



# Full wwPDB X-ray Structure Validation Report ⓘ

Jun 13, 2024 – 08:02 AM EDT

PDB ID : 4FQU  
Title : Glutathionyl-Hydroquinone Reductase PcpF of *Sphingobium chlorophenolicum*  
Authors : Green, A.R.; Hayes, R.P.; Xun, L.; Kang, C.  
Deposited on : 2012-06-25  
Resolution : 3.00 Å (reported)

This is a Full wwPDB X-ray Structure Validation Report for a publicly released PDB entry.

We welcome your comments at [validation@mail.wwpdb.org](mailto:validation@mail.wwpdb.org)

A user guide is available at

<https://www.wwpdb.org/validation/2017/XrayValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

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

MolProbity : 4.02b-467  
Xtriage (Phenix) : 1.20.1  
EDS : 2.36.2  
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)  
Refmac : 5.8.0158  
CCP4 : 7.0.044 (Gargrove)  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
Validation Pipeline (wwPDB-VP) : 2.36.2

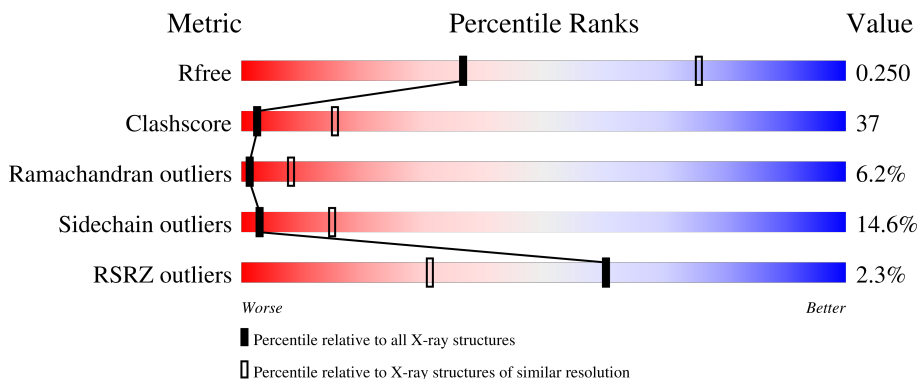
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

*X-RAY DIFFRACTION*

The reported resolution of this entry is 3.00 Å.

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



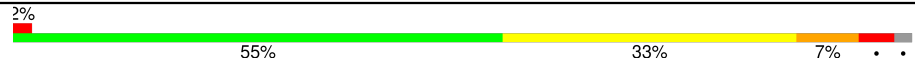

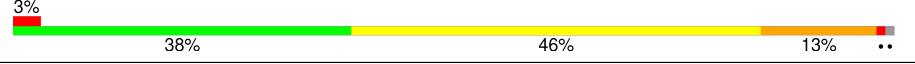
Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
$R_{free}$	130704	2092 (3.00-3.00)
Clashscore	141614	2416 (3.00-3.00)
Ramachandran outliers	138981	2333 (3.00-3.00)
Sidechain outliers	138945	2336 (3.00-3.00)
RSRZ outliers	127900	1990 (3.00-3.00)

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 of the lower bar indicate the fraction of residues that contain outliers for  $\geq 3$ , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions  $\leq 5\%$ . The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	313	 2% 55% 33% 10% .
1	B	313	 2% 52% 35% 8% . .
1	C	313	 2% 45% 43% 9% .
1	D	313	 3% 41% 46% 12% .
1	E	313	 3% 45% 40% 13% .

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Mol	Chain	Length	Quality of chain
1	F	313	
1	G	313	
1	H	313	

## 2 Entry composition [i](#)

There are 2 unique types of molecules in this entry. The entry contains 19729 atoms, of which 0 are hydrogens and 0 are deuteriums.

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 Putative glutathione transferase.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	312	Total 2491	C 1592	N 435	O 458	S 6	0	0	0
1	B	303	Total 2420	C 1549	N 424	O 441	S 6	0	0	0
1	C	312	Total 2482	C 1584	N 435	O 457	S 6	0	0	0
1	D	312	Total 2481	C 1586	N 432	O 457	S 6	0	0	0
1	E	312	Total 2484	C 1587	N 435	O 456	S 6	0	0	0
1	F	308	Total 2444	C 1559	N 429	O 450	S 6	0	0	0
1	G	305	Total 2428	C 1551	N 426	O 445	S 6	0	0	0
1	H	309	Total 2444	C 1561	N 430	O 447	S 6	0	0	0

- Molecule 2 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
2	A	21	Total 21	O 21	0	0
2	B	5	Total 5	O 5	0	0
2	C	9	Total 9	O 9	0	0
2	D	3	Total 3	O 3	0	0
2	E	1	Total 1	O 1	0	0
2	F	13	Total 13	O 13	0	0

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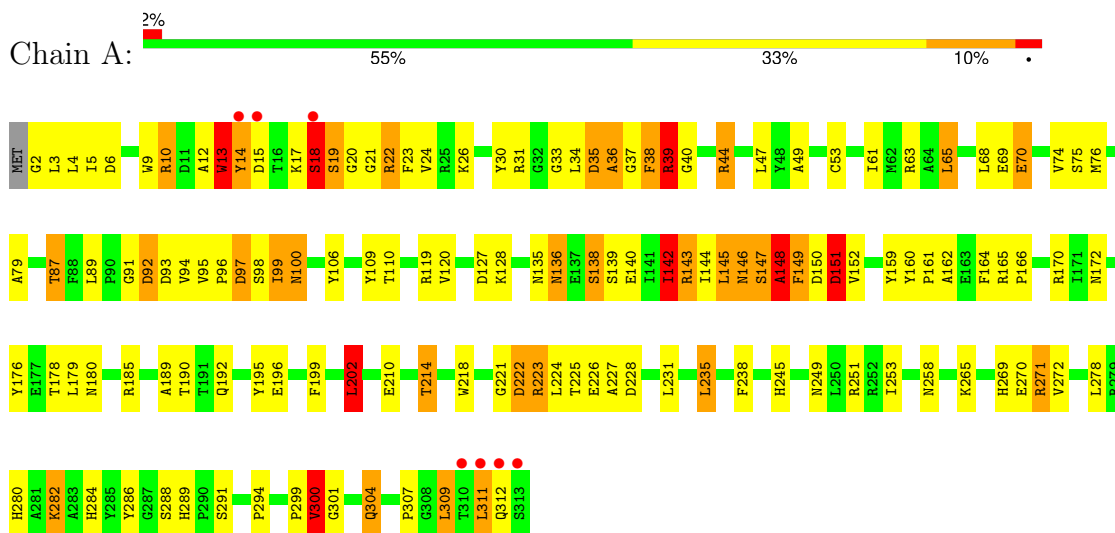
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<b>Mol</b>	<b>Chain</b>	<b>Residues</b>	<b>Atoms</b>	<b>ZeroOcc</b>	<b>AltConf</b>
2	G	2	Total O 2 2	0	0
2	H	1	Total O 1 1	0	0

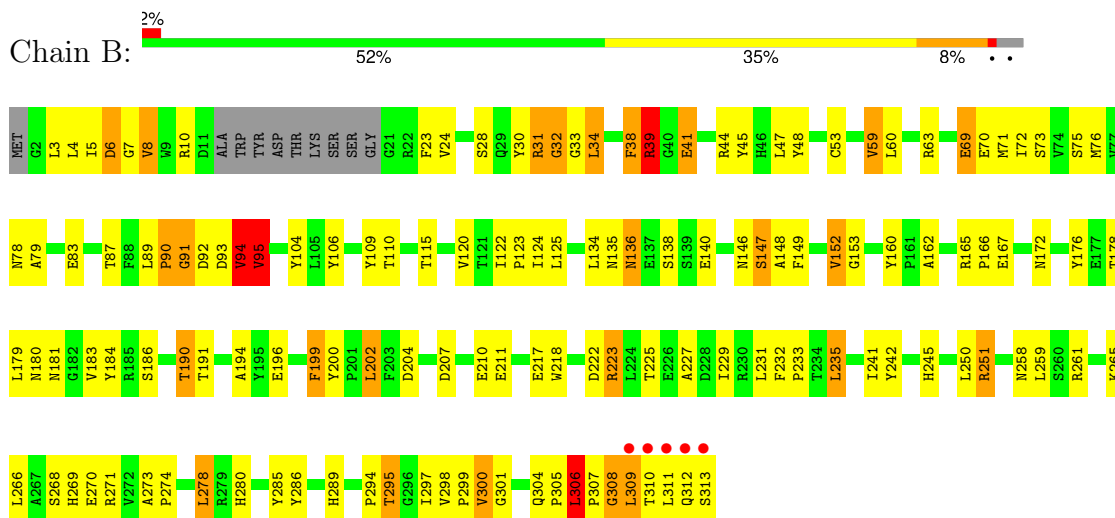
### 3 Residue-property plots [i](#)

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and 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.

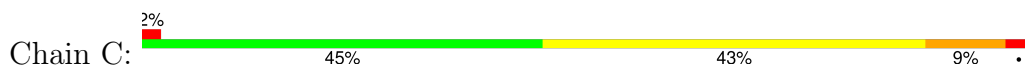
- Molecule 1: Putative glutathione transferase

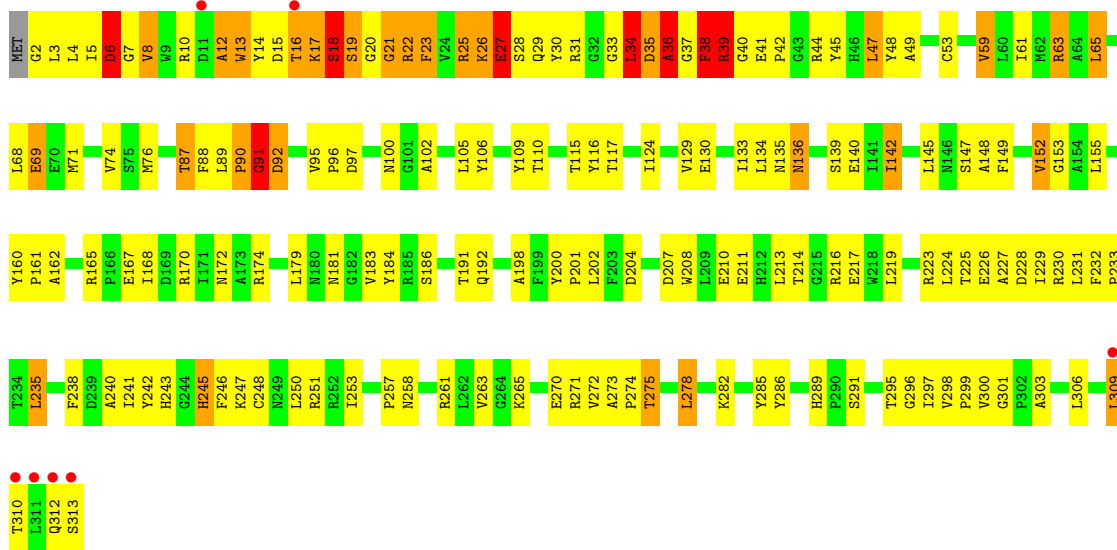


- Molecule 1: Putative glutathione transferase

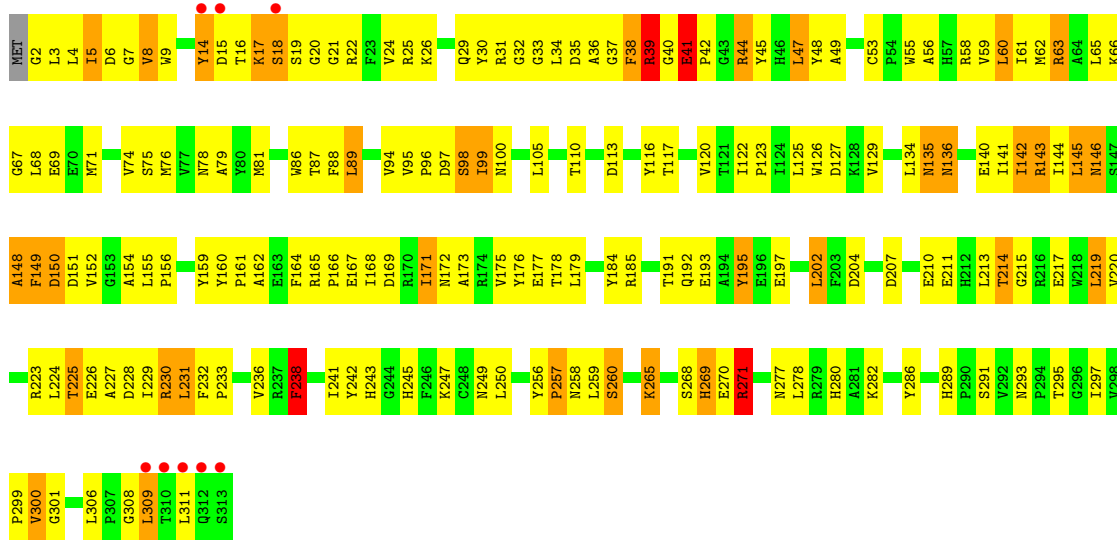


- Molecule 1: Putative glutathione transferase

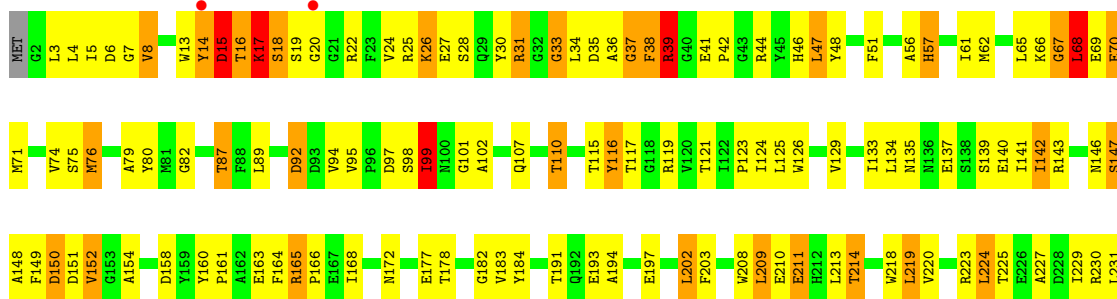




• Molecule 1: Putative glutathione transferase

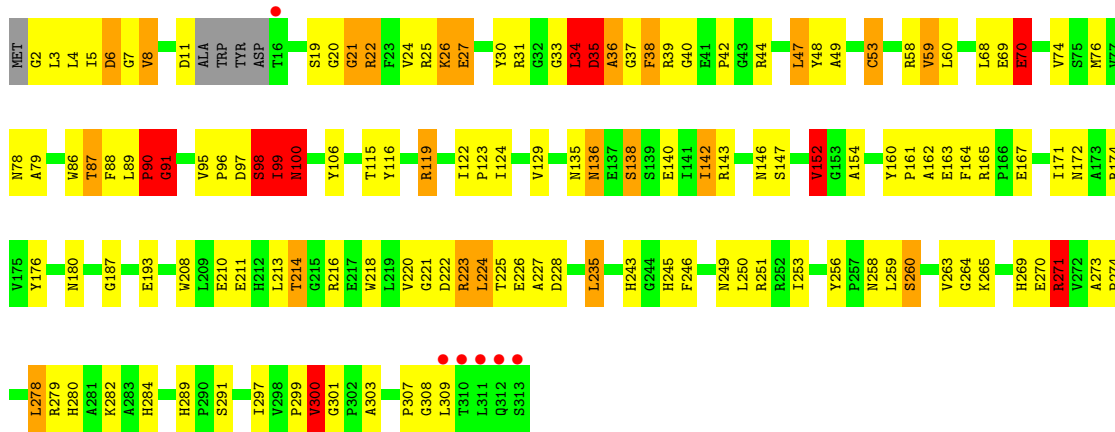


• Molecule 1: Putative glutathione transferase

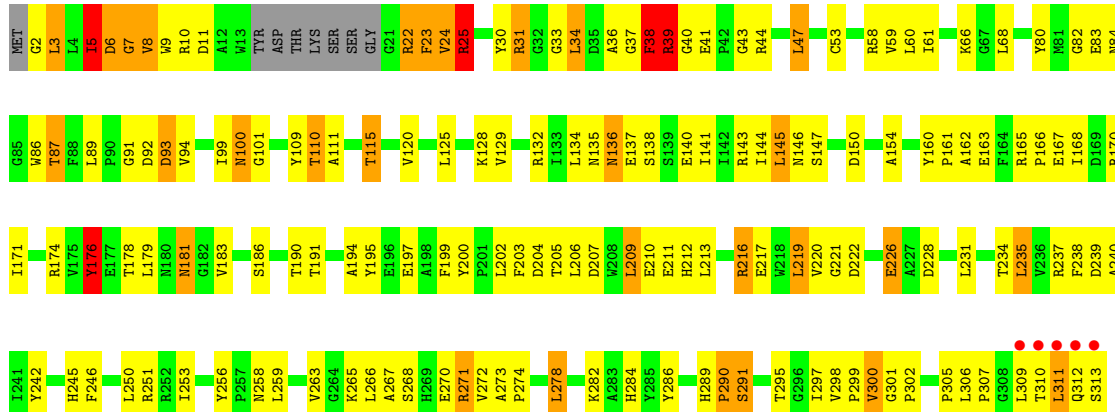




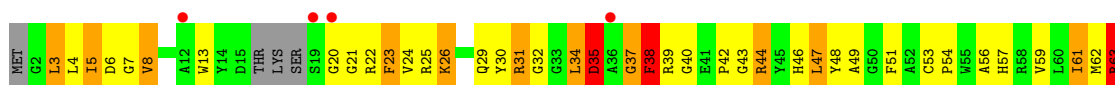
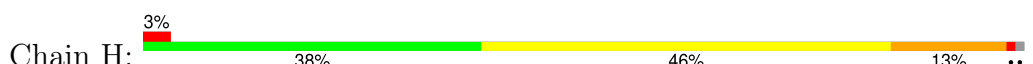
● Molecule 1: Putative glutathione transferase



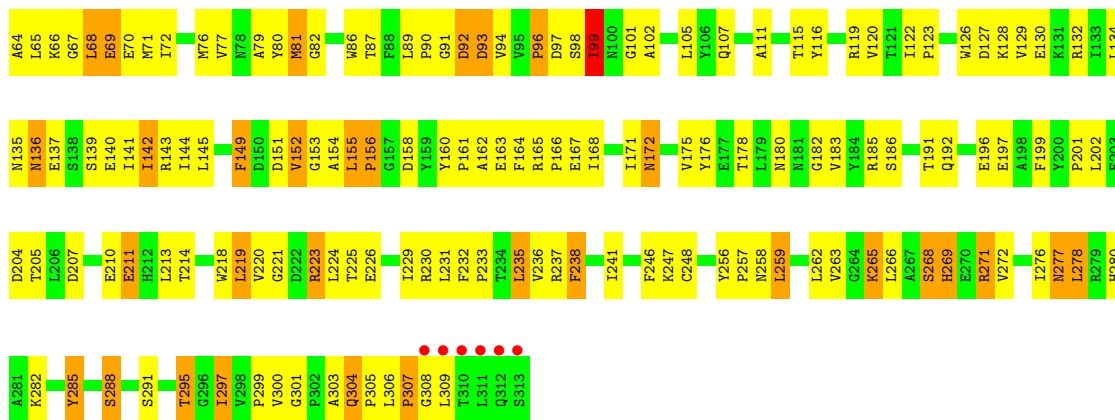
● Molecule 1: Putative glutathione transferase



● Molecule 1: Putative glutathione transferase







## 4 Data and refinement statistics

Property	Value	Source
Space group	P 21 3	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	242.84Å 242.84Å 242.84Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	49.57 – 3.00 49.57 – 2.83	Depositor EDS
% Data completeness (in resolution range)	87.9 (49.57-3.00) 84.0 (49.57-2.83)	Depositor EDS
$R_{merge}$	(Not available)	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	0.36 (at 2.81Å)	Xtrriage
Refinement program	PHENIX (phenix.refine: 1.6.1_357)	Depositor
R, $R_{free}$	0.202 , 0.256 0.195 , 0.250	Depositor DCC
$R_{free}$ test set	2007 reflections (1.78%)	wwPDB-VP
Wilson B-factor (Å <sup>2</sup> )	43.0	Xtrriage
Anisotropy	0.000	Xtrriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.32 , 46.6	EDS
L-test for twinning <sup>2</sup>	$\langle  L  \rangle = 0.49$ , $\langle L^2 \rangle = 0.32$	Xtrriage
Estimated twinning fraction	0.024 for l,-k,h	Xtrriage
$F_o, F_c$ correlation	0.91	EDS
Total number of atoms	19729	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	45.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.35% of the height of the origin peak. No significant pseudotranslation is detected.*

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

<sup>2</sup>Theoretical values of  $\langle |L| \rangle$ ,  $\langle L^2 \rangle$  for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

## 5 Model quality i

### 5.1 Standard geometry i

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	0.94	5/2562 (0.2%)	0.97	4/3490 (0.1%)
1	B	0.82	1/2488 (0.0%)	0.94	6/3387 (0.2%)
1	C	0.80	2/2552 (0.1%)	0.95	4/3476 (0.1%)
1	D	0.72	1/2552 (0.0%)	0.88	3/3478 (0.1%)
1	E	0.80	0/2554	0.92	4/3479 (0.1%)
1	F	0.93	2/2511 (0.1%)	0.95	2/3418 (0.1%)
1	G	0.68	0/2495	0.84	2/3397 (0.1%)
1	H	0.63	0/2511	0.79	0/3419
All	All	0.80	11/20225 (0.1%)	0.91	25/27544 (0.1%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	0	3
1	C	0	2
1	D	0	1
1	E	0	1
1	F	0	2
All	All	0	9

All (11) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	18	SER	CB-OG	6.75	1.51	1.42
1	B	53	CYS	CB-SG	-6.33	1.71	1.82
1	A	53	CYS	CB-SG	-6.18	1.71	1.82
1	F	70	GLU	CG-CD	6.14	1.61	1.51
1	A	70	GLU	CG-CD	5.71	1.60	1.51
1	A	148	ALA	CA-CB	5.68	1.64	1.52
1	F	53	CYS	CB-SG	-5.49	1.72	1.81

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	19	SER	CB-OG	5.40	1.49	1.42
1	C	53	CYS	CB-SG	-5.17	1.73	1.81
1	D	41	GLU	CG-CD	5.14	1.59	1.51
1	C	38	PHE	CB-CG	5.12	1.60	1.51

All (25) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B	39	ARG	NE-CZ-NH1	8.07	124.34	120.30
1	E	76	MET	CG-SD-CE	-7.11	88.83	100.20
1	F	91	GLY	N-CA-C	6.47	129.29	113.10
1	C	91	GLY	N-CA-C	6.35	128.98	113.10
1	B	306	LEU	CA-CB-CG	6.27	129.72	115.30
1	B	39	ARG	NE-CZ-NH2	-6.06	117.27	120.30
1	D	89	LEU	CA-CB-CG	6.05	129.21	115.30
1	E	33	GLY	N-CA-C	-5.85	98.47	113.10
1	C	39	ARG	NE-CZ-NH2	-5.67	117.46	120.30
1	E	165	ARG	NE-CZ-NH1	-5.67	117.46	120.30
1	E	251	ARG	NE-CZ-NH2	5.61	123.11	120.30
1	D	179	LEU	CA-CB-CG	5.59	128.15	115.30
1	B	94	VAL	N-CA-C	5.42	125.64	111.00
1	B	95	VAL	N-CA-C	5.41	125.60	111.00
1	A	97	ASP	CB-CG-OD2	5.39	123.16	118.30
1	A	142	ILE	CG1-CB-CG2	-5.37	99.58	111.40
1	F	34	LEU	CA-CB-CG	5.36	127.63	115.30
1	C	6	ASP	N-CA-C	-5.27	96.78	111.00
1	G	91	GLY	N-CA-C	-5.24	100.01	113.10
1	A	149	PHE	N-CA-C	-5.21	96.94	111.00
1	D	39	ARG	CB-CA-C	-5.16	100.09	110.40
1	G	7	GLY	N-CA-C	-5.11	100.33	113.10
1	B	31	ARG	NE-CZ-NH1	-5.09	117.76	120.30
1	C	142	ILE	CG1-CB-CG2	-5.07	100.24	111.40
1	A	202	LEU	CA-CB-CG	5.06	126.94	115.30

There are no chirality outliers.

All (9) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	148	ALA	Peptide
1	A	39	ARG	Peptide
1	A	40	GLY	Peptide
1	C	36	ALA	Peptide

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Mol	Chain	Res	Type	Group
1	C	6	ASP	Peptide
1	D	300	VAL	Peptide
1	E	6	ASP	Peptide
1	F	21	GLY	Peptide
1	F	6	ASP	Peptide

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

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	2491	0	2406	178	0
1	B	2420	0	2340	152	0
1	C	2482	0	2392	196	0
1	D	2481	0	2383	236	0
1	E	2484	0	2385	189	0
1	F	2444	0	2354	147	0
1	G	2428	0	2344	153	0
1	H	2444	0	2351	207	0
2	A	21	0	0	3	0
2	B	5	0	0	0	0
2	C	9	0	0	4	0
2	D	3	0	0	1	0
2	E	1	0	0	0	0
2	F	13	0	0	1	0
2	G	2	0	0	0	0
2	H	1	0	0	0	0
All	All	19729	0	18955	1412	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 37.

All (1412) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:39:ARG:HE	1:A:148:ALA:C	1.39	1.27
1:A:143:ARG:HG3	1:A:143:ARG:HH11	1.06	1.14

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:221:GLY:HA3	2:A:401:HOH:O	1.46	1.12
1:C:213:LEU:HD21	1:C:219:LEU:HD23	1.29	1.12
1:H:23:PHE:CB	1:H:24:VAL:HA	1.73	1.12
1:B:39:ARG:HB3	1:B:39:ARG:NH1	1.63	1.11
1:A:37:GLY:HA2	1:A:38:PHE:CB	1.76	1.11
1:A:23:PHE:CE2	1:F:26:LYS:HB2	1.86	1.09
1:E:7:GLY:HA3	1:E:8:VAL:CB	1.82	1.08
1:D:214:THR:HG23	1:D:215:GLY:H	1.16	1.06
1:E:31:ARG:HH11	1:E:31:ARG:HG2	1.11	1.06
1:H:23:PHE:HB3	1:H:24:VAL:HA	1.12	1.06
1:A:39:ARG:NE	1:A:148:ALA:C	2.10	1.05
1:B:39:ARG:HH22	1:B:44:ARG:CZ	1.69	1.05
1:F:119:ARG:HG3	1:F:119:ARG:HH11	1.17	1.05
1:B:39:ARG:HH11	1:B:39:ARG:CB	1.69	1.04
1:C:152:VAL:HG12	1:C:153:GLY:H	0.88	1.04
1:F:19:SER:HB3	1:F:20:GLY:HA2	1.38	1.04
1:C:152:VAL:HG12	1:C:153:GLY:N	1.63	1.03
1:D:39:ARG:HG3	1:D:40:GLY:N	1.71	1.03
1:D:143:ARG:HG3	1:D:143:ARG:HH11	1.19	1.02
1:A:37:GLY:CA	1:A:38:PHE:HB3	1.89	1.01
1:D:37:GLY:HA2	1:D:38:PHE:HB3	1.38	1.00
1:A:17:LYS:HA	1:A:18:SER:HB3	1.41	1.00
1:C:152:VAL:CG1	1:C:153:GLY:H	1.75	1.00
1:C:38:PHE:O	1:C:38:PHE:CD1	2.15	1.00
1:D:87:THR:HG21	1:D:89:LEU:HG	1.41	0.99
1:A:270:GLU:O	1:A:271:ARG:HB2	1.62	0.98
1:F:87:THR:HG23	1:F:89:LEU:H	1.24	0.98
1:A:49:ALA:HB3	1:A:76:MET:HE1	1.45	0.98
1:F:270:GLU:O	1:F:271:ARG:HB2	1.61	0.98
1:A:39:ARG:HH21	1:A:149:PHE:H	1.01	0.98
1:A:143:ARG:HH11	1:A:143:ARG:CG	1.76	0.98
1:G:167:GLU:HG3	1:G:170:ARG:NH1	1.78	0.98
1:B:245:HIS:HE1	1:B:289:HIS:HD2	1.08	0.98
1:H:271:ARG:HH11	1:H:271:ARG:HG2	1.29	0.98
1:D:71:MET:SD	1:D:149:PHE:CZ	2.58	0.97
1:H:23:PHE:HB3	1:H:24:VAL:CA	1.94	0.97
1:C:38:PHE:O	1:C:38:PHE:HD1	1.45	0.96
1:D:63:ARG:HG2	1:D:63:ARG:HH11	1.27	0.96
1:H:6:ASP:H	1:H:7:GLY:HA2	1.29	0.96
1:A:19:SER:N	1:A:20:GLY:HA2	1.81	0.96
1:G:39:ARG:HA	1:G:39:ARG:NE	1.82	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:39:ARG:HB3	1:B:39:ARG:HH11	0.79	0.95
1:C:7:GLY:HA2	1:C:8:VAL:O	1.66	0.95
1:G:174:ARG:O	1:G:178:THR:HG22	1.65	0.94
1:A:245:HIS:HE1	1:A:289:HIS:CD2	1.86	0.94
1:E:87:THR:HG23	1:E:89:LEU:H	1.29	0.94
1:D:136:ASN:HD22	1:D:136:ASN:C	1.68	0.93
1:A:22:ARG:HH11	1:A:22:ARG:HG2	1.30	0.93
1:B:78:ASN:ND2	1:B:91:GLY:HA3	1.82	0.93
1:G:191:THR:HG23	1:G:194:ALA:H	1.33	0.93
1:A:14:TYR:N	1:A:15:ASP:HA	1.84	0.92
1:A:39:ARG:HG2	1:A:148:ALA:O	1.68	0.92
1:B:38:PHE:HB2	1:B:39:ARG:O	1.69	0.92
1:B:38:PHE:HB2	1:B:39:ARG:CA	2.00	0.91
1:A:222:ASP:N	2:A:401:HOH:O	2.04	0.91
1:D:37:GLY:HA2	1:D:38:PHE:CB	1.98	0.91
1:A:143:ARG:HG3	1:A:143:ARG:NH1	1.78	0.90
1:F:37:GLY:HA2	1:F:39:ARG:H	1.34	0.90
1:G:167:GLU:HG3	1:G:170:ARG:HH12	1.36	0.90
1:D:143:ARG:HH11	1:D:143:ARG:CG	1.84	0.90
1:E:300:VAL:HG12	1:F:250:LEU:HD13	1.51	0.90
1:F:99:ILE:HD12	1:F:99:ILE:O	1.71	0.89
1:A:37:GLY:HA2	1:A:38:PHE:HB3	0.94	0.89
1:B:270:GLU:O	1:B:271:ARG:HB2	1.73	0.89
1:B:38:PHE:HB2	1:B:39:ARG:C	1.92	0.89
1:A:245:HIS:HE1	1:A:289:HIS:HD2	1.15	0.89
1:C:27:GLU:CD	1:C:28:SER:H	1.75	0.89
1:H:42:PRO:HD3	1:H:152:VAL:HG11	1.55	0.89
1:D:47:LEU:HB3	1:D:74:VAL:HG12	1.53	0.88
1:H:34:LEU:H	1:H:144:ILE:HD11	1.36	0.88
1:H:38:PHE:HD2	1:H:38:PHE:O	1.56	0.88
1:A:223:ARG:CB	1:A:223:ARG:HH11	1.87	0.88
1:E:270:GLU:O	1:E:271:ARG:HB2	1.74	0.88
1:E:300:VAL:CG1	1:F:250:LEU:HD13	2.03	0.88
1:C:49:ALA:HB3	1:C:76:MET:CE	2.03	0.87
1:D:150:ASP:HA	1:D:154:ALA:HB3	1.55	0.87
1:A:39:ARG:NH1	1:A:147:SER:N	2.21	0.87
1:A:39:ARG:NH2	1:A:149:PHE:H	1.73	0.87
1:B:199:PHE:HD2	1:B:199:PHE:H	1.22	0.87
1:G:213:LEU:HD21	1:G:219:LEU:HD23	1.55	0.86
1:A:22:ARG:HH11	1:A:22:ARG:CG	1.87	0.86
1:C:210:GLU:OE2	1:C:257:PRO:HD2	1.75	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:87:THR:HG22	1:D:89:LEU:H	1.38	0.86
1:E:31:ARG:HG2	1:E:31:ARG:NH1	1.87	0.86
1:C:87:THR:CG2	1:C:89:LEU:H	1.88	0.86
1:A:5:ILE:HG21	1:A:10:ARG:HH11	1.41	0.85
1:A:19:SER:H	1:A:20:GLY:HA2	1.37	0.85
1:B:41:GLU:CD	1:B:41:GLU:H	1.77	0.85
1:D:217:GLU:HB3	1:D:265:LYS:NZ	1.90	0.85
1:F:37:GLY:HA2	1:F:39:ARG:HG3	1.59	0.85
1:H:155:LEU:HB3	1:H:156:PRO:HD2	1.56	0.85
1:D:87:THR:CG2	1:D:89:LEU:HG	2.05	0.85
1:H:306:LEU:HB3	1:H:307:PRO:HD2	1.56	0.85
1:B:245:HIS:HE1	1:B:289:HIS:CD2	1.95	0.85
1:H:37:GLY:N	1:H:38:PHE:HB3	1.91	0.85
1:H:226:GLU:HA	1:H:229:ILE:HD12	1.58	0.85
1:B:191:THR:HG23	1:B:194:ALA:H	1.42	0.85
1:E:31:ARG:HH11	1:E:31:ARG:CG	1.90	0.84
1:A:17:LYS:HA	1:A:18:SER:CB	2.04	0.84
1:H:63:ARG:HG2	1:H:63:ARG:HH11	1.39	0.84
1:D:282:LYS:NZ	1:D:301:GLY:HA3	1.92	0.84
1:H:6:ASP:O	1:H:115:THR:HA	1.77	0.84
1:H:271:ARG:HH11	1:H:271:ARG:CG	1.90	0.84
1:C:33:GLY:O	1:C:34:LEU:HB2	1.79	0.83
1:H:304:GLN:H	1:H:304:GLN:NE2	1.76	0.83
1:F:224:LEU:HD12	1:F:225:THR:N	1.92	0.83
1:A:39:ARG:HE	1:A:149:PHE:N	1.75	0.83
1:A:23:PHE:HE2	1:F:26:LYS:HB2	1.43	0.83
1:D:59:VAL:HG12	1:D:142:ILE:HD13	1.60	0.83
1:H:304:GLN:H	1:H:304:GLN:HE21	1.26	0.83
1:C:42:PRO:HG3	1:C:152:VAL:HG11	1.60	0.83
1:C:39:ARG:HB3	1:C:41:GLU:OE1	1.78	0.82
1:D:269:HIS:ND1	1:D:270:GLU:O	2.11	0.82
1:A:223:ARG:HH11	1:A:223:ARG:HB3	1.44	0.82
1:G:31:ARG:HH11	1:G:31:ARG:CG	1.92	0.82
1:H:79:ALA:HB2	1:H:280:HIS:CE1	2.14	0.82
1:E:14:TYR:O	1:E:15:ASP:HB3	1.79	0.82
1:H:91:GLY:O	1:H:94:VAL:HG23	1.80	0.82
1:E:245:HIS:HE1	1:E:289:HIS:HD2	1.26	0.82
1:E:13:TRP:O	1:E:14:TYR:HB2	1.78	0.82
1:G:22:ARG:HD3	1:G:23:PHE:H	1.43	0.82
1:D:63:ARG:HH11	1:D:63:ARG:CG	1.92	0.81
1:B:38:PHE:HB2	1:B:39:ARG:HA	1.61	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:63:ARG:HG2	1:C:63:ARG:HH11	1.46	0.81
1:E:33:GLY:O	1:E:34:LEU:HB2	1.78	0.81
1:H:241:ILE:HD13	1:H:285:TYR:CD1	2.15	0.81
1:B:41:GLU:OE1	1:B:44:ARG:HD2	1.80	0.81
1:B:30:TYR:O	1:B:135:ASN:HA	1.81	0.80
1:H:6:ASP:N	1:H:7:GLY:HA2	1.94	0.80
1:A:299:PRO:C	1:A:301:GLY:H	1.83	0.80
1:E:152:VAL:HG12	1:E:152:VAL:O	1.78	0.80
1:B:312:GLN:HG2	1:B:313:SER:H	1.45	0.80
1:C:136:ASN:H	1:C:136:ASN:HD22	1.29	0.80
1:C:16:THR:HG21	1:C:20:GLY:O	1.82	0.80
1:D:38:PHE:O	2:D:402:HOH:O	1.99	0.80
1:A:39:ARG:HH12	1:A:147:SER:N	1.80	0.80
1:G:213:LEU:HD12	1:G:259:LEU:HD23	1.62	0.80
1:H:20:GLY:HA3	1:H:22:ARG:H	1.47	0.79
1:C:87:THR:HG23	1:C:89:LEU:H	1.47	0.79
1:D:122:ILE:HB	1:D:123:PRO:HA	1.65	0.79
1:A:39:ARG:HH21	1:A:149:PHE:N	1.79	0.79
1:A:99:ILE:HD12	1:A:99:ILE:O	1.82	0.79
1:D:270:GLU:O	1:D:271:ARG:HB2	1.81	0.79
1:E:17:LYS:HA	1:E:18:SER:CB	2.12	0.79
1:F:37:GLY:CA	1:F:39:ARG:H	1.96	0.79
1:F:214:THR:HA	1:F:258:ASN:ND2	1.97	0.79
1:D:214:THR:HA	1:D:258:ASN:ND2	1.98	0.79
1:H:166:PRO:HG2	1:H:167:GLU:H	1.48	0.78
1:D:214:THR:CG2	1:D:215:GLY:H	1.96	0.78
1:D:256:TYR:O	1:D:260:SER:HB2	1.83	0.78
1:F:87:THR:CG2	1:F:89:LEU:H	1.96	0.78
1:F:245:HIS:HE1	1:F:289:HIS:HD2	1.31	0.78
1:G:39:ARG:NH2	1:G:41:GLU:OE1	2.16	0.78
1:D:87:THR:CG2	1:D:89:LEU:H	1.97	0.78
1:D:202:LEU:HD12	1:D:202:LEU:C	2.04	0.78
1:E:150:ASP:N	1:E:154:ALA:HB3	1.99	0.78
1:H:282:LYS:NZ	1:H:301:GLY:HA3	1.99	0.77
1:G:204:ASP:O	1:G:207:ASP:HB2	1.84	0.77
1:B:7:GLY:HA2	1:B:8:VAL:CB	2.15	0.77
1:C:49:ALA:HB3	1:C:76:MET:HE2	1.67	0.77
1:C:265:LYS:HA	1:C:310:THR:HG21	1.67	0.77
1:D:164:PHE:C	1:D:166:PRO:HD2	2.03	0.77
1:G:34:LEU:HD11	1:G:140:GLU:HB3	1.65	0.77
1:B:76:MET:HB2	1:B:95:VAL:HG13	1.65	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:7:GLY:HA2	1:G:8:VAL:CB	2.14	0.77
1:H:162:ALA:HA	1:H:165:ARG:HD2	1.66	0.77
1:H:218:TRP:CZ2	1:H:265:LYS:HE2	2.20	0.77
1:D:226:GLU:HA	1:D:229:ILE:HG13	1.65	0.77
1:E:150:ASP:H	1:E:154:ALA:HB3	1.48	0.77
1:E:282:LYS:NZ	1:E:301:GLY:HA3	1.99	0.77
1:B:39:ARG:NH2	1:B:44:ARG:CZ	2.47	0.76
1:C:30:TYR:O	1:C:135:ASN:HA	1.84	0.76
1:H:94:VAL:HG12	1:H:96:PRO:HD3	1.68	0.76
1:H:105:LEU:HD21	1:H:122:ILE:HG23	1.65	0.76
1:D:214:THR:HG23	1:D:215:GLY:N	1.96	0.76
1:E:125:LEU:HD23	1:E:134:LEU:HD23	1.68	0.76
1:F:22:ARG:HH11	1:F:22:ARG:HB3	1.50	0.76
1:G:33:GLY:O	1:G:34:LEU:HB2	1.85	0.76
1:A:300:VAL:HB	1:B:199:PHE:CZ	2.21	0.75
1:G:5:ILE:O	1:G:6:ASP:HB2	1.85	0.75
1:B:196:GLU:HA	1:B:199:PHE:HE2	1.52	0.75
1:F:245:HIS:HE1	1:F:289:HIS:CD2	2.03	0.75
1:C:37:GLY:HA2	1:C:38:PHE:CB	2.17	0.75
1:C:49:ALA:HB3	1:C:76:MET:HE1	1.68	0.74
1:C:87:THR:HG23	1:C:89:LEU:HG	1.67	0.74
1:G:286:TYR:HB2	1:G:298:VAL:HG22	1.69	0.74
1:H:149:PHE:HD1	1:H:149:PHE:N	1.86	0.74
1:A:223:ARG:HB3	1:A:223:ARG:NH1	2.01	0.74
1:H:164:PHE:O	1:H:168:ILE:HG13	1.88	0.74
1:B:245:HIS:CE1	1:B:289:HIS:HD2	2.00	0.74
1:G:6:ASP:O	1:G:115:THR:HA	1.87	0.74
1:E:224:LEU:HD12	1:E:225:THR:N	2.03	0.74
1:A:245:HIS:CE1	1:A:289:HIS:HD2	2.02	0.74
1:B:79:ALA:HB2	1:B:280:HIS:CE1	2.23	0.74
1:D:136:ASN:C	1:D:136:ASN:ND2	2.42	0.73
1:E:56:ALA:HA	1:E:123:PRO:HG3	1.70	0.73
1:G:179:LEU:O	1:G:183:VAL:HG13	1.88	0.73
1:E:202:LEU:C	1:E:202:LEU:HD12	2.07	0.73
1:H:37:GLY:H	1:H:38:PHE:CB	2.01	0.73
1:H:176:TYR:HA	1:H:180:ASN:HB2	1.69	0.73
1:B:38:PHE:HB3	1:B:148:ALA:HB1	1.70	0.73
1:A:20:GLY:HA3	1:A:21:GLY:C	2.09	0.73
1:C:39:ARG:HB3	1:C:41:GLU:CD	2.09	0.73
1:E:46:HIS:HB3	1:E:126:TRP:HB3	1.70	0.73
1:G:37:GLY:HA2	1:G:38:PHE:CD2	2.23	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:245:HIS:HE1	1:D:289:HIS:CD2	2.06	0.73
1:F:22:ARG:O	1:F:22:ARG:HG2	1.87	0.73
1:D:41:GLU:HG2	1:D:42:PRO:HD2	1.70	0.73
1:G:231:LEU:HG	1:G:235:LEU:HD22	1.71	0.73
1:F:269:HIS:ND1	1:F:270:GLU:O	2.22	0.73
1:B:6:ASP:H	1:B:7:GLY:HA2	1.53	0.72
1:C:37:GLY:HA2	1:C:38:PHE:CG	2.24	0.72
1:D:15:ASP:C	1:D:17:LYS:H	1.93	0.72
1:H:51:PHE:CD1	1:H:277:ASN:HB3	2.24	0.72
1:E:19:SER:CB	1:E:20:GLY:HA3	2.19	0.72
1:H:192:GLN:O	1:H:196:GLU:HG3	1.89	0.72
1:D:5:ILE:CG2	1:D:6:ASP:N	2.52	0.72
1:H:37:GLY:HA2	1:H:39:ARG:HG3	1.71	0.72
1:D:245:HIS:HE1	1:D:289:HIS:HD2	1.35	0.72
1:G:38:PHE:HD1	1:G:39:ARG:O	1.71	0.72
1:C:270:GLU:O	1:C:271:ARG:HB2	1.87	0.72
1:D:38:PHE:HD1	1:D:39:ARG:H	1.35	0.72
1:D:193:GLU:O	1:D:197:GLU:HG3	1.90	0.72
1:F:270:GLU:O	1:F:271:ARG:CB	2.35	0.72
1:E:37:GLY:HA3	1:E:38:PHE:CD2	2.24	0.72
1:E:37:GLY:HA3	1:E:38:PHE:HD2	1.53	0.72
1:H:5:ILE:HG22	1:H:8:VAL:CB	2.20	0.71
1:A:218:TRP:CZ2	1:A:265:LYS:HE3	2.25	0.71
1:B:93:ASP:O	1:B:94:VAL:HG13	1.90	0.71
1:D:5:ILE:HG22	1:D:8:VAL:CB	2.20	0.71
1:B:33:GLY:H	1:B:134:LEU:HD11	1.55	0.71
1:C:5:ILE:CG2	1:C:6:ASP:H	2.03	0.71
1:D:162:ALA:HA	1:D:165:ARG:HG3	1.73	0.71
1:G:216:ARG:HH11	1:G:216:ARG:HG2	1.56	0.71
1:B:305:PRO:HB2	1:B:306:LEU:HD13	1.72	0.70
1:D:49:ALA:O	1:D:76:MET:HA	1.91	0.70
1:D:143:ARG:HG3	1:D:143:ARG:NH1	1.96	0.70
1:A:282:LYS:HE2	1:A:301:GLY:HA3	1.73	0.70
1:D:63:ARG:HG2	1:D:63:ARG:NH1	2.01	0.70
1:A:39:ARG:NH1	1:A:144:ILE:O	2.25	0.70
1:E:37:GLY:HA2	1:E:38:PHE:HB3	1.73	0.70
1:F:36:ALA:C	1:F:38:PHE:HB3	2.12	0.70
1:H:172:ASN:HB3	1:H:230:ARG:HH21	1.57	0.70
1:D:39:ARG:NH1	1:D:149:PHE:CD1	2.60	0.70
1:D:144:ILE:HG22	1:D:145:LEU:HD23	1.73	0.70
1:B:90:PRO:O	1:B:91:GLY:O	2.10	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:39:ARG:HG3	1:H:207:ASP:OD2	1.92	0.69
1:E:178:THR:O	1:E:202:LEU:HB2	1.92	0.69
1:A:170:ARG:HG3	1:A:170:ARG:HH11	1.56	0.69
1:C:23:PHE:CE2	1:E:27:GLU:HB3	2.27	0.69
1:E:163:GLU:HG2	1:E:164:PHE:CD1	2.26	0.69
1:H:89:LEU:HB3	1:H:90:PRO:HD2	1.73	0.69
1:B:39:ARG:HH22	1:B:44:ARG:NE	1.90	0.69
1:A:39:ARG:NE	1:A:148:ALA:N	2.39	0.69
1:A:39:ARG:HD3	1:A:148:ALA:H	1.57	0.69
1:G:136:ASN:HD22	1:G:136:ASN:H	1.40	0.69
1:D:202:LEU:HD12	1:D:202:LEU:O	1.93	0.69
1:B:23:PHE:CG	1:B:23:PHE:O	2.45	0.69
1:C:5:ILE:HG23	1:C:6:ASP:N	2.07	0.69
1:E:117:THR:HG22	1:E:117:THR:O	1.93	0.69
1:F:30:TYR:H	1:F:136:ASN:HD21	1.41	0.69
1:H:37:GLY:C	1:H:39:ARG:H	1.93	0.69
1:H:241:ILE:HD13	1:H:285:TYR:HD1	1.57	0.69
1:A:5:ILE:CG2	1:A:10:ARG:HH11	2.06	0.69
1:D:38:PHE:HD1	1:D:39:ARG:N	1.90	0.69
1:G:212:HIS:O	1:G:216:ARG:HD2	1.93	0.69
1:G:216:ARG:HG2	1:G:216:ARG:NH1	2.07	0.69
1:C:200:TYR:CZ	1:D:300:VAL:HG21	2.29	0.68
1:E:147:SER:O	1:E:149:PHE:N	2.27	0.68
1:A:39:ARG:NE	1:A:148:ALA:CA	2.56	0.68
1:F:264:GLY:HA3	1:F:308:GLY:O	1.92	0.68
1:G:286:TYR:CZ	1:G:299:PRO:HG2	2.27	0.68
1:E:307:PRO:HG2	1:E:308:GLY:H	1.58	0.68
1:A:39:ARG:CZ	1:A:147:SER:C	2.62	0.68
1:G:38:PHE:CD1	1:G:39:ARG:O	2.47	0.68
1:H:40:GLY:HA3	1:H:149:PHE:CE1	2.29	0.68
1:D:60:LEU:HD21	1:D:76:MET:CE	2.24	0.68
1:F:143:ARG:NH2	1:F:226:GLU:OE2	2.27	0.68
1:D:207:ASP:HB3	1:G:37:GLY:O	1.92	0.68
1:F:19:SER:HB3	1:F:20:GLY:CA	2.21	0.68
1:B:39:ARG:HG2	1:B:41:GLU:OE2	1.93	0.68
1:F:22:ARG:HB3	1:F:22:ARG:NH1	2.07	0.68
1:C:20:GLY:N	1:C:21:GLY:CA	2.56	0.68
1:F:119:ARG:HH11	1:F:119:ARG:CG	1.98	0.68
1:H:38:PHE:O	1:H:38:PHE:CD2	2.43	0.68
1:H:66:LYS:O	1:H:68:LEU:HD12	1.93	0.68
1:D:5:ILE:CG2	1:D:6:ASP:H	2.07	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:152:VAL:O	1:E:152:VAL:CG1	2.42	0.67
1:F:19:SER:CB	1:F:20:GLY:HA2	2.13	0.67
1:H:149:PHE:N	1:H:149:PHE:CD1	2.58	0.67
1:H:87:THR:OG1	1:H:89:LEU:HG	1.94	0.67
1:B:270:GLU:O	1:B:271:ARG:CB	2.43	0.67
1:D:60:LEU:HD21	1:D:76:MET:HE1	1.75	0.67
1:G:39:ARG:HE	1:G:40:GLY:HA2	1.60	0.67
1:G:87:THR:HG23	1:G:89:LEU:H	1.60	0.67
1:D:217:GLU:HB3	1:D:265:LYS:HZ2	1.57	0.67
1:G:31:ARG:HH11	1:G:31:ARG:HG3	1.60	0.67
1:H:37:GLY:N	1:H:38:PHE:CB	2.57	0.67
1:A:22:ARG:HG2	1:A:22:ARG:NH1	2.08	0.67
1:C:241:ILE:HD13	1:C:285:TYR:CD1	2.30	0.67
1:B:196:GLU:HA	1:B:199:PHE:CE2	2.29	0.66
1:C:213:LEU:HD21	1:C:219:LEU:CD2	2.18	0.66
1:A:30:TYR:HB2	1:A:136:ASN:ND2	2.10	0.66
1:C:39:ARG:H	1:C:39:ARG:NH1	1.94	0.66
1:D:5:ILE:HG23	1:D:6:ASP:N	2.10	0.66
1:E:183:VAL:HG11	1:E:242:TYR:CD2	2.31	0.66
1:B:41:GLU:CD	1:B:41:GLU:N	2.48	0.66
1:B:199:PHE:HA	1:B:202:LEU:HB3	1.76	0.66
1:H:158:ASP:O	1:H:161:PRO:HD3	1.95	0.66
1:B:136:ASN:HD22	1:B:136:ASN:H	1.43	0.66
1:B:89:LEU:O	1:B:91:GLY:N	2.28	0.66
1:C:243:HIS:HA	1:C:248:CYS:O	1.95	0.66
1:A:299:PRO:C	1:A:301:GLY:N	2.50	0.65
1:D:165:ARG:N	1:D:166:PRO:HD2	2.11	0.65
1:C:5:ILE:CG2	1:C:6:ASP:N	2.58	0.65
1:C:7:GLY:HA2	1:C:8:VAL:C	2.16	0.65
1:D:79:ALA:HB2	1:D:280:HIS:CE1	2.31	0.65
1:H:63:ARG:HG2	1:H:63:ARG:NH1	2.06	0.65
1:H:304:GLN:HE21	1:H:304:GLN:N	1.94	0.65
1:E:237:ARG:HG3	1:E:237:ARG:HH11	1.61	0.65
1:H:23:PHE:CB	1:H:24:VAL:CA	2.63	0.65
1:C:37:GLY:HA2	1:C:38:PHE:HB3	1.77	0.65
1:F:34:LEU:O	1:F:35:ASP:CB	2.45	0.65
1:F:34:LEU:O	1:F:35:ASP:OD2	2.15	0.65
1:D:220:VAL:HB	1:D:225:THR:HG21	1.78	0.65
1:D:232:PHE:O	1:D:236:VAL:HG12	1.97	0.65
1:F:4:LEU:HD21	1:F:106:TYR:HB2	1.78	0.65
1:G:270:GLU:O	1:G:271:ARG:HB2	1.97	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:172:ASN:HB3	1:H:230:ARG:NH2	2.12	0.65
1:F:228:ASP:OD1	2:F:405:HOH:O	2.14	0.65
1:C:39:ARG:H	1:C:39:ARG:CZ	2.09	0.65
1:E:124:ILE:HG23	1:E:133:ILE:HG23	1.78	0.65
1:E:191:THR:HG22	1:E:193:GLU:N	2.12	0.64
1:E:107:GLN:HA	1:E:110:THR:HG22	1.80	0.64
1:B:6:ASP:N	1:B:7:GLY:HA2	2.11	0.64
1:D:99:ILE:HG13	1:D:100:ASN:N	2.13	0.64
1:E:95:VAL:HG12	1:E:95:VAL:O	1.98	0.64
1:G:245:HIS:HE1	1:G:289:HIS:HD2	1.44	0.64
1:H:165:ARG:N	1:H:166:PRO:HD2	2.12	0.64
1:C:20:GLY:N	1:C:21:GLY:HA3	2.12	0.64
1:F:97:ASP:C	1:F:98:SER:O	2.34	0.64
1:B:199:PHE:CD2	1:B:200:TYR:N	2.65	0.64
1:E:158:ASP:O	1:E:161:PRO:HD3	1.97	0.64
1:G:68:LEU:HD12	1:G:145:LEU:HD13	1.80	0.64
1:G:150:ASP:HA	1:G:154:ALA:HB3	1.78	0.64
1:H:213:LEU:HD12	1:H:258:ASN:HB3	1.78	0.64
1:A:30:TYR:O	1:A:135:ASN:HA	1.98	0.64
1:A:49:ALA:CB	1:A:76:MET:HE1	2.25	0.64
1:C:231:LEU:O	1:C:231:LEU:HG	1.95	0.64
1:A:300:VAL:HB	1:B:199:PHE:HZ	1.62	0.64
1:C:18:SER:O	1:C:19:SER:HB2	1.98	0.64
1:H:51:PHE:HD1	1:H:277:ASN:HB3	1.61	0.64
1:H:271:ARG:HG2	1:H:271:ARG:NH1	2.07	0.64
1:A:61:ILE:HG22	1:A:65:LEU:HD22	1.80	0.64
1:H:42:PRO:CD	1:H:152:VAL:HG11	2.26	0.64
1:B:31:ARG:HD2	1:B:140:GLU:OE1	1.98	0.63
1:B:78:ASN:HD22	1:B:91:GLY:HA3	1.63	0.63
1:C:217:GLU:OE1	1:C:265:LYS:HE2	1.97	0.63
1:B:271:ARG:NH1	1:B:271:ARG:HG2	2.13	0.63
1:E:79:ALA:HB2	1:E:280:HIS:CE1	2.33	0.63
1:C:14:TYR:N	1:C:15:ASP:HA	2.12	0.63
1:F:31:ARG:NH1	1:F:140:GLU:OE2	2.31	0.63
1:B:93:ASP:HB3	1:B:280:HIS:ND1	2.13	0.63
1:B:162:ALA:HA	1:B:165:ARG:NE	2.12	0.63
1:D:25:ARG:HH12	1:D:29:GLN:HG2	1.64	0.63
1:E:164:PHE:C	1:E:166:PRO:HD2	2.18	0.63
1:F:38:PHE:HD1	1:F:38:PHE:O	1.79	0.63
1:E:68:LEU:HD12	1:E:68:LEU:N	2.13	0.63
1:F:7:GLY:HA2	1:F:8:VAL:O	1.97	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:249:ASN:OD1	1:B:301:GLY:HA3	1.99	0.63
1:C:61:ILE:HG22	1:C:65:LEU:HD22	1.81	0.63
1:D:172:ASN:HA	1:D:175:VAL:HG12	1.81	0.63
1:H:136:ASN:H	1:H:136:ASN:HD22	1.45	0.63
1:B:199:PHE:HD2	1:B:199:PHE:N	1.94	0.62
1:E:245:HIS:CE1	1:E:289:HIS:HD2	2.15	0.62
1:F:48:TYR:HB2	1:F:124:ILE:HB	1.79	0.62
1:E:295:THR:OG1	1:E:297:ILE:HG13	2.00	0.62
1:G:168:ILE:HG12	1:G:220:VAL:HG21	1.80	0.62
1:A:39:ARG:CZ	1:A:148:ALA:N	2.62	0.62
1:F:172:ASN:HD21	1:F:227:ALA:HA	1.64	0.62
1:G:197:GLU:OE2	1:H:115:THR:HG21	1.98	0.62
1:H:305:PRO:HB2	1:H:306:LEU:HD12	1.82	0.62
1:B:39:ARG:NH2	1:B:44:ARG:NE	2.46	0.62
1:F:87:THR:HG23	1:F:89:LEU:HG	1.80	0.62
1:G:245:HIS:HE1	1:G:289:HIS:CD2	2.17	0.62
1:H:155:LEU:HB3	1:H:156:PRO:CD	2.25	0.62
1:H:299:PRO:C	1:H:301:GLY:H	2.02	0.62
1:C:44:ARG:HD3	1:C:45:TYR:CE2	2.33	0.62
1:C:48:TYR:HB2	1:C:124:ILE:HB	1.80	0.62
1:F:38:PHE:C	1:F:40:GLY:H	2.01	0.62
1:G:22:ARG:HD3	1:G:23:PHE:N	2.15	0.62
1:D:38:PHE:CD1	1:D:39:ARG:N	2.65	0.62
1:H:37:GLY:H	1:H:38:PHE:HB3	1.60	0.62
1:H:120:VAL:HG12	1:H:120:VAL:O	1.97	0.62
1:B:165:ARG:N	1:B:166:PRO:HD2	2.15	0.62
1:D:56:ALA:O	1:D:60:LEU:HD12	1.99	0.62
1:F:245:HIS:CE1	1:F:289:HIS:HD2	2.17	0.62
1:A:148:ALA:HA	1:A:150:ASP:H	1.65	0.61
1:F:37:GLY:CA	1:F:39:ARG:HG3	2.29	0.61
1:C:238:PHE:CD1	1:C:253:ILE:HG12	2.35	0.61
1:H:202:LEU:C	1:H:202:LEU:HD23	2.20	0.61
1:A:99:ILE:O	1:A:100:ASN:HB2	1.99	0.61
1:D:309:LEU:HD12	1:D:311:LEU:HD12	1.81	0.61
1:B:300:VAL:H	1:B:301:GLY:HA3	1.64	0.61
1:E:47:LEU:C	1:E:47:LEU:HD22	2.21	0.61
1:E:191:THR:HG22	1:E:193:GLU:H	1.64	0.61
1:F:3:LEU:HD13	1:F:24:VAL:HG11	1.81	0.61
1:G:31:ARG:CG	1:G:31:ARG:NH1	2.59	0.61
1:C:27:GLU:CD	1:C:28:SER:N	2.49	0.61
1:E:150:ASP:H	1:E:154:ALA:CB	2.12	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:25:ARG:HG2	1:F:27:GLU:HG2	1.83	0.61
1:F:37:GLY:HA2	1:F:39:ARG:N	2.10	0.61
1:G:37:GLY:HA2	1:G:38:PHE:CB	2.31	0.61
1:G:210:GLU:HB2	1:G:256:TYR:HD1	1.66	0.61
1:H:6:ASP:N	1:H:7:GLY:CA	2.64	0.61
1:B:271:ARG:HG2	1:B:271:ARG:HH11	1.66	0.61
1:A:106:TYR:HA	1:A:120:VAL:HG11	1.83	0.60
1:A:165:ARG:N	1:A:166:PRO:HD2	2.15	0.60
1:B:176:TYR:HA	1:B:180:ASN:HB2	1.82	0.60
1:F:136:ASN:H	1:F:136:ASN:HD22	1.49	0.60
1:F:299:PRO:C	1:F:301:GLY:H	2.04	0.60
1:G:39:ARG:HA	1:G:39:ARG:CZ	2.30	0.60
1:H:98:SER:O	1:H:99:ILE:HG12	2.02	0.60
1:D:39:ARG:HD3	1:D:149:PHE:HA	1.82	0.60
1:D:97:ASP:OD2	1:D:100:ASN:HB2	2.00	0.60
1:G:132:ARG:HG3	1:G:132:ARG:HH11	1.66	0.60
1:G:213:LEU:HD21	1:G:219:LEU:CD2	2.29	0.60
1:C:23:PHE:CD1	1:C:23:PHE:C	2.73	0.60
1:C:172:ASN:ND2	2:C:407:HOH:O	2.33	0.60
1:D:14:TYR:C	1:D:14:TYR:CD2	2.75	0.60
1:D:71:MET:SD	1:D:149:PHE:CE2	2.95	0.60
1:D:5:ILE:HG22	1:D:6:ASP:H	1.67	0.60
1:D:39:ARG:CD	1:D:149:PHE:HA	2.31	0.60
1:B:38:PHE:CB	1:B:39:ARG:HA	2.27	0.60
1:E:87:THR:HG23	1:E:89:LEU:N	2.11	0.60
1:E:149:PHE:O	1:E:151:ASP:N	2.34	0.60
1:F:33:GLY:O	1:F:34:LEU:HB2	2.02	0.60
1:G:31:ARG:HH11	1:G:31:ARG:HG2	1.65	0.60
1:G:310:THR:O	1:G:311:LEU:HB2	2.01	0.60
1:C:5:ILE:HG23	1:C:6:ASP:H	1.63	0.60
1:E:37:GLY:HA2	1:E:38:PHE:CB	2.29	0.60
1:G:87:THR:HG23	1:G:89:LEU:HG	1.84	0.60
1:D:39:ARG:HH11	1:D:149:PHE:HB2	1.65	0.60
1:D:39:ARG:CZ	1:D:149:PHE:CD1	2.84	0.59
1:D:211:GLU:O	1:D:214:THR:HB	2.01	0.59
1:C:200:TYR:OH	1:D:300:VAL:CG2	2.50	0.59
1:C:271:ARG:HH11	1:C:271:ARG:HG2	1.67	0.59
1:C:152:VAL:CG1	1:C:153:GLY:N	2.40	0.59
1:D:229:ILE:O	1:D:233:PRO:HD3	2.01	0.59
1:F:99:ILE:O	1:F:99:ILE:CD1	2.47	0.59
1:B:95:VAL:O	1:B:95:VAL:HG22	2.01	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:163:GLU:HG2	1:E:164:PHE:CE1	2.38	0.59
1:G:37:GLY:HA2	1:G:38:PHE:CG	2.38	0.59
1:A:231:LEU:HG	1:A:235:LEU:HD22	1.83	0.59
1:B:93:ASP:O	1:B:93:ASP:OD2	2.21	0.59
1:B:218:TRP:CZ2	1:B:265:LYS:HD3	2.37	0.59
1:C:39:ARG:HG2	1:C:44:ARG:NH1	2.16	0.59
1:C:192:GLN:HA	1:D:297:ILE:HG12	1.84	0.59
1:H:56:ALA:HA	1:H:123:PRO:HD3	1.84	0.59
1:F:2:GLY:O	1:F:3:LEU:HD23	2.03	0.59
1:D:178:THR:O	1:D:202:LEU:HB2	2.02	0.59
1:E:213:LEU:HD21	1:E:219:LEU:HD23	1.85	0.59
1:D:39:ARG:NH1	1:D:149:PHE:HB2	2.17	0.59
1:C:38:PHE:O	1:C:39:ARG:O	2.20	0.58
1:A:300:VAL:HB	1:B:199:PHE:CE1	2.38	0.58
1:C:282:LYS:NZ	1:C:301:GLY:HA3	2.18	0.58
1:C:295:THR:HG23	2:C:405:HOH:O	2.02	0.58
1:G:132:ARG:HG3	1:G:132:ARG:NH1	2.17	0.58
1:B:273:ALA:HB3	1:B:274:PRO:HD3	1.85	0.58
1:C:12:ALA:HB1	1:E:13:TRP:CE3	2.38	0.58
1:A:39:ARG:CG	1:A:148:ALA:O	2.48	0.58
1:C:97:ASP:OD1	1:C:102:ALA:HB3	2.04	0.58
1:E:3:LEU:HD13	1:E:24:VAL:HG11	1.84	0.58
1:H:40:GLY:CA	1:H:149:PHE:CE1	2.86	0.58
1:C:179:LEU:HD12	1:C:202:LEU:CD2	2.33	0.58
1:H:34:LEU:N	1:H:144:ILE:HD11	2.11	0.58
1:H:42:PRO:HB3	1:H:71:MET:HG3	1.86	0.58
1:H:137:GLU:HB3	1:H:140:GLU:HG3	1.84	0.58
1:H:304:GLN:NE2	1:H:304:GLN:N	2.51	0.58
1:E:67:GLY:O	1:E:69:GLU:N	2.35	0.58
1:G:22:ARG:HG2	1:H:185:ARG:NH2	2.18	0.58
1:H:136:ASN:HD22	1:H:136:ASN:N	1.99	0.58
1:B:6:ASP:N	1:B:7:GLY:CA	2.67	0.58
1:C:63:ARG:HG2	1:C:63:ARG:NH1	2.10	0.58
1:E:66:LYS:O	1:E:68:LEU:N	2.32	0.58
1:A:49:ALA:HB3	1:A:76:MET:CE	2.26	0.58
1:A:143:ARG:CG	1:A:143:ARG:NH1	2.47	0.58
1:D:68:LEU:HD22	1:D:149:PHE:CD1	2.39	0.58
1:E:282:LYS:HZ1	1:E:301:GLY:HA3	1.65	0.58
1:F:42:PRO:HD3	1:F:152:VAL:HG11	1.86	0.58
1:A:87:THR:OG1	1:A:89:LEU:HG	2.03	0.58
1:B:199:PHE:CD2	1:B:199:PHE:N	2.65	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:4:LEU:HD22	1:D:7:GLY:HA2	1.86	0.57
1:D:219:LEU:HB2	1:D:228:ASP:OD2	2.04	0.57
1:E:286:TYR:HB2	1:E:298:VAL:HG22	1.86	0.57
1:F:30:TYR:H	1:F:136:ASN:ND2	2.02	0.57
1:G:140:GLU:O	1:G:144:ILE:HG13	2.04	0.57
1:D:15:ASP:O	1:D:17:LYS:N	2.37	0.57
1:E:92:ASP:N	1:E:92:ASP:OD1	2.37	0.57
1:F:119:ARG:HG3	1:F:119:ARG:NH1	1.97	0.57
1:C:191:THR:C	1:D:297:ILE:HD11	2.25	0.57
1:D:30:TYR:O	1:D:135:ASN:HA	2.05	0.57
1:G:7:GLY:CA	1:G:8:VAL:CB	2.82	0.57
1:C:309:LEU:HD22	1:C:310:THR:H	1.70	0.57
1:E:38:PHE:HD1	1:E:39:ARG:H	1.51	0.57
1:H:67:GLY:O	1:H:69:GLU:N	2.38	0.57
1:E:62:MET:HB2	1:E:142:ILE:HD11	1.87	0.57
1:H:168:ILE:HG12	1:H:220:VAL:HG21	1.86	0.57
1:B:152:VAL:CG1	1:B:152:VAL:O	2.52	0.57
1:A:39:ARG:HH12	1:A:146:ASN:N	2.03	0.57
1:A:109:TYR:CD1	1:A:120:VAL:HG13	2.39	0.57
1:E:107:GLN:O	1:E:110:THR:HG22	2.04	0.57
1:C:47:LEU:HB3	1:C:74:VAL:HG12	1.87	0.57
1:A:39:ARG:HH12	1:A:146:ASN:C	2.08	0.57
1:B:217:GLU:OE1	1:B:311:LEU:HD21	2.05	0.57
1:G:216:ARG:HH11	1:G:216:ARG:CG	2.16	0.57
1:A:245:HIS:CE1	1:A:289:HIS:CD2	2.79	0.57
1:C:172:ASN:HD21	1:C:227:ALA:HA	1.70	0.57
1:C:224:LEU:HD12	1:C:225:THR:N	2.20	0.57
1:A:162:ALA:HA	1:A:165:ARG:HG3	1.87	0.56
1:C:167:GLU:HG3	1:C:170:ARG:NH1	2.20	0.56
1:D:299:PRO:C	1:D:301:GLY:N	2.56	0.56
1:D:149:PHE:O	1:D:154:ALA:HB2	2.05	0.56
1:E:61:ILE:HD13	1:E:272:VAL:HG13	1.86	0.56
1:E:300:VAL:CG1	1:E:300:VAL:O	2.54	0.56
1:E:307:PRO:CG	1:E:308:GLY:H	2.16	0.56
1:G:61:ILE:HG23	1:G:272:VAL:HG22	1.85	0.56
1:B:78:ASN:HD21	1:B:91:GLY:HA3	1.63	0.56
1:C:4:LEU:HD21	1:C:106:TYR:HB2	1.87	0.56
1:D:39:ARG:NH1	1:D:149:PHE:CG	2.73	0.56
1:E:229:ILE:O	1:E:233:PRO:HD3	2.05	0.56
1:F:68:LEU:HD21	1:F:154:ALA:HB2	1.87	0.56
1:G:30:TYR:H	1:G:136:ASN:HD21	1.54	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:39:ARG:HA	1:G:39:ARG:HE	1.65	0.56
1:G:110:THR:HG22	1:G:111:ALA:N	2.20	0.56
1:H:59:VAL:HG11	1:H:141:ILE:CG2	2.35	0.56
1:E:160:TYR:CE1	1:E:165:ARG:HG3	2.39	0.56
1:H:81:MET:HB3	1:H:288:SER:HB2	1.86	0.56
1:H:213:LEU:HD23	1:H:219:LEU:HD23	1.87	0.56
1:A:19:SER:H	1:A:20:GLY:CA	2.13	0.56
1:E:245:HIS:HE1	1:E:289:HIS:CD2	2.16	0.56
1:F:36:ALA:O	1:F:38:PHE:HB3	2.04	0.56
1:F:143:ARG:O	1:F:146:ASN:HB3	2.04	0.56
1:G:31:ARG:NH1	1:G:31:ARG:HG2	2.20	0.56
1:H:164:PHE:C	1:H:166:PRO:HD2	2.25	0.56
1:B:23:PHE:O	1:B:23:PHE:CD2	2.59	0.56
1:B:106:TYR:HA	1:B:120:VAL:HG11	1.88	0.56
1:D:44:ARG:HG2	1:D:45:TYR:CE2	2.40	0.56
1:E:160:TYR:CZ	1:E:165:ARG:HG3	2.40	0.56
1:G:210:GLU:CD	1:G:258:ASN:HB2	2.26	0.56
1:B:122:ILE:HB	1:B:123:PRO:HA	1.87	0.56
1:C:87:THR:HG22	1:C:89:LEU:H	1.69	0.56
1:D:282:LYS:HZ2	1:D:301:GLY:HA3	1.71	0.56
1:G:2:GLY:HA3	1:G:11:ASP:HA	1.88	0.56
1:H:163:GLU:C	1:H:164:PHE:HD2	2.09	0.56
1:E:62:MET:HE2	1:E:142:ILE:O	2.06	0.56
1:H:22:ARG:HB2	1:H:23:PHE:HA	1.88	0.56
1:H:91:GLY:O	1:H:94:VAL:CG2	2.52	0.56
1:A:159:TYR:HE1	1:A:224:LEU:HD23	1.71	0.55
1:D:2:GLY:HA3	1:D:9:TRP:CZ2	2.41	0.55
1:F:37:GLY:C	1:F:39:ARG:H	2.09	0.55
1:F:97:ASP:OD2	1:F:100:ASN:HB3	2.05	0.55
1:H:172:ASN:ND2	1:H:230:ARG:HE	2.04	0.55
1:A:192:GLN:O	1:A:196:GLU:HG3	2.06	0.55
1:A:299:PRO:O	1:A:301:GLY:N	2.39	0.55
1:D:172:ASN:HD21	1:D:227:ALA:HA	1.69	0.55
1:A:98:SER:O	1:A:99:ILE:HG13	2.05	0.55
1:A:271:ARG:HH11	1:A:271:ARG:HG2	1.69	0.55
1:A:304:GLN:HA	1:A:304:GLN:HE21	1.72	0.55
1:D:14:TYR:CD1	1:D:26:LYS:HE2	2.41	0.55
1:D:286:TYR:CZ	1:D:299:PRO:HG2	2.42	0.55
1:E:191:THR:HG22	1:E:194:ALA:H	1.71	0.55
1:G:167:GLU:CG	1:G:170:ARG:HH12	2.14	0.55
1:C:27:GLU:OE1	1:C:28:SER:HB3	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:298:VAL:O	1:D:192:GLN:NE2	2.39	0.55
1:D:87:THR:CG2	1:D:88:PHE:N	2.69	0.55
1:E:282:LYS:HZ2	1:E:301:GLY:HA3	1.68	0.55
1:F:79:ALA:HB2	1:F:280:HIS:CE1	2.41	0.55
1:A:284:HIS:O	1:A:288:SER:HB2	2.06	0.55
1:C:136:ASN:HD22	1:C:136:ASN:N	1.94	0.55
1:D:231:LEU:HG	1:D:231:LEU:O	2.05	0.55
1:E:16:THR:O	1:E:17:LYS:HB2	2.07	0.55
1:G:59:VAL:HG21	1:G:141:ILE:HG21	1.87	0.55
1:G:136:ASN:HD22	1:G:136:ASN:N	2.00	0.55
1:G:213:LEU:CD1	1:G:259:LEU:HD23	2.36	0.55
1:H:37:GLY:C	1:H:39:ARG:N	2.60	0.55
1:A:199:PHE:O	1:A:202:LEU:HB3	2.07	0.55
1:A:282:LYS:HE2	1:A:301:GLY:CA	2.35	0.55
1:B:89:LEU:HB3	1:B:90:PRO:HD2	1.89	0.55
1:C:240:ALA:HB1	1:C:282:LYS:HD2	1.89	0.55
1:A:39:ARG:HD3	1:A:148:ALA:N	2.21	0.55
1:D:2:GLY:O	1:D:3:LEU:HD23	2.07	0.55
1:D:44:ARG:HD3	1:D:129:VAL:HG21	1.89	0.55
1:H:5:ILE:CG2	1:H:6:ASP:N	2.69	0.55
1:E:160:TYR:N	1:E:161:PRO:HD3	2.22	0.55
1:F:58:ARG:HD2	1:F:138:SER:OG	2.07	0.55
1:A:44:ARG:O	1:A:128:LYS:HG3	2.07	0.54
1:B:202:LEU:HD12	1:B:202:LEU:C	2.27	0.54
1:C:59:VAL:HA	1:C:142:ILE:HD11	1.88	0.54
1:D:241:ILE:CG1	1:D:282:LYS:HG2	2.38	0.54
1:G:312:GLN:HG2	1:G:313:SER:H	1.72	0.54
1:H:68:LEU:HD12	1:H:68:LEU:H	1.71	0.54
1:H:160:TYR:N	1:H:161:PRO:CD	2.70	0.54
1:H:162:ALA:HA	1:H:165:ARG:CD	2.37	0.54
1:A:170:ARG:HG3	1:A:170:ARG:NH1	2.20	0.54
1:C:245:HIS:NE2	1:C:289:HIS:HD2	2.05	0.54
1:D:145:LEU:HD23	1:D:145:LEU:N	2.22	0.54
1:F:78:ASN:HD21	1:F:91:GLY:HA3	1.72	0.54
1:H:63:ARG:O	1:H:65:LEU:N	2.35	0.54
1:D:270:GLU:O	1:D:271:ARG:CB	2.54	0.54
1:G:44:ARG:HG3	1:G:129:VAL:HG23	1.90	0.54
1:H:30:TYR:H	1:H:136:ASN:HD21	1.55	0.54
1:H:57:HIS:CD2	1:H:237:ARG:HH22	2.25	0.54
1:B:76:MET:HB2	1:B:94:VAL:HB	1.89	0.54
1:C:13:TRP:HE1	1:E:13:TRP:HA	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:299:PRO:HG3	1:D:247:LYS:HD3	1.90	0.54
1:D:47:LEU:HD22	1:D:48:TYR:N	2.22	0.54
1:H:164:PHE:HE1	1:H:221:GLY:HA3	1.72	0.54
1:C:26:LYS:HB2	1:C:27:GLU:OE2	2.07	0.54
1:C:265:LYS:CA	1:C:310:THR:HG21	2.36	0.54
1:D:282:LYS:HZ1	1:D:301:GLY:HA3	1.73	0.54
1:E:13:TRP:HZ2	1:E:17:LYS:HZ2	1.55	0.54
1:H:256:TYR:HB3	1:H:259:LEU:HB2	1.90	0.54
1:H:282:LYS:NZ	1:H:301:GLY:CA	2.71	0.54
1:C:162:ALA:HA	1:C:165:ARG:CD	2.38	0.54
1:E:44:ARG:HG2	1:E:129:VAL:HG23	1.89	0.54
1:E:286:TYR:CZ	1:E:299:PRO:HG2	2.43	0.54
1:H:271:ARG:CG	1:H:271:ARG:NH1	2.58	0.54
1:A:160:TYR:N	1:A:161:PRO:HD3	2.22	0.54
1:C:19:SER:HB3	1:C:20:GLY:HA3	1.89	0.54
1:C:27:GLU:OE1	1:C:28:SER:N	2.41	0.54
1:A:39:ARG:NE	1:A:149:PHE:N	2.46	0.54
1:B:178:THR:O	1:B:202:LEU:HB2	2.08	0.54
1:C:167:GLU:HG3	1:C:170:ARG:HH11	1.73	0.54
1:D:150:ASP:O	1:D:152:VAL:N	2.39	0.54
1:E:15:ASP:O	1:E:15:ASP:CG	2.46	0.54
1:E:37:GLY:CA	1:E:38:PHE:CD2	2.91	0.54
1:E:62:MET:HB2	1:E:142:ILE:CD1	2.37	0.54
1:E:66:LYS:HD2	1:E:146:ASN:HA	1.90	0.54
1:D:210:GLU:OE2	1:D:257:PRO:HG2	2.08	0.54
1:G:58:ARG:HD2	1:G:138:SER:OG	2.08	0.54
1:A:136:ASN:N	1:A:136:ASN:HD22	2.07	0.53
1:B:32:GLY:HA3	1:B:134:LEU:HD12	1.89	0.53
1:D:159:TYR:HD1	1:D:224:LEU:O	1.92	0.53
1:E:70:GLU:N	1:E:70:GLU:CD	2.62	0.53
1:F:256:TYR:O	1:F:260:SER:HB2	2.08	0.53
1:B:232:PHE:HB3	1:B:233:PRO:HD3	1.90	0.53
1:E:13:TRP:NE1	1:E:16:THR:HG22	2.23	0.53
1:G:210:GLU:OE1	1:G:256:TYR:HB3	2.08	0.53
1:A:39:ARG:NH2	1:A:149:PHE:N	2.47	0.53
1:D:53:CYS:HG	1:D:55:TRP:HD1	1.56	0.53
1:F:30:TYR:O	1:F:135:ASN:HA	2.09	0.53
1:F:36:ALA:C	1:F:38:PHE:CB	2.77	0.53
1:B:286:TYR:HB2	1:B:298:VAL:HG22	1.90	0.53
1:D:268:SER:HB2	1:D:309:LEU:HD22	1.89	0.53
1:E:160:TYR:N	1:E:161:PRO:CD	2.71	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:78:ASN:ND2	1:F:91:GLY:HA3	2.24	0.53
1:A:151:ASP:HB3	1:A:152:VAL:HG13	1.89	0.53
1:E:150:ASP:CA	1:E:154:ALA:HB3	2.39	0.53
1:C:87:THR:CG2	1:C:89:LEU:HG	2.35	0.53
1:F:5:ILE:C	1:F:7:GLY:N	2.60	0.53
1:G:312:GLN:HG2	1:G:313:SER:N	2.23	0.53
1:C:16:THR:HG22	1:C:18:SER:H	1.74	0.53
1:E:210:GLU:CD	1:E:258:ASN:HB2	2.29	0.53
1:A:97:ASP:OD2	1:A:100:ASN:HB3	2.08	0.53
1:B:269:HIS:ND1	1:B:270:GLU:O	2.35	0.53
1:G:31:ARG:NH1	1:G:140:GLU:OE2	2.41	0.53
1:A:39:ARG:CD	1:A:148:ALA:N	2.72	0.53
1:B:38:PHE:CB	1:B:39:ARG:O	2.52	0.53
1:B:93:ASP:CB	1:B:280:HIS:ND1	2.72	0.53
1:B:268:SER:CB	1:B:309:LEU:HG	2.39	0.53
1:C:251:ARG:NH2	2:C:401:HOH:O	2.19	0.53
1:H:97:ASP:O	1:H:101:GLY:HA2	2.09	0.53
1:E:210:GLU:OE2	1:E:258:ASN:HB2	2.08	0.53
1:H:47:LEU:C	1:H:47:LEU:HD22	2.28	0.53
1:H:226:GLU:O	1:H:230:ARG:HG3	2.08	0.53
1:B:44:ARG:NH1	1:B:45:TYR:OH	2.41	0.52
1:C:23:PHE:CD2	1:E:27:GLU:HB3	2.44	0.52
1:H:213:LEU:CD1	1:H:258:ASN:HB3	2.39	0.52
1:A:13:TRP:C	1:A:15:ASP:HA	2.28	0.52
1:C:20:GLY:HA2	1:E:184:TYR:CB	2.38	0.52
1:E:172:ASN:HD21	1:E:227:ALA:HA	1.73	0.52
1:G:34:LEU:HD21	1:G:140:GLU:OE1	2.08	0.52
1:D:98:SER:O	1:D:100:ASN:N	2.42	0.52
1:D:136:ASN:ND2	1:D:136:ASN:O	2.42	0.52
1:E:142:ILE:O	1:E:142:ILE:HD13	2.10	0.52
1:G:213:LEU:CD2	1:G:219:LEU:HD23	2.34	0.52
1:C:25:ARG:CZ	1:C:29:GLN:HG2	2.40	0.52
1:E:202:LEU:HD12	1:E:203:PHE:N	2.25	0.52
1:A:172:ASN:HD21	1:A:227:ALA:HA	1.75	0.52
1:C:23:PHE:HD1	1:C:23:PHE:O	1.93	0.52
1:D:44:ARG:HD3	1:D:129:VAL:CG2	2.38	0.52
1:D:66:LYS:HE3	1:D:146:ASN:HA	1.91	0.52
1:D:113:ASP:OD1	1:D:113:ASP:C	2.48	0.52
1:E:97:ASP:CB	1:E:102:ALA:HB3	2.39	0.52
1:H:81:MET:H	1:H:288:SER:HB3	1.74	0.52
1:A:282:LYS:CE	1:A:301:GLY:HA3	2.40	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:59:VAL:CG1	1:B:123:PRO:HG3	2.39	0.52
1:D:214:THR:CG2	1:D:215:GLY:N	2.65	0.52
1:E:34:LEU:HD11	1:E:140:GLU:HB3	1.92	0.52
1:F:214:THR:HA	1:F:258:ASN:HD21	1.73	0.52
1:A:5:ILE:HG21	1:A:10:ARG:NH1	2.19	0.52
1:A:136:ASN:HD22	1:A:136:ASN:H	1.56	0.52
1:D:25:ARG:NH1	1:D:29:GLN:HG2	2.25	0.52
1:E:308:GLY:O	1:E:309:LEU:HG	2.10	0.52
1:G:238:PHE:CD1	1:G:253:ILE:HG12	2.44	0.52
1:H:81:MET:HB3	1:H:288:SER:CB	2.39	0.52
1:C:286:TYR:CE2	1:C:299:PRO:HD2	2.45	0.52
1:D:97:ASP:C	1:D:98:SER:O	2.47	0.52
1:D:143:ARG:CG	1:D:143:ARG:NH1	2.54	0.52
1:F:224:LEU:HD12	1:F:224:LEU:C	2.30	0.52
1:H:97:ASP:HB3	1:H:102:ALA:H	1.75	0.52
1:B:94:VAL:HG12	1:B:95:VAL:HG12	1.92	0.52
1:B:231:LEU:HG	1:B:235:LEU:HD22	1.91	0.52
1:D:14:TYR:O	1:D:14:TYR:CG	2.63	0.52
1:D:230:ARG:O	1:D:233:PRO:HD2	2.10	0.52
1:F:7:GLY:HA2	1:F:8:VAL:C	2.30	0.52
1:H:4:LEU:HD12	1:H:116:TYR:CD2	2.45	0.52
1:H:266:LEU:O	1:H:272:VAL:HG21	2.09	0.52
1:D:269:HIS:CE1	1:D:271:ARG:HB2	2.46	0.52
1:F:34:LEU:O	1:F:35:ASP:CG	2.48	0.52
1:F:37:GLY:N	1:F:38:PHE:HB3	2.25	0.52
1:G:282:LYS:NZ	1:G:301:GLY:HA3	2.25	0.52
1:B:30:TYR:H	1:B:136:ASN:HD21	1.58	0.51
1:D:135:ASN:HD21	1:D:140:GLU:HB2	1.74	0.51
1:F:59:VAL:HA	1:F:142:ILE:HD11	1.92	0.51
1:H:31:ARG:HG3	1:H:140:GLU:OE1	2.10	0.51
1:A:160:TYR:CE2	1:A:165:ARG:HD3	2.45	0.51
1:C:162:ALA:HA	1:C:165:ARG:HD2	1.92	0.51
1:C:201:PRO:O	1:C:202:LEU:C	2.49	0.51
1:G:203:PHE:CE1	1:G:250:LEU:HB3	2.46	0.51
1:H:47:LEU:HD22	1:H:48:TYR:N	2.25	0.51
1:C:179:LEU:HD12	1:C:202:LEU:HD21	1.92	0.51
1:E:214:THR:HG23	1:E:258:ASN:HD21	1.75	0.51
1:G:240:ALA:HA	1:G:302:PRO:HG2	1.92	0.51
1:H:56:ALA:CA	1:H:123:PRO:HD3	2.39	0.51
1:H:67:GLY:C	1:H:69:GLU:H	2.14	0.51
1:A:147:SER:O	1:A:150:ASP:CG	2.49	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:31:ARG:HH12	1:E:137:GLU:HG2	1.75	0.51
1:E:149:PHE:HB3	1:E:154:ALA:HB2	1.93	0.51
1:E:232:PHE:N	1:E:233:PRO:HD2	2.26	0.51
1:F:300:VAL:HG13	1:F:300:VAL:O	2.09	0.51
1:H:164:PHE:CE1	1:H:221:GLY:HA3	2.45	0.51
1:A:68:LEU:HD12	1:A:145:LEU:HD13	1.92	0.51
1:F:162:ALA:HA	1:F:165:ARG:NE	2.26	0.51
1:D:269:HIS:CE1	1:D:270:GLU:O	2.63	0.51
1:E:26:LYS:HD3	1:E:26:LYS:C	2.31	0.51
1:F:47:LEU:HB3	1:F:74:VAL:HG12	1.92	0.51
1:F:163:GLU:HB2	1:F:164:PHE:CD1	2.45	0.51
1:A:161:PRO:HB2	1:A:164:PHE:HD1	1.76	0.51
1:B:39:ARG:CZ	1:B:41:GLU:CD	2.79	0.51
1:C:44:ARG:HG3	1:C:129:VAL:HG23	1.93	0.51
1:E:31:ARG:NH1	1:E:137:GLU:HG2	2.25	0.51
1:F:7:GLY:HA2	1:F:8:VAL:CB	2.41	0.51
1:G:31:ARG:HG3	1:G:140:GLU:OE1	2.10	0.51
1:B:191:THR:CG2	1:B:194:ALA:H	2.21	0.51
1:D:15:ASP:C	1:D:17:LYS:N	2.63	0.51
1:D:257:PRO:HG2	1:D:258:ASN:H	1.76	0.51
1:E:99:ILE:C	1:E:99:ILE:HD13	2.31	0.51
1:C:37:GLY:HA2	1:C:38:PHE:CD2	2.46	0.50
1:D:81:MET:CE	1:D:86:TRP:CE2	2.94	0.50
1:E:247:LYS:HG2	1:F:299:PRO:HB3	1.93	0.50
1:H:137:GLU:HG3	1:H:139:SER:OG	2.10	0.50
1:A:2:GLY:HA3	1:A:9:TRP:CZ2	2.47	0.50
1:B:179:LEU:CD1	1:B:202:LEU:HD13	2.42	0.50
1:B:186:SER:OG	1:B:199:PHE:HB3	2.10	0.50
1:C:286:TYR:O	1:C:296:GLY:HA2	2.11	0.50
1:G:176:TYR:HE1	1:G:181:ASN:ND2	2.09	0.50
1:D:41:GLU:HA	1:D:152:VAL:HG11	1.94	0.50
1:G:205:THR:HG22	1:G:209:LEU:HD23	1.93	0.50
1:H:127:ASP:OD1	1:H:130:GLU:HG3	2.11	0.50
1:H:182:GLY:O	1:H:183:VAL:C	2.49	0.50
1:C:42:PRO:CG	1:C:152:VAL:HG11	2.37	0.50
1:D:149:PHE:O	1:D:149:PHE:CD2	2.64	0.50
1:E:68:LEU:HD12	1:E:68:LEU:H	1.76	0.50
1:H:178:THR:O	1:H:182:GLY:HA3	2.11	0.50
1:H:282:LYS:HZ2	1:H:301:GLY:HA3	1.77	0.50
1:C:5:ILE:HG13	1:C:22:ARG:HD2	1.93	0.50
1:D:3:LEU:HD13	1:D:24:VAL:HG11	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:165:ARG:N	1:E:166:PRO:HD2	2.26	0.50
1:E:177:GLU:O	1:E:177:GLU:HG2	2.11	0.50
1:H:80:TYR:CE2	1:H:82:GLY:HA3	2.46	0.50
1:H:211:GLU:O	1:H:214:THR:HB	2.10	0.50
1:A:37:GLY:CA	1:A:38:PHE:CB	2.61	0.50
1:D:44:ARG:HG2	1:D:45:TYR:CZ	2.46	0.50
1:D:210:GLU:OE2	1:D:257:PRO:HD2	2.12	0.50
1:E:115:THR:O	1:E:116:TYR:C	2.50	0.50
1:F:161:PRO:HB3	1:F:223:ARG:NH2	2.26	0.50
1:F:265:LYS:HB2	1:F:309:LEU:HD13	1.93	0.50
1:H:166:PRO:HG2	1:H:167:GLU:N	2.23	0.50
1:H:166:PRO:CG	1:H:167:GLU:H	2.20	0.50
1:H:232:PHE:O	1:H:236:VAL:HG12	2.12	0.50
1:B:93:ASP:C	1:B:94:VAL:HG22	2.32	0.50
1:C:63:ARG:HH11	1:C:63:ARG:CG	2.17	0.50
1:F:37:GLY:N	1:F:38:PHE:CB	2.75	0.50
1:H:22:ARG:HH11	1:H:23:PHE:HD2	1.60	0.50
1:E:107:GLN:HA	1:E:110:THR:CG2	2.41	0.50
1:E:243:HIS:CD2	1:E:249:ASN:HA	2.47	0.50
1:F:78:ASN:HB2	1:F:87:THR:HG22	1.92	0.50
1:A:79:ALA:HB2	1:A:280:HIS:CE1	2.46	0.50
1:E:36:ALA:O	1:E:37:GLY:O	2.30	0.50
1:E:168:ILE:HG13	1:E:220:VAL:HG11	1.94	0.50
1:H:44:ARG:HH11	1:H:129:VAL:HB	1.76	0.50
1:D:122:ILE:HB	1:D:123:PRO:CA	2.39	0.49
1:E:42:PRO:HA	1:E:71:MET:HB3	1.93	0.49
1:E:202:LEU:C	1:E:202:LEU:CD1	2.79	0.49
1:H:59:VAL:HG11	1:H:141:ILE:HG21	1.93	0.49
1:H:172:ASN:CB	1:H:230:ARG:HH21	2.24	0.49
1:D:269:HIS:CE1	1:D:271:ARG:CB	2.95	0.49
1:F:90:PRO:O	1:F:91:GLY:O	2.31	0.49
1:C:2:GLY:N	1:E:19:SER:CB	2.75	0.49
1:C:226:GLU:O	1:C:230:ARG:HG2	2.12	0.49
1:E:44:ARG:CG	1:E:129:VAL:HG23	2.41	0.49
1:E:208:TRP:O	1:E:211:GLU:N	2.46	0.49
1:F:220:VAL:CG1	1:F:221:GLY:N	2.74	0.49
1:G:24:VAL:HG23	1:H:26:LYS:HD3	1.94	0.49
1:H:231:LEU:HD11	1:H:235:LEU:CD2	2.42	0.49
1:H:268:SER:O	1:H:269:HIS:C	2.51	0.49
1:C:16:THR:HG22	1:C:18:SER:N	2.27	0.49
1:C:272:VAL:O	1:C:275:THR:HG23	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:167:GLU:HG2	1:D:171:ILE:HD12	1.94	0.49
1:B:231:LEU:HG	1:B:235:LEU:CD2	2.43	0.49
1:D:34:LEU:O	1:D:36:ALA:N	2.46	0.49
1:E:150:ASP:HA	1:E:154:ALA:HB3	1.93	0.49
1:E:273:ALA:HB3	1:E:274:PRO:HD3	1.93	0.49
1:H:299:PRO:C	1:H:301:GLY:N	2.66	0.49
1:A:294:PRO:HG3	1:B:294:PRO:HG3	1.94	0.49
1:D:152:VAL:HG12	1:D:152:VAL:O	2.12	0.49
1:E:67:GLY:O	1:E:69:GLU:HG2	2.12	0.49
1:G:235:LEU:HB3	1:G:263:VAL:CG2	2.42	0.49
1:H:49:ALA:O	1:H:77:VAL:HG22	2.12	0.49
1:A:106:TYR:CA	1:A:120:VAL:HG11	2.42	0.49
1:B:190:THR:HG23	1:D:6:ASP:OD1	2.12	0.49
1:D:162:ALA:HB2	1:D:165:ARG:CZ	2.43	0.49
1:H:142:ILE:HD11	1:H:226:GLU:HB2	1.95	0.49
1:A:269:HIS:C	1:A:270:GLU:O	2.44	0.49
1:H:143:ARG:NH1	1:H:160:TYR:CZ	2.81	0.49
1:A:218:TRP:CZ3	1:A:224:LEU:HD13	2.48	0.49
1:D:126:TRP:CD1	1:D:126:TRP:C	2.85	0.49
1:E:208:TRP:O	1:E:209:LEU:C	2.50	0.49
1:G:109:TYR:CD1	1:G:120:VAL:HG13	2.47	0.49
1:A:178:THR:O	1:A:202:LEU:HD22	2.13	0.49
1:B:295:THR:OG1	1:B:297:ILE:HG12	2.13	0.49
1:C:31:ARG:HD2	1:C:140:GLU:OE1	2.13	0.49
1:E:98:SER:O	1:E:99:ILE:HG22	2.13	0.49
1:F:160:TYR:CE1	1:F:165:ARG:HG2	2.48	0.49
1:H:271:ARG:HH11	1:H:271:ARG:CB	2.25	0.49
1:A:143:ARG:NH1	1:A:226:GLU:OE1	2.45	0.48
1:F:218:TRP:CZ2	1:F:265:LYS:HD3	2.48	0.48
1:H:20:GLY:HA3	1:H:22:ARG:N	2.20	0.48
1:H:63:ARG:HH11	1:H:63:ARG:CG	2.16	0.48
1:A:14:TYR:CG	1:A:14:TYR:O	2.67	0.48
1:C:37:GLY:CA	1:C:38:PHE:HB3	2.42	0.48
1:D:243:HIS:CD2	1:D:249:ASN:HA	2.48	0.48
1:F:220:VAL:HG12	1:F:221:GLY:N	2.28	0.48
1:F:273:ALA:N	1:F:274:PRO:HD2	2.28	0.48
1:B:33:GLY:O	1:B:34:LEU:HB2	2.12	0.48
1:C:42:PRO:HD3	1:C:152:VAL:HG21	1.95	0.48
1:C:136:ASN:H	1:C:136:ASN:ND2	2.06	0.48
1:E:97:ASP:OD2	1:E:102:ALA:HB3	2.13	0.48
1:G:237:ARG:HG3	1:G:237:ARG:HH11	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:25:ARG:O	1:C:27:GLU:N	2.45	0.48
1:D:191:THR:O	1:D:192:GLN:C	2.50	0.48
1:F:42:PRO:HD3	1:F:152:VAL:CG1	2.44	0.48
1:A:31:ARG:NH1	1:A:140:GLU:OE2	2.46	0.48
1:D:66:LYS:HB2	1:D:68:LEU:HG	1.95	0.48
1:E:183:VAL:HG21	1:E:242:TYR:CE2	2.48	0.48
1:E:263:VAL:HG12	1:E:264:GLY:N	2.29	0.48
1:F:6:ASP:HA	1:F:115:THR:O	2.14	0.48
1:H:92:ASP:N	1:H:92:ASP:OD1	2.36	0.48
1:H:231:LEU:HD11	1:H:235:LEU:HD22	1.96	0.48
1:F:34:LEU:O	1:F:35:ASP:HB3	2.13	0.48
1:F:60:LEU:HD21	1:F:76:MET:HE1	1.95	0.48
1:F:70:GLU:CD	1:F:70:GLU:H	2.16	0.48
1:A:22:ARG:CG	1:A:22:ARG:NH1	2.58	0.48
1:A:238:PHE:CD1	1:A:253:ILE:HG12	2.48	0.48
1:H:44:ARG:O	1:H:128:LYS:HB2	2.13	0.48
1:H:57:HIS:O	1:H:61:ILE:HG12	2.13	0.48
1:H:66:LYS:C	1:H:68:LEU:HD12	2.34	0.48
1:H:306:LEU:HB3	1:H:307:PRO:CD	2.29	0.48
1:C:10:ARG:HG2	1:C:15:ASP:CG	2.34	0.48
1:D:39:ARG:HB2	1:D:148:ALA:HB1	1.96	0.48
1:D:150:ASP:C	1:D:152:VAL:H	2.17	0.48
1:E:68:LEU:HD23	1:E:149:PHE:CD2	2.48	0.48
1:F:99:ILE:O	1:F:100:ASN:HB2	2.14	0.48
1:F:119:ARG:CG	1:F:119:ARG:NH1	2.65	0.48
1:G:39:ARG:NE	1:G:39:ARG:CA	2.59	0.48
1:G:213:LEU:HD12	1:G:259:LEU:CD2	2.36	0.48
1:A:95:VAL:HA	1:A:96:PRO:HD3	1.63	0.48
1:C:282:LYS:HZ1	1:C:301:GLY:HA3	1.79	0.48
1:E:35:ASP:O	1:E:36:ALA:C	2.52	0.48
1:E:191:THR:CG2	1:E:194:ALA:H	2.27	0.48
1:G:39:ARG:HE	1:G:40:GLY:CA	2.27	0.48
1:G:299:PRO:C	1:G:301:GLY:N	2.66	0.48
1:H:7:GLY:HA2	1:H:8:VAL:CB	2.44	0.48
1:C:19:SER:N	1:C:20:GLY:HA3	2.28	0.47
1:C:229:ILE:O	1:C:233:PRO:HD3	2.14	0.47
1:D:105:LEU:HD21	1:D:122:ILE:HG23	1.96	0.47
1:D:175:VAL:HG22	1:D:175:VAL:O	2.13	0.47
1:E:178:THR:O	1:E:182:GLY:HA3	2.14	0.47
1:F:269:HIS:CE1	1:F:270:GLU:O	2.66	0.47
1:E:229:ILE:O	1:E:233:PRO:CD	2.61	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:302:PRO:O	1:E:305:PRO:HD3	2.14	0.47
1:F:299:PRO:C	1:F:301:GLY:N	2.68	0.47
1:G:299:PRO:O	1:G:301:GLY:N	2.47	0.47
1:H:259:LEU:O	1:H:263:VAL:HG23	2.14	0.47
1:C:47:LEU:HD21	1:C:59:VAL:HG21	1.96	0.47
1:C:160:TYR:N	1:C:161:PRO:HD3	2.28	0.47
1:D:17:LYS:HG3	1:D:21:GLY:H	1.80	0.47
1:H:171:ILE:O	1:H:175:VAL:HG23	2.15	0.47
1:H:229:ILE:O	1:H:233:PRO:HD3	2.14	0.47
1:A:35:ASP:O	1:A:36:ALA:C	2.52	0.47
1:A:92:ASP:O	1:A:93:ASP:HB2	2.13	0.47
1:B:307:PRO:O	1:B:308:GLY:O	2.32	0.47
1:H:46:HIS:HB2	1:H:128:LYS:HE3	1.96	0.47
1:A:270:GLU:O	1:A:271:ARG:CB	2.38	0.47
1:D:238:PHE:HA	1:D:242:TYR:HB2	1.97	0.47
1:B:309:LEU:HD22	1:B:310:THR:N	2.30	0.47
1:C:38:PHE:H	1:C:39:ARG:NH1	2.12	0.47
1:F:243:HIS:CD2	1:F:249:ASN:HA	2.50	0.47
1:H:24:VAL:O	1:H:25:ARG:HB2	2.15	0.47
1:H:63:ARG:C	1:H:65:LEU:H	2.18	0.47
1:C:20:GLY:HA2	1:E:184:TYR:HB2	1.97	0.47
1:C:179:LEU:HA	1:C:202:LEU:CD2	2.44	0.47
1:D:87:THR:CG2	1:D:89:LEU:CG	2.87	0.47
1:D:202:LEU:C	1:D:202:LEU:CD1	2.76	0.47
1:F:44:ARG:HG3	1:F:129:VAL:HG23	1.96	0.47
1:F:152:VAL:CG1	1:F:152:VAL:O	2.61	0.47
1:F:210:GLU:OE2	1:F:258:ASN:HB2	2.13	0.47
1:G:30:TYR:O	1:G:135:ASN:HA	2.15	0.47
1:G:302:PRO:O	1:G:305:PRO:HG3	2.15	0.47
1:H:266:LEU:O	1:H:272:VAL:CG2	2.63	0.47
1:A:223:ARG:CB	1:A:223:ARG:NH1	2.62	0.47
1:D:4:LEU:HD12	1:D:116:TYR:CD2	2.50	0.47
1:E:47:LEU:HD22	1:E:48:TYR:N	2.29	0.47
1:E:224:LEU:HD12	1:E:224:LEU:C	2.34	0.47
1:E:278:LEU:HD12	1:E:278:LEU:HA	1.66	0.47
1:F:167:GLU:O	1:F:171:ILE:HG13	2.14	0.47
1:H:44:ARG:O	1:H:44:ARG:HG3	2.13	0.47
1:C:61:ILE:CG2	1:C:65:LEU:HD22	2.45	0.47
1:D:78:ASN:OD1	1:D:79:ALA:N	2.47	0.47
1:E:97:ASP:HB3	1:E:102:ALA:HB3	1.96	0.47
1:F:33:GLY:O	1:F:34:LEU:HD22	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:37:GLY:HA2	1:G:38:PHE:HB3	1.97	0.47
1:H:30:TYR:O	1:H:135:ASN:HA	2.15	0.47
1:C:23:PHE:HE2	1:E:27:GLU:HB3	1.80	0.46
1:C:25:ARG:NH1	1:C:29:GLN:HG2	2.29	0.46
1:C:33:GLY:O	1:C:34:LEU:CB	2.55	0.46
1:C:174:ARG:HD3	1:C:208:TRP:CE3	2.50	0.46
1:C:179:LEU:HD12	1:C:202:LEU:HD22	1.96	0.46
1:D:39:ARG:HB3	1:D:148:ALA:O	2.15	0.46
1:E:310:THR:HG22	1:E:311:LEU:N	2.30	0.46
1:G:8:VAL:CB	1:G:10:ARG:HH11	2.28	0.46
1:G:9:TRP:NE1	1:G:84:ASN:HA	2.30	0.46
1:G:134:LEU:O	1:G:134:LEU:HD12	2.15	0.46
1:G:295:THR:HB	1:G:297:ILE:HG12	1.96	0.46
1:H:165:ARG:N	1:H:166:PRO:CD	2.78	0.46
1:A:304:GLN:HE21	1:A:304:GLN:CA	2.27	0.46
1:B:69:GLU:H	1:B:69:GLU:HG2	1.59	0.46
1:B:79:ALA:HB2	1:B:280:HIS:NE2	2.30	0.46
1:B:147:SER:O	1:B:149:PHE:N	2.48	0.46
1:B:204:ASP:O	1:B:207:ASP:HB2	2.15	0.46
1:C:35:ASP:O	1:C:36:ALA:HB2	2.14	0.46
1:D:165:ARG:N	1:D:166:PRO:CD	2.77	0.46
1:G:3:LEU:CD1	1:G:3:LEU:C	2.84	0.46
1:G:137:GLU:HG3	1:G:140:GLU:HG3	1.97	0.46
1:G:176:TYR:CD1	1:G:176:TYR:C	2.88	0.46
1:F:210:GLU:OE1	1:F:256:TYR:HB3	2.16	0.46
1:G:38:PHE:O	1:G:39:ARG:CB	2.64	0.46
1:A:39:ARG:NH1	1:A:147:SER:CA	2.78	0.46
1:B:312:GLN:HG2	1:B:313:SER:N	2.22	0.46
1:D:37:GLY:HA2	1:D:38:PHE:CG	2.51	0.46
1:E:7:GLY:CA	1:E:8:VAL:CB	2.72	0.46
1:G:210:GLU:OE2	1:G:258:ASN:HB2	2.15	0.46
1:A:5:ILE:HD12	1:A:5:ILE:HA	1.81	0.46
1:B:218:TRP:CH2	1:B:265:LYS:HD3	2.50	0.46
1:D:19:SER:N	1:D:20:GLY:HA3	2.30	0.46
1:D:149:PHE:O	1:D:149:PHE:HD2	1.99	0.46
1:H:68:LEU:HD21	1:H:149:PHE:HD2	1.80	0.46
1:A:39:ARG:HD2	1:A:144:ILE:O	2.14	0.46
1:D:14:TYR:CE2	1:D:24:VAL:HB	2.50	0.46
1:D:78:ASN:HA	1:D:94:VAL:HG22	1.97	0.46
1:E:75:SER:HA	1:E:95:VAL:HG12	1.98	0.46
1:A:311:LEU:HD13	1:A:311:LEU:O	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:176:TYR:CD2	1:D:176:TYR:C	2.89	0.46
1:F:187:GLY:HA3	1:F:246:PHE:CD1	2.51	0.46
1:A:33:GLY:O	1:A:34:LEU:CB	2.60	0.46
1:A:210:GLU:CD	1:A:258:ASN:HB2	2.35	0.46
1:B:90:PRO:O	1:B:91:GLY:C	2.55	0.46
1:B:258:ASN:CG	1:B:261:ARG:HH21	2.19	0.46
1:C:17:LYS:O	1:C:18:SER:HB2	2.16	0.46
1:C:69:GLU:H	1:C:69:GLU:HG2	1.50	0.46
1:G:171:ILE:O	1:G:174:ARG:N	2.40	0.46
1:H:37:GLY:HA2	1:H:39:ARG:N	2.30	0.46
1:H:57:HIS:CG	1:H:237:ARG:HH22	2.34	0.46
1:A:91:GLY:O	1:A:94:VAL:HG23	2.16	0.46
1:C:37:GLY:CA	1:C:38:PHE:CB	2.93	0.46
1:C:90:PRO:O	1:C:91:GLY:O	2.33	0.46
1:C:204:ASP:O	1:C:207:ASP:HB2	2.16	0.46
1:E:214:THR:HG23	1:E:258:ASN:ND2	2.30	0.46
1:H:271:ARG:NH1	1:H:271:ARG:CB	2.78	0.46
1:C:26:LYS:C	1:C:27:GLU:HG3	2.37	0.46
1:D:81:MET:HE3	1:D:86:TRP:CE2	2.50	0.46
1:F:37:GLY:C	1:F:39:ARG:N	2.69	0.46
1:G:160:TYR:CE2	1:G:165:ARG:HD3	2.51	0.46
1:A:179:LEU:HA	1:A:202:LEU:HD22	1.97	0.45
1:C:23:PHE:CD1	1:C:23:PHE:O	2.69	0.45
1:C:136:ASN:N	1:C:136:ASN:ND2	2.63	0.45
1:C:258:ASN:O	1:C:261:ARG:N	2.49	0.45
1:H:277:ASN:C	1:H:277:ASN:OD1	2.54	0.45
1:D:167:GLU:OE1	1:D:220:VAL:HG22	2.16	0.45
1:G:245:HIS:CE1	1:G:289:HIS:HD2	2.30	0.45
1:H:151:ASP:O	1:H:153:GLY:N	2.47	0.45
1:H:232:PHE:N	1:H:233:PRO:HD2	2.31	0.45
1:A:5:ILE:CG2	1:A:6:ASP:N	2.79	0.45
1:A:37:GLY:CA	1:A:38:PHE:HD1	2.30	0.45
1:D:184:TYR:O	1:D:185:ARG:C	2.54	0.45
1:D:241:ILE:HG13	1:D:282:LYS:HG2	1.98	0.45
1:F:37:GLY:CA	1:F:38:PHE:HB3	2.45	0.45
1:F:211:GLU:O	1:F:214:THR:HB	2.15	0.45
1:G:191:THR:HG23	1:G:194:ALA:N	2.15	0.45
1:H:163:GLU:O	1:H:164:PHE:HD2	2.00	0.45
1:C:44:ARG:HD3	1:C:45:TYR:CZ	2.52	0.45
1:C:47:LEU:HD11	1:C:59:VAL:CG2	2.46	0.45
1:C:105:LEU:HD12	1:C:105:LEU:HA	1.76	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:174:ARG:HD3	1:C:208:TRP:CZ3	2.51	0.45
1:C:232:PHE:N	1:C:233:PRO:CD	2.79	0.45
1:E:97:ASP:OD2	1:E:102:ALA:CB	2.64	0.45
1:G:165:ARG:N	1:G:166:PRO:HD2	2.32	0.45
1:H:218:TRP:CZ3	1:H:224:LEU:HD13	2.52	0.45
1:C:5:ILE:HG22	1:C:6:ASP:H	1.78	0.45
1:D:120:VAL:HG12	1:D:120:VAL:O	2.17	0.45
1:E:44:ARG:HG3	1:E:129:VAL:CG2	2.46	0.45
1:G:231:LEU:HG	1:G:235:LEU:CD2	2.45	0.45
1:G:266:LEU:O	1:G:268:SER:N	2.50	0.45
1:B:160:TYR:CZ	1:B:165:ARG:HG2	2.52	0.45
1:D:63:ARG:NH2	1:D:74:VAL:HG13	2.31	0.45
1:E:172:ASN:ND2	1:E:230:ARG:HD3	2.31	0.45
1:E:231:LEU:HG	1:E:235:LEU:HD22	1.98	0.45
1:H:163:GLU:C	1:H:164:PHE:CD2	2.90	0.45
1:A:12:ALA:O	1:A:13:TRP:O	2.34	0.45
1:A:249:ASN:OD1	1:B:301:GLY:CA	2.63	0.45
1:B:223:ARG:O	1:B:225:THR:HG23	2.17	0.45
1:C:59:VAL:HA	1:C:142:ILE:CD1	2.47	0.45
1:A:63:ARG:NH2	1:A:74:VAL:HG23	2.32	0.45
1:C:136:ASN:ND2	1:C:136:ASN:C	2.69	0.45
1:C:235:LEU:HB3	1:C:263:VAL:HG21	1.98	0.45
1:D:14:TYR:CE1	1:D:26:LYS:HE2	2.52	0.45
1:D:161:PRO:HG3	1:D:223:ARG:NH2	2.31	0.45
1:A:5:ILE:CG2	1:A:10:ARG:NH1	2.77	0.45
1:A:13:TRP:HB2	1:A:15:ASP:HA	1.99	0.45
1:A:17:LYS:C	1:A:21:GLY:HA3	2.37	0.45
1:A:221:GLY:CA	2:A:401:HOH:O	2.21	0.45
1:C:241:ILE:HD13	1:C:285:TYR:HD1	1.81	0.45
1:D:204:ASP:O	1:D:207:ASP:HB2	2.17	0.45
1:E:57:HIS:NE2	1:E:275:THR:O	2.48	0.45
1:E:250:LEU:CD1	1:F:303:ALA:HB2	2.47	0.45
1:G:92:ASP:O	1:G:94:VAL:N	2.50	0.45
1:G:290:PRO:HD2	1:G:291:SER:H	1.82	0.45
1:H:160:TYR:CZ	1:H:165:ARG:HG2	2.52	0.45
1:B:39:ARG:CZ	1:B:41:GLU:OE2	2.65	0.45
1:D:33:GLY:HA3	1:D:144:ILE:HD11	1.98	0.45
1:D:142:ILE:HA	1:D:142:ILE:HD12	1.47	0.45
1:D:162:ALA:HA	1:D:165:ARG:CG	2.43	0.45
1:E:62:MET:HG2	1:E:142:ILE:HD13	1.98	0.45
1:F:33:GLY:O	1:F:34:LEU:CB	2.63	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:86:TRP:HB2	1:H:105:LEU:CD2	2.46	0.45
1:H:99:ILE:O	1:H:99:ILE:CG1	2.65	0.45
1:A:2:GLY:O	1:A:3:LEU:HD23	2.17	0.44
1:C:76:MET:H	1:C:95:VAL:HB	1.81	0.44
1:D:39:ARG:NH1	1:D:149:PHE:CB	2.79	0.44
1:E:51:PHE:HB2	1:E:280:HIS:CD2	2.52	0.44
1:F:142:ILE:HA	1:F:142:ILE:HD13	1.32	0.44
1:F:250:LEU:HD12	1:F:250:LEU:HA	1.63	0.44
1:D:81:MET:HE1	1:D:86:TRP:CE2	2.52	0.44
1:G:270:GLU:O	1:G:271:ARG:CB	2.61	0.44
1:A:19:SER:HB3	1:F:3:LEU:HD21	1.99	0.44
1:B:93:ASP:O	1:B:94:VAL:CG1	2.64	0.44
1:B:152:VAL:O	1:B:152:VAL:HG13	2.15	0.44
1:B:210:GLU:OE1	1:B:259:LEU:HG	2.16	0.44
1:B:278:LEU:HD12	1:B:278:LEU:HA	1.59	0.44
1:D:71:MET:HB3	1:D:149:PHE:HZ	1.82	0.44
1:H:201:PRO:HA	1:H:204:ASP:HB2	2.00	0.44
1:B:5:ILE:CG2	1:B:6:ASP:N	2.81	0.44
1:B:232:PHE:N	1:B:233:PRO:CD	2.80	0.44
1:C:39:ARG:HB2	1:C:40:GLY:H	1.46	0.44
1:C:245:HIS:CD2	1:C:246:PHE:CE1	3.06	0.44
1:C:278:LEU:HD12	1:C:278:LEU:HA	1.55	0.44
1:C:286:TYR:CD2	1:C:299:PRO:HD2	2.52	0.44
1:D:53:CYS:SG	1:D:55:TRP:HD1	2.41	0.44
1:D:66:LYS:O	1:D:68:LEU:N	2.51	0.44
1:G:39:ARG:HE	1:G:39:ARG:CA	2.24	0.44
1:G:286:TYR:CD2	1:G:299:PRO:HD2	2.52	0.44
1:A:138:SER:O	1:A:139:SER:C	2.55	0.44
1:B:266:LEU:HA	1:B:266:LEU:HD23	1.59	0.44
1:D:37:GLY:HA2	1:D:38:PHE:CD2	2.53	0.44
1:D:135:ASN:HD21	1:D:140:GLU:CB	2.31	0.44
1:E:30:TYR:O	1:E:135:ASN:HA	2.17	0.44
1:G:278:LEU:HD12	1:G:278:LEU:HA	1.85	0.44
1:A:176:TYR:HA	1:A:180:ASN:HB2	1.98	0.44
1:A:300:VAL:CB	1:B:199:PHE:HZ	2.30	0.44
1:B:48:TYR:HB2	1:B:124:ILE:HB	2.00	0.44
1:C:106:TYR:CD1	1:C:106:TYR:C	2.91	0.44
1:D:66:LYS:C	1:D:68:LEU:H	2.20	0.44
1:D:68:LEU:HD12	1:D:145:LEU:HD13	2.00	0.44
1:G:60:LEU:HD23	1:G:60:LEU:HA	1.55	0.44
1:H:7:GLY:CA	1:H:8:VAL:O	2.66	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:30:TYR:H	1:H:136:ASN:ND2	2.16	0.44
1:H:192:GLN:O	1:H:192:GLN:HG3	2.16	0.44
1:H:278:LEU:HD12	1:H:278:LEU:HA	1.54	0.44
1:H:295:THR:OG1	1:H:297:ILE:HG13	2.17	0.44
1:A:79:ALA:HB2	1:A:280:HIS:NE2	2.33	0.44
1:A:214:THR:HA	1:A:258:ASN:ND2	2.33	0.44
1:D:269:HIS:HE1	1:D:271:ARG:CB	2.30	0.44
1:E:252:ARG:O	1:E:255:ASP:HB2	2.17	0.44
1:F:3:LEU:CD1	1:F:24:VAL:HG11	2.47	0.44
1:B:34:LEU:HD21	1:B:140:GLU:HG2	2.00	0.44
1:C:18:SER:O	1:C:19:SER:CB	2.64	0.44
1:C:147:SER:O	1:C:149:PHE:N	2.50	0.44
1:D:14:TYR:O	1:D:18:SER:HB3	2.18	0.44
1:D:61:ILE:HG21	1:D:229:ILE:HG23	2.00	0.44
1:F:122:ILE:HB	1:F:123:PRO:HA	2.00	0.44
1:G:219:LEU:HG	1:G:228:ASP:OD2	2.17	0.44
1:H:44:ARG:HH12	1:H:130:GLU:HG3	1.83	0.44
1:H:235:LEU:HA	1:H:235:LEU:HD12	1.71	0.44
1:B:3:LEU:HD12	1:B:24:VAL:HG11	1.99	0.44
1:D:53:CYS:HB3	1:D:56:ALA:HB3	1.99	0.44
1:E:218:TRP:CB	1:E:223:ARG:O	2.66	0.44
1:G:205:THR:O	1:G:209:LEU:HB2	2.18	0.44
1:H:68:LEU:HD21	1:H:149:PHE:CD2	2.53	0.44
1:A:37:GLY:CA	1:A:38:PHE:CD1	3.01	0.43
1:B:183:VAL:HG23	1:B:184:TYR:N	2.33	0.43
1:E:304:GLN:HA	1:E:305:PRO:HD2	1.69	0.43
1:G:5:ILE:O	1:G:6:ASP:CB	2.59	0.43
1:G:86:TRP:CH2	1:G:284:HIS:CD2	3.06	0.43
1:G:203:PHE:CZ	1:G:250:LEU:N	2.86	0.43
1:H:241:ILE:HG21	1:H:285:TYR:CD1	2.53	0.43
1:B:4:LEU:HD23	1:B:4:LEU:HA	1.72	0.43
1:B:63:ARG:NH2	1:B:72:ILE:O	2.42	0.43
1:C:168:ILE:CD1	1:C:225:THR:HB	2.48	0.43
1:D:39:ARG:CB	1:D:148:ALA:HB1	2.48	0.43
1:D:58:ARG:O	1:D:61:ILE:HB	2.18	0.43
1:F:47:LEU:C	1:F:47:LEU:CD2	2.87	0.43
1:G:80:TYR:CE2	1:G:82:GLY:HA3	2.52	0.43
1:B:104:TYR:HD2	1:B:106:TYR:CZ	2.36	0.43
1:D:4:LEU:HD23	1:D:4:LEU:HA	1.92	0.43
1:E:42:PRO:N	1:E:152:VAL:HG11	2.33	0.43
1:E:300:VAL:O	1:E:300:VAL:HG13	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:22:ARG:O	1:F:22:ARG:CG	2.63	0.43
1:H:231:LEU:CD1	1:H:235:LEU:HD22	2.49	0.43
1:A:99:ILE:O	1:A:99:ILE:CD1	2.61	0.43
1:B:172:ASN:HD21	1:B:227:ALA:HA	1.82	0.43
1:E:98:SER:C	1:E:99:ILE:HG22	2.38	0.43
1:G:160:TYR:N	1:G:161:PRO:HD3	2.32	0.43
1:E:237:ARG:HG3	1:E:237:ARG:NH1	2.31	0.43
1:E:270:GLU:O	1:E:271:ARG:CB	2.48	0.43
1:C:87:THR:CG2	1:C:88:PHE:N	2.80	0.43
1:D:61:ILE:O	1:D:62:MET:C	2.56	0.43
1:E:191:THR:HB	1:E:194:ALA:HB3	2.01	0.43
1:G:24:VAL:O	1:G:25:ARG:HG2	2.19	0.43
1:G:37:GLY:CA	1:G:38:PHE:CB	2.96	0.43
1:H:40:GLY:HA2	1:H:149:PHE:CE1	2.54	0.43
1:H:91:GLY:C	1:H:94:VAL:HG23	2.39	0.43
1:A:14:TYR:CD1	1:A:24:VAL:HB	2.53	0.43
1:A:17:LYS:HB3	1:F:291:SER:CB	2.48	0.43
1:A:26:LYS:HB3	1:A:119:ARG:HD2	1.99	0.43
1:C:161:PRO:O	1:C:165:ARG:HG3	2.19	0.43
1:D:5:ILE:HD12	1:D:117:THR:HG23	2.00	0.43
1:D:122:ILE:HD13	1:D:122:ILE:HG21	1.71	0.43
1:D:175:VAL:HG21	1:D:231:LEU:HB2	2.01	0.43
1:D:225:THR:HG23	1:D:228:ASP:OD1	2.19	0.43
1:E:94:VAL:HG12	1:E:95:VAL:N	2.33	0.43
1:G:99:ILE:HG22	1:G:100:ASN:N	2.33	0.43
1:G:282:LYS:NZ	1:G:301:GLY:CA	2.82	0.43
1:A:74:VAL:HG12	1:A:75:SER:N	2.33	0.43
1:A:304:GLN:HA	1:A:304:GLN:NE2	2.33	0.43
1:A:309:LEU:N	1:A:309:LEU:HD12	2.34	0.43
1:B:109:TYR:CD1	1:B:120:VAL:HG13	2.53	0.43
1:B:160:TYR:CE1	1:B:165:ARG:HG2	2.53	0.43
1:C:300:VAL:HG23	1:D:195:TYR:CE2	2.54	0.43
1:D:39:ARG:HD2	1:D:149:PHE:HA	1.98	0.43
1:D:65:LEU:HD21	1:D:224:LEU:HD21	2.01	0.43
1:E:46:HIS:CD2	1:E:99:ILE:HG21	2.53	0.43
1:E:47:LEU:C	1:E:47:LEU:CD2	2.87	0.43
1:G:38:PHE:O	1:G:39:ARG:HG2	2.18	0.43
1:G:199:PHE:O	1:G:202:LEU:HB3	2.18	0.43
1:A:218:TRP:CE2	1:A:265:LYS:HE3	2.53	0.43
1:C:20:GLY:HA2	1:E:184:TYR:HB3	2.01	0.43
1:D:39:ARG:HH11	1:D:149:PHE:CB	2.30	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:167:GLU:O	1:D:168:ILE:C	2.57	0.43
1:G:66:LYS:NZ	1:G:146:ASN:O	2.51	0.43
1:G:251:ARG:HG3	1:G:256:TYR:HE2	1.82	0.43
1:G:273:ALA:N	1:G:274:PRO:CD	2.82	0.43
1:H:24:VAL:O	1:H:24:VAL:HG22	2.18	0.43
1:A:97:ASP:OD2	1:A:100:ASN:CB	2.67	0.43
1:B:89:LEU:C	1:B:91:GLY:N	2.71	0.43
1:C:183:VAL:HG11	1:C:242:TYR:CD2	2.54	0.43
1:D:105:LEU:CD2	1:D:122:ILE:HG23	2.49	0.43
1:F:49:ALA:HB3	1:F:76:MET:HE1	2.01	0.43
1:F:235:LEU:HD23	1:F:263:VAL:HG23	2.01	0.43
1:F:299:PRO:O	1:F:301:GLY:N	2.51	0.43
1:H:31:ARG:HD2	1:H:140:GLU:CD	2.39	0.43
1:A:98:SER:O	1:A:99:ILE:CG1	2.65	0.42
1:B:300:VAL:N	1:B:301:GLY:HA3	2.31	0.42
1:C:12:ALA:HB1	1:E:13:TRP:HE3	1.82	0.42
1:C:109:TYR:CE1	1:C:124:ILE:HD11	2.53	0.42
1:C:183:VAL:HG23	1:C:184:TYR:N	2.34	0.42
1:D:5:ILE:HD12	1:D:5:ILE:HA	1.43	0.42
1:D:269:HIS:HE1	1:D:271:ARG:HB2	1.83	0.42
1:G:200:TYR:C	1:G:202:LEU:N	2.72	0.42
1:G:217:GLU:HB3	1:G:265:LYS:NZ	2.34	0.42
1:G:266:LEU:C	1:G:268:SER:H	2.22	0.42
1:H:183:VAL:O	1:H:186:SER:HB2	2.19	0.42
1:A:300:VAL:CB	1:B:199:PHE:CZ	2.97	0.42
1:B:241:ILE:HG21	1:B:285:TYR:CG	2.53	0.42
1:C:19:SER:HB3	1:C:20:GLY:CA	2.49	0.42
1:C:68:LEU:HD23	1:C:68:LEU:HA	1.56	0.42
1:D:37:GLY:CA	1:D:38:PHE:CB	2.83	0.42
1:D:176:TYR:CD2	1:D:177:GLU:N	2.87	0.42
1:E:80:TYR:CE2	1:E:82:GLY:HA3	2.53	0.42
1:F:38:PHE:O	1:F:38:PHE:CD1	2.64	0.42
1:G:125:LEU:HD12	1:G:125:LEU:HA	1.84	0.42
1:G:203:PHE:CZ	1:G:250:LEU:HB3	2.53	0.42
1:H:151:ASP:C	1:H:153:GLY:H	2.22	0.42
1:A:61:ILE:HG23	1:A:272:VAL:HG22	2.01	0.42
1:D:210:GLU:CD	1:D:258:ASN:HB2	2.39	0.42
1:E:75:SER:C	1:E:76:MET:HG2	2.38	0.42
1:F:38:PHE:C	1:F:40:GLY:N	2.71	0.42
1:F:87:THR:CG2	1:F:88:PHE:N	2.81	0.42
1:G:5:ILE:O	1:G:7:GLY:CA	2.67	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:34:LEU:HA	1:A:34:LEU:HD12	1.80	0.42
1:A:39:ARG:NH1	1:A:147:SER:H	2.11	0.42
1:A:127:ASP:OD1	1:A:127:ASP:C	2.58	0.42
1:A:223:ARG:O	1:A:225:THR:HG23	2.19	0.42
1:B:136:ASN:HD22	1:B:136:ASN:N	2.07	0.42
1:B:199:PHE:C	1:B:202:LEU:H	2.23	0.42
1:C:219:LEU:HG	1:C:228:ASP:OD2	2.19	0.42
1:D:32:GLY:HA3	1:D:134:LEU:CD1	2.49	0.42
1:D:214:THR:HA	1:D:258:ASN:HD21	1.80	0.42
1:D:217:GLU:HB3	1:D:265:LYS:HZ1	1.78	0.42
1:E:47:LEU:HD23	1:E:124:ILE:O	2.19	0.42
1:F:99:ILE:O	1:F:99:ILE:CG1	2.68	0.42
1:F:174:ARG:HD3	1:F:208:TRP:CZ3	2.54	0.42
1:F:210:GLU:CD	1:F:258:ASN:HB2	2.38	0.42
1:G:299:PRO:C	1:G:301:GLY:H	2.22	0.42
1:H:35:ASP:O	1:H:38:PHE:CD1	2.73	0.42
1:H:304:GLN:HA	1:H:305:PRO:HD3	1.81	0.42
1:C:12:ALA:CB	1:E:13:TRP:CE3	3.02	0.42
1:C:133:ILE:HG22	1:C:134:LEU:N	2.33	0.42
1:D:3:LEU:CD1	1:D:24:VAL:HG11	2.49	0.42
1:D:14:TYR:CD2	1:D:14:TYR:O	2.72	0.42
1:D:76:MET:N	1:D:95:VAL:HB	2.35	0.42
1:D:127:ASP:OD1	1:D:129:VAL:HB	2.19	0.42
1:F:31:ARG:HD2	1:F:140:GLU:OE1	2.19	0.42
1:G:6:ASP:HB2	1:G:7:GLY:HA2	2.02	0.42
1:G:242:TYR:HA	1:G:246:PHE:HB2	2.01	0.42
1:H:161:PRO:HG3	1:H:223:ARG:NH1	2.34	0.42
1:A:195:TYR:OH	1:B:300:VAL:HB	2.19	0.42
1:C:160:TYR:N	1:C:161:PRO:CD	2.82	0.42
1:D:229:ILE:O	1:D:233:PRO:CD	2.67	0.42
1:E:168:ILE:HD11	1:E:225:THR:HB	2.00	0.42
1:A:159:TYR:CE1	1:A:224:LEU:HD23	2.53	0.42
1:A:286:TYR:CD1	1:A:299:PRO:HD3	2.54	0.42
1:B:75:SER:HA	1:B:95:VAL:HG22	2.02	0.42
1:D:165:ARG:O	1:D:169:ASP:HB2	2.20	0.42
1:E:57:HIS:HB3	1:E:233:PRO:HB3	2.02	0.42
1:A:17:LYS:HB3	1:F:291:SER:HB3	2.01	0.42
1:C:270:GLU:O	1:C:271:ARG:CB	2.54	0.42
1:E:44:ARG:CG	1:E:129:VAL:CG2	2.98	0.42
1:H:43:GLY:O	1:H:128:LYS:HD2	2.20	0.42
1:H:61:ILE:O	1:H:62:MET:C	2.58	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:250:LEU:HD12	1:C:250:LEU:HA	1.70	0.42
1:C:300:VAL:HG23	1:D:195:TYR:HE2	1.85	0.42
1:D:37:GLY:CA	1:D:38:PHE:CD2	3.03	0.42
1:F:6:ASP:CA	1:F:115:THR:O	2.67	0.42
1:C:273:ALA:N	1:C:274:PRO:CD	2.82	0.42
1:D:31:ARG:NH1	1:D:140:GLU:OE2	2.53	0.42
1:D:47:LEU:HD22	1:D:47:LEU:C	2.40	0.42
1:D:75:SER:C	1:D:76:MET:HG2	2.39	0.42
1:D:277:ASN:OD1	1:D:277:ASN:C	2.57	0.42
1:E:245:HIS:HB2	1:E:286:TYR:CZ	2.54	0.42
1:F:213:LEU:HD12	1:F:259:LEU:HD23	2.02	0.42
1:G:47:LEU:C	1:G:47:LEU:CD2	2.88	0.42
1:H:126:TRP:CD1	1:H:126:TRP:C	2.93	0.42
1:A:37:GLY:HA3	1:A:38:PHE:HD1	1.85	0.41
1:C:312:GLN:O	1:C:313:SER:HB3	2.20	0.41
1:D:81:MET:HE3	1:D:86:TRP:CD2	2.55	0.41
1:F:7:GLY:CA	1:F:8:VAL:O	2.65	0.41
1:A:17:LYS:HD2	1:A:18:SER:HB3	2.00	0.41
1:C:5:ILE:HD12	1:C:5:ILE:HA	1.46	0.41
1:E:4:LEU:O	1:E:5:ILE:HD13	2.20	0.41
1:E:310:THR:HG22	1:E:311:LEU:H	1.85	0.41
1:B:7:GLY:CA	1:B:8:VAL:CB	2.92	0.41
1:C:5:ILE:O	1:C:117:THR:HG23	2.20	0.41
1:D:33:GLY:O	1:D:34:LEU:HB2	2.20	0.41
1:D:39:ARG:HD3	1:D:149:PHE:CD2	2.56	0.41
1:F:31:ARG:HA	1:F:135:ASN:ND2	2.35	0.41
1:F:37:GLY:CA	1:F:38:PHE:CB	2.98	0.41
1:A:44:ARG:NH1	1:A:127:ASP:OD2	2.53	0.41
1:B:6:ASP:O	1:B:115:THR:HA	2.19	0.41
1:B:78:ASN:OD1	1:B:79:ALA:N	2.54	0.41
1:C:16:THR:C	1:C:18:SER:N	2.73	0.41
1:C:303:ALA:HB2	1:D:250:LEU:CD1	2.50	0.41
1:D:44:ARG:HH11	1:D:129:VAL:HB	1.86	0.41
1:E:44:ARG:HG3	1:E:129:VAL:HG21	2.02	0.41
1:E:299:PRO:C	1:E:301:GLY:N	2.73	0.41
1:F:49:ALA:HB3	1:F:76:MET:CE	2.51	0.41
1:F:86:TRP:CH2	1:F:284:HIS:CE1	3.08	0.41
1:H:23:PHE:H	1:H:24:VAL:HB	1.86	0.41
1:A:39:ARG:CZ	1:A:149:PHE:N	2.83	0.41
1:A:74:VAL:CG1	1:A:76:MET:HE3	2.51	0.41
1:C:210:GLU:OE2	1:C:257:PRO:CD	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:126:TRP:CD1	1:D:126:TRP:O	2.73	0.41
1:E:135:ASN:OD1	1:E:141:ILE:HG13	2.19	0.41
1:E:218:TRP:HB2	1:E:223:ARG:O	2.21	0.41
1:G:34:LEU:HD21	1:G:140:GLU:CD	2.41	0.41
1:G:195:TYR:CE1	1:G:199:PHE:HB2	2.56	0.41
1:H:175:VAL:HG12	1:H:180:ASN:OD1	2.20	0.41
1:B:172:ASN:HD22	1:B:172:ASN:HA	1.65	0.41
1:B:229:ILE:O	1:B:233:PRO:CD	2.69	0.41
1:C:139:SER:HB2	1:C:230:ARG:NH1	2.35	0.41
1:C:282:LYS:HZ2	1:C:301:GLY:HA3	1.85	0.41
1:G:167:GLU:CG	1:G:170:ARG:NH1	2.67	0.41
1:H:32:GLY:HA3	1:H:134:LEU:HD12	2.02	0.41
1:H:72:ILE:HD11	1:H:149:PHE:HE2	1.86	0.41
1:H:93:ASP:OD2	1:H:93:ASP:N	2.53	0.41
1:H:199:PHE:O	1:H:202:LEU:HB3	2.20	0.41
1:H:262:LEU:HD12	1:H:262:LEU:O	2.20	0.41
1:A:235:LEU:HA	1:A:235:LEU:HD12	1.84	0.41
1:B:89:LEU:CB	1:B:90:PRO:HD2	2.47	0.41
1:B:162:ALA:HA	1:B:165:ARG:CD	2.50	0.41
1:B:245:HIS:CE1	1:B:289:HIS:CD2	2.88	0.41
1:C:89:LEU:HB3	1:C:90:PRO:HD2	2.02	0.41
1:C:155:LEU:HA	1:C:155:LEU:HD23	1.83	0.41
1:F:297:ILE:H	1:F:297:ILE:HG12	1.74	0.41
1:G:92:ASP:C	1:G:94:VAL:H	2.24	0.41
1:A:17:LYS:HB3	1:F:291:SER:OG	2.20	0.41
1:A:269:HIS:ND1	1:A:270:GLU:O	2.47	0.41
1:B:71:MET:HE1	1:B:153:GLY:HA3	2.01	0.41
1:C:142:ILE:HA	1:C:142:ILE:HD13	1.75	0.41
1:D:210:GLU:CD	1:D:257:PRO:HD2	2.41	0.41
1:D:293:ASN:O	1:D:293:ASN:CG	2.59	0.41
1:E:139:SER:O	1:E:142:ILE:HG22	2.20	0.41
1:G:220:VAL:HG12	1:G:221:GLY:N	2.35	0.41
1:G:282:LYS:HZ1	1:G:301:GLY:HA3	1.86	0.41
1:H:91:GLY:N	1:H:94:VAL:HG21	2.36	0.41
1:H:282:LYS:HZ1	1:H:301:GLY:HA3	1.79	0.41
1:A:300:VAL:O	1:A:300:VAL:HG13	2.20	0.41
1:B:87:THR:HG23	1:B:89:LEU:H	1.86	0.41
1:B:183:VAL:HG11	1:B:242:TYR:CD2	2.55	0.41
1:C:95:VAL:HA	1:C:96:PRO:HD3	1.91	0.41
1:C:214:THR:C	1:C:216:ARG:H	2.24	0.41
1:C:224:LEU:HD12	1:C:224:LEU:C	2.41	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:265:LYS:HA	1:C:310:THR:CG2	2.45	0.41
1:D:4:LEU:HD12	1:D:116:TYR:HD2	1.86	0.41
1:D:87:THR:HG22	1:D:88:PHE:N	2.36	0.41
1:E:36:ALA:O	1:E:37:GLY:C	2.59	0.41
1:E:68:LEU:N	1:E:68:LEU:CD1	2.82	0.41
1:F:7:GLY:CA	1:F:8:VAL:C	2.89	0.41
1:F:95:VAL:HA	1:F:96:PRO:HD3	1.75	0.41
1:F:253:ILE:H	1:F:253:ILE:HG12	1.64	0.41
1:G:43:GLY:O	1:G:128:LYS:HD2	2.21	0.41
1:G:282:LYS:HZ1	1:G:301:GLY:CA	2.34	0.41
1:H:53:CYS:HA	1:H:54:PRO:HD3	1.89	0.41
1:H:246:PHE:O	1:H:248:CYS:N	2.54	0.41
1:A:17:LYS:CE	1:A:18:SER:OG	2.68	0.41
1:B:60:LEU:HD23	1:B:60:LEU:HA	1.80	0.41
1:C:235:LEU:HB3	1:C:263:VAL:CG2	2.50	0.41
1:C:312:GLN:O	1:C:313:SER:CB	2.69	0.41
1:D:63:ARG:HH21	1:D:74:VAL:HG13	1.86	0.41
1:D:160:TYR:N	1:D:161:PRO:CD	2.84	0.41
1:D:245:HIS:HB2	1:D:286:TYR:CZ	2.55	0.41
1:E:17:LYS:CA	1:E:18:SER:CB	2.93	0.41
1:E:87:THR:CG2	1:E:89:LEU:HG	2.51	0.41
1:F:6:ASP:C	1:F:115:THR:O	2.59	0.41
1:F:278:LEU:HD12	1:F:278:LEU:HA	1.94	0.41
1:G:99:ILE:HG22	1:G:100:ASN:OD1	2.21	0.41
1:G:161:PRO:O	1:G:162:ALA:C	2.59	0.41
1:C:186:SER:HB3	1:C:198:ALA:HB3	2.02	0.40
1:E:306:LEU:HD12	1:E:306:LEU:HA	1.88	0.40
1:F:176:TYR:HA	1:F:180:ASN:HB2	2.04	0.40
1:A:4:LEU:HD23	1:A:4:LEU:HA	1.90	0.40
1:B:273:ALA:N	1:B:274:PRO:CD	2.84	0.40
1:C:87:THR:N	2:C:402:HOH:O	2.54	0.40
1:F:87:THR:HG23	1:F:88:PHE:N	2.36	0.40
1:G:38:PHE:O	1:G:39:ARG:HB2	2.21	0.40
1:H:3:LEU:HD22	1:H:3:LEU:HA	1.61	0.40
1:C:89:LEU:HA	1:C:90:PRO:HD3	1.94	0.40
1:D:135:ASN:OD1	1:D:135:ASN:C	2.59	0.40
1:E:143:ARG:O	1:E:146:ASN:HB3	2.21	0.40
1:H:307:PRO:HB2	1:H:308:GLY:H	1.71	0.40
1:B:306:LEU:HD13	1:B:306:LEU:N	2.36	0.40
1:C:4:LEU:HD12	1:C:116:TYR:HD2	1.87	0.40
1:D:125:LEU:HB2	1:D:141:ILE:HG12	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:269:HIS:CE1	1:D:271:ARG:HB3	2.57	0.40
1:E:41:GLU:HA	1:E:152:VAL:HG11	2.03	0.40
1:H:5:ILE:HA	1:H:5:ILE:HD12	1.55	0.40
1:H:139:SER:C	1:H:142:ILE:HG22	2.42	0.40
1:H:160:TYR:CD2	1:H:165:ARG:NE	2.90	0.40
1:H:220:VAL:HG23	1:H:225:THR:HG21	2.04	0.40
1:A:185:ARG:O	1:A:189:ALA:HB2	2.21	0.40
1:A:300:VAL:CG2	1:B:199:PHE:HZ	2.34	0.40
1:B:250:LEU:O	1:B:251:ARG:HB3	2.21	0.40
1:D:68:LEU:HD22	1:D:149:PHE:CE1	2.56	0.40
1:E:235:LEU:HB3	1:E:263:VAL:CG2	2.51	0.40
1:E:307:PRO:CG	1:E:308:GLY:N	2.83	0.40
1:F:37:GLY:HA2	1:F:38:PHE:HB3	2.02	0.40
1:G:143:ARG:HE	1:G:226:GLU:CD	2.24	0.40
1:H:21:GLY:O	1:H:22:ARG:HB3	2.22	0.40
1:H:210:GLU:O	1:H:210:GLU:HG3	2.20	0.40

There are no symmetry-related clashes.

## 5.3 Torsion angles [i](#)

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

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all 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	310/313 (99%)	263 (85%)	33 (11%)	14 (4%)	2	14
1	B	299/313 (96%)	252 (84%)	39 (13%)	8 (3%)	5	26
1	C	310/313 (99%)	238 (77%)	52 (17%)	20 (6%)	1	7
1	D	310/313 (99%)	238 (77%)	52 (17%)	20 (6%)	1	7
1	E	310/313 (99%)	247 (80%)	41 (13%)	22 (7%)	1	5
1	F	304/313 (97%)	262 (86%)	27 (9%)	15 (5%)	2	13
1	G	301/313 (96%)	241 (80%)	39 (13%)	21 (7%)	1	6

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	H	305/313 (97%)	213 (70%)	60 (20%)	32 (10%)	0	2
All	All	2449/2504 (98%)	1954 (80%)	343 (14%)	152 (6%)	1	8

All (152) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	13	TRP
1	A	36	ALA
1	A	38	PHE
1	A	147	SER
1	A	307	PRO
1	B	91	GLY
1	B	92	ASP
1	B	308	GLY
1	C	13	TRP
1	C	18	SER
1	C	19	SER
1	C	26	LYS
1	C	27	GLU
1	C	35	ASP
1	C	38	PHE
1	C	39	ARG
1	C	91	GLY
1	C	92	ASP
1	D	16	THR
1	D	35	ASP
1	D	38	PHE
1	D	98	SER
1	D	214	THR
1	D	271	ARG
1	E	18	SER
1	E	68	LEU
1	E	99	ILE
1	E	148	ALA
1	E	150	ASP
1	E	307	PRO
1	E	312	GLN
1	F	36	ALA
1	F	90	PRO
1	F	91	GLY
1	F	100	ASN
1	F	116	TYR

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	F	152	VAL
1	G	6	ASP
1	G	36	ALA
1	G	38	PHE
1	G	39	ARG
1	G	176	TYR
1	G	307	PRO
1	G	309	LEU
1	H	38	PHE
1	H	68	LEU
1	H	96	PRO
1	H	152	VAL
1	H	219	LEU
1	H	238	PHE
1	H	247	LYS
1	H	257	PRO
1	H	303	ALA
1	A	18	SER
1	A	99	ILE
1	A	100	ASN
1	A	142	ILE
1	A	300	VAL
1	B	95	VAL
1	C	36	ALA
1	C	148	ALA
1	D	151	ASP
1	D	173	ALA
1	D	265	LYS
1	D	308	GLY
1	E	8	VAL
1	E	15	ASP
1	E	16	THR
1	E	37	GLY
1	E	38	PHE
1	E	39	ARG
1	E	67	GLY
1	E	116	TYR
1	E	152	VAL
1	F	98	SER
1	F	271	ARG
1	G	93	ASP
1	H	26	LYS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	H	35	ASP
1	H	61	ILE
1	H	64	ALA
1	H	111	ALA
1	H	155	LEU
1	H	269	HIS
1	H	276	ILE
1	H	297	ILE
1	H	300	VAL
1	A	151	ASP
1	B	299	PRO
1	C	34	LEU
1	C	100	ASN
1	D	148	ALA
1	D	269	HIS
1	E	17	LYS
1	E	271	ARG
1	F	35	ASP
1	G	5	ILE
1	G	83	GLU
1	G	311	LEU
1	H	8	VAL
1	H	13	TRP
1	H	63	ARG
1	H	268	SER
1	A	39	ARG
1	A	271	ARG
1	B	90	PRO
1	C	8	VAL
1	D	96	PRO
1	D	238	PHE
1	D	257	PRO
1	D	309	LEU
1	E	209	LEU
1	E	219	LEU
1	E	269	HIS
1	F	21	GLY
1	F	138	SER
1	F	300	VAL
1	G	163	GLU
1	G	219	LEU
1	G	267	ALA

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Mol	Chain	Res	Type
1	G	300	VAL
1	H	99	ILE
1	H	154	ALA
1	H	285	TYR
1	H	307	PRO
1	H	309	LEU
1	C	12	ALA
1	C	245	HIS
1	D	8	VAL
1	D	150	ASP
1	F	8	VAL
1	G	8	VAL
1	G	271	ARG
1	H	156	PRO
1	A	312	GLN
1	B	8	VAL
1	C	152	VAL
1	D	67	GLY
1	G	25	ARG
1	G	101	GLY
1	G	290	PRO
1	H	34	LEU
1	H	259	LEU
1	D	156	PRO
1	H	37	GLY
1	B	32	GLY
1	C	90	PRO
1	E	101	GLY
1	G	306	LEU
1	C	21	GLY
1	F	99	ILE
1	F	307	PRO

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

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all 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	258/260 (99%)	223 (86%)	35 (14%)	3	17
1	B	250/260 (96%)	212 (85%)	38 (15%)	3	14
1	C	256/260 (98%)	221 (86%)	35 (14%)	3	17
1	D	255/260 (98%)	217 (85%)	38 (15%)	3	14
1	E	254/260 (98%)	216 (85%)	38 (15%)	3	14
1	F	252/260 (97%)	216 (86%)	36 (14%)	3	15
1	G	250/260 (96%)	214 (86%)	36 (14%)	3	15
1	H	249/260 (96%)	209 (84%)	40 (16%)	2	12
All	All	2024/2080 (97%)	1728 (85%)	296 (15%)	3	15

All (296) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	10	ARG
1	A	13	TRP
1	A	14	TYR
1	A	22	ARG
1	A	35	ASP
1	A	44	ARG
1	A	47	LEU
1	A	65	LEU
1	A	69	GLU
1	A	70	GLU
1	A	87	THR
1	A	92	ASP
1	A	110	THR
1	A	136	ASN
1	A	138	SER
1	A	142	ILE
1	A	143	ARG
1	A	145	LEU
1	A	146	ASN
1	A	151	ASP
1	A	190	THR
1	A	202	LEU
1	A	214	THR
1	A	222	ASP
1	A	223	ARG
1	A	228	ASP
1	A	235	LEU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	A	251	ARG
1	A	278	LEU
1	A	282	LYS
1	A	291	SER
1	A	300	VAL
1	A	304	GLN
1	A	309	LEU
1	A	311	LEU
1	B	6	ASP
1	B	10	ARG
1	B	28	SER
1	B	34	LEU
1	B	38	PHE
1	B	39	ARG
1	B	41	GLU
1	B	47	LEU
1	B	59	VAL
1	B	69	GLU
1	B	70	GLU
1	B	73	SER
1	B	83	GLU
1	B	94	VAL
1	B	95	VAL
1	B	110	THR
1	B	125	LEU
1	B	136	ASN
1	B	138	SER
1	B	146	ASN
1	B	147	SER
1	B	152	VAL
1	B	167	GLU
1	B	181	ASN
1	B	190	THR
1	B	199	PHE
1	B	202	LEU
1	B	211	GLU
1	B	222	ASP
1	B	223	ARG
1	B	235	LEU
1	B	251	ARG
1	B	278	LEU
1	B	295	THR

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	B	300	VAL
1	B	304	GLN
1	B	306	LEU
1	B	309	LEU
1	C	3	LEU
1	C	16	THR
1	C	17	LYS
1	C	18	SER
1	C	22	ARG
1	C	23	PHE
1	C	25	ARG
1	C	27	GLU
1	C	34	LEU
1	C	38	PHE
1	C	39	ARG
1	C	47	LEU
1	C	59	VAL
1	C	63	ARG
1	C	65	LEU
1	C	69	GLU
1	C	71	MET
1	C	87	THR
1	C	92	ASP
1	C	110	THR
1	C	115	THR
1	C	130	GLU
1	C	136	ASN
1	C	145	LEU
1	C	181	ASN
1	C	211	GLU
1	C	223	ARG
1	C	235	LEU
1	C	247	LYS
1	C	275	THR
1	C	278	LEU
1	C	291	SER
1	C	297	ILE
1	C	306	LEU
1	C	309	LEU
1	D	5	ILE
1	D	14	TYR
1	D	17	LYS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	D	18	SER
1	D	22	ARG
1	D	39	ARG
1	D	41	GLU
1	D	44	ARG
1	D	47	LEU
1	D	60	LEU
1	D	63	ARG
1	D	69	GLU
1	D	99	ILE
1	D	110	THR
1	D	135	ASN
1	D	136	ASN
1	D	142	ILE
1	D	143	ARG
1	D	145	LEU
1	D	146	ASN
1	D	149	PHE
1	D	155	LEU
1	D	171	ILE
1	D	195	TYR
1	D	202	LEU
1	D	213	LEU
1	D	219	LEU
1	D	225	THR
1	D	230	ARG
1	D	231	LEU
1	D	238	PHE
1	D	259	LEU
1	D	260	SER
1	D	271	ARG
1	D	278	LEU
1	D	291	SER
1	D	295	THR
1	D	306	LEU
1	E	14	TYR
1	E	15	ASP
1	E	17	LYS
1	E	22	ARG
1	E	25	ARG
1	E	26	LYS
1	E	28	SER

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	E	31	ARG
1	E	39	ARG
1	E	47	LEU
1	E	57	HIS
1	E	65	LEU
1	E	68	LEU
1	E	70	GLU
1	E	74	VAL
1	E	87	THR
1	E	92	ASP
1	E	99	ILE
1	E	110	THR
1	E	119	ARG
1	E	121	THR
1	E	142	ILE
1	E	147	SER
1	E	197	GLU
1	E	202	LEU
1	E	211	GLU
1	E	214	THR
1	E	224	LEU
1	E	235	LEU
1	E	251	ARG
1	E	263	VAL
1	E	270	GLU
1	E	278	LEU
1	E	295	THR
1	E	300	VAL
1	E	302	PRO
1	E	304	GLN
1	E	306	LEU
1	F	11	ASP
1	F	22	ARG
1	F	26	LYS
1	F	27	GLU
1	F	34	LEU
1	F	35	ASP
1	F	38	PHE
1	F	47	LEU
1	F	53	CYS
1	F	59	VAL
1	F	69	GLU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	F	70	GLU
1	F	87	THR
1	F	90	PRO
1	F	98	SER
1	F	99	ILE
1	F	100	ASN
1	F	119	ARG
1	F	136	ASN
1	F	142	ILE
1	F	147	SER
1	F	152	VAL
1	F	193	GLU
1	F	214	THR
1	F	216	ARG
1	F	222	ASP
1	F	223	ARG
1	F	224	LEU
1	F	235	LEU
1	F	251	ARG
1	F	260	SER
1	F	271	ARG
1	F	278	LEU
1	F	279	ARG
1	F	282	LYS
1	F	300	VAL
1	G	3	LEU
1	G	5	ILE
1	G	22	ARG
1	G	23	PHE
1	G	24	VAL
1	G	25	ARG
1	G	31	ARG
1	G	34	LEU
1	G	38	PHE
1	G	39	ARG
1	G	47	LEU
1	G	53	CYS
1	G	87	THR
1	G	93	ASP
1	G	100	ASN
1	G	110	THR
1	G	115	THR

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	G	136	ASN
1	G	145	LEU
1	G	147	SER
1	G	176	TYR
1	G	181	ASN
1	G	186	SER
1	G	190	THR
1	G	206	LEU
1	G	209	LEU
1	G	211	GLU
1	G	216	ARG
1	G	222	ASP
1	G	226	GLU
1	G	234	THR
1	G	235	LEU
1	G	239	ASP
1	G	278	LEU
1	G	291	SER
1	G	300	VAL
1	H	3	LEU
1	H	5	ILE
1	H	23	PHE
1	H	29	GLN
1	H	31	ARG
1	H	35	ASP
1	H	38	PHE
1	H	44	ARG
1	H	47	LEU
1	H	63	ARG
1	H	69	GLU
1	H	70	GLU
1	H	76	MET
1	H	81	MET
1	H	92	ASP
1	H	93	ASP
1	H	99	ILE
1	H	107	GLN
1	H	119	ARG
1	H	132	ARG
1	H	136	ASN
1	H	142	ILE
1	H	145	LEU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	H	149	PHE
1	H	172	ASN
1	H	191	THR
1	H	197	GLU
1	H	205	THR
1	H	211	GLU
1	H	223	ARG
1	H	235	LEU
1	H	238	PHE
1	H	265	LYS
1	H	271	ARG
1	H	277	ASN
1	H	278	LEU
1	H	288	SER
1	H	291	SER
1	H	295	THR
1	H	304	GLN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (52) such sidechains are listed below:

<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	A	29	GLN
1	A	136	ASN
1	A	172	ASN
1	A	180	ASN
1	A	245	HIS
1	A	289	HIS
1	A	304	GLN
1	B	84	ASN
1	B	136	ASN
1	B	172	ASN
1	B	245	HIS
1	B	289	HIS
1	B	312	GLN
1	C	84	ASN
1	C	136	ASN
1	C	172	ASN
1	C	289	HIS
1	C	312	GLN
1	D	136	ASN
1	D	172	ASN
1	D	245	HIS

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Mol	Chain	Res	Type
1	D	289	HIS
1	D	293	ASN
1	E	29	GLN
1	E	172	ASN
1	E	180	ASN
1	E	243	HIS
1	E	245	HIS
1	E	289	HIS
1	E	304	GLN
1	F	29	GLN
1	F	100	ASN
1	F	136	ASN
1	F	172	ASN
1	F	180	ASN
1	F	245	HIS
1	F	289	HIS
1	G	29	GLN
1	G	136	ASN
1	G	172	ASN
1	G	180	ASN
1	G	212	HIS
1	G	245	HIS
1	G	289	HIS
1	G	304	GLN
1	H	136	ASN
1	H	172	ASN
1	H	192	GLN
1	H	245	HIS
1	H	280	HIS
1	H	304	GLN
1	H	312	GLN

### 5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

## 5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

## 5.6 Ligand geometry [i](#)

There are no ligands in this entry.

## 5.7 Other polymers [i](#)

There are no such residues in this entry.

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

There are no chain breaks in this entry.

## 6 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	312/313 (99%)	-0.57	7 (2%) 62 33	15, 25, 76, 137	0
1	B	303/313 (96%)	-0.52	5 (1%) 70 41	20, 38, 68, 147	0
1	C	312/313 (99%)	-0.55	7 (2%) 62 33	21, 36, 90, 132	0
1	D	312/313 (99%)	-0.44	8 (2%) 56 27	26, 45, 94, 153	0
1	E	312/313 (99%)	-0.46	8 (2%) 56 27	19, 41, 87, 146	0
1	F	308/313 (98%)	-0.60	6 (1%) 66 37	17, 29, 78, 139	0
1	G	305/313 (97%)	-0.42	5 (1%) 72 44	32, 49, 86, 154	0
1	H	309/313 (98%)	-0.15	10 (3%) 47 20	36, 63, 99, 164	0
All	All	2473/2504 (98%)	-0.46	56 (2%) 60 31	15, 41, 88, 164	0

All (56) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	H	310	THR	10.2
1	G	312	GLN	10.1
1	B	310	THR	8.5
1	F	310	THR	7.9
1	G	310	THR	7.7
1	D	313	SER	7.2
1	G	313	SER	6.6
1	H	309	LEU	6.5
1	G	311	LEU	6.4
1	H	311	LEU	6.4
1	F	312	GLN	6.2
1	D	310	THR	6.2
1	E	313	SER	5.7
1	B	311	LEU	5.3
1	B	309	LEU	5.0
1	C	311	LEU	5.0

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	C	313	SER	5.0
1	G	309	LEU	4.9
1	E	310	THR	4.9
1	F	309	LEU	4.9
1	A	311	LEU	4.7
1	F	313	SER	4.6
1	C	309	LEU	4.5
1	C	312	GLN	4.3
1	A	312	GLN	4.2
1	H	313	SER	3.9
1	B	313	SER	3.9
1	E	309	LEU	3.8
1	H	312	GLN	3.7
1	A	310	THR	3.7
1	C	310	THR	3.6
1	D	312	GLN	3.6
1	A	313	SER	3.6
1	E	312	GLN	3.6
1	D	15	ASP	3.5
1	D	18	SER	3.4
1	H	19	SER	3.4
1	E	311	LEU	3.3
1	E	308	GLY	3.3
1	D	309	LEU	3.1
1	H	36	ALA	3.0
1	H	20	GLY	2.9
1	H	308	GLY	2.8
1	B	312	GLN	2.7
1	F	311	LEU	2.6
1	E	20	GLY	2.6
1	D	311	LEU	2.5
1	C	11	ASP	2.3
1	F	16	THR	2.3
1	A	18	SER	2.3
1	A	14	TYR	2.1
1	H	12	ALA	2.1
1	A	15	ASP	2.1
1	E	14	TYR	2.0
1	D	14	TYR	2.0
1	C	16	THR	2.0



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

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

## 6.3 Carbohydrates [i](#)

There are no monosaccharides in this entry.

## 6.4 Ligands [i](#)

There are no ligands in this entry.

## 6.5 Other polymers [i](#)

There are no such residues in this entry.