



# Full wwPDB NMR Structure Validation Report ⓘ

Oct 16, 2021 – 09:48 PM EDT

PDB ID : 1T3K  
Title : NMR structure of a CDC25-like dual-specificity tyrosine phosphatase of *Arabidopsis thaliana*  
Authors : Landrieu, I.; da Costa, M.; De Veylder, L.; Dewitte, F.; Vandepoele, K.; Hassan, S.; Wieruszkeski, J.M.; Faure, J.D.; Inze, D.; Lippens, G.  
Deposited on : 2004-04-27

This is a Full wwPDB NMR Structure 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/NMRValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

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

MolProbity : 4.02b-467  
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)  
RCI : v\_1n\_11\_5\_13\_A (Berjanski et al., 2005)  
PANAV : Wang et al. (2010)  
ShiftChecker : 2.23.2  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
Validation Pipeline (wwPDB-VP) : 2.23.2

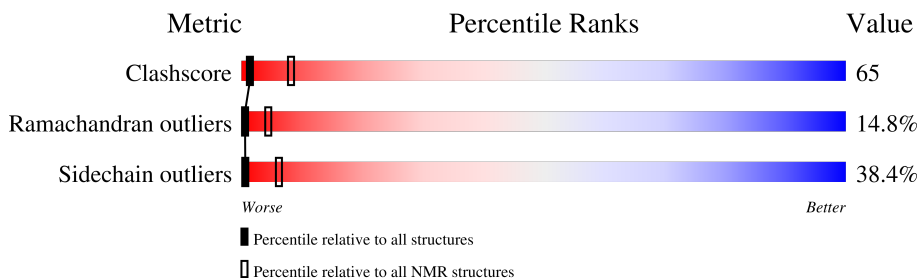
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

*SOLUTION NMR*

The overall completeness of chemical shifts assignment was not calculated.

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



| Metric                | Whole archive (#Entries) | NMR archive (#Entries) |
|-----------------------|--------------------------|------------------------|
| Clashscore            | 158937                   | 12864                  |
| Ramachandran outliers | 154571                   | 11451                  |
| Sidechain outliers    | 154315                   | 11428                  |

The table below summarises the geometric issues observed across the polymeric chains and their fit to the experimental data. The red, orange, yellow and green segments indicate the fraction of residues that contain outliers for  $\geq 3$ , 2, 1 and 0 types of geometric quality criteria. A cyan segment indicates the fraction of residues that are not part of the well-defined cores, and 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  $\leq 5\%$

| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|------------------|
| 1   | A     | 152    |                  |

## 2 Ensemble composition and analysis

This entry contains 20 models. Model 20 is the overall representative, medoid model (most similar to other models). The authors have identified model 1 as representative, based on the following criterion: *lowest energy*.

The following residues are included in the computation of the global validation metrics.

| Well-defined (core) protein residues |                       |                   |              |
|--------------------------------------|-----------------------|-------------------|--------------|
| Well-defined core                    | Residue range (total) | Backbone RMSD (Å) | Medoid model |
| 1                                    | A:1-A:129 (129)       | 1.43              | 20           |

Ill-defined regions of proteins are excluded from the global statistics.

Ligands and non-protein polymers are included in the analysis.

The models can be grouped into 2 clusters and 4 single-model clusters were found.

| Cluster number        | Models                               |
|-----------------------|--------------------------------------|
| 1                     | 1, 4, 5, 6, 7, 9, 11, 13, 15, 16, 20 |
| 2                     | 2, 3, 8, 14, 17                      |
| Single-model clusters | 10; 12; 18; 19                       |

### 3 Entry composition [i](#)

There are 2 unique types of molecules in this entry. The entry contains 2059 atoms, of which 1026 are hydrogens and 0 are deuteriums.

- Molecule 1 is a protein called Dual-specificity tyrosine phosphatase.

| Mol | Chain | Residues | Atoms |     |      |     |     | Trace |   |
|-----|-------|----------|-------|-----|------|-----|-----|-------|---|
|     |       |          | Total | C   | H    | N   | O   |       | S |
| 1   | A     | 132      | 2058  | 639 | 1026 | 190 | 195 | 8     | 0 |

There are 21 discrepancies between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment             | Reference  |
|-------|---------|----------|--------|---------------------|------------|
| A     | -19     | MET      | -      | cloning artifact    | UNP Q8GY31 |
| A     | -18     | GLY      | -      | cloning artifact    | UNP Q8GY31 |
| A     | -17     | SER      | -      | cloning artifact    | UNP Q8GY31 |
| A     | -16     | SER      | -      | cloning artifact    | UNP Q8GY31 |
| A     | -15     | HIS      | -      | cloning artifact    | UNP Q8GY31 |
| A     | -14     | HIS      | -      | cloning artifact    | UNP Q8GY31 |
| A     | -13     | HIS      | -      | cloning artifact    | UNP Q8GY31 |
| A     | -12     | HIS      | -      | cloning artifact    | UNP Q8GY31 |
| A     | -11     | HIS      | -      | cloning artifact    | UNP Q8GY31 |
| A     | -10     | HIS      | -      | cloning artifact    | UNP Q8GY31 |
| A     | -9      | SER      | -      | cloning artifact    | UNP Q8GY31 |
| A     | -8      | SER      | -      | cloning artifact    | UNP Q8GY31 |
| A     | -7      | GLY      | -      | cloning artifact    | UNP Q8GY31 |
| A     | -6      | LEU      | -      | cloning artifact    | UNP Q8GY31 |
| A     | -5      | VAL      | -      | cloning artifact    | UNP Q8GY31 |
| A     | -4      | PRO      | -      | cloning artifact    | UNP Q8GY31 |
| A     | -3      | ARG      | -      | cloning artifact    | UNP Q8GY31 |
| A     | -2      | GLY      | -      | cloning artifact    | UNP Q8GY31 |
| A     | -1      | SER      | -      | cloning artifact    | UNP Q8GY31 |
| A     | 0       | HIS      | -      | cloning artifact    | UNP Q8GY31 |
| A     | 72      | SER      | CYS    | engineered mutation | UNP Q8GY31 |

- Molecule 2 is ZINC ION (three-letter code: ZN) (formula: Zn).

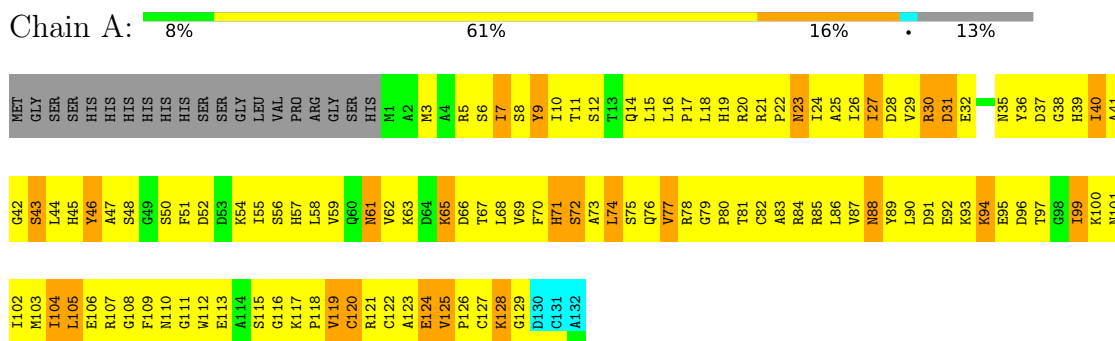
| Mol | Chain | Residues | Atoms |    |
|-----|-------|----------|-------|----|
|     |       |          | Total | Zn |
| 2   | A     | 1        | 1     | 1  |

## 4 Residue-property plots [i](#)

### 4.1 Average score per residue in the NMR ensemble

These plots are provided for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic is the same as shown in the summary in section 1 of this report. The second graphic shows the sequence where residues are colour-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. Stretches of 2 or more consecutive residues without any outliers are shown as green connectors. Residues which are classified as ill-defined in the NMR ensemble, are shown in cyan with an underline colour-coded according to the previous scheme. Residues which were present in the experimental sample, but not modelled in the final structure are shown in grey.

- Molecule 1: Dual-specificity tyrosine phosphatase

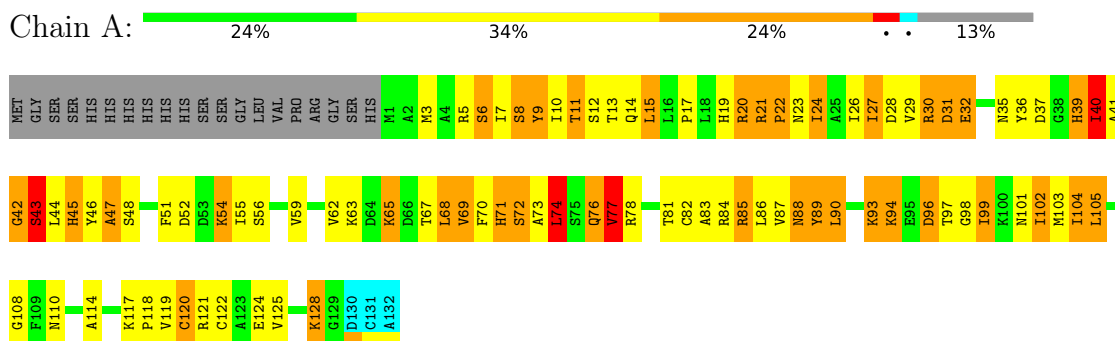


### 4.2 Scores per residue for each member of the ensemble

Colouring as in section 4.1 above.

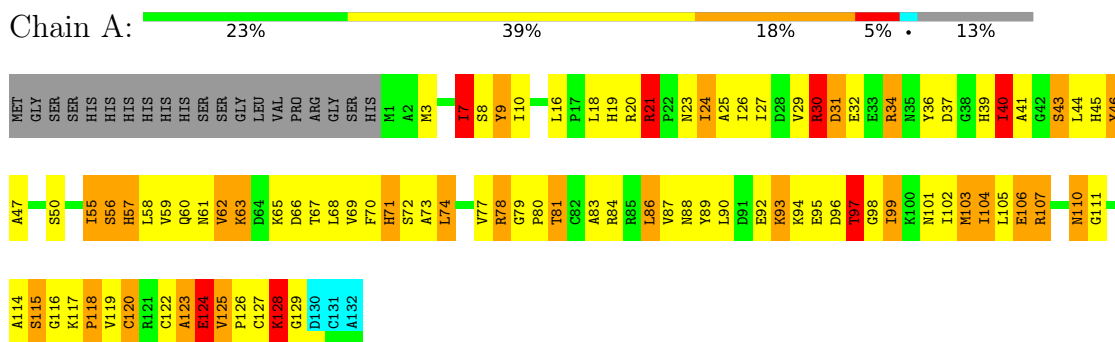
#### 4.2.1 Score per residue for model 1

- Molecule 1: Dual-specificity tyrosine phosphatase



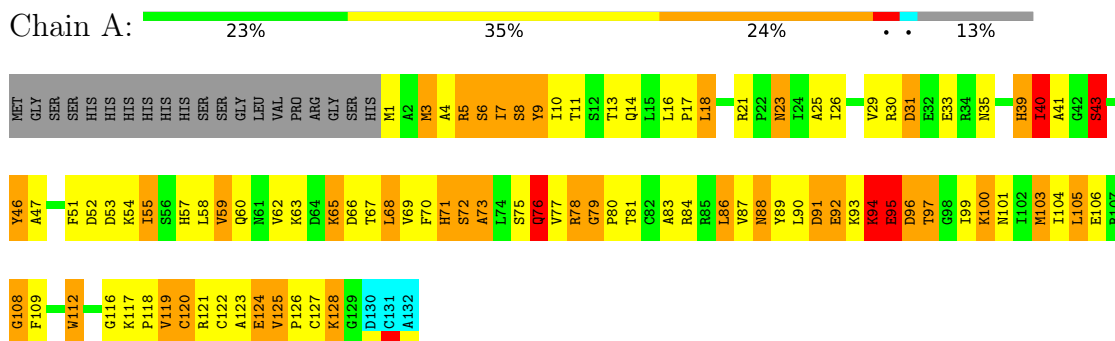
### 4.2.2 Score per residue for model 2

- Molecule 1: Dual-specificity tyrosine phosphatase



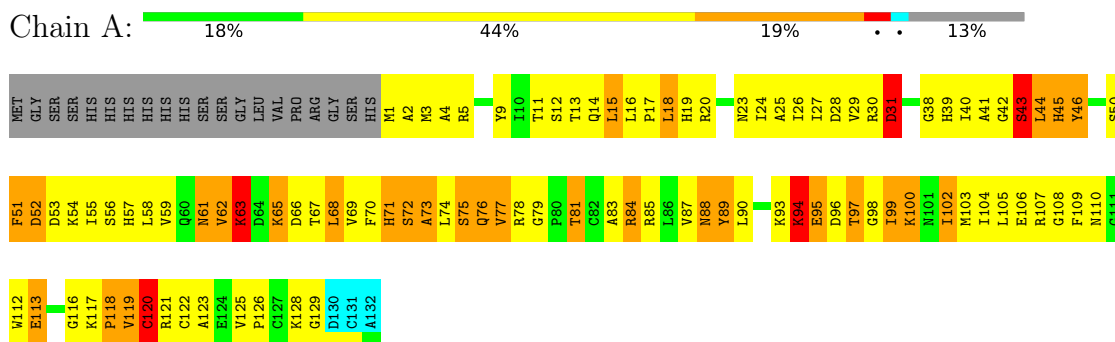
### 4.2.3 Score per residue for model 3

- Molecule 1: Dual-specificity tyrosine phosphatase



### 4.2.4 Score per residue for model 4

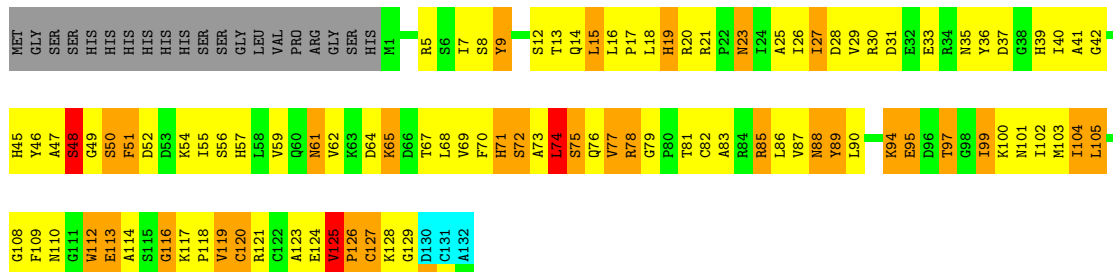
- Molecule 1: Dual-specificity tyrosine phosphatase



### 4.2.5 Score per residue for model 5

- Molecule 1: Dual-specificity tyrosine phosphatase

Chain A: 20% 43% 20% 13%



### 4.2.6 Score per residue for model 6

- Molecule 1: Dual-specificity tyrosine phosphatase

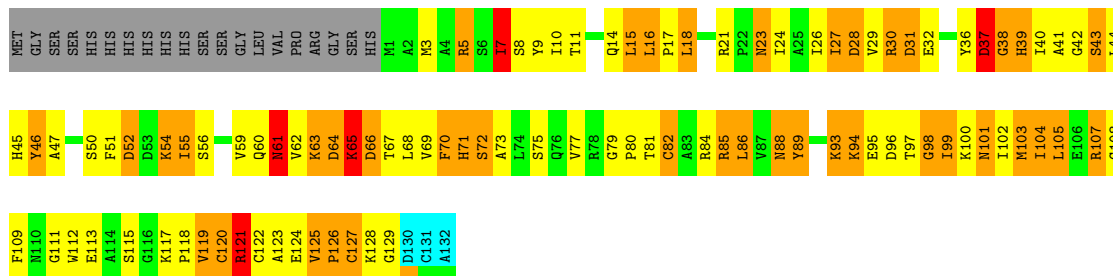
Chain A: 17% 41% 24% 13%



### 4.2.7 Score per residue for model 7

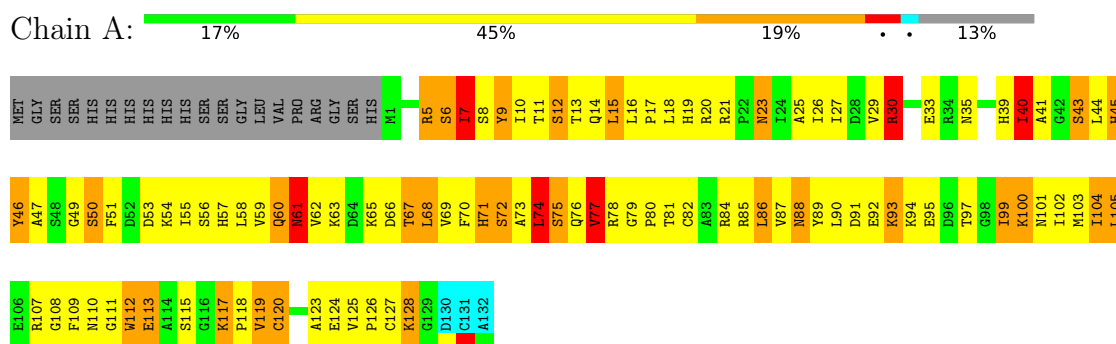
- Molecule 1: Dual-specificity tyrosine phosphatase

Chain A: 20% 35% 27% 13%



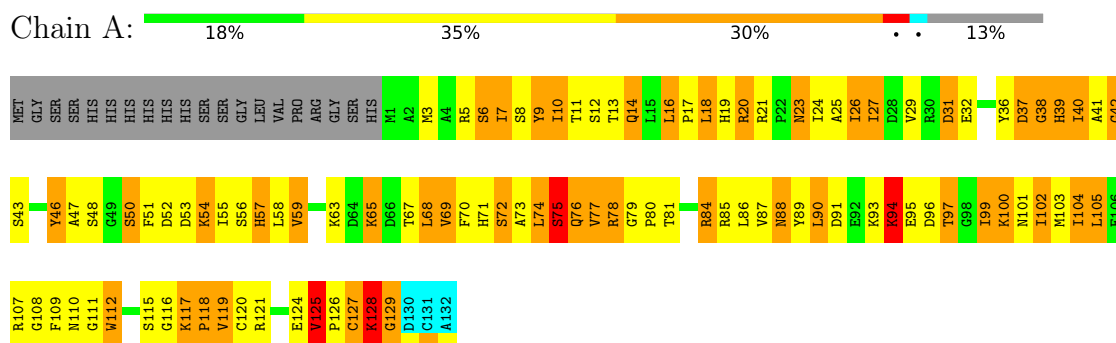
#### 4.2.8 Score per residue for model 8

- Molecule 1: Dual-specificity tyrosine phosphatase



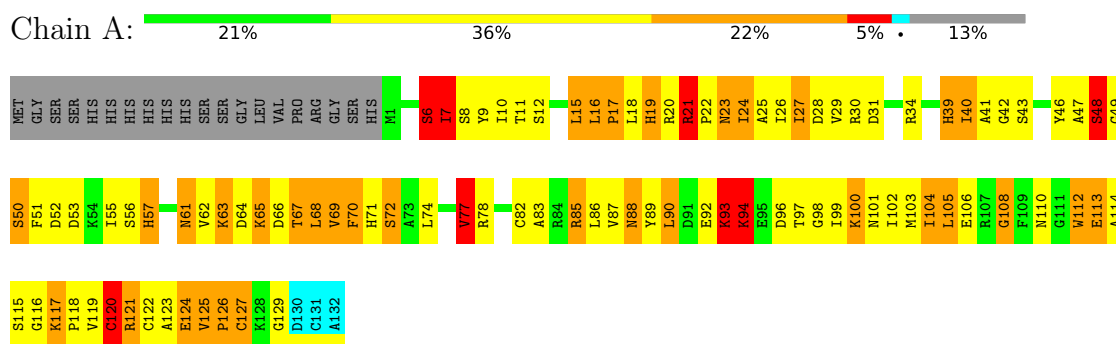
#### 4.2.9 Score per residue for model 9

- Molecule 1: Dual-specificity tyrosine phosphatase



#### 4.2.10 Score per residue for model 10

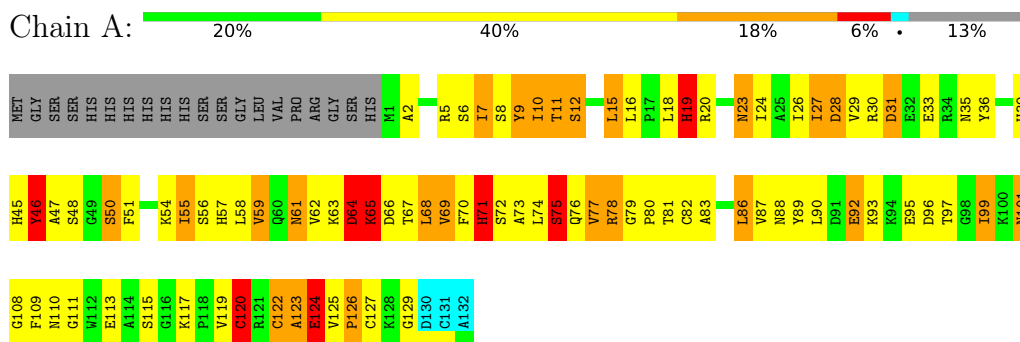
- Molecule 1: Dual-specificity tyrosine phosphatase





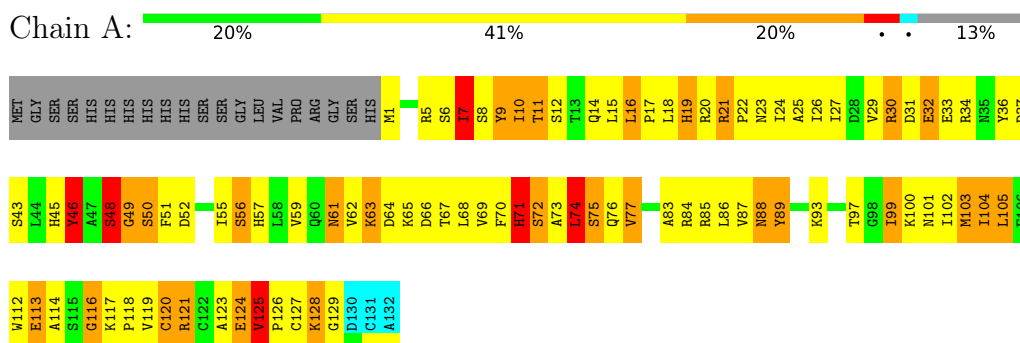
### 4.2.11 Score per residue for model 11

- Molecule 1: Dual-specificity tyrosine phosphatase



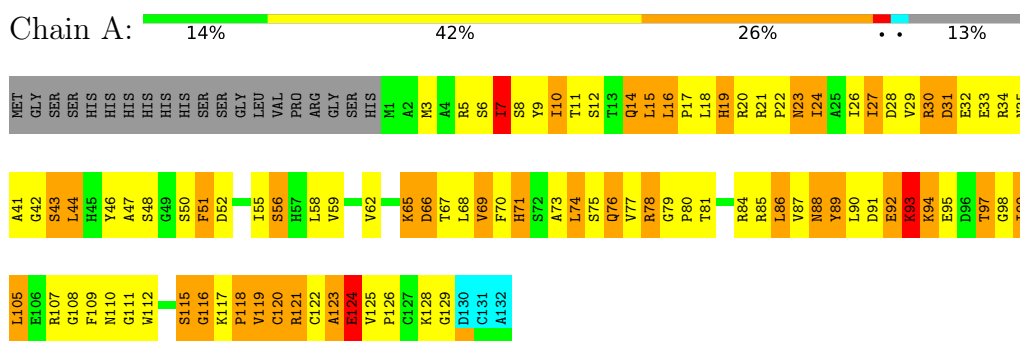
### 4.2.12 Score per residue for model 12

- Molecule 1: Dual-specificity tyrosine phosphatase



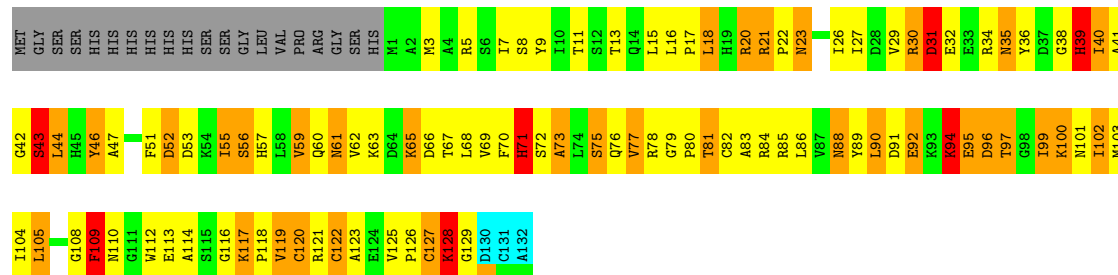
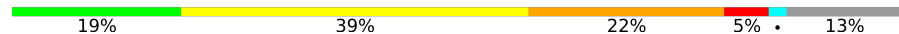
### 4.2.13 Score per residue for model 13

- Molecule 1: Dual-specificity tyrosine phosphatase



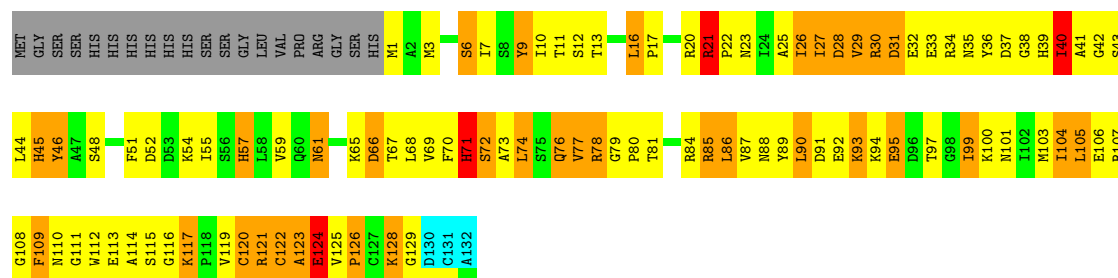
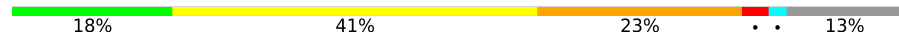
## 4.2.14 Score per residue for model 14

- Molecule 1: Dual-specificity tyrosine phosphatase

Chain A: 

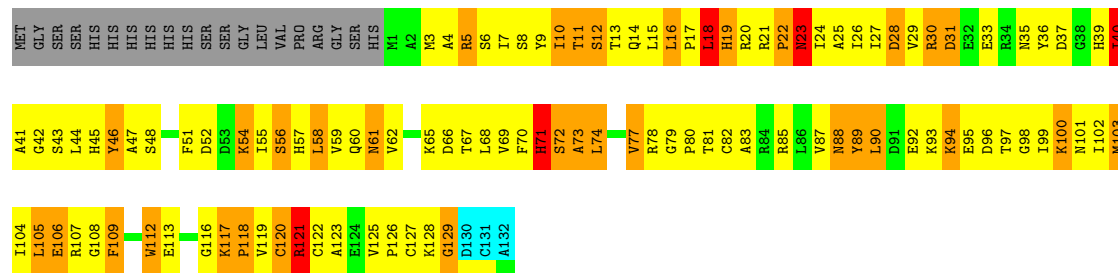
## 4.2.15 Score per residue for model 15

- Molecule 1: Dual-specificity tyrosine phosphatase

Chain A: 

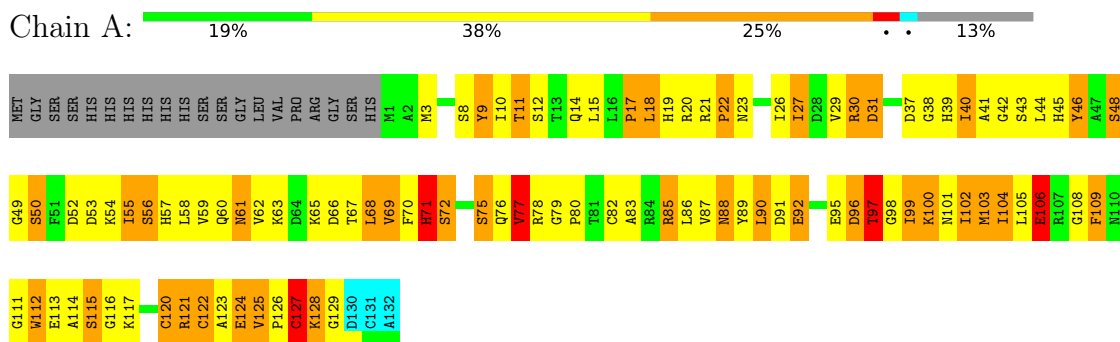
## 4.2.16 Score per residue for model 16

- Molecule 1: Dual-specificity tyrosine phosphatase

Chain A: 

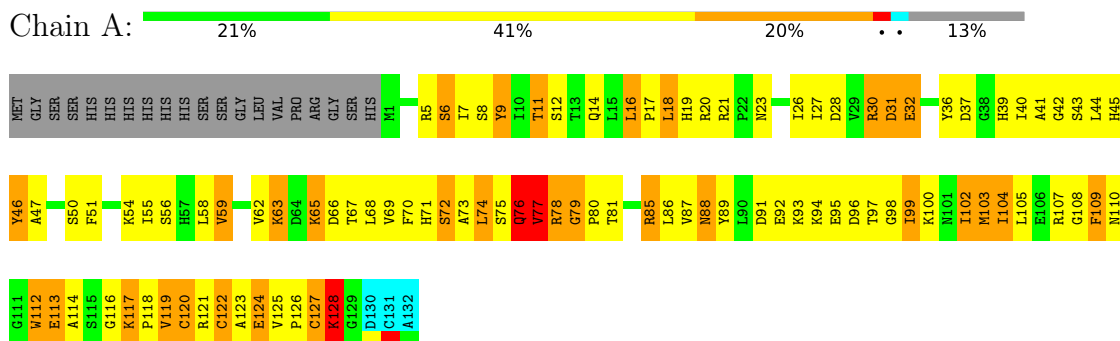
## 4.2.17 Score per residue for model 17

- Molecule 1: Dual-specificity tyrosine phosphatase



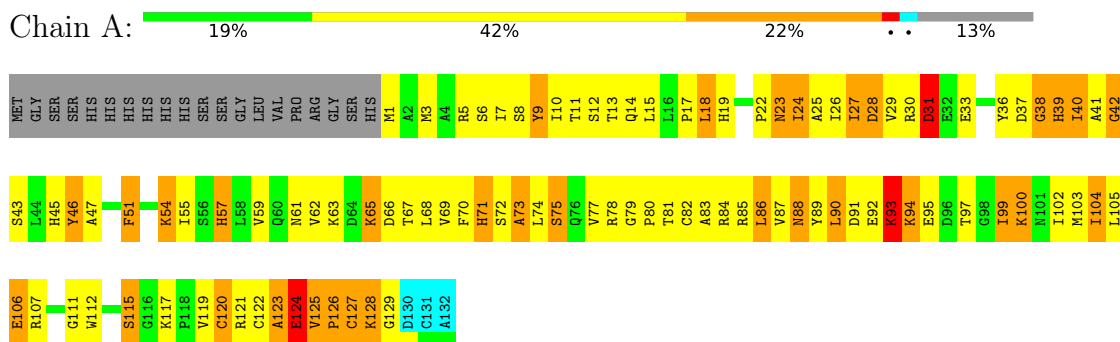
## 4.2.18 Score per residue for model 18

- Molecule 1: Dual-specificity tyrosine phosphatase




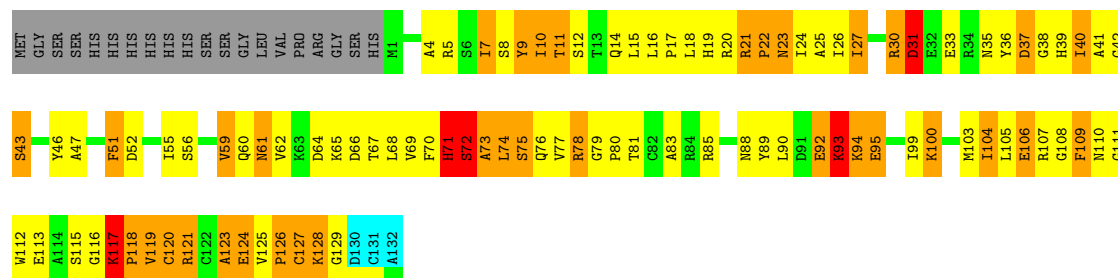
## 4.2.19 Score per residue for model 19

- Molecule 1: Dual-specificity tyrosine phosphatase



## 4.2.20 Score per residue for model 20 (medoid)

## ● Molecule 1: Dual-specificity tyrosine phosphatase

Chain A:  20% 38% 23% 13%

## 5 Refinement protocol and experimental data overview

The models were refined using the following method: *distance geometry simulated annealing*.

Of the 200 calculated structures, 20 were deposited, based on the following criterion: *structures with the least restraint violations*.

The following table shows the software used for structure solution, optimisation and refinement.

| Software name | Classification     | Version |
|---------------|--------------------|---------|
| CNS           | structure solution | 1.1     |
| CNS           | refinement         | 1.1     |

No chemical shift data was provided.

## 6 Model quality i

### 6.1 Standard geometry i

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

There are no covalent bond-length or bond-angle outliers.

There are no bond-length outliers.

There are no bond-angle outliers.

There are no chirality outliers.

There are no planarity outliers.

### 6.2 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 each 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 averaged over the ensemble.

| Mol | Chain | Non-H | H(model) | H(added) | Clashes |
|-----|-------|-------|----------|----------|---------|
| 1   | A     | 1012  | 1012     | 1010     | 132±13  |
| All | All   | 20260 | 20240    | 20199    | 2633    |

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 65.

All unique clashes are listed below, sorted by their clash magnitude.

| Atom-1          | Atom-2           | Clash(Å) | Distance(Å) | Models |       |
|-----------------|------------------|----------|-------------|--------|-------|
|                 |                  |          |             | Worst  | Total |
| 1:A:69:VAL:HG22 | 1:A:105:LEU:HD22 | 1.10     | 1.12        | 2      | 1     |
| 1:A:23:ASN:O    | 1:A:67:THR:OG1   | 1.08     | 1.69        | 7      | 2     |
| 1:A:7:ILE:HD12  | 1:A:104:ILE:HG21 | 1.04     | 1.26        | 3      | 1     |
| 1:A:10:ILE:HB   | 1:A:14:GLN:HG2   | 1.01     | 1.32        | 13     | 3     |
| 1:A:10:ILE:HD13 | 1:A:18:LEU:HD13  | 1.00     | 1.31        | 20     | 1     |
| 1:A:55:ILE:HA   | 1:A:89:TYR:CE2   | 0.98     | 1.91        | 17     | 7     |
| 1:A:55:ILE:HG23 | 1:A:89:TYR:CD2   | 0.98     | 1.93        | 19     | 7     |
| 1:A:27:ILE:HG22 | 1:A:68:LEU:HD21  | 0.98     | 1.27        | 1      | 1     |
| 1:A:56:SER:HA   | 1:A:89:TYR:CE2   | 0.97     | 1.95        | 8      | 2     |
| 1:A:11:THR:O    | 1:A:14:GLN:HG3   | 0.96     | 1.59        | 13     | 3     |
| 1:A:68:LEU:HD23 | 1:A:99:ILE:HG21  | 0.94     | 1.33        | 14     | 2     |
| 1:A:28:ASP:O    | 1:A:45:HIS:HB3   | 0.94     | 1.62        | 11     | 1     |

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| Atom-1           | Atom-2           | Clash(Å) | Distance(Å) | Models |       |
|------------------|------------------|----------|-------------|--------|-------|
|                  |                  |          |             | Worst  | Total |
| 1:A:27:ILE:HG23  | 1:A:68:LEU:HD21  | 0.92     | 1.40        | 12     | 1     |
| 1:A:40:ILE:HG22  | 1:A:112:TRP:CZ2  | 0.92     | 1.99        | 20     | 2     |
| 1:A:124:GLU:C    | 1:A:126:PRO:HD3  | 0.92     | 1.83        | 10     | 3     |
| 1:A:105:LEU:HD21 | 1:A:108:GLY:CA   | 0.90     | 1.96        | 8      | 2     |
| 1:A:7:ILE:HG22   | 1:A:102:ILE:HD12 | 0.90     | 1.41        | 2      | 1     |
| 1:A:55:ILE:HB    | 1:A:89:TYR:CD2   | 0.90     | 2.01        | 1      | 8     |
| 1:A:70:PHE:CZ    | 1:A:83:ALA:HB2   | 0.89     | 2.02        | 20     | 4     |
| 1:A:68:LEU:O     | 1:A:68:LEU:HD13  | 0.88     | 1.66        | 4      | 1     |
| 1:A:59:VAL:HB    | 1:A:89:TYR:CE2   | 0.88     | 2.03        | 14     | 2     |
| 1:A:26:ILE:HG21  | 1:A:105:LEU:HD22 | 0.88     | 1.43        | 19     | 1     |
| 1:A:27:ILE:HD11  | 1:A:68:LEU:HD12  | 0.88     | 1.43        | 8      | 1     |
| 1:A:99:ILE:HD13  | 1:A:102:ILE:HG22 | 0.87     | 1.47        | 1      | 1     |
| 1:A:71:HIS:HA    | 1:A:74:LEU:HD21  | 0.87     | 1.44        | 18     | 1     |
| 1:A:112:TRP:O    | 1:A:117:LYS:HB2  | 0.86     | 1.68        | 12     | 1     |
| 1:A:99:ILE:HD11  | 1:A:102:ILE:HA   | 0.86     | 1.47        | 17     | 1     |
| 1:A:30:ARG:NE    | 1:A:45:HIS:HA    | 0.86     | 1.85        | 7      | 1     |
| 1:A:117:LYS:O    | 1:A:119:VAL:HG12 | 0.86     | 1.70        | 4      | 4     |
| 1:A:9:TYR:HB3    | 1:A:104:ILE:HG23 | 0.86     | 1.44        | 1      | 12    |
| 1:A:56:SER:HA    | 1:A:59:VAL:CG2   | 0.86     | 2.00        | 16     | 4     |
| 1:A:29:VAL:HG12  | 1:A:46:TYR:CE1   | 0.85     | 2.06        | 10     | 5     |
| 1:A:90:LEU:HD13  | 1:A:91:ASP:N     | 0.85     | 1.84        | 17     | 4     |
| 1:A:26:ILE:HG23  | 1:A:105:LEU:HD21 | 0.85     | 1.49        | 2      | 1     |
| 1:A:99:ILE:HD13  | 1:A:102:ILE:CG2  | 0.84     | 2.02        | 1      | 1     |
| 1:A:7:ILE:HG13   | 1:A:102:ILE:O    | 0.84     | 1.71        | 7      | 1     |
| 1:A:58:LEU:O     | 1:A:62:VAL:HG23  | 0.84     | 1.73        | 18     | 1     |
| 1:A:73:ALA:HB1   | 1:A:77:VAL:HG23  | 0.84     | 1.49        | 18     | 1     |
| 1:A:90:LEU:O     | 1:A:90:LEU:HD22  | 0.83     | 1.73        | 19     | 5     |
| 1:A:7:ILE:HD12   | 1:A:104:ILE:CG2  | 0.83     | 2.02        | 3      | 1     |
| 1:A:52:ASP:CG    | 1:A:55:ILE:HD12  | 0.83     | 1.94        | 16     | 1     |
| 1:A:9:TYR:CB     | 1:A:104:ILE:HB   | 0.83     | 2.03        | 16     | 1     |
| 1:A:29:VAL:HG13  | 1:A:46:TYR:CE1   | 0.82     | 2.09        | 6      | 2     |
| 1:A:76:GLN:O     | 1:A:77:VAL:HG22  | 0.82     | 1.75        | 14     | 3     |
| 1:A:27:ILE:HG12  | 1:A:68:LEU:HD11  | 0.81     | 1.49        | 5      | 1     |
| 1:A:105:LEU:HD22 | 1:A:105:LEU:O    | 0.81     | 1.75        | 5      | 6     |
| 1:A:68:LEU:HD11  | 1:A:99:ILE:HG22  | 0.81     | 1.52        | 9      | 1     |
| 1:A:83:ALA:O     | 1:A:87:VAL:HG23  | 0.81     | 1.76        | 11     | 9     |
| 1:A:9:TYR:O      | 1:A:10:ILE:HD12  | 0.80     | 1.76        | 3      | 1     |
| 1:A:68:LEU:CB    | 1:A:99:ILE:HG21  | 0.80     | 2.05        | 1      | 4     |
| 1:A:117:LYS:HG2  | 1:A:119:VAL:HG12 | 0.80     | 1.51        | 12     | 1     |
| 1:A:10:ILE:HB    | 1:A:14:GLN:CG    | 0.80     | 2.05        | 13     | 3     |
| 1:A:74:LEU:HD13  | 1:A:74:LEU:N     | 0.80     | 1.90        | 20     | 2     |

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| Atom-1           | Atom-2           | Clash(Å) | Distance(Å) | Models |       |
|------------------|------------------|----------|-------------|--------|-------|
|                  |                  |          |             | Worst  | Total |
| 1:A:7:ILE:CG2    | 1:A:102:ILE:O    | 0.80     | 2.30        | 7      | 1     |
| 1:A:27:ILE:CG2   | 1:A:68:LEU:HD21  | 0.79     | 2.07        | 1      | 2     |
| 1:A:97:THR:HG22  | 1:A:99:ILE:CD1   | 0.79     | 2.07        | 14     | 1     |
| 1:A:56:SER:CA    | 1:A:89:TYR:CE2   | 0.79     | 2.65        | 8      | 3     |
| 1:A:69:VAL:HA    | 1:A:103:MET:O    | 0.79     | 1.78        | 7      | 12    |
| 1:A:68:LEU:HD11  | 1:A:99:ILE:CG2   | 0.78     | 2.09        | 9      | 1     |
| 1:A:9:TYR:HB2    | 1:A:104:ILE:HG22 | 0.78     | 1.54        | 10     | 2     |
| 1:A:68:LEU:HD12  | 1:A:99:ILE:HG23  | 0.78     | 1.54        | 2      | 1     |
| 1:A:69:VAL:CG2   | 1:A:105:LEU:HD22 | 0.78     | 2.05        | 2      | 1     |
| 1:A:40:ILE:O     | 1:A:40:ILE:HG22  | 0.78     | 1.78        | 4      | 3     |
| 1:A:56:SER:CB    | 1:A:89:TYR:CE1   | 0.78     | 2.67        | 16     | 2     |
| 1:A:78:ARG:O     | 1:A:81:THR:N     | 0.78     | 2.16        | 3      | 15    |
| 1:A:25:ALA:HB1   | 1:A:43:SER:OG    | 0.78     | 1.79        | 15     | 2     |
| 1:A:59:VAL:O     | 1:A:62:VAL:HG13  | 0.77     | 1.78        | 17     | 4     |
| 1:A:125:VAL:HG13 | 1:A:126:PRO:HD3  | 0.77     | 1.54        | 7      | 1     |
| 1:A:18:LEU:HD13  | 1:A:18:LEU:N     | 0.77     | 1.94        | 19     | 2     |
| 1:A:27:ILE:HG23  | 1:A:68:LEU:CD2   | 0.77     | 2.08        | 12     | 1     |
| 1:A:26:ILE:HG23  | 1:A:43:SER:CB    | 0.77     | 2.09        | 14     | 1     |
| 1:A:70:PHE:O     | 1:A:71:HIS:HB2   | 0.77     | 1.80        | 14     | 14    |
| 1:A:125:VAL:HG23 | 1:A:126:PRO:HD3  | 0.77     | 1.57        | 6      | 5     |
| 1:A:112:TRP:C    | 1:A:112:TRP:CD1  | 0.77     | 2.58        | 10     | 8     |
| 1:A:39:HIS:CB    | 1:A:119:VAL:HG22 | 0.77     | 2.10        | 10     | 1     |
| 1:A:73:ALA:HB2   | 1:A:109:PHE:CZ   | 0.76     | 2.15        | 8      | 1     |
| 1:A:56:SER:N     | 1:A:89:TYR:CE2   | 0.76     | 2.53        | 10     | 8     |
| 1:A:74:LEU:O     | 1:A:76:GLN:N     | 0.76     | 2.19        | 9      | 3     |
| 1:A:39:HIS:HB3   | 1:A:120:CYS:HB2  | 0.76     | 1.57        | 10     | 3     |
| 1:A:28:ASP:O     | 1:A:45:HIS:CB    | 0.76     | 2.33        | 11     | 1     |
| 1:A:71:HIS:CE1   | 1:A:104:ILE:HD13 | 0.76     | 2.15        | 11     | 2     |
| 1:A:69:VAL:HG11  | 1:A:105:LEU:HD13 | 0.76     | 1.54        | 11     | 1     |
| 1:A:7:ILE:HG21   | 1:A:102:ILE:O    | 0.76     | 1.78        | 7      | 1     |
| 1:A:73:ALA:HB2   | 1:A:109:PHE:CE2  | 0.76     | 2.15        | 8      | 1     |
| 1:A:105:LEU:HD22 | 1:A:108:GLY:HA3  | 0.76     | 1.58        | 18     | 1     |
| 1:A:23:ASN:HB3   | 1:A:65:LYS:C     | 0.76     | 2.00        | 10     | 3     |
| 1:A:23:ASN:HB3   | 1:A:65:LYS:O     | 0.76     | 1.81        | 10     | 3     |
| 1:A:7:ILE:HG22   | 1:A:102:ILE:CG2  | 0.76     | 2.11        | 5      | 1     |
| 1:A:39:HIS:O     | 1:A:120:CYS:N    | 0.76     | 2.18        | 9      | 1     |
| 1:A:10:ILE:HG22  | 1:A:14:GLN:HB3   | 0.76     | 1.57        | 12     | 1     |
| 1:A:23:ASN:O     | 1:A:67:THR:N     | 0.76     | 2.18        | 14     | 11    |
| 1:A:39:HIS:HB3   | 1:A:119:VAL:HG22 | 0.76     | 1.57        | 10     | 1     |
| 1:A:68:LEU:HD12  | 1:A:99:ILE:CG2   | 0.76     | 2.09        | 2      | 3     |
| 1:A:25:ALA:O     | 1:A:68:LEU:HD12  | 0.75     | 1.81        | 16     | 2     |

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| Atom-1          | Atom-2           | Clash(Å) | Distance(Å) | Models |       |
|-----------------|------------------|----------|-------------|--------|-------|
|                 |                  |          |             | Worst  | Total |
| 1:A:7:ILE:HB    | 1:A:102:ILE:HG23 | 0.75     | 1.59        | 10     | 1     |
| 1:A:27:ILE:HD11 | 1:A:46:TYR:OH    | 0.75     | 1.81        | 13     | 1     |
| 1:A:56:SER:HA   | 1:A:89:TYR:OH    | 0.75     | 1.81        | 10     | 4     |
| 1:A:55:ILE:HG23 | 1:A:89:TYR:CG    | 0.75     | 2.17        | 19     | 6     |
| 1:A:70:PHE:CZ   | 1:A:102:ILE:HD11 | 0.75     | 2.16        | 6      | 1     |
| 1:A:27:ILE:HD12 | 1:A:44:LEU:HD11  | 0.75     | 1.55        | 13     | 1     |
| 1:A:39:HIS:CB   | 1:A:120:CYS:HB2  | 0.75     | 2.12        | 6      | 3     |
| 1:A:69:VAL:HG23 | 1:A:103:MET:C    | 0.75     | 2.02        | 2      | 2     |
| 1:A:125:VAL:N   | 1:A:126:PRO:HD3  | 0.75     | 1.97        | 11     | 4     |
| 1:A:68:LEU:HD22 | 1:A:69:VAL:N     | 0.75     | 1.96        | 4      | 2     |
| 1:A:40:ILE:HG21 | 1:A:112:TRP:CH2  | 0.75     | 2.17        | 4      | 1     |
| 1:A:58:LEU:HD12 | 1:A:58:LEU:O     | 0.75     | 1.82        | 6      | 1     |
| 1:A:74:LEU:HA   | 1:A:79:GLY:CA    | 0.75     | 2.12        | 18     | 1     |
| 1:A:27:ILE:HD13 | 1:A:28:ASP:N     | 0.74     | 1.98        | 10     | 1     |
| 1:A:40:ILE:HD13 | 1:A:109:PHE:CZ   | 0.74     | 2.17        | 14     | 1     |
| 1:A:25:ALA:O    | 1:A:68:LEU:HA    | 0.74     | 1.83        | 3      | 8     |
| 1:A:99:ILE:HD12 | 1:A:102:ILE:CG2  | 0.74     | 2.12        | 2      | 2     |
| 1:A:9:TYR:HB3   | 1:A:104:ILE:HB   | 0.74     | 1.60        | 16     | 3     |
| 1:A:99:ILE:HD11 | 1:A:102:ILE:CA   | 0.74     | 2.13        | 17     | 1     |
| 1:A:52:ASP:HA   | 1:A:55:ILE:HD11  | 0.74     | 1.60        | 3      | 2     |
| 1:A:99:ILE:HD12 | 1:A:99:ILE:O     | 0.74     | 1.81        | 10     | 3     |
| 1:A:68:LEU:HD23 | 1:A:99:ILE:CG2   | 0.74     | 2.11        | 14     | 1     |
| 1:A:112:TRP:CD1 | 1:A:119:VAL:HG12 | 0.74     | 2.17        | 15     | 1     |
| 1:A:63:LYS:O    | 1:A:65:LYS:N     | 0.74     | 2.20        | 7      | 7     |
| 1:A:56:SER:HB2  | 1:A:89:TYR:OH    | 0.74     | 1.82        | 7      | 3     |
| 1:A:113:GLU:HA  | 1:A:117:LYS:CB   | 0.74     | 2.12        | 12     | 1     |
| 1:A:39:HIS:HB2  | 1:A:120:CYS:CB   | 0.73     | 2.13        | 17     | 3     |
| 1:A:9:TYR:C     | 1:A:10:ILE:HD12  | 0.73     | 2.03        | 7      | 2     |
| 1:A:31:ASP:CG   | 1:A:47:ALA:HB2   | 0.73     | 2.03        | 10     | 3     |
| 1:A:69:VAL:CG1  | 1:A:105:LEU:HD13 | 0.73     | 2.12        | 11     | 1     |
| 1:A:76:GLN:OE1  | 1:A:77:VAL:HG12  | 0.73     | 1.82        | 12     | 1     |
| 1:A:10:ILE:HD11 | 1:A:103:MET:CG   | 0.73     | 2.13        | 12     | 3     |
| 1:A:70:PHE:CZ   | 1:A:86:LEU:HD13  | 0.73     | 2.18        | 6      | 1     |
| 1:A:112:TRP:O   | 1:A:117:LYS:CB   | 0.73     | 2.36        | 12     | 1     |
| 1:A:10:ILE:HG23 | 1:A:14:GLN:HG3   | 0.73     | 1.60        | 17     | 1     |
| 1:A:9:TYR:CB    | 1:A:104:ILE:HG23 | 0.72     | 2.14        | 1      | 7     |
| 1:A:7:ILE:HG22  | 1:A:102:ILE:HG12 | 0.72     | 1.61        | 13     | 1     |
| 1:A:55:ILE:CG2  | 1:A:89:TYR:CD2   | 0.72     | 2.72        | 19     | 6     |
| 1:A:112:TRP:C   | 1:A:117:LYS:HB2  | 0.72     | 2.04        | 12     | 1     |
| 1:A:59:VAL:O    | 1:A:62:VAL:HG23  | 0.72     | 1.83        | 1      | 1     |
| 1:A:57:HIS:O    | 1:A:61:ASN:ND2   | 0.72     | 2.23        | 14     | 8     |

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| Atom-1           | Atom-2           | Clash(Å) | Distance(Å) | Models |       |
|------------------|------------------|----------|-------------|--------|-------|
|                  |                  |          |             | Worst  | Total |
| 1:A:124:GLU:O    | 1:A:125:VAL:HG22 | 0.72     | 1.84        | 17     | 2     |
| 1:A:71:HIS:HA    | 1:A:74:LEU:HD23  | 0.72     | 1.61        | 19     | 1     |
| 1:A:10:ILE:HD13  | 1:A:14:GLN:O     | 0.72     | 1.84        | 16     | 1     |
| 1:A:11:THR:O     | 1:A:14:GLN:CG    | 0.72     | 2.38        | 13     | 2     |
| 1:A:116:GLY:O    | 1:A:117:LYS:HB3  | 0.72     | 1.85        | 14     | 2     |
| 1:A:62:VAL:HG11  | 1:A:66:ASP:HB2   | 0.72     | 1.62        | 18     | 1     |
| 1:A:26:ILE:HG23  | 1:A:69:VAL:O     | 0.71     | 1.84        | 20     | 7     |
| 1:A:28:ASP:O     | 1:A:45:HIS:C     | 0.71     | 2.29        | 11     | 1     |
| 1:A:105:LEU:HD21 | 1:A:108:GLY:HA2  | 0.71     | 1.60        | 20     | 1     |
| 1:A:69:VAL:HG22  | 1:A:105:LEU:CD2  | 0.71     | 2.06        | 2      | 1     |
| 1:A:56:SER:HB2   | 1:A:89:TYR:CZ    | 0.71     | 2.20        | 5      | 4     |
| 1:A:69:VAL:HG12  | 1:A:103:MET:HB2  | 0.71     | 1.63        | 8      | 5     |
| 1:A:23:ASN:OD1   | 1:A:66:ASP:CA    | 0.71     | 2.39        | 7      | 1     |
| 1:A:26:ILE:HG23  | 1:A:43:SER:HB3   | 0.70     | 1.62        | 14     | 1     |
| 1:A:39:HIS:CB    | 1:A:120:CYS:HB3  | 0.70     | 2.15        | 7      | 3     |
| 1:A:45:HIS:O     | 1:A:46:TYR:O     | 0.70     | 2.08        | 11     | 1     |
| 1:A:48:SER:O     | 1:A:51:PHE:CD1   | 0.70     | 2.44        | 5      | 2     |
| 1:A:67:THR:HG22  | 1:A:100:LYS:HB3  | 0.70     | 1.62        | 9      | 2     |
| 1:A:29:VAL:HG22  | 1:A:46:TYR:CE1   | 0.70     | 2.22        | 3      | 2     |
| 1:A:68:LEU:O     | 1:A:102:ILE:HD12 | 0.70     | 1.86        | 6      | 1     |
| 1:A:7:ILE:HD11   | 1:A:104:ILE:HB   | 0.70     | 1.62        | 8      | 1     |
| 1:A:40:ILE:HG22  | 1:A:119:VAL:HG23 | 0.70     | 1.63        | 13     | 1     |
| 1:A:39:HIS:HB2   | 1:A:120:CYS:CA   | 0.70     | 2.16        | 17     | 1     |
| 1:A:24:ILE:HD13  | 1:A:25:ALA:N     | 0.70     | 2.01        | 19     | 1     |
| 1:A:105:LEU:H    | 1:A:105:LEU:HD13 | 0.70     | 1.47        | 14     | 7     |
| 1:A:112:TRP:O    | 1:A:117:LYS:N    | 0.70     | 2.23        | 3      | 6     |
| 1:A:60:GLN:C     | 1:A:61:ASN:ND2   | 0.70     | 2.45        | 7      | 3     |
| 1:A:74:LEU:HD23  | 1:A:78:ARG:HB3   | 0.70     | 1.62        | 2      | 1     |
| 1:A:23:ASN:CB    | 1:A:65:LYS:O     | 0.70     | 2.39        | 4      | 2     |
| 1:A:7:ILE:O      | 1:A:7:ILE:HD13   | 0.70     | 1.87        | 8      | 2     |
| 1:A:70:PHE:CE2   | 1:A:83:ALA:HB2   | 0.70     | 2.21        | 4      | 3     |
| 1:A:7:ILE:HG22   | 1:A:102:ILE:CD1  | 0.69     | 2.15        | 2      | 1     |
| 1:A:23:ASN:O     | 1:A:66:ASP:HA    | 0.69     | 1.86        | 4      | 3     |
| 1:A:7:ILE:HA     | 1:A:102:ILE:HG23 | 0.69     | 1.63        | 12     | 3     |
| 1:A:105:LEU:HD13 | 1:A:108:GLY:N    | 0.69     | 2.02        | 18     | 2     |
| 1:A:76:GLN:O     | 1:A:77:VAL:HG13  | 0.69     | 1.88        | 18     | 4     |
| 1:A:99:ILE:HD12  | 1:A:102:ILE:HG23 | 0.69     | 1.64        | 2      | 2     |
| 1:A:40:ILE:HG23  | 1:A:40:ILE:O     | 0.69     | 1.86        | 20     | 5     |
| 1:A:15:LEU:O     | 1:A:18:LEU:HD23  | 0.69     | 1.88        | 17     | 2     |
| 1:A:55:ILE:HD12  | 1:A:88:ASN:OD1   | 0.69     | 1.87        | 17     | 1     |
| 1:A:56:SER:HA    | 1:A:89:TYR:CD2   | 0.69     | 2.22        | 8      | 1     |

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| Atom-1           | Atom-2           | Clash(Å) | Distance(Å) | Models |       |
|------------------|------------------|----------|-------------|--------|-------|
|                  |                  |          |             | Worst  | Total |
| 1:A:31:ASP:HA    | 1:A:47:ALA:HB2   | 0.69     | 1.62        | 14     | 2     |
| 1:A:62:VAL:HG13  | 1:A:98:GLY:O     | 0.69     | 1.88        | 1      | 1     |
| 1:A:27:ILE:CG1   | 1:A:68:LEU:HD11  | 0.69     | 2.18        | 5      | 1     |
| 1:A:74:LEU:HD12  | 1:A:78:ARG:HB3   | 0.69     | 1.65        | 19     | 1     |
| 1:A:15:LEU:HD13  | 1:A:106:GLU:OE2  | 0.68     | 1.88        | 19     | 1     |
| 1:A:10:ILE:HD13  | 1:A:18:LEU:CD1   | 0.68     | 2.15        | 20     | 1     |
| 1:A:67:THR:O     | 1:A:68:LEU:HD12  | 0.68     | 1.88        | 20     | 2     |
| 1:A:7:ILE:CG1    | 1:A:102:ILE:O    | 0.68     | 2.40        | 7      | 1     |
| 1:A:73:ALA:HB1   | 1:A:77:VAL:CG2   | 0.68     | 2.17        | 18     | 1     |
| 1:A:10:ILE:HG23  | 1:A:14:GLN:HB3   | 0.68     | 1.64        | 8      | 1     |
| 1:A:66:ASP:O     | 1:A:100:LYS:N    | 0.68     | 2.26        | 14     | 12    |
| 1:A:28:ASP:OD2   | 1:A:73:ALA:HB3   | 0.68     | 1.88        | 16     | 1     |
| 1:A:9:TYR:CA     | 1:A:104:ILE:HG23 | 0.68     | 2.18        | 17     | 6     |
| 1:A:29:VAL:HG13  | 1:A:46:TYR:CZ    | 0.68     | 2.23        | 6      | 1     |
| 1:A:9:TYR:C      | 1:A:10:ILE:HD13  | 0.68     | 2.09        | 9      | 3     |
| 1:A:58:LEU:HD22  | 1:A:59:VAL:N     | 0.68     | 2.04        | 16     | 1     |
| 1:A:39:HIS:CG    | 1:A:120:CYS:O    | 0.68     | 2.46        | 4      | 2     |
| 1:A:22:PRO:HD2   | 1:A:24:ILE:HD12  | 0.68     | 1.66        | 13     | 1     |
| 1:A:10:ILE:HD12  | 1:A:19:HIS:CG    | 0.68     | 2.23        | 16     | 1     |
| 1:A:7:ILE:HG22   | 1:A:102:ILE:HG23 | 0.68     | 1.66        | 5      | 1     |
| 1:A:40:ILE:HG22  | 1:A:112:TRP:CH2  | 0.68     | 2.24        | 16     | 1     |
| 1:A:117:LYS:O    | 1:A:119:VAL:HG13 | 0.68     | 1.89        | 16     | 2     |
| 1:A:74:LEU:HD13  | 1:A:74:LEU:O     | 0.67     | 1.89        | 1      | 2     |
| 1:A:117:LYS:HG2  | 1:A:119:VAL:CG1  | 0.67     | 2.18        | 12     | 2     |
| 1:A:41:ALA:HB3   | 1:A:128:LYS:HE3  | 0.67     | 1.65        | 12     | 1     |
| 1:A:90:LEU:HD13  | 1:A:90:LEU:C     | 0.67     | 2.09        | 14     | 5     |
| 1:A:105:LEU:HD22 | 1:A:108:GLY:CA   | 0.67     | 2.19        | 18     | 1     |
| 1:A:26:ILE:HG12  | 1:A:69:VAL:HG13  | 0.67     | 1.67        | 4      | 3     |
| 1:A:10:ILE:HD12  | 1:A:10:ILE:O     | 0.67     | 1.87        | 1      | 2     |
| 1:A:24:ILE:O     | 1:A:24:ILE:HD13  | 0.67     | 1.89        | 1      | 1     |
| 1:A:56:SER:O     | 1:A:59:VAL:HB    | 0.67     | 1.89        | 4      | 4     |
| 1:A:105:LEU:HD23 | 1:A:105:LEU:H    | 0.67     | 1.49        | 6      | 1     |
| 1:A:28:ASP:H     | 1:A:45:HIS:N     | 0.67     | 1.88        | 11     | 1     |
| 1:A:47:ALA:HB3   | 1:A:51:PHE:CE1   | 0.67     | 2.23        | 14     | 1     |
| 1:A:24:ILE:HA    | 1:A:67:THR:OG1   | 0.67     | 1.90        | 7      | 1     |
| 1:A:87:VAL:HA    | 1:A:90:LEU:HD23  | 0.67     | 1.66        | 10     | 3     |
| 1:A:72:SER:O     | 1:A:105:LEU:HB2  | 0.67     | 1.90        | 9      | 1     |
| 1:A:46:TYR:C     | 1:A:46:TYR:CD1   | 0.67     | 2.68        | 7      | 1     |
| 1:A:26:ILE:O     | 1:A:43:SER:HA    | 0.67     | 1.90        | 14     | 2     |
| 1:A:112:TRP:O    | 1:A:116:GLY:C    | 0.67     | 2.33        | 13     | 6     |
| 1:A:104:ILE:HD13 | 1:A:105:LEU:N    | 0.67     | 2.05        | 9      | 2     |

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| Atom-1           | Atom-2           | Clash(Å) | Distance(Å) | Models |       |
|------------------|------------------|----------|-------------|--------|-------|
|                  |                  |          |             | Worst  | Total |
| 1:A:67:THR:HG22  | 1:A:101:ASN:HD21 | 0.67     | 1.48        | 11     | 1     |
| 1:A:90:LEU:HD23  | 1:A:95:GLU:HG2   | 0.67     | 1.67        | 19     | 1     |
| 1:A:71:HIS:CD2   | 1:A:104:ILE:HD13 | 0.66     | 2.25        | 20     | 2     |
| 1:A:97:THR:HG22  | 1:A:99:ILE:HD11  | 0.66     | 1.68        | 14     | 1     |
| 1:A:40:ILE:O     | 1:A:128:LYS:HB2  | 0.66     | 1.90        | 15     | 1     |
| 1:A:56:SER:HB3   | 1:A:89:TYR:CE1   | 0.66     | 2.24        | 16     | 1     |
| 1:A:40:ILE:HD13  | 1:A:109:PHE:CE1  | 0.66     | 2.25        | 14     | 1     |
| 1:A:15:LEU:O     | 1:A:15:LEU:HD13  | 0.66     | 1.91        | 17     | 1     |
| 1:A:55:ILE:CG2   | 1:A:89:TYR:HA    | 0.66     | 2.19        | 2      | 9     |
| 1:A:10:ILE:HD11  | 1:A:103:MET:HB3  | 0.66     | 1.68        | 9      | 2     |
| 1:A:63:LYS:NZ    | 1:A:97:THR:HG21  | 0.66     | 2.06        | 4      | 1     |
| 1:A:19:HIS:CD2   | 1:A:24:ILE:HD13  | 0.66     | 2.25        | 11     | 1     |
| 1:A:29:VAL:HG23  | 1:A:47:ALA:O     | 0.66     | 1.90        | 1      | 1     |
| 1:A:56:SER:CB    | 1:A:89:TYR:CZ    | 0.66     | 2.78        | 13     | 5     |
| 1:A:39:HIS:CB    | 1:A:120:CYS:CB   | 0.66     | 2.74        | 7      | 3     |
| 1:A:68:LEU:N     | 1:A:68:LEU:HD13  | 0.66     | 2.05        | 9      | 1     |
| 1:A:17:PRO:C     | 1:A:18:LEU:HD22  | 0.66     | 2.11        | 10     | 1     |
| 1:A:35:ASN:O     | 1:A:44:LEU:HD13  | 0.66     | 1.90        | 11     | 1     |
| 1:A:125:VAL:N    | 1:A:126:PRO:HD2  | 0.66     | 2.05        | 8      | 8     |
| 1:A:67:THR:HG23  | 1:A:101:ASN:O    | 0.66     | 1.91        | 13     | 1     |
| 1:A:105:LEU:HD12 | 1:A:105:LEU:O    | 0.65     | 1.92        | 18     | 2     |
| 1:A:70:PHE:O     | 1:A:71:HIS:ND1   | 0.65     | 2.29        | 18     | 3     |
| 1:A:125:VAL:HG12 | 1:A:126:PRO:CD   | 0.65     | 2.21        | 12     | 2     |
| 1:A:67:THR:HG22  | 1:A:100:LYS:CB   | 0.65     | 2.21        | 9      | 2     |
| 1:A:112:TRP:CZ2  | 1:A:119:VAL:HB   | 0.65     | 2.27        | 20     | 1     |
| 1:A:68:LEU:HB3   | 1:A:99:ILE:HG21  | 0.65     | 1.66        | 12     | 5     |
| 1:A:56:SER:HB3   | 1:A:89:TYR:CZ    | 0.65     | 2.26        | 12     | 3     |
| 1:A:10:ILE:HG23  | 1:A:14:GLN:HB2   | 0.65     | 1.69        | 7      | 2     |
| 1:A:21:ARG:N     | 1:A:22:PRO:HD3   | 0.65     | 2.06        | 13     | 1     |
| 1:A:56:SER:O     | 1:A:60:GLN:HB2   | 0.65     | 1.91        | 17     | 2     |
| 1:A:27:ILE:HD12  | 1:A:68:LEU:HD12  | 0.65     | 1.69        | 11     | 1     |
| 1:A:119:VAL:O    | 1:A:121:ARG:N    | 0.65     | 2.30        | 15     | 5     |
| 1:A:39:HIS:CG    | 1:A:119:VAL:HG21 | 0.65     | 2.27        | 18     | 1     |
| 1:A:51:PHE:O     | 1:A:55:ILE:HD11  | 0.65     | 1.90        | 19     | 4     |
| 1:A:63:LYS:CE    | 1:A:97:THR:HG21  | 0.65     | 2.22        | 4      | 1     |
| 1:A:105:LEU:HD13 | 1:A:107:ARG:C    | 0.65     | 2.12        | 18     | 1     |
| 1:A:67:THR:HG22  | 1:A:101:ASN:ND2  | 0.65     | 2.07        | 11     | 1     |
| 1:A:30:ARG:NH1   | 1:A:46:TYR:H     | 0.65     | 1.89        | 7      | 1     |
| 1:A:7:ILE:HD12   | 1:A:7:ILE:N      | 0.65     | 2.07        | 1      | 2     |
| 1:A:99:ILE:HD11  | 1:A:102:ILE:HG23 | 0.65     | 1.68        | 14     | 1     |
| 1:A:55:ILE:O     | 1:A:89:TYR:CE2   | 0.64     | 2.50        | 19     | 7     |

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| Atom-1           | Atom-2           | Clash(Å) | Distance(Å) | Models |       |
|------------------|------------------|----------|-------------|--------|-------|
|                  |                  |          |             | Worst  | Total |
| 1:A:30:ARG:CZ    | 1:A:46:TYR:H     | 0.64     | 2.06        | 7      | 1     |
| 1:A:46:TYR:CZ    | 1:A:85:ARG:NH1   | 0.64     | 2.65        | 7      | 1     |
| 1:A:26:ILE:HG21  | 1:A:105:LEU:HD12 | 0.64     | 1.69        | 16     | 1     |
| 1:A:18:LEU:O     | 1:A:18:LEU:HD13  | 0.64     | 1.92        | 4      | 2     |
| 1:A:55:ILE:O     | 1:A:58:LEU:HD13  | 0.64     | 1.91        | 16     | 1     |
| 1:A:39:HIS:ND1   | 1:A:119:VAL:HG21 | 0.64     | 2.07        | 18     | 1     |
| 1:A:116:GLY:C    | 1:A:118:PRO:HD3  | 0.64     | 2.12        | 3      | 2     |
| 1:A:73:ALA:O     | 1:A:104:ILE:HD11 | 0.64     | 1.93        | 9      | 1     |
| 1:A:125:VAL:N    | 1:A:126:PRO:CD   | 0.64     | 2.61        | 18     | 11    |
| 1:A:71:HIS:CD2   | 1:A:72:SER:N     | 0.64     | 2.65        | 17     | 1     |
| 1:A:25:ALA:HB3   | 1:A:68:LEU:HG    | 0.64     | 1.70        | 3      | 1     |
| 1:A:40:ILE:O     | 1:A:40:ILE:CG2   | 0.64     | 2.45        | 4      | 6     |
| 1:A:23:ASN:O     | 1:A:67:THR:HG23  | 0.64     | 1.92        | 9      | 4     |
| 1:A:56:SER:O     | 1:A:60:GLN:HG2   | 0.64     | 1.92        | 8      | 1     |
| 1:A:72:SER:O     | 1:A:108:GLY:CA   | 0.64     | 2.46        | 9      | 1     |
| 1:A:69:VAL:HG22  | 1:A:103:MET:HB2  | 0.64     | 1.67        | 12     | 1     |
| 1:A:71:HIS:O     | 1:A:72:SER:CB    | 0.64     | 2.45        | 17     | 9     |
| 1:A:124:GLU:O    | 1:A:125:VAL:HG13 | 0.64     | 1.92        | 9      | 1     |
| 1:A:99:ILE:HD13  | 1:A:101:ASN:C    | 0.63     | 2.13        | 10     | 1     |
| 1:A:25:ALA:HB1   | 1:A:44:LEU:CD2   | 0.63     | 2.23        | 4      | 1     |
| 1:A:75:SER:O     | 1:A:78:ARG:HB2   | 0.63     | 1.93        | 9      | 3     |
| 1:A:26:ILE:HD12  | 1:A:26:ILE:N     | 0.63     | 2.08        | 11     | 1     |
| 1:A:125:VAL:HG23 | 1:A:126:PRO:CD   | 0.63     | 2.23        | 6      | 2     |
| 1:A:99:ILE:HG13  | 1:A:102:ILE:HG23 | 0.63     | 1.69        | 18     | 1     |
| 1:A:27:ILE:HG13  | 1:A:68:LEU:HD22  | 0.63     | 1.70        | 2      | 1     |
| 1:A:105:LEU:HD23 | 1:A:108:GLY:HA3  | 0.63     | 1.71        | 11     | 2     |
| 1:A:104:ILE:HD12 | 1:A:105:LEU:N    | 0.63     | 2.09        | 11     | 3     |
| 1:A:20:ARG:O     | 1:A:21:ARG:CB    | 0.63     | 2.47        | 15     | 3     |
| 1:A:67:THR:C     | 1:A:68:LEU:HD23  | 0.63     | 2.14        | 8      | 2     |
| 1:A:71:HIS:CB    | 1:A:105:LEU:HD23 | 0.63     | 2.24        | 18     | 1     |
| 1:A:39:HIS:CE1   | 1:A:120:CYS:HA   | 0.63     | 2.29        | 3      | 1     |
| 1:A:9:TYR:CB     | 1:A:104:ILE:HG13 | 0.63     | 2.24        | 20     | 2     |
| 1:A:64:ASP:O     | 1:A:66:ASP:N     | 0.63     | 2.31        | 11     | 1     |
| 1:A:122:CYS:O    | 1:A:123:ALA:CB   | 0.62     | 2.47        | 2      | 3     |
| 1:A:125:VAL:HG12 | 1:A:126:PRO:HD3  | 0.62     | 1.71        | 12     | 2     |
| 1:A:26:ILE:HG23  | 1:A:69:VAL:HG13  | 0.62     | 1.69        | 7      | 1     |
| 1:A:113:GLU:HA   | 1:A:117:LYS:HB3  | 0.62     | 1.71        | 12     | 1     |
| 1:A:20:ARG:O     | 1:A:21:ARG:HB3   | 0.62     | 1.95        | 1      | 1     |
| 1:A:43:SER:C     | 1:A:44:LEU:HD13  | 0.62     | 2.14        | 4      | 1     |
| 1:A:39:HIS:C     | 1:A:120:CYS:HB3  | 0.62     | 2.15        | 11     | 1     |
| 1:A:69:VAL:HG11  | 1:A:105:LEU:CD1  | 0.62     | 2.23        | 11     | 1     |

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| Atom-1           | Atom-2           | Clash(Å) | Distance(Å) | Models |       |
|------------------|------------------|----------|-------------|--------|-------|
|                  |                  |          |             | Worst  | Total |
| 1:A:55:ILE:HD13  | 1:A:89:TYR:HB2   | 0.62     | 1.72        | 1      | 6     |
| 1:A:112:TRP:CD1  | 1:A:118:PRO:HD2  | 0.62     | 2.29        | 3      | 1     |
| 1:A:99:ILE:HD13  | 1:A:102:ILE:N    | 0.62     | 2.09        | 10     | 1     |
| 1:A:90:LEU:HD23  | 1:A:95:GLU:CG    | 0.62     | 2.24        | 19     | 1     |
| 1:A:105:LEU:HD23 | 1:A:108:GLY:CA   | 0.62     | 2.24        | 11     | 2     |
| 1:A:56:SER:HA    | 1:A:59:VAL:HG23  | 0.62     | 1.69        | 16     | 4     |
| 1:A:117:LYS:O    | 1:A:119:VAL:N    | 0.62     | 2.32        | 4      | 8     |
| 1:A:105:LEU:HD12 | 1:A:108:GLY:HA2  | 0.62     | 1.70        | 6      | 1     |
| 1:A:7:ILE:HD11   | 1:A:104:ILE:CG2  | 0.62     | 2.25        | 8      | 2     |
| 1:A:30:ARG:CZ    | 1:A:46:TYR:N     | 0.62     | 2.62        | 7      | 1     |
| 1:A:69:VAL:HG12  | 1:A:103:MET:CB   | 0.62     | 2.25        | 8      | 4     |
| 1:A:10:ILE:HG23  | 1:A:14:GLN:CB    | 0.62     | 2.24        | 7      | 2     |
| 1:A:124:GLU:C    | 1:A:126:PRO:CD   | 0.62     | 2.65        | 10     | 3     |
| 1:A:27:ILE:CG1   | 1:A:68:LEU:HD22  | 0.62     | 2.25        | 2      | 1     |
| 1:A:105:LEU:HD13 | 1:A:108:GLY:CA   | 0.62     | 2.25        | 4      | 2     |
| 1:A:21:ARG:N     | 1:A:22:PRO:CD    | 0.62     | 2.63        | 12     | 2     |
| 1:A:9:TYR:CB     | 1:A:104:ILE:HG22 | 0.62     | 2.24        | 10     | 2     |
| 1:A:52:ASP:CB    | 1:A:55:ILE:HD12  | 0.62     | 2.23        | 16     | 1     |
| 1:A:27:ILE:HB    | 1:A:68:LEU:HD21  | 0.61     | 1.72        | 4      | 1     |
| 1:A:111:GLY:O    | 1:A:116:GLY:N    | 0.61     | 2.32        | 15     | 3     |
| 1:A:70:PHE:O     | 1:A:71:HIS:CB    | 0.61     | 2.47        | 6      | 15    |
| 1:A:18:LEU:HD12  | 1:A:20:ARG:N     | 0.61     | 2.10        | 13     | 1     |
| 1:A:41:ALA:HB3   | 1:A:128:LYS:HB3  | 0.61     | 1.70        | 17     | 1     |
| 1:A:73:ALA:C     | 1:A:74:LEU:HD13  | 0.61     | 2.16        | 16     | 3     |
| 1:A:23:ASN:ND2   | 1:A:65:LYS:HB2   | 0.61     | 2.10        | 10     | 1     |
| 1:A:39:HIS:O     | 1:A:119:VAL:HA   | 0.61     | 1.95        | 12     | 1     |
| 1:A:7:ILE:HG12   | 1:A:7:ILE:O      | 0.61     | 1.94        | 13     | 1     |
| 1:A:93:LYS:O     | 1:A:94:LYS:CB    | 0.61     | 2.47        | 1      | 2     |
| 1:A:74:LEU:HD22  | 1:A:74:LEU:H     | 0.61     | 1.54        | 18     | 3     |
| 1:A:116:GLY:C    | 1:A:118:PRO:CD   | 0.61     | 2.68        | 18     | 2     |
| 1:A:14:GLN:CD    | 1:A:14:GLN:C     | 0.61     | 2.58        | 13     | 1     |
| 1:A:29:VAL:HG21  | 1:A:85:ARG:HG3   | 0.61     | 1.72        | 14     | 1     |
| 1:A:39:HIS:HB2   | 1:A:120:CYS:HB2  | 0.61     | 1.71        | 17     | 4     |
| 1:A:117:LYS:CG   | 1:A:117:LYS:O    | 0.61     | 2.47        | 8      | 1     |
| 1:A:40:ILE:O     | 1:A:129:GLY:CA   | 0.61     | 2.49        | 16     | 2     |
| 1:A:105:LEU:HD13 | 1:A:105:LEU:N    | 0.61     | 2.11        | 15     | 2     |
| 1:A:68:LEU:HD22  | 1:A:99:ILE:CG2   | 0.61     | 2.26        | 15     | 1     |
| 1:A:23:ASN:O     | 1:A:67:THR:HB    | 0.61     | 1.96        | 8      | 4     |
| 1:A:56:SER:HB2   | 1:A:89:TYR:CD1   | 0.61     | 2.30        | 16     | 1     |
| 1:A:42:GLY:HA2   | 1:A:129:GLY:C    | 0.61     | 2.15        | 20     | 7     |
| 1:A:40:ILE:CG2   | 1:A:119:VAL:HG23 | 0.61     | 2.25        | 13     | 1     |

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| Atom-1           | Atom-2           | Clash(Å) | Distance(Å) | Models |       |
|------------------|------------------|----------|-------------|--------|-------|
|                  |                  |          |             | Worst  | Total |
| 1:A:27:ILE:HD11  | 1:A:46:TYR:CZ    | 0.61     | 2.31        | 16     | 1     |
| 1:A:69:VAL:HG12  | 1:A:71:HIS:CE1   | 0.61     | 2.31        | 18     | 1     |
| 1:A:7:ILE:HG23   | 1:A:102:ILE:HD11 | 0.60     | 1.72        | 1      | 1     |
| 1:A:67:THR:O     | 1:A:68:LEU:HD22  | 0.60     | 1.96        | 19     | 1     |
| 1:A:39:HIS:NE2   | 1:A:120:CYS:CA   | 0.60     | 2.65        | 3      | 1     |
| 1:A:40:ILE:HG21  | 1:A:112:TRP:HB2  | 0.60     | 1.72        | 5      | 1     |
| 1:A:28:ASP:N     | 1:A:45:HIS:CB    | 0.60     | 2.64        | 11     | 1     |
| 1:A:39:HIS:CE1   | 1:A:120:CYS:CB   | 0.60     | 2.85        | 3      | 1     |
| 1:A:69:VAL:HB    | 1:A:105:LEU:HD22 | 0.60     | 1.74        | 6      | 1     |
| 1:A:39:HIS:HB3   | 1:A:120:CYS:CB   | 0.60     | 2.26        | 10     | 3     |
| 1:A:99:ILE:CD1   | 1:A:102:ILE:HG23 | 0.60     | 2.26        | 14     | 1     |
| 1:A:55:ILE:HG13  | 1:A:89:TYR:CB    | 0.60     | 2.26        | 7      | 1     |
| 1:A:59:VAL:HG12  | 1:A:89:TYR:CZ    | 0.60     | 2.32        | 8      | 1     |
| 1:A:105:LEU:HD21 | 1:A:108:GLY:HA3  | 0.60     | 1.72        | 8      | 1     |
| 1:A:9:TYR:HA     | 1:A:104:ILE:O    | 0.60     | 1.96        | 15     | 7     |
| 1:A:119:VAL:O    | 1:A:120:CYS:C    | 0.60     | 2.39        | 11     | 9     |
| 1:A:70:PHE:CD2   | 1:A:102:ILE:HD11 | 0.60     | 2.31        | 9      | 1     |
| 1:A:40:ILE:O     | 1:A:129:GLY:HA3  | 0.60     | 1.96        | 16     | 2     |
| 1:A:68:LEU:HB2   | 1:A:99:ILE:HG21  | 0.60     | 1.72        | 19     | 6     |
| 1:A:8:SER:O      | 1:A:103:MET:HA   | 0.60     | 1.97        | 7      | 10    |
| 1:A:55:ILE:HA    | 1:A:89:TYR:CD2   | 0.60     | 2.32        | 3      | 6     |
| 1:A:25:ALA:HB3   | 1:A:68:LEU:CG    | 0.60     | 2.27        | 3      | 1     |
| 1:A:90:LEU:HD12  | 1:A:91:ASP:N     | 0.60     | 2.12        | 3      | 2     |
| 1:A:73:ALA:O     | 1:A:74:LEU:HD12  | 0.60     | 1.97        | 6      | 1     |
| 1:A:73:ALA:C     | 1:A:74:LEU:HD22  | 0.60     | 2.16        | 19     | 1     |
| 1:A:55:ILE:HG22  | 1:A:56:SER:N     | 0.60     | 2.12        | 16     | 1     |
| 1:A:71:HIS:HB3   | 1:A:105:LEU:HD23 | 0.60     | 1.73        | 18     | 1     |
| 1:A:78:ARG:O     | 1:A:79:GLY:C     | 0.60     | 2.40        | 3      | 10    |
| 1:A:39:HIS:O     | 1:A:119:VAL:HG23 | 0.60     | 1.95        | 10     | 2     |
| 1:A:68:LEU:HD12  | 1:A:99:ILE:HG22  | 0.59     | 1.71        | 3      | 1     |
| 1:A:23:ASN:OD1   | 1:A:66:ASP:N     | 0.59     | 2.35        | 7      | 1     |
| 1:A:7:ILE:HD11   | 1:A:104:ILE:CB   | 0.59     | 2.27        | 8      | 1     |
| 1:A:61:ASN:O     | 1:A:62:VAL:HG22  | 0.59     | 1.96        | 4      | 1     |
| 1:A:55:ILE:HG23  | 1:A:86:LEU:HD22  | 0.59     | 1.74        | 7      | 1     |
| 1:A:27:ILE:HD11  | 1:A:68:LEU:CD1   | 0.59     | 2.24        | 8      | 1     |
| 1:A:8:SER:O      | 1:A:103:MET:HB3  | 0.59     | 1.97        | 16     | 3     |
| 1:A:119:VAL:O    | 1:A:120:CYS:O    | 0.59     | 2.20        | 3      | 3     |
| 1:A:59:VAL:HG13  | 1:A:98:GLY:HA3   | 0.59     | 1.73        | 16     | 1     |
| 1:A:77:VAL:O     | 1:A:80:PRO:HD2   | 0.59     | 1.98        | 19     | 7     |
| 1:A:25:ALA:HB1   | 1:A:44:LEU:HD21  | 0.59     | 1.74        | 4      | 1     |
| 1:A:88:ASN:OD1   | 1:A:88:ASN:C     | 0.59     | 2.41        | 8      | 2     |

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| Atom-1           | Atom-2           | Clash(Å) | Distance(Å) | Models |       |
|------------------|------------------|----------|-------------|--------|-------|
|                  |                  |          |             | Worst  | Total |
| 1:A:99:ILE:H     | 1:A:99:ILE:HD13  | 0.59     | 1.57        | 8      | 1     |
| 1:A:23:ASN:HB2   | 1:A:67:THR:HG23  | 0.59     | 1.73        | 9      | 2     |
| 1:A:99:ILE:HD12  | 1:A:102:ILE:HB   | 0.59     | 1.75        | 5      | 1     |
| 1:A:40:ILE:HG22  | 1:A:119:VAL:CG2  | 0.59     | 2.28        | 13     | 1     |
| 1:A:43:SER:O     | 1:A:44:LEU:HD23  | 0.59     | 1.98        | 15     | 1     |
| 1:A:74:LEU:HD23  | 1:A:105:LEU:HG   | 0.59     | 1.74        | 18     | 1     |
| 1:A:9:TYR:HB3    | 1:A:104:ILE:HG12 | 0.59     | 1.74        | 19     | 1     |
| 1:A:9:TYR:CD1    | 1:A:104:ILE:HG23 | 0.59     | 2.32        | 20     | 1     |
| 1:A:6:SER:C      | 1:A:7:ILE:HD12   | 0.59     | 2.18        | 9      | 3     |
| 1:A:16:LEU:HD13  | 1:A:17:PRO:N     | 0.59     | 2.12        | 15     | 2     |
| 1:A:125:VAL:O    | 1:A:127:CYS:N    | 0.59     | 2.34        | 20     | 5     |
| 1:A:127:CYS:O    | 1:A:128:LYS:CB   | 0.59     | 2.51        | 9      | 2     |
| 1:A:86:LEU:O     | 1:A:89:TYR:HB3   | 0.58     | 1.98        | 19     | 7     |
| 1:A:111:GLY:O    | 1:A:115:SER:CB   | 0.58     | 2.51        | 11     | 6     |
| 1:A:52:ASP:CA    | 1:A:55:ILE:HD11  | 0.58     | 2.27        | 3      | 1     |
| 1:A:107:ARG:O    | 1:A:109:PHE:N    | 0.58     | 2.34        | 16     | 1     |
| 1:A:41:ALA:HB3   | 1:A:128:LYS:CB   | 0.58     | 2.27        | 17     | 1     |
| 1:A:105:LEU:HD21 | 1:A:108:GLY:N    | 0.58     | 2.13        | 8      | 1     |
| 1:A:27:ILE:HD12  | 1:A:68:LEU:CD1   | 0.58     | 2.28        | 11     | 1     |
| 1:A:42:GLY:N     | 1:A:129:GLY:HA2  | 0.58     | 2.13        | 19     | 2     |
| 1:A:105:LEU:HD22 | 1:A:105:LEU:C    | 0.58     | 2.18        | 10     | 3     |
| 1:A:58:LEU:O     | 1:A:61:ASN:ND2   | 0.58     | 2.35        | 6      | 2     |
| 1:A:72:SER:H     | 1:A:105:LEU:HD11 | 0.58     | 1.59        | 1      | 1     |
| 1:A:78:ARG:O     | 1:A:80:PRO:N     | 0.58     | 2.36        | 3      | 1     |
| 1:A:31:ASP:N     | 1:A:47:ALA:HB2   | 0.58     | 2.13        | 3      | 2     |
| 1:A:68:LEU:HD12  | 1:A:99:ILE:HG21  | 0.58     | 1.75        | 4      | 1     |
| 1:A:10:ILE:HD11  | 1:A:103:MET:SD   | 0.58     | 2.38        | 8      | 2     |
| 1:A:26:ILE:HB    | 1:A:43:SER:CB    | 0.58     | 2.28        | 11     | 1     |
| 1:A:90:LEU:HD22  | 1:A:90:LEU:C     | 0.58     | 2.18        | 17     | 3     |
| 1:A:59:VAL:HG21  | 1:A:93:LYS:O     | 0.58     | 1.98        | 2      | 1     |
| 1:A:41:ALA:CB    | 1:A:128:LYS:HB3  | 0.58     | 2.28        | 17     | 2     |
| 1:A:39:HIS:N     | 1:A:39:HIS:CD2   | 0.58     | 2.70        | 7      | 2     |
| 1:A:30:ARG:HH21  | 1:A:44:LEU:C     | 0.58     | 2.02        | 7      | 1     |
| 1:A:55:ILE:HB    | 1:A:89:TYR:CG    | 0.58     | 2.33        | 7      | 4     |
| 1:A:74:LEU:HD22  | 1:A:74:LEU:N     | 0.58     | 2.14        | 18     | 2     |
| 1:A:40:ILE:HG21  | 1:A:112:TRP:CZ2  | 0.58     | 2.33        | 4      | 2     |
| 1:A:83:ALA:HA    | 1:A:86:LEU:HD12  | 0.58     | 1.73        | 5      | 1     |
| 1:A:28:ASP:O     | 1:A:45:HIS:CA    | 0.58     | 2.52        | 11     | 1     |
| 1:A:68:LEU:O     | 1:A:68:LEU:HD23  | 0.58     | 1.99        | 11     | 1     |
| 1:A:59:VAL:HG23  | 1:A:89:TYR:OH    | 0.58     | 1.98        | 19     | 2     |
| 1:A:31:ASP:O     | 1:A:47:ALA:HB2   | 0.58     | 1.98        | 19     | 1     |

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| Atom-1           | Atom-2           | Clash(Å) | Distance(Å) | Models |       |
|------------------|------------------|----------|-------------|--------|-------|
|                  |                  |          |             | Worst  | Total |
| 1:A:10:ILE:O     | 1:A:106:GLU:HA   | 0.58     | 1.98        | 19     | 1     |
| 1:A:56:SER:N     | 1:A:89:TYR:HE2   | 0.58     | 1.96        | 10     | 4     |
| 1:A:90:LEU:O     | 1:A:90:LEU:HD13  | 0.58     | 1.99        | 11     | 1     |
| 1:A:27:ILE:CD1   | 1:A:68:LEU:HD11  | 0.58     | 2.29        | 12     | 1     |
| 1:A:51:PHE:O     | 1:A:55:ILE:CD1   | 0.57     | 2.52        | 6      | 6     |
| 1:A:55:ILE:HD11  | 1:A:85:ARG:HD2   | 0.57     | 1.76        | 5      | 1     |
| 1:A:30:ARG:N     | 1:A:30:ARG:HD3   | 0.57     | 2.14        | 7      | 1     |
| 1:A:73:ALA:HB3   | 1:A:78:ARG:HH12  | 0.57     | 1.59        | 14     | 1     |
| 1:A:68:LEU:HD13  | 1:A:99:ILE:HG22  | 0.57     | 1.74        | 6      | 1     |
| 1:A:71:HIS:CB    | 1:A:105:LEU:HD21 | 0.57     | 2.29        | 7      | 2     |
| 1:A:126:PRO:O    | 1:A:127:CYS:C    | 0.57     | 2.43        | 17     | 2     |
| 1:A:41:ALA:O     | 1:A:42:GLY:O     | 0.57     | 2.22        | 1      | 2     |
| 1:A:21:ARG:HB2   | 1:A:22:PRO:CD    | 0.57     | 2.30        | 1      | 1     |
| 1:A:56:SER:CA    | 1:A:89:TYR:OH    | 0.57     | 2.52        | 10     | 4     |
| 1:A:110:ASN:O    | 1:A:114:ALA:HB3  | 0.57     | 1.99        | 12     | 9     |
| 1:A:56:SER:OG    | 1:A:89:TYR:OH    | 0.57     | 2.21        | 10     | 1     |
| 1:A:44:LEU:HD22  | 1:A:44:LEU:N     | 0.57     | 2.14        | 4      | 2     |
| 1:A:10:ILE:CB    | 1:A:14:GLN:HG2   | 0.57     | 2.30        | 9      | 3     |
| 1:A:30:ARG:NE    | 1:A:44:LEU:O     | 0.57     | 2.35        | 7      | 1     |
| 1:A:39:HIS:HB3   | 1:A:120:CYS:HB3  | 0.57     | 1.75        | 9      | 3     |
| 1:A:76:GLN:C     | 1:A:77:VAL:HG13  | 0.57     | 2.20        | 14     | 1     |
| 1:A:18:LEU:N     | 1:A:18:LEU:CD1   | 0.57     | 2.67        | 19     | 1     |
| 1:A:9:TYR:HB3    | 1:A:104:ILE:CG2  | 0.57     | 2.29        | 7      | 4     |
| 1:A:16:LEU:HD13  | 1:A:16:LEU:C     | 0.57     | 2.20        | 7      | 2     |
| 1:A:62:VAL:HG11  | 1:A:66:ASP:CB    | 0.57     | 2.30        | 18     | 1     |
| 1:A:56:SER:O     | 1:A:89:TYR:CE2   | 0.57     | 2.57        | 8      | 1     |
| 1:A:10:ILE:HD13  | 1:A:10:ILE:N     | 0.57     | 2.14        | 11     | 2     |
| 1:A:59:VAL:HG13  | 1:A:98:GLY:CA    | 0.57     | 2.30        | 16     | 1     |
| 1:A:73:ALA:CB    | 1:A:77:VAL:HG23  | 0.57     | 2.29        | 18     | 1     |
| 1:A:70:PHE:CE1   | 1:A:102:ILE:HD11 | 0.57     | 2.35        | 5      | 1     |
| 1:A:7:ILE:H      | 1:A:102:ILE:HG23 | 0.57     | 1.60        | 9      | 1     |
| 1:A:105:LEU:HD23 | 1:A:108:GLY:H    | 0.57     | 1.59        | 10     | 1     |
| 1:A:40:ILE:HD11  | 1:A:118:PRO:HD2  | 0.57     | 1.76        | 12     | 1     |
| 1:A:61:ASN:HD22  | 1:A:61:ASN:N     | 0.57     | 1.98        | 10     | 9     |
| 1:A:68:LEU:HD22  | 1:A:68:LEU:C     | 0.57     | 2.20        | 4      | 1     |
| 1:A:127:CYS:O    | 1:A:128:LYS:HB3  | 0.57     | 2.00        | 9      | 2     |
| 1:A:26:ILE:HG12  | 1:A:105:LEU:HD13 | 0.57     | 1.77        | 19     | 1     |
| 1:A:8:SER:O      | 1:A:103:MET:CB   | 0.56     | 2.53        | 10     | 9     |
| 1:A:89:TYR:C     | 1:A:89:TYR:CD1   | 0.56     | 2.77        | 7      | 4     |
| 1:A:90:LEU:HD22  | 1:A:95:GLU:N     | 0.56     | 2.15        | 4      | 1     |
| 1:A:7:ILE:HG22   | 1:A:102:ILE:CG1  | 0.56     | 2.29        | 13     | 1     |

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| Atom-1           | Atom-2           | Clash(Å) | Distance(Å) | Models |       |
|------------------|------------------|----------|-------------|--------|-------|
|                  |                  |          |             | Worst  | Total |
| 1:A:24:ILE:HD12  | 1:A:24:ILE:O     | 0.56     | 2.00        | 20     | 1     |
| 1:A:39:HIS:NE2   | 1:A:120:CYS:HA   | 0.56     | 2.13        | 3      | 1     |
| 1:A:26:ILE:HD13  | 1:A:26:ILE:N     | 0.56     | 2.15        | 9      | 1     |
| 1:A:26:ILE:HG23  | 1:A:69:VAL:HG23  | 0.56     | 1.77        | 17     | 2     |
| 1:A:55:ILE:HD13  | 1:A:89:TYR:CB    | 0.56     | 2.30        | 20     | 2     |
| 1:A:73:ALA:HB3   | 1:A:74:LEU:HD13  | 0.56     | 1.74        | 20     | 1     |
| 1:A:70:PHE:O     | 1:A:71:HIS:CG    | 0.56     | 2.59        | 2      | 4     |
| 1:A:75:SER:O     | 1:A:76:GLN:HB3   | 0.56     | 2.01        | 3      | 1     |
| 1:A:117:LYS:N    | 1:A:118:PRO:CD   | 0.56     | 2.68        | 18     | 2     |
| 1:A:16:LEU:HD23  | 1:A:17:PRO:CD    | 0.56     | 2.30        | 6      | 4     |
| 1:A:59:VAL:CG1   | 1:A:89:TYR:CZ    | 0.56     | 2.89        | 8      | 2     |
| 1:A:6:SER:O      | 1:A:7:ILE:HD13   | 0.56     | 2.01        | 10     | 1     |
| 1:A:62:VAL:HG22  | 1:A:62:VAL:O     | 0.56     | 2.00        | 12     | 4     |
| 1:A:56:SER:HB2   | 1:A:89:TYR:CE1   | 0.56     | 2.34        | 13     | 2     |
| 1:A:17:PRO:O     | 1:A:18:LEU:HD23  | 0.56     | 2.00        | 16     | 2     |
| 1:A:28:ASP:OD2   | 1:A:74:LEU:HD11  | 0.56     | 2.00        | 16     | 1     |
| 1:A:26:ILE:CG2   | 1:A:105:LEU:HD11 | 0.56     | 2.30        | 17     | 1     |
| 1:A:40:ILE:HD12  | 1:A:128:LYS:HG3  | 0.56     | 1.78        | 20     | 1     |
| 1:A:112:TRP:CZ2  | 1:A:119:VAL:HG11 | 0.56     | 2.34        | 10     | 2     |
| 1:A:74:LEU:O     | 1:A:75:SER:CB    | 0.56     | 2.53        | 19     | 1     |
| 1:A:30:ARG:NH1   | 1:A:46:TYR:N     | 0.56     | 2.53        | 7      | 1     |
| 1:A:104:ILE:HD13 | 1:A:104:ILE:C    | 0.56     | 2.21        | 8      | 2     |
| 1:A:23:ASN:N     | 1:A:23:ASN:OD1   | 0.56     | 2.38        | 9      | 1     |
| 1:A:90:LEU:HA    | 1:A:94:LYS:HB3   | 0.56     | 1.78        | 13     | 1     |
| 1:A:85:ARG:O     | 1:A:88:ASN:OD1   | 0.56     | 2.24        | 18     | 5     |
| 1:A:117:LYS:CB   | 1:A:118:PRO:CD   | 0.56     | 2.84        | 6      | 4     |
| 1:A:49:GLY:O     | 1:A:50:SER:CB    | 0.56     | 2.53        | 10     | 3     |
| 1:A:112:TRP:O    | 1:A:116:GLY:N    | 0.56     | 2.39        | 14     | 2     |
| 1:A:7:ILE:HA     | 1:A:102:ILE:O    | 0.56     | 2.00        | 13     | 1     |
| 1:A:68:LEU:HD13  | 1:A:68:LEU:C     | 0.56     | 2.21        | 4      | 1     |
| 1:A:18:LEU:HD12  | 1:A:19:HIS:N     | 0.56     | 2.15        | 13     | 1     |
| 1:A:40:ILE:HD13  | 1:A:40:ILE:N     | 0.56     | 2.15        | 17     | 2     |
| 1:A:39:HIS:CE1   | 1:A:119:VAL:HG21 | 0.56     | 2.36        | 18     | 1     |
| 1:A:112:TRP:CZ2  | 1:A:119:VAL:HA   | 0.56     | 2.36        | 16     | 1     |
| 1:A:31:ASP:HA    | 1:A:47:ALA:CB    | 0.56     | 2.31        | 3      | 1     |
| 1:A:56:SER:CA    | 1:A:59:VAL:HB    | 0.56     | 2.31        | 5      | 4     |
| 1:A:66:ASP:O     | 1:A:99:ILE:HB    | 0.56     | 2.01        | 17     | 2     |
| 1:A:85:ARG:O     | 1:A:88:ASN:CG    | 0.56     | 2.45        | 4      | 1     |
| 1:A:10:ILE:CG2   | 1:A:14:GLN:HB2   | 0.56     | 2.31        | 13     | 1     |
| 1:A:58:LEU:HD22  | 1:A:68:LEU:HD11  | 0.56     | 1.78        | 13     | 1     |
| 1:A:51:PHE:O     | 1:A:52:ASP:HB2   | 0.56     | 2.00        | 16     | 1     |

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| Atom-1           | Atom-2           | Clash(Å) | Distance(Å) | Models |       |
|------------------|------------------|----------|-------------|--------|-------|
|                  |                  |          |             | Worst  | Total |
| 1:A:84:ARG:O     | 1:A:87:VAL:HB    | 0.55     | 2.00        | 19     | 7     |
| 1:A:6:SER:O      | 1:A:7:ILE:O      | 0.55     | 2.25        | 8      | 4     |
| 1:A:66:ASP:C     | 1:A:100:LYS:H    | 0.55     | 2.04        | 3      | 1     |
| 1:A:112:TRP:CD1  | 1:A:117:LYS:HB2  | 0.55     | 2.35        | 12     | 1     |
| 1:A:97:THR:HG22  | 1:A:99:ILE:HD13  | 0.55     | 1.77        | 14     | 1     |
| 1:A:70:PHE:CE1   | 1:A:104:ILE:HG22 | 0.55     | 2.35        | 3      | 1     |
| 1:A:28:ASP:O     | 1:A:45:HIS:O     | 0.55     | 2.23        | 11     | 1     |
| 1:A:67:THR:HB    | 1:A:101:ASN:OD1  | 0.55     | 2.01        | 11     | 1     |
| 1:A:74:LEU:N     | 1:A:74:LEU:CD1   | 0.55     | 2.64        | 20     | 2     |
| 1:A:15:LEU:HD22  | 1:A:18:LEU:HD22  | 0.55     | 1.77        | 17     | 1     |
| 1:A:30:ARG:O     | 1:A:31:ASP:CB    | 0.55     | 2.54        | 3      | 10    |
| 1:A:69:VAL:HG12  | 1:A:105:LEU:HD13 | 0.55     | 1.78        | 16     | 2     |
| 1:A:56:SER:CB    | 1:A:89:TYR:CE2   | 0.55     | 2.90        | 6      | 6     |
| 1:A:77:VAL:HG12  | 1:A:77:VAL:O     | 0.55     | 2.01        | 5      | 1     |
| 1:A:71:HIS:ND1   | 1:A:105:LEU:HB3  | 0.55     | 2.16        | 18     | 1     |
| 1:A:105:LEU:HD12 | 1:A:108:GLY:CA   | 0.55     | 2.32        | 6      | 1     |
| 1:A:55:ILE:CG1   | 1:A:89:TYR:HB2   | 0.55     | 2.30        | 13     | 2     |
| 1:A:73:ALA:HB3   | 1:A:78:ARG:NH1   | 0.55     | 2.17        | 14     | 1     |
| 1:A:121:ARG:O    | 1:A:121:ARG:CG   | 0.55     | 2.54        | 14     | 1     |
| 1:A:59:VAL:HG22  | 1:A:95:GLU:O     | 0.55     | 2.02        | 2      | 1     |
| 1:A:112:TRP:HA   | 1:A:116:GLY:HA3  | 0.55     | 1.79        | 16     | 3     |
| 1:A:43:SER:O     | 1:A:44:LEU:HD13  | 0.55     | 2.01        | 4      | 2     |
| 1:A:76:GLN:O     | 1:A:77:VAL:CG2   | 0.55     | 2.52        | 14     | 4     |
| 1:A:23:ASN:O     | 1:A:23:ASN:CG    | 0.55     | 2.44        | 7      | 2     |
| 1:A:120:CYS:O    | 1:A:122:CYS:N    | 0.55     | 2.39        | 17     | 2     |
| 1:A:26:ILE:CG1   | 1:A:69:VAL:HG13  | 0.55     | 2.32        | 20     | 3     |
| 1:A:25:ALA:HB3   | 1:A:68:LEU:CD1   | 0.55     | 2.31        | 10     | 1     |
| 1:A:39:HIS:O     | 1:A:41:ALA:N     | 0.55     | 2.40        | 2      | 5     |
| 1:A:10:ILE:HD13  | 1:A:103:MET:HG2  | 0.55     | 1.78        | 3      | 1     |
| 1:A:117:LYS:CB   | 1:A:118:PRO:HD2  | 0.55     | 2.32        | 6      | 2     |
| 1:A:18:LEU:O     | 1:A:19:HIS:CB    | 0.55     | 2.55        | 10     | 3     |
| 1:A:90:LEU:HD22  | 1:A:94:LYS:HA    | 0.55     | 1.78        | 9      | 1     |
| 1:A:11:THR:O     | 1:A:14:GLN:N     | 0.55     | 2.39        | 13     | 1     |
| 1:A:122:CYS:HB3  | 1:A:127:CYS:CB   | 0.55     | 2.32        | 18     | 1     |
| 1:A:90:LEU:C     | 1:A:90:LEU:HD13  | 0.55     | 2.21        | 4      | 3     |
| 1:A:39:HIS:O     | 1:A:40:ILE:C     | 0.55     | 2.45        | 17     | 2     |
| 1:A:112:TRP:O    | 1:A:118:PRO:HD2  | 0.55     | 2.02        | 18     | 2     |
| 1:A:39:HIS:O     | 1:A:129:GLY:C    | 0.55     | 2.45        | 14     | 2     |
| 1:A:11:THR:HG23  | 1:A:106:GLU:CD   | 0.55     | 2.21        | 20     | 1     |
| 1:A:7:ILE:CG2    | 1:A:102:ILE:HD12 | 0.55     | 2.27        | 2      | 1     |
| 1:A:57:HIS:N     | 1:A:89:TYR:CZ    | 0.55     | 2.75        | 16     | 1     |

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| Atom-1           | Atom-2           | Clash(Å) | Distance(Å) | Models |       |
|------------------|------------------|----------|-------------|--------|-------|
|                  |                  |          |             | Worst  | Total |
| 1:A:58:LEU:CD2   | 1:A:58:LEU:C     | 0.55     | 2.75        | 16     | 1     |
| 1:A:89:TYR:CD1   | 1:A:89:TYR:C     | 0.55     | 2.80        | 16     | 1     |
| 1:A:99:ILE:HD12  | 1:A:102:ILE:HD13 | 0.54     | 1.78        | 6      | 1     |
| 1:A:62:VAL:HG11  | 1:A:98:GLY:CA    | 0.54     | 2.31        | 13     | 1     |
| 1:A:16:LEU:HD22  | 1:A:16:LEU:O     | 0.54     | 2.02        | 15     | 1     |
| 1:A:15:LEU:O     | 1:A:15:LEU:HD23  | 0.54     | 2.03        | 16     | 1     |
| 1:A:90:LEU:HD12  | 1:A:90:LEU:O     | 0.54     | 2.02        | 1      | 2     |
| 1:A:125:VAL:HB   | 1:A:126:PRO:CD   | 0.54     | 2.32        | 2      | 2     |
| 1:A:69:VAL:HG23  | 1:A:104:ILE:C    | 0.54     | 2.23        | 10     | 2     |
| 1:A:90:LEU:HD12  | 1:A:95:GLU:O     | 0.54     | 2.02        | 5      | 1     |
| 1:A:105:LEU:HD13 | 1:A:108:GLY:HA2  | 0.54     | 1.77        | 17     | 1     |
| 1:A:68:LEU:C     | 1:A:68:LEU:HD13  | 0.54     | 2.23        | 1      | 2     |
| 1:A:3:MET:O      | 1:A:4:ALA:HB3    | 0.54     | 2.03        | 3      | 1     |
| 1:A:120:CYS:O    | 1:A:121:ARG:CB   | 0.54     | 2.55        | 6      | 4     |
| 1:A:37:ASP:O     | 1:A:38:GLY:O     | 0.54     | 2.24        | 7      | 2     |
| 1:A:56:SER:C     | 1:A:89:TYR:CE2   | 0.54     | 2.80        | 8      | 2     |
| 1:A:40:ILE:HG21  | 1:A:112:TRP:HZ2  | 0.54     | 1.62        | 12     | 1     |
| 1:A:27:ILE:HD12  | 1:A:68:LEU:HD13  | 0.54     | 1.80        | 17     | 1     |
| 1:A:6:SER:HB2    | 1:A:7:ILE:HD12   | 0.54     | 1.78        | 18     | 1     |
| 1:A:27:ILE:HG23  | 1:A:68:LEU:HD11  | 0.54     | 1.79        | 18     | 1     |
| 1:A:27:ILE:HG22  | 1:A:44:LEU:HB3   | 0.54     | 1.78        | 18     | 1     |
| 1:A:51:PHE:CD1   | 1:A:54:LYS:HB2   | 0.54     | 2.38        | 4      | 1     |
| 1:A:55:ILE:O     | 1:A:59:VAL:CG2   | 0.54     | 2.56        | 17     | 2     |
| 1:A:72:SER:O     | 1:A:73:ALA:HB3   | 0.54     | 2.02        | 6      | 2     |
| 1:A:39:HIS:O     | 1:A:120:CYS:CA   | 0.54     | 2.55        | 9      | 1     |
| 1:A:26:ILE:HD13  | 1:A:27:ILE:N     | 0.54     | 2.18        | 15     | 1     |
| 1:A:26:ILE:CG2   | 1:A:105:LEU:HD12 | 0.54     | 2.32        | 16     | 1     |
| 1:A:42:GLY:N     | 1:A:128:LYS:O    | 0.54     | 2.36        | 19     | 1     |
| 1:A:74:LEU:HD22  | 1:A:75:SER:H     | 0.54     | 1.60        | 20     | 1     |
| 1:A:55:ILE:HD11  | 1:A:85:ARG:CD    | 0.54     | 2.32        | 5      | 1     |
| 1:A:73:ALA:HB3   | 1:A:78:ARG:HB2   | 0.54     | 1.80        | 18     | 1     |
| 1:A:55:ILE:CG2   | 1:A:89:TYR:CG    | 0.54     | 2.91        | 19     | 4     |
| 1:A:58:LEU:HD13  | 1:A:63:LYS:HD3   | 0.54     | 1.79        | 2      | 1     |
| 1:A:59:VAL:HG23  | 1:A:95:GLU:HG3   | 0.54     | 1.78        | 3      | 1     |
| 1:A:55:ILE:O     | 1:A:59:VAL:HB    | 0.54     | 2.01        | 17     | 3     |
| 1:A:55:ILE:HB    | 1:A:89:TYR:HD2   | 0.54     | 1.62        | 12     | 1     |
| 1:A:80:PRO:O     | 1:A:83:ALA:HB3   | 0.54     | 2.02        | 19     | 1     |
| 1:A:6:SER:CB     | 1:A:7:ILE:HD12   | 0.54     | 2.33        | 15     | 2     |
| 1:A:56:SER:HA    | 1:A:59:VAL:CB    | 0.54     | 2.33        | 13     | 4     |
| 1:A:69:VAL:HG22  | 1:A:105:LEU:CD1  | 0.54     | 2.32        | 7      | 1     |
| 1:A:68:LEU:HD22  | 1:A:99:ILE:HG21  | 0.54     | 1.79        | 11     | 1     |

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| Atom-1          | Atom-2           | Clash(Å) | Distance(Å) | Models |       |
|-----------------|------------------|----------|-------------|--------|-------|
|                 |                  |          |             | Worst  | Total |
| 1:A:74:LEU:HD23 | 1:A:78:ARG:CB    | 0.54     | 2.33        | 2      | 1     |
| 1:A:90:LEU:HD23 | 1:A:96:ASP:OD1   | 0.54     | 2.03        | 4      | 1     |
| 1:A:29:VAL:O    | 1:A:29:VAL:HG23  | 0.54     | 2.02        | 9      | 1     |
| 1:A:40:ILE:HG23 | 1:A:41:ALA:H     | 0.54     | 1.62        | 15     | 1     |
| 1:A:17:PRO:C    | 1:A:18:LEU:HD23  | 0.54     | 2.22        | 16     | 1     |
| 1:A:124:GLU:O   | 1:A:125:VAL:CG2  | 0.54     | 2.56        | 17     | 1     |
| 1:A:27:ILE:CD1  | 1:A:68:LEU:HD23  | 0.54     | 2.33        | 20     | 1     |
| 1:A:56:SER:CB   | 1:A:89:TYR:OH    | 0.54     | 2.55        | 7      | 6     |
| 1:A:55:ILE:HG21 | 1:A:89:TYR:HA    | 0.54     | 1.80        | 2      | 3     |
| 1:A:55:ILE:O    | 1:A:59:VAL:HG23  | 0.54     | 2.03        | 6      | 3     |
| 1:A:27:ILE:CG2  | 1:A:70:PHE:CD2   | 0.54     | 2.91        | 7      | 1     |
| 1:A:30:ARG:HG2  | 1:A:46:TYR:N     | 0.54     | 2.18        | 7      | 1     |
| 1:A:71:HIS:HB3  | 1:A:105:LEU:HD21 | 0.54     | 1.80        | 7      | 2     |
| 1:A:7:ILE:CA    | 1:A:102:ILE:HG23 | 0.54     | 2.32        | 12     | 1     |
| 1:A:71:HIS:CD2  | 1:A:104:ILE:CD1  | 0.54     | 2.91        | 20     | 2     |
| 1:A:87:VAL:O    | 1:A:91:ASP:HB2   | 0.53     | 2.03        | 8      | 5     |
| 1:A:52:ASP:OD2  | 1:A:85:ARG:O     | 0.53     | 2.26        | 16     | 1     |
| 1:A:40:ILE:N    | 1:A:120:CYS:HB2  | 0.53     | 2.17        | 19     | 1     |
| 1:A:125:VAL:CG2 | 1:A:126:PRO:HD3  | 0.53     | 2.31        | 9      | 2     |
| 1:A:55:ILE:CG2  | 1:A:86:LEU:HD13  | 0.53     | 2.33        | 7      | 1     |
| 1:A:36:TYR:CE1  | 1:A:40:ILE:HD13  | 0.53     | 2.39        | 1      | 1     |
| 1:A:68:LEU:HD13 | 1:A:68:LEU:O     | 0.53     | 2.04        | 1      | 1     |
| 1:A:8:SER:O     | 1:A:103:MET:CA   | 0.53     | 2.57        | 2      | 6     |
| 1:A:56:SER:OG   | 1:A:89:TYR:CZ    | 0.53     | 2.60        | 4      | 2     |
| 1:A:48:SER:O    | 1:A:51:PHE:N     | 0.53     | 2.41        | 5      | 1     |
| 1:A:72:SER:O    | 1:A:110:ASN:CB   | 0.53     | 2.57        | 6      | 1     |
| 1:A:48:SER:C    | 1:A:50:SER:H     | 0.53     | 2.07        | 17     | 1     |
| 1:A:68:LEU:CD1  | 1:A:99:ILE:HG22  | 0.53     | 2.33        | 3      | 2     |
| 1:A:27:ILE:HG13 | 1:A:68:LEU:HD21  | 0.53     | 1.80        | 5      | 1     |
| 1:A:50:SER:O    | 1:A:51:PHE:CG    | 0.53     | 2.61        | 18     | 3     |
| 1:A:29:VAL:CG1  | 1:A:46:TYR:CE1   | 0.53     | 2.92        | 12     | 1     |
| 1:A:74:LEU:HA   | 1:A:79:GLY:N     | 0.53     | 2.19        | 18     | 1     |
| 1:A:117:LYS:O   | 1:A:117:LYS:HG2  | 0.53     | 2.03        | 8      | 1     |
| 1:A:76:GLN:O    | 1:A:77:VAL:HG23  | 0.53     | 2.02        | 8      | 1     |
| 1:A:40:ILE:HG22 | 1:A:112:TRP:HH2  | 0.53     | 1.60        | 16     | 1     |
| 1:A:56:SER:HB3  | 1:A:89:TYR:OH    | 0.53     | 2.04        | 6      | 3     |
| 1:A:112:TRP:CD1 | 1:A:112:TRP:C    | 0.53     | 2.81        | 3      | 5     |
| 1:A:56:SER:HA   | 1:A:59:VAL:HB    | 0.53     | 1.80        | 13     | 6     |
| 1:A:24:ILE:CG2  | 1:A:67:THR:OG1   | 0.53     | 2.57        | 7      | 1     |
| 1:A:54:LYS:HZ2  | 1:A:54:LYS:HB2   | 0.53     | 1.63        | 7      | 1     |
| 1:A:55:ILE:HG21 | 1:A:86:LEU:HD13  | 0.53     | 1.81        | 7      | 1     |

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| Atom-1          | Atom-2           | Clash(Å) | Distance(Å) | Models |       |
|-----------------|------------------|----------|-------------|--------|-------|
|                 |                  |          |             | Worst  | Total |
| 1:A:45:HIS:O    | 1:A:46:TYR:HB3   | 0.53     | 2.04        | 12     | 1     |
| 1:A:29:VAL:HG11 | 1:A:85:ARG:CZ    | 0.53     | 2.32        | 1      | 1     |
| 1:A:29:VAL:HG11 | 1:A:82:CYS:SG    | 0.53     | 2.44        | 5      | 1     |
| 1:A:29:VAL:O    | 1:A:29:VAL:HG13  | 0.53     | 2.04        | 7      | 1     |
| 1:A:10:ILE:HD11 | 1:A:103:MET:CB   | 0.53     | 2.33        | 12     | 2     |
| 1:A:10:ILE:HD12 | 1:A:10:ILE:N     | 0.53     | 2.19        | 7      | 1     |
| 1:A:61:ASN:N    | 1:A:61:ASN:ND2   | 0.53     | 2.56        | 11     | 1     |
| 1:A:18:LEU:O    | 1:A:19:HIS:CG    | 0.53     | 2.62        | 5      | 1     |
| 1:A:71:HIS:CG   | 1:A:75:SER:HA    | 0.53     | 2.39        | 7      | 1     |
| 1:A:20:ARG:HB2  | 1:A:24:ILE:HD13  | 0.53     | 1.80        | 10     | 1     |
| 1:A:27:ILE:HD13 | 1:A:27:ILE:H     | 0.53     | 1.64        | 11     | 1     |
| 1:A:109:PHE:CE2 | 1:A:112:TRP:CD2  | 0.53     | 2.97        | 15     | 1     |
| 1:A:9:TYR:HB3   | 1:A:104:ILE:HG13 | 0.53     | 1.81        | 20     | 1     |
| 1:A:40:ILE:HD13 | 1:A:120:CYS:HA   | 0.53     | 1.79        | 20     | 1     |
| 1:A:23:ASN:OD1  | 1:A:66:ASP:HA    | 0.52     | 2.02        | 7      | 1     |
| 1:A:112:TRP:CE2 | 1:A:117:LYS:CE   | 0.52     | 2.93        | 12     | 1     |
| 1:A:23:ASN:HB3  | 1:A:65:LYS:HB2   | 0.52     | 1.80        | 14     | 2     |
| 1:A:55:ILE:HG13 | 1:A:89:TYR:HB2   | 0.52     | 1.81        | 7      | 2     |
| 1:A:122:CYS:O   | 1:A:123:ALA:HB2  | 0.52     | 2.05        | 15     | 4     |
| 1:A:13:THR:O    | 1:A:17:PRO:CD    | 0.52     | 2.57        | 1      | 6     |
| 1:A:41:ALA:HB3  | 1:A:128:LYS:CA   | 0.52     | 2.34        | 2      | 1     |
| 1:A:15:LEU:HD13 | 1:A:15:LEU:O     | 0.52     | 2.04        | 4      | 1     |
| 1:A:46:TYR:CD2  | 1:A:51:PHE:CG    | 0.52     | 2.96        | 4      | 1     |
| 1:A:85:ARG:HA   | 1:A:88:ASN:OD1   | 0.52     | 2.04        | 4      | 1     |
| 1:A:72:SER:O    | 1:A:105:LEU:CB   | 0.52     | 2.58        | 9      | 1     |
| 1:A:71:HIS:HB2  | 1:A:105:LEU:HD11 | 0.52     | 1.81        | 13     | 1     |
| 1:A:7:ILE:HG22  | 1:A:7:ILE:O      | 0.52     | 2.05        | 15     | 3     |
| 1:A:9:TYR:HA    | 1:A:104:ILE:HG23 | 0.52     | 1.82        | 12     | 2     |
| 1:A:55:ILE:HA   | 1:A:89:TYR:CZ    | 0.52     | 2.38        | 17     | 1     |
| 1:A:39:HIS:H    | 1:A:120:CYS:HB2  | 0.52     | 1.64        | 20     | 2     |
| 1:A:71:HIS:O    | 1:A:72:SER:C     | 0.52     | 2.47        | 20     | 1     |
| 1:A:76:GLN:C    | 1:A:77:VAL:HG22  | 0.52     | 2.24        | 18     | 2     |
| 1:A:70:PHE:CZ   | 1:A:102:ILE:CD1  | 0.52     | 2.91        | 6      | 1     |
| 1:A:108:GLY:O   | 1:A:109:PHE:HB2  | 0.52     | 2.04        | 6      | 1     |
| 1:A:38:GLY:O    | 1:A:39:HIS:CG    | 0.52     | 2.63        | 20     | 2     |
| 1:A:21:ARG:HB2  | 1:A:22:PRO:HD2   | 0.52     | 1.80        | 1      | 1     |
| 1:A:23:ASN:HB2  | 1:A:65:LYS:O     | 0.52     | 2.02        | 4      | 1     |
| 1:A:18:LEU:HD23 | 1:A:21:ARG:HB2   | 0.52     | 1.81        | 7      | 1     |
| 1:A:48:SER:HB2  | 1:A:51:PHE:N     | 0.52     | 2.20        | 10     | 1     |
| 1:A:71:HIS:NE2  | 1:A:104:ILE:HD13 | 0.52     | 2.18        | 11     | 3     |
| 1:A:90:LEU:HD12 | 1:A:90:LEU:C     | 0.52     | 2.25        | 6      | 4     |

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| Atom-1           | Atom-2           | Clash(Å) | Distance(Å) | Models |       |
|------------------|------------------|----------|-------------|--------|-------|
|                  |                  |          |             | Worst  | Total |
| 1:A:110:ASN:O    | 1:A:114:ALA:CB   | 0.52     | 2.58        | 12     | 7     |
| 1:A:30:ARG:NH1   | 1:A:46:TYR:CD1   | 0.52     | 2.78        | 7      | 1     |
| 1:A:68:LEU:HD23  | 1:A:68:LEU:N     | 0.52     | 2.19        | 8      | 2     |
| 1:A:29:VAL:HA    | 1:A:46:TYR:O     | 0.52     | 2.04        | 11     | 2     |
| 1:A:87:VAL:HA    | 1:A:90:LEU:HD21  | 0.52     | 1.82        | 13     | 1     |
| 1:A:29:VAL:HG21  | 1:A:82:CYS:HA    | 0.52     | 1.82        | 14     | 1     |
| 1:A:18:LEU:O     | 1:A:18:LEU:CG    | 0.52     | 2.58        | 17     | 1     |
| 1:A:40:ILE:CG2   | 1:A:112:TRP:CH2  | 0.52     | 2.92        | 17     | 1     |
| 1:A:36:TYR:O     | 1:A:37:ASP:CB    | 0.52     | 2.58        | 20     | 5     |
| 1:A:73:ALA:HB2   | 1:A:110:ASN:N    | 0.52     | 2.19        | 5      | 1     |
| 1:A:25:ALA:O     | 1:A:68:LEU:CA    | 0.52     | 2.58        | 10     | 1     |
| 1:A:39:HIS:CA    | 1:A:120:CYS:HB3  | 0.52     | 2.35        | 11     | 1     |
| 1:A:109:PHE:HB2  | 1:A:112:TRP:CE3  | 0.52     | 2.39        | 18     | 1     |
| 1:A:105:LEU:O    | 1:A:105:LEU:CD2  | 0.52     | 2.57        | 7      | 4     |
| 1:A:23:ASN:ND2   | 1:A:67:THR:HG23  | 0.52     | 2.20        | 16     | 2     |
| 1:A:26:ILE:CG2   | 1:A:105:LEU:HD21 | 0.52     | 2.31        | 2      | 1     |
| 1:A:69:VAL:HG23  | 1:A:103:MET:O    | 0.52     | 2.05        | 2      | 1     |
| 1:A:90:LEU:HD13  | 1:A:90:LEU:O     | 0.52     | 2.05        | 4      | 1     |
| 1:A:45:HIS:CE1   | 1:A:46:TYR:CD1   | 0.52     | 2.98        | 11     | 1     |
| 1:A:65:LYS:CG    | 1:A:66:ASP:N     | 0.52     | 2.72        | 3      | 1     |
| 1:A:125:VAL:HG13 | 1:A:126:PRO:CD   | 0.52     | 2.31        | 7      | 1     |
| 1:A:68:LEU:CD2   | 1:A:102:ILE:HD13 | 0.52     | 2.35        | 9      | 1     |
| 1:A:112:TRP:CD1  | 1:A:117:LYS:CB   | 0.52     | 2.93        | 12     | 1     |
| 1:A:16:LEU:C     | 1:A:16:LEU:HD13  | 0.51     | 2.26        | 4      | 3     |
| 1:A:15:LEU:C     | 1:A:15:LEU:HD12  | 0.51     | 2.26        | 10     | 2     |
| 1:A:37:ASP:OD1   | 1:A:38:GLY:N     | 0.51     | 2.42        | 7      | 1     |
| 1:A:22:PRO:O     | 1:A:23:ASN:OD1   | 0.51     | 2.28        | 20     | 1     |
| 1:A:47:ALA:O     | 1:A:48:SER:CB    | 0.51     | 2.58        | 5      | 1     |
| 1:A:23:ASN:ND2   | 1:A:65:LYS:CB    | 0.51     | 2.73        | 4      | 1     |
| 1:A:23:ASN:OD1   | 1:A:100:LYS:HB2  | 0.51     | 2.05        | 16     | 1     |
| 1:A:68:LEU:HD23  | 1:A:70:PHE:CE1   | 0.51     | 2.39        | 16     | 1     |
| 1:A:108:GLY:C    | 1:A:109:PHE:CG   | 0.51     | 2.84        | 17     | 1     |
| 1:A:73:ALA:CB    | 1:A:74:LEU:HD13  | 0.51     | 2.34        | 20     | 1     |
| 1:A:46:TYR:CD2   | 1:A:51:PHE:CD2   | 0.51     | 2.98        | 4      | 1     |
| 1:A:30:ARG:NH2   | 1:A:44:LEU:O     | 0.51     | 2.44        | 7      | 1     |
| 1:A:11:THR:HG22  | 1:A:14:GLN:HG3   | 0.51     | 1.82        | 12     | 1     |
| 1:A:41:ALA:CB    | 1:A:128:LYS:CB   | 0.51     | 2.88        | 2      | 3     |
| 1:A:112:TRP:CG   | 1:A:113:GLU:N    | 0.51     | 2.77        | 5      | 4     |
| 1:A:23:ASN:O     | 1:A:23:ASN:OD1   | 0.51     | 2.28        | 7      | 1     |
| 1:A:55:ILE:CB    | 1:A:89:TYR:CD2   | 0.51     | 2.93        | 7      | 1     |
| 1:A:7:ILE:C      | 1:A:7:ILE:HD13   | 0.51     | 2.25        | 12     | 2     |

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| Atom-1          | Atom-2           | Clash(Å) | Distance(Å) | Models |       |
|-----------------|------------------|----------|-------------|--------|-------|
|                 |                  |          |             | Worst  | Total |
| 1:A:59:VAL:HG13 | 1:A:95:GLU:HG2   | 0.51     | 1.81        | 13     | 1     |
| 1:A:7:ILE:HD11  | 1:A:9:TYR:CE1    | 0.51     | 2.41        | 14     | 1     |
| 1:A:13:THR:O    | 1:A:17:PRO:HD3   | 0.51     | 2.06        | 1      | 4     |
| 1:A:41:ALA:HB2  | 1:A:128:LYS:HG2  | 0.51     | 1.83        | 1      | 1     |
| 1:A:41:ALA:CB   | 1:A:128:LYS:HB2  | 0.51     | 2.36        | 2      | 1     |
| 1:A:71:HIS:O    | 1:A:73:ALA:N     | 0.51     | 2.44        | 7      | 2     |
| 1:A:106:GLU:O   | 1:A:107:ARG:CB   | 0.51     | 2.58        | 2      | 1     |
| 1:A:68:LEU:HB2  | 1:A:99:ILE:CG2   | 0.51     | 2.35        | 10     | 3     |
| 1:A:39:HIS:C    | 1:A:120:CYS:HB2  | 0.51     | 2.25        | 10     | 1     |
| 1:A:67:THR:C    | 1:A:68:LEU:HD22  | 0.51     | 2.26        | 19     | 1     |
| 1:A:92:GLU:O    | 1:A:93:LYS:CB    | 0.51     | 2.58        | 8      | 2     |
| 1:A:10:ILE:O    | 1:A:106:GLU:HB3  | 0.51     | 2.06        | 17     | 2     |
| 1:A:50:SER:O    | 1:A:51:PHE:HB2   | 0.51     | 2.05        | 10     | 2     |
| 1:A:126:PRO:O   | 1:A:128:LYS:N    | 0.51     | 2.44        | 17     | 3     |
| 1:A:124:GLU:O   | 1:A:126:PRO:N    | 0.51     | 2.44        | 2      | 1     |
| 1:A:51:PHE:O    | 1:A:88:ASN:ND2   | 0.51     | 2.44        | 5      | 6     |
| 1:A:63:LYS:HE2  | 1:A:97:THR:HG21  | 0.51     | 1.82        | 4      | 1     |
| 1:A:71:HIS:CE1  | 1:A:75:SER:CB    | 0.51     | 2.94        | 17     | 2     |
| 1:A:109:PHE:O   | 1:A:109:PHE:CG   | 0.51     | 2.64        | 14     | 2     |
| 1:A:96:ASP:O    | 1:A:97:THR:HG23  | 0.51     | 2.06        | 17     | 1     |
| 1:A:105:LEU:O   | 1:A:106:GLU:O    | 0.51     | 2.28        | 19     | 1     |
| 1:A:41:ALA:HB3  | 1:A:128:LYS:HA   | 0.51     | 1.81        | 18     | 3     |
| 1:A:26:ILE:O    | 1:A:43:SER:HB3   | 0.51     | 2.05        | 3      | 2     |
| 1:A:7:ILE:HD13  | 1:A:101:ASN:ND2  | 0.51     | 2.22        | 7      | 1     |
| 1:A:46:TYR:CG   | 1:A:47:ALA:N     | 0.51     | 2.78        | 7      | 1     |
| 1:A:29:VAL:HG12 | 1:A:82:CYS:HB2   | 0.51     | 1.83        | 16     | 1     |
| 1:A:23:ASN:HB3  | 1:A:66:ASP:HA    | 0.50     | 1.82        | 3      | 1     |
| 1:A:56:SER:O    | 1:A:60:GLN:CG    | 0.50     | 2.58        | 8      | 2     |
| 1:A:116:GLY:O   | 1:A:117:LYS:CB   | 0.50     | 2.57        | 14     | 2     |
| 1:A:56:SER:O    | 1:A:60:GLN:CB    | 0.50     | 2.59        | 17     | 1     |
| 1:A:61:ASN:O    | 1:A:62:VAL:CG2   | 0.50     | 2.59        | 4      | 2     |
| 1:A:72:SER:H    | 1:A:105:LEU:HD21 | 0.50     | 1.66        | 15     | 3     |
| 1:A:35:ASN:OD1  | 1:A:36:TYR:CD2   | 0.50     | 2.64        | 6      | 1     |
| 1:A:7:ILE:HD13  | 1:A:7:ILE:C      | 0.50     | 2.26        | 20     | 2     |
| 1:A:9:TYR:CD1   | 1:A:9:TYR:N      | 0.50     | 2.79        | 20     | 10    |
| 1:A:23:ASN:C    | 1:A:66:ASP:CB    | 0.50     | 2.80        | 3      | 1     |
| 1:A:55:ILE:HG23 | 1:A:86:LEU:HD23  | 0.50     | 1.81        | 5      | 1     |
| 1:A:10:ILE:HD13 | 1:A:10:ILE:H     | 0.50     | 1.67        | 11     | 1     |
| 1:A:28:ASP:N    | 1:A:45:HIS:HB3   | 0.50     | 2.20        | 11     | 1     |
| 1:A:21:ARG:CB   | 1:A:22:PRO:CD    | 0.50     | 2.90        | 10     | 3     |
| 1:A:125:VAL:CB  | 1:A:126:PRO:CD   | 0.50     | 2.90        | 12     | 4     |

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| Atom-1          | Atom-2           | Clash(Å) | Distance(Å) | Models |       |
|-----------------|------------------|----------|-------------|--------|-------|
|                 |                  |          |             | Worst  | Total |
| 1:A:95:GLU:O    | 1:A:96:ASP:CB    | 0.50     | 2.59        | 3      | 2     |
| 1:A:46:TYR:CE2  | 1:A:51:PHE:CG    | 0.50     | 2.99        | 4      | 1     |
| 1:A:29:VAL:HG11 | 1:A:48:SER:HB3   | 0.50     | 1.81        | 6      | 1     |
| 1:A:46:TYR:CE2  | 1:A:47:ALA:O     | 0.50     | 2.64        | 6      | 4     |
| 1:A:112:TRP:NE1 | 1:A:119:VAL:HB   | 0.50     | 2.21        | 10     | 1     |
| 1:A:52:ASP:OD1  | 1:A:89:TYR:CA    | 0.50     | 2.60        | 12     | 1     |
| 1:A:46:TYR:OH   | 1:A:85:ARG:HD3   | 0.50     | 2.05        | 18     | 1     |
| 1:A:85:ARG:HG3  | 1:A:86:LEU:N     | 0.50     | 2.22        | 17     | 3     |
| 1:A:70:PHE:CD2  | 1:A:83:ALA:HB2   | 0.50     | 2.41        | 6      | 1     |
| 1:A:86:LEU:HD12 | 1:A:97:THR:HG21  | 0.50     | 1.82        | 15     | 1     |
| 1:A:23:ASN:HD22 | 1:A:67:THR:HG23  | 0.50     | 1.67        | 2      | 1     |
| 1:A:41:ALA:HB2  | 1:A:128:LYS:HB2  | 0.50     | 1.82        | 2      | 2     |
| 1:A:55:ILE:CG1  | 1:A:89:TYR:CB    | 0.50     | 2.90        | 13     | 2     |
| 1:A:29:VAL:HG23 | 1:A:30:ARG:HG3   | 0.50     | 1.83        | 10     | 1     |
| 1:A:120:CYS:SG  | 1:A:121:ARG:N    | 0.50     | 2.84        | 12     | 1     |
| 1:A:51:PHE:CD1  | 1:A:51:PHE:N     | 0.50     | 2.80        | 20     | 1     |
| 1:A:18:LEU:HD23 | 1:A:19:HIS:HB2   | 0.50     | 1.83        | 6      | 1     |
| 1:A:55:ILE:HB   | 1:A:89:TYR:CB    | 0.50     | 2.37        | 6      | 2     |
| 1:A:55:ILE:O    | 1:A:89:TYR:CD2   | 0.50     | 2.64        | 14     | 2     |
| 1:A:79:GLY:N    | 1:A:80:PRO:HD2   | 0.50     | 2.21        | 14     | 6     |
| 1:A:39:HIS:C    | 1:A:41:ALA:H     | 0.50     | 2.10        | 20     | 2     |
| 1:A:52:ASP:O    | 1:A:89:TYR:CE2   | 0.50     | 2.64        | 6      | 4     |
| 1:A:46:TYR:CD1  | 1:A:46:TYR:C     | 0.50     | 2.85        | 4      | 4     |
| 1:A:56:SER:HB2  | 1:A:89:TYR:CE2   | 0.50     | 2.42        | 7      | 5     |
| 1:A:71:HIS:CD2  | 1:A:71:HIS:C     | 0.50     | 2.85        | 17     | 1     |
| 1:A:26:ILE:HD13 | 1:A:105:LEU:HD11 | 0.50     | 1.83        | 2      | 2     |
| 1:A:55:ILE:HD13 | 1:A:55:ILE:N     | 0.50     | 2.22        | 3      | 2     |
| 1:A:127:CYS:O   | 1:A:128:LYS:CD   | 0.50     | 2.60        | 17     | 1     |
| 1:A:85:ARG:NH2  | 1:A:86:LEU:HA    | 0.50     | 2.22        | 18     | 1     |
| 1:A:65:LYS:O    | 1:A:100:LYS:HB2  | 0.49     | 2.07        | 3      | 1     |
| 1:A:29:VAL:O    | 1:A:30:ARG:CB    | 0.49     | 2.59        | 10     | 2     |
| 1:A:42:GLY:O    | 1:A:43:SER:O     | 0.49     | 2.29        | 14     | 2     |
| 1:A:117:LYS:O   | 1:A:119:VAL:CG1  | 0.49     | 2.60        | 9      | 1     |
| 1:A:34:ARG:CG   | 1:A:34:ARG:HH11  | 0.49     | 2.20        | 2      | 1     |
| 1:A:39:HIS:CE1  | 1:A:120:CYS:CA   | 0.49     | 2.93        | 3      | 1     |
| 1:A:39:HIS:O    | 1:A:119:VAL:CG2  | 0.49     | 2.60        | 10     | 1     |
| 1:A:18:LEU:CD1  | 1:A:20:ARG:N     | 0.49     | 2.76        | 13     | 1     |
| 1:A:9:TYR:HB3   | 1:A:104:ILE:CB   | 0.49     | 2.35        | 16     | 2     |
| 1:A:54:LYS:O    | 1:A:58:LEU:HD12  | 0.49     | 2.08        | 18     | 1     |
| 1:A:44:LEU:HD13 | 1:A:44:LEU:C     | 0.49     | 2.27        | 1      | 1     |
| 1:A:48:SER:O    | 1:A:51:PHE:CE1   | 0.49     | 2.65        | 6      | 2     |

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| Atom-1           | Atom-2           | Clash(Å) | Distance(Å) | Models |       |
|------------------|------------------|----------|-------------|--------|-------|
|                  |                  |          |             | Worst  | Total |
| 1:A:29:VAL:HG12  | 1:A:46:TYR:HE1   | 0.49     | 1.67        | 9      | 1     |
| 1:A:70:PHE:HD2   | 1:A:102:ILE:HD11 | 0.49     | 1.65        | 9      | 1     |
| 1:A:39:HIS:CD2   | 1:A:119:VAL:HG23 | 0.49     | 2.43        | 11     | 1     |
| 1:A:81:THR:HG22  | 1:A:85:ARG:NH1   | 0.49     | 2.22        | 16     | 1     |
| 1:A:18:LEU:O     | 1:A:18:LEU:HD12  | 0.49     | 2.08        | 17     | 1     |
| 1:A:105:LEU:HD12 | 1:A:105:LEU:C    | 0.49     | 2.26        | 18     | 1     |
| 1:A:69:VAL:HG23  | 1:A:104:ILE:N    | 0.49     | 2.22        | 2      | 1     |
| 1:A:39:HIS:O     | 1:A:113:GLU:HB3  | 0.49     | 2.07        | 6      | 1     |
| 1:A:71:HIS:CD2   | 1:A:74:LEU:HD23  | 0.49     | 2.42        | 11     | 1     |
| 1:A:72:SER:O     | 1:A:73:ALA:HB2   | 0.49     | 2.08        | 16     | 1     |
| 1:A:95:GLU:O     | 1:A:96:ASP:HB2   | 0.49     | 2.07        | 3      | 1     |
| 1:A:90:LEU:O     | 1:A:94:LYS:HA    | 0.49     | 2.07        | 5      | 2     |
| 1:A:109:PHE:CB   | 1:A:112:TRP:CE3  | 0.49     | 2.96        | 9      | 1     |
| 1:A:49:GLY:O     | 1:A:50:SER:HB3   | 0.49     | 2.06        | 10     | 1     |
| 1:A:9:TYR:HB3    | 1:A:104:ILE:CG1  | 0.49     | 2.38        | 20     | 3     |
| 1:A:70:PHE:CE2   | 1:A:102:ILE:CG1  | 0.49     | 2.96        | 6      | 1     |
| 1:A:108:GLY:O    | 1:A:109:PHE:HB3  | 0.49     | 2.07        | 11     | 1     |
| 1:A:84:ARG:HA    | 1:A:87:VAL:HG23  | 0.49     | 1.84        | 19     | 1     |
| 1:A:21:ARG:CB    | 1:A:22:PRO:HD3   | 0.49     | 2.37        | 10     | 1     |
| 1:A:10:ILE:HD13  | 1:A:15:LEU:CD1   | 0.49     | 2.38        | 1      | 1     |
| 1:A:14:GLN:C     | 1:A:17:PRO:HD2   | 0.49     | 2.28        | 16     | 4     |
| 1:A:39:HIS:HB2   | 1:A:120:CYS:SG   | 0.49     | 2.48        | 13     | 1     |
| 1:A:105:LEU:HD22 | 1:A:105:LEU:N    | 0.49     | 2.23        | 16     | 2     |
| 1:A:55:ILE:CD1   | 1:A:85:ARG:NH1   | 0.49     | 2.76        | 18     | 1     |
| 1:A:23:ASN:HB2   | 1:A:65:LYS:C     | 0.49     | 2.29        | 16     | 2     |
| 1:A:28:ASP:C     | 1:A:30:ARG:HD3   | 0.49     | 2.28        | 7      | 1     |
| 1:A:76:GLN:O     | 1:A:77:VAL:CB    | 0.49     | 2.61        | 8      | 2     |
| 1:A:7:ILE:HG12   | 1:A:8:SER:N      | 0.49     | 2.23        | 10     | 1     |
| 1:A:31:ASP:OD1   | 1:A:47:ALA:HB2   | 0.49     | 2.08        | 20     | 1     |
| 1:A:26:ILE:HA    | 1:A:69:VAL:O     | 0.49     | 2.07        | 18     | 6     |
| 1:A:70:PHE:CD2   | 1:A:71:HIS:CD2   | 0.49     | 3.01        | 3      | 1     |
| 1:A:30:ARG:HG2   | 1:A:46:TYR:H     | 0.49     | 1.67        | 7      | 1     |
| 1:A:113:GLU:HA   | 1:A:117:LYS:HA   | 0.49     | 1.84        | 8      | 2     |
| 1:A:30:ARG:HA    | 1:A:47:ALA:HA    | 0.49     | 1.85        | 8      | 1     |
| 1:A:63:LYS:CD    | 1:A:98:GLY:O     | 0.49     | 2.60        | 10     | 1     |
| 1:A:33:GLU:O     | 1:A:36:TYR:CD1   | 0.49     | 2.66        | 15     | 2     |
| 1:A:82:CYS:O     | 1:A:85:ARG:CG    | 0.48     | 2.61        | 17     | 3     |
| 1:A:16:LEU:HB3   | 1:A:17:PRO:HD3   | 0.48     | 1.85        | 7      | 4     |
| 1:A:55:ILE:O     | 1:A:59:VAL:CB    | 0.48     | 2.60        | 17     | 2     |
| 1:A:52:ASP:OD1   | 1:A:89:TYR:HA    | 0.48     | 2.07        | 12     | 1     |
| 1:A:14:GLN:O     | 1:A:18:LEU:HD21  | 0.48     | 2.07        | 19     | 1     |

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| Atom-1          | Atom-2           | Clash(Å) | Distance(Å) | Models |       |
|-----------------|------------------|----------|-------------|--------|-------|
|                 |                  |          |             | Worst  | Total |
| 1:A:43:SER:C    | 1:A:44:LEU:HD22  | 0.48     | 2.28        | 2      | 2     |
| 1:A:73:ALA:N    | 1:A:105:LEU:HD21 | 0.48     | 2.23        | 3      | 1     |
| 1:A:56:SER:OG   | 1:A:89:TYR:CE1   | 0.48     | 2.65        | 4      | 2     |
| 1:A:59:VAL:HG12 | 1:A:89:TYR:OH    | 0.48     | 2.08        | 14     | 1     |
| 1:A:23:ASN:CB   | 1:A:65:LYS:CG    | 0.48     | 2.92        | 16     | 1     |
| 1:A:74:LEU:N    | 1:A:74:LEU:HD22  | 0.48     | 2.23        | 16     | 1     |
| 1:A:70:PHE:CZ   | 1:A:104:ILE:HD11 | 0.48     | 2.42        | 4      | 1     |
| 1:A:116:GLY:O   | 1:A:117:LYS:C    | 0.48     | 2.52        | 10     | 5     |
| 1:A:68:LEU:N    | 1:A:68:LEU:CD1   | 0.48     | 2.76        | 9      | 1     |
| 1:A:10:ILE:O    | 1:A:106:GLU:CG   | 0.48     | 2.60        | 19     | 2     |
| 1:A:68:LEU:HG   | 1:A:99:ILE:HG22  | 0.48     | 1.85        | 10     | 1     |
| 1:A:68:LEU:HD23 | 1:A:102:ILE:HA   | 0.48     | 1.83        | 11     | 1     |
| 1:A:27:ILE:HG22 | 1:A:44:LEU:HD11  | 0.48     | 1.85        | 14     | 1     |
| 1:A:40:ILE:HG23 | 1:A:112:TRP:CH2  | 0.48     | 2.43        | 17     | 1     |
| 1:A:112:TRP:CZ2 | 1:A:119:VAL:CB   | 0.48     | 2.96        | 20     | 1     |
| 1:A:123:ALA:O   | 1:A:124:GLU:CB   | 0.48     | 2.62        | 20     | 3     |
| 1:A:68:LEU:HD23 | 1:A:102:ILE:HD13 | 0.48     | 1.85        | 9      | 1     |
| 1:A:28:ASP:CG   | 1:A:73:ALA:HB2   | 0.48     | 2.28        | 13     | 1     |
| 1:A:24:ILE:HG22 | 1:A:67:THR:CG2   | 0.48     | 2.38        | 20     | 1     |
| 1:A:40:ILE:CG2  | 1:A:112:TRP:CZ2  | 0.48     | 2.87        | 20     | 1     |
| 1:A:46:TYR:CD2  | 1:A:47:ALA:O     | 0.48     | 2.66        | 1      | 3     |
| 1:A:31:ASP:O    | 1:A:34:ARG:CG    | 0.48     | 2.62        | 6      | 1     |
| 1:A:50:SER:OG   | 1:A:53:ASP:CB    | 0.48     | 2.62        | 10     | 1     |
| 1:A:42:GLY:CA   | 1:A:129:GLY:HA2  | 0.48     | 2.39        | 15     | 1     |
| 1:A:7:ILE:O     | 1:A:7:ILE:HG23   | 0.48     | 2.08        | 20     | 1     |
| 1:A:25:ALA:CB   | 1:A:44:LEU:HD21  | 0.48     | 2.38        | 4      | 1     |
| 1:A:69:VAL:HG12 | 1:A:105:LEU:N    | 0.48     | 2.23        | 5      | 1     |
| 1:A:31:ASP:N    | 1:A:46:TYR:O     | 0.48     | 2.46        | 7      | 1     |
| 1:A:8:SER:HB2   | 1:A:103:MET:HE3  | 0.48     | 1.86        | 10     | 1     |
| 1:A:68:LEU:O    | 1:A:102:ILE:HA   | 0.48     | 2.08        | 18     | 2     |
| 1:A:48:SER:O    | 1:A:51:PHE:CD2   | 0.48     | 2.66        | 15     | 1     |
| 1:A:89:TYR:CE1  | 1:A:93:LYS:HB2   | 0.48     | 2.42        | 16     | 1     |
| 1:A:27:ILE:HD11 | 1:A:68:LEU:HD13  | 0.48     | 1.84        | 2      | 1     |
| 1:A:112:TRP:CZ2 | 1:A:118:PRO:O    | 0.48     | 2.65        | 3      | 3     |
| 1:A:50:SER:C    | 1:A:52:ASP:H     | 0.48     | 2.12        | 5      | 1     |
| 1:A:59:VAL:N    | 1:A:89:TYR:OH    | 0.48     | 2.47        | 11     | 3     |
| 1:A:58:LEU:HD12 | 1:A:58:LEU:C     | 0.48     | 2.28        | 6      | 1     |
| 1:A:10:ILE:CG2  | 1:A:14:GLN:HG2   | 0.48     | 2.39        | 9      | 1     |
| 1:A:27:ILE:HD12 | 1:A:68:LEU:HB3   | 0.48     | 1.85        | 15     | 1     |
| 1:A:55:ILE:O    | 1:A:89:TYR:CZ    | 0.48     | 2.67        | 19     | 2     |
| 1:A:10:ILE:HG23 | 1:A:14:GLN:C     | 0.48     | 2.29        | 16     | 1     |

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| Atom-1          | Atom-2           | Clash(Å) | Distance(Å) | Models |       |
|-----------------|------------------|----------|-------------|--------|-------|
|                 |                  |          |             | Worst  | Total |
| 1:A:109:PHE:O   | 1:A:112:TRP:HB3  | 0.48     | 2.08        | 17     | 1     |
| 1:A:71:HIS:CA   | 1:A:74:LEU:HD21  | 0.48     | 2.29        | 18     | 1     |
| 1:A:34:ARG:NH2  | 1:A:45:HIS:CB    | 0.48     | 2.76        | 2      | 1     |
| 1:A:124:GLU:C   | 1:A:125:VAL:HG23 | 0.48     | 2.28        | 12     | 2     |
| 1:A:16:LEU:HD23 | 1:A:17:PRO:N     | 0.48     | 2.23        | 13     | 3     |
| 1:A:26:ILE:HG12 | 1:A:69:VAL:CG1   | 0.48     | 2.38        | 7      | 1     |
| 1:A:39:HIS:HB2  | 1:A:119:VAL:HB   | 0.48     | 1.84        | 11     | 1     |
| 1:A:42:GLY:O    | 1:A:129:GLY:HA3  | 0.48     | 2.09        | 17     | 1     |
| 1:A:66:ASP:OD2  | 1:A:68:LEU:HD13  | 0.48     | 2.08        | 20     | 1     |
| 1:A:90:LEU:HD12 | 1:A:95:GLU:HA    | 0.48     | 1.85        | 20     | 1     |
| 1:A:11:THR:N    | 1:A:14:GLN:HB2   | 0.47     | 2.24        | 18     | 2     |
| 1:A:58:LEU:O    | 1:A:62:VAL:HG13  | 0.47     | 2.09        | 3      | 1     |
| 1:A:14:GLN:O    | 1:A:17:PRO:HD2   | 0.47     | 2.09        | 17     | 3     |
| 1:A:69:VAL:HG22 | 1:A:105:LEU:HD13 | 0.47     | 1.85        | 7      | 1     |
| 1:A:45:HIS:CE1  | 1:A:46:TYR:CE1   | 0.47     | 3.01        | 11     | 1     |
| 1:A:117:LYS:NZ  | 1:A:119:VAL:HG11 | 0.47     | 2.23        | 12     | 1     |
| 1:A:27:ILE:HB   | 1:A:70:PHE:HB3   | 0.47     | 1.86        | 17     | 1     |
| 1:A:99:ILE:HD13 | 1:A:99:ILE:O     | 0.47     | 2.08        | 18     | 1     |
| 1:A:39:HIS:CB   | 1:A:120:CYS:O    | 0.47     | 2.62        | 1      | 3     |
| 1:A:71:HIS:O    | 1:A:72:SER:HB3   | 0.47     | 2.09        | 1      | 3     |
| 1:A:125:VAL:H   | 1:A:126:PRO:CD   | 0.47     | 2.21        | 9      | 1     |
| 1:A:21:ARG:O    | 1:A:24:ILE:HG22  | 0.47     | 2.09        | 12     | 1     |
| 1:A:52:ASP:OD1  | 1:A:88:ASN:ND2   | 0.47     | 2.47        | 13     | 1     |
| 1:A:30:ARG:O    | 1:A:31:ASP:HB2   | 0.47     | 2.08        | 1      | 2     |
| 1:A:30:ARG:N    | 1:A:46:TYR:O     | 0.47     | 2.47        | 11     | 3     |
| 1:A:12:SER:O    | 1:A:15:LEU:HD23  | 0.47     | 2.08        | 8      | 4     |
| 1:A:37:ASP:O    | 1:A:39:HIS:CE1   | 0.47     | 2.66        | 5      | 3     |
| 1:A:125:VAL:CG1 | 1:A:126:PRO:CD   | 0.47     | 2.91        | 12     | 2     |
| 1:A:40:ILE:HA   | 1:A:128:LYS:CD   | 0.47     | 2.39        | 6      | 1     |
| 1:A:59:VAL:CB   | 1:A:89:TYR:CE2   | 0.47     | 2.95        | 8      | 1     |
| 1:A:21:ARG:HB3  | 1:A:22:PRO:CD    | 0.47     | 2.39        | 20     | 1     |
| 1:A:13:THR:O    | 1:A:17:PRO:HD2   | 0.47     | 2.08        | 3      | 4     |
| 1:A:71:HIS:CE1  | 1:A:79:GLY:HA3   | 0.47     | 2.45        | 7      | 2     |
| 1:A:26:ILE:O    | 1:A:43:SER:CA    | 0.47     | 2.61        | 14     | 1     |
| 1:A:24:ILE:HD11 | 1:A:69:VAL:HG21  | 0.47     | 1.85        | 16     | 1     |
| 1:A:71:HIS:CE1  | 1:A:104:ILE:HD12 | 0.47     | 2.44        | 16     | 1     |
| 1:A:88:ASN:OD1  | 1:A:89:TYR:CD1   | 0.47     | 2.68        | 17     | 1     |
| 1:A:40:ILE:CG2  | 1:A:41:ALA:N     | 0.47     | 2.77        | 19     | 1     |
| 1:A:38:GLY:HA2  | 1:A:119:VAL:CG2  | 0.47     | 2.39        | 20     | 1     |
| 1:A:106:GLU:O   | 1:A:107:ARG:HB2  | 0.47     | 2.09        | 2      | 1     |
| 1:A:31:ASP:CB   | 1:A:47:ALA:HB2   | 0.47     | 2.39        | 5      | 2     |

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| Atom-1           | Atom-2           | Clash(Å) | Distance(Å) | Models |       |
|------------------|------------------|----------|-------------|--------|-------|
|                  |                  |          |             | Worst  | Total |
| 1:A:69:VAL:HG13  | 1:A:103:MET:C    | 0.47     | 2.30        | 12     | 2     |
| 1:A:39:HIS:O     | 1:A:40:ILE:HG22  | 0.47     | 2.09        | 10     | 1     |
| 1:A:112:TRP:O    | 1:A:116:GLY:CA   | 0.47     | 2.63        | 14     | 3     |
| 1:A:29:VAL:HB    | 1:A:46:TYR:CE1   | 0.47     | 2.44        | 13     | 1     |
| 1:A:31:ASP:O     | 1:A:35:ASN:N     | 0.47     | 2.47        | 15     | 1     |
| 1:A:26:ILE:HG21  | 1:A:105:LEU:HD21 | 0.47     | 1.85        | 17     | 1     |
| 1:A:55:ILE:HD13  | 1:A:85:ARG:NH1   | 0.47     | 2.24        | 18     | 1     |
| 1:A:104:ILE:HD13 | 1:A:105:LEU:O    | 0.47     | 2.10        | 18     | 2     |
| 1:A:7:ILE:H      | 1:A:7:ILE:HD13   | 0.47     | 1.70        | 13     | 1     |
| 1:A:28:ASP:OD1   | 1:A:73:ALA:HB2   | 0.47     | 2.10        | 13     | 1     |
| 1:A:7:ILE:HG23   | 1:A:70:PHE:CE2   | 0.47     | 2.45        | 15     | 1     |
| 1:A:104:ILE:HD12 | 1:A:104:ILE:C    | 0.47     | 2.30        | 19     | 1     |
| 1:A:21:ARG:O     | 1:A:23:ASN:N     | 0.47     | 2.48        | 15     | 2     |
| 1:A:24:ILE:HD13  | 1:A:24:ILE:C     | 0.47     | 2.30        | 1      | 2     |
| 1:A:12:SER:O     | 1:A:15:LEU:HB3   | 0.47     | 2.10        | 13     | 2     |
| 1:A:23:ASN:HB3   | 1:A:65:LYS:CG    | 0.47     | 2.39        | 6      | 3     |
| 1:A:120:CYS:O    | 1:A:121:ARG:CG   | 0.47     | 2.63        | 20     | 3     |
| 1:A:29:VAL:C     | 1:A:30:ARG:HG3   | 0.47     | 2.30        | 8      | 1     |
| 1:A:46:TYR:CE2   | 1:A:51:PHE:CB    | 0.47     | 2.98        | 8      | 1     |
| 1:A:27:ILE:HD11  | 1:A:70:PHE:HB3   | 0.47     | 1.87        | 11     | 1     |
| 1:A:46:TYR:CD2   | 1:A:54:LYS:HG2   | 0.47     | 2.44        | 11     | 1     |
| 1:A:51:PHE:CD1   | 1:A:52:ASP:OD1   | 0.47     | 2.67        | 13     | 1     |
| 1:A:55:ILE:CG2   | 1:A:86:LEU:HD23  | 0.47     | 2.40        | 13     | 1     |
| 1:A:7:ILE:HD12   | 1:A:7:ILE:C      | 0.47     | 2.30        | 14     | 1     |
| 1:A:71:HIS:NE2   | 1:A:79:GLY:N     | 0.47     | 2.63        | 14     | 1     |
| 1:A:9:TYR:HB2    | 1:A:104:ILE:HB   | 0.47     | 1.82        | 16     | 1     |
| 1:A:55:ILE:O     | 1:A:58:LEU:CD1   | 0.47     | 2.59        | 16     | 1     |
| 1:A:120:CYS:O    | 1:A:122:CYS:SG   | 0.47     | 2.73        | 18     | 2     |
| 1:A:71:HIS:CE1   | 1:A:105:LEU:HB3  | 0.47     | 2.44        | 18     | 1     |
| 1:A:85:ARG:O     | 1:A:85:ARG:NH1   | 0.47     | 2.48        | 18     | 1     |
| 1:A:28:ASP:O     | 1:A:46:TYR:CD1   | 0.47     | 2.68        | 13     | 2     |
| 1:A:24:ILE:HD13  | 1:A:67:THR:OG1   | 0.47     | 2.10        | 2      | 1     |
| 1:A:11:THR:HG22  | 1:A:14:GLN:CG    | 0.47     | 2.40        | 8      | 1     |
| 1:A:7:ILE:N      | 1:A:102:ILE:HG23 | 0.47     | 2.24        | 9      | 1     |
| 1:A:18:LEU:HD13  | 1:A:20:ARG:H     | 0.47     | 1.70        | 9      | 1     |
| 1:A:68:LEU:HG    | 1:A:99:ILE:CG2   | 0.47     | 2.40        | 10     | 1     |
| 1:A:116:GLY:O    | 1:A:118:PRO:HD2  | 0.47     | 2.10        | 16     | 1     |
| 1:A:40:ILE:HD12  | 1:A:112:TRP:CD1  | 0.47     | 2.45        | 5      | 1     |
| 1:A:52:ASP:O     | 1:A:52:ASP:OD1   | 0.47     | 2.33        | 5      | 1     |
| 1:A:18:LEU:HD23  | 1:A:21:ARG:CB    | 0.47     | 2.40        | 7      | 1     |
| 1:A:27:ILE:HD13  | 1:A:27:ILE:C     | 0.47     | 2.30        | 10     | 1     |

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| Atom-1           | Atom-2           | Clash(Å) | Distance(Å) | Models |       |
|------------------|------------------|----------|-------------|--------|-------|
|                  |                  |          |             | Worst  | Total |
| 1:A:39:HIS:CG    | 1:A:120:CYS:CB   | 0.47     | 2.98        | 10     | 1     |
| 1:A:68:LEU:CG    | 1:A:99:ILE:HG22  | 0.47     | 2.40        | 10     | 1     |
| 1:A:29:VAL:HG13  | 1:A:82:CYS:SG    | 0.47     | 2.50        | 11     | 1     |
| 1:A:9:TYR:CB     | 1:A:104:ILE:CG2  | 0.47     | 2.92        | 13     | 1     |
| 1:A:11:THR:O     | 1:A:14:GLN:CB    | 0.47     | 2.63        | 13     | 1     |
| 1:A:33:GLU:O     | 1:A:36:TYR:CE1   | 0.47     | 2.68        | 15     | 1     |
| 1:A:70:PHE:CE1   | 1:A:102:ILE:CD1  | 0.47     | 2.98        | 16     | 1     |
| 1:A:18:LEU:HD11  | 1:A:21:ARG:HD3   | 0.47     | 1.87        | 2      | 1     |
| 1:A:111:GLY:O    | 1:A:115:SER:N    | 0.47     | 2.43        | 17     | 7     |
| 1:A:57:HIS:HA    | 1:A:60:GLN:CG    | 0.47     | 2.40        | 8      | 1     |
| 1:A:67:THR:OG1   | 1:A:101:ASN:CB   | 0.47     | 2.63        | 8      | 1     |
| 1:A:105:LEU:HD11 | 1:A:108:GLY:H    | 0.47     | 1.70        | 8      | 1     |
| 1:A:18:LEU:HD22  | 1:A:18:LEU:N     | 0.47     | 2.25        | 10     | 1     |
| 1:A:40:ILE:HD13  | 1:A:109:PHE:CE2  | 0.47     | 2.45        | 14     | 1     |
| 1:A:71:HIS:CE1   | 1:A:79:GLY:N     | 0.47     | 2.83        | 14     | 1     |
| 1:A:94:LYS:O     | 1:A:95:GLU:CG    | 0.47     | 2.63        | 14     | 1     |
| 1:A:23:ASN:HB3   | 1:A:65:LYS:HG3   | 0.47     | 1.87        | 16     | 1     |
| 1:A:16:LEU:N     | 1:A:17:PRO:HD2   | 0.46     | 2.25        | 12     | 5     |
| 1:A:52:ASP:O     | 1:A:89:TYR:CZ    | 0.46     | 2.68        | 12     | 2     |
| 1:A:46:TYR:CE2   | 1:A:51:PHE:HB3   | 0.46     | 2.45        | 8      | 2     |
| 1:A:48:SER:HB3   | 1:A:51:PHE:CD1   | 0.46     | 2.45        | 12     | 1     |
| 1:A:27:ILE:HG22  | 1:A:44:LEU:CD1   | 0.46     | 2.41        | 14     | 1     |
| 1:A:71:HIS:CD2   | 1:A:79:GLY:CA    | 0.46     | 2.98        | 14     | 1     |
| 1:A:59:VAL:HG21  | 1:A:93:LYS:HG2   | 0.46     | 1.86        | 15     | 1     |
| 1:A:57:HIS:N     | 1:A:89:TYR:OH    | 0.46     | 2.47        | 16     | 1     |
| 1:A:18:LEU:HD12  | 1:A:18:LEU:O     | 0.46     | 2.10        | 18     | 1     |
| 1:A:88:ASN:ND2   | 1:A:89:TYR:N     | 0.46     | 2.62        | 1      | 2     |
| 1:A:30:ARG:O     | 1:A:31:ASP:HB3   | 0.46     | 2.10        | 3      | 1     |
| 1:A:94:LYS:O     | 1:A:95:GLU:O     | 0.46     | 2.33        | 4      | 1     |
| 1:A:112:TRP:NE1  | 1:A:119:VAL:CG1  | 0.46     | 2.78        | 5      | 1     |
| 1:A:113:GLU:O    | 1:A:117:LYS:HB2  | 0.46     | 2.11        | 7      | 1     |
| 1:A:65:LYS:O     | 1:A:65:LYS:CG    | 0.46     | 2.64        | 9      | 1     |
| 1:A:27:ILE:HB    | 1:A:45:HIS:HB2   | 0.46     | 1.86        | 11     | 1     |
| 1:A:45:HIS:ND1   | 1:A:46:TYR:CD1   | 0.46     | 2.83        | 11     | 1     |
| 1:A:76:GLN:C     | 1:A:77:VAL:HG23  | 0.46     | 2.30        | 11     | 1     |
| 1:A:6:SER:O      | 1:A:8:SER:N      | 0.46     | 2.48        | 13     | 1     |
| 1:A:70:PHE:CE1   | 1:A:104:ILE:HD11 | 0.46     | 2.45        | 14     | 1     |
| 1:A:26:ILE:HG12  | 1:A:69:VAL:HG23  | 0.46     | 1.87        | 15     | 1     |
| 1:A:61:ASN:C     | 1:A:62:VAL:HG23  | 0.46     | 2.31        | 2      | 1     |
| 1:A:114:ALA:O    | 1:A:116:GLY:N    | 0.46     | 2.47        | 2      | 2     |
| 1:A:42:GLY:CA    | 1:A:129:GLY:C    | 0.46     | 2.84        | 6      | 5     |

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| Atom-1           | Atom-2           | Clash(Å) | Distance(Å) | Models |       |
|------------------|------------------|----------|-------------|--------|-------|
|                  |                  |          |             | Worst  | Total |
| 1:A:46:TYR:CE2   | 1:A:85:ARG:HD3   | 0.46     | 2.44        | 7      | 1     |
| 1:A:60:GLN:O     | 1:A:62:VAL:N     | 0.46     | 2.48        | 8      | 1     |
| 1:A:7:ILE:HD13   | 1:A:8:SER:N      | 0.46     | 2.25        | 11     | 1     |
| 1:A:23:ASN:O     | 1:A:67:THR:CB    | 0.46     | 2.63        | 13     | 1     |
| 1:A:10:ILE:O     | 1:A:106:GLU:CA   | 0.46     | 2.63        | 19     | 1     |
| 1:A:26:ILE:O     | 1:A:43:SER:HB2   | 0.46     | 2.10        | 4      | 1     |
| 1:A:87:VAL:HA    | 1:A:90:LEU:CG    | 0.46     | 2.41        | 13     | 1     |
| 1:A:35:ASN:ND2   | 1:A:36:TYR:CD1   | 0.46     | 2.84        | 14     | 1     |
| 1:A:59:VAL:HB    | 1:A:89:TYR:CZ    | 0.46     | 2.44        | 14     | 1     |
| 1:A:39:HIS:ND1   | 1:A:120:CYS:HA   | 0.46     | 2.25        | 17     | 1     |
| 1:A:73:ALA:HB3   | 1:A:74:LEU:CD1   | 0.46     | 2.40        | 20     | 1     |
| 1:A:34:ARG:NH1   | 1:A:40:ILE:HG23  | 0.46     | 2.26        | 2      | 1     |
| 1:A:7:ILE:HG22   | 1:A:102:ILE:HG21 | 0.46     | 1.87        | 5      | 1     |
| 1:A:56:SER:OG    | 1:A:89:TYR:CE2   | 0.46     | 2.69        | 12     | 3     |
| 1:A:120:CYS:O    | 1:A:121:ARG:HB3  | 0.46     | 2.09        | 6      | 1     |
| 1:A:7:ILE:HG12   | 1:A:102:ILE:N    | 0.46     | 2.26        | 7      | 1     |
| 1:A:15:LEU:HA    | 1:A:18:LEU:HD12  | 0.46     | 1.87        | 7      | 1     |
| 1:A:77:VAL:O     | 1:A:77:VAL:HG12  | 0.46     | 2.10        | 7      | 1     |
| 1:A:112:TRP:O    | 1:A:117:LYS:HA   | 0.46     | 2.11        | 8      | 1     |
| 1:A:39:HIS:HB2   | 1:A:120:CYS:O    | 0.46     | 2.11        | 12     | 1     |
| 1:A:5:ARG:CZ     | 1:A:9:TYR:CE2    | 0.46     | 2.98        | 14     | 1     |
| 1:A:31:ASP:O     | 1:A:32:GLU:C     | 0.46     | 2.53        | 14     | 1     |
| 1:A:68:LEU:CD2   | 1:A:70:PHE:CE1   | 0.46     | 2.97        | 16     | 1     |
| 1:A:55:ILE:HG22  | 1:A:59:VAL:HG21  | 0.46     | 1.88        | 17     | 1     |
| 1:A:7:ILE:N      | 1:A:7:ILE:CD1    | 0.46     | 2.77        | 1      | 2     |
| 1:A:41:ALA:HB1   | 1:A:109:PHE:CE1  | 0.46     | 2.45        | 7      | 1     |
| 1:A:61:ASN:ND2   | 1:A:61:ASN:N     | 0.46     | 2.63        | 7      | 3     |
| 1:A:27:ILE:CG2   | 1:A:70:PHE:CB    | 0.46     | 2.94        | 10     | 1     |
| 1:A:10:ILE:HB    | 1:A:14:GLN:CB    | 0.46     | 2.39        | 13     | 1     |
| 1:A:5:ARG:NH1    | 1:A:9:TYR:CE2    | 0.46     | 2.84        | 14     | 1     |
| 1:A:26:ILE:HD13  | 1:A:26:ILE:C     | 0.46     | 2.31        | 15     | 1     |
| 1:A:89:TYR:CE1   | 1:A:93:LYS:CB    | 0.46     | 2.98        | 16     | 1     |
| 1:A:27:ILE:HD11  | 1:A:68:LEU:HB3   | 0.46     | 1.88        | 20     | 1     |
| 1:A:11:THR:H     | 1:A:14:GLN:CG    | 0.46     | 2.24        | 16     | 5     |
| 1:A:71:HIS:NE2   | 1:A:79:GLY:CA    | 0.46     | 2.79        | 2      | 1     |
| 1:A:51:PHE:CE1   | 1:A:54:LYS:CB    | 0.46     | 2.98        | 4      | 1     |
| 1:A:125:VAL:CG2  | 1:A:126:PRO:CD   | 0.46     | 2.93        | 8      | 3     |
| 1:A:90:LEU:C     | 1:A:90:LEU:HD23  | 0.46     | 2.30        | 5      | 1     |
| 1:A:125:VAL:HG12 | 1:A:126:PRO:HD2  | 0.46     | 1.87        | 5      | 1     |
| 1:A:27:ILE:HG23  | 1:A:70:PHE:CD2   | 0.46     | 2.46        | 7      | 1     |
| 1:A:6:SER:C      | 1:A:7:ILE:HG23   | 0.46     | 2.31        | 10     | 1     |

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| Atom-1           | Atom-2           | Clash(Å) | Distance(Å) | Models |       |
|------------------|------------------|----------|-------------|--------|-------|
|                  |                  |          |             | Worst  | Total |
| 1:A:21:ARG:HB2   | 1:A:22:PRO:HD3   | 0.46     | 1.86        | 10     | 1     |
| 1:A:108:GLY:O    | 1:A:109:PHE:CG   | 0.46     | 2.68        | 17     | 1     |
| 1:A:23:ASN:CG    | 1:A:65:LYS:HB2   | 0.46     | 2.31        | 4      | 1     |
| 1:A:70:PHE:HZ    | 1:A:83:ALA:HB2   | 0.46     | 1.70        | 5      | 1     |
| 1:A:31:ASP:O     | 1:A:34:ARG:N     | 0.46     | 2.49        | 14     | 1     |
| 1:A:72:SER:N     | 1:A:105:LEU:HD21 | 0.46     | 2.25        | 15     | 1     |
| 1:A:74:LEU:N     | 1:A:74:LEU:HD13  | 0.46     | 2.26        | 18     | 1     |
| 1:A:7:ILE:HD13   | 1:A:7:ILE:N      | 0.46     | 2.26        | 2      | 2     |
| 1:A:26:ILE:N     | 1:A:26:ILE:CD1   | 0.46     | 2.79        | 11     | 2     |
| 1:A:39:HIS:HB3   | 1:A:120:CYS:C    | 0.46     | 2.31        | 9      | 1     |
| 1:A:69:VAL:HG11  | 1:A:105:LEU:CD2  | 0.46     | 2.40        | 9      | 1     |
| 1:A:71:HIS:CE1   | 1:A:75:SER:HA    | 0.46     | 2.46        | 13     | 1     |
| 1:A:70:PHE:CE1   | 1:A:83:ALA:HB2   | 0.46     | 2.45        | 14     | 1     |
| 1:A:55:ILE:HG21  | 1:A:92:GLU:CB    | 0.46     | 2.40        | 3      | 2     |
| 1:A:90:LEU:O     | 1:A:94:LYS:N     | 0.46     | 2.49        | 3      | 2     |
| 1:A:72:SER:O     | 1:A:74:LEU:N     | 0.46     | 2.48        | 5      | 2     |
| 1:A:52:ASP:OD1   | 1:A:89:TYR:CD1   | 0.46     | 2.69        | 5      | 1     |
| 1:A:27:ILE:HD11  | 1:A:44:LEU:HD23  | 0.46     | 1.87        | 6      | 1     |
| 1:A:23:ASN:O     | 1:A:67:THR:CG2   | 0.46     | 2.63        | 9      | 2     |
| 1:A:70:PHE:CE1   | 1:A:104:ILE:CD1  | 0.46     | 2.99        | 14     | 1     |
| 1:A:90:LEU:HA    | 1:A:95:GLU:O     | 0.45     | 2.11        | 3      | 1     |
| 1:A:29:VAL:HG22  | 1:A:46:TYR:HE1   | 0.45     | 1.70        | 6      | 1     |
| 1:A:51:PHE:O     | 1:A:55:ILE:HD13  | 0.45     | 2.12        | 6      | 1     |
| 1:A:11:THR:CG2   | 1:A:12:SER:N     | 0.45     | 2.79        | 11     | 2     |
| 1:A:112:TRP:CE2  | 1:A:117:LYS:HE3  | 0.45     | 2.46        | 12     | 1     |
| 1:A:42:GLY:O     | 1:A:43:SER:C     | 0.45     | 2.54        | 14     | 1     |
| 1:A:74:LEU:H     | 1:A:74:LEU:HD13  | 0.45     | 1.71        | 18     | 1     |
| 1:A:41:ALA:HA    | 1:A:128:LYS:O    | 0.45     | 2.11        | 19     | 1     |
| 1:A:104:ILE:HD12 | 1:A:105:LEU:O    | 0.45     | 2.11        | 19     | 1     |
| 1:A:48:SER:O     | 1:A:50:SER:N     | 0.45     | 2.48        | 17     | 3     |
| 1:A:33:GLU:CD    | 1:A:40:ILE:HD13  | 0.45     | 2.32        | 8      | 1     |
| 1:A:10:ILE:CG2   | 1:A:14:GLN:CG    | 0.45     | 2.94        | 9      | 1     |
| 1:A:58:LEU:HD22  | 1:A:58:LEU:C     | 0.45     | 2.30        | 16     | 1     |
| 1:A:27:ILE:HG23  | 1:A:68:LEU:HD12  | 0.45     | 1.88        | 19     | 1     |
| 1:A:30:ARG:HG3   | 1:A:45:HIS:CB    | 0.45     | 2.41        | 4      | 1     |
| 1:A:59:VAL:CG1   | 1:A:89:TYR:CE2   | 0.45     | 3.00        | 8      | 1     |
| 1:A:77:VAL:HG13  | 1:A:78:ARG:H     | 0.45     | 1.72        | 10     | 1     |
| 1:A:51:PHE:CE2   | 1:A:85:ARG:CZ    | 0.45     | 2.99        | 12     | 1     |
| 1:A:16:LEU:HD22  | 1:A:16:LEU:C     | 0.45     | 2.31        | 15     | 1     |
| 1:A:23:ASN:HB2   | 1:A:65:LYS:CG    | 0.45     | 2.41        | 16     | 1     |
| 1:A:89:TYR:CE1   | 1:A:95:GLU:HG2   | 0.45     | 2.47        | 3      | 1     |

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| Atom-1          | Atom-2           | Clash(Å) | Distance(Å) | Models |       |
|-----------------|------------------|----------|-------------|--------|-------|
|                 |                  |          |             | Worst  | Total |
| 1:A:124:GLU:O   | 1:A:125:VAL:HG23 | 0.45     | 2.12        | 5      | 1     |
| 1:A:7:ILE:N     | 1:A:102:ILE:O    | 0.45     | 2.49        | 18     | 3     |
| 1:A:39:HIS:C    | 1:A:41:ALA:N     | 0.45     | 2.70        | 6      | 2     |
| 1:A:11:THR:HG23 | 1:A:14:GLN:HB3   | 0.45     | 1.87        | 9      | 1     |
| 1:A:46:TYR:CD2  | 1:A:54:LYS:CG    | 0.45     | 2.99        | 11     | 1     |
| 1:A:34:ARG:CB   | 1:A:45:HIS:CE1   | 0.45     | 2.99        | 2      | 1     |
| 1:A:128:LYS:O   | 1:A:129:GLY:O    | 0.45     | 2.34        | 9      | 1     |
| 1:A:23:ASN:HB3  | 1:A:65:LYS:HG2   | 0.45     | 1.88        | 12     | 1     |
| 1:A:62:VAL:HG11 | 1:A:98:GLY:HA2   | 0.45     | 1.89        | 13     | 1     |
| 1:A:29:VAL:HG21 | 1:A:85:ARG:CD    | 0.45     | 2.41        | 15     | 1     |
| 1:A:15:LEU:HD12 | 1:A:106:GLU:CD   | 0.45     | 2.32        | 16     | 1     |
| 1:A:40:ILE:HB   | 1:A:120:CYS:H    | 0.45     | 1.72        | 20     | 1     |
| 1:A:19:HIS:O    | 1:A:20:ARG:CB    | 0.45     | 2.65        | 2      | 2     |
| 1:A:68:LEU:CD1  | 1:A:99:ILE:CG2   | 0.45     | 2.94        | 3      | 1     |
| 1:A:26:ILE:HG13 | 1:A:69:VAL:HG23  | 0.45     | 1.88        | 6      | 1     |
| 1:A:39:HIS:HB3  | 1:A:120:CYS:N    | 0.45     | 2.26        | 11     | 1     |
| 1:A:127:CYS:O   | 1:A:128:LYS:CG   | 0.45     | 2.65        | 14     | 1     |
| 1:A:55:ILE:N    | 1:A:89:TYR:CD2   | 0.45     | 2.84        | 16     | 1     |
| 1:A:66:ASP:O    | 1:A:100:LYS:HB2  | 0.45     | 2.12        | 20     | 1     |
| 1:A:7:ILE:HG22  | 1:A:102:ILE:HG22 | 0.45     | 1.87        | 6      | 1     |
| 1:A:126:PRO:O   | 1:A:127:CYS:O    | 0.45     | 2.34        | 6      | 2     |
| 1:A:29:VAL:HG22 | 1:A:30:ARG:CG    | 0.45     | 2.41        | 8      | 1     |
| 1:A:21:ARG:CG   | 1:A:22:PRO:HD3   | 0.45     | 2.42        | 10     | 1     |
| 1:A:71:HIS:CD2  | 1:A:105:LEU:O    | 0.45     | 2.70        | 11     | 1     |
| 1:A:74:LEU:HD22 | 1:A:75:SER:N     | 0.45     | 2.25        | 20     | 1     |
| 1:A:52:ASP:O    | 1:A:89:TYR:CD2   | 0.45     | 2.70        | 1      | 3     |
| 1:A:65:LYS:N    | 1:A:100:LYS:HB2  | 0.45     | 2.26        | 10     | 1     |
| 1:A:28:ASP:H    | 1:A:45:HIS:CB    | 0.45     | 2.25        | 11     | 1     |
| 1:A:70:PHE:CE1  | 1:A:104:ILE:HG12 | 0.45     | 2.47        | 14     | 1     |
| 1:A:19:HIS:O    | 1:A:21:ARG:N     | 0.45     | 2.50        | 17     | 1     |
| 1:A:46:TYR:CZ   | 1:A:85:ARG:CD    | 0.45     | 3.00        | 17     | 1     |
| 1:A:32:GLU:O    | 1:A:36:TYR:CD2   | 0.45     | 2.70        | 14     | 2     |
| 1:A:67:THR:HG23 | 1:A:101:ASN:ND2  | 0.45     | 2.26        | 1      | 1     |
| 1:A:124:GLU:O   | 1:A:126:PRO:CD   | 0.45     | 2.65        | 2      | 1     |
| 1:A:74:LEU:C    | 1:A:76:GLN:N     | 0.45     | 2.70        | 15     | 2     |
| 1:A:38:GLY:O    | 1:A:39:HIS:CD2   | 0.45     | 2.70        | 9      | 3     |
| 1:A:116:GLY:O   | 1:A:118:PRO:N    | 0.45     | 2.49        | 9      | 1     |
| 1:A:122:CYS:CB  | 1:A:126:PRO:HG2  | 0.45     | 2.42        | 10     | 1     |
| 1:A:28:ASP:OD2  | 1:A:73:ALA:HB2   | 0.45     | 2.12        | 13     | 1     |
| 1:A:55:ILE:HG21 | 1:A:88:ASN:OD1   | 0.45     | 2.12        | 14     | 1     |
| 1:A:56:SER:HA   | 1:A:89:TYR:CZ    | 0.45     | 2.45        | 14     | 1     |

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| Atom-1          | Atom-2           | Clash(Å) | Distance(Å) | Models |       |
|-----------------|------------------|----------|-------------|--------|-------|
|                 |                  |          |             | Worst  | Total |
| 1:A:20:ARG:O    | 1:A:21:ARG:HB2   | 0.45     | 2.12        | 15     | 1     |
| 1:A:11:THR:O    | 1:A:12:SER:C     | 0.45     | 2.54        | 16     | 1     |
| 1:A:54:LYS:HB3  | 1:A:57:HIS:CB    | 0.45     | 2.41        | 16     | 1     |
| 1:A:72:SER:O    | 1:A:72:SER:OG    | 0.45     | 2.34        | 5      | 1     |
| 1:A:58:LEU:HD21 | 1:A:86:LEU:HG    | 0.45     | 1.88        | 6      | 1     |
| 1:A:66:ASP:O    | 1:A:100:LYS:CB   | 0.45     | 2.65        | 15     | 2     |
| 1:A:9:TYR:HA    | 1:A:104:ILE:H    | 0.45     | 1.72        | 13     | 1     |
| 1:A:15:LEU:HG   | 1:A:18:LEU:HD23  | 0.45     | 1.89        | 13     | 1     |
| 1:A:92:GLU:O    | 1:A:93:LYS:HB2   | 0.45     | 2.11        | 13     | 1     |
| 1:A:112:TRP:CD1 | 1:A:117:LYS:O    | 0.45     | 2.70        | 15     | 1     |
| 1:A:55:ILE:HG22 | 1:A:59:VAL:CG2   | 0.45     | 2.42        | 17     | 1     |
| 1:A:39:HIS:ND1  | 1:A:119:VAL:CG2  | 0.45     | 2.78        | 18     | 1     |
| 1:A:15:LEU:O    | 1:A:18:LEU:HD22  | 0.45     | 2.11        | 19     | 1     |
| 1:A:56:SER:HB3  | 1:A:89:TYR:CE2   | 0.44     | 2.47        | 1      | 1     |
| 1:A:26:ILE:HG23 | 1:A:26:ILE:O     | 0.44     | 2.11        | 15     | 1     |
| 1:A:37:ASP:O    | 1:A:37:ASP:OD1   | 0.44     | 2.35        | 15     | 1     |
| 1:A:26:ILE:HG21 | 1:A:105:LEU:HD11 | 0.44     | 1.88        | 17     | 1     |
| 1:A:46:TYR:CZ   | 1:A:85:ARG:HD3   | 0.44     | 2.47        | 17     | 1     |
| 1:A:105:LEU:CD2 | 1:A:108:GLY:HA3  | 0.44     | 2.38        | 18     | 1     |
| 1:A:79:GLY:N    | 1:A:80:PRO:CD    | 0.44     | 2.80        | 19     | 1     |
| 1:A:125:VAL:HB  | 1:A:126:PRO:HD2  | 0.44     | 1.89        | 3      | 1     |
| 1:A:7:ILE:HG23  | 1:A:8:SER:N      | 0.44     | 2.28        | 7      | 1     |
| 1:A:113:GLU:O   | 1:A:117:LYS:HB3  | 0.44     | 2.12        | 8      | 1     |
| 1:A:117:LYS:N   | 1:A:118:PRO:HD3  | 0.44     | 2.26        | 8      | 1     |
| 1:A:120:CYS:SG  | 1:A:129:GLY:O    | 0.44     | 2.75        | 16     | 1     |
| 1:A:57:HIS:O    | 1:A:61:ASN:HB2   | 0.44     | 2.10        | 19     | 1     |
| 1:A:39:HIS:CB   | 1:A:127:CYS:HB3  | 0.44     | 2.42        | 20     | 1     |
| 1:A:24:ILE:CD1  | 1:A:67:THR:OG1   | 0.44     | 2.65        | 2      | 1     |
| 1:A:41:ALA:HB1  | 1:A:128:LYS:HB3  | 0.44     | 1.88        | 3      | 1     |
| 1:A:55:ILE:CG2  | 1:A:56:SER:N     | 0.44     | 2.80        | 16     | 2     |
| 1:A:69:VAL:HG11 | 1:A:105:LEU:HD21 | 0.44     | 1.89        | 9      | 1     |
| 1:A:58:LEU:HB3  | 1:A:89:TYR:CE2   | 0.44     | 2.48        | 17     | 2     |
| 1:A:74:LEU:HD23 | 1:A:109:PHE:HB2  | 0.44     | 1.89        | 12     | 1     |
| 1:A:10:ILE:CG2  | 1:A:14:GLN:CB    | 0.44     | 2.96        | 13     | 1     |
| 1:A:7:ILE:HG23  | 1:A:70:PHE:HE2   | 0.44     | 1.71        | 15     | 1     |
| 1:A:40:ILE:HG13 | 1:A:119:VAL:HA   | 0.44     | 1.90        | 5      | 1     |
| 1:A:55:ILE:CG2  | 1:A:86:LEU:HD22  | 0.44     | 2.41        | 7      | 1     |
| 1:A:68:LEU:HD22 | 1:A:68:LEU:O     | 0.44     | 2.12        | 9      | 1     |
| 1:A:75:SER:CB   | 1:A:79:GLY:N     | 0.44     | 2.81        | 11     | 1     |
| 1:A:50:SER:O    | 1:A:51:PHE:CD1   | 0.44     | 2.71        | 18     | 1     |
| 1:A:23:ASN:CB   | 1:A:66:ASP:HA    | 0.44     | 2.43        | 3      | 1     |

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| Atom-1           | Atom-2          | Clash(Å) | Distance(Å) | Models |       |
|------------------|-----------------|----------|-------------|--------|-------|
|                  |                 |          |             | Worst  | Total |
| 1:A:28:ASP:H     | 1:A:30:ARG:NH2  | 0.44     | 2.10        | 7      | 1     |
| 1:A:67:THR:HA    | 1:A:101:ASN:O   | 0.44     | 2.13        | 7      | 1     |
| 1:A:29:VAL:HG22  | 1:A:82:CYS:SG   | 0.44     | 2.52        | 11     | 1     |
| 1:A:71:HIS:CG    | 1:A:105:LEU:HB3 | 0.44     | 2.47        | 18     | 2     |
| 1:A:87:VAL:HA    | 1:A:90:LEU:CD2  | 0.44     | 2.42        | 13     | 1     |
| 1:A:61:ASN:O     | 1:A:62:VAL:HG12 | 0.44     | 2.12        | 16     | 1     |
| 1:A:69:VAL:HG13  | 1:A:103:MET:O   | 0.44     | 2.13        | 16     | 1     |
| 1:A:44:LEU:CD1   | 1:A:68:LEU:HD11 | 0.44     | 2.43        | 18     | 1     |
| 1:A:39:HIS:CD2   | 1:A:39:HIS:N    | 0.44     | 2.86        | 4      | 1     |
| 1:A:54:LYS:O     | 1:A:57:HIS:N    | 0.44     | 2.50        | 4      | 1     |
| 1:A:85:ARG:CA    | 1:A:88:ASN:OD1  | 0.44     | 2.66        | 4      | 1     |
| 1:A:39:HIS:CG    | 1:A:120:CYS:HB3 | 0.44     | 2.47        | 10     | 2     |
| 1:A:120:CYS:O    | 1:A:121:ARG:HB2 | 0.44     | 2.12        | 16     | 4     |
| 1:A:61:ASN:O     | 1:A:62:VAL:CG1  | 0.44     | 2.66        | 10     | 2     |
| 1:A:112:TRP:CZ2  | 1:A:117:LYS:HE3 | 0.44     | 2.48        | 12     | 1     |
| 1:A:59:VAL:CG1   | 1:A:89:TYR:OH   | 0.44     | 2.66        | 14     | 1     |
| 1:A:90:LEU:C     | 1:A:90:LEU:CD1  | 0.44     | 2.82        | 14     | 2     |
| 1:A:81:THR:O     | 1:A:84:ARG:CB   | 0.44     | 2.65        | 19     | 1     |
| 1:A:19:HIS:O     | 1:A:20:ARG:CG   | 0.44     | 2.66        | 4      | 3     |
| 1:A:124:GLU:O    | 1:A:125:VAL:C   | 0.44     | 2.55        | 2      | 1     |
| 1:A:89:TYR:C     | 1:A:89:TYR:HD1  | 0.44     | 2.15        | 7      | 1     |
| 1:A:54:LYS:NZ    | 1:A:57:HIS:CG   | 0.44     | 2.86        | 9      | 1     |
| 1:A:68:LEU:HD23  | 1:A:70:PHE:CZ   | 0.44     | 2.48        | 16     | 1     |
| 1:A:104:ILE:HD12 | 1:A:105:LEU:H   | 0.44     | 1.72        | 17     | 1     |
| 1:A:29:VAL:CG2   | 1:A:46:TYR:CE1  | 0.44     | 3.01        | 19     | 1     |
| 1:A:40:ILE:N     | 1:A:120:CYS:HB3 | 0.44     | 2.28        | 1      | 2     |
| 1:A:56:SER:OG    | 1:A:89:TYR:CD1  | 0.44     | 2.67        | 5      | 1     |
| 1:A:54:LYS:HB2   | 1:A:54:LYS:NZ   | 0.44     | 2.28        | 7      | 1     |
| 1:A:45:HIS:O     | 1:A:45:HIS:CD2  | 0.44     | 2.70        | 8      | 1     |
| 1:A:71:HIS:CE1   | 1:A:75:SER:HB3  | 0.44     | 2.48        | 9      | 2     |
| 1:A:39:HIS:CD2   | 1:A:120:CYS:O   | 0.44     | 2.71        | 12     | 1     |
| 1:A:48:SER:HB3   | 1:A:51:PHE:N    | 0.44     | 2.27        | 12     | 1     |
| 1:A:10:ILE:O     | 1:A:106:GLU:CB  | 0.44     | 2.65        | 17     | 2     |
| 1:A:27:ILE:HG21  | 1:A:70:PHE:CE2  | 0.44     | 2.48        | 16     | 1     |
| 1:A:116:GLY:O    | 1:A:118:PRO:CD  | 0.44     | 2.65        | 16     | 1     |
| 1:A:39:HIS:NE2   | 1:A:128:LYS:HB2 | 0.44     | 2.27        | 17     | 1     |
| 1:A:55:ILE:HG23  | 1:A:89:TYR:HA   | 0.44     | 1.86        | 2      | 1     |
| 1:A:70:PHE:O     | 1:A:71:HIS:CD2  | 0.44     | 2.71        | 2      | 1     |
| 1:A:28:ASP:HB3   | 1:A:71:HIS:O    | 0.44     | 2.13        | 7      | 1     |
| 1:A:8:SER:O      | 1:A:103:MET:CG  | 0.44     | 2.66        | 17     | 3     |
| 1:A:22:PRO:O     | 1:A:24:ILE:N    | 0.44     | 2.51        | 16     | 1     |

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| Atom-1          | Atom-2          | Clash(Å) | Distance(Å) | Models |       |
|-----------------|-----------------|----------|-------------|--------|-------|
|                 |                 |          |             | Worst  | Total |
| 1:A:59:VAL:HG21 | 1:A:97:THR:O    | 0.44     | 2.13        | 16     | 1     |
| 1:A:62:VAL:CG1  | 1:A:65:LYS:O    | 0.44     | 2.66        | 18     | 1     |
| 1:A:86:LEU:O    | 1:A:89:TYR:CB   | 0.44     | 2.66        | 19     | 1     |
| 1:A:10:ILE:CG1  | 1:A:14:GLN:HB3  | 0.44     | 2.43        | 20     | 1     |
| 1:A:73:ALA:HB3  | 1:A:74:LEU:HD22 | 0.43     | 1.90        | 2      | 1     |
| 1:A:105:LEU:H   | 1:A:105:LEU:CD1 | 0.43     | 2.24        | 5      | 2     |
| 1:A:70:PHE:CD2  | 1:A:82:CYS:HB3  | 0.43     | 2.48        | 7      | 1     |
| 1:A:93:LYS:O    | 1:A:94:LYS:CG   | 0.43     | 2.65        | 7      | 1     |
| 1:A:39:HIS:O    | 1:A:120:CYS:CB  | 0.43     | 2.65        | 9      | 1     |
| 1:A:69:VAL:HG23 | 1:A:105:LEU:N   | 0.43     | 2.28        | 10     | 1     |
| 1:A:123:ALA:O   | 1:A:124:GLU:HG3 | 0.43     | 2.13        | 13     | 1     |
| 1:A:54:LYS:HA   | 1:A:57:HIS:HB2  | 0.43     | 1.90        | 19     | 2     |
| 1:A:24:ILE:HD11 | 1:A:69:VAL:CG2  | 0.43     | 2.42        | 16     | 1     |
| 1:A:59:VAL:HG22 | 1:A:98:GLY:HA3  | 0.43     | 1.90        | 18     | 1     |
| 1:A:92:GLU:O    | 1:A:93:LYS:CG   | 0.43     | 2.66        | 20     | 1     |
| 1:A:89:TYR:CE1  | 1:A:95:GLU:CG   | 0.43     | 3.01        | 3      | 1     |
| 1:A:74:LEU:HD11 | 1:A:77:VAL:HG12 | 0.43     | 1.90        | 9      | 1     |
| 1:A:90:LEU:O    | 1:A:94:LYS:CA   | 0.43     | 2.66        | 9      | 1     |
| 1:A:68:LEU:CB   | 1:A:99:ILE:CG2  | 0.43     | 2.95        | 10     | 2     |
| 1:A:27:ILE:CA   | 1:A:45:HIS:HB2  | 0.43     | 2.43        | 11     | 1     |
| 1:A:6:SER:O     | 1:A:7:ILE:CG2   | 0.43     | 2.67        | 12     | 1     |
| 1:A:36:TYR:CD1  | 1:A:36:TYR:N    | 0.43     | 2.84        | 13     | 1     |
| 1:A:52:ASP:O    | 1:A:92:GLU:CG   | 0.43     | 2.66        | 14     | 1     |
| 1:A:26:ILE:CG2  | 1:A:105:LEU:CD1 | 0.43     | 2.96        | 17     | 1     |
| 1:A:104:ILE:CD1 | 1:A:105:LEU:O   | 0.43     | 2.67        | 18     | 1     |
| 1:A:71:HIS:NE2  | 1:A:79:GLY:HA3  | 0.43     | 2.28        | 20     | 1     |
| 1:A:34:ARG:HB3  | 1:A:45:HIS:CE1  | 0.43     | 2.48        | 2      | 1     |
| 1:A:39:HIS:NE2  | 1:A:120:CYS:CB  | 0.43     | 2.81        | 3      | 1     |
| 1:A:69:VAL:O    | 1:A:69:VAL:HG23 | 0.43     | 2.13        | 3      | 2     |
| 1:A:18:LEU:C    | 1:A:18:LEU:HD22 | 0.43     | 2.33        | 4      | 1     |
| 1:A:73:ALA:HB1  | 1:A:110:ASN:CB  | 0.43     | 2.43        | 4      | 1     |
| 1:A:96:ASP:OD1  | 1:A:96:ASP:N    | 0.43     | 2.52        | 4      | 1     |
| 1:A:109:PHE:HB3 | 1:A:112:TRP:CE3 | 0.43     | 2.48        | 5      | 2     |
| 1:A:55:ILE:O    | 1:A:55:ILE:HG22 | 0.43     | 2.14        | 6      | 1     |
| 1:A:72:SER:O    | 1:A:73:ALA:CB   | 0.43     | 2.66        | 6      | 1     |
| 1:A:127:CYS:O   | 1:A:128:LYS:HD3 | 0.43     | 2.13        | 8      | 1     |
| 1:A:51:PHE:CE2  | 1:A:85:ARG:NH2  | 0.43     | 2.86        | 12     | 1     |
| 1:A:39:HIS:O    | 1:A:128:LYS:HB2 | 0.43     | 2.13        | 13     | 1     |
| 1:A:52:ASP:HB3  | 1:A:55:ILE:HD12 | 0.43     | 1.86        | 16     | 1     |
| 1:A:21:ARG:O    | 1:A:22:PRO:O    | 0.43     | 2.36        | 20     | 2     |
| 1:A:121:ARG:O   | 1:A:122:CYS:O   | 0.43     | 2.36        | 17     | 1     |

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| Atom-1          | Atom-2           | Clash(Å) | Distance(Å) | Models |       |
|-----------------|------------------|----------|-------------|--------|-------|
|                 |                  |          |             | Worst  | Total |
| 1:A:117:LYS:N   | 1:A:118:PRO:HD2  | 0.43     | 2.28        | 4      | 3     |
| 1:A:63:LYS:O    | 1:A:64:ASP:CB    | 0.43     | 2.66        | 10     | 2     |
| 1:A:51:PHE:CE2  | 1:A:52:ASP:OD1   | 0.43     | 2.72        | 7      | 1     |
| 1:A:27:ILE:CG1  | 1:A:70:PHE:HB3   | 0.43     | 2.43        | 9      | 1     |
| 1:A:6:SER:O     | 1:A:7:ILE:CD1    | 0.43     | 2.65        | 10     | 1     |
| 1:A:39:HIS:CA   | 1:A:120:CYS:HB2  | 0.43     | 2.43        | 10     | 1     |
| 1:A:123:ALA:C   | 1:A:124:GLU:CG   | 0.43     | 2.86        | 11     | 3     |
| 1:A:71:HIS:CD2  | 1:A:73:ALA:HB3   | 0.43     | 2.49        | 1      | 1     |
| 1:A:41:ALA:HB3  | 1:A:129:GLY:N    | 0.43     | 2.28        | 2      | 1     |
| 1:A:18:LEU:C    | 1:A:20:ARG:H     | 0.43     | 2.16        | 12     | 1     |
| 1:A:128:LYS:CD  | 1:A:128:LYS:O    | 0.43     | 2.67        | 18     | 1     |
| 1:A:28:ASP:OD1  | 1:A:28:ASP:N     | 0.43     | 2.52        | 19     | 1     |
| 1:A:23:ASN:HB3  | 1:A:66:ASP:CA    | 0.43     | 2.44        | 3      | 1     |
| 1:A:26:ILE:CG1  | 1:A:69:VAL:CG2   | 0.43     | 2.97        | 8      | 2     |
| 1:A:39:HIS:O    | 1:A:120:CYS:O    | 0.43     | 2.35        | 9      | 1     |
| 1:A:40:ILE:HB   | 1:A:120:CYS:CA   | 0.43     | 2.42        | 10     | 1     |
| 1:A:59:VAL:HG11 | 1:A:93:LYS:HE3   | 0.43     | 1.91        | 12     | 1     |
| 1:A:15:LEU:O    | 1:A:18:LEU:CD2   | 0.43     | 2.66        | 13     | 1     |
| 1:A:85:ARG:O    | 1:A:88:ASN:ND2   | 0.43     | 2.52        | 13     | 1     |
| 1:A:89:TYR:O    | 1:A:92:GLU:N     | 0.43     | 2.51        | 13     | 2     |
| 1:A:51:PHE:CD1  | 1:A:52:ASP:N     | 0.43     | 2.87        | 15     | 1     |
| 1:A:27:ILE:HG22 | 1:A:70:PHE:HB2   | 0.43     | 1.91        | 17     | 1     |
| 1:A:65:LYS:O    | 1:A:100:LYS:CB   | 0.43     | 2.66        | 3      | 1     |
| 1:A:26:ILE:O    | 1:A:44:LEU:N     | 0.43     | 2.52        | 8      | 1     |
| 1:A:9:TYR:CB    | 1:A:104:ILE:O    | 0.43     | 2.66        | 9      | 1     |
| 1:A:39:HIS:CB   | 1:A:119:VAL:CG2  | 0.43     | 2.93        | 10     | 1     |
| 1:A:112:TRP:CD1 | 1:A:116:GLY:O    | 0.43     | 2.72        | 13     | 1     |
| 1:A:108:GLY:O   | 1:A:109:PHE:CD2  | 0.43     | 2.72        | 17     | 1     |
| 1:A:62:VAL:HG23 | 1:A:63:LYS:N     | 0.43     | 2.29        | 19     | 1     |
| 1:A:52:ASP:O    | 1:A:89:TYR:CG    | 0.43     | 2.71        | 4      | 1     |
| 1:A:50:SER:O    | 1:A:51:PHE:CD2   | 0.43     | 2.72        | 11     | 2     |
| 1:A:70:PHE:O    | 1:A:71:HIS:HB3   | 0.43     | 2.13        | 17     | 1     |
| 1:A:7:ILE:HA    | 1:A:102:ILE:CD1  | 0.43     | 2.44        | 1      | 1     |
| 1:A:43:SER:HB2  | 1:A:44:LEU:HD22  | 0.43     | 1.89        | 2      | 1     |
| 1:A:99:ILE:CD1  | 1:A:102:ILE:CG2  | 0.43     | 2.95        | 2      | 1     |
| 1:A:7:ILE:HD13  | 1:A:104:ILE:HG13 | 0.43     | 1.91        | 14     | 1     |
| 1:A:22:PRO:O    | 1:A:23:ASN:C     | 0.43     | 2.55        | 14     | 1     |
| 1:A:112:TRP:O   | 1:A:112:TRP:HD1  | 0.43     | 1.97        | 14     | 1     |
| 1:A:39:HIS:CB   | 1:A:120:CYS:SG   | 0.43     | 3.07        | 15     | 1     |
| 1:A:17:PRO:O    | 1:A:18:LEU:HG    | 0.43     | 2.13        | 18     | 2     |
| 1:A:29:VAL:HG13 | 1:A:46:TYR:HE1   | 0.43     | 1.74        | 17     | 1     |

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| Atom-1          | Atom-2           | Clash(Å) | Distance(Å) | Models |       |
|-----------------|------------------|----------|-------------|--------|-------|
|                 |                  |          |             | Worst  | Total |
| 1:A:28:ASP:CB   | 1:A:30:ARG:NH1   | 0.43     | 2.82        | 18     | 1     |
| 1:A:41:ALA:HA   | 1:A:128:LYS:HB3  | 0.43     | 1.91        | 1      | 1     |
| 1:A:29:VAL:O    | 1:A:30:ARG:NE    | 0.43     | 2.52        | 4      | 1     |
| 1:A:63:LYS:CB   | 1:A:98:GLY:O     | 0.43     | 2.67        | 4      | 1     |
| 1:A:24:ILE:HA   | 1:A:67:THR:HB    | 0.43     | 1.90        | 6      | 2     |
| 1:A:48:SER:O    | 1:A:51:PHE:CZ    | 0.43     | 2.72        | 6      | 1     |
| 1:A:71:HIS:CD2  | 1:A:73:ALA:C     | 0.43     | 2.92        | 6      | 1     |
| 1:A:76:GLN:CD   | 1:A:76:GLN:N     | 0.43     | 2.72        | 6      | 1     |
| 1:A:55:ILE:HG23 | 1:A:86:LEU:CD2   | 0.43     | 2.42        | 7      | 1     |
| 1:A:10:ILE:HD11 | 1:A:103:MET:HG3  | 0.43     | 1.90        | 12     | 1     |
| 1:A:112:TRP:CZ2 | 1:A:117:LYS:CE   | 0.43     | 3.02        | 12     | 1     |
| 1:A:7:ILE:HD11  | 1:A:9:TYR:HE1    | 0.43     | 1.72        | 14     | 1     |
| 1:A:99:ILE:O    | 1:A:99:ILE:CD1   | 0.43     | 2.67        | 15     | 1     |
| 1:A:40:ILE:O    | 1:A:129:GLY:C    | 0.43     | 2.58        | 16     | 1     |
| 1:A:48:SER:C    | 1:A:50:SER:N     | 0.43     | 2.73        | 17     | 1     |
| 1:A:78:ARG:O    | 1:A:81:THR:HB    | 0.43     | 2.14        | 20     | 1     |
| 1:A:105:LEU:CD2 | 1:A:108:GLY:HA2  | 0.43     | 2.38        | 20     | 1     |
| 1:A:34:ARG:NH1  | 1:A:40:ILE:CG2   | 0.42     | 2.82        | 2      | 1     |
| 1:A:99:ILE:CD1  | 1:A:102:ILE:HG12 | 0.42     | 2.44        | 4      | 1     |
| 1:A:51:PHE:CD2  | 1:A:52:ASP:OD1   | 0.42     | 2.72        | 7      | 1     |
| 1:A:9:TYR:CA    | 1:A:104:ILE:O    | 0.42     | 2.66        | 9      | 1     |
| 1:A:46:TYR:CE1  | 1:A:47:ALA:O     | 0.42     | 2.72        | 11     | 1     |
| 1:A:55:ILE:HG23 | 1:A:89:TYR:HD2   | 0.42     | 1.69        | 14     | 1     |
| 1:A:120:CYS:O   | 1:A:121:ARG:HG2  | 0.42     | 2.15        | 14     | 1     |
| 1:A:18:LEU:HD13 | 1:A:18:LEU:H     | 0.42     | 1.71        | 19     | 1     |
| 1:A:61:ASN:O    | 1:A:62:VAL:CB    | 0.42     | 2.66        | 2      | 1     |
| 1:A:55:ILE:HG21 | 1:A:92:GLU:HB2   | 0.42     | 1.90        | 3      | 1     |
| 1:A:70:PHE:CZ   | 1:A:86:LEU:CD1   | 0.42     | 2.96        | 6      | 1     |
| 1:A:11:THR:HG22 | 1:A:14:GLN:HG2   | 0.42     | 1.89        | 8      | 1     |
| 1:A:11:THR:N    | 1:A:14:GLN:HG2   | 0.42     | 2.28        | 9      | 1     |
| 1:A:27:ILE:HG23 | 1:A:70:PHE:CB    | 0.42     | 2.43        | 10     | 1     |
| 1:A:48:SER:HB2  | 1:A:51:PHE:CD1   | 0.42     | 2.48        | 10     | 1     |
| 1:A:26:ILE:CG2  | 1:A:105:LEU:CG   | 0.42     | 2.97        | 17     | 1     |
| 1:A:36:TYR:CD1  | 1:A:40:ILE:CD1   | 0.42     | 3.03        | 1      | 1     |
| 1:A:82:CYS:HA   | 1:A:85:ARG:CD    | 0.42     | 2.44        | 1      | 1     |
| 1:A:55:ILE:HD12 | 1:A:92:GLU:HG3   | 0.42     | 1.90        | 2      | 1     |
| 1:A:3:MET:O     | 1:A:4:ALA:CB     | 0.42     | 2.67        | 3      | 1     |
| 1:A:112:TRP:CD1 | 1:A:119:VAL:HB   | 0.42     | 2.49        | 10     | 1     |
| 1:A:67:THR:CB   | 1:A:101:ASN:OD1  | 0.42     | 2.66        | 11     | 1     |
| 1:A:25:ALA:O    | 1:A:68:LEU:HD22  | 0.42     | 2.14        | 12     | 1     |
| 1:A:40:ILE:O    | 1:A:129:GLY:N    | 0.42     | 2.51        | 15     | 1     |

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| Atom-1          | Atom-2           | Clash(Å) | Distance(Å) | Models |       |
|-----------------|------------------|----------|-------------|--------|-------|
|                 |                  |          |             | Worst  | Total |
| 1:A:31:ASP:CA   | 1:A:47:ALA:HB2   | 0.42     | 2.45        | 2      | 1     |
| 1:A:39:HIS:CD2  | 1:A:39:HIS:C     | 0.42     | 2.92        | 3      | 1     |
| 1:A:68:LEU:HD22 | 1:A:69:VAL:C     | 0.42     | 2.35        | 4      | 1     |
| 1:A:69:VAL:HG23 | 1:A:104:ILE:CA   | 0.42     | 2.45        | 7      | 2     |
| 1:A:124:GLU:C   | 1:A:125:VAL:CG2  | 0.42     | 2.87        | 5      | 2     |
| 1:A:68:LEU:CB   | 1:A:102:ILE:CD1  | 0.42     | 2.97        | 6      | 1     |
| 1:A:56:SER:OG   | 1:A:94:LYS:HB2   | 0.42     | 2.14        | 8      | 1     |
| 1:A:71:HIS:CB   | 1:A:105:LEU:O    | 0.42     | 2.67        | 8      | 1     |
| 1:A:74:LEU:O    | 1:A:76:GLN:NE2   | 0.42     | 2.52        | 8      | 1     |
| 1:A:82:CYS:O    | 1:A:85:ARG:HB2   | 0.42     | 2.15        | 8      | 1     |
| 1:A:52:ASP:O    | 1:A:55:ILE:HG13  | 0.42     | 2.14        | 16     | 1     |
| 1:A:28:ASP:OD1  | 1:A:45:HIS:CD2   | 0.42     | 2.73        | 1      | 1     |
| 1:A:29:VAL:CG1  | 1:A:85:ARG:CZ    | 0.42     | 2.97        | 1      | 1     |
| 1:A:65:LYS:O    | 1:A:100:LYS:CG   | 0.42     | 2.67        | 3      | 1     |
| 1:A:40:ILE:N    | 1:A:128:LYS:CD   | 0.42     | 2.83        | 6      | 1     |
| 1:A:127:CYS:O   | 1:A:128:LYS:HG2  | 0.42     | 2.14        | 14     | 2     |
| 1:A:128:LYS:N   | 1:A:128:LYS:HE2  | 0.42     | 2.30        | 12     | 1     |
| 1:A:35:ASN:O    | 1:A:45:HIS:CG    | 0.42     | 2.73        | 15     | 1     |
| 1:A:74:LEU:H    | 1:A:74:LEU:CD2   | 0.42     | 2.23        | 18     | 1     |
| 1:A:40:ILE:HG23 | 1:A:41:ALA:N     | 0.42     | 2.29        | 19     | 1     |
| 1:A:36:TYR:CE1  | 1:A:40:ILE:CD1   | 0.42     | 3.02        | 1      | 1     |
| 1:A:122:CYS:HA  | 1:A:127:CYS:SG   | 0.42     | 2.55        | 2      | 1     |
| 1:A:86:LEU:HD23 | 1:A:87:VAL:N     | 0.42     | 2.28        | 3      | 1     |
| 1:A:89:TYR:CE1  | 1:A:96:ASP:HA    | 0.42     | 2.49        | 3      | 1     |
| 1:A:52:ASP:OD1  | 1:A:52:ASP:N     | 0.42     | 2.53        | 4      | 2     |
| 1:A:29:VAL:O    | 1:A:30:ARG:CG    | 0.42     | 2.67        | 5      | 1     |
| 1:A:10:ILE:HD13 | 1:A:103:MET:CB   | 0.42     | 2.44        | 7      | 1     |
| 1:A:56:SER:HG   | 1:A:89:TYR:HH    | 0.42     | 1.50        | 10     | 1     |
| 1:A:105:LEU:O   | 1:A:105:LEU:HD13 | 0.42     | 2.14        | 10     | 1     |
| 1:A:35:ASN:O    | 1:A:44:LEU:HD22  | 0.42     | 2.15        | 11     | 1     |
| 1:A:92:GLU:HG3  | 1:A:93:LYS:N     | 0.42     | 2.29        | 11     | 1     |
| 1:A:112:TRP:CD1 | 1:A:119:VAL:CG1  | 0.42     | 2.97        | 15     | 1     |
| 1:A:23:ASN:CB   | 1:A:65:LYS:HG3   | 0.42     | 2.43        | 16     | 1     |
| 1:A:11:THR:O    | 1:A:15:LEU:N     | 0.42     | 2.53        | 17     | 1     |
| 1:A:25:ALA:O    | 1:A:68:LEU:HD13  | 0.42     | 2.14        | 19     | 1     |
| 1:A:66:ASP:O    | 1:A:99:ILE:HA    | 0.42     | 2.15        | 3      | 1     |
| 1:A:65:LYS:CD   | 1:A:65:LYS:N     | 0.42     | 2.83        | 4      | 1     |
| 1:A:74:LEU:C    | 1:A:76:GLN:H     | 0.42     | 2.16        | 5      | 1     |
| 1:A:65:LYS:O    | 1:A:65:LYS:HG2   | 0.42     | 2.14        | 8      | 2     |
| 1:A:71:HIS:CE1  | 1:A:75:SER:HB2   | 0.42     | 2.50        | 9      | 1     |
| 1:A:25:ALA:CB   | 1:A:68:LEU:HD13  | 0.42     | 2.45        | 10     | 1     |

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| Atom-1           | Atom-2          | Clash(Å) | Distance(Å) | Models |       |
|------------------|-----------------|----------|-------------|--------|-------|
|                  |                 |          |             | Worst  | Total |
| 1:A:27:ILE:HG12  | 1:A:27:ILE:O    | 0.42     | 2.13        | 11     | 1     |
| 1:A:33:GLU:O     | 1:A:37:ASP:N    | 0.42     | 2.53        | 12     | 1     |
| 1:A:29:VAL:O     | 1:A:29:VAL:CG2  | 0.42     | 2.68        | 15     | 1     |
| 1:A:102:ILE:HG23 | 1:A:102:ILE:O   | 0.42     | 2.14        | 16     | 1     |
| 1:A:32:GLU:O     | 1:A:36:TYR:CD1  | 0.42     | 2.72        | 18     | 1     |
| 1:A:122:CYS:HB3  | 1:A:127:CYS:HA  | 0.42     | 1.91        | 18     | 1     |
| 1:A:9:TYR:N      | 1:A:9:TYR:CD1   | 0.42     | 2.75        | 2      | 1     |
| 1:A:14:GLN:NE2   | 1:A:18:LEU:HD13 | 0.42     | 2.30        | 5      | 1     |
| 1:A:70:PHE:CZ    | 1:A:104:ILE:HB  | 0.42     | 2.49        | 9      | 1     |
| 1:A:93:LYS:O     | 1:A:94:LYS:C    | 0.42     | 2.58        | 9      | 1     |
| 1:A:117:LYS:HB3  | 1:A:118:PRO:CD  | 0.42     | 2.44        | 14     | 2     |
| 1:A:61:ASN:N     | 1:A:61:ASN:HD22 | 0.42     | 2.12        | 11     | 1     |
| 1:A:39:HIS:CD2   | 1:A:41:ALA:HB2  | 0.42     | 2.49        | 17     | 1     |
| 1:A:74:LEU:HA    | 1:A:79:GLY:HA3  | 0.42     | 1.91        | 18     | 1     |
| 1:A:10:ILE:HG21  | 1:A:15:LEU:HA   | 0.42     | 1.91        | 20     | 1     |
| 1:A:27:ILE:HD12  | 1:A:68:LEU:HG   | 0.42     | 1.90        | 4      | 1     |
| 1:A:34:ARG:O     | 1:A:45:HIS:CB   | 0.42     | 2.68        | 6      | 1     |
| 1:A:124:GLU:C    | 1:A:126:PRO:HD2 | 0.42     | 2.35        | 6      | 2     |
| 1:A:56:SER:CB    | 1:A:89:TYR:HE2  | 0.42     | 2.28        | 7      | 2     |
| 1:A:40:ILE:N     | 1:A:40:ILE:CD1  | 0.42     | 2.82        | 8      | 1     |
| 1:A:25:ALA:C     | 1:A:26:ILE:HD13 | 0.42     | 2.35        | 9      | 1     |
| 1:A:72:SER:O     | 1:A:108:GLY:HA2 | 0.42     | 2.15        | 9      | 1     |
| 1:A:52:ASP:OD1   | 1:A:89:TYR:CD2  | 0.42     | 2.73        | 10     | 1     |
| 1:A:120:CYS:O    | 1:A:120:CYS:SG  | 0.42     | 2.77        | 11     | 1     |
| 1:A:74:LEU:O     | 1:A:75:SER:C    | 0.42     | 2.57        | 12     | 1     |
| 1:A:21:ARG:O     | 1:A:21:ARG:CG   | 0.42     | 2.68        | 13     | 1     |
| 1:A:50:SER:C     | 1:A:51:PHE:CG   | 0.42     | 2.92        | 18     | 1     |
| 1:A:105:LEU:CD2  | 1:A:108:GLY:CA  | 0.42     | 2.98        | 20     | 1     |
| 1:A:75:SER:O     | 1:A:78:ARG:CB   | 0.42     | 2.67        | 4      | 1     |
| 1:A:109:PHE:O    | 1:A:113:GLU:CG  | 0.42     | 2.68        | 4      | 1     |
| 1:A:15:LEU:C     | 1:A:15:LEU:HD23 | 0.42     | 2.35        | 7      | 1     |
| 1:A:30:ARG:NH2   | 1:A:44:LEU:C    | 0.42     | 2.72        | 7      | 1     |
| 1:A:82:CYS:O     | 1:A:85:ARG:HG3  | 0.42     | 2.14        | 10     | 1     |
| 1:A:68:LEU:CD2   | 1:A:102:ILE:HA  | 0.42     | 2.45        | 11     | 1     |
| 1:A:76:GLN:O     | 1:A:77:VAL:CG1  | 0.42     | 2.66        | 14     | 1     |
| 1:A:39:HIS:ND1   | 1:A:39:HIS:N    | 0.42     | 2.66        | 18     | 1     |
| 1:A:97:THR:HG22  | 1:A:99:ILE:HG13 | 0.41     | 1.91        | 2      | 1     |
| 1:A:31:ASP:O     | 1:A:34:ARG:HG2  | 0.41     | 2.14        | 6      | 1     |
| 1:A:34:ARG:HD2   | 1:A:45:HIS:HB2  | 0.41     | 1.92        | 6      | 1     |
| 1:A:113:GLU:CA   | 1:A:113:GLU:OE1 | 0.41     | 2.69        | 6      | 1     |
| 1:A:23:ASN:CG    | 1:A:66:ASP:N    | 0.41     | 2.74        | 7      | 1     |

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| Atom-1          | Atom-2          | Clash(Å) | Distance(Å) | Models |       |
|-----------------|-----------------|----------|-------------|--------|-------|
|                 |                 |          |             | Worst  | Total |
| 1:A:61:ASN:O    | 1:A:63:LYS:N    | 0.41     | 2.53        | 8      | 1     |
| 1:A:29:VAL:CA   | 1:A:46:TYR:O    | 0.41     | 2.68        | 11     | 1     |
| 1:A:9:TYR:C     | 1:A:9:TYR:CD1   | 0.41     | 2.92        | 13     | 1     |
| 1:A:31:ASP:O    | 1:A:33:GLU:N    | 0.41     | 2.51        | 13     | 1     |
| 1:A:74:LEU:HB3  | 1:A:76:GLN:NE2  | 0.41     | 2.30        | 13     | 1     |
| 1:A:104:ILE:C   | 1:A:104:ILE:CD1 | 0.41     | 2.88        | 8      | 1     |
| 1:A:55:ILE:C    | 1:A:89:TYR:CE2  | 0.41     | 2.93        | 10     | 1     |
| 1:A:17:PRO:O    | 1:A:18:LEU:CD2  | 0.41     | 2.69        | 14     | 1     |
| 1:A:71:HIS:CD2  | 1:A:75:SER:HA   | 0.41     | 2.50        | 14     | 1     |
| 1:A:112:TRP:NE1 | 1:A:118:PRO:O   | 0.41     | 2.53        | 14     | 1     |
| 1:A:71:HIS:CE1  | 1:A:108:GLY:HA3 | 0.41     | 2.50        | 17     | 1     |
| 1:A:28:ASP:HB3  | 1:A:30:ARG:NH1  | 0.41     | 2.30        | 18     | 1     |
| 1:A:23:ASN:OD1  | 1:A:23:ASN:N    | 0.41     | 2.52        | 19     | 1     |
| 1:A:51:PHE:CD2  | 1:A:88:ASN:ND2  | 0.41     | 2.88        | 19     | 1     |
| 1:A:31:ASP:CA   | 1:A:47:ALA:CB   | 0.41     | 2.98        | 2      | 2     |
| 1:A:27:ILE:HD12 | 1:A:68:LEU:CG   | 0.41     | 2.44        | 11     | 2     |
| 1:A:46:TYR:CD1  | 1:A:46:TYR:O    | 0.41     | 2.74        | 4      | 1     |
| 1:A:18:LEU:O    | 1:A:19:HIS:CD2  | 0.41     | 2.73        | 13     | 2     |
| 1:A:46:TYR:CE2  | 1:A:51:PHE:HA   | 0.41     | 2.50        | 7      | 1     |
| 1:A:70:PHE:CE1  | 1:A:104:ILE:CG1 | 0.41     | 3.03        | 9      | 1     |
| 1:A:25:ALA:HB3  | 1:A:68:LEU:HD13 | 0.41     | 1.91        | 10     | 1     |
| 1:A:27:ILE:HD11 | 1:A:46:TYR:HE1  | 0.41     | 1.75        | 10     | 1     |
| 1:A:32:GLU:O    | 1:A:36:TYR:CE1  | 0.41     | 2.73        | 12     | 1     |
| 1:A:55:ILE:CG2  | 1:A:86:LEU:CD2  | 0.41     | 2.97        | 13     | 1     |
| 1:A:88:ASN:OD1  | 1:A:89:TYR:N    | 0.41     | 2.54        | 14     | 1     |
| 1:A:43:SER:C    | 1:A:44:LEU:HD23 | 0.41     | 2.36        | 15     | 1     |
| 1:A:105:LEU:N   | 1:A:105:LEU:CD1 | 0.41     | 2.81        | 15     | 1     |
| 1:A:117:LYS:HB3 | 1:A:118:PRO:HD3 | 0.41     | 1.91        | 16     | 1     |
| 1:A:7:ILE:O     | 1:A:7:ILE:CD1   | 0.41     | 2.68        | 20     | 1     |
| 1:A:26:ILE:CG1  | 1:A:69:VAL:CG1  | 0.41     | 2.98        | 20     | 1     |
| 1:A:81:THR:O    | 1:A:84:ARG:HB2  | 0.41     | 2.16        | 2      | 1     |
| 1:A:88:ASN:O    | 1:A:92:GLU:CB   | 0.41     | 2.69        | 3      | 1     |
| 1:A:55:ILE:HD12 | 1:A:89:TYR:HB2  | 0.41     | 1.91        | 4      | 1     |
| 1:A:58:LEU:HD21 | 1:A:86:LEU:CG   | 0.41     | 2.44        | 6      | 1     |
| 1:A:69:VAL:CG2  | 1:A:105:LEU:N   | 0.41     | 2.83        | 10     | 2     |
| 1:A:33:GLU:HA   | 1:A:36:TYR:CZ   | 0.41     | 2.50        | 12     | 1     |
| 1:A:43:SER:CB   | 1:A:72:SER:OG   | 0.41     | 2.69        | 1      | 1     |
| 1:A:32:GLU:HG2  | 1:A:36:TYR:CG   | 0.41     | 2.49        | 2      | 1     |
| 1:A:39:HIS:HE2  | 1:A:120:CYS:CA  | 0.41     | 2.29        | 3      | 1     |
| 1:A:40:ILE:HA   | 1:A:128:LYS:HG3 | 0.41     | 1.92        | 4      | 1     |
| 1:A:59:VAL:HG22 | 1:A:98:GLY:N    | 0.41     | 2.31        | 7      | 1     |

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| Atom-1           | Atom-2           | Clash(Å) | Distance(Å) | Models |       |
|------------------|------------------|----------|-------------|--------|-------|
|                  |                  |          |             | Worst  | Total |
| 1:A:21:ARG:CG    | 1:A:22:PRO:CD    | 0.41     | 2.99        | 10     | 1     |
| 1:A:20:ARG:C     | 1:A:22:PRO:HD2   | 0.41     | 2.36        | 12     | 1     |
| 1:A:99:ILE:HD13  | 1:A:99:ILE:N     | 0.41     | 2.29        | 14     | 1     |
| 1:A:62:VAL:HG12  | 1:A:65:LYS:O     | 0.41     | 2.15        | 18     | 1     |
| 1:A:9:TYR:CB     | 1:A:104:ILE:HG12 | 0.41     | 2.44        | 19     | 1     |
| 1:A:9:TYR:CB     | 1:A:104:ILE:CG1  | 0.41     | 2.97        | 20     | 1     |
| 1:A:7:ILE:HD12   | 1:A:7:ILE:O      | 0.41     | 2.16        | 6      | 1     |
| 1:A:60:GLN:O     | 1:A:61:ASN:ND2   | 0.41     | 2.54        | 8      | 1     |
| 1:A:77:VAL:O     | 1:A:77:VAL:HG22  | 0.41     | 2.16        | 15     | 1     |
| 1:A:18:LEU:O     | 1:A:18:LEU:CD1   | 0.41     | 2.69        | 17     | 1     |
| 1:A:58:LEU:C     | 1:A:58:LEU:HD13  | 0.41     | 2.35        | 17     | 1     |
| 1:A:62:VAL:HA    | 1:A:98:GLY:CA    | 0.41     | 2.46        | 17     | 1     |
| 1:A:38:GLY:C     | 1:A:39:HIS:CG    | 0.41     | 2.94        | 19     | 1     |
| 1:A:34:ARG:CG    | 1:A:34:ARG:NH1   | 0.41     | 2.81        | 2      | 1     |
| 1:A:117:LYS:O    | 1:A:118:PRO:O    | 0.41     | 2.38        | 2      | 1     |
| 1:A:96:ASP:O     | 1:A:98:GLY:N     | 0.41     | 2.53        | 4      | 1     |
| 1:A:76:GLN:N     | 1:A:76:GLN:NE2   | 0.41     | 2.69        | 5      | 1     |
| 1:A:36:TYR:O     | 1:A:37:ASP:OD1   | 0.41     | 2.39        | 7      | 1     |
| 1:A:107:ARG:HG2  | 1:A:108:GLY:N    | 0.41     | 2.30        | 7      | 1     |
| 1:A:29:VAL:O     | 1:A:30:ARG:HB2   | 0.41     | 2.16        | 10     | 1     |
| 1:A:51:PHE:CE1   | 1:A:52:ASP:OD1   | 0.41     | 2.74        | 13     | 1     |
| 1:A:77:VAL:O     | 1:A:80:PRO:HG2   | 0.41     | 2.16        | 14     | 1     |
| 1:A:16:LEU:N     | 1:A:17:PRO:CD    | 0.41     | 2.84        | 16     | 1     |
| 1:A:72:SER:O     | 1:A:109:PHE:CZ   | 0.41     | 2.73        | 17     | 1     |
| 1:A:89:TYR:HB2   | 1:A:96:ASP:OD2   | 0.41     | 2.16        | 17     | 1     |
| 1:A:105:LEU:HD13 | 1:A:108:GLY:HA3  | 0.41     | 1.92        | 18     | 1     |
| 1:A:10:ILE:CG1   | 1:A:14:GLN:CB    | 0.41     | 2.98        | 20     | 1     |
| 1:A:39:HIS:ND1   | 1:A:120:CYS:O    | 0.41     | 2.54        | 4      | 1     |
| 1:A:44:LEU:CD2   | 1:A:44:LEU:N     | 0.41     | 2.84        | 4      | 1     |
| 1:A:20:ARG:O     | 1:A:20:ARG:CG    | 0.41     | 2.69        | 5      | 1     |
| 1:A:37:ASP:O     | 1:A:39:HIS:CD2   | 0.41     | 2.74        | 5      | 1     |
| 1:A:64:ASP:O     | 1:A:65:LYS:C     | 0.41     | 2.58        | 7      | 1     |
| 1:A:67:THR:CG2   | 1:A:101:ASN:OD1  | 0.41     | 2.69        | 11     | 1     |
| 1:A:73:ALA:O     | 1:A:109:PHE:CE1  | 0.41     | 2.74        | 12     | 1     |
| 1:A:29:VAL:CG2   | 1:A:47:ALA:O     | 0.41     | 2.69        | 13     | 1     |
| 1:A:27:ILE:HD11  | 1:A:46:TYR:CE1   | 0.41     | 2.50        | 16     | 1     |
| 1:A:39:HIS:HB2   | 1:A:120:CYS:N    | 0.41     | 2.30        | 17     | 1     |
| 1:A:29:VAL:HG11  | 1:A:85:ARG:NE    | 0.41     | 2.31        | 1      | 1     |
| 1:A:31:ASP:O     | 1:A:32:GLU:HB3   | 0.41     | 2.15        | 1      | 1     |
| 1:A:39:HIS:O     | 1:A:40:ILE:HG23  | 0.41     | 2.15        | 1      | 1     |
| 1:A:93:LYS:O     | 1:A:94:LYS:HB2   | 0.41     | 2.15        | 1      | 1     |

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| Atom-1           | Atom-2           | Clash(Å) | Distance(Å) | Models |       |
|------------------|------------------|----------|-------------|--------|-------|
|                  |                  |          |             | Worst  | Total |
| 1:A:34:ARG:HD3   | 1:A:40:ILE:HG23  | 0.41     | 1.93        | 2      | 1     |
| 1:A:62:VAL:O     | 1:A:98:GLY:HA2   | 0.41     | 2.16        | 2      | 1     |
| 1:A:8:SER:O      | 1:A:104:ILE:N    | 0.41     | 2.53        | 3      | 1     |
| 1:A:108:GLY:O    | 1:A:109:PHE:CD1  | 0.41     | 2.74        | 3      | 2     |
| 1:A:52:ASP:CB    | 1:A:88:ASN:ND2   | 0.41     | 2.84        | 4      | 1     |
| 1:A:56:SER:N     | 1:A:89:TYR:CD2   | 0.41     | 2.89        | 4      | 1     |
| 1:A:68:LEU:CD1   | 1:A:102:ILE:CD1  | 0.41     | 2.99        | 4      | 1     |
| 1:A:46:TYR:HE2   | 1:A:51:PHE:HA    | 0.41     | 1.76        | 7      | 1     |
| 1:A:51:PHE:CE2   | 1:A:52:ASP:OD2   | 0.41     | 2.74        | 7      | 1     |
| 1:A:46:TYR:CD2   | 1:A:51:PHE:HB3   | 0.41     | 2.51        | 8      | 1     |
| 1:A:59:VAL:HB    | 1:A:89:TYR:CD2   | 0.41     | 2.51        | 8      | 1     |
| 1:A:108:GLY:O    | 1:A:109:PHE:CB   | 0.41     | 2.69        | 11     | 1     |
| 1:A:58:LEU:CD2   | 1:A:68:LEU:HD11  | 0.41     | 2.44        | 13     | 1     |
| 1:A:109:PHE:CE2  | 1:A:113:GLU:HB2  | 0.41     | 2.50        | 14     | 2     |
| 1:A:42:GLY:O     | 1:A:43:SER:CB    | 0.41     | 2.68        | 16     | 1     |
| 1:A:94:LYS:O     | 1:A:95:GLU:CB    | 0.41     | 2.69        | 16     | 1     |
| 1:A:55:ILE:HG23  | 1:A:89:TYR:CD1   | 0.41     | 2.51        | 17     | 1     |
| 1:A:55:ILE:CD1   | 1:A:88:ASN:OD1   | 0.41     | 2.66        | 17     | 1     |
| 1:A:58:LEU:HD21  | 1:A:99:ILE:CG2   | 0.41     | 2.46        | 17     | 1     |
| 1:A:109:PHE:CE2  | 1:A:113:GLU:HG3  | 0.41     | 2.51        | 18     | 1     |
| 1:A:17:PRO:HB2   | 1:A:18:LEU:HD13  | 0.41     | 1.91        | 19     | 1     |
| 1:A:33:GLU:OE1   | 1:A:36:TYR:CD1   | 0.41     | 2.74        | 19     | 1     |
| 1:A:104:ILE:HD12 | 1:A:105:LEU:C    | 0.41     | 2.37        | 19     | 1     |
| 1:A:26:ILE:HB    | 1:A:43:SER:HB2   | 0.41     | 1.93        | 20     | 1     |
| 1:A:46:TYR:CE2   | 1:A:54:LYS:HG2   | 0.41     | 2.51        | 1      | 1     |
| 1:A:71:HIS:CD2   | 1:A:79:GLY:HA2   | 0.41     | 2.51        | 3      | 1     |
| 1:A:105:LEU:C    | 1:A:105:LEU:CD2  | 0.41     | 2.89        | 10     | 2     |
| 1:A:72:SER:O     | 1:A:110:ASN:HB2  | 0.41     | 2.15        | 6      | 1     |
| 1:A:60:GLN:C     | 1:A:61:ASN:HD22  | 0.41     | 2.17        | 7      | 1     |
| 1:A:71:HIS:CD2   | 1:A:104:ILE:HD11 | 0.41     | 2.50        | 7      | 1     |
| 1:A:39:HIS:O     | 1:A:120:CYS:HB3  | 0.41     | 2.16        | 9      | 1     |
| 1:A:42:GLY:CA    | 1:A:128:LYS:CE   | 0.41     | 2.99        | 9      | 1     |
| 1:A:71:HIS:CG    | 1:A:105:LEU:CB   | 0.41     | 3.04        | 12     | 1     |
| 1:A:128:LYS:HE2  | 1:A:128:LYS:H    | 0.41     | 1.76        | 12     | 1     |
| 1:A:55:ILE:HD13  | 1:A:89:TYR:CE1   | 0.41     | 2.51        | 17     | 1     |
| 1:A:51:PHE:O     | 1:A:55:ILE:HD12  | 0.41     | 2.16        | 20     | 1     |
| 1:A:112:TRP:O    | 1:A:118:PRO:CD   | 0.40     | 2.69        | 8      | 1     |
| 1:A:112:TRP:CE2  | 1:A:118:PRO:O    | 0.40     | 2.74        | 14     | 1     |
| 1:A:28:ASP:HB3   | 1:A:34:ARG:O     | 0.40     | 2.17        | 15     | 1     |
| 1:A:29:VAL:CG2   | 1:A:85:ARG:CD    | 0.40     | 3.00        | 15     | 1     |
| 1:A:23:ASN:HB2   | 1:A:65:LYS:HG2   | 0.40     | 1.91        | 16     | 1     |

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| Atom-1          | Atom-2          | Clash(Å) | Distance(Å) | Models |       |
|-----------------|-----------------|----------|-------------|--------|-------|
|                 |                 |          |             | Worst  | Total |
| 1:A:28:ASP:OD1  | 1:A:45:HIS:CG   | 0.40     | 2.74        | 16     | 1     |
| 1:A:26:ILE:O    | 1:A:43:SER:CB   | 0.40     | 2.69        | 20     | 1     |
| 1:A:71:HIS:ND1  | 1:A:75:SER:HA   | 0.40     | 2.31        | 20     | 1     |
| 1:A:55:ILE:CG2  | 1:A:96:ASP:OD2  | 0.40     | 2.69        | 1      | 1     |
| 1:A:66:ASP:O    | 1:A:99:ILE:CA   | 0.40     | 2.69        | 4      | 2     |
| 1:A:27:ILE:HG23 | 1:A:46:TYR:CE1  | 0.40     | 2.52        | 6      | 1     |
| 1:A:105:LEU:CD1 | 1:A:108:GLY:CA  | 0.40     | 2.98        | 6      | 1     |
| 1:A:52:ASP:OD2  | 1:A:88:ASN:OD1  | 0.40     | 2.40        | 7      | 1     |
| 1:A:61:ASN:OD1  | 1:A:65:LYS:O    | 0.40     | 2.38        | 7      | 1     |
| 1:A:11:THR:HG23 | 1:A:12:SER:N    | 0.40     | 2.31        | 11     | 1     |
| 1:A:97:THR:CG2  | 1:A:102:ILE:CD1 | 0.40     | 2.99        | 14     | 1     |
| 1:A:5:ARG:O     | 1:A:7:ILE:N     | 0.40     | 2.55        | 16     | 1     |
| 1:A:55:ILE:HG21 | 1:A:92:GLU:HB3  | 0.40     | 1.93        | 19     | 1     |
| 1:A:109:PHE:CE2 | 1:A:113:GLU:OE1 | 0.40     | 2.75        | 20     | 1     |
| 1:A:54:LYS:O    | 1:A:57:HIS:HB3  | 0.40     | 2.16        | 4      | 2     |
| 1:A:70:PHE:CD1  | 1:A:102:ILE:CD1 | 0.40     | 3.05        | 4      | 1     |
| 1:A:120:CYS:SG  | 1:A:128:LYS:CE  | 0.40     | 3.09        | 6      | 1     |
| 1:A:30:ARG:N    | 1:A:30:ARG:CD   | 0.40     | 2.81        | 7      | 1     |
| 1:A:18:LEU:HD12 | 1:A:21:ARG:H    | 0.40     | 1.77        | 14     | 1     |
| 1:A:104:ILE:CG1 | 1:A:105:LEU:N   | 0.40     | 2.85        | 15     | 1     |
| 1:A:71:HIS:CE1  | 1:A:104:ILE:CD1 | 0.40     | 3.04        | 16     | 1     |
| 1:A:71:HIS:CG   | 1:A:72:SER:N    | 0.40     | 2.88        | 17     | 1     |
| 1:A:41:ALA:O    | 1:A:42:GLY:C    | 0.40     | 2.58        | 19     | 1     |
| 1:A:30:ARG:HD3  | 1:A:73:ALA:HB1  | 0.40     | 1.94        | 20     | 1     |
| 1:A:94:LYS:O    | 1:A:95:GLU:HB3  | 0.40     | 2.16        | 3      | 1     |
| 1:A:5:ARG:NE    | 1:A:7:ILE:O     | 0.40     | 2.54        | 7      | 1     |
| 1:A:67:THR:HG22 | 1:A:101:ASN:HB2 | 0.40     | 1.92        | 7      | 1     |
| 1:A:48:SER:CB   | 1:A:85:ARG:NH1  | 0.40     | 2.84        | 9      | 1     |
| 1:A:72:SER:C    | 1:A:108:GLY:CA  | 0.40     | 2.89        | 9      | 1     |
| 1:A:46:TYR:OH   | 1:A:85:ARG:CZ   | 0.40     | 2.69        | 10     | 1     |
| 1:A:26:ILE:HG13 | 1:A:69:VAL:HG13 | 0.40     | 1.92        | 13     | 1     |
| 1:A:40:ILE:HG13 | 1:A:41:ALA:N    | 0.40     | 2.31        | 14     | 1     |
| 1:A:36:TYR:O    | 1:A:37:ASP:C    | 0.40     | 2.60        | 15     | 1     |
| 1:A:117:LYS:CB  | 1:A:118:PRO:HD3 | 0.40     | 2.46        | 16     | 1     |
| 1:A:75:SER:OG   | 1:A:76:GLN:NE2  | 0.40     | 2.55        | 3      | 1     |
| 1:A:56:SER:O    | 1:A:89:TYR:CZ   | 0.40     | 2.75        | 8      | 1     |
| 1:A:110:ASN:OD1 | 1:A:111:GLY:N   | 0.40     | 2.54        | 8      | 1     |
| 1:A:69:VAL:HG13 | 1:A:103:MET:CB  | 0.40     | 2.46        | 12     | 1     |
| 1:A:73:ALA:O    | 1:A:109:PHE:CD1 | 0.40     | 2.74        | 12     | 1     |
| 1:A:23:ASN:HB3  | 1:A:65:LYS:CB   | 0.40     | 2.47        | 13     | 1     |
| 1:A:71:HIS:CE1  | 1:A:78:ARG:NH1  | 0.40     | 2.89        | 14     | 1     |

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| Atom-1          | Atom-2         | Clash(Å) | Distance(Å) | Models |       |
|-----------------|----------------|----------|-------------|--------|-------|
|                 |                |          |             | Worst  | Total |
| 1:A:73:ALA:O    | 1:A:74:LEU:CB  | 0.40     | 2.69        | 15     | 1     |
| 1:A:26:ILE:CG2  | 1:A:69:VAL:O   | 0.40     | 2.68        | 17     | 1     |
| 1:A:26:ILE:HG21 | 1:A:71:HIS:CD2 | 0.40     | 2.51        | 18     | 1     |

## 6.3 Torsion angles [i](#)

### 6.3.1 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 NMR 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     | 128/152 (84%)   | 84±4 (65±3%) | 26±5 (20±4%) | 19±2 (15±2%) | 0           | 4 |
| All | All   | 2560/3040 (84%) | 1670 (65%)   | 512 (20%)    | 378 (15%)    | 0           | 4 |

All 65 unique Ramachandran outliers are listed below. They are sorted by the frequency of occurrence in the ensemble.

| Mol | Chain | Res | Type | Models (Total) |
|-----|-------|-----|------|----------------|
| 1   | A     | 71  | HIS  | 17             |
| 1   | A     | 77  | VAL  | 17             |
| 1   | A     | 120 | CYS  | 17             |
| 1   | A     | 123 | ALA  | 16             |
| 1   | A     | 31  | ASP  | 15             |
| 1   | A     | 72  | SER  | 14             |
| 1   | A     | 40  | ILE  | 13             |
| 1   | A     | 43  | SER  | 11             |
| 1   | A     | 94  | LYS  | 11             |
| 1   | A     | 127 | CYS  | 10             |
| 1   | A     | 30  | ARG  | 9              |
| 1   | A     | 118 | PRO  | 9              |
| 1   | A     | 121 | ARG  | 9              |
| 1   | A     | 6   | SER  | 8              |
| 1   | A     | 122 | CYS  | 8              |
| 1   | A     | 126 | PRO  | 8              |
| 1   | A     | 108 | GLY  | 7              |
| 1   | A     | 7   | ILE  | 7              |
| 1   | A     | 124 | GLU  | 7              |

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| Mol | Chain | Res | Type | Models (Total) |
|-----|-------|-----|------|----------------|
| 1   | A     | 125 | VAL  | 7              |
| 1   | A     | 117 | LYS  | 7              |
| 1   | A     | 21  | ARG  | 6              |
| 1   | A     | 22  | PRO  | 6              |
| 1   | A     | 96  | ASP  | 6              |
| 1   | A     | 97  | THR  | 6              |
| 1   | A     | 73  | ALA  | 6              |
| 1   | A     | 95  | GLU  | 6              |
| 1   | A     | 38  | GLY  | 6              |
| 1   | A     | 75  | SER  | 6              |
| 1   | A     | 19  | HIS  | 6              |
| 1   | A     | 74  | LEU  | 5              |
| 1   | A     | 128 | LYS  | 5              |
| 1   | A     | 23  | ASN  | 5              |
| 1   | A     | 93  | LYS  | 5              |
| 1   | A     | 42  | GLY  | 4              |
| 1   | A     | 48  | SER  | 4              |
| 1   | A     | 5   | ARG  | 4              |
| 1   | A     | 63  | LYS  | 4              |
| 1   | A     | 50  | SER  | 4              |
| 1   | A     | 62  | VAL  | 3              |
| 1   | A     | 115 | SER  | 3              |
| 1   | A     | 76  | GLN  | 3              |
| 1   | A     | 79  | GLY  | 3              |
| 1   | A     | 4   | ALA  | 3              |
| 1   | A     | 49  | GLY  | 3              |
| 1   | A     | 116 | GLY  | 3              |
| 1   | A     | 65  | LYS  | 3              |
| 1   | A     | 12  | SER  | 3              |
| 1   | A     | 2   | ALA  | 2              |
| 1   | A     | 32  | GLU  | 2              |
| 1   | A     | 37  | ASP  | 2              |
| 1   | A     | 61  | ASN  | 2              |
| 1   | A     | 64  | ASP  | 2              |
| 1   | A     | 129 | GLY  | 2              |
| 1   | A     | 17  | PRO  | 2              |
| 1   | A     | 46  | TYR  | 2              |
| 1   | A     | 39  | HIS  | 2              |
| 1   | A     | 109 | PHE  | 2              |
| 1   | A     | 3   | MET  | 2              |
| 1   | A     | 18  | LEU  | 2              |
| 1   | A     | 106 | GLU  | 2              |

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| Mol | Chain | Res | Type | Models (Total) |
|-----|-------|-----|------|----------------|
| 1   | A     | 47  | ALA  | 1              |
| 1   | A     | 107 | ARG  | 1              |
| 1   | A     | 98  | GLY  | 1              |
| 1   | A     | 20  | ARG  | 1              |

### 6.3.2 Protein sidechains [i](#)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all NMR 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     | 111/130 (85%)   | 68±5 (62±4%) | 43±5 (38±4%) | 0 6         |
| All | All   | 2220/2600 (85%) | 1368 (62%)   | 852 (38%)    | 0 6         |

All 103 unique residues with a non-rotameric sidechain are listed below. They are sorted by the frequency of occurrence in the ensemble.

| Mol | Chain | Res | Type | Models (Total) |
|-----|-------|-----|------|----------------|
| 1   | A     | 88  | ASN  | 20             |
| 1   | A     | 99  | ILE  | 18             |
| 1   | A     | 97  | THR  | 16             |
| 1   | A     | 104 | ILE  | 16             |
| 1   | A     | 46  | TYR  | 16             |
| 1   | A     | 9   | TYR  | 15             |
| 1   | A     | 65  | LYS  | 15             |
| 1   | A     | 124 | GLU  | 14             |
| 1   | A     | 128 | LYS  | 14             |
| 1   | A     | 16  | LEU  | 14             |
| 1   | A     | 5   | ARG  | 13             |
| 1   | A     | 11  | THR  | 13             |
| 1   | A     | 74  | LEU  | 13             |
| 1   | A     | 105 | LEU  | 13             |
| 1   | A     | 101 | ASN  | 13             |
| 1   | A     | 100 | LYS  | 13             |
| 1   | A     | 61  | ASN  | 13             |
| 1   | A     | 27  | ILE  | 12             |
| 1   | A     | 40  | ILE  | 12             |
| 1   | A     | 86  | LEU  | 12             |
| 1   | A     | 119 | VAL  | 12             |

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| Mol | Chain | Res | Type | Models (Total) |
|-----|-------|-----|------|----------------|
| 1   | A     | 93  | LYS  | 11             |
| 1   | A     | 21  | ARG  | 11             |
| 1   | A     | 30  | ARG  | 11             |
| 1   | A     | 78  | ARG  | 11             |
| 1   | A     | 94  | LYS  | 11             |
| 1   | A     | 3   | MET  | 10             |
| 1   | A     | 15  | LEU  | 10             |
| 1   | A     | 18  | LEU  | 10             |
| 1   | A     | 92  | GLU  | 10             |
| 1   | A     | 76  | GLN  | 9              |
| 1   | A     | 85  | ARG  | 9              |
| 1   | A     | 90  | LEU  | 9              |
| 1   | A     | 7   | ILE  | 9              |
| 1   | A     | 56  | SER  | 9              |
| 1   | A     | 23  | ASN  | 9              |
| 1   | A     | 95  | GLU  | 9              |
| 1   | A     | 107 | ARG  | 9              |
| 1   | A     | 113 | GLU  | 9              |
| 1   | A     | 12  | SER  | 8              |
| 1   | A     | 19  | HIS  | 8              |
| 1   | A     | 20  | ARG  | 8              |
| 1   | A     | 35  | ASN  | 8              |
| 1   | A     | 37  | ASP  | 8              |
| 1   | A     | 43  | SER  | 8              |
| 1   | A     | 54  | LYS  | 8              |
| 1   | A     | 68  | LEU  | 8              |
| 1   | A     | 84  | ARG  | 8              |
| 1   | A     | 89  | TYR  | 8              |
| 1   | A     | 102 | ILE  | 8              |
| 1   | A     | 121 | ARG  | 8              |
| 1   | A     | 50  | SER  | 8              |
| 1   | A     | 57  | HIS  | 8              |
| 1   | A     | 103 | MET  | 8              |
| 1   | A     | 106 | GLU  | 8              |
| 1   | A     | 112 | TRP  | 8              |
| 1   | A     | 28  | ASP  | 8              |
| 1   | A     | 31  | ASP  | 8              |
| 1   | A     | 10  | ILE  | 8              |
| 1   | A     | 75  | SER  | 8              |
| 1   | A     | 71  | HIS  | 8              |
| 1   | A     | 24  | ILE  | 7              |
| 1   | A     | 39  | HIS  | 7              |

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| Mol | Chain | Res | Type | Models (Total) |
|-----|-------|-----|------|----------------|
| 1   | A     | 69  | VAL  | 7              |
| 1   | A     | 63  | LYS  | 7              |
| 1   | A     | 59  | VAL  | 7              |
| 1   | A     | 72  | SER  | 7              |
| 1   | A     | 109 | PHE  | 7              |
| 1   | A     | 32  | GLU  | 6              |
| 1   | A     | 45  | HIS  | 6              |
| 1   | A     | 51  | PHE  | 6              |
| 1   | A     | 117 | LYS  | 6              |
| 1   | A     | 125 | VAL  | 6              |
| 1   | A     | 55  | ILE  | 6              |
| 1   | A     | 1   | MET  | 6              |
| 1   | A     | 53  | ASP  | 6              |
| 1   | A     | 120 | CYS  | 6              |
| 1   | A     | 48  | SER  | 6              |
| 1   | A     | 96  | ASP  | 6              |
| 1   | A     | 77  | VAL  | 5              |
| 1   | A     | 34  | ARG  | 5              |
| 1   | A     | 66  | ASP  | 5              |
| 1   | A     | 110 | ASN  | 5              |
| 1   | A     | 60  | GLN  | 5              |
| 1   | A     | 127 | CYS  | 5              |
| 1   | A     | 8   | SER  | 4              |
| 1   | A     | 81  | THR  | 4              |
| 1   | A     | 33  | GLU  | 4              |
| 1   | A     | 67  | THR  | 4              |
| 1   | A     | 44  | LEU  | 4              |
| 1   | A     | 52  | ASP  | 4              |
| 1   | A     | 58  | LEU  | 4              |
| 1   | A     | 64  | ASP  | 4              |
| 1   | A     | 6   | SER  | 4              |
| 1   | A     | 115 | SER  | 4              |
| 1   | A     | 122 | CYS  | 3              |
| 1   | A     | 14  | GLN  | 3              |
| 1   | A     | 91  | ASP  | 2              |
| 1   | A     | 29  | VAL  | 2              |
| 1   | A     | 70  | PHE  | 2              |
| 1   | A     | 82  | CYS  | 2              |
| 1   | A     | 26  | ILE  | 2              |
| 1   | A     | 36  | TYR  | 2              |

### 6.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

### 6.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

### 6.6 Ligand geometry [i](#)

Of 1 ligands modelled in this entry, 1 is monoatomic - leaving 0 for Mogul analysis.

### 6.7 Other polymers [i](#)

There are no such molecules in this entry.

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

There are no chain breaks in this entry.

## 7 Chemical shift validation

No chemical shift data were provided