.79                     | 0.63              |
| 1:K:104:ILE:HD12 | 1:K:145:VAL:CG2  | 2.28                     | 0.63              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:112:PRO:HA   | 1:K:177:LEU:HD23 | 1.80                     | 0.63              |
| 1:M:112:PRO:HA   | 1:M:177:LEU:HD23 | 1.80                     | 0.63              |
| 1:M:225:ILE:O    | 1:M:229:GLU:OE1  | 2.17                     | 0.63              |
| 2:P:86:GLN:HE22  | 1:Q:202:VAL:HG23 | 1.63                     | 0.63              |
| 2:R:146:VAL:O    | 2:R:150:VAL:HG23 | 1.98                     | 0.63              |
| 1:S:112:PRO:HA   | 1:S:177:LEU:HD23 | 1.80                     | 0.63              |
| 1:S:221:GLN:OE1  | 1:S:224:LYS:HB2  | 1.98                     | 0.63              |
| 1:U:104:ILE:HD12 | 1:U:145:VAL:CG2  | 2.28                     | 0.63              |
| 2:F:218:SER:OG   | 1:G:237:MET:HE1  | 1.99                     | 0.63              |
| 2:J:42:PHE:CD1   | 1:K:68:LEU:CD1   | 2.81                     | 0.63              |
| 1:Q:253:LYS:HZ2  | 2:R:241:LEU:HD13 | 1.63                     | 0.63              |
| 1:W:221:GLN:OE1  | 1:W:224:LYS:HB2  | 1.98                     | 0.63              |
| 1:A:104:ILE:HD12 | 1:A:145:VAL:CG2  | 2.28                     | 0.63              |
| 2:B:185:ALA:HB1  | 1:C:212:PHE:CZ   | 2.34                     | 0.63              |
| 1:I:104:ILE:HG23 | 1:I:184:ILE:HG23 | 1.80                     | 0.63              |
| 2:J:35:ARG:HB2   | 2:J:103:LEU:HD11 | 1.80                     | 0.63              |
| 1:K:62:THR:HG22  | 1:K:64:LEU:HD21  | 1.80                     | 0.63              |
| 1:K:244:LYS:O    | 1:M:295:ILE:HD13 | 1.98                     | 0.63              |
| 2:R:268:LEU:CB   | 2:T:267:LEU:O    | 2.46                     | 0.63              |
| 1:U:204:GLN:N    | 2:V:198:PHE:HB3  | 2.14                     | 0.63              |
| 1:U:221:GLN:OE1  | 1:U:224:LYS:HB2  | 1.98                     | 0.63              |
| 2:V:247:ILE:HG12 | 1:W:257:ALA:CB   | 2.24                     | 0.63              |
| 1:W:112:PRO:HA   | 1:W:177:LEU:HD23 | 1.80                     | 0.63              |
| 1:A:200:LYS:CA   | 2:B:195:ARG:HA   | 2.29                     | 0.63              |
| 2:B:95:LEU:HD12  | 2:B:167:ASP:O    | 1.99                     | 0.63              |
| 1:C:272:TYR:HB2  | 2:D:259:TYR:O    | 1.98                     | 0.63              |
| 2:D:95:LEU:HD12  | 2:D:167:ASP:O    | 1.99                     | 0.63              |
| 2:D:208:LYS:HA   | 2:D:211:ILE:HD12 | 1.80                     | 0.63              |
| 2:D:236:ILE:CG1  | 1:E:251:LEU:CD2  | 2.77                     | 0.63              |
| 2:H:95:LEU:HD12  | 2:H:167:ASP:O    | 1.99                     | 0.63              |
| 2:L:35:ARG:HB2   | 2:L:103:LEU:HD11 | 1.80                     | 0.63              |
| 1:M:104:ILE:HD12 | 1:M:145:VAL:CG2  | 2.28                     | 0.63              |
| 1:O:104:ILE:HG23 | 1:O:184:ILE:HG23 | 1.80                     | 0.63              |
| 1:S:104:ILE:HG23 | 1:S:184:ILE:HG23 | 1.80                     | 0.63              |
| 1:A:62:THR:HG22  | 1:A:64:LEU:HD21  | 1.80                     | 0.63              |
| 1:A:225:ILE:O    | 1:A:229:GLU:OE1  | 2.17                     | 0.63              |
| 1:A:294:LEU:CG   | 1:W:249:ILE:HG21 | 2.27                     | 0.63              |
| 2:B:229:ALA:HA   | 1:C:245:ASN:HD22 | 1.63                     | 0.63              |
| 1:E:104:ILE:HD12 | 1:E:145:VAL:CG2  | 2.28                     | 0.63              |
| 2:F:78:VAL:HG21  | 2:F:127:LEU:HD23 | 1.80                     | 0.63              |
| 1:K:104:ILE:HG23 | 1:K:184:ILE:HG23 | 1.80                     | 0.63              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:102:VAL:HG13 | 1:O:188:SER:O    | 1.97                     | 0.63              |
| 2:P:43:ARG:O     | 1:Q:66:GLU:HG3   | 1.99                     | 0.63              |
| 2:P:108:THR:OG1  | 1:Q:111:ARG:HD3  | 1.98                     | 0.63              |
| 2:P:146:VAL:O    | 2:P:150:VAL:HG23 | 1.98                     | 0.63              |
| 2:X:208:LYS:HA   | 2:X:211:ILE:HD12 | 1.80                     | 0.63              |
| 1:A:112:PRO:HA   | 1:A:177:LEU:HD23 | 1.80                     | 0.63              |
| 1:E:102:VAL:HG13 | 1:E:188:SER:O    | 1.97                     | 0.63              |
| 1:I:225:ILE:O    | 1:I:229:GLU:OE1  | 2.17                     | 0.63              |
| 1:M:123:ARG:O    | 2:N:71:SER:CB    | 2.46                     | 0.63              |
| 1:M:131:ARG:NH1  | 2:N:70:ARG:HD3   | 2.14                     | 0.63              |
| 2:N:267:LEU:HG   | 2:P:267:LEU:HB3  | 1.79                     | 0.63              |
| 1:O:225:ILE:O    | 1:O:229:GLU:OE1  | 2.17                     | 0.63              |
| 2:P:41:ARG:CB    | 1:Q:43:VAL:CG1   | 2.71                     | 0.63              |
| 2:R:200:VAL:HG13 | 1:S:226:VAL:CG1  | 2.29                     | 0.63              |
| 1:S:102:VAL:HG13 | 1:S:188:SER:O    | 1.98                     | 0.63              |
| 1:S:225:ILE:O    | 1:S:229:GLU:OE1  | 2.17                     | 0.63              |
| 1:S:270:ARG:O    | 2:T:258:THR:OG1  | 2.17                     | 0.63              |
| 1:A:221:GLN:HG2  | 2:B:215:GLU:HB3  | 1.81                     | 0.63              |
| 2:H:35:ARG:HB2   | 2:H:103:LEU:HD11 | 1.80                     | 0.63              |
| 1:K:225:ILE:O    | 1:K:229:GLU:OE1  | 2.17                     | 0.63              |
| 2:P:35:ARG:HB2   | 2:P:103:LEU:HD11 | 1.80                     | 0.63              |
| 1:S:269:ASN:HD21 | 2:T:257:ILE:CD1  | 2.11                     | 0.63              |
| 1:S:274:THR:HG22 | 2:T:260:LEU:CA   | 2.29                     | 0.63              |
| 1:U:246:PRO:CB   | 1:W:294:LEU:HG   | 2.29                     | 0.63              |
| 2:D:239:ARG:HE   | 1:E:258:GLN:NE2  | 1.97                     | 0.62              |
| 1:G:104:ILE:HG23 | 1:G:184:ILE:HG23 | 1.80                     | 0.62              |
| 2:J:146:VAL:O    | 2:J:150:VAL:HG23 | 1.98                     | 0.62              |
| 2:L:146:VAL:O    | 2:L:150:VAL:HG23 | 1.98                     | 0.62              |
| 2:N:95:LEU:HD12  | 2:N:167:ASP:O    | 1.99                     | 0.62              |
| 2:P:161:PHE:CD1  | 1:Q:181:ASP:HB2  | 2.34                     | 0.62              |
| 2:P:259:TYR:CE1  | 1:Q:278:LEU:CB   | 2.81                     | 0.62              |
| 1:Q:104:ILE:HG23 | 1:Q:184:ILE:HG23 | 1.80                     | 0.62              |
| 2:R:78:VAL:HG21  | 2:R:127:LEU:HD23 | 1.79                     | 0.62              |
| 2:T:208:LYS:HA   | 2:T:211:ILE:HD12 | 1.80                     | 0.62              |
| 1:U:104:ILE:HG23 | 1:U:184:ILE:HG23 | 1.80                     | 0.62              |
| 2:X:95:LEU:HD12  | 2:X:167:ASP:O    | 1.99                     | 0.62              |
| 2:D:268:LEU:HD21 | 1:E:272:TYR:HD2  | 1.62                     | 0.62              |
| 1:K:214:VAL:HG22 | 2:L:208:LYS:HG2  | 1.82                     | 0.62              |
| 2:L:90:ILE:HB    | 2:L:127:LEU:HD21 | 1.82                     | 0.62              |
| 2:B:90:ILE:HB    | 2:B:127:LEU:HD21 | 1.81                     | 0.62              |
| 1:C:104:ILE:HG23 | 1:C:184:ILE:HG23 | 1.80                     | 0.62              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:F:90:ILE:HB    | 2:F:127:LEU:HD21 | 1.82                     | 0.62              |
| 2:F:95:LEU:HD12  | 2:F:167:ASP:O    | 1.99                     | 0.62              |
| 2:F:259:TYR:HE1  | 1:G:278:LEU:H    | 1.46                     | 0.62              |
| 2:L:208:LYS:HA   | 2:L:211:ILE:HD12 | 1.80                     | 0.62              |
| 1:O:104:ILE:HD12 | 1:O:145:VAL:CG2  | 2.28                     | 0.62              |
| 2:P:208:LYS:HA   | 2:P:211:ILE:HD12 | 1.80                     | 0.62              |
| 2:T:43:ARG:O     | 1:U:66:GLU:CD    | 2.41                     | 0.62              |
| 1:W:225:ILE:O    | 1:W:229:GLU:OE1  | 2.17                     | 0.62              |
| 2:D:247:ILE:HD11 | 1:E:257:ALA:O    | 1.99                     | 0.62              |
| 2:D:267:LEU:HD21 | 2:F:269:GLN:CD   | 2.24                     | 0.62              |
| 1:E:104:ILE:HG23 | 1:E:184:ILE:HG23 | 1.80                     | 0.62              |
| 2:F:268:LEU:CD1  | 2:H:261:PRO:CG   | 2.77                     | 0.62              |
| 1:I:112:PRO:HA   | 1:I:177:LEU:HD23 | 1.80                     | 0.62              |
| 1:O:62:THR:HG22  | 1:O:64:LEU:HD21  | 1.80                     | 0.62              |
| 2:R:35:ARG:HB2   | 2:R:103:LEU:HD11 | 1.80                     | 0.62              |
| 2:T:90:ILE:HB    | 2:T:127:LEU:HD21 | 1.81                     | 0.62              |
| 1:U:210:ALA:HB3  | 2:V:205:GLN:HB2  | 1.81                     | 0.62              |
| 1:A:253:LYS:HE2  | 1:C:287:PHE:CZ   | 2.35                     | 0.62              |
| 1:C:253:LYS:CD   | 1:E:279:VAL:HG13 | 2.30                     | 0.62              |
| 2:F:208:LYS:HA   | 2:F:211:ILE:HD12 | 1.80                     | 0.62              |
| 1:G:225:ILE:O    | 1:G:229:GLU:OE1  | 2.17                     | 0.62              |
| 1:I:270:ARG:O    | 2:J:259:TYR:HB3  | 2.00                     | 0.62              |
| 2:L:95:LEU:HD12  | 2:L:167:ASP:O    | 1.99                     | 0.62              |
| 2:N:78:VAL:HG21  | 2:N:127:LEU:HD23 | 1.79                     | 0.62              |
| 2:P:43:ARG:HB2   | 1:Q:67:GLY:N     | 1.93                     | 0.62              |
| 2:P:95:LEU:HD12  | 2:P:167:ASP:O    | 1.99                     | 0.62              |
| 1:Q:221:GLN:OE1  | 1:Q:224:LYS:HB2  | 1.98                     | 0.62              |
| 1:S:253:LYS:HB3  | 1:U:279:VAL:CG1  | 2.29                     | 0.62              |
| 1:U:50:ILE:HA    | 1:U:64:LEU:HD12  | 1.82                     | 0.62              |
| 2:V:90:ILE:HB    | 2:V:127:LEU:HD21 | 1.81                     | 0.62              |
| 1:W:104:ILE:HG23 | 1:W:184:ILE:HG23 | 1.80                     | 0.62              |
| 2:X:90:ILE:HB    | 2:X:127:LEU:HD21 | 1.82                     | 0.62              |
| 1:C:142:LYS:NZ   | 2:D:140:ILE:HG21 | 2.14                     | 0.62              |
| 1:C:268:GLN:HB3  | 2:D:255:ARG:O    | 2.00                     | 0.62              |
| 1:E:225:ILE:O    | 1:E:229:GLU:OE1  | 2.17                     | 0.62              |
| 1:G:62:THR:HG22  | 1:G:64:LEU:HD21  | 1.80                     | 0.62              |
| 2:H:57:LEU:HD13  | 2:H:62:GLN:O     | 2.00                     | 0.62              |
| 2:J:95:LEU:HD12  | 2:J:167:ASP:O    | 1.99                     | 0.62              |
| 1:K:245:ASN:OD1  | 1:M:295:ILE:HD11 | 1.98                     | 0.62              |
| 1:M:99:LEU:CB    | 2:N:180:THR:HG23 | 2.30                     | 0.62              |
| 1:M:99:LEU:HD22  | 2:N:175:PHE:CE2  | 2.34                     | 0.62              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:P:125:GLU:HG2  | 1:Q:158:ALA:HA   | 1.80                     | 0.62              |
| 2:P:185:ALA:CB   | 1:Q:212:PHE:HZ   | 2.12                     | 0.62              |
| 2:T:95:LEU:HD12  | 2:T:167:ASP:O    | 1.99                     | 0.62              |
| 2:V:95:LEU:HD12  | 2:V:167:ASP:O    | 1.99                     | 0.62              |
| 1:A:67:GLY:C     | 2:X:43:ARG:NE    | 2.58                     | 0.62              |
| 2:D:236:ILE:CG1  | 1:E:251:LEU:HD22 | 2.30                     | 0.62              |
| 2:H:258:THR:HB   | 1:I:272:TYR:CD2  | 2.35                     | 0.62              |
| 1:I:50:ILE:HA    | 1:I:64:LEU:HD12  | 1.82                     | 0.62              |
| 1:M:62:THR:HG22  | 1:M:64:LEU:HD21  | 1.80                     | 0.62              |
| 2:N:208:LYS:HA   | 2:N:211:ILE:HD12 | 1.80                     | 0.62              |
| 2:N:243:ALA:O    | 2:N:244:ALA:C    | 2.43                     | 0.62              |
| 2:N:267:LEU:CD1  | 2:P:267:LEU:HD22 | 2.24                     | 0.62              |
| 2:P:129:SER:CB   | 1:Q:158:ALA:HB2  | 2.29                     | 0.62              |
| 1:Q:62:THR:HG22  | 1:Q:64:LEU:HD21  | 1.80                     | 0.62              |
| 2:R:95:LEU:HD12  | 2:R:167:ASP:O    | 1.99                     | 0.62              |
| 2:V:78:VAL:HG21  | 2:V:127:LEU:HD23 | 1.79                     | 0.62              |
| 1:W:50:ILE:HA    | 1:W:64:LEU:HD12  | 1.82                     | 0.62              |
| 1:A:50:ILE:HA    | 1:A:64:LEU:HD12  | 1.82                     | 0.62              |
| 1:C:225:ILE:O    | 1:C:229:GLU:OE1  | 2.17                     | 0.62              |
| 1:G:112:PRO:HA   | 1:G:177:LEU:HD23 | 1.80                     | 0.62              |
| 2:J:43:ARG:CA    | 1:K:68:LEU:N     | 2.63                     | 0.62              |
| 1:K:50:ILE:HA    | 1:K:64:LEU:HD12  | 1.82                     | 0.62              |
| 2:P:40:ASP:C     | 1:Q:45:GLY:CA    | 2.73                     | 0.62              |
| 2:P:243:ALA:O    | 2:P:244:ALA:C    | 2.43                     | 0.62              |
| 1:Q:225:ILE:O    | 1:Q:229:GLU:OE1  | 2.17                     | 0.62              |
| 2:R:243:ALA:O    | 2:R:244:ALA:C    | 2.43                     | 0.62              |
| 1:S:62:THR:HG22  | 1:S:64:LEU:HD21  | 1.80                     | 0.62              |
| 2:V:57:LEU:HD13  | 2:V:62:GLN:O     | 2.00                     | 0.62              |
| 2:V:257:ILE:HA   | 1:W:271:ILE:C    | 2.24                     | 0.62              |
| 1:C:100:GLN:HA   | 2:D:184:GLU:CG   | 2.29                     | 0.62              |
| 2:D:228:LEU:CD1  | 1:E:251:LEU:CD2  | 2.73                     | 0.62              |
| 2:F:57:LEU:HD13  | 2:F:62:GLN:O     | 2.00                     | 0.62              |
| 1:M:121:TYR:HE2  | 2:N:32:ALA:HB3   | 1.59                     | 0.62              |
| 1:Q:245:ASN:OD1  | 1:S:295:ILE:HD11 | 1.98                     | 0.62              |
| 1:S:242:LEU:CD1  | 2:T:238:LEU:HD22 | 2.29                     | 0.62              |
| 1:C:50:ILE:HA    | 1:C:64:LEU:HD12  | 1.82                     | 0.62              |
| 2:F:38:ILE:HD12  | 2:F:50:VAL:HG21  | 1.82                     | 0.62              |
| 2:F:243:ALA:O    | 2:F:244:ALA:C    | 2.43                     | 0.62              |
| 2:J:243:ALA:O    | 2:J:244:ALA:C    | 2.43                     | 0.62              |
| 2:R:38:ILE:HD12  | 2:R:50:VAL:HG21  | 1.82                     | 0.62              |
| 1:S:260:ILE:HD13 | 2:T:248:ALA:HB3  | 1.82                     | 0.62              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:T:243:ALA:O    | 2:T:244:ALA:C    | 2.43                     | 0.62              |
| 1:W:124:LEU:HD13 | 1:W:128:TYR:HB2  | 1.82                     | 0.62              |
| 1:A:261:SER:HB3  | 1:A:264:ILE:HD12 | 1.82                     | 0.61              |
| 2:D:38:ILE:HD12  | 2:D:50:VAL:HG21  | 1.82                     | 0.61              |
| 1:E:62:THR:HG22  | 1:E:64:LEU:HD21  | 1.80                     | 0.61              |
| 2:L:38:ILE:HD12  | 2:L:50:VAL:HG21  | 1.82                     | 0.61              |
| 1:M:50:ILE:HA    | 1:M:64:LEU:HD12  | 1.82                     | 0.61              |
| 1:W:261:SER:HB3  | 1:W:264:ILE:HD12 | 1.82                     | 0.61              |
| 1:A:282:LEU:HB2  | 1:W:277:ASN:HD22 | 1.65                     | 0.61              |
| 2:B:35:ARG:HB2   | 2:B:103:LEU:HD11 | 1.80                     | 0.61              |
| 2:B:57:LEU:HD13  | 2:B:62:GLN:O     | 2.00                     | 0.61              |
| 1:G:50:ILE:HA    | 1:G:64:LEU:HD12  | 1.82                     | 0.61              |
| 2:J:260:LEU:HD22 | 2:J:268:LEU:CD2  | 2.31                     | 0.61              |
| 1:O:261:SER:HB3  | 1:O:264:ILE:HD12 | 1.82                     | 0.61              |
| 2:P:41:ARG:CB    | 1:Q:43:VAL:CA    | 2.75                     | 0.61              |
| 1:S:253:LYS:HG2  | 2:T:241:LEU:HD13 | 1.76                     | 0.61              |
| 1:U:124:LEU:HD13 | 1:U:128:TYR:HB2  | 1.82                     | 0.61              |
| 2:D:243:ALA:O    | 2:D:244:ALA:C    | 2.43                     | 0.61              |
| 1:K:221:GLN:HG2  | 2:L:215:GLU:HB3  | 1.82                     | 0.61              |
| 2:P:108:THR:C    | 1:Q:111:ARG:HD3  | 2.25                     | 0.61              |
| 2:P:129:SER:HB2  | 1:Q:158:ALA:CB   | 2.29                     | 0.61              |
| 1:Q:124:LEU:HD13 | 1:Q:128:TYR:HB2  | 1.82                     | 0.61              |
| 2:T:38:ILE:HD12  | 2:T:50:VAL:HG21  | 1.82                     | 0.61              |
| 2:T:57:LEU:HD13  | 2:T:62:GLN:O     | 2.00                     | 0.61              |
| 2:V:35:ARG:HB2   | 2:V:103:LEU:HD11 | 1.80                     | 0.61              |
| 2:X:243:ALA:O    | 2:X:244:ALA:C    | 2.43                     | 0.61              |
| 1:A:84:ARG:HB3   | 2:X:108:THR:O    | 1.99                     | 0.61              |
| 2:B:267:LEU:HG   | 2:D:267:LEU:CB   | 2.30                     | 0.61              |
| 1:C:131:ARG:O    | 2:D:95:LEU:HD13  | 2.00                     | 0.61              |
| 1:C:261:SER:HB3  | 1:C:264:ILE:HD12 | 1.83                     | 0.61              |
| 1:E:50:ILE:HA    | 1:E:64:LEU:HD12  | 1.82                     | 0.61              |
| 1:K:124:LEU:HD13 | 1:K:128:TYR:HB2  | 1.82                     | 0.61              |
| 1:M:130:GLU:O    | 2:N:73:PRO:HB3   | 2.00                     | 0.61              |
| 2:N:260:LEU:HD22 | 2:N:268:LEU:CD2  | 2.31                     | 0.61              |
| 2:P:38:ILE:HD12  | 2:P:50:VAL:HG21  | 1.82                     | 0.61              |
| 2:R:57:LEU:HD13  | 2:R:62:GLN:O     | 2.00                     | 0.61              |
| 1:S:272:TYR:CD1  | 2:T:258:THR:CG2  | 2.82                     | 0.61              |
| 1:U:261:SER:HB3  | 1:U:264:ILE:HD12 | 1.82                     | 0.61              |
| 2:V:259:TYR:CD1  | 1:W:273:LEU:HB2  | 2.36                     | 0.61              |
| 2:V:259:TYR:CE1  | 1:W:274:THR:O    | 2.51                     | 0.61              |
| 2:B:86:GLN:O     | 2:B:88:VAL:HG23  | 2.01                     | 0.61              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:B:240:LYS:CE   | 1:E:282:LEU:HD13 | 2.31                     | 0.61              |
| 2:B:267:LEU:HD11 | 2:D:267:LEU:CD1  | 2.25                     | 0.61              |
| 2:D:90:ILE:HB    | 2:D:127:LEU:HD21 | 1.82                     | 0.61              |
| 1:G:124:LEU:HD13 | 1:G:128:TYR:HB2  | 1.82                     | 0.61              |
| 2:J:90:ILE:HB    | 2:J:127:LEU:HD21 | 1.81                     | 0.61              |
| 2:J:92:LEU:HD12  | 2:J:169:SER:C    | 2.26                     | 0.61              |
| 1:O:50:ILE:HA    | 1:O:64:LEU:HD12  | 1.82                     | 0.61              |
| 2:P:57:LEU:HD13  | 2:P:62:GLN:O     | 2.00                     | 0.61              |
| 1:S:50:ILE:HA    | 1:S:64:LEU:HD12  | 1.82                     | 0.61              |
| 2:T:260:LEU:HD22 | 2:T:268:LEU:CD2  | 2.30                     | 0.61              |
| 2:V:86:GLN:O     | 2:V:88:VAL:HG23  | 2.01                     | 0.61              |
| 2:V:259:TYR:CE2  | 1:W:274:THR:O    | 2.54                     | 0.61              |
| 1:C:124:LEU:HD13 | 1:C:128:TYR:HB2  | 1.82                     | 0.61              |
| 2:F:69:CYS:HA    | 2:F:98:PRO:HD2   | 1.83                     | 0.61              |
| 1:G:257:ALA:HA   | 1:I:279:VAL:HG11 | 1.82                     | 0.61              |
| 2:H:92:LEU:HD12  | 2:H:169:SER:C    | 2.26                     | 0.61              |
| 2:H:243:ALA:O    | 2:H:244:ALA:C    | 2.43                     | 0.61              |
| 1:I:257:ALA:HB2  | 1:K:279:VAL:HG11 | 1.82                     | 0.61              |
| 2:J:41:ARG:CG    | 1:K:43:VAL:HG12  | 2.29                     | 0.61              |
| 2:L:57:LEU:HD13  | 2:L:62:GLN:O     | 2.00                     | 0.61              |
| 2:N:86:GLN:O     | 2:N:88:VAL:HG23  | 2.01                     | 0.61              |
| 1:O:124:LEU:HD13 | 1:O:128:TYR:HB2  | 1.82                     | 0.61              |
| 2:P:90:ILE:HB    | 2:P:127:LEU:HD21 | 1.82                     | 0.61              |
| 2:R:251:LEU:HD12 | 1:S:278:LEU:HD23 | 1.83                     | 0.61              |
| 1:S:274:THR:HG22 | 2:T:261:PRO:HD3  | 1.83                     | 0.61              |
| 2:T:92:LEU:HD12  | 2:T:169:SER:C    | 2.26                     | 0.61              |
| 1:U:225:ILE:O    | 1:U:229:GLU:OE1  | 2.17                     | 0.61              |
| 2:V:92:LEU:HD12  | 2:V:169:SER:C    | 2.26                     | 0.61              |
| 2:D:224:ILE:CG2  | 1:E:248:TYR:HD1  | 2.14                     | 0.61              |
| 2:J:57:LEU:HD13  | 2:J:62:GLN:O     | 2.00                     | 0.61              |
| 2:L:92:LEU:HD12  | 2:L:169:SER:C    | 2.26                     | 0.61              |
| 2:P:132:ALA:HB2  | 1:Q:155:THR:HA   | 1.82                     | 0.61              |
| 2:V:268:LEU:HD12 | 2:X:261:PRO:CD   | 2.30                     | 0.61              |
| 2:X:57:LEU:HD13  | 2:X:62:GLN:O     | 2.00                     | 0.61              |
| 2:X:78:VAL:CG2   | 2:X:127:LEU:HD23 | 2.31                     | 0.61              |
| 2:X:260:LEU:HD22 | 2:X:268:LEU:CD2  | 2.30                     | 0.61              |
| 2:B:243:ALA:O    | 2:B:244:ALA:C    | 2.43                     | 0.61              |
| 2:D:92:LEU:HD12  | 2:D:169:SER:C    | 2.26                     | 0.61              |
| 1:I:124:LEU:HD13 | 1:I:128:TYR:HB2  | 1.82                     | 0.61              |
| 1:M:121:TYR:OH   | 2:N:70:ARG:NH2   | 2.34                     | 0.61              |
| 2:P:39:PHE:CA    | 1:Q:45:GLY:HA3   | 2.31                     | 0.61              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:P:109:SER:OG   | 1:Q:180:ASP:CG   | 2.43                     | 0.61              |
| 1:U:250:LYS:CE   | 1:W:291:SER:CB   | 2.78                     | 0.61              |
| 1:A:175:PHE:CZ   | 2:B:167:ASP:HB2  | 2.35                     | 0.61              |
| 1:A:283:GLN:CB   | 1:W:276:ASP:HB3  | 2.28                     | 0.61              |
| 2:D:235:LEU:HB3  | 1:E:251:LEU:HD11 | 1.82                     | 0.61              |
| 2:H:38:ILE:HD12  | 2:H:50:VAL:HG21  | 1.82                     | 0.61              |
| 2:H:78:VAL:CG2   | 2:H:127:LEU:HD23 | 2.31                     | 0.61              |
| 1:K:261:SER:HB3  | 1:K:264:ILE:HD12 | 1.82                     | 0.61              |
| 2:R:248:ALA:HB2  | 1:S:278:LEU:CD2  | 2.31                     | 0.61              |
| 2:T:78:VAL:CG2   | 2:T:127:LEU:HD23 | 2.31                     | 0.61              |
| 2:X:69:CYS:HA    | 2:X:98:PRO:HD2   | 1.83                     | 0.61              |
| 1:A:196:ALA:HB1  | 2:B:192:GLU:CA   | 2.30                     | 0.61              |
| 2:D:256:ASN:HB2  | 1:E:268:GLN:NE2  | 2.16                     | 0.61              |
| 2:L:260:LEU:HD22 | 2:L:268:LEU:CD2  | 2.30                     | 0.61              |
| 2:N:57:LEU:HD13  | 2:N:62:GLN:O     | 2.00                     | 0.61              |
| 2:N:92:LEU:HD12  | 2:N:169:SER:C    | 2.26                     | 0.61              |
| 1:Q:261:SER:HB3  | 1:Q:264:ILE:HD12 | 1.83                     | 0.61              |
| 1:U:257:ALA:HB2  | 1:W:279:VAL:CG1  | 2.12                     | 0.61              |
| 2:V:243:ALA:O    | 2:V:244:ALA:C    | 2.43                     | 0.61              |
| 2:V:258:THR:HB   | 1:W:272:TYR:HA   | 1.81                     | 0.61              |
| 2:X:86:GLN:O     | 2:X:88:VAL:HG23  | 2.01                     | 0.61              |
| 2:B:260:LEU:HD22 | 2:B:268:LEU:CD2  | 2.31                     | 0.60              |
| 1:C:101:MET:CE   | 2:D:180:THR:HG23 | 2.29                     | 0.60              |
| 2:D:260:LEU:HD22 | 2:D:268:LEU:CD2  | 2.31                     | 0.60              |
| 1:E:261:SER:HB3  | 1:E:264:ILE:HD12 | 1.82                     | 0.60              |
| 2:H:260:LEU:HD22 | 2:H:268:LEU:CD2  | 2.31                     | 0.60              |
| 1:I:261:SER:HB3  | 1:I:264:ILE:HD12 | 1.83                     | 0.60              |
| 1:M:123:ARG:HG3  | 2:N:166:ASP:OD2  | 2.00                     | 0.60              |
| 1:M:124:LEU:HD13 | 1:M:128:TYR:HB2  | 1.82                     | 0.60              |
| 1:M:139:GLU:CD   | 2:N:169:SER:HB2  | 2.26                     | 0.60              |
| 2:P:92:LEU:HD12  | 2:P:169:SER:C    | 2.26                     | 0.60              |
| 2:R:86:GLN:O     | 2:R:88:VAL:HG23  | 2.01                     | 0.60              |
| 2:R:259:TYR:CE2  | 1:S:280:LEU:O    | 2.53                     | 0.60              |
| 1:S:124:LEU:HD13 | 1:S:128:TYR:HB2  | 1.82                     | 0.60              |
| 2:V:78:VAL:CG2   | 2:V:127:LEU:HD23 | 2.31                     | 0.60              |
| 2:F:78:VAL:CG2   | 2:F:127:LEU:HD23 | 2.31                     | 0.60              |
| 1:I:232:ALA:CB   | 2:J:223:LEU:HB3  | 2.31                     | 0.60              |
| 2:L:86:GLN:O     | 2:L:88:VAL:HG23  | 2.01                     | 0.60              |
| 1:M:214:VAL:HG22 | 2:N:208:LYS:HG2  | 1.83                     | 0.60              |
| 2:N:78:VAL:CG2   | 2:N:127:LEU:HD23 | 2.31                     | 0.60              |
| 1:Q:50:ILE:HA    | 1:Q:64:LEU:HD12  | 1.82                     | 0.60              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:R:69:CYS:HA    | 2:R:98:PRO:HD2   | 1.83                     | 0.60              |
| 2:V:69:CYS:HA    | 2:V:98:PRO:HD2   | 1.83                     | 0.60              |
| 2:D:69:CYS:HA    | 2:D:98:PRO:HD2   | 1.83                     | 0.60              |
| 2:D:239:ARG:HE   | 1:E:258:GLN:CD   | 2.10                     | 0.60              |
| 2:D:243:ALA:HB1  | 1:E:258:GLN:HA   | 1.81                     | 0.60              |
| 2:R:78:VAL:CG2   | 2:R:127:LEU:HD23 | 2.31                     | 0.60              |
| 2:R:92:LEU:HD12  | 2:R:169:SER:C    | 2.26                     | 0.60              |
| 2:R:214:ALA:HB1  | 1:S:238:LEU:HD21 | 1.81                     | 0.60              |
| 2:R:240:LYS:O    | 2:R:241:LEU:HD23 | 2.02                     | 0.60              |
| 2:R:260:LEU:HD22 | 2:R:268:LEU:CD2  | 2.31                     | 0.60              |
| 2:T:69:CYS:HA    | 2:T:98:PRO:HD2   | 1.83                     | 0.60              |
| 2:V:251:LEU:HD22 | 1:W:271:ILE:HD12 | 1.82                     | 0.60              |
| 2:X:38:ILE:HD12  | 2:X:50:VAL:HG21  | 1.83                     | 0.60              |
| 1:A:124:LEU:HD13 | 1:A:128:TYR:HB2  | 1.82                     | 0.60              |
| 2:B:240:LYS:CD   | 1:E:282:LEU:HD13 | 2.31                     | 0.60              |
| 2:D:86:GLN:O     | 2:D:88:VAL:HG23  | 2.01                     | 0.60              |
| 1:E:124:LEU:HD13 | 1:E:128:TYR:HB2  | 1.82                     | 0.60              |
| 2:L:243:ALA:O    | 2:L:244:ALA:C    | 2.43                     | 0.60              |
| 1:M:135:SER:HB2  | 2:N:93:ARG:HD2   | 1.81                     | 0.60              |
| 1:Q:242:LEU:CD1  | 2:R:238:LEU:HD13 | 2.19                     | 0.60              |
| 2:R:90:ILE:HB    | 2:R:127:LEU:HD21 | 1.81                     | 0.60              |
| 2:V:260:LEU:HD22 | 2:V:268:LEU:CD2  | 2.31                     | 0.60              |
| 2:B:78:VAL:CG2   | 2:B:127:LEU:HD23 | 2.31                     | 0.60              |
| 1:G:261:SER:HB3  | 1:G:264:ILE:HD12 | 1.83                     | 0.60              |
| 2:J:43:ARG:HA    | 1:K:67:GLY:O     | 2.00                     | 0.60              |
| 2:N:69:CYS:HA    | 2:N:98:PRO:HD2   | 1.83                     | 0.60              |
| 2:P:43:ARG:CB    | 2:P:43:ARG:HG3   | 2.22                     | 0.60              |
| 2:P:78:VAL:CG2   | 2:P:127:LEU:HD23 | 2.31                     | 0.60              |
| 1:Q:253:LYS:CE   | 2:R:241:LEU:HD13 | 2.31                     | 0.60              |
| 2:R:215:GLU:HA   | 1:S:237:MET:HE1  | 1.83                     | 0.60              |
| 1:S:249:ILE:HG12 | 2:T:241:LEU:CD1  | 2.13                     | 0.60              |
| 2:B:240:LYS:O    | 2:B:241:LEU:HD23 | 2.02                     | 0.60              |
| 2:F:260:LEU:HD22 | 2:F:268:LEU:CD2  | 2.31                     | 0.60              |
| 2:F:270:LEU:HD11 | 2:H:260:LEU:CG   | 2.32                     | 0.60              |
| 2:J:78:VAL:CG2   | 2:J:127:LEU:HD23 | 2.31                     | 0.60              |
| 2:L:69:CYS:HA    | 2:L:98:PRO:HD2   | 1.83                     | 0.60              |
| 2:L:78:VAL:CG2   | 2:L:127:LEU:HD23 | 2.31                     | 0.60              |
| 2:N:90:ILE:HB    | 2:N:127:LEU:HD21 | 1.82                     | 0.60              |
| 1:O:253:LYS:HG2  | 2:P:241:LEU:HD13 | 1.84                     | 0.60              |
| 2:P:260:LEU:HD22 | 2:P:268:LEU:CD2  | 2.31                     | 0.60              |
| 2:P:262:ALA:HB3  | 1:Q:275:ALA:HB1  | 1.83                     | 0.60              |

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| Atom-1          | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|-----------------|------------------|--------------------------|-------------------|
| 2:B:92:LEU:HD12 | 2:B:169:SER:C    | 2.26                     | 0.60              |
| 2:B:211:ILE:CD1 | 1:C:233:GLU:OE2  | 2.50                     | 0.60              |
| 2:B:270:LEU:CD1 | 2:D:269:GLN:O    | 2.49                     | 0.60              |
| 2:D:57:LEU:HD13 | 2:D:62:GLN:O     | 2.00                     | 0.60              |
| 2:D:78:VAL:CG2  | 2:D:127:LEU:HD23 | 2.31                     | 0.60              |
| 2:F:86:GLN:O    | 2:F:88:VAL:HG23  | 2.01                     | 0.60              |
| 2:F:92:LEU:HD12 | 2:F:169:SER:C    | 2.26                     | 0.60              |
| 2:F:240:LYS:O   | 2:F:241:LEU:HD23 | 2.02                     | 0.60              |
| 1:K:225:ILE:HA  | 2:L:219:LYS:CD   | 2.31                     | 0.60              |
| 2:P:41:ARG:CA   | 1:Q:43:VAL:CG1   | 2.78                     | 0.60              |
| 2:P:86:GLN:O    | 2:P:88:VAL:HG23  | 2.01                     | 0.60              |
| 2:P:259:TYR:HH  | 1:Q:278:LEU:C    | 2.09                     | 0.60              |
| 2:T:86:GLN:O    | 2:T:88:VAL:HG23  | 2.01                     | 0.60              |
| 2:V:240:LYS:O   | 2:V:241:LEU:HD23 | 2.02                     | 0.60              |
| 2:V:257:ILE:C   | 1:W:271:ILE:O    | 2.45                     | 0.60              |
| 2:H:43:ARG:HD2  | 1:I:68:LEU:CD2   | 2.29                     | 0.60              |
| 2:H:86:GLN:O    | 2:H:88:VAL:HG23  | 2.01                     | 0.60              |
| 1:I:47:HIS:ND1  | 1:I:80:ILE:HG22  | 2.17                     | 0.60              |
| 2:J:237:GLU:OE1 | 1:M:283:GLN:NE2  | 2.35                     | 0.60              |
| 2:J:240:LYS:NZ  | 1:M:283:GLN:HG2  | 2.16                     | 0.60              |
| 2:L:157:ARG:NH2 | 1:M:165:ARG:HH12 | 1.99                     | 0.60              |
| 2:P:179:PHE:HB2 | 1:Q:201:GLN:O    | 2.02                     | 0.60              |
| 2:R:225:ALA:HB1 | 1:S:244:LYS:CB   | 2.32                     | 0.60              |
| 2:R:269:GLN:O   | 2:R:270:LEU:HD23 | 2.02                     | 0.60              |
| 1:S:99:LEU:HD21 | 2:T:140:ILE:HG21 | 1.82                     | 0.60              |
| 2:V:38:ILE:HD12 | 2:V:50:VAL:HG21  | 1.82                     | 0.60              |
| 2:V:260:LEU:N   | 1:W:273:LEU:O    | 2.34                     | 0.60              |
| 2:D:270:LEU:HB2 | 2:F:271:PRO:HB3  | 1.83                     | 0.60              |
| 2:H:69:CYS:HA   | 2:H:98:PRO:HD2   | 1.83                     | 0.60              |
| 2:H:90:ILE:HB   | 2:H:127:LEU:HD21 | 1.82                     | 0.60              |
| 2:H:240:LYS:O   | 2:H:241:LEU:HD23 | 2.02                     | 0.60              |
| 2:J:269:GLN:O   | 2:J:270:LEU:HD23 | 2.02                     | 0.60              |
| 2:N:219:LYS:HD2 | 2:N:219:LYS:C    | 2.27                     | 0.60              |
| 2:P:41:ARG:HD2  | 1:Q:44:GLU:N     | 1.92                     | 0.60              |
| 2:P:117:ARG:HD3 | 1:Q:87:PRO:HB2   | 1.83                     | 0.60              |
| 2:P:269:GLN:O   | 2:P:270:LEU:HD23 | 2.02                     | 0.60              |
| 1:Q:242:LEU:CD1 | 2:R:238:LEU:HD22 | 2.32                     | 0.60              |
| 2:R:219:LYS:HD2 | 2:R:219:LYS:C    | 2.27                     | 0.60              |
| 1:U:47:HIS:ND1  | 1:U:80:ILE:HG22  | 2.17                     | 0.60              |
| 2:X:28:TYR:O    | 2:X:54:THR:HG23  | 2.02                     | 0.60              |
| 1:A:47:HIS:ND1  | 1:A:80:ILE:HG22  | 2.17                     | 0.60              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:D:28:TYR:O     | 2:D:54:THR:HG23  | 2.02                     | 0.60              |
| 2:D:41:ARG:NH1   | 1:E:43:VAL:HG12  | 2.17                     | 0.60              |
| 2:D:43:ARG:CB    | 2:D:43:ARG:HG2   | 2.22                     | 0.60              |
| 2:D:225:ALA:CA   | 1:E:248:TYR:HB2  | 2.31                     | 0.60              |
| 1:I:272:TYR:HB2  | 2:J:260:LEU:HA   | 1.83                     | 0.60              |
| 2:J:28:TYR:O     | 2:J:54:THR:HG23  | 2.02                     | 0.60              |
| 2:J:38:ILE:HD12  | 2:J:50:VAL:HG21  | 1.82                     | 0.60              |
| 2:J:86:GLN:O     | 2:J:88:VAL:HG23  | 2.01                     | 0.60              |
| 2:L:269:GLN:O    | 2:L:270:LEU:HD23 | 2.02                     | 0.60              |
| 1:M:175:PHE:HZ   | 2:N:167:ASP:CB   | 2.15                     | 0.60              |
| 2:N:28:TYR:O     | 2:N:54:THR:HG23  | 2.02                     | 0.60              |
| 2:P:41:ARG:CB    | 1:Q:44:GLU:C     | 2.57                     | 0.60              |
| 2:P:196:ALA:HB1  | 1:Q:220:GLU:HG3  | 1.82                     | 0.60              |
| 1:S:253:LYS:HZ1  | 2:T:241:LEU:CD1  | 2.13                     | 0.60              |
| 2:V:258:THR:O    | 1:W:273:LEU:N    | 2.34                     | 0.60              |
| 2:X:269:GLN:O    | 2:X:270:LEU:HD23 | 2.02                     | 0.60              |
| 2:B:38:ILE:HD12  | 2:B:50:VAL:HG21  | 1.82                     | 0.59              |
| 2:D:219:LYS:C    | 2:D:219:LYS:HD2  | 2.27                     | 0.59              |
| 2:F:28:TYR:O     | 2:F:54:THR:HG23  | 2.02                     | 0.59              |
| 2:H:28:TYR:O     | 2:H:54:THR:HG23  | 2.02                     | 0.59              |
| 2:J:240:LYS:O    | 2:J:241:LEU:HD23 | 2.02                     | 0.59              |
| 1:M:143:SER:HB2  | 2:N:143:ARG:HE   | 1.66                     | 0.59              |
| 2:R:208:LYS:O    | 2:R:212:ILE:HD12 | 2.02                     | 0.59              |
| 1:S:108:VAL:HG21 | 1:S:137:VAL:CG2  | 2.32                     | 0.59              |
| 1:S:249:ILE:CD1  | 2:T:238:LEU:HA   | 2.32                     | 0.59              |
| 1:S:261:SER:HB3  | 1:S:264:ILE:HD12 | 1.83                     | 0.59              |
| 1:S:272:TYR:CB   | 2:T:258:THR:HG23 | 2.31                     | 0.59              |
| 2:X:92:LEU:HD12  | 2:X:169:SER:C    | 2.26                     | 0.59              |
| 2:D:240:LYS:O    | 2:D:241:LEU:HD23 | 2.02                     | 0.59              |
| 2:H:269:GLN:O    | 2:H:270:LEU:HD23 | 2.02                     | 0.59              |
| 1:K:299:LYS:NZ   | 1:M:288:THR:HB   | 2.17                     | 0.59              |
| 2:L:204:GLU:CG   | 1:M:226:VAL:HG11 | 2.32                     | 0.59              |
| 2:L:221:ALA:HA   | 1:M:248:TYR:HB3  | 1.83                     | 0.59              |
| 2:L:240:LYS:O    | 2:L:241:LEU:HD23 | 2.02                     | 0.59              |
| 1:M:142:LYS:HE2  | 2:N:173:LEU:O    | 2.03                     | 0.59              |
| 1:M:261:SER:HB3  | 1:M:264:ILE:HD12 | 1.82                     | 0.59              |
| 2:P:69:CYS:HA    | 2:P:98:PRO:HD2   | 1.83                     | 0.59              |
| 2:P:240:LYS:O    | 2:P:241:LEU:HD23 | 2.02                     | 0.59              |
| 2:R:200:VAL:HG22 | 1:S:223:GLN:HA   | 1.84                     | 0.59              |
| 1:S:290:GLY:O    | 1:U:283:GLN:HB3  | 2.02                     | 0.59              |
| 2:V:28:TYR:O     | 2:V:54:THR:HG23  | 2.02                     | 0.59              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:W:90:ILE:HD13  | 1:W:134:PRO:HA   | 1.85                     | 0.59              |
| 1:W:108:VAL:HG21 | 1:W:137:VAL:CG2  | 2.32                     | 0.59              |
| 2:B:219:LYS:HD2  | 2:B:219:LYS:C    | 2.27                     | 0.59              |
| 2:D:262:ALA:CB   | 1:E:274:THR:HA   | 2.32                     | 0.59              |
| 2:H:208:LYS:O    | 2:H:212:ILE:HD12 | 2.02                     | 0.59              |
| 2:H:268:LEU:O    | 2:J:267:LEU:O    | 2.20                     | 0.59              |
| 2:L:229:ALA:HA   | 1:M:245:ASN:HD22 | 1.67                     | 0.59              |
| 2:N:38:ILE:HD12  | 2:N:50:VAL:HG21  | 1.82                     | 0.59              |
| 2:P:186:LYS:CA   | 1:Q:212:PHE:CE2  | 2.83                     | 0.59              |
| 1:U:225:ILE:HD13 | 2:V:219:LYS:HG2  | 1.84                     | 0.59              |
| 1:U:260:ILE:HG21 | 1:W:278:LEU:HD22 | 1.85                     | 0.59              |
| 1:W:47:HIS:ND1   | 1:W:80:ILE:HG22  | 2.17                     | 0.59              |
| 2:B:208:LYS:O    | 2:B:212:ILE:HD12 | 2.03                     | 0.59              |
| 2:B:221:ALA:CB   | 1:C:242:LEU:HD22 | 2.32                     | 0.59              |
| 2:D:208:LYS:O    | 2:D:212:ILE:HD12 | 2.03                     | 0.59              |
| 1:E:90:ILE:HD13  | 1:E:134:PRO:HA   | 1.85                     | 0.59              |
| 2:F:219:LYS:HD2  | 2:F:219:LYS:C    | 2.27                     | 0.59              |
| 1:G:90:ILE:HD13  | 1:G:134:PRO:HA   | 1.85                     | 0.59              |
| 2:J:69:CYS:HA    | 2:J:98:PRO:HD2   | 1.83                     | 0.59              |
| 1:K:47:HIS:ND1   | 1:K:80:ILE:HG22  | 2.17                     | 0.59              |
| 2:P:87:ASN:OD1   | 1:Q:194:THR:CG2  | 2.50                     | 0.59              |
| 2:P:109:SER:N    | 1:Q:111:ARG:HD3  | 2.17                     | 0.59              |
| 1:Q:47:HIS:ND1   | 1:Q:80:ILE:HG22  | 2.17                     | 0.59              |
| 2:R:248:ALA:CB   | 1:S:278:LEU:CD2  | 2.80                     | 0.59              |
| 2:X:208:LYS:O    | 2:X:212:ILE:HD12 | 2.02                     | 0.59              |
| 1:A:207:ALA:O    | 2:B:205:GLN:HG3  | 2.02                     | 0.59              |
| 2:B:69:CYS:HA    | 2:B:98:PRO:HD2   | 1.83                     | 0.59              |
| 1:C:108:VAL:HG21 | 1:C:137:VAL:CG2  | 2.32                     | 0.59              |
| 2:F:269:GLN:O    | 2:F:270:LEU:HD23 | 2.02                     | 0.59              |
| 2:N:208:LYS:O    | 2:N:212:ILE:HD12 | 2.02                     | 0.59              |
| 2:P:219:LYS:HD2  | 2:P:219:LYS:C    | 2.27                     | 0.59              |
| 1:Q:90:ILE:HD13  | 1:Q:134:PRO:HA   | 1.85                     | 0.59              |
| 2:V:219:LYS:HD2  | 2:V:219:LYS:C    | 2.27                     | 0.59              |
| 2:X:219:LYS:HD2  | 2:X:219:LYS:C    | 2.27                     | 0.59              |
| 2:X:240:LYS:O    | 2:X:241:LEU:HD23 | 2.02                     | 0.59              |
| 1:G:52:PHE:HE1   | 2:H:32:ALA:N     | 1.99                     | 0.59              |
| 1:K:221:GLN:NE2  | 2:L:216:GLY:H    | 2.00                     | 0.59              |
| 2:L:28:TYR:O     | 2:L:54:THR:HG23  | 2.02                     | 0.59              |
| 1:M:131:ARG:HB3  | 2:N:71:SER:O     | 2.03                     | 0.59              |
| 2:N:269:GLN:NE2  | 2:P:269:GLN:CD   | 2.60                     | 0.59              |
| 2:P:108:THR:CB   | 1:Q:111:ARG:CD   | 2.80                     | 0.59              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:P:208:LYS:O    | 2:P:212:ILE:HD12 | 2.03                     | 0.59              |
| 2:V:256:ASN:HB2  | 1:W:270:ARG:CA   | 2.31                     | 0.59              |
| 2:B:106:ILE:HA   | 2:B:110:ILE:HD12 | 1.85                     | 0.59              |
| 2:B:267:LEU:CG   | 2:D:267:LEU:HD13 | 2.33                     | 0.59              |
| 2:D:106:ILE:HA   | 2:D:110:ILE:HD12 | 1.85                     | 0.59              |
| 2:D:229:ALA:N    | 1:E:247:GLY:HA3  | 2.18                     | 0.59              |
| 1:I:50:ILE:HG13  | 1:I:79:ILE:HD12  | 1.84                     | 0.59              |
| 1:S:47:HIS:ND1   | 1:S:80:ILE:HG22  | 2.17                     | 0.59              |
| 1:U:108:VAL:HG21 | 1:U:137:VAL:CG2  | 2.32                     | 0.59              |
| 2:V:268:LEU:CD1  | 2:X:261:PRO:HD3  | 2.33                     | 0.59              |
| 2:V:269:GLN:O    | 2:V:270:LEU:HD23 | 2.02                     | 0.59              |
| 1:A:108:VAL:HG21 | 1:A:137:VAL:CG2  | 2.32                     | 0.59              |
| 1:A:285:GLU:HG3  | 1:W:289:ARG:NH1  | 2.18                     | 0.59              |
| 2:B:269:GLN:O    | 2:B:270:LEU:HD23 | 2.02                     | 0.59              |
| 2:F:106:ILE:HA   | 2:F:110:ILE:HD12 | 1.85                     | 0.59              |
| 2:L:219:LYS:HD2  | 2:L:219:LYS:C    | 2.27                     | 0.59              |
| 1:Q:50:ILE:HG13  | 1:Q:79:ILE:HD12  | 1.84                     | 0.59              |
| 2:R:28:TYR:O     | 2:R:54:THR:HG23  | 2.02                     | 0.59              |
| 1:S:90:ILE:HD13  | 1:S:134:PRO:HA   | 1.85                     | 0.59              |
| 2:X:106:ILE:HA   | 2:X:110:ILE:HD12 | 1.85                     | 0.59              |
| 1:A:142:LYS:HE3  | 2:B:140:ILE:HD13 | 1.85                     | 0.59              |
| 1:C:50:ILE:HG13  | 1:C:79:ILE:HD12  | 1.84                     | 0.59              |
| 2:D:260:LEU:HD13 | 1:E:272:TYR:CD2  | 2.37                     | 0.59              |
| 1:G:50:ILE:HG13  | 1:G:79:ILE:HD12  | 1.84                     | 0.59              |
| 1:G:108:VAL:HG21 | 1:G:137:VAL:CG2  | 2.32                     | 0.59              |
| 1:I:132:VAL:HG11 | 1:I:177:LEU:HD12 | 1.85                     | 0.59              |
| 1:I:224:LYS:O    | 2:J:219:LYS:NZ   | 2.36                     | 0.59              |
| 2:J:106:ILE:HA   | 2:J:110:ILE:HD12 | 1.85                     | 0.59              |
| 2:L:208:LYS:O    | 2:L:212:ILE:HD12 | 2.03                     | 0.59              |
| 1:M:175:PHE:CZ   | 2:N:95:LEU:HD13  | 2.38                     | 0.59              |
| 2:P:30:VAL:HG22  | 2:P:66:ILE:HG12  | 1.85                     | 0.59              |
| 2:R:269:GLN:HG3  | 2:T:269:GLN:NE2  | 2.17                     | 0.59              |
| 1:S:272:TYR:C    | 2:T:259:TYR:O    | 2.46                     | 0.59              |
| 2:T:106:ILE:HA   | 2:T:110:ILE:HD12 | 1.85                     | 0.59              |
| 1:U:132:VAL:HG11 | 1:U:177:LEU:HD12 | 1.85                     | 0.59              |
| 1:A:281:ASN:HA   | 1:W:274:THR:CG2  | 2.32                     | 0.59              |
| 1:E:47:HIS:ND1   | 1:E:80:ILE:HG22  | 2.17                     | 0.59              |
| 1:E:132:VAL:HG11 | 1:E:177:LEU:HD12 | 1.85                     | 0.59              |
| 1:E:164:ILE:CD1  | 1:E:184:ILE:HD11 | 2.31                     | 0.59              |
| 1:G:47:HIS:ND1   | 1:G:80:ILE:HG22  | 2.17                     | 0.59              |
| 2:J:85:LEU:CD1   | 1:K:155:THR:HG22 | 2.30                     | 0.59              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:J:208:LYS:O    | 2:J:212:ILE:HD12 | 2.02                     | 0.59              |
| 1:K:50:ILE:HG13  | 1:K:79:ILE:HD12  | 1.84                     | 0.59              |
| 2:L:197:ARG:NH1  | 1:M:222:ARG:NH2  | 2.51                     | 0.59              |
| 1:M:50:ILE:HG13  | 1:M:79:ILE:HD12  | 1.85                     | 0.59              |
| 1:M:108:VAL:HG21 | 1:M:137:VAL:CG2  | 2.32                     | 0.59              |
| 1:O:90:ILE:HD13  | 1:O:134:PRO:HA   | 1.85                     | 0.59              |
| 1:S:260:ILE:CG2  | 2:T:248:ALA:HB3  | 2.32                     | 0.59              |
| 2:V:268:LEU:HD12 | 2:X:261:PRO:HD2  | 1.84                     | 0.59              |
| 2:D:269:GLN:O    | 2:D:270:LEU:HD23 | 2.02                     | 0.58              |
| 2:J:240:LYS:CE   | 1:M:282:LEU:HB3  | 2.33                     | 0.58              |
| 2:P:41:ARG:HE    | 1:Q:44:GLU:N     | 1.97                     | 0.58              |
| 2:P:107:PHE:CE1  | 1:Q:84:ARG:HB3   | 2.38                     | 0.58              |
| 2:P:121:SER:CB   | 1:Q:184:ILE:O    | 2.51                     | 0.58              |
| 2:R:90:ILE:HG21  | 2:R:170:LEU:HD22 | 1.85                     | 0.58              |
| 2:T:219:LYS:HD2  | 2:T:219:LYS:C    | 2.27                     | 0.58              |
| 2:V:30:VAL:HG22  | 2:V:66:ILE:HG12  | 1.85                     | 0.58              |
| 1:A:84:ARG:CA    | 2:X:109:SER:HA   | 2.33                     | 0.58              |
| 1:C:47:HIS:ND1   | 1:C:80:ILE:HG22  | 2.17                     | 0.58              |
| 1:C:290:GLY:HA2  | 1:E:283:GLN:HB2  | 1.84                     | 0.58              |
| 1:E:108:VAL:HG21 | 1:E:137:VAL:CG2  | 2.32                     | 0.58              |
| 2:F:270:LEU:HD22 | 1:G:272:TYR:HD2  | 1.66                     | 0.58              |
| 1:G:132:VAL:HG11 | 1:G:177:LEU:HD12 | 1.85                     | 0.58              |
| 1:I:221:GLN:NE2  | 2:J:216:GLY:N    | 2.51                     | 0.58              |
| 2:J:30:VAL:HG22  | 2:J:66:ILE:HG12  | 1.85                     | 0.58              |
| 2:J:219:LYS:HD2  | 2:J:219:LYS:C    | 2.27                     | 0.58              |
| 2:N:90:ILE:HG21  | 2:N:170:LEU:HD22 | 1.85                     | 0.58              |
| 2:N:240:LYS:O    | 2:N:241:LEU:HD23 | 2.02                     | 0.58              |
| 2:N:269:GLN:O    | 2:N:270:LEU:HD23 | 2.02                     | 0.58              |
| 1:O:50:ILE:HG13  | 1:O:79:ILE:HD12  | 1.84                     | 0.58              |
| 1:Q:164:ILE:CD1  | 1:Q:184:ILE:HD11 | 2.31                     | 0.58              |
| 2:R:215:GLU:HG2  | 1:S:237:MET:CE   | 2.30                     | 0.58              |
| 2:T:240:LYS:O    | 2:T:241:LEU:HD23 | 2.02                     | 0.58              |
| 2:T:269:GLN:O    | 2:T:270:LEU:HD23 | 2.02                     | 0.58              |
| 1:U:50:ILE:HG13  | 1:U:79:ILE:HD12  | 1.84                     | 0.58              |
| 1:A:50:ILE:HG13  | 1:A:79:ILE:HD12  | 1.85                     | 0.58              |
| 2:H:219:LYS:HD2  | 2:H:219:LYS:C    | 2.27                     | 0.58              |
| 1:I:106:LEU:HD12 | 1:I:183:ALA:C    | 2.29                     | 0.58              |
| 1:O:106:LEU:HD12 | 1:O:183:ALA:C    | 2.28                     | 0.58              |
| 1:O:132:VAL:HG11 | 1:O:177:LEU:HD12 | 1.85                     | 0.58              |
| 2:P:39:PHE:CE1   | 1:Q:84:ARG:HD3   | 2.37                     | 0.58              |
| 2:P:182:ALA:HB3  | 1:Q:205:GLN:HB3  | 1.84                     | 0.58              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:Q:108:VAL:HG21 | 1:Q:137:VAL:CG2  | 2.32                     | 0.58              |
| 1:Q:256:ALA:HB2  | 2:R:245:GLU:CD   | 2.28                     | 0.58              |
| 1:S:50:ILE:HG13  | 1:S:79:ILE:HD12  | 1.84                     | 0.58              |
| 1:C:106:LEU:HD12 | 1:C:183:ALA:C    | 2.28                     | 0.58              |
| 1:C:256:ALA:HB1  | 1:C:260:ILE:HD11 | 1.86                     | 0.58              |
| 2:D:185:ALA:HA   | 2:D:188:VAL:HB   | 1.85                     | 0.58              |
| 2:F:208:LYS:O    | 2:F:212:ILE:HD12 | 2.03                     | 0.58              |
| 1:K:221:GLN:CD   | 2:L:216:GLY:N    | 2.61                     | 0.58              |
| 1:K:243:SER:HB2  | 1:M:296:LYS:CE   | 2.33                     | 0.58              |
| 2:N:158:ALA:HB1  | 2:N:163:LEU:CB   | 2.34                     | 0.58              |
| 1:O:47:HIS:ND1   | 1:O:80:ILE:HG22  | 2.17                     | 0.58              |
| 2:R:257:ILE:HB   | 1:S:278:LEU:CD1  | 2.31                     | 0.58              |
| 1:S:135:SER:HB3  | 2:T:93:ARG:CZ    | 2.33                     | 0.58              |
| 2:T:90:ILE:HG21  | 2:T:170:LEU:HD22 | 1.85                     | 0.58              |
| 2:T:208:LYS:O    | 2:T:212:ILE:HD12 | 2.02                     | 0.58              |
| 2:X:92:LEU:HD12  | 2:X:169:SER:O    | 2.04                     | 0.58              |
| 1:A:106:LEU:HD12 | 1:A:183:ALA:C    | 2.28                     | 0.58              |
| 2:B:90:ILE:HG21  | 2:B:170:LEU:HD22 | 1.85                     | 0.58              |
| 2:F:30:VAL:HG22  | 2:F:66:ILE:HG12  | 1.85                     | 0.58              |
| 1:K:106:LEU:HD12 | 1:K:183:ALA:C    | 2.28                     | 0.58              |
| 1:K:242:LEU:O    | 1:M:294:LEU:CD1  | 2.41                     | 0.58              |
| 1:M:47:HIS:ND1   | 1:M:80:ILE:HG22  | 2.17                     | 0.58              |
| 1:M:124:LEU:HA   | 2:N:71:SER:H     | 1.68                     | 0.58              |
| 1:M:142:LYS:CE   | 2:N:173:LEU:O    | 2.51                     | 0.58              |
| 2:P:106:ILE:HA   | 2:P:110:ILE:HD12 | 1.85                     | 0.58              |
| 2:P:110:ILE:N    | 1:Q:85:ALA:HB2   | 2.19                     | 0.58              |
| 2:P:117:ARG:CD   | 1:Q:87:PRO:CG    | 2.80                     | 0.58              |
| 2:R:158:ALA:HB1  | 2:R:163:LEU:CB   | 2.34                     | 0.58              |
| 2:V:185:ALA:HA   | 2:V:188:VAL:HB   | 1.86                     | 0.58              |
| 2:V:208:LYS:O    | 2:V:212:ILE:HD12 | 2.02                     | 0.58              |
| 1:A:132:VAL:HG11 | 1:A:177:LEU:HD12 | 1.85                     | 0.58              |
| 1:C:132:VAL:HG11 | 1:C:177:LEU:HD12 | 1.85                     | 0.58              |
| 1:C:164:ILE:CD1  | 1:C:184:ILE:HD11 | 2.31                     | 0.58              |
| 2:D:243:ALA:HB2  | 1:E:258:GLN:HA   | 1.84                     | 0.58              |
| 2:H:30:VAL:HG22  | 2:H:66:ILE:HG12  | 1.85                     | 0.58              |
| 1:I:235:ALA:HB3  | 2:J:227:SER:OG   | 2.03                     | 0.58              |
| 2:L:185:ALA:HA   | 2:L:188:VAL:HB   | 1.86                     | 0.58              |
| 1:M:54:ARG:CD    | 2:N:54:THR:H     | 2.16                     | 0.58              |
| 1:M:214:VAL:CG2  | 2:N:205:GLN:HB3  | 2.34                     | 0.58              |
| 2:P:28:TYR:O     | 2:P:54:THR:HG23  | 2.02                     | 0.58              |
| 1:Q:252:ARG:HG3  | 2:R:245:GLU:CD   | 2.28                     | 0.58              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:S:239:GLY:HA2  | 2:T:235:LEU:HB2  | 1.84                     | 0.58              |
| 2:T:28:TYR:O     | 2:T:54:THR:HG23  | 2.02                     | 0.58              |
| 2:V:229:ALA:HB2  | 1:W:244:LYS:CB   | 2.33                     | 0.58              |
| 1:W:50:ILE:HG13  | 1:W:79:ILE:HD12  | 1.84                     | 0.58              |
| 1:W:106:LEU:HD12 | 1:W:183:ALA:C    | 2.28                     | 0.58              |
| 2:X:30:VAL:HG22  | 2:X:66:ILE:HG12  | 1.85                     | 0.58              |
| 2:B:30:VAL:HG22  | 2:B:66:ILE:HG12  | 1.85                     | 0.58              |
| 2:B:185:ALA:HA   | 2:B:188:VAL:HB   | 1.86                     | 0.58              |
| 2:L:30:VAL:HG22  | 2:L:66:ILE:HG12  | 1.85                     | 0.58              |
| 2:P:90:ILE:HG21  | 2:P:170:LEU:HD22 | 1.85                     | 0.58              |
| 2:P:92:LEU:HD12  | 2:P:169:SER:O    | 2.04                     | 0.58              |
| 1:S:132:VAL:HG11 | 1:S:177:LEU:HD12 | 1.85                     | 0.58              |
| 1:S:252:ARG:HH21 | 2:T:245:GLU:HG2  | 1.69                     | 0.58              |
| 2:T:92:LEU:HD12  | 2:T:169:SER:O    | 2.04                     | 0.58              |
| 1:A:282:LEU:HB2  | 1:W:277:ASN:ND2  | 2.18                     | 0.58              |
| 2:F:92:LEU:HD12  | 2:F:169:SER:O    | 2.04                     | 0.58              |
| 2:F:221:ALA:HB1  | 1:G:242:LEU:CD2  | 2.33                     | 0.58              |
| 2:H:92:LEU:HD12  | 2:H:169:SER:O    | 2.04                     | 0.58              |
| 2:H:106:ILE:HA   | 2:H:110:ILE:HD12 | 1.85                     | 0.58              |
| 2:H:185:ALA:HA   | 2:H:188:VAL:HB   | 1.86                     | 0.58              |
| 2:H:270:LEU:HD13 | 2:J:260:LEU:HD11 | 1.86                     | 0.58              |
| 1:K:229:GLU:HG3  | 2:L:223:LEU:HD13 | 1.85                     | 0.58              |
| 1:M:90:ILE:HD13  | 1:M:134:PRO:HA   | 1.85                     | 0.58              |
| 2:R:185:ALA:HA   | 2:R:188:VAL:HB   | 1.86                     | 0.58              |
| 1:S:290:GLY:O    | 1:U:283:GLN:CB   | 2.51                     | 0.58              |
| 1:W:256:ALA:HB1  | 1:W:260:ILE:HD11 | 1.86                     | 0.58              |
| 1:A:256:ALA:HB1  | 1:A:260:ILE:HD11 | 1.86                     | 0.58              |
| 2:B:28:TYR:O     | 2:B:54:THR:HG23  | 2.02                     | 0.58              |
| 1:C:90:ILE:HD13  | 1:C:134:PRO:HA   | 1.85                     | 0.58              |
| 2:J:185:ALA:HA   | 2:J:188:VAL:HB   | 1.86                     | 0.58              |
| 1:K:236:LYS:HZ2  | 2:L:227:SER:HA   | 1.68                     | 0.58              |
| 2:L:106:ILE:HA   | 2:L:110:ILE:HD12 | 1.85                     | 0.58              |
| 1:M:256:ALA:HB1  | 1:M:260:ILE:HD11 | 1.86                     | 0.58              |
| 2:P:185:ALA:HA   | 2:P:188:VAL:HB   | 1.85                     | 0.58              |
| 1:Q:217:ALA:HB1  | 2:R:208:LYS:HZ2  | 1.69                     | 0.58              |
| 1:Q:261:SER:CB   | 1:Q:264:ILE:HD12 | 2.34                     | 0.58              |
| 2:R:106:ILE:HA   | 2:R:110:ILE:HD12 | 1.85                     | 0.58              |
| 2:R:193:ALA:HA   | 1:S:219:GLN:NE2  | 2.18                     | 0.58              |
| 2:X:90:ILE:HG21  | 2:X:170:LEU:HD22 | 1.85                     | 0.58              |
| 1:A:261:SER:CB   | 1:A:264:ILE:HD12 | 2.34                     | 0.58              |
| 2:B:240:LYS:HD3  | 1:E:282:LEU:CD1  | 2.32                     | 0.58              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:D:256:ASN:HB2  | 1:E:268:GLN:CG   | 2.34                     | 0.58              |
| 1:E:50:ILE:HG13  | 1:E:79:ILE:HD12  | 1.84                     | 0.58              |
| 1:G:106:LEU:HD12 | 1:G:183:ALA:C    | 2.28                     | 0.58              |
| 1:I:90:ILE:HD13  | 1:I:134:PRO:HA   | 1.85                     | 0.58              |
| 2:N:271:PRO:O    | 2:P:271:PRO:HB3  | 2.02                     | 0.58              |
| 2:P:44:GLY:C     | 1:Q:66:GLU:CD    | 2.72                     | 0.58              |
| 2:P:46:GLN:HA    | 1:Q:66:GLU:CD    | 2.29                     | 0.58              |
| 1:U:90:ILE:HD13  | 1:U:134:PRO:HA   | 1.85                     | 0.58              |
| 2:X:158:ALA:HB1  | 2:X:163:LEU:CB   | 2.34                     | 0.58              |
| 1:A:193:TYR:CE2  | 2:B:191:GLN:HG3  | 2.39                     | 0.57              |
| 2:D:30:VAL:HG22  | 2:D:66:ILE:HG12  | 1.85                     | 0.57              |
| 2:D:250:GLN:HB3  | 1:E:265:ALA:CB   | 2.34                     | 0.57              |
| 2:F:139:LEU:HD12 | 2:F:175:PHE:CE1  | 2.39                     | 0.57              |
| 2:F:258:THR:HG22 | 2:F:259:TYR:N    | 2.19                     | 0.57              |
| 2:H:90:ILE:HG21  | 2:H:170:LEU:HD22 | 1.85                     | 0.57              |
| 1:K:256:ALA:HB1  | 1:K:260:ILE:HD11 | 1.86                     | 0.57              |
| 2:P:109:SER:CA   | 1:Q:111:ARG:HB3  | 2.34                     | 0.57              |
| 1:S:281:ASN:O    | 1:S:287:PHE:HB2  | 2.04                     | 0.57              |
| 2:T:30:VAL:HG22  | 2:T:66:ILE:HG12  | 1.85                     | 0.57              |
| 2:V:92:LEU:HD12  | 2:V:169:SER:O    | 2.04                     | 0.57              |
| 2:X:185:ALA:HA   | 2:X:188:VAL:HB   | 1.86                     | 0.57              |
| 1:A:211:GLN:HG3  | 2:B:205:GLN:HG3  | 1.84                     | 0.57              |
| 1:C:192:GLU:HB3  | 2:D:188:VAL:HG13 | 1.86                     | 0.57              |
| 1:C:281:ASN:O    | 1:C:287:PHE:HB2  | 2.04                     | 0.57              |
| 1:G:99:LEU:HD13  | 2:H:180:THR:HA   | 1.85                     | 0.57              |
| 1:I:90:ILE:HB    | 1:I:137:VAL:HG11 | 1.87                     | 0.57              |
| 2:J:90:ILE:HG21  | 2:J:170:LEU:HD22 | 1.85                     | 0.57              |
| 2:J:240:LYS:NZ   | 1:M:283:GLN:CG   | 2.67                     | 0.57              |
| 1:K:90:ILE:HD13  | 1:K:134:PRO:HA   | 1.85                     | 0.57              |
| 1:K:90:ILE:HB    | 1:K:137:VAL:HG11 | 1.87                     | 0.57              |
| 2:L:90:ILE:HG21  | 2:L:170:LEU:HD22 | 1.85                     | 0.57              |
| 2:L:222:GLU:CD   | 1:M:241:ALA:HB1  | 2.29                     | 0.57              |
| 1:M:106:LEU:HD12 | 1:M:183:ALA:C    | 2.28                     | 0.57              |
| 1:M:139:GLU:OE1  | 2:N:169:SER:HB2  | 2.04                     | 0.57              |
| 1:M:281:ASN:O    | 1:M:287:PHE:HB2  | 2.04                     | 0.57              |
| 2:N:30:VAL:HG22  | 2:N:66:ILE:HG12  | 1.85                     | 0.57              |
| 2:P:263:GLY:HA3  | 1:Q:286:SER:HB3  | 1.86                     | 0.57              |
| 1:Q:106:LEU:HD12 | 1:Q:183:ALA:C    | 2.28                     | 0.57              |
| 1:Q:249:ILE:HG12 | 2:R:241:LEU:CD1  | 2.30                     | 0.57              |
| 2:T:185:ALA:HA   | 2:T:188:VAL:HB   | 1.86                     | 0.57              |
| 1:U:106:LEU:HD12 | 1:U:183:ALA:C    | 2.28                     | 0.57              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:U:218:LYS:CE   | 2:V:212:ILE:HD11 | 2.34                     | 0.57              |
| 2:V:90:ILE:HG21  | 2:V:170:LEU:HD22 | 1.85                     | 0.57              |
| 2:V:106:ILE:HA   | 2:V:110:ILE:HD12 | 1.85                     | 0.57              |
| 2:D:90:ILE:HG21  | 2:D:170:LEU:HD22 | 1.85                     | 0.57              |
| 2:D:139:LEU:HD12 | 2:D:175:PHE:CE1  | 2.39                     | 0.57              |
| 2:D:225:ALA:HA   | 1:E:248:TYR:N    | 2.19                     | 0.57              |
| 1:E:261:SER:CB   | 1:E:264:ILE:HD12 | 2.34                     | 0.57              |
| 2:H:269:GLN:HG3  | 2:J:269:GLN:NE2  | 2.19                     | 0.57              |
| 1:M:132:VAL:HG11 | 1:M:177:LEU:HD12 | 1.85                     | 0.57              |
| 2:P:121:SER:HG   | 1:Q:184:ILE:C    | 2.08                     | 0.57              |
| 1:S:106:LEU:HD12 | 1:S:183:ALA:C    | 2.28                     | 0.57              |
| 2:T:221:ALA:HB2  | 1:U:248:TYR:CD2  | 2.39                     | 0.57              |
| 1:U:142:LYS:HZ2  | 2:V:140:ILE:HG21 | 1.69                     | 0.57              |
| 1:U:261:SER:CB   | 1:U:264:ILE:HD12 | 2.34                     | 0.57              |
| 1:U:281:ASN:O    | 1:U:287:PHE:HB2  | 2.04                     | 0.57              |
| 2:V:247:ILE:HD11 | 1:W:257:ALA:HB1  | 1.85                     | 0.57              |
| 1:A:90:ILE:HD13  | 1:A:134:PRO:HA   | 1.85                     | 0.57              |
| 1:A:280:LEU:O    | 1:W:274:THR:HG23 | 2.05                     | 0.57              |
| 2:B:92:LEU:HD12  | 2:B:169:SER:O    | 2.04                     | 0.57              |
| 1:C:192:GLU:CB   | 2:D:188:VAL:CG1  | 2.82                     | 0.57              |
| 1:C:261:SER:CB   | 1:C:264:ILE:HD12 | 2.34                     | 0.57              |
| 1:E:106:LEU:HD12 | 1:E:183:ALA:C    | 2.28                     | 0.57              |
| 1:E:256:ALA:HB1  | 1:E:260:ILE:HD11 | 1.86                     | 0.57              |
| 2:F:39:PHE:HB3   | 2:F:63:LYS:O     | 2.05                     | 0.57              |
| 1:G:261:SER:CB   | 1:G:264:ILE:HD12 | 2.34                     | 0.57              |
| 1:G:289:ARG:HH12 | 1:I:285:GLU:HG3  | 1.69                     | 0.57              |
| 2:H:30:VAL:HG12  | 2:H:34:HIS:O     | 2.05                     | 0.57              |
| 2:H:158:ALA:HB1  | 2:H:163:LEU:CB   | 2.34                     | 0.57              |
| 2:J:157:ARG:NH2  | 1:K:165:ARG:HH12 | 2.02                     | 0.57              |
| 1:K:108:VAL:HG21 | 1:K:137:VAL:CG2  | 2.32                     | 0.57              |
| 1:K:239:GLY:CA   | 2:L:228:LEU:HD21 | 2.34                     | 0.57              |
| 2:N:30:VAL:HG12  | 2:N:34:HIS:O     | 2.05                     | 0.57              |
| 2:N:106:ILE:HA   | 2:N:110:ILE:HD12 | 1.85                     | 0.57              |
| 2:P:86:GLN:NE2   | 1:Q:198:GLU:O    | 2.38                     | 0.57              |
| 2:P:128:LYS:HD2  | 1:Q:157:ARG:HD2  | 1.85                     | 0.57              |
| 1:Q:90:ILE:HB    | 1:Q:137:VAL:HG11 | 1.87                     | 0.57              |
| 2:R:30:VAL:HG22  | 2:R:66:ILE:HG12  | 1.85                     | 0.57              |
| 2:R:39:PHE:HB3   | 2:R:63:LYS:O     | 2.05                     | 0.57              |
| 2:V:39:PHE:HB3   | 2:V:63:LYS:O     | 2.05                     | 0.57              |
| 2:X:39:PHE:HB3   | 2:X:63:LYS:O     | 2.05                     | 0.57              |
| 1:A:207:ALA:HB2  | 2:B:201:GLU:HB2  | 1.85                     | 0.57              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:221:GLN:OE1  | 2:B:216:GLY:HA3  | 2.05                     | 0.57              |
| 2:D:268:LEU:HD21 | 1:E:272:TYR:CE2  | 2.34                     | 0.57              |
| 2:F:185:ALA:HA   | 2:F:188:VAL:HB   | 1.86                     | 0.57              |
| 1:I:108:VAL:HG21 | 1:I:137:VAL:CG2  | 2.32                     | 0.57              |
| 2:P:128:LYS:HE3  | 1:Q:157:ARG:NH1  | 2.19                     | 0.57              |
| 2:R:139:LEU:HD12 | 2:R:175:PHE:CE1  | 2.39                     | 0.57              |
| 1:S:261:SER:CB   | 1:S:264:ILE:HD12 | 2.34                     | 0.57              |
| 2:V:240:LYS:HA   | 1:W:254:ILE:HG12 | 1.85                     | 0.57              |
| 2:V:258:THR:CB   | 1:W:272:TYR:HD2  | 2.05                     | 0.57              |
| 1:E:281:ASN:O    | 1:E:287:PHE:HB2  | 2.04                     | 0.57              |
| 2:J:30:VAL:HG12  | 2:J:34:HIS:O     | 2.05                     | 0.57              |
| 2:J:240:LYS:HE2  | 1:M:282:LEU:HB3  | 1.87                     | 0.57              |
| 2:L:258:THR:HG22 | 2:L:259:TYR:N    | 2.20                     | 0.57              |
| 2:N:185:ALA:HA   | 2:N:188:VAL:HB   | 1.85                     | 0.57              |
| 2:R:30:VAL:HG12  | 2:R:34:HIS:O     | 2.05                     | 0.57              |
| 1:U:256:ALA:HB1  | 1:U:260:ILE:HD11 | 1.86                     | 0.57              |
| 1:A:51:PHE:CZ    | 1:A:69:HIS:HB3   | 2.40                     | 0.57              |
| 2:B:43:ARG:CB    | 2:B:43:ARG:HG3   | 2.22                     | 0.57              |
| 1:E:90:ILE:HB    | 1:E:137:VAL:HG11 | 1.87                     | 0.57              |
| 2:H:258:THR:HG22 | 2:H:259:TYR:N    | 2.19                     | 0.57              |
| 1:I:141:LEU:HD23 | 1:I:164:ILE:HD13 | 1.87                     | 0.57              |
| 1:I:272:TYR:H    | 2:J:259:TYR:HD2  | 1.52                     | 0.57              |
| 2:L:158:ALA:HB3  | 2:L:165:LEU:HG   | 1.87                     | 0.57              |
| 1:U:235:ALA:HA   | 2:V:235:LEU:HD22 | 1.86                     | 0.57              |
| 2:V:235:LEU:O    | 1:W:251:LEU:HD21 | 2.05                     | 0.57              |
| 1:W:141:LEU:HD23 | 1:W:164:ILE:HD13 | 1.87                     | 0.57              |
| 1:A:141:LEU:HD23 | 1:A:164:ILE:HD13 | 1.87                     | 0.57              |
| 1:A:203:ALA:HB1  | 2:B:198:PHE:O    | 2.04                     | 0.57              |
| 1:I:271:ILE:HG23 | 2:J:259:TYR:CE2  | 2.39                     | 0.57              |
| 2:J:39:PHE:HB3   | 2:J:63:LYS:O     | 2.05                     | 0.57              |
| 2:J:237:GLU:OE1  | 1:M:283:GLN:CD   | 2.48                     | 0.57              |
| 1:K:132:VAL:HG11 | 1:K:177:LEU:HD12 | 1.85                     | 0.57              |
| 2:L:158:ALA:HB1  | 2:L:163:LEU:CB   | 2.34                     | 0.57              |
| 1:Q:99:LEU:HD21  | 2:R:140:ILE:HB   | 1.86                     | 0.57              |
| 2:T:30:VAL:HG12  | 2:T:34:HIS:O     | 2.05                     | 0.57              |
| 2:T:258:THR:HG22 | 2:T:259:TYR:N    | 2.20                     | 0.57              |
| 1:U:246:PRO:HD3  | 1:W:294:LEU:HB2  | 1.87                     | 0.57              |
| 1:W:51:PHE:CZ    | 1:W:69:HIS:HB3   | 2.40                     | 0.57              |
| 1:W:132:VAL:HG11 | 1:W:177:LEU:HD12 | 1.85                     | 0.57              |
| 1:W:261:SER:CB   | 1:W:264:ILE:HD12 | 2.34                     | 0.57              |
| 1:A:217:ALA:CB   | 2:B:212:ILE:HD13 | 2.35                     | 0.57              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:B:139:LEU:HD12 | 2:B:175:PHE:CE1  | 2.39                     | 0.57              |
| 2:B:258:THR:HG22 | 2:B:259:TYR:N    | 2.19                     | 0.57              |
| 2:F:90:ILE:HG23  | 2:F:172:HIS:O    | 2.05                     | 0.57              |
| 2:H:158:ALA:HB3  | 2:H:165:LEU:HG   | 1.87                     | 0.57              |
| 2:J:158:ALA:HB1  | 2:J:163:LEU:CB   | 2.34                     | 0.57              |
| 2:J:236:ILE:O    | 1:K:254:ILE:HD13 | 2.05                     | 0.57              |
| 2:J:240:LYS:HZ3  | 1:M:283:GLN:HG3  | 1.70                     | 0.57              |
| 1:K:232:ALA:CA   | 2:L:224:ILE:HG12 | 2.34                     | 0.57              |
| 2:L:39:PHE:HB3   | 2:L:63:LYS:O     | 2.05                     | 0.57              |
| 2:L:92:LEU:HD12  | 2:L:169:SER:O    | 2.04                     | 0.57              |
| 1:O:281:ASN:O    | 1:O:287:PHE:HB2  | 2.04                     | 0.57              |
| 2:P:39:PHE:HB3   | 2:P:63:LYS:O     | 2.05                     | 0.57              |
| 2:P:44:GLY:O     | 1:Q:66:GLU:OE2   | 2.22                     | 0.57              |
| 2:P:46:GLN:CA    | 1:Q:66:GLU:CD    | 2.78                     | 0.57              |
| 2:R:92:LEU:HD12  | 2:R:169:SER:O    | 2.04                     | 0.57              |
| 2:T:158:ALA:HB1  | 2:T:163:LEU:CB   | 2.34                     | 0.57              |
| 1:U:164:ILE:CD1  | 1:U:184:ILE:HD11 | 2.31                     | 0.57              |
| 2:H:39:PHE:HB3   | 2:H:63:LYS:O     | 2.05                     | 0.57              |
| 1:I:256:ALA:HB1  | 1:I:260:ILE:HD11 | 1.86                     | 0.57              |
| 2:J:43:ARG:CA    | 1:K:67:GLY:N     | 2.67                     | 0.57              |
| 1:M:261:SER:CB   | 1:M:264:ILE:HD12 | 2.34                     | 0.57              |
| 2:P:128:LYS:HD2  | 1:Q:157:ARG:CD   | 2.34                     | 0.57              |
| 2:R:248:ALA:HB2  | 1:S:278:LEU:HD23 | 1.87                     | 0.57              |
| 2:R:258:THR:HG22 | 2:R:259:TYR:N    | 2.20                     | 0.57              |
| 2:T:39:PHE:HB3   | 2:T:63:LYS:O     | 2.05                     | 0.57              |
| 2:B:158:ALA:HB1  | 2:B:163:LEU:CB   | 2.34                     | 0.56              |
| 1:C:175:PHE:CZ   | 2:D:167:ASP:HB2  | 2.40                     | 0.56              |
| 2:F:90:ILE:HG21  | 2:F:170:LEU:HD22 | 1.85                     | 0.56              |
| 1:G:90:ILE:HB    | 1:G:137:VAL:HG11 | 1.87                     | 0.56              |
| 1:G:206:GLU:OE1  | 2:H:202:LYS:CD   | 2.52                     | 0.56              |
| 2:J:92:LEU:HD12  | 2:J:169:SER:O    | 2.04                     | 0.56              |
| 1:K:51:PHE:CZ    | 1:K:69:HIS:HB3   | 2.40                     | 0.56              |
| 1:K:261:SER:CB   | 1:K:264:ILE:HD12 | 2.34                     | 0.56              |
| 2:L:43:ARG:O     | 1:M:66:GLU:HB3   | 2.04                     | 0.56              |
| 2:L:178:GLU:OE1  | 1:M:202:VAL:HG13 | 2.05                     | 0.56              |
| 1:M:99:LEU:HD22  | 2:N:175:PHE:CD2  | 2.40                     | 0.56              |
| 2:N:39:PHE:HB3   | 2:N:63:LYS:O     | 2.05                     | 0.56              |
| 2:N:90:ILE:HG23  | 2:N:172:HIS:O    | 2.05                     | 0.56              |
| 2:N:92:LEU:HD12  | 2:N:169:SER:O    | 2.04                     | 0.56              |
| 1:O:90:ILE:HB    | 1:O:137:VAL:HG11 | 1.87                     | 0.56              |
| 2:P:158:ALA:HB1  | 2:P:163:LEU:CB   | 2.34                     | 0.56              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:P:258:THR:HG22 | 2:P:259:TYR:N    | 2.19                     | 0.56              |
| 1:Q:51:PHE:CZ    | 1:Q:69:HIS:HB3   | 2.40                     | 0.56              |
| 2:V:259:TYR:HD1  | 1:W:273:LEU:CB   | 2.17                     | 0.56              |
| 2:X:258:THR:HG22 | 2:X:259:TYR:N    | 2.20                     | 0.56              |
| 2:D:39:PHE:HB3   | 2:D:63:LYS:O     | 2.05                     | 0.56              |
| 2:D:258:THR:HG22 | 2:D:259:TYR:N    | 2.19                     | 0.56              |
| 2:H:139:LEU:HD12 | 2:H:175:PHE:CE1  | 2.39                     | 0.56              |
| 2:J:90:ILE:HG23  | 2:J:172:HIS:O    | 2.05                     | 0.56              |
| 2:J:139:LEU:HD12 | 2:J:175:PHE:CE1  | 2.39                     | 0.56              |
| 2:L:30:VAL:HG12  | 2:L:34:HIS:O     | 2.05                     | 0.56              |
| 2:L:90:ILE:HG23  | 2:L:172:HIS:O    | 2.05                     | 0.56              |
| 1:O:51:PHE:CZ    | 1:O:69:HIS:HB3   | 2.40                     | 0.56              |
| 1:O:108:VAL:HG21 | 1:O:137:VAL:CG2  | 2.32                     | 0.56              |
| 1:O:261:SER:CB   | 1:O:264:ILE:HD12 | 2.34                     | 0.56              |
| 2:P:30:VAL:HG12  | 2:P:34:HIS:O     | 2.05                     | 0.56              |
| 2:P:272:GLN:HG2  | 2:R:272:GLN:OE1  | 2.06                     | 0.56              |
| 1:Q:267:SER:HB2  | 2:R:252:SER:O    | 2.03                     | 0.56              |
| 1:S:256:ALA:HB1  | 1:S:260:ILE:HD11 | 1.86                     | 0.56              |
| 2:T:158:ALA:HB3  | 2:T:165:LEU:HG   | 1.87                     | 0.56              |
| 1:U:90:ILE:HB    | 1:U:137:VAL:HG11 | 1.87                     | 0.56              |
| 2:V:139:LEU:HD12 | 2:V:175:PHE:CE1  | 2.39                     | 0.56              |
| 2:X:30:VAL:HG12  | 2:X:34:HIS:O     | 2.05                     | 0.56              |
| 2:X:158:ALA:HB3  | 2:X:165:LEU:HG   | 1.87                     | 0.56              |
| 2:B:39:PHE:HB3   | 2:B:63:LYS:O     | 2.05                     | 0.56              |
| 2:B:158:ALA:HB3  | 2:B:165:LEU:HG   | 1.87                     | 0.56              |
| 2:B:267:LEU:HG   | 2:D:267:LEU:HB3  | 1.86                     | 0.56              |
| 1:C:271:ILE:HA   | 2:D:259:TYR:HB3  | 1.87                     | 0.56              |
| 2:D:79:ILE:HG23  | 2:D:89:ASN:OD1   | 2.06                     | 0.56              |
| 1:G:281:ASN:O    | 1:G:287:PHE:HB2  | 2.04                     | 0.56              |
| 2:H:269:GLN:HA   | 2:J:269:GLN:OE1  | 2.05                     | 0.56              |
| 2:J:85:LEU:HD11  | 1:K:155:THR:CG2  | 2.34                     | 0.56              |
| 2:J:108:THR:HG22 | 1:K:66:GLU:OE2   | 2.04                     | 0.56              |
| 2:J:158:ALA:HB3  | 2:J:165:LEU:HG   | 1.87                     | 0.56              |
| 2:J:258:THR:HG22 | 2:J:259:TYR:N    | 2.20                     | 0.56              |
| 1:K:281:ASN:O    | 1:K:287:PHE:HB2  | 2.04                     | 0.56              |
| 1:M:141:LEU:HD23 | 1:M:164:ILE:HD13 | 1.87                     | 0.56              |
| 1:M:171:ARG:NH2  | 2:N:167:ASP:OD2  | 2.38                     | 0.56              |
| 2:P:140:ILE:HA   | 2:P:143:ARG:HB2  | 1.87                     | 0.56              |
| 1:Q:281:ASN:O    | 1:Q:287:PHE:HB2  | 2.04                     | 0.56              |
| 1:S:51:PHE:CZ    | 1:S:69:HIS:HB3   | 2.40                     | 0.56              |
| 1:S:249:ILE:HG13 | 2:T:238:LEU:HA   | 1.86                     | 0.56              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:U:51:PHE:CZ    | 1:U:69:HIS:HB3   | 2.40                     | 0.56              |
| 2:V:207:LYS:HD2  | 1:W:227:GLN:HG2  | 1.86                     | 0.56              |
| 2:V:235:LEU:CD1  | 2:V:239:ARG:HG2  | 2.35                     | 0.56              |
| 2:B:204:GLU:CA   | 1:C:226:VAL:HG21 | 2.33                     | 0.56              |
| 2:D:30:VAL:HG12  | 2:D:34:HIS:O     | 2.05                     | 0.56              |
| 2:D:92:LEU:HD12  | 2:D:169:SER:O    | 2.04                     | 0.56              |
| 1:E:285:GLU:O    | 1:E:289:ARG:HG3  | 2.06                     | 0.56              |
| 2:F:140:ILE:HA   | 2:F:143:ARG:HB2  | 1.87                     | 0.56              |
| 2:F:243:ALA:HB1  | 2:F:247:ILE:HD11 | 1.88                     | 0.56              |
| 1:G:164:ILE:CD1  | 1:G:184:ILE:HD11 | 2.31                     | 0.56              |
| 1:G:193:TYR:CD1  | 2:H:188:VAL:HG22 | 2.39                     | 0.56              |
| 1:I:79:ILE:HD13  | 1:I:121:TYR:CD2  | 2.41                     | 0.56              |
| 1:K:141:LEU:HD23 | 1:K:164:ILE:HD13 | 1.87                     | 0.56              |
| 2:L:235:LEU:CD1  | 2:L:239:ARG:HG2  | 2.36                     | 0.56              |
| 1:M:51:PHE:CZ    | 1:M:69:HIS:HB3   | 2.40                     | 0.56              |
| 2:P:121:SER:OG   | 1:Q:183:ALA:HB1  | 2.06                     | 0.56              |
| 2:P:158:ALA:HB3  | 2:P:165:LEU:HG   | 1.87                     | 0.56              |
| 2:R:82:SER:O     | 2:R:85:LEU:HD23  | 2.06                     | 0.56              |
| 2:R:90:ILE:HG23  | 2:R:172:HIS:O    | 2.05                     | 0.56              |
| 1:U:141:LEU:HD23 | 1:U:164:ILE:HD13 | 1.87                     | 0.56              |
| 2:V:79:ILE:HG23  | 2:V:89:ASN:OD1   | 2.06                     | 0.56              |
| 1:W:281:ASN:O    | 1:W:287:PHE:HB2  | 2.05                     | 0.56              |
| 1:A:281:ASN:O    | 1:A:287:PHE:HB2  | 2.05                     | 0.56              |
| 2:D:256:ASN:HB2  | 1:E:268:GLN:HE21 | 1.70                     | 0.56              |
| 2:F:82:SER:O     | 2:F:85:LEU:HD23  | 2.06                     | 0.56              |
| 1:G:141:LEU:HD23 | 1:G:164:ILE:HD13 | 1.87                     | 0.56              |
| 2:L:222:GLU:OE2  | 1:M:241:ALA:HB2  | 2.06                     | 0.56              |
| 1:O:285:GLU:O    | 1:O:289:ARG:HG3  | 2.06                     | 0.56              |
| 2:P:39:PHE:CE2   | 1:Q:44:GLU:HG2   | 2.39                     | 0.56              |
| 2:P:41:ARG:HB3   | 1:Q:43:VAL:HG12  | 1.86                     | 0.56              |
| 2:P:90:ILE:HG23  | 2:P:172:HIS:O    | 2.05                     | 0.56              |
| 2:P:221:ALA:HB2  | 1:Q:248:TYR:CD2  | 2.40                     | 0.56              |
| 2:T:82:SER:O     | 2:T:85:LEU:HD23  | 2.06                     | 0.56              |
| 1:U:214:VAL:HG21 | 2:V:205:GLN:OE1  | 2.05                     | 0.56              |
| 1:U:245:ASN:HA   | 1:W:294:LEU:HB3  | 1.87                     | 0.56              |
| 1:W:90:ILE:HB    | 1:W:137:VAL:HG11 | 1.87                     | 0.56              |
| 2:X:79:ILE:HG23  | 2:X:89:ASN:OD1   | 2.06                     | 0.56              |
| 2:X:90:ILE:HG23  | 2:X:172:HIS:O    | 2.05                     | 0.56              |
| 2:B:30:VAL:HG12  | 2:B:34:HIS:O     | 2.05                     | 0.56              |
| 2:B:79:ILE:HG23  | 2:B:89:ASN:OD1   | 2.06                     | 0.56              |
| 1:C:51:PHE:CZ    | 1:C:69:HIS:HB3   | 2.40                     | 0.56              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:79:ILE:HD13  | 1:C:121:TYR:CD2  | 2.41                     | 0.56              |
| 2:D:158:ALA:HB1  | 2:D:163:LEU:CB   | 2.34                     | 0.56              |
| 2:D:228:LEU:CD1  | 1:E:251:LEU:HD11 | 2.36                     | 0.56              |
| 1:G:51:PHE:CZ    | 1:G:69:HIS:HB3   | 2.40                     | 0.56              |
| 1:I:281:ASN:O    | 1:I:287:PHE:HB2  | 2.05                     | 0.56              |
| 2:J:79:ILE:HG23  | 2:J:89:ASN:OD1   | 2.06                     | 0.56              |
| 2:J:82:SER:O     | 2:J:85:LEU:HD23  | 2.06                     | 0.56              |
| 1:K:79:ILE:HD13  | 1:K:121:TYR:CD2  | 2.41                     | 0.56              |
| 1:K:221:GLN:NE2  | 2:L:216:GLY:N    | 2.54                     | 0.56              |
| 1:M:193:TYR:CD1  | 2:N:188:VAL:HG22 | 2.41                     | 0.56              |
| 1:M:285:GLU:O    | 1:M:289:ARG:HG3  | 2.06                     | 0.56              |
| 2:T:139:LEU:HD12 | 2:T:175:PHE:CE1  | 2.39                     | 0.56              |
| 2:T:243:ALA:HB1  | 2:T:247:ILE:HD11 | 1.88                     | 0.56              |
| 1:U:204:GLN:HB2  | 2:V:198:PHE:CD2  | 2.41                     | 0.56              |
| 2:V:30:VAL:HG12  | 2:V:34:HIS:O     | 2.05                     | 0.56              |
| 2:V:90:ILE:HG23  | 2:V:172:HIS:O    | 2.05                     | 0.56              |
| 1:W:79:ILE:HD13  | 1:W:121:TYR:CD2  | 2.41                     | 0.56              |
| 1:W:285:GLU:O    | 1:W:289:ARG:HG3  | 2.06                     | 0.56              |
| 1:C:90:ILE:HB    | 1:C:137:VAL:HG11 | 1.87                     | 0.56              |
| 1:C:141:LEU:HD23 | 1:C:164:ILE:HD13 | 1.87                     | 0.56              |
| 2:D:189:ALA:HB3  | 1:E:212:PHE:CD2  | 2.41                     | 0.56              |
| 1:E:51:PHE:CZ    | 1:E:69:HIS:HB3   | 2.40                     | 0.56              |
| 1:E:141:LEU:HD23 | 1:E:164:ILE:HD13 | 1.87                     | 0.56              |
| 2:J:224:ILE:HG21 | 1:K:251:LEU:HG   | 1.88                     | 0.56              |
| 1:M:79:ILE:HD13  | 1:M:121:TYR:CD2  | 2.41                     | 0.56              |
| 1:M:99:LEU:CD2   | 2:N:175:PHE:CE2  | 2.88                     | 0.56              |
| 2:N:28:TYR:HD1   | 2:N:30:VAL:HG23  | 1.71                     | 0.56              |
| 1:Q:141:LEU:HD23 | 1:Q:164:ILE:HD13 | 1.87                     | 0.56              |
| 1:Q:238:LEU:HD13 | 2:R:239:ARG:HD3  | 1.87                     | 0.56              |
| 1:Q:285:GLU:O    | 1:Q:289:ARG:HG3  | 2.06                     | 0.56              |
| 2:T:79:ILE:HG23  | 2:T:89:ASN:OD1   | 2.06                     | 0.56              |
| 2:V:82:SER:O     | 2:V:85:LEU:HD23  | 2.06                     | 0.56              |
| 2:V:243:ALA:HB1  | 2:V:247:ILE:HD11 | 1.88                     | 0.56              |
| 2:X:82:SER:O     | 2:X:85:LEU:HD23  | 2.06                     | 0.56              |
| 1:A:90:ILE:HB    | 1:A:137:VAL:HG11 | 1.87                     | 0.56              |
| 1:A:106:LEU:HD12 | 1:A:183:ALA:O    | 2.06                     | 0.56              |
| 1:A:278:LEU:H    | 2:X:259:TYR:HE1  | 1.54                     | 0.56              |
| 2:B:119:LEU:HD23 | 2:B:122:ILE:HD11 | 1.88                     | 0.56              |
| 1:G:285:GLU:O    | 1:G:289:ARG:HG3  | 2.06                     | 0.56              |
| 2:H:235:LEU:CD1  | 2:H:239:ARG:HG2  | 2.35                     | 0.56              |
| 1:I:51:PHE:CZ    | 1:I:69:HIS:HB3   | 2.40                     | 0.56              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:J:119:LEU:HD23 | 2:J:122:ILE:HD11 | 1.88                     | 0.56              |
| 2:L:243:ALA:HB1  | 2:L:247:ILE:HD11 | 1.88                     | 0.56              |
| 1:M:90:ILE:HB    | 1:M:137:VAL:HG11 | 1.87                     | 0.56              |
| 1:Q:132:VAL:HG11 | 1:Q:177:LEU:HD12 | 1.85                     | 0.56              |
| 1:S:272:TYR:O    | 2:T:259:TYR:C    | 2.49                     | 0.56              |
| 2:T:90:ILE:HG23  | 2:T:172:HIS:O    | 2.05                     | 0.56              |
| 1:U:246:PRO:HD3  | 1:W:294:LEU:CB   | 2.36                     | 0.56              |
| 1:A:285:GLU:O    | 1:A:289:ARG:HG3  | 2.06                     | 0.56              |
| 2:B:90:ILE:HG23  | 2:B:172:HIS:O    | 2.05                     | 0.56              |
| 2:B:140:ILE:HA   | 2:B:143:ARG:HB2  | 1.88                     | 0.56              |
| 1:G:153:LEU:HD23 | 1:G:160:VAL:HG21 | 1.88                     | 0.56              |
| 2:H:243:ALA:HB1  | 2:H:247:ILE:HD11 | 1.88                     | 0.56              |
| 1:I:261:SER:CB   | 1:I:264:ILE:HD12 | 2.34                     | 0.56              |
| 2:J:243:ALA:HB1  | 2:J:247:ILE:HD11 | 1.88                     | 0.56              |
| 1:K:285:GLU:O    | 1:K:289:ARG:HG3  | 2.06                     | 0.56              |
| 1:K:299:LYS:HZ1  | 1:M:288:THR:HB   | 1.71                     | 0.56              |
| 2:L:28:TYR:HD1   | 2:L:30:VAL:HG23  | 1.71                     | 0.56              |
| 1:M:138:ASN:HB3  | 2:N:171:THR:O    | 2.06                     | 0.56              |
| 1:M:139:GLU:HA   | 2:N:143:ARG:HH22 | 1.70                     | 0.56              |
| 2:N:79:ILE:HG23  | 2:N:89:ASN:OD1   | 2.06                     | 0.56              |
| 2:N:140:ILE:HA   | 2:N:143:ARG:HB2  | 1.87                     | 0.56              |
| 2:P:43:ARG:HE    | 1:Q:65:ALA:HB3   | 1.70                     | 0.56              |
| 2:P:61:VAL:CG2   | 1:Q:43:VAL:HG12  | 2.34                     | 0.56              |
| 2:P:109:SER:HB3  | 1:Q:111:ARG:HG2  | 1.88                     | 0.56              |
| 1:Q:79:ILE:HD13  | 1:Q:121:TYR:CD2  | 2.41                     | 0.56              |
| 1:Q:106:LEU:HD12 | 1:Q:183:ALA:O    | 2.06                     | 0.56              |
| 2:R:158:ALA:HB3  | 2:R:165:LEU:HG   | 1.87                     | 0.56              |
| 1:S:164:ILE:CD1  | 1:S:184:ILE:HD11 | 2.31                     | 0.56              |
| 2:T:140:ILE:HA   | 2:T:143:ARG:HB2  | 1.88                     | 0.56              |
| 1:U:193:TYR:HE1  | 2:V:187:GLN:HB3  | 1.71                     | 0.56              |
| 2:V:158:ALA:HB1  | 2:V:163:LEU:CB   | 2.34                     | 0.56              |
| 1:A:48:ARG:HB2   | 1:A:117:LEU:HD13 | 1.88                     | 0.56              |
| 1:A:193:TYR:HE1  | 2:B:187:GLN:HB3  | 1.71                     | 0.56              |
| 2:D:82:SER:O     | 2:D:85:LEU:HD23  | 2.06                     | 0.56              |
| 1:G:79:ILE:HD13  | 1:G:121:TYR:CD2  | 2.41                     | 0.56              |
| 2:H:28:TYR:HD1   | 2:H:30:VAL:HG23  | 1.71                     | 0.56              |
| 2:H:140:ILE:HA   | 2:H:143:ARG:HB2  | 1.88                     | 0.56              |
| 1:M:48:ARG:HB2   | 1:M:117:LEU:HD13 | 1.88                     | 0.56              |
| 1:M:106:LEU:HD12 | 1:M:183:ALA:O    | 2.06                     | 0.56              |
| 2:R:79:ILE:HG23  | 2:R:89:ASN:OD1   | 2.06                     | 0.56              |
| 1:S:106:LEU:HD12 | 1:S:183:ALA:O    | 2.06                     | 0.56              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:V:140:ILE:HA   | 2:V:143:ARG:HB2  | 1.87                     | 0.56              |
| 2:V:239:ARG:O    | 1:W:254:ILE:CG2  | 2.49                     | 0.56              |
| 1:W:106:LEU:HD12 | 1:W:183:ALA:O    | 2.06                     | 0.56              |
| 2:X:139:LEU:HD12 | 2:X:175:PHE:CE1  | 2.39                     | 0.56              |
| 1:A:153:LEU:HD23 | 1:A:160:VAL:HG21 | 1.88                     | 0.55              |
| 1:A:203:ALA:CB   | 2:B:198:PHE:C    | 2.79                     | 0.55              |
| 1:C:153:LEU:HD23 | 1:C:160:VAL:HG21 | 1.88                     | 0.55              |
| 2:D:35:ARG:HB2   | 2:D:103:LEU:CD1  | 2.37                     | 0.55              |
| 2:D:140:ILE:HA   | 2:D:143:ARG:HB2  | 1.87                     | 0.55              |
| 2:D:259:TYR:OH   | 1:E:278:LEU:HD12 | 2.06                     | 0.55              |
| 1:E:106:LEU:HD12 | 1:E:183:ALA:O    | 2.06                     | 0.55              |
| 2:F:79:ILE:HG23  | 2:F:89:ASN:OD1   | 2.06                     | 0.55              |
| 2:H:216:GLY:O    | 2:H:219:LYS:HG3  | 2.07                     | 0.55              |
| 1:I:224:LYS:HD3  | 2:J:216:GLY:HA3  | 1.87                     | 0.55              |
| 1:K:260:ILE:HD11 | 2:L:244:ALA:HB1  | 1.88                     | 0.55              |
| 2:N:216:GLY:O    | 2:N:219:LYS:HG3  | 2.07                     | 0.55              |
| 2:N:269:GLN:NE2  | 2:P:269:GLN:CG   | 2.68                     | 0.55              |
| 2:P:179:PHE:CE2  | 1:Q:201:GLN:OE1  | 2.58                     | 0.55              |
| 1:S:253:LYS:HZ1  | 2:T:241:LEU:HD11 | 1.72                     | 0.55              |
| 1:U:153:LEU:HD23 | 1:U:160:VAL:HG21 | 1.88                     | 0.55              |
| 1:U:246:PRO:HA   | 1:W:294:LEU:HG   | 1.89                     | 0.55              |
| 1:A:217:ALA:HB3  | 2:B:212:ILE:HD13 | 1.88                     | 0.55              |
| 2:B:222:GLU:OE2  | 1:C:241:ALA:CB   | 2.53                     | 0.55              |
| 2:B:243:ALA:HB1  | 2:B:247:ILE:HD11 | 1.88                     | 0.55              |
| 1:C:48:ARG:HB2   | 1:C:117:LEU:HD13 | 1.88                     | 0.55              |
| 1:C:285:GLU:O    | 1:C:289:ARG:HG3  | 2.06                     | 0.55              |
| 2:D:28:TYR:HD1   | 2:D:30:VAL:HG23  | 1.71                     | 0.55              |
| 2:D:135:ASP:O    | 2:D:139:LEU:HG   | 2.07                     | 0.55              |
| 2:D:243:ALA:HB1  | 2:D:247:ILE:HD11 | 1.88                     | 0.55              |
| 2:D:246:ASP:CB   | 1:E:262:LYS:HE2  | 2.36                     | 0.55              |
| 2:F:158:ALA:HB1  | 2:F:163:LEU:CB   | 2.34                     | 0.55              |
| 2:F:228:LEU:HD22 | 2:F:232:GLY:O    | 2.06                     | 0.55              |
| 2:H:79:ILE:HG23  | 2:H:89:ASN:OD1   | 2.06                     | 0.55              |
| 2:H:119:LEU:HD23 | 2:H:122:ILE:HD11 | 1.88                     | 0.55              |
| 2:H:228:LEU:HD22 | 2:H:232:GLY:O    | 2.06                     | 0.55              |
| 2:J:28:TYR:HD1   | 2:J:30:VAL:HG23  | 1.71                     | 0.55              |
| 1:K:106:LEU:HD12 | 1:K:183:ALA:O    | 2.06                     | 0.55              |
| 2:L:43:ARG:CB    | 2:L:43:ARG:HG3   | 2.22                     | 0.55              |
| 2:L:119:LEU:HD23 | 2:L:122:ILE:HD11 | 1.88                     | 0.55              |
| 1:Q:48:ARG:HB2   | 1:Q:117:LEU:HD13 | 1.88                     | 0.55              |
| 2:R:119:LEU:HD23 | 2:R:122:ILE:HD11 | 1.88                     | 0.55              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:S:48:ARG:HB2   | 1:S:117:LEU:HD13 | 1.88                     | 0.55              |
| 1:S:141:LEU:HD23 | 1:S:164:ILE:HD13 | 1.87                     | 0.55              |
| 1:S:285:GLU:O    | 1:S:289:ARG:HG3  | 2.06                     | 0.55              |
| 2:T:35:ARG:HB2   | 2:T:103:LEU:CD1  | 2.37                     | 0.55              |
| 2:T:135:ASP:O    | 2:T:139:LEU:HG   | 2.06                     | 0.55              |
| 1:U:79:ILE:HD13  | 1:U:121:TYR:CD2  | 2.41                     | 0.55              |
| 2:V:158:ALA:HB3  | 2:V:165:LEU:HG   | 1.87                     | 0.55              |
| 2:V:254:SER:HB2  | 1:W:264:ILE:HG22 | 1.87                     | 0.55              |
| 1:A:68:LEU:N     | 2:X:43:ARG:CD    | 2.69                     | 0.55              |
| 2:B:211:ILE:CG1  | 1:C:233:GLU:OE2  | 2.54                     | 0.55              |
| 1:C:131:ARG:HA   | 2:D:95:LEU:CD2   | 2.36                     | 0.55              |
| 1:C:290:GLY:C    | 1:E:283:GLN:OE1  | 2.49                     | 0.55              |
| 2:D:90:ILE:HG23  | 2:D:172:HIS:O    | 2.05                     | 0.55              |
| 1:E:48:ARG:HB2   | 1:E:117:LEU:HD13 | 1.88                     | 0.55              |
| 2:F:28:TYR:HD1   | 2:F:30:VAL:HG23  | 1.71                     | 0.55              |
| 1:G:94:THR:HG23  | 1:G:142:LYS:HD2  | 1.89                     | 0.55              |
| 2:H:35:ARG:HB2   | 2:H:103:LEU:CD1  | 2.37                     | 0.55              |
| 2:H:90:ILE:HG23  | 2:H:172:HIS:O    | 2.05                     | 0.55              |
| 1:I:228:ALA:N    | 2:J:219:LYS:HZ1  | 2.01                     | 0.55              |
| 2:L:79:ILE:HG23  | 2:L:89:ASN:OD1   | 2.06                     | 0.55              |
| 2:L:228:LEU:HD22 | 2:L:232:GLY:O    | 2.06                     | 0.55              |
| 2:N:228:LEU:HD22 | 2:N:232:GLY:O    | 2.06                     | 0.55              |
| 1:O:79:ILE:HD13  | 1:O:121:TYR:CD2  | 2.41                     | 0.55              |
| 1:O:256:ALA:HB1  | 1:O:260:ILE:HD11 | 1.86                     | 0.55              |
| 2:P:35:ARG:HB2   | 2:P:103:LEU:CD1  | 2.37                     | 0.55              |
| 2:P:39:PHE:C     | 1:Q:45:GLY:N     | 2.62                     | 0.55              |
| 2:P:79:ILE:HG23  | 2:P:89:ASN:OD1   | 2.06                     | 0.55              |
| 1:S:272:TYR:CZ   | 2:T:271:PRO:HG3  | 2.40                     | 0.55              |
| 1:U:94:THR:HG23  | 1:U:142:LYS:HD2  | 1.89                     | 0.55              |
| 1:U:285:GLU:O    | 1:U:289:ARG:HG3  | 2.06                     | 0.55              |
| 2:V:35:ARG:HB2   | 2:V:103:LEU:CD1  | 2.37                     | 0.55              |
| 2:V:258:THR:C    | 1:W:272:TYR:HA   | 2.30                     | 0.55              |
| 2:B:82:SER:O     | 2:B:85:LEU:HD23  | 2.06                     | 0.55              |
| 2:D:216:GLY:O    | 2:D:219:LYS:HG3  | 2.07                     | 0.55              |
| 2:F:30:VAL:HG12  | 2:F:34:HIS:O     | 2.05                     | 0.55              |
| 1:I:82:ASP:OD1   | 1:I:82:ASP:O     | 2.25                     | 0.55              |
| 1:I:153:LEU:HD23 | 1:I:160:VAL:HG21 | 1.88                     | 0.55              |
| 1:I:235:ALA:CB   | 2:J:227:SER:OG   | 2.54                     | 0.55              |
| 1:K:239:GLY:HA3  | 2:L:228:LEU:CD2  | 2.36                     | 0.55              |
| 1:K:299:LYS:OXT  | 1:M:285:GLU:OE2  | 2.24                     | 0.55              |
| 2:L:80:THR:HG21  | 2:L:131:VAL:HB   | 1.89                     | 0.55              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:L:197:ARG:HH12 | 1:M:222:ARG:HH22 | 1.54                     | 0.55              |
| 2:L:216:GLY:O    | 2:L:219:LYS:HG3  | 2.07                     | 0.55              |
| 1:M:121:TYR:O    | 2:N:33:GLY:CA    | 2.54                     | 0.55              |
| 2:N:80:THR:HG21  | 2:N:131:VAL:HB   | 1.89                     | 0.55              |
| 2:N:267:LEU:HD11 | 2:P:267:LEU:CD2  | 2.27                     | 0.55              |
| 1:O:141:LEU:HD23 | 1:O:164:ILE:HD13 | 1.87                     | 0.55              |
| 2:P:82:SER:O     | 2:P:85:LEU:HD23  | 2.06                     | 0.55              |
| 2:P:109:SER:C    | 1:Q:85:ALA:HB2   | 2.32                     | 0.55              |
| 2:P:119:LEU:HD23 | 2:P:122:ILE:HD11 | 1.88                     | 0.55              |
| 2:P:157:ARG:NH2  | 1:Q:162:LEU:CD2  | 2.70                     | 0.55              |
| 2:P:185:ALA:O    | 1:Q:212:PHE:CZ   | 2.59                     | 0.55              |
| 1:Q:94:THR:HG23  | 1:Q:142:LYS:HD2  | 1.89                     | 0.55              |
| 1:S:94:THR:HG23  | 1:S:142:LYS:HD2  | 1.89                     | 0.55              |
| 2:B:28:TYR:HD1   | 2:B:30:VAL:HG23  | 1.71                     | 0.55              |
| 2:D:41:ARG:CZ    | 1:E:43:VAL:HG12  | 2.36                     | 0.55              |
| 2:D:119:LEU:HD23 | 2:D:122:ILE:HD11 | 1.88                     | 0.55              |
| 2:D:158:ALA:HB3  | 2:D:165:LEU:HG   | 1.87                     | 0.55              |
| 2:D:228:LEU:HD22 | 2:D:232:GLY:O    | 2.06                     | 0.55              |
| 2:F:135:ASP:O    | 2:F:139:LEU:HG   | 2.06                     | 0.55              |
| 1:I:48:ARG:HB2   | 1:I:117:LEU:HD13 | 1.88                     | 0.55              |
| 1:I:285:GLU:O    | 1:I:289:ARG:HG3  | 2.06                     | 0.55              |
| 2:J:135:ASP:O    | 2:J:139:LEU:HG   | 2.06                     | 0.55              |
| 2:J:235:LEU:CD1  | 2:J:239:ARG:HG2  | 2.35                     | 0.55              |
| 1:M:142:LYS:HE3  | 2:N:173:LEU:CB   | 2.37                     | 0.55              |
| 2:N:158:ALA:HB3  | 2:N:165:LEU:HG   | 1.87                     | 0.55              |
| 1:O:153:LEU:HD23 | 1:O:160:VAL:HG21 | 1.88                     | 0.55              |
| 2:P:216:GLY:O    | 2:P:219:LYS:HG3  | 2.07                     | 0.55              |
| 2:P:243:ALA:HB1  | 2:P:247:ILE:HD11 | 1.88                     | 0.55              |
| 1:Q:82:ASP:OD1   | 1:Q:82:ASP:O     | 2.25                     | 0.55              |
| 2:R:257:ILE:CB   | 1:S:278:LEU:HD12 | 2.33                     | 0.55              |
| 2:T:80:THR:HG21  | 2:T:131:VAL:HB   | 1.89                     | 0.55              |
| 2:T:119:LEU:HD23 | 2:T:122:ILE:HD11 | 1.88                     | 0.55              |
| 2:X:135:ASP:O    | 2:X:139:LEU:HG   | 2.06                     | 0.55              |
| 1:A:79:ILE:HD13  | 1:A:121:TYR:CD2  | 2.41                     | 0.55              |
| 1:A:197:VAL:HG22 | 2:B:191:GLN:CB   | 2.36                     | 0.55              |
| 2:B:235:LEU:CD1  | 2:B:239:ARG:HG2  | 2.36                     | 0.55              |
| 1:C:290:GLY:O    | 1:E:283:GLN:OE1  | 2.23                     | 0.55              |
| 2:D:224:ILE:HD13 | 1:E:248:TYR:CE1  | 2.41                     | 0.55              |
| 1:E:79:ILE:HD13  | 1:E:121:TYR:CD2  | 2.41                     | 0.55              |
| 2:F:216:GLY:O    | 2:F:219:LYS:HG3  | 2.07                     | 0.55              |
| 1:G:106:LEU:HD12 | 1:G:183:ALA:O    | 2.06                     | 0.55              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:H:82:SER:O     | 2:H:85:LEU:HD23  | 2.06                     | 0.55              |
| 1:I:106:LEU:HD12 | 1:I:183:ALA:O    | 2.06                     | 0.55              |
| 2:J:228:LEU:HD22 | 2:J:232:GLY:O    | 2.06                     | 0.55              |
| 2:L:92:LEU:HD13  | 2:L:170:LEU:HD23 | 1.89                     | 0.55              |
| 1:M:164:ILE:CD1  | 1:M:184:ILE:HD11 | 2.31                     | 0.55              |
| 2:N:139:LEU:HD12 | 2:N:175:PHE:CE1  | 2.39                     | 0.55              |
| 2:N:258:THR:HG22 | 2:N:259:TYR:N    | 2.19                     | 0.55              |
| 2:P:28:TYR:HD1   | 2:P:30:VAL:HG23  | 1.71                     | 0.55              |
| 2:R:92:LEU:HD13  | 2:R:170:LEU:HD23 | 1.89                     | 0.55              |
| 2:R:216:GLY:O    | 2:R:219:LYS:HG3  | 2.07                     | 0.55              |
| 2:R:235:LEU:CD1  | 2:R:239:ARG:HG2  | 2.36                     | 0.55              |
| 1:S:82:ASP:OD1   | 1:S:82:ASP:O     | 2.25                     | 0.55              |
| 2:T:204:GLU:HG2  | 1:U:226:VAL:HG21 | 1.89                     | 0.55              |
| 1:U:142:LYS:HZ1  | 2:V:140:ILE:HD13 | 1.71                     | 0.55              |
| 1:U:207:ALA:HB2  | 2:V:201:GLU:CB   | 2.36                     | 0.55              |
| 1:A:164:ILE:CD1  | 1:A:184:ILE:HD11 | 2.31                     | 0.55              |
| 2:B:35:ARG:HB2   | 2:B:103:LEU:CD1  | 2.37                     | 0.55              |
| 1:C:106:LEU:HD12 | 1:C:183:ALA:O    | 2.06                     | 0.55              |
| 2:D:236:ILE:O    | 1:E:254:ILE:HG21 | 2.07                     | 0.55              |
| 1:G:82:ASP:O     | 1:G:82:ASP:OD1   | 2.25                     | 0.55              |
| 1:G:98:ASP:OD2   | 2:H:184:GLU:HG2  | 2.06                     | 0.55              |
| 1:G:256:ALA:HB1  | 1:G:260:ILE:HD11 | 1.86                     | 0.55              |
| 2:N:92:LEU:HD13  | 2:N:170:LEU:HD23 | 1.89                     | 0.55              |
| 2:N:243:ALA:HB1  | 2:N:247:ILE:HD11 | 1.88                     | 0.55              |
| 2:P:235:LEU:CD1  | 2:P:239:ARG:HG2  | 2.36                     | 0.55              |
| 1:Q:253:LYS:NZ   | 2:R:241:LEU:CD1  | 2.70                     | 0.55              |
| 2:R:28:TYR:HD1   | 2:R:30:VAL:HG23  | 1.71                     | 0.55              |
| 2:R:35:ARG:HB2   | 2:R:103:LEU:CD1  | 2.37                     | 0.55              |
| 2:R:135:ASP:O    | 2:R:139:LEU:HG   | 2.06                     | 0.55              |
| 2:R:243:ALA:HB1  | 2:R:247:ILE:HD11 | 1.88                     | 0.55              |
| 2:R:261:PRO:HB3  | 1:S:284:ASP:OD2  | 2.07                     | 0.55              |
| 1:S:79:ILE:HD13  | 1:S:121:TYR:CD2  | 2.41                     | 0.55              |
| 1:U:82:ASP:OD1   | 1:U:82:ASP:O     | 2.25                     | 0.55              |
| 1:W:164:ILE:CD1  | 1:W:184:ILE:HD11 | 2.31                     | 0.55              |
| 2:X:35:ARG:HB2   | 2:X:103:LEU:CD1  | 2.37                     | 0.55              |
| 2:X:37:VAL:CG1   | 2:X:45:VAL:HG13  | 2.37                     | 0.55              |
| 2:X:243:ALA:HB1  | 2:X:247:ILE:HD11 | 1.88                     | 0.55              |
| 1:A:82:ASP:OD1   | 1:A:82:ASP:O     | 2.25                     | 0.55              |
| 2:B:270:LEU:HD13 | 1:C:272:TYR:CZ   | 2.41                     | 0.55              |
| 1:C:270:ARG:O    | 2:D:258:THR:HG23 | 2.06                     | 0.55              |
| 2:D:251:LEU:HD23 | 1:E:264:ILE:C    | 2.31                     | 0.55              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:48:ARG:HB2   | 1:G:117:LEU:HD13 | 1.88                     | 0.55              |
| 2:H:135:ASP:O    | 2:H:139:LEU:HG   | 2.06                     | 0.55              |
| 1:K:94:THR:HG23  | 1:K:142:LYS:HD2  | 1.89                     | 0.55              |
| 1:M:142:LYS:HE3  | 2:N:173:LEU:HB3  | 1.88                     | 0.55              |
| 2:R:80:THR:HG21  | 2:R:131:VAL:HB   | 1.89                     | 0.55              |
| 1:S:90:ILE:HB    | 1:S:137:VAL:HG11 | 1.87                     | 0.55              |
| 1:S:153:LEU:HD23 | 1:S:160:VAL:HG21 | 1.88                     | 0.55              |
| 1:W:48:ARG:HB2   | 1:W:117:LEU:HD13 | 1.88                     | 0.55              |
| 2:F:80:THR:HG21  | 2:F:131:VAL:HB   | 1.89                     | 0.55              |
| 2:F:119:LEU:HD23 | 2:F:122:ILE:HD11 | 1.88                     | 0.55              |
| 2:F:218:SER:CB   | 1:G:237:MET:HE1  | 2.37                     | 0.55              |
| 2:L:37:VAL:CG1   | 2:L:45:VAL:HG13  | 2.37                     | 0.55              |
| 2:N:37:VAL:CG1   | 2:N:45:VAL:HG13  | 2.37                     | 0.55              |
| 2:N:82:SER:O     | 2:N:85:LEU:HD23  | 2.06                     | 0.55              |
| 2:P:179:PHE:HB2  | 1:Q:201:GLN:C    | 2.32                     | 0.55              |
| 1:Q:217:ALA:CB   | 2:R:208:LYS:NZ   | 2.69                     | 0.55              |
| 1:Q:256:ALA:HB1  | 1:Q:260:ILE:HD11 | 1.86                     | 0.55              |
| 2:R:140:ILE:HA   | 2:R:143:ARG:HB2  | 1.87                     | 0.55              |
| 2:R:268:LEU:HD12 | 2:T:266:VAL:HG13 | 1.89                     | 0.55              |
| 1:S:252:ARG:HE   | 2:T:245:GLU:HG2  | 1.70                     | 0.55              |
| 2:T:92:LEU:HD13  | 2:T:170:LEU:HD23 | 1.89                     | 0.55              |
| 1:U:106:LEU:HD12 | 1:U:183:ALA:O    | 2.06                     | 0.55              |
| 2:V:37:VAL:CG1   | 2:V:45:VAL:HG13  | 2.37                     | 0.55              |
| 2:V:135:ASP:O    | 2:V:139:LEU:HG   | 2.06                     | 0.55              |
| 2:V:216:GLY:O    | 2:V:219:LYS:HG3  | 2.07                     | 0.55              |
| 2:B:135:ASP:O    | 2:B:139:LEU:HG   | 2.06                     | 0.55              |
| 2:B:269:GLN:CA   | 2:D:269:GLN:HB2  | 2.34                     | 0.55              |
| 2:D:92:LEU:HD13  | 2:D:170:LEU:HD23 | 1.89                     | 0.55              |
| 2:D:225:ALA:CA   | 1:E:248:TYR:CB   | 2.85                     | 0.55              |
| 1:E:82:ASP:OD1   | 1:E:82:ASP:O     | 2.25                     | 0.55              |
| 2:L:259:TYR:CE1  | 1:M:278:LEU:HB2  | 2.42                     | 0.55              |
| 1:M:153:LEU:HD23 | 1:M:160:VAL:HG21 | 1.88                     | 0.55              |
| 1:M:171:ARG:CZ   | 2:N:169:SER:OG   | 2.55                     | 0.55              |
| 2:P:80:THR:HG21  | 2:P:131:VAL:HB   | 1.89                     | 0.55              |
| 2:P:135:ASP:O    | 2:P:139:LEU:HG   | 2.06                     | 0.55              |
| 2:V:43:ARG:CB    | 2:V:43:ARG:HG3   | 2.22                     | 0.55              |
| 2:V:80:THR:HG21  | 2:V:131:VAL:HB   | 1.89                     | 0.55              |
| 2:V:92:LEU:HD13  | 2:V:170:LEU:HD23 | 1.89                     | 0.55              |
| 2:V:228:LEU:HD22 | 2:V:232:GLY:O    | 2.06                     | 0.55              |
| 1:A:40:VAL:HG11  | 2:X:42:PHE:HE1   | 1.72                     | 0.54              |
| 2:D:224:ILE:CD1  | 1:E:248:TYR:CE1  | 2.90                     | 0.54              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:F:92:LEU:HD13  | 2:F:170:LEU:HD23 | 1.89                     | 0.54              |
| 2:F:158:ALA:HB3  | 2:F:165:LEU:HG   | 1.87                     | 0.54              |
| 2:L:82:SER:O     | 2:L:85:LEU:HD23  | 2.06                     | 0.54              |
| 2:L:140:ILE:HA   | 2:L:143:ARG:HB2  | 1.87                     | 0.54              |
| 1:M:94:THR:HG23  | 1:M:142:LYS:HD2  | 1.89                     | 0.54              |
| 1:O:223:GLN:O    | 1:O:226:VAL:HG12 | 2.08                     | 0.54              |
| 2:P:185:ALA:C    | 1:Q:212:PHE:CZ   | 2.85                     | 0.54              |
| 2:R:37:VAL:CG1   | 2:R:45:VAL:HG13  | 2.37                     | 0.54              |
| 1:U:207:ALA:HB2  | 2:V:201:GLU:HB2  | 1.87                     | 0.54              |
| 2:V:119:LEU:HD23 | 2:V:122:ILE:HD11 | 1.88                     | 0.54              |
| 2:X:140:ILE:HA   | 2:X:143:ARG:HB2  | 1.88                     | 0.54              |
| 2:B:228:LEU:HD22 | 2:B:232:GLY:O    | 2.06                     | 0.54              |
| 2:D:119:LEU:HD21 | 2:D:163:LEU:CD1  | 2.38                     | 0.54              |
| 2:F:35:ARG:HB2   | 2:F:103:LEU:CD1  | 2.37                     | 0.54              |
| 2:F:221:ALA:HB1  | 1:G:242:LEU:HD22 | 1.89                     | 0.54              |
| 1:G:57:GLY:CA    | 2:H:52:GLU:OE1   | 2.52                     | 0.54              |
| 1:G:278:LEU:HA   | 1:G:279:VAL:HG23 | 1.90                     | 0.54              |
| 2:L:135:ASP:O    | 2:L:139:LEU:HG   | 2.06                     | 0.54              |
| 1:M:82:ASP:OD1   | 1:M:82:ASP:O     | 2.25                     | 0.54              |
| 1:M:142:LYS:CG   | 2:N:173:LEU:HB3  | 2.33                     | 0.54              |
| 2:P:37:VAL:CG1   | 2:P:45:VAL:HG13  | 2.37                     | 0.54              |
| 2:P:110:ILE:N    | 1:Q:85:ALA:CB    | 2.70                     | 0.54              |
| 1:Q:153:LEU:HD23 | 1:Q:160:VAL:HG21 | 1.88                     | 0.54              |
| 2:T:103:LEU:HA   | 2:T:106:ILE:HB   | 1.90                     | 0.54              |
| 1:W:223:GLN:O    | 1:W:226:VAL:HG12 | 2.08                     | 0.54              |
| 2:X:92:LEU:HD13  | 2:X:170:LEU:HD23 | 1.89                     | 0.54              |
| 2:X:228:LEU:HD22 | 2:X:232:GLY:O    | 2.06                     | 0.54              |
| 1:C:223:GLN:O    | 1:C:226:VAL:HG12 | 2.08                     | 0.54              |
| 2:D:235:LEU:CD1  | 2:D:239:ARG:HG2  | 2.35                     | 0.54              |
| 1:I:223:GLN:O    | 1:I:226:VAL:HG12 | 2.08                     | 0.54              |
| 2:J:216:GLY:O    | 2:J:219:LYS:HG3  | 2.07                     | 0.54              |
| 1:K:82:ASP:OD1   | 1:K:82:ASP:O     | 2.25                     | 0.54              |
| 1:O:94:THR:HG23  | 1:O:142:LYS:HD2  | 1.89                     | 0.54              |
| 2:P:119:LEU:HD21 | 2:P:163:LEU:CD1  | 2.38                     | 0.54              |
| 2:R:68:ASP:O     | 2:R:98:PRO:HD2   | 2.08                     | 0.54              |
| 2:T:43:ARG:CB    | 2:T:43:ARG:HG3   | 2.22                     | 0.54              |
| 2:T:119:LEU:HD21 | 2:T:163:LEU:CD1  | 2.38                     | 0.54              |
| 2:T:228:LEU:HD22 | 2:T:232:GLY:O    | 2.06                     | 0.54              |
| 1:U:211:GLN:HG3  | 2:V:205:GLN:HG3  | 1.87                     | 0.54              |
| 1:W:94:THR:HG23  | 1:W:142:LYS:HD2  | 1.89                     | 0.54              |
| 2:X:216:GLY:O    | 2:X:219:LYS:HG3  | 2.07                     | 0.54              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:280:LEU:CB   | 1:W:273:LEU:HD22 | 2.30                     | 0.54              |
| 2:B:270:LEU:H    | 2:D:269:GLN:HB2  | 1.71                     | 0.54              |
| 2:F:103:LEU:HA   | 2:F:106:ILE:HB   | 1.90                     | 0.54              |
| 1:G:64:LEU:HD22  | 1:G:69:HIS:CE1   | 2.43                     | 0.54              |
| 1:G:223:GLN:O    | 1:G:226:VAL:HG12 | 2.08                     | 0.54              |
| 1:G:277:ASN:ND2  | 1:I:281:ASN:C    | 2.66                     | 0.54              |
| 2:H:103:LEU:HA   | 2:H:106:ILE:HB   | 1.90                     | 0.54              |
| 2:J:103:LEU:HA   | 2:J:106:ILE:HB   | 1.90                     | 0.54              |
| 2:J:119:LEU:HD21 | 2:J:163:LEU:CD1  | 2.38                     | 0.54              |
| 1:K:232:ALA:HB2  | 2:L:224:ILE:HG13 | 1.87                     | 0.54              |
| 2:L:43:ARG:CB    | 2:L:43:ARG:HG2   | 2.22                     | 0.54              |
| 2:N:30:VAL:HG21  | 2:N:36:ALA:HB2   | 1.90                     | 0.54              |
| 2:N:103:LEU:HA   | 2:N:106:ILE:HB   | 1.90                     | 0.54              |
| 2:N:135:ASP:O    | 2:N:139:LEU:HG   | 2.06                     | 0.54              |
| 1:O:106:LEU:HD12 | 1:O:183:ALA:O    | 2.06                     | 0.54              |
| 2:P:42:PHE:CB    | 1:Q:67:GLY:O     | 2.42                     | 0.54              |
| 1:Q:64:LEU:HD22  | 1:Q:69:HIS:CE1   | 2.43                     | 0.54              |
| 1:U:223:GLN:O    | 1:U:226:VAL:HG12 | 2.08                     | 0.54              |
| 1:W:217:ALA:HB1  | 2:X:212:ILE:HG21 | 1.89                     | 0.54              |
| 2:X:30:VAL:HG21  | 2:X:36:ALA:HB2   | 1.90                     | 0.54              |
| 2:X:235:LEU:CD1  | 2:X:239:ARG:HG2  | 2.35                     | 0.54              |
| 2:B:68:ASP:O     | 2:B:98:PRO:HD2   | 2.08                     | 0.54              |
| 2:B:80:THR:HG21  | 2:B:131:VAL:HB   | 1.89                     | 0.54              |
| 2:B:94:ILE:HD11  | 2:B:123:THR:OG1  | 2.08                     | 0.54              |
| 2:B:103:LEU:HA   | 2:B:106:ILE:HB   | 1.90                     | 0.54              |
| 2:B:216:GLY:O    | 2:B:219:LYS:HG3  | 2.07                     | 0.54              |
| 2:D:37:VAL:CG1   | 2:D:45:VAL:HG13  | 2.37                     | 0.54              |
| 1:E:64:LEU:HD22  | 1:E:69:HIS:CE1   | 2.43                     | 0.54              |
| 2:J:140:ILE:HA   | 2:J:143:ARG:HB2  | 1.88                     | 0.54              |
| 2:L:35:ARG:HB2   | 2:L:103:LEU:CD1  | 2.37                     | 0.54              |
| 2:L:103:LEU:HA   | 2:L:106:ILE:HB   | 1.90                     | 0.54              |
| 2:N:35:ARG:HB2   | 2:N:103:LEU:CD1  | 2.37                     | 0.54              |
| 1:O:48:ARG:HB2   | 1:O:117:LEU:HD13 | 1.88                     | 0.54              |
| 2:P:39:PHE:CE2   | 1:Q:44:GLU:CG    | 2.91                     | 0.54              |
| 2:P:92:LEU:HD13  | 2:P:170:LEU:HD23 | 1.89                     | 0.54              |
| 2:R:119:LEU:HD21 | 2:R:163:LEU:CD1  | 2.38                     | 0.54              |
| 2:R:228:LEU:HD22 | 2:R:232:GLY:O    | 2.07                     | 0.54              |
| 1:S:64:LEU:HD22  | 1:S:69:HIS:CE1   | 2.43                     | 0.54              |
| 1:U:48:ARG:HB2   | 1:U:117:LEU:HD13 | 1.88                     | 0.54              |
| 1:U:142:LYS:HE3  | 2:V:140:ILE:HD13 | 1.89                     | 0.54              |
| 2:X:103:LEU:HA   | 2:X:106:ILE:HB   | 1.90                     | 0.54              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:84:ARG:CG    | 2:X:108:THR:O    | 2.56                     | 0.54              |
| 1:C:54:ARG:NH2   | 2:D:52:GLU:HB3   | 2.22                     | 0.54              |
| 1:C:270:ARG:HD3  | 2:D:271:PRO:HG3  | 1.89                     | 0.54              |
| 2:F:37:VAL:CG1   | 2:F:45:VAL:HG13  | 2.37                     | 0.54              |
| 2:H:30:VAL:HG21  | 2:H:36:ALA:HB2   | 1.90                     | 0.54              |
| 2:H:94:ILE:HD11  | 2:H:123:THR:OG1  | 2.08                     | 0.54              |
| 2:J:224:ILE:HG22 | 1:K:251:LEU:HG   | 1.88                     | 0.54              |
| 2:J:240:LYS:CG   | 1:M:282:LEU:HD13 | 2.37                     | 0.54              |
| 1:K:153:LEU:HD23 | 1:K:160:VAL:HG21 | 1.88                     | 0.54              |
| 1:M:125:GLY:HA3  | 2:N:70:ARG:CG    | 2.36                     | 0.54              |
| 2:N:119:LEU:HD23 | 2:N:122:ILE:HD11 | 1.88                     | 0.54              |
| 2:P:60:TRP:NE1   | 1:Q:42:THR:HA    | 2.22                     | 0.54              |
| 2:P:128:LYS:CE   | 1:Q:157:ARG:HH11 | 2.20                     | 0.54              |
| 2:P:157:ARG:CZ   | 1:Q:165:ARG:NH1  | 2.70                     | 0.54              |
| 1:S:223:GLN:O    | 1:S:226:VAL:HG12 | 2.08                     | 0.54              |
| 1:S:272:TYR:OH   | 2:T:271:PRO:HG3  | 2.08                     | 0.54              |
| 2:T:216:GLY:O    | 2:T:219:LYS:HG3  | 2.07                     | 0.54              |
| 1:U:64:LEU:HD22  | 1:U:69:HIS:CE1   | 2.43                     | 0.54              |
| 2:V:41:ARG:HG3   | 1:W:43:VAL:O     | 2.07                     | 0.54              |
| 1:W:64:LEU:HD22  | 1:W:69:HIS:CE1   | 2.43                     | 0.54              |
| 1:A:278:LEU:HA   | 1:A:279:VAL:HG23 | 1.90                     | 0.54              |
| 1:E:153:LEU:HD23 | 1:E:160:VAL:HG21 | 1.88                     | 0.54              |
| 2:F:235:LEU:CD1  | 2:F:239:ARG:HG2  | 2.35                     | 0.54              |
| 2:F:268:LEU:CD1  | 2:H:261:PRO:HG2  | 2.37                     | 0.54              |
| 1:K:64:LEU:HD22  | 1:K:69:HIS:CE1   | 2.43                     | 0.54              |
| 2:L:30:VAL:HG21  | 2:L:36:ALA:HB2   | 1.90                     | 0.54              |
| 2:P:228:LEU:HD22 | 2:P:232:GLY:O    | 2.06                     | 0.54              |
| 1:Q:223:GLN:O    | 1:Q:226:VAL:HG12 | 2.08                     | 0.54              |
| 1:Q:245:ASN:OD1  | 1:S:295:ILE:CD1  | 2.55                     | 0.54              |
| 2:R:269:GLN:HA   | 2:T:269:GLN:OE1  | 2.08                     | 0.54              |
| 2:T:41:ARG:HG3   | 1:U:44:GLU:CA    | 2.35                     | 0.54              |
| 2:V:68:ASP:O     | 2:V:98:PRO:HD2   | 2.08                     | 0.54              |
| 2:V:246:ASP:HB3  | 1:W:258:GLN:HG2  | 1.90                     | 0.54              |
| 1:W:153:LEU:HD23 | 1:W:160:VAL:HG21 | 1.88                     | 0.54              |
| 2:X:119:LEU:HD23 | 2:X:122:ILE:HD11 | 1.88                     | 0.54              |
| 2:B:30:VAL:HG21  | 2:B:36:ALA:HB2   | 1.90                     | 0.54              |
| 2:B:37:VAL:CG1   | 2:B:45:VAL:HG13  | 2.37                     | 0.54              |
| 1:C:82:ASP:OD1   | 1:C:82:ASP:O     | 2.25                     | 0.54              |
| 2:D:80:THR:HG21  | 2:D:131:VAL:HB   | 1.89                     | 0.54              |
| 2:D:140:ILE:HD11 | 2:D:173:LEU:HD21 | 1.90                     | 0.54              |
| 2:D:182:ALA:HB3  | 1:E:205:GLN:HG3  | 1.89                     | 0.54              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:F:30:VAL:HG21  | 2:F:36:ALA:HB2   | 1.90                     | 0.54              |
| 2:J:92:LEU:HD13  | 2:J:170:LEU:HD23 | 1.89                     | 0.54              |
| 2:J:94:ILE:HD11  | 2:J:123:THR:OG1  | 2.08                     | 0.54              |
| 2:L:119:LEU:HD21 | 2:L:163:LEU:CD1  | 2.38                     | 0.54              |
| 1:O:64:LEU:HD22  | 1:O:69:HIS:CE1   | 2.43                     | 0.54              |
| 1:O:82:ASP:O     | 1:O:82:ASP:OD1   | 2.25                     | 0.54              |
| 2:P:41:ARG:HA    | 1:Q:47:HIS:O     | 2.07                     | 0.54              |
| 1:S:272:TYR:HB2  | 2:T:258:THR:CG2  | 2.36                     | 0.54              |
| 1:S:274:THR:HB   | 2:T:261:PRO:HG3  | 1.88                     | 0.54              |
| 2:T:37:VAL:CG1   | 2:T:45:VAL:HG13  | 2.37                     | 0.54              |
| 2:T:43:ARG:CB    | 2:T:43:ARG:HG2   | 2.22                     | 0.54              |
| 2:X:28:TYR:HD1   | 2:X:30:VAL:HG23  | 1.71                     | 0.54              |
| 2:X:68:ASP:O     | 2:X:98:PRO:HD2   | 2.08                     | 0.54              |
| 2:X:80:THR:HG21  | 2:X:131:VAL:HB   | 1.89                     | 0.54              |
| 2:X:94:ILE:HD11  | 2:X:123:THR:OG1  | 2.08                     | 0.54              |
| 1:A:64:LEU:HD22  | 1:A:69:HIS:CE1   | 2.43                     | 0.54              |
| 1:A:94:THR:HG23  | 1:A:142:LYS:HD2  | 1.89                     | 0.54              |
| 1:A:223:GLN:O    | 1:A:226:VAL:HG12 | 2.08                     | 0.54              |
| 2:D:30:VAL:HG21  | 2:D:36:ALA:HB2   | 1.90                     | 0.54              |
| 2:D:68:ASP:O     | 2:D:98:PRO:HD2   | 2.08                     | 0.54              |
| 1:E:278:LEU:HA   | 1:E:279:VAL:HG23 | 1.90                     | 0.54              |
| 1:G:289:ARG:NH1  | 1:I:285:GLU:HG3  | 2.23                     | 0.54              |
| 1:I:94:THR:HG23  | 1:I:142:LYS:HD2  | 1.89                     | 0.54              |
| 2:J:37:VAL:CG1   | 2:J:45:VAL:HG13  | 2.37                     | 0.54              |
| 2:L:68:ASP:O     | 2:L:98:PRO:HD2   | 2.08                     | 0.54              |
| 1:M:64:LEU:HD22  | 1:M:69:HIS:CE1   | 2.43                     | 0.54              |
| 2:N:68:ASP:O     | 2:N:98:PRO:HD2   | 2.08                     | 0.54              |
| 2:P:43:ARG:CB    | 1:Q:67:GLY:HA3   | 2.35                     | 0.54              |
| 2:T:28:TYR:HD1   | 2:T:30:VAL:HG23  | 1.71                     | 0.54              |
| 2:V:28:TYR:HD1   | 2:V:30:VAL:HG23  | 1.71                     | 0.54              |
| 1:A:139:GLU:HA   | 2:B:143:ARG:NH2  | 2.23                     | 0.54              |
| 1:A:225:ILE:HD13 | 2:B:219:LYS:CG   | 2.36                     | 0.54              |
| 1:G:253:LYS:HE2  | 1:I:291:SER:OG   | 2.07                     | 0.54              |
| 2:H:80:THR:HG21  | 2:H:131:VAL:HB   | 1.89                     | 0.54              |
| 2:J:68:ASP:O     | 2:J:98:PRO:HD2   | 2.08                     | 0.54              |
| 2:L:57:LEU:HB2   | 2:L:62:GLN:HB2   | 1.90                     | 0.54              |
| 1:M:125:GLY:CA   | 2:N:70:ARG:CD    | 2.86                     | 0.54              |
| 1:O:278:LEU:HA   | 1:O:279:VAL:HG23 | 1.90                     | 0.54              |
| 2:R:259:TYR:CZ   | 1:S:276:ASP:HA   | 2.38                     | 0.54              |
| 2:T:30:VAL:HG21  | 2:T:36:ALA:HB2   | 1.90                     | 0.54              |
| 2:T:94:ILE:HD11  | 2:T:123:THR:OG1  | 2.08                     | 0.54              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:V:119:LEU:HD21 | 2:V:163:LEU:CD1  | 2.38                     | 0.54              |
| 2:V:258:THR:O    | 1:W:273:LEU:HB2  | 2.08                     | 0.54              |
| 2:V:270:LEU:HD11 | 2:X:260:LEU:HD11 | 1.89                     | 0.54              |
| 2:B:268:LEU:HD13 | 2:D:260:LEU:CD2  | 2.38                     | 0.53              |
| 1:C:94:THR:HG23  | 1:C:142:LYS:HD2  | 1.89                     | 0.53              |
| 1:C:278:LEU:HA   | 1:C:279:VAL:HG23 | 1.90                     | 0.53              |
| 2:D:94:ILE:HD11  | 2:D:123:THR:OG1  | 2.08                     | 0.53              |
| 2:F:140:ILE:HD11 | 2:F:173:LEU:HD21 | 1.90                     | 0.53              |
| 2:H:92:LEU:HD13  | 2:H:170:LEU:HD23 | 1.89                     | 0.53              |
| 2:J:35:ARG:HB2   | 2:J:103:LEU:CD1  | 2.37                     | 0.53              |
| 2:J:57:LEU:HB2   | 2:J:62:GLN:HB2   | 1.90                     | 0.53              |
| 1:K:225:ILE:HD13 | 2:L:219:LYS:CD   | 2.38                     | 0.53              |
| 1:K:278:LEU:HA   | 1:K:279:VAL:HG23 | 1.90                     | 0.53              |
| 1:M:52:PHE:CE1   | 2:N:52:GLU:HB3   | 2.44                     | 0.53              |
| 2:N:57:LEU:HB2   | 2:N:62:GLN:HB2   | 1.90                     | 0.53              |
| 2:N:94:ILE:HD11  | 2:N:123:THR:OG1  | 2.08                     | 0.53              |
| 2:P:41:ARG:O     | 1:Q:49:ALA:HB3   | 2.09                     | 0.53              |
| 2:P:68:ASP:O     | 2:P:98:PRO:HD2   | 2.08                     | 0.53              |
| 1:S:242:LEU:HD12 | 2:T:235:LEU:CD1  | 2.37                     | 0.53              |
| 1:S:242:LEU:HD13 | 2:T:238:LEU:HD13 | 1.89                     | 0.53              |
| 2:T:68:ASP:O     | 2:T:98:PRO:HD2   | 2.08                     | 0.53              |
| 2:T:140:ILE:HD11 | 2:T:173:LEU:HD21 | 1.90                     | 0.53              |
| 2:T:200:VAL:HG22 | 1:U:223:GLN:CA   | 2.38                     | 0.53              |
| 2:V:258:THR:CG2  | 2:V:259:TYR:H    | 2.22                     | 0.53              |
| 2:X:258:THR:CG2  | 2:X:259:TYR:H    | 2.22                     | 0.53              |
| 1:A:284:ASP:HA   | 1:W:275:ALA:HB3  | 1.89                     | 0.53              |
| 2:B:258:THR:CG2  | 2:B:259:TYR:H    | 2.21                     | 0.53              |
| 2:H:57:LEU:HB2   | 2:H:62:GLN:HB2   | 1.90                     | 0.53              |
| 1:I:274:THR:HG22 | 2:J:261:PRO:CB   | 2.38                     | 0.53              |
| 2:J:80:THR:HG21  | 2:J:131:VAL:HB   | 1.89                     | 0.53              |
| 2:P:139:LEU:HD12 | 2:P:175:PHE:CE1  | 2.39                     | 0.53              |
| 1:Q:250:LYS:C    | 1:Q:254:ILE:HD12 | 2.34                     | 0.53              |
| 2:R:217:ASP:HB3  | 1:S:248:TYR:CD2  | 2.42                     | 0.53              |
| 1:S:253:LYS:HG2  | 2:T:241:LEU:CD2  | 2.36                     | 0.53              |
| 2:V:94:ILE:HD11  | 2:V:123:THR:OG1  | 2.08                     | 0.53              |
| 2:V:140:ILE:HD11 | 2:V:173:LEU:HD21 | 1.90                     | 0.53              |
| 2:B:92:LEU:HD13  | 2:B:170:LEU:HD23 | 1.89                     | 0.53              |
| 1:C:200:LYS:HB2  | 2:D:198:PHE:HD2  | 1.74                     | 0.53              |
| 2:D:103:LEU:HA   | 2:D:106:ILE:HB   | 1.90                     | 0.53              |
| 1:E:223:GLN:O    | 1:E:226:VAL:HG12 | 2.08                     | 0.53              |
| 2:H:37:VAL:CG1   | 2:H:45:VAL:HG13  | 2.37                     | 0.53              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:H:270:LEU:HD11 | 2:J:260:LEU:HD11 | 1.86                     | 0.53              |
| 1:I:64:LEU:HD22  | 1:I:69:HIS:CE1   | 2.43                     | 0.53              |
| 2:J:258:THR:CG2  | 2:J:259:TYR:H    | 2.22                     | 0.53              |
| 1:K:223:GLN:O    | 1:K:226:VAL:HG12 | 2.08                     | 0.53              |
| 2:L:140:ILE:HD11 | 2:L:173:LEU:HD21 | 1.90                     | 0.53              |
| 1:M:54:ARG:HE    | 2:N:53:GLY:CA    | 2.17                     | 0.53              |
| 2:P:200:VAL:HG22 | 1:Q:223:GLN:CB   | 2.34                     | 0.53              |
| 2:P:262:ALA:HB3  | 1:Q:275:ALA:CB   | 2.37                     | 0.53              |
| 1:Q:274:THR:HG21 | 2:R:259:TYR:CE2  | 2.43                     | 0.53              |
| 2:R:257:ILE:CG2  | 1:S:278:LEU:HD12 | 2.39                     | 0.53              |
| 2:T:235:LEU:CD1  | 2:T:239:ARG:HG2  | 2.36                     | 0.53              |
| 1:W:82:ASP:O     | 1:W:82:ASP:OD1   | 2.25                     | 0.53              |
| 1:W:250:LYS:C    | 1:W:254:ILE:HD12 | 2.34                     | 0.53              |
| 1:A:250:LYS:C    | 1:A:254:ILE:HD12 | 2.34                     | 0.53              |
| 1:C:250:LYS:C    | 1:C:254:ILE:HD12 | 2.34                     | 0.53              |
| 1:E:94:THR:HG23  | 1:E:142:LYS:HD2  | 1.89                     | 0.53              |
| 2:F:57:LEU:HB2   | 2:F:62:GLN:HB2   | 1.90                     | 0.53              |
| 2:H:85:LEU:HD22  | 1:I:154:ILE:HG22 | 1.89                     | 0.53              |
| 1:I:278:LEU:HA   | 1:I:279:VAL:HG23 | 1.90                     | 0.53              |
| 1:M:278:LEU:HA   | 1:M:279:VAL:HG23 | 1.90                     | 0.53              |
| 2:P:103:LEU:HA   | 2:P:106:ILE:HB   | 1.90                     | 0.53              |
| 2:P:110:ILE:CA   | 1:Q:109:LEU:HD21 | 2.37                     | 0.53              |
| 2:P:176:GLY:HA3  | 1:Q:198:GLU:OE2  | 2.08                     | 0.53              |
| 2:R:103:LEU:HA   | 2:R:106:ILE:HB   | 1.90                     | 0.53              |
| 1:S:275:ALA:HB2  | 2:T:264:GLN:HE21 | 1.73                     | 0.53              |
| 1:U:6:LYS:HZ1    | 2:V:10:GLY:HA2   | 1.73                     | 0.53              |
| 2:V:30:VAL:HG21  | 2:V:36:ALA:HB2   | 1.90                     | 0.53              |
| 2:V:258:THR:HB   | 1:W:272:TYR:CA   | 2.38                     | 0.53              |
| 1:W:278:LEU:HA   | 1:W:279:VAL:HG23 | 1.90                     | 0.53              |
| 2:X:140:ILE:HD11 | 2:X:173:LEU:HD21 | 1.90                     | 0.53              |
| 2:B:92:LEU:HD23  | 2:B:123:THR:HG23 | 1.91                     | 0.53              |
| 2:D:46:GLN:O     | 2:D:104:PRO:HG3  | 2.09                     | 0.53              |
| 2:D:247:ILE:HA   | 1:E:262:LYS:HA   | 1.89                     | 0.53              |
| 2:H:140:ILE:HD11 | 2:H:173:LEU:HD21 | 1.90                     | 0.53              |
| 2:J:30:VAL:HG21  | 2:J:36:ALA:HB2   | 1.90                     | 0.53              |
| 1:K:229:GLU:HG3  | 2:L:223:LEU:CD1  | 2.39                     | 0.53              |
| 2:L:139:LEU:HD12 | 2:L:175:PHE:CE1  | 2.39                     | 0.53              |
| 1:M:112:PRO:CA   | 1:M:177:LEU:HD23 | 2.39                     | 0.53              |
| 2:N:46:GLN:O     | 2:N:104:PRO:HG3  | 2.09                     | 0.53              |
| 2:P:30:VAL:HG21  | 2:P:36:ALA:HB2   | 1.90                     | 0.53              |
| 1:Q:278:LEU:HA   | 1:Q:279:VAL:HG23 | 1.90                     | 0.53              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:R:237:GLU:HG3  | 1:S:294:LEU:HA   | 1.91                     | 0.53              |
| 1:S:278:LEU:HA   | 1:S:279:VAL:HG23 | 1.90                     | 0.53              |
| 1:U:250:LYS:C    | 1:U:254:ILE:HD12 | 2.34                     | 0.53              |
| 2:V:258:THR:HG22 | 2:V:259:TYR:N    | 2.20                     | 0.53              |
| 1:A:285:GLU:HG3  | 1:W:289:ARG:HH12 | 1.73                     | 0.53              |
| 2:B:57:LEU:HB2   | 2:B:62:GLN:HB2   | 1.90                     | 0.53              |
| 2:F:68:ASP:O     | 2:F:98:PRO:HD2   | 2.08                     | 0.53              |
| 1:G:112:PRO:CA   | 1:G:177:LEU:HD23 | 2.39                     | 0.53              |
| 2:L:94:ILE:HD11  | 2:L:123:THR:OG1  | 2.08                     | 0.53              |
| 1:M:223:GLN:O    | 1:M:226:VAL:HG12 | 2.08                     | 0.53              |
| 2:R:46:GLN:O     | 2:R:104:PRO:HG3  | 2.09                     | 0.53              |
| 2:R:94:ILE:HD11  | 2:R:123:THR:OG1  | 2.08                     | 0.53              |
| 1:S:221:GLN:HG2  | 2:T:212:ILE:CG2  | 2.38                     | 0.53              |
| 1:W:112:PRO:CA   | 1:W:177:LEU:HD23 | 2.39                     | 0.53              |
| 2:X:57:LEU:HB2   | 2:X:62:GLN:HB2   | 1.90                     | 0.53              |
| 2:B:185:ALA:HB1  | 1:C:212:PHE:CE2  | 2.43                     | 0.53              |
| 2:H:68:ASP:O     | 2:H:98:PRO:HD2   | 2.08                     | 0.53              |
| 1:I:164:ILE:CD1  | 1:I:184:ILE:HD11 | 2.31                     | 0.53              |
| 1:I:232:ALA:HB2  | 2:J:223:LEU:HB3  | 1.89                     | 0.53              |
| 1:K:48:ARG:HB2   | 1:K:117:LEU:HD13 | 1.88                     | 0.53              |
| 1:O:164:ILE:CD1  | 1:O:184:ILE:HD11 | 2.31                     | 0.53              |
| 2:P:140:ILE:HD11 | 2:P:173:LEU:HD21 | 1.90                     | 0.53              |
| 2:P:182:ALA:CB   | 1:Q:205:GLN:C    | 2.82                     | 0.53              |
| 1:Q:249:ILE:HD12 | 2:R:238:LEU:HA   | 1.90                     | 0.53              |
| 2:R:140:ILE:HD11 | 2:R:173:LEU:HD21 | 1.90                     | 0.53              |
| 1:S:253:LYS:NZ   | 2:T:241:LEU:HD11 | 2.23                     | 0.53              |
| 2:V:92:LEU:HD23  | 2:V:123:THR:HG23 | 1.91                     | 0.53              |
| 2:V:258:THR:CA   | 1:W:272:TYR:HA   | 2.39                     | 0.53              |
| 2:X:92:LEU:HD23  | 2:X:123:THR:HG23 | 1.91                     | 0.53              |
| 1:C:64:LEU:HD22  | 1:C:69:HIS:CE1   | 2.43                     | 0.53              |
| 1:C:83:ILE:HA    | 1:C:112:PRO:HD2  | 1.91                     | 0.53              |
| 1:C:142:LYS:HE3  | 2:D:140:ILE:CD1  | 2.21                     | 0.53              |
| 1:C:192:GLU:HB3  | 2:D:188:VAL:HG11 | 1.90                     | 0.53              |
| 2:J:140:ILE:HD11 | 2:J:173:LEU:HD21 | 1.90                     | 0.53              |
| 2:J:240:LYS:HZ3  | 1:M:283:GLN:CG   | 2.21                     | 0.53              |
| 1:K:106:LEU:HB2  | 1:K:141:LEU:HD21 | 1.91                     | 0.53              |
| 1:K:236:LYS:CE   | 2:L:227:SER:HA   | 2.38                     | 0.53              |
| 1:M:106:LEU:HB2  | 1:M:141:LEU:HD21 | 1.91                     | 0.53              |
| 2:N:221:ALA:HA   | 1:O:248:TYR:HB2  | 1.90                     | 0.53              |
| 1:S:106:LEU:HB2  | 1:S:141:LEU:HD21 | 1.91                     | 0.53              |
| 1:S:250:LYS:C    | 1:S:254:ILE:HD12 | 2.34                     | 0.53              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:T:46:GLN:O     | 2:T:104:PRO:HG3  | 2.09                     | 0.53              |
| 1:A:68:LEU:HD23  | 2:X:43:ARG:NH1   | 2.16                     | 0.53              |
| 1:A:280:LEU:CB   | 1:W:273:LEU:CD2  | 2.87                     | 0.53              |
| 2:F:119:LEU:HD21 | 2:F:163:LEU:CD1  | 2.37                     | 0.53              |
| 1:M:135:SER:HB3  | 2:N:93:ARG:HG3   | 1.91                     | 0.53              |
| 2:P:94:ILE:HD11  | 2:P:123:THR:OG1  | 2.08                     | 0.53              |
| 2:P:117:ARG:HH11 | 1:Q:87:PRO:HG2   | 1.74                     | 0.53              |
| 2:R:43:ARG:CB    | 2:R:43:ARG:HG2   | 2.22                     | 0.53              |
| 2:R:92:LEU:HD23  | 2:R:123:THR:HG23 | 1.91                     | 0.53              |
| 1:S:112:PRO:CA   | 1:S:177:LEU:HD23 | 2.39                     | 0.53              |
| 2:T:57:LEU:HB2   | 2:T:62:GLN:HB2   | 1.90                     | 0.53              |
| 1:A:200:LYS:O    | 2:B:198:PHE:HD2  | 1.92                     | 0.53              |
| 2:D:57:LEU:HB2   | 2:D:62:GLN:HB2   | 1.90                     | 0.53              |
| 2:D:221:ALA:HA   | 1:E:248:TYR:CD2  | 2.44                     | 0.53              |
| 2:J:41:ARG:NE    | 1:K:43:VAL:O     | 2.42                     | 0.53              |
| 2:L:204:GLU:HG3  | 1:M:226:VAL:HG11 | 1.91                     | 0.53              |
| 2:L:258:THR:CG2  | 2:L:259:TYR:H    | 2.22                     | 0.53              |
| 2:P:39:PHE:HE2   | 1:Q:44:GLU:CG    | 2.22                     | 0.53              |
| 2:P:121:SER:HB3  | 1:Q:183:ALA:CB   | 2.39                     | 0.53              |
| 2:P:121:SER:HB3  | 1:Q:183:ALA:HB3  | 1.91                     | 0.53              |
| 2:P:259:TYR:OH   | 1:Q:278:LEU:C    | 2.52                     | 0.53              |
| 2:R:57:LEU:HB2   | 2:R:62:GLN:HB2   | 1.90                     | 0.53              |
| 1:S:263:THR:O    | 2:T:252:SER:HB2  | 2.09                     | 0.53              |
| 2:V:103:LEU:HA   | 2:V:106:ILE:HB   | 1.90                     | 0.53              |
| 1:C:175:PHE:CZ   | 2:D:167:ASP:CG   | 2.87                     | 0.52              |
| 2:F:94:ILE:HD11  | 2:F:123:THR:OG1  | 2.08                     | 0.52              |
| 1:I:112:PRO:HA   | 1:I:176:SER:O    | 2.09                     | 0.52              |
| 1:K:164:ILE:CD1  | 1:K:184:ILE:HD11 | 2.31                     | 0.52              |
| 1:K:250:LYS:C    | 1:K:254:ILE:HD12 | 2.34                     | 0.52              |
| 2:L:229:ALA:HB2  | 1:M:245:ASN:HB3  | 1.91                     | 0.52              |
| 2:N:92:LEU:HD23  | 2:N:123:THR:HG23 | 1.91                     | 0.52              |
| 2:P:45:VAL:HG23  | 1:Q:46:GLY:HA2   | 1.91                     | 0.52              |
| 1:Q:242:LEU:HD13 | 2:R:238:LEU:HD22 | 1.89                     | 0.52              |
| 2:R:215:GLU:CG   | 1:S:237:MET:HE3  | 2.35                     | 0.52              |
| 1:S:249:ILE:CD1  | 2:T:237:GLU:O    | 2.58                     | 0.52              |
| 2:V:43:ARG:CB    | 2:V:43:ARG:HG2   | 2.22                     | 0.52              |
| 1:A:112:PRO:CA   | 1:A:177:LEU:HD23 | 2.39                     | 0.52              |
| 2:B:35:ARG:HB2   | 2:B:69:CYS:SG    | 2.50                     | 0.52              |
| 1:C:77:TYR:CD2   | 2:D:32:ALA:HB3   | 2.43                     | 0.52              |
| 2:D:85:LEU:HD22  | 1:E:155:THR:CG2  | 2.40                     | 0.52              |
| 1:G:135:SER:HB3  | 2:H:171:THR:CG2  | 2.39                     | 0.52              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:250:LYS:C    | 1:G:254:ILE:HD12 | 2.33                     | 0.52              |
| 2:H:35:ARG:HB2   | 2:H:69:CYS:SG    | 2.50                     | 0.52              |
| 1:K:232:ALA:HB2  | 2:L:224:ILE:CG1  | 2.39                     | 0.52              |
| 1:O:250:LYS:C    | 1:O:254:ILE:HD12 | 2.34                     | 0.52              |
| 2:P:35:ARG:HA    | 2:P:52:GLU:HG3   | 1.92                     | 0.52              |
| 1:Q:112:PRO:CA   | 1:Q:177:LEU:HD23 | 2.39                     | 0.52              |
| 2:R:30:VAL:HG21  | 2:R:36:ALA:HB2   | 1.90                     | 0.52              |
| 2:R:35:ARG:HA    | 2:R:52:GLU:HG3   | 1.92                     | 0.52              |
| 2:R:259:TYR:OH   | 1:S:281:ASN:CG   | 2.52                     | 0.52              |
| 2:R:266:VAL:HB   | 2:T:264:GLN:HB3  | 1.92                     | 0.52              |
| 1:U:278:LEU:HA   | 1:U:279:VAL:HG23 | 1.90                     | 0.52              |
| 1:C:192:GLU:CB   | 2:D:188:VAL:HG11 | 2.38                     | 0.52              |
| 1:C:200:LYS:HB2  | 2:D:198:PHE:CD2  | 2.44                     | 0.52              |
| 2:D:173:LEU:O    | 2:D:174:THR:HG23 | 2.10                     | 0.52              |
| 2:D:236:ILE:N    | 1:E:251:LEU:HD22 | 2.24                     | 0.52              |
| 2:D:258:THR:CG2  | 2:D:259:TYR:H    | 2.21                     | 0.52              |
| 2:F:35:ARG:HA    | 2:F:52:GLU:HG3   | 1.92                     | 0.52              |
| 2:F:46:GLN:O     | 2:F:104:PRO:HG3  | 2.09                     | 0.52              |
| 2:F:268:LEU:HD12 | 2:H:261:PRO:HG2  | 1.91                     | 0.52              |
| 1:I:83:ILE:HA    | 1:I:112:PRO:HD2  | 1.91                     | 0.52              |
| 2:J:35:ARG:HB2   | 2:J:69:CYS:SG    | 2.50                     | 0.52              |
| 2:J:46:GLN:O     | 2:J:104:PRO:HG3  | 2.09                     | 0.52              |
| 1:K:112:PRO:CA   | 1:K:177:LEU:HD23 | 2.39                     | 0.52              |
| 2:N:235:LEU:CD1  | 2:N:239:ARG:HG2  | 2.36                     | 0.52              |
| 2:P:43:ARG:CB    | 2:P:43:ARG:HG2   | 2.22                     | 0.52              |
| 2:P:57:LEU:HB2   | 2:P:62:GLN:HB2   | 1.90                     | 0.52              |
| 2:R:33:GLY:O     | 2:R:69:CYS:N     | 2.43                     | 0.52              |
| 2:T:33:GLY:O     | 2:T:69:CYS:N     | 2.43                     | 0.52              |
| 2:V:211:ILE:HG23 | 1:W:233:GLU:OE2  | 2.10                     | 0.52              |
| 2:X:35:ARG:HB2   | 2:X:69:CYS:SG    | 2.50                     | 0.52              |
| 1:A:284:ASP:CA   | 1:W:275:ALA:HB3  | 2.39                     | 0.52              |
| 2:B:269:GLN:HA   | 2:D:269:GLN:CB   | 2.34                     | 0.52              |
| 2:D:33:GLY:O     | 2:D:69:CYS:N     | 2.43                     | 0.52              |
| 2:D:35:ARG:HB2   | 2:D:69:CYS:SG    | 2.50                     | 0.52              |
| 1:E:250:LYS:C    | 1:E:254:ILE:HD12 | 2.34                     | 0.52              |
| 2:F:181:GLU:O    | 2:F:184:GLU:HB3  | 2.10                     | 0.52              |
| 2:H:258:THR:CG2  | 2:H:259:TYR:H    | 2.21                     | 0.52              |
| 1:I:250:LYS:C    | 1:I:254:ILE:HD12 | 2.34                     | 0.52              |
| 2:N:258:THR:CG2  | 2:N:259:TYR:H    | 2.21                     | 0.52              |
| 1:O:106:LEU:HD21 | 1:O:182:VAL:CG1  | 2.40                     | 0.52              |
| 2:R:181:GLU:O    | 2:R:184:GLU:HB3  | 2.10                     | 0.52              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:R:259:TYR:OH   | 1:S:281:ASN:N    | 2.43                     | 0.52              |
| 2:V:35:ARG:HB2   | 2:V:69:CYS:SG    | 2.50                     | 0.52              |
| 1:W:106:LEU:HB2  | 1:W:141:LEU:HD21 | 1.91                     | 0.52              |
| 1:A:83:ILE:HA    | 1:A:112:PRO:HD2  | 1.91                     | 0.52              |
| 1:A:253:LYS:HB3  | 1:C:279:VAL:HG13 | 1.90                     | 0.52              |
| 1:C:106:LEU:HB2  | 1:C:141:LEU:HD21 | 1.91                     | 0.52              |
| 2:D:211:ILE:HG12 | 1:E:230:GLY:HA3  | 1.92                     | 0.52              |
| 2:D:267:LEU:HD21 | 2:F:269:GLN:OE1  | 2.09                     | 0.52              |
| 1:E:106:LEU:HB2  | 1:E:141:LEU:HD21 | 1.91                     | 0.52              |
| 1:G:106:LEU:HB2  | 1:G:141:LEU:HD21 | 1.91                     | 0.52              |
| 2:L:35:ARG:HB2   | 2:L:69:CYS:SG    | 2.50                     | 0.52              |
| 2:X:35:ARG:HA    | 2:X:52:GLU:HG3   | 1.92                     | 0.52              |
| 1:A:106:LEU:HD21 | 1:A:182:VAL:CG1  | 2.40                     | 0.52              |
| 1:A:204:GLN:HB2  | 2:B:198:PHE:CD1  | 2.44                     | 0.52              |
| 2:B:140:ILE:HD11 | 2:B:173:LEU:HD21 | 1.90                     | 0.52              |
| 2:B:181:GLU:O    | 2:B:184:GLU:HB3  | 2.10                     | 0.52              |
| 1:C:112:PRO:CA   | 1:C:177:LEU:HD23 | 2.39                     | 0.52              |
| 1:G:112:PRO:HA   | 1:G:176:SER:O    | 2.10                     | 0.52              |
| 2:H:181:GLU:O    | 2:H:184:GLU:HB3  | 2.10                     | 0.52              |
| 1:I:106:LEU:HB2  | 1:I:141:LEU:HD21 | 1.91                     | 0.52              |
| 1:I:106:LEU:HD21 | 1:I:182:VAL:CG1  | 2.40                     | 0.52              |
| 2:J:181:GLU:O    | 2:J:184:GLU:HB3  | 2.10                     | 0.52              |
| 2:L:92:LEU:HD23  | 2:L:123:THR:HG23 | 1.91                     | 0.52              |
| 2:N:130:VAL:HG12 | 2:N:146:VAL:HG13 | 1.92                     | 0.52              |
| 2:N:140:ILE:HD11 | 2:N:173:LEU:HD21 | 1.90                     | 0.52              |
| 2:P:41:ARG:NH1   | 1:Q:80:ILE:HD13  | 2.24                     | 0.52              |
| 2:P:181:GLU:O    | 2:P:184:GLU:HB3  | 2.10                     | 0.52              |
| 2:R:259:TYR:CZ   | 1:S:281:ASN:CG   | 2.87                     | 0.52              |
| 2:T:173:LEU:O    | 2:T:174:THR:HG23 | 2.10                     | 0.52              |
| 1:E:83:ILE:HA    | 1:E:112:PRO:HD2  | 1.91                     | 0.52              |
| 1:E:112:PRO:HA   | 1:E:176:SER:O    | 2.10                     | 0.52              |
| 2:F:173:LEU:O    | 2:F:174:THR:HG23 | 2.10                     | 0.52              |
| 2:J:225:ALA:N    | 1:K:248:TYR:HB2  | 2.25                     | 0.52              |
| 2:L:130:VAL:HG12 | 2:L:146:VAL:HG13 | 1.92                     | 0.52              |
| 2:L:218:SER:OG   | 1:M:238:LEU:CD2  | 2.57                     | 0.52              |
| 2:N:35:ARG:HB2   | 2:N:69:CYS:SG    | 2.50                     | 0.52              |
| 2:N:35:ARG:HA    | 2:N:52:GLU:HG3   | 1.92                     | 0.52              |
| 2:N:262:ALA:CB   | 2:P:264:GLN:NE2  | 2.72                     | 0.52              |
| 1:O:83:ILE:HA    | 1:O:112:PRO:HD2  | 1.91                     | 0.52              |
| 2:P:85:LEU:HB2   | 1:Q:197:VAL:HG12 | 1.87                     | 0.52              |
| 2:P:173:LEU:O    | 2:P:174:THR:HG23 | 2.10                     | 0.52              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:R:35:ARG:HB2   | 2:R:69:CYS:SG    | 2.50                     | 0.52              |
| 2:R:214:ALA:HB2  | 2:T:242:GLU:OE2  | 2.10                     | 0.52              |
| 1:U:106:LEU:HB2  | 1:U:141:LEU:HD21 | 1.91                     | 0.52              |
| 2:V:46:GLN:O     | 2:V:104:PRO:HG3  | 2.09                     | 0.52              |
| 2:V:256:ASN:CG   | 1:W:270:ARG:HG2  | 2.35                     | 0.52              |
| 2:X:173:LEU:O    | 2:X:174:THR:HG23 | 2.10                     | 0.52              |
| 2:X:181:GLU:O    | 2:X:184:GLU:HB3  | 2.10                     | 0.52              |
| 1:C:193:TYR:CE2  | 2:D:191:GLN:HG3  | 2.45                     | 0.52              |
| 2:D:182:ALA:CB   | 1:E:205:GLN:CG   | 2.88                     | 0.52              |
| 1:G:112:PRO:HD3  | 1:G:128:TYR:CE2  | 2.45                     | 0.52              |
| 2:H:33:GLY:O     | 2:H:69:CYS:N     | 2.43                     | 0.52              |
| 2:H:46:GLN:O     | 2:H:104:PRO:HG3  | 2.09                     | 0.52              |
| 2:H:269:GLN:HG3  | 2:J:269:GLN:CD   | 2.35                     | 0.52              |
| 2:L:41:ARG:CD    | 1:M:43:VAL:O     | 2.58                     | 0.52              |
| 2:L:46:GLN:O     | 2:L:104:PRO:HG3  | 2.09                     | 0.52              |
| 1:M:123:ARG:O    | 2:N:71:SER:N     | 2.42                     | 0.52              |
| 2:N:119:LEU:HD21 | 2:N:163:LEU:CD1  | 2.38                     | 0.52              |
| 2:P:92:LEU:HD23  | 2:P:123:THR:HG23 | 1.91                     | 0.52              |
| 1:Q:112:PRO:HA   | 1:Q:176:SER:O    | 2.10                     | 0.52              |
| 2:R:43:ARG:CB    | 2:R:43:ARG:HG3   | 2.22                     | 0.52              |
| 2:R:258:THR:CG2  | 2:R:259:TYR:H    | 2.22                     | 0.52              |
| 1:S:83:ILE:HA    | 1:S:112:PRO:HD2  | 1.91                     | 0.52              |
| 2:T:92:LEU:HD23  | 2:T:123:THR:HG23 | 1.91                     | 0.52              |
| 1:U:112:PRO:HD3  | 1:U:128:TYR:CE2  | 2.45                     | 0.52              |
| 2:X:46:GLN:O     | 2:X:104:PRO:HG3  | 2.09                     | 0.52              |
| 1:A:112:PRO:HA   | 1:A:176:SER:O    | 2.09                     | 0.52              |
| 1:C:112:PRO:HA   | 1:C:176:SER:O    | 2.10                     | 0.52              |
| 1:C:271:ILE:CG2  | 1:C:273:LEU:HD21 | 2.40                     | 0.52              |
| 2:D:43:ARG:CG    | 2:D:43:ARG:HB3   | 2.24                     | 0.52              |
| 2:D:251:LEU:HD23 | 1:E:265:ALA:N    | 2.25                     | 0.52              |
| 2:J:41:ARG:HG2   | 1:K:43:VAL:CB    | 2.20                     | 0.52              |
| 1:M:146:ALA:HB1  | 2:N:140:ILE:CG2  | 2.37                     | 0.52              |
| 1:M:272:TYR:O    | 2:N:259:TYR:HD2  | 1.92                     | 0.52              |
| 1:O:106:LEU:HB2  | 1:O:141:LEU:HD21 | 1.91                     | 0.52              |
| 2:P:35:ARG:HB2   | 2:P:69:CYS:SG    | 2.50                     | 0.52              |
| 2:P:46:GLN:O     | 2:P:104:PRO:HG3  | 2.09                     | 0.52              |
| 2:P:258:THR:CG2  | 2:P:259:TYR:H    | 2.21                     | 0.52              |
| 1:Q:106:LEU:HD21 | 1:Q:182:VAL:CG1  | 2.40                     | 0.52              |
| 2:R:251:LEU:CD1  | 1:S:278:LEU:CD2  | 2.88                     | 0.52              |
| 1:U:83:ILE:HA    | 1:U:112:PRO:HD2  | 1.91                     | 0.52              |
| 1:W:112:PRO:HA   | 1:W:176:SER:O    | 2.10                     | 0.52              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:W:271:ILE:CG2  | 1:W:273:LEU:HD21 | 2.40                     | 0.52              |
| 2:X:92:LEU:CD2   | 2:X:154:LEU:HD22 | 2.40                     | 0.52              |
| 1:C:112:PRO:HD3  | 1:C:128:TYR:CE2  | 2.45                     | 0.52              |
| 2:D:41:ARG:NH1   | 1:E:43:VAL:CG1   | 2.73                     | 0.52              |
| 2:D:239:ARG:HE   | 1:E:258:GLN:HE22 | 1.56                     | 0.52              |
| 2:D:239:ARG:O    | 1:E:258:GLN:HG2  | 2.10                     | 0.52              |
| 1:E:106:LEU:HD21 | 1:E:182:VAL:CG1  | 2.40                     | 0.52              |
| 2:F:33:GLY:O     | 2:F:69:CYS:N     | 2.43                     | 0.52              |
| 1:G:257:ALA:CA   | 1:I:279:VAL:HG11 | 2.39                     | 0.52              |
| 2:H:173:LEU:O    | 2:H:174:THR:HG23 | 2.10                     | 0.52              |
| 1:I:112:PRO:CA   | 1:I:177:LEU:HD23 | 2.39                     | 0.52              |
| 2:J:43:ARG:CB    | 2:J:43:ARG:HG3   | 2.22                     | 0.52              |
| 2:J:130:VAL:HG12 | 2:J:146:VAL:HG13 | 1.92                     | 0.52              |
| 2:J:173:LEU:O    | 2:J:174:THR:HG23 | 2.10                     | 0.52              |
| 1:K:271:ILE:CG2  | 1:K:273:LEU:HD21 | 2.40                     | 0.52              |
| 2:L:270:LEU:HD13 | 1:M:272:TYR:CE2  | 2.45                     | 0.52              |
| 2:N:262:ALA:HB2  | 2:P:264:GLN:NE2  | 2.25                     | 0.52              |
| 2:P:33:GLY:O     | 2:P:69:CYS:N     | 2.43                     | 0.52              |
| 2:P:189:ALA:CB   | 1:Q:212:PHE:CE1  | 2.91                     | 0.52              |
| 1:S:106:LEU:HD21 | 1:S:182:VAL:CG1  | 2.40                     | 0.52              |
| 1:U:106:LEU:HD21 | 1:U:182:VAL:CG1  | 2.40                     | 0.52              |
| 1:U:112:PRO:HA   | 1:U:176:SER:O    | 2.10                     | 0.52              |
| 2:V:92:LEU:CD2   | 2:V:154:LEU:HD22 | 2.40                     | 0.52              |
| 2:V:258:THR:O    | 1:W:273:LEU:CB   | 2.58                     | 0.52              |
| 1:W:112:PRO:HD3  | 1:W:128:TYR:CE2  | 2.45                     | 0.52              |
| 1:A:193:TYR:CE1  | 2:B:187:GLN:C    | 2.88                     | 0.51              |
| 2:B:33:GLY:O     | 2:B:69:CYS:N     | 2.43                     | 0.51              |
| 2:B:46:GLN:O     | 2:B:104:PRO:HG3  | 2.09                     | 0.51              |
| 2:B:173:LEU:O    | 2:B:174:THR:HG23 | 2.10                     | 0.51              |
| 1:C:106:LEU:HD21 | 1:C:182:VAL:CG1  | 2.40                     | 0.51              |
| 1:C:280:LEU:HD23 | 1:C:282:LEU:HD11 | 1.92                     | 0.51              |
| 2:D:97:ARG:O     | 2:D:97:ARG:HG3   | 2.11                     | 0.51              |
| 1:E:112:PRO:CA   | 1:E:177:LEU:HD23 | 2.39                     | 0.51              |
| 1:G:83:ILE:HA    | 1:G:112:PRO:HD2  | 1.92                     | 0.51              |
| 1:I:280:LEU:HD23 | 1:I:282:LEU:HD11 | 1.93                     | 0.51              |
| 2:L:224:ILE:HG21 | 1:M:251:LEU:HG   | 1.93                     | 0.51              |
| 1:M:125:GLY:CA   | 2:N:70:ARG:CG    | 2.87                     | 0.51              |
| 1:M:138:ASN:HD22 | 2:N:171:THR:HG23 | 1.74                     | 0.51              |
| 1:M:250:LYS:C    | 1:M:254:ILE:HD12 | 2.34                     | 0.51              |
| 1:O:112:PRO:CA   | 1:O:177:LEU:HD23 | 2.39                     | 0.51              |
| 2:P:92:LEU:CD2   | 2:P:154:LEU:HD22 | 2.40                     | 0.51              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:R:92:LEU:CD2   | 2:R:154:LEU:HD22 | 2.40                     | 0.51              |
| 2:R:97:ARG:HG3   | 2:R:97:ARG:O     | 2.11                     | 0.51              |
| 1:S:135:SER:CB   | 2:T:93:ARG:CZ    | 2.88                     | 0.51              |
| 2:T:259:TYR:HE1  | 1:U:278:LEU:HB2  | 1.73                     | 0.51              |
| 1:U:210:ALA:CB   | 2:V:205:GLN:HB2  | 2.39                     | 0.51              |
| 2:V:35:ARG:HA    | 2:V:52:GLU:HG3   | 1.92                     | 0.51              |
| 2:V:57:LEU:HB2   | 2:V:62:GLN:HB2   | 1.90                     | 0.51              |
| 2:V:97:ARG:HG3   | 2:V:97:ARG:O     | 2.11                     | 0.51              |
| 2:V:130:VAL:HG12 | 2:V:146:VAL:HG13 | 1.92                     | 0.51              |
| 2:V:256:ASN:HB2  | 1:W:270:ARG:HG2  | 1.91                     | 0.51              |
| 2:B:119:LEU:HD21 | 2:B:163:LEU:CD1  | 2.38                     | 0.51              |
| 2:F:258:THR:CG2  | 2:F:259:TYR:H    | 2.21                     | 0.51              |
| 1:G:271:ILE:CG2  | 1:G:273:LEU:HD21 | 2.40                     | 0.51              |
| 2:J:33:GLY:O     | 2:J:69:CYS:N     | 2.43                     | 0.51              |
| 2:J:35:ARG:HA    | 2:J:52:GLU:HG3   | 1.92                     | 0.51              |
| 2:L:33:GLY:O     | 2:L:69:CYS:N     | 2.43                     | 0.51              |
| 1:M:112:PRO:HD3  | 1:M:128:TYR:CE2  | 2.45                     | 0.51              |
| 1:O:164:ILE:HD12 | 1:O:184:ILE:CD1  | 2.36                     | 0.51              |
| 1:Q:106:LEU:HB2  | 1:Q:141:LEU:HD21 | 1.91                     | 0.51              |
| 1:U:6:LYS:NZ     | 2:V:10:GLY:CA    | 2.73                     | 0.51              |
| 2:V:218:SER:HB2  | 1:W:238:LEU:HG   | 1.92                     | 0.51              |
| 2:V:235:LEU:O    | 1:W:251:LEU:CD2  | 2.58                     | 0.51              |
| 2:V:239:ARG:CB   | 1:W:251:LEU:HD13 | 2.40                     | 0.51              |
| 2:X:130:VAL:HG12 | 2:X:146:VAL:HG13 | 1.92                     | 0.51              |
| 1:A:112:PRO:HD3  | 1:A:128:TYR:CE2  | 2.45                     | 0.51              |
| 2:B:204:GLU:CB   | 1:C:226:VAL:HG21 | 2.41                     | 0.51              |
| 2:B:270:LEU:HB2  | 2:D:269:GLN:O    | 2.11                     | 0.51              |
| 2:D:204:GLU:HA   | 1:E:226:VAL:HG11 | 1.91                     | 0.51              |
| 1:E:96:SER:HA    | 1:E:146:ALA:HA   | 1.93                     | 0.51              |
| 2:F:35:ARG:HB2   | 2:F:69:CYS:SG    | 2.50                     | 0.51              |
| 1:I:102:VAL:CG1  | 1:I:187:LEU:HD12 | 2.41                     | 0.51              |
| 1:K:48:ARG:HG3   | 1:K:117:LEU:HD12 | 1.93                     | 0.51              |
| 1:K:112:PRO:HD3  | 1:K:128:TYR:CE2  | 2.45                     | 0.51              |
| 2:L:173:LEU:O    | 2:L:174:THR:HG23 | 2.10                     | 0.51              |
| 1:M:96:SER:HA    | 1:M:146:ALA:HA   | 1.93                     | 0.51              |
| 1:M:271:ILE:CG2  | 1:M:273:LEU:HD21 | 2.40                     | 0.51              |
| 2:N:33:GLY:O     | 2:N:69:CYS:N     | 2.43                     | 0.51              |
| 2:N:97:ARG:HG3   | 2:N:97:ARG:O     | 2.11                     | 0.51              |
| 1:O:112:PRO:HD3  | 1:O:128:TYR:CE2  | 2.45                     | 0.51              |
| 2:P:157:ARG:CZ   | 1:Q:165:ARG:HH12 | 2.23                     | 0.51              |
| 2:R:130:VAL:HG12 | 2:R:146:VAL:HG13 | 1.92                     | 0.51              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:S:253:LYS:NZ   | 2:T:241:LEU:HD13 | 2.25                     | 0.51              |
| 2:T:92:LEU:CD2   | 2:T:154:LEU:HD22 | 2.40                     | 0.51              |
| 2:V:33:GLY:O     | 2:V:69:CYS:N     | 2.43                     | 0.51              |
| 2:B:92:LEU:CD2   | 2:B:154:LEU:HD22 | 2.40                     | 0.51              |
| 2:D:92:LEU:HD23  | 2:D:123:THR:HG23 | 1.91                     | 0.51              |
| 2:D:235:LEU:C    | 1:E:251:LEU:HD13 | 2.35                     | 0.51              |
| 2:F:130:VAL:HG12 | 2:F:146:VAL:HG13 | 1.92                     | 0.51              |
| 1:G:106:LEU:HD21 | 1:G:182:VAL:CG1  | 2.40                     | 0.51              |
| 2:H:97:ARG:HG3   | 2:H:97:ARG:O     | 2.11                     | 0.51              |
| 2:J:92:LEU:CD2   | 2:J:154:LEU:HD22 | 2.40                     | 0.51              |
| 2:J:97:ARG:HG3   | 2:J:97:ARG:O     | 2.11                     | 0.51              |
| 2:L:35:ARG:HA    | 2:L:52:GLU:HG3   | 1.92                     | 0.51              |
| 2:N:92:LEU:CD2   | 2:N:154:LEU:HD22 | 2.40                     | 0.51              |
| 1:O:96:SER:HA    | 1:O:146:ALA:HA   | 1.93                     | 0.51              |
| 1:Q:112:PRO:HD3  | 1:Q:128:TYR:CE2  | 2.45                     | 0.51              |
| 2:R:225:ALA:HB1  | 1:S:244:LYS:HB3  | 1.93                     | 0.51              |
| 1:S:271:ILE:CG2  | 1:S:273:LEU:HD21 | 2.40                     | 0.51              |
| 2:T:43:ARG:CG    | 2:T:43:ARG:HB2   | 2.24                     | 0.51              |
| 2:T:181:GLU:O    | 2:T:184:GLU:HB3  | 2.10                     | 0.51              |
| 1:U:112:PRO:CA   | 1:U:177:LEU:HD23 | 2.39                     | 0.51              |
| 1:W:106:LEU:HD21 | 1:W:182:VAL:CG1  | 2.40                     | 0.51              |
| 1:G:164:ILE:HD12 | 1:G:184:ILE:CD1  | 2.36                     | 0.51              |
| 1:M:106:LEU:HD21 | 1:M:182:VAL:CG1  | 2.40                     | 0.51              |
| 1:M:124:LEU:C    | 2:N:70:ARG:HB3   | 2.36                     | 0.51              |
| 1:O:112:PRO:HA   | 1:O:176:SER:O    | 2.10                     | 0.51              |
| 1:Q:271:ILE:CG2  | 1:Q:273:LEU:HD21 | 2.40                     | 0.51              |
| 1:S:112:PRO:HA   | 1:S:176:SER:O    | 2.10                     | 0.51              |
| 2:T:35:ARG:HB2   | 2:T:69:CYS:SG    | 2.50                     | 0.51              |
| 1:U:271:ILE:CG2  | 1:U:273:LEU:HD21 | 2.40                     | 0.51              |
| 1:W:83:ILE:HA    | 1:W:112:PRO:HD2  | 1.91                     | 0.51              |
| 1:W:280:LEU:HD23 | 1:W:282:LEU:HD11 | 1.93                     | 0.51              |
| 1:A:68:LEU:N     | 2:X:43:ARG:HD2   | 2.26                     | 0.51              |
| 2:B:97:ARG:HG3   | 2:B:97:ARG:O     | 2.10                     | 0.51              |
| 1:C:266:THR:OG1  | 2:D:252:SER:CB   | 2.59                     | 0.51              |
| 2:D:35:ARG:HA    | 2:D:52:GLU:HG3   | 1.92                     | 0.51              |
| 2:D:181:GLU:O    | 2:D:184:GLU:HB3  | 2.10                     | 0.51              |
| 1:E:112:PRO:HD3  | 1:E:128:TYR:CE2  | 2.45                     | 0.51              |
| 1:E:280:LEU:HD23 | 1:E:282:LEU:HD11 | 1.93                     | 0.51              |
| 1:G:102:VAL:CG1  | 1:G:187:LEU:HD12 | 2.41                     | 0.51              |
| 1:G:280:LEU:HD23 | 1:G:282:LEU:HD11 | 1.93                     | 0.51              |
| 2:H:92:LEU:HD23  | 2:H:123:THR:HG23 | 1.91                     | 0.51              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:H:130:VAL:HG12 | 2:H:146:VAL:HG13 | 1.92                     | 0.51              |
| 1:I:96:SER:HA    | 1:I:146:ALA:HA   | 1.93                     | 0.51              |
| 1:K:102:VAL:CG1  | 1:K:187:LEU:HD12 | 2.41                     | 0.51              |
| 1:K:106:LEU:HD21 | 1:K:182:VAL:CG1  | 2.40                     | 0.51              |
| 1:K:210:ALA:O    | 1:K:214:VAL:HG23 | 2.11                     | 0.51              |
| 1:M:48:ARG:HG3   | 1:M:117:LEU:HD12 | 1.93                     | 0.51              |
| 1:M:102:VAL:CG1  | 1:M:187:LEU:HD12 | 2.41                     | 0.51              |
| 1:O:48:ARG:HG3   | 1:O:117:LEU:HD12 | 1.93                     | 0.51              |
| 1:O:210:ALA:O    | 1:O:214:VAL:HG23 | 2.11                     | 0.51              |
| 2:P:130:VAL:HG12 | 2:P:146:VAL:HG13 | 1.92                     | 0.51              |
| 1:Q:102:VAL:CG1  | 1:Q:187:LEU:HD12 | 2.41                     | 0.51              |
| 1:Q:210:ALA:O    | 1:Q:214:VAL:HG23 | 2.11                     | 0.51              |
| 1:S:112:PRO:HD3  | 1:S:128:TYR:CE2  | 2.45                     | 0.51              |
| 1:S:269:ASN:ND2  | 2:T:257:ILE:CD1  | 2.68                     | 0.51              |
| 1:S:272:TYR:HD1  | 2:T:258:THR:CG2  | 2.19                     | 0.51              |
| 1:W:96:SER:HA    | 1:W:146:ALA:HA   | 1.93                     | 0.51              |
| 1:W:102:VAL:CG1  | 1:W:187:LEU:HD12 | 2.41                     | 0.51              |
| 1:W:164:ILE:HD12 | 1:W:184:ILE:CD1  | 2.36                     | 0.51              |
| 2:X:94:ILE:HG21  | 2:X:119:LEU:HD22 | 1.93                     | 0.51              |
| 1:A:106:LEU:HB2  | 1:A:141:LEU:HD21 | 1.91                     | 0.51              |
| 1:A:210:ALA:O    | 1:A:214:VAL:HG23 | 2.11                     | 0.51              |
| 1:A:271:ILE:CG2  | 1:A:273:LEU:HD21 | 2.40                     | 0.51              |
| 2:B:130:VAL:HG12 | 2:B:146:VAL:HG13 | 1.92                     | 0.51              |
| 2:B:211:ILE:HG12 | 1:C:233:GLU:OE2  | 2.11                     | 0.51              |
| 1:C:210:ALA:O    | 1:C:214:VAL:HG23 | 2.11                     | 0.51              |
| 2:D:85:LEU:HD21  | 1:E:155:THR:HB   | 1.91                     | 0.51              |
| 1:E:48:ARG:HG3   | 1:E:117:LEU:HD12 | 1.93                     | 0.51              |
| 1:E:271:ILE:CG2  | 1:E:273:LEU:HD21 | 2.40                     | 0.51              |
| 2:F:92:LEU:CD2   | 2:F:154:LEU:HD22 | 2.40                     | 0.51              |
| 1:I:128:TYR:CD2  | 1:I:129:GLU:N    | 2.79                     | 0.51              |
| 1:I:271:ILE:CG2  | 1:I:273:LEU:HD21 | 2.40                     | 0.51              |
| 2:J:85:LEU:HD21  | 1:K:155:THR:HG22 | 1.91                     | 0.51              |
| 2:J:221:ALA:CA   | 1:K:248:TYR:CD2  | 2.92                     | 0.51              |
| 2:J:228:LEU:HD23 | 2:J:231:ALA:HB3  | 1.93                     | 0.51              |
| 2:L:181:GLU:O    | 2:L:184:GLU:HB3  | 2.10                     | 0.51              |
| 1:M:121:TYR:CE2  | 2:N:32:ALA:CB    | 2.89                     | 0.51              |
| 1:M:274:THR:HG1  | 1:M:277:ASN:CG   | 2.16                     | 0.51              |
| 2:N:218:SER:O    | 2:N:221:ALA:HB3  | 2.11                     | 0.51              |
| 2:P:39:PHE:HA    | 1:Q:45:GLY:O     | 2.10                     | 0.51              |
| 2:P:228:LEU:HD23 | 2:P:231:ALA:HB3  | 1.93                     | 0.51              |
| 1:Q:83:ILE:HA    | 1:Q:112:PRO:HD2  | 1.91                     | 0.51              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:R:173:LEU:O    | 2:R:174:THR:HG23 | 2.10                     | 0.51              |
| 1:S:110:SER:HA   | 1:S:179:LEU:HD23 | 1.93                     | 0.51              |
| 1:U:96:SER:HA    | 1:U:146:ALA:HA   | 1.93                     | 0.51              |
| 1:U:108:VAL:HG13 | 1:U:182:VAL:HG22 | 1.93                     | 0.51              |
| 2:X:33:GLY:O     | 2:X:69:CYS:N     | 2.43                     | 0.51              |
| 1:A:40:VAL:HG21  | 2:X:42:PHE:HD1   | 1.76                     | 0.51              |
| 1:A:225:ILE:HA   | 2:B:219:LYS:CE   | 2.39                     | 0.51              |
| 1:C:128:TYR:CD2  | 1:C:129:GLU:N    | 2.79                     | 0.51              |
| 2:H:92:LEU:CD2   | 2:H:154:LEU:HD22 | 2.40                     | 0.51              |
| 2:J:92:LEU:HD23  | 2:J:123:THR:HG23 | 1.91                     | 0.51              |
| 1:K:112:PRO:HA   | 1:K:176:SER:O    | 2.10                     | 0.51              |
| 2:L:182:ALA:HB3  | 1:M:205:GLN:HB3  | 1.92                     | 0.51              |
| 1:M:54:ARG:HH21  | 2:N:53:GLY:H     | 1.57                     | 0.51              |
| 1:M:280:LEU:HD23 | 1:M:282:LEU:HD11 | 1.93                     | 0.51              |
| 2:N:173:LEU:O    | 2:N:174:THR:HG23 | 2.10                     | 0.51              |
| 1:O:102:VAL:CG1  | 1:O:187:LEU:HD12 | 2.41                     | 0.51              |
| 2:P:110:ILE:CG2  | 1:Q:109:LEU:HD21 | 2.40                     | 0.51              |
| 2:P:128:LYS:CE   | 1:Q:157:ARG:NH1  | 2.74                     | 0.51              |
| 1:Q:96:SER:HA    | 1:Q:146:ALA:HA   | 1.93                     | 0.51              |
| 1:Q:221:GLN:HG2  | 2:R:212:ILE:CG2  | 2.36                     | 0.51              |
| 1:Q:260:ILE:HG12 | 2:R:249:TYR:HD1  | 1.74                     | 0.51              |
| 1:S:102:VAL:CG1  | 1:S:187:LEU:HD12 | 2.41                     | 0.51              |
| 1:S:210:ALA:O    | 1:S:214:VAL:HG23 | 2.11                     | 0.51              |
| 2:T:217:ASP:O    | 1:U:248:TYR:CE2  | 2.64                     | 0.51              |
| 1:U:102:VAL:CG1  | 1:U:187:LEU:HD12 | 2.41                     | 0.51              |
| 1:U:225:ILE:HA   | 2:V:219:LYS:HE2  | 1.92                     | 0.51              |
| 1:U:280:LEU:HD23 | 1:U:282:LEU:HD11 | 1.93                     | 0.51              |
| 2:V:94:ILE:HG21  | 2:V:119:LEU:HD22 | 1.93                     | 0.51              |
| 2:V:218:SER:O    | 2:V:221:ALA:HB3  | 2.11                     | 0.51              |
| 1:W:128:TYR:CD2  | 1:W:129:GLU:N    | 2.79                     | 0.51              |
| 2:X:97:ARG:HG3   | 2:X:97:ARG:O     | 2.11                     | 0.51              |
| 2:X:119:LEU:HD21 | 2:X:163:LEU:CD1  | 2.38                     | 0.51              |
| 2:B:219:LYS:HD2  | 2:B:220:ALA:N    | 2.26                     | 0.51              |
| 1:C:110:SER:HA   | 1:C:179:LEU:HD23 | 1.93                     | 0.51              |
| 1:C:192:GLU:CB   | 2:D:188:VAL:HG13 | 2.40                     | 0.51              |
| 1:C:274:THR:HG22 | 2:D:261:PRO:CB   | 2.28                     | 0.51              |
| 2:D:130:VAL:HG12 | 2:D:146:VAL:HG13 | 1.92                     | 0.51              |
| 1:E:246:PRO:HA   | 1:E:249:ILE:HG22 | 1.93                     | 0.51              |
| 2:J:99:VAL:HG22  | 2:J:164:ILE:CG1  | 2.41                     | 0.51              |
| 1:K:108:VAL:HG13 | 1:K:182:VAL:HG22 | 1.93                     | 0.51              |
| 2:L:92:LEU:CD2   | 2:L:154:LEU:HD22 | 2.40                     | 0.51              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:L:97:ARG:O     | 2:L:97:ARG:HG3   | 2.11                     | 0.51              |
| 1:M:246:PRO:HA   | 1:M:249:ILE:HG22 | 1.93                     | 0.51              |
| 2:N:181:GLU:O    | 2:N:184:GLU:HB3  | 2.10                     | 0.51              |
| 2:P:97:ARG:HG3   | 2:P:97:ARG:O     | 2.11                     | 0.51              |
| 2:P:196:ALA:CB   | 1:Q:220:GLU:CG   | 2.87                     | 0.51              |
| 1:Q:108:VAL:HG13 | 1:Q:182:VAL:HG22 | 1.93                     | 0.51              |
| 1:Q:221:GLN:CG   | 2:R:212:ILE:HG23 | 2.39                     | 0.51              |
| 1:Q:242:LEU:HD13 | 2:R:238:LEU:CG   | 2.40                     | 0.51              |
| 1:Q:260:ILE:CD1  | 2:R:248:ALA:HB3  | 2.38                     | 0.51              |
| 1:S:108:VAL:HG13 | 1:S:182:VAL:HG22 | 1.93                     | 0.51              |
| 2:T:97:ARG:O     | 2:T:97:ARG:HG3   | 2.11                     | 0.51              |
| 1:U:246:PRO:HB3  | 1:W:294:LEU:CG   | 2.41                     | 0.51              |
| 2:V:240:LYS:HG2  | 1:W:254:ILE:HD11 | 1.93                     | 0.51              |
| 1:A:128:TYR:CD2  | 1:A:129:GLU:N    | 2.79                     | 0.51              |
| 1:A:280:LEU:HD23 | 1:A:282:LEU:HD11 | 1.93                     | 0.51              |
| 2:D:218:SER:O    | 2:D:221:ALA:HB3  | 2.11                     | 0.51              |
| 2:D:225:ALA:HA   | 1:E:248:TYR:HB2  | 1.92                     | 0.51              |
| 1:E:108:VAL:HG13 | 1:E:182:VAL:HG22 | 1.93                     | 0.51              |
| 2:F:219:LYS:HD2  | 2:F:220:ALA:N    | 2.26                     | 0.51              |
| 1:G:48:ARG:HG3   | 1:G:117:LEU:HD12 | 1.93                     | 0.51              |
| 1:G:108:VAL:HG13 | 1:G:182:VAL:HG22 | 1.93                     | 0.51              |
| 2:H:35:ARG:HA    | 2:H:52:GLU:HG3   | 1.92                     | 0.51              |
| 2:H:218:SER:O    | 2:H:221:ALA:HB3  | 2.11                     | 0.51              |
| 1:I:246:PRO:HA   | 1:I:249:ILE:HG22 | 1.93                     | 0.51              |
| 1:K:128:TYR:CD2  | 1:K:129:GLU:N    | 2.79                     | 0.51              |
| 2:L:99:VAL:HG22  | 2:L:164:ILE:CG1  | 2.41                     | 0.51              |
| 1:M:83:ILE:HA    | 1:M:112:PRO:HD2  | 1.91                     | 0.51              |
| 1:M:112:PRO:HA   | 1:M:176:SER:O    | 2.10                     | 0.51              |
| 1:O:128:TYR:CD2  | 1:O:129:GLU:N    | 2.79                     | 0.51              |
| 1:O:271:ILE:CG2  | 1:O:273:LEU:HD21 | 2.40                     | 0.51              |
| 1:O:280:LEU:HD23 | 1:O:282:LEU:HD11 | 1.93                     | 0.51              |
| 2:P:218:SER:O    | 2:P:221:ALA:HB3  | 2.11                     | 0.51              |
| 1:Q:48:ARG:HG3   | 1:Q:117:LEU:HD12 | 1.93                     | 0.51              |
| 1:Q:128:TYR:CD2  | 1:Q:129:GLU:N    | 2.79                     | 0.51              |
| 2:R:94:ILE:HG21  | 2:R:119:LEU:HD22 | 1.93                     | 0.51              |
| 2:T:228:LEU:HD23 | 2:T:231:ALA:HB3  | 1.93                     | 0.51              |
| 2:V:173:LEU:O    | 2:V:174:THR:HG23 | 2.10                     | 0.51              |
| 2:V:181:GLU:O    | 2:V:184:GLU:HB3  | 2.10                     | 0.51              |
| 2:V:266:VAL:HG12 | 2:X:264:GLN:OE1  | 2.10                     | 0.51              |
| 1:A:108:VAL:HG13 | 1:A:182:VAL:HG22 | 1.93                     | 0.50              |
| 1:A:193:TYR:CE1  | 2:B:187:GLN:O    | 2.64                     | 0.50              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:B:94:ILE:HG21  | 2:B:119:LEU:HD22 | 1.93                     | 0.50              |
| 2:B:233:ASP:OD2  | 1:C:299:LYS:HG3  | 2.10                     | 0.50              |
| 1:C:102:VAL:CG1  | 1:C:187:LEU:HD12 | 2.41                     | 0.50              |
| 1:C:120:MET:HG2  | 1:C:124:LEU:HD12 | 1.93                     | 0.50              |
| 1:C:246:PRO:HA   | 1:C:249:ILE:HG22 | 1.93                     | 0.50              |
| 1:C:260:ILE:HD11 | 2:D:244:ALA:HB1  | 1.92                     | 0.50              |
| 2:D:228:LEU:C    | 1:E:247:GLY:HA3  | 2.36                     | 0.50              |
| 1:E:128:TYR:CD2  | 1:E:129:GLU:N    | 2.79                     | 0.50              |
| 2:F:92:LEU:HD23  | 2:F:123:THR:HG23 | 1.91                     | 0.50              |
| 1:G:80:ILE:O     | 1:G:126:LEU:HD22 | 2.12                     | 0.50              |
| 1:G:120:MET:HG2  | 1:G:124:LEU:HD12 | 1.94                     | 0.50              |
| 2:H:99:VAL:HG22  | 2:H:164:ILE:CG1  | 2.41                     | 0.50              |
| 1:M:128:TYR:CD2  | 1:M:129:GLU:N    | 2.79                     | 0.50              |
| 1:M:135:SER:CB   | 2:N:171:THR:OG1  | 2.54                     | 0.50              |
| 1:M:175:PHE:CZ   | 2:N:167:ASP:HB2  | 2.46                     | 0.50              |
| 2:N:224:ILE:HA   | 2:N:227:SER:HB3  | 1.94                     | 0.50              |
| 1:O:50:ILE:CG1   | 1:O:79:ILE:HD12  | 2.41                     | 0.50              |
| 1:O:108:VAL:HG13 | 1:O:182:VAL:HG22 | 1.93                     | 0.50              |
| 2:T:219:LYS:HD2  | 2:T:220:ALA:N    | 2.26                     | 0.50              |
| 1:A:50:ILE:CG1   | 1:A:79:ILE:HD12  | 2.41                     | 0.50              |
| 1:E:48:ARG:HG3   | 1:E:117:LEU:CD1  | 2.42                     | 0.50              |
| 2:F:99:VAL:HG22  | 2:F:164:ILE:CG1  | 2.41                     | 0.50              |
| 1:G:209:ARG:HA   | 1:G:212:PHE:CZ   | 2.47                     | 0.50              |
| 1:I:210:ALA:O    | 1:I:214:VAL:HG23 | 2.11                     | 0.50              |
| 1:K:83:ILE:HA    | 1:K:112:PRO:HD2  | 1.91                     | 0.50              |
| 1:K:280:LEU:HD23 | 1:K:282:LEU:HD11 | 1.93                     | 0.50              |
| 1:M:210:ALA:O    | 1:M:214:VAL:HG23 | 2.11                     | 0.50              |
| 2:P:85:LEU:HD12  | 1:Q:200:LYS:NZ   | 2.26                     | 0.50              |
| 2:P:124:THR:HG21 | 1:Q:157:ARG:NH2  | 2.26                     | 0.50              |
| 1:Q:164:ILE:HD12 | 1:Q:184:ILE:CD1  | 2.36                     | 0.50              |
| 1:S:80:ILE:O     | 1:S:126:LEU:HD22 | 2.12                     | 0.50              |
| 1:U:80:ILE:O     | 1:U:126:LEU:HD22 | 2.12                     | 0.50              |
| 1:W:48:ARG:HG3   | 1:W:117:LEU:HD12 | 1.93                     | 0.50              |
| 1:W:210:ALA:O    | 1:W:214:VAL:HG23 | 2.11                     | 0.50              |
| 1:A:48:ARG:HG3   | 1:A:117:LEU:CD1  | 2.42                     | 0.50              |
| 2:B:35:ARG:HA    | 2:B:52:GLU:HG3   | 1.92                     | 0.50              |
| 1:C:48:ARG:HG3   | 1:C:117:LEU:CD1  | 2.42                     | 0.50              |
| 2:D:224:ILE:HA   | 2:D:227:SER:HB3  | 1.94                     | 0.50              |
| 1:I:48:ARG:HG3   | 1:I:117:LEU:HD12 | 1.93                     | 0.50              |
| 2:J:45:VAL:HB    | 2:J:108:THR:HG22 | 1.94                     | 0.50              |
| 1:K:220:GLU:O    | 1:K:223:GLN:HB3  | 2.11                     | 0.50              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:250:LYS:HG2  | 1:M:287:PHE:CE2  | 2.46                     | 0.50              |
| 1:M:80:ILE:O     | 1:M:126:LEU:HD22 | 2.12                     | 0.50              |
| 1:M:220:GLU:O    | 1:M:223:GLN:HB3  | 2.11                     | 0.50              |
| 2:N:228:LEU:HD23 | 2:N:231:ALA:HB3  | 1.93                     | 0.50              |
| 1:O:48:ARG:HG3   | 1:O:117:LEU:CD1  | 2.42                     | 0.50              |
| 2:P:41:ARG:HG3   | 1:Q:47:HIS:HB2   | 1.93                     | 0.50              |
| 2:R:228:LEU:HD23 | 2:R:231:ALA:HB3  | 1.93                     | 0.50              |
| 1:S:128:TYR:CD2  | 1:S:129:GLU:N    | 2.79                     | 0.50              |
| 1:S:209:ARG:HA   | 1:S:212:PHE:CZ   | 2.47                     | 0.50              |
| 1:U:110:SER:HA   | 1:U:179:LEU:HD23 | 1.93                     | 0.50              |
| 1:W:246:PRO:HA   | 1:W:249:ILE:HG22 | 1.93                     | 0.50              |
| 1:A:41:PHE:O     | 1:A:43:VAL:HG23  | 2.12                     | 0.50              |
| 1:A:102:VAL:CG1  | 1:A:187:LEU:HD12 | 2.41                     | 0.50              |
| 1:A:246:PRO:HA   | 1:A:249:ILE:HG22 | 1.93                     | 0.50              |
| 1:C:10:GLY:O     | 2:D:6:PHE:CD1    | 2.64                     | 0.50              |
| 1:C:108:VAL:HG13 | 1:C:182:VAL:HG22 | 1.93                     | 0.50              |
| 1:G:220:GLU:O    | 1:G:223:GLN:HB3  | 2.11                     | 0.50              |
| 2:H:119:LEU:HD21 | 2:H:163:LEU:CD1  | 2.38                     | 0.50              |
| 2:J:90:ILE:HD12  | 2:J:131:VAL:CG2  | 2.42                     | 0.50              |
| 2:J:157:ARG:NH2  | 1:K:165:ARG:NH2  | 2.60                     | 0.50              |
| 2:J:218:SER:O    | 2:J:221:ALA:HB3  | 2.11                     | 0.50              |
| 2:L:94:ILE:HG21  | 2:L:119:LEU:HD22 | 1.93                     | 0.50              |
| 2:L:189:ALA:CB   | 1:M:212:PHE:CE1  | 2.93                     | 0.50              |
| 2:L:218:SER:O    | 2:L:221:ALA:HB3  | 2.11                     | 0.50              |
| 1:M:108:VAL:HG13 | 1:M:182:VAL:HG22 | 1.93                     | 0.50              |
| 1:Q:50:ILE:CG1   | 1:Q:79:ILE:HD12  | 2.41                     | 0.50              |
| 1:Q:80:ILE:O     | 1:Q:126:LEU:HD22 | 2.12                     | 0.50              |
| 2:R:140:ILE:CD1  | 2:R:173:LEU:HD21 | 2.42                     | 0.50              |
| 1:S:135:SER:OG   | 2:T:93:ARG:NH1   | 2.44                     | 0.50              |
| 1:S:253:LYS:HE3  | 2:T:241:LEU:HD11 | 1.93                     | 0.50              |
| 1:S:268:GLN:HB3  | 2:T:255:ARG:HB3  | 1.94                     | 0.50              |
| 2:T:99:VAL:HG22  | 2:T:164:ILE:CG1  | 2.41                     | 0.50              |
| 1:U:210:ALA:O    | 1:U:214:VAL:HG23 | 2.11                     | 0.50              |
| 2:V:99:VAL:HG22  | 2:V:164:ILE:CG1  | 2.41                     | 0.50              |
| 2:V:219:LYS:HD2  | 2:V:220:ALA:N    | 2.26                     | 0.50              |
| 1:W:80:ILE:O     | 1:W:126:LEU:HD22 | 2.12                     | 0.50              |
| 1:W:120:MET:HG2  | 1:W:124:LEU:HD12 | 1.94                     | 0.50              |
| 1:W:209:ARG:HA   | 1:W:212:PHE:CZ   | 2.47                     | 0.50              |
| 2:X:218:SER:O    | 2:X:221:ALA:HB3  | 2.11                     | 0.50              |
| 1:A:280:LEU:O    | 1:W:274:THR:CG2  | 2.60                     | 0.50              |
| 2:B:140:ILE:CD1  | 2:B:173:LEU:HD21 | 2.42                     | 0.50              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:D:228:LEU:HD23 | 2:D:231:ALA:HB3  | 1.93                     | 0.50              |
| 1:E:102:VAL:CG1  | 1:E:187:LEU:HD12 | 2.41                     | 0.50              |
| 1:E:110:SER:HA   | 1:E:179:LEU:HD23 | 1.93                     | 0.50              |
| 1:G:210:ALA:O    | 1:G:214:VAL:HG23 | 2.11                     | 0.50              |
| 1:G:274:THR:HG1  | 1:G:277:ASN:CG   | 2.20                     | 0.50              |
| 2:H:219:LYS:HD2  | 2:H:220:ALA:N    | 2.26                     | 0.50              |
| 2:J:125:GLU:OE2  | 1:K:165:ARG:NH2  | 2.45                     | 0.50              |
| 1:K:50:ILE:CG1   | 1:K:79:ILE:HD12  | 2.41                     | 0.50              |
| 1:K:110:SER:HA   | 1:K:179:LEU:HD23 | 1.93                     | 0.50              |
| 1:K:221:GLN:CD   | 2:L:216:GLY:CA   | 2.84                     | 0.50              |
| 2:L:28:TYR:CD1   | 2:L:30:VAL:HG23  | 2.47                     | 0.50              |
| 1:O:80:ILE:O     | 1:O:126:LEU:HD22 | 2.12                     | 0.50              |
| 1:O:110:SER:HA   | 1:O:179:LEU:HD23 | 1.93                     | 0.50              |
| 2:P:90:ILE:HD12  | 2:P:131:VAL:CG2  | 2.42                     | 0.50              |
| 2:P:94:ILE:HG21  | 2:P:119:LEU:HD22 | 1.93                     | 0.50              |
| 1:Q:209:ARG:HA   | 1:Q:212:PHE:CZ   | 2.47                     | 0.50              |
| 1:Q:280:LEU:HD23 | 1:Q:282:LEU:HD11 | 1.93                     | 0.50              |
| 2:T:258:THR:CG2  | 2:T:259:TYR:H    | 2.22                     | 0.50              |
| 2:V:229:ALA:CB   | 1:W:244:LYS:CB   | 2.86                     | 0.50              |
| 1:A:96:SER:HA    | 1:A:146:ALA:HA   | 1.93                     | 0.50              |
| 1:A:110:SER:HA   | 1:A:179:LEU:HD23 | 1.93                     | 0.50              |
| 1:A:120:MET:HG2  | 1:A:124:LEU:HD12 | 1.94                     | 0.50              |
| 2:B:219:LYS:O    | 2:B:222:GLU:HB2  | 2.12                     | 0.50              |
| 1:C:96:SER:HA    | 1:C:146:ALA:HA   | 1.93                     | 0.50              |
| 1:E:209:ARG:HA   | 1:E:212:PHE:CZ   | 2.47                     | 0.50              |
| 2:F:218:SER:O    | 2:F:221:ALA:HB3  | 2.11                     | 0.50              |
| 2:H:140:ILE:CD1  | 2:H:173:LEU:HD21 | 2.42                     | 0.50              |
| 1:I:220:GLU:O    | 1:I:223:GLN:HB3  | 2.12                     | 0.50              |
| 1:K:224:LYS:C    | 2:L:219:LYS:HE2  | 2.36                     | 0.50              |
| 2:L:219:LYS:HD2  | 2:L:220:ALA:N    | 2.26                     | 0.50              |
| 1:M:110:SER:HA   | 1:M:179:LEU:HD23 | 1.93                     | 0.50              |
| 2:N:43:ARG:CG    | 2:N:43:ARG:HB3   | 2.24                     | 0.50              |
| 2:P:28:TYR:CD1   | 2:P:30:VAL:HG23  | 2.47                     | 0.50              |
| 1:Q:82:ASP:O     | 1:Q:128:TYR:OH   | 2.30                     | 0.50              |
| 2:R:90:ILE:HD12  | 2:R:131:VAL:CG2  | 2.42                     | 0.50              |
| 1:S:253:LYS:CE   | 2:T:241:LEU:HD11 | 2.41                     | 0.50              |
| 1:S:260:ILE:HD11 | 2:T:244:ALA:C    | 2.34                     | 0.50              |
| 2:T:90:ILE:HD12  | 2:T:131:VAL:CG2  | 2.42                     | 0.50              |
| 2:T:130:VAL:HG12 | 2:T:146:VAL:HG13 | 1.92                     | 0.50              |
| 2:T:186:LYS:HA   | 1:U:212:PHE:CD2  | 2.46                     | 0.50              |
| 1:U:48:ARG:HG3   | 1:U:117:LEU:CD1  | 2.42                     | 0.50              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:U:220:GLU:O    | 1:U:223:GLN:HB3  | 2.11                     | 0.50              |
| 1:U:246:PRO:HA   | 1:U:249:ILE:HG22 | 1.93                     | 0.50              |
| 2:X:219:LYS:HD2  | 2:X:220:ALA:N    | 2.26                     | 0.50              |
| 2:X:219:LYS:O    | 2:X:222:GLU:HB2  | 2.12                     | 0.50              |
| 2:X:224:ILE:HA   | 2:X:227:SER:HB3  | 1.94                     | 0.50              |
| 2:B:218:SER:O    | 2:B:221:ALA:HB3  | 2.11                     | 0.50              |
| 1:C:41:PHE:O     | 1:C:43:VAL:HG23  | 2.12                     | 0.50              |
| 1:C:209:ARG:HA   | 1:C:212:PHE:CZ   | 2.47                     | 0.50              |
| 1:C:220:GLU:O    | 1:C:223:GLN:HB3  | 2.11                     | 0.50              |
| 2:D:45:VAL:HB    | 2:D:108:THR:HG22 | 1.94                     | 0.50              |
| 2:D:92:LEU:CD2   | 2:D:154:LEU:HD22 | 2.40                     | 0.50              |
| 2:D:99:VAL:HG22  | 2:D:164:ILE:CG1  | 2.41                     | 0.50              |
| 1:E:50:ILE:CG1   | 1:E:79:ILE:HD12  | 2.41                     | 0.50              |
| 2:F:97:ARG:HG3   | 2:F:97:ARG:O     | 2.11                     | 0.50              |
| 2:F:228:LEU:HD23 | 2:F:231:ALA:HB3  | 1.93                     | 0.50              |
| 1:G:41:PHE:CD1   | 1:G:78:PRO:HB3   | 2.47                     | 0.50              |
| 2:H:28:TYR:CD1   | 2:H:30:VAL:HG23  | 2.47                     | 0.50              |
| 2:H:90:ILE:HD12  | 2:H:131:VAL:CG2  | 2.42                     | 0.50              |
| 2:H:219:LYS:O    | 2:H:222:GLU:HB2  | 2.12                     | 0.50              |
| 2:J:45:VAL:HB    | 1:K:66:GLU:OE2   | 2.10                     | 0.50              |
| 2:J:94:ILE:HG21  | 2:J:119:LEU:HD22 | 1.93                     | 0.50              |
| 1:K:41:PHE:O     | 1:K:43:VAL:HG23  | 2.12                     | 0.50              |
| 1:M:99:LEU:HB2   | 2:N:180:THR:O    | 2.12                     | 0.50              |
| 1:M:121:TYR:O    | 2:N:33:GLY:HA2   | 2.12                     | 0.50              |
| 1:O:82:ASP:O     | 1:O:128:TYR:OH   | 2.30                     | 0.50              |
| 2:P:92:LEU:HD23  | 2:P:154:LEU:HD22 | 1.94                     | 0.50              |
| 2:P:110:ILE:C    | 1:Q:85:ALA:CB    | 2.84                     | 0.50              |
| 2:P:178:GLU:CB   | 1:Q:202:VAL:HG13 | 2.32                     | 0.50              |
| 2:P:219:LYS:O    | 2:P:222:GLU:HB2  | 2.12                     | 0.50              |
| 1:Q:120:MET:HG2  | 1:Q:124:LEU:HD12 | 1.93                     | 0.50              |
| 1:S:48:ARG:HG3   | 1:S:117:LEU:HD12 | 1.93                     | 0.50              |
| 1:S:50:ILE:CG1   | 1:S:79:ILE:HD12  | 2.41                     | 0.50              |
| 1:S:96:SER:HA    | 1:S:146:ALA:HA   | 1.93                     | 0.50              |
| 2:T:35:ARG:HA    | 2:T:52:GLU:HG3   | 1.92                     | 0.50              |
| 2:T:94:ILE:HG21  | 2:T:119:LEU:HD22 | 1.93                     | 0.50              |
| 2:T:221:ALA:CB   | 1:U:248:TYR:CB   | 2.90                     | 0.50              |
| 1:U:48:ARG:HG3   | 1:U:117:LEU:HD12 | 1.93                     | 0.50              |
| 2:V:45:VAL:HB    | 2:V:108:THR:HG22 | 1.94                     | 0.50              |
| 1:A:80:ILE:O     | 1:A:126:LEU:HD22 | 2.12                     | 0.50              |
| 1:A:82:ASP:O     | 1:A:128:TYR:OH   | 2.30                     | 0.50              |
| 1:A:193:TYR:CD1  | 2:B:188:VAL:HA   | 2.47                     | 0.50              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:209:ARG:HA   | 1:A:212:PHE:CZ   | 2.47                     | 0.50              |
| 1:A:220:GLU:O    | 1:A:223:GLN:HB3  | 2.11                     | 0.50              |
| 2:B:270:LEU:N    | 2:D:269:GLN:HB2  | 2.26                     | 0.50              |
| 2:B:271:PRO:O    | 2:D:271:PRO:HB3  | 2.12                     | 0.50              |
| 2:D:140:ILE:CD1  | 2:D:173:LEU:HD21 | 2.42                     | 0.50              |
| 2:D:189:ALA:CB   | 1:E:212:PHE:CD2  | 2.94                     | 0.50              |
| 1:E:41:PHE:O     | 1:E:43:VAL:HG23  | 2.12                     | 0.50              |
| 1:E:210:ALA:O    | 1:E:214:VAL:HG23 | 2.11                     | 0.50              |
| 1:G:246:PRO:HA   | 1:G:249:ILE:HG22 | 1.93                     | 0.50              |
| 2:H:45:VAL:HB    | 2:H:108:THR:HG22 | 1.94                     | 0.50              |
| 1:K:48:ARG:HG3   | 1:K:117:LEU:CD1  | 2.42                     | 0.50              |
| 2:L:43:ARG:CG    | 2:L:43:ARG:HB3   | 2.24                     | 0.50              |
| 1:M:48:ARG:HG3   | 1:M:117:LEU:CD1  | 2.42                     | 0.50              |
| 2:N:90:ILE:HD12  | 2:N:131:VAL:CG2  | 2.42                     | 0.50              |
| 2:N:99:VAL:HG22  | 2:N:164:ILE:CG1  | 2.41                     | 0.50              |
| 2:N:259:TYR:C    | 2:N:260:LEU:HD12 | 2.37                     | 0.50              |
| 1:O:220:GLU:O    | 1:O:223:GLN:HB3  | 2.11                     | 0.50              |
| 2:P:99:VAL:HG22  | 2:P:164:ILE:CG1  | 2.41                     | 0.50              |
| 2:P:117:ARG:HB3  | 1:Q:107:ARG:HG2  | 1.92                     | 0.50              |
| 2:P:219:LYS:HD2  | 2:P:220:ALA:N    | 2.26                     | 0.50              |
| 1:Q:6:LYS:HD3    | 2:R:6:PHE:CD1    | 2.47                     | 0.50              |
| 1:Q:110:SER:HA   | 1:Q:179:LEU:HD23 | 1.93                     | 0.50              |
| 2:R:45:VAL:HB    | 2:R:108:THR:HG22 | 1.94                     | 0.50              |
| 2:R:218:SER:O    | 2:R:221:ALA:HB3  | 2.11                     | 0.50              |
| 1:S:120:MET:HG2  | 1:S:124:LEU:HD12 | 1.94                     | 0.50              |
| 2:T:45:VAL:HB    | 2:T:108:THR:HG22 | 1.94                     | 0.50              |
| 2:T:140:ILE:CD1  | 2:T:173:LEU:HD21 | 2.42                     | 0.50              |
| 1:U:209:ARG:HA   | 1:U:212:PHE:CZ   | 2.47                     | 0.50              |
| 2:V:224:ILE:HA   | 2:V:227:SER:HB3  | 1.94                     | 0.50              |
| 2:V:228:LEU:HD23 | 2:V:231:ALA:HB3  | 1.93                     | 0.50              |
| 1:W:214:VAL:HG22 | 2:X:208:LYS:CG   | 2.38                     | 0.50              |
| 2:X:90:ILE:HD12  | 2:X:131:VAL:CG2  | 2.42                     | 0.50              |
| 2:X:228:LEU:HD23 | 2:X:231:ALA:HB3  | 1.93                     | 0.50              |
| 1:A:48:ARG:HG3   | 1:A:117:LEU:HD12 | 1.93                     | 0.50              |
| 1:A:193:TYR:HB2  | 2:B:188:VAL:HG22 | 1.94                     | 0.50              |
| 2:B:90:ILE:HD12  | 2:B:131:VAL:CG2  | 2.42                     | 0.50              |
| 2:D:251:LEU:HD23 | 1:E:265:ALA:HA   | 1.94                     | 0.50              |
| 1:E:82:ASP:O     | 1:E:128:TYR:OH   | 2.30                     | 0.50              |
| 2:F:90:ILE:HD12  | 2:F:131:VAL:CG2  | 2.42                     | 0.50              |
| 1:G:41:PHE:CE2   | 1:G:69:HIS:O     | 2.65                     | 0.50              |
| 1:G:96:SER:HA    | 1:G:146:ALA:HA   | 1.93                     | 0.50              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:H:224:ILE:HA   | 2:H:227:SER:HB3  | 1.94                     | 0.50              |
| 1:I:41:PHE:CE2   | 1:I:69:HIS:O     | 2.65                     | 0.50              |
| 1:I:82:ASP:O     | 1:I:128:TYR:OH   | 2.30                     | 0.50              |
| 1:I:112:PRO:HD3  | 1:I:128:TYR:CE2  | 2.45                     | 0.50              |
| 2:J:219:LYS:HD2  | 2:J:220:ALA:N    | 2.26                     | 0.50              |
| 1:K:80:ILE:O     | 1:K:126:LEU:HD22 | 2.12                     | 0.50              |
| 1:K:96:SER:HA    | 1:K:146:ALA:HA   | 1.93                     | 0.50              |
| 2:L:140:ILE:CD1  | 2:L:173:LEU:HD21 | 2.42                     | 0.50              |
| 2:L:219:LYS:O    | 2:L:222:GLU:HB2  | 2.12                     | 0.50              |
| 1:M:41:PHE:CD1   | 1:M:78:PRO:HB3   | 2.47                     | 0.50              |
| 1:M:82:ASP:O     | 1:M:128:TYR:OH   | 2.30                     | 0.50              |
| 2:N:219:LYS:O    | 2:N:222:GLU:HB2  | 2.12                     | 0.50              |
| 1:O:41:PHE:CD1   | 1:O:78:PRO:HB3   | 2.47                     | 0.50              |
| 1:O:274:THR:HG1  | 1:O:277:ASN:CG   | 2.20                     | 0.50              |
| 2:P:41:ARG:NH2   | 1:Q:44:GLU:CD    | 2.70                     | 0.50              |
| 2:P:124:THR:CG2  | 1:Q:157:ARG:CZ   | 2.90                     | 0.50              |
| 2:P:140:ILE:CD1  | 2:P:173:LEU:HD21 | 2.42                     | 0.50              |
| 1:Q:249:ILE:HD11 | 2:R:241:LEU:CD1  | 2.39                     | 0.50              |
| 2:R:237:GLU:OE1  | 1:S:294:LEU:HD22 | 2.12                     | 0.50              |
| 1:S:48:ARG:HG3   | 1:S:117:LEU:CD1  | 2.42                     | 0.50              |
| 1:S:271:ILE:HA   | 2:T:258:THR:HA   | 1.94                     | 0.50              |
| 1:U:250:LYS:HE2  | 1:W:291:SER:CB   | 2.41                     | 0.50              |
| 2:V:259:TYR:OH   | 1:W:277:ASN:N    | 2.45                     | 0.50              |
| 1:W:110:SER:HA   | 1:W:179:LEU:HD23 | 1.93                     | 0.50              |
| 1:W:220:GLU:O    | 1:W:223:GLN:HB3  | 2.12                     | 0.50              |
| 1:A:41:PHE:CE2   | 1:A:69:HIS:O     | 2.65                     | 0.49              |
| 1:A:197:VAL:CG2  | 2:B:191:GLN:HB3  | 2.42                     | 0.49              |
| 1:C:48:ARG:HG3   | 1:C:117:LEU:HD12 | 1.93                     | 0.49              |
| 1:C:54:ARG:NH2   | 2:D:52:GLU:CB    | 2.75                     | 0.49              |
| 2:D:28:TYR:CD1   | 2:D:30:VAL:HG23  | 2.47                     | 0.49              |
| 1:E:80:ILE:O     | 1:E:126:LEU:HD22 | 2.12                     | 0.49              |
| 2:F:92:LEU:HD23  | 2:F:154:LEU:HD22 | 1.94                     | 0.49              |
| 2:H:268:LEU:O    | 2:J:267:LEU:HB3  | 2.13                     | 0.49              |
| 1:K:246:PRO:HA   | 1:K:249:ILE:HG22 | 1.93                     | 0.49              |
| 2:N:28:TYR:CD1   | 2:N:30:VAL:HG23  | 2.47                     | 0.49              |
| 2:N:94:ILE:HG21  | 2:N:119:LEU:HD22 | 1.93                     | 0.49              |
| 2:N:140:ILE:CD1  | 2:N:173:LEU:HD21 | 2.42                     | 0.49              |
| 1:O:41:PHE:CE2   | 1:O:69:HIS:O     | 2.65                     | 0.49              |
| 1:Q:41:PHE:CD1   | 1:Q:78:PRO:HB3   | 2.47                     | 0.49              |
| 1:Q:41:PHE:O     | 1:Q:43:VAL:HG23  | 2.12                     | 0.49              |
| 1:Q:135:SER:OG   | 2:R:93:ARG:HD2   | 2.12                     | 0.49              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:Q:217:ALA:CB   | 2:R:208:LYS:HZ2  | 2.25                     | 0.49              |
| 1:Q:246:PRO:HA   | 1:Q:249:ILE:HG22 | 1.93                     | 0.49              |
| 2:T:221:ALA:HB2  | 1:U:248:TYR:CG   | 2.46                     | 0.49              |
| 1:U:41:PHE:O     | 1:U:43:VAL:HG23  | 2.12                     | 0.49              |
| 2:V:90:ILE:HD12  | 2:V:131:VAL:CG2  | 2.42                     | 0.49              |
| 2:V:92:LEU:HD23  | 2:V:154:LEU:HD22 | 1.94                     | 0.49              |
| 1:W:48:ARG:NH1   | 1:W:66:GLU:HG3   | 2.27                     | 0.49              |
| 1:W:108:VAL:HG13 | 1:W:182:VAL:HG22 | 1.93                     | 0.49              |
| 2:X:140:ILE:CD1  | 2:X:173:LEU:HD21 | 2.42                     | 0.49              |
| 2:B:99:VAL:HG22  | 2:B:164:ILE:CG1  | 2.41                     | 0.49              |
| 2:B:267:LEU:CD2  | 2:D:267:LEU:HD22 | 2.42                     | 0.49              |
| 1:C:48:ARG:NH1   | 1:C:66:GLU:HG3   | 2.27                     | 0.49              |
| 1:C:82:ASP:O     | 1:C:128:TYR:OH   | 2.30                     | 0.49              |
| 1:E:220:GLU:O    | 1:E:223:GLN:HB3  | 2.11                     | 0.49              |
| 1:G:128:TYR:CD2  | 1:G:129:GLU:N    | 2.79                     | 0.49              |
| 2:J:225:ALA:HA   | 1:K:248:TYR:N    | 2.28                     | 0.49              |
| 2:L:92:LEU:HD23  | 2:L:154:LEU:HD22 | 1.94                     | 0.49              |
| 2:L:228:LEU:HD23 | 2:L:231:ALA:HB3  | 1.93                     | 0.49              |
| 1:M:41:PHE:O     | 1:M:43:VAL:HG23  | 2.12                     | 0.49              |
| 2:P:110:ILE:O    | 1:Q:109:LEU:CD1  | 2.46                     | 0.49              |
| 1:Q:41:PHE:CE2   | 1:Q:69:HIS:O     | 2.65                     | 0.49              |
| 1:Q:48:ARG:HG3   | 1:Q:117:LEU:CD1  | 2.42                     | 0.49              |
| 2:R:28:TYR:CD1   | 2:R:30:VAL:HG23  | 2.47                     | 0.49              |
| 1:S:41:PHE:O     | 1:S:43:VAL:HG23  | 2.12                     | 0.49              |
| 1:S:48:ARG:NH1   | 1:S:66:GLU:HG3   | 2.27                     | 0.49              |
| 1:U:41:PHE:CE2   | 1:U:69:HIS:O     | 2.65                     | 0.49              |
| 2:X:28:TYR:CD1   | 2:X:30:VAL:HG23  | 2.47                     | 0.49              |
| 2:X:43:ARG:CG    | 2:X:43:ARG:HB3   | 2.24                     | 0.49              |
| 2:X:92:LEU:HD23  | 2:X:154:LEU:HD22 | 1.94                     | 0.49              |
| 2:B:228:LEU:HD23 | 2:B:231:ALA:HB3  | 1.93                     | 0.49              |
| 1:C:272:TYR:HB2  | 2:D:260:LEU:HG   | 1.94                     | 0.49              |
| 2:D:92:LEU:HD23  | 2:D:154:LEU:HD22 | 1.94                     | 0.49              |
| 2:D:94:ILE:HG21  | 2:D:119:LEU:HD22 | 1.93                     | 0.49              |
| 2:D:219:LYS:O    | 2:D:222:GLU:HB2  | 2.12                     | 0.49              |
| 1:G:41:PHE:O     | 1:G:43:VAL:HG23  | 2.12                     | 0.49              |
| 1:G:206:GLU:OE1  | 2:H:202:LYS:CE   | 2.61                     | 0.49              |
| 2:H:85:LEU:HD22  | 1:I:154:ILE:CG2  | 2.42                     | 0.49              |
| 1:I:41:PHE:CD1   | 1:I:78:PRO:HB3   | 2.47                     | 0.49              |
| 1:I:48:ARG:HG3   | 1:I:117:LEU:CD1  | 2.42                     | 0.49              |
| 1:I:80:ILE:O     | 1:I:126:LEU:HD22 | 2.12                     | 0.49              |
| 1:I:110:SER:HA   | 1:I:179:LEU:HD23 | 1.93                     | 0.49              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:209:ARG:HA   | 1:I:212:PHE:CZ   | 2.47                     | 0.49              |
| 2:J:28:TYR:CD1   | 2:J:30:VAL:HG23  | 2.47                     | 0.49              |
| 1:K:46:GLY:C     | 1:K:83:ILE:HG12  | 2.38                     | 0.49              |
| 1:M:50:ILE:CG1   | 1:M:79:ILE:HD12  | 2.41                     | 0.49              |
| 2:N:92:LEU:HD23  | 2:N:154:LEU:HD22 | 1.94                     | 0.49              |
| 2:N:219:LYS:HD2  | 2:N:220:ALA:N    | 2.26                     | 0.49              |
| 2:R:219:LYS:HD2  | 2:R:220:ALA:N    | 2.26                     | 0.49              |
| 1:S:280:LEU:HD23 | 1:S:282:LEU:HD11 | 1.93                     | 0.49              |
| 2:T:259:TYR:C    | 2:T:260:LEU:HD12 | 2.37                     | 0.49              |
| 1:U:128:TYR:CD2  | 1:U:129:GLU:N    | 2.79                     | 0.49              |
| 1:U:144:VAL:HG11 | 1:U:160:VAL:O    | 2.13                     | 0.49              |
| 1:W:41:PHE:CE2   | 1:W:69:HIS:O     | 2.65                     | 0.49              |
| 1:A:144:VAL:HG11 | 1:A:160:VAL:O    | 2.13                     | 0.49              |
| 2:B:185:ALA:CB   | 1:C:212:PHE:CE2  | 2.95                     | 0.49              |
| 2:B:267:LEU:HD21 | 2:D:267:LEU:HD13 | 1.94                     | 0.49              |
| 2:B:268:LEU:CD1  | 2:D:260:LEU:HD23 | 2.42                     | 0.49              |
| 1:C:41:PHE:CE2   | 1:C:69:HIS:O     | 2.65                     | 0.49              |
| 2:D:90:ILE:HD12  | 2:D:131:VAL:CG2  | 2.42                     | 0.49              |
| 1:E:144:VAL:HG11 | 1:E:160:VAL:O    | 2.13                     | 0.49              |
| 2:F:94:ILE:HG21  | 2:F:119:LEU:HD22 | 1.93                     | 0.49              |
| 1:G:48:ARG:HG3   | 1:G:117:LEU:CD1  | 2.42                     | 0.49              |
| 1:G:275:ALA:HB3  | 1:I:284:ASP:CB   | 2.42                     | 0.49              |
| 2:J:108:THR:CG2  | 1:K:66:GLU:OE2   | 2.60                     | 0.49              |
| 1:S:242:LEU:HD13 | 2:T:238:LEU:CD2  | 2.39                     | 0.49              |
| 2:T:90:ILE:CB    | 2:T:127:LEU:HD21 | 2.43                     | 0.49              |
| 2:T:92:LEU:HD23  | 2:T:154:LEU:HD22 | 1.94                     | 0.49              |
| 1:U:46:GLY:C     | 1:U:83:ILE:HG12  | 2.38                     | 0.49              |
| 1:U:236:LYS:CE   | 2:V:227:SER:OG   | 2.60                     | 0.49              |
| 1:W:41:PHE:CD1   | 1:W:78:PRO:HB3   | 2.47                     | 0.49              |
| 1:W:48:ARG:HG3   | 1:W:117:LEU:CD1  | 2.42                     | 0.49              |
| 1:C:64:LEU:HD13  | 1:C:69:HIS:CB    | 2.43                     | 0.49              |
| 1:C:80:ILE:O     | 1:C:126:LEU:HD22 | 2.12                     | 0.49              |
| 1:C:144:VAL:HG11 | 1:C:160:VAL:O    | 2.13                     | 0.49              |
| 1:C:299:LYS:OXT  | 1:E:288:THR:CG2  | 2.53                     | 0.49              |
| 2:D:247:ILE:HG23 | 1:E:261:SER:CB   | 2.41                     | 0.49              |
| 2:F:219:LYS:O    | 2:F:222:GLU:HB2  | 2.12                     | 0.49              |
| 1:G:64:LEU:HD13  | 1:G:69:HIS:CB    | 2.43                     | 0.49              |
| 1:G:82:ASP:O     | 1:G:128:TYR:OH   | 2.30                     | 0.49              |
| 2:H:72:ARG:HB2   | 2:H:96:PHE:CZ    | 2.48                     | 0.49              |
| 1:I:120:MET:HG2  | 1:I:124:LEU:HD12 | 1.94                     | 0.49              |
| 1:K:120:MET:HG2  | 1:K:124:LEU:HD12 | 1.93                     | 0.49              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:L:90:ILE:HD12  | 2:L:131:VAL:CG2  | 2.42                     | 0.49              |
| 2:L:224:ILE:HA   | 2:L:227:SER:HB3  | 1.94                     | 0.49              |
| 1:M:131:ARG:HG2  | 2:N:73:PRO:CD    | 2.41                     | 0.49              |
| 1:O:246:PRO:HA   | 1:O:249:ILE:HG22 | 1.93                     | 0.49              |
| 2:P:90:ILE:CB    | 2:P:127:LEU:HD21 | 2.43                     | 0.49              |
| 2:R:99:VAL:HG22  | 2:R:164:ILE:CG1  | 2.41                     | 0.49              |
| 2:R:224:ILE:HA   | 2:R:227:SER:HB3  | 1.94                     | 0.49              |
| 1:S:144:VAL:HG11 | 1:S:160:VAL:O    | 2.13                     | 0.49              |
| 1:S:220:GLU:O    | 1:S:223:GLN:HB3  | 2.12                     | 0.49              |
| 2:T:28:TYR:CD1   | 2:T:30:VAL:HG23  | 2.47                     | 0.49              |
| 2:T:224:ILE:HA   | 2:T:227:SER:HB3  | 1.94                     | 0.49              |
| 1:U:50:ILE:CG1   | 1:U:79:ILE:HD12  | 2.41                     | 0.49              |
| 1:U:82:ASP:O     | 1:U:128:TYR:OH   | 2.30                     | 0.49              |
| 2:V:28:TYR:CD1   | 2:V:30:VAL:HG23  | 2.47                     | 0.49              |
| 2:V:140:ILE:CD1  | 2:V:173:LEU:HD21 | 2.42                     | 0.49              |
| 1:W:46:GLY:C     | 1:W:83:ILE:HG12  | 2.38                     | 0.49              |
| 1:W:50:ILE:CG1   | 1:W:79:ILE:HD12  | 2.41                     | 0.49              |
| 2:X:72:ARG:HB2   | 2:X:96:PHE:CZ    | 2.48                     | 0.49              |
| 1:A:48:ARG:NH1   | 1:A:66:GLU:HG3   | 2.27                     | 0.49              |
| 1:E:41:PHE:CE2   | 1:E:69:HIS:O     | 2.65                     | 0.49              |
| 1:E:46:GLY:C     | 1:E:83:ILE:HG12  | 2.38                     | 0.49              |
| 1:G:50:ILE:CG1   | 1:G:79:ILE:HD12  | 2.41                     | 0.49              |
| 2:H:259:TYR:C    | 2:H:260:LEU:HD12 | 2.37                     | 0.49              |
| 1:I:144:VAL:HG11 | 1:I:160:VAL:O    | 2.13                     | 0.49              |
| 2:J:219:LYS:O    | 2:J:222:GLU:HB2  | 2.12                     | 0.49              |
| 1:K:41:PHE:CE2   | 1:K:69:HIS:O     | 2.65                     | 0.49              |
| 1:K:246:PRO:HG3  | 1:M:292:ASP:OD1  | 2.12                     | 0.49              |
| 1:M:209:ARG:HA   | 1:M:212:PHE:CZ   | 2.47                     | 0.49              |
| 1:O:144:VAL:HG11 | 1:O:160:VAL:O    | 2.13                     | 0.49              |
| 1:O:209:ARG:HA   | 1:O:212:PHE:CZ   | 2.47                     | 0.49              |
| 2:P:45:VAL:HB    | 2:P:108:THR:HG22 | 1.94                     | 0.49              |
| 2:P:259:TYR:CD1  | 1:Q:278:LEU:HB2  | 2.46                     | 0.49              |
| 1:Q:46:GLY:C     | 1:Q:83:ILE:HG12  | 2.38                     | 0.49              |
| 1:S:41:PHE:CD1   | 1:S:78:PRO:HB3   | 2.47                     | 0.49              |
| 1:S:82:ASP:O     | 1:S:128:TYR:OH   | 2.30                     | 0.49              |
| 2:T:218:SER:O    | 2:T:221:ALA:HB3  | 2.11                     | 0.49              |
| 2:V:207:LYS:HG3  | 1:W:227:GLN:HG2  | 1.93                     | 0.49              |
| 2:V:219:LYS:O    | 2:V:222:GLU:HB2  | 2.12                     | 0.49              |
| 2:V:259:TYR:HA   | 1:W:273:LEU:CA   | 2.43                     | 0.49              |
| 1:W:144:VAL:HG11 | 1:W:160:VAL:O    | 2.13                     | 0.49              |
| 1:A:294:LEU:CB   | 1:W:246:PRO:HB3  | 2.43                     | 0.49              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:B:224:ILE:HA   | 2:B:227:SER:HB3  | 1.94                     | 0.49              |
| 1:C:41:PHE:CD1   | 1:C:78:PRO:HB3   | 2.47                     | 0.49              |
| 2:F:69:CYS:SG    | 2:F:103:LEU:HD11 | 2.53                     | 0.49              |
| 1:G:46:GLY:C     | 1:G:83:ILE:HG12  | 2.38                     | 0.49              |
| 1:G:289:ARG:NH1  | 1:I:285:GLU:CG   | 2.75                     | 0.49              |
| 2:H:94:ILE:HG21  | 2:H:119:LEU:HD22 | 1.93                     | 0.49              |
| 1:I:48:ARG:NH1   | 1:I:66:GLU:HG3   | 2.27                     | 0.49              |
| 1:I:50:ILE:CG1   | 1:I:79:ILE:HD12  | 2.41                     | 0.49              |
| 2:J:140:ILE:CD1  | 2:J:173:LEU:HD21 | 2.42                     | 0.49              |
| 2:L:72:ARG:HB2   | 2:L:96:PHE:CZ    | 2.48                     | 0.49              |
| 1:M:120:MET:HG2  | 1:M:124:LEU:HD12 | 1.93                     | 0.49              |
| 1:M:200:LYS:HA   | 2:N:195:ARG:HA   | 1.95                     | 0.49              |
| 1:M:204:GLN:HA   | 2:N:198:PHE:HB3  | 1.93                     | 0.49              |
| 1:M:272:TYR:O    | 2:N:259:TYR:CD2  | 2.66                     | 0.49              |
| 1:O:46:GLY:C     | 1:O:83:ILE:HG12  | 2.38                     | 0.49              |
| 1:O:48:ARG:NH1   | 1:O:66:GLU:HG3   | 2.27                     | 0.49              |
| 2:P:69:CYS:SG    | 2:P:103:LEU:HD11 | 2.53                     | 0.49              |
| 2:P:224:ILE:HA   | 2:P:227:SER:HB3  | 1.94                     | 0.49              |
| 1:Q:144:VAL:HG11 | 1:Q:160:VAL:O    | 2.13                     | 0.49              |
| 1:Q:220:GLU:O    | 1:Q:223:GLN:HB3  | 2.12                     | 0.49              |
| 1:Q:253:LYS:HZ2  | 2:R:241:LEU:CD1  | 2.25                     | 0.49              |
| 2:R:72:ARG:HB2   | 2:R:96:PHE:CZ    | 2.48                     | 0.49              |
| 1:S:246:PRO:HA   | 1:S:249:ILE:HG22 | 1.93                     | 0.49              |
| 2:T:219:LYS:O    | 2:T:222:GLU:HB2  | 2.12                     | 0.49              |
| 1:U:41:PHE:CD1   | 1:U:78:PRO:HB3   | 2.47                     | 0.49              |
| 1:U:120:MET:HG2  | 1:U:124:LEU:HD12 | 1.94                     | 0.49              |
| 1:U:200:LYS:HD2  | 2:V:194:GLU:OE1  | 2.12                     | 0.49              |
| 2:V:69:CYS:SG    | 2:V:103:LEU:HD11 | 2.53                     | 0.49              |
| 2:V:140:ILE:HD11 | 2:V:173:LEU:CD2  | 2.43                     | 0.49              |
| 1:W:82:ASP:O     | 1:W:128:TYR:OH   | 2.30                     | 0.49              |
| 2:X:90:ILE:CB    | 2:X:127:LEU:HD21 | 2.43                     | 0.49              |
| 2:B:268:LEU:CB   | 2:D:267:LEU:O    | 2.59                     | 0.49              |
| 1:C:46:GLY:C     | 1:C:83:ILE:HG12  | 2.38                     | 0.49              |
| 1:C:50:ILE:CG1   | 1:C:79:ILE:HD12  | 2.41                     | 0.49              |
| 1:E:41:PHE:CD1   | 1:E:78:PRO:HB3   | 2.47                     | 0.49              |
| 1:E:120:MET:HG2  | 1:E:124:LEU:HD12 | 1.94                     | 0.49              |
| 2:F:28:TYR:CD1   | 2:F:30:VAL:HG23  | 2.47                     | 0.49              |
| 2:F:43:ARG:CB    | 2:F:43:ARG:HG3   | 2.22                     | 0.49              |
| 2:F:45:VAL:HB    | 2:F:108:THR:HG22 | 1.94                     | 0.49              |
| 1:G:110:SER:HA   | 1:G:179:LEU:HD23 | 1.93                     | 0.49              |
| 1:G:144:VAL:HG11 | 1:G:160:VAL:O    | 2.13                     | 0.49              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:275:ALA:HB3  | 1:I:284:ASP:CG   | 2.38                     | 0.49              |
| 2:H:92:LEU:HD23  | 2:H:154:LEU:HD22 | 1.94                     | 0.49              |
| 1:I:108:VAL:HG13 | 1:I:182:VAL:HG22 | 1.93                     | 0.49              |
| 2:J:72:ARG:HB2   | 2:J:96:PHE:CZ    | 2.48                     | 0.49              |
| 1:K:225:ILE:HA   | 2:L:219:LYS:HD3  | 1.94                     | 0.49              |
| 2:L:140:ILE:HD11 | 2:L:173:LEU:CD2  | 2.43                     | 0.49              |
| 1:M:46:GLY:C     | 1:M:83:ILE:HG12  | 2.38                     | 0.49              |
| 2:N:268:LEU:HD12 | 2:P:260:LEU:HG   | 1.93                     | 0.49              |
| 2:N:269:GLN:HG3  | 2:P:269:GLN:CB   | 2.42                     | 0.49              |
| 1:O:41:PHE:O     | 1:O:43:VAL:HG23  | 2.12                     | 0.49              |
| 1:O:64:LEU:HD13  | 1:O:69:HIS:CB    | 2.43                     | 0.49              |
| 1:Q:256:ALA:N    | 2:R:245:GLU:OE2  | 2.46                     | 0.49              |
| 2:R:69:CYS:SG    | 2:R:103:LEU:HD11 | 2.53                     | 0.49              |
| 1:S:274:THR:HG22 | 2:T:260:LEU:C    | 2.37                     | 0.49              |
| 2:T:43:ARG:HA    | 1:U:66:GLU:HB3   | 1.93                     | 0.49              |
| 2:T:69:CYS:SG    | 2:T:103:LEU:HD11 | 2.53                     | 0.49              |
| 1:U:60:GLN:HA    | 1:U:118:PRO:HB2  | 1.95                     | 0.49              |
| 2:V:259:TYR:C    | 2:V:260:LEU:HD12 | 2.37                     | 0.49              |
| 2:V:270:LEU:CD1  | 2:X:260:LEU:HD11 | 2.43                     | 0.49              |
| 1:W:41:PHE:O     | 1:W:43:VAL:HG23  | 2.12                     | 0.49              |
| 2:X:69:CYS:SG    | 2:X:103:LEU:HD11 | 2.53                     | 0.49              |
| 2:B:140:ILE:HD11 | 2:B:173:LEU:CD2  | 2.43                     | 0.49              |
| 2:F:224:ILE:HA   | 2:F:227:SER:HB3  | 1.94                     | 0.49              |
| 2:H:78:VAL:HG13  | 2:H:124:THR:HG23 | 1.95                     | 0.49              |
| 2:J:42:PHE:HD1   | 1:K:68:LEU:CD1   | 2.24                     | 0.49              |
| 1:K:41:PHE:CD1   | 1:K:78:PRO:HB3   | 2.47                     | 0.49              |
| 1:K:48:ARG:NH1   | 1:K:66:GLU:HG3   | 2.27                     | 0.49              |
| 1:K:82:ASP:O     | 1:K:128:TYR:OH   | 2.30                     | 0.49              |
| 1:K:209:ARG:HA   | 1:K:212:PHE:CZ   | 2.47                     | 0.49              |
| 1:M:60:GLN:HA    | 1:M:118:PRO:HB2  | 1.95                     | 0.49              |
| 1:O:120:MET:HG2  | 1:O:124:LEU:HD12 | 1.94                     | 0.49              |
| 2:P:78:VAL:HG13  | 2:P:124:THR:HG23 | 1.95                     | 0.49              |
| 1:U:260:ILE:HG21 | 1:W:278:LEU:HD21 | 1.92                     | 0.49              |
| 2:B:45:VAL:HB    | 2:B:108:THR:HG22 | 1.94                     | 0.49              |
| 2:B:92:LEU:HD23  | 2:B:154:LEU:HD22 | 1.94                     | 0.49              |
| 2:D:72:ARG:HB2   | 2:D:96:PHE:CZ    | 2.48                     | 0.49              |
| 2:D:219:LYS:HD2  | 2:D:220:ALA:N    | 2.26                     | 0.49              |
| 2:F:140:ILE:CD1  | 2:F:173:LEU:HD21 | 2.42                     | 0.49              |
| 2:H:69:CYS:SG    | 2:H:103:LEU:HD11 | 2.53                     | 0.49              |
| 2:H:228:LEU:HD23 | 2:H:231:ALA:HB3  | 1.93                     | 0.49              |
| 1:I:225:ILE:HA   | 2:J:219:LYS:HD3  | 1.94                     | 0.49              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:J:268:LEU:O    | 2:L:269:GLN:HB2  | 2.12                     | 0.49              |
| 2:N:140:ILE:HD11 | 2:N:173:LEU:CD2  | 2.43                     | 0.49              |
| 1:O:256:ALA:HB2  | 2:P:245:GLU:OE2  | 2.12                     | 0.49              |
| 1:Q:253:LYS:HE2  | 1:S:291:SER:OG   | 2.13                     | 0.49              |
| 2:R:259:TYR:C    | 2:R:260:LEU:HD12 | 2.37                     | 0.49              |
| 1:U:52:PHE:HB2   | 1:U:79:ILE:HD11  | 1.95                     | 0.49              |
| 2:X:45:VAL:HB    | 2:X:108:THR:HG22 | 1.94                     | 0.49              |
| 2:X:99:VAL:HG22  | 2:X:164:ILE:CG1  | 2.41                     | 0.49              |
| 1:A:102:VAL:HG22 | 1:A:189:PHE:CD2  | 2.48                     | 0.48              |
| 1:A:197:VAL:HG22 | 2:B:191:GLN:CG   | 2.43                     | 0.48              |
| 2:D:200:VAL:HG21 | 1:E:219:GLN:HE21 | 1.77                     | 0.48              |
| 1:E:277:ASN:HD22 | 1:G:282:LEU:HB2  | 1.78                     | 0.48              |
| 1:I:41:PHE:O     | 1:I:43:VAL:HG23  | 2.12                     | 0.48              |
| 1:I:221:GLN:OE1  | 2:J:216:GLY:CA   | 2.61                     | 0.48              |
| 1:I:239:GLY:C    | 2:J:231:ALA:HB1  | 2.35                     | 0.48              |
| 1:I:274:THR:HG1  | 1:I:277:ASN:CG   | 2.19                     | 0.48              |
| 2:L:69:CYS:SG    | 2:L:103:LEU:HD11 | 2.53                     | 0.48              |
| 1:M:41:PHE:CE2   | 1:M:69:HIS:O     | 2.65                     | 0.48              |
| 2:P:85:LEU:CB    | 1:Q:197:VAL:HG11 | 2.31                     | 0.48              |
| 2:R:90:ILE:CB    | 2:R:127:LEU:HD21 | 2.43                     | 0.48              |
| 2:R:92:LEU:HD23  | 2:R:154:LEU:HD22 | 1.94                     | 0.48              |
| 2:R:219:LYS:O    | 2:R:222:GLU:HB2  | 2.12                     | 0.48              |
| 1:U:204:GLN:HB2  | 2:V:198:PHE:CG   | 2.48                     | 0.48              |
| 2:V:258:THR:O    | 1:W:273:LEU:HG   | 2.13                     | 0.48              |
| 2:B:269:GLN:NE2  | 2:D:269:GLN:NE2  | 2.61                     | 0.48              |
| 2:B:270:LEU:CG   | 2:D:269:GLN:O    | 2.60                     | 0.48              |
| 1:E:48:ARG:NH1   | 1:E:66:GLU:HG3   | 2.27                     | 0.48              |
| 2:F:72:ARG:HB2   | 2:F:96:PHE:CZ    | 2.48                     | 0.48              |
| 1:G:102:VAL:HG22 | 1:G:189:PHE:CD2  | 2.48                     | 0.48              |
| 2:J:140:ILE:HD11 | 2:J:173:LEU:CD2  | 2.43                     | 0.48              |
| 1:K:253:LYS:C    | 1:M:279:VAL:HG13 | 2.38                     | 0.48              |
| 2:L:211:ILE:HG12 | 1:M:230:GLY:CA   | 2.43                     | 0.48              |
| 1:M:48:ARG:NH1   | 1:M:66:GLU:HG3   | 2.27                     | 0.48              |
| 1:M:123:ARG:HG3  | 2:N:97:ARG:HD3   | 1.95                     | 0.48              |
| 1:O:60:GLN:HA    | 1:O:118:PRO:HB2  | 1.95                     | 0.48              |
| 1:O:102:VAL:HG22 | 1:O:189:PHE:CD2  | 2.48                     | 0.48              |
| 1:Q:48:ARG:NH1   | 1:Q:66:GLU:HG3   | 2.27                     | 0.48              |
| 1:S:41:PHE:CE2   | 1:S:69:HIS:O     | 2.65                     | 0.48              |
| 1:S:102:VAL:HG22 | 1:S:189:PHE:CD2  | 2.48                     | 0.48              |
| 2:T:78:VAL:HG13  | 2:T:124:THR:HG23 | 1.95                     | 0.48              |
| 1:U:64:LEU:HD13  | 1:U:69:HIS:CB    | 2.43                     | 0.48              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:U:200:LYS:O    | 2:V:198:PHE:CD2  | 2.66                     | 0.48              |
| 2:V:78:VAL:HG13  | 2:V:124:THR:HG23 | 1.95                     | 0.48              |
| 2:X:43:ARG:CB    | 2:X:43:ARG:HG3   | 2.22                     | 0.48              |
| 1:A:45:GLY:O     | 2:X:108:THR:HA   | 2.13                     | 0.48              |
| 1:A:196:ALA:HB2  | 2:B:192:GLU:OE1  | 2.14                     | 0.48              |
| 1:C:60:GLN:HA    | 1:C:118:PRO:HB2  | 1.95                     | 0.48              |
| 2:F:90:ILE:CB    | 2:F:127:LEU:HD21 | 2.43                     | 0.48              |
| 1:G:52:PHE:HB2   | 1:G:79:ILE:HD11  | 1.95                     | 0.48              |
| 1:I:64:LEU:HD13  | 1:I:69:HIS:CB    | 2.43                     | 0.48              |
| 1:K:144:VAL:HG11 | 1:K:160:VAL:O    | 2.13                     | 0.48              |
| 2:L:259:TYR:C    | 2:L:260:LEU:HD12 | 2.37                     | 0.48              |
| 2:N:45:VAL:HB    | 2:N:108:THR:HG22 | 1.94                     | 0.48              |
| 2:N:69:CYS:SG    | 2:N:103:LEU:HD11 | 2.53                     | 0.48              |
| 1:Q:256:ALA:HA   | 2:R:245:GLU:HG3  | 1.95                     | 0.48              |
| 1:U:48:ARG:NH1   | 1:U:66:GLU:HG3   | 2.27                     | 0.48              |
| 1:U:102:VAL:HG22 | 1:U:189:PHE:CD2  | 2.48                     | 0.48              |
| 2:V:72:ARG:HB2   | 2:V:96:PHE:CZ    | 2.48                     | 0.48              |
| 1:A:41:PHE:CD1   | 1:A:78:PRO:HB3   | 2.47                     | 0.48              |
| 2:D:43:ARG:CB    | 2:D:43:ARG:HG3   | 2.22                     | 0.48              |
| 2:D:69:CYS:SG    | 2:D:103:LEU:HD11 | 2.53                     | 0.48              |
| 1:E:62:THR:CG2   | 1:E:64:LEU:HD21  | 2.44                     | 0.48              |
| 1:G:139:GLU:HG3  | 2:H:143:ARG:NH2  | 2.29                     | 0.48              |
| 1:I:52:PHE:HB2   | 1:I:79:ILE:HD11  | 1.95                     | 0.48              |
| 1:I:60:GLN:HA    | 1:I:118:PRO:HB2  | 1.95                     | 0.48              |
| 2:J:43:ARG:CB    | 1:K:67:GLY:C     | 2.85                     | 0.48              |
| 2:L:45:VAL:HB    | 2:L:108:THR:HG22 | 1.94                     | 0.48              |
| 1:M:52:PHE:HB2   | 1:M:79:ILE:HD11  | 1.95                     | 0.48              |
| 1:M:64:LEU:HD13  | 1:M:69:HIS:CB    | 2.43                     | 0.48              |
| 2:N:78:VAL:HG13  | 2:N:124:THR:HG23 | 1.95                     | 0.48              |
| 2:P:185:ALA:O    | 1:Q:212:PHE:CE2  | 2.66                     | 0.48              |
| 2:R:217:ASP:OD1  | 1:S:248:TYR:CZ   | 2.67                     | 0.48              |
| 2:R:259:TYR:HE2  | 1:S:281:ASN:CA   | 2.26                     | 0.48              |
| 1:S:46:GLY:C     | 1:S:83:ILE:HG12  | 2.38                     | 0.48              |
| 1:U:110:SER:HB2  | 1:U:177:LEU:HD22 | 1.96                     | 0.48              |
| 1:A:40:VAL:HG11  | 2:X:42:PHE:CE1   | 2.48                     | 0.48              |
| 1:A:46:GLY:C     | 1:A:83:ILE:HG12  | 2.38                     | 0.48              |
| 1:A:64:LEU:HD13  | 1:A:69:HIS:CB    | 2.43                     | 0.48              |
| 2:B:69:CYS:SG    | 2:B:103:LEU:HD11 | 2.53                     | 0.48              |
| 2:D:239:ARG:NE   | 1:E:258:GLN:NE2  | 2.61                     | 0.48              |
| 1:E:164:ILE:HD12 | 1:E:184:ILE:CD1  | 2.36                     | 0.48              |
| 1:I:46:GLY:C     | 1:I:83:ILE:HG12  | 2.38                     | 0.48              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:M:144:VAL:HG11 | 1:M:160:VAL:O    | 2.13                     | 0.48              |
| 1:M:274:THR:HG21 | 1:O:280:LEU:O    | 2.13                     | 0.48              |
| 2:P:272:GLN:HG2  | 2:R:272:GLN:CD   | 2.38                     | 0.48              |
| 1:Q:60:GLN:HA    | 1:Q:118:PRO:HB2  | 1.95                     | 0.48              |
| 2:R:78:VAL:HG13  | 2:R:124:THR:HG23 | 1.95                     | 0.48              |
| 1:S:52:PHE:HB2   | 1:S:79:ILE:HD11  | 1.95                     | 0.48              |
| 1:S:64:LEU:HD13  | 1:S:69:HIS:CB    | 2.43                     | 0.48              |
| 2:V:239:ARG:HG3  | 1:W:251:LEU:HD13 | 1.91                     | 0.48              |
| 1:W:64:LEU:HD13  | 1:W:69:HIS:CB    | 2.43                     | 0.48              |
| 2:B:193:ALA:HA   | 1:C:219:GLN:OE1  | 2.13                     | 0.48              |
| 2:D:90:ILE:CB    | 2:D:127:LEU:HD21 | 2.43                     | 0.48              |
| 1:E:64:LEU:HD13  | 1:E:69:HIS:CB    | 2.43                     | 0.48              |
| 2:F:259:TYR:C    | 2:F:260:LEU:HD12 | 2.37                     | 0.48              |
| 2:H:140:ILE:HD11 | 2:H:173:LEU:CD2  | 2.43                     | 0.48              |
| 1:I:83:ILE:HG21  | 1:I:117:LEU:HD11 | 1.96                     | 0.48              |
| 1:I:260:ILE:HG12 | 2:J:244:ALA:CB   | 2.44                     | 0.48              |
| 2:J:225:ALA:HA   | 1:K:248:TYR:H    | 1.77                     | 0.48              |
| 1:K:236:LYS:HE2  | 2:L:227:SER:OG   | 2.12                     | 0.48              |
| 1:M:102:VAL:HG22 | 1:M:189:PHE:CD2  | 2.48                     | 0.48              |
| 2:N:267:LEU:CD1  | 2:P:267:LEU:HB3  | 2.44                     | 0.48              |
| 1:O:83:ILE:HG21  | 1:O:117:LEU:HD11 | 1.96                     | 0.48              |
| 1:Q:102:VAL:HG22 | 1:Q:189:PHE:CD2  | 2.48                     | 0.48              |
| 1:Q:249:ILE:HD12 | 1:S:294:LEU:HD21 | 1.92                     | 0.48              |
| 2:X:140:ILE:HD11 | 2:X:173:LEU:CD2  | 2.43                     | 0.48              |
| 2:B:72:ARG:HB2   | 2:B:96:PHE:CZ    | 2.48                     | 0.48              |
| 1:C:6:LYS:HG2    | 2:D:10:GLY:C     | 2.38                     | 0.48              |
| 2:J:42:PHE:O     | 1:K:68:LEU:CA    | 2.49                     | 0.48              |
| 2:J:214:ALA:HB1  | 2:L:242:GLU:OE2  | 2.13                     | 0.48              |
| 1:K:64:LEU:HD13  | 1:K:69:HIS:CB    | 2.43                     | 0.48              |
| 2:L:236:ILE:HG23 | 1:M:250:LYS:HD3  | 1.96                     | 0.48              |
| 1:M:123:ARG:HH21 | 2:N:166:ASP:HB3  | 1.78                     | 0.48              |
| 2:P:43:ARG:CG    | 2:P:43:ARG:HB2   | 2.24                     | 0.48              |
| 2:P:72:ARG:HB2   | 2:P:96:PHE:CZ    | 2.48                     | 0.48              |
| 1:S:60:GLN:HA    | 1:S:118:PRO:HB2  | 1.95                     | 0.48              |
| 1:S:110:SER:HB2  | 1:S:177:LEU:HD22 | 1.96                     | 0.48              |
| 1:U:83:ILE:HG21  | 1:U:117:LEU:HD11 | 1.96                     | 0.48              |
| 1:A:52:PHE:HB2   | 1:A:79:ILE:HD11  | 1.95                     | 0.48              |
| 1:A:204:GLN:HB2  | 2:B:198:PHE:CD2  | 2.49                     | 0.48              |
| 1:C:245:ASN:OD1  | 1:C:246:PRO:CD   | 2.62                     | 0.48              |
| 1:E:110:SER:HB2  | 1:E:177:LEU:HD22 | 1.96                     | 0.48              |
| 2:J:69:CYS:SG    | 2:J:103:LEU:HD11 | 2.53                     | 0.48              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:J:90:ILE:CB    | 2:J:127:LEU:HD21 | 2.43                     | 0.48              |
| 2:J:224:ILE:HA   | 2:J:227:SER:HB3  | 1.94                     | 0.48              |
| 1:M:83:ILE:HG21  | 1:M:117:LEU:HD11 | 1.96                     | 0.48              |
| 2:P:121:SER:OG   | 1:Q:183:ALA:CB   | 2.62                     | 0.48              |
| 2:P:262:ALA:CB   | 1:Q:275:ALA:CB   | 2.92                     | 0.48              |
| 2:R:140:ILE:HD11 | 2:R:173:LEU:CD2  | 2.43                     | 0.48              |
| 2:T:72:ARG:HB2   | 2:T:96:PHE:CZ    | 2.48                     | 0.48              |
| 1:U:6:LYS:NZ     | 2:V:10:GLY:HA2   | 2.28                     | 0.48              |
| 2:V:256:ASN:HB2  | 1:W:270:ARG:CG   | 2.44                     | 0.48              |
| 1:A:100:GLN:HB2  | 2:B:184:GLU:HG3  | 1.95                     | 0.48              |
| 1:A:197:VAL:CG2  | 2:B:191:GLN:CB   | 2.92                     | 0.48              |
| 2:B:269:GLN:CG   | 2:D:269:GLN:CD   | 2.79                     | 0.48              |
| 1:C:164:ILE:HD12 | 1:C:184:ILE:CD1  | 2.36                     | 0.48              |
| 2:F:140:ILE:HD11 | 2:F:173:LEU:CD2  | 2.43                     | 0.48              |
| 1:G:48:ARG:NH1   | 1:G:66:GLU:HG3   | 2.27                     | 0.48              |
| 1:G:54:ARG:HD3   | 2:H:54:THR:OG1   | 2.14                     | 0.48              |
| 1:G:245:ASN:OD1  | 1:G:246:PRO:CD   | 2.62                     | 0.48              |
| 1:G:246:PRO:HB3  | 1:I:294:LEU:HG   | 1.95                     | 0.48              |
| 2:J:224:ILE:HB   | 1:K:248:TYR:CD1  | 2.48                     | 0.48              |
| 1:K:52:PHE:HB2   | 1:K:79:ILE:HD11  | 1.95                     | 0.48              |
| 1:K:102:VAL:HG22 | 1:K:189:PHE:CD2  | 2.48                     | 0.48              |
| 1:K:245:ASN:OD1  | 1:K:246:PRO:CD   | 2.62                     | 0.48              |
| 1:M:131:ARG:HH12 | 2:N:70:ARG:HD3   | 1.79                     | 0.48              |
| 2:N:72:ARG:HB2   | 2:N:96:PHE:CZ    | 2.48                     | 0.48              |
| 2:P:42:PHE:C     | 1:Q:67:GLY:O     | 2.57                     | 0.48              |
| 2:P:108:THR:OG1  | 1:Q:111:ARG:CD   | 2.61                     | 0.48              |
| 1:Q:64:LEU:HD13  | 1:Q:69:HIS:CB    | 2.43                     | 0.48              |
| 2:T:270:LEU:HD13 | 1:U:272:TYR:CE2  | 2.49                     | 0.48              |
| 1:W:62:THR:CG2   | 1:W:64:LEU:HD21  | 2.44                     | 0.48              |
| 2:B:54:THR:O     | 2:B:54:THR:HG22  | 2.14                     | 0.48              |
| 2:B:240:LYS:HZ1  | 1:E:282:LEU:HD22 | 1.79                     | 0.48              |
| 1:C:102:VAL:HG22 | 1:C:189:PHE:CD2  | 2.48                     | 0.48              |
| 2:D:140:ILE:HD11 | 2:D:173:LEU:CD2  | 2.43                     | 0.48              |
| 1:E:52:PHE:HB2   | 1:E:79:ILE:HD11  | 1.95                     | 0.48              |
| 1:E:83:ILE:HG21  | 1:E:117:LEU:HD11 | 1.96                     | 0.48              |
| 2:F:78:VAL:HG13  | 2:F:124:THR:HG23 | 1.95                     | 0.48              |
| 2:J:259:TYR:C    | 2:J:260:LEU:HD12 | 2.37                     | 0.48              |
| 1:K:228:ALA:HB3  | 2:L:220:ALA:HB2  | 1.96                     | 0.48              |
| 1:M:139:GLU:HG3  | 2:N:143:ARG:HH21 | 1.79                     | 0.48              |
| 1:M:245:ASN:OD1  | 1:M:246:PRO:CD   | 2.62                     | 0.48              |
| 2:T:140:ILE:HD11 | 2:T:173:LEU:CD2  | 2.43                     | 0.48              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:U:264:ILE:HD13 | 1:U:271:ILE:HD11 | 1.96                     | 0.48              |
| 2:B:90:ILE:CB    | 2:B:127:LEU:HD21 | 2.43                     | 0.47              |
| 2:B:200:VAL:HG21 | 1:C:222:ARG:HG3  | 1.94                     | 0.47              |
| 1:E:60:GLN:HA    | 1:E:118:PRO:HB2  | 1.95                     | 0.47              |
| 2:F:251:LEU:HD21 | 1:G:261:SER:HB2  | 1.95                     | 0.47              |
| 2:H:134:PHE:HB2  | 2:H:139:LEU:CD2  | 2.44                     | 0.47              |
| 2:H:140:ILE:O    | 2:H:140:ILE:HG22 | 2.14                     | 0.47              |
| 2:J:92:LEU:HD23  | 2:J:154:LEU:HD22 | 1.94                     | 0.47              |
| 1:K:60:GLN:HA    | 1:K:118:PRO:HB2  | 1.95                     | 0.47              |
| 2:L:78:VAL:HG13  | 2:L:124:THR:HG23 | 1.95                     | 0.47              |
| 2:P:259:TYR:OH   | 1:Q:278:LEU:O    | 2.26                     | 0.47              |
| 1:U:94:THR:HG21  | 1:U:145:VAL:CB   | 2.44                     | 0.47              |
| 1:U:245:ASN:OD1  | 1:U:246:PRO:CD   | 2.62                     | 0.47              |
| 2:V:90:ILE:CB    | 2:V:127:LEU:HD21 | 2.43                     | 0.47              |
| 1:A:62:THR:CG2   | 1:A:64:LEU:HD21  | 2.44                     | 0.47              |
| 1:A:245:ASN:OD1  | 1:A:246:PRO:CD   | 2.62                     | 0.47              |
| 2:B:259:TYR:C    | 2:B:260:LEU:HD12 | 2.37                     | 0.47              |
| 1:G:83:ILE:HG21  | 1:G:117:LEU:HD11 | 1.96                     | 0.47              |
| 1:I:238:LEU:HD13 | 2:J:235:LEU:HD13 | 1.94                     | 0.47              |
| 1:I:245:ASN:OD1  | 1:I:246:PRO:CD   | 2.62                     | 0.47              |
| 1:K:62:THR:CG2   | 1:K:64:LEU:HD21  | 2.44                     | 0.47              |
| 2:L:54:THR:HG22  | 2:L:54:THR:O     | 2.14                     | 0.47              |
| 2:L:207:LYS:HG3  | 1:M:227:GLN:HG2  | 1.96                     | 0.47              |
| 1:M:110:SER:HB2  | 1:M:177:LEU:HD22 | 1.96                     | 0.47              |
| 1:M:131:ARG:HA   | 2:N:73:PRO:HB3   | 1.95                     | 0.47              |
| 1:M:139:GLU:HG3  | 2:N:143:ARG:NH2  | 2.29                     | 0.47              |
| 1:O:52:PHE:HB2   | 1:O:79:ILE:HD11  | 1.95                     | 0.47              |
| 2:P:50:VAL:HG13  | 2:P:55:HIS:CD2   | 2.49                     | 0.47              |
| 2:R:200:VAL:HA   | 1:S:226:VAL:HG11 | 1.96                     | 0.47              |
| 1:W:110:SER:HB2  | 1:W:177:LEU:HD22 | 1.96                     | 0.47              |
| 1:A:60:GLN:HA    | 1:A:118:PRO:HB2  | 1.95                     | 0.47              |
| 1:A:83:ILE:HG21  | 1:A:117:LEU:HD11 | 1.96                     | 0.47              |
| 1:A:110:SER:HB2  | 1:A:177:LEU:HD22 | 1.96                     | 0.47              |
| 1:A:264:ILE:HD13 | 1:A:271:ILE:HD11 | 1.96                     | 0.47              |
| 2:B:43:ARG:CG    | 2:B:43:ARG:HB3   | 2.24                     | 0.47              |
| 2:B:264:GLN:HB2  | 2:B:266:VAL:HG23 | 1.96                     | 0.47              |
| 1:C:52:PHE:HB2   | 1:C:79:ILE:HD11  | 1.95                     | 0.47              |
| 2:D:207:LYS:HG3  | 1:E:227:GLN:CG   | 2.44                     | 0.47              |
| 1:E:245:ASN:OD1  | 1:E:246:PRO:CD   | 2.62                     | 0.47              |
| 1:G:62:THR:CG2   | 1:G:64:LEU:HD21  | 2.44                     | 0.47              |
| 1:G:249:ILE:HG21 | 1:I:294:LEU:CG   | 2.36                     | 0.47              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:H:90:ILE:CB    | 2:H:127:LEU:HD21 | 2.43                     | 0.47              |
| 1:I:102:VAL:HG22 | 1:I:189:PHE:CD2  | 2.48                     | 0.47              |
| 2:J:43:ARG:CG    | 2:J:43:ARG:HB2   | 2.24                     | 0.47              |
| 2:L:50:VAL:HG13  | 2:L:55:HIS:CD2   | 2.49                     | 0.47              |
| 2:N:264:GLN:HB2  | 2:N:266:VAL:HG23 | 1.96                     | 0.47              |
| 2:P:186:LYS:N    | 1:Q:212:PHE:CE2  | 2.83                     | 0.47              |
| 2:P:264:GLN:HB2  | 2:P:266:VAL:HG23 | 1.97                     | 0.47              |
| 2:R:264:GLN:HB2  | 2:R:266:VAL:HG23 | 1.96                     | 0.47              |
| 2:R:267:LEU:HD21 | 2:T:267:LEU:CD1  | 2.15                     | 0.47              |
| 2:V:259:TYR:HE1  | 1:W:277:ASN:HB2  | 1.78                     | 0.47              |
| 1:W:214:VAL:O    | 1:W:218:LYS:HG2  | 2.15                     | 0.47              |
| 2:B:28:TYR:CD1   | 2:B:30:VAL:HG23  | 2.47                     | 0.47              |
| 2:B:269:GLN:HA   | 2:D:269:GLN:OE1  | 2.14                     | 0.47              |
| 2:D:140:ILE:O    | 2:D:140:ILE:HG22 | 2.15                     | 0.47              |
| 2:D:197:ARG:N    | 1:E:219:GLN:HE22 | 2.12                     | 0.47              |
| 2:D:240:LYS:HE3  | 1:E:254:ILE:CD1  | 2.44                     | 0.47              |
| 1:E:264:ILE:HD13 | 1:E:271:ILE:HD11 | 1.96                     | 0.47              |
| 2:F:127:LEU:O    | 2:F:131:VAL:HG23 | 2.15                     | 0.47              |
| 1:K:274:THR:HG22 | 2:L:261:PRO:HG3  | 1.96                     | 0.47              |
| 2:L:90:ILE:CB    | 2:L:127:LEU:HD21 | 2.43                     | 0.47              |
| 2:P:140:ILE:HD11 | 2:P:173:LEU:CD2  | 2.43                     | 0.47              |
| 2:P:196:ALA:CB   | 1:Q:220:GLU:HG3  | 2.43                     | 0.47              |
| 1:S:62:THR:CG2   | 1:S:64:LEU:HD21  | 2.44                     | 0.47              |
| 1:S:124:LEU:HD11 | 1:S:175:PHE:HB3  | 1.97                     | 0.47              |
| 2:T:41:ARG:CZ    | 1:U:44:GLU:HG3   | 2.43                     | 0.47              |
| 1:U:62:THR:CG2   | 1:U:64:LEU:HD21  | 2.44                     | 0.47              |
| 2:V:246:ASP:CB   | 1:W:258:GLN:NE2  | 2.77                     | 0.47              |
| 2:V:250:GLN:HB3  | 1:W:262:LYS:HA   | 1.95                     | 0.47              |
| 1:W:245:ASN:OD1  | 1:W:246:PRO:CD   | 2.62                     | 0.47              |
| 1:A:66:GLU:OE1   | 2:X:47:ASP:CG    | 2.57                     | 0.47              |
| 1:A:214:VAL:O    | 1:A:218:LYS:HG2  | 2.15                     | 0.47              |
| 2:B:189:ALA:HB3  | 1:C:212:PHE:HB2  | 1.96                     | 0.47              |
| 1:C:110:SER:HB2  | 1:C:177:LEU:HD22 | 1.96                     | 0.47              |
| 2:F:140:ILE:HG22 | 2:F:140:ILE:O    | 2.14                     | 0.47              |
| 1:M:142:LYS:HE3  | 2:N:173:LEU:HG   | 1.96                     | 0.47              |
| 2:N:50:VAL:HG13  | 2:N:55:HIS:CD2   | 2.49                     | 0.47              |
| 2:R:103:LEU:HA   | 2:R:106:ILE:HD12 | 1.97                     | 0.47              |
| 1:S:214:VAL:O    | 1:S:218:LYS:HG2  | 2.15                     | 0.47              |
| 2:V:50:VAL:HG13  | 2:V:55:HIS:CD2   | 2.49                     | 0.47              |
| 2:X:50:VAL:HG13  | 2:X:55:HIS:CD2   | 2.49                     | 0.47              |
| 2:X:78:VAL:HG13  | 2:X:124:THR:HG23 | 1.95                     | 0.47              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:D:224:ILE:HG21 | 1:E:248:TYR:CD1  | 2.48                     | 0.47              |
| 2:F:106:ILE:HG22 | 2:F:106:ILE:O    | 2.15                     | 0.47              |
| 2:F:140:ILE:HG12 | 2:F:173:LEU:HD21 | 1.97                     | 0.47              |
| 2:F:260:LEU:O    | 1:G:274:THR:O    | 2.32                     | 0.47              |
| 1:G:260:ILE:CG2  | 1:I:278:LEU:HD22 | 2.45                     | 0.47              |
| 1:I:110:SER:HB2  | 1:I:177:LEU:HD22 | 1.96                     | 0.47              |
| 2:J:78:VAL:HG13  | 2:J:124:THR:HG23 | 1.95                     | 0.47              |
| 1:K:225:ILE:HD13 | 2:L:219:LYS:HD3  | 1.97                     | 0.47              |
| 1:K:250:LYS:HG2  | 1:M:287:PHE:HE2  | 1.80                     | 0.47              |
| 2:L:218:SER:OG   | 1:M:238:LEU:HD23 | 2.14                     | 0.47              |
| 1:M:135:SER:CB   | 2:N:93:ARG:HG3   | 2.44                     | 0.47              |
| 1:O:245:ASN:OD1  | 1:O:246:PRO:CD   | 2.62                     | 0.47              |
| 2:P:103:LEU:HA   | 2:P:106:ILE:HD12 | 1.97                     | 0.47              |
| 2:P:184:GLU:OE2  | 2:P:188:VAL:CG2  | 2.63                     | 0.47              |
| 1:Q:110:SER:HB2  | 1:Q:177:LEU:HD22 | 1.96                     | 0.47              |
| 2:R:248:ALA:HB1  | 1:S:278:LEU:CD2  | 2.44                     | 0.47              |
| 1:S:83:ILE:HG21  | 1:S:117:LEU:HD11 | 1.96                     | 0.47              |
| 2:T:43:ARG:CG    | 2:T:43:ARG:HB3   | 2.24                     | 0.47              |
| 2:X:106:ILE:O    | 2:X:106:ILE:HG22 | 2.15                     | 0.47              |
| 1:A:200:LYS:HD2  | 2:B:194:GLU:OE1  | 2.15                     | 0.47              |
| 1:A:281:ASN:OD1  | 1:W:274:THR:HG21 | 2.14                     | 0.47              |
| 2:B:50:VAL:HG13  | 2:B:55:HIS:CD2   | 2.49                     | 0.47              |
| 2:B:106:ILE:O    | 2:B:106:ILE:HG22 | 2.15                     | 0.47              |
| 2:B:127:LEU:O    | 2:B:131:VAL:HG23 | 2.15                     | 0.47              |
| 2:B:221:ALA:HA   | 1:C:248:TYR:HB3  | 1.95                     | 0.47              |
| 1:C:253:LYS:HD3  | 1:E:279:VAL:CB   | 2.45                     | 0.47              |
| 1:C:264:ILE:HD13 | 1:C:271:ILE:HD11 | 1.96                     | 0.47              |
| 2:D:78:VAL:HG13  | 2:D:124:THR:HG23 | 1.95                     | 0.47              |
| 2:D:127:LEU:O    | 2:D:131:VAL:HG23 | 2.15                     | 0.47              |
| 2:D:207:LYS:HD2  | 1:E:227:GLN:HG2  | 1.95                     | 0.47              |
| 2:D:264:GLN:HB2  | 2:D:266:VAL:HG23 | 1.96                     | 0.47              |
| 1:E:214:VAL:O    | 1:E:218:LYS:HG2  | 2.15                     | 0.47              |
| 2:F:43:ARG:CG    | 2:F:43:ARG:HB2   | 2.24                     | 0.47              |
| 1:G:124:LEU:HD11 | 1:G:175:PHE:HB3  | 1.97                     | 0.47              |
| 1:G:264:ILE:HD13 | 1:G:271:ILE:HD11 | 1.96                     | 0.47              |
| 1:I:81:TYR:CG    | 1:I:117:LEU:HD22 | 2.50                     | 0.47              |
| 1:K:81:TYR:CG    | 1:K:117:LEU:HD22 | 2.50                     | 0.47              |
| 1:K:83:ILE:HG21  | 1:K:117:LEU:HD11 | 1.96                     | 0.47              |
| 1:K:110:SER:HB2  | 1:K:177:LEU:HD22 | 1.96                     | 0.47              |
| 1:K:226:VAL:HA   | 1:K:229:GLU:OE1  | 2.15                     | 0.47              |
| 1:K:260:ILE:CD1  | 2:L:244:ALA:HB1  | 2.43                     | 0.47              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:L:41:ARG:HD3   | 1:M:43:VAL:O     | 2.15                     | 0.47              |
| 2:L:106:ILE:O    | 2:L:106:ILE:HG22 | 2.15                     | 0.47              |
| 2:N:127:LEU:O    | 2:N:131:VAL:HG23 | 2.15                     | 0.47              |
| 1:O:110:SER:HB2  | 1:O:177:LEU:HD22 | 1.96                     | 0.47              |
| 1:O:124:LEU:HD11 | 1:O:175:PHE:HB3  | 1.97                     | 0.47              |
| 1:O:214:VAL:O    | 1:O:218:LYS:HG2  | 2.15                     | 0.47              |
| 2:P:44:GLY:O     | 1:Q:66:GLU:HG2   | 2.15                     | 0.47              |
| 2:P:106:ILE:O    | 2:P:106:ILE:HG22 | 2.15                     | 0.47              |
| 2:P:127:LEU:O    | 2:P:131:VAL:HG23 | 2.15                     | 0.47              |
| 1:Q:264:ILE:HD13 | 1:Q:271:ILE:HD11 | 1.96                     | 0.47              |
| 1:S:94:THR:HG21  | 1:S:145:VAL:CB   | 2.44                     | 0.47              |
| 1:S:264:ILE:HD13 | 1:S:271:ILE:HD11 | 1.96                     | 0.47              |
| 1:S:280:LEU:CD2  | 1:S:282:LEU:HD11 | 2.45                     | 0.47              |
| 2:T:41:ARG:CG    | 1:U:44:GLU:HA    | 2.41                     | 0.47              |
| 2:T:140:ILE:HG12 | 2:T:173:LEU:HD21 | 1.97                     | 0.47              |
| 2:T:264:GLN:HB2  | 2:T:266:VAL:HG23 | 1.97                     | 0.47              |
| 1:U:124:LEU:HD11 | 1:U:175:PHE:HB3  | 1.97                     | 0.47              |
| 1:U:164:ILE:HD12 | 1:U:184:ILE:CD1  | 2.36                     | 0.47              |
| 1:U:226:VAL:HA   | 1:U:229:GLU:OE1  | 2.15                     | 0.47              |
| 1:U:280:LEU:CD2  | 1:U:282:LEU:HD11 | 2.45                     | 0.47              |
| 2:V:246:ASP:OD2  | 1:W:258:GLN:CD   | 2.58                     | 0.47              |
| 1:W:81:TYR:CG    | 1:W:117:LEU:HD22 | 2.50                     | 0.47              |
| 1:W:102:VAL:HG22 | 1:W:189:PHE:CD2  | 2.49                     | 0.47              |
| 1:W:124:LEU:HD11 | 1:W:175:PHE:HB3  | 1.97                     | 0.47              |
| 2:X:54:THR:O     | 2:X:54:THR:HG22  | 2.14                     | 0.47              |
| 2:X:127:LEU:O    | 2:X:131:VAL:HG23 | 2.15                     | 0.47              |
| 2:X:184:GLU:OE2  | 2:X:188:VAL:CG2  | 2.63                     | 0.47              |
| 1:A:124:LEU:HD11 | 1:A:175:PHE:HB3  | 1.97                     | 0.47              |
| 1:A:271:ILE:C    | 1:A:272:TYR:CD1  | 2.93                     | 0.47              |
| 1:A:283:GLN:NE2  | 1:W:276:ASP:O    | 2.48                     | 0.47              |
| 2:D:106:ILE:O    | 2:D:106:ILE:HG22 | 2.15                     | 0.47              |
| 2:D:259:TYR:C    | 2:D:260:LEU:HD12 | 2.37                     | 0.47              |
| 1:E:102:VAL:HG22 | 1:E:189:PHE:CD2  | 2.48                     | 0.47              |
| 2:F:54:THR:HG22  | 2:F:54:THR:O     | 2.14                     | 0.47              |
| 1:G:123:ARG:O    | 2:H:71:SER:CB    | 2.63                     | 0.47              |
| 2:H:50:VAL:HG13  | 2:H:55:HIS:CD2   | 2.49                     | 0.47              |
| 2:H:184:GLU:OE2  | 2:H:188:VAL:CG2  | 2.63                     | 0.47              |
| 1:K:224:LYS:O    | 2:L:219:LYS:HE2  | 2.15                     | 0.47              |
| 1:K:225:ILE:N    | 2:L:219:LYS:HE2  | 2.29                     | 0.47              |
| 1:K:235:ALA:HB1  | 2:L:228:LEU:HD11 | 1.95                     | 0.47              |
| 2:L:43:ARG:HA    | 1:M:67:GLY:N     | 2.29                     | 0.47              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:M:81:TYR:CG    | 1:M:117:LEU:HD22 | 2.50                     | 0.47              |
| 1:M:124:LEU:HD11 | 1:M:175:PHE:HB3  | 1.97                     | 0.47              |
| 2:P:121:SER:CB   | 1:Q:183:ALA:HB1  | 2.45                     | 0.47              |
| 1:Q:83:ILE:HG21  | 1:Q:117:LEU:HD11 | 1.96                     | 0.47              |
| 1:Q:245:ASN:OD1  | 1:Q:246:PRO:CD   | 2.62                     | 0.47              |
| 1:S:245:ASN:OD1  | 1:S:246:PRO:CD   | 2.62                     | 0.47              |
| 2:V:106:ILE:HG22 | 2:V:106:ILE:O    | 2.15                     | 0.47              |
| 1:W:83:ILE:HG21  | 1:W:117:LEU:HD11 | 1.96                     | 0.47              |
| 1:W:226:VAL:HA   | 1:W:229:GLU:OE1  | 2.15                     | 0.47              |
| 1:A:280:LEU:CD2  | 1:A:282:LEU:HD11 | 2.45                     | 0.47              |
| 1:A:282:LEU:N    | 1:W:277:ASN:HD21 | 2.13                     | 0.47              |
| 1:C:68:LEU:O     | 1:C:69:HIS:CG    | 2.68                     | 0.47              |
| 1:C:83:ILE:HG21  | 1:C:117:LEU:HD11 | 1.96                     | 0.47              |
| 1:C:130:GLU:O    | 2:D:93:ARG:CZ    | 2.62                     | 0.47              |
| 1:C:175:PHE:HZ   | 2:D:167:ASP:CG   | 2.22                     | 0.47              |
| 2:D:50:VAL:HG13  | 2:D:55:HIS:CD2   | 2.49                     | 0.47              |
| 2:D:236:ILE:O    | 1:E:254:ILE:CG1  | 2.63                     | 0.47              |
| 1:E:81:TYR:CG    | 1:E:117:LEU:HD22 | 2.50                     | 0.47              |
| 1:E:274:THR:HG1  | 1:E:277:ASN:CG   | 2.21                     | 0.47              |
| 1:G:60:GLN:HA    | 1:G:118:PRO:HB2  | 1.95                     | 0.47              |
| 1:K:124:LEU:HD11 | 1:K:175:PHE:HB3  | 1.97                     | 0.47              |
| 1:K:214:VAL:O    | 1:K:218:LYS:HG2  | 2.15                     | 0.47              |
| 1:K:260:ILE:HD11 | 2:L:244:ALA:CB   | 2.45                     | 0.47              |
| 2:L:127:LEU:O    | 2:L:131:VAL:HG23 | 2.15                     | 0.47              |
| 2:N:140:ILE:HG12 | 2:N:173:LEU:HD21 | 1.97                     | 0.47              |
| 2:P:41:ARG:CD    | 1:Q:42:THR:C     | 2.88                     | 0.47              |
| 2:P:61:VAL:O     | 1:Q:43:VAL:O     | 2.33                     | 0.47              |
| 1:Q:68:LEU:O     | 1:Q:69:HIS:CG    | 2.68                     | 0.47              |
| 1:Q:280:LEU:CD2  | 1:Q:282:LEU:HD11 | 2.45                     | 0.47              |
| 2:R:50:VAL:HG13  | 2:R:55:HIS:CD2   | 2.49                     | 0.47              |
| 1:S:249:ILE:HD11 | 2:T:237:GLU:O    | 2.15                     | 0.47              |
| 2:T:50:VAL:HG13  | 2:T:55:HIS:CD2   | 2.49                     | 0.47              |
| 2:T:127:LEU:O    | 2:T:131:VAL:HG23 | 2.15                     | 0.47              |
| 2:T:184:GLU:OE2  | 2:T:188:VAL:CG2  | 2.63                     | 0.47              |
| 1:U:214:VAL:O    | 1:U:218:LYS:HG2  | 2.15                     | 0.47              |
| 2:V:54:THR:HG22  | 2:V:54:THR:O     | 2.14                     | 0.47              |
| 1:W:264:ILE:HD13 | 1:W:271:ILE:HD11 | 1.96                     | 0.47              |
| 1:W:280:LEU:CD2  | 1:W:282:LEU:HD11 | 2.45                     | 0.47              |
| 1:A:68:LEU:O     | 1:A:69:HIS:CG    | 2.68                     | 0.47              |
| 1:A:72:ILE:HB    | 1:A:75:PHE:HB3   | 1.97                     | 0.47              |
| 1:A:81:TYR:CD2   | 1:A:117:LEU:HD22 | 2.50                     | 0.47              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:B:78:VAL:HG13  | 2:B:124:THR:HG23 | 1.95                     | 0.47              |
| 2:B:184:GLU:OE2  | 2:B:188:VAL:CG2  | 2.63                     | 0.47              |
| 2:B:260:LEU:HD11 | 2:X:270:LEU:HD11 | 1.96                     | 0.47              |
| 1:C:100:GLN:HB2  | 2:D:184:GLU:HG2  | 1.97                     | 0.47              |
| 1:C:271:ILE:C    | 1:C:272:TYR:CD1  | 2.93                     | 0.47              |
| 2:D:54:THR:HG22  | 2:D:54:THR:O     | 2.14                     | 0.47              |
| 2:D:200:VAL:CG2  | 1:E:219:GLN:HE21 | 2.28                     | 0.47              |
| 1:E:68:LEU:O     | 1:E:69:HIS:CG    | 2.68                     | 0.47              |
| 1:E:81:TYR:CD2   | 1:E:117:LEU:HD22 | 2.50                     | 0.47              |
| 2:F:43:ARG:CG    | 2:F:43:ARG:HB3   | 2.24                     | 0.47              |
| 1:G:280:LEU:CD2  | 1:G:282:LEU:HD11 | 2.45                     | 0.47              |
| 2:H:43:ARG:CB    | 2:H:43:ARG:HG2   | 2.22                     | 0.47              |
| 2:H:54:THR:O     | 2:H:54:THR:HG22  | 2.14                     | 0.47              |
| 2:H:103:LEU:HA   | 2:H:106:ILE:HD12 | 1.97                     | 0.47              |
| 2:H:127:LEU:O    | 2:H:131:VAL:HG23 | 2.15                     | 0.47              |
| 1:I:72:ILE:HB    | 1:I:75:PHE:HB3   | 1.97                     | 0.47              |
| 1:I:81:TYR:CD2   | 1:I:117:LEU:HD22 | 2.50                     | 0.47              |
| 1:K:72:ILE:HB    | 1:K:75:PHE:HB3   | 1.97                     | 0.47              |
| 1:M:68:LEU:O     | 1:M:69:HIS:CG    | 2.68                     | 0.47              |
| 1:O:271:ILE:C    | 1:O:272:TYR:CD1  | 2.93                     | 0.47              |
| 1:Q:81:TYR:CD2   | 1:Q:117:LEU:HD22 | 2.50                     | 0.47              |
| 1:Q:124:LEU:HD11 | 1:Q:175:PHE:HB3  | 1.97                     | 0.47              |
| 1:Q:214:VAL:O    | 1:Q:218:LYS:HG2  | 2.15                     | 0.47              |
| 1:Q:260:ILE:HD11 | 2:R:244:ALA:O    | 2.15                     | 0.47              |
| 2:R:140:ILE:O    | 2:R:140:ILE:HG22 | 2.14                     | 0.47              |
| 1:S:271:ILE:C    | 1:S:272:TYR:CD1  | 2.93                     | 0.47              |
| 2:T:54:THR:HG22  | 2:T:54:THR:O     | 2.14                     | 0.47              |
| 1:U:81:TYR:CD2   | 1:U:117:LEU:HD22 | 2.50                     | 0.47              |
| 1:U:81:TYR:CG    | 1:U:117:LEU:HD22 | 2.50                     | 0.47              |
| 1:U:271:ILE:C    | 1:U:272:TYR:CD1  | 2.93                     | 0.47              |
| 2:V:256:ASN:HB2  | 1:W:270:ARG:CB   | 2.44                     | 0.47              |
| 1:C:214:VAL:O    | 1:C:218:LYS:HG2  | 2.15                     | 0.46              |
| 1:E:124:LEU:HD11 | 1:E:175:PHE:HB3  | 1.97                     | 0.46              |
| 1:E:226:VAL:HA   | 1:E:229:GLU:OE1  | 2.15                     | 0.46              |
| 2:F:264:GLN:HB2  | 2:F:266:VAL:HG23 | 1.96                     | 0.46              |
| 1:G:110:SER:HB2  | 1:G:177:LEU:HD22 | 1.96                     | 0.46              |
| 1:G:214:VAL:O    | 1:G:218:LYS:HG2  | 2.15                     | 0.46              |
| 2:H:140:ILE:HG12 | 2:H:173:LEU:HD21 | 1.97                     | 0.46              |
| 2:H:268:LEU:CD1  | 2:J:266:VAL:HG13 | 2.41                     | 0.46              |
| 1:I:94:THR:HG21  | 1:I:145:VAL:CB   | 2.44                     | 0.46              |
| 1:I:221:GLN:OE1  | 2:J:216:GLY:HA3  | 2.15                     | 0.46              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:L:134:PHE:HB2  | 2:L:139:LEU:CD2  | 2.43                     | 0.46              |
| 1:M:72:ILE:HB    | 1:M:75:PHE:HB3   | 1.97                     | 0.46              |
| 1:M:81:TYR:CD2   | 1:M:117:LEU:HD22 | 2.50                     | 0.46              |
| 2:N:140:ILE:HG22 | 2:N:140:ILE:O    | 2.14                     | 0.46              |
| 1:O:211:GLN:O    | 1:O:214:VAL:HB   | 2.16                     | 0.46              |
| 1:O:290:GLY:C    | 1:Q:283:GLN:OE1  | 2.56                     | 0.46              |
| 2:P:186:LYS:HD3  | 1:Q:208:GLN:OE1  | 2.16                     | 0.46              |
| 2:R:214:ALA:CB   | 2:T:242:GLU:OE2  | 2.63                     | 0.46              |
| 1:S:68:LEU:O     | 1:S:69:HIS:CG    | 2.68                     | 0.46              |
| 1:S:169:THR:HA   | 1:S:179:LEU:HD12 | 1.97                     | 0.46              |
| 1:S:226:VAL:HA   | 1:S:229:GLU:OE1  | 2.15                     | 0.46              |
| 2:T:106:ILE:O    | 2:T:106:ILE:HG22 | 2.15                     | 0.46              |
| 1:U:142:LYS:CE   | 2:V:140:ILE:HD13 | 2.45                     | 0.46              |
| 2:V:140:ILE:HG12 | 2:V:173:LEU:HD21 | 1.97                     | 0.46              |
| 2:V:218:SER:CB   | 1:W:237:MET:CE   | 2.82                     | 0.46              |
| 2:V:247:ILE:HD11 | 1:W:257:ALA:CB   | 2.44                     | 0.46              |
| 1:W:52:PHE:HB2   | 1:W:79:ILE:HD11  | 1.95                     | 0.46              |
| 1:W:60:GLN:HA    | 1:W:118:PRO:HB2  | 1.95                     | 0.46              |
| 1:W:81:TYR:CD2   | 1:W:117:LEU:HD22 | 2.50                     | 0.46              |
| 1:A:193:TYR:HE1  | 2:B:187:GLN:CB   | 2.28                     | 0.46              |
| 1:A:203:ALA:HB1  | 2:B:199:VAL:HA   | 1.96                     | 0.46              |
| 2:B:211:ILE:HG21 | 1:C:233:GLU:OE2  | 2.13                     | 0.46              |
| 1:C:44:GLU:O     | 1:C:47:HIS:HB2   | 2.16                     | 0.46              |
| 1:C:131:ARG:CG   | 2:D:71:SER:O     | 2.59                     | 0.46              |
| 1:C:193:TYR:CZ   | 2:D:191:GLN:HG3  | 2.50                     | 0.46              |
| 2:D:247:ILE:CG2  | 1:E:261:SER:HB2  | 2.45                     | 0.46              |
| 1:G:81:TYR:CD2   | 1:G:117:LEU:HD22 | 2.50                     | 0.46              |
| 2:H:264:GLN:HB2  | 2:H:266:VAL:HG23 | 1.96                     | 0.46              |
| 1:I:44:GLU:O     | 1:I:47:HIS:HB2   | 2.16                     | 0.46              |
| 1:I:68:LEU:O     | 1:I:69:HIS:CG    | 2.68                     | 0.46              |
| 1:I:169:THR:HA   | 1:I:179:LEU:HD12 | 1.97                     | 0.46              |
| 2:J:41:ARG:CD    | 1:K:43:VAL:H     | 2.28                     | 0.46              |
| 2:J:127:LEU:O    | 2:J:131:VAL:HG23 | 2.15                     | 0.46              |
| 2:J:140:ILE:HG12 | 2:J:173:LEU:HD21 | 1.97                     | 0.46              |
| 1:K:81:TYR:CD2   | 1:K:117:LEU:HD22 | 2.50                     | 0.46              |
| 1:M:62:THR:CG2   | 1:M:64:LEU:HD21  | 2.44                     | 0.46              |
| 2:N:221:ALA:HB2  | 1:O:248:TYR:CG   | 2.50                     | 0.46              |
| 2:N:269:GLN:HG3  | 2:P:269:GLN:HG2  | 1.98                     | 0.46              |
| 1:O:81:TYR:CD2   | 1:O:117:LEU:HD22 | 2.50                     | 0.46              |
| 1:O:226:VAL:HA   | 1:O:229:GLU:OE1  | 2.15                     | 0.46              |
| 2:P:39:PHE:CG    | 1:Q:45:GLY:O     | 2.60                     | 0.46              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:P:140:ILE:O    | 2:P:140:ILE:HG22 | 2.15                     | 0.46              |
| 1:Q:226:VAL:HA   | 1:Q:229:GLU:OE1  | 2.15                     | 0.46              |
| 2:R:76:VAL:HG21  | 2:R:120:PRO:HA   | 1.98                     | 0.46              |
| 2:R:237:GLU:OE1  | 1:S:293:SER:CB   | 2.63                     | 0.46              |
| 1:S:81:TYR:CG    | 1:S:117:LEU:HD22 | 2.50                     | 0.46              |
| 1:S:274:THR:HG1  | 1:S:277:ASN:CG   | 2.23                     | 0.46              |
| 2:T:76:VAL:HG21  | 2:T:120:PRO:HA   | 1.97                     | 0.46              |
| 1:U:44:GLU:O     | 1:U:47:HIS:HB2   | 2.16                     | 0.46              |
| 1:U:72:ILE:HB    | 1:U:75:PHE:HB3   | 1.97                     | 0.46              |
| 1:A:81:TYR:CG    | 1:A:117:LEU:HD22 | 2.50                     | 0.46              |
| 2:B:260:LEU:HD13 | 2:B:268:LEU:CD2  | 2.45                     | 0.46              |
| 1:C:81:TYR:CD2   | 1:C:117:LEU:HD22 | 2.50                     | 0.46              |
| 2:D:184:GLU:OE2  | 2:D:188:VAL:CG2  | 2.63                     | 0.46              |
| 2:D:228:LEU:C    | 1:E:247:GLY:CA   | 2.88                     | 0.46              |
| 2:F:50:VAL:HG13  | 2:F:55:HIS:CD2   | 2.49                     | 0.46              |
| 1:G:44:GLU:O     | 1:G:47:HIS:HB2   | 2.16                     | 0.46              |
| 2:H:241:LEU:HD11 | 1:K:283:GLN:HE22 | 1.77                     | 0.46              |
| 1:I:214:VAL:O    | 1:I:218:LYS:HG2  | 2.15                     | 0.46              |
| 2:J:43:ARG:HA    | 1:K:67:GLY:N     | 2.27                     | 0.46              |
| 1:K:68:LEU:O     | 1:K:69:HIS:CG    | 2.68                     | 0.46              |
| 2:L:140:ILE:HG12 | 2:L:173:LEU:HD21 | 1.97                     | 0.46              |
| 2:L:224:ILE:HD12 | 1:M:248:TYR:CD1  | 2.50                     | 0.46              |
| 1:M:214:VAL:O    | 1:M:218:LYS:HG2  | 2.15                     | 0.46              |
| 1:M:226:VAL:HA   | 1:M:229:GLU:OE1  | 2.15                     | 0.46              |
| 1:M:280:LEU:CD2  | 1:M:282:LEU:HD11 | 2.45                     | 0.46              |
| 2:N:268:LEU:CD1  | 2:P:260:LEU:HG   | 2.45                     | 0.46              |
| 1:O:44:GLU:O     | 1:O:47:HIS:HB2   | 2.16                     | 0.46              |
| 1:O:256:ALA:HB2  | 2:P:245:GLU:CD   | 2.40                     | 0.46              |
| 1:O:264:ILE:HD13 | 1:O:271:ILE:HD11 | 1.96                     | 0.46              |
| 2:P:43:ARG:C     | 1:Q:66:GLU:HG2   | 2.40                     | 0.46              |
| 2:P:85:LEU:HD12  | 1:Q:200:LYS:HZ3  | 1.80                     | 0.46              |
| 2:P:87:ASN:OD1   | 1:Q:194:THR:HG21 | 2.14                     | 0.46              |
| 2:P:182:ALA:HB3  | 1:Q:205:GLN:CB   | 2.46                     | 0.46              |
| 1:Q:52:PHE:HB2   | 1:Q:79:ILE:HD11  | 1.95                     | 0.46              |
| 2:T:140:ILE:HG22 | 2:T:140:ILE:O    | 2.15                     | 0.46              |
| 2:T:259:TYR:CE1  | 1:U:278:LEU:CB   | 2.98                     | 0.46              |
| 2:V:140:ILE:HG22 | 2:V:140:ILE:O    | 2.14                     | 0.46              |
| 2:X:43:ARG:CG    | 2:X:43:ARG:HB2   | 2.24                     | 0.46              |
| 1:A:44:GLU:O     | 1:A:47:HIS:HB2   | 2.16                     | 0.46              |
| 1:A:84:ARG:HG2   | 2:X:108:THR:O    | 2.14                     | 0.46              |
| 1:A:275:ALA:HA   | 2:X:261:PRO:CA   | 2.35                     | 0.46              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:B:140:ILE:HG12 | 2:B:173:LEU:HD21 | 1.97                     | 0.46              |
| 1:C:81:TYR:CG    | 1:C:117:LEU:HD22 | 2.50                     | 0.46              |
| 1:C:226:VAL:HA   | 1:C:229:GLU:OE1  | 2.15                     | 0.46              |
| 2:D:268:LEU:O    | 2:F:269:GLN:HB2  | 2.16                     | 0.46              |
| 1:E:72:ILE:HB    | 1:E:75:PHE:HB3   | 1.97                     | 0.46              |
| 1:G:81:TYR:CG    | 1:G:117:LEU:HD22 | 2.50                     | 0.46              |
| 1:I:271:ILE:C    | 1:I:272:TYR:CD1  | 2.93                     | 0.46              |
| 2:J:50:VAL:HG13  | 2:J:55:HIS:CD2   | 2.49                     | 0.46              |
| 2:J:103:LEU:HA   | 2:J:106:ILE:HD12 | 1.97                     | 0.46              |
| 2:J:184:GLU:OE2  | 2:J:188:VAL:CG2  | 2.63                     | 0.46              |
| 1:M:96:SER:N     | 1:M:99:LEU:HA    | 2.31                     | 0.46              |
| 1:M:211:GLN:O    | 1:M:214:VAL:HB   | 2.15                     | 0.46              |
| 2:N:184:GLU:OE2  | 2:N:188:VAL:CG2  | 2.63                     | 0.46              |
| 2:P:81:GLY:H     | 1:Q:154:ILE:CG2  | 2.28                     | 0.46              |
| 1:S:268:GLN:C    | 2:T:255:ARG:O    | 2.59                     | 0.46              |
| 1:U:96:SER:N     | 1:U:99:LEU:HA    | 2.31                     | 0.46              |
| 1:U:211:GLN:O    | 1:U:214:VAL:HB   | 2.16                     | 0.46              |
| 2:V:259:TYR:CD1  | 1:W:273:LEU:CB   | 2.98                     | 0.46              |
| 2:V:264:GLN:HB2  | 2:V:266:VAL:HG23 | 1.96                     | 0.46              |
| 1:W:44:GLU:O     | 1:W:47:HIS:HB2   | 2.16                     | 0.46              |
| 2:X:103:LEU:HA   | 2:X:106:ILE:HD12 | 1.97                     | 0.46              |
| 2:X:259:TYR:C    | 2:X:260:LEU:HD12 | 2.37                     | 0.46              |
| 1:A:221:GLN:OE1  | 2:B:216:GLY:CA   | 2.63                     | 0.46              |
| 2:B:270:LEU:HD22 | 1:C:272:TYR:CD2  | 2.50                     | 0.46              |
| 1:C:211:GLN:O    | 1:C:214:VAL:HB   | 2.16                     | 0.46              |
| 1:C:280:LEU:CD2  | 1:C:282:LEU:HD11 | 2.45                     | 0.46              |
| 2:D:240:LYS:CG   | 1:E:254:ILE:HG23 | 2.39                     | 0.46              |
| 2:F:184:GLU:OE2  | 2:F:188:VAL:CG2  | 2.63                     | 0.46              |
| 1:G:4:ASN:O      | 1:G:8:LEU:HD13   | 2.16                     | 0.46              |
| 1:G:58:VAL:H     | 2:H:32:ALA:HB1   | 1.81                     | 0.46              |
| 1:G:226:VAL:HA   | 1:G:229:GLU:OE1  | 2.15                     | 0.46              |
| 1:G:281:ASN:O    | 1:G:283:GLN:N    | 2.49                     | 0.46              |
| 2:H:106:ILE:O    | 2:H:106:ILE:HG22 | 2.15                     | 0.46              |
| 1:I:140:VAL:HG13 | 1:I:167:GLU:HB2  | 1.98                     | 0.46              |
| 1:I:226:VAL:HA   | 1:I:229:GLU:OE1  | 2.15                     | 0.46              |
| 2:J:43:ARG:CG    | 2:J:43:ARG:HB3   | 2.24                     | 0.46              |
| 1:K:94:THR:HG21  | 1:K:145:VAL:CB   | 2.44                     | 0.46              |
| 1:K:271:ILE:C    | 1:K:272:TYR:CD1  | 2.93                     | 0.46              |
| 1:K:299:LYS:OXT  | 1:M:285:GLU:HG2  | 2.15                     | 0.46              |
| 1:M:93:PRO:HG2   | 2:N:172:HIS:CD2  | 2.51                     | 0.46              |
| 1:M:271:ILE:C    | 1:M:272:TYR:CD1  | 2.93                     | 0.46              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:81:TYR:CG    | 1:O:117:LEU:HD22 | 2.50                     | 0.46              |
| 2:P:259:TYR:C    | 2:P:260:LEU:HD12 | 2.37                     | 0.46              |
| 1:Q:62:THR:CG2   | 1:Q:64:LEU:HD21  | 2.44                     | 0.46              |
| 2:R:184:GLU:OE2  | 2:R:188:VAL:CG2  | 2.63                     | 0.46              |
| 1:S:96:SER:N     | 1:S:99:LEU:HA    | 2.31                     | 0.46              |
| 1:S:221:GLN:O    | 1:S:225:ILE:HG12 | 2.16                     | 0.46              |
| 2:V:236:ILE:CG1  | 1:W:247:GLY:HA2  | 2.44                     | 0.46              |
| 1:W:221:GLN:O    | 1:W:225:ILE:HG12 | 2.16                     | 0.46              |
| 1:W:271:ILE:C    | 1:W:272:TYR:CD1  | 2.93                     | 0.46              |
| 2:X:140:ILE:O    | 2:X:140:ILE:HG22 | 2.14                     | 0.46              |
| 2:X:264:GLN:HB2  | 2:X:266:VAL:HG23 | 1.96                     | 0.46              |
| 1:A:68:LEU:H     | 2:X:43:ARG:CD    | 2.26                     | 0.46              |
| 1:A:104:ILE:HD11 | 1:A:187:LEU:CD1  | 2.46                     | 0.46              |
| 1:A:203:ALA:HB1  | 2:B:199:VAL:N    | 2.31                     | 0.46              |
| 1:C:104:ILE:HD11 | 1:C:187:LEU:CD1  | 2.46                     | 0.46              |
| 2:D:189:ALA:HB1  | 1:E:212:PHE:CG   | 2.51                     | 0.46              |
| 1:E:211:GLN:O    | 1:E:214:VAL:HB   | 2.15                     | 0.46              |
| 1:E:280:LEU:CD2  | 1:E:282:LEU:HD11 | 2.45                     | 0.46              |
| 1:I:62:THR:CG2   | 1:I:64:LEU:HD21  | 2.44                     | 0.46              |
| 1:I:211:GLN:O    | 1:I:214:VAL:HB   | 2.15                     | 0.46              |
| 1:I:280:LEU:CD2  | 1:I:282:LEU:HD11 | 2.45                     | 0.46              |
| 1:K:140:VAL:HG13 | 1:K:167:GLU:HB2  | 1.98                     | 0.46              |
| 1:M:264:ILE:HD13 | 1:M:271:ILE:HD11 | 1.96                     | 0.46              |
| 1:O:68:LEU:O     | 1:O:69:HIS:CG    | 2.68                     | 0.46              |
| 1:O:96:SER:N     | 1:O:99:LEU:HA    | 2.31                     | 0.46              |
| 1:O:280:LEU:CD2  | 1:O:282:LEU:HD11 | 2.45                     | 0.46              |
| 2:P:109:SER:HB3  | 1:Q:111:ARG:CG   | 2.45                     | 0.46              |
| 2:P:121:SER:CB   | 1:Q:183:ALA:CB   | 2.94                     | 0.46              |
| 1:Q:81:TYR:CG    | 1:Q:117:LEU:HD22 | 2.50                     | 0.46              |
| 2:R:54:THR:O     | 2:R:54:THR:HG22  | 2.14                     | 0.46              |
| 2:V:251:LEU:HD22 | 1:W:271:ILE:CD1  | 2.46                     | 0.46              |
| 1:W:140:VAL:HG13 | 1:W:167:GLU:HB2  | 1.98                     | 0.46              |
| 1:C:293:SER:CB   | 1:E:283:GLN:CD   | 2.89                     | 0.46              |
| 1:G:151:SER:HB3  | 1:G:193:TYR:CE2  | 2.51                     | 0.46              |
| 1:I:4:ASN:O      | 1:I:8:LEU:HD13   | 2.16                     | 0.46              |
| 1:I:164:ILE:HD12 | 1:I:184:ILE:CD1  | 2.36                     | 0.46              |
| 1:I:264:ILE:HD13 | 1:I:271:ILE:HD11 | 1.96                     | 0.46              |
| 1:K:44:GLU:O     | 1:K:47:HIS:HB2   | 2.16                     | 0.46              |
| 1:K:151:SER:HB3  | 1:K:193:TYR:CE2  | 2.51                     | 0.46              |
| 2:L:140:ILE:HG22 | 2:L:140:ILE:O    | 2.15                     | 0.46              |
| 2:L:184:GLU:OE2  | 2:L:188:VAL:CG2  | 2.63                     | 0.46              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:M:44:GLU:O     | 1:M:47:HIS:HB2   | 2.16                     | 0.46              |
| 1:M:218:LYS:NZ   | 2:N:212:ILE:HD11 | 2.31                     | 0.46              |
| 1:Q:96:SER:N     | 1:Q:99:LEU:HA    | 2.31                     | 0.46              |
| 1:Q:104:ILE:HD11 | 1:Q:187:LEU:CD1  | 2.46                     | 0.46              |
| 1:Q:211:GLN:O    | 1:Q:214:VAL:HB   | 2.16                     | 0.46              |
| 1:S:104:ILE:HD11 | 1:S:187:LEU:CD1  | 2.46                     | 0.46              |
| 1:S:211:GLN:O    | 1:S:214:VAL:HB   | 2.16                     | 0.46              |
| 1:U:203:ALA:C    | 2:V:198:PHE:HB3  | 2.41                     | 0.46              |
| 2:V:184:GLU:OE2  | 2:V:188:VAL:CG2  | 2.63                     | 0.46              |
| 1:W:281:ASN:O    | 1:W:283:GLN:N    | 2.49                     | 0.46              |
| 1:W:282:LEU:HA   | 1:W:287:PHE:CE1  | 2.51                     | 0.46              |
| 1:A:4:ASN:O      | 1:A:8:LEU:HD13   | 2.16                     | 0.46              |
| 1:A:211:GLN:O    | 1:A:214:VAL:HB   | 2.16                     | 0.46              |
| 1:A:281:ASN:O    | 1:A:283:GLN:N    | 2.49                     | 0.46              |
| 1:A:294:LEU:HD11 | 1:W:249:ILE:HD12 | 1.98                     | 0.46              |
| 2:B:140:ILE:O    | 2:B:140:ILE:HG22 | 2.15                     | 0.46              |
| 1:C:4:ASN:O      | 1:C:8:LEU:HD13   | 2.16                     | 0.46              |
| 1:C:281:ASN:O    | 1:C:283:GLN:N    | 2.49                     | 0.46              |
| 2:F:270:LEU:HD13 | 1:G:272:TYR:CD2  | 2.51                     | 0.46              |
| 1:G:104:ILE:HD11 | 1:G:187:LEU:CD1  | 2.46                     | 0.46              |
| 1:G:211:GLN:O    | 1:G:214:VAL:HB   | 2.15                     | 0.46              |
| 2:H:76:VAL:HG21  | 2:H:120:PRO:HA   | 1.97                     | 0.46              |
| 1:M:139:GLU:CG   | 2:N:169:SER:HB3  | 2.46                     | 0.46              |
| 1:M:221:GLN:O    | 1:M:225:ILE:HG12 | 2.16                     | 0.46              |
| 1:O:62:THR:CG2   | 1:O:64:LEU:HD21  | 2.44                     | 0.46              |
| 2:P:124:THR:HG21 | 1:Q:157:ARG:CZ   | 2.46                     | 0.46              |
| 1:Q:44:GLU:O     | 1:Q:47:HIS:HB2   | 2.16                     | 0.46              |
| 1:Q:221:GLN:O    | 1:Q:225:ILE:HG12 | 2.16                     | 0.46              |
| 1:Q:271:ILE:C    | 1:Q:272:TYR:CD1  | 2.93                     | 0.46              |
| 1:Q:272:TYR:HB2  | 2:R:258:THR:HG23 | 1.97                     | 0.46              |
| 1:S:81:TYR:CD2   | 1:S:117:LEU:HD22 | 2.50                     | 0.46              |
| 1:S:238:LEU:CB   | 2:T:235:LEU:HD22 | 2.46                     | 0.46              |
| 1:S:281:ASN:O    | 1:S:283:GLN:N    | 2.49                     | 0.46              |
| 2:T:41:ARG:HD3   | 1:U:43:VAL:C     | 2.32                     | 0.46              |
| 2:V:76:VAL:HG21  | 2:V:120:PRO:HA   | 1.98                     | 0.46              |
| 2:V:254:SER:OG   | 1:W:269:ASN:O    | 2.33                     | 0.46              |
| 1:W:72:ILE:HB    | 1:W:75:PHE:HB3   | 1.97                     | 0.46              |
| 1:W:169:THR:HA   | 1:W:179:LEU:HD12 | 1.97                     | 0.46              |
| 1:A:221:GLN:HG2  | 2:B:215:GLU:CB   | 2.46                     | 0.46              |
| 1:A:282:LEU:HA   | 1:A:287:PHE:CE1  | 2.51                     | 0.46              |
| 1:C:72:ILE:HB    | 1:C:75:PHE:HB3   | 1.97                     | 0.46              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:94:THR:HG21  | 1:C:145:VAL:CB   | 2.44                     | 0.46              |
| 1:C:124:LEU:HD11 | 1:C:175:PHE:HB3  | 1.97                     | 0.46              |
| 1:C:131:ARG:HA   | 2:D:95:LEU:HD22  | 1.96                     | 0.46              |
| 1:E:44:GLU:O     | 1:E:47:HIS:HB2   | 2.16                     | 0.46              |
| 2:F:76:VAL:HG21  | 2:F:120:PRO:HA   | 1.98                     | 0.46              |
| 1:G:275:ALA:CB   | 1:I:284:ASP:CG   | 2.89                     | 0.46              |
| 1:I:124:LEU:HD11 | 1:I:175:PHE:HB3  | 1.97                     | 0.46              |
| 1:I:228:ALA:H    | 2:J:219:LYS:NZ   | 2.11                     | 0.46              |
| 1:I:228:ALA:CB   | 2:J:219:LYS:NZ   | 2.73                     | 0.46              |
| 2:J:140:ILE:O    | 2:J:140:ILE:HG22 | 2.14                     | 0.46              |
| 2:J:260:LEU:HD22 | 2:J:268:LEU:HD21 | 1.98                     | 0.46              |
| 1:K:228:ALA:H    | 2:L:219:LYS:HZ1  | 1.64                     | 0.46              |
| 1:K:280:LEU:CD2  | 1:K:282:LEU:HD11 | 2.45                     | 0.46              |
| 2:L:76:VAL:HG21  | 2:L:120:PRO:HA   | 1.97                     | 0.46              |
| 1:M:131:ARG:O    | 2:N:95:LEU:CD2   | 2.64                     | 0.46              |
| 2:N:54:THR:HG22  | 2:N:54:THR:O     | 2.14                     | 0.46              |
| 2:N:260:LEU:HD22 | 2:N:268:LEU:HD21 | 1.98                     | 0.46              |
| 1:O:169:THR:HA   | 1:O:179:LEU:HD12 | 1.97                     | 0.46              |
| 2:P:76:VAL:HG21  | 2:P:120:PRO:HA   | 1.97                     | 0.46              |
| 2:R:200:VAL:CG1  | 1:S:226:VAL:HG11 | 2.37                     | 0.46              |
| 1:S:4:ASN:O      | 1:S:8:LEU:HD13   | 2.16                     | 0.46              |
| 2:T:260:LEU:HD22 | 2:T:268:LEU:HD21 | 1.98                     | 0.46              |
| 1:U:68:LEU:O     | 1:U:69:HIS:CG    | 2.68                     | 0.46              |
| 1:W:104:ILE:HD11 | 1:W:187:LEU:CD1  | 2.46                     | 0.46              |
| 1:W:211:GLN:O    | 1:W:214:VAL:HB   | 2.16                     | 0.46              |
| 2:X:47:ASP:HA    | 2:X:104:PRO:CB   | 2.46                     | 0.46              |
| 1:A:226:VAL:HA   | 1:A:229:GLU:OE1  | 2.15                     | 0.46              |
| 1:C:96:SER:N     | 1:C:99:LEU:HA    | 2.31                     | 0.46              |
| 1:C:221:GLN:O    | 1:C:225:ILE:HG12 | 2.16                     | 0.46              |
| 1:C:282:LEU:HA   | 1:C:287:PHE:CE1  | 2.51                     | 0.46              |
| 2:D:85:LEU:CD2   | 1:E:155:THR:HB   | 2.46                     | 0.46              |
| 1:E:151:SER:HB3  | 1:E:193:TYR:CE2  | 2.51                     | 0.46              |
| 1:E:278:LEU:C    | 1:E:279:VAL:HG23 | 2.41                     | 0.46              |
| 2:F:103:LEU:HA   | 2:F:106:ILE:HD12 | 1.97                     | 0.46              |
| 1:G:169:THR:HA   | 1:G:179:LEU:HD12 | 1.97                     | 0.46              |
| 1:G:271:ILE:C    | 1:G:272:TYR:CD1  | 2.93                     | 0.46              |
| 1:I:96:SER:N     | 1:I:99:LEU:HA    | 2.31                     | 0.46              |
| 1:I:151:SER:HB3  | 1:I:193:TYR:CE2  | 2.51                     | 0.46              |
| 1:K:4:ASN:O      | 1:K:8:LEU:HD13   | 2.16                     | 0.46              |
| 1:K:96:SER:N     | 1:K:99:LEU:HA    | 2.31                     | 0.46              |
| 1:K:281:ASN:O    | 1:K:283:GLN:N    | 2.49                     | 0.46              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:M:138:ASN:HB2  | 2:N:171:THR:HG23 | 1.98                     | 0.46              |
| 1:M:151:SER:HB3  | 1:M:193:TYR:CE2  | 2.51                     | 0.46              |
| 1:M:164:ILE:HD12 | 1:M:184:ILE:CD1  | 2.36                     | 0.46              |
| 2:N:43:ARG:CB    | 2:N:43:ARG:HG3   | 2.22                     | 0.46              |
| 1:O:151:SER:HB3  | 1:O:193:TYR:CE2  | 2.51                     | 0.46              |
| 2:P:42:PHE:N     | 1:Q:43:VAL:HG11  | 2.31                     | 0.46              |
| 2:P:140:ILE:HG12 | 2:P:173:LEU:HD21 | 1.97                     | 0.46              |
| 2:P:270:LEU:HD13 | 1:Q:272:TYR:CD2  | 2.51                     | 0.46              |
| 1:Q:169:THR:HA   | 1:Q:179:LEU:HD12 | 1.97                     | 0.46              |
| 1:S:272:TYR:CG   | 2:T:258:THR:HG23 | 2.51                     | 0.46              |
| 2:T:43:ARG:CG    | 1:U:66:GLU:O     | 2.64                     | 0.46              |
| 2:T:47:ASP:HA    | 2:T:104:PRO:CB   | 2.46                     | 0.46              |
| 1:U:4:ASN:O      | 1:U:8:LEU:HD13   | 2.16                     | 0.46              |
| 1:U:281:ASN:O    | 1:U:283:GLN:N    | 2.49                     | 0.46              |
| 2:V:221:ALA:HB1  | 1:W:242:LEU:HD22 | 1.90                     | 0.46              |
| 1:A:85:ALA:H     | 2:X:109:SER:CB   | 2.29                     | 0.45              |
| 1:A:175:PHE:HZ   | 2:B:167:ASP:CB   | 2.28                     | 0.45              |
| 1:A:200:LYS:C    | 2:B:198:PHE:HD2  | 2.24                     | 0.45              |
| 1:C:52:PHE:O     | 1:C:76:GLN:HG2   | 2.16                     | 0.45              |
| 2:D:140:ILE:HG12 | 2:D:173:LEU:HD21 | 1.97                     | 0.45              |
| 2:D:228:LEU:HD12 | 1:E:251:LEU:CG   | 2.46                     | 0.45              |
| 1:E:4:ASN:O      | 1:E:8:LEU:HD13   | 2.16                     | 0.45              |
| 1:E:96:SER:N     | 1:E:99:LEU:HA    | 2.31                     | 0.45              |
| 1:E:169:THR:HA   | 1:E:179:LEU:HD12 | 1.97                     | 0.45              |
| 2:F:221:ALA:HB1  | 1:G:242:LEU:HD21 | 1.98                     | 0.45              |
| 1:G:52:PHE:HE1   | 2:H:32:ALA:CA    | 2.28                     | 0.45              |
| 1:G:52:PHE:O     | 1:G:76:GLN:HG2   | 2.16                     | 0.45              |
| 2:H:47:ASP:HA    | 2:H:104:PRO:CB   | 2.46                     | 0.45              |
| 1:I:221:GLN:O    | 1:I:225:ILE:HG12 | 2.16                     | 0.45              |
| 1:I:252:ARG:HG2  | 2:J:238:LEU:HD11 | 1.97                     | 0.45              |
| 2:J:106:ILE:O    | 2:J:106:ILE:HG22 | 2.15                     | 0.45              |
| 2:L:28:TYR:HD2   | 2:L:57:LEU:HD23  | 1.81                     | 0.45              |
| 1:O:72:ILE:HB    | 1:O:75:PHE:HB3   | 1.97                     | 0.45              |
| 2:P:118:VAL:HG13 | 1:Q:181:ASP:CG   | 2.41                     | 0.45              |
| 1:Q:151:SER:HB3  | 1:Q:193:TYR:CE2  | 2.51                     | 0.45              |
| 2:R:106:ILE:O    | 2:R:106:ILE:HG22 | 2.15                     | 0.45              |
| 2:R:127:LEU:O    | 2:R:131:VAL:HG23 | 2.15                     | 0.45              |
| 2:R:140:ILE:HG12 | 2:R:173:LEU:HD21 | 1.97                     | 0.45              |
| 1:S:44:GLU:O     | 1:S:47:HIS:HB2   | 2.16                     | 0.45              |
| 2:T:44:GLY:HA3   | 1:U:66:GLU:CD    | 2.41                     | 0.45              |
| 2:T:103:LEU:HA   | 2:T:106:ILE:HD12 | 1.97                     | 0.45              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:W:52:PHE:O     | 1:W:76:GLN:HG2   | 2.17                     | 0.45              |
| 1:W:68:LEU:O     | 1:W:69:HIS:CG    | 2.68                     | 0.45              |
| 1:W:278:LEU:C    | 1:W:279:VAL:HG23 | 2.42                     | 0.45              |
| 2:X:76:VAL:HG21  | 2:X:120:PRO:HA   | 1.97                     | 0.45              |
| 2:X:140:ILE:HG12 | 2:X:173:LEU:HD21 | 1.97                     | 0.45              |
| 1:A:52:PHE:O     | 1:A:76:GLN:HG2   | 2.16                     | 0.45              |
| 1:A:96:SER:N     | 1:A:99:LEU:HA    | 2.30                     | 0.45              |
| 2:B:47:ASP:HA    | 2:B:104:PRO:CB   | 2.46                     | 0.45              |
| 2:B:260:LEU:HD22 | 2:B:268:LEU:HD21 | 1.98                     | 0.45              |
| 1:C:62:THR:CG2   | 1:C:64:LEU:HD21  | 2.44                     | 0.45              |
| 1:C:151:SER:HB3  | 1:C:193:TYR:CE2  | 2.51                     | 0.45              |
| 1:E:129:GLU:O    | 1:E:134:PRO:HD3  | 2.17                     | 0.45              |
| 2:F:90:ILE:CG2   | 2:F:127:LEU:HD21 | 2.47                     | 0.45              |
| 1:G:221:GLN:O    | 1:G:225:ILE:HG12 | 2.16                     | 0.45              |
| 1:I:160:VAL:HG12 | 1:I:184:ILE:HD11 | 1.99                     | 0.45              |
| 2:J:264:GLN:HB2  | 2:J:266:VAL:HG23 | 1.97                     | 0.45              |
| 1:M:82:ASP:OD1   | 1:M:84:ARG:HB2   | 2.17                     | 0.45              |
| 2:N:71:SER:HA    | 2:N:96:PHE:O     | 2.16                     | 0.45              |
| 2:N:90:ILE:CB    | 2:N:127:LEU:HD21 | 2.43                     | 0.45              |
| 2:P:54:THR:O     | 2:P:54:THR:HG22  | 2.14                     | 0.45              |
| 2:P:161:PHE:CE1  | 1:Q:181:ASP:HA   | 2.52                     | 0.45              |
| 1:Q:72:ILE:HB    | 1:Q:75:PHE:HB3   | 1.97                     | 0.45              |
| 1:Q:278:LEU:C    | 1:Q:279:VAL:HG23 | 2.42                     | 0.45              |
| 1:Q:281:ASN:O    | 1:Q:283:GLN:N    | 2.49                     | 0.45              |
| 2:R:47:ASP:HA    | 2:R:104:PRO:CB   | 2.46                     | 0.45              |
| 1:S:270:ARG:O    | 2:T:257:ILE:O    | 2.34                     | 0.45              |
| 1:S:278:LEU:C    | 1:S:279:VAL:HG23 | 2.42                     | 0.45              |
| 1:S:282:LEU:HA   | 1:S:287:PHE:CE1  | 2.51                     | 0.45              |
| 2:T:90:ILE:CG2   | 2:T:127:LEU:HD21 | 2.47                     | 0.45              |
| 1:U:104:ILE:HD11 | 1:U:187:LEU:CD1  | 2.46                     | 0.45              |
| 1:U:129:GLU:O    | 1:U:134:PRO:HD3  | 2.17                     | 0.45              |
| 2:V:47:ASP:HA    | 2:V:104:PRO:CB   | 2.47                     | 0.45              |
| 2:V:103:LEU:HA   | 2:V:106:ILE:HD12 | 1.97                     | 0.45              |
| 1:W:151:SER:HB3  | 1:W:193:TYR:CE2  | 2.51                     | 0.45              |
| 2:X:28:TYR:HD2   | 2:X:57:LEU:HD23  | 1.81                     | 0.45              |
| 1:A:129:GLU:O    | 1:A:134:PRO:HD3  | 2.16                     | 0.45              |
| 2:B:43:ARG:CB    | 2:B:43:ARG:HG2   | 2.22                     | 0.45              |
| 2:B:103:LEU:HA   | 2:B:106:ILE:HD12 | 1.97                     | 0.45              |
| 1:C:160:VAL:HG12 | 1:C:184:ILE:HD11 | 1.99                     | 0.45              |
| 2:D:260:LEU:HD22 | 2:D:268:LEU:HD21 | 1.98                     | 0.45              |
| 1:E:271:ILE:C    | 1:E:272:TYR:CD1  | 2.93                     | 0.45              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:281:ASN:O    | 1:E:283:GLN:N    | 2.49                     | 0.45              |
| 2:F:71:SER:HA    | 2:F:96:PHE:O     | 2.16                     | 0.45              |
| 2:F:270:LEU:CD1  | 2:H:260:LEU:CD1  | 2.92                     | 0.45              |
| 1:G:68:LEU:O     | 1:G:69:HIS:CG    | 2.68                     | 0.45              |
| 1:G:160:VAL:HG12 | 1:G:184:ILE:HD11 | 1.99                     | 0.45              |
| 2:H:43:ARG:CG    | 2:H:43:ARG:HB3   | 2.24                     | 0.45              |
| 2:H:71:SER:HA    | 2:H:96:PHE:O     | 2.17                     | 0.45              |
| 2:J:28:TYR:HD2   | 2:J:57:LEU:HD23  | 1.81                     | 0.45              |
| 2:J:76:VAL:HG21  | 2:J:120:PRO:HA   | 1.97                     | 0.45              |
| 1:K:169:THR:HA   | 1:K:179:LEU:HD12 | 1.97                     | 0.45              |
| 2:L:264:GLN:HB2  | 2:L:266:VAL:HG23 | 1.97                     | 0.45              |
| 1:M:112:PRO:HG3  | 1:M:128:TYR:CZ   | 2.52                     | 0.45              |
| 1:O:4:ASN:O      | 1:O:8:LEU:HD13   | 2.16                     | 0.45              |
| 1:O:218:LYS:NZ   | 2:P:212:ILE:HD11 | 2.31                     | 0.45              |
| 1:O:218:LYS:HZ1  | 2:P:212:ILE:HD11 | 1.82                     | 0.45              |
| 1:O:278:LEU:C    | 1:O:279:VAL:HG23 | 2.42                     | 0.45              |
| 2:P:108:THR:C    | 1:Q:111:ARG:CB   | 2.87                     | 0.45              |
| 2:P:176:GLY:CA   | 1:Q:198:GLU:OE2  | 2.65                     | 0.45              |
| 1:Q:99:LEU:HD21  | 2:R:140:ILE:CG2  | 2.46                     | 0.45              |
| 2:R:49:VAL:HG21  | 2:R:101:SER:CA   | 2.43                     | 0.45              |
| 1:S:72:ILE:HB    | 1:S:75:PHE:HB3   | 1.97                     | 0.45              |
| 1:S:112:PRO:HG3  | 1:S:128:TYR:CZ   | 2.52                     | 0.45              |
| 1:S:129:GLU:O    | 1:S:134:PRO:HD3  | 2.17                     | 0.45              |
| 1:U:278:LEU:C    | 1:U:279:VAL:HG23 | 2.42                     | 0.45              |
| 1:A:41:PHE:CD1   | 1:A:43:VAL:CG2   | 3.00                     | 0.45              |
| 1:A:100:GLN:HB2  | 2:B:184:GLU:CG   | 2.46                     | 0.45              |
| 1:A:112:PRO:HG3  | 1:A:128:TYR:CZ   | 2.52                     | 0.45              |
| 1:A:169:THR:HA   | 1:A:179:LEU:HD12 | 1.97                     | 0.45              |
| 1:A:221:GLN:O    | 1:A:225:ILE:HG12 | 2.16                     | 0.45              |
| 1:C:130:GLU:O    | 1:C:134:PRO:HG2  | 2.17                     | 0.45              |
| 2:D:76:VAL:HG21  | 2:D:120:PRO:HA   | 1.98                     | 0.45              |
| 2:D:103:LEU:HA   | 2:D:106:ILE:HD12 | 1.97                     | 0.45              |
| 1:E:282:LEU:HA   | 1:E:287:PHE:CE1  | 2.51                     | 0.45              |
| 1:G:206:GLU:HA   | 1:G:209:ARG:HB3  | 1.99                     | 0.45              |
| 1:G:278:LEU:C    | 1:G:279:VAL:HG23 | 2.42                     | 0.45              |
| 1:I:206:GLU:HA   | 1:I:209:ARG:HB3  | 1.99                     | 0.45              |
| 2:J:54:THR:O     | 2:J:54:THR:HG22  | 2.14                     | 0.45              |
| 1:K:264:ILE:HD13 | 1:K:271:ILE:HD11 | 1.96                     | 0.45              |
| 2:L:182:ALA:CB   | 1:M:205:GLN:HB3  | 2.46                     | 0.45              |
| 1:M:94:THR:HG21  | 1:M:145:VAL:CB   | 2.44                     | 0.45              |
| 1:M:104:ILE:HD11 | 1:M:187:LEU:CD1  | 2.46                     | 0.45              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:94:THR:HG21  | 1:O:145:VAL:CB   | 2.44                     | 0.45              |
| 2:P:81:GLY:H     | 1:Q:154:ILE:HG22 | 1.81                     | 0.45              |
| 2:P:128:LYS:HZ1  | 1:Q:157:ARG:NH1  | 2.13                     | 0.45              |
| 2:V:127:LEU:O    | 2:V:131:VAL:HG23 | 2.15                     | 0.45              |
| 2:V:258:THR:C    | 1:W:273:LEU:H    | 2.25                     | 0.45              |
| 2:X:71:SER:HA    | 2:X:96:PHE:O     | 2.16                     | 0.45              |
| 1:A:151:SER:HB3  | 1:A:193:TYR:CE2  | 2.51                     | 0.45              |
| 2:B:58:ILE:O     | 2:B:61:VAL:HG12  | 2.17                     | 0.45              |
| 2:D:47:ASP:HA    | 2:D:104:PRO:CB   | 2.46                     | 0.45              |
| 2:D:71:SER:HA    | 2:D:96:PHE:O     | 2.16                     | 0.45              |
| 1:E:160:VAL:HG12 | 1:E:184:ILE:HD11 | 1.99                     | 0.45              |
| 1:E:206:GLU:HA   | 1:E:209:ARG:HB3  | 1.99                     | 0.45              |
| 2:H:58:ILE:O     | 2:H:61:VAL:HG12  | 2.17                     | 0.45              |
| 1:I:104:ILE:HD11 | 1:I:187:LEU:CD1  | 2.46                     | 0.45              |
| 1:I:278:LEU:C    | 1:I:279:VAL:HG23 | 2.42                     | 0.45              |
| 1:K:41:PHE:CD1   | 1:K:43:VAL:CG2   | 3.00                     | 0.45              |
| 1:K:82:ASP:OD1   | 1:K:84:ARG:HB2   | 2.17                     | 0.45              |
| 1:K:104:ILE:HD11 | 1:K:187:LEU:CD1  | 2.46                     | 0.45              |
| 1:K:221:GLN:O    | 1:K:225:ILE:HG12 | 2.16                     | 0.45              |
| 1:K:282:LEU:HA   | 1:K:287:PHE:CE1  | 2.51                     | 0.45              |
| 2:L:47:ASP:HA    | 2:L:104:PRO:CB   | 2.46                     | 0.45              |
| 2:L:103:LEU:HA   | 2:L:106:ILE:HD12 | 1.97                     | 0.45              |
| 1:M:129:GLU:O    | 1:M:134:PRO:HD3  | 2.17                     | 0.45              |
| 1:M:160:VAL:HG12 | 1:M:184:ILE:HD11 | 1.99                     | 0.45              |
| 1:M:169:THR:HA   | 1:M:179:LEU:HD12 | 1.97                     | 0.45              |
| 1:M:175:PHE:CE2  | 2:N:167:ASP:HB3  | 2.50                     | 0.45              |
| 1:M:206:GLU:HA   | 1:M:209:ARG:HB3  | 1.99                     | 0.45              |
| 2:N:106:ILE:HG22 | 2:N:106:ILE:O    | 2.15                     | 0.45              |
| 1:O:221:GLN:O    | 1:O:225:ILE:HG12 | 2.16                     | 0.45              |
| 1:Q:4:ASN:O      | 1:Q:8:LEU:HD13   | 2.16                     | 0.45              |
| 1:Q:129:GLU:O    | 1:Q:134:PRO:HD3  | 2.17                     | 0.45              |
| 1:Q:260:ILE:HG13 | 2:R:249:TYR:CE1  | 2.52                     | 0.45              |
| 2:R:28:TYR:HD2   | 2:R:57:LEU:HD23  | 1.81                     | 0.45              |
| 1:S:41:PHE:CD1   | 1:S:43:VAL:CG2   | 3.00                     | 0.45              |
| 1:S:238:LEU:C    | 2:T:235:LEU:HD22 | 2.41                     | 0.45              |
| 1:U:299:LYS:NZ   | 1:W:292:ASP:OD1  | 2.50                     | 0.45              |
| 2:B:96:PHE:O     | 2:B:96:PHE:CD2   | 2.70                     | 0.45              |
| 1:C:112:PRO:HG3  | 1:C:128:TYR:CZ   | 2.52                     | 0.45              |
| 1:C:169:THR:HA   | 1:C:179:LEU:HD12 | 1.97                     | 0.45              |
| 1:C:206:GLU:HA   | 1:C:209:ARG:HB3  | 1.99                     | 0.45              |
| 2:D:58:ILE:O     | 2:D:61:VAL:HG12  | 2.17                     | 0.45              |

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| Atom-1          | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|-----------------|------------------|--------------------------|-------------------|
| 2:D:90:ILE:CG2  | 2:D:127:LEU:HD21 | 2.47                     | 0.45              |
| 2:D:197:ARG:CA  | 1:E:219:GLN:NE2  | 2.71                     | 0.45              |
| 1:E:82:ASP:OD1  | 1:E:84:ARG:HB2   | 2.17                     | 0.45              |
| 2:F:241:LEU:CD2 | 1:I:283:GLN:HE21 | 2.14                     | 0.45              |
| 1:G:72:ILE:HB   | 1:G:75:PHE:HB3   | 1.97                     | 0.45              |
| 1:G:96:SER:N    | 1:G:99:LEU:HA    | 2.31                     | 0.45              |
| 1:G:282:LEU:HA  | 1:G:287:PHE:CE1  | 2.51                     | 0.45              |
| 1:I:239:GLY:O   | 2:J:231:ALA:O    | 2.34                     | 0.45              |
| 2:J:96:PHE:O    | 2:J:96:PHE:CD2   | 2.70                     | 0.45              |
| 1:K:129:GLU:O   | 1:K:134:PRO:HD3  | 2.17                     | 0.45              |
| 1:K:211:GLN:O   | 1:K:214:VAL:HB   | 2.16                     | 0.45              |
| 2:L:43:ARG:HA   | 1:M:66:GLU:C     | 2.42                     | 0.45              |
| 2:L:49:VAL:HG21 | 2:L:101:SER:CA   | 2.43                     | 0.45              |
| 1:M:41:PHE:CD1  | 1:M:43:VAL:CG2   | 3.00                     | 0.45              |
| 1:M:278:LEU:C   | 1:M:279:VAL:HG23 | 2.42                     | 0.45              |
| 1:M:281:ASN:O   | 1:M:283:GLN:N    | 2.49                     | 0.45              |
| 1:M:282:LEU:HA  | 1:M:287:PHE:CE1  | 2.51                     | 0.45              |
| 2:N:47:ASP:HA   | 2:N:104:PRO:CB   | 2.46                     | 0.45              |
| 1:O:41:PHE:CD1  | 1:O:43:VAL:CG2   | 3.00                     | 0.45              |
| 1:O:133:LEU:O   | 1:O:135:SER:N    | 2.50                     | 0.45              |
| 2:P:41:ARG:HD2  | 1:Q:42:THR:C     | 2.40                     | 0.45              |
| 2:P:41:ARG:CD   | 1:Q:43:VAL:N     | 2.62                     | 0.45              |
| 2:P:71:SER:HA   | 2:P:96:PHE:O     | 2.16                     | 0.45              |
| 2:R:90:ILE:CG2  | 2:R:127:LEU:HD21 | 2.47                     | 0.45              |
| 1:S:151:SER:HB3 | 1:S:193:TYR:CE2  | 2.51                     | 0.45              |
| 1:S:268:GLN:O   | 2:T:255:ARG:O    | 2.34                     | 0.45              |
| 2:T:35:ARG:HD3  | 2:T:52:GLU:H     | 1.82                     | 0.45              |
| 2:T:58:ILE:O    | 2:T:61:VAL:HG12  | 2.17                     | 0.45              |
| 1:U:41:PHE:CD1  | 1:U:43:VAL:CG2   | 3.00                     | 0.45              |
| 1:U:169:THR:HA  | 1:U:179:LEU:HD12 | 1.97                     | 0.45              |
| 1:U:282:LEU:HA  | 1:U:287:PHE:CE1  | 2.51                     | 0.45              |
| 2:V:218:SER:CB  | 1:W:237:MET:SD   | 3.04                     | 0.45              |
| 1:W:96:SER:N    | 1:W:99:LEU:HA    | 2.31                     | 0.45              |
| 1:W:112:PRO:CB  | 1:W:120:MET:HE2  | 2.47                     | 0.45              |
| 1:W:130:GLU:O   | 1:W:134:PRO:HG2  | 2.17                     | 0.45              |
| 2:X:134:PHE:HB2 | 2:X:139:LEU:CD2  | 2.43                     | 0.45              |
| 1:A:82:ASP:OD1  | 1:A:84:ARG:HB2   | 2.17                     | 0.45              |
| 1:A:206:GLU:HA  | 1:A:209:ARG:HB3  | 1.99                     | 0.45              |
| 2:B:96:PHE:CE2  | 2:B:115:ASP:HB3  | 2.52                     | 0.45              |
| 2:B:270:LEU:H   | 2:D:269:GLN:CB   | 2.29                     | 0.45              |
| 2:D:85:LEU:HD22 | 1:E:155:THR:CB   | 2.46                     | 0.45              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:D:96:PHE:O     | 2:D:96:PHE:CD2   | 2.70                     | 0.45              |
| 2:F:58:ILE:O     | 2:F:61:VAL:HG12  | 2.17                     | 0.45              |
| 2:F:260:LEU:CD1  | 2:F:268:LEU:HD21 | 2.45                     | 0.45              |
| 1:G:94:THR:HG21  | 1:G:145:VAL:CB   | 2.44                     | 0.45              |
| 1:G:256:ALA:O    | 1:G:257:ALA:C    | 2.60                     | 0.45              |
| 2:H:260:LEU:HD22 | 2:H:268:LEU:HD21 | 1.98                     | 0.45              |
| 1:I:112:PRO:HG3  | 1:I:128:TYR:CZ   | 2.52                     | 0.45              |
| 2:J:71:SER:HA    | 2:J:96:PHE:O     | 2.16                     | 0.45              |
| 1:K:112:PRO:CB   | 1:K:120:MET:HE2  | 2.47                     | 0.45              |
| 1:O:82:ASP:OD1   | 1:O:84:ARG:HB2   | 2.17                     | 0.45              |
| 1:O:129:GLU:O    | 1:O:134:PRO:HD3  | 2.17                     | 0.45              |
| 1:O:282:LEU:HA   | 1:O:287:PHE:CE1  | 2.51                     | 0.45              |
| 2:P:58:ILE:O     | 2:P:61:VAL:HG12  | 2.17                     | 0.45              |
| 2:P:96:PHE:CE2   | 2:P:115:ASP:HB3  | 2.52                     | 0.45              |
| 1:Q:52:PHE:O     | 1:Q:76:GLN:HG2   | 2.16                     | 0.45              |
| 1:Q:133:LEU:O    | 1:Q:135:SER:N    | 2.50                     | 0.45              |
| 1:Q:140:VAL:HG13 | 1:Q:167:GLU:HB2  | 1.98                     | 0.45              |
| 2:R:241:LEU:HD11 | 1:U:283:GLN:HE22 | 1.82                     | 0.45              |
| 2:R:260:LEU:HD22 | 2:R:268:LEU:HD21 | 1.98                     | 0.45              |
| 1:S:206:GLU:HA   | 1:S:209:ARG:HB3  | 1.99                     | 0.45              |
| 1:S:256:ALA:O    | 1:S:257:ALA:C    | 2.60                     | 0.45              |
| 2:T:268:LEU:C    | 2:T:269:GLN:OE1  | 2.60                     | 0.45              |
| 1:U:160:VAL:HG12 | 1:U:184:ILE:HD11 | 1.99                     | 0.45              |
| 2:V:43:ARG:CG    | 2:V:43:ARG:HB3   | 2.24                     | 0.45              |
| 2:V:58:ILE:O     | 2:V:61:VAL:HG12  | 2.17                     | 0.45              |
| 2:V:96:PHE:CD2   | 2:V:96:PHE:O     | 2.70                     | 0.45              |
| 1:W:129:GLU:O    | 1:W:134:PRO:HD3  | 2.17                     | 0.45              |
| 1:W:256:ALA:O    | 1:W:257:ALA:C    | 2.60                     | 0.45              |
| 1:A:112:PRO:CB   | 1:A:120:MET:HE2  | 2.47                     | 0.45              |
| 2:B:270:LEU:HD11 | 2:D:260:LEU:HD11 | 1.99                     | 0.45              |
| 1:C:133:LEU:O    | 1:C:135:SER:N    | 2.50                     | 0.45              |
| 1:C:140:VAL:HG13 | 1:C:167:GLU:HB2  | 1.98                     | 0.45              |
| 1:E:104:ILE:HD11 | 1:E:187:LEU:CD1  | 2.46                     | 0.45              |
| 2:F:268:LEU:C    | 2:F:269:GLN:OE1  | 2.60                     | 0.45              |
| 2:H:91:THR:HG22  | 2:H:92:LEU:N     | 2.32                     | 0.45              |
| 1:I:82:ASP:OD1   | 1:I:84:ARG:HB2   | 2.17                     | 0.45              |
| 2:J:91:THR:HG22  | 2:J:92:LEU:N     | 2.32                     | 0.45              |
| 1:K:52:PHE:O     | 1:K:76:GLN:HG2   | 2.16                     | 0.45              |
| 2:L:88:VAL:HG22  | 2:L:175:PHE:HD1  | 1.82                     | 0.45              |
| 1:M:140:VAL:HG13 | 1:M:167:GLU:HB2  | 1.98                     | 0.45              |
| 1:O:104:ILE:HD11 | 1:O:187:LEU:CD1  | 2.46                     | 0.45              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:P:35:ARG:HD3   | 2:P:52:GLU:H     | 1.82                     | 0.45              |
| 2:P:85:LEU:HD13  | 1:Q:197:VAL:CG1  | 2.47                     | 0.45              |
| 1:Q:206:GLU:HA   | 1:Q:209:ARG:HB3  | 1.99                     | 0.45              |
| 1:Q:239:GLY:HA2  | 2:R:235:LEU:CB   | 2.36                     | 0.45              |
| 1:Q:239:GLY:C    | 1:Q:241:ALA:H    | 2.25                     | 0.45              |
| 1:Q:282:LEU:HA   | 1:Q:287:PHE:CE1  | 2.51                     | 0.45              |
| 2:R:58:ILE:O     | 2:R:61:VAL:HG12  | 2.17                     | 0.45              |
| 2:R:88:VAL:HG22  | 2:R:175:PHE:HD1  | 1.82                     | 0.45              |
| 2:R:270:LEU:HD11 | 2:T:260:LEU:HD21 | 1.99                     | 0.45              |
| 1:S:160:VAL:HG12 | 1:S:184:ILE:HD11 | 1.99                     | 0.45              |
| 1:S:260:ILE:CB   | 2:T:248:ALA:HB3  | 2.46                     | 0.45              |
| 1:S:274:THR:HG22 | 2:T:261:PRO:CD   | 2.46                     | 0.45              |
| 2:T:134:PHE:HB2  | 2:T:139:LEU:CD2  | 2.43                     | 0.45              |
| 1:U:82:ASP:OD1   | 1:U:84:ARG:HB2   | 2.17                     | 0.45              |
| 1:U:207:ALA:CB   | 2:V:201:GLU:HB3  | 2.47                     | 0.45              |
| 2:V:90:ILE:CG2   | 2:V:127:LEU:HD21 | 2.47                     | 0.45              |
| 2:V:258:THR:CB   | 1:W:272:TYR:HA   | 2.46                     | 0.45              |
| 1:W:206:GLU:HA   | 1:W:209:ARG:HB3  | 1.99                     | 0.45              |
| 1:A:110:SER:OG   | 1:A:133:LEU:HD11 | 2.17                     | 0.45              |
| 1:A:140:VAL:HG13 | 1:A:167:GLU:HB2  | 1.98                     | 0.45              |
| 1:A:278:LEU:C    | 1:A:279:VAL:HG23 | 2.42                     | 0.45              |
| 2:B:268:LEU:C    | 2:B:269:GLN:OE1  | 2.60                     | 0.45              |
| 1:C:112:PRO:CB   | 1:C:120:MET:HE2  | 2.47                     | 0.45              |
| 1:E:41:PHE:CD1   | 1:E:43:VAL:CG2   | 3.00                     | 0.45              |
| 1:E:52:PHE:O     | 1:E:76:GLN:HG2   | 2.16                     | 0.45              |
| 1:E:221:GLN:O    | 1:E:225:ILE:HG12 | 2.16                     | 0.45              |
| 1:E:233:GLU:O    | 1:E:236:LYS:HB2  | 2.17                     | 0.45              |
| 1:G:129:GLU:O    | 1:G:134:PRO:HD3  | 2.16                     | 0.45              |
| 1:G:239:GLY:C    | 1:G:241:ALA:H    | 2.25                     | 0.45              |
| 2:H:268:LEU:C    | 2:J:267:LEU:O    | 2.59                     | 0.45              |
| 1:I:112:PRO:CB   | 1:I:120:MET:HE2  | 2.47                     | 0.45              |
| 1:I:281:ASN:O    | 1:I:283:GLN:N    | 2.49                     | 0.45              |
| 1:I:282:LEU:HA   | 1:I:287:PHE:CE1  | 2.51                     | 0.45              |
| 1:K:112:PRO:HG3  | 1:K:128:TYR:CZ   | 2.52                     | 0.45              |
| 1:K:130:GLU:O    | 1:K:134:PRO:HG2  | 2.17                     | 0.45              |
| 1:K:206:GLU:HA   | 1:K:209:ARG:HB3  | 1.99                     | 0.45              |
| 1:K:250:LYS:HE2  | 1:M:288:THR:HG22 | 1.99                     | 0.45              |
| 2:L:35:ARG:HD3   | 2:L:52:GLU:H     | 1.82                     | 0.45              |
| 1:M:130:GLU:O    | 1:M:134:PRO:HG2  | 2.17                     | 0.45              |
| 1:M:133:LEU:O    | 1:M:135:SER:N    | 2.50                     | 0.45              |
| 2:N:103:LEU:HA   | 2:N:106:ILE:HD12 | 1.97                     | 0.45              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:110:SER:OG   | 1:O:133:LEU:HD11 | 2.17                     | 0.45              |
| 1:O:112:PRO:CB   | 1:O:120:MET:HE2  | 2.47                     | 0.45              |
| 1:O:112:PRO:HG3  | 1:O:128:TYR:CZ   | 2.52                     | 0.45              |
| 2:P:85:LEU:HD13  | 1:Q:197:VAL:HG11 | 1.99                     | 0.45              |
| 2:P:260:LEU:HD22 | 2:P:268:LEU:HD21 | 1.98                     | 0.45              |
| 1:Q:41:PHE:CD1   | 1:Q:43:VAL:CG2   | 3.00                     | 0.45              |
| 1:Q:242:LEU:HD13 | 2:R:238:LEU:CD2  | 2.47                     | 0.45              |
| 1:S:110:SER:OG   | 1:S:133:LEU:HD11 | 2.17                     | 0.45              |
| 1:S:133:LEU:O    | 1:S:135:SER:N    | 2.50                     | 0.45              |
| 1:U:112:PRO:HG3  | 1:U:128:TYR:CZ   | 2.52                     | 0.45              |
| 1:U:133:LEU:O    | 1:U:135:SER:N    | 2.50                     | 0.45              |
| 1:U:140:VAL:HG13 | 1:U:167:GLU:HB2  | 1.98                     | 0.45              |
| 1:U:221:GLN:O    | 1:U:225:ILE:HG12 | 2.16                     | 0.45              |
| 1:W:41:PHE:CD1   | 1:W:43:VAL:CG2   | 3.00                     | 0.45              |
| 1:W:110:SER:OG   | 1:W:133:LEU:HD11 | 2.17                     | 0.45              |
| 1:W:133:LEU:O    | 1:W:135:SER:N    | 2.50                     | 0.45              |
| 1:A:130:GLU:O    | 1:A:134:PRO:HG2  | 2.17                     | 0.45              |
| 1:A:160:VAL:HG12 | 1:A:184:ILE:HD11 | 1.99                     | 0.45              |
| 2:B:76:VAL:HG21  | 2:B:120:PRO:HA   | 1.97                     | 0.45              |
| 2:B:90:ILE:CG2   | 2:B:127:LEU:HD21 | 2.47                     | 0.45              |
| 1:C:256:ALA:O    | 1:C:257:ALA:C    | 2.60                     | 0.45              |
| 2:D:251:LEU:CD2  | 1:E:264:ILE:C    | 2.90                     | 0.45              |
| 2:D:268:LEU:CD1  | 1:E:272:TYR:CD2  | 2.99                     | 0.45              |
| 1:E:62:THR:HG22  | 1:E:64:LEU:CD2   | 2.47                     | 0.45              |
| 2:F:47:ASP:HA    | 2:F:104:PRO:CB   | 2.47                     | 0.45              |
| 2:F:61:VAL:HG13  | 2:F:62:GLN:HG3   | 1.99                     | 0.45              |
| 2:F:88:VAL:HG22  | 2:F:175:PHE:HD1  | 1.82                     | 0.45              |
| 1:G:112:PRO:HG3  | 1:G:128:TYR:CZ   | 2.52                     | 0.45              |
| 1:G:135:SER:CB   | 2:H:171:THR:CG2  | 2.94                     | 0.45              |
| 1:G:140:VAL:HG13 | 1:G:167:GLU:HB2  | 1.98                     | 0.45              |
| 1:G:253:LYS:CE   | 1:I:291:SER:HB3  | 2.46                     | 0.45              |
| 1:I:110:SER:OG   | 1:I:133:LEU:HD11 | 2.17                     | 0.45              |
| 2:J:58:ILE:O     | 2:J:61:VAL:HG12  | 2.17                     | 0.45              |
| 2:J:96:PHE:CE2   | 2:J:115:ASP:HB3  | 2.52                     | 0.45              |
| 1:K:256:ALA:O    | 1:K:257:ALA:C    | 2.60                     | 0.45              |
| 2:L:96:PHE:CD2   | 2:L:96:PHE:O     | 2.70                     | 0.45              |
| 1:M:4:ASN:O      | 1:M:8:LEU:HD13   | 2.16                     | 0.45              |
| 1:M:193:TYR:CD1  | 2:N:188:VAL:CG2  | 3.00                     | 0.45              |
| 1:M:221:GLN:NE2  | 2:N:212:ILE:O    | 2.50                     | 0.45              |
| 2:N:96:PHE:CE2   | 2:N:115:ASP:HB3  | 2.52                     | 0.45              |
| 1:O:281:ASN:O    | 1:O:283:GLN:N    | 2.49                     | 0.45              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:P:157:ARG:HH21 | 1:Q:165:ARG:NH2  | 2.15                     | 0.45              |
| 1:Q:82:ASP:OD1   | 1:Q:84:ARG:HB2   | 2.17                     | 0.45              |
| 1:Q:233:GLU:O    | 1:Q:236:LYS:HB2  | 2.17                     | 0.45              |
| 2:V:35:ARG:HD3   | 2:V:52:GLU:H     | 1.82                     | 0.45              |
| 2:X:90:ILE:CG2   | 2:X:127:LEU:HD21 | 2.47                     | 0.45              |
| 2:X:96:PHE:CE2   | 2:X:115:ASP:HB3  | 2.52                     | 0.45              |
| 2:B:35:ARG:HD3   | 2:B:52:GLU:H     | 1.82                     | 0.44              |
| 2:B:61:VAL:HG13  | 2:B:62:GLN:HG3   | 1.99                     | 0.44              |
| 2:B:149:GLN:O    | 2:B:152:ASP:OD1  | 2.36                     | 0.44              |
| 1:C:120:MET:O    | 1:C:120:MET:SD   | 2.76                     | 0.44              |
| 2:D:149:GLN:O    | 2:D:152:ASP:OD1  | 2.36                     | 0.44              |
| 2:D:244:ALA:HA   | 2:D:247:ILE:HD12 | 2.00                     | 0.44              |
| 1:E:110:SER:OG   | 1:E:133:LEU:HD11 | 2.17                     | 0.44              |
| 1:E:112:PRO:HG3  | 1:E:128:TYR:CZ   | 2.52                     | 0.44              |
| 1:E:133:LEU:O    | 1:E:135:SER:N    | 2.50                     | 0.44              |
| 2:F:33:GLY:O     | 2:F:70:ARG:N     | 2.51                     | 0.44              |
| 1:G:233:GLU:O    | 1:G:236:LYS:HB2  | 2.17                     | 0.44              |
| 2:H:96:PHE:O     | 2:H:96:PHE:CD2   | 2.70                     | 0.44              |
| 2:J:33:GLY:O     | 2:J:70:ARG:N     | 2.50                     | 0.44              |
| 2:J:47:ASP:HA    | 2:J:104:PRO:CB   | 2.46                     | 0.44              |
| 2:J:260:LEU:HD13 | 2:J:268:LEU:CD2  | 2.44                     | 0.44              |
| 1:K:133:LEU:O    | 1:K:135:SER:N    | 2.50                     | 0.44              |
| 1:M:120:MET:SD   | 1:M:120:MET:O    | 2.75                     | 0.44              |
| 1:M:135:SER:CB   | 2:N:93:ARG:HG2   | 2.41                     | 0.44              |
| 2:N:76:VAL:HG21  | 2:N:120:PRO:HA   | 1.98                     | 0.44              |
| 2:N:134:PHE:HB2  | 2:N:139:LEU:CD2  | 2.44                     | 0.44              |
| 1:O:124:LEU:HD11 | 1:O:175:PHE:CB   | 2.47                     | 0.44              |
| 2:P:96:PHE:O     | 2:P:96:PHE:CD2   | 2.70                     | 0.44              |
| 1:Q:120:MET:O    | 1:Q:120:MET:SD   | 2.76                     | 0.44              |
| 2:R:251:LEU:HD12 | 1:S:278:LEU:HD21 | 1.97                     | 0.44              |
| 1:S:82:ASP:OD1   | 1:S:84:ARG:HB2   | 2.17                     | 0.44              |
| 1:S:112:PRO:CB   | 1:S:120:MET:HE2  | 2.47                     | 0.44              |
| 1:S:274:THR:CG2  | 2:T:260:LEU:C    | 2.91                     | 0.44              |
| 1:U:120:MET:SD   | 1:U:120:MET:O    | 2.76                     | 0.44              |
| 2:V:96:PHE:CE2   | 2:V:115:ASP:HB3  | 2.52                     | 0.44              |
| 2:V:149:GLN:O    | 2:V:152:ASP:OD1  | 2.36                     | 0.44              |
| 2:V:268:LEU:C    | 2:V:269:GLN:OE1  | 2.60                     | 0.44              |
| 1:W:82:ASP:OD1   | 1:W:84:ARG:HB2   | 2.17                     | 0.44              |
| 1:W:112:PRO:HG3  | 1:W:128:TYR:CZ   | 2.52                     | 0.44              |
| 1:A:120:MET:O    | 1:A:120:MET:SD   | 2.75                     | 0.44              |
| 1:A:233:GLU:O    | 1:A:236:LYS:HB2  | 2.17                     | 0.44              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:B:33:GLY:O     | 2:B:70:ARG:N     | 2.51                     | 0.44              |
| 1:C:278:LEU:C    | 1:C:279:VAL:HG23 | 2.42                     | 0.44              |
| 2:D:240:LYS:HE3  | 1:E:254:ILE:HG12 | 1.97                     | 0.44              |
| 1:E:112:PRO:CB   | 1:E:120:MET:HE2  | 2.47                     | 0.44              |
| 1:E:256:ALA:O    | 1:E:257:ALA:C    | 2.60                     | 0.44              |
| 2:F:244:ALA:HA   | 2:F:247:ILE:HD12 | 1.99                     | 0.44              |
| 1:G:110:SER:OG   | 1:G:133:LEU:HD11 | 2.17                     | 0.44              |
| 1:G:117:LEU:CD2  | 1:G:120:MET:HE3  | 2.48                     | 0.44              |
| 1:G:130:GLU:O    | 1:G:134:PRO:HG2  | 2.17                     | 0.44              |
| 1:G:264:ILE:HD11 | 1:I:278:LEU:HD13 | 1.98                     | 0.44              |
| 2:H:85:LEU:CD2   | 1:I:154:ILE:HG22 | 2.47                     | 0.44              |
| 1:I:120:MET:O    | 1:I:120:MET:SD   | 2.76                     | 0.44              |
| 1:I:273:LEU:O    | 2:J:261:PRO:HG3  | 2.16                     | 0.44              |
| 1:K:110:SER:OG   | 1:K:133:LEU:HD11 | 2.17                     | 0.44              |
| 2:L:61:VAL:HG13  | 2:L:62:GLN:HG3   | 1.99                     | 0.44              |
| 2:L:90:ILE:CG2   | 2:L:127:LEU:HD21 | 2.47                     | 0.44              |
| 2:L:268:LEU:C    | 2:L:269:GLN:OE1  | 2.60                     | 0.44              |
| 2:N:33:GLY:O     | 2:N:70:ARG:N     | 2.51                     | 0.44              |
| 2:N:260:LEU:CD1  | 2:N:268:LEU:HD21 | 2.45                     | 0.44              |
| 2:N:268:LEU:C    | 2:N:269:GLN:OE1  | 2.60                     | 0.44              |
| 1:O:256:ALA:CB   | 2:P:245:GLU:OE2  | 2.64                     | 0.44              |
| 1:Q:62:THR:HG22  | 1:Q:64:LEU:CD2   | 2.47                     | 0.44              |
| 1:S:120:MET:O    | 1:S:120:MET:SD   | 2.76                     | 0.44              |
| 1:S:130:GLU:O    | 1:S:134:PRO:HG2  | 2.17                     | 0.44              |
| 2:T:221:ALA:HB2  | 1:U:248:TYR:CB   | 2.47                     | 0.44              |
| 1:U:52:PHE:O     | 1:U:76:GLN:HG2   | 2.16                     | 0.44              |
| 1:U:151:SER:HB3  | 1:U:193:TYR:CE2  | 2.51                     | 0.44              |
| 1:U:256:ALA:O    | 1:U:257:ALA:C    | 2.60                     | 0.44              |
| 1:W:4:ASN:O      | 1:W:8:LEU:HD13   | 2.16                     | 0.44              |
| 1:W:160:VAL:HG12 | 1:W:184:ILE:HD11 | 1.99                     | 0.44              |
| 2:X:88:VAL:HG22  | 2:X:175:PHE:HD1  | 1.82                     | 0.44              |
| 2:X:96:PHE:O     | 2:X:96:PHE:CD2   | 2.70                     | 0.44              |
| 2:X:260:LEU:HD22 | 2:X:268:LEU:HD21 | 1.98                     | 0.44              |
| 1:A:256:ALA:O    | 1:A:257:ALA:C    | 2.60                     | 0.44              |
| 1:C:122:GLN:O    | 2:D:97:ARG:CZ    | 2.66                     | 0.44              |
| 2:D:35:ARG:HD3   | 2:D:52:GLU:H     | 1.82                     | 0.44              |
| 2:D:96:PHE:CE2   | 2:D:115:ASP:HB3  | 2.52                     | 0.44              |
| 2:F:96:PHE:O     | 2:F:96:PHE:CD2   | 2.70                     | 0.44              |
| 2:F:134:PHE:HB2  | 2:F:139:LEU:CD2  | 2.43                     | 0.44              |
| 1:I:133:LEU:O    | 1:I:135:SER:N    | 2.50                     | 0.44              |
| 2:J:35:ARG:HD3   | 2:J:52:GLU:H     | 1.82                     | 0.44              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:J:49:VAL:HG21  | 2:J:101:SER:CA   | 2.43                     | 0.44              |
| 2:J:244:ALA:HA   | 2:J:247:ILE:HD12 | 2.00                     | 0.44              |
| 1:K:233:GLU:O    | 1:K:236:LYS:HB2  | 2.17                     | 0.44              |
| 1:M:50:ILE:HA    | 1:M:64:LEU:CD1   | 2.48                     | 0.44              |
| 1:M:52:PHE:O     | 1:M:76:GLN:HG2   | 2.16                     | 0.44              |
| 1:M:131:ARG:CG   | 2:N:73:PRO:HD3   | 2.44                     | 0.44              |
| 1:M:239:GLY:C    | 1:M:241:ALA:H    | 2.25                     | 0.44              |
| 2:N:58:ILE:O     | 2:N:61:VAL:HG12  | 2.17                     | 0.44              |
| 2:N:244:ALA:HA   | 2:N:247:ILE:HD12 | 2.00                     | 0.44              |
| 1:O:52:PHE:O     | 1:O:76:GLN:HG2   | 2.16                     | 0.44              |
| 1:O:140:VAL:HG13 | 1:O:167:GLU:HB2  | 1.98                     | 0.44              |
| 2:P:47:ASP:HA    | 2:P:104:PRO:CB   | 2.46                     | 0.44              |
| 2:P:90:ILE:CG2   | 2:P:127:LEU:HD21 | 2.47                     | 0.44              |
| 2:P:91:THR:HG22  | 2:P:92:LEU:N     | 2.32                     | 0.44              |
| 2:P:185:ALA:CB   | 1:Q:212:PHE:CZ   | 2.96                     | 0.44              |
| 2:P:260:LEU:CD1  | 2:P:268:LEU:HD21 | 2.45                     | 0.44              |
| 1:Q:110:SER:OG   | 1:Q:133:LEU:HD11 | 2.17                     | 0.44              |
| 1:Q:124:LEU:HD11 | 1:Q:175:PHE:CB   | 2.48                     | 0.44              |
| 1:Q:160:VAL:HG12 | 1:Q:184:ILE:HD11 | 1.99                     | 0.44              |
| 2:R:33:GLY:O     | 2:R:70:ARG:N     | 2.51                     | 0.44              |
| 2:R:71:SER:HA    | 2:R:96:PHE:O     | 2.16                     | 0.44              |
| 1:S:52:PHE:O     | 1:S:76:GLN:HG2   | 2.16                     | 0.44              |
| 2:T:71:SER:HA    | 2:T:96:PHE:O     | 2.17                     | 0.44              |
| 1:U:110:SER:OG   | 1:U:133:LEU:HD11 | 2.17                     | 0.44              |
| 1:W:221:GLN:OE1  | 2:X:216:GLY:HA3  | 2.17                     | 0.44              |
| 1:W:239:GLY:C    | 1:W:241:ALA:H    | 2.25                     | 0.44              |
| 2:X:35:ARG:HD3   | 2:X:52:GLU:H     | 1.82                     | 0.44              |
| 1:A:117:LEU:CD2  | 1:A:120:MET:HE3  | 2.48                     | 0.44              |
| 2:B:268:LEU:HD12 | 2:D:260:LEU:HD23 | 2.00                     | 0.44              |
| 1:C:10:GLY:O     | 2:D:6:PHE:CE1    | 2.71                     | 0.44              |
| 1:C:41:PHE:CD1   | 1:C:43:VAL:CG2   | 3.00                     | 0.44              |
| 1:C:82:ASP:OD1   | 1:C:84:ARG:HB2   | 2.17                     | 0.44              |
| 1:C:124:LEU:HD11 | 1:C:175:PHE:CB   | 2.47                     | 0.44              |
| 1:C:129:GLU:O    | 1:C:134:PRO:HD3  | 2.17                     | 0.44              |
| 1:C:239:GLY:C    | 1:C:241:ALA:H    | 2.25                     | 0.44              |
| 2:D:33:GLY:O     | 2:D:70:ARG:N     | 2.51                     | 0.44              |
| 2:D:258:THR:CG2  | 2:D:259:TYR:N    | 2.80                     | 0.44              |
| 1:E:130:GLU:O    | 1:E:134:PRO:HG2  | 2.17                     | 0.44              |
| 2:F:260:LEU:HD22 | 2:F:268:LEU:HD21 | 1.98                     | 0.44              |
| 2:F:267:LEU:HG   | 2:H:265:SER:O    | 2.18                     | 0.44              |
| 1:G:133:LEU:O    | 1:G:135:SER:N    | 2.50                     | 0.44              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:H:61:VAL:HG13  | 2:H:62:GLN:HG3   | 1.99                     | 0.44              |
| 2:H:194:GLU:HA   | 2:H:197:ARG:HB3  | 2.00                     | 0.44              |
| 1:I:129:GLU:O    | 1:I:134:PRO:HD3  | 2.17                     | 0.44              |
| 1:I:260:ILE:HG12 | 2:J:244:ALA:HB1  | 1.99                     | 0.44              |
| 2:J:134:PHE:HB2  | 2:J:139:LEU:CD2  | 2.43                     | 0.44              |
| 2:J:268:LEU:C    | 2:J:269:GLN:OE1  | 2.60                     | 0.44              |
| 1:K:120:MET:O    | 1:K:120:MET:SD   | 2.75                     | 0.44              |
| 1:K:236:LYS:HE3  | 2:L:227:SER:CA   | 2.48                     | 0.44              |
| 1:K:236:LYS:CE   | 2:L:227:SER:CA   | 2.94                     | 0.44              |
| 1:K:239:GLY:C    | 1:K:241:ALA:H    | 2.25                     | 0.44              |
| 1:K:274:THR:HG1  | 1:K:277:ASN:CG   | 2.23                     | 0.44              |
| 1:K:274:THR:CG2  | 2:L:261:PRO:HB3  | 2.48                     | 0.44              |
| 2:L:71:SER:HA    | 2:L:96:PHE:O     | 2.17                     | 0.44              |
| 2:L:149:GLN:O    | 2:L:152:ASP:OD1  | 2.36                     | 0.44              |
| 1:M:110:SER:OG   | 1:M:133:LEU:HD11 | 2.17                     | 0.44              |
| 2:N:194:GLU:HA   | 2:N:197:ARG:HB3  | 2.00                     | 0.44              |
| 1:O:50:ILE:HA    | 1:O:64:LEU:CD1   | 2.48                     | 0.44              |
| 1:O:160:VAL:HG12 | 1:O:184:ILE:HD11 | 1.99                     | 0.44              |
| 2:P:61:VAL:HG13  | 2:P:62:GLN:HG3   | 1.99                     | 0.44              |
| 2:P:118:VAL:CG2  | 1:Q:109:LEU:CD2  | 2.92                     | 0.44              |
| 2:P:121:SER:OG   | 1:Q:184:ILE:CA   | 2.65                     | 0.44              |
| 2:P:244:ALA:HA   | 2:P:247:ILE:HD12 | 2.00                     | 0.44              |
| 2:P:260:LEU:HD13 | 2:P:268:LEU:CD2  | 2.45                     | 0.44              |
| 2:T:61:VAL:HG13  | 2:T:62:GLN:HG3   | 1.99                     | 0.44              |
| 2:T:84:ASP:H     | 2:T:135:ASP:HA   | 1.83                     | 0.44              |
| 2:T:91:THR:HG22  | 2:T:92:LEU:N     | 2.32                     | 0.44              |
| 1:U:239:GLY:C    | 1:U:241:ALA:H    | 2.25                     | 0.44              |
| 2:X:149:GLN:O    | 2:X:152:ASP:OD1  | 2.36                     | 0.44              |
| 1:A:117:LEU:HD23 | 1:A:120:MET:HE3  | 2.00                     | 0.44              |
| 1:A:133:LEU:O    | 1:A:135:SER:N    | 2.50                     | 0.44              |
| 1:A:203:ALA:C    | 2:B:198:PHE:HB3  | 2.42                     | 0.44              |
| 2:B:84:ASP:H     | 2:B:135:ASP:HA   | 1.83                     | 0.44              |
| 2:B:240:LYS:HE2  | 1:E:282:LEU:HD22 | 1.99                     | 0.44              |
| 1:C:87:PRO:HA    | 1:C:108:VAL:O    | 2.18                     | 0.44              |
| 2:D:90:ILE:HD12  | 2:D:131:VAL:HG21 | 2.00                     | 0.44              |
| 2:D:268:LEU:C    | 2:D:269:GLN:OE1  | 2.60                     | 0.44              |
| 1:E:140:VAL:HG13 | 1:E:167:GLU:HB2  | 1.98                     | 0.44              |
| 2:F:90:ILE:HD12  | 2:F:131:VAL:HG21 | 2.00                     | 0.44              |
| 2:F:96:PHE:CE2   | 2:F:115:ASP:HB3  | 2.52                     | 0.44              |
| 1:G:41:PHE:CD1   | 1:G:43:VAL:CG2   | 3.00                     | 0.44              |
| 2:H:35:ARG:HD3   | 2:H:52:GLU:H     | 1.82                     | 0.44              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:52:PHE:O     | 1:I:76:GLN:HG2   | 2.16                     | 0.44              |
| 1:K:124:LEU:HD11 | 1:K:175:PHE:CB   | 2.47                     | 0.44              |
| 1:K:141:LEU:O    | 1:K:145:VAL:HG23 | 2.18                     | 0.44              |
| 2:L:96:PHE:CE2   | 2:L:115:ASP:HB3  | 2.52                     | 0.44              |
| 1:M:112:PRO:CB   | 1:M:120:MET:HE2  | 2.47                     | 0.44              |
| 1:M:214:VAL:HG23 | 2:N:205:GLN:HB3  | 2.00                     | 0.44              |
| 1:O:87:PRO:HA    | 1:O:108:VAL:O    | 2.18                     | 0.44              |
| 1:O:130:GLU:O    | 1:O:134:PRO:HG2  | 2.17                     | 0.44              |
| 2:P:179:PHE:HD2  | 1:Q:201:GLN:HB3  | 1.78                     | 0.44              |
| 2:P:268:LEU:C    | 2:P:269:GLN:OE1  | 2.60                     | 0.44              |
| 1:Q:112:PRO:CB   | 1:Q:120:MET:HE2  | 2.47                     | 0.44              |
| 1:Q:112:PRO:HG3  | 1:Q:128:TYR:CZ   | 2.52                     | 0.44              |
| 1:Q:117:LEU:CD2  | 1:Q:120:MET:HE3  | 2.48                     | 0.44              |
| 2:R:43:ARG:CG    | 2:R:43:ARG:HB2   | 2.24                     | 0.44              |
| 2:R:134:PHE:HB2  | 2:R:139:LEU:CD2  | 2.44                     | 0.44              |
| 1:S:243:SER:CA   | 2:T:234:GLY:CA   | 2.93                     | 0.44              |
| 2:T:33:GLY:O     | 2:T:70:ARG:N     | 2.51                     | 0.44              |
| 2:T:244:ALA:HA   | 2:T:247:ILE:HD12 | 2.00                     | 0.44              |
| 1:U:112:PRO:CB   | 1:U:120:MET:HE2  | 2.47                     | 0.44              |
| 1:U:233:GLU:O    | 1:U:236:LYS:HB2  | 2.17                     | 0.44              |
| 2:V:84:ASP:H     | 2:V:135:ASP:HA   | 1.83                     | 0.44              |
| 2:V:240:LYS:CG   | 1:W:254:ILE:HD11 | 2.46                     | 0.44              |
| 2:X:90:ILE:HD12  | 2:X:131:VAL:HG21 | 2.00                     | 0.44              |
| 2:X:244:ALA:HA   | 2:X:247:ILE:HD12 | 2.00                     | 0.44              |
| 1:A:43:VAL:HG11  | 2:X:43:ARG:HA    | 2.00                     | 0.44              |
| 1:C:253:LYS:HB3  | 1:E:279:VAL:CG2  | 2.46                     | 0.44              |
| 2:D:91:THR:HG22  | 2:D:92:LEU:N     | 2.32                     | 0.44              |
| 1:E:120:MET:SD   | 1:E:120:MET:O    | 2.76                     | 0.44              |
| 2:F:35:ARG:HD3   | 2:F:52:GLU:H     | 1.82                     | 0.44              |
| 1:G:82:ASP:OD1   | 1:G:84:ARG:HB2   | 2.17                     | 0.44              |
| 2:H:33:GLY:O     | 2:H:70:ARG:N     | 2.51                     | 0.44              |
| 2:H:268:LEU:C    | 2:H:269:GLN:OE1  | 2.60                     | 0.44              |
| 2:H:270:LEU:H    | 2:J:269:GLN:HB2  | 1.83                     | 0.44              |
| 1:I:124:LEU:HD11 | 1:I:175:PHE:CB   | 2.48                     | 0.44              |
| 1:I:197:VAL:O    | 1:I:200:LYS:HG2  | 2.18                     | 0.44              |
| 1:K:253:LYS:HD2  | 1:M:287:PHE:HZ   | 1.73                     | 0.44              |
| 1:M:125:GLY:N    | 2:N:70:ARG:HG2   | 2.33                     | 0.44              |
| 1:M:142:LYS:HE3  | 2:N:173:LEU:CG   | 2.47                     | 0.44              |
| 2:N:43:ARG:CG    | 2:N:43:ARG:HB2   | 2.24                     | 0.44              |
| 2:N:61:VAL:HG13  | 2:N:62:GLN:HG3   | 1.99                     | 0.44              |
| 1:O:117:LEU:CD2  | 1:O:120:MET:HE3  | 2.48                     | 0.44              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:P:259:TYR:HH   | 1:Q:280:LEU:H    | 1.65                     | 0.44              |
| 1:Q:6:LYS:NZ     | 2:R:6:PHE:HA     | 2.33                     | 0.44              |
| 2:R:194:GLU:HA   | 2:R:197:ARG:HB3  | 2.00                     | 0.44              |
| 2:R:240:LYS:C    | 2:R:241:LEU:HG   | 2.43                     | 0.44              |
| 1:S:62:THR:HG22  | 1:S:64:LEU:CD2   | 2.47                     | 0.44              |
| 1:S:87:PRO:HA    | 1:S:108:VAL:O    | 2.18                     | 0.44              |
| 1:S:239:GLY:HA2  | 2:T:235:LEU:CB   | 2.47                     | 0.44              |
| 2:T:28:TYR:HD2   | 2:T:57:LEU:HD23  | 1.81                     | 0.44              |
| 2:T:96:PHE:O     | 2:T:96:PHE:CD2   | 2.70                     | 0.44              |
| 2:T:149:GLN:O    | 2:T:152:ASP:OD1  | 2.36                     | 0.44              |
| 1:U:206:GLU:HA   | 1:U:209:ARG:HB3  | 1.99                     | 0.44              |
| 1:W:120:MET:SD   | 1:W:120:MET:O    | 2.76                     | 0.44              |
| 2:X:61:VAL:HG13  | 2:X:62:GLN:HG3   | 1.99                     | 0.44              |
| 2:X:268:LEU:C    | 2:X:269:GLN:OE1  | 2.60                     | 0.44              |
| 1:A:62:THR:HG22  | 1:A:64:LEU:CD2   | 2.47                     | 0.44              |
| 1:A:94:THR:HG21  | 1:A:145:VAL:CB   | 2.44                     | 0.44              |
| 2:B:71:SER:HA    | 2:B:96:PHE:O     | 2.16                     | 0.44              |
| 2:B:90:ILE:HD12  | 2:B:131:VAL:HG21 | 2.00                     | 0.44              |
| 2:B:194:GLU:HA   | 2:B:197:ARG:HB3  | 2.00                     | 0.44              |
| 1:C:117:LEU:HD23 | 1:C:120:MET:HE3  | 2.00                     | 0.44              |
| 2:D:49:VAL:HG21  | 2:D:101:SER:CA   | 2.43                     | 0.44              |
| 2:D:224:ILE:CG2  | 1:E:251:LEU:HG   | 2.48                     | 0.44              |
| 1:G:50:ILE:HA    | 1:G:64:LEU:CD1   | 2.48                     | 0.44              |
| 1:G:112:PRO:CB   | 1:G:120:MET:HE2  | 2.47                     | 0.44              |
| 1:G:217:ALA:HB1  | 2:H:212:ILE:HG21 | 1.99                     | 0.44              |
| 2:H:84:ASP:H     | 2:H:135:ASP:HA   | 1.83                     | 0.44              |
| 2:H:88:VAL:HG22  | 2:H:175:PHE:HD1  | 1.82                     | 0.44              |
| 2:H:90:ILE:CG2   | 2:H:127:LEU:HD21 | 2.47                     | 0.44              |
| 2:H:96:PHE:CE2   | 2:H:115:ASP:HB3  | 2.52                     | 0.44              |
| 2:J:149:GLN:O    | 2:J:152:ASP:OD1  | 2.36                     | 0.44              |
| 1:K:197:VAL:O    | 1:K:200:LYS:HG2  | 2.18                     | 0.44              |
| 1:M:141:LEU:O    | 1:M:145:VAL:HG23 | 2.18                     | 0.44              |
| 1:M:233:GLU:O    | 1:M:236:LYS:HB2  | 2.17                     | 0.44              |
| 2:N:90:ILE:CG2   | 2:N:127:LEU:HD21 | 2.47                     | 0.44              |
| 1:O:81:TYR:OH    | 1:O:121:TYR:HB2  | 2.18                     | 0.44              |
| 1:O:141:LEU:O    | 1:O:145:VAL:HG23 | 2.18                     | 0.44              |
| 1:O:206:GLU:HA   | 1:O:209:ARG:HB3  | 1.99                     | 0.44              |
| 2:P:134:PHE:HB2  | 2:P:139:LEU:CD2  | 2.44                     | 0.44              |
| 1:Q:197:VAL:O    | 1:Q:200:LYS:HG2  | 2.18                     | 0.44              |
| 1:Q:221:GLN:CG   | 2:R:212:ILE:CG2  | 2.95                     | 0.44              |
| 1:Q:222:ARG:HA   | 1:Q:225:ILE:CG1  | 2.48                     | 0.44              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:Q:274:THR:HG1  | 1:Q:277:ASN:CG   | 2.23                     | 0.44              |
| 2:R:35:ARG:HD3   | 2:R:52:GLU:H     | 1.82                     | 0.44              |
| 2:R:96:PHE:O     | 2:R:96:PHE:CD2   | 2.70                     | 0.44              |
| 2:R:96:PHE:CE2   | 2:R:115:ASP:HB3  | 2.52                     | 0.44              |
| 1:S:124:LEU:HD11 | 1:S:175:PHE:CB   | 2.47                     | 0.44              |
| 1:S:140:VAL:HG13 | 1:S:167:GLU:HB2  | 1.98                     | 0.44              |
| 1:S:222:ARG:HA   | 1:S:225:ILE:CG1  | 2.48                     | 0.44              |
| 2:T:88:VAL:HG22  | 2:T:175:PHE:HD1  | 1.82                     | 0.44              |
| 2:T:96:PHE:CE2   | 2:T:115:ASP:HB3  | 2.52                     | 0.44              |
| 1:U:62:THR:HG22  | 1:U:64:LEU:CD2   | 2.47                     | 0.44              |
| 2:V:33:GLY:O     | 2:V:70:ARG:N     | 2.50                     | 0.44              |
| 2:V:91:THR:HG22  | 2:V:92:LEU:N     | 2.32                     | 0.44              |
| 2:V:218:SER:HA   | 1:W:238:LEU:HD21 | 2.00                     | 0.44              |
| 1:W:87:PRO:HA    | 1:W:108:VAL:O    | 2.18                     | 0.44              |
| 1:W:228:ALA:HB3  | 2:X:219:LYS:NZ   | 2.33                     | 0.44              |
| 1:W:233:GLU:O    | 1:W:236:LYS:HB2  | 2.17                     | 0.44              |
| 1:A:124:LEU:HD11 | 1:A:175:PHE:CB   | 2.47                     | 0.44              |
| 1:A:210:ALA:O    | 2:B:205:GLN:HB3  | 2.16                     | 0.44              |
| 1:A:222:ARG:HA   | 1:A:225:ILE:CG1  | 2.48                     | 0.44              |
| 1:A:284:ASP:HB2  | 1:W:275:ALA:HB3  | 1.99                     | 0.44              |
| 2:B:49:VAL:HG21  | 2:B:101:SER:CA   | 2.43                     | 0.44              |
| 2:B:97:ARG:O     | 2:B:98:PRO:C     | 2.61                     | 0.44              |
| 1:C:50:ILE:HA    | 1:C:64:LEU:CD1   | 2.48                     | 0.44              |
| 1:C:81:TYR:OH    | 1:C:121:TYR:HB2  | 2.18                     | 0.44              |
| 1:C:117:LEU:CD2  | 1:C:120:MET:HE3  | 2.48                     | 0.44              |
| 1:C:197:VAL:O    | 1:C:200:LYS:HG2  | 2.18                     | 0.44              |
| 2:D:61:VAL:HG13  | 2:D:62:GLN:HG3   | 1.99                     | 0.44              |
| 1:E:81:TYR:OH    | 1:E:121:TYR:HB2  | 2.18                     | 0.44              |
| 1:E:124:LEU:HD11 | 1:E:175:PHE:CB   | 2.47                     | 0.44              |
| 2:F:91:THR:HG22  | 2:F:92:LEU:N     | 2.32                     | 0.44              |
| 1:G:214:VAL:HA   | 2:H:208:LYS:HD3  | 1.99                     | 0.44              |
| 2:H:149:GLN:O    | 2:H:152:ASP:OD1  | 2.36                     | 0.44              |
| 1:I:81:TYR:OH    | 1:I:121:TYR:HB2  | 2.18                     | 0.44              |
| 1:I:239:GLY:C    | 1:I:241:ALA:H    | 2.25                     | 0.44              |
| 2:J:41:ARG:CZ    | 1:K:43:VAL:H     | 2.30                     | 0.44              |
| 2:J:90:ILE:CG2   | 2:J:127:LEU:HD21 | 2.47                     | 0.44              |
| 2:L:33:GLY:O     | 2:L:70:ARG:N     | 2.51                     | 0.44              |
| 2:L:58:ILE:O     | 2:L:61:VAL:HG12  | 2.17                     | 0.44              |
| 2:L:221:ALA:HB2  | 1:M:248:TYR:HD2  | 1.82                     | 0.44              |
| 1:O:117:LEU:HD23 | 1:O:120:MET:HE3  | 2.00                     | 0.44              |
| 1:O:239:GLY:C    | 1:O:241:ALA:H    | 2.25                     | 0.44              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:P:61:VAL:CA    | 1:Q:43:VAL:O     | 2.62                     | 0.44              |
| 2:P:88:VAL:HG22  | 2:P:175:PHE:HD1  | 1.82                     | 0.44              |
| 2:R:260:LEU:HD13 | 2:R:268:LEU:CD2  | 2.45                     | 0.44              |
| 1:S:117:LEU:HD23 | 1:S:120:MET:HE3  | 2.00                     | 0.44              |
| 1:U:81:TYR:OH    | 1:U:121:TYR:HB2  | 2.18                     | 0.44              |
| 1:U:117:LEU:HD23 | 1:U:120:MET:HE3  | 2.00                     | 0.44              |
| 1:U:142:LYS:HZ1  | 2:V:140:ILE:HG21 | 1.81                     | 0.44              |
| 1:W:141:LEU:O    | 1:W:145:VAL:HG23 | 2.18                     | 0.44              |
| 2:X:97:ARG:O     | 2:X:98:PRO:C     | 2.61                     | 0.44              |
| 2:X:194:GLU:HA   | 2:X:197:ARG:HB3  | 2.00                     | 0.44              |
| 1:A:67:GLY:HA3   | 2:X:43:ARG:HH21  | 1.79                     | 0.44              |
| 1:A:81:TYR:OH    | 1:A:121:TYR:HB2  | 2.18                     | 0.44              |
| 1:A:141:LEU:O    | 1:A:145:VAL:HG23 | 2.18                     | 0.44              |
| 2:D:41:ARG:O     | 1:E:67:GLY:HA2   | 2.17                     | 0.44              |
| 2:D:225:ALA:N    | 1:E:248:TYR:CB   | 2.71                     | 0.44              |
| 2:D:239:ARG:O    | 1:E:258:GLN:CG   | 2.66                     | 0.44              |
| 1:E:276:ASP:HB3  | 1:G:283:GLN:HB2  | 1.99                     | 0.44              |
| 1:G:99:LEU:CB    | 2:H:180:THR:O    | 2.57                     | 0.44              |
| 1:G:141:LEU:O    | 1:G:145:VAL:HG23 | 2.18                     | 0.44              |
| 1:G:209:ARG:O    | 1:G:212:PHE:CZ   | 2.71                     | 0.44              |
| 1:G:222:ARG:HA   | 1:G:225:ILE:CG1  | 2.48                     | 0.44              |
| 2:H:258:THR:CG2  | 2:H:259:TYR:N    | 2.80                     | 0.44              |
| 1:K:133:LEU:O    | 1:K:134:PRO:C    | 2.61                     | 0.44              |
| 1:M:98:ASP:O     | 2:N:180:THR:O    | 2.35                     | 0.44              |
| 1:M:209:ARG:O    | 1:M:212:PHE:CZ   | 2.71                     | 0.44              |
| 2:N:96:PHE:O     | 2:N:96:PHE:CD2   | 2.70                     | 0.44              |
| 1:O:197:VAL:O    | 1:O:200:LYS:HG2  | 2.18                     | 0.44              |
| 2:P:43:ARG:HB2   | 1:Q:67:GLY:C     | 2.42                     | 0.44              |
| 1:Q:209:ARG:O    | 1:Q:212:PHE:CZ   | 2.71                     | 0.44              |
| 1:Q:256:ALA:O    | 1:Q:257:ALA:C    | 2.60                     | 0.44              |
| 2:R:260:LEU:CD1  | 2:R:268:LEU:HD21 | 2.45                     | 0.44              |
| 1:S:239:GLY:C    | 1:S:241:ALA:H    | 2.25                     | 0.44              |
| 1:U:130:GLU:O    | 1:U:134:PRO:HG2  | 2.17                     | 0.44              |
| 2:V:61:VAL:HG13  | 2:V:62:GLN:HG3   | 1.99                     | 0.44              |
| 1:W:117:LEU:CD2  | 1:W:120:MET:HE3  | 2.48                     | 0.44              |
| 1:W:117:LEU:HD23 | 1:W:120:MET:HE3  | 2.00                     | 0.44              |
| 1:W:209:ARG:O    | 1:W:212:PHE:CZ   | 2.71                     | 0.44              |
| 1:A:197:VAL:O    | 1:A:200:LYS:HG2  | 2.18                     | 0.43              |
| 2:B:91:THR:HG22  | 2:B:92:LEU:N     | 2.32                     | 0.43              |
| 2:B:244:ALA:HA   | 2:B:247:ILE:HD12 | 2.00                     | 0.43              |
| 1:C:110:SER:OG   | 1:C:133:LEU:HD11 | 2.17                     | 0.43              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:175:PHE:CE1  | 2:D:167:ASP:HB2  | 2.53                     | 0.43              |
| 1:C:209:ARG:O    | 1:C:212:PHE:CZ   | 2.71                     | 0.43              |
| 1:C:222:ARG:HA   | 1:C:225:ILE:CG1  | 2.48                     | 0.43              |
| 1:E:117:LEU:CD2  | 1:E:120:MET:HE3  | 2.48                     | 0.43              |
| 1:E:141:LEU:O    | 1:E:145:VAL:HG23 | 2.18                     | 0.43              |
| 1:E:209:ARG:O    | 1:E:212:PHE:CZ   | 2.71                     | 0.43              |
| 2:F:218:SER:OG   | 1:G:237:MET:CE   | 2.65                     | 0.43              |
| 1:G:124:LEU:HD11 | 1:G:175:PHE:CB   | 2.47                     | 0.43              |
| 1:G:133:LEU:O    | 1:G:134:PRO:C    | 2.61                     | 0.43              |
| 1:I:41:PHE:CD1   | 1:I:43:VAL:CG2   | 3.00                     | 0.43              |
| 1:I:130:GLU:O    | 1:I:134:PRO:HG2  | 2.17                     | 0.43              |
| 1:I:141:LEU:O    | 1:I:145:VAL:HG23 | 2.18                     | 0.43              |
| 2:L:97:ARG:O     | 2:L:98:PRO:C     | 2.61                     | 0.43              |
| 1:M:87:PRO:HA    | 1:M:108:VAL:O    | 2.18                     | 0.43              |
| 2:N:91:THR:HG22  | 2:N:92:LEU:N     | 2.32                     | 0.43              |
| 1:O:144:VAL:HG21 | 1:O:164:ILE:N    | 2.33                     | 0.43              |
| 1:O:233:GLU:O    | 1:O:236:LYS:HB2  | 2.17                     | 0.43              |
| 2:P:194:GLU:HA   | 2:P:197:ARG:HB3  | 2.00                     | 0.43              |
| 1:Q:50:ILE:HA    | 1:Q:64:LEU:CD1   | 2.48                     | 0.43              |
| 1:Q:253:LYS:NZ   | 1:S:291:SER:HB3  | 2.33                     | 0.43              |
| 2:R:61:VAL:HG13  | 2:R:62:GLN:HG3   | 1.99                     | 0.43              |
| 2:R:90:ILE:HD12  | 2:R:131:VAL:HG21 | 2.00                     | 0.43              |
| 2:R:91:THR:HG22  | 2:R:92:LEU:N     | 2.32                     | 0.43              |
| 1:S:117:LEU:CD2  | 1:S:120:MET:HE3  | 2.48                     | 0.43              |
| 1:S:197:VAL:O    | 1:S:200:LYS:HG2  | 2.18                     | 0.43              |
| 1:S:253:LYS:HZ2  | 2:T:241:LEU:CD1  | 2.27                     | 0.43              |
| 2:V:258:THR:CG2  | 2:V:259:TYR:N    | 2.80                     | 0.43              |
| 1:W:133:LEU:O    | 1:W:134:PRO:C    | 2.61                     | 0.43              |
| 1:W:140:VAL:HG12 | 1:W:164:ILE:HA   | 2.00                     | 0.43              |
| 1:W:222:ARG:HA   | 1:W:225:ILE:CG1  | 2.48                     | 0.43              |
| 1:A:239:GLY:C    | 1:A:241:ALA:H    | 2.25                     | 0.43              |
| 2:B:88:VAL:HG22  | 2:B:175:PHE:HD1  | 1.82                     | 0.43              |
| 2:B:269:GLN:HA   | 2:D:269:GLN:CD   | 2.43                     | 0.43              |
| 1:C:144:VAL:HG21 | 1:C:164:ILE:N    | 2.33                     | 0.43              |
| 2:D:84:ASP:H     | 2:D:135:ASP:HA   | 1.83                     | 0.43              |
| 1:E:117:LEU:HD23 | 1:E:120:MET:HE3  | 2.00                     | 0.43              |
| 1:E:239:GLY:C    | 1:E:241:ALA:H    | 2.25                     | 0.43              |
| 2:F:84:ASP:H     | 2:F:135:ASP:HA   | 1.83                     | 0.43              |
| 1:G:120:MET:SD   | 1:G:120:MET:O    | 2.76                     | 0.43              |
| 2:H:97:ARG:O     | 2:H:98:PRO:C     | 2.61                     | 0.43              |
| 1:I:58:VAL:HG12  | 1:I:118:PRO:HB3  | 2.01                     | 0.43              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:140:VAL:HG12 | 1:I:164:ILE:HA   | 2.01                     | 0.43              |
| 1:I:209:ARG:O    | 1:I:212:PHE:CZ   | 2.71                     | 0.43              |
| 2:J:61:VAL:HG13  | 2:J:62:GLN:HG3   | 1.99                     | 0.43              |
| 2:J:128:LYS:HZ3  | 1:K:157:ARG:HH12 | 1.65                     | 0.43              |
| 1:K:50:ILE:HA    | 1:K:64:LEU:CD1   | 2.48                     | 0.43              |
| 1:K:58:VAL:HG12  | 1:K:118:PRO:HB3  | 2.01                     | 0.43              |
| 1:K:117:LEU:CD2  | 1:K:120:MET:HE3  | 2.47                     | 0.43              |
| 1:K:222:ARG:HA   | 1:K:225:ILE:CG1  | 2.48                     | 0.43              |
| 2:L:260:LEU:HD13 | 2:L:268:LEU:CD2  | 2.45                     | 0.43              |
| 1:M:54:ARG:CZ    | 2:N:54:THR:N     | 2.81                     | 0.43              |
| 1:M:58:VAL:HG12  | 1:M:118:PRO:HB3  | 2.01                     | 0.43              |
| 2:N:35:ARG:HD3   | 2:N:52:GLU:H     | 1.82                     | 0.43              |
| 2:N:84:ASP:H     | 2:N:135:ASP:HA   | 1.83                     | 0.43              |
| 1:O:120:MET:SD   | 1:O:120:MET:O    | 2.76                     | 0.43              |
| 1:O:267:SER:HB2  | 2:P:252:SER:HB2  | 1.99                     | 0.43              |
| 1:Q:141:LEU:O    | 1:Q:145:VAL:HG23 | 2.18                     | 0.43              |
| 1:Q:144:VAL:HG21 | 1:Q:164:ILE:N    | 2.33                     | 0.43              |
| 2:R:251:LEU:HD13 | 1:S:278:LEU:HG   | 2.00                     | 0.43              |
| 2:R:268:LEU:C    | 2:R:269:GLN:OE1  | 2.60                     | 0.43              |
| 1:S:50:ILE:HA    | 1:S:64:LEU:CD1   | 2.48                     | 0.43              |
| 1:U:117:LEU:CD2  | 1:U:120:MET:HE3  | 2.48                     | 0.43              |
| 1:U:202:VAL:O    | 1:U:206:GLU:HG3  | 2.19                     | 0.43              |
| 2:V:90:ILE:HD12  | 2:V:131:VAL:HG21 | 2.00                     | 0.43              |
| 2:X:33:GLY:O     | 2:X:70:ARG:N     | 2.50                     | 0.43              |
| 2:X:58:ILE:HB    | 2:X:61:VAL:HG11  | 2.00                     | 0.43              |
| 1:A:87:PRO:HA    | 1:A:108:VAL:O    | 2.18                     | 0.43              |
| 1:A:225:ILE:O    | 2:B:219:LYS:NZ   | 2.51                     | 0.43              |
| 2:B:58:ILE:HB    | 2:B:61:VAL:HG11  | 2.00                     | 0.43              |
| 1:C:102:VAL:HG21 | 1:C:153:LEU:CD1  | 2.49                     | 0.43              |
| 1:C:141:LEU:O    | 1:C:145:VAL:HG23 | 2.18                     | 0.43              |
| 2:D:243:ALA:HB2  | 1:E:258:GLN:CA   | 2.46                     | 0.43              |
| 1:E:87:PRO:HA    | 1:E:108:VAL:O    | 2.18                     | 0.43              |
| 1:E:222:ARG:HA   | 1:E:225:ILE:CG1  | 2.48                     | 0.43              |
| 1:I:235:ALA:HB1  | 2:J:228:LEU:HG   | 2.00                     | 0.43              |
| 2:J:42:PHE:HD1   | 1:K:68:LEU:HD13  | 1.83                     | 0.43              |
| 2:J:97:ARG:O     | 2:J:98:PRO:C     | 2.61                     | 0.43              |
| 1:K:140:VAL:HG12 | 1:K:164:ILE:HA   | 2.00                     | 0.43              |
| 1:M:58:VAL:CG2   | 2:N:32:ALA:CB    | 2.94                     | 0.43              |
| 1:M:218:LYS:CE   | 2:N:212:ILE:HD11 | 2.48                     | 0.43              |
| 2:P:258:THR:CG2  | 2:P:259:TYR:N    | 2.80                     | 0.43              |
| 2:R:244:ALA:HA   | 2:R:247:ILE:HD12 | 2.00                     | 0.43              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:S:58:VAL:HG12  | 1:S:118:PRO:HB3  | 2.01                     | 0.43              |
| 1:S:133:LEU:O    | 1:S:134:PRO:C    | 2.61                     | 0.43              |
| 2:T:43:ARG:CD    | 1:U:66:GLU:O     | 2.67                     | 0.43              |
| 1:U:133:LEU:O    | 1:U:134:PRO:C    | 2.61                     | 0.43              |
| 2:V:71:SER:HA    | 2:V:96:PHE:O     | 2.17                     | 0.43              |
| 2:V:244:ALA:HA   | 2:V:247:ILE:HD12 | 2.00                     | 0.43              |
| 1:W:50:ILE:HA    | 1:W:64:LEU:CD1   | 2.48                     | 0.43              |
| 1:W:62:THR:HG22  | 1:W:64:LEU:CD2   | 2.47                     | 0.43              |
| 1:W:144:VAL:HG21 | 1:W:164:ILE:N    | 2.33                     | 0.43              |
| 1:W:197:VAL:O    | 1:W:200:LYS:HG2  | 2.18                     | 0.43              |
| 2:X:58:ILE:O     | 2:X:61:VAL:HG12  | 2.17                     | 0.43              |
| 1:A:199:ALA:HB1  | 2:B:195:ARG:HG3  | 1.99                     | 0.43              |
| 1:A:294:LEU:HG   | 1:W:249:ILE:CG2  | 2.34                     | 0.43              |
| 2:F:241:LEU:HD11 | 1:I:283:GLN:NE2  | 2.33                     | 0.43              |
| 2:F:267:LEU:HD12 | 2:H:265:SER:HB2  | 2.00                     | 0.43              |
| 1:G:58:VAL:HG12  | 1:G:118:PRO:HB3  | 2.01                     | 0.43              |
| 2:H:43:ARG:CB    | 2:H:43:ARG:HG3   | 2.22                     | 0.43              |
| 1:I:117:LEU:CD2  | 1:I:120:MET:HE3  | 2.48                     | 0.43              |
| 1:I:120:MET:SD   | 1:I:124:LEU:HB2  | 2.59                     | 0.43              |
| 2:J:225:ALA:CA   | 1:K:248:TYR:HB2  | 2.49                     | 0.43              |
| 1:K:238:LEU:HB2  | 2:L:235:LEU:HB2  | 2.00                     | 0.43              |
| 2:L:91:THR:HG22  | 2:L:92:LEU:N     | 2.32                     | 0.43              |
| 2:L:189:ALA:HB3  | 1:M:212:PHE:CE1  | 2.53                     | 0.43              |
| 2:L:260:LEU:HD22 | 2:L:268:LEU:HD21 | 1.98                     | 0.43              |
| 1:M:117:LEU:CD2  | 1:M:120:MET:HE3  | 2.48                     | 0.43              |
| 1:M:123:ARG:NH2  | 2:N:166:ASP:HB3  | 2.33                     | 0.43              |
| 1:O:133:LEU:O    | 1:O:134:PRO:C    | 2.61                     | 0.43              |
| 2:P:33:GLY:O     | 2:P:70:ARG:N     | 2.51                     | 0.43              |
| 2:P:150:VAL:HG21 | 2:P:170:LEU:HD21 | 2.00                     | 0.43              |
| 1:Q:87:PRO:HA    | 1:Q:108:VAL:O    | 2.18                     | 0.43              |
| 1:Q:120:MET:SD   | 1:Q:124:LEU:HB2  | 2.59                     | 0.43              |
| 1:Q:259:ASN:HB2  | 2:R:249:TYR:CZ   | 2.53                     | 0.43              |
| 1:S:233:GLU:O    | 1:S:236:LYS:HB2  | 2.17                     | 0.43              |
| 1:S:249:ILE:HD12 | 2:T:238:LEU:CA   | 2.45                     | 0.43              |
| 2:T:150:VAL:HG21 | 2:T:170:LEU:HD21 | 2.00                     | 0.43              |
| 2:V:88:VAL:HG22  | 2:V:175:PHE:HD1  | 1.82                     | 0.43              |
| 2:V:194:GLU:HA   | 2:V:197:ARG:HB3  | 2.00                     | 0.43              |
| 1:W:102:VAL:HG21 | 1:W:153:LEU:CD1  | 2.49                     | 0.43              |
| 1:E:144:VAL:HG21 | 1:E:164:ILE:N    | 2.33                     | 0.43              |
| 1:G:144:VAL:HG21 | 1:G:164:ILE:N    | 2.33                     | 0.43              |
| 2:H:236:ILE:HG23 | 1:I:250:LYS:CD   | 2.46                     | 0.43              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:102:VAL:HG21 | 1:I:153:LEU:CD1  | 2.49                     | 0.43              |
| 1:I:233:GLU:O    | 1:I:236:LYS:HB2  | 2.17                     | 0.43              |
| 2:J:88:VAL:HG22  | 2:J:175:PHE:HD1  | 1.82                     | 0.43              |
| 2:J:90:ILE:HD12  | 2:J:131:VAL:HG21 | 2.00                     | 0.43              |
| 1:K:160:VAL:HG12 | 1:K:184:ILE:HD11 | 1.99                     | 0.43              |
| 2:L:244:ALA:HA   | 2:L:247:ILE:HD12 | 2.00                     | 0.43              |
| 1:M:256:ALA:O    | 1:M:257:ALA:C    | 2.60                     | 0.43              |
| 2:N:149:GLN:O    | 2:N:152:ASP:OD1  | 2.35                     | 0.43              |
| 1:O:202:VAL:O    | 1:O:206:GLU:HG3  | 2.19                     | 0.43              |
| 1:O:209:ARG:O    | 1:O:212:PHE:CZ   | 2.71                     | 0.43              |
| 2:P:43:ARG:C     | 1:Q:66:GLU:CG    | 2.92                     | 0.43              |
| 2:P:109:SER:HB3  | 1:Q:111:ARG:CD   | 2.48                     | 0.43              |
| 1:Q:94:THR:HG21  | 1:Q:145:VAL:CB   | 2.44                     | 0.43              |
| 1:Q:130:GLU:O    | 1:Q:134:PRO:HG2  | 2.17                     | 0.43              |
| 1:S:141:LEU:O    | 1:S:145:VAL:HG23 | 2.18                     | 0.43              |
| 2:T:44:GLY:HA3   | 1:U:66:GLU:OE2   | 2.18                     | 0.43              |
| 2:T:106:ILE:HA   | 2:T:110:ILE:HB   | 2.01                     | 0.43              |
| 2:T:109:SER:HB2  | 1:U:180:ASP:OD2  | 2.18                     | 0.43              |
| 2:T:258:THR:CG2  | 2:T:259:TYR:N    | 2.80                     | 0.43              |
| 1:U:58:VAL:HG12  | 1:U:118:PRO:HB3  | 2.00                     | 0.43              |
| 1:U:120:MET:SD   | 1:U:124:LEU:HB2  | 2.59                     | 0.43              |
| 1:U:135:SER:OG   | 2:V:93:ARG:HD2   | 2.17                     | 0.43              |
| 1:U:222:ARG:HA   | 1:U:225:ILE:CG1  | 2.48                     | 0.43              |
| 1:U:274:THR:HG1  | 1:U:277:ASN:CG   | 2.27                     | 0.43              |
| 1:A:140:VAL:HG12 | 1:A:164:ILE:HA   | 2.01                     | 0.43              |
| 1:A:284:ASP:CB   | 1:W:275:ALA:HB3  | 2.48                     | 0.43              |
| 2:B:193:ALA:O    | 1:C:219:GLN:NE2  | 2.33                     | 0.43              |
| 1:C:101:MET:SD   | 2:D:180:THR:CG2  | 3.07                     | 0.43              |
| 1:C:133:LEU:O    | 1:C:134:PRO:C    | 2.61                     | 0.43              |
| 1:C:140:VAL:HG12 | 1:C:164:ILE:HA   | 2.00                     | 0.43              |
| 1:C:233:GLU:O    | 1:C:236:LYS:HB2  | 2.17                     | 0.43              |
| 2:D:251:LEU:HD22 | 1:E:264:ILE:HG22 | 1.97                     | 0.43              |
| 2:F:240:LYS:C    | 2:F:241:LEU:HG   | 2.43                     | 0.43              |
| 1:G:197:VAL:O    | 1:G:200:LYS:HG2  | 2.18                     | 0.43              |
| 2:H:58:ILE:HB    | 2:H:61:VAL:HG11  | 2.00                     | 0.43              |
| 1:I:58:VAL:CG1   | 1:I:118:PRO:HB3  | 2.49                     | 0.43              |
| 1:I:144:VAL:HG21 | 1:I:164:ILE:N    | 2.33                     | 0.43              |
| 1:K:81:TYR:OH    | 1:K:121:TYR:HB2  | 2.18                     | 0.43              |
| 1:K:102:VAL:HG21 | 1:K:153:LEU:CD1  | 2.49                     | 0.43              |
| 1:K:144:VAL:HG21 | 1:K:164:ILE:N    | 2.33                     | 0.43              |
| 1:K:236:LYS:CE   | 2:L:227:SER:CB   | 2.94                     | 0.43              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:278:LEU:C    | 1:K:279:VAL:HG23 | 2.42                     | 0.43              |
| 1:M:52:PHE:CZ    | 2:N:52:GLU:HB3   | 2.53                     | 0.43              |
| 1:M:58:VAL:CG1   | 1:M:118:PRO:HB3  | 2.49                     | 0.43              |
| 1:M:81:TYR:OH    | 1:M:121:TYR:HB2  | 2.18                     | 0.43              |
| 1:M:144:VAL:HG21 | 1:M:164:ILE:N    | 2.33                     | 0.43              |
| 1:M:197:VAL:O    | 1:M:200:LYS:HG2  | 2.18                     | 0.43              |
| 1:O:120:MET:SD   | 1:O:124:LEU:HB2  | 2.59                     | 0.43              |
| 1:O:261:SER:HA   | 1:O:264:ILE:HB   | 2.01                     | 0.43              |
| 2:P:240:LYS:C    | 2:P:241:LEU:HG   | 2.43                     | 0.43              |
| 1:Q:81:TYR:OH    | 1:Q:121:TYR:HB2  | 2.18                     | 0.43              |
| 1:S:81:TYR:OH    | 1:S:121:TYR:HB2  | 2.18                     | 0.43              |
| 2:T:58:ILE:HB    | 2:T:61:VAL:HG11  | 2.00                     | 0.43              |
| 2:T:90:ILE:HD12  | 2:T:131:VAL:HG21 | 2.00                     | 0.43              |
| 2:T:194:GLU:HA   | 2:T:197:ARG:HB3  | 2.00                     | 0.43              |
| 1:U:144:VAL:HG21 | 1:U:164:ILE:HA   | 2.01                     | 0.43              |
| 1:W:124:LEU:HD11 | 1:W:175:PHE:CB   | 2.47                     | 0.43              |
| 2:X:84:ASP:H     | 2:X:135:ASP:HA   | 1.83                     | 0.43              |
| 2:X:91:THR:HG22  | 2:X:92:LEU:N     | 2.32                     | 0.43              |
| 1:A:102:VAL:HG21 | 1:A:153:LEU:CD1  | 2.49                     | 0.43              |
| 2:B:134:PHE:HB2  | 2:B:139:LEU:CD2  | 2.43                     | 0.43              |
| 1:C:130:GLU:O    | 2:D:93:ARG:NH2   | 2.51                     | 0.43              |
| 2:F:28:TYR:HD2   | 2:F:57:LEU:HD23  | 1.81                     | 0.43              |
| 1:G:87:PRO:HA    | 1:G:108:VAL:O    | 2.18                     | 0.43              |
| 1:G:140:VAL:HG12 | 1:G:164:ILE:HA   | 2.00                     | 0.43              |
| 1:G:144:VAL:HG21 | 1:G:164:ILE:HA   | 2.01                     | 0.43              |
| 2:H:150:VAL:HG21 | 2:H:170:LEU:HD21 | 2.00                     | 0.43              |
| 1:I:222:ARG:HA   | 1:I:225:ILE:CG1  | 2.48                     | 0.43              |
| 2:J:240:LYS:C    | 2:J:241:LEU:HG   | 2.43                     | 0.43              |
| 2:J:258:THR:CG2  | 2:J:259:TYR:N    | 2.80                     | 0.43              |
| 1:K:209:ARG:O    | 1:K:212:PHE:CZ   | 2.71                     | 0.43              |
| 2:L:150:VAL:HG21 | 2:L:170:LEU:HD21 | 2.00                     | 0.43              |
| 1:M:124:LEU:HD11 | 1:M:175:PHE:CB   | 2.47                     | 0.43              |
| 1:M:193:TYR:HB2  | 2:N:184:GLU:OE2  | 2.19                     | 0.43              |
| 2:N:98:PRO:HA    | 2:N:163:LEU:HD23 | 2.01                     | 0.43              |
| 2:P:149:GLN:O    | 2:P:152:ASP:OD1  | 2.36                     | 0.43              |
| 1:Q:133:LEU:O    | 1:Q:134:PRO:C    | 2.61                     | 0.43              |
| 1:S:120:MET:SD   | 1:S:124:LEU:HB2  | 2.59                     | 0.43              |
| 2:T:260:LEU:CD1  | 2:T:268:LEU:HD21 | 2.45                     | 0.43              |
| 1:U:144:VAL:HG21 | 1:U:164:ILE:N    | 2.33                     | 0.43              |
| 1:W:120:MET:SD   | 1:W:124:LEU:HB2  | 2.59                     | 0.43              |
| 1:W:202:VAL:O    | 1:W:206:GLU:HG3  | 2.19                     | 0.43              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:X:240:LYS:C    | 2:X:241:LEU:HG   | 2.43                     | 0.43              |
| 1:A:144:VAL:HG21 | 1:A:164:ILE:N    | 2.33                     | 0.43              |
| 1:A:209:ARG:O    | 1:A:212:PHE:CZ   | 2.71                     | 0.43              |
| 1:A:245:ASN:OD1  | 1:A:246:PRO:HD2  | 2.19                     | 0.43              |
| 2:B:98:PRO:HA    | 2:B:163:LEU:HD23 | 2.01                     | 0.43              |
| 1:C:100:GLN:NE2  | 2:D:184:GLU:CD   | 2.75                     | 0.43              |
| 1:C:270:ARG:HB2  | 2:D:258:THR:OG1  | 2.19                     | 0.43              |
| 2:D:97:ARG:O     | 2:D:98:PRO:C     | 2.61                     | 0.43              |
| 1:E:133:LEU:O    | 1:E:134:PRO:C    | 2.61                     | 0.43              |
| 2:F:248:ALA:HB2  | 2:F:251:LEU:HD12 | 2.01                     | 0.43              |
| 2:F:258:THR:CG2  | 2:F:259:TYR:N    | 2.80                     | 0.43              |
| 2:H:90:ILE:HD12  | 2:H:131:VAL:HG21 | 2.00                     | 0.43              |
| 1:I:87:PRO:HA    | 1:I:108:VAL:O    | 2.18                     | 0.43              |
| 1:I:133:LEU:O    | 1:I:134:PRO:C    | 2.61                     | 0.43              |
| 2:J:41:ARG:HD3   | 1:K:43:VAL:H     | 1.84                     | 0.43              |
| 2:L:189:ALA:HB1  | 1:M:212:PHE:CD1  | 2.48                     | 0.43              |
| 1:M:102:VAL:HG21 | 1:M:153:LEU:CD1  | 2.49                     | 0.43              |
| 2:N:88:VAL:HG22  | 2:N:175:PHE:HD1  | 1.82                     | 0.43              |
| 1:O:249:ILE:HB   | 2:P:238:LEU:HD12 | 2.00                     | 0.43              |
| 2:P:84:ASP:H     | 2:P:135:ASP:HA   | 1.83                     | 0.43              |
| 1:Q:238:LEU:HB3  | 2:R:235:LEU:HD13 | 2.00                     | 0.43              |
| 1:Q:281:ASN:HB2  | 1:Q:287:PHE:HD1  | 1.84                     | 0.43              |
| 1:S:209:ARG:O    | 1:S:212:PHE:CZ   | 2.71                     | 0.43              |
| 1:S:243:SER:HA   | 2:T:234:GLY:HA3  | 1.99                     | 0.43              |
| 1:U:141:LEU:O    | 1:U:145:VAL:HG23 | 2.18                     | 0.43              |
| 1:U:246:PRO:N    | 1:W:294:LEU:HG   | 2.33                     | 0.43              |
| 2:V:270:LEU:HD11 | 2:X:260:LEU:CD1  | 2.49                     | 0.43              |
| 2:X:43:ARG:CB    | 2:X:43:ARG:HG2   | 2.22                     | 0.43              |
| 1:A:53:ASN:HB2   | 1:A:59:GLN:CG    | 2.49                     | 0.43              |
| 1:A:58:VAL:CG1   | 1:A:118:PRO:HB3  | 2.49                     | 0.43              |
| 1:A:110:SER:CB   | 1:A:133:LEU:HD11 | 2.49                     | 0.43              |
| 1:A:133:LEU:O    | 1:A:134:PRO:C    | 2.61                     | 0.43              |
| 1:A:202:VAL:O    | 1:A:206:GLU:HG3  | 2.19                     | 0.43              |
| 1:C:120:MET:SD   | 1:C:124:LEU:HB2  | 2.59                     | 0.43              |
| 2:D:88:VAL:HG22  | 2:D:175:PHE:HD1  | 1.82                     | 0.43              |
| 2:D:248:ALA:HB2  | 2:D:251:LEU:HD12 | 2.01                     | 0.43              |
| 2:D:256:ASN:HB2  | 1:E:268:GLN:HG2  | 2.00                     | 0.43              |
| 2:D:268:LEU:HD11 | 1:E:272:TYR:CD2  | 2.53                     | 0.43              |
| 1:E:281:ASN:HB2  | 1:E:287:PHE:HD1  | 1.84                     | 0.43              |
| 1:G:120:MET:SD   | 1:G:124:LEU:HB2  | 2.59                     | 0.43              |
| 1:I:202:VAL:O    | 1:I:206:GLU:HG3  | 2.19                     | 0.43              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:J:189:ALA:HA   | 2:J:192:GLU:CB   | 2.49                     | 0.43              |
| 2:J:221:ALA:CB   | 1:K:248:TYR:CD2  | 3.02                     | 0.43              |
| 1:K:117:LEU:HD23 | 1:K:120:MET:HE3  | 2.00                     | 0.43              |
| 1:K:120:MET:SD   | 1:K:124:LEU:HB2  | 2.59                     | 0.43              |
| 1:K:202:VAL:O    | 1:K:206:GLU:HG3  | 2.19                     | 0.43              |
| 1:M:120:MET:SD   | 1:M:124:LEU:HB2  | 2.59                     | 0.43              |
| 1:O:53:ASN:HB2   | 1:O:59:GLN:CG    | 2.49                     | 0.43              |
| 1:O:62:THR:HG22  | 1:O:64:LEU:CD2   | 2.47                     | 0.43              |
| 2:P:97:ARG:O     | 2:P:98:PRO:C     | 2.61                     | 0.43              |
| 1:Q:202:VAL:O    | 1:Q:206:GLU:HG3  | 2.19                     | 0.43              |
| 1:Q:238:LEU:HB2  | 2:R:235:LEU:HD22 | 2.00                     | 0.43              |
| 2:R:84:ASP:H     | 2:R:135:ASP:HA   | 1.83                     | 0.43              |
| 2:R:189:ALA:HA   | 2:R:192:GLU:CB   | 2.49                     | 0.43              |
| 1:S:53:ASN:HB2   | 1:S:59:GLN:CG    | 2.49                     | 0.43              |
| 1:S:272:TYR:O    | 2:T:259:TYR:CB   | 2.66                     | 0.43              |
| 1:U:6:LYS:HZ3    | 2:V:10:GLY:CA    | 2.32                     | 0.43              |
| 1:U:197:VAL:O    | 1:U:200:LYS:HG2  | 2.18                     | 0.43              |
| 2:V:97:ARG:O     | 2:V:98:PRO:C     | 2.61                     | 0.43              |
| 2:X:150:VAL:HG21 | 2:X:170:LEU:HD21 | 2.00                     | 0.43              |
| 1:A:280:LEU:HD13 | 1:W:271:ILE:CG2  | 2.45                     | 0.43              |
| 1:C:281:ASN:HB2  | 1:C:287:PHE:HD1  | 1.84                     | 0.43              |
| 1:E:197:VAL:O    | 1:E:200:LYS:HG2  | 2.18                     | 0.43              |
| 2:F:97:ARG:O     | 2:F:98:PRO:C     | 2.61                     | 0.43              |
| 1:G:275:ALA:HB3  | 1:I:284:ASP:HA   | 2.01                     | 0.43              |
| 2:H:43:ARG:HB2   | 1:I:68:LEU:HD22  | 2.01                     | 0.43              |
| 2:J:98:PRO:HA    | 2:J:163:LEU:HD23 | 2.01                     | 0.43              |
| 2:J:150:VAL:HG21 | 2:J:170:LEU:HD21 | 2.00                     | 0.43              |
| 2:J:194:GLU:HA   | 2:J:197:ARG:HB3  | 2.00                     | 0.43              |
| 1:K:62:THR:HG22  | 1:K:64:LEU:CD2   | 2.47                     | 0.43              |
| 1:K:87:PRO:HA    | 1:K:108:VAL:O    | 2.18                     | 0.43              |
| 2:L:84:ASP:H     | 2:L:135:ASP:HA   | 1.83                     | 0.43              |
| 1:M:62:THR:HG22  | 1:M:64:LEU:CD2   | 2.47                     | 0.43              |
| 2:N:43:ARG:CB    | 2:N:43:ARG:HG2   | 2.22                     | 0.43              |
| 1:O:58:VAL:HG12  | 1:O:118:PRO:HB3  | 2.00                     | 0.43              |
| 1:O:110:SER:HB3  | 1:O:133:LEU:HD11 | 2.01                     | 0.43              |
| 1:O:256:ALA:O    | 1:O:257:ALA:C    | 2.60                     | 0.43              |
| 2:R:149:GLN:O    | 2:R:152:ASP:OD1  | 2.35                     | 0.43              |
| 1:S:110:SER:HB3  | 1:S:133:LEU:HD11 | 2.01                     | 0.43              |
| 1:S:144:VAL:HG21 | 1:S:164:ILE:N    | 2.33                     | 0.43              |
| 2:T:260:LEU:CD2  | 2:T:268:LEU:CD2  | 2.97                     | 0.43              |
| 1:U:87:PRO:HA    | 1:U:108:VAL:O    | 2.18                     | 0.43              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:U:110:SER:HB3  | 1:U:133:LEU:HD11 | 2.01                     | 0.43              |
| 1:U:124:LEU:HD11 | 1:U:175:PHE:CB   | 2.48                     | 0.43              |
| 1:U:209:ARG:O    | 1:U:212:PHE:CZ   | 2.71                     | 0.43              |
| 2:V:260:LEU:HD22 | 2:V:268:LEU:HD21 | 1.98                     | 0.43              |
| 1:W:81:TYR:OH    | 1:W:121:TYR:HB2  | 2.18                     | 0.43              |
| 2:X:260:LEU:CD2  | 2:X:268:LEU:CD2  | 2.97                     | 0.43              |
| 1:A:261:SER:HA   | 1:A:264:ILE:HB   | 2.01                     | 0.42              |
| 2:B:196:ALA:CB   | 1:C:219:GLN:HE21 | 2.27                     | 0.42              |
| 2:B:211:ILE:HG23 | 1:C:233:GLU:OE2  | 2.16                     | 0.42              |
| 1:C:245:ASN:OD1  | 1:C:246:PRO:HD2  | 2.19                     | 0.42              |
| 2:D:240:LYS:N    | 1:E:254:ILE:HG23 | 2.34                     | 0.42              |
| 1:E:102:VAL:HG21 | 1:E:153:LEU:CD1  | 2.49                     | 0.42              |
| 1:E:140:VAL:HG12 | 1:E:164:ILE:HA   | 2.01                     | 0.42              |
| 1:E:144:VAL:HG21 | 1:E:164:ILE:HA   | 2.01                     | 0.42              |
| 2:F:149:GLN:O    | 2:F:152:ASP:OD1  | 2.36                     | 0.42              |
| 1:G:117:LEU:HD23 | 1:G:120:MET:HE3  | 2.00                     | 0.42              |
| 1:G:135:SER:OG   | 2:H:171:THR:CG2  | 2.66                     | 0.42              |
| 2:H:98:PRO:HA    | 2:H:163:LEU:HD23 | 2.01                     | 0.42              |
| 1:I:117:LEU:HD23 | 1:I:120:MET:HE3  | 2.00                     | 0.42              |
| 1:K:261:SER:HA   | 1:K:264:ILE:HB   | 2.01                     | 0.42              |
| 2:L:258:THR:CG2  | 2:L:259:TYR:N    | 2.80                     | 0.42              |
| 1:M:98:ASP:OD2   | 2:N:184:GLU:HG2  | 2.19                     | 0.42              |
| 1:M:99:LEU:CD2   | 2:N:175:PHE:HE2  | 2.32                     | 0.42              |
| 1:M:110:SER:CB   | 1:M:133:LEU:HD11 | 2.49                     | 0.42              |
| 2:N:106:ILE:HA   | 2:N:110:ILE:HB   | 2.01                     | 0.42              |
| 2:N:150:VAL:HG21 | 2:N:170:LEU:HD21 | 2.00                     | 0.42              |
| 2:N:271:PRO:O    | 2:P:271:PRO:CB   | 2.66                     | 0.42              |
| 2:P:86:GLN:NE2   | 1:Q:201:GLN:HB2  | 2.30                     | 0.42              |
| 1:Q:110:SER:HB3  | 1:Q:133:LEU:HD11 | 2.01                     | 0.42              |
| 1:Q:144:VAL:HG21 | 1:Q:164:ILE:HA   | 2.01                     | 0.42              |
| 2:R:258:THR:CG2  | 2:R:259:TYR:N    | 2.80                     | 0.42              |
| 1:S:131:ARG:CZ   | 2:T:70:ARG:NH1   | 2.82                     | 0.42              |
| 1:U:102:VAL:HG21 | 1:U:153:LEU:CD1  | 2.49                     | 0.42              |
| 1:U:140:VAL:HG12 | 1:U:164:ILE:HA   | 2.00                     | 0.42              |
| 1:U:245:ASN:OD1  | 1:U:246:PRO:HD2  | 2.19                     | 0.42              |
| 1:W:53:ASN:HB2   | 1:W:59:GLN:CG    | 2.49                     | 0.42              |
| 1:A:120:MET:SD   | 1:A:124:LEU:HB2  | 2.59                     | 0.42              |
| 2:B:106:ILE:HA   | 2:B:110:ILE:HB   | 2.01                     | 0.42              |
| 2:D:229:ALA:HB1  | 1:E:245:ASN:HB3  | 2.01                     | 0.42              |
| 2:D:251:LEU:HD23 | 1:E:265:ALA:CA   | 2.49                     | 0.42              |
| 1:E:94:THR:HG21  | 1:E:145:VAL:CB   | 2.44                     | 0.42              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:202:VAL:O    | 1:E:206:GLU:HG3  | 2.18                     | 0.42              |
| 2:F:99:VAL:HG22  | 2:F:164:ILE:HG13 | 2.02                     | 0.42              |
| 2:F:268:LEU:HD11 | 2:H:264:GLN:HE22 | 1.85                     | 0.42              |
| 2:H:244:ALA:HA   | 2:H:247:ILE:HD12 | 2.00                     | 0.42              |
| 2:H:260:LEU:HD13 | 2:H:268:LEU:CD2  | 2.44                     | 0.42              |
| 2:H:260:LEU:CD2  | 2:H:268:LEU:CD2  | 2.97                     | 0.42              |
| 1:I:245:ASN:OD1  | 1:I:246:PRO:HD2  | 2.19                     | 0.42              |
| 2:J:84:ASP:H     | 2:J:135:ASP:HA   | 1.83                     | 0.42              |
| 1:K:245:ASN:OD1  | 1:K:246:PRO:HD2  | 2.19                     | 0.42              |
| 2:L:99:VAL:HG22  | 2:L:164:ILE:HG13 | 2.02                     | 0.42              |
| 2:L:189:ALA:HA   | 2:L:192:GLU:CB   | 2.49                     | 0.42              |
| 2:L:194:GLU:HA   | 2:L:197:ARG:HB3  | 2.00                     | 0.42              |
| 2:L:260:LEU:HD22 | 2:L:268:LEU:CG   | 2.50                     | 0.42              |
| 1:M:222:ARG:HA   | 1:M:225:ILE:CG1  | 2.48                     | 0.42              |
| 1:M:245:ASN:OD1  | 1:M:246:PRO:HD2  | 2.19                     | 0.42              |
| 2:N:97:ARG:O     | 2:N:98:PRO:C     | 2.61                     | 0.42              |
| 1:O:58:VAL:CG1   | 1:O:118:PRO:HB3  | 2.49                     | 0.42              |
| 1:O:102:VAL:HG21 | 1:O:153:LEU:CD1  | 2.49                     | 0.42              |
| 1:O:281:ASN:HB2  | 1:O:287:PHE:HD1  | 1.84                     | 0.42              |
| 2:P:179:PHE:HA   | 1:Q:205:GLN:HB2  | 1.99                     | 0.42              |
| 2:P:179:PHE:H    | 1:Q:202:VAL:HA   | 1.83                     | 0.42              |
| 1:Q:53:ASN:HB2   | 1:Q:59:GLN:CG    | 2.49                     | 0.42              |
| 1:Q:58:VAL:CG1   | 1:Q:118:PRO:HB3  | 2.49                     | 0.42              |
| 1:Q:117:LEU:HD23 | 1:Q:120:MET:HE3  | 2.00                     | 0.42              |
| 2:R:98:PRO:HA    | 2:R:163:LEU:HD23 | 2.01                     | 0.42              |
| 2:R:217:ASP:CB   | 1:S:248:TYR:CE2  | 3.00                     | 0.42              |
| 1:S:261:SER:HA   | 1:S:264:ILE:HB   | 2.01                     | 0.42              |
| 2:T:189:ALA:HA   | 2:T:192:GLU:CB   | 2.49                     | 0.42              |
| 2:T:260:LEU:HD13 | 2:T:268:LEU:CD2  | 2.45                     | 0.42              |
| 2:V:58:ILE:HB    | 2:V:61:VAL:HG11  | 2.01                     | 0.42              |
| 1:W:58:VAL:CG1   | 1:W:118:PRO:HB3  | 2.49                     | 0.42              |
| 1:A:144:VAL:HG21 | 1:A:164:ILE:HA   | 2.01                     | 0.42              |
| 1:A:193:TYR:OH   | 2:B:187:GLN:HG3  | 2.18                     | 0.42              |
| 2:B:248:ALA:HB2  | 2:B:251:LEU:HD12 | 2.01                     | 0.42              |
| 2:B:258:THR:CG2  | 2:B:259:TYR:N    | 2.80                     | 0.42              |
| 1:C:99:LEU:HB2   | 2:D:183:VAL:HG13 | 2.02                     | 0.42              |
| 1:C:202:VAL:O    | 1:C:206:GLU:HG3  | 2.19                     | 0.42              |
| 2:D:236:ILE:CG2  | 1:E:250:LYS:HB3  | 2.40                     | 0.42              |
| 2:F:150:VAL:HG21 | 2:F:170:LEU:HD21 | 2.00                     | 0.42              |
| 2:F:194:GLU:HA   | 2:F:197:ARG:HB3  | 2.00                     | 0.42              |
| 2:F:270:LEU:HB3  | 1:G:272:TYR:CE2  | 2.53                     | 0.42              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:102:VAL:HG21 | 1:G:153:LEU:CD1  | 2.49                     | 0.42              |
| 1:I:53:ASN:HB2   | 1:I:59:GLN:CG    | 2.49                     | 0.42              |
| 1:I:110:SER:HB3  | 1:I:133:LEU:HD11 | 2.01                     | 0.42              |
| 1:I:256:ALA:O    | 1:I:257:ALA:C    | 2.60                     | 0.42              |
| 1:I:261:SER:HA   | 1:I:264:ILE:HB   | 2.01                     | 0.42              |
| 2:J:58:ILE:HB    | 2:J:61:VAL:HG11  | 2.00                     | 0.42              |
| 2:J:99:VAL:HG22  | 2:J:164:ILE:HG13 | 2.01                     | 0.42              |
| 2:J:128:LYS:NZ   | 1:K:157:ARG:NH1  | 2.64                     | 0.42              |
| 1:K:53:ASN:HB2   | 1:K:59:GLN:CG    | 2.49                     | 0.42              |
| 2:L:43:ARG:C     | 1:M:66:GLU:HB3   | 2.44                     | 0.42              |
| 2:L:58:ILE:HB    | 2:L:61:VAL:HG11  | 2.01                     | 0.42              |
| 2:L:98:PRO:HA    | 2:L:163:LEU:HD23 | 2.01                     | 0.42              |
| 2:N:90:ILE:HD12  | 2:N:131:VAL:HG21 | 2.00                     | 0.42              |
| 1:O:222:ARG:HA   | 1:O:225:ILE:CG1  | 2.48                     | 0.42              |
| 2:P:90:ILE:HD12  | 2:P:131:VAL:HG21 | 2.00                     | 0.42              |
| 2:P:124:THR:HG22 | 1:Q:157:ARG:CZ   | 2.48                     | 0.42              |
| 2:P:260:LEU:CD2  | 2:P:268:LEU:CD2  | 2.97                     | 0.42              |
| 2:R:58:ILE:HB    | 2:R:61:VAL:HG11  | 2.00                     | 0.42              |
| 2:R:99:VAL:HG22  | 2:R:164:ILE:HG13 | 2.01                     | 0.42              |
| 2:R:202:LYS:HE2  | 2:R:206:GLN:NE2  | 2.35                     | 0.42              |
| 2:R:248:ALA:HB2  | 2:R:251:LEU:HD12 | 2.01                     | 0.42              |
| 1:S:140:VAL:HG12 | 1:S:164:ILE:HA   | 2.00                     | 0.42              |
| 1:S:245:ASN:OD1  | 1:S:246:PRO:HD2  | 2.19                     | 0.42              |
| 2:T:98:PRO:HA    | 2:T:163:LEU:HD23 | 2.01                     | 0.42              |
| 1:U:142:LYS:NZ   | 2:V:140:ILE:HD13 | 2.33                     | 0.42              |
| 1:W:281:ASN:HB2  | 1:W:287:PHE:HD1  | 1.84                     | 0.42              |
| 2:B:28:TYR:HD2   | 2:B:57:LEU:HD23  | 1.81                     | 0.42              |
| 1:C:142:LYS:CG   | 2:D:140:ILE:HG21 | 2.48                     | 0.42              |
| 1:C:274:THR:HG1  | 1:C:277:ASN:CG   | 2.27                     | 0.42              |
| 2:D:150:VAL:HG21 | 2:D:170:LEU:HD21 | 2.00                     | 0.42              |
| 2:D:202:LYS:HE2  | 2:D:206:GLN:NE2  | 2.35                     | 0.42              |
| 1:E:120:MET:SD   | 1:E:124:LEU:HB2  | 2.59                     | 0.42              |
| 1:E:144:VAL:HG21 | 1:E:164:ILE:CA   | 2.50                     | 0.42              |
| 1:G:81:TYR:OH    | 1:G:121:TYR:HB2  | 2.18                     | 0.42              |
| 1:G:260:ILE:HG21 | 1:I:278:LEU:HD22 | 2.01                     | 0.42              |
| 2:H:189:ALA:HA   | 2:H:192:GLU:CB   | 2.49                     | 0.42              |
| 1:I:228:ALA:HB3  | 2:J:219:LYS:HZ1  | 1.83                     | 0.42              |
| 2:J:248:ALA:HB2  | 2:J:251:LEU:HD12 | 2.01                     | 0.42              |
| 1:K:164:ILE:HD12 | 1:K:184:ILE:CD1  | 2.36                     | 0.42              |
| 1:K:225:ILE:HD13 | 2:L:219:LYS:CB   | 2.46                     | 0.42              |
| 2:L:90:ILE:HD12  | 2:L:131:VAL:HG21 | 2.00                     | 0.42              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:M:57:GLY:HA3   | 2:N:35:ARG:NH1   | 2.34                     | 0.42              |
| 2:N:260:LEU:HD22 | 2:N:268:LEU:CG   | 2.50                     | 0.42              |
| 1:O:245:ASN:OD1  | 1:O:246:PRO:HD2  | 2.19                     | 0.42              |
| 1:O:267:SER:OG   | 2:P:252:SER:HA   | 2.19                     | 0.42              |
| 2:P:58:ILE:HB    | 2:P:61:VAL:HG11  | 2.01                     | 0.42              |
| 2:P:125:GLU:OE2  | 1:Q:162:LEU:HG   | 2.20                     | 0.42              |
| 2:P:262:ALA:CB   | 1:Q:275:ALA:HB2  | 2.49                     | 0.42              |
| 1:Q:140:VAL:HG12 | 1:Q:164:ILE:HA   | 2.01                     | 0.42              |
| 1:Q:261:SER:HA   | 1:Q:264:ILE:HB   | 2.01                     | 0.42              |
| 1:S:81:TYR:CE1   | 1:S:121:TYR:HB2  | 2.55                     | 0.42              |
| 1:S:151:SER:HB3  | 1:S:193:TYR:CD2  | 2.55                     | 0.42              |
| 1:S:252:ARG:HH11 | 2:T:242:GLU:HG2  | 1.79                     | 0.42              |
| 1:U:53:ASN:HB2   | 1:U:59:GLN:CG    | 2.49                     | 0.42              |
| 1:U:151:SER:HB3  | 1:U:193:TYR:CD2  | 2.55                     | 0.42              |
| 2:V:106:ILE:HA   | 2:V:110:ILE:HB   | 2.01                     | 0.42              |
| 2:V:134:PHE:HB2  | 2:V:139:LEU:CD2  | 2.44                     | 0.42              |
| 2:X:258:THR:CG2  | 2:X:259:TYR:N    | 2.80                     | 0.42              |
| 1:C:53:ASN:HB2   | 1:C:59:GLN:CG    | 2.49                     | 0.42              |
| 1:C:58:VAL:HG12  | 1:C:118:PRO:HB3  | 2.01                     | 0.42              |
| 1:C:110:SER:HB3  | 1:C:133:LEU:HD11 | 2.01                     | 0.42              |
| 1:C:261:SER:HA   | 1:C:264:ILE:HB   | 2.01                     | 0.42              |
| 2:D:240:LYS:CG   | 1:E:254:ILE:HG12 | 2.49                     | 0.42              |
| 1:E:151:SER:HB3  | 1:E:193:TYR:CD2  | 2.55                     | 0.42              |
| 2:F:58:ILE:HB    | 2:F:61:VAL:HG11  | 2.00                     | 0.42              |
| 1:G:58:VAL:CG1   | 1:G:118:PRO:HB3  | 2.49                     | 0.42              |
| 1:G:261:SER:HA   | 1:G:264:ILE:HB   | 2.01                     | 0.42              |
| 1:I:63:ILE:HD13  | 1:I:115:GLN:C    | 2.45                     | 0.42              |
| 1:I:110:SER:CB   | 1:I:133:LEU:HD11 | 2.49                     | 0.42              |
| 1:I:144:VAL:HG21 | 1:I:164:ILE:HA   | 2.01                     | 0.42              |
| 2:J:202:LYS:HE2  | 2:J:206:GLN:NE2  | 2.35                     | 0.42              |
| 1:K:110:SER:CB   | 1:K:133:LEU:HD11 | 2.49                     | 0.42              |
| 1:M:81:TYR:CE1   | 1:M:121:TYR:HB2  | 2.55                     | 0.42              |
| 1:M:133:LEU:O    | 1:M:134:PRO:C    | 2.61                     | 0.42              |
| 2:N:189:ALA:HA   | 2:N:192:GLU:CB   | 2.49                     | 0.42              |
| 1:O:140:VAL:HG12 | 1:O:164:ILE:HA   | 2.00                     | 0.42              |
| 2:P:41:ARG:CD    | 1:Q:42:THR:O     | 2.63                     | 0.42              |
| 1:Q:81:TYR:CE1   | 1:Q:121:TYR:HB2  | 2.55                     | 0.42              |
| 1:S:58:VAL:CG1   | 1:S:118:PRO:HB3  | 2.49                     | 0.42              |
| 1:S:81:TYR:CD1   | 1:S:120:MET:HE1  | 2.55                     | 0.42              |
| 1:S:110:SER:CB   | 1:S:133:LEU:HD11 | 2.49                     | 0.42              |
| 1:S:202:VAL:O    | 1:S:206:GLU:HG3  | 2.19                     | 0.42              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:V:90:ILE:CD1   | 2:V:173:LEU:HD13 | 2.50                     | 0.42              |
| 2:V:239:ARG:CG   | 1:W:251:LEU:CD1  | 2.91                     | 0.42              |
| 2:V:260:LEU:HD22 | 2:V:268:LEU:CG   | 2.50                     | 0.42              |
| 1:W:157:ARG:NH1  | 1:W:187:LEU:HB3  | 2.35                     | 0.42              |
| 2:X:98:PRO:HA    | 2:X:163:LEU:HD23 | 2.01                     | 0.42              |
| 2:X:248:ALA:HB2  | 2:X:251:LEU:HD12 | 2.01                     | 0.42              |
| 2:D:194:GLU:HA   | 2:D:197:ARG:HB3  | 2.00                     | 0.42              |
| 2:D:222:GLU:OE2  | 1:E:237:MET:HE2  | 2.19                     | 0.42              |
| 2:D:260:LEU:HD22 | 2:D:268:LEU:CG   | 2.50                     | 0.42              |
| 1:E:58:VAL:CG1   | 1:E:118:PRO:HB3  | 2.49                     | 0.42              |
| 1:E:81:TYR:CE1   | 1:E:121:TYR:HB2  | 2.55                     | 0.42              |
| 1:E:275:ALA:HB3  | 1:G:284:ASP:HB2  | 2.02                     | 0.42              |
| 2:F:98:PRO:HA    | 2:F:163:LEU:HD23 | 2.01                     | 0.42              |
| 2:F:202:LYS:HE2  | 2:F:206:GLN:NE2  | 2.35                     | 0.42              |
| 1:I:270:ARG:O    | 2:J:259:TYR:CB   | 2.68                     | 0.42              |
| 2:J:260:LEU:CD1  | 2:J:268:LEU:HD21 | 2.45                     | 0.42              |
| 2:L:204:GLU:HA   | 1:M:226:VAL:CG1  | 2.50                     | 0.42              |
| 1:M:117:LEU:HD23 | 1:M:120:MET:HE3  | 2.00                     | 0.42              |
| 1:M:144:VAL:HG21 | 1:M:164:ILE:CA   | 2.50                     | 0.42              |
| 1:M:144:VAL:HG21 | 1:M:164:ILE:HA   | 2.01                     | 0.42              |
| 1:M:281:ASN:HB2  | 1:M:287:PHE:HD1  | 1.84                     | 0.42              |
| 1:O:144:VAL:HG21 | 1:O:164:ILE:CA   | 2.50                     | 0.42              |
| 1:O:267:SER:HB2  | 2:P:252:SER:CB   | 2.50                     | 0.42              |
| 2:P:106:ILE:HA   | 2:P:110:ILE:HB   | 2.01                     | 0.42              |
| 2:P:189:ALA:HA   | 2:P:192:GLU:CB   | 2.49                     | 0.42              |
| 2:P:202:LYS:HE2  | 2:P:206:GLN:NE2  | 2.35                     | 0.42              |
| 1:Q:58:VAL:HG12  | 1:Q:118:PRO:HB3  | 2.01                     | 0.42              |
| 1:Q:157:ARG:NH1  | 1:Q:187:LEU:HB3  | 2.35                     | 0.42              |
| 1:Q:260:ILE:CG1  | 2:R:249:TYR:HD1  | 2.33                     | 0.42              |
| 1:S:252:ARG:NE   | 2:T:245:GLU:OE2  | 2.49                     | 0.42              |
| 1:S:252:ARG:CD   | 2:T:245:GLU:OE2  | 2.68                     | 0.42              |
| 2:T:99:VAL:HG22  | 2:T:164:ILE:HG13 | 2.01                     | 0.42              |
| 1:U:261:SER:HA   | 1:U:264:ILE:HB   | 2.01                     | 0.42              |
| 2:V:202:LYS:HE2  | 2:V:206:GLN:NE2  | 2.35                     | 0.42              |
| 1:W:261:SER:HA   | 1:W:264:ILE:HB   | 2.01                     | 0.42              |
| 2:X:260:LEU:HD22 | 2:X:268:LEU:CG   | 2.50                     | 0.42              |
| 1:A:63:ILE:HD13  | 1:A:115:GLN:C    | 2.45                     | 0.42              |
| 1:A:200:LYS:HB2  | 2:B:194:GLU:C    | 2.44                     | 0.42              |
| 2:B:150:VAL:HG21 | 2:B:170:LEU:HD21 | 2.00                     | 0.42              |
| 2:B:202:LYS:HE2  | 2:B:206:GLN:NE2  | 2.35                     | 0.42              |
| 1:C:131:ARG:HA   | 2:D:95:LEU:HD21  | 2.01                     | 0.42              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:D:58:ILE:HB    | 2:D:61:VAL:HG11  | 2.00                     | 0.42              |
| 2:D:99:VAL:HG22  | 2:D:164:ILE:HG13 | 2.02                     | 0.42              |
| 2:D:106:ILE:HA   | 2:D:110:ILE:HB   | 2.01                     | 0.42              |
| 1:G:245:ASN:OD1  | 1:G:246:PRO:HD2  | 2.19                     | 0.42              |
| 2:H:240:LYS:C    | 2:H:241:LEU:HG   | 2.43                     | 0.42              |
| 1:I:252:ARG:HG2  | 2:J:238:LEU:HD12 | 2.00                     | 0.42              |
| 1:I:281:ASN:HB2  | 1:I:287:PHE:HD1  | 1.84                     | 0.42              |
| 2:J:236:ILE:HA   | 1:K:251:LEU:HD22 | 2.00                     | 0.42              |
| 1:K:58:VAL:CG1   | 1:K:118:PRO:HB3  | 2.49                     | 0.42              |
| 1:K:81:TYR:CD1   | 1:K:120:MET:HE1  | 2.55                     | 0.42              |
| 1:K:144:VAL:HG21 | 1:K:164:ILE:HA   | 2.01                     | 0.42              |
| 1:K:281:ASN:HB2  | 1:K:287:PHE:HD1  | 1.84                     | 0.42              |
| 2:L:197:ARG:N    | 1:M:219:GLN:NE2  | 2.68                     | 0.42              |
| 1:O:110:SER:CB   | 1:O:133:LEU:HD11 | 2.49                     | 0.42              |
| 2:P:90:ILE:CD1   | 2:P:173:LEU:HD13 | 2.50                     | 0.42              |
| 2:P:99:VAL:HG22  | 2:P:164:ILE:HG13 | 2.01                     | 0.42              |
| 2:P:128:LYS:HD2  | 1:Q:157:ARG:HD3  | 2.02                     | 0.42              |
| 2:P:260:LEU:HD22 | 2:P:268:LEU:CG   | 2.50                     | 0.42              |
| 1:Q:102:VAL:HG21 | 1:Q:153:LEU:CD1  | 2.49                     | 0.42              |
| 1:Q:245:ASN:OD1  | 1:Q:246:PRO:HD2  | 2.19                     | 0.42              |
| 2:R:204:GLU:HG3  | 1:S:226:VAL:HG21 | 2.01                     | 0.42              |
| 2:R:270:LEU:H    | 2:T:269:GLN:HB2  | 1.85                     | 0.42              |
| 1:S:102:VAL:HG21 | 1:S:153:LEU:CD1  | 2.49                     | 0.42              |
| 2:T:41:ARG:CD    | 1:U:44:GLU:HA    | 2.50                     | 0.42              |
| 1:U:50:ILE:HA    | 1:U:64:LEU:CD1   | 2.48                     | 0.42              |
| 1:U:58:VAL:CG1   | 1:U:118:PRO:HB3  | 2.49                     | 0.42              |
| 1:U:157:ARG:NH1  | 1:U:187:LEU:HB3  | 2.35                     | 0.42              |
| 1:U:246:PRO:CD   | 1:W:294:LEU:CB   | 2.98                     | 0.42              |
| 2:V:189:ALA:HA   | 2:V:192:GLU:CB   | 2.49                     | 0.42              |
| 2:V:250:GLN:CD   | 1:W:262:LYS:HG2  | 2.45                     | 0.42              |
| 1:W:81:TYR:CD1   | 1:W:120:MET:HE1  | 2.55                     | 0.42              |
| 2:X:260:LEU:HD13 | 2:X:268:LEU:CD2  | 2.45                     | 0.42              |
| 1:A:81:TYR:CD1   | 1:A:120:MET:HE1  | 2.55                     | 0.42              |
| 1:A:84:ARG:HA    | 2:X:109:SER:CA   | 2.39                     | 0.42              |
| 2:B:204:GLU:HG2  | 1:C:226:VAL:CG2  | 2.35                     | 0.42              |
| 2:B:221:ALA:O    | 2:B:222:GLU:C    | 2.63                     | 0.42              |
| 2:B:272:GLN:NE2  | 2:D:272:GLN:NE2  | 2.67                     | 0.42              |
| 1:C:81:TYR:CE1   | 1:C:121:TYR:HB2  | 2.55                     | 0.42              |
| 1:C:110:SER:CB   | 1:C:133:LEU:HD11 | 2.49                     | 0.42              |
| 1:C:151:SER:HB3  | 1:C:193:TYR:CD2  | 2.55                     | 0.42              |
| 2:D:182:ALA:HB1  | 1:E:205:GLN:CG   | 2.50                     | 0.42              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:157:ARG:NH1  | 1:E:187:LEU:HB3  | 2.35                     | 0.42              |
| 1:G:110:SER:CB   | 1:G:133:LEU:HD11 | 2.49                     | 0.42              |
| 1:G:157:ARG:NH1  | 1:G:187:LEU:HB3  | 2.35                     | 0.42              |
| 2:H:99:VAL:HG22  | 2:H:164:ILE:HG13 | 2.01                     | 0.42              |
| 2:H:218:SER:OG   | 1:I:237:MET:HE1  | 2.19                     | 0.42              |
| 2:L:90:ILE:CD1   | 2:L:173:LEU:HD13 | 2.50                     | 0.42              |
| 1:M:157:ARG:NH1  | 1:M:187:LEU:HB3  | 2.35                     | 0.42              |
| 1:M:202:VAL:O    | 1:M:206:GLU:HG3  | 2.19                     | 0.42              |
| 2:N:58:ILE:HB    | 2:N:61:VAL:HG11  | 2.01                     | 0.42              |
| 2:N:99:VAL:HG22  | 2:N:164:ILE:HG13 | 2.02                     | 0.42              |
| 2:N:202:LYS:HE2  | 2:N:206:GLN:NE2  | 2.35                     | 0.42              |
| 2:N:258:THR:CG2  | 2:N:259:TYR:N    | 2.80                     | 0.42              |
| 1:O:63:ILE:HD13  | 1:O:115:GLN:C    | 2.45                     | 0.42              |
| 1:O:157:ARG:NH1  | 1:O:187:LEU:HB3  | 2.35                     | 0.42              |
| 1:Q:144:VAL:HG21 | 1:Q:164:ILE:CA   | 2.50                     | 0.42              |
| 2:R:193:ALA:CB   | 1:S:219:GLN:NE2  | 2.74                     | 0.42              |
| 1:S:63:ILE:HD13  | 1:S:115:GLN:C    | 2.45                     | 0.42              |
| 1:S:99:LEU:HD22  | 2:T:140:ILE:HD13 | 1.99                     | 0.42              |
| 1:S:144:VAL:HG21 | 1:S:164:ILE:CA   | 2.50                     | 0.42              |
| 2:T:248:ALA:HB2  | 2:T:251:LEU:HD12 | 2.01                     | 0.42              |
| 2:T:260:LEU:HD22 | 2:T:268:LEU:CG   | 2.50                     | 0.42              |
| 1:U:81:TYR:CE1   | 1:U:121:TYR:HB2  | 2.55                     | 0.42              |
| 2:V:28:TYR:H     | 2:V:54:THR:HG23  | 1.85                     | 0.42              |
| 2:V:257:ILE:HG12 | 1:W:271:ILE:HB   | 1.96                     | 0.42              |
| 2:X:28:TYR:H     | 2:X:54:THR:HG23  | 1.85                     | 0.42              |
| 1:A:50:ILE:HA    | 1:A:64:LEU:CD1   | 2.48                     | 0.42              |
| 1:A:291:SER:CB   | 1:W:253:LYS:HE2  | 2.47                     | 0.42              |
| 2:B:28:TYR:H     | 2:B:54:THR:HG23  | 1.85                     | 0.42              |
| 1:E:53:ASN:HB2   | 1:E:59:GLN:CG    | 2.49                     | 0.42              |
| 1:E:63:ILE:HD13  | 1:E:115:GLN:C    | 2.45                     | 0.42              |
| 1:E:110:SER:CB   | 1:E:133:LEU:HD11 | 2.49                     | 0.42              |
| 1:E:261:SER:HA   | 1:E:264:ILE:HB   | 2.01                     | 0.42              |
| 2:F:189:ALA:HA   | 2:F:192:GLU:CB   | 2.49                     | 0.42              |
| 2:F:218:SER:HB3  | 1:G:237:MET:HE1  | 2.01                     | 0.42              |
| 1:G:63:ILE:HD13  | 1:G:115:GLN:C    | 2.45                     | 0.42              |
| 2:H:28:TYR:HD2   | 2:H:57:LEU:HD23  | 1.81                     | 0.42              |
| 2:H:106:ILE:HA   | 2:H:110:ILE:HB   | 2.01                     | 0.42              |
| 1:I:81:TYR:CD1   | 1:I:120:MET:HE1  | 2.55                     | 0.42              |
| 2:J:92:LEU:CD2   | 2:J:123:THR:HG23 | 2.50                     | 0.42              |
| 2:J:248:ALA:HA   | 2:J:251:LEU:HB2  | 2.02                     | 0.42              |
| 1:K:238:LEU:O    | 2:L:234:GLY:HA3  | 2.18                     | 0.42              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:L:202:LYS:HE2  | 2:L:206:GLN:NE2  | 2.35                     | 0.42              |
| 1:M:81:TYR:CD1   | 1:M:120:MET:HE1  | 2.55                     | 0.42              |
| 1:M:261:SER:HA   | 1:M:264:ILE:HB   | 2.01                     | 0.42              |
| 2:P:43:ARG:HB2   | 1:Q:67:GLY:O     | 2.20                     | 0.42              |
| 2:P:85:LEU:HB2   | 1:Q:197:VAL:HG13 | 1.99                     | 0.42              |
| 2:P:109:SER:CA   | 1:Q:85:ALA:HB2   | 2.50                     | 0.42              |
| 2:P:111:GLY:CA   | 1:Q:85:ALA:HB3   | 2.50                     | 0.42              |
| 1:Q:238:LEU:CB   | 2:R:235:LEU:HD22 | 2.49                     | 0.42              |
| 1:S:157:ARG:NH1  | 1:S:187:LEU:HB3  | 2.35                     | 0.42              |
| 1:S:164:ILE:HD12 | 1:S:184:ILE:CD1  | 2.36                     | 0.42              |
| 1:W:110:SER:HB3  | 1:W:133:LEU:HD11 | 2.01                     | 0.42              |
| 1:W:144:VAL:HG21 | 1:W:164:ILE:CA   | 2.50                     | 0.42              |
| 1:W:245:ASN:OD1  | 1:W:246:PRO:HD2  | 2.19                     | 0.42              |
| 2:X:221:ALA:O    | 2:X:222:GLU:C    | 2.63                     | 0.42              |
| 1:A:58:VAL:HG12  | 1:A:118:PRO:HB3  | 2.01                     | 0.42              |
| 2:B:90:ILE:CD1   | 2:B:173:LEU:HD13 | 2.50                     | 0.42              |
| 2:B:260:LEU:HD22 | 2:B:268:LEU:CG   | 2.50                     | 0.42              |
| 1:C:63:ILE:HD13  | 1:C:115:GLN:C    | 2.45                     | 0.42              |
| 1:C:131:ARG:CA   | 2:D:95:LEU:HD22  | 2.49                     | 0.42              |
| 1:C:131:ARG:NE   | 2:D:71:SER:O     | 2.53                     | 0.42              |
| 1:C:144:VAL:HG21 | 1:C:164:ILE:CA   | 2.50                     | 0.42              |
| 2:D:90:ILE:CD1   | 2:D:173:LEU:HD13 | 2.50                     | 0.42              |
| 2:D:92:LEU:CD2   | 2:D:123:THR:HG23 | 2.50                     | 0.42              |
| 1:E:50:ILE:HA    | 1:E:64:LEU:CD1   | 2.48                     | 0.42              |
| 1:E:95:GLY:H     | 1:E:142:LYS:HE2  | 1.85                     | 0.42              |
| 1:E:289:ARG:HD2  | 1:E:290:GLY:N    | 2.35                     | 0.42              |
| 2:F:91:THR:HB    | 2:F:171:THR:HB   | 2.02                     | 0.42              |
| 2:F:235:LEU:HD12 | 2:F:235:LEU:HA   | 1.91                     | 0.42              |
| 2:F:260:LEU:HD22 | 2:F:268:LEU:CG   | 2.50                     | 0.42              |
| 1:G:202:VAL:O    | 1:G:206:GLU:HG3  | 2.19                     | 0.42              |
| 1:G:281:ASN:HB2  | 1:G:287:PHE:HD1  | 1.84                     | 0.42              |
| 2:H:248:ALA:HB2  | 2:H:251:LEU:HD12 | 2.01                     | 0.42              |
| 1:I:50:ILE:HA    | 1:I:64:LEU:CD1   | 2.48                     | 0.42              |
| 1:I:144:VAL:HG21 | 1:I:164:ILE:CA   | 2.50                     | 0.42              |
| 1:I:260:ILE:HG21 | 1:K:278:LEU:HD22 | 2.02                     | 0.42              |
| 1:K:151:SER:HB3  | 1:K:193:TYR:CD2  | 2.55                     | 0.42              |
| 1:K:157:ARG:NH1  | 1:K:187:LEU:HB3  | 2.35                     | 0.42              |
| 1:M:54:ARG:HD3   | 2:N:54:THR:HB    | 2.02                     | 0.42              |
| 1:M:140:VAL:HG12 | 1:M:164:ILE:HA   | 2.00                     | 0.42              |
| 2:N:90:ILE:CD1   | 2:N:173:LEU:HD13 | 2.50                     | 0.42              |
| 1:O:71:ARG:O     | 1:O:71:ARG:HG3   | 2.20                     | 0.42              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:95:GLY:H     | 1:O:142:LYS:HE2  | 1.85                     | 0.42              |
| 2:P:41:ARG:CZ    | 1:Q:80:ILE:HG21  | 2.49                     | 0.42              |
| 1:Q:47:HIS:CG    | 1:Q:81:TYR:O     | 2.73                     | 0.42              |
| 2:R:259:TYR:CE2  | 1:S:281:ASN:CA   | 3.02                     | 0.42              |
| 2:R:259:TYR:HE2  | 1:S:281:ASN:CG   | 2.22                     | 0.42              |
| 2:R:260:LEU:CD2  | 2:R:268:LEU:CD2  | 2.98                     | 0.42              |
| 2:R:261:PRO:CB   | 1:S:284:ASP:OD2  | 2.68                     | 0.42              |
| 1:S:242:LEU:HD13 | 2:T:238:LEU:CG   | 2.50                     | 0.42              |
| 1:S:272:TYR:O    | 2:T:259:TYR:CA   | 2.68                     | 0.42              |
| 1:S:281:ASN:HB2  | 1:S:287:PHE:HD1  | 1.84                     | 0.42              |
| 2:T:202:LYS:HE2  | 2:T:206:GLN:NE2  | 2.35                     | 0.42              |
| 1:U:281:ASN:HB2  | 1:U:287:PHE:HD1  | 1.84                     | 0.42              |
| 2:V:43:ARG:NE    | 1:W:67:GLY:HA2   | 2.35                     | 0.42              |
| 1:W:94:THR:HG21  | 1:W:145:VAL:CB   | 2.44                     | 0.42              |
| 1:W:110:SER:CB   | 1:W:133:LEU:HD11 | 2.49                     | 0.42              |
| 1:W:144:VAL:HG21 | 1:W:164:ILE:HA   | 2.01                     | 0.42              |
| 1:A:81:TYR:CE1   | 1:A:121:TYR:HB2  | 2.55                     | 0.41              |
| 1:A:144:VAL:HG21 | 1:A:164:ILE:CA   | 2.50                     | 0.41              |
| 2:B:200:VAL:HG22 | 1:C:223:GLN:N    | 2.35                     | 0.41              |
| 1:C:81:TYR:CD1   | 1:C:120:MET:HE1  | 2.55                     | 0.41              |
| 1:C:131:ARG:CD   | 2:D:71:SER:O     | 2.68                     | 0.41              |
| 1:C:272:TYR:CD1  | 2:D:259:TYR:O    | 2.73                     | 0.41              |
| 2:D:43:ARG:CG    | 2:D:43:ARG:HB2   | 2.24                     | 0.41              |
| 2:D:182:ALA:CB   | 1:E:205:GLN:HG3  | 2.50                     | 0.41              |
| 2:D:240:LYS:HG3  | 1:E:254:ILE:HG12 | 2.02                     | 0.41              |
| 1:E:58:VAL:HG12  | 1:E:118:PRO:HB3  | 2.01                     | 0.41              |
| 1:G:144:VAL:HG21 | 1:G:164:ILE:CA   | 2.50                     | 0.41              |
| 2:H:224:ILE:HG21 | 1:I:251:LEU:HG   | 2.02                     | 0.41              |
| 2:H:248:ALA:HA   | 2:H:251:LEU:HB2  | 2.02                     | 0.41              |
| 2:J:37:VAL:HG11  | 2:J:45:VAL:HG13  | 2.02                     | 0.41              |
| 1:K:232:ALA:CB   | 2:L:224:ILE:HG12 | 2.50                     | 0.41              |
| 2:L:248:ALA:HA   | 2:L:251:LEU:HB2  | 2.02                     | 0.41              |
| 1:M:58:VAL:HB    | 1:M:122:GLN:HG3  | 2.02                     | 0.41              |
| 2:N:248:ALA:HB2  | 2:N:251:LEU:HD12 | 2.01                     | 0.41              |
| 2:P:98:PRO:HA    | 2:P:163:LEU:HD23 | 2.01                     | 0.41              |
| 2:R:37:VAL:HG11  | 2:R:45:VAL:HG13  | 2.02                     | 0.41              |
| 2:R:38:ILE:CG2   | 2:R:40:ASP:HB2   | 2.50                     | 0.41              |
| 2:R:150:VAL:HG21 | 2:R:170:LEU:HD21 | 2.00                     | 0.41              |
| 1:S:144:VAL:HG21 | 1:S:164:ILE:HA   | 2.01                     | 0.41              |
| 2:V:150:VAL:HG21 | 2:V:170:LEU:HD21 | 2.00                     | 0.41              |
| 1:W:58:VAL:HG12  | 1:W:118:PRO:HB3  | 2.00                     | 0.41              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:X:106:ILE:HA   | 2:X:110:ILE:HB   | 2.01                     | 0.41              |
| 2:X:189:ALA:HA   | 2:X:192:GLU:CB   | 2.49                     | 0.41              |
| 1:A:82:ASP:OD2   | 1:A:86:ARG:NE    | 2.54                     | 0.41              |
| 1:A:110:SER:HB3  | 1:A:133:LEU:HD11 | 2.01                     | 0.41              |
| 1:A:200:LYS:HD2  | 2:B:194:GLU:CB   | 2.49                     | 0.41              |
| 1:A:207:ALA:HA   | 2:B:201:GLU:O    | 2.20                     | 0.41              |
| 1:A:281:ASN:HB2  | 1:A:287:PHE:HD1  | 1.84                     | 0.41              |
| 2:B:272:GLN:HA   | 2:D:271:PRO:HA   | 2.01                     | 0.41              |
| 1:C:47:HIS:CG    | 1:C:81:TYR:O     | 2.73                     | 0.41              |
| 1:C:82:ASP:OD2   | 1:C:86:ARG:NE    | 2.54                     | 0.41              |
| 1:C:144:VAL:HG21 | 1:C:164:ILE:HA   | 2.01                     | 0.41              |
| 1:E:245:ASN:OD1  | 1:E:246:PRO:HD2  | 2.19                     | 0.41              |
| 1:E:274:THR:HG23 | 1:G:280:LEU:O    | 2.20                     | 0.41              |
| 2:F:37:VAL:HG11  | 2:F:45:VAL:HG13  | 2.02                     | 0.41              |
| 2:F:106:ILE:HA   | 2:F:110:ILE:HB   | 2.01                     | 0.41              |
| 1:G:53:ASN:HB2   | 1:G:59:GLN:CG    | 2.49                     | 0.41              |
| 1:G:71:ARG:O     | 1:G:71:ARG:HG3   | 2.20                     | 0.41              |
| 1:G:82:ASP:OD2   | 1:G:86:ARG:NE    | 2.54                     | 0.41              |
| 2:H:49:VAL:HG21  | 2:H:101:SER:CA   | 2.43                     | 0.41              |
| 2:J:90:ILE:CD1   | 2:J:173:LEU:HD13 | 2.50                     | 0.41              |
| 2:J:91:THR:HB    | 2:J:171:THR:HB   | 2.03                     | 0.41              |
| 2:J:235:LEU:HD12 | 2:J:235:LEU:HA   | 1.91                     | 0.41              |
| 1:K:110:SER:HB3  | 1:K:133:LEU:HD11 | 2.01                     | 0.41              |
| 2:L:91:THR:HB    | 2:L:171:THR:HB   | 2.03                     | 0.41              |
| 2:L:196:ALA:HB1  | 1:M:220:GLU:CG   | 2.47                     | 0.41              |
| 2:L:221:ALA:O    | 2:L:222:GLU:C    | 2.63                     | 0.41              |
| 1:M:95:GLY:H     | 1:M:142:LYS:HE2  | 1.85                     | 0.41              |
| 1:M:151:SER:HB3  | 1:M:193:TYR:CD2  | 2.55                     | 0.41              |
| 1:M:289:ARG:HD2  | 1:M:290:GLY:N    | 2.35                     | 0.41              |
| 2:N:28:TYR:H     | 2:N:54:THR:HG23  | 1.85                     | 0.41              |
| 1:O:81:TYR:CE1   | 1:O:121:TYR:HB2  | 2.55                     | 0.41              |
| 1:O:82:ASP:OD2   | 1:O:86:ARG:NE    | 2.54                     | 0.41              |
| 2:P:92:LEU:CD2   | 2:P:123:THR:HG23 | 2.50                     | 0.41              |
| 2:P:117:ARG:HG2  | 1:Q:107:ARG:NE   | 2.34                     | 0.41              |
| 2:P:248:ALA:HB2  | 2:P:251:LEU:HD12 | 2.01                     | 0.41              |
| 2:R:106:ILE:HA   | 2:R:110:ILE:HB   | 2.01                     | 0.41              |
| 1:S:47:HIS:CG    | 1:S:81:TYR:O     | 2.73                     | 0.41              |
| 1:S:104:ILE:HG22 | 1:S:141:LEU:HD22 | 2.02                     | 0.41              |
| 2:T:38:ILE:CG2   | 2:T:40:ASP:HB2   | 2.50                     | 0.41              |
| 2:T:90:ILE:CD1   | 2:T:173:LEU:HD13 | 2.50                     | 0.41              |
| 1:U:58:VAL:HB    | 1:U:122:GLN:HG3  | 2.03                     | 0.41              |

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| Atom-1          | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|-----------------|------------------|--------------------------|-------------------|
| 1:U:63:ILE:HD13 | 1:U:115:GLN:C    | 2.45                     | 0.41              |
| 1:U:95:GLY:H    | 1:U:142:LYS:HE2  | 1.85                     | 0.41              |
| 1:U:135:SER:HB2 | 2:V:93:ARG:CD    | 2.51                     | 0.41              |
| 2:V:37:VAL:HG11 | 2:V:45:VAL:HG13  | 2.02                     | 0.41              |
| 2:V:248:ALA:HB2 | 2:V:251:LEU:HD12 | 2.01                     | 0.41              |
| 2:V:259:TYR:HA  | 1:W:273:LEU:H    | 1.84                     | 0.41              |
| 1:W:151:SER:HB3 | 1:W:193:TYR:CD2  | 2.55                     | 0.41              |
| 2:X:37:VAL:HG11 | 2:X:45:VAL:HG13  | 2.02                     | 0.41              |
| 2:X:91:THR:HB   | 2:X:171:THR:HB   | 2.02                     | 0.41              |
| 2:X:92:LEU:CD2  | 2:X:123:THR:HG23 | 2.50                     | 0.41              |
| 2:X:99:VAL:HG22 | 2:X:164:ILE:HG13 | 2.02                     | 0.41              |
| 2:X:202:LYS:HE2 | 2:X:206:GLN:NE2  | 2.35                     | 0.41              |
| 1:A:98:ASP:O    | 1:A:99:LEU:HB2   | 2.21                     | 0.41              |
| 1:A:151:SER:HB3 | 1:A:193:TYR:CD2  | 2.55                     | 0.41              |
| 1:A:157:ARG:NH1 | 1:A:187:LEU:HB3  | 2.35                     | 0.41              |
| 1:A:289:ARG:HD2 | 1:A:290:GLY:N    | 2.35                     | 0.41              |
| 1:C:58:VAL:CG1  | 1:C:118:PRO:HB3  | 2.49                     | 0.41              |
| 1:C:95:GLY:H    | 1:C:142:LYS:HE2  | 1.85                     | 0.41              |
| 2:D:236:ILE:N   | 1:E:251:LEU:CD2  | 2.83                     | 0.41              |
| 2:F:28:TYR:H    | 2:F:54:THR:HG23  | 1.85                     | 0.41              |
| 2:F:43:ARG:CB   | 2:F:43:ARG:HG2   | 2.22                     | 0.41              |
| 2:F:92:LEU:CD2  | 2:F:123:THR:HG23 | 2.50                     | 0.41              |
| 2:F:221:ALA:O   | 2:F:222:GLU:C    | 2.63                     | 0.41              |
| 1:G:47:HIS:CG   | 1:G:81:TYR:O     | 2.73                     | 0.41              |
| 1:G:81:TYR:CD1  | 1:G:120:MET:HE1  | 2.55                     | 0.41              |
| 2:H:58:ILE:HB   | 2:H:61:VAL:CG1   | 2.50                     | 0.41              |
| 1:I:82:ASP:OD2  | 1:I:86:ARG:NE    | 2.54                     | 0.41              |
| 1:I:151:SER:HB3 | 1:I:193:TYR:CD2  | 2.55                     | 0.41              |
| 1:K:63:ILE:HD13 | 1:K:115:GLN:C    | 2.45                     | 0.41              |
| 2:L:28:TYR:H    | 2:L:54:THR:HG23  | 1.85                     | 0.41              |
| 2:L:37:VAL:HG11 | 2:L:45:VAL:HG13  | 2.02                     | 0.41              |
| 1:M:47:HIS:CG   | 1:M:81:TYR:O     | 2.73                     | 0.41              |
| 1:M:121:TYR:CD2 | 2:N:32:ALA:CB    | 2.99                     | 0.41              |
| 2:P:248:ALA:HA  | 2:P:251:LEU:HB2  | 2.03                     | 0.41              |
| 1:Q:151:SER:HB3 | 1:Q:193:TYR:CD2  | 2.55                     | 0.41              |
| 1:Q:253:LYS:HE3 | 2:R:241:LEU:HD13 | 2.00                     | 0.41              |
| 1:S:58:VAL:HB   | 1:S:122:GLN:HG3  | 2.02                     | 0.41              |
| 1:S:236:LYS:O   | 1:S:240:GLU:OE1  | 2.39                     | 0.41              |
| 2:T:39:PHE:O    | 2:T:62:GLN:HA    | 2.21                     | 0.41              |
| 1:U:110:SER:CB  | 1:U:133:LEU:HD11 | 2.49                     | 0.41              |
| 1:U:200:LYS:O   | 2:V:198:PHE:HD2  | 2.03                     | 0.41              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:W:63:ILE:HD13  | 1:W:115:GLN:C    | 2.45                     | 0.41              |
| 1:W:98:ASP:O     | 1:W:99:LEU:HB2   | 2.20                     | 0.41              |
| 1:A:241:ALA:HB3  | 1:A:242:LEU:HG   | 2.03                     | 0.41              |
| 1:A:283:GLN:H    | 1:W:277:ASN:ND2  | 2.17                     | 0.41              |
| 2:B:99:VAL:HG22  | 2:B:164:ILE:HG13 | 2.01                     | 0.41              |
| 2:B:189:ALA:HA   | 2:B:192:GLU:CB   | 2.49                     | 0.41              |
| 1:C:58:VAL:HB    | 1:C:122:GLN:HG3  | 2.02                     | 0.41              |
| 1:C:71:ARG:O     | 1:C:71:ARG:HG3   | 2.20                     | 0.41              |
| 2:D:39:PHE:O     | 2:D:62:GLN:HA    | 2.21                     | 0.41              |
| 2:D:221:ALA:O    | 2:D:222:GLU:C    | 2.63                     | 0.41              |
| 2:D:240:LYS:C    | 2:D:241:LEU:HG   | 2.43                     | 0.41              |
| 1:E:58:VAL:HB    | 1:E:122:GLN:HG3  | 2.02                     | 0.41              |
| 2:F:270:LEU:HD13 | 1:G:272:TYR:CE2  | 2.56                     | 0.41              |
| 1:G:151:SER:HB3  | 1:G:193:TYR:CD2  | 2.55                     | 0.41              |
| 2:H:92:LEU:CD2   | 2:H:123:THR:HG23 | 2.50                     | 0.41              |
| 1:I:81:TYR:CE1   | 1:I:121:TYR:HB2  | 2.55                     | 0.41              |
| 1:I:95:GLY:H     | 1:I:142:LYS:HE2  | 1.85                     | 0.41              |
| 1:I:98:ASP:O     | 1:I:99:LEU:HB2   | 2.21                     | 0.41              |
| 2:J:106:ILE:HA   | 2:J:110:ILE:HB   | 2.01                     | 0.41              |
| 1:K:81:TYR:CE1   | 1:K:121:TYR:HB2  | 2.55                     | 0.41              |
| 1:K:98:ASP:O     | 1:K:99:LEU:HB2   | 2.21                     | 0.41              |
| 2:L:248:ALA:HB2  | 2:L:251:LEU:HD12 | 2.01                     | 0.41              |
| 1:M:63:ILE:HD13  | 1:M:115:GLN:C    | 2.45                     | 0.41              |
| 1:M:98:ASP:O     | 1:M:99:LEU:HB2   | 2.21                     | 0.41              |
| 1:O:47:HIS:CG    | 1:O:81:TYR:O     | 2.73                     | 0.41              |
| 1:O:90:ILE:HG22  | 1:O:138:ASN:OD1  | 2.21                     | 0.41              |
| 2:P:67:PHE:HZ    | 2:P:107:PHE:CD1  | 2.39                     | 0.41              |
| 2:P:91:THR:HB    | 2:P:171:THR:HB   | 2.03                     | 0.41              |
| 1:Q:110:SER:CB   | 1:Q:133:LEU:HD11 | 2.49                     | 0.41              |
| 1:Q:236:LYS:O    | 1:Q:240:GLU:OE1  | 2.39                     | 0.41              |
| 1:S:82:ASP:OD2   | 1:S:86:ARG:NE    | 2.54                     | 0.41              |
| 1:S:260:ILE:HG12 | 2:T:248:ALA:CB   | 2.36                     | 0.41              |
| 2:T:248:ALA:HA   | 2:T:251:LEU:HB2  | 2.02                     | 0.41              |
| 1:U:81:TYR:CD1   | 1:U:120:MET:HE1  | 2.55                     | 0.41              |
| 1:U:267:SER:OG   | 2:V:252:SER:HA   | 2.20                     | 0.41              |
| 2:V:221:ALA:HB1  | 1:W:242:LEU:CD1  | 2.50                     | 0.41              |
| 1:W:58:VAL:HB    | 1:W:122:GLN:HG3  | 2.02                     | 0.41              |
| 1:W:71:ARG:HG3   | 1:W:71:ARG:O     | 2.20                     | 0.41              |
| 1:W:236:LYS:O    | 1:W:240:GLU:OE1  | 2.39                     | 0.41              |
| 2:B:240:LYS:NZ   | 1:E:282:LEU:HD22 | 2.35                     | 0.41              |
| 1:C:289:ARG:HD2  | 1:C:290:GLY:N    | 2.35                     | 0.41              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:D:28:TYR:H     | 2:D:54:THR:HG23  | 1.85                     | 0.41              |
| 2:D:38:ILE:CG2   | 2:D:40:ASP:HB2   | 2.50                     | 0.41              |
| 2:D:189:ALA:HA   | 2:D:192:GLU:CB   | 2.49                     | 0.41              |
| 2:D:247:ILE:HA   | 1:E:261:SER:O    | 2.20                     | 0.41              |
| 1:E:82:ASP:OD2   | 1:E:86:ARG:NE    | 2.54                     | 0.41              |
| 1:E:110:SER:HB3  | 1:E:133:LEU:HD11 | 2.01                     | 0.41              |
| 1:E:155:THR:OG1  | 1:E:156:GLN:HG3  | 2.21                     | 0.41              |
| 2:F:268:LEU:HD13 | 2:H:261:PRO:CD   | 2.50                     | 0.41              |
| 1:G:110:SER:HB3  | 1:G:133:LEU:HD11 | 2.01                     | 0.41              |
| 2:H:38:ILE:CG2   | 2:H:40:ASP:HB2   | 2.50                     | 0.41              |
| 2:H:90:ILE:HA    | 2:H:172:HIS:O    | 2.21                     | 0.41              |
| 2:H:260:LEU:HD22 | 2:H:268:LEU:CG   | 2.50                     | 0.41              |
| 1:I:41:PHE:CG    | 1:I:78:PRO:HB3   | 2.56                     | 0.41              |
| 1:I:71:ARG:O     | 1:I:71:ARG:HG3   | 2.20                     | 0.41              |
| 2:J:58:ILE:HB    | 2:J:61:VAL:CG1   | 2.50                     | 0.41              |
| 2:J:260:LEU:CD2  | 2:J:268:LEU:CD2  | 2.97                     | 0.41              |
| 1:K:95:GLY:H     | 1:K:142:LYS:HE2  | 1.85                     | 0.41              |
| 1:K:104:ILE:HG22 | 1:K:141:LEU:HD22 | 2.02                     | 0.41              |
| 1:K:289:ARG:HD2  | 1:K:290:GLY:N    | 2.35                     | 0.41              |
| 2:L:140:ILE:CG1  | 2:L:173:LEU:HD21 | 2.51                     | 0.41              |
| 2:L:260:LEU:CD1  | 2:L:268:LEU:HD21 | 2.45                     | 0.41              |
| 1:M:90:ILE:HG22  | 1:M:138:ASN:OD1  | 2.21                     | 0.41              |
| 2:N:58:ILE:HB    | 2:N:61:VAL:CG1   | 2.51                     | 0.41              |
| 1:O:151:SER:HB3  | 1:O:193:TYR:CD2  | 2.55                     | 0.41              |
| 1:O:236:LYS:O    | 1:O:240:GLU:OE1  | 2.39                     | 0.41              |
| 2:P:46:GLN:N     | 1:Q:66:GLU:OE1   | 2.49                     | 0.41              |
| 1:Q:81:TYR:CD1   | 1:Q:120:MET:HE1  | 2.55                     | 0.41              |
| 2:R:91:THR:HB    | 2:R:171:THR:HB   | 2.03                     | 0.41              |
| 1:S:95:GLY:H     | 1:S:142:LYS:HE2  | 1.85                     | 0.41              |
| 2:T:97:ARG:O     | 2:T:98:PRO:C     | 2.61                     | 0.41              |
| 1:U:71:ARG:O     | 1:U:71:ARG:HG3   | 2.20                     | 0.41              |
| 1:U:82:ASP:OD2   | 1:U:86:ARG:NE    | 2.54                     | 0.41              |
| 1:U:144:VAL:HG21 | 1:U:164:ILE:CA   | 2.50                     | 0.41              |
| 2:V:82:SER:HB3   | 2:V:139:LEU:HD11 | 2.03                     | 0.41              |
| 2:V:92:LEU:CD2   | 2:V:123:THR:HG23 | 2.50                     | 0.41              |
| 2:V:99:VAL:HG22  | 2:V:164:ILE:HG13 | 2.01                     | 0.41              |
| 1:W:41:PHE:CG    | 1:W:78:PRO:HB3   | 2.56                     | 0.41              |
| 2:X:67:PHE:HZ    | 2:X:107:PHE:CD1  | 2.39                     | 0.41              |
| 2:X:248:ALA:HA   | 2:X:251:LEU:HB2  | 2.02                     | 0.41              |
| 2:D:37:VAL:HG11  | 2:D:45:VAL:HG13  | 2.02                     | 0.41              |
| 2:D:91:THR:HB    | 2:D:171:THR:HB   | 2.03                     | 0.41              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:D:236:ILE:HD13 | 1:E:250:LYS:HD2  | 2.01                     | 0.41              |
| 2:D:246:ASP:O    | 1:E:262:LYS:HG2  | 2.21                     | 0.41              |
| 2:F:260:LEU:CD2  | 2:F:268:LEU:CD2  | 2.98                     | 0.41              |
| 1:G:81:TYR:CE1   | 1:G:121:TYR:HB2  | 2.55                     | 0.41              |
| 1:G:155:THR:OG1  | 1:G:156:GLN:HG3  | 2.21                     | 0.41              |
| 1:G:236:LYS:O    | 1:G:240:GLU:OE1  | 2.39                     | 0.41              |
| 2:H:67:PHE:HZ    | 2:H:107:PHE:CD1  | 2.39                     | 0.41              |
| 1:I:62:THR:HG22  | 1:I:64:LEU:CD2   | 2.47                     | 0.41              |
| 1:I:157:ARG:NH1  | 1:I:187:LEU:HB3  | 2.35                     | 0.41              |
| 1:I:236:LYS:O    | 1:I:240:GLU:OE1  | 2.39                     | 0.41              |
| 2:J:28:TYR:H     | 2:J:54:THR:HG23  | 1.85                     | 0.41              |
| 2:J:39:PHE:O     | 2:J:62:GLN:HA    | 2.21                     | 0.41              |
| 2:J:43:ARG:CB    | 2:J:43:ARG:HG2   | 2.22                     | 0.41              |
| 1:K:58:VAL:HB    | 1:K:122:GLN:HG3  | 2.02                     | 0.41              |
| 1:K:144:VAL:HG21 | 1:K:164:ILE:CA   | 2.50                     | 0.41              |
| 2:L:92:LEU:CD2   | 2:L:123:THR:HG23 | 2.50                     | 0.41              |
| 2:L:260:LEU:CD2  | 2:L:268:LEU:CD2  | 2.97                     | 0.41              |
| 1:M:110:SER:HB3  | 1:M:133:LEU:HD11 | 2.01                     | 0.41              |
| 1:M:139:GLU:HG3  | 2:N:169:SER:HB3  | 2.01                     | 0.41              |
| 2:N:67:PHE:HZ    | 2:N:107:PHE:CD1  | 2.39                     | 0.41              |
| 2:N:82:SER:HB3   | 2:N:139:LEU:HD11 | 2.03                     | 0.41              |
| 1:O:81:TYR:CD1   | 1:O:120:MET:HE1  | 2.55                     | 0.41              |
| 1:O:104:ILE:HG22 | 1:O:141:LEU:HD22 | 2.02                     | 0.41              |
| 2:P:38:ILE:CG2   | 2:P:40:ASP:HB2   | 2.50                     | 0.41              |
| 2:P:221:ALA:O    | 2:P:222:GLU:C    | 2.63                     | 0.41              |
| 1:Q:90:ILE:HG22  | 1:Q:138:ASN:OD1  | 2.21                     | 0.41              |
| 2:R:67:PHE:HZ    | 2:R:107:PHE:CD1  | 2.39                     | 0.41              |
| 2:R:260:LEU:HD22 | 2:R:268:LEU:CG   | 2.50                     | 0.41              |
| 1:S:71:ARG:HG3   | 1:S:71:ARG:O     | 2.20                     | 0.41              |
| 1:U:47:HIS:CG    | 1:U:81:TYR:O     | 2.73                     | 0.41              |
| 2:V:58:ILE:HB    | 2:V:61:VAL:CG1   | 2.51                     | 0.41              |
| 1:A:99:LEU:HD12  | 2:B:183:VAL:CG1  | 2.39                     | 0.41              |
| 2:B:218:SER:CB   | 1:C:238:LEU:CD2  | 2.90                     | 0.41              |
| 1:C:157:ARG:NH1  | 1:C:187:LEU:HB3  | 2.35                     | 0.41              |
| 1:C:193:TYR:HE1  | 2:D:187:GLN:HG3  | 1.85                     | 0.41              |
| 2:D:68:ASP:HB3   | 2:D:114:TYR:OH   | 2.21                     | 0.41              |
| 2:D:140:ILE:CG1  | 2:D:173:LEU:HD21 | 2.51                     | 0.41              |
| 1:E:41:PHE:CG    | 1:E:78:PRO:HB3   | 2.56                     | 0.41              |
| 2:F:260:LEU:HD13 | 2:F:268:LEU:CD2  | 2.45                     | 0.41              |
| 1:G:58:VAL:HB    | 1:G:122:GLN:HG3  | 2.02                     | 0.41              |
| 1:G:90:ILE:HG22  | 1:G:138:ASN:OD1  | 2.21                     | 0.41              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:95:GLY:H     | 1:G:142:LYS:HE2  | 1.85                     | 0.41              |
| 1:G:215:GLU:O    | 1:G:219:GLN:HG2  | 2.21                     | 0.41              |
| 2:H:43:ARG:CG    | 2:H:43:ARG:HB2   | 2.24                     | 0.41              |
| 2:H:202:LYS:HE2  | 2:H:206:GLN:NE2  | 2.35                     | 0.41              |
| 1:I:47:HIS:CG    | 1:I:81:TYR:O     | 2.73                     | 0.41              |
| 1:I:155:THR:OG1  | 1:I:156:GLN:HG3  | 2.21                     | 0.41              |
| 2:J:260:LEU:HD22 | 2:J:268:LEU:CG   | 2.50                     | 0.41              |
| 1:K:47:HIS:CG    | 1:K:81:TYR:O     | 2.73                     | 0.41              |
| 1:K:71:ARG:HG3   | 1:K:71:ARG:O     | 2.20                     | 0.41              |
| 1:K:236:LYS:O    | 1:K:240:GLU:OE1  | 2.39                     | 0.41              |
| 2:L:58:ILE:HB    | 2:L:61:VAL:CG1   | 2.51                     | 0.41              |
| 1:M:53:ASN:HB2   | 1:M:59:GLN:CG    | 2.49                     | 0.41              |
| 1:M:260:ILE:HG13 | 2:N:245:GLU:CD   | 2.45                     | 0.41              |
| 2:N:49:VAL:HG21  | 2:N:101:SER:CA   | 2.43                     | 0.41              |
| 2:N:240:LYS:C    | 2:N:241:LEU:HG   | 2.43                     | 0.41              |
| 1:O:215:GLU:O    | 1:O:219:GLN:HG2  | 2.21                     | 0.41              |
| 1:O:289:ARG:HD2  | 1:O:290:GLY:N    | 2.35                     | 0.41              |
| 2:P:107:PHE:CZ   | 1:Q:84:ARG:HG2   | 2.56                     | 0.41              |
| 2:P:107:PHE:HE2  | 1:Q:45:GLY:O     | 2.03                     | 0.41              |
| 2:P:110:ILE:HG12 | 1:Q:109:LEU:CD2  | 2.50                     | 0.41              |
| 1:Q:58:VAL:HB    | 1:Q:122:GLN:HG3  | 2.02                     | 0.41              |
| 1:Q:82:ASP:OD2   | 1:Q:86:ARG:NE    | 2.54                     | 0.41              |
| 1:Q:209:ARG:O    | 1:Q:212:PHE:CE1  | 2.74                     | 0.41              |
| 2:R:200:VAL:HG13 | 1:S:226:VAL:CB   | 2.51                     | 0.41              |
| 1:S:215:GLU:O    | 1:S:219:GLN:HG2  | 2.21                     | 0.41              |
| 1:U:90:ILE:HG22  | 1:U:138:ASN:OD1  | 2.21                     | 0.41              |
| 1:U:242:LEU:HD13 | 2:V:238:LEU:HD13 | 2.01                     | 0.41              |
| 1:U:289:ARG:HD2  | 1:U:290:GLY:N    | 2.35                     | 0.41              |
| 2:V:39:PHE:O     | 2:V:62:GLN:HA    | 2.21                     | 0.41              |
| 2:V:49:VAL:HG21  | 2:V:101:SER:CA   | 2.43                     | 0.41              |
| 2:V:98:PRO:HA    | 2:V:163:LEU:HD23 | 2.01                     | 0.41              |
| 1:W:81:TYR:CE1   | 1:W:121:TYR:HB2  | 2.55                     | 0.41              |
| 2:X:38:ILE:CG2   | 2:X:40:ASP:HB2   | 2.50                     | 0.41              |
| 2:X:58:ILE:HB    | 2:X:61:VAL:CG1   | 2.50                     | 0.41              |
| 2:X:140:ILE:CG1  | 2:X:173:LEU:HD21 | 2.51                     | 0.41              |
| 1:A:41:PHE:CG    | 1:A:78:PRO:HB3   | 2.56                     | 0.41              |
| 1:A:45:GLY:HA3   | 2:X:45:VAL:N     | 2.31                     | 0.41              |
| 1:A:47:HIS:CG    | 1:A:81:TYR:O     | 2.73                     | 0.41              |
| 1:A:199:ALA:CB   | 2:B:195:ARG:HG3  | 2.50                     | 0.41              |
| 2:B:90:ILE:HA    | 2:B:172:HIS:O    | 2.21                     | 0.41              |
| 2:B:248:ALA:HA   | 2:B:251:LEU:HB2  | 2.02                     | 0.41              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:68:LEU:C     | 1:C:69:HIS:CG    | 2.99                     | 0.41              |
| 2:D:58:ILE:HB    | 2:D:61:VAL:CG1   | 2.50                     | 0.41              |
| 2:D:260:LEU:HD13 | 1:E:272:TYR:HE2  | 1.80                     | 0.41              |
| 1:E:81:TYR:CD1   | 1:E:120:MET:HE1  | 2.55                     | 0.41              |
| 1:E:104:ILE:HG22 | 1:E:141:LEU:HD22 | 2.02                     | 0.41              |
| 1:E:241:ALA:HB3  | 1:E:242:LEU:HG   | 2.03                     | 0.41              |
| 2:F:68:ASP:HB3   | 2:F:114:TYR:OH   | 2.21                     | 0.41              |
| 1:M:41:PHE:CG    | 1:M:78:PRO:HB3   | 2.56                     | 0.41              |
| 1:M:58:VAL:HG22  | 2:N:32:ALA:CB    | 2.50                     | 0.41              |
| 2:N:221:ALA:O    | 2:N:222:GLU:C    | 2.63                     | 0.41              |
| 1:O:68:LEU:C     | 1:O:69:HIS:CG    | 2.99                     | 0.41              |
| 2:P:28:TYR:H     | 2:P:54:THR:HG23  | 1.85                     | 0.41              |
| 2:P:58:ILE:HB    | 2:P:61:VAL:CG1   | 2.51                     | 0.41              |
| 2:P:140:ILE:CG1  | 2:P:173:LEU:HD21 | 2.51                     | 0.41              |
| 2:R:82:SER:HB3   | 2:R:139:LEU:HD11 | 2.03                     | 0.41              |
| 2:R:90:ILE:CD1   | 2:R:173:LEU:HD13 | 2.50                     | 0.41              |
| 1:S:98:ASP:O     | 1:S:99:LEU:HB2   | 2.21                     | 0.41              |
| 1:S:155:THR:OG1  | 1:S:156:GLN:HG3  | 2.21                     | 0.41              |
| 1:S:263:THR:OG1  | 2:T:252:SER:HB3  | 2.20                     | 0.41              |
| 2:T:96:PHE:HB2   | 2:T:163:LEU:HD22 | 2.03                     | 0.41              |
| 1:U:68:LEU:C     | 1:U:69:HIS:CG    | 2.99                     | 0.41              |
| 1:U:241:ALA:HB3  | 1:U:242:LEU:HG   | 2.03                     | 0.41              |
| 2:V:240:LYS:C    | 2:V:241:LEU:HG   | 2.43                     | 0.41              |
| 1:A:51:PHE:CE1   | 1:A:69:HIS:HB3   | 2.56                     | 0.41              |
| 1:A:68:LEU:C     | 1:A:69:HIS:CG    | 2.99                     | 0.41              |
| 1:A:71:ARG:O     | 1:A:71:ARG:HG3   | 2.20                     | 0.41              |
| 1:A:90:ILE:HG22  | 1:A:138:ASN:OD1  | 2.21                     | 0.41              |
| 1:A:95:GLY:H     | 1:A:142:LYS:HE2  | 1.85                     | 0.41              |
| 1:A:215:GLU:O    | 1:A:219:GLN:HG2  | 2.21                     | 0.41              |
| 1:A:221:GLN:CD   | 2:B:216:GLY:N    | 2.79                     | 0.41              |
| 2:B:38:ILE:CG2   | 2:B:40:ASP:HB2   | 2.50                     | 0.41              |
| 2:B:96:PHE:HB2   | 2:B:163:LEU:HD22 | 2.03                     | 0.41              |
| 2:B:103:LEU:O    | 2:B:104:PRO:C    | 2.64                     | 0.41              |
| 2:D:90:ILE:HA    | 2:D:172:HIS:O    | 2.21                     | 0.41              |
| 2:D:246:ASP:OD2  | 1:E:262:LYS:HD3  | 2.20                     | 0.41              |
| 2:D:260:LEU:CD2  | 2:D:268:LEU:CD2  | 2.97                     | 0.41              |
| 1:E:47:HIS:CG    | 1:E:81:TYR:O     | 2.73                     | 0.41              |
| 1:E:54:ARG:HB3   | 1:E:75:PHE:CE1   | 2.56                     | 0.41              |
| 1:E:90:ILE:HG22  | 1:E:138:ASN:OD1  | 2.21                     | 0.41              |
| 1:E:98:ASP:O     | 1:E:99:LEU:HB2   | 2.21                     | 0.41              |
| 1:E:215:GLU:O    | 1:E:219:GLN:HG2  | 2.21                     | 0.41              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:236:LYS:O    | 1:E:240:GLU:OE1  | 2.39                     | 0.41              |
| 1:E:278:LEU:CA   | 1:E:279:VAL:HG23 | 2.51                     | 0.41              |
| 2:F:38:ILE:CG2   | 2:F:40:ASP:HB2   | 2.50                     | 0.41              |
| 2:F:67:PHE:HZ    | 2:F:107:PHE:CD1  | 2.39                     | 0.41              |
| 2:F:82:SER:HB3   | 2:F:139:LEU:HD11 | 2.03                     | 0.41              |
| 1:G:41:PHE:CG    | 1:G:78:PRO:HB3   | 2.56                     | 0.41              |
| 1:G:68:LEU:C     | 1:G:69:HIS:CG    | 2.99                     | 0.41              |
| 1:G:246:PRO:HB3  | 1:I:294:LEU:CB   | 2.51                     | 0.41              |
| 2:H:82:SER:HB3   | 2:H:139:LEU:HD11 | 2.03                     | 0.41              |
| 1:I:58:VAL:HB    | 1:I:122:GLN:HG3  | 2.02                     | 0.41              |
| 2:J:32:ALA:C     | 2:J:34:HIS:H     | 2.29                     | 0.41              |
| 2:J:240:LYS:NZ   | 1:M:282:LEU:HB3  | 2.36                     | 0.41              |
| 1:K:90:ILE:HG22  | 1:K:138:ASN:OD1  | 2.21                     | 0.41              |
| 1:K:241:ALA:HB3  | 1:K:242:LEU:HG   | 2.03                     | 0.41              |
| 1:K:245:ASN:CG   | 1:M:295:ILE:HD11 | 2.46                     | 0.41              |
| 2:L:38:ILE:CG2   | 2:L:40:ASP:HB2   | 2.50                     | 0.41              |
| 2:L:39:PHE:O     | 2:L:62:GLN:HA    | 2.21                     | 0.41              |
| 2:L:67:PHE:HZ    | 2:L:107:PHE:CD1  | 2.39                     | 0.41              |
| 1:M:82:ASP:OD2   | 1:M:86:ARG:NE    | 2.53                     | 0.41              |
| 1:M:211:GLN:HG3  | 2:N:205:GLN:HG3  | 2.01                     | 0.41              |
| 2:N:37:VAL:HG11  | 2:N:45:VAL:HG13  | 2.02                     | 0.41              |
| 2:N:38:ILE:CG2   | 2:N:40:ASP:HB2   | 2.50                     | 0.41              |
| 2:N:39:PHE:O     | 2:N:62:GLN:HA    | 2.21                     | 0.41              |
| 2:N:68:ASP:HB3   | 2:N:114:TYR:OH   | 2.21                     | 0.41              |
| 1:O:144:VAL:HG21 | 1:O:164:ILE:HA   | 2.01                     | 0.41              |
| 1:O:155:THR:OG1  | 1:O:156:GLN:HG3  | 2.21                     | 0.41              |
| 2:P:28:TYR:HD2   | 2:P:57:LEU:HD23  | 1.81                     | 0.41              |
| 2:P:39:PHE:O     | 2:P:62:GLN:HA    | 2.21                     | 0.41              |
| 2:P:105:ARG:NE   | 1:Q:180:ASP:OD1  | 2.54                     | 0.41              |
| 2:P:121:SER:CB   | 1:Q:184:ILE:C    | 2.94                     | 0.41              |
| 2:P:259:TYR:HE1  | 1:Q:278:LEU:CB   | 2.30                     | 0.41              |
| 1:Q:63:ILE:HD13  | 1:Q:115:GLN:C    | 2.45                     | 0.41              |
| 1:Q:215:GLU:O    | 1:Q:219:GLN:HG2  | 2.21                     | 0.41              |
| 2:R:68:ASP:HB3   | 2:R:114:TYR:OH   | 2.21                     | 0.41              |
| 2:R:96:PHE:HB2   | 2:R:163:LEU:HD22 | 2.03                     | 0.41              |
| 2:R:237:GLU:OE1  | 1:S:293:SER:HB2  | 2.21                     | 0.41              |
| 1:S:90:ILE:HG22  | 1:S:138:ASN:OD1  | 2.21                     | 0.41              |
| 1:S:253:LYS:HG2  | 2:T:241:LEU:CD1  | 2.45                     | 0.41              |
| 2:T:32:ALA:C     | 2:T:34:HIS:H     | 2.29                     | 0.41              |
| 2:T:37:VAL:HG11  | 2:T:45:VAL:HG13  | 2.02                     | 0.41              |
| 2:T:91:THR:HB    | 2:T:171:THR:HB   | 2.03                     | 0.41              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:T:221:ALA:O    | 2:T:222:GLU:C    | 2.63                     | 0.41              |
| 1:U:41:PHE:CG    | 1:U:78:PRO:HB3   | 2.56                     | 0.41              |
| 1:U:146:ALA:CB   | 2:V:140:ILE:HG22 | 2.51                     | 0.41              |
| 1:U:236:LYS:O    | 1:U:240:GLU:OE1  | 2.39                     | 0.41              |
| 1:U:238:LEU:HB3  | 2:V:235:LEU:HD13 | 2.03                     | 0.41              |
| 2:V:68:ASP:HB3   | 2:V:114:TYR:OH   | 2.21                     | 0.41              |
| 2:V:96:PHE:HB2   | 2:V:163:LEU:HD22 | 2.03                     | 0.41              |
| 1:W:104:ILE:HG22 | 1:W:141:LEU:HD22 | 2.02                     | 0.41              |
| 1:W:215:GLU:O    | 1:W:219:GLN:HG2  | 2.21                     | 0.41              |
| 2:X:68:ASP:HB3   | 2:X:114:TYR:OH   | 2.21                     | 0.41              |
| 1:A:209:ARG:O    | 1:A:212:PHE:CE1  | 2.74                     | 0.41              |
| 1:A:284:ASP:HB2  | 1:W:275:ALA:CB   | 2.51                     | 0.41              |
| 2:B:67:PHE:HZ    | 2:B:107:PHE:CD1  | 2.39                     | 0.41              |
| 2:B:68:ASP:HB3   | 2:B:114:TYR:OH   | 2.21                     | 0.41              |
| 2:B:92:LEU:CD2   | 2:B:123:THR:HG23 | 2.50                     | 0.41              |
| 1:C:236:LYS:O    | 1:C:240:GLU:OE1  | 2.39                     | 0.41              |
| 2:D:98:PRO:HA    | 2:D:163:LEU:HD23 | 2.01                     | 0.41              |
| 2:D:236:ILE:HD13 | 1:E:250:LYS:CD   | 2.50                     | 0.41              |
| 2:F:90:ILE:CD1   | 2:F:173:LEU:HD13 | 2.50                     | 0.41              |
| 2:F:269:GLN:C    | 2:F:270:LEU:HD23 | 2.46                     | 0.41              |
| 1:G:98:ASP:O     | 1:G:99:LEU:HB2   | 2.21                     | 0.41              |
| 1:G:193:TYR:CE1  | 2:H:188:VAL:HA   | 2.56                     | 0.41              |
| 2:H:32:ALA:C     | 2:H:34:HIS:H     | 2.29                     | 0.41              |
| 2:H:37:VAL:HG11  | 2:H:45:VAL:HG13  | 2.02                     | 0.41              |
| 2:H:49:VAL:HG11  | 2:H:100:ALA:O    | 2.21                     | 0.41              |
| 2:H:90:ILE:CD1   | 2:H:173:LEU:HD13 | 2.50                     | 0.41              |
| 2:J:270:LEU:HD22 | 1:K:272:TYR:HE2  | 1.85                     | 0.41              |
| 1:K:41:PHE:CG    | 1:K:78:PRO:HB3   | 2.56                     | 0.41              |
| 1:K:82:ASP:OD2   | 1:K:86:ARG:NE    | 2.54                     | 0.41              |
| 2:L:68:ASP:HB3   | 2:L:114:TYR:OH   | 2.21                     | 0.41              |
| 2:L:90:ILE:HA    | 2:L:172:HIS:O    | 2.21                     | 0.41              |
| 2:L:106:ILE:HA   | 2:L:110:ILE:HB   | 2.01                     | 0.41              |
| 1:M:209:ARG:O    | 1:M:212:PHE:CE1  | 2.74                     | 0.41              |
| 2:N:235:LEU:HA   | 2:N:235:LEU:HD12 | 1.91                     | 0.41              |
| 1:Q:68:LEU:C     | 1:Q:69:HIS:CG    | 2.99                     | 0.41              |
| 1:Q:155:THR:OG1  | 1:Q:156:GLN:HG3  | 2.21                     | 0.41              |
| 1:Q:289:ARG:HD2  | 1:Q:290:GLY:N    | 2.35                     | 0.41              |
| 2:R:211:ILE:CD1  | 1:S:233:GLU:CD   | 2.93                     | 0.41              |
| 1:S:252:ARG:CD   | 2:T:245:GLU:CD   | 2.94                     | 0.41              |
| 2:T:92:LEU:CD2   | 2:T:123:THR:HG23 | 2.50                     | 0.41              |
| 2:T:240:LYS:C    | 2:T:241:LEU:HG   | 2.43                     | 0.41              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:U:51:PHE:CE1   | 1:U:69:HIS:HB3   | 2.56                     | 0.41              |
| 1:U:209:ARG:O    | 1:U:212:PHE:CE1  | 2.74                     | 0.41              |
| 2:V:32:ALA:C     | 2:V:34:HIS:H     | 2.29                     | 0.41              |
| 1:A:155:THR:OG1  | 1:A:156:GLN:HG3  | 2.21                     | 0.40              |
| 2:B:140:ILE:CG1  | 2:B:173:LEU:HD21 | 2.51                     | 0.40              |
| 1:C:41:PHE:CG    | 1:C:78:PRO:HB3   | 2.56                     | 0.40              |
| 1:C:175:PHE:CZ   | 2:D:167:ASP:CB   | 3.05                     | 0.40              |
| 2:D:239:ARG:NE   | 1:E:258:GLN:OE1  | 2.53                     | 0.40              |
| 1:G:51:PHE:CE1   | 1:G:69:HIS:HB3   | 2.56                     | 0.40              |
| 1:G:62:THR:HG22  | 1:G:64:LEU:CD2   | 2.47                     | 0.40              |
| 2:H:140:ILE:CG1  | 2:H:173:LEU:HD21 | 2.51                     | 0.40              |
| 1:I:51:PHE:CE1   | 1:I:69:HIS:HB3   | 2.56                     | 0.40              |
| 1:I:54:ARG:HB3   | 1:I:75:PHE:CE1   | 2.56                     | 0.40              |
| 1:I:81:TYR:CE2   | 1:I:117:LEU:HB3  | 2.57                     | 0.40              |
| 1:I:209:ARG:O    | 1:I:212:PHE:CE1  | 2.74                     | 0.40              |
| 2:J:82:SER:HB3   | 2:J:139:LEU:HD11 | 2.03                     | 0.40              |
| 1:M:104:ILE:HG22 | 1:M:141:LEU:HD22 | 2.02                     | 0.40              |
| 1:M:241:ALA:HB3  | 1:M:242:LEU:HG   | 2.03                     | 0.40              |
| 2:N:90:ILE:HA    | 2:N:172:HIS:O    | 2.21                     | 0.40              |
| 2:N:140:ILE:CG1  | 2:N:173:LEU:HD21 | 2.51                     | 0.40              |
| 1:O:98:ASP:O     | 1:O:99:LEU:HB2   | 2.21                     | 0.40              |
| 2:P:37:VAL:HG11  | 2:P:45:VAL:HG13  | 2.02                     | 0.40              |
| 2:P:90:ILE:HA    | 2:P:172:HIS:O    | 2.21                     | 0.40              |
| 1:Q:71:ARG:O     | 1:Q:71:ARG:HG3   | 2.20                     | 0.40              |
| 2:R:58:ILE:HB    | 2:R:61:VAL:CG1   | 2.50                     | 0.40              |
| 2:R:193:ALA:CA   | 1:S:219:GLN:NE2  | 2.83                     | 0.40              |
| 1:S:81:TYR:CE2   | 1:S:117:LEU:HB3  | 2.57                     | 0.40              |
| 1:U:215:GLU:O    | 1:U:219:GLN:HG2  | 2.21                     | 0.40              |
| 2:V:38:ILE:CG2   | 2:V:40:ASP:HB2   | 2.50                     | 0.40              |
| 2:V:49:VAL:HG11  | 2:V:100:ALA:O    | 2.21                     | 0.40              |
| 2:V:221:ALA:O    | 2:V:222:GLU:C    | 2.63                     | 0.40              |
| 2:V:250:GLN:HG3  | 1:W:262:LYS:CG   | 2.51                     | 0.40              |
| 1:W:209:ARG:O    | 1:W:212:PHE:CE1  | 2.74                     | 0.40              |
| 2:X:39:PHE:O     | 2:X:62:GLN:HA    | 2.21                     | 0.40              |
| 2:X:269:GLN:C    | 2:X:270:LEU:HD23 | 2.46                     | 0.40              |
| 2:B:58:ILE:HB    | 2:B:61:VAL:CG1   | 2.50                     | 0.40              |
| 2:B:240:LYS:C    | 2:B:241:LEU:HG   | 2.43                     | 0.40              |
| 2:B:267:LEU:CD2  | 2:D:267:LEU:HD13 | 2.51                     | 0.40              |
| 1:C:155:THR:OG1  | 1:C:156:GLN:HG3  | 2.21                     | 0.40              |
| 2:D:140:ILE:HD12 | 2:D:175:PHE:CZ   | 2.57                     | 0.40              |
| 2:F:140:ILE:CG1  | 2:F:173:LEU:HD21 | 2.51                     | 0.40              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:81:TYR:CE2   | 1:G:117:LEU:HB3  | 2.56                     | 0.40              |
| 1:G:278:LEU:CA   | 1:G:279:VAL:HG23 | 2.51                     | 0.40              |
| 2:H:39:PHE:O     | 2:H:62:GLN:HA    | 2.21                     | 0.40              |
| 1:I:293:SER:HB2  | 1:I:299:LYS:CG   | 2.52                     | 0.40              |
| 2:J:85:LEU:HD22  | 1:K:154:ILE:HG22 | 2.03                     | 0.40              |
| 1:K:209:ARG:O    | 1:K:212:PHE:CE1  | 2.74                     | 0.40              |
| 1:K:293:SER:HB2  | 1:K:299:LYS:CG   | 2.52                     | 0.40              |
| 2:L:82:SER:HB3   | 2:L:139:LEU:HD11 | 2.03                     | 0.40              |
| 2:N:96:PHE:HB2   | 2:N:163:LEU:HD22 | 2.03                     | 0.40              |
| 1:O:256:ALA:O    | 1:O:260:ILE:HB   | 2.22                     | 0.40              |
| 2:P:32:ALA:C     | 2:P:34:HIS:H     | 2.29                     | 0.40              |
| 2:P:96:PHE:HB2   | 2:P:163:LEU:HD22 | 2.03                     | 0.40              |
| 1:Q:95:GLY:H     | 1:Q:142:LYS:HE2  | 1.85                     | 0.40              |
| 2:R:215:GLU:CG   | 1:S:237:MET:CE   | 2.97                     | 0.40              |
| 1:S:253:LYS:N    | 2:T:241:LEU:HB3  | 2.35                     | 0.40              |
| 2:T:41:ARG:NE    | 1:U:44:GLU:HA    | 2.37                     | 0.40              |
| 2:T:67:PHE:HZ    | 2:T:107:PHE:CD1  | 2.39                     | 0.40              |
| 2:T:68:ASP:HB3   | 2:T:114:TYR:OH   | 2.21                     | 0.40              |
| 1:U:98:ASP:O     | 1:U:99:LEU:HB2   | 2.21                     | 0.40              |
| 1:U:104:ILE:HG22 | 1:U:141:LEU:HD22 | 2.02                     | 0.40              |
| 2:V:140:ILE:CG1  | 2:V:173:LEU:HD21 | 2.51                     | 0.40              |
| 2:V:246:ASP:HB2  | 1:W:258:GLN:NE2  | 2.36                     | 0.40              |
| 1:W:81:TYR:CE2   | 1:W:117:LEU:HB3  | 2.57                     | 0.40              |
| 1:W:293:SER:HB2  | 1:W:299:LYS:CG   | 2.52                     | 0.40              |
| 2:X:35:ARG:O     | 2:X:103:LEU:HD13 | 2.22                     | 0.40              |
| 2:X:90:ILE:CD1   | 2:X:173:LEU:HD13 | 2.50                     | 0.40              |
| 2:X:260:LEU:CD1  | 2:X:268:LEU:HD21 | 2.45                     | 0.40              |
| 2:B:32:ALA:C     | 2:B:34:HIS:H     | 2.29                     | 0.40              |
| 2:B:260:LEU:CD2  | 2:B:268:LEU:CD2  | 2.98                     | 0.40              |
| 1:C:79:ILE:HG21  | 1:C:121:TYR:CG   | 2.57                     | 0.40              |
| 1:C:215:GLU:O    | 1:C:219:GLN:HG2  | 2.21                     | 0.40              |
| 2:D:32:ALA:C     | 2:D:34:HIS:H     | 2.29                     | 0.40              |
| 2:F:35:ARG:O     | 2:F:103:LEU:HD13 | 2.22                     | 0.40              |
| 2:F:39:PHE:O     | 2:F:62:GLN:HA    | 2.21                     | 0.40              |
| 2:F:49:VAL:HG21  | 2:F:101:SER:CA   | 2.43                     | 0.40              |
| 2:F:243:ALA:HB1  | 2:F:247:ILE:CD1  | 2.51                     | 0.40              |
| 1:G:209:ARG:O    | 1:G:212:PHE:CE1  | 2.74                     | 0.40              |
| 1:G:289:ARG:HD2  | 1:G:290:GLY:N    | 2.35                     | 0.40              |
| 2:H:140:ILE:HD12 | 2:H:175:PHE:CZ   | 2.57                     | 0.40              |
| 1:I:215:GLU:O    | 1:I:219:GLN:HG2  | 2.21                     | 0.40              |
| 1:I:289:ARG:HD2  | 1:I:290:GLY:N    | 2.35                     | 0.40              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:68:LEU:C     | 1:K:69:HIS:CG    | 2.99                     | 0.40              |
| 1:K:215:GLU:O    | 1:K:219:GLN:HG2  | 2.21                     | 0.40              |
| 1:K:224:LYS:O    | 2:L:219:LYS:CE   | 2.69                     | 0.40              |
| 1:K:256:ALA:O    | 1:K:260:ILE:HB   | 2.22                     | 0.40              |
| 2:N:248:ALA:HA   | 2:N:251:LEU:HB2  | 2.02                     | 0.40              |
| 1:O:58:VAL:HB    | 1:O:122:GLN:HG3  | 2.03                     | 0.40              |
| 2:P:117:ARG:HG2  | 1:Q:107:ARG:NH2  | 2.35                     | 0.40              |
| 1:Q:41:PHE:CG    | 1:Q:78:PRO:HB3   | 2.56                     | 0.40              |
| 1:Q:51:PHE:CE1   | 1:Q:69:HIS:HB3   | 2.56                     | 0.40              |
| 1:Q:249:ILE:HG13 | 2:R:241:LEU:HB2  | 2.03                     | 0.40              |
| 2:R:49:VAL:HG11  | 2:R:100:ALA:O    | 2.21                     | 0.40              |
| 2:R:92:LEU:CD2   | 2:R:123:THR:HG23 | 2.50                     | 0.40              |
| 2:R:97:ARG:O     | 2:R:98:PRO:C     | 2.61                     | 0.40              |
| 2:R:259:TYR:OH   | 1:S:281:ASN:CB   | 2.69                     | 0.40              |
| 1:S:51:PHE:CE1   | 1:S:69:HIS:HB3   | 2.56                     | 0.40              |
| 1:S:256:ALA:O    | 1:S:260:ILE:HB   | 2.22                     | 0.40              |
| 2:V:140:ILE:HD12 | 2:V:175:PHE:CZ   | 2.57                     | 0.40              |
| 1:W:90:ILE:CD1   | 1:W:134:PRO:HA   | 2.52                     | 0.40              |
| 1:W:95:GLY:H     | 1:W:142:LYS:HE2  | 1.85                     | 0.40              |
| 2:X:96:PHE:HB2   | 2:X:163:LEU:HD22 | 2.03                     | 0.40              |
| 1:A:58:VAL:HB    | 1:A:122:GLN:HG3  | 2.02                     | 0.40              |
| 1:A:236:LYS:O    | 1:A:240:GLU:OE1  | 2.39                     | 0.40              |
| 2:B:49:VAL:HG11  | 2:B:100:ALA:O    | 2.21                     | 0.40              |
| 1:C:293:SER:HB2  | 1:C:299:LYS:CG   | 2.52                     | 0.40              |
| 2:D:49:VAL:HG11  | 2:D:100:ALA:O    | 2.21                     | 0.40              |
| 2:D:260:LEU:CD1  | 2:D:268:LEU:HD21 | 2.45                     | 0.40              |
| 1:E:71:ARG:O     | 1:E:71:ARG:HG3   | 2.20                     | 0.40              |
| 1:E:209:ARG:O    | 1:E:212:PHE:CE1  | 2.74                     | 0.40              |
| 1:E:273:LEU:CD2  | 1:G:280:LEU:HD13 | 2.51                     | 0.40              |
| 2:H:91:THR:HB    | 2:H:171:THR:HB   | 2.03                     | 0.40              |
| 2:H:254:SER:HB3  | 2:H:257:ILE:HD11 | 2.04                     | 0.40              |
| 1:I:104:ILE:HG22 | 1:I:141:LEU:HD22 | 2.02                     | 0.40              |
| 1:I:241:ALA:HB3  | 1:I:242:LEU:HG   | 2.03                     | 0.40              |
| 2:J:38:ILE:CG2   | 2:J:40:ASP:HB2   | 2.50                     | 0.40              |
| 2:J:42:PHE:CD1   | 1:K:68:LEU:HD13  | 2.57                     | 0.40              |
| 2:L:93:ARG:NE    | 2:L:95:LEU:HD21  | 2.17                     | 0.40              |
| 2:L:243:ALA:HB1  | 2:L:247:ILE:CD1  | 2.51                     | 0.40              |
| 1:M:71:ARG:O     | 1:M:71:ARG:HG3   | 2.20                     | 0.40              |
| 1:M:121:TYR:CE2  | 2:N:32:ALA:CA    | 3.05                     | 0.40              |
| 1:M:122:GLN:NE2  | 2:N:35:ARG:NH2   | 2.69                     | 0.40              |
| 2:N:35:ARG:O     | 2:N:103:LEU:HD13 | 2.22                     | 0.40              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:51:PHE:CE1   | 1:O:69:HIS:HB3   | 2.56                     | 0.40              |
| 1:O:278:LEU:CA   | 1:O:279:VAL:HG23 | 2.51                     | 0.40              |
| 1:O:293:SER:HB2  | 1:O:299:LYS:CG   | 2.52                     | 0.40              |
| 2:P:125:GLU:CG   | 1:Q:161:SER:HB3  | 2.51                     | 0.40              |
| 2:P:157:ARG:NH2  | 1:Q:165:ARG:NH2  | 2.69                     | 0.40              |
| 2:P:235:LEU:HD12 | 2:P:235:LEU:HA   | 1.91                     | 0.40              |
| 2:R:39:PHE:O     | 2:R:62:GLN:HA    | 2.21                     | 0.40              |
| 2:R:140:ILE:CG1  | 2:R:173:LEU:HD21 | 2.51                     | 0.40              |
| 1:S:68:LEU:C     | 1:S:69:HIS:CG    | 2.99                     | 0.40              |
| 1:S:209:ARG:O    | 1:S:212:PHE:CE1  | 2.74                     | 0.40              |
| 1:S:289:ARG:HD2  | 1:S:290:GLY:N    | 2.35                     | 0.40              |
| 2:T:82:SER:HB3   | 2:T:139:LEU:HD11 | 2.03                     | 0.40              |
| 2:T:90:ILE:HA    | 2:T:172:HIS:O    | 2.21                     | 0.40              |
| 2:T:140:ILE:CG1  | 2:T:173:LEU:HD21 | 2.51                     | 0.40              |
| 2:T:269:GLN:C    | 2:T:270:LEU:HD23 | 2.46                     | 0.40              |
| 1:U:267:SER:CB   | 2:V:252:SER:HA   | 2.52                     | 0.40              |
| 2:V:91:THR:HB    | 2:V:171:THR:HB   | 2.02                     | 0.40              |
| 1:W:68:LEU:C     | 1:W:69:HIS:CG    | 2.99                     | 0.40              |
| 1:W:79:ILE:HG21  | 1:W:121:TYR:CG   | 2.57                     | 0.40              |
| 1:W:90:ILE:HG22  | 1:W:138:ASN:OD1  | 2.21                     | 0.40              |
| 1:W:155:THR:OG1  | 1:W:156:GLN:HG3  | 2.21                     | 0.40              |
| 1:W:289:ARG:HD2  | 1:W:290:GLY:N    | 2.35                     | 0.40              |
| 2:X:90:ILE:HA    | 2:X:172:HIS:O    | 2.21                     | 0.40              |
| 1:A:104:ILE:HG22 | 1:A:141:LEU:HD22 | 2.02                     | 0.40              |
| 2:B:269:GLN:C    | 2:B:270:LEU:HD23 | 2.46                     | 0.40              |
| 1:C:98:ASP:O     | 1:C:99:LEU:HB2   | 2.21                     | 0.40              |
| 1:C:241:ALA:HB3  | 1:C:242:LEU:HG   | 2.03                     | 0.40              |
| 2:D:248:ALA:HA   | 2:D:251:LEU:HB2  | 2.02                     | 0.40              |
| 2:F:90:ILE:HA    | 2:F:172:HIS:O    | 2.21                     | 0.40              |
| 1:G:104:ILE:HG22 | 1:G:141:LEU:HD22 | 2.02                     | 0.40              |
| 2:H:28:TYR:H     | 2:H:54:THR:HG23  | 1.85                     | 0.40              |
| 2:H:221:ALA:O    | 2:H:222:GLU:C    | 2.63                     | 0.40              |
| 1:I:79:ILE:HG21  | 1:I:121:TYR:CG   | 2.57                     | 0.40              |
| 2:J:90:ILE:HA    | 2:J:172:HIS:O    | 2.21                     | 0.40              |
| 2:J:110:ILE:HD13 | 2:J:161:PHE:O    | 2.22                     | 0.40              |
| 1:K:51:PHE:CE1   | 1:K:69:HIS:HB3   | 2.56                     | 0.40              |
| 1:K:54:ARG:HB3   | 1:K:75:PHE:CE1   | 2.56                     | 0.40              |
| 1:K:274:THR:HG21 | 2:L:261:PRO:HB3  | 2.03                     | 0.40              |
| 2:L:96:PHE:HB2   | 2:L:163:LEU:HD22 | 2.03                     | 0.40              |
| 2:L:110:ILE:HD13 | 2:L:161:PHE:O    | 2.22                     | 0.40              |
| 1:M:52:PHE:HE1   | 2:N:52:GLU:HB3   | 1.87                     | 0.40              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 2:N:140:ILE:HD12 | 2:N:175:PHE:CZ   | 2.57                     | 0.40              |
| 2:N:268:LEU:HD12 | 2:P:260:LEU:CD2  | 2.51                     | 0.40              |
| 1:O:41:PHE:CG    | 1:O:78:PRO:HB3   | 2.56                     | 0.40              |
| 1:O:54:ARG:HB3   | 1:O:75:PHE:CE1   | 2.56                     | 0.40              |
| 2:P:41:ARG:O     | 1:Q:49:ALA:CB    | 2.69                     | 0.40              |
| 2:P:82:SER:HB3   | 2:P:139:LEU:HD11 | 2.03                     | 0.40              |
| 2:P:107:PHE:CZ   | 1:Q:84:ARG:CG    | 3.04                     | 0.40              |
| 2:P:107:PHE:HZ   | 1:Q:84:ARG:CD    | 2.35                     | 0.40              |
| 2:R:28:TYR:H     | 2:R:54:THR:HG23  | 1.85                     | 0.40              |
| 2:R:103:LEU:O    | 2:R:104:PRO:C    | 2.64                     | 0.40              |
| 2:R:139:LEU:O    | 2:R:143:ARG:HA   | 2.22                     | 0.40              |
| 2:R:140:ILE:HD12 | 2:R:175:PHE:CZ   | 2.57                     | 0.40              |
| 2:R:235:LEU:HA   | 2:R:235:LEU:HD12 | 1.91                     | 0.40              |
| 2:R:254:SER:HB3  | 2:R:257:ILE:HD11 | 2.04                     | 0.40              |
| 2:T:58:ILE:HB    | 2:T:61:VAL:CG1   | 2.51                     | 0.40              |
| 2:T:254:SER:HB3  | 2:T:257:ILE:HD11 | 2.04                     | 0.40              |
| 2:V:221:ALA:C    | 1:W:242:LEU:HD21 | 2.47                     | 0.40              |
| 2:V:254:SER:HB3  | 2:V:257:ILE:HD11 | 2.04                     | 0.40              |
| 2:V:260:LEU:HD13 | 2:V:268:LEU:CD2  | 2.44                     | 0.40              |
| 1:W:82:ASP:OD2   | 1:W:86:ARG:NE    | 2.54                     | 0.40              |

There are no symmetry-related clashes.

## 5.3 Torsion angles [i](#)

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

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

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

| Mol | Chain | Analysed      | Favoured  | Allowed  | Outliers | Percentiles |    |
|-----|-------|---------------|-----------|----------|----------|-------------|----|
| 1   | A     | 297/299 (99%) | 244 (82%) | 52 (18%) | 1 (0%)   | 37          | 73 |
| 1   | C     | 297/299 (99%) | 243 (82%) | 53 (18%) | 1 (0%)   | 37          | 73 |
| 1   | E     | 297/299 (99%) | 243 (82%) | 53 (18%) | 1 (0%)   | 37          | 73 |
| 1   | G     | 297/299 (99%) | 244 (82%) | 52 (18%) | 1 (0%)   | 37          | 73 |

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| Mol | Chain | Analysed        | Favoured   | Allowed    | Outliers | Percentiles |     |
|-----|-------|-----------------|------------|------------|----------|-------------|-----|
| 1   | I     | 297/299 (99%)   | 243 (82%)  | 53 (18%)   | 1 (0%)   | 37          | 73  |
| 1   | K     | 297/299 (99%)   | 243 (82%)  | 53 (18%)   | 1 (0%)   | 37          | 73  |
| 1   | M     | 297/299 (99%)   | 244 (82%)  | 52 (18%)   | 1 (0%)   | 37          | 73  |
| 1   | O     | 297/299 (99%)   | 244 (82%)  | 52 (18%)   | 1 (0%)   | 37          | 73  |
| 1   | Q     | 297/299 (99%)   | 244 (82%)  | 52 (18%)   | 1 (0%)   | 37          | 73  |
| 1   | S     | 297/299 (99%)   | 244 (82%)  | 52 (18%)   | 1 (0%)   | 37          | 73  |
| 1   | U     | 297/299 (99%)   | 244 (82%)  | 52 (18%)   | 1 (0%)   | 37          | 73  |
| 1   | W     | 297/299 (99%)   | 243 (82%)  | 53 (18%)   | 1 (0%)   | 37          | 73  |
| 2   | B     | 270/272 (99%)   | 229 (85%)  | 41 (15%)   | 0        | 100         | 100 |
| 2   | D     | 270/272 (99%)   | 229 (85%)  | 41 (15%)   | 0        | 100         | 100 |
| 2   | F     | 270/272 (99%)   | 228 (84%)  | 42 (16%)   | 0        | 100         | 100 |
| 2   | H     | 270/272 (99%)   | 228 (84%)  | 42 (16%)   | 0        | 100         | 100 |
| 2   | J     | 270/272 (99%)   | 229 (85%)  | 41 (15%)   | 0        | 100         | 100 |
| 2   | L     | 270/272 (99%)   | 229 (85%)  | 41 (15%)   | 0        | 100         | 100 |
| 2   | N     | 270/272 (99%)   | 228 (84%)  | 42 (16%)   | 0        | 100         | 100 |
| 2   | P     | 270/272 (99%)   | 229 (85%)  | 41 (15%)   | 0        | 100         | 100 |
| 2   | R     | 270/272 (99%)   | 229 (85%)  | 41 (15%)   | 0        | 100         | 100 |
| 2   | T     | 270/272 (99%)   | 229 (85%)  | 41 (15%)   | 0        | 100         | 100 |
| 2   | V     | 270/272 (99%)   | 228 (84%)  | 42 (16%)   | 0        | 100         | 100 |
| 2   | X     | 270/272 (99%)   | 228 (84%)  | 42 (16%)   | 0        | 100         | 100 |
| All | All   | 6804/6852 (99%) | 5666 (83%) | 1126 (16%) | 12 (0%)  | 45          | 78  |

All (12) Ramachandran outliers are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1   | A     | 279 | VAL  |
| 1   | C     | 279 | VAL  |
| 1   | E     | 279 | VAL  |
| 1   | G     | 279 | VAL  |
| 1   | I     | 279 | VAL  |
| 1   | K     | 279 | VAL  |
| 1   | M     | 279 | VAL  |
| 1   | O     | 279 | VAL  |
| 1   | Q     | 279 | VAL  |
| 1   | S     | 279 | VAL  |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1   | U     | 279 | VAL  |
| 1   | W     | 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     | 248/248 (100%) | 248 (100%) | 0        | 100         | 100 |
| 1   | C     | 248/248 (100%) | 248 (100%) | 0        | 100         | 100 |
| 1   | E     | 248/248 (100%) | 248 (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     | 224/224 (100%) | 224 (100%) | 0        | 100         | 100 |
| 2   | D     | 224/224 (100%) | 224 (100%) | 0        | 100         | 100 |
| 2   | F     | 224/224 (100%) | 224 (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 |

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| Mol | Chain | Analysed         | Rotameric   | Outliers | Percentiles |     |
|-----|-------|------------------|-------------|----------|-------------|-----|
| 2   | V     | 224/224 (100%)   | 224 (100%)  | 0        | 100         | 100 |
| 2   | X     | 224/224 (100%)   | 224 (100%)  | 0        | 100         | 100 |
| All | All   | 5664/5664 (100%) | 5664 (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 (67) such sidechains are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1   | A     | 60  | GLN  |
| 1   | A     | 69  | HIS  |
| 2   | B     | 34  | HIS  |
| 2   | B     | 55  | HIS  |
| 2   | B     | 272 | GLN  |
| 1   | C     | 60  | GLN  |
| 1   | C     | 69  | HIS  |
| 2   | D     | 34  | HIS  |
| 2   | D     | 55  | HIS  |
| 2   | D     | 256 | ASN  |
| 2   | D     | 269 | GLN  |
| 2   | D     | 272 | GLN  |
| 1   | E     | 60  | GLN  |
| 1   | E     | 69  | HIS  |
| 1   | E     | 219 | GLN  |
| 1   | E     | 268 | GLN  |
| 2   | F     | 34  | HIS  |
| 2   | F     | 55  | HIS  |
| 1   | G     | 60  | GLN  |
| 1   | G     | 69  | HIS  |
| 2   | H     | 34  | HIS  |
| 2   | H     | 55  | HIS  |
| 1   | I     | 60  | GLN  |
| 1   | I     | 69  | HIS  |
| 1   | I     | 268 | GLN  |
| 1   | I     | 283 | GLN  |
| 2   | J     | 34  | HIS  |
| 2   | J     | 55  | HIS  |
| 1   | K     | 60  | GLN  |
| 1   | K     | 283 | GLN  |
| 2   | L     | 34  | HIS  |
| 2   | L     | 55  | HIS  |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1   | M     | 60  | GLN  |
| 1   | M     | 219 | GLN  |
| 2   | N     | 34  | HIS  |
| 2   | N     | 55  | HIS  |
| 2   | N     | 269 | GLN  |
| 1   | O     | 60  | GLN  |
| 1   | O     | 69  | HIS  |
| 1   | O     | 268 | GLN  |
| 2   | P     | 34  | HIS  |
| 2   | P     | 55  | HIS  |
| 2   | P     | 86  | GLN  |
| 1   | Q     | 60  | GLN  |
| 1   | Q     | 69  | HIS  |
| 1   | Q     | 221 | GLN  |
| 1   | Q     | 268 | GLN  |
| 2   | R     | 34  | HIS  |
| 2   | R     | 55  | HIS  |
| 1   | S     | 60  | GLN  |
| 1   | S     | 219 | GLN  |
| 1   | S     | 268 | GLN  |
| 2   | T     | 34  | HIS  |
| 2   | T     | 55  | HIS  |
| 1   | U     | 60  | GLN  |
| 1   | U     | 69  | HIS  |
| 1   | U     | 268 | GLN  |
| 1   | U     | 283 | GLN  |
| 2   | V     | 34  | HIS  |
| 2   | V     | 55  | HIS  |
| 1   | W     | 60  | GLN  |
| 1   | W     | 69  | HIS  |
| 1   | W     | 258 | GLN  |
| 1   | W     | 268 | GLN  |
| 1   | W     | 277 | ASN  |
| 2   | X     | 34  | HIS  |
| 2   | X     | 55  | HIS  |

### 5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

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

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

## 5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

## 5.6 Ligand geometry [i](#)

There are no ligands in this entry.

## 5.7 Other polymers [i](#)

There are no such residues in this entry.

## 5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

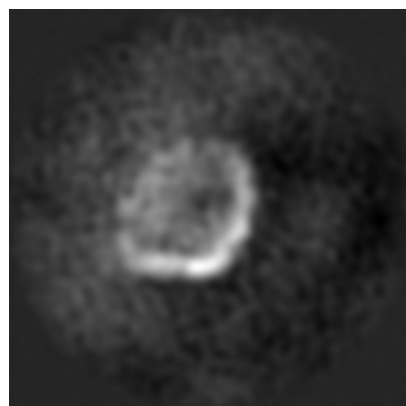
## 6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-70179. These allow visual inspection of the internal detail of the map and identification of artifacts.

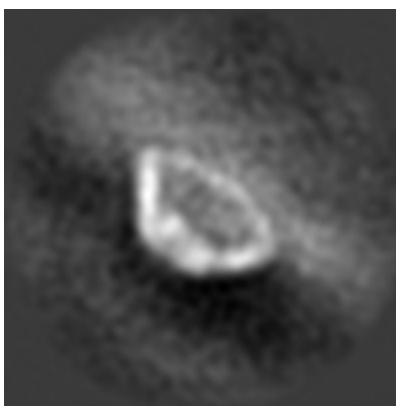
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

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

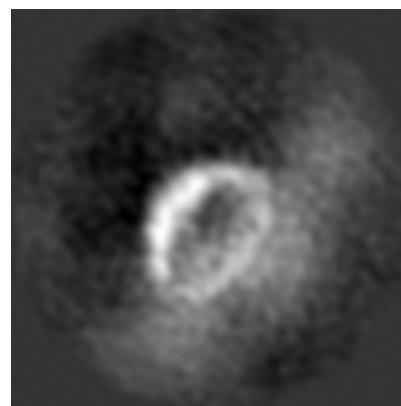
#### 6.1.1 Primary map



X

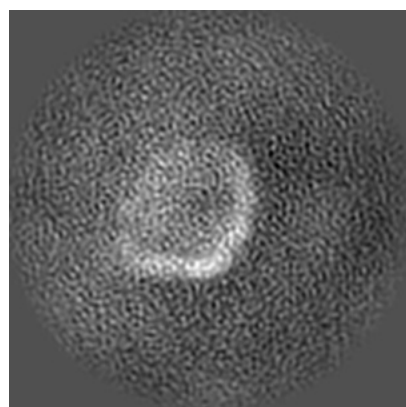


Y

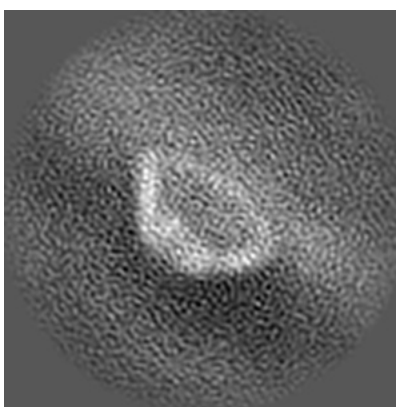


Z

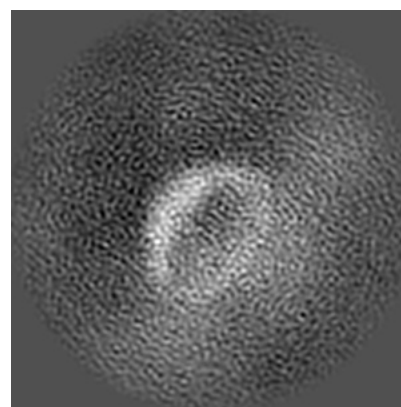
#### 6.1.2 Raw map



X



Y



Z

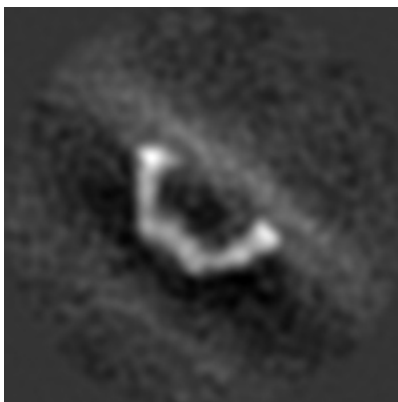
The images above show the map projected in three orthogonal directions.

## 6.2 Central slices [i](#)

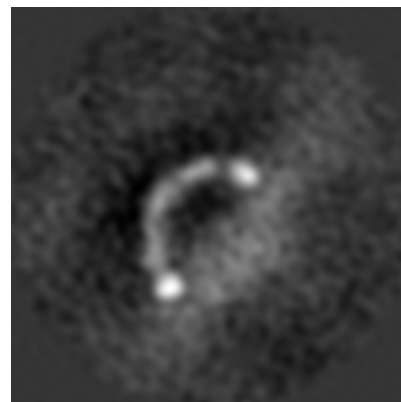
### 6.2.1 Primary map



X Index: 60

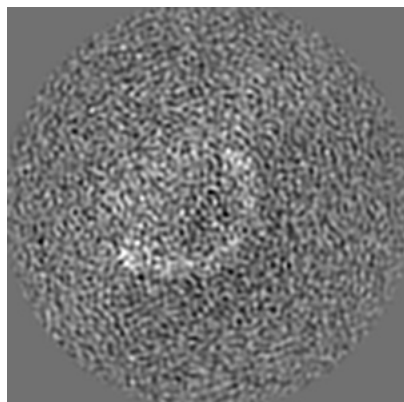


Y Index: 60

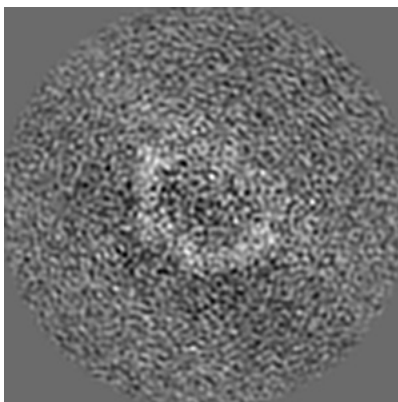


Z Index: 60

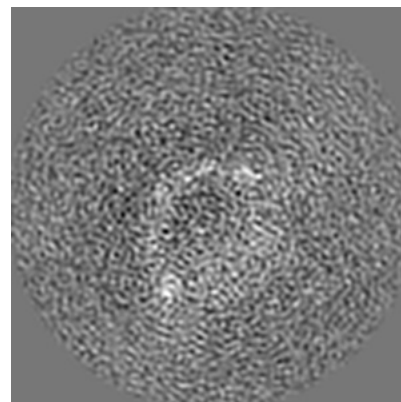
### 6.2.2 Raw map



X Index: 60



Y Index: 60

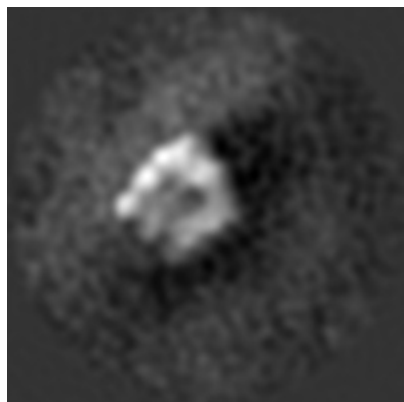


Z Index: 60

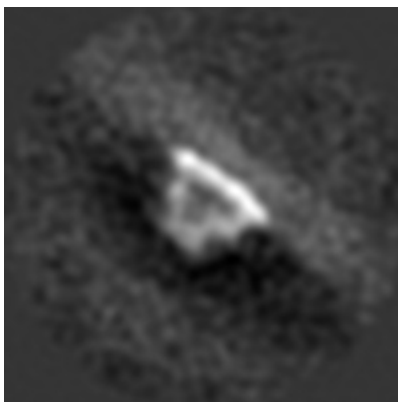
The images above show central slices of the map in three orthogonal directions.

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

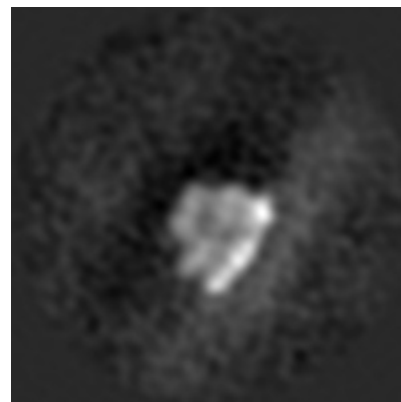
### 6.3.1 Primary map



X Index: 45

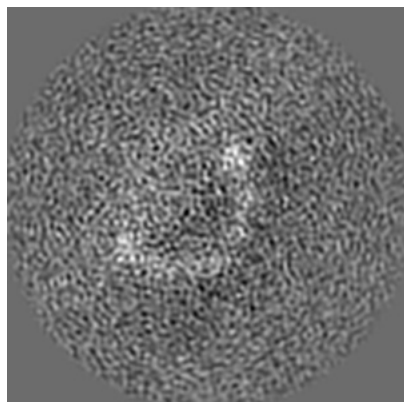


Y Index: 69

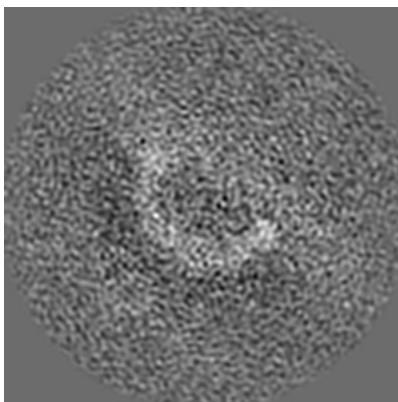


Z Index: 43

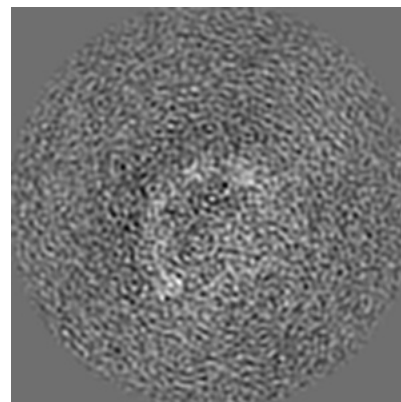
### 6.3.2 Raw map



X Index: 59



Y Index: 61

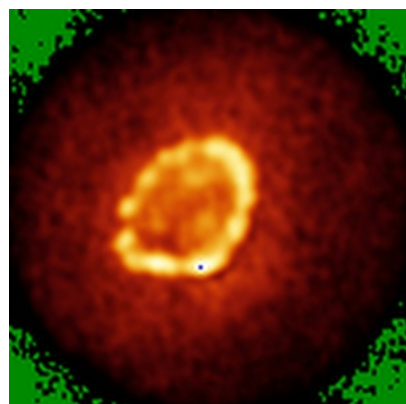


Z Index: 61

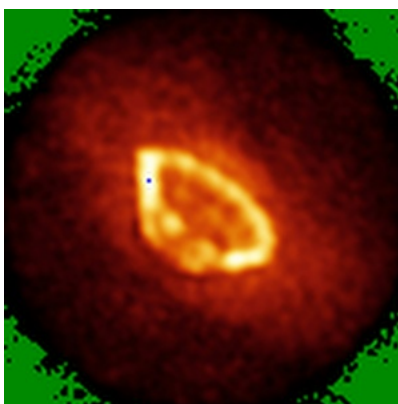
The images above show the largest variance slices of the map in three orthogonal directions.

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

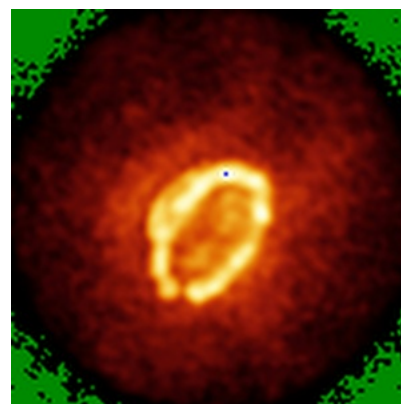
### 6.4.1 Primary map



X

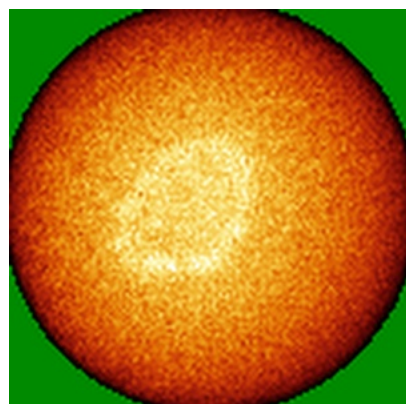


Y

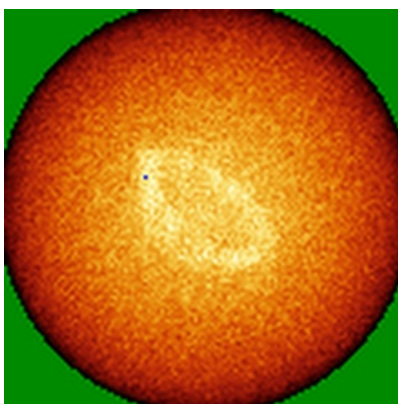


Z

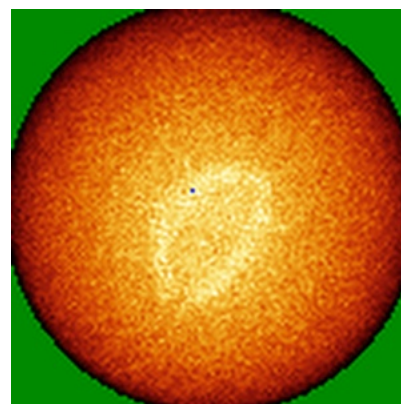
### 6.4.2 Raw map



X



Y

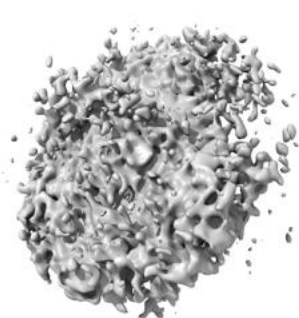


Z

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

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

### 6.5.1 Primary map



X



Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.0002. 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.

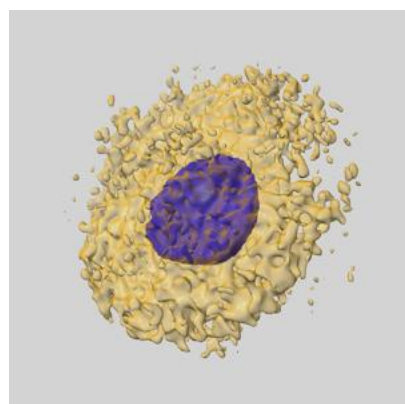
## 6.6 Mask visualisation [i](#)

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

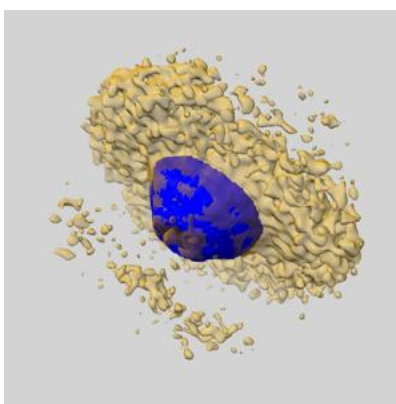
A mask typically either:

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

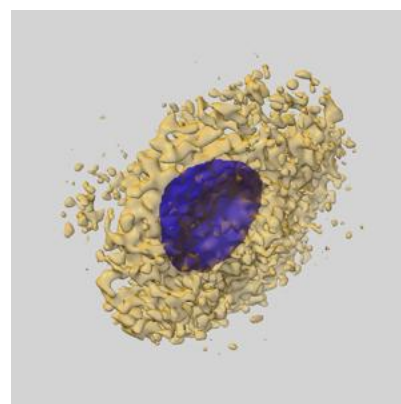
### 6.6.1 emd\_70179\_msk\_1.map [i](#)



X



Y

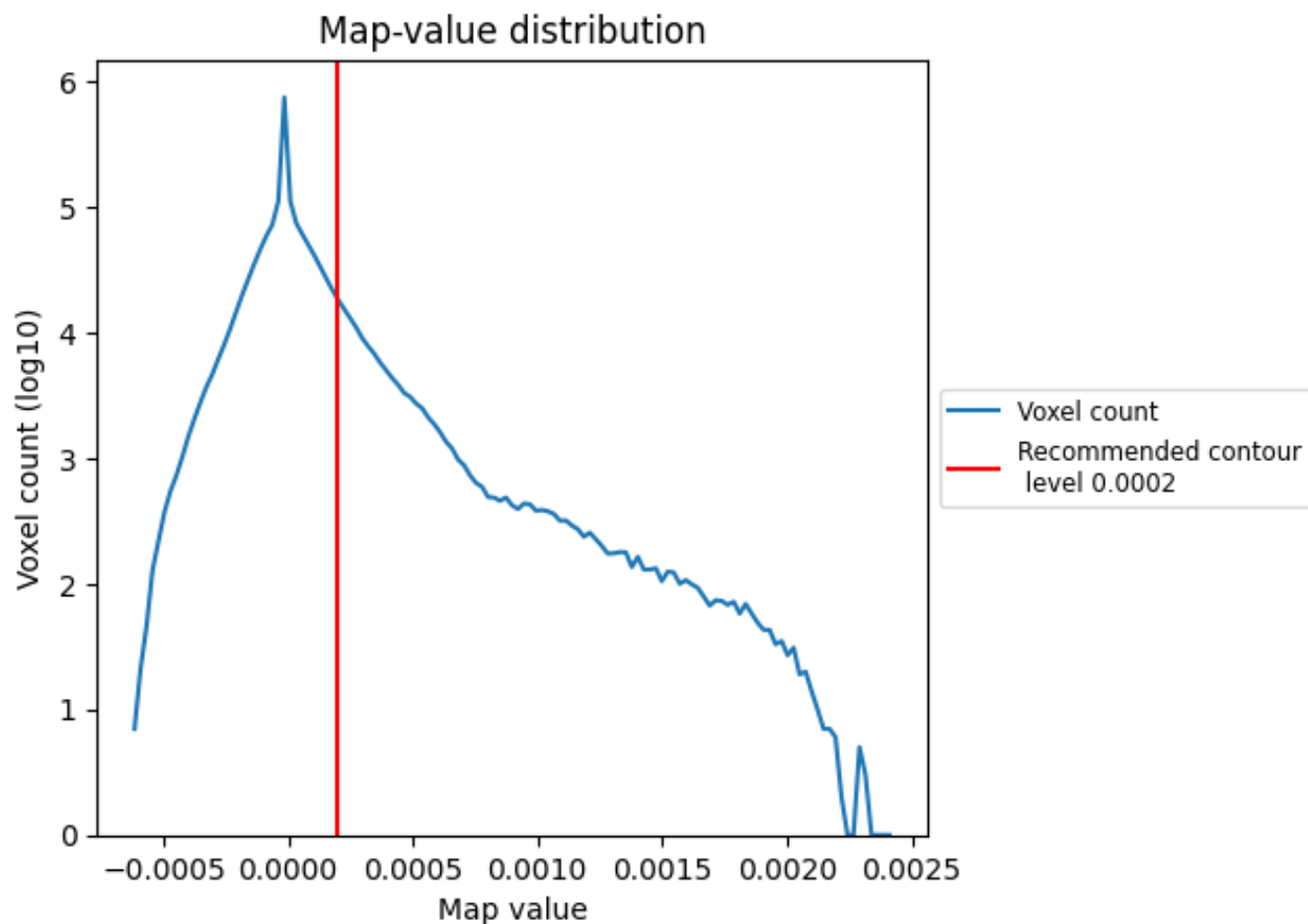


Z

## 7 Map analysis [i](#)

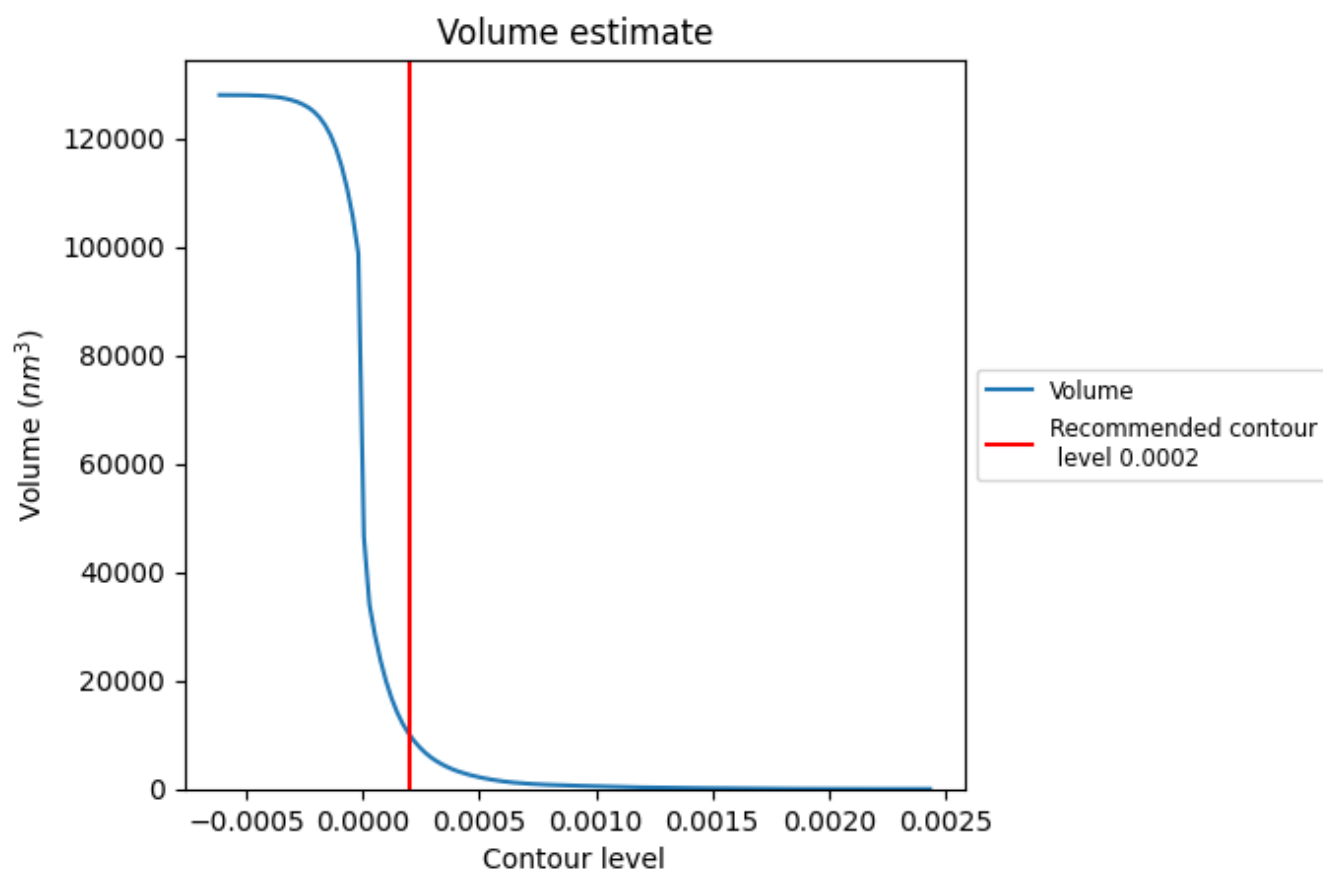
This section contains the results of statistical analysis of the map.

### 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.

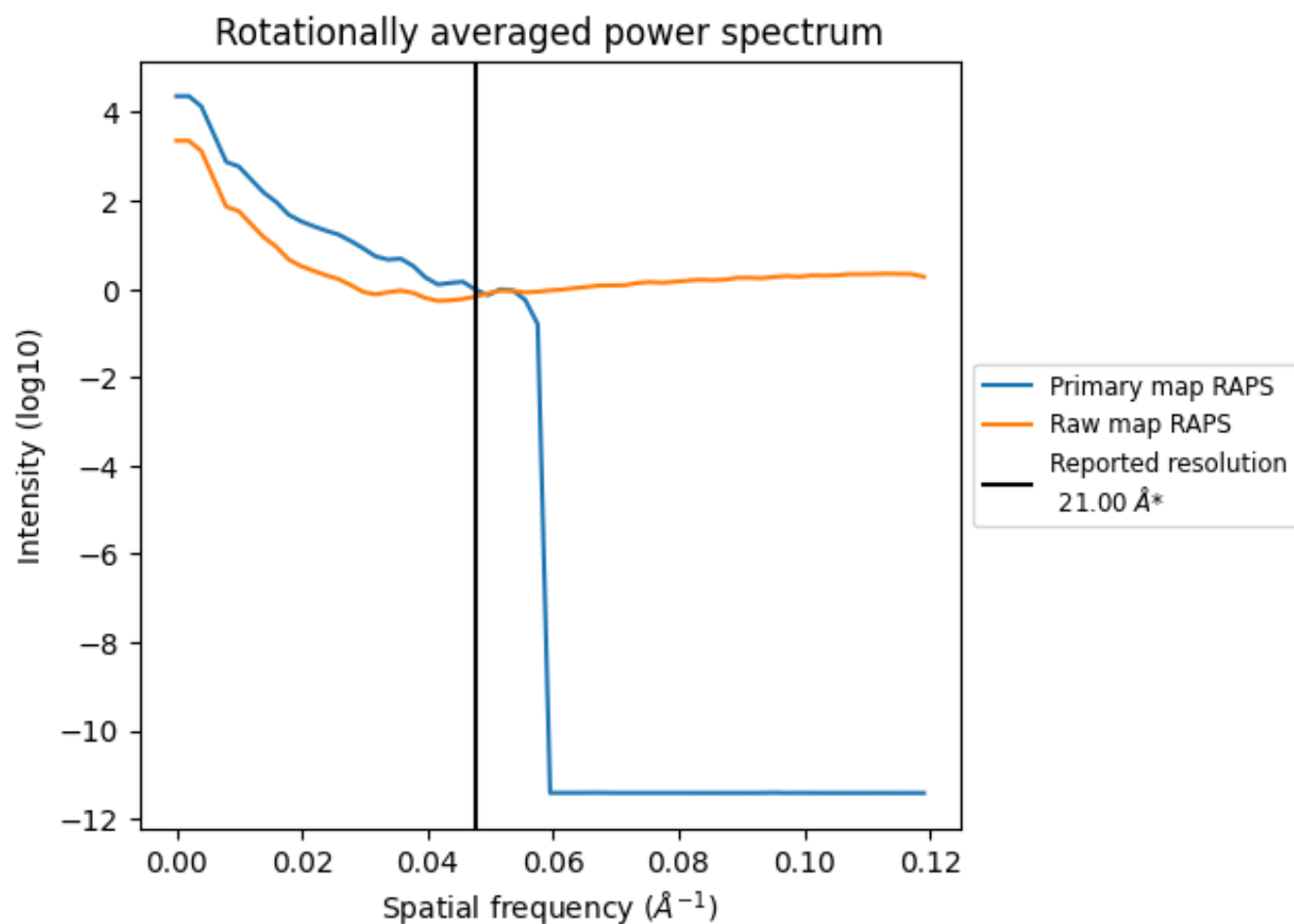
## 7.2 Volume estimate [i](#)



The volume at the recommended contour level is 10031  $\text{nm}^3$ ; this corresponds to an approximate mass of 9062 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 ⓘ

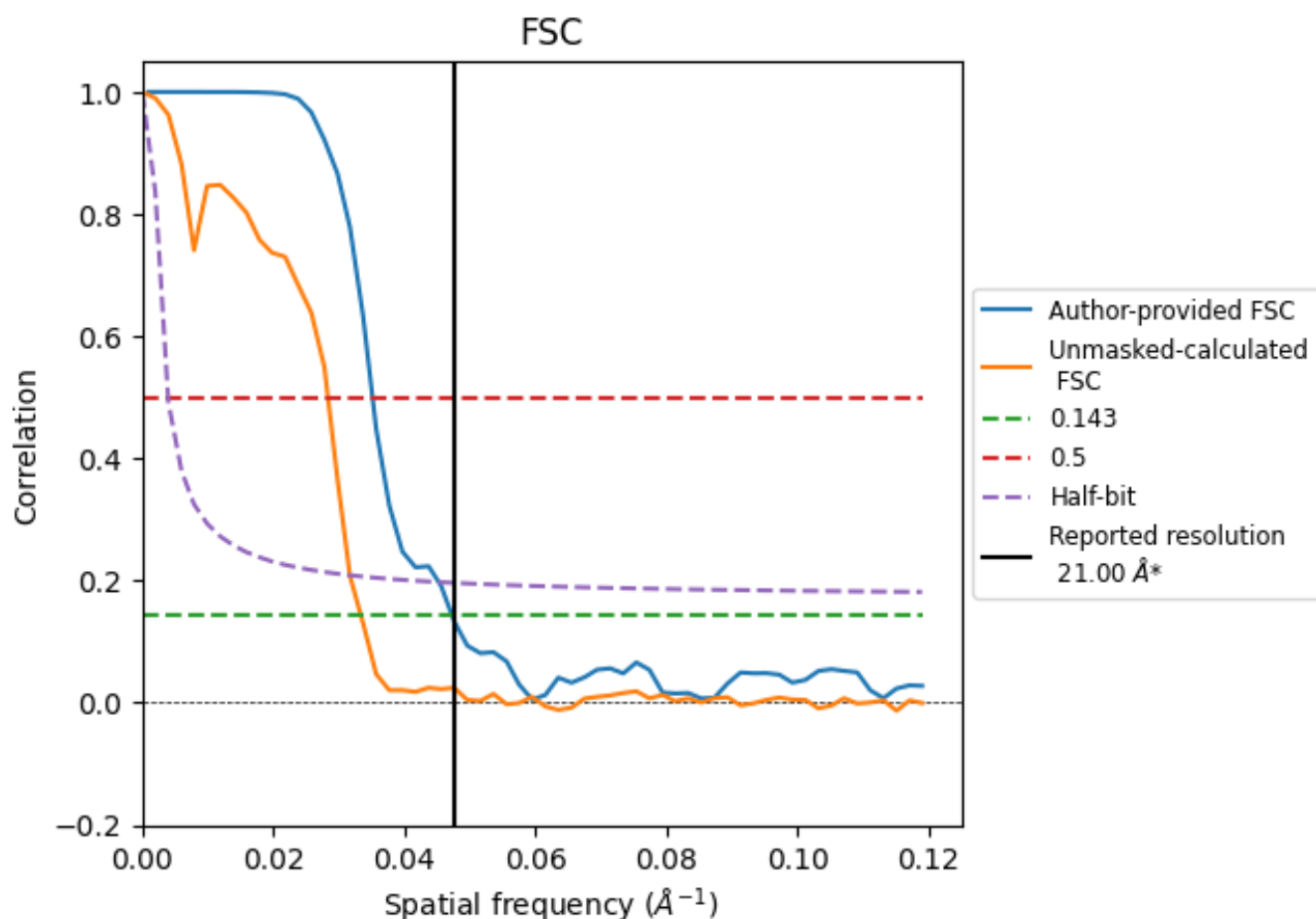


\*Reported resolution corresponds to spatial frequency of 0.048 Å<sup>-1</sup>

## 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 0.048  $\text{\AA}^{-1}$

## 8.2 Resolution estimates [i](#)

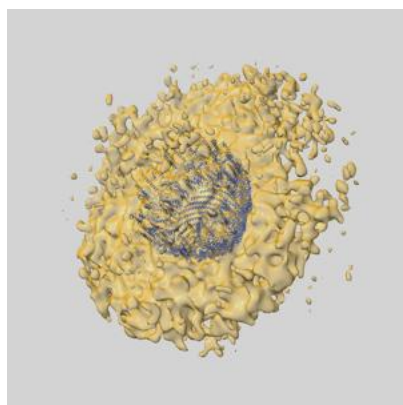
| Resolution estimate (Å)   | Estimation criterion (FSC cut-off) |       |          |
|---------------------------|------------------------------------|-------|----------|
|                           | 0.143                              | 0.5   | Half-bit |
| Reported by author        | 21.00                              | -     | -        |
| Author-provided FSC curve | 21.14                              | 28.41 | 22.08    |
| Unmasked-calculated*      | 29.94                              | 35.34 | 31.55    |

\*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 29.94 differs from the reported value 21.0 by more than 10 %

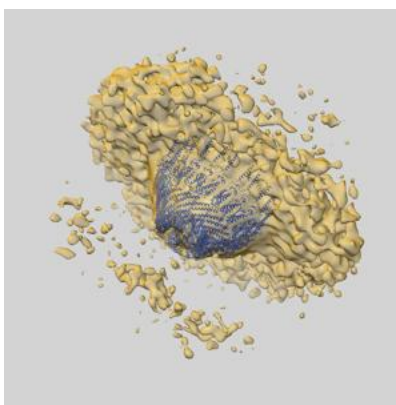
## 9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-70179 and PDB model 9O6S. Per-residue inclusion information can be found in section [3](#) on page [6](#).

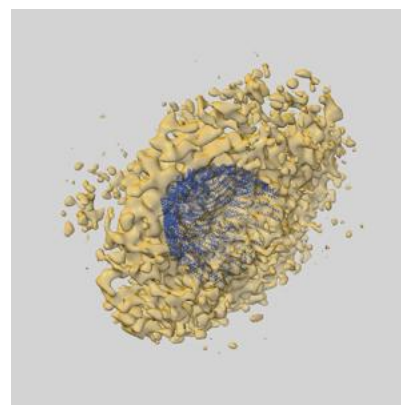
### 9.1 Map-model overlay [i](#)



X



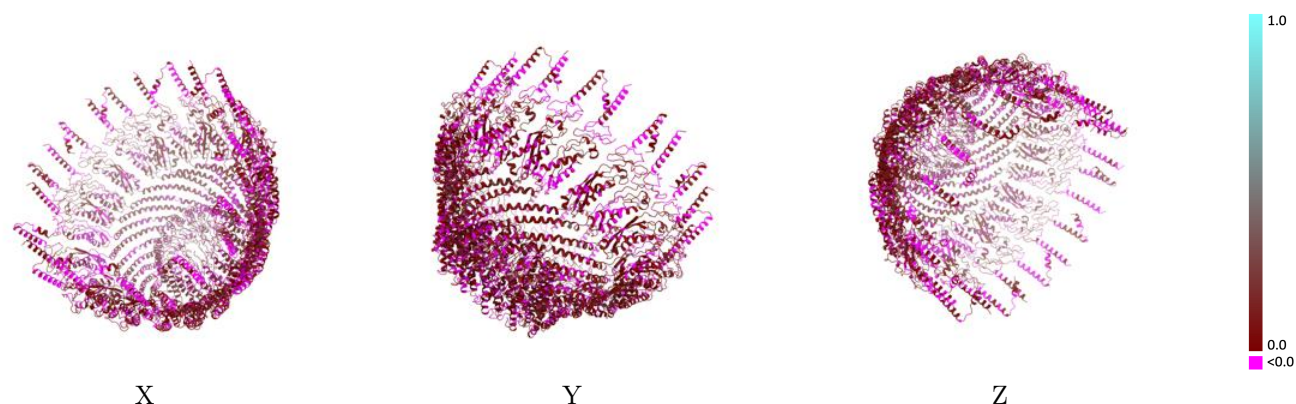
Y



Z

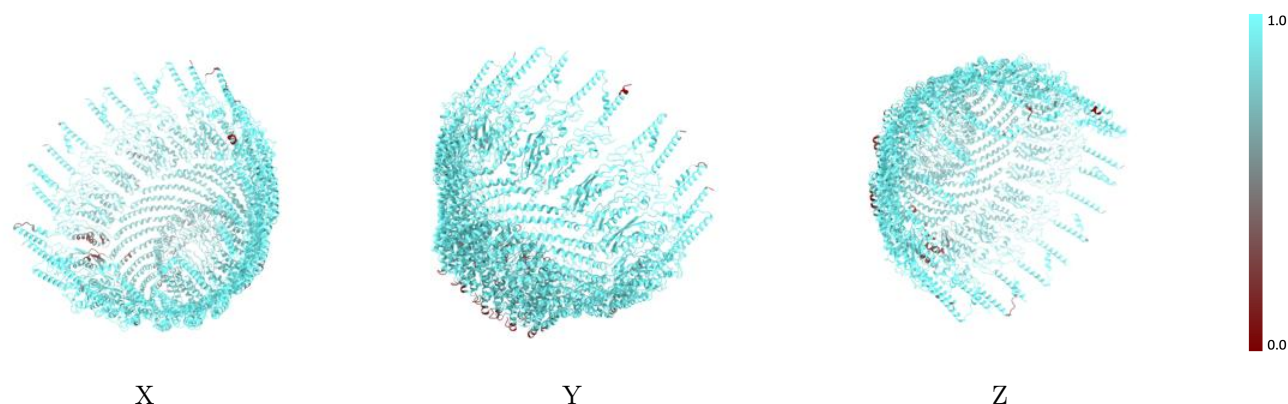
The images above show the 3D surface view of the map at the recommended contour level 0.0002 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



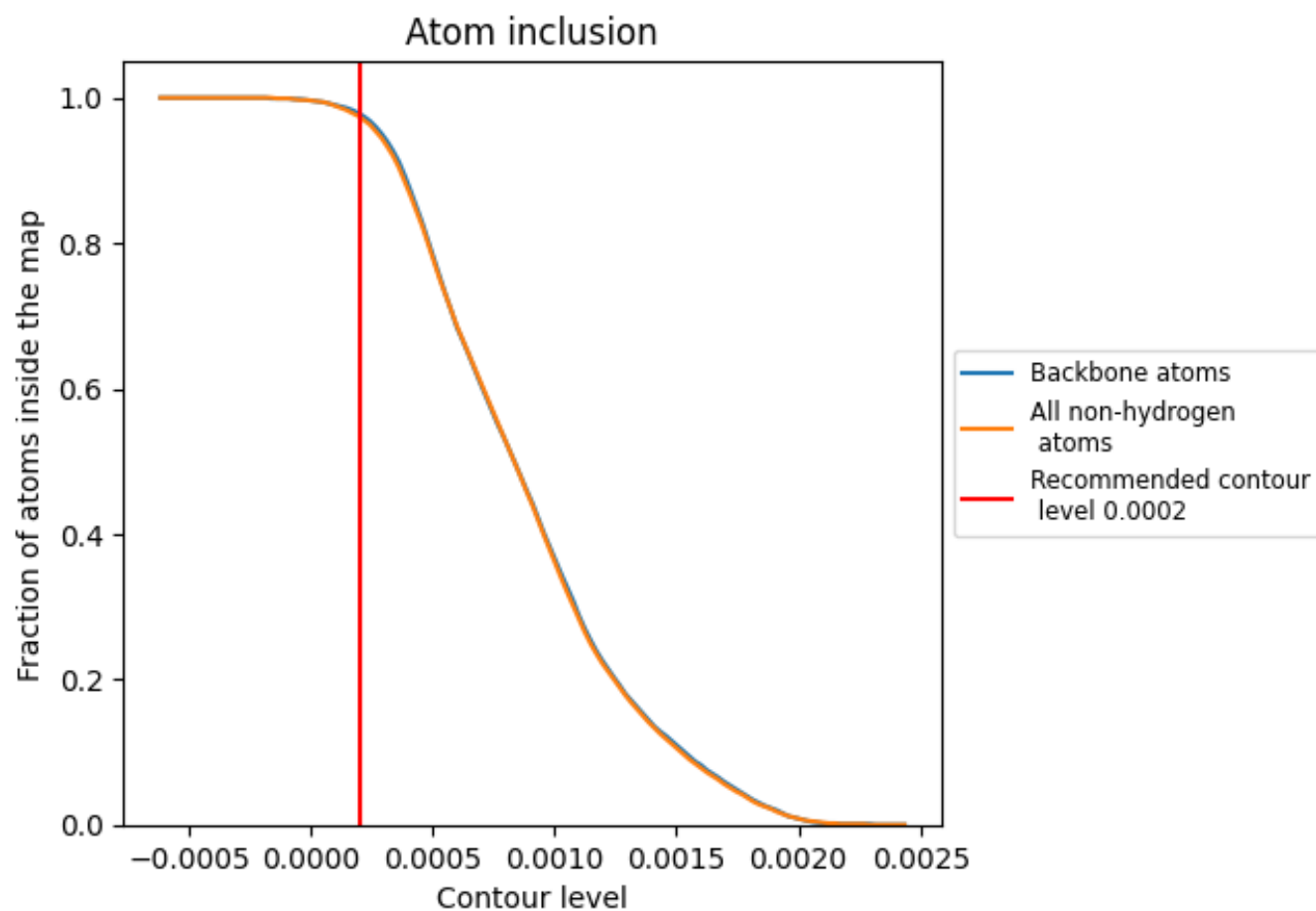
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

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



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.0002).

## 9.4 Atom inclusion [i](#)



At the recommended contour level, 98% of all backbone atoms, 97% 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 (0.0002) and Q-score for the entire model and for each chain.

| Chain | Atom inclusion                                                                             | Q-score                                                                                    |
|-------|--------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| All   |  0.9740   |  0.0410   |
| A     |  0.9750   |  0.0550   |
| B     |  0.9980   |  0.0420   |
| C     |  0.9820   |  0.0410   |
| D     |  0.9870   |  0.0380   |
| E     |  0.9830   |  0.0310   |
| F     |  0.9770   |  0.0230   |
| G     |  0.9950   |  0.0420   |
| H     |  0.9890   |  0.0270   |
| I     |  0.9880   |  0.0620   |
| J     |  0.9810   |  0.0610   |
| K     |  0.9940   |  0.0430   |
| L     |  0.9880   |  0.0480   |
| M     |  0.9850   |  0.0600   |
| N     |  0.9600  |  0.0400  |
| O     |  0.9830 |  0.0490 |
| P     |  0.9840 |  0.0300 |
| Q     |  0.9790 |  0.0550 |
| R     |  0.8820 |  0.0130 |
| S     |  0.9100 |  0.0360 |
| T     |  0.9550 |  0.0350 |
| U     |  0.9730 |  0.0530 |
| V     |  0.9850 |  0.0380 |
| W     |  0.9570 |  0.0370 |
| X     |  0.9850 |  0.0230 |

