



# Full wwPDB X-ray Structure Validation Report

Feb 28, 2014 – 06:19 AM GMT

PDB ID : 4BTP  
Title : Structure of the capsid protein P1 of the bacteriophage phi8  
Authors : El Omari, K.; Sutton, G.; Ravantti, J.J.; Zhang, H.; Walter, T.S.; Grimes, J.M.; Bamford, D.H.; Stuart, D.I.; Mancini, E.J.  
Deposited on : 2013-06-18  
Resolution : 3.70 Å(reported)

This is a full wwPDB 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 <http://wwpdb.org/ValidationPDFNotes.html>

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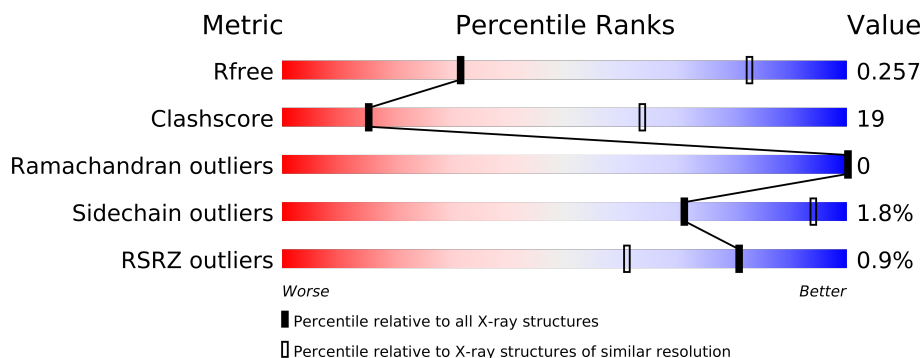
The following versions of software and data (see [references](#)) were used in the production of this report:

MolProbity : 4.02b-467  
Mogul : 1.15 2013  
Xtriage (Phenix) : dev-1323  
EDS : stable22639  
Percentile statistics : 21963  
Refmac : 5.8.0049  
CCP4 : 6.3.0 (Settle)  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et. al. (1996)  
Validation Pipeline (wwPDB-VP) : stable22683

# 1 Overall quality at a glance

The reported resolution of this entry is 3.70 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
$R_{free}$	66092	1098 (4.00-3.40)
Clashscore	79885	1009 (3.94-3.46)
Ramachandran outliers	78287	1016 (3.98-3.42)
Sidechain outliers	78261	1014 (3.98-3.42)
RSRZ outliers	66119	1099 (4.00-3.40)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments on the lower bar indicate the fraction of residues that contain outliers for  $\geq 3$ , 2, 1 and 0 types of geometric quality criteria. The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density.

Mol	Chain	Length	Quality of chain
1	A	792	
1	B	792	
1	C	792	
1	D	792	
1	E	792	
1	F	792	
1	G	792	
1	H	792	
1	I	792	
1	J	792	

## 2 Entry composition

There is only 1 type of molecule in this entry. The entry contains 57630 atoms, of which 0 are hydrogen and 0 are deuterium.

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

- Molecule 1 is a protein called P1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	749	Total	C	N	O	S	0	0	0
			5763	3634	998	1107	24			
1	B	749	Total	C	N	O	S	0	0	0
			5763	3634	998	1107	24			
1	C	749	Total	C	N	O	S	0	0	0
			5763	3634	998	1107	24			
1	D	749	Total	C	N	O	S	0	0	0
			5763	3634	998	1107	24			
1	E	749	Total	C	N	O	S	0	0	0
			5763	3634	998	1107	24			
1	F	749	Total	C	N	O	S	0	0	0
			5763	3634	998	1107	24			
1	G	749	Total	C	N	O	S	0	0	0
			5763	3634	998	1107	24			
1	H	749	Total	C	N	O	S	0	0	0
			5763	3634	998	1107	24			
1	I	749	Total	C	N	O	S	0	0	0
			5763	3634	998	1107	24			
1	J	749	Total	C	N	O	S	0	0	0
			5763	3634	998	1107	24			

There are 20 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	419	ALA	GLY	CONFLICT	UNP Q9MC13
A	691	ASP	GLU	CONFLICT	UNP Q9MC13
B	419	ALA	GLY	CONFLICT	UNP Q9MC13
B	691	ASP	GLU	CONFLICT	UNP Q9MC13
C	419	ALA	GLY	CONFLICT	UNP Q9MC13
C	691	ASP	GLU	CONFLICT	UNP Q9MC13
D	419	ALA	GLY	CONFLICT	UNP Q9MC13
D	691	ASP	GLU	CONFLICT	UNP Q9MC13
E	419	ALA	GLY	CONFLICT	UNP Q9MC13

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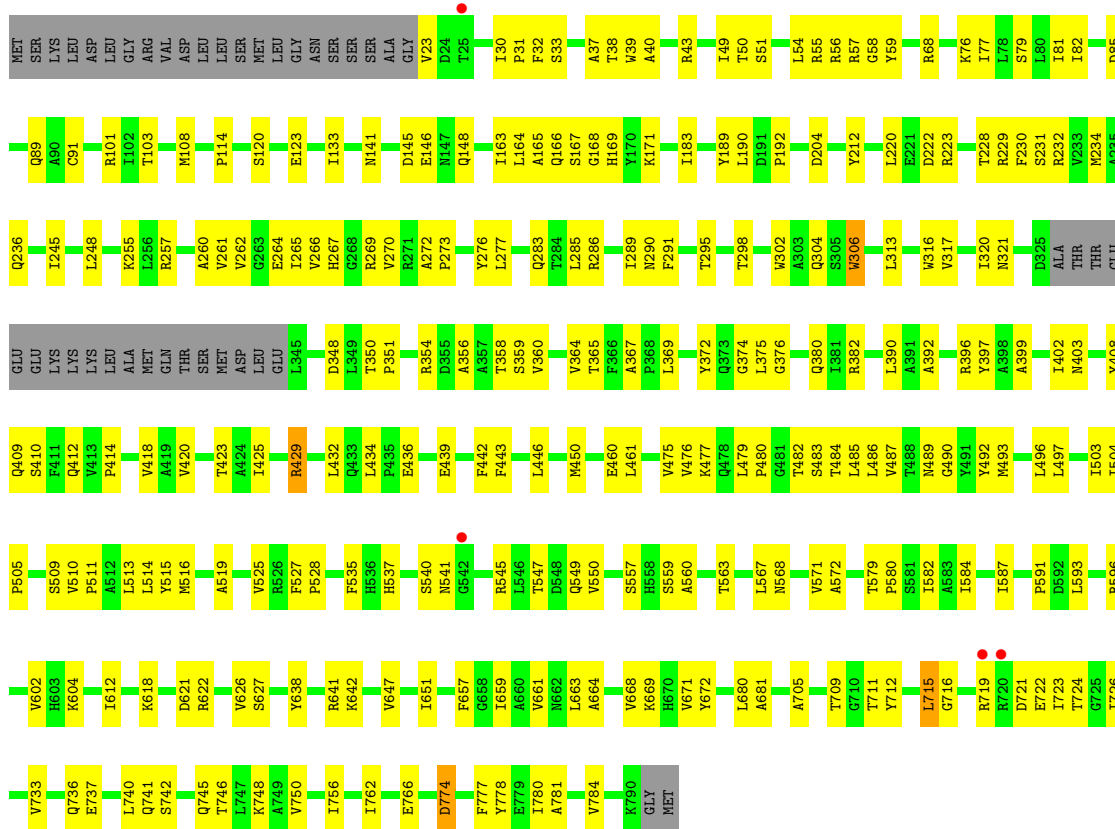
Chain	Residue	Modelled	Actual	Comment	Reference
E	691	ASP	GLU	CONFLICT	UNP Q9MC13
F	419	ALA	GLY	CONFLICT	UNP Q9MC13
F	691	ASP	GLU	CONFLICT	UNP Q9MC13
G	419	ALA	GLY	CONFLICT	UNP Q9MC13
G	691	ASP	GLU	CONFLICT	UNP Q9MC13
H	419	ALA	GLY	CONFLICT	UNP Q9MC13
H	691	ASP	GLU	CONFLICT	UNP Q9MC13
I	419	ALA	GLY	CONFLICT	UNP Q9MC13
I	691	ASP	GLU	CONFLICT	UNP Q9MC13
J	419	ALA	GLY	CONFLICT	UNP Q9MC13
J	691	ASP	GLU	CONFLICT	UNP Q9MC13

### 3 Residue-property plots

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

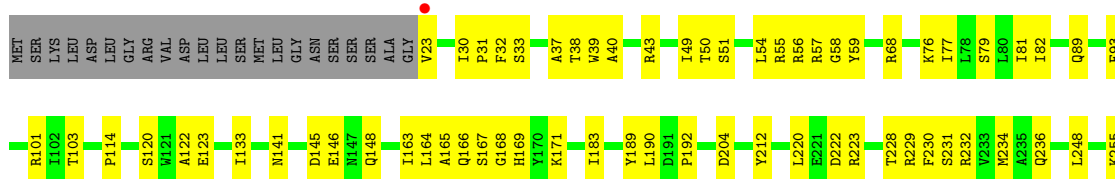
#### • Molecule 1: P1

Chain A: 

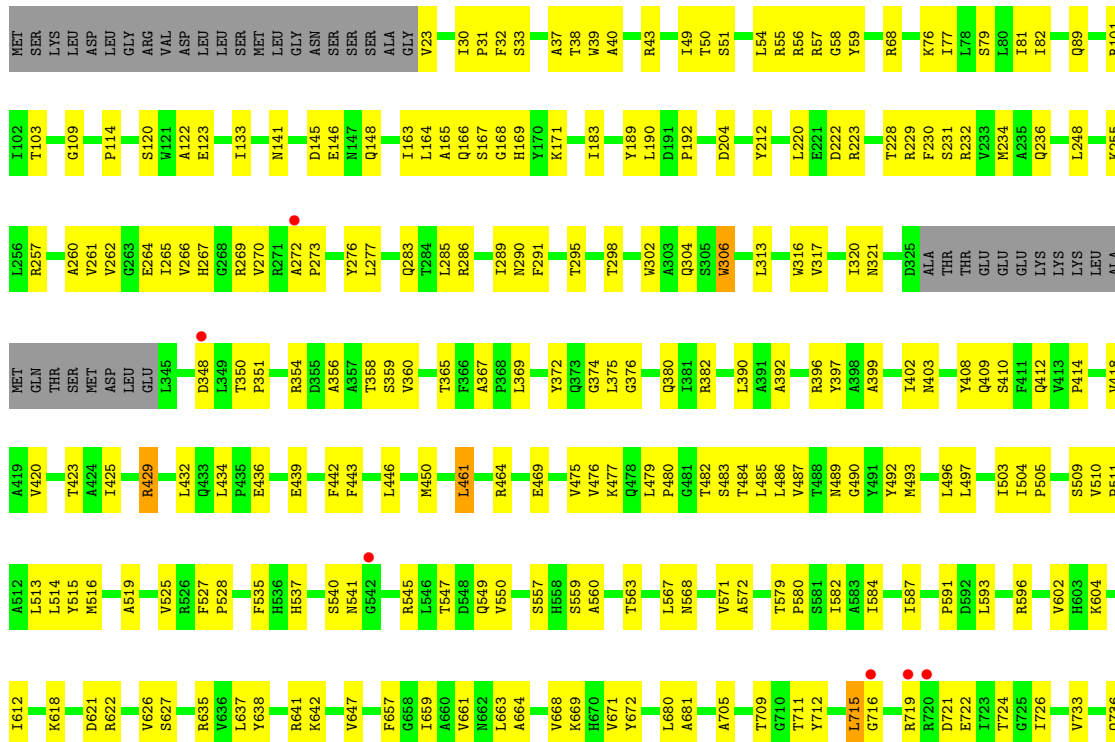


#### • Molecule 1: P1

Chain B: 



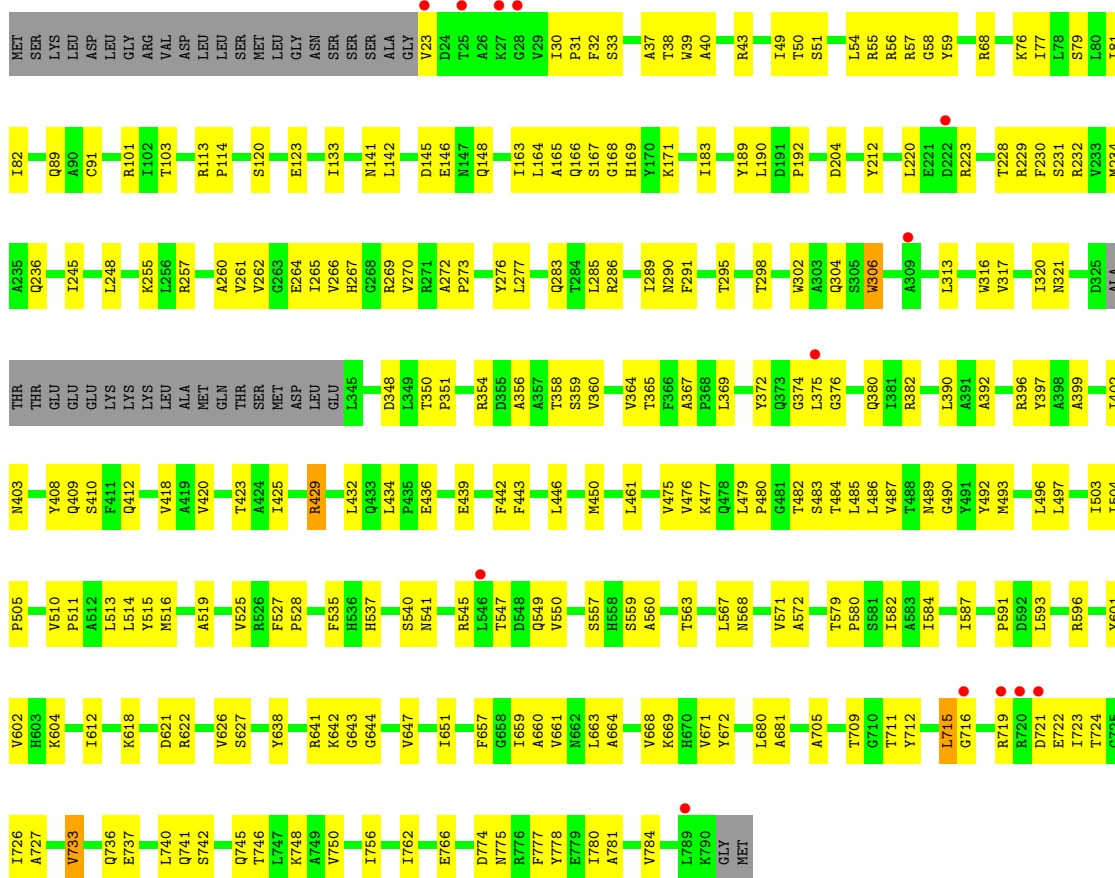






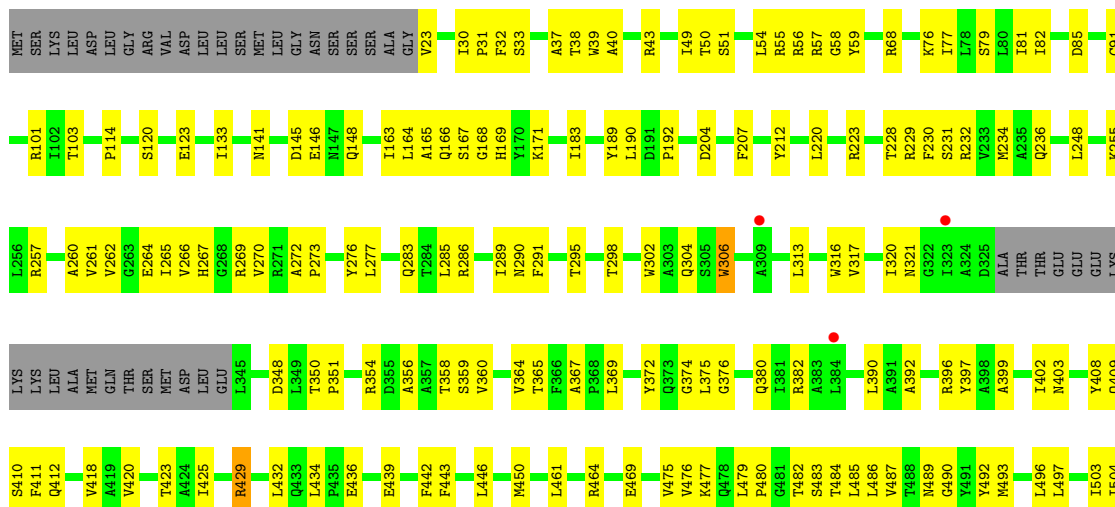
• Molecule 1: P1

Chain F:

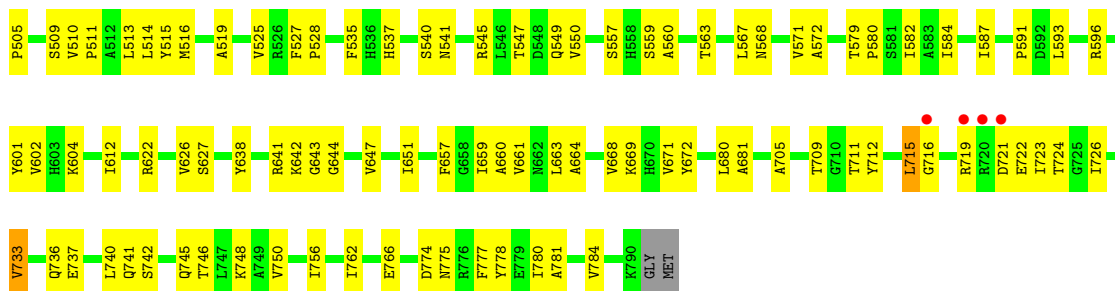


• Molecule 1: P1

Chain G:

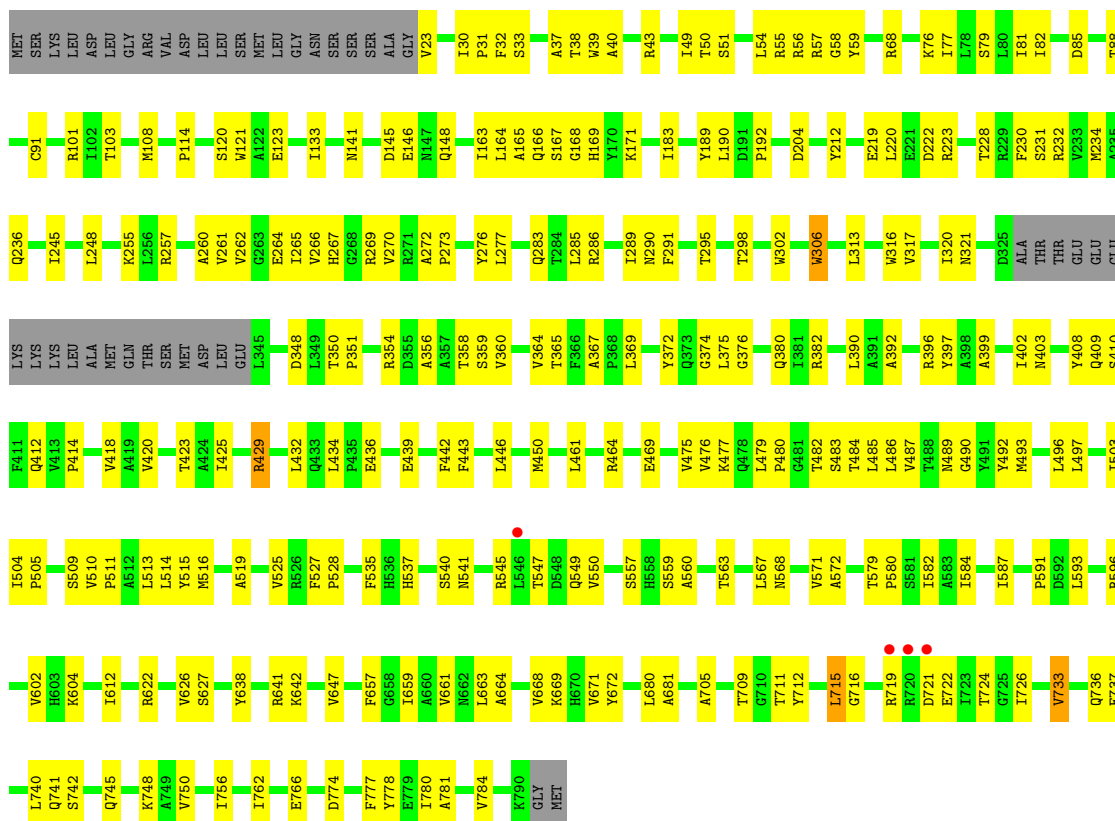






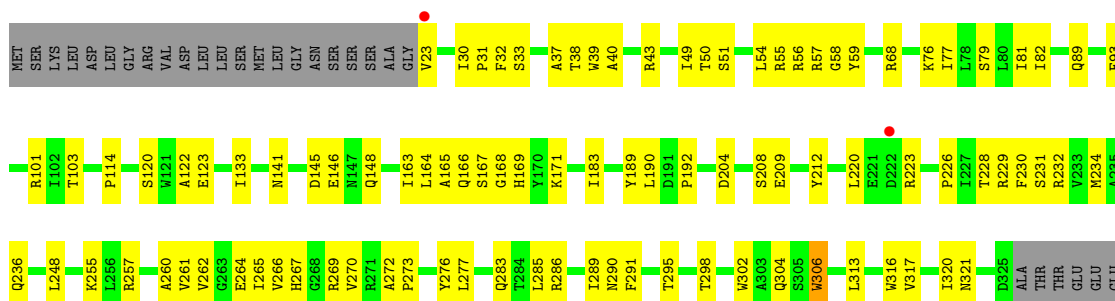
• Molecule 1: P1

Chain H:



• Molecule 1: P1

Chain I:





## 4 Data and refinement statistics

Property	Value	Source
Space group	P 41 21 2	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	314.35Å 314.35Å 527.94Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	30.01 – 3.70 29.99 – 3.70	Depositor EDS
% Data completeness (in resolution range)	97.0 (30.01-3.70) 97.2 (29.99-3.70)	Depositor EDS
$R_{merge}$	0.17	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	2.19 (at 3.75Å)	Xtriage
Refinement program	REFMAC 5.7.0032	Depositor
R, $R_{free}$	0.244 , 0.258 0.244 , 0.257	Depositor DCC
$R_{free}$ test set	13628 reflections (5.30%)	DCC
Wilson B-factor (Å <sup>2</sup> )	126.2	Xtriage
Anisotropy	0.230	Xtriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.28 , 83.3	EDS
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning	$\langle  L  \rangle = 0.50$ , $\langle L^2 \rangle = 0.33$	Xtriage
Outliers	1 of 270608 reflections (0.000%)	Xtriage
$F_o, F_c$ correlation	0.93	EDS
Total number of atoms	57630	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	142.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.41% of the height of the origin peak. No significant pseudotranslation is detected.*

<sup>1</sup>Intensities estimated from amplitudes.

## 5 Model quality

### 5.1 Standard geometry

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
1	A	0.36	0/5864	0.63	0/7955
1	B	0.37	0/5864	0.64	0/7955
1	C	0.36	0/5864	0.63	0/7955
1	D	0.37	0/5864	0.63	0/7955
1	E	0.36	0/5864	0.63	0/7955
1	F	0.36	0/5864	0.63	0/7955
1	G	0.36	0/5864	0.63	0/7955
1	H	0.36	0/5864	0.64	0/7955
1	I	0.36	0/5864	0.63	0/7955
1	J	0.36	0/5864	0.63	0/7955
All	All	0.36	0/58640	0.63	0/79550

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

### 5.2 Close contacts

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogens added by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, and the number in parentheses is this value normalized per 1000 atoms of the molecule in the chain. The Symm-Clashes column gives symmetry related clashes, in the same way as for the Clashes column.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	5763	0	5771	227	0
1	B	5763	0	5771	232	0
1	C	5763	0	5771	219	0
1	D	5763	0	5771	224	6

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	E	5763	0	5771	227	0
1	F	5763	0	5771	226	0
1	G	5763	0	5771	226	0
1	H	5763	0	5771	231	6
1	I	5763	0	5771	227	0
1	J	5763	0	5771	229	0
All	All	57630	0	57710	2172	6

Clashscore is defined as the number of clashes calculated for the entry per 1000 atoms (including hydrogens) of the entry. The overall clashscore for this entry is 19.

All (2172) close contacts within the same asymmetric unit are listed below.

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:J:270:VAL:HG21	1:J:317:VAL:HG12	1.19	1.17
1:B:270:VAL:HG21	1:B:317:VAL:HG12	1.19	1.17
1:B:270:VAL:CG2	1:B:317:VAL:HG12	1.76	1.15
1:C:270:VAL:CG2	1:C:317:VAL:HG12	1.76	1.15
1:D:270:VAL:CG2	1:D:317:VAL:HG12	1.77	1.15
1:A:270:VAL:HG21	1:A:317:VAL:HG12	1.19	1.15
1:H:270:VAL:HG21	1:H:317:VAL:HG12	1.19	1.14
1:G:270:VAL:CG2	1:G:317:VAL:HG12	1.76	1.14
1:H:270:VAL:CG2	1:H:317:VAL:HG12	1.76	1.14
1:I:270:VAL:CG2	1:I:317:VAL:HG12	1.77	1.14
1:A:270:VAL:CG2	1:A:317:VAL:HG12	1.76	1.14
1:E:270:VAL:CG2	1:E:317:VAL:HG12	1.76	1.14
1:C:270:VAL:HG21	1:C:317:VAL:HG12	1.19	1.13
1:F:270:VAL:CG2	1:F:317:VAL:HG12	1.77	1.13
1:J:270:VAL:CG2	1:J:317:VAL:HG12	1.76	1.13
1:E:270:VAL:HG21	1:E:317:VAL:HG12	1.19	1.12
1:G:270:VAL:HG21	1:G:317:VAL:HG12	1.19	1.11
1:F:270:VAL:HG21	1:F:317:VAL:HG12	1.19	1.10
1:I:270:VAL:HG21	1:I:317:VAL:HG12	1.19	1.09
1:D:270:VAL:HG21	1:D:317:VAL:HG12	1.19	1.09
1:J:255:LYS:NZ	1:J:359:SER:OG	2.02	0.93
1:G:255:LYS:NZ	1:G:359:SER:OG	2.02	0.93
1:F:255:LYS:NZ	1:F:359:SER:OG	2.02	0.93
1:E:255:LYS:NZ	1:E:359:SER:OG	2.02	0.93
1:A:255:LYS:NZ	1:A:359:SER:OG	2.02	0.93
1:A:23:VAL:HG21	1:A:32:PHE:HB3	1.51	0.92
1:E:23:VAL:HG21	1:E:32:PHE:HB3	1.52	0.92
1:C:255:LYS:NZ	1:C:359:SER:OG	2.02	0.92
1:D:255:LYS:NZ	1:D:359:SER:OG	2.01	0.91

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:C:23:VAL:HG21	1:C:32:PHE:HB3	1.52	0.91
1:D:23:VAL:HG21	1:D:32:PHE:HB3	1.52	0.91
1:H:255:LYS:NZ	1:H:359:SER:OG	2.02	0.91
1:F:23:VAL:HG21	1:F:32:PHE:HB3	1.52	0.91
1:B:255:LYS:NZ	1:B:359:SER:OG	2.02	0.91
1:J:23:VAL:HG21	1:J:32:PHE:HB3	1.52	0.91
1:H:23:VAL:HG21	1:H:32:PHE:HB3	1.52	0.91
1:I:255:LYS:NZ	1:I:359:SER:OG	2.02	0.91
1:I:23:VAL:HG21	1:I:32:PHE:HB3	1.51	0.90
1:B:23:VAL:HG21	1:B:32:PHE:HB3	1.51	0.90
1:I:270:VAL:HG21	1:I:317:VAL:CG1	2.03	0.89
1:G:23:VAL:HG21	1:G:32:PHE:HB3	1.52	0.89
1:G:270:VAL:HG21	1:G:317:VAL:CG1	2.03	0.89
1:B:270:VAL:HG21	1:B:317:VAL:CG1	2.03	0.89
1:D:270:VAL:HG21	1:D:317:VAL:CG1	2.03	0.88
1:F:270:VAL:HG21	1:F:317:VAL:CG1	2.03	0.88
1:H:270:VAL:HG21	1:H:317:VAL:CG1	2.03	0.88
1:E:270:VAL:HG21	1:E:317:VAL:CG1	2.03	0.88
1:E:306:TRP:HD1	1:E:313:LEU:HD13	1.39	0.88
1:B:306:TRP:HD1	1:B:313:LEU:HD13	1.40	0.87
1:A:270:VAL:HG21	1:A:317:VAL:CG1	2.03	0.87
1:J:306:TRP:HD1	1:J:313:LEU:HD13	1.39	0.87
1:C:270:VAL:HG21	1:C:317:VAL:CG1	2.03	0.87
1:H:306:TRP:HD1	1:H:313:LEU:HD13	1.39	0.87
1:F:306:TRP:HD1	1:F:313:LEU:HD13	1.39	0.86
1:D:306:TRP:HD1	1:D:313:LEU:HD13	1.39	0.86
1:I:306:TRP:HD1	1:I:313:LEU:HD13	1.39	0.86
1:A:306:TRP:HD1	1:A:313:LEU:HD13	1.39	0.86
1:C:306:TRP:HD1	1:C:313:LEU:HD13	1.39	0.85
1:D:403:ASN:OD1	1:D:436:GLU:HG2	1.77	0.85
1:J:403:ASN:OD1	1:J:436:GLU:HG2	1.77	0.85
1:J:270:VAL:HG21	1:J:317:VAL:CG1	2.03	0.85
1:G:306:TRP:HD1	1:G:313:LEU:HD13	1.39	0.85
1:G:403:ASN:OD1	1:G:436:GLU:HG2	1.77	0.85
1:E:403:ASN:OD1	1:E:436:GLU:HG2	1.77	0.84
1:B:403:ASN:OD1	1:B:436:GLU:HG2	1.77	0.84
1:C:270:VAL:CG2	1:C:317:VAL:CG1	2.56	0.84
1:D:270:VAL:CG2	1:D:317:VAL:CG1	2.56	0.84
1:A:403:ASN:OD1	1:A:436:GLU:HG2	1.77	0.84
1:B:23:VAL:CG2	1:B:32:PHE:HB3	2.08	0.83
1:C:316:TRP:CE2	1:C:320:ILE:HD11	2.14	0.83
1:A:270:VAL:CG2	1:A:317:VAL:CG1	2.56	0.83

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:F:403:ASN:OD1	1:F:436:GLU:HG2	1.77	0.83
1:E:270:VAL:CG2	1:E:317:VAL:CG1	2.56	0.83
1:E:316:TRP:CE2	1:E:320:ILE:HD11	2.14	0.83
1:J:23:VAL:CG2	1:J:32:PHE:HB3	2.09	0.83
1:I:23:VAL:CG2	1:I:32:PHE:HB3	2.08	0.83
1:C:403:ASN:OD1	1:C:436:GLU:HG2	1.77	0.83
1:J:316:TRP:CE2	1:J:320:ILE:HD11	2.13	0.83
1:D:316:TRP:CE2	1:D:320:ILE:HD11	2.13	0.83
1:G:316:TRP:CE2	1:G:320:ILE:HD11	2.13	0.83
1:C:23:VAL:CG2	1:C:32:PHE:HB3	2.09	0.83
1:H:403:ASN:OD1	1:H:436:GLU:HG2	1.77	0.83
1:G:306:TRP:CD1	1:G:313:LEU:HD13	2.13	0.83
1:E:306:TRP:CD1	1:E:313:LEU:HD13	2.13	0.83
1:I:403:ASN:OD1	1:I:436:GLU:HG2	1.77	0.83
1:A:306:TRP:CD1	1:A:313:LEU:HD13	2.13	0.83
1:F:316:TRP:CE2	1:F:320:ILE:HD11	2.13	0.83
1:A:316:TRP:CE2	1:A:320:ILE:HD11	2.13	0.83
1:A:23:VAL:CG2	1:A:32:PHE:HB3	2.08	0.83
1:B:270:VAL:CG2	1:B:317:VAL:CG1	2.56	0.83
1:I:306:TRP:CD1	1:I:313:LEU:HD13	2.13	0.83
1:F:270:VAL:CG2	1:F:317:VAL:CG1	2.56	0.83
1:H:270:VAL:CG2	1:H:317:VAL:CG1	2.56	0.83
1:B:306:TRP:CD1	1:B:313:LEU:HD13	2.14	0.82
1:D:306:TRP:CD1	1:D:313:LEU:HD13	2.13	0.82
1:I:316:TRP:CE2	1:I:320:ILE:HD11	2.13	0.82
1:I:270:VAL:CG2	1:I:317:VAL:CG1	2.56	0.82
1:E:23:VAL:CG2	1:E:32:PHE:HB3	2.08	0.82
1:J:270:VAL:CG2	1:J:317:VAL:CG1	2.56	0.82
1:J:306:TRP:CD1	1:J:313:LEU:HD13	2.13	0.82
1:H:316:TRP:CE2	1:H:320:ILE:HD11	2.13	0.82
1:H:23:VAL:CG2	1:H:32:PHE:HB3	2.09	0.82
1:B:316:TRP:CE2	1:B:320:ILE:HD11	2.14	0.82
1:F:306:TRP:CD1	1:F:313:LEU:HD13	2.13	0.82
1:D:23:VAL:CG2	1:D:32:PHE:HB3	2.09	0.82
1:H:306:TRP:CD1	1:H:313:LEU:HD13	2.13	0.81
1:C:306:TRP:CD1	1:C:313:LEU:HD13	2.13	0.81
1:F:23:VAL:CG2	1:F:32:PHE:HB3	2.09	0.81
1:G:270:VAL:CG2	1:G:317:VAL:CG1	2.56	0.81
1:H:171:LYS:O	1:I:232:ARG:NH2	2.13	0.81
1:G:23:VAL:CG2	1:G:32:PHE:HB3	2.09	0.81
1:C:39:TRP:CZ3	1:C:516:MET:HG2	2.17	0.81
1:B:228:THR:O	1:B:232:ARG:HG2	1.82	0.80

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:H:273:PRO:HB3	1:H:276:TYR:CD2	2.17	0.80
1:J:273:PRO:HB3	1:J:276:TYR:CD2	2.17	0.80
1:E:39:TRP:CZ3	1:E:516:MET:HG2	2.16	0.80
1:F:228:THR:O	1:F:232:ARG:HG2	1.82	0.80
1:F:504:ILE:HG13	1:F:510:VAL:HG21	1.64	0.80
1:G:273:PRO:HB3	1:G:276:TYR:CD2	2.17	0.80
1:I:228:THR:O	1:I:232:ARG:HG2	1.82	0.80
1:G:39:TRP:CZ3	1:G:516:MET:HG2	2.17	0.80
1:G:228:THR:O	1:G:232:ARG:HG2	1.82	0.80
1:D:273:PRO:HB3	1:D:276:TYR:CD2	2.17	0.80
1:I:504:ILE:HG13	1:I:510:VAL:HG21	1.64	0.79
1:F:273:PRO:HB3	1:F:276:TYR:CD2	2.17	0.79
1:C:228:THR:O	1:C:232:ARG:HG2	1.82	0.79
1:H:228:THR:O	1:H:232:ARG:HG2	1.82	0.79
1:C:273:PRO:HB3	1:C:276:TYR:CD2	2.17	0.79
1:A:228:THR:O	1:A:232:ARG:HG2	1.82	0.79
1:F:39:TRP:CZ3	1:F:516:MET:HG2	2.17	0.79
1:I:273:PRO:HB3	1:I:276:TYR:CD2	2.17	0.79
1:H:39:TRP:CZ3	1:H:516:MET:HG2	2.18	0.79
1:A:273:PRO:HB3	1:A:276:TYR:CD2	2.17	0.79
1:J:39:TRP:CZ3	1:J:516:MET:HG2	2.18	0.79
1:D:228:THR:O	1:D:232:ARG:HG2	1.81	0.79
1:H:123:GLU:CD	1:I:229:ARG:HH12	1.86	0.78
1:D:504:ILE:HG13	1:D:510:VAL:HG21	1.64	0.78
1:B:504:ILE:HG13	1:B:510:VAL:HG21	1.65	0.78
1:I:39:TRP:CZ3	1:I:516:MET:HG2	2.17	0.78
1:A:39:TRP:CZ3	1:A:516:MET:HG2	2.18	0.78
1:D:39:TRP:CZ3	1:D:516:MET:HG2	2.18	0.78
1:E:273:PRO:HB3	1:E:276:TYR:CD2	2.19	0.78
1:A:504:ILE:HG13	1:A:510:VAL:HG21	1.64	0.78
1:J:504:ILE:HG13	1:J:510:VAL:HG21	1.65	0.78
1:B:39:TRP:CZ3	1:B:516:MET:HG2	2.17	0.78
1:C:504:ILE:HG13	1:C:510:VAL:HG21	1.64	0.78
1:E:228:THR:O	1:E:232:ARG:HG2	1.82	0.77
1:E:504:ILE:HG13	1:E:510:VAL:HG21	1.65	0.77
1:B:273:PRO:HB3	1:B:276:TYR:CD2	2.19	0.77
1:J:228:THR:O	1:J:232:ARG:HG2	1.83	0.77
1:G:504:ILE:HG13	1:G:510:VAL:HG21	1.64	0.77
1:D:171:LYS:O	1:J:232:ARG:NH2	2.17	0.77
1:C:123:GLU:HG2	1:C:171:LYS:HD2	1.68	0.76
1:H:504:ILE:HG13	1:H:510:VAL:HG21	1.65	0.76
1:A:123:GLU:HG2	1:A:171:LYS:HD2	1.68	0.76

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:D:123:GLU:HG2	1:D:171:LYS:HD2	1.68	0.76
1:B:123:GLU:HG2	1:B:171:LYS:HD2	1.68	0.76
1:J:123:GLU:HG2	1:J:171:LYS:HD2	1.67	0.75
1:I:123:GLU:HG2	1:I:171:LYS:HD2	1.68	0.75
1:D:418:VAL:HG12	1:J:141:ASN:HD21	1.52	0.74
1:H:123:GLU:HG2	1:H:171:LYS:HD2	1.68	0.74
1:I:40:ALA:HB3	1:I:290:ASN:OD1	1.88	0.74
1:G:716:GLY:HA2	1:G:742:SER:OG	1.88	0.74
1:I:716:GLY:HA2	1:I:742:SER:OG	1.88	0.74
1:D:716:GLY:HA2	1:D:742:SER:OG	1.88	0.74
1:E:716:GLY:HA2	1:E:742:SER:OG	1.88	0.74
1:F:40:ALA:HB3	1:F:290:ASN:OD1	1.87	0.74
1:C:270:VAL:HG23	1:C:317:VAL:HG12	1.70	0.74
1:G:123:GLU:HG2	1:G:171:LYS:HD2	1.68	0.74
1:E:40:ALA:HB3	1:E:290:ASN:OD1	1.88	0.74
1:B:40:ALA:HB3	1:B:290:ASN:OD1	1.88	0.74
1:A:270:VAL:HG23	1:A:317:VAL:HG12	1.70	0.74
1:E:123:GLU:HG2	1:E:171:LYS:HD2	1.68	0.74
1:F:716:GLY:HA2	1:F:742:SER:OG	1.88	0.74
1:H:716:GLY:HA2	1:H:742:SER:OG	1.88	0.74
1:B:716:GLY:HA2	1:B:742:SER:OG	1.88	0.73
1:A:716:GLY:HA2	1:A:742:SER:OG	1.88	0.73
1:A:40:ALA:HB3	1:A:290:ASN:OD1	1.88	0.73
1:C:40:ALA:HB3	1:C:290:ASN:OD1	1.88	0.73
1:F:123:GLU:HG2	1:F:171:LYS:HD2	1.68	0.73
1:G:545:ARG:HD2	1:G:572:ALA:HB1	1.71	0.73
1:H:40:ALA:HB3	1:H:290:ASN:OD1	1.88	0.73
1:D:270:VAL:HG23	1:D:317:VAL:HG12	1.70	0.73
1:E:545:ARG:HD2	1:E:572:ALA:HB1	1.71	0.73
1:J:270:VAL:HG23	1:J:317:VAL:HG12	1.70	0.72
1:D:40:ALA:HB3	1:D:290:ASN:OD1	1.88	0.72
1:H:270:VAL:HG23	1:H:317:VAL:HG12	1.70	0.72
1:D:123:GLU:CD	1:J:229:ARG:HH12	1.93	0.72
1:G:40:ALA:HB3	1:G:290:ASN:OD1	1.88	0.72
1:J:716:GLY:HA2	1:J:742:SER:OG	1.88	0.72
1:C:716:GLY:HA2	1:C:742:SER:OG	1.88	0.72
1:H:545:ARG:HD2	1:H:572:ALA:HB1	1.71	0.72
1:F:545:ARG:HD2	1:F:572:ALA:HB1	1.71	0.72
1:G:270:VAL:HG23	1:G:317:VAL:HG12	1.70	0.72
1:I:545:ARG:HD2	1:I:572:ALA:HB1	1.71	0.72
1:C:306:TRP:CD1	1:C:313:LEU:CD1	2.73	0.71
1:G:306:TRP:CD1	1:G:313:LEU:CD1	2.73	0.71

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:H:39:TRP:CE3	1:H:289:ILE:HD11	2.25	0.71
1:J:40:ALA:HB3	1:J:290:ASN:OD1	1.88	0.71
1:E:270:VAL:HG23	1:E:317:VAL:HG12	1.70	0.71
1:B:545:ARG:HD2	1:B:572:ALA:HB1	1.71	0.71
1:A:306:TRP:CD1	1:A:313:LEU:CD1	2.74	0.71
1:D:306:TRP:CD1	1:D:313:LEU:CD1	2.73	0.71
1:H:306:TRP:CD1	1:H:313:LEU:CD1	2.74	0.71
1:G:39:TRP:CE3	1:G:289:ILE:HD11	2.25	0.71
1:C:545:ARG:HD2	1:C:572:ALA:HB1	1.71	0.71
1:E:306:TRP:CD1	1:E:313:LEU:CD1	2.74	0.71
1:F:306:TRP:CD1	1:F:313:LEU:CD1	2.73	0.71
1:C:39:TRP:CE3	1:C:289:ILE:HD11	2.26	0.71
1:I:39:TRP:CE3	1:I:289:ILE:HD11	2.26	0.71
1:F:39:TRP:CE3	1:F:289:ILE:HD11	2.26	0.71
1:H:418:VAL:HG12	1:I:141:ASN:HD21	1.55	0.71
1:E:145:ASP:HB3	1:E:148:GLN:HE21	1.56	0.71
1:J:39:TRP:CE3	1:J:289:ILE:HD11	2.25	0.70
1:D:39:TRP:CE3	1:D:289:ILE:HD11	2.25	0.70
1:B:306:TRP:CD1	1:B:313:LEU:CD1	2.74	0.70
1:J:316:TRP:CD2	1:J:320:ILE:HD11	2.26	0.70
1:D:316:TRP:CD2	1:D:320:ILE:HD11	2.26	0.70
1:I:270:VAL:HG23	1:I:317:VAL:HG12	1.70	0.70
1:I:306:TRP:CD1	1:I:313:LEU:CD1	2.74	0.70
1:I:316:TRP:CD2	1:I:320:ILE:HD11	2.27	0.70
1:J:306:TRP:CD1	1:J:313:LEU:CD1	2.74	0.70
1:A:145:ASP:HB3	1:A:148:GLN:HE21	1.56	0.70
1:G:418:VAL:HG12	1:H:141:ASN:HD21	1.57	0.70
1:C:412:GLN:HG2	1:C:423:THR:HG22	1.73	0.70
1:G:316:TRP:CD2	1:G:320:ILE:HD11	2.27	0.70
1:E:39:TRP:CE3	1:E:289:ILE:HD11	2.26	0.70
1:G:145:ASP:HB3	1:G:148:GLN:HE21	1.57	0.70
1:A:545:ARG:HD2	1:A:572:ALA:HB1	1.71	0.70
1:A:39:TRP:CE3	1:A:289:ILE:HD11	2.25	0.70
1:F:145:ASP:HB3	1:F:148:GLN:HE21	1.57	0.70
1:E:316:TRP:CD2	1:E:320:ILE:HD11	2.27	0.70
1:D:545:ARG:HD2	1:D:572:ALA:HB1	1.71	0.70
1:B:145:ASP:HB3	1:B:148:GLN:HE21	1.56	0.70
1:B:270:VAL:HG22	1:B:321:ASN:ND2	2.07	0.70
1:B:316:TRP:CD2	1:B:320:ILE:HD11	2.27	0.70
1:A:316:TRP:CD2	1:A:320:ILE:HD11	2.27	0.70
1:H:145:ASP:HB3	1:H:148:GLN:HE21	1.56	0.70
1:B:39:TRP:CE3	1:B:289:ILE:HD11	2.26	0.70

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:B:412:GLN:HG2	1:B:423:THR:HG22	1.73	0.70
1:J:545:ARG:HD2	1:J:572:ALA:HB1	1.71	0.70
1:C:270:VAL:HG22	1:C:321:ASN:ND2	2.07	0.69
1:E:270:VAL:HG22	1:E:321:ASN:ND2	2.07	0.69
1:A:412:GLN:HG2	1:A:423:THR:HG22	1.73	0.69
1:E:412:GLN:HG2	1:E:423:THR:HG22	1.73	0.69
1:D:270:VAL:HG22	1:D:321:ASN:ND2	2.07	0.69
1:A:418:VAL:HG12	1:B:141:ASN:HD21	1.58	0.69
1:C:316:TRP:CD2	1:C:320:ILE:HD11	2.27	0.69
1:H:316:TRP:CD2	1:H:320:ILE:HD11	2.27	0.69
1:F:316:TRP:CD2	1:F:320:ILE:HD11	2.27	0.69
1:D:412:GLN:HG2	1:D:423:THR:HG22	1.74	0.69
1:J:270:VAL:HG22	1:J:321:ASN:ND2	2.08	0.69
1:B:270:VAL:HG23	1:B:317:VAL:HG12	1.70	0.69
1:F:270:VAL:HG22	1:F:321:ASN:ND2	2.07	0.69
1:D:145:ASP:HB3	1:D:148:GLN:HE21	1.56	0.69
1:A:270:VAL:HG22	1:A:321:ASN:ND2	2.08	0.69
1:J:412:GLN:HG2	1:J:423:THR:HG22	1.73	0.69
1:H:412:GLN:HG2	1:H:423:THR:HG22	1.74	0.69
1:I:145:ASP:HB3	1:I:148:GLN:HE21	1.57	0.69
1:F:270:VAL:HG23	1:F:317:VAL:HG12	1.70	0.69
1:E:171:LYS:O	1:F:232:ARG:NH2	2.25	0.69
1:G:270:VAL:HG22	1:G:321:ASN:ND2	2.07	0.69
1:J:145:ASP:HB3	1:J:148:GLN:HE21	1.57	0.69
1:D:262:VAL:HG11	1:D:285:LEU:HD12	1.76	0.69
1:I:267:HIS:NE2	1:I:295:THR:HG23	2.09	0.68
1:I:412:GLN:HG2	1:I:423:THR:HG22	1.73	0.68
1:H:267:HIS:NE2	1:H:295:THR:HG23	2.09	0.68
1:D:267:HIS:NE2	1:D:295:THR:HG23	2.09	0.68
1:F:412:GLN:HG2	1:F:423:THR:HG22	1.74	0.68
1:A:262:VAL:HG11	1:A:285:LEU:HD12	1.76	0.68
1:I:270:VAL:HG22	1:I:321:ASN:ND2	2.07	0.68
1:J:267:HIS:NE2	1:J:295:THR:HG23	2.09	0.68
1:H:270:VAL:HG22	1:H:321:ASN:ND2	2.07	0.68
1:A:171:LYS:O	1:B:232:ARG:NH2	2.26	0.68
1:G:412:GLN:HG2	1:G:423:THR:HG22	1.73	0.68
1:G:267:HIS:NE2	1:G:295:THR:HG23	2.09	0.68
1:A:123:GLU:CD	1:B:229:ARG:HH12	1.96	0.68
1:E:267:HIS:NE2	1:E:295:THR:HG23	2.09	0.68
1:B:262:VAL:HG11	1:B:285:LEU:HD12	1.76	0.68
1:F:267:HIS:NE2	1:F:295:THR:HG23	2.09	0.68
1:C:145:ASP:HB3	1:C:148:GLN:HE21	1.56	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:H:545:ARG:HB2	1:H:572:ALA:HB3	1.77	0.67
1:F:545:ARG:HB2	1:F:572:ALA:HB3	1.76	0.67
1:H:262:VAL:HG11	1:H:285:LEU:HD12	1.76	0.67
1:G:545:ARG:HB2	1:G:572:ALA:HB3	1.76	0.67
1:A:545:ARG:HB2	1:A:572:ALA:HB3	1.76	0.67
1:J:262:VAL:HG11	1:J:285:LEU:HD12	1.76	0.67
1:B:267:HIS:NE2	1:B:295:THR:HG23	2.09	0.67
1:B:171:LYS:O	1:C:232:ARG:NH2	2.27	0.67
1:I:593:LEU:O	1:I:596:ARG:HB3	1.95	0.67
1:J:593:LEU:O	1:J:596:ARG:HB3	1.95	0.67
1:I:545:ARG:HB2	1:I:572:ALA:HB3	1.76	0.67
1:A:267:HIS:NE2	1:A:295:THR:HG23	2.09	0.67
1:G:262:VAL:HG11	1:G:285:LEU:HD12	1.76	0.67
1:C:262:VAL:HG11	1:C:285:LEU:HD12	1.76	0.67
1:E:123:GLU:CD	1:F:229:ARG:HH12	1.97	0.67
1:D:545:ARG:HB2	1:D:572:ALA:HB3	1.76	0.67
1:A:593:LEU:O	1:A:596:ARG:HB3	1.95	0.67
1:E:593:LEU:O	1:E:596:ARG:HB3	1.95	0.67
1:E:545:ARG:HB2	1:E:572:ALA:HB3	1.76	0.67
1:C:593:LEU:O	1:C:596:ARG:HB3	1.95	0.67
1:C:267:HIS:NE2	1:C:295:THR:HG23	2.09	0.67
1:J:545:ARG:HB2	1:J:572:ALA:HB3	1.77	0.66
1:E:262:VAL:HG11	1:E:285:LEU:HD12	1.76	0.66
1:B:545:ARG:HB2	1:B:572:ALA:HB3	1.77	0.66
1:H:593:LEU:O	1:H:596:ARG:HB3	1.95	0.66
1:I:262:VAL:HG11	1:I:285:LEU:HD12	1.76	0.66
1:B:593:LEU:O	1:B:596:ARG:HB3	1.95	0.66
1:B:266:VAL:HG13	1:B:286:ARG:HD2	1.78	0.65
1:G:266:VAL:HG13	1:G:286:ARG:HD2	1.78	0.65
1:F:262:VAL:HG11	1:F:285:LEU:HD12	1.76	0.65
1:F:593:LEU:O	1:F:596:ARG:HB3	1.95	0.65
1:A:266:VAL:HG13	1:A:286:ARG:HD2	1.78	0.65
1:D:593:LEU:O	1:D:596:ARG:HB3	1.95	0.65
1:G:593:LEU:O	1:G:596:ARG:HB3	1.95	0.65
1:C:266:VAL:HG13	1:C:286:ARG:HD2	1.79	0.65
1:C:545:ARG:HB2	1:C:572:ALA:HB3	1.77	0.65
1:J:266:VAL:HG13	1:J:286:ARG:HD2	1.79	0.65
1:B:272:ALA:N	1:B:273:PRO:CD	2.60	0.65
1:D:272:ALA:N	1:D:273:PRO:CD	2.60	0.64
1:A:272:ALA:N	1:A:273:PRO:CD	2.60	0.64
1:E:272:ALA:N	1:E:273:PRO:CD	2.60	0.64
1:I:272:ALA:N	1:I:273:PRO:CD	2.60	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:H:266:VAL:HG13	1:H:286:ARG:HD2	1.79	0.64
1:F:418:VAL:HG12	1:G:141:ASN:HD21	1.61	0.64
1:J:272:ALA:N	1:J:273:PRO:CD	2.60	0.64
1:H:272:ALA:N	1:H:273:PRO:CD	2.61	0.64
1:G:272:ALA:N	1:G:273:PRO:CD	2.61	0.64
1:G:230:PHE:O	1:G:234:MET:HG3	1.98	0.64
1:F:230:PHE:O	1:F:234:MET:HG3	1.98	0.64
1:H:230:PHE:O	1:H:234:MET:HG3	1.97	0.64
1:E:230:PHE:O	1:E:234:MET:HG3	1.98	0.64
1:F:266:VAL:HG13	1:F:286:ARG:HD2	1.78	0.64
1:C:230:PHE:O	1:C:234:MET:HG3	1.98	0.64
1:J:39:TRP:CH2	1:J:516:MET:HA	2.33	0.64
1:D:230:PHE:O	1:D:234:MET:HG3	1.98	0.64
1:C:39:TRP:CH2	1:C:516:MET:HA	2.33	0.64
1:D:266:VAL:HG13	1:D:286:ARG:HD2	1.78	0.64
1:F:547:THR:HG21	1:F:571:VAL:HG12	1.80	0.64
1:C:272:ALA:N	1:C:273:PRO:CD	2.60	0.63
1:I:266:VAL:HG13	1:I:286:ARG:HD2	1.78	0.63
1:B:547:THR:HG21	1:B:571:VAL:HG12	1.80	0.63
1:G:39:TRP:CH2	1:G:516:MET:HA	2.33	0.63
1:E:547:THR:HG21	1:E:571:VAL:HG12	1.80	0.63
1:E:266:VAL:HG13	1:E:286:ARG:HD2	1.79	0.63
1:A:232:ARG:NH2	1:J:171:LYS:O	2.30	0.63
1:F:39:TRP:CH2	1:F:516:MET:HA	2.33	0.63
1:J:230:PHE:O	1:J:234:MET:HG3	1.98	0.63
1:A:547:THR:HG21	1:A:571:VAL:HG12	1.80	0.63
1:F:272:ALA:N	1:F:273:PRO:CD	2.61	0.63
1:D:39:TRP:CH2	1:D:516:MET:HA	2.34	0.63
1:I:230:PHE:O	1:I:234:MET:HG3	1.98	0.63
1:E:304:GLN:OE1	1:I:429:ARG:NE	2.28	0.63
1:J:547:THR:HG21	1:J:571:VAL:HG12	1.80	0.63
1:I:39:TRP:CH2	1:I:516:MET:HA	2.34	0.63
1:B:230:PHE:O	1:B:234:MET:HG3	1.98	0.63
1:A:39:TRP:CH2	1:A:516:MET:HA	2.34	0.63
1:B:39:TRP:CH2	1:B:516:MET:HA	2.33	0.63
1:A:230:PHE:O	1:A:234:MET:HG3	1.98	0.63
1:E:39:TRP:CH2	1:E:516:MET:HA	2.33	0.63
1:H:547:THR:HG21	1:H:571:VAL:HG12	1.80	0.63
1:C:547:THR:HG21	1:C:571:VAL:HG12	1.80	0.62
1:H:123:GLU:OE2	1:I:229:ARG:NH2	2.32	0.62
1:A:39:TRP:CZ3	1:A:289:ILE:HD11	2.35	0.62
1:C:30:ILE:HG23	1:C:31:PRO:HD2	1.82	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:B:123:GLU:CD	1:C:229:ARG:HH12	2.03	0.62
1:E:232:ARG:NH2	1:I:171:LYS:O	2.32	0.62
1:I:547:THR:HG21	1:I:571:VAL:HG12	1.80	0.62
1:G:547:THR:HG21	1:G:571:VAL:HG12	1.80	0.62
1:H:39:TRP:CZ3	1:H:289:ILE:HD11	2.35	0.62
1:E:30:ILE:HG23	1:E:31:PRO:HD2	1.82	0.62
1:G:39:TRP:CZ3	1:G:289:ILE:HD11	2.35	0.62
1:A:429:ARG:NE	1:B:304:GLN:OE1	2.32	0.62
1:B:51:SER:HB2	1:B:56:ARG:HA	1.82	0.62
1:D:39:TRP:CZ3	1:D:289:ILE:HD11	2.35	0.61
1:G:30:ILE:HG23	1:G:31:PRO:HD2	1.82	0.61
1:H:39:TRP:CH2	1:H:516:MET:HA	2.34	0.61
1:C:51:SER:HB2	1:C:56:ARG:HA	1.82	0.61
1:I:51:SER:HB2	1:I:56:ARG:HA	1.82	0.61
1:J:30:ILE:HG23	1:J:31:PRO:HD2	1.82	0.61
1:D:547:THR:HG21	1:D:571:VAL:HG12	1.80	0.61
1:B:39:TRP:CZ3	1:B:289:ILE:HD11	2.35	0.61
1:A:30:ILE:HG23	1:A:31:PRO:HD2	1.83	0.61
1:D:30:ILE:HG23	1:D:31:PRO:HD2	1.82	0.61
1:C:39:TRP:CZ3	1:C:289:ILE:HD11	2.36	0.61
1:D:51:SER:HB2	1:D:56:ARG:HA	1.82	0.61
1:E:51:SER:HB2	1:E:56:ARG:HA	1.82	0.61
1:H:30:ILE:HG23	1:H:31:PRO:HD2	1.82	0.61
1:B:30:ILE:HG23	1:B:31:PRO:HD2	1.83	0.61
1:I:39:TRP:CZ3	1:I:289:ILE:HD11	2.35	0.61
1:B:76:LYS:O	1:B:79:SER:HB3	2.01	0.61
1:A:76:LYS:O	1:A:79:SER:HB3	2.01	0.61
1:F:30:ILE:HG23	1:F:31:PRO:HD2	1.82	0.61
1:F:51:SER:HB2	1:F:56:ARG:HA	1.82	0.61
1:E:76:LYS:O	1:E:79:SER:HB3	2.01	0.61
1:E:39:TRP:CZ3	1:E:289:ILE:HD11	2.36	0.61
1:F:39:TRP:CZ3	1:F:289:ILE:HD11	2.35	0.61
1:J:39:TRP:CZ3	1:J:289:ILE:HD11	2.35	0.61
1:A:141:ASN:HD21	1:J:418:VAL:HG12	1.66	0.61
1:I:76:LYS:O	1:I:79:SER:HB3	2.01	0.60
1:B:418:VAL:HG12	1:C:141:ASN:HD21	1.66	0.60
1:D:76:LYS:O	1:D:79:SER:HB3	2.01	0.60
1:G:51:SER:HB2	1:G:56:ARG:HA	1.82	0.60
1:A:51:SER:HB2	1:A:56:ARG:HA	1.82	0.60
1:H:76:LYS:O	1:H:79:SER:HB3	2.01	0.60
1:H:51:SER:HB2	1:H:56:ARG:HA	1.83	0.60
1:J:76:LYS:O	1:J:79:SER:HB3	2.01	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:F:740:LEU:HD23	1:F:784:VAL:HG21	1.84	0.60
1:F:76:LYS:O	1:F:79:SER:HB3	2.01	0.60
1:H:480:PRO:HD2	1:H:567:LEU:CD2	2.32	0.60
1:G:76:LYS:O	1:G:79:SER:HB3	2.01	0.60
1:J:51:SER:HB2	1:J:56:ARG:HA	1.82	0.60
1:E:740:LEU:HD23	1:E:784:VAL:HG21	1.84	0.60
1:C:480:PRO:HD2	1:C:567:LEU:CD2	2.32	0.60
1:E:141:ASN:HD21	1:I:418:VAL:HG12	1.66	0.60
1:I:30:ILE:HG23	1:I:31:PRO:HD2	1.82	0.60
1:C:740:LEU:HD23	1:C:784:VAL:HG21	1.84	0.59
1:I:740:LEU:HD23	1:I:784:VAL:HG21	1.84	0.59
1:I:480:PRO:HD2	1:I:567:LEU:CD2	2.32	0.59
1:B:480:PRO:HD2	1:B:567:LEU:CD2	2.32	0.59
1:F:480:PRO:HD2	1:F:567:LEU:CD2	2.32	0.59
1:A:740:LEU:HD23	1:A:784:VAL:HG21	1.84	0.59
1:E:480:PRO:HD2	1:E:567:LEU:CD2	2.32	0.59
1:C:418:VAL:HG12	1:D:141:ASN:HD21	1.66	0.59
1:A:50:THR:HG22	1:A:183:ILE:HB	1.85	0.59
1:B:740:LEU:HD23	1:B:784:VAL:HG21	1.84	0.59
1:I:50:THR:HG22	1:I:183:ILE:HB	1.85	0.59
1:C:76:LYS:O	1:C:79:SER:HB3	2.01	0.59
1:J:740:LEU:HD23	1:J:784:VAL:HG21	1.84	0.59
1:C:39:TRP:CD2	1:C:289:ILE:HD11	2.38	0.59
1:G:480:PRO:HD2	1:G:567:LEU:CD2	2.32	0.59
1:E:50:THR:HG22	1:E:183:ILE:HB	1.85	0.59
1:H:740:LEU:HD23	1:H:784:VAL:HG21	1.83	0.59
1:G:39:TRP:CD2	1:G:289:ILE:HD11	2.38	0.59
1:J:480:PRO:HD2	1:J:567:LEU:CD2	2.32	0.59
1:D:480:PRO:HD2	1:D:567:LEU:CD2	2.32	0.59
1:H:39:TRP:CD2	1:H:289:ILE:HD11	2.38	0.59
1:G:740:LEU:HD23	1:G:784:VAL:HG21	1.84	0.58
1:C:50:THR:HG22	1:C:183:ILE:HB	1.85	0.58
1:J:50:THR:HG22	1:J:183:ILE:HB	1.84	0.58
1:A:480:PRO:HD2	1:A:567:LEU:CD2	2.33	0.58
1:H:50:THR:HG22	1:H:183:ILE:HB	1.85	0.58
1:E:39:TRP:CD2	1:E:289:ILE:HD11	2.38	0.58
1:I:39:TRP:CD2	1:I:289:ILE:HD11	2.38	0.58
1:C:30:ILE:HG23	1:C:31:PRO:CD	2.33	0.58
1:B:354:ARG:NH1	1:B:358:THR:HG22	2.19	0.58
1:D:30:ILE:HG23	1:D:31:PRO:CD	2.34	0.58
1:D:740:LEU:HD23	1:D:784:VAL:HG21	1.84	0.58
1:D:120:SER:OG	1:D:223:ARG:N	2.37	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:39:TRP:CD2	1:A:289:ILE:HD11	2.38	0.58
1:E:30:ILE:HG23	1:E:31:PRO:CD	2.34	0.58
1:H:354:ARG:NH1	1:H:358:THR:HG22	2.19	0.58
1:J:30:ILE:HG23	1:J:31:PRO:CD	2.34	0.58
1:F:30:ILE:HG23	1:F:31:PRO:CD	2.34	0.58
1:C:723:ILE:HD11	1:D:509:SER:OG	2.03	0.58
1:F:354:ARG:NH1	1:F:358:THR:HG22	2.19	0.58
1:F:39:TRP:CD2	1:F:289:ILE:HD11	2.38	0.58
1:H:30:ILE:CG2	1:H:31:PRO:HD2	2.34	0.58
1:G:660:ALA:HB1	1:H:85:ASP:OD2	2.03	0.58
1:B:557:SER:OG	1:B:560:ALA:HB3	2.04	0.58
1:D:39:TRP:CD2	1:D:289:ILE:HD11	2.38	0.57
1:B:30:ILE:HG23	1:B:31:PRO:CD	2.34	0.57
1:D:50:THR:HG22	1:D:183:ILE:HB	1.85	0.57
1:B:103:THR:HG22	1:B:133:ILE:HA	1.86	0.57
1:A:354:ARG:NH1	1:A:358:THR:HG22	2.19	0.57
1:G:50:THR:HG22	1:G:183:ILE:HB	1.85	0.57
1:I:354:ARG:NH1	1:I:358:THR:HG22	2.19	0.57
1:B:50:THR:HG22	1:B:183:ILE:HB	1.85	0.57
1:A:229:ARG:HH12	1:J:123:GLU:CD	2.08	0.57
1:B:39:TRP:CD2	1:B:289:ILE:HD11	2.39	0.57
1:B:285:LEU:HD13	1:B:291:PHE:CE2	2.39	0.57
1:E:30:ILE:CG2	1:E:31:PRO:HD2	2.34	0.57
1:J:30:ILE:CG2	1:J:31:PRO:HD2	2.34	0.57
1:H:120:SER:OG	1:H:223:ARG:N	2.37	0.57
1:F:50:THR:HG22	1:F:183:ILE:HB	1.85	0.57
1:F:375:LEU:HB2	1:F:582:ILE:O	2.04	0.57
1:B:375:LEU:HB2	1:B:582:ILE:O	2.05	0.57
1:G:375:LEU:HB2	1:G:582:ILE:O	2.05	0.57
1:G:30:ILE:CG2	1:G:31:PRO:HD2	2.34	0.57
1:A:30:ILE:CG2	1:A:31:PRO:HD2	2.34	0.57
1:A:30:ILE:HG23	1:A:31:PRO:CD	2.34	0.57
1:D:30:ILE:CG2	1:D:31:PRO:HD2	2.34	0.57
1:A:712:TYR:HE2	1:A:750:VAL:HG21	1.70	0.57
1:G:557:SER:OG	1:G:560:ALA:HB3	2.05	0.57
1:H:375:LEU:HB2	1:H:582:ILE:O	2.05	0.57
1:F:120:SER:OG	1:F:223:ARG:N	2.37	0.57
1:A:103:THR:HG22	1:A:133:ILE:HA	1.87	0.57
1:H:557:SER:OG	1:H:560:ALA:HB3	2.05	0.57
1:J:557:SER:OG	1:J:560:ALA:HB3	2.04	0.57
1:J:270:VAL:HG11	1:J:320:ILE:HB	1.86	0.57
1:B:120:SER:OG	1:B:223:ARG:N	2.37	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:I:557:SER:OG	1:I:560:ALA:HB3	2.05	0.57
1:E:123:GLU:CG	1:E:171:LYS:HD2	2.35	0.57
1:J:39:TRP:CD2	1:J:289:ILE:HD11	2.38	0.57
1:D:123:GLU:OE2	1:J:229:ARG:NH2	2.35	0.57
1:I:375:LEU:HB2	1:I:582:ILE:O	2.05	0.57
1:I:120:SER:OG	1:I:223:ARG:N	2.38	0.57
1:C:30:ILE:CG2	1:C:31:PRO:HD2	2.34	0.57
1:B:30:ILE:CG2	1:B:31:PRO:HD2	2.34	0.57
1:C:103:THR:HG22	1:C:133:ILE:HA	1.87	0.57
1:I:164:LEU:O	1:I:168:GLY:HA2	2.05	0.57
1:A:55:ARG:NE	1:A:587:ILE:HD11	2.20	0.57
1:I:123:GLU:CG	1:I:171:LYS:HD2	2.35	0.57
1:H:30:ILE:HG23	1:H:31:PRO:CD	2.34	0.57
1:E:354:ARG:NH1	1:E:358:THR:HG22	2.19	0.57
1:F:557:SER:OG	1:F:560:ALA:HB3	2.05	0.57
1:E:55:ARG:NE	1:E:587:ILE:HD11	2.20	0.57
1:B:164:LEU:O	1:B:168:GLY:HA2	2.05	0.57
1:E:164:LEU:O	1:E:168:GLY:HA2	2.05	0.57
1:J:354:ARG:NH1	1:J:358:THR:HG22	2.19	0.57
1:I:270:VAL:HG11	1:I:320:ILE:HB	1.87	0.57
1:I:285:LEU:HD13	1:I:291:PHE:CE2	2.40	0.57
1:G:164:LEU:O	1:G:168:GLY:HA2	2.05	0.57
1:G:354:ARG:NH1	1:G:358:THR:HG22	2.19	0.57
1:F:171:LYS:O	1:G:232:ARG:NH2	2.38	0.57
1:A:285:LEU:HD13	1:A:291:PHE:CE2	2.40	0.57
1:E:375:LEU:HB2	1:E:582:ILE:O	2.05	0.57
1:G:712:TYR:HE2	1:G:750:VAL:HG21	1.70	0.57
1:C:712:TYR:HE2	1:C:750:VAL:HG21	1.70	0.57
1:D:164:LEU:O	1:D:168:GLY:HA2	2.05	0.57
1:D:123:GLU:CG	1:D:171:LYS:HD2	2.35	0.57
1:H:285:LEU:HD13	1:H:291:PHE:CE2	2.39	0.57
1:G:30:ILE:HG23	1:G:31:PRO:CD	2.34	0.57
1:E:712:TYR:HE2	1:E:750:VAL:HG21	1.70	0.57
1:B:123:GLU:CG	1:B:171:LYS:HD2	2.35	0.56
1:E:285:LEU:HD13	1:E:291:PHE:CE2	2.39	0.56
1:D:354:ARG:NH1	1:D:358:THR:HG22	2.19	0.56
1:F:164:LEU:O	1:F:168:GLY:HA2	2.04	0.56
1:D:55:ARG:NE	1:D:587:ILE:HD11	2.20	0.56
1:E:557:SER:OG	1:E:560:ALA:HB3	2.04	0.56
1:C:164:LEU:O	1:C:168:GLY:HA2	2.05	0.56
1:C:557:SER:OG	1:C:560:ALA:HB3	2.05	0.56
1:C:348:ASP:C	1:C:351:PRO:HD2	2.26	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:C:270:VAL:HG11	1:C:320:ILE:HB	1.87	0.56
1:C:123:GLU:CG	1:C:171:LYS:HD2	2.35	0.56
1:D:285:LEU:HD13	1:D:291:PHE:CE2	2.40	0.56
1:J:285:LEU:HD13	1:J:291:PHE:CE2	2.40	0.56
1:F:30:ILE:CG2	1:F:31:PRO:HD2	2.34	0.56
1:J:375:LEU:HB2	1:J:582:ILE:O	2.05	0.56
1:G:120:SER:OG	1:G:223:ARG:N	2.38	0.56
1:D:103:THR:HG22	1:D:133:ILE:HA	1.87	0.56
1:A:557:SER:OG	1:A:560:ALA:HB3	2.05	0.56
1:A:375:LEU:HB2	1:A:582:ILE:O	2.05	0.56
1:D:659:ILE:H	1:D:659:ILE:HD12	1.70	0.56
1:A:316:TRP:CZ2	1:A:320:ILE:HD11	2.41	0.56
1:A:123:GLU:CG	1:A:171:LYS:HD2	2.35	0.56
1:E:229:ARG:HH12	1:I:123:GLU:CD	2.09	0.56
1:I:30:ILE:CG2	1:I:31:PRO:HD2	2.34	0.56
1:I:30:ILE:HG23	1:I:31:PRO:CD	2.34	0.56
1:D:375:LEU:HB2	1:D:582:ILE:O	2.04	0.56
1:H:164:LEU:O	1:H:168:GLY:HA2	2.04	0.56
1:E:120:SER:OG	1:E:223:ARG:N	2.38	0.56
1:G:103:THR:HG22	1:G:133:ILE:HA	1.86	0.56
1:E:659:ILE:H	1:E:659:ILE:HD12	1.70	0.56
1:F:659:ILE:H	1:F:659:ILE:HD12	1.70	0.56
1:C:120:SER:OG	1:C:223:ARG:N	2.39	0.56
1:E:103:THR:HG22	1:E:133:ILE:HA	1.87	0.56
1:D:557:SER:OG	1:D:560:ALA:HB3	2.05	0.56
1:G:270:VAL:HG11	1:G:320:ILE:HB	1.87	0.56
1:E:270:VAL:HG11	1:E:320:ILE:HB	1.87	0.56
1:F:270:VAL:HG11	1:F:320:ILE:HB	1.87	0.56
1:F:49:ILE:HG23	1:F:50:THR:HG23	1.88	0.56
1:G:348:ASP:C	1:G:351:PRO:HD2	2.25	0.56
1:B:167:SER:OG	1:B:169:HIS:CD2	2.59	0.56
1:G:55:ARG:NE	1:G:587:ILE:HD11	2.20	0.56
1:C:354:ARG:NH1	1:C:358:THR:HG22	2.19	0.56
1:D:348:ASP:C	1:D:351:PRO:HD2	2.26	0.56
1:D:270:VAL:HG11	1:D:320:ILE:HB	1.87	0.56
1:F:285:LEU:HD13	1:F:291:PHE:CE2	2.40	0.56
1:G:503:ILE:HG22	1:G:515:TYR:CE1	2.40	0.56
1:J:120:SER:OG	1:J:223:ARG:N	2.38	0.56
1:H:55:ARG:NE	1:H:587:ILE:HD11	2.20	0.56
1:F:123:GLU:CG	1:F:171:LYS:HD2	2.35	0.56
1:C:285:LEU:HD13	1:C:291:PHE:CE2	2.40	0.56
1:C:49:ILE:HG23	1:C:50:THR:HG23	1.87	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:D:49:ILE:HG23	1:D:50:THR:HG23	1.88	0.56
1:I:103:THR:HG22	1:I:133:ILE:HA	1.88	0.56
1:F:712:TYR:HE2	1:F:750:VAL:HG21	1.70	0.56
1:I:167:SER:OG	1:I:169:HIS:CD2	2.59	0.56
1:I:659:ILE:HD12	1:I:659:ILE:H	1.70	0.56
1:B:55:ARG:NE	1:B:587:ILE:HD11	2.20	0.56
1:C:55:ARG:NE	1:C:587:ILE:HD11	2.20	0.56
1:H:712:TYR:HE2	1:H:750:VAL:HG21	1.70	0.56
1:J:659:ILE:HD12	1:J:659:ILE:H	1.71	0.56
1:D:316:TRP:CZ2	1:D:320:ILE:HD11	2.41	0.56
1:H:270:VAL:HG11	1:H:320:ILE:HB	1.87	0.56
1:I:712:TYR:HE2	1:I:750:VAL:HG21	1.70	0.56
1:C:375:LEU:HB2	1:C:582:ILE:O	2.04	0.56
1:H:348:ASP:C	1:H:351:PRO:HD2	2.26	0.56
1:D:503:ILE:HG22	1:D:515:TYR:CE1	2.41	0.56
1:I:348:ASP:C	1:I:351:PRO:HD2	2.26	0.56
1:E:503:ILE:HG22	1:E:515:TYR:CE1	2.41	0.56
1:D:712:TYR:HE2	1:D:750:VAL:HG21	1.70	0.56
1:G:659:ILE:HD12	1:G:659:ILE:H	1.71	0.56
1:A:270:VAL:HG11	1:A:320:ILE:HB	1.87	0.56
1:G:316:TRP:CZ2	1:G:320:ILE:HD11	2.41	0.56
1:J:49:ILE:HG23	1:J:50:THR:HG23	1.88	0.56
1:H:49:ILE:HG23	1:H:50:THR:HG23	1.87	0.56
1:J:375:LEU:HD12	1:J:375:LEU:O	2.06	0.56
1:A:120:SER:OG	1:A:223:ARG:N	2.38	0.56
1:A:167:SER:OG	1:A:169:HIS:CD2	2.59	0.56
1:E:348:ASP:C	1:E:351:PRO:HD2	2.26	0.56
1:J:164:LEU:O	1:J:168:GLY:HA2	2.05	0.56
1:J:123:GLU:CG	1:J:171:LYS:HD2	2.35	0.56
1:A:503:ILE:HG22	1:A:515:TYR:CE1	2.41	0.56
1:I:55:ARG:NE	1:I:587:ILE:HD11	2.20	0.56
1:B:270:VAL:HG11	1:B:320:ILE:HB	1.87	0.55
1:I:316:TRP:CZ2	1:I:320:ILE:HD11	2.41	0.55
1:C:291:PHE:O	1:C:295:THR:HG22	2.07	0.55
1:J:103:THR:HG22	1:J:133:ILE:HA	1.87	0.55
1:F:348:ASP:C	1:F:351:PRO:HD2	2.26	0.55
1:H:503:ILE:HG22	1:H:515:TYR:CE1	2.41	0.55
1:H:659:ILE:HD12	1:H:659:ILE:H	1.71	0.55
1:J:316:TRP:CZ2	1:J:320:ILE:HD11	2.41	0.55
1:H:123:GLU:CG	1:H:171:LYS:HD2	2.35	0.55
1:A:291:PHE:O	1:A:295:THR:HG22	2.07	0.55
1:J:291:PHE:O	1:J:295:THR:HG22	2.07	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:G:285:LEU:HD13	1:G:291:PHE:CE2	2.40	0.55
1:I:49:ILE:HG23	1:I:50:THR:HG23	1.87	0.55
1:B:375:LEU:O	1:B:375:LEU:HD12	2.06	0.55
1:H:375:LEU:O	1:H:375:LEU:HD12	2.06	0.55
1:D:375:LEU:HD12	1:D:375:LEU:O	2.06	0.55
1:B:712:TYR:HE2	1:B:750:VAL:HG21	1.70	0.55
1:G:167:SER:OG	1:G:169:HIS:CD2	2.60	0.55
1:A:164:LEU:O	1:A:168:GLY:HA2	2.05	0.55
1:F:103:THR:HG22	1:F:133:ILE:HA	1.87	0.55
1:E:412:GLN:O	1:F:89:GLN:NE2	2.37	0.55
1:D:291:PHE:O	1:D:295:THR:HG22	2.06	0.55
1:I:375:LEU:HD12	1:I:375:LEU:O	2.06	0.55
1:C:503:ILE:HG22	1:C:515:TYR:CE1	2.42	0.55
1:D:204:ASP:O	1:D:248:LEU:HD11	2.06	0.55
1:B:49:ILE:HG23	1:B:50:THR:HG23	1.88	0.55
1:J:503:ILE:HG22	1:J:515:TYR:CE1	2.41	0.55
1:J:712:TYR:HE2	1:J:750:VAL:HG21	1.70	0.55
1:J:348:ASP:C	1:J:351:PRO:HD2	2.26	0.55
1:H:103:THR:HG22	1:H:133:ILE:HA	1.86	0.55
1:F:316:TRP:CZ2	1:F:320:ILE:HD11	2.41	0.55
1:I:291:PHE:O	1:I:295:THR:HG22	2.07	0.55
1:J:380:GLN:HB3	1:J:390:LEU:HD23	1.88	0.55
1:A:49:ILE:HG23	1:A:50:THR:HG23	1.87	0.55
1:J:55:ARG:NE	1:J:587:ILE:HD11	2.21	0.55
1:C:204:ASP:O	1:C:248:LEU:HD11	2.07	0.55
1:A:659:ILE:H	1:A:659:ILE:HD12	1.71	0.55
1:E:316:TRP:CZ2	1:E:320:ILE:HD11	2.41	0.55
1:H:291:PHE:O	1:H:295:THR:HG22	2.07	0.55
1:C:375:LEU:HD12	1:C:375:LEU:O	2.06	0.55
1:C:659:ILE:HD12	1:C:659:ILE:H	1.70	0.55
1:H:380:GLN:HB3	1:H:390:LEU:HD23	1.89	0.55
1:I:380:GLN:HB3	1:I:390:LEU:HD23	1.89	0.55
1:D:380:GLN:HB3	1:D:390:LEU:HD23	1.89	0.55
1:G:49:ILE:HG23	1:G:50:THR:HG23	1.88	0.55
1:E:375:LEU:HD12	1:E:375:LEU:O	2.07	0.55
1:A:348:ASP:C	1:A:351:PRO:HD2	2.26	0.55
1:E:204:ASP:O	1:E:248:LEU:HD11	2.07	0.55
1:J:167:SER:OG	1:J:169:HIS:CD2	2.59	0.55
1:C:316:TRP:CZ2	1:C:320:ILE:HD11	2.41	0.55
1:A:418:VAL:CG1	1:B:141:ASN:HD21	2.19	0.55
1:G:375:LEU:O	1:G:375:LEU:HD12	2.07	0.55
1:F:167:SER:OG	1:F:169:HIS:CD2	2.60	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:B:503:ILE:HG22	1:B:515:TYR:CE1	2.42	0.55
1:J:204:ASP:O	1:J:248:LEU:HD11	2.07	0.55
1:H:204:ASP:O	1:H:248:LEU:HD11	2.07	0.55
1:H:167:SER:OG	1:H:169:HIS:CD2	2.60	0.55
1:A:375:LEU:O	1:A:375:LEU:HD12	2.06	0.55
1:A:204:ASP:O	1:A:248:LEU:HD11	2.07	0.55
1:C:313:LEU:O	1:C:317:VAL:HG23	2.07	0.55
1:F:313:LEU:O	1:F:317:VAL:HG23	2.07	0.55
1:G:380:GLN:HB3	1:G:390:LEU:HD23	1.89	0.55
1:E:380:GLN:HB3	1:E:390:LEU:HD23	1.89	0.55
1:B:291:PHE:O	1:B:295:THR:HG22	2.06	0.55
1:B:348:ASP:C	1:B:351:PRO:HD2	2.26	0.55
1:B:316:TRP:CZ2	1:B:320:ILE:HD11	2.41	0.54
1:G:313:LEU:O	1:G:317:VAL:HG23	2.07	0.54
1:I:313:LEU:O	1:I:317:VAL:HG23	2.07	0.54
1:F:375:LEU:HD12	1:F:375:LEU:O	2.06	0.54
1:I:204:ASP:O	1:I:248:LEU:HD11	2.07	0.54
1:D:476:VAL:HG13	1:D:485:LEU:HD13	1.89	0.54
1:F:476:VAL:HG13	1:F:485:LEU:HD13	1.89	0.54
1:F:204:ASP:O	1:F:248:LEU:HD11	2.07	0.54
1:F:55:ARG:NE	1:F:587:ILE:HD11	2.20	0.54
1:B:659:ILE:HD12	1:B:659:ILE:H	1.70	0.54
1:E:476:VAL:HG13	1:E:485:LEU:HD13	1.89	0.54
1:E:429:ARG:NE	1:F:304:GLN:OE1	2.40	0.54
1:A:476:VAL:HG13	1:A:485:LEU:HD13	1.90	0.54
1:A:313:LEU:O	1:A:317:VAL:HG23	2.07	0.54
1:H:316:TRP:CZ2	1:H:320:ILE:HD11	2.41	0.54
1:H:418:VAL:CG1	1:I:141:ASN:HD21	2.19	0.54
1:A:412:GLN:O	1:B:89:GLN:NE2	2.39	0.54
1:F:291:PHE:O	1:F:295:THR:HG22	2.07	0.54
1:F:503:ILE:HG22	1:F:515:TYR:CE1	2.42	0.54
1:C:167:SER:OG	1:C:169:HIS:CD2	2.60	0.54
1:E:167:SER:OG	1:E:169:HIS:CD2	2.60	0.54
1:D:313:LEU:O	1:D:317:VAL:HG23	2.07	0.54
1:A:123:GLU:OE2	1:B:229:ARG:NH2	2.40	0.54
1:E:291:PHE:O	1:E:295:THR:HG22	2.06	0.54
1:A:380:GLN:HB3	1:A:390:LEU:HD23	1.89	0.54
1:E:49:ILE:HG23	1:E:50:THR:HG23	1.88	0.54
1:G:204:ASP:O	1:G:248:LEU:HD11	2.07	0.54
1:B:204:ASP:O	1:B:248:LEU:HD11	2.07	0.54
1:G:476:VAL:HG13	1:G:485:LEU:HD13	1.89	0.54
1:B:476:VAL:HG13	1:B:485:LEU:HD13	1.89	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:J:313:LEU:O	1:J:317:VAL:HG23	2.07	0.54
1:D:167:SER:OG	1:D:169:HIS:CD2	2.60	0.54
1:E:313:LEU:O	1:E:317:VAL:HG23	2.07	0.54
1:C:146:GLU:OE2	1:C:604:LYS:NZ	2.38	0.54
1:C:476:VAL:HG13	1:C:485:LEU:HD13	1.89	0.54
1:B:313:LEU:O	1:B:317:VAL:HG23	2.07	0.54
1:G:291:PHE:O	1:G:295:THR:HG22	2.07	0.54
1:G:723:ILE:HD11	1:H:509:SER:OG	2.08	0.54
1:I:503:ILE:HG22	1:I:515:TYR:CE1	2.42	0.54
1:E:270:VAL:HG23	1:E:317:VAL:CG1	2.34	0.54
1:D:418:VAL:CG1	1:J:141:ASN:HD21	2.19	0.54
1:F:380:GLN:HB3	1:F:390:LEU:HD23	1.89	0.54
1:I:56:ARG:HD2	1:I:671:VAL:HG22	1.90	0.54
1:B:429:ARG:NE	1:C:304:GLN:OE1	2.40	0.54
1:I:146:GLU:OE2	1:I:604:LYS:NZ	2.38	0.54
1:B:380:GLN:HB3	1:B:390:LEU:HD23	1.89	0.54
1:J:476:VAL:HG13	1:J:485:LEU:HD13	1.89	0.54
1:H:313:LEU:O	1:H:317:VAL:HG23	2.07	0.53
1:C:40:ALA:HB1	1:C:192:PRO:HG3	1.91	0.53
1:F:56:ARG:HD2	1:F:671:VAL:HG22	1.90	0.53
1:A:497:LEU:HD12	1:A:511:PRO:HB2	1.91	0.53
1:E:418:VAL:HG12	1:F:141:ASN:HD21	1.73	0.53
1:H:476:VAL:HG13	1:H:485:LEU:HD13	1.89	0.53
1:B:270:VAL:HG23	1:B:317:VAL:CG1	2.34	0.53
1:G:568:ASN:O	1:G:571:VAL:O	2.26	0.53
1:J:40:ALA:HB1	1:J:192:PRO:HG3	1.90	0.53
1:I:145:ASP:OD1	1:I:146:GLU:N	2.41	0.53
1:G:270:VAL:HG23	1:G:317:VAL:CG1	2.34	0.53
1:F:58:GLY:O	1:F:669:LYS:HE2	2.09	0.53
1:D:497:LEU:HD12	1:D:511:PRO:HB2	1.90	0.53
1:B:40:ALA:HB1	1:B:192:PRO:HG3	1.91	0.53
1:B:146:GLU:OE2	1:B:604:LYS:NZ	2.39	0.53
1:A:736:GLN:O	1:A:781:ALA:HB1	2.09	0.53
1:C:380:GLN:HB3	1:C:390:LEU:HD23	1.89	0.53
1:B:568:ASN:O	1:B:571:VAL:O	2.26	0.53
1:D:568:ASN:O	1:D:571:VAL:O	2.26	0.53
1:I:58:GLY:O	1:I:669:LYS:HE2	2.08	0.53
1:A:40:ALA:HB1	1:A:192:PRO:HG3	1.91	0.53
1:G:40:ALA:HB1	1:G:192:PRO:HG3	1.90	0.53
1:H:568:ASN:O	1:H:571:VAL:O	2.26	0.53
1:A:568:ASN:O	1:A:571:VAL:O	2.26	0.53
1:I:568:ASN:O	1:I:571:VAL:O	2.27	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:G:56:ARG:HD2	1:G:671:VAL:HG22	1.91	0.53
1:J:56:ARG:HD2	1:J:671:VAL:HG22	1.91	0.53
1:D:40:ALA:HB1	1:D:192:PRO:HG3	1.90	0.53
1:H:146:GLU:OE2	1:H:604:LYS:NZ	2.39	0.53
1:A:56:ARG:HD2	1:A:671:VAL:HG22	1.90	0.53
1:H:736:GLN:O	1:H:781:ALA:HB1	2.09	0.53
1:F:568:ASN:O	1:F:571:VAL:O	2.26	0.53
1:D:56:ARG:HD2	1:D:671:VAL:HG22	1.91	0.53
1:B:490:GLY:HA2	1:B:493:MET:HG2	1.91	0.53
1:C:497:LEU:HD12	1:C:511:PRO:HB2	1.91	0.53
1:C:736:GLN:O	1:C:781:ALA:HB1	2.09	0.53
1:J:736:GLN:O	1:J:781:ALA:HB1	2.09	0.53
1:D:145:ASP:OD1	1:D:146:GLU:N	2.42	0.53
1:E:56:ARG:HD2	1:E:671:VAL:HG22	1.90	0.53
1:B:497:LEU:HD12	1:B:511:PRO:HB2	1.91	0.53
1:E:58:GLY:O	1:E:669:LYS:HE2	2.09	0.53
1:B:736:GLN:O	1:B:781:ALA:HB1	2.09	0.53
1:I:476:VAL:HG13	1:I:485:LEU:HD13	1.89	0.53
1:J:270:VAL:HG23	1:J:317:VAL:CG1	2.34	0.53
1:H:270:VAL:HG23	1:H:317:VAL:CG1	2.34	0.53
1:G:736:GLN:O	1:G:781:ALA:HB1	2.09	0.53
1:C:486:LEU:CD1	1:C:514:LEU:HD11	2.40	0.53
1:D:58:GLY:O	1:D:669:LYS:HE2	2.09	0.53
1:J:497:LEU:HD12	1:J:511:PRO:HB2	1.91	0.53
1:E:568:ASN:O	1:E:571:VAL:O	2.26	0.52
1:D:740:LEU:HD12	1:D:777:PHE:CE2	2.44	0.52
1:A:490:GLY:HA2	1:A:493:MET:HG2	1.91	0.52
1:B:58:GLY:O	1:B:669:LYS:HE2	2.09	0.52
1:G:123:GLU:CG	1:G:171:LYS:HD2	2.35	0.52
1:B:145:ASP:OD1	1:B:146:GLU:N	2.42	0.52
1:H:145:ASP:OD1	1:H:146:GLU:N	2.42	0.52
1:F:547:THR:OG1	1:F:549:GLN:OE1	2.28	0.52
1:B:547:THR:OG1	1:B:549:GLN:OE1	2.28	0.52
1:B:56:ARG:HD2	1:B:671:VAL:HG22	1.90	0.52
1:D:547:THR:OG1	1:D:549:GLN:OE1	2.28	0.52
1:I:490:GLY:HA2	1:I:493:MET:HG2	1.91	0.52
1:E:490:GLY:HA2	1:E:493:MET:HG2	1.91	0.52
1:B:715:LEU:HA	1:B:719:ARG:H	1.75	0.52
1:H:40:ALA:HB1	1:H:192:PRO:HG3	1.90	0.52
1:C:56:ARG:HD2	1:C:671:VAL:HG22	1.90	0.52
1:C:740:LEU:HD12	1:C:777:PHE:CE2	2.44	0.52
1:A:740:LEU:HD12	1:A:777:PHE:CE2	2.44	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:C:58:GLY:O	1:C:669:LYS:HE2	2.09	0.52
1:F:264:GLU:OE2	1:F:298:THR:OG1	2.26	0.52
1:I:736:GLN:O	1:I:781:ALA:HB1	2.09	0.52
1:F:146:GLU:OE2	1:F:604:LYS:NZ	2.38	0.52
1:A:547:THR:OG1	1:A:549:GLN:OE1	2.28	0.52
1:J:380:GLN:HB3	1:J:390:LEU:CD2	2.40	0.52
1:G:740:LEU:HD12	1:G:777:PHE:CE2	2.44	0.52
1:D:736:GLN:O	1:D:781:ALA:HB1	2.09	0.52
1:C:490:GLY:HA2	1:C:493:MET:HG2	1.91	0.52
1:E:736:GLN:O	1:E:781:ALA:HB1	2.09	0.52
1:D:490:GLY:HA2	1:D:493:MET:HG2	1.91	0.52
1:F:145:ASP:OD1	1:F:146:GLU:N	2.43	0.52
1:H:285:LEU:HD13	1:H:291:PHE:CD2	2.45	0.52
1:D:380:GLN:HB3	1:D:390:LEU:CD2	2.40	0.52
1:F:723:ILE:HD11	1:G:509:SER:OG	2.09	0.52
1:H:58:GLY:O	1:H:669:LYS:HE2	2.09	0.52
1:F:736:GLN:O	1:F:781:ALA:HB1	2.09	0.52
1:A:58:GLY:O	1:A:669:LYS:HE2	2.09	0.52
1:E:497:LEU:HD12	1:E:511:PRO:HB2	1.90	0.52
1:H:39:TRP:CZ3	1:H:289:ILE:CD1	2.93	0.52
1:F:40:ALA:HB1	1:F:192:PRO:HG3	1.90	0.52
1:E:145:ASP:OD1	1:E:146:GLU:N	2.42	0.52
1:E:285:LEU:HD13	1:E:291:PHE:CD2	2.45	0.52
1:E:30:ILE:CG2	1:E:31:PRO:CD	2.88	0.52
1:H:56:ARG:HD2	1:H:671:VAL:HG22	1.91	0.52
1:E:740:LEU:HD12	1:E:777:PHE:CE2	2.44	0.52
1:H:740:LEU:HD12	1:H:777:PHE:CE2	2.45	0.52
1:E:409:GLN:HG3	1:E:661:VAL:HG13	1.92	0.52
1:J:58:GLY:O	1:J:669:LYS:HE2	2.09	0.52
1:D:409:GLN:HG3	1:D:661:VAL:HG13	1.92	0.52
1:F:490:GLY:HA2	1:F:493:MET:HG2	1.91	0.52
1:G:39:TRP:CZ3	1:G:289:ILE:CD1	2.93	0.52
1:E:547:THR:OG1	1:E:549:GLN:OE1	2.28	0.52
1:C:568:ASN:O	1:C:571:VAL:O	2.27	0.52
1:A:145:ASP:OD1	1:A:146:GLU:N	2.43	0.52
1:B:285:LEU:HD13	1:B:291:PHE:CD2	2.45	0.52
1:F:380:GLN:HB3	1:F:390:LEU:CD2	2.40	0.52
1:F:30:ILE:CG2	1:F:31:PRO:CD	2.88	0.52
1:D:659:ILE:N	1:D:659:ILE:HD12	2.25	0.52
1:J:490:GLY:HA2	1:J:493:MET:HG2	1.91	0.52
1:A:715:LEU:HA	1:A:719:ARG:H	1.75	0.52
1:E:486:LEU:CD1	1:E:514:LEU:HD11	2.40	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:B:486:LEU:CD1	1:B:514:LEU:HD11	2.40	0.52
1:E:380:GLN:HB3	1:E:390:LEU:CD2	2.40	0.52
1:H:380:GLN:HB3	1:H:390:LEU:CD2	2.40	0.52
1:H:547:THR:OG1	1:H:549:GLN:OE1	2.28	0.52
1:G:145:ASP:OD1	1:G:146:GLU:N	2.43	0.52
1:J:568:ASN:O	1:J:571:VAL:O	2.26	0.52
1:I:380:GLN:HB3	1:I:390:LEU:CD2	2.40	0.52
1:A:659:ILE:HD12	1:A:659:ILE:N	2.25	0.52
1:G:715:LEU:HA	1:G:719:ARG:H	1.75	0.52
1:J:409:GLN:HG3	1:J:661:VAL:HG13	1.92	0.52
1:G:486:LEU:CD1	1:G:514:LEU:HD11	2.40	0.52
1:J:715:LEU:HA	1:J:719:ARG:H	1.75	0.52
1:G:380:GLN:HB3	1:G:390:LEU:CD2	2.40	0.52
1:G:146:GLU:OE2	1:G:604:LYS:NZ	2.38	0.52
1:J:145:ASP:OD1	1:J:146:GLU:N	2.42	0.52
1:F:285:LEU:HD13	1:F:291:PHE:CD2	2.45	0.52
1:D:30:ILE:CG2	1:D:31:PRO:CD	2.88	0.52
1:B:30:ILE:CG2	1:B:31:PRO:CD	2.88	0.52
1:I:740:LEU:HD12	1:I:777:PHE:CE2	2.45	0.52
1:J:740:LEU:HD12	1:J:777:PHE:CE2	2.45	0.52
1:B:409:GLN:HG3	1:B:661:VAL:HG13	1.92	0.52
1:I:486:LEU:CD1	1:I:514:LEU:HD11	2.40	0.52
1:H:497:LEU:HD12	1:H:511:PRO:HB2	1.91	0.52
1:G:490:GLY:HA2	1:G:493:MET:HG2	1.91	0.52
1:E:40:ALA:HB1	1:E:192:PRO:HG3	1.91	0.52
1:J:30:ILE:CG2	1:J:31:PRO:CD	2.88	0.52
1:H:264:GLU:OE2	1:H:298:THR:OG1	2.26	0.52
1:F:486:LEU:CD1	1:F:514:LEU:HD11	2.39	0.52
1:J:264:GLU:OE2	1:J:298:THR:OG1	2.26	0.52
1:B:740:LEU:HD12	1:B:777:PHE:CE2	2.44	0.51
1:H:741:GLN:O	1:H:745:GLN:HG3	2.10	0.51
1:G:497:LEU:HD12	1:G:511:PRO:HB2	1.91	0.51
1:I:40:ALA:HB1	1:I:192:PRO:HG3	1.90	0.51
1:B:380:GLN:HB3	1:B:390:LEU:CD2	2.40	0.51
1:J:547:THR:OG1	1:J:549:GLN:OE1	2.28	0.51
1:F:659:ILE:N	1:F:659:ILE:HD12	2.25	0.51
1:G:659:ILE:HD12	1:G:659:ILE:N	2.25	0.51
1:A:350:THR:OG1	1:A:351:PRO:HD3	2.11	0.51
1:H:490:GLY:HA2	1:H:493:MET:HG2	1.90	0.51
1:H:409:GLN:HG3	1:H:661:VAL:HG13	1.92	0.51
1:G:58:GLY:O	1:G:669:LYS:HE2	2.09	0.51
1:D:715:LEU:HA	1:D:719:ARG:H	1.75	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:39:TRP:CZ3	1:A:289:ILE:CD1	2.93	0.51
1:D:285:LEU:HD13	1:D:291:PHE:CD2	2.46	0.51
1:C:145:ASP:OD1	1:C:146:GLU:N	2.43	0.51
1:C:285:LEU:HD13	1:C:291:PHE:CD2	2.45	0.51
1:A:30:ILE:CG2	1:A:31:PRO:CD	2.89	0.51
1:I:780:ILE:O	1:I:784:VAL:HG23	2.11	0.51
1:J:741:GLN:O	1:J:745:GLN:HG3	2.11	0.51
1:F:741:GLN:O	1:F:745:GLN:HG3	2.10	0.51
1:G:641:ARG:HG3	1:G:777:PHE:CE1	2.46	0.51
1:I:659:ILE:HD12	1:I:659:ILE:N	2.25	0.51
1:J:350:THR:OG1	1:J:351:PRO:HD3	2.11	0.51
1:C:659:ILE:HD12	1:C:659:ILE:N	2.25	0.51
1:H:429:ARG:NE	1:I:304:GLN:OE1	2.40	0.51
1:G:409:GLN:HG3	1:G:661:VAL:HG13	1.92	0.51
1:I:39:TRP:CZ3	1:I:289:ILE:CD1	2.94	0.51
1:A:380:GLN:HB3	1:A:390:LEU:CD2	2.40	0.51
1:I:547:THR:OG1	1:I:549:GLN:OE1	2.28	0.51
1:F:740:LEU:HD12	1:F:777:PHE:CE2	2.45	0.51
1:A:780:ILE:O	1:A:784:VAL:HG23	2.11	0.51
1:B:780:ILE:O	1:B:784:VAL:HG23	2.11	0.51
1:E:659:ILE:N	1:E:659:ILE:HD12	2.25	0.51
1:B:350:THR:OG1	1:B:351:PRO:HD3	2.10	0.51
1:F:409:GLN:HG3	1:F:661:VAL:HG13	1.92	0.51
1:J:486:LEU:CD1	1:J:514:LEU:HD11	2.40	0.51
1:J:442:PHE:CE2	1:J:681:ALA:HB1	2.46	0.51
1:E:741:GLN:O	1:E:745:GLN:HG3	2.10	0.51
1:A:741:GLN:O	1:A:745:GLN:HG3	2.11	0.51
1:F:497:LEU:HD12	1:F:511:PRO:HB2	1.91	0.51
1:C:741:GLN:O	1:C:745:GLN:HG3	2.11	0.51
1:G:285:LEU:HD13	1:G:291:PHE:CD2	2.46	0.51
1:H:30:ILE:CG2	1:H:31:PRO:CD	2.88	0.51
1:E:641:ARG:HG3	1:E:777:PHE:CE1	2.46	0.51
1:H:350:THR:OG1	1:H:351:PRO:HD3	2.11	0.51
1:F:350:THR:OG1	1:F:351:PRO:HD3	2.11	0.51
1:E:429:ARG:HD2	1:E:661:VAL:HG11	1.93	0.51
1:I:497:LEU:HD12	1:I:511:PRO:HB2	1.91	0.51
1:H:486:LEU:CD1	1:H:514:LEU:HD11	2.40	0.51
1:H:68:ARG:HH12	1:H:166:GLN:HG2	1.76	0.51
1:C:442:PHE:CE2	1:C:681:ALA:HB1	2.46	0.51
1:G:547:THR:OG1	1:G:549:GLN:OE1	2.28	0.51
1:B:641:ARG:HG3	1:B:777:PHE:CE1	2.46	0.51
1:E:442:PHE:CE2	1:E:681:ALA:HB1	2.45	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:486:LEU:CD1	1:A:514:LEU:HD11	2.41	0.51
1:F:39:TRP:CZ3	1:F:289:ILE:CD1	2.94	0.51
1:C:780:ILE:O	1:C:784:VAL:HG23	2.11	0.51
1:J:780:ILE:O	1:J:784:VAL:HG23	2.11	0.51
1:H:641:ARG:HG3	1:H:777:PHE:CE1	2.46	0.51
1:C:715:LEU:HA	1:C:719:ARG:H	1.75	0.51
1:I:270:VAL:HG23	1:I:317:VAL:CG1	2.34	0.51
1:D:39:TRP:CZ3	1:D:289:ILE:CD1	2.93	0.51
1:B:39:TRP:CZ3	1:B:289:ILE:CD1	2.94	0.51
1:C:547:THR:OG1	1:C:549:GLN:OE1	2.28	0.51
1:A:146:GLU:OE2	1:A:604:LYS:NZ	2.38	0.51
1:D:146:GLU:OE2	1:D:604:LYS:NZ	2.39	0.51
1:A:285:LEU:HD13	1:A:291:PHE:CD2	2.46	0.51
1:C:145:ASP:CB	1:C:148:GLN:HE21	2.24	0.51
1:I:409:GLN:HG3	1:I:661:VAL:HG13	1.91	0.51
1:A:31:PRO:HB3	1:A:528:PRO:HA	1.93	0.51
1:I:641:ARG:HG3	1:I:777:PHE:CE1	2.45	0.51
1:C:660:ALA:HB1	1:D:85:ASP:OD2	2.10	0.51
1:I:741:GLN:O	1:I:745:GLN:HG3	2.10	0.51
1:C:429:ARG:NE	1:D:304:GLN:OE1	2.42	0.51
1:A:409:GLN:HG3	1:A:661:VAL:HG13	1.92	0.51
1:I:442:PHE:CE2	1:I:681:ALA:HB1	2.46	0.51
1:J:39:TRP:CZ3	1:J:289:ILE:CD1	2.93	0.50
1:B:31:PRO:HB3	1:B:528:PRO:HA	1.93	0.50
1:H:659:ILE:HD12	1:H:659:ILE:N	2.25	0.50
1:D:486:LEU:CD1	1:D:514:LEU:HD11	2.40	0.50
1:D:519:ALA:HB1	1:D:535:PHE:CE2	2.46	0.50
1:J:68:ARG:HH12	1:J:166:GLN:HG2	1.76	0.50
1:B:741:GLN:O	1:B:745:GLN:HG3	2.10	0.50
1:H:108:MET:HA	1:I:114:PRO:CG	2.42	0.50
1:C:380:GLN:HB3	1:C:390:LEU:CD2	2.40	0.50
1:A:89:GLN:NE2	1:J:412:GLN:O	2.44	0.50
1:J:285:LEU:HD13	1:J:291:PHE:CD2	2.45	0.50
1:G:31:PRO:HB3	1:G:528:PRO:HA	1.93	0.50
1:F:641:ARG:HG3	1:F:777:PHE:CE1	2.47	0.50
1:I:30:ILE:CG2	1:I:31:PRO:CD	2.88	0.50
1:B:659:ILE:N	1:B:659:ILE:HD12	2.25	0.50
1:H:429:ARG:HD2	1:H:661:VAL:HG11	1.93	0.50
1:F:68:ARG:HH12	1:F:166:GLN:HG2	1.77	0.50
1:F:519:ALA:HB1	1:F:535:PHE:CE2	2.47	0.50
1:H:442:PHE:CE2	1:H:681:ALA:HB1	2.46	0.50
1:B:519:ALA:HB1	1:B:535:PHE:CE2	2.46	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:I:68:ARG:HH12	1:I:166:GLN:HG2	1.76	0.50
1:G:30:ILE:CG2	1:G:31:PRO:CD	2.88	0.50
1:J:641:ARG:HG3	1:J:777:PHE:CE1	2.46	0.50
1:H:780:ILE:O	1:H:784:VAL:HG23	2.11	0.50
1:C:350:THR:OG1	1:C:351:PRO:HD3	2.11	0.50
1:F:745:GLN:HG2	1:F:766:GLU:OE2	2.12	0.50
1:D:741:GLN:O	1:D:745:GLN:HG3	2.10	0.50
1:F:715:LEU:HA	1:F:719:ARG:H	1.75	0.50
1:G:442:PHE:CE2	1:G:681:ALA:HB1	2.47	0.50
1:D:442:PHE:CE2	1:D:681:ALA:HB1	2.46	0.50
1:G:741:GLN:O	1:G:745:GLN:HG3	2.11	0.50
1:B:492:TYR:CE2	1:B:680:LEU:HA	2.46	0.50
1:C:39:TRP:CZ3	1:C:289:ILE:CD1	2.94	0.50
1:E:39:TRP:CZ3	1:E:289:ILE:CD1	2.94	0.50
1:E:780:ILE:O	1:E:784:VAL:HG23	2.11	0.50
1:C:429:ARG:HD2	1:C:661:VAL:HG11	1.93	0.50
1:D:492:TYR:CE2	1:D:680:LEU:HA	2.47	0.50
1:G:420:VAL:CG1	1:G:602:VAL:HG13	2.42	0.50
1:I:519:ALA:HB1	1:I:535:PHE:CE2	2.47	0.50
1:G:145:ASP:CB	1:G:148:GLN:HE21	2.24	0.50
1:I:285:LEU:HD13	1:I:291:PHE:CD2	2.45	0.50
1:J:382:ARG:HA	1:J:390:LEU:HA	1.94	0.50
1:C:31:PRO:HB3	1:C:528:PRO:HA	1.94	0.50
1:B:418:VAL:CG1	1:C:141:ASN:HD21	2.25	0.50
1:F:780:ILE:O	1:F:784:VAL:HG23	2.11	0.50
1:I:350:THR:OG1	1:I:351:PRO:HD3	2.11	0.50
1:B:429:ARG:HD2	1:B:661:VAL:HG11	1.93	0.50
1:G:492:TYR:CE2	1:G:680:LEU:HA	2.47	0.50
1:G:68:ARG:HH12	1:G:166:GLN:HG2	1.77	0.50
1:E:220:LEU:HD23	1:E:230:PHE:CD1	2.46	0.50
1:H:31:PRO:HB3	1:H:528:PRO:HA	1.93	0.50
1:G:780:ILE:O	1:G:784:VAL:HG23	2.11	0.50
1:D:641:ARG:HG3	1:D:777:PHE:CE1	2.47	0.50
1:D:780:ILE:O	1:D:784:VAL:HG23	2.11	0.50
1:J:659:ILE:HD12	1:J:659:ILE:N	2.25	0.50
1:C:409:GLN:HG3	1:C:661:VAL:HG13	1.92	0.50
1:G:475:VAL:HG22	1:G:680:LEU:HD12	1.94	0.50
1:A:492:TYR:CE2	1:A:680:LEU:HA	2.47	0.50
1:C:270:VAL:HG23	1:C:317:VAL:CG1	2.34	0.50
1:F:270:VAL:HG23	1:F:317:VAL:CG1	2.34	0.50
1:F:123:GLU:CD	1:G:229:ARG:HH12	2.15	0.50
1:G:220:LEU:HD23	1:G:230:PHE:CD1	2.47	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:D:31:PRO:HB3	1:D:528:PRO:HA	1.94	0.50
1:I:31:PRO:HB3	1:I:528:PRO:HA	1.93	0.50
1:E:350:THR:OG1	1:E:351:PRO:HD3	2.10	0.50
1:D:429:ARG:HD2	1:D:661:VAL:HG11	1.93	0.50
1:F:429:ARG:HD2	1:F:661:VAL:HG11	1.94	0.50
1:C:492:TYR:CE2	1:C:680:LEU:HA	2.47	0.50
1:C:475:VAL:HG22	1:C:680:LEU:HD12	1.94	0.50
1:G:264:GLU:OE2	1:G:298:THR:OG1	2.26	0.50
1:B:412:GLN:O	1:C:89:GLN:NE2	2.42	0.50
1:I:145:ASP:CB	1:I:148:GLN:HE21	2.24	0.50
1:C:30:ILE:CG2	1:C:31:PRO:CD	2.88	0.50
1:D:350:THR:OG1	1:D:351:PRO:HD3	2.11	0.50
1:J:429:ARG:HD2	1:J:661:VAL:HG11	1.93	0.50
1:A:475:VAL:HG22	1:A:680:LEU:HD12	1.94	0.50
1:D:642:LYS:HZ2	1:D:733:VAL:HG21	1.77	0.50
1:A:519:ALA:HB1	1:A:535:PHE:CE2	2.46	0.50
1:E:68:ARG:HH12	1:E:166:GLN:HG2	1.76	0.50
1:H:715:LEU:HA	1:H:719:ARG:H	1.75	0.50
1:J:420:VAL:CG1	1:J:602:VAL:HG13	2.42	0.50
1:I:715:LEU:HA	1:I:719:ARG:H	1.76	0.50
1:I:264:GLU:OE2	1:I:298:THR:OG1	2.26	0.50
1:C:220:LEU:HD23	1:C:230:PHE:CD1	2.47	0.50
1:D:382:ARG:HA	1:D:390:LEU:HA	1.94	0.50
1:E:715:LEU:HA	1:E:719:ARG:H	1.76	0.50
1:E:519:ALA:HB1	1:E:535:PHE:CE2	2.47	0.50
1:E:492:TYR:CE2	1:E:680:LEU:HA	2.46	0.50
1:B:442:PHE:CE2	1:B:681:ALA:HB1	2.46	0.50
1:J:519:ALA:HB1	1:J:535:PHE:CE2	2.47	0.50
1:H:220:LEU:HD23	1:H:230:PHE:CD1	2.47	0.49
1:H:492:TYR:CE2	1:H:680:LEU:HA	2.47	0.49
1:A:420:VAL:CG1	1:A:602:VAL:HG13	2.42	0.49
1:B:420:VAL:CG1	1:B:602:VAL:HG13	2.42	0.49
1:D:420:VAL:CG1	1:D:602:VAL:HG13	2.42	0.49
1:C:264:GLU:OE2	1:C:298:THR:OG1	2.26	0.49
1:D:745:GLN:HG2	1:D:766:GLU:OE2	2.12	0.49
1:C:68:ARG:HH12	1:C:166:GLN:HG2	1.76	0.49
1:J:475:VAL:HG22	1:J:680:LEU:HD12	1.94	0.49
1:I:492:TYR:CE2	1:I:680:LEU:HA	2.47	0.49
1:C:541:ASN:HA	1:C:559:SER:HB3	1.95	0.49
1:A:442:PHE:CE2	1:A:681:ALA:HB1	2.46	0.49
1:B:642:LYS:HZ2	1:B:733:VAL:HG21	1.77	0.49
1:D:403:ASN:O	1:D:434:LEU:HB2	2.13	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:G:593:LEU:HD13	1:G:596:ARG:HD2	1.95	0.49
1:I:429:ARG:HD2	1:I:661:VAL:HG11	1.93	0.49
1:E:31:PRO:HB3	1:E:528:PRO:HA	1.93	0.49
1:G:660:ALA:HB1	1:H:85:ASP:CG	2.32	0.49
1:G:350:THR:OG1	1:G:351:PRO:HD3	2.11	0.49
1:J:745:GLN:HG2	1:J:766:GLU:OE2	2.12	0.49
1:I:745:GLN:HG2	1:I:766:GLU:OE2	2.12	0.49
1:I:420:VAL:CG1	1:I:602:VAL:HG13	2.42	0.49
1:A:68:ARG:HH12	1:A:166:GLN:HG2	1.77	0.49
1:D:145:ASP:CB	1:D:148:GLN:HE21	2.24	0.49
1:J:390:LEU:O	1:J:484:THR:HG22	2.13	0.49
1:A:429:ARG:HD2	1:A:661:VAL:HG11	1.93	0.49
1:J:31:PRO:HB3	1:J:528:PRO:HA	1.93	0.49
1:C:641:ARG:HG3	1:C:777:PHE:CE1	2.47	0.49
1:G:429:ARG:HD2	1:G:661:VAL:HG11	1.93	0.49
1:G:745:GLN:HG2	1:G:766:GLU:OE2	2.12	0.49
1:F:492:TYR:CE2	1:F:680:LEU:HA	2.47	0.49
1:F:442:PHE:CE2	1:F:681:ALA:HB1	2.46	0.49
1:C:403:ASN:O	1:C:434:LEU:HB2	2.13	0.49
1:D:475:VAL:HG22	1:D:680:LEU:HD12	1.94	0.49
1:G:537:HIS:O	1:G:560:ALA:HA	2.13	0.49
1:D:537:HIS:O	1:D:560:ALA:HA	2.13	0.49
1:H:745:GLN:HG2	1:H:766:GLU:OE2	2.12	0.49
1:D:68:ARG:HH12	1:D:166:GLN:HG2	1.77	0.49
1:C:519:ALA:HB1	1:C:535:PHE:CE2	2.47	0.49
1:A:403:ASN:O	1:A:434:LEU:HB2	2.13	0.49
1:H:412:GLN:O	1:I:89:GLN:NE2	2.42	0.49
1:B:382:ARG:HA	1:B:390:LEU:HA	1.94	0.49
1:A:641:ARG:HG3	1:A:777:PHE:CE1	2.47	0.49
1:A:745:GLN:HG2	1:A:766:GLU:OE2	2.12	0.49
1:B:745:GLN:HG2	1:B:766:GLU:OE2	2.12	0.49
1:F:475:VAL:HG22	1:F:680:LEU:HD12	1.94	0.49
1:J:541:ASN:HA	1:J:559:SER:HB3	1.95	0.49
1:D:541:ASN:HA	1:D:559:SER:HB3	1.94	0.49
1:H:420:VAL:CG1	1:H:602:VAL:HG13	2.42	0.49
1:A:541:ASN:HA	1:A:559:SER:HB3	1.95	0.49
1:H:519:ALA:HB1	1:H:535:PHE:CE2	2.47	0.49
1:C:390:LEU:O	1:C:484:THR:HG22	2.13	0.49
1:G:418:VAL:CG1	1:H:141:ASN:HD21	2.25	0.49
1:A:593:LEU:HD13	1:A:596:ARG:HD2	1.95	0.49
1:J:220:LEU:HD23	1:J:230:PHE:CD1	2.48	0.49
1:E:745:GLN:HG2	1:E:766:GLU:OE2	2.12	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:H:475:VAL:HG22	1:H:680:LEU:HD12	1.94	0.49
1:F:420:VAL:CG1	1:F:602:VAL:HG13	2.42	0.49
1:E:420:VAL:CG1	1:E:602:VAL:HG13	2.42	0.49
1:H:537:HIS:O	1:H:560:ALA:HA	2.13	0.49
1:J:492:TYR:CE2	1:J:680:LEU:HA	2.47	0.49
1:D:264:GLU:OE2	1:D:298:THR:OG1	2.26	0.49
1:F:612:ILE:HD11	1:F:657:PHE:CD2	2.48	0.49
1:C:420:VAL:CG1	1:C:602:VAL:HG13	2.42	0.49
1:E:264:GLU:OE2	1:E:298:THR:OG1	2.26	0.49
1:I:612:ILE:HD11	1:I:657:PHE:CD2	2.47	0.49
1:F:660:ALA:HB1	1:G:85:ASP:OD2	2.13	0.49
1:F:403:ASN:O	1:F:434:LEU:HB2	2.13	0.49
1:E:593:LEU:HD13	1:E:596:ARG:HD2	1.95	0.49
1:F:418:VAL:CG1	1:G:141:ASN:HD21	2.25	0.49
1:A:220:LEU:HD23	1:A:230:PHE:CD1	2.47	0.49
1:E:141:ASN:HD21	1:I:418:VAL:CG1	2.26	0.49
1:F:537:HIS:O	1:F:560:ALA:HA	2.13	0.49
1:B:475:VAL:HG22	1:B:680:LEU:HD12	1.94	0.49
1:I:475:VAL:HG22	1:I:680:LEU:HD12	1.94	0.49
1:J:612:ILE:HD11	1:J:657:PHE:CD2	2.48	0.49
1:G:519:ALA:HB1	1:G:535:PHE:CE2	2.47	0.49
1:B:432:LEU:HD13	1:B:756:ILE:HD11	1.95	0.49
1:G:403:ASN:O	1:G:434:LEU:HB2	2.13	0.48
1:G:390:LEU:O	1:G:484:THR:HG22	2.13	0.48
1:C:593:LEU:HD13	1:C:596:ARG:HD2	1.95	0.48
1:B:408:TYR:HB3	1:B:425:ILE:HG23	1.95	0.48
1:F:390:LEU:O	1:F:484:THR:HG22	2.13	0.48
1:A:382:ARG:HA	1:A:390:LEU:HA	1.95	0.48
1:I:220:LEU:HD23	1:I:230:PHE:CD1	2.48	0.48
1:F:31:PRO:HB3	1:F:528:PRO:HA	1.94	0.48
1:I:537:HIS:O	1:I:560:ALA:HA	2.13	0.48
1:J:432:LEU:HD13	1:J:756:ILE:HD11	1.95	0.48
1:D:660:ALA:HB1	1:J:85:ASP:OD2	2.13	0.48
1:B:68:ARG:HH12	1:B:166:GLN:HG2	1.76	0.48
1:C:432:LEU:HD13	1:C:756:ILE:HD11	1.95	0.48
1:G:432:LEU:HD13	1:G:756:ILE:HD11	1.95	0.48
1:B:403:ASN:O	1:B:434:LEU:HB2	2.13	0.48
1:C:382:ARG:HA	1:C:390:LEU:HA	1.94	0.48
1:D:390:LEU:O	1:D:484:THR:HG22	2.13	0.48
1:E:475:VAL:HG22	1:E:680:LEU:HD12	1.94	0.48
1:B:541:ASN:HA	1:B:559:SER:HB3	1.95	0.48
1:A:432:LEU:HD13	1:A:756:ILE:HD11	1.95	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:H:612:ILE:HD11	1:H:657:PHE:CD2	2.48	0.48
1:A:270:VAL:HG23	1:A:317:VAL:CG1	2.34	0.48
1:I:403:ASN:O	1:I:434:LEU:HB2	2.13	0.48
1:G:513:LEU:HD23	1:G:516:MET:HE3	1.95	0.48
1:G:382:ARG:HA	1:G:390:LEU:HA	1.94	0.48
1:E:390:LEU:O	1:E:484:THR:HG22	2.13	0.48
1:I:382:ARG:HA	1:I:390:LEU:HA	1.95	0.48
1:C:537:HIS:O	1:C:560:ALA:HA	2.13	0.48
1:E:382:ARG:HA	1:E:390:LEU:HA	1.94	0.48
1:E:146:GLU:OE2	1:E:604:LYS:NZ	2.38	0.48
1:B:390:LEU:O	1:B:484:THR:HG22	2.13	0.48
1:C:745:GLN:HG2	1:C:766:GLU:OE2	2.12	0.48
1:H:121:TRP:CE3	1:I:226:PRO:HG3	2.48	0.48
1:I:541:ASN:HA	1:I:559:SER:HB3	1.95	0.48
1:J:403:ASN:O	1:J:434:LEU:HB2	2.13	0.48
1:E:122:ALA:HB1	1:F:114:PRO:HB2	1.95	0.48
1:B:537:HIS:O	1:B:560:ALA:HA	2.13	0.48
1:F:541:ASN:HA	1:F:559:SER:HB3	1.95	0.48
1:G:721:ASP:HA	1:G:722:GLU:HA	1.57	0.48
1:I:432:LEU:HD13	1:I:756:ILE:HD11	1.95	0.48
1:H:541:ASN:HA	1:H:559:SER:HB3	1.94	0.48
1:H:382:ARG:HA	1:H:390:LEU:HA	1.95	0.48
1:H:390:LEU:O	1:H:484:THR:HG22	2.13	0.48
1:F:593:LEU:HD13	1:F:596:ARG:HD2	1.96	0.48
1:F:220:LEU:HD23	1:F:230:PHE:CD1	2.48	0.48
1:B:220:LEU:HD23	1:B:230:PHE:CD1	2.47	0.48
1:E:612:ILE:HD11	1:E:657:PHE:CD2	2.48	0.48
1:E:403:ASN:O	1:E:434:LEU:HB2	2.13	0.48
1:A:513:LEU:HD23	1:A:516:MET:HE3	1.95	0.48
1:H:408:TYR:HB3	1:H:425:ILE:HG23	1.96	0.48
1:F:382:ARG:HA	1:F:390:LEU:HA	1.95	0.48
1:A:390:LEU:O	1:A:484:THR:HG22	2.13	0.48
1:H:121:TRP:CZ3	1:I:226:PRO:HG3	2.49	0.48
1:C:612:ILE:HD11	1:C:657:PHE:CD2	2.48	0.48
1:A:612:ILE:HD11	1:A:657:PHE:CD2	2.48	0.48
1:B:612:ILE:HD11	1:B:657:PHE:CD2	2.48	0.48
1:J:146:GLU:OE2	1:J:604:LYS:NZ	2.38	0.48
1:G:408:TYR:HB3	1:G:425:ILE:HG23	1.95	0.48
1:A:537:HIS:O	1:A:560:ALA:HA	2.13	0.48
1:I:612:ILE:HD11	1:I:657:PHE:HD2	1.79	0.48
1:A:509:SER:OG	1:J:723:ILE:HD11	2.13	0.48
1:G:642:LYS:HZ2	1:G:733:VAL:HG21	1.77	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:E:432:LEU:HD13	1:E:756:ILE:HD11	1.95	0.48
1:B:593:LEU:HD13	1:B:596:ARG:HD2	1.96	0.48
1:J:537:HIS:O	1:J:560:ALA:HA	2.13	0.48
1:H:432:LEU:HD13	1:H:756:ILE:HD11	1.95	0.48
1:E:541:ASN:HA	1:E:559:SER:HB3	1.95	0.48
1:H:403:ASN:O	1:H:434:LEU:HB2	2.13	0.48
1:E:513:LEU:HD23	1:E:516:MET:HE3	1.96	0.48
1:E:145:ASP:CB	1:E:148:GLN:HE21	2.23	0.48
1:A:145:ASP:CB	1:A:148:GLN:HE21	2.23	0.48
1:D:220:LEU:HD23	1:D:230:PHE:CD1	2.48	0.48
1:J:612:ILE:HD11	1:J:657:PHE:HD2	1.79	0.48
1:G:612:ILE:HD11	1:G:657:PHE:CD2	2.49	0.48
1:H:108:MET:HA	1:I:114:PRO:HG2	1.96	0.47
1:B:145:ASP:CB	1:B:148:GLN:HE21	2.24	0.47
1:E:537:HIS:O	1:E:560:ALA:HA	2.13	0.47
1:A:612:ILE:HD11	1:A:657:PHE:HD2	1.79	0.47
1:F:432:LEU:HD13	1:F:756:ILE:HD11	1.95	0.47
1:B:260:ALA:HB2	1:B:302:TRP:HB3	1.96	0.47
1:J:114:PRO:HA	1:J:228:THR:CG2	2.45	0.47
1:E:408:TYR:HB3	1:E:425:ILE:HG23	1.96	0.47
1:C:493:MET:HG3	1:C:496:LEU:HD12	1.96	0.47
1:D:260:ALA:HB2	1:D:302:TRP:HB3	1.96	0.47
1:B:264:GLU:OE2	1:B:298:THR:OG1	2.26	0.47
1:F:396:ARG:HD3	1:F:443:PHE:CG	2.49	0.47
1:D:593:LEU:HD13	1:D:596:ARG:HD2	1.95	0.47
1:I:390:LEU:O	1:I:484:THR:HG22	2.13	0.47
1:I:477:LYS:O	1:I:486:LEU:HD23	2.15	0.47
1:F:429:ARG:NE	1:G:304:GLN:OE1	2.42	0.47
1:C:396:ARG:HD3	1:C:443:PHE:CG	2.49	0.47
1:D:705:ALA:O	1:D:709:THR:HG22	2.15	0.47
1:C:114:PRO:HA	1:C:228:THR:CG2	2.45	0.47
1:I:408:TYR:HB3	1:I:425:ILE:HG23	1.95	0.47
1:A:493:MET:HG3	1:A:496:LEU:HD12	1.96	0.47
1:C:705:ALA:O	1:C:709:THR:HG22	2.14	0.47
1:J:392:ALA:HB2	1:J:450:MET:HE2	1.96	0.47
1:I:114:PRO:HA	1:I:228:THR:CG2	2.44	0.47
1:B:493:MET:HG3	1:B:496:LEU:HD12	1.97	0.47
1:B:477:LYS:O	1:B:486:LEU:HD23	2.15	0.47
1:G:477:LYS:O	1:G:486:LEU:HD23	2.14	0.47
1:C:260:ALA:HB2	1:C:302:TRP:HB3	1.97	0.47
1:H:612:ILE:HD11	1:H:657:PHE:HD2	1.79	0.47
1:F:705:ALA:O	1:F:709:THR:HG22	2.14	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:D:612:ILE:HD11	1:D:657:PHE:CD2	2.49	0.47
1:F:721:ASP:HA	1:F:722:GLU:HA	1.57	0.47
1:H:705:ALA:O	1:H:709:THR:HG22	2.15	0.47
1:H:392:ALA:HB2	1:H:450:MET:HE2	1.97	0.47
1:H:642:LYS:HZ2	1:H:733:VAL:HG21	1.79	0.47
1:D:396:ARG:HD3	1:D:443:PHE:CG	2.49	0.47
1:H:145:ASP:CB	1:H:148:GLN:HE21	2.23	0.47
1:D:262:VAL:O	1:D:266:VAL:HG23	2.15	0.47
1:J:262:VAL:O	1:J:266:VAL:HG23	2.15	0.47
1:F:262:VAL:O	1:F:266:VAL:HG23	2.15	0.47
1:F:408:TYR:HB3	1:F:425:ILE:HG23	1.96	0.47
1:J:374:GLY:HA3	1:J:375:LEU:HA	1.73	0.47
1:I:55:ARG:CZ	1:I:587:ILE:HD11	2.45	0.47
1:C:477:LYS:O	1:C:486:LEU:HD23	2.14	0.47
1:E:493:MET:HG3	1:E:496:LEU:HD12	1.96	0.47
1:G:493:MET:HG3	1:G:496:LEU:HD12	1.96	0.47
1:J:260:ALA:HB2	1:J:302:TRP:HB3	1.97	0.47
1:D:477:LYS:O	1:D:486:LEU:HD23	2.14	0.47
1:B:33:SER:HA	1:B:525:VAL:O	2.15	0.47
1:C:33:SER:HA	1:C:525:VAL:O	2.15	0.47
1:J:33:SER:HA	1:J:525:VAL:O	2.15	0.47
1:E:396:ARG:HD3	1:E:443:PHE:CG	2.49	0.47
1:I:396:ARG:HD3	1:I:443:PHE:CG	2.50	0.47
1:G:705:ALA:O	1:G:709:THR:HG22	2.15	0.47
1:A:705:ALA:O	1:A:709:THR:HG22	2.15	0.47
1:F:642:LYS:HZ2	1:F:733:VAL:HG21	1.80	0.47
1:A:396:ARG:HD3	1:A:443:PHE:CG	2.49	0.47
1:J:721:ASP:HA	1:J:722:GLU:HA	1.57	0.47
1:I:705:ALA:O	1:I:709:THR:HG22	2.15	0.47
1:D:432:LEU:HD13	1:D:756:ILE:HD11	1.95	0.47
1:J:114:PRO:HA	1:J:228:THR:HG21	1.97	0.47
1:J:545:ARG:HB2	1:J:572:ALA:CB	2.45	0.47
1:J:593:LEU:HD13	1:J:596:ARG:HD2	1.96	0.47
1:I:390:LEU:O	1:I:549:GLN:NE2	2.48	0.47
1:F:493:MET:HG3	1:F:496:LEU:HD12	1.96	0.47
1:E:477:LYS:O	1:E:486:LEU:HD23	2.14	0.47
1:E:612:ILE:HD11	1:E:657:PHE:HD2	1.80	0.47
1:B:612:ILE:HD11	1:B:657:PHE:HD2	1.80	0.47
1:D:612:ILE:HD11	1:D:657:PHE:HD2	1.80	0.47
1:D:277:LEU:O	1:D:283:GLN:HG2	2.15	0.47
1:J:396:ARG:HD3	1:J:443:PHE:CG	2.50	0.47
1:A:264:GLU:OE2	1:A:298:THR:OG1	2.26	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:F:277:LEU:O	1:F:283:GLN:HG2	2.15	0.47
1:A:460:GLU:OE1	1:G:775:ASN:ND2	2.41	0.47
1:E:545:ARG:HB2	1:E:572:ALA:CB	2.45	0.47
1:F:145:ASP:CB	1:F:148:GLN:HE21	2.24	0.47
1:F:477:LYS:O	1:F:486:LEU:HD23	2.15	0.47
1:A:477:LYS:O	1:A:486:LEU:HD23	2.15	0.47
1:G:33:SER:HA	1:G:525:VAL:O	2.15	0.47
1:G:541:ASN:HA	1:G:559:SER:HB3	1.95	0.47
1:G:277:LEU:O	1:G:283:GLN:HG2	2.15	0.47
1:C:277:LEU:O	1:C:283:GLN:HG2	2.15	0.47
1:J:257:ARG:O	1:J:261:VAL:HG23	2.15	0.47
1:F:114:PRO:HA	1:F:228:THR:CG2	2.45	0.47
1:G:114:PRO:HA	1:G:228:THR:CG2	2.45	0.47
1:G:262:VAL:O	1:G:266:VAL:HG23	2.15	0.47
1:H:354:ARG:HH12	1:H:358:THR:HG22	1.80	0.47
1:C:354:ARG:HH12	1:C:358:THR:HG22	1.80	0.47
1:J:493:MET:HG3	1:J:496:LEU:HD12	1.96	0.47
1:J:477:LYS:O	1:J:486:LEU:HD23	2.15	0.47
1:F:612:ILE:HD11	1:F:657:PHE:HD2	1.80	0.47
1:D:721:ASP:HA	1:D:722:GLU:HA	1.57	0.47
1:J:705:ALA:O	1:J:709:THR:HG22	2.15	0.47
1:E:257:ARG:O	1:E:261:VAL:HG23	2.16	0.46
1:E:114:PRO:HA	1:E:228:THR:CG2	2.45	0.46
1:J:145:ASP:CB	1:J:148:GLN:HE21	2.24	0.46
1:F:737:GLU:HG3	1:F:777:PHE:CZ	2.50	0.46
1:E:55:ARG:CZ	1:E:587:ILE:HD11	2.45	0.46
1:I:260:ALA:HB2	1:I:302:TRP:HB3	1.96	0.46
1:H:33:SER:HA	1:H:525:VAL:O	2.15	0.46
1:B:396:ARG:HD3	1:B:443:PHE:CG	2.49	0.46
1:D:33:SER:HA	1:D:525:VAL:O	2.15	0.46
1:I:593:LEU:HD13	1:I:596:ARG:HD2	1.95	0.46
1:D:429:ARG:NE	1:J:304:GLN:OE1	2.45	0.46
1:C:612:ILE:HD11	1:C:657:PHE:HD2	1.80	0.46
1:I:277:LEU:O	1:I:283:GLN:HG2	2.15	0.46
1:H:396:ARG:HD3	1:H:443:PHE:CG	2.50	0.46
1:H:277:LEU:O	1:H:283:GLN:HG2	2.15	0.46
1:D:270:VAL:HG23	1:D:317:VAL:CG1	2.34	0.46
1:A:257:ARG:O	1:A:261:VAL:HG23	2.16	0.46
1:H:257:ARG:O	1:H:261:VAL:HG23	2.15	0.46
1:E:317:VAL:HA	1:E:320:ILE:HD12	1.97	0.46
1:G:171:LYS:O	1:H:232:ARG:NH2	2.48	0.46
1:A:262:VAL:O	1:A:266:VAL:HG23	2.15	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:B:262:VAL:O	1:B:266:VAL:HG23	2.15	0.46
1:J:408:TYR:HB3	1:J:425:ILE:HG23	1.96	0.46
1:C:262:VAL:O	1:C:266:VAL:HG23	2.15	0.46
1:B:390:LEU:O	1:B:549:GLN:NE2	2.49	0.46
1:G:55:ARG:CZ	1:G:587:ILE:HD11	2.46	0.46
1:D:493:MET:HG3	1:D:496:LEU:HD12	1.96	0.46
1:H:477:LYS:O	1:H:486:LEU:HD23	2.14	0.46
1:I:748:LYS:HA	1:I:762:ILE:HD13	1.97	0.46
1:B:705:ALA:O	1:B:709:THR:HG22	2.15	0.46
1:A:33:SER:HA	1:A:525:VAL:O	2.15	0.46
1:F:270:VAL:HG22	1:F:321:ASN:HD21	1.81	0.46
1:D:114:PRO:HA	1:D:228:THR:CG2	2.45	0.46
1:D:286:ARG:HH12	1:D:527:PHE:HB3	1.81	0.46
1:H:286:ARG:HH12	1:H:527:PHE:HB3	1.81	0.46
1:A:408:TYR:HB3	1:A:425:ILE:HG23	1.96	0.46
1:C:408:TYR:HB3	1:C:425:ILE:HG23	1.96	0.46
1:F:354:ARG:HH12	1:F:358:THR:HG22	1.80	0.46
1:A:354:ARG:HH12	1:A:358:THR:HG22	1.80	0.46
1:H:260:ALA:HB2	1:H:302:TRP:HB3	1.96	0.46
1:H:493:MET:HG3	1:H:496:LEU:HD12	1.97	0.46
1:A:260:ALA:HB2	1:A:302:TRP:HB3	1.97	0.46
1:E:277:LEU:O	1:E:283:GLN:HG2	2.16	0.46
1:B:317:VAL:HA	1:B:320:ILE:HD12	1.97	0.46
1:D:257:ARG:O	1:D:261:VAL:HG23	2.16	0.46
1:G:257:ARG:O	1:G:261:VAL:HG23	2.15	0.46
1:B:114:PRO:HA	1:B:228:THR:CG2	2.45	0.46
1:C:114:PRO:HA	1:C:228:THR:HG21	1.97	0.46
1:E:390:LEU:O	1:E:549:GLN:NE2	2.49	0.46
1:H:390:LEU:O	1:H:549:GLN:NE2	2.49	0.46
1:D:408:TYR:HB3	1:D:425:ILE:HG23	1.95	0.46
1:A:737:GLU:HG3	1:A:777:PHE:CZ	2.50	0.46
1:F:55:ARG:CZ	1:F:587:ILE:HD11	2.46	0.46
1:G:612:ILE:HD11	1:G:657:PHE:HD2	1.81	0.46
1:D:392:ALA:HB2	1:D:450:MET:HE2	1.97	0.46
1:E:705:ALA:O	1:E:709:THR:HG22	2.15	0.46
1:F:748:LYS:HA	1:F:762:ILE:HD13	1.98	0.46
1:D:402:ILE:O	1:D:434:LEU:HD12	2.16	0.46
1:I:273:PRO:CB	1:I:276:TYR:CD2	2.96	0.46
1:B:716:GLY:HA2	1:B:742:SER:HG	1.78	0.46
1:F:286:ARG:HH12	1:F:527:PHE:HB3	1.81	0.46
1:G:408:TYR:HB3	1:G:425:ILE:CG2	2.46	0.46
1:D:390:LEU:O	1:D:549:GLN:NE2	2.49	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:E:737:GLU:HG3	1:E:777:PHE:CZ	2.50	0.46
1:I:737:GLU:HG3	1:I:777:PHE:CZ	2.51	0.46
1:E:354:ARG:HH12	1:E:358:THR:HG22	1.81	0.46
1:H:540:SER:HA	1:H:541:ASN:HA	1.75	0.46
1:H:410:SER:HB3	1:H:664:ALA:HB2	1.98	0.46
1:G:396:ARG:HD3	1:G:443:PHE:CG	2.50	0.46
1:A:277:LEU:O	1:A:283:GLN:HG2	2.15	0.46
1:A:392:ALA:HB2	1:A:450:MET:HE2	1.98	0.46
1:A:317:VAL:HA	1:A:320:ILE:HD12	1.98	0.46
1:B:114:PRO:HA	1:B:228:THR:HG21	1.98	0.46
1:G:390:LEU:O	1:G:549:GLN:NE2	2.48	0.46
1:J:286:ARG:HH12	1:J:527:PHE:HB3	1.81	0.46
1:H:593:LEU:HD13	1:H:596:ARG:HD2	1.96	0.46
1:F:390:LEU:O	1:F:549:GLN:NE2	2.48	0.46
1:A:141:ASN:HD21	1:J:418:VAL:CG1	2.28	0.46
1:A:55:ARG:CZ	1:A:587:ILE:HD11	2.46	0.46
1:D:55:ARG:CZ	1:D:587:ILE:HD11	2.46	0.46
1:C:55:ARG:CZ	1:C:587:ILE:HD11	2.46	0.46
1:J:55:ARG:CZ	1:J:587:ILE:HD11	2.46	0.46
1:J:277:LEU:O	1:J:283:GLN:HG2	2.15	0.46
1:F:33:SER:HA	1:F:525:VAL:O	2.15	0.46
1:E:33:SER:HA	1:E:525:VAL:O	2.15	0.46
1:D:410:SER:HB3	1:D:664:ALA:HB2	1.98	0.46
1:B:277:LEU:O	1:B:283:GLN:HG2	2.15	0.46
1:B:513:LEU:HD23	1:B:516:MET:HE3	1.97	0.46
1:A:545:ARG:HB2	1:A:572:ALA:CB	2.45	0.46
1:I:262:VAL:O	1:I:266:VAL:HG23	2.15	0.46
1:C:286:ARG:HH12	1:C:527:PHE:HB3	1.81	0.46
1:H:737:GLU:HG3	1:H:777:PHE:CZ	2.51	0.46
1:B:374:GLY:HA3	1:B:375:LEU:HA	1.73	0.46
1:E:264:GLU:OE1	1:E:269:ARG:HD2	2.16	0.46
1:B:264:GLU:OE1	1:B:269:ARG:HD2	2.16	0.46
1:G:410:SER:HB3	1:G:664:ALA:HB2	1.98	0.46
1:J:399:ALA:HB2	1:J:584:ILE:HB	1.98	0.46
1:G:392:ALA:HB2	1:G:450:MET:HE2	1.98	0.46
1:H:37:ALA:O	1:H:369:LEU:HB2	2.16	0.46
1:B:257:ARG:O	1:B:261:VAL:HG23	2.16	0.46
1:C:317:VAL:HA	1:C:320:ILE:HD12	1.98	0.46
1:I:257:ARG:O	1:I:261:VAL:HG23	2.16	0.46
1:E:270:VAL:HG22	1:E:321:ASN:HD21	1.81	0.46
1:B:402:ILE:O	1:B:434:LEU:HD12	2.16	0.46
1:F:504:ILE:CG1	1:F:510:VAL:HG21	2.42	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:114:PRO:HA	1:A:228:THR:CG2	2.46	0.46
1:G:479:LEU:HD11	1:G:567:LEU:HD23	1.98	0.46
1:C:390:LEU:O	1:C:549:GLN:NE2	2.49	0.46
1:E:262:VAL:O	1:E:266:VAL:HG23	2.15	0.46
1:E:479:LEU:HD11	1:E:567:LEU:HD23	1.98	0.46
1:B:737:GLU:HG3	1:B:777:PHE:CZ	2.50	0.46
1:A:479:LEU:HD11	1:A:567:LEU:HD23	1.98	0.46
1:I:493:MET:HG3	1:I:496:LEU:HD12	1.96	0.46
1:E:260:ALA:HB2	1:E:302:TRP:HB3	1.97	0.46
1:J:410:SER:HB3	1:J:664:ALA:HB2	1.98	0.46
1:A:399:ALA:HB2	1:A:584:ILE:HB	1.98	0.46
1:F:257:ARG:O	1:F:261:VAL:HG23	2.16	0.46
1:E:402:ILE:O	1:E:434:LEU:HD12	2.16	0.46
1:C:402:ILE:O	1:C:434:LEU:HD12	2.16	0.46
1:I:402:ILE:O	1:I:434:LEU:HD12	2.16	0.46
1:I:504:ILE:CG1	1:I:510:VAL:HG21	2.43	0.46
1:F:513:LEU:HD23	1:F:516:MET:HE1	1.98	0.46
1:H:408:TYR:HB3	1:H:425:ILE:CG2	2.47	0.46
1:B:408:TYR:HB3	1:B:425:ILE:CG2	2.47	0.46
1:D:408:TYR:HB3	1:D:425:ILE:CG2	2.46	0.46
1:A:390:LEU:O	1:A:549:GLN:NE2	2.49	0.46
1:E:479:LEU:CD1	1:E:567:LEU:HD23	2.46	0.46
1:D:737:GLU:HG3	1:D:777:PHE:CZ	2.51	0.46
1:I:374:GLY:HA3	1:I:375:LEU:HA	1.74	0.46
1:B:55:ARG:CZ	1:B:587:ILE:HD11	2.46	0.46
1:F:260:ALA:HB2	1:F:302:TRP:HB3	1.97	0.46
1:H:399:ALA:HB2	1:H:584:ILE:HB	1.98	0.46
1:B:37:ALA:O	1:B:369:LEU:HB2	2.16	0.46
1:I:114:PRO:HA	1:I:228:THR:HG21	1.97	0.45
1:J:273:PRO:CB	1:J:276:TYR:CD2	2.96	0.45
1:J:479:LEU:HD11	1:J:567:LEU:HD23	1.98	0.45
1:G:479:LEU:CD1	1:G:567:LEU:HD23	2.47	0.45
1:J:740:LEU:HD21	1:J:780:ILE:HG22	1.98	0.45
1:B:54:LEU:CD2	1:B:375:LEU:HD23	2.46	0.45
1:B:399:ALA:HB2	1:B:584:ILE:HB	1.98	0.45
1:I:37:ALA:O	1:I:369:LEU:HB2	2.16	0.45
1:C:257:ARG:O	1:C:261:VAL:HG23	2.16	0.45
1:H:317:VAL:HA	1:H:320:ILE:HD12	1.98	0.45
1:G:317:VAL:HA	1:G:320:ILE:HD12	1.98	0.45
1:F:402:ILE:O	1:F:434:LEU:HD12	2.16	0.45
1:D:479:LEU:HD11	1:D:567:LEU:HD23	1.98	0.45
1:F:545:ARG:HB2	1:F:572:ALA:CB	2.45	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:G:286:ARG:HH12	1:G:527:PHE:HB3	1.81	0.45
1:F:740:LEU:HD21	1:F:780:ILE:HG22	1.98	0.45
1:C:740:LEU:HD21	1:C:780:ILE:HG22	1.98	0.45
1:H:740:LEU:HD21	1:H:780:ILE:HG22	1.98	0.45
1:G:740:LEU:HD21	1:G:780:ILE:HG22	1.99	0.45
1:D:354:ARG:HH12	1:D:358:THR:HG22	1.81	0.45
1:C:399:ALA:HB2	1:C:584:ILE:HB	1.99	0.45
1:F:392:ALA:HB2	1:F:450:MET:HE2	1.98	0.45
1:A:410:SER:HB3	1:A:664:ALA:HB2	1.99	0.45
1:I:33:SER:HA	1:I:525:VAL:O	2.15	0.45
1:H:748:LYS:HA	1:H:762:ILE:HD13	1.98	0.45
1:J:23:VAL:HG21	1:J:32:PHE:CB	2.37	0.45
1:J:479:LEU:CD1	1:J:567:LEU:HD23	2.47	0.45
1:H:479:LEU:HB3	1:H:482:THR:OG1	2.17	0.45
1:H:262:VAL:O	1:H:266:VAL:HG23	2.15	0.45
1:E:408:TYR:HB3	1:E:425:ILE:CG2	2.47	0.45
1:B:563:THR:HG21	1:B:568:ASN:HB2	1.98	0.45
1:J:737:GLU:HG3	1:J:777:PHE:CZ	2.51	0.45
1:A:479:LEU:CD1	1:A:567:LEU:HD23	2.47	0.45
1:D:54:LEU:CD2	1:D:375:LEU:HD23	2.46	0.45
1:G:260:ALA:HB2	1:G:302:TRP:HB3	1.97	0.45
1:D:264:GLU:OE1	1:D:269:ARG:HD2	2.16	0.45
1:A:85:ASP:OD2	1:J:660:ALA:HB1	2.16	0.45
1:I:317:VAL:HA	1:I:320:ILE:HD12	1.98	0.45
1:H:479:LEU:CD1	1:H:567:LEU:HD23	2.46	0.45
1:D:412:GLN:O	1:J:89:GLN:NE2	2.48	0.45
1:C:479:LEU:HB3	1:C:482:THR:OG1	2.17	0.45
1:C:737:GLU:HG3	1:C:777:PHE:CZ	2.50	0.45
1:F:479:LEU:CD1	1:F:567:LEU:HD23	2.47	0.45
1:A:740:LEU:HD21	1:A:780:ILE:HG22	1.98	0.45
1:G:737:GLU:HG3	1:G:777:PHE:CZ	2.51	0.45
1:G:54:LEU:CD2	1:G:375:LEU:HD23	2.46	0.45
1:C:54:LEU:CD2	1:C:375:LEU:HD23	2.46	0.45
1:G:397:TYR:CE1	1:G:497:LEU:HD21	2.51	0.45
1:E:748:LYS:HA	1:E:762:ILE:HD13	1.97	0.45
1:D:317:VAL:HA	1:D:320:ILE:HD12	1.98	0.45
1:G:402:ILE:O	1:G:434:LEU:HD12	2.16	0.45
1:A:402:ILE:O	1:A:434:LEU:HD12	2.16	0.45
1:G:273:PRO:CB	1:G:276:TYR:CD2	2.96	0.45
1:B:286:ARG:HH12	1:B:527:PHE:HB3	1.81	0.45
1:J:390:LEU:O	1:J:549:GLN:NE2	2.49	0.45
1:I:563:THR:HG21	1:I:568:ASN:HB2	1.98	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:479:LEU:HB3	1:A:482:THR:OG1	2.17	0.45
1:I:354:ARG:HH12	1:I:358:THR:HG22	1.80	0.45
1:G:354:ARG:HH12	1:G:358:THR:HG22	1.81	0.45
1:E:54:LEU:CD2	1:E:375:LEU:HD23	2.46	0.45
1:I:397:TYR:CE1	1:I:497:LEU:HD21	2.52	0.45
1:E:37:ALA:O	1:E:369:LEU:HB2	2.17	0.45
1:A:723:ILE:HD11	1:B:509:SER:OG	2.17	0.45
1:A:37:ALA:O	1:A:369:LEU:HB2	2.16	0.45
1:F:114:PRO:HA	1:F:228:THR:HG21	1.98	0.45
1:B:479:LEU:HD11	1:B:567:LEU:HD23	1.98	0.45
1:I:286:ARG:HH12	1:I:527:PHE:HB3	1.81	0.45
1:A:286:ARG:HH12	1:A:527:PHE:HB3	1.81	0.45
1:I:479:LEU:CD1	1:I:567:LEU:HD23	2.46	0.45
1:B:740:LEU:HD21	1:B:780:ILE:HG22	1.99	0.45
1:A:54:LEU:CD2	1:A:375:LEU:HD23	2.46	0.45
1:E:418:VAL:CG1	1:F:141:ASN:HD21	2.30	0.45
1:F:540:SER:HA	1:F:541:ASN:HA	1.75	0.45
1:C:410:SER:HB3	1:C:664:ALA:HB2	1.99	0.45
1:I:399:ALA:HB2	1:I:584:ILE:HB	1.98	0.45
1:J:37:ALA:O	1:J:369:LEU:HB2	2.16	0.45
1:G:748:LYS:HA	1:G:762:ILE:HD13	1.98	0.45
1:F:317:VAL:HA	1:F:320:ILE:HD12	1.98	0.45
1:E:114:PRO:HA	1:E:228:THR:HG21	1.98	0.45
1:G:504:ILE:CG1	1:G:510:VAL:HG21	2.43	0.45
1:C:545:ARG:HB2	1:C:572:ALA:CB	2.45	0.45
1:A:145:ASP:HB3	1:A:148:GLN:HG3	1.99	0.45
1:I:408:TYR:HB3	1:I:425:ILE:CG2	2.47	0.45
1:D:748:LYS:HA	1:D:762:ILE:HD13	1.97	0.45
1:E:399:ALA:HB2	1:E:584:ILE:HB	1.99	0.45
1:A:748:LYS:HA	1:A:762:ILE:HD13	1.98	0.45
1:J:270:VAL:HG22	1:J:321:ASN:HD21	1.81	0.45
1:D:114:PRO:HA	1:D:228:THR:HG21	1.98	0.45
1:D:479:LEU:CD1	1:D:567:LEU:HD23	2.47	0.45
1:C:563:THR:HG21	1:C:568:ASN:HB2	1.99	0.45
1:D:563:THR:HG21	1:D:568:ASN:HB2	1.99	0.45
1:E:740:LEU:HD21	1:E:780:ILE:HG22	1.98	0.45
1:J:354:ARG:HH12	1:J:358:THR:HG22	1.80	0.45
1:H:55:ARG:CZ	1:H:587:ILE:HD11	2.46	0.45
1:F:37:ALA:O	1:F:369:LEU:HB2	2.17	0.45
1:B:392:ALA:HB2	1:B:450:MET:HE2	1.99	0.45
1:D:37:ALA:O	1:D:369:LEU:HB2	2.17	0.45
1:C:748:LYS:HA	1:C:762:ILE:HD13	1.98	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:E:286:ARG:HH12	1:E:527:PHE:HB3	1.82	0.45
1:C:479:LEU:CD1	1:C:567:LEU:HD23	2.47	0.45
1:G:264:GLU:OE1	1:G:269:ARG:HD2	2.16	0.45
1:I:264:GLU:OE1	1:I:269:ARG:HD2	2.16	0.45
1:C:260:ALA:O	1:C:264:GLU:HG2	2.17	0.45
1:D:399:ALA:HB2	1:D:584:ILE:HB	1.98	0.45
1:J:748:LYS:HA	1:J:762:ILE:HD13	1.98	0.45
1:I:40:ALA:CB	1:I:290:ASN:OD1	2.64	0.45
1:G:545:ARG:HB2	1:G:572:ALA:CB	2.45	0.45
1:H:545:ARG:HB2	1:H:572:ALA:CB	2.45	0.45
1:I:545:ARG:HB2	1:I:572:ALA:CB	2.45	0.45
1:A:408:TYR:HB3	1:A:425:ILE:CG2	2.47	0.45
1:D:740:LEU:HD21	1:D:780:ILE:HG22	1.99	0.45
1:I:54:LEU:CD2	1:I:375:LEU:HD23	2.46	0.45
1:D:260:ALA:O	1:D:264:GLU:HG2	2.17	0.45
1:I:410:SER:HB3	1:I:664:ALA:HB2	1.98	0.45
1:G:37:ALA:O	1:G:369:LEU:HB2	2.16	0.45
1:E:414:PRO:HB3	1:F:142:LEU:HD22	1.98	0.45
1:J:317:VAL:HA	1:J:320:ILE:HD12	1.98	0.44
1:H:114:PRO:HA	1:H:228:THR:CG2	2.47	0.44
1:E:563:THR:HG21	1:E:568:ASN:HB2	1.99	0.44
1:D:545:ARG:HB2	1:D:572:ALA:CB	2.45	0.44
1:C:145:ASP:HB3	1:C:148:GLN:HG3	1.99	0.44
1:J:408:TYR:HB3	1:J:425:ILE:CG2	2.47	0.44
1:J:54:LEU:CD2	1:J:375:LEU:HD23	2.46	0.44
1:H:397:TYR:CE1	1:H:497:LEU:HD21	2.52	0.44
1:B:657:PHE:CD2	1:B:663:LEU:HD12	2.52	0.44
1:A:260:ALA:O	1:A:264:GLU:HG2	2.17	0.44
1:B:410:SER:HB3	1:B:664:ALA:HB2	1.99	0.44
1:F:399:ALA:HB2	1:F:584:ILE:HB	1.99	0.44
1:D:726:ILE:HA	1:D:727:ALA:HA	1.82	0.44
1:G:255:LYS:NZ	1:G:359:SER:HG	2.13	0.44
1:C:273:PRO:CB	1:C:276:TYR:CD2	2.96	0.44
1:A:232:ARG:O	1:A:236:GLN:HG3	2.18	0.44
1:E:232:ARG:O	1:E:236:GLN:HG3	2.17	0.44
1:D:108:MET:HA	1:J:114:PRO:CG	2.47	0.44
1:D:418:VAL:HG12	1:J:141:ASN:ND2	2.28	0.44
1:B:40:ALA:CB	1:B:290:ASN:OD1	2.64	0.44
1:F:145:ASP:HB3	1:F:148:GLN:HG3	2.00	0.44
1:E:89:GLN:NE2	1:I:412:GLN:O	2.44	0.44
1:I:479:LEU:HD11	1:I:567:LEU:HD23	1.98	0.44
1:F:479:LEU:HB3	1:F:482:THR:OG1	2.17	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:F:54:LEU:CD2	1:F:375:LEU:HD23	2.46	0.44
1:H:503:ILE:HG21	1:H:515:TYR:CD2	2.53	0.44
1:B:260:ALA:O	1:B:264:GLU:HG2	2.17	0.44
1:D:38:THR:HA	1:D:367:ALA:O	2.17	0.44
1:B:748:LYS:HA	1:B:762:ILE:HD13	1.98	0.44
1:G:114:PRO:HA	1:G:228:THR:HG21	1.98	0.44
1:H:479:LEU:HD11	1:H:567:LEU:HD23	1.98	0.44
1:I:740:LEU:HD21	1:I:780:ILE:HG22	1.99	0.44
1:F:479:LEU:HD11	1:F:567:LEU:HD23	1.98	0.44
1:B:397:TYR:CE1	1:B:497:LEU:HD21	2.51	0.44
1:H:264:GLU:OE1	1:H:269:ARG:HD2	2.16	0.44
1:H:642:LYS:HG3	1:H:778:TYR:OH	2.17	0.44
1:B:38:THR:HA	1:B:367:ALA:O	2.18	0.44
1:I:232:ARG:O	1:I:236:GLN:HG3	2.17	0.44
1:J:563:THR:HG21	1:J:568:ASN:HB2	1.99	0.44
1:C:418:VAL:CG1	1:D:141:ASN:HD21	2.31	0.44
1:F:264:GLU:OE1	1:F:269:ARG:HD2	2.17	0.44
1:J:264:GLU:OE1	1:J:269:ARG:HD2	2.16	0.44
1:A:264:GLU:OE1	1:A:269:ARG:HD2	2.16	0.44
1:E:410:SER:HB3	1:E:664:ALA:HB2	1.98	0.44
1:I:392:ALA:HB2	1:I:450:MET:HE2	1.99	0.44
1:I:38:THR:HA	1:I:367:ALA:O	2.18	0.44
1:C:37:ALA:O	1:C:369:LEU:HB2	2.17	0.44
1:I:642:LYS:HZ2	1:I:733:VAL:HG21	1.82	0.44
1:H:402:ILE:O	1:H:434:LEU:HD12	2.16	0.44
1:J:265:ILE:HD12	1:J:273:PRO:HG3	2.00	0.44
1:F:232:ARG:O	1:F:236:GLN:HG3	2.18	0.44
1:G:265:ILE:HD12	1:G:273:PRO:HG3	2.00	0.44
1:D:265:ILE:HD12	1:D:273:PRO:HG3	2.00	0.44
1:H:232:ARG:O	1:H:236:GLN:HG3	2.18	0.44
1:G:563:THR:HG21	1:G:568:ASN:HB2	1.98	0.44
1:C:571:VAL:HA	1:C:572:ALA:HA	1.80	0.44
1:C:408:TYR:HB3	1:C:425:ILE:CG2	2.47	0.44
1:A:563:THR:HG21	1:A:568:ASN:HB2	1.99	0.44
1:J:397:TYR:CE1	1:J:497:LEU:HD21	2.52	0.44
1:E:397:TYR:CE1	1:E:497:LEU:HD21	2.53	0.44
1:F:397:TYR:CE1	1:F:497:LEU:HD21	2.52	0.44
1:J:642:LYS:HG3	1:J:778:TYR:OH	2.18	0.44
1:G:23:VAL:HG21	1:G:32:PHE:CB	2.36	0.44
1:F:265:ILE:HD12	1:F:273:PRO:HG3	1.99	0.44
1:B:479:LEU:HB3	1:B:482:THR:OG1	2.17	0.44
1:E:504:ILE:HG22	1:E:505:PRO:HD2	2.00	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:I:145:ASP:HB3	1:I:148:GLN:HG3	1.99	0.44
1:E:479:LEU:HB3	1:E:482:THR:OG1	2.17	0.44
1:D:374:GLY:HA3	1:D:375:LEU:HA	1.74	0.44
1:E:503:ILE:HG21	1:E:515:TYR:CD2	2.53	0.44
1:C:264:GLU:OE1	1:C:269:ARG:HD2	2.16	0.44
1:H:657:PHE:CD2	1:H:663:LEU:HD12	2.53	0.44
1:G:399:ALA:HB2	1:G:584:ILE:HB	1.98	0.44
1:I:270:VAL:HG22	1:I:321:ASN:HD21	1.81	0.44
1:J:402:ILE:O	1:J:434:LEU:HD12	2.17	0.44
1:I:265:ILE:HD12	1:I:273:PRO:HG3	2.00	0.44
1:J:479:LEU:HB3	1:J:482:THR:OG1	2.17	0.44
1:G:479:LEU:HB3	1:G:482:THR:OG1	2.17	0.44
1:H:571:VAL:HA	1:H:572:ALA:HA	1.80	0.44
1:B:145:ASP:HB3	1:B:148:GLN:HG3	2.00	0.44
1:F:408:TYR:HB3	1:F:425:ILE:CG2	2.47	0.44
1:I:479:LEU:HB3	1:I:482:THR:OG1	2.17	0.44
1:H:54:LEU:CD2	1:H:375:LEU:HD23	2.46	0.44
1:F:260:ALA:O	1:F:264:GLU:HG2	2.17	0.44
1:I:260:ALA:O	1:I:264:GLU:HG2	2.18	0.44
1:F:657:PHE:CD2	1:F:663:LEU:HD12	2.53	0.44
1:E:657:PHE:CD2	1:E:663:LEU:HD12	2.53	0.44
1:D:446:LEU:O	1:D:450:MET:HG2	2.18	0.44
1:B:43:ARG:CG	1:B:365:THR:HG23	2.48	0.44
1:F:504:ILE:HG22	1:F:505:PRO:HD2	2.00	0.44
1:A:114:PRO:HA	1:A:228:THR:HG21	1.99	0.44
1:H:504:ILE:HG22	1:H:505:PRO:HD2	2.00	0.44
1:H:563:THR:HG21	1:H:568:ASN:HB2	1.99	0.44
1:A:374:GLY:HA3	1:A:375:LEU:HA	1.73	0.44
1:J:260:ALA:O	1:J:264:GLU:HG2	2.17	0.44
1:B:446:LEU:O	1:B:450:MET:HG2	2.18	0.44
1:C:446:LEU:O	1:C:450:MET:HG2	2.18	0.44
1:E:642:LYS:HG3	1:E:778:TYR:OH	2.17	0.44
1:C:38:THR:HA	1:C:367:ALA:O	2.18	0.44
1:J:190:LEU:HD13	1:J:190:LEU:O	2.18	0.44
1:G:232:ARG:O	1:G:236:GLN:HG3	2.18	0.44
1:H:40:ALA:CB	1:H:290:ASN:OD1	2.63	0.44
1:B:503:ILE:HG21	1:B:515:TYR:CD2	2.53	0.44
1:H:260:ALA:O	1:H:264:GLU:HG2	2.17	0.44
1:G:642:LYS:HG3	1:G:778:TYR:OH	2.17	0.44
1:F:446:LEU:O	1:F:450:MET:HG2	2.18	0.44
1:E:392:ALA:HB2	1:E:450:MET:HE2	2.00	0.44
1:D:643:GLY:HA3	1:D:644:GLY:HA2	1.84	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:38:THR:HA	1:A:367:ALA:O	2.18	0.44
1:A:642:LYS:HG3	1:A:778:TYR:OH	2.18	0.44
1:F:410:SER:HB3	1:F:664:ALA:HB2	1.99	0.44
1:B:726:ILE:HA	1:B:727:ALA:HA	1.82	0.44
1:J:38:THR:HA	1:J:367:ALA:O	2.18	0.44
1:G:504:ILE:HG22	1:G:505:PRO:HD2	2.00	0.43
1:I:190:LEU:O	1:I:190:LEU:HD13	2.18	0.43
1:E:145:ASP:HB3	1:E:148:GLN:HG3	1.99	0.43
1:H:145:ASP:HB3	1:H:148:GLN:HG3	1.99	0.43
1:C:479:LEU:HD11	1:C:567:LEU:HD23	1.98	0.43
1:G:260:ALA:O	1:G:264:GLU:HG2	2.17	0.43
1:H:446:LEU:O	1:H:450:MET:HG2	2.18	0.43
1:A:446:LEU:O	1:A:450:MET:HG2	2.18	0.43
1:C:392:ALA:HB2	1:C:450:MET:HE2	1.99	0.43
1:F:38:THR:HA	1:F:367:ALA:O	2.18	0.43
1:D:163:ILE:HD13	1:D:212:TYR:CE2	2.53	0.43
1:D:121:TRP:CZ3	1:J:226:PRO:HG3	2.53	0.43
1:E:509:SER:OG	1:I:723:ILE:HD11	2.18	0.43
1:D:439:GLU:OE2	1:D:489:ASN:ND2	2.51	0.43
1:C:232:ARG:O	1:C:236:GLN:HG3	2.17	0.43
1:B:479:LEU:CD1	1:B:567:LEU:HD23	2.47	0.43
1:E:114:PRO:HB2	1:I:122:ALA:HB1	2.00	0.43
1:J:145:ASP:HB3	1:J:148:GLN:HG3	2.00	0.43
1:F:563:THR:HG21	1:F:568:ASN:HB2	1.99	0.43
1:G:503:ILE:HG21	1:G:515:TYR:CD2	2.53	0.43
1:D:503:ILE:HG21	1:D:515:TYR:CD2	2.53	0.43
1:D:397:TYR:CE1	1:D:497:LEU:HD21	2.53	0.43
1:D:642:LYS:HG3	1:D:778:TYR:OH	2.17	0.43
1:D:540:SER:HA	1:D:541:ASN:HA	1.75	0.43
1:G:657:PHE:CD2	1:G:663:LEU:HD12	2.52	0.43
1:J:446:LEU:O	1:J:450:MET:HG2	2.18	0.43
1:G:446:LEU:O	1:G:450:MET:HG2	2.18	0.43
1:I:642:LYS:HG3	1:I:778:TYR:OH	2.18	0.43
1:A:190:LEU:HD13	1:A:190:LEU:O	2.18	0.43
1:D:270:VAL:HG22	1:D:321:ASN:HD21	1.81	0.43
1:H:265:ILE:HD12	1:H:273:PRO:HG3	2.00	0.43
1:D:232:ARG:O	1:D:236:GLN:HG3	2.18	0.43
1:D:479:LEU:HB3	1:D:482:THR:OG1	2.17	0.43
1:I:514:LEU:HD23	1:I:514:LEU:HA	1.91	0.43
1:E:260:ALA:O	1:E:264:GLU:HG2	2.17	0.43
1:D:657:PHE:CD2	1:D:663:LEU:HD12	2.53	0.43
1:C:642:LYS:HG3	1:C:778:TYR:OH	2.18	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:H:163:ILE:HD13	1:H:212:TYR:CE2	2.54	0.43
1:C:270:VAL:HG22	1:C:321:ASN:HD21	1.81	0.43
1:A:270:VAL:HG22	1:A:321:ASN:HD21	1.81	0.43
1:E:23:VAL:HG21	1:E:32:PHE:CB	2.36	0.43
1:A:504:ILE:HG22	1:A:505:PRO:HD2	2.00	0.43
1:J:232:ARG:O	1:J:236:GLN:HG3	2.18	0.43
1:B:190:LEU:O	1:B:190:LEU:HD13	2.18	0.43
1:A:397:TYR:CE1	1:A:497:LEU:HD21	2.53	0.43
1:C:397:TYR:CE1	1:C:497:LEU:HD21	2.53	0.43
1:A:304:GLN:OE1	1:J:429:ARG:NE	2.46	0.43
1:I:446:LEU:O	1:I:450:MET:HG2	2.18	0.43
1:I:163:ILE:HD13	1:I:212:TYR:CE2	2.54	0.43
1:H:190:LEU:O	1:H:190:LEU:HD13	2.18	0.43
1:I:504:ILE:HG22	1:I:505:PRO:HD2	2.00	0.43
1:B:504:ILE:HG22	1:B:505:PRO:HD2	1.99	0.43
1:E:374:GLY:HA3	1:E:375:LEU:HA	1.73	0.43
1:A:503:ILE:HG21	1:A:515:TYR:CD2	2.53	0.43
1:F:503:ILE:HG21	1:F:515:TYR:CD2	2.54	0.43
1:A:657:PHE:CD2	1:A:663:LEU:HD12	2.53	0.43
1:F:642:LYS:HG3	1:F:778:TYR:OH	2.18	0.43
1:G:38:THR:HA	1:G:367:ALA:O	2.18	0.43
1:E:109:GLY:HA3	1:F:113:ARG:CD	2.48	0.43
1:J:356:ALA:O	1:J:360:VAL:HG23	2.19	0.43
1:I:356:ALA:O	1:I:360:VAL:HG23	2.19	0.43
1:F:23:VAL:HG21	1:F:32:PHE:CB	2.36	0.43
1:G:434:LEU:O	1:G:711:THR:HG21	2.19	0.43
1:E:434:LEU:O	1:E:711:THR:HG21	2.18	0.43
1:C:272:ALA:N	1:C:273:PRO:HD3	2.34	0.43
1:B:265:ILE:HD12	1:B:273:PRO:HG3	2.00	0.43
1:E:571:VAL:HA	1:E:572:ALA:HA	1.80	0.43
1:J:503:ILE:HG21	1:J:515:TYR:CG	2.54	0.43
1:B:642:LYS:HG3	1:B:778:TYR:OH	2.18	0.43
1:I:657:PHE:CD2	1:I:663:LEU:HD12	2.54	0.43
1:G:356:ALA:O	1:G:360:VAL:HG23	2.19	0.43
1:C:726:ILE:HA	1:C:727:ALA:HA	1.83	0.43
1:G:190:LEU:HD13	1:G:190:LEU:O	2.18	0.43
1:D:434:LEU:O	1:D:711:THR:HG21	2.19	0.43
1:F:434:LEU:O	1:F:711:THR:HG21	2.19	0.43
1:H:114:PRO:HA	1:H:228:THR:HG21	1.99	0.43
1:B:504:ILE:CG1	1:B:510:VAL:HG21	2.43	0.43
1:J:504:ILE:HG22	1:J:505:PRO:HD2	2.00	0.43
1:E:190:LEU:O	1:E:190:LEU:HD13	2.18	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:G:145:ASP:HB3	1:G:148:GLN:HG3	1.99	0.43
1:D:145:ASP:HB3	1:D:148:GLN:HG3	2.00	0.43
1:J:146:GLU:CD	1:J:604:LYS:HZ1	2.19	0.43
1:H:350:THR:N	1:H:351:PRO:CD	2.82	0.43
1:A:446:LEU:CD2	1:A:487:VAL:HG11	2.49	0.43
1:A:439:GLU:OE2	1:A:489:ASN:ND2	2.52	0.43
1:H:38:THR:HA	1:H:367:ALA:O	2.18	0.43
1:C:356:ALA:O	1:C:360:VAL:HG23	2.19	0.43
1:H:123:GLU:CD	1:I:229:ARG:NH1	2.65	0.43
1:A:265:ILE:HD12	1:A:273:PRO:HG3	2.00	0.43
1:B:545:ARG:HB2	1:B:572:ALA:CB	2.45	0.43
1:E:425:ILE:HD12	1:E:593:LEU:HD22	2.01	0.43
1:B:374:GLY:HA2	1:B:376:GLY:H	1.84	0.43
1:I:446:LEU:CD2	1:I:487:VAL:HG11	2.49	0.43
1:E:446:LEU:O	1:E:450:MET:HG2	2.18	0.43
1:E:356:ALA:O	1:E:360:VAL:HG23	2.19	0.43
1:J:439:GLU:OE2	1:J:489:ASN:ND2	2.52	0.43
1:F:356:ALA:O	1:F:360:VAL:HG23	2.19	0.43
1:F:643:GLY:HA3	1:F:644:GLY:HA2	1.84	0.43
1:A:721:ASP:HA	1:A:722:GLU:HA	1.57	0.43
1:A:43:ARG:CG	1:A:365:THR:HG23	2.49	0.43
1:E:439:GLU:OE2	1:E:489:ASN:ND2	2.52	0.43
1:E:402:ILE:HD12	1:E:668:VAL:CG1	2.49	0.43
1:A:402:ILE:HD12	1:A:668:VAL:CG1	2.49	0.43
1:B:122:ALA:HB1	1:C:114:PRO:HB2	2.00	0.43
1:A:272:ALA:N	1:A:273:PRO:HD3	2.34	0.43
1:B:272:ALA:N	1:B:273:PRO:HD3	2.33	0.43
1:I:425:ILE:HD12	1:I:593:LEU:HD22	2.01	0.43
1:C:425:ILE:HD12	1:C:593:LEU:HD22	2.01	0.43
1:F:777:PHE:HA	1:F:780:ILE:HD12	2.01	0.43
1:B:354:ARG:HH12	1:B:358:THR:HG22	1.80	0.43
1:D:120:SER:HB3	1:D:222:ASP:HA	2.01	0.43
1:J:503:ILE:HG21	1:J:515:TYR:CD2	2.53	0.43
1:J:43:ARG:CG	1:J:365:THR:HG23	2.49	0.43
1:H:721:ASP:HA	1:H:722:GLU:HA	1.57	0.43
1:E:77:ILE:O	1:E:81:ILE:HG13	2.19	0.43
1:H:434:LEU:O	1:H:711:THR:HG21	2.19	0.43
1:G:571:VAL:HA	1:G:572:ALA:HA	1.81	0.43
1:I:51:SER:HB2	1:I:57:ARG:H	1.84	0.43
1:E:51:SER:HB2	1:E:57:ARG:H	1.84	0.43
1:H:374:GLY:HA3	1:H:375:LEU:HA	1.73	0.43
1:C:657:PHE:CD2	1:C:663:LEU:HD12	2.53	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:E:43:ARG:CG	1:E:365:THR:HG23	2.48	0.43
1:A:356:ALA:O	1:A:360:VAL:HG23	2.19	0.43
1:B:356:ALA:O	1:B:360:VAL:HG23	2.19	0.43
1:F:77:ILE:O	1:F:81:ILE:HG13	2.19	0.43
1:H:43:ARG:CG	1:H:365:THR:HG23	2.49	0.43
1:J:163:ILE:HD13	1:J:212:TYR:CE2	2.54	0.43
1:G:77:ILE:O	1:G:81:ILE:HG13	2.19	0.43
1:H:261:VAL:HG13	1:H:316:TRP:HH2	1.85	0.42
1:D:504:ILE:HG22	1:D:505:PRO:HD2	2.00	0.42
1:G:51:SER:HB2	1:G:57:ARG:H	1.84	0.42
1:C:503:ILE:HG21	1:C:515:TYR:CD2	2.54	0.42
1:A:350:THR:N	1:A:351:PRO:CD	2.82	0.42
1:B:503:ILE:HG21	1:B:515:TYR:CG	2.54	0.42
1:E:446:LEU:CD2	1:E:487:VAL:HG11	2.49	0.42
1:F:726:ILE:HA	1:F:727:ALA:HA	1.83	0.42
1:C:77:ILE:O	1:C:81:ILE:HG13	2.19	0.42
1:F:43:ARG:CG	1:F:365:THR:HG23	2.49	0.42
1:A:77:ILE:O	1:A:81:ILE:HG13	2.19	0.42
1:J:261:VAL:HG13	1:J:316:TRP:HH2	1.84	0.42
1:G:261:VAL:HG13	1:G:316:TRP:HH2	1.84	0.42
1:A:434:LEU:O	1:A:711:THR:HG21	2.19	0.42
1:I:434:LEU:O	1:I:711:THR:HG21	2.19	0.42
1:H:503:ILE:HG21	1:H:515:TYR:CG	2.54	0.42
1:I:503:ILE:HG21	1:I:515:TYR:CD2	2.54	0.42
1:F:446:LEU:CD2	1:F:487:VAL:HG11	2.49	0.42
1:G:439:GLU:OE2	1:G:489:ASN:ND2	2.51	0.42
1:D:190:LEU:O	1:D:190:LEU:HD13	2.18	0.42
1:D:261:VAL:HG13	1:D:316:TRP:HH2	1.84	0.42
1:D:402:ILE:HD12	1:D:668:VAL:CG1	2.49	0.42
1:H:402:ILE:HD12	1:H:668:VAL:CG1	2.49	0.42
1:B:232:ARG:O	1:B:236:GLN:HG3	2.18	0.42
1:J:272:ALA:N	1:J:273:PRO:HD3	2.33	0.42
1:F:273:PRO:CB	1:F:276:TYR:CD2	2.96	0.42
1:J:425:ILE:HD12	1:J:593:LEU:HD22	2.01	0.42
1:H:68:ARG:HG3	1:H:165:ALA:CB	2.49	0.42
1:I:43:ARG:CG	1:I:365:THR:HG23	2.49	0.42
1:I:77:ILE:O	1:I:81:ILE:HG13	2.19	0.42
1:G:163:ILE:HD13	1:G:212:TYR:CE2	2.53	0.42
1:B:439:GLU:OE2	1:B:489:ASN:ND2	2.52	0.42
1:C:265:ILE:HD12	1:C:273:PRO:HG3	2.00	0.42
1:G:547:THR:HG23	1:G:550:VAL:HG23	2.02	0.42
1:G:418:VAL:HA	1:H:141:ASN:HD21	1.84	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:374:GLY:HA2	1:A:376:GLY:H	1.84	0.42
1:G:350:THR:N	1:G:351:PRO:CD	2.82	0.42
1:D:503:ILE:HG21	1:D:515:TYR:CG	2.54	0.42
1:B:350:THR:N	1:B:351:PRO:CD	2.83	0.42
1:J:657:PHE:CD2	1:J:663:LEU:HD12	2.54	0.42
1:G:446:LEU:CD2	1:G:487:VAL:HG11	2.49	0.42
1:B:446:LEU:CD2	1:B:487:VAL:HG11	2.50	0.42
1:E:38:THR:HA	1:E:367:ALA:O	2.18	0.42
1:G:643:GLY:HA3	1:G:644:GLY:HA2	1.84	0.42
1:C:439:GLU:OE2	1:C:489:ASN:ND2	2.52	0.42
1:A:261:VAL:HG13	1:A:316:TRP:HH2	1.84	0.42
1:I:402:ILE:HD12	1:I:668:VAL:CG1	2.49	0.42
1:H:273:PRO:CB	1:H:276:TYR:CD2	2.96	0.42
1:C:504:ILE:HG22	1:C:505:PRO:HD2	2.00	0.42
1:A:40:ALA:CB	1:A:290:ASN:OD1	2.63	0.42
1:H:374:GLY:HA2	1:H:376:GLY:H	1.84	0.42
1:I:350:THR:N	1:I:351:PRO:CD	2.82	0.42
1:F:68:ARG:HG3	1:F:165:ALA:CB	2.50	0.42
1:I:540:SER:HA	1:I:541:ASN:HA	1.74	0.42
1:C:446:LEU:CD2	1:C:487:VAL:HG11	2.49	0.42
1:B:77:ILE:O	1:B:81:ILE:HG13	2.19	0.42
1:H:101:ARG:HA	1:H:231:SER:HB3	2.02	0.42
1:D:77:ILE:O	1:D:81:ILE:HG13	2.19	0.42
1:E:163:ILE:HD13	1:E:212:TYR:CE2	2.54	0.42
1:F:190:LEU:O	1:F:190:LEU:HD13	2.18	0.42
1:B:434:LEU:O	1:B:711:THR:HG21	2.19	0.42
1:C:434:LEU:O	1:C:711:THR:HG21	2.19	0.42
1:A:273:PRO:CB	1:A:276:TYR:CD2	2.96	0.42
1:E:265:ILE:HD12	1:E:273:PRO:HG3	2.00	0.42
1:E:291:PHE:CE1	1:E:295:THR:HG21	2.54	0.42
1:B:425:ILE:HD12	1:B:593:LEU:HD22	2.01	0.42
1:A:547:THR:HG23	1:A:550:VAL:HG23	2.02	0.42
1:B:51:SER:HB2	1:B:57:ARG:H	1.85	0.42
1:A:141:ASN:HD21	1:J:418:VAL:HA	1.84	0.42
1:E:374:GLY:HA2	1:E:376:GLY:H	1.84	0.42
1:D:374:GLY:HA2	1:D:376:GLY:H	1.85	0.42
1:G:503:ILE:HG21	1:G:515:TYR:CG	2.54	0.42
1:E:503:ILE:HG21	1:E:515:TYR:CG	2.54	0.42
1:F:503:ILE:HG21	1:F:515:TYR:CG	2.55	0.42
1:D:68:ARG:HG3	1:D:165:ALA:CB	2.50	0.42
1:D:446:LEU:CD2	1:D:487:VAL:HG11	2.49	0.42
1:E:721:ASP:HA	1:E:722:GLU:HA	1.56	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:J:77:ILE:O	1:J:81:ILE:HG13	2.19	0.42
1:A:163:ILE:HD13	1:A:212:TYR:CE2	2.54	0.42
1:C:190:LEU:O	1:C:190:LEU:HD13	2.18	0.42
1:H:82:ILE:N	1:H:82:ILE:HD12	2.35	0.42
1:C:82:ILE:N	1:C:82:ILE:HD12	2.34	0.42
1:B:261:VAL:HG13	1:B:316:TRP:HH2	1.85	0.42
1:I:23:VAL:HG21	1:I:32:PHE:CB	2.36	0.42
1:B:402:ILE:HD12	1:B:668:VAL:CG1	2.49	0.42
1:C:513:LEU:HA	1:C:516:MET:HE2	2.02	0.42
1:H:513:LEU:HD23	1:H:516:MET:HE3	2.02	0.42
1:I:192:PRO:HB2	1:I:364:VAL:HG22	2.02	0.42
1:D:291:PHE:CE1	1:D:295:THR:HG21	2.55	0.42
1:G:291:PHE:CE1	1:G:295:THR:HG21	2.55	0.42
1:B:777:PHE:HA	1:B:780:ILE:HD12	2.02	0.42
1:D:777:PHE:HA	1:D:780:ILE:HD12	2.02	0.42
1:J:374:GLY:HA2	1:J:376:GLY:H	1.85	0.42
1:C:374:GLY:HA2	1:C:376:GLY:H	1.85	0.42
1:A:68:ARG:HG3	1:A:165:ALA:CB	2.50	0.42
1:H:446:LEU:CD2	1:H:487:VAL:HG11	2.50	0.42
1:D:356:ALA:O	1:D:360:VAL:HG23	2.19	0.42
1:J:643:GLY:HA3	1:J:644:GLY:HA2	1.84	0.42
1:F:163:ILE:HD13	1:F:212:TYR:CE2	2.54	0.42
1:I:101:ARG:HA	1:I:231:SER:HB3	2.01	0.42
1:B:163:ILE:HD13	1:B:212:TYR:CE2	2.54	0.42
1:F:82:ILE:HD12	1:F:82:ILE:N	2.35	0.42
1:B:270:VAL:HG22	1:B:321:ASN:HD21	1.81	0.42
1:J:434:LEU:O	1:J:711:THR:HG21	2.19	0.42
1:C:402:ILE:HD12	1:C:668:VAL:CG1	2.50	0.42
1:H:480:PRO:HD2	1:H:567:LEU:HD22	2.02	0.42
1:A:51:SER:HB2	1:A:57:ARG:H	1.84	0.42
1:G:777:PHE:HA	1:G:780:ILE:HD12	2.02	0.42
1:J:493:MET:O	1:J:493:MET:HG3	2.20	0.42
1:C:68:ARG:HG3	1:C:165:ALA:CB	2.50	0.42
1:B:68:ARG:HG3	1:B:165:ALA:CB	2.50	0.42
1:F:622:ARG:O	1:F:626:VAL:HG23	2.20	0.42
1:E:101:ARG:HA	1:E:231:SER:HB3	2.01	0.42
1:H:622:ARG:O	1:H:626:VAL:HG23	2.20	0.42
1:B:622:ARG:O	1:B:626:VAL:HG23	2.20	0.42
1:G:374:GLY:HA2	1:G:376:GLY:H	1.84	0.42
1:I:439:GLU:OE2	1:I:489:ASN:ND2	2.52	0.42
1:B:460:GLU:HG2	1:F:775:ASN:ND2	2.35	0.42
1:B:123:GLU:OE2	1:C:229:ARG:NH2	2.52	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:I:291:PHE:CE1	1:I:295:THR:HG21	2.55	0.42
1:F:291:PHE:CE1	1:F:295:THR:HG21	2.54	0.42
1:B:408:TYR:CB	1:B:425:ILE:CG2	2.98	0.42
1:B:408:TYR:CB	1:B:425:ILE:HG23	2.50	0.42
1:C:503:ILE:HG21	1:C:515:TYR:CG	2.54	0.42
1:B:493:MET:O	1:B:493:MET:HG3	2.20	0.42
1:F:493:MET:HG3	1:F:493:MET:O	2.20	0.42
1:E:540:SER:HA	1:E:541:ASN:HA	1.74	0.42
1:G:540:SER:HA	1:G:541:ASN:HA	1.75	0.42
1:H:439:GLU:OE2	1:H:489:ASN:ND2	2.52	0.42
1:H:356:ALA:O	1:H:360:VAL:HG23	2.19	0.42
1:F:439:GLU:OE2	1:F:489:ASN:ND2	2.53	0.42
1:E:59:TYR:CE2	1:E:591:PRO:HD3	2.55	0.42
1:F:261:VAL:HG13	1:F:316:TRP:HH2	1.84	0.42
1:C:504:ILE:CG1	1:C:510:VAL:HG21	2.43	0.42
1:D:408:TYR:CB	1:D:425:ILE:CG2	2.98	0.42
1:E:374:GLY:CA	1:E:376:GLY:H	2.33	0.42
1:A:503:ILE:HG21	1:A:515:TYR:CG	2.54	0.42
1:F:350:THR:N	1:F:351:PRO:CD	2.82	0.42
1:I:503:ILE:HG21	1:I:515:TYR:CG	2.55	0.42
1:A:540:SER:HA	1:A:541:ASN:HA	1.75	0.42
1:G:622:ARG:O	1:G:626:VAL:HG23	2.20	0.42
1:F:101:ARG:HA	1:F:231:SER:HB3	2.02	0.42
1:C:43:ARG:CG	1:C:365:THR:HG23	2.49	0.42
1:D:638:TYR:CE1	1:D:647:VAL:HG11	2.55	0.42
1:D:108:MET:HA	1:J:114:PRO:HG2	2.02	0.41
1:J:192:PRO:HB2	1:J:364:VAL:HG22	2.02	0.41
1:I:408:TYR:CB	1:I:425:ILE:HG23	2.50	0.41
1:E:777:PHE:HA	1:E:780:ILE:HD12	2.02	0.41
1:B:374:GLY:CA	1:B:376:GLY:H	2.33	0.41
1:C:374:GLY:HA3	1:C:375:LEU:HA	1.74	0.41
1:J:68:ARG:HG3	1:J:165:ALA:CB	2.50	0.41
1:G:91:CYS:HG	1:G:207:PHE:HE2	1.65	0.41
1:G:411:PHE:CE2	1:H:88:THR:HG21	2.55	0.41
1:G:43:ARG:CG	1:G:365:THR:HG23	2.50	0.41
1:J:101:ARG:HA	1:J:231:SER:HB3	2.01	0.41
1:C:163:ILE:HD13	1:C:212:TYR:CE2	2.55	0.41
1:G:402:ILE:HD12	1:G:668:VAL:CG1	2.50	0.41
1:E:171:LYS:HB3	1:F:232:ARG:NH2	2.35	0.41
1:E:273:PRO:CB	1:E:276:TYR:CD2	2.98	0.41
1:C:40:ALA:CB	1:C:290:ASN:OD1	2.64	0.41
1:C:192:PRO:HB2	1:C:364:VAL:HG22	2.02	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:H:192:PRO:HB2	1:H:364:VAL:HG22	2.01	0.41
1:G:418:VAL:HG12	1:H:141:ASN:ND2	2.30	0.41
1:H:291:PHE:CE1	1:H:295:THR:HG21	2.54	0.41
1:A:425:ILE:HD12	1:A:593:LEU:HD22	2.02	0.41
1:H:51:SER:HB2	1:H:57:ARG:H	1.85	0.41
1:A:777:PHE:HA	1:A:780:ILE:HD12	2.02	0.41
1:E:350:THR:N	1:E:351:PRO:CD	2.82	0.41
1:H:77:ILE:O	1:H:81:ILE:HG13	2.19	0.41
1:D:43:ARG:CG	1:D:365:THR:HG23	2.49	0.41
1:A:638:TYR:CE1	1:A:647:VAL:HG11	2.55	0.41
1:C:622:ARG:O	1:C:626:VAL:HG23	2.20	0.41
1:I:82:ILE:HD12	1:I:82:ILE:N	2.35	0.41
1:I:261:VAL:HG13	1:I:316:TRP:HH2	1.85	0.41
1:F:192:PRO:HB2	1:F:364:VAL:HG22	2.02	0.41
1:D:192:PRO:HB2	1:D:364:VAL:HG22	2.02	0.41
1:C:291:PHE:CE1	1:C:295:THR:HG21	2.55	0.41
1:E:408:TYR:CB	1:E:425:ILE:CG2	2.99	0.41
1:C:408:TYR:CB	1:C:425:ILE:CG2	2.98	0.41
1:H:408:TYR:CB	1:H:425:ILE:CG2	2.98	0.41
1:G:425:ILE:HD12	1:G:593:LEU:HD22	2.01	0.41
1:I:374:GLY:HA2	1:I:376:GLY:H	1.85	0.41
1:C:350:THR:N	1:C:351:PRO:CD	2.82	0.41
1:E:493:MET:HG3	1:E:493:MET:O	2.20	0.41
1:G:101:ARG:HA	1:G:231:SER:HB3	2.02	0.41
1:G:59:TYR:CE2	1:G:591:PRO:HD3	2.56	0.41
1:G:579:THR:HB	1:G:580:PRO:HD2	2.02	0.41
1:D:82:ILE:N	1:D:82:ILE:HD12	2.36	0.41
1:E:82:ILE:HD12	1:E:82:ILE:N	2.35	0.41
1:G:403:ASN:O	1:G:403:ASN:OD1	2.38	0.41
1:E:403:ASN:O	1:E:403:ASN:OD1	2.38	0.41
1:F:403:ASN:O	1:F:403:ASN:OD1	2.38	0.41
1:F:402:ILE:HD12	1:F:668:VAL:CG1	2.49	0.41
1:C:171:LYS:O	1:D:232:ARG:NH2	2.51	0.41
1:B:190:LEU:CD2	1:B:290:ASN:ND2	2.83	0.41
1:A:192:PRO:HB2	1:A:364:VAL:HG22	2.02	0.41
1:I:408:TYR:CB	1:I:425:ILE:CG2	2.98	0.41
1:E:425:ILE:O	1:E:596:ARG:HG3	2.21	0.41
1:F:408:TYR:CB	1:F:425:ILE:HG23	2.51	0.41
1:D:425:ILE:O	1:D:596:ARG:HG3	2.21	0.41
1:D:350:THR:N	1:D:351:PRO:CD	2.83	0.41
1:A:493:MET:O	1:A:493:MET:HG3	2.20	0.41
1:H:493:MET:HG3	1:H:493:MET:O	2.20	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:I:420:VAL:HG12	1:I:602:VAL:HG13	2.03	0.41
1:E:420:VAL:HG12	1:E:602:VAL:HG13	2.03	0.41
1:E:622:ARG:O	1:E:626:VAL:HG23	2.20	0.41
1:C:643:GLY:HA3	1:C:644:GLY:HA2	1.84	0.41
1:H:638:TYR:CE1	1:H:647:VAL:HG11	2.55	0.41
1:I:726:ILE:HA	1:I:727:ALA:HA	1.83	0.41
1:H:306:TRP:CE3	1:H:306:TRP:HA	2.56	0.41
1:J:402:ILE:HD12	1:J:668:VAL:CG1	2.49	0.41
1:B:403:ASN:O	1:B:403:ASN:OD1	2.38	0.41
1:E:272:ALA:N	1:E:273:PRO:HD3	2.33	0.41
1:E:146:GLU:CD	1:E:604:LYS:HZ1	2.22	0.41
1:A:291:PHE:CE1	1:A:295:THR:HG21	2.55	0.41
1:B:291:PHE:CE1	1:B:295:THR:HG21	2.55	0.41
1:C:408:TYR:CB	1:C:425:ILE:HG23	2.50	0.41
1:J:51:SER:HB2	1:J:57:ARG:H	1.86	0.41
1:C:480:PRO:HD2	1:C:567:LEU:HD22	2.02	0.41
1:I:777:PHE:HA	1:I:780:ILE:HD12	2.02	0.41
1:G:68:ARG:HG3	1:G:165:ALA:CB	2.50	0.41
1:B:420:VAL:HG12	1:B:602:VAL:HG13	2.03	0.41
1:F:420:VAL:HG12	1:F:602:VAL:HG13	2.03	0.41
1:B:59:TYR:CE2	1:B:591:PRO:HD3	2.55	0.41
1:A:101:ARG:HA	1:A:231:SER:HB3	2.02	0.41
1:B:579:THR:HB	1:B:580:PRO:HD2	2.02	0.41
1:F:579:THR:HB	1:F:580:PRO:HD2	2.02	0.41
1:E:261:VAL:HG13	1:E:316:TRP:HH2	1.84	0.41
1:D:403:ASN:OD1	1:D:403:ASN:O	2.38	0.41
1:H:425:ILE:O	1:H:596:ARG:HG3	2.21	0.41
1:F:425:ILE:HD12	1:F:593:LEU:HD22	2.01	0.41
1:G:408:TYR:CB	1:G:425:ILE:CG2	2.98	0.41
1:H:120:SER:HB3	1:H:222:ASP:HA	2.02	0.41
1:D:374:GLY:CA	1:D:376:GLY:H	2.34	0.41
1:J:350:THR:N	1:J:351:PRO:CD	2.83	0.41
1:I:493:MET:O	1:I:493:MET:HG3	2.20	0.41
1:F:627:SER:HB3	1:F:726:ILE:CD1	2.51	0.41
1:G:374:GLY:CA	1:G:376:GLY:H	2.34	0.41
1:E:627:SER:HB3	1:E:726:ILE:CD1	2.51	0.41
1:I:59:TYR:CE2	1:I:591:PRO:HD3	2.56	0.41
1:A:622:ARG:O	1:A:626:VAL:HG23	2.20	0.41
1:D:59:TYR:CE2	1:D:591:PRO:HD3	2.56	0.41
1:D:101:ARG:HA	1:D:231:SER:HB3	2.02	0.41
1:I:622:ARG:O	1:I:626:VAL:HG23	2.20	0.41
1:B:82:ILE:N	1:B:82:ILE:HD12	2.35	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:J:82:ILE:HD12	1:J:82:ILE:N	2.35	0.41
1:D:272:ALA:N	1:D:273:PRO:HD3	2.34	0.41
1:J:513:LEU:HD23	1:J:516:MET:HE3	2.03	0.41
1:H:40:ALA:CB	1:H:192:PRO:HG3	2.51	0.41
1:H:547:THR:CG2	1:H:550:VAL:HG23	2.51	0.41
1:J:291:PHE:CE1	1:J:295:THR:HG21	2.55	0.41
1:J:408:TYR:CB	1:J:425:ILE:CG2	2.99	0.41
1:H:408:TYR:CB	1:H:425:ILE:HG23	2.50	0.41
1:F:408:TYR:CB	1:F:425:ILE:CG2	2.98	0.41
1:F:425:ILE:O	1:F:596:ARG:HG3	2.21	0.41
1:F:547:THR:HG23	1:F:550:VAL:HG23	2.02	0.41
1:D:547:THR:HG23	1:D:550:VAL:HG23	2.02	0.41
1:C:374:GLY:CA	1:C:376:GLY:H	2.34	0.41
1:G:514:LEU:HD23	1:G:514:LEU:HA	1.91	0.41
1:D:627:SER:HB3	1:D:726:ILE:CD1	2.51	0.41
1:I:627:SER:HB3	1:I:726:ILE:CD1	2.51	0.41
1:I:579:THR:HB	1:I:580:PRO:HD2	2.03	0.41
1:H:59:TYR:CE2	1:H:591:PRO:HD3	2.55	0.41
1:C:579:THR:HB	1:C:580:PRO:HD2	2.02	0.41
1:B:101:ARG:HA	1:B:231:SER:HB3	2.01	0.41
1:J:59:TYR:CE2	1:J:591:PRO:HD3	2.56	0.41
1:B:638:TYR:CE1	1:B:647:VAL:HG11	2.56	0.41
1:J:622:ARG:O	1:J:626:VAL:HG23	2.20	0.41
1:A:579:THR:HB	1:A:580:PRO:HD2	2.02	0.41
1:A:403:ASN:O	1:A:403:ASN:OD1	2.39	0.41
1:H:403:ASN:OD1	1:H:403:ASN:O	2.39	0.41
1:D:504:ILE:CG1	1:D:510:VAL:HG21	2.43	0.41
1:G:480:PRO:HB2	1:G:510:VAL:HG22	2.03	0.41
1:G:547:THR:CG2	1:G:550:VAL:HG23	2.51	0.41
1:H:425:ILE:HD12	1:H:593:LEU:HD22	2.01	0.41
1:D:408:TYR:CB	1:D:425:ILE:HG23	2.50	0.41
1:F:547:THR:CG2	1:F:550:VAL:HG23	2.51	0.41
1:B:547:THR:HG23	1:B:550:VAL:HG23	2.02	0.41
1:C:51:SER:HB2	1:C:57:ARG:H	1.85	0.41
1:E:418:VAL:HA	1:F:141:ASN:HD21	1.84	0.41
1:H:514:LEU:HD23	1:H:514:LEU:HA	1.91	0.41
1:E:68:ARG:HG3	1:E:165:ALA:CB	2.50	0.41
1:C:627:SER:HB3	1:C:726:ILE:CD1	2.51	0.41
1:E:638:TYR:CE1	1:E:647:VAL:HG11	2.56	0.41
1:B:721:ASP:HA	1:B:722:GLU:HA	1.56	0.41
1:A:59:TYR:CE2	1:A:591:PRO:HD3	2.56	0.41
1:A:82:ILE:HD12	1:A:82:ILE:N	2.36	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:C:261:VAL:HG13	1:C:316:TRP:HH2	1.85	0.41
1:A:306:TRP:HA	1:A:306:TRP:CE3	2.56	0.41
1:H:270:VAL:HG22	1:H:321:ASN:HD21	1.81	0.41
1:J:403:ASN:O	1:J:403:ASN:OD1	2.38	0.41
1:D:273:PRO:CB	1:D:276:TYR:CD2	2.96	0.41
1:B:480:PRO:HD2	1:B:567:LEU:HD22	2.03	0.41
1:J:504:ILE:CG1	1:J:510:VAL:HG21	2.43	0.41
1:J:480:PRO:HB2	1:J:510:VAL:HG22	2.03	0.41
1:B:40:ALA:CB	1:B:192:PRO:HG3	2.51	0.41
1:C:146:GLU:CD	1:C:604:LYS:HZ1	2.22	0.41
1:C:596:ARG:HB2	1:C:601:TYR:HE1	1.86	0.41
1:F:596:ARG:HB2	1:F:601:TYR:HE1	1.86	0.41
1:D:596:ARG:HB2	1:D:601:TYR:HE1	1.85	0.41
1:G:408:TYR:CB	1:G:425:ILE:HG23	2.50	0.41
1:J:547:THR:HG23	1:J:550:VAL:HG23	2.02	0.41
1:D:547:THR:CG2	1:D:550:VAL:HG23	2.51	0.41
1:D:51:SER:HB2	1:D:57:ARG:H	1.84	0.41
1:C:777:PHE:HA	1:C:780:ILE:HD12	2.02	0.41
1:F:480:PRO:HD2	1:F:567:LEU:HD22	2.02	0.41
1:J:777:PHE:HA	1:J:780:ILE:HD12	2.02	0.41
1:H:777:PHE:HA	1:H:780:ILE:HD12	2.03	0.41
1:A:374:GLY:CA	1:A:376:GLY:H	2.34	0.41
1:D:493:MET:HG3	1:D:493:MET:O	2.20	0.41
1:J:514:LEU:HA	1:J:514:LEU:HD23	1.91	0.41
1:J:446:LEU:CD2	1:J:487:VAL:HG11	2.50	0.41
1:A:414:PRO:HG3	1:B:93:PHE:HD1	1.86	0.41
1:H:414:PRO:HG3	1:I:93:PHE:HD1	1.86	0.41
1:J:627:SER:HB3	1:J:726:ILE:CD1	2.51	0.41
1:G:464:ARG:HD3	1:G:469:GLU:OE2	2.21	0.41
1:G:82:ILE:N	1:G:82:ILE:HD12	2.35	0.41
1:C:101:ARG:HA	1:C:231:SER:HB3	2.01	0.41
1:F:91:CYS:SG	1:F:245:ILE:HD11	2.61	0.41
1:I:208:SER:OG	1:I:209:GLU:N	2.54	0.41
1:I:638:TYR:CE1	1:I:647:VAL:HG11	2.56	0.41
1:A:91:CYS:SG	1:A:245:ILE:HD11	2.61	0.41
1:F:638:TYR:CE1	1:F:647:VAL:HG11	2.56	0.41
1:J:579:THR:HB	1:J:580:PRO:HD2	2.02	0.41
1:G:627:SER:HB3	1:G:726:ILE:CD1	2.51	0.41
1:H:464:ARG:HD3	1:H:469:GLU:OE2	2.21	0.41
1:B:643:GLY:HA3	1:B:644:GLY:HA2	1.84	0.41
1:D:622:ARG:O	1:D:626:VAL:HG23	2.20	0.41
1:D:480:PRO:HB2	1:D:510:VAL:HG22	2.03	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:G:192:PRO:HB2	1:G:364:VAL:HG22	2.02	0.41
1:G:40:ALA:CB	1:G:192:PRO:HG3	2.51	0.41
1:A:408:TYR:CB	1:A:425:ILE:CG2	2.99	0.41
1:J:547:THR:CG2	1:J:550:VAL:HG23	2.51	0.41
1:B:120:SER:HB3	1:B:222:ASP:HA	2.03	0.41
1:J:374:GLY:CA	1:J:376:GLY:H	2.34	0.41
1:A:514:LEU:HD23	1:A:514:LEU:HA	1.91	0.41
1:B:627:SER:HB3	1:B:726:ILE:CD1	2.51	0.41
1:H:91:CYS:SG	1:H:245:ILE:HD11	2.61	0.41
1:C:403:ASN:OD1	1:C:403:ASN:O	2.38	0.40
1:H:272:ALA:N	1:H:273:PRO:HD3	2.34	0.40
1:H:480:PRO:HB2	1:H:510:VAL:HG22	2.03	0.40
1:E:547:THR:HG23	1:E:550:VAL:HG23	2.02	0.40
1:C:547:THR:HG23	1:C:550:VAL:HG23	2.02	0.40
1:I:425:ILE:O	1:I:596:ARG:HG3	2.21	0.40
1:E:408:TYR:CB	1:E:425:ILE:HG23	2.51	0.40
1:B:596:ARG:HB2	1:B:601:TYR:HE1	1.86	0.40
1:A:547:THR:CG2	1:A:550:VAL:HG23	2.51	0.40
1:F:51:SER:HB2	1:F:57:ARG:H	1.85	0.40
1:A:480:PRO:HD2	1:A:567:LEU:HD22	2.03	0.40
1:I:374:GLY:CA	1:I:376:GLY:H	2.34	0.40
1:I:68:ARG:HG3	1:I:165:ALA:CB	2.50	0.40
1:C:540:SER:HA	1:C:541:ASN:HA	1.75	0.40
1:F:374:GLY:HA2	1:F:376:GLY:H	1.85	0.40
1:E:579:THR:HB	1:E:580:PRO:HD2	2.03	0.40
1:H:627:SER:HB3	1:H:726:ILE:CD1	2.51	0.40
1:B:464:ARG:HD3	1:B:469:GLU:OE2	2.22	0.40
1:J:306:TRP:CE3	1:J:306:TRP:HA	2.56	0.40
1:A:108:MET:HA	1:B:114:PRO:CG	2.50	0.40
1:I:596:ARG:HB2	1:I:601:TYR:HE1	1.87	0.40
1:D:425:ILE:HD12	1:D:593:LEU:HD22	2.02	0.40
1:G:493:MET:HG3	1:G:493:MET:O	2.20	0.40
1:D:514:LEU:HD23	1:D:514:LEU:HA	1.91	0.40
1:J:464:ARG:HD3	1:J:469:GLU:OE2	2.21	0.40
1:E:635:ARG:HE	1:E:637:LEU:HD21	1.86	0.40
1:E:464:ARG:HD3	1:E:469:GLU:OE2	2.22	0.40
1:D:579:THR:HB	1:D:580:PRO:HD2	2.02	0.40
1:G:651:ILE:HG23	1:G:746:THR:HG22	2.03	0.40
1:I:618:LYS:HB2	1:I:621:ASP:HB3	2.04	0.40
1:I:635:ARG:HE	1:I:637:LEU:HD21	1.86	0.40
1:B:651:ILE:HG23	1:B:746:THR:HG22	2.04	0.40
1:C:306:TRP:CE3	1:C:306:TRP:HA	2.56	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:I:403:ASN:O	1:I:403:ASN:OD1	2.38	0.40
1:B:273:PRO:CB	1:B:276:TYR:CD2	2.99	0.40
1:B:192:PRO:HB2	1:B:364:VAL:HG22	2.03	0.40
1:H:547:THR:HG23	1:H:550:VAL:HG23	2.02	0.40
1:A:408:TYR:CB	1:A:425:ILE:HG23	2.51	0.40
1:E:480:PRO:HD2	1:E:567:LEU:HD22	2.03	0.40
1:E:120:SER:HB3	1:E:222:ASP:HA	2.04	0.40
1:E:618:LYS:HB2	1:E:621:ASP:HB3	2.03	0.40
1:F:618:LYS:HB2	1:F:621:ASP:HB3	2.04	0.40
1:A:618:LYS:HB2	1:A:621:ASP:HB3	2.03	0.40
1:F:651:ILE:HG23	1:F:746:THR:HG22	2.03	0.40
1:F:59:TYR:CE2	1:F:591:PRO:HD3	2.56	0.40
1:G:306:TRP:HA	1:G:306:TRP:CE3	2.56	0.40
1:G:272:ALA:N	1:G:273:PRO:HD3	2.34	0.40
1:E:547:THR:CG2	1:E:550:VAL:HG23	2.51	0.40
1:J:425:ILE:O	1:J:596:ARG:HG3	2.21	0.40
1:C:425:ILE:O	1:C:596:ARG:HG3	2.21	0.40
1:B:425:ILE:O	1:B:596:ARG:HG3	2.21	0.40
1:G:596:ARG:HB2	1:G:601:TYR:HE1	1.86	0.40
1:J:641:ARG:NH1	1:J:774:ASP:HA	2.36	0.40
1:H:374:GLY:CA	1:H:376:GLY:H	2.34	0.40
1:A:120:SER:HB3	1:A:222:ASP:HA	2.04	0.40
1:C:638:TYR:CE1	1:C:647:VAL:HG11	2.56	0.40
1:J:638:TYR:CE1	1:J:647:VAL:HG11	2.55	0.40
1:B:306:TRP:CE3	1:B:306:TRP:HA	2.57	0.40
1:B:23:VAL:HG21	1:B:32:PHE:CB	2.36	0.40
1:F:272:ALA:N	1:F:273:PRO:HD3	2.34	0.40
1:B:480:PRO:HB2	1:B:510:VAL:HG22	2.03	0.40
1:I:190:LEU:CD2	1:I:290:ASN:ND2	2.84	0.40
1:E:190:LEU:CD2	1:E:290:ASN:ND2	2.85	0.40
1:A:425:ILE:O	1:A:596:ARG:HG3	2.21	0.40
1:I:547:THR:HG23	1:I:550:VAL:HG23	2.02	0.40
1:C:641:ARG:NH1	1:C:774:ASP:HA	2.37	0.40
1:A:641:ARG:NH1	1:A:774:ASP:HA	2.36	0.40
1:E:461:LEU:HD23	1:E:485:LEU:CD2	2.52	0.40
1:C:493:MET:HG3	1:C:493:MET:O	2.20	0.40
1:D:121:TRP:CE3	1:J:226:PRO:HG3	2.56	0.40
1:A:627:SER:HB3	1:A:726:ILE:CD1	2.51	0.40
1:G:638:TYR:CE1	1:G:647:VAL:HG11	2.56	0.40
1:J:91:CYS:SG	1:J:245:ILE:HD11	2.61	0.40
1:A:651:ILE:HG23	1:A:746:THR:HG22	2.03	0.40
1:J:618:LYS:HB2	1:J:621:ASP:HB3	2.03	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:H:579:THR:HB	1:H:580:PRO:HD2	2.03	0.40

All (6) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:D:219:GLU:OE1	1:H:219:GLU:OE2[6_476]	1.30	0.90
1:D:219:GLU:OE1	1:H:219:GLU:CD[6_476]	1.35	0.85
1:D:219:GLU:OE1	1:H:219:GLU:OE1[6_476]	1.40	0.80
1:D:219:GLU:OE2	1:H:219:GLU:OE1[6_476]	1.40	0.80
1:D:219:GLU:CD	1:H:219:GLU:OE1[6_476]	1.43	0.77
1:D:219:GLU:CD	1:H:219:GLU:CD[6_476]	1.93	0.27

## 5.3 Torsion angles

### 5.3.1 Protein backbone ⓘ

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution. 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	745/792 (94%)	713 (96%)	32 (4%)	0	100	100
1	B	745/792 (94%)	712 (96%)	33 (4%)	0	100	100
1	C	745/792 (94%)	713 (96%)	32 (4%)	0	100	100
1	D	745/792 (94%)	713 (96%)	32 (4%)	0	100	100
1	E	745/792 (94%)	713 (96%)	32 (4%)	0	100	100
1	F	745/792 (94%)	713 (96%)	32 (4%)	0	100	100
1	G	745/792 (94%)	713 (96%)	32 (4%)	0	100	100
1	H	745/792 (94%)	713 (96%)	32 (4%)	0	100	100
1	I	745/792 (94%)	713 (96%)	32 (4%)	0	100	100
1	J	745/792 (94%)	713 (96%)	32 (4%)	0	100	100
All	All	7450/7920 (94%)	7129 (96%)	321 (4%)	0	100	100

There are no Ramachandran outliers to report.

### 5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution. 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	622/663 (94%)	611 (98%)	11 (2%)	71	94
1	B	622/663 (94%)	611 (98%)	11 (2%)	71	94
1	C	622/663 (94%)	611 (98%)	11 (2%)	71	94
1	D	622/663 (94%)	611 (98%)	11 (2%)	71	94
1	E	622/663 (94%)	611 (98%)	11 (2%)	71	94
1	F	622/663 (94%)	611 (98%)	11 (2%)	71	94
1	G	622/663 (94%)	611 (98%)	11 (2%)	71	94
1	H	622/663 (94%)	611 (98%)	11 (2%)	71	94
1	I	622/663 (94%)	611 (98%)	11 (2%)	71	94
1	J	622/663 (94%)	611 (98%)	11 (2%)	71	94
All	All	6220/6630 (94%)	6110 (98%)	110 (2%)	71	94

All (110) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	189	TYR
1	A	306	TRP
1	A	372	TYR
1	A	429	ARG
1	A	461	LEU
1	A	483	SER
1	A	672	TYR
1	A	715	LEU
1	A	724	THR
1	A	733	VAL
1	A	774	ASP
1	B	189	TYR
1	B	306	TRP
1	B	372	TYR
1	B	429	ARG
1	B	461	LEU
1	B	483	SER
1	B	672	TYR

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Mol	Chain	Res	Type
1	B	715	LEU
1	B	724	THR
1	B	733	VAL
1	B	774	ASP
1	C	189	TYR
1	C	306	TRP
1	C	372	TYR
1	C	429	ARG
1	C	461	LEU
1	C	483	SER
1	C	672	TYR
1	C	715	LEU
1	C	724	THR
1	C	733	VAL
1	C	774	ASP
1	D	189	TYR
1	D	306	TRP
1	D	372	TYR
1	D	429	ARG
1	D	461	LEU
1	D	483	SER
1	D	672	TYR
1	D	715	LEU
1	D	724	THR
1	D	733	VAL
1	D	774	ASP
1	E	189	TYR
1	E	306	TRP
1	E	372	TYR
1	E	429	ARG
1	E	461	LEU
1	E	483	SER
1	E	672	TYR
1	E	715	LEU
1	E	724	THR
1	E	733	VAL
1	E	774	ASP
1	F	189	TYR
1	F	306	TRP
1	F	372	TYR
1	F	429	ARG
1	F	461	LEU

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Mol	Chain	Res	Type
1	F	483	SER
1	F	672	TYR
1	F	715	LEU
1	F	724	THR
1	F	733	VAL
1	F	774	ASP
1	G	189	TYR
1	G	306	TRP
1	G	372	TYR
1	G	429	ARG
1	G	461	LEU
1	G	483	SER
1	G	672	TYR
1	G	715	LEU
1	G	724	THR
1	G	733	VAL
1	G	774	ASP
1	H	189	TYR
1	H	306	TRP
1	H	372	TYR
1	H	429	ARG
1	H	461	LEU
1	H	483	SER
1	H	672	TYR
1	H	715	LEU
1	H	724	THR
1	H	733	VAL
1	H	774	ASP
1	I	189	TYR
1	I	306	TRP
1	I	372	TYR
1	I	429	ARG
1	I	461	LEU
1	I	483	SER
1	I	672	TYR
1	I	715	LEU
1	I	724	THR
1	I	733	VAL
1	I	774	ASP
1	J	189	TYR
1	J	306	TRP
1	J	372	TYR

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Mol	Chain	Res	Type
1	J	429	ARG
1	J	461	LEU
1	J	483	SER
1	J	672	TYR
1	J	715	LEU
1	J	724	THR
1	J	733	VAL
1	J	774	ASP

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (73) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	130	ASN
1	A	141	ASN
1	A	148	GLN
1	A	169	HIS
1	A	288	ASN
1	A	549	GLN
1	A	741	GLN
1	B	130	ASN
1	B	141	ASN
1	B	148	GLN
1	B	169	HIS
1	B	249	ASN
1	B	288	ASN
1	B	549	GLN
1	B	741	GLN
1	C	130	ASN
1	C	141	ASN
1	C	148	GLN
1	C	169	HIS
1	C	288	ASN
1	C	549	GLN
1	C	741	GLN
1	D	130	ASN
1	D	141	ASN
1	D	148	GLN
1	D	169	HIS
1	D	288	ASN
1	D	741	GLN
1	E	130	ASN
1	E	141	ASN

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Mol	Chain	Res	Type
1	E	148	GLN
1	E	169	HIS
1	E	249	ASN
1	E	288	ASN
1	E	549	GLN
1	E	741	GLN
1	F	130	ASN
1	F	141	ASN
1	F	148	GLN
1	F	169	HIS
1	F	288	ASN
1	F	549	GLN
1	F	729	GLN
1	F	741	GLN
1	F	775	ASN
1	G	130	ASN
1	G	141	ASN
1	G	148	GLN
1	G	169	HIS
1	G	288	ASN
1	G	549	GLN
1	G	741	GLN
1	H	130	ASN
1	H	141	ASN
1	H	148	GLN
1	H	169	HIS
1	H	288	ASN
1	H	549	GLN
1	H	741	GLN
1	I	130	ASN
1	I	141	ASN
1	I	148	GLN
1	I	169	HIS
1	I	288	ASN
1	I	549	GLN
1	I	741	GLN
1	J	130	ASN
1	J	141	ASN
1	J	148	GLN
1	J	169	HIS
1	J	288	ASN
1	J	549	GLN

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Mol	Chain	Res	Type
1	J	741	GLN

### 5.3.3 RNA ⓘ

There are no RNA chains in this entry.

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

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

### 5.5 Carbohydrates ⓘ

There are no carbohydrates in this entry.

### 5.6 Ligand geometry ⓘ

There are no ligands in this entry.

### 5.7 Other polymers ⓘ

There are no such residues in this entry.

### 5.8 Polymer linkage issues

There are no chain breaks in this entry.

## 6 Fit of model and data ⓘ

### 6.1 Protein, DNA and RNA chains ⓘ

In the following table, the column labelled ‘#RSRZ > 2’ contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95<sup>th</sup> percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled ‘Q < 0.9’ lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ > 2	OWAB(Å <sup>2</sup> )	Q < 0.9
1	A	749/792 (94%)	-0.08	4 (0%) 88 73	85, 134, 194, 235	0
1	B	749/792 (94%)	-0.06	5 (0%) 84 66	79, 127, 189, 230	0
1	C	749/792 (94%)	-0.03	7 (0%) 81 61	86, 144, 202, 250	0
1	D	749/792 (94%)	-0.04	7 (0%) 81 61	88, 138, 198, 241	0
1	E	749/792 (94%)	-0.05	6 (0%) 83 63	86, 131, 189, 231	0
1	F	749/792 (94%)	-0.02	13 (1%) 67 44	88, 146, 206, 239	0
1	G	749/792 (94%)	-0.04	7 (0%) 81 61	85, 140, 199, 240	0
1	H	749/792 (94%)	-0.05	4 (0%) 88 73	83, 136, 199, 238	0
1	I	749/792 (94%)	-0.03	6 (0%) 83 63	86, 134, 199, 246	0
1	J	749/792 (94%)	-0.04	8 (1%) 77 54	87, 138, 199, 235	0
All	All	7490/7920 (94%)	-0.04	67 (0%) 81 61	79, 137, 198, 250	0

All (67) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	D	720	ARG	7.1
1	C	720	ARG	6.8
1	H	720	ARG	6.0
1	F	720	ARG	5.8
1	G	720	ARG	5.5
1	A	720	ARG	5.1
1	E	720	ARG	5.0
1	B	720	ARG	4.8
1	I	720	ARG	4.7
1	D	719	ARG	4.5
1	J	720	ARG	4.4
1	A	719	ARG	3.9
1	G	719	ARG	3.5

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Mol	Chain	Res	Type	RSRZ
1	C	719	ARG	3.5
1	F	222	ASP	3.4
1	F	719	ARG	3.0
1	I	719	ARG	3.0
1	F	716	GLY	2.9
1	J	719	ARG	2.9
1	G	721	ASP	2.9
1	I	546	LEU	2.8
1	C	716	GLY	2.7
1	J	222	ASP	2.7
1	C	721	ASP	2.6
1	G	323	ILE	2.6
1	F	721	ASP	2.6
1	E	719	ARG	2.5
1	I	222	ASP	2.5
1	E	716	GLY	2.5
1	I	23	VAL	2.5
1	G	716	GLY	2.4
1	B	23	VAL	2.4
1	F	309	ALA	2.4
1	H	721	ASP	2.4
1	D	716	GLY	2.4
1	D	721	ASP	2.4
1	A	25	THR	2.3
1	J	384	LEU	2.3
1	E	542	GLY	2.3
1	D	717	LEU	2.3
1	F	27	LYS	2.3
1	H	719	ARG	2.3
1	C	717	LEU	2.2
1	A	542	GLY	2.2
1	J	716	GLY	2.2
1	F	25	THR	2.1
1	F	789	LEU	2.1
1	I	717	LEU	2.1
1	B	348	ASP	2.1
1	E	348	ASP	2.1
1	C	323	ILE	2.1
1	C	222	ASP	2.1
1	G	384	LEU	2.1
1	F	23	VAL	2.1
1	J	27	LYS	2.1

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Mol	Chain	Res	Type	RSRZ
1	E	272	ALA	2.1
1	B	716	GLY	2.0
1	H	546	LEU	2.0
1	D	323	ILE	2.0
1	F	28	GLY	2.0
1	F	546	LEU	2.0
1	G	309	ALA	2.0
1	J	348	ASP	2.0
1	D	546	LEU	2.0
1	J	25	THR	2.0
1	B	375	LEU	2.0
1	F	375	LEU	2.0

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

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

## 6.3 Carbohydrates ⓘ

There are no carbohydrates in this entry.

## 6.4 Ligands ⓘ

There are no ligands in this entry.

## 6.5 Other polymers ⓘ

There are no such residues in this entry.