



# Full wwPDB X-ray Structure Validation Report ⓘ

May 22, 2020 – 12:26 am BST

PDB ID : 5DJW  
Title : Crystal structure of Family 31 alpha-glucosidase (BT\_3299) from Bacteroides thetaiotaomicron  
Authors : Chaudet, M.M.; Rose, D.R.  
Deposited on : 2015-09-02  
Resolution : 2.70 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.

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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  
Xtrriage (Phenix) : 1.13  
EDS : 2.11  
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) : 2.11

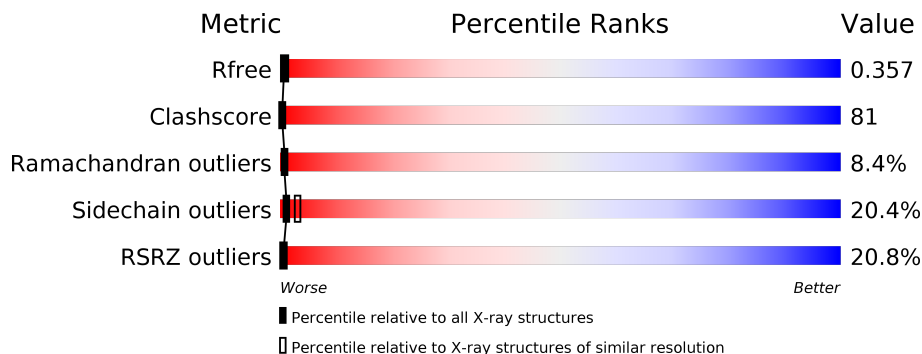
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

*X-RAY DIFFRACTION*

The reported resolution of this entry is 2.70 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))
$R_{free}$	130704	2808 (2.70-2.70)
Clashscore	141614	3122 (2.70-2.70)
Ramachandran outliers	138981	3069 (2.70-2.70)
Sidechain outliers	138945	3069 (2.70-2.70)
RSRZ outliers	127900	2737 (2.70-2.70)

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 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	697	
1	B	697	

## 2 Entry composition i

There are 2 unique types of molecules in this entry. The entry contains 9139 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 Alpha-glucosidase II.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	588	4569	2924	782	843	20	0	0	0
1	B	587	4547	2913	783	831	20	0	0	0

There are 28 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	1	MET	-	initiating methionine	UNP Q8A2K6
A	685	HIS	-	expression tag	UNP Q8A2K6
A	686	HIS	-	expression tag	UNP Q8A2K6
A	687	HIS	-	expression tag	UNP Q8A2K6
A	688	HIS	-	expression tag	UNP Q8A2K6
A	689	HIS	-	expression tag	UNP Q8A2K6
A	690	HIS	-	expression tag	UNP Q8A2K6
A	691	LEU	-	expression tag	UNP Q8A2K6
A	692	ARG	-	expression tag	UNP Q8A2K6
A	693	VAL	-	expression tag	UNP Q8A2K6
A	694	PRO	-	expression tag	UNP Q8A2K6
A	695	ARG	-	expression tag	UNP Q8A2K6
A	696	GLY	-	expression tag	UNP Q8A2K6
A	697	SER	-	expression tag	UNP Q8A2K6
B	1	MET	-	initiating methionine	UNP Q8A2K6
B	685	HIS	-	expression tag	UNP Q8A2K6
B	686	HIS	-	expression tag	UNP Q8A2K6
B	687	HIS	-	expression tag	UNP Q8A2K6
B	688	HIS	-	expression tag	UNP Q8A2K6
B	689	HIS	-	expression tag	UNP Q8A2K6
B	690	HIS	-	expression tag	UNP Q8A2K6
B	691	LEU	-	expression tag	UNP Q8A2K6
B	692	ARG	-	expression tag	UNP Q8A2K6
B	693	VAL	-	expression tag	UNP Q8A2K6
B	694	PRO	-	expression tag	UNP Q8A2K6

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Chain	Residue	Modelled	Actual	Comment	Reference
B	695	ARG	-	expression tag	UNP Q8A2K6
B	696	GLY	-	expression tag	UNP Q8A2K6
B	697	SER	-	expression tag	UNP Q8A2K6

- Molecule 2 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
2	A	15	Total O 15 15	0	0
2	B	8	Total O 8 8	0	0





## 4 Data and refinement statistics

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	89.26Å 74.86Å 94.43Å 90.00° 95.70° 90.00°	Depositor
Resolution (Å)	47.55 – 2.70 47.55 – 2.70	Depositor EDS
% Data completeness (in resolution range)	100.0 (47.55-2.70) 100.0 (47.55-2.70)	Depositor EDS
$R_{merge}$	(Not available)	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	1.66 (at 2.69Å)	Xtrriage
Refinement program	PHENIX 1.9_1692	Depositor
R, $R_{free}$	0.330 , 0.390 0.314 , 0.357	Depositor DCC
$R_{free}$ test set	1716 reflections (5.00%)	wwPDB-VP
Wilson B-factor (Å <sup>2</sup> )	44.0	Xtrriage
Anisotropy	0.424	Xtrriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.32 , 89.9	EDS
L-test for twinning <sup>2</sup>	$\langle  L  \rangle = 0.47$ , $\langle L^2 \rangle = 0.29$	Xtrriage
Estimated twinning fraction	No twinning to report.	Xtrriage
$F_o, F_c$ correlation	0.81	EDS
Total number of atoms	9139	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	50.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 6.64% 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	0.84	3/4694 (0.1%)	0.98	16/6370 (0.3%)
1	B	1.10	2/4672 (0.0%)	1.00	16/6342 (0.3%)
All	All	0.98	5/9366 (0.1%)	0.99	32/12712 (0.3%)

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	18
1	B	0	20
All	All	0	38

All (5) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	B	434	PHE	C-N	-49.64	0.19	1.34
1	B	594	PRO	C-N	13.36	1.64	1.34
1	A	50	GLY	C-N	9.53	1.55	1.34
1	A	143	PRO	N-CD	5.13	1.55	1.47
1	A	545	PRO	N-CD	5.13	1.55	1.47

All (32) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	50	GLY	O-C-N	-18.38	93.30	122.70
1	B	326	GLN	C-N-CA	14.11	156.97	121.70
1	A	309	ASP	CB-CA-C	-13.73	82.94	110.40
1	B	434	PHE	CA-C-N	-11.30	92.34	117.20
1	B	327	ILE	CA-C-N	-10.55	93.98	117.20
1	B	434	PHE	O-C-N	10.44	139.41	122.70
1	A	463	GLY	N-CA-C	-10.37	87.19	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	50	GLY	C-N-CA	-9.11	98.92	121.70
1	A	330	THR	C-N-CD	-8.15	102.67	120.60
1	B	434	PHE	C-N-CA	-8.06	101.54	121.70
1	A	225	PRO	CB-CA-C	-7.59	93.02	112.00
1	B	206	ASP	N-CA-C	7.50	131.24	111.00
1	B	326	GLN	O-C-N	-7.24	111.12	122.70
1	B	544	GLN	N-CA-C	-7.05	91.97	111.00
1	A	89	GLY	N-CA-C	-6.81	96.08	113.10
1	A	620	SER	N-CA-C	-6.75	92.77	111.00
1	B	208	ILE	N-CA-C	-6.48	93.51	111.00
1	A	265	GLY	N-CA-C	-6.40	97.11	113.10
1	B	327	ILE	O-C-N	6.38	132.91	122.70
1	B	62	THR	N-CA-C	6.28	127.96	111.00
1	B	91	TYR	N-CA-CB	6.19	121.74	110.60
1	B	433	GLY	N-CA-C	5.78	127.56	113.10
1	A	142	ILE	C-N-CD	5.68	140.33	128.40
1	A	618	GLY	N-CA-C	-5.63	99.03	113.10
1	A	545	PRO	CA-N-CD	-5.60	103.66	111.50
1	A	377	GLU	N-CA-C	5.58	126.06	111.00
1	B	401	ASP	N-CA-C	-5.46	96.25	111.00
1	A	403	GLY	N-CA-C	-5.43	99.52	113.10
1	A	186	SER	C-N-CD	-5.34	108.85	120.60
1	A	310	PHE	CB-CA-C	-5.12	100.16	110.40
1	B	205	CYS	C-N-CA	5.12	134.49	121.70
1	B	327	ILE	N-CA-C	5.07	124.67	111.00

There are no chirality outliers.

All (38) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	185	TYR	Peptide
1	A	235	ASN	Peptide
1	A	259	TYR	Peptide
1	A	330	THR	Peptide
1	A	336	PRO	Peptide
1	A	377	GLU	Peptide
1	A	396	ALA	Peptide
1	A	399	THR	Peptide
1	A	436	PHE	Peptide
1	A	458	GLY	Peptide
1	A	463	GLY	Peptide
1	A	464	THR	Peptide

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Mol	Chain	Res	Type	Group
1	A	50	GLY	Mainchain
1	A	504	ASN	Peptide
1	A	541	PHE	Peptide
1	A	620	SER	Peptide
1	A	652	ASN	Peptide
1	A	77	ASN	Peptide
1	B	188	ASP	Peptide
1	B	192	ILE	Peptide
1	B	205	CYS	Peptide
1	B	223	PHE	Peptide
1	B	256	ASP	Peptide
1	B	264	SER	Peptide
1	B	276	ASP	Peptide
1	B	306	LEU	Peptide
1	B	327	ILE	Mainchain
1	B	353	LEU	Mainchain
1	B	355	TYR	Peptide
1	B	434	PHE	Mainchain
1	B	544	GLN	Peptide
1	B	551	ILE	Peptide
1	B	593	ASP	Peptide
1	B	619	TRP	Peptide
1	B	622	LYS	Peptide
1	B	635	ARG	Peptide
1	B	648	THR	Peptide
1	B	90	ALA	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	4569	0	4348	730	5
1	B	4547	0	4343	709	1
2	A	15	0	0	8	1
2	B	8	0	0	3	0
All	All	9139	0	8691	1435	6

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 81.

All (1435) 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:272:VAL:CG1	1:A:336:PRO:HG2	1.40	1.51
1:B:553:LYS:CB	1:B:572:ILE:HG22	1.36	1.50
1:B:256:ASP:O	1:B:259:TYR:CD2	1.73	1.40
1:B:552:TRP:CB	1:B:571:LYS:HE2	1.49	1.39
1:A:256:ASP:O	1:A:259:TYR:CD2	1.73	1.39
1:B:181:CYS:SG	1:B:211:ASP:CB	2.12	1.37
1:A:324:GLU:OE2	1:A:385:ARG:NH1	1.57	1.37
1:A:84:TRP:CD1	1:A:85:ASN:N	1.89	1.36
1:A:101:GLN:NE2	1:A:387:ASN:HB3	1.41	1.35
1:A:280:PHE:CE1	1:A:336:PRO:HD2	1.67	1.30
1:B:379:ARG:NE	1:B:618:GLY:O	1.62	1.30
1:B:406:TRP:CZ2	1:B:541:PHE:HD2	1.48	1.29
1:B:328:ASN:CB	1:B:348:PRO:HB3	1.59	1.29
1:A:224:ASN:HB3	1:A:227:SER:CB	1.63	1.28
1:A:330:THR:HG21	2:A:712:HOH:O	1.14	1.28
1:B:347:LEU:O	1:B:350:GLY:N	1.67	1.27
1:B:406:TRP:NE1	1:B:541:PHE:CE2	2.02	1.26
1:A:436:PHE:CZ	1:A:459:HIS:HE1	1.51	1.26
1:A:272:VAL:CG1	1:A:336:PRO:CG	2.14	1.25
1:A:379:ARG:NH2	1:A:618:GLY:O	1.69	1.25
1:B:188:ASP:OD1	1:B:191:VAL:HG22	1.33	1.24
1:A:436:PHE:HZ	1:A:459:HIS:CE1	1.56	1.24
1:B:219:ARG:NH1	1:B:254:LYS:HG2	1.50	1.23
1:A:436:PHE:CZ	1:A:459:HIS:CE1	2.25	1.22
1:B:214:TYR:OH	1:B:248:MET:O	1.52	1.22
1:A:193:GLU:O	1:A:197:THR:OG1	1.54	1.21
1:B:166:GLY:O	1:B:392:GLN:NE2	1.74	1.20
1:A:57:THR:HG23	1:A:134:LYS:CD	1.71	1.20
1:B:245:SER:OG	1:B:247:TRP:NE1	1.73	1.20
1:A:627:SER:HA	1:A:647:LYS:NZ	1.58	1.19
1:A:192:ILE:HG21	1:A:195:ALA:HB3	1.26	1.18
1:A:80:THR:HB	1:A:129:SER:CB	1.72	1.18
1:A:86:THR:O	1:A:88:SER:N	1.77	1.17
1:A:272:VAL:CG2	1:A:280:PHE:HB2	1.74	1.17
1:A:272:VAL:HG13	1:A:336:PRO:CG	1.71	1.17
1:A:233:ALA:CB	1:A:312:ALA:HA	1.72	1.17
1:B:306:LEU:HD13	1:B:307:TYR:HA	1.17	1.17
1:A:225:PRO:O	1:A:229:PRO:HG3	1.43	1.16

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:406:TRP:CZ2	1:B:541:PHE:CD2	2.32	1.16
1:B:211:ASP:O	1:B:212:ILE:CG2	1.94	1.15
1:B:189:SER:O	1:B:191:VAL:N	1.76	1.15
1:B:178:TYR:HB3	1:B:205:CYS:HB3	1.15	1.15
1:B:406:TRP:NE1	1:B:541:PHE:CD2	2.16	1.14
1:A:224:ASN:HB3	1:A:227:SER:HB3	1.14	1.12
1:A:223:PHE:CZ	1:A:311:LEU:CB	2.32	1.12
1:A:57:THR:CG2	1:A:134:LYS:HD2	1.78	1.12
1:A:80:THR:HB	1:A:129:SER:CA	1.79	1.12
1:A:225:PRO:O	1:A:229:PRO:CG	1.96	1.12
1:B:263:LYS:HA	1:B:265:GLY:H	1.10	1.11
1:B:307:TYR:CD2	1:B:374:ALA:HB2	1.85	1.11
1:B:586:ASN:HB2	1:B:589:GLU:HG3	1.19	1.11
1:A:182:ARG:NH2	1:A:190:ARG:CB	2.13	1.10
1:A:256:ASP:O	1:A:259:TYR:HD2	1.15	1.10
1:B:553:LYS:CB	1:B:572:ILE:CG2	2.30	1.10
1:B:256:ASP:O	1:B:259:TYR:CE2	2.05	1.09
1:A:101:GLN:NE2	1:A:387:ASN:CB	2.15	1.09
1:A:53:ASN:O	1:A:144:PHE:HZ	1.33	1.09
1:A:266:THR:O	1:A:267:GLU:HB2	1.46	1.09
1:A:627:SER:HA	1:A:647:LYS:HZ1	0.95	1.09
1:A:647:LYS:NZ	1:A:648:THR:O	1.85	1.09
1:B:186:SER:HB3	1:B:187:PRO:CD	1.82	1.08
1:A:87:ASP:HA	1:A:100:TYR:HE1	1.15	1.08
1:B:404:SER:O	1:B:442:LEU:CD2	2.02	1.08
1:B:552:TRP:CB	1:B:571:LYS:CE	2.32	1.08
1:A:272:VAL:HG22	1:A:280:PHE:HB2	1.09	1.07
1:B:219:ARG:NH1	1:B:254:LYS:CG	2.16	1.07
1:B:211:ASP:O	1:B:212:ILE:HG23	1.50	1.07
1:B:406:TRP:CE2	1:B:541:PHE:CD2	2.42	1.07
1:B:219:ARG:HH11	1:B:254:LYS:CG	1.67	1.07
1:A:294:PHE:HB3	1:A:362:LEU:HD22	1.36	1.07
1:A:84:TRP:CE2	1:A:356:HIS:CD2	2.43	1.07
1:A:84:TRP:HD1	1:A:85:ASN:N	1.38	1.07
1:A:80:THR:HB	1:A:129:SER:HA	1.34	1.07
1:B:186:SER:HB3	1:B:187:PRO:HD3	1.30	1.06
1:A:179:GLN:HB3	1:A:209:TRP:HE1	1.20	1.06
1:A:238:LEU:O	1:A:243:PHE:HB2	1.52	1.06
1:A:625:ASP:HA	1:A:651:TYR:CB	1.85	1.06
1:B:178:TYR:HB3	1:B:205:CYS:CB	1.85	1.05
1:B:328:ASN:HB2	1:B:348:PRO:HB3	1.11	1.05

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:625:ASP:CA	1:A:651:TYR:CB	2.34	1.05
1:A:460:ALA:HB3	1:A:467:LYS:HD3	1.39	1.05
1:B:566:TYR:HA	1:B:567:GLN:HG2	1.36	1.04
1:A:192:ILE:O	1:A:194:ILE:N	1.90	1.04
1:A:86:THR:HG21	1:A:333:LYS:CB	1.88	1.04
1:B:323:ASN:OD1	1:B:386:SER:HB3	1.58	1.04
1:B:194:ILE:CG2	1:B:470:TRP:HZ2	1.70	1.04
1:A:280:PHE:CD1	1:A:336:PRO:HD2	1.91	1.04
1:B:194:ILE:HG22	1:B:470:TRP:CZ2	1.92	1.04
1:A:280:PHE:CE1	1:A:336:PRO:CD	2.42	1.03
1:A:506:MET:HB3	1:A:507:PRO:HD2	1.39	1.03
1:B:454:PRO:CD	1:B:509:MET:HE3	1.88	1.03
1:A:263:LYS:O	1:A:266:THR:CB	2.05	1.03
1:B:72:GLY:HA2	1:B:73:SER:HB2	1.39	1.03
1:B:210:MET:HB2	1:B:211:ASP:CB	1.88	1.03
1:B:328:ASN:HB2	1:B:348:PRO:CB	1.90	1.02
1:B:402:ASN:ND2	1:B:446:TRP:CH2	2.26	1.02
1:B:139:SER:HB3	1:B:144:PHE:HE2	1.19	1.02
1:B:70:VAL:HG22	1:B:71:THR:H	1.25	1.02
1:A:87:ASP:HA	1:A:100:TYR:CE1	1.95	1.02
1:A:233:ALA:HB2	1:A:312:ALA:HA	1.03	1.02
1:A:433:GLY:O	1:A:460:ALA:HA	1.55	1.02
1:A:53:ASN:O	1:A:144:PHE:CZ	2.13	1.02
1:A:119:LEU:HD13	1:A:389:LEU:HD21	1.41	1.01
1:B:270:VAL:CG2	1:B:292:PRO:HA	1.90	1.01
1:B:590:ASN:O	1:B:591:SER:OG	1.77	1.01
1:A:192:ILE:CG2	1:A:195:ALA:HB3	1.91	1.01
1:A:182:ARG:NH2	1:A:190:ARG:HB2	1.75	1.00
1:A:512:VAL:O	1:A:515:SER:OG	1.75	1.00
1:B:189:SER:O	1:B:191:VAL:HG13	1.60	1.00
1:A:506:MET:HB3	1:A:507:PRO:CD	1.90	1.00
1:B:256:ASP:O	1:B:259:TYR:HD2	1.16	1.00
1:B:221:PHE:CE1	1:B:306:LEU:HG	1.97	1.00
1:A:229:PRO:C	1:A:231:PRO:CD	2.29	1.00
1:B:545:PRO:HG2	1:B:547:LEU:HD13	1.42	1.00
1:A:580:THR:OG1	1:A:596:THR:O	1.80	1.00
1:B:307:TYR:O	2:B:701:HOH:O	1.80	0.99
1:A:131:THR:HG22	1:A:132:ASP:H	1.24	0.99
1:A:512:VAL:HG13	1:A:548:PRO:HD3	1.42	0.99
1:A:101:GLN:HE21	1:A:387:ASN:HB3	0.83	0.99
1:A:248:MET:HB2	1:A:319:TRP:CZ2	1.98	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:522:LEU:O	1:B:523:ARG:HB2	1.61	0.99
1:A:78:GLY:HA2	1:A:131:THR:HA	1.42	0.98
1:A:219:ARG:HH22	1:A:256:ASP:CB	1.77	0.98
1:B:306:LEU:HD13	1:B:307:TYR:CA	1.93	0.98
1:A:229:PRO:C	1:A:231:PRO:HD3	1.81	0.98
1:B:188:ASP:OD1	1:B:191:VAL:CG2	2.12	0.98
1:A:182:ARG:HH22	1:A:190:ARG:CB	1.73	0.98
1:B:74:LEU:HD23	1:B:75:LEU:H	1.27	0.98
1:A:627:SER:CA	1:A:647:LYS:NZ	2.27	0.98
1:B:554:GLU:O	1:B:555:LEU:HB2	1.60	0.98
1:B:328:ASN:CG	1:B:348:PRO:HB3	1.83	0.97
1:B:368:ARG:HG3	1:B:382:ILE:HG21	1.46	0.97
1:A:331:PRO:O	1:A:332:ASN:OD1	1.80	0.97
1:A:74:LEU:HD12	1:A:76:ARG:O	1.64	0.97
1:A:517:PRO:O	1:A:523:ARG:NH2	1.95	0.97
1:B:306:LEU:CD1	1:B:307:TYR:HA	1.94	0.97
1:A:228:PHE:C	1:A:230:ASN:H	1.66	0.96
1:B:248:MET:HB2	1:B:319:TRP:CZ2	2.00	0.96
1:A:101:GLN:HG2	1:A:387:ASN:N	1.79	0.96
1:B:194:ILE:CG2	1:B:470:TRP:CZ2	2.48	0.96
1:B:117:GLY:N	1:B:149:ILE:O	1.97	0.96
1:B:434:PHE:O	1:B:436:PHE:N	1.89	0.95
1:B:594:PRO:O	1:B:596:THR:N	1.97	0.95
1:A:192:ILE:C	1:A:194:ILE:H	1.65	0.95
1:B:406:TRP:HZ2	1:B:541:PHE:HD2	1.07	0.95
1:B:263:LYS:HA	1:B:265:GLY:N	1.79	0.95
1:B:573:ARG:HH11	1:B:573:ARG:HG2	1.30	0.95
1:A:525:GLU:OE1	1:A:545:PRO:HG2	1.65	0.95
1:A:119:LEU:CD1	1:A:389:LEU:HD21	1.97	0.95
1:A:228:PHE:O	1:A:231:PRO:HD3	1.64	0.95
1:A:641:THR:HB	1:A:643:LYS:HE3	1.49	0.95
1:A:86:THR:HG22	1:A:87:ASP:OD1	1.66	0.95
1:A:224:ASN:HB3	1:A:227:SER:HB2	1.49	0.94
1:A:233:ALA:HB2	1:A:312:ALA:CA	1.96	0.94
1:B:118:ILE:HD11	1:B:120:PHE:CE1	2.01	0.94
1:B:328:ASN:CB	1:B:348:PRO:CB	2.42	0.94
1:B:555:LEU:HD23	1:B:570:MET:HE3	1.49	0.94
1:A:272:VAL:HG11	1:A:336:PRO:CG	1.96	0.94
1:B:307:TYR:HD2	1:B:374:ALA:HB2	1.28	0.94
1:B:593:ASP:CB	1:B:594:PRO:HD3	1.97	0.94
1:B:512:VAL:HG23	1:B:528:ALA:O	1.68	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:101:GLN:HG2	1:A:387:ASN:H	1.33	0.94
1:A:223:PHE:CE2	1:A:311:LEU:CB	2.51	0.93
1:B:219:ARG:HH12	1:B:254:LYS:HG2	1.33	0.93
1:B:402:ASN:HB2	1:B:430:ASP:HB2	1.47	0.93
1:A:272:VAL:HG11	1:A:336:PRO:HG2	1.49	0.93
1:B:454:PRO:HD3	1:B:509:MET:HE3	1.50	0.93
1:A:179:GLN:OE1	1:A:455:PHE:HE1	1.52	0.93
1:A:256:ASP:O	1:A:259:TYR:CE2	2.21	0.93
1:A:275:ALA:O	1:A:277:GLY:N	2.00	0.93
1:A:277:GLY:O	1:A:278:LYS:HB2	1.66	0.93
1:A:179:GLN:HG2	1:A:207:VAL:HB	1.49	0.92
1:A:84:TRP:CZ3	1:A:356:HIS:HB2	2.04	0.92
1:A:225:PRO:C	1:A:229:PRO:HG3	1.88	0.92
1:B:434:PHE:HD2	1:B:435:LEU:HA	1.35	0.92
1:B:545:PRO:HG2	1:B:547:LEU:CD1	2.00	0.92
1:A:101:GLN:HE21	1:A:387:ASN:CB	1.77	0.91
1:B:593:ASP:HB2	1:B:594:PRO:HD3	1.51	0.91
1:A:182:ARG:HH21	1:A:190:ARG:HB2	1.34	0.91
1:B:415:MET:O	1:B:418:THR:HG22	1.70	0.91
1:A:84:TRP:CE3	1:A:125:LYS:HG2	2.06	0.91
1:B:479:ALA:HB2	1:B:566:TYR:CD2	2.06	0.91
1:B:82:LYS:HG2	1:B:83:LEU:N	1.86	0.91
1:B:209:TRP:CB	1:B:246:ALA:HB3	2.00	0.91
1:B:306:LEU:HD21	1:B:310:PHE:HB3	1.51	0.90
1:A:224:ASN:CB	1:A:227:SER:HB3	2.00	0.90
1:A:269:ASP:HB2	1:A:279:ASN:HD22	1.34	0.90
1:A:329:ASP:OD1	1:A:330:THR:N	2.04	0.90
1:A:434:PHE:CD2	1:A:461:CYS:HB3	2.06	0.90
1:B:188:ASP:O	1:B:227:SER:OG	1.88	0.90
1:B:510:ARG:HB2	1:B:530:LEU:HB2	1.50	0.90
1:B:555:LEU:HD23	1:B:570:MET:CE	2.01	0.90
1:B:170:MET:HE1	1:B:499:HIS:HA	1.54	0.90
1:B:439:ASP:OD1	1:B:440:ALA:N	2.05	0.90
1:B:328:ASN:ND2	1:B:328:ASN:O	2.05	0.89
1:A:229:PRO:O	1:A:231:PRO:HD2	1.72	0.89
1:B:219:ARG:NH1	1:B:254:LYS:CD	2.34	0.89
1:A:101:GLN:CG	1:A:387:ASN:H	1.85	0.89
1:A:101:GLN:CG	1:A:387:ASN:N	2.35	0.89
1:A:610:ASN:O	2:A:701:HOH:O	1.91	0.89
1:B:194:ILE:O	1:B:197:THR:HB	1.72	0.89
1:A:230:ASN:N	1:A:231:PRO:HD3	1.87	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:211:ASP:O	1:B:212:ILE:HG22	1.72	0.88
1:B:211:ASP:C	1:B:212:ILE:HG22	1.92	0.88
1:A:627:SER:CA	1:A:647:LYS:HZ1	1.82	0.88
1:A:549:LYS:HG3	1:A:550:GLY:N	1.88	0.88
1:A:119:LEU:HD11	1:A:389:LEU:CD2	2.04	0.88
1:B:245:SER:O	1:B:316:ASP:O	1.91	0.88
1:A:653:THR:O	1:A:654:GLU:HB2	1.70	0.88
1:A:272:VAL:CG2	1:A:280:PHE:CB	2.51	0.88
1:B:347:LEU:O	1:B:350:GLY:CA	2.20	0.88
1:A:230:ASN:N	1:A:231:PRO:CD	2.36	0.87
1:A:76:ARG:NH2	1:A:524:ALA:HB2	1.89	0.87
1:A:82:LYS:NZ	1:A:97:THR:HA	1.88	0.87
1:B:433:GLY:HA3	1:B:460:ALA:HB3	1.57	0.87
1:B:406:TRP:HZ2	1:B:541:PHE:CD2	1.81	0.87
1:B:525:GLU:OE1	1:B:545:PRO:O	1.93	0.87
1:B:86:THR:CG2	1:B:98:ARG:O	2.23	0.87
1:A:119:LEU:CD1	1:A:389:LEU:CD2	2.52	0.87
1:A:549:LYS:HG3	1:A:550:GLY:H	1.40	0.87
1:B:454:PRO:HD2	1:B:509:MET:HE3	1.57	0.87
1:B:81:ILE:HG12	1:B:82:LYS:N	1.89	0.87
1:B:454:PRO:CD	1:B:509:MET:CE	2.52	0.86
1:B:546:ALA:O	1:B:547:LEU:HB2	1.74	0.86
1:A:86:THR:HG21	1:A:333:LYS:HB3	1.55	0.86
1:B:406:TRP:CE2	1:B:541:PHE:HD2	1.87	0.86
1:A:80:THR:CB	1:A:129:SER:HA	2.04	0.86
1:B:406:TRP:HE3	1:B:442:LEU:CD1	1.88	0.86
1:A:236:ARG:HG2	1:A:240:ILE:HG13	1.58	0.86
1:A:324:GLU:HG3	1:A:386:SER:OG	1.75	0.86
1:B:474:GLN:O	1:B:474:GLN:NE2	2.08	0.86
1:A:436:PHE:HE2	1:A:467:LYS:CB	1.88	0.86
1:A:500:GLU:O	1:A:505:GLY:N	2.08	0.86
1:A:286:PRO:HG2	1:A:289:ALA:HB2	1.57	0.86
1:A:413:VAL:HB	1:A:414:PRO:HD3	1.55	0.85
1:A:464:THR:HG22	1:A:465:ASN:H	1.41	0.85
1:B:194:ILE:HG21	1:B:470:TRP:HZ2	1.40	0.85
1:A:71:THR:CB	1:A:93:VAL:O	2.23	0.85
1:A:94:ASP:C	1:A:95:LYS:HG3	1.97	0.85
1:B:436:PHE:O	1:B:438:ALA:N	2.09	0.85
1:A:186:SER:CB	1:A:187:PRO:HD3	2.07	0.84
1:B:64:ILE:H	1:B:76:ARG:HH21	1.25	0.84
1:B:454:PRO:HD3	1:B:509:MET:CE	2.06	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:228:PHE:O	1:A:230:ASN:N	2.10	0.84
1:A:577:ILE:O	2:A:702:HOH:O	1.95	0.84
1:B:353:LEU:C	1:B:354:GLN:HG2	1.98	0.84
1:A:330:THR:HB	1:A:331:PRO:HD2	1.58	0.84
1:A:182:ARG:NH2	1:A:190:ARG:CG	2.39	0.84
1:A:81:ILE:N	1:A:128:LEU:O	2.11	0.84
1:A:641:THR:HB	1:A:643:LYS:CE	2.08	0.84
1:A:625:ASP:C	1:A:651:TYR:CB	2.47	0.84
1:B:210:MET:CB	1:B:211:ASP:CB	2.56	0.83
1:A:434:PHE:O	1:A:435:LEU:HB2	1.77	0.83
1:B:479:ALA:HA	1:B:566:TYR:CE2	2.14	0.83
1:B:479:ALA:HB2	1:B:566:TYR:HD2	1.43	0.83
1:B:101:GLN:O	2:B:702:HOH:O	1.94	0.83
1:A:182:ARG:HH22	1:A:190:ARG:HB3	1.40	0.83
1:A:273:LYS:O	1:A:275:ALA:N	2.11	0.83
1:A:406:TRP:CE3	1:A:442:LEU:HD13	2.13	0.83
1:B:139:SER:HB3	1:B:144:PHE:CE2	2.09	0.83
1:A:76:ARG:CZ	1:A:524:ALA:HB2	2.09	0.83
1:A:232:LYS:HA	1:A:311:LEU:HA	1.57	0.83
1:A:268:ASN:HB3	1:A:299:VAL:HG22	1.58	0.83
1:B:165:THR:O	1:B:393:ARG:HD2	1.80	0.82
1:B:256:ASP:HB3	1:B:257:PRO:CD	2.09	0.82
1:A:466:ASN:HB3	1:A:471:VAL:HG11	1.62	0.82
1:A:192:ILE:CG2	1:A:195:ALA:CB	2.57	0.82
1:B:437:ASN:HA	1:B:465:ASN:OD1	1.78	0.82
1:A:272:VAL:HG13	1:A:336:PRO:HG2	0.83	0.82
1:B:270:VAL:HG22	1:B:292:PRO:HA	1.61	0.82
1:A:238:LEU:O	1:A:243:PHE:CB	2.28	0.82
1:A:269:ASP:HA	1:A:291:PHE:O	1.80	0.81
1:B:404:SER:O	1:B:442:LEU:HD22	1.80	0.81
1:B:209:TRP:HB2	1:B:246:ALA:HB3	1.61	0.81
1:B:62:THR:O	1:B:63:SER:HB2	1.79	0.81
1:A:272:VAL:HG13	1:A:336:PRO:O	1.81	0.81
1:B:270:VAL:HG22	1:B:271:TRP:N	1.93	0.81
1:B:479:ALA:CA	1:B:566:TYR:HE2	1.93	0.81
1:A:318:VAL:HG23	1:A:382:ILE:HD12	1.62	0.81
1:A:229:PRO:C	1:A:231:PRO:HD2	2.00	0.80
1:A:440:ALA:HB1	1:A:476:VAL:HG21	1.63	0.80
1:B:86:THR:HG21	1:B:98:ARG:O	1.81	0.80
1:B:189:SER:C	1:B:191:VAL:H	1.85	0.80
1:B:406:TRP:HE3	1:B:442:LEU:HD13	1.44	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:259:TYR:O	1:A:260:PHE:HD1	1.64	0.80
1:B:132:ASP:O	1:B:133:GLU:HB2	1.80	0.80
1:B:414:PRO:HG3	1:B:526:GLU:HB3	1.64	0.80
1:B:404:SER:O	1:B:442:LEU:HD21	1.81	0.80
1:A:462:ALA:C	1:A:463:GLY:O	2.01	0.80
1:B:219:ARG:HH11	1:B:254:LYS:CD	1.93	0.79
1:B:322:VAL:O	1:B:324:GLU:N	2.15	0.79
1:B:74:LEU:CD2	1:B:75:LEU:H	1.94	0.79
1:A:280:PHE:CE2	1:A:335:MET:HB3	2.18	0.79
1:A:486:ARG:O	1:A:489:ILE:HG22	1.82	0.79
1:A:587:THR:O	1:A:590:ASN:HB2	1.82	0.79
1:B:132:ASP:O	1:B:133:GLU:CB	2.30	0.79
1:A:402:ASN:HB3	1:A:433:GLY:HA3	1.63	0.79
1:A:436:PHE:CE2	1:A:467:LYS:HB2	2.18	0.79
1:B:63:SER:HA	1:B:76:ARG:NH2	1.99	0.79
1:A:268:ASN:CB	1:A:299:VAL:HG22	2.13	0.78
1:A:84:TRP:HD1	1:A:85:ASN:CA	1.96	0.78
1:A:162:SER:O	1:A:166:GLY:N	2.16	0.78
1:A:192:ILE:HG21	1:A:195:ALA:CB	2.10	0.78
1:A:219:ARG:NH2	1:A:256:ASP:CB	2.46	0.78
1:A:324:GLU:N	1:A:325:PRO:HA	1.97	0.78
1:B:256:ASP:CB	1:B:257:PRO:CD	2.61	0.78
1:A:283:ASP:H	1:A:327:ILE:HG23	1.48	0.78
1:B:507:PRO:O	1:B:510:ARG:NE	2.16	0.78
1:B:541:PHE:O	1:B:542:ALA:HB2	1.84	0.78
1:A:112:ASP:CG	1:A:113:GLY:H	1.86	0.78
1:A:192:ILE:CG2	1:A:195:ALA:H	1.97	0.78
1:A:101:GLN:HG2	1:A:387:ASN:CA	2.14	0.78
1:A:436:PHE:HE2	1:A:467:LYS:HB2	1.48	0.78
1:B:277:GLY:C	1:B:278:LYS:HD3	2.04	0.77
1:A:308:LYS:HD2	1:A:371:ILE:HG12	1.66	0.77
1:B:212:ILE:HG13	1:B:213:ASP:N	1.98	0.77
1:B:479:ALA:CA	1:B:566:TYR:CE2	2.68	0.77
1:A:223:PHE:HZ	1:A:311:LEU:CB	1.97	0.77
1:B:454:PRO:HD2	1:B:509:MET:CE	2.14	0.77
1:A:436:PHE:CE2	1:A:460:ALA:HB2	2.20	0.77
1:B:256:ASP:HB3	1:B:257:PRO:HD2	1.66	0.77
1:A:274:THR:O	1:A:275:ALA:CB	2.33	0.77
1:A:305:ASN:OD1	1:A:307:TYR:HB3	1.84	0.77
1:A:285:TRP:HE1	1:A:322:VAL:HG21	1.49	0.77
1:B:402:ASN:CB	1:B:430:ASP:HB2	2.14	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:402:ASN:ND2	1:B:446:TRP:CZ2	2.47	0.77
1:A:225:PRO:CA	1:A:229:PRO:HG3	2.14	0.77
1:A:404:SER:HB2	1:A:436:PHE:HA	1.67	0.77
1:A:618:GLY:HA3	1:A:621:TYR:CE2	2.20	0.77
1:B:245:SER:HG	1:B:247:TRP:HE1	1.23	0.77
1:A:133:GLU:HA	1:A:134:LYS:HE3	1.66	0.76
1:A:207:VAL:HG13	1:A:244:HIS:O	1.84	0.76
1:A:262:TYR:CE1	1:A:264:SER:OG	2.38	0.76
1:A:430:ASP:HB3	1:A:459:HIS:HB3	1.68	0.76
1:B:525:GLU:OE2	1:B:527:GLU:CB	2.34	0.76
1:A:74:LEU:HD13	1:A:79:LYS:CE	2.16	0.76
1:A:272:VAL:HG22	1:A:280:PHE:CB	2.03	0.76
1:A:92:GLY:O	1:A:93:VAL:CB	2.33	0.76
1:A:436:PHE:CZ	1:A:460:ALA:HB2	2.19	0.76
1:A:431:ILE:CG2	1:A:446:TRP:HB3	2.16	0.76
1:A:618:GLY:HA3	1:A:621:TYR:CZ	2.21	0.75
1:B:406:TRP:CE3	1:B:442:LEU:CD1	2.69	0.75
1:B:126:ALA:HB1	1:B:137:LEU:HD21	1.67	0.75
1:B:90:ALA:O	1:B:91:TYR:O	2.05	0.75
1:B:210:MET:CA	1:B:211:ASP:CB	2.64	0.75
1:B:453:TYR:HA	1:B:509:MET:CE	2.15	0.75
1:A:182:ARG:NH2	1:A:190:ARG:HG3	2.02	0.75
1:A:74:LEU:HD13	1:A:79:LYS:HE3	1.68	0.75
1:A:329:ASP:O	1:A:330:THR:OG1	2.05	0.75
1:B:464:THR:O	1:B:465:ASN:HB3	1.85	0.75
1:B:586:ASN:HB2	1:B:589:GLU:CG	2.10	0.75
1:B:81:ILE:HG21	1:B:128:LEU:HB3	1.66	0.75
1:A:84:TRP:HA	1:A:357:ASN:OD1	1.87	0.75
1:B:211:ASP:C	1:B:212:ILE:CG2	2.45	0.75
1:B:91:TYR:CD2	1:B:415:MET:HE1	2.21	0.74
1:B:358:VAL:O	1:B:362:LEU:HG	1.87	0.74
1:A:581:GLY:O	1:A:582:LYS:HB3	1.86	0.74
1:A:274:THR:O	1:A:275:ALA:HB3	1.87	0.74
1:A:504:ASN:OD1	1:A:505:GLY:HA2	1.87	0.74
1:B:459:HIS:CG	1:B:460:ALA:N	2.56	0.74
1:B:652:ASN:ND2	1:B:657:ASP:OD1	2.20	0.74
1:A:57:THR:HG23	1:A:134:LYS:HD2	0.85	0.74
1:A:84:TRP:CZ3	1:A:356:HIS:CB	2.71	0.74
1:B:78:GLY:O	1:B:79:LYS:HB2	1.86	0.74
1:B:428:GLY:HA3	1:B:455:PHE:O	1.87	0.74
1:B:575:GLY:HA2	1:B:606:LYS:O	1.87	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:106:MET:CE	1:B:128:LEU:HD22	2.17	0.74
1:B:379:ARG:CD	1:B:618:GLY:O	2.35	0.74
1:A:179:GLN:OE1	1:A:455:PHE:CE1	2.40	0.73
1:B:256:ASP:CG	1:B:257:PRO:HD3	2.09	0.73
1:B:379:ARG:CG	1:B:618:GLY:O	2.36	0.73
1:B:566:TYR:CA	1:B:567:GLN:HG2	2.15	0.73
1:A:171:ILE:HD12	1:A:175:ALA:HB3	1.69	0.73
1:A:627:SER:CA	1:A:647:LYS:HZ3	1.98	0.73
1:B:307:TYR:HD2	1:B:374:ALA:CB	2.01	0.73
1:B:538:ILE:CD1	1:B:545:PRO:HG3	2.19	0.73
1:A:587:THR:HB	1:A:590:ASN:HD22	1.52	0.73
1:B:151:ARG:HH12	1:B:160:GLY:HA3	1.52	0.73
1:B:186:SER:CB	1:B:187:PRO:CD	2.60	0.73
1:B:224:ASN:H	1:B:225:PRO:HD2	1.52	0.73
1:B:87:ASP:HB3	1:B:324:GLU:OE1	1.88	0.73
1:A:538:ILE:HD12	1:A:569:LYS:HB3	1.69	0.73
1:B:402:ASN:HB2	1:B:430:ASP:CB	2.19	0.73
1:B:635:ARG:HE	1:B:636:ASN:HD22	1.35	0.73
1:B:83:LEU:N	1:B:83:LEU:HD12	2.02	0.73
1:A:436:PHE:CE1	1:A:459:HIS:CE1	2.77	0.73
1:B:180:GLN:O	1:B:181:CYS:HB2	1.88	0.73
1:B:93:VAL:O	1:B:97:THR:N	2.22	0.73
1:A:84:TRP:CZ3	1:A:125:LYS:HG2	2.23	0.72
1:B:204:PRO:CB	1:B:585:GLN:HA	2.18	0.72
1:B:166:GLY:HA3	1:B:393:ARG:HD2	1.71	0.72
1:A:179:GLN:HB3	1:A:209:TRP:NE1	2.02	0.72
1:A:436:PHE:CE2	1:A:460:ALA:CB	2.71	0.72
1:A:84:TRP:O	1:A:85:ASN:HB2	1.89	0.72
1:A:272:VAL:HG11	1:A:336:PRO:HG3	1.69	0.72
1:A:434:PHE:O	1:A:435:LEU:CB	2.36	0.72
1:A:236:ARG:NH1	1:B:661:ILE:HG23	2.04	0.72
1:A:266:THR:O	1:A:267:GLU:CB	2.32	0.72
1:A:506:MET:CB	1:A:507:PRO:CD	2.66	0.72
1:B:552:TRP:HA	1:B:571:LYS:HD3	1.72	0.72
1:A:80:THR:HA	1:A:129:SER:HA	1.70	0.72
1:B:545:PRO:O	1:B:546:ALA:CB	2.37	0.72
1:A:74:LEU:CD1	1:A:76:ARG:O	2.37	0.72
1:A:84:TRP:CH2	1:A:356:HIS:HB2	2.24	0.72
1:A:80:THR:CB	1:A:129:SER:CB	2.61	0.72
1:A:223:PHE:CD2	1:A:231:PRO:HB2	2.24	0.72
1:B:527:GLU:CB	1:B:543:ASN:ND2	2.53	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:62:THR:HB	1:B:64:ILE:HD11	1.72	0.71
1:A:236:ARG:HG2	1:A:240:ILE:CG1	2.21	0.71
1:B:118:ILE:HD11	1:B:120:PHE:HE1	1.54	0.71
1:B:493:TYR:OH	1:B:531:VAL:O	2.04	0.71
1:B:431:ILE:HA	1:B:446:TRP:CE2	2.26	0.71
1:B:178:TYR:HB3	1:B:205:CYS:SG	2.30	0.71
1:A:84:TRP:HZ2	1:A:334:THR:CG2	2.03	0.71
1:A:397:THR:HG21	1:A:424:GLN:HG2	1.73	0.71
1:B:413:VAL:HB	1:B:414:PRO:HD3	1.73	0.71
1:B:100:TYR:HE2	1:B:400:GLY:HA2	1.55	0.71
1:B:270:VAL:CG2	1:B:292:PRO:CA	2.67	0.71
1:A:324:GLU:CD	1:A:385:ARG:NH1	2.45	0.70
1:B:206:ASP:HB2	1:B:488:TYR:HH	1.55	0.70
1:B:82:LYS:C	1:B:83:LEU:HD12	2.10	0.70
1:A:84:TRP:HE3	1:A:125:LYS:HG2	1.52	0.70
1:A:225:PRO:O	1:A:229:PRO:HG2	1.91	0.70
1:B:209:TRP:HH2	1:B:459:HIS:CD2	2.10	0.70
1:B:453:TYR:HA	1:B:509:MET:HE2	1.72	0.70
1:A:625:ASP:CB	1:A:651:TYR:CB	2.69	0.70
1:A:73:SER:H	1:A:95:LYS:HE3	1.56	0.70
1:B:231:PRO:O	1:B:235:ASN:OD1	2.09	0.70
1:B:270:VAL:HG21	1:B:292:PRO:HB3	1.73	0.70
1:A:209:TRP:HE3	1:A:319:TRP:CE3	2.09	0.70
1:A:440:ALA:HB1	1:A:476:VAL:CG2	2.22	0.70
1:A:486:ARG:O	1:A:489:ILE:CG2	2.40	0.70
1:A:627:SER:CB	1:A:647:LYS:NZ	2.54	0.70
1:A:641:THR:HB	1:A:643:LYS:NZ	2.06	0.70
1:B:306:LEU:HD22	1:B:306:LEU:C	2.12	0.70
1:A:192:ILE:HG22	1:A:195:ALA:H	1.57	0.69
1:B:183:PHE:HA	1:B:212:ILE:H	1.54	0.69
1:B:459:HIS:CG	1:B:460:ALA:H	2.10	0.69
1:A:224:ASN:CB	1:A:227:SER:CB	2.57	0.69
1:B:270:VAL:HG22	1:B:271:TRP:H	1.57	0.69
1:B:270:VAL:HG13	1:B:271:TRP:CE3	2.27	0.69
1:B:545:PRO:CG	1:B:547:LEU:CD1	2.70	0.69
1:B:70:VAL:HG22	1:B:71:THR:N	2.03	0.69
1:B:184:SER:OG	1:B:185:TYR:N	2.24	0.69
1:B:328:ASN:CG	1:B:348:PRO:CB	2.58	0.69
1:B:81:ILE:HG12	1:B:82:LYS:H	1.55	0.69
1:A:330:THR:CB	1:A:331:PRO:HD2	2.22	0.69
1:A:84:TRP:CZ2	1:A:356:HIS:CD2	2.79	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:278:LYS:N	1:B:278:LYS:HD3	2.07	0.69
1:B:171:ILE:HD12	1:B:175:ALA:HB3	1.73	0.69
1:A:131:THR:HG22	1:A:132:ASP:N	2.04	0.69
1:B:306:LEU:HD21	1:B:310:PHE:CB	2.23	0.69
1:A:409:LEU:HD23	1:A:410:LYS:N	2.08	0.69
1:A:434:PHE:CD2	1:A:461:CYS:CB	2.75	0.69
1:B:485:GLU:O	1:B:489:ILE:HG23	1.93	0.69
1:B:552:TRP:CB	1:B:571:LYS:CD	2.71	0.69
1:A:191:VAL:O	1:A:192:ILE:HB	1.92	0.69
1:B:298:LYS:O	1:B:301:LYS:HE3	1.94	0.69
1:A:192:ILE:C	1:A:194:ILE:N	2.37	0.68
1:A:232:LYS:O	1:A:233:ALA:HB3	1.92	0.68
1:A:266:THR:CB	1:A:268:ASN:OD1	2.41	0.68
1:A:232:LYS:HA	1:A:311:LEU:CA	2.18	0.68
1:B:64:ILE:O	1:B:74:LEU:CD2	2.41	0.68
1:A:466:ASN:O	1:A:467:LYS:HB3	1.92	0.68
1:B:520:LEU:HD12	1:B:520:LEU:N	2.09	0.68
1:B:552:TRP:CB	1:B:571:LYS:HD3	2.23	0.68
1:A:332:ASN:C	1:A:333:LYS:HG2	2.14	0.68
1:B:470:TRP:C	1:B:472:PHE:H	1.94	0.68
1:A:538:ILE:CG2	1:A:544:GLN:O	2.41	0.68
1:B:256:ASP:C	1:B:259:TYR:CE2	2.66	0.68
1:B:406:TRP:CE3	1:B:442:LEU:HD12	2.28	0.68
1:A:307:TYR:O	1:A:310:PHE:HD2	1.76	0.68
1:A:84:TRP:HZ2	1:A:334:THR:HG21	1.59	0.68
1:B:215:MET:HB2	1:B:218:TYR:HA	1.76	0.68
1:B:248:MET:HB2	1:B:319:TRP:CE2	2.29	0.68
1:B:300:ASN:O	1:B:304:ARG:N	2.25	0.68
1:B:64:ILE:N	1:B:76:ARG:HH21	1.91	0.68
1:A:228:PHE:C	1:A:230:ASN:N	2.34	0.68
1:A:538:ILE:HG21	1:A:544:GLN:O	1.94	0.68
1:A:577:ILE:HB	1:A:609:GLY:HA3	1.75	0.68
1:B:210:MET:HA	1:B:211:ASP:CB	2.24	0.68
1:A:86:THR:HG21	1:A:333:LYS:HB2	1.74	0.67
1:A:628:LEU:HB3	1:A:648:THR:HB	1.75	0.67
1:B:474:GLN:O	1:B:478:ASP:OD2	2.12	0.67
1:A:202:ARG:HD3	1:B:583:ILE:HD12	1.75	0.67
1:A:84:TRP:CD2	1:A:356:HIS:CD2	2.81	0.67
1:A:68:GLY:HA2	1:A:422:SER:CB	2.25	0.67
1:A:649:GLY:O	1:A:650:LYS:HB2	1.93	0.67
1:B:63:SER:HA	1:B:76:ARG:HH21	1.58	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:426:PHE:CE2	1:A:455:PHE:HB2	2.30	0.67
1:A:586:ASN:OD1	1:A:588:THR:HB	1.93	0.67
1:B:534:ASN:CG	1:B:576:ALA:HB1	2.14	0.67
1:B:63:SER:H	1:B:76:ARG:HH22	1.43	0.67
1:B:516:ASP:HB3	1:B:519:ASP:HB2	1.77	0.67
1:B:81:ILE:CG2	1:B:128:LEU:CB	2.73	0.67
1:A:307:TYR:HA	1:A:310:PHE:CE2	2.29	0.67
1:B:178:TYR:CB	1:B:205:CYS:HB3	2.08	0.67
1:B:347:LEU:O	1:B:350:GLY:HA2	1.95	0.67
1:A:171:ILE:HD12	1:A:175:ALA:CB	2.24	0.67
1:A:379:ARG:CZ	1:A:618:GLY:O	2.42	0.67
1:B:256:ASP:CB	1:B:257:PRO:HD3	2.24	0.67
1:A:106:MET:O	1:A:107:MET:HB3	1.92	0.66
1:A:308:LYS:HD2	1:A:371:ILE:CG1	2.25	0.66
1:A:128:LEU:HD23	1:A:137:LEU:HB2	1.77	0.66
1:A:239:HIS:HE1	1:A:316:ASP:OD2	1.76	0.66
1:A:460:ALA:CB	1:A:467:LYS:HD3	2.22	0.66
1:B:193:GLU:HB3	1:B:195:ALA:HB3	1.78	0.66
1:B:209:TRP:HB3	1:B:246:ALA:HB3	1.73	0.66
1:B:434:PHE:CD2	1:B:435:LEU:HA	2.25	0.66
1:B:204:PRO:HB2	1:B:584:ILE:O	1.95	0.66
1:A:491:LEU:HD21	1:A:590:ASN:OD1	1.95	0.66
1:A:126:ALA:O	1:A:127:GLU:HB2	1.95	0.66
1:B:307:TYR:H	1:B:307:TYR:HD1	1.44	0.66
1:B:605:GLY:O	1:B:606:LYS:HG3	1.96	0.66
1:A:165:THR:CG2	1:A:390:GLY:HA2	2.26	0.66
1:A:128:LEU:CD2	1:A:137:LEU:HB2	2.26	0.66
1:A:575:GLY:HA2	1:A:606:LYS:O	1.95	0.66
1:B:81:ILE:CG2	1:B:128:LEU:HB3	2.25	0.66
1:A:589:GLU:OE1	2:A:703:HOH:O	2.12	0.66
1:B:367:SER:O	1:B:371:ILE:HD12	1.96	0.66
1:B:479:ALA:HB2	1:B:566:TYR:CE2	2.31	0.66
1:B:573:ARG:NH1	1:B:574:GLY:O	2.29	0.66
1:B:78:GLY:O	1:B:79:LYS:CB	2.44	0.66
1:A:552:TRP:O	1:A:572:ILE:O	2.14	0.66
1:B:459:HIS:ND1	1:B:460:ALA:N	2.43	0.66
1:B:545:PRO:O	1:B:546:ALA:HB2	1.95	0.66
1:A:272:VAL:CG2	1:A:280:PHE:CA	2.74	0.66
1:A:500:GLU:O	1:A:505:GLY:CA	2.44	0.66
1:A:512:VAL:CG1	1:A:548:PRO:HD3	2.22	0.66
1:B:612:TYR:OH	1:B:621:TYR:HB3	1.96	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:405:CYS:O	1:A:406:TRP:HB2	1.94	0.65
1:A:500:GLU:O	1:A:505:GLY:HA3	1.96	0.65
1:B:538:ILE:HD12	1:B:545:PRO:HG3	1.77	0.65
1:B:606:LYS:NZ	1:B:634:GLU:HG3	2.10	0.65
1:A:464:THR:CG2	1:A:465:ASN:H	2.10	0.65
1:B:81:ILE:HG21	1:B:128:LEU:CB	2.26	0.65
1:B:483:ALA:O	1:B:486:ARG:HB2	1.97	0.65
1:B:228:PHE:N	1:B:229:PRO:HD3	2.12	0.65
1:B:557:LEU:HD12	1:B:557:LEU:H	1.61	0.65
1:A:215:MET:HE3	1:A:218:TYR:HA	1.79	0.65
1:B:106:MET:HE1	1:B:128:LEU:HD22	1.76	0.65
1:B:124:TRP:O	1:B:140:GLU:CB	2.44	0.65
1:B:270:VAL:CG2	1:B:271:TRP:N	2.59	0.65
1:B:512:VAL:CG2	1:B:528:ALA:O	2.43	0.65
1:B:100:TYR:CE2	1:B:400:GLY:HA2	2.31	0.65
1:A:248:MET:HB2	1:A:319:TRP:CH2	2.32	0.65
1:B:479:ALA:CB	1:B:566:TYR:CD2	2.79	0.65
1:B:594:PRO:C	1:B:596:THR:H	1.98	0.65
1:B:522:LEU:HD23	1:B:522:LEU:N	2.12	0.65
1:B:64:ILE:H	1:B:76:ARG:NH2	1.94	0.65
1:A:84:TRP:CE2	1:A:356:HIS:HD2	2.14	0.65
1:B:82:LYS:HE2	1:B:84:TRP:HB3	1.78	0.65
1:A:538:ILE:CD1	1:A:569:LYS:HB3	2.27	0.65
1:B:554:GLU:O	1:B:555:LEU:CB	2.41	0.65
1:B:63:SER:CA	1:B:76:ARG:NH2	2.60	0.64
1:A:74:LEU:HD22	1:A:79:LYS:HD2	1.79	0.64
1:A:84:TRP:CD1	1:A:85:ASN:CA	2.75	0.64
1:A:84:TRP:HD1	1:A:85:ASN:HA	1.62	0.64
1:B:118:ILE:CD1	1:B:120:PHE:CE1	2.79	0.64
1:B:593:ASP:CB	1:B:594:PRO:CD	2.70	0.64
1:B:91:TYR:CD2	1:B:415:MET:CE	2.81	0.64
1:A:84:TRP:O	1:A:85:ASN:CB	2.45	0.64
1:B:520:LEU:HD12	1:B:520:LEU:H	1.61	0.64
1:A:306:LEU:HA	1:A:374:ALA:HB2	1.77	0.64
1:A:626:TYR:O	1:A:650:LYS:N	2.31	0.64
1:B:436:PHE:C	1:B:438:ALA:H	2.00	0.64
1:B:609:GLY:O	1:B:631:PHE:N	2.16	0.64
1:B:115:ALA:HB3	1:B:154:PRO:HA	1.79	0.64
1:B:277:GLY:C	1:B:278:LYS:CD	2.66	0.64
1:A:80:THR:CA	1:A:129:SER:HA	2.27	0.64
1:B:165:THR:O	1:B:393:ARG:CD	2.46	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:261:VAL:CG1	1:A:262:TYR:N	2.59	0.64
1:A:618:GLY:CA	1:A:621:TYR:CZ	2.79	0.64
1:B:406:TRP:HZ2	1:B:541:PHE:HB2	1.63	0.64
1:B:517:PRO:O	1:B:523:ARG:NH2	2.31	0.64
1:A:84:TRP:CD2	1:A:356:HIS:HD2	2.16	0.63
1:A:90:ALA:C	1:A:92:GLY:H	2.01	0.63
1:A:111:LYS:O	1:A:112:ASP:O	2.16	0.63
1:A:165:THR:O	1:A:393:ARG:NH1	2.29	0.63
1:A:105:TRP:CE2	1:A:161:LEU:HD22	2.34	0.63
1:B:81:ILE:HG22	1:B:128:LEU:O	1.98	0.63
1:A:420:GLY:HA3	1:A:507:PRO:HG3	1.80	0.63
1:A:52:ALA:O	1:A:53:ASN:ND2	2.32	0.63
1:B:181:CYS:O	1:B:459:HIS:CD2	2.51	0.63
1:A:211:ASP:O	1:A:212:ILE:HG22	1.98	0.63
1:A:461:CYS:SG	1:A:462:ALA:N	2.72	0.63
1:B:566:TYR:N	1:B:567:GLN:HA	2.12	0.63
1:A:72:GLY:H	1:A:411:MET:HE1	1.62	0.63
1:A:101:GLN:HG3	1:A:387:ASN:N	2.14	0.63
1:A:552:TRP:CH2	1:A:573:ARG:HG3	2.34	0.63
1:B:117:GLY:O	1:B:148:ILE:HA	1.98	0.63
1:B:188:ASP:OD2	1:B:192:ILE:CD1	2.46	0.63
1:B:255:VAL:HG23	1:B:255:VAL:O	1.99	0.63
1:B:245:SER:O	1:B:316:ASP:C	2.36	0.62
1:B:590:ASN:C	1:B:591:SER:OG	2.37	0.62
1:B:206:ASP:HB2	1:B:488:TYR:OH	1.98	0.62
1:B:434:PHE:HD2	1:B:435:LEU:CA	2.08	0.62
1:B:435:LEU:O	1:B:436:PHE:CB	2.48	0.62
1:A:133:GLU:CA	1:A:134:LYS:HE3	2.29	0.62
1:B:305:ASN:ND2	1:B:307:TYR:CE1	2.67	0.62
1:B:590:ASN:ND2	1:B:590:ASN:O	2.29	0.62
1:A:99:LEU:N	1:A:99:LEU:HD12	2.13	0.62
1:B:557:LEU:HD12	1:B:557:LEU:N	2.15	0.62
1:A:462:ALA:O	1:A:463:GLY:O	2.17	0.62
1:B:132:ASP:O	1:B:133:GLU:HG2	1.99	0.62
1:B:109:VAL:O	1:B:110:ARG:HB3	1.99	0.62
1:B:279:ASN:OD1	1:B:279:ASN:N	2.33	0.62
1:A:462:ALA:O	1:A:463:GLY:C	2.36	0.62
1:B:509:MET:HG3	1:B:529:PHE:CD2	2.35	0.62
1:B:82:LYS:HG2	1:B:83:LEU:H	1.64	0.62
1:A:182:ARG:O	1:A:183:PHE:HB2	2.00	0.62
1:A:272:VAL:HG21	1:A:280:PHE:HA	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:307:TYR:O	1:A:310:PHE:CD2	2.53	0.62
1:A:322:VAL:HG13	1:A:326:GLN:OE1	2.00	0.62
1:B:194:ILE:HG22	1:B:470:TRP:CH2	2.33	0.62
1:B:263:LYS:CA	1:B:265:GLY:H	2.00	0.62
1:B:431:ILE:HA	1:B:446:TRP:NE1	2.15	0.62
1:A:151:ARG:HH12	1:A:160:GLY:HA3	1.65	0.62
1:B:86:THR:HG22	1:B:98:ARG:O	1.99	0.62
1:B:512:VAL:HG13	1:B:548:PRO:HG3	1.82	0.61
1:A:65:TYR:O	1:A:106:MET:HG2	2.00	0.61
1:A:397:THR:HG23	1:A:424:GLN:NE2	2.15	0.61
1:A:74:LEU:HD13	1:A:79:LYS:CD	2.30	0.61
1:B:223:PHE:CB	1:B:224:ASN:HA	2.29	0.61
1:B:369:GLU:O	1:B:373:ASP:HB2	2.00	0.61
1:B:188:ASP:HB3	1:B:189:SER:HA	1.81	0.61
1:B:185:TYR:O	1:B:212:ILE:HD13	2.00	0.61
1:B:256:ASP:C	1:B:259:TYR:HE2	2.01	0.61
1:B:270:VAL:CG2	1:B:271:TRP:H	2.13	0.61
1:B:305:ASN:ND2	1:B:307:TYR:HE1	1.97	0.61
1:A:431:ILE:HG22	1:A:446:TRP:HB3	1.80	0.61
1:A:286:PRO:CG	1:A:289:ALA:HB2	2.31	0.61
1:B:171:ILE:HB	1:B:172:PRO:HD2	1.82	0.61
1:B:151:ARG:HH12	1:B:160:GLY:CA	2.12	0.61
1:B:247:TRP:CD1	1:B:315:VAL:HG13	2.36	0.61
1:B:651:TYR:CG	1:B:652:ASN:N	2.68	0.61
1:A:101:GLN:NE2	1:A:387:ASN:HB2	2.14	0.61
1:B:264:SER:OG	1:B:302:TRP:NE1	2.25	0.61
1:A:431:ILE:HG22	1:A:431:ILE:O	2.01	0.61
1:B:479:ALA:N	1:B:566:TYR:HE2	1.98	0.61
1:B:519:ASP:OD1	1:B:521:SER:N	2.32	0.61
1:B:590:ASN:C	1:B:591:SER:HG	2.01	0.61
1:A:230:ASN:HD21	1:A:234:VAL:CB	2.14	0.60
1:A:430:ASP:HB3	1:A:459:HIS:CB	2.30	0.60
1:A:625:ASP:HB3	1:A:651:TYR:CB	2.31	0.60
1:B:162:SER:HB2	1:B:504:ASN:O	2.00	0.60
1:B:285:TRP:HB2	1:B:286:PRO:HD3	1.83	0.60
1:B:173:ARG:NH1	1:B:495:TYR:CE2	2.68	0.60
1:B:101:GLN:HB3	1:B:103:HIS:CE1	2.37	0.60
1:B:64:ILE:HG12	1:B:76:ARG:NH2	2.16	0.60
1:A:627:SER:CB	1:A:647:LYS:HE2	2.30	0.60
1:A:269:ASP:HB2	1:A:279:ASN:ND2	2.14	0.60
1:A:654:GLU:C	1:A:655:ASN:HD22	2.03	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:267:GLU:O	1:B:268:ASN:CB	2.49	0.60
1:B:593:ASP:HB3	1:B:594:PRO:HD3	1.83	0.60
1:A:330:THR:HB	1:A:331:PRO:CD	2.31	0.60
1:A:228:PHE:O	1:A:231:PRO:CD	2.46	0.60
1:A:257:PRO:HA	1:A:259:TYR:CE2	2.37	0.60
1:A:231:PRO:O	1:A:311:LEU:CB	2.50	0.60
1:A:94:ASP:O	1:A:95:LYS:CB	2.49	0.60
1:A:185:TYR:O	1:A:187:PRO:O	2.19	0.60
1:A:582:LYS:HE2	1:A:594:PRO:HD2	1.82	0.60
1:A:89:GLY:O	1:A:90:ALA:HB2	2.01	0.60
1:B:552:TRP:CA	1:B:571:LYS:HD3	2.32	0.60
1:B:573:ARG:NH1	1:B:573:ARG:HG2	2.05	0.60
1:A:629:LEU:HD22	1:A:644:LEU:HD11	1.83	0.59
1:B:545:PRO:CG	1:B:547:LEU:HD11	2.31	0.59
1:B:257:PRO:HA	1:B:259:TYR:CE2	2.38	0.59
1:B:638:ASP:CG	1:B:639:LYS:HG2	2.22	0.59
1:A:280:PHE:CZ	1:A:335:MET:HA	2.38	0.59
1:A:90:ALA:C	1:A:92:GLY:N	2.55	0.59
1:B:74:LEU:HD23	1:B:75:LEU:N	2.08	0.59
1:B:352:HIS:O	1:B:353:LEU:CB	2.50	0.59
1:B:90:ALA:O	1:B:91:TYR:C	2.41	0.59
1:A:233:ALA:C	1:A:235:ASN:N	2.56	0.59
1:A:432:GLY:HA3	1:A:459:HIS:NE2	2.18	0.59
1:A:431:ILE:HG23	1:A:446:TRP:HB3	1.83	0.59
1:B:402:ASN:HB2	1:B:430:ASP:OD2	2.02	0.59
1:A:209:TRP:HH2	1:A:383:LEU:CD1	2.15	0.58
1:A:64:ILE:O	1:A:77:ASN:ND2	2.28	0.58
1:B:177:GLY:H	1:B:487:ARG:HH21	1.50	0.58
1:A:410:LYS:NZ	1:A:413:VAL:HG21	2.18	0.58
1:A:465:ASN:C	1:A:466:ASN:OD1	2.42	0.58
1:B:285:TRP:N	1:B:286:PRO:HD2	2.17	0.58
1:A:126:ALA:HB3	1:A:137:LEU:HD11	1.85	0.58
1:A:280:PHE:CD1	1:A:336:PRO:CD	2.77	0.58
1:A:362:LEU:HD23	1:A:362:LEU:O	2.02	0.58
1:A:51:LYS:O	1:A:52:ALA:O	2.21	0.58
1:A:652:ASN:O	1:A:653:THR:OG1	2.20	0.58
1:B:128:LEU:HG	1:B:137:LEU:HD12	1.84	0.58
1:B:266:THR:O	1:B:267:GLU:HB3	2.02	0.58
1:B:64:ILE:O	1:B:74:LEU:HD21	2.03	0.58
1:B:180:GLN:OE1	1:B:181:CYS:HA	2.02	0.58
1:A:464:THR:HG22	1:A:465:ASN:N	2.14	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:126:ALA:CB	1:B:137:LEU:HD21	2.34	0.58
1:B:219:ARG:NH1	1:B:254:LYS:HD2	2.19	0.58
1:B:381:PHE:CE1	1:B:383:LEU:HD21	2.38	0.58
1:B:364:VAL:HG21	1:B:384:THR:HB	1.84	0.58
1:A:262:TYR:HD1	1:A:262:TYR:O	1.85	0.58
1:B:270:VAL:O	1:B:271:TRP:CB	2.51	0.58
1:A:88:SER:CB	1:A:98:ARG:O	2.52	0.58
1:B:204:PRO:HB2	1:B:585:GLN:HA	1.86	0.58
1:B:307:TYR:CD2	1:B:374:ALA:CB	2.73	0.58
1:B:507:PRO:O	1:B:510:ARG:CD	2.52	0.58
1:B:479:ALA:CB	1:B:566:TYR:CE2	2.86	0.58
1:A:624:GLY:O	1:A:650:LYS:O	2.21	0.58
1:B:220:ILE:HG21	1:B:250:ASP:O	2.04	0.58
1:B:264:SER:HG	1:B:302:TRP:HE1	1.40	0.58
1:A:635:ARG:HB2	1:A:640:VAL:HG22	1.86	0.58
1:B:223:PHE:HB2	1:B:224:ASN:HA	1.84	0.58
1:A:165:THR:O	1:A:165:THR:HG22	2.03	0.57
1:A:399:THR:HG22	1:A:399:THR:O	2.03	0.57
1:A:451:ALA:O	1:A:487:ARG:HD2	2.04	0.57
1:A:84:TRP:CG	1:A:85:ASN:N	2.48	0.57
1:B:178:TYR:CB	1:B:205:CYS:SG	2.92	0.57
1:B:270:VAL:HG21	1:B:292:PRO:CB	2.34	0.57
1:A:170:MET:HE2	1:A:498:LEU:HG	1.86	0.57
1:B:257:PRO:CA	1:B:259:TYR:CE2	2.87	0.57
1:B:566:TYR:N	1:B:566:TYR:CD1	2.72	0.57
1:B:59:PRO:HB2	1:B:62:THR:OG1	2.03	0.57
1:A:112:ASP:CG	1:A:113:GLY:N	2.57	0.57
1:A:210:MET:HG3	1:A:247:TRP:CH2	2.39	0.57
1:A:259:TYR:O	1:A:260:PHE:CD1	2.53	0.57
1:A:398:TRP:HH2	1:A:401:ASP:OD1	1.86	0.57
1:B:577:ILE:HG13	1:B:607:ALA:HB1	1.85	0.57
1:A:538:ILE:HD12	1:A:569:LYS:CB	2.33	0.57
1:B:328:ASN:HB2	1:B:348:PRO:CA	2.35	0.57
1:B:507:PRO:O	1:B:510:ARG:HD3	2.05	0.57
1:B:106:MET:HE2	1:B:128:LEU:HD22	1.86	0.57
1:B:81:ILE:CG2	1:B:128:LEU:O	2.52	0.57
1:B:379:ARG:HG3	1:B:618:GLY:O	2.04	0.57
1:A:233:ALA:C	1:A:235:ASN:H	2.08	0.57
1:A:406:TRP:CD1	1:A:409:LEU:HD22	2.39	0.57
1:B:274:THR:HA	1:B:352:HIS:NE2	2.16	0.57
1:A:209:TRP:HH2	1:A:383:LEU:HD12	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:440:ALA:CB	1:A:476:VAL:HG21	2.34	0.57
1:A:573:ARG:O	1:A:576:ALA:HB3	2.04	0.57
1:B:183:PHE:HA	1:B:212:ILE:N	2.18	0.57
1:B:629:LEU:CD2	1:B:647:LYS:HD2	2.35	0.57
1:B:629:LEU:HD22	1:B:647:LYS:HD2	1.86	0.57
1:A:66:GLY:HA3	1:A:106:MET:HA	1.87	0.57
1:A:120:PHE:HB3	1:A:144:PHE:CE1	2.40	0.57
1:B:298:LYS:HA	1:B:301:LYS:CE	2.34	0.57
1:B:298:LYS:HA	1:B:301:LYS:HE3	1.85	0.57
1:B:474:GLN:HA	1:B:474:GLN:HE21	1.70	0.57
1:B:94:ASP:O	1:B:96:GLY:N	2.32	0.57
1:A:118:ILE:CG1	1:A:120:PHE:CE1	2.87	0.56
1:A:78:GLY:CA	1:A:131:THR:HA	2.28	0.56
1:B:542:ALA:O	1:B:543:ASN:O	2.23	0.56
1:B:488:TYR:HD2	1:B:584:ILE:CG2	2.17	0.56
1:A:330:THR:CB	1:A:331:PRO:CD	2.77	0.56
1:A:597:LEU:HD21	1:A:631:PHE:CD1	2.40	0.56
1:B:72:GLY:HA2	1:B:73:SER:CB	2.16	0.56
1:A:259:TYR:CE2	1:A:262:TYR:CD1	2.92	0.56
1:A:432:GLY:HA3	1:A:436:PHE:HE1	1.69	0.56
1:A:53:ASN:O	1:A:54:ALA:HB2	2.05	0.56
1:A:82:LYS:NZ	1:A:97:THR:CA	2.66	0.56
1:A:94:ASP:O	1:A:95:LYS:HB2	2.05	0.56
1:B:472:PHE:O	1:B:476:VAL:HG21	2.05	0.56
1:A:456:ALA:HA	2:A:704:HOH:O	2.05	0.56
1:A:85:ASN:HB3	1:A:99:LEU:O	2.05	0.56
1:B:213:ASP:HB3	1:B:218:TYR:CE1	2.41	0.56
1:B:467:LYS:O	1:B:468:GLU:CB	2.53	0.56
1:A:236:ARG:NE	1:A:240:ILE:HD11	2.20	0.56
1:A:360:GLY:O	1:A:364:VAL:HG12	2.06	0.56
1:A:525:GLU:OE1	1:A:545:PRO:CG	2.47	0.56
1:B:541:PHE:O	1:B:542:ALA:CB	2.50	0.56
1:A:388:PHE:CD1	1:A:389:LEU:N	2.73	0.56
1:A:633:ALA:HB2	1:A:642:VAL:HG22	1.87	0.56
1:B:402:ASN:ND2	1:B:446:TRP:HH2	1.99	0.56
1:B:534:ASN:ND2	1:B:576:ALA:HB1	2.21	0.56
1:A:444:GLY:O	1:A:566:TYR:HB3	2.05	0.56
1:B:132:ASP:O	1:B:133:GLU:CG	2.54	0.56
1:B:536:LEU:HD21	1:B:548:PRO:HD2	1.87	0.56
1:B:555:LEU:O	1:B:557:LEU:N	2.36	0.56
1:B:606:LYS:HZ3	1:B:634:GLU:HG3	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:552:TRP:CZ2	1:A:573:ARG:HG3	2.41	0.56
1:A:304:ARG:HB2	1:A:370:GLY:HA2	1.88	0.56
1:B:375:ARG:HG2	1:B:376:PRO:HD2	1.87	0.56
1:B:553:LYS:CB	1:B:572:ILE:H	2.19	0.56
1:A:125:LYS:CE	1:A:355:TYR:HA	2.36	0.56
1:A:231:PRO:C	1:A:233:ALA:H	2.09	0.56
1:A:618:GLY:N	1:A:621:TYR:OH	2.39	0.56
1:B:190:ARG:HG2	1:B:194:ILE:HG12	1.88	0.56
1:B:212:ILE:HG13	1:B:213:ASP:H	1.71	0.56
1:B:306:LEU:HD13	1:B:307:TYR:N	2.21	0.56
1:B:430:ASP:O	1:B:431:ILE:HB	2.06	0.56
1:B:135:ILE:HG23	1:B:135:ILE:O	2.06	0.55
1:B:117:GLY:O	1:B:149:ILE:N	2.38	0.55
1:A:403:GLY:HA2	1:A:435:LEU:HB3	1.89	0.55
1:A:86:THR:HG21	1:A:333:LYS:CG	2.36	0.55
1:B:70:VAL:O	1:B:415:MET:HG3	2.06	0.55
1:A:123:THR:HG23	1:A:355:TYR:HD2	1.72	0.55
1:A:532:GLY:O	1:A:533:ASP:HB2	2.05	0.55
1:A:627:SER:CB	1:A:647:LYS:CE	2.84	0.55
1:B:403:GLY:HA3	1:B:408:HIS:ND1	2.21	0.55
1:B:101:GLN:HB3	1:B:103:HIS:HE1	1.70	0.55
1:B:262:TYR:O	1:B:263:LYS:CB	2.53	0.55
1:B:270:VAL:HG23	1:B:292:PRO:HA	1.85	0.55
1:B:635:ARG:HG3	1:B:635:ARG:O	2.07	0.55
1:A:224:ASN:CB	1:A:227:SER:HB2	2.29	0.55
1:A:436:PHE:CE2	1:A:467:LYS:CB	2.76	0.55
1:B:654:GLU:N	1:B:655:ASN:HA	2.21	0.55
1:A:149:ILE:CG2	1:A:151:ARG:HG3	2.37	0.55
1:A:355:TYR:CD1	1:A:355:TYR:N	2.72	0.55
1:A:496:THR:HA	1:A:612:TYR:HB3	1.88	0.55
1:A:572:ILE:HD13	1:A:600:CYS:HB2	1.89	0.55
1:B:500:GLU:O	1:B:504:ASN:HB2	2.06	0.55
1:A:432:GLY:HA3	1:A:459:HIS:CE1	2.42	0.55
1:B:182:ARG:HB2	1:B:461:CYS:HB2	1.87	0.55
1:B:248:MET:HG3	1:B:319:TRP:NE1	2.22	0.55
1:A:272:VAL:HG21	1:A:280:PHE:CA	2.35	0.55
1:B:181:CYS:O	1:B:459:HIS:HD2	1.90	0.55
1:A:125:LYS:HE3	1:A:355:TYR:HA	1.89	0.55
1:A:433:GLY:O	1:A:460:ALA:CA	2.43	0.55
1:A:308:LYS:HB3	1:A:315:VAL:CG1	2.37	0.54
1:A:233:ALA:HB3	1:A:312:ALA:HA	1.82	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:531:VAL:HB	1:A:535:LEU:HD23	1.89	0.54
1:B:188:ASP:OD2	1:B:192:ILE:HD12	2.07	0.54
1:B:285:TRP:HB2	1:B:286:PRO:CD	2.36	0.54
1:B:584:ILE:HG13	1:B:589:GLU:HB2	1.89	0.54
1:A:507:PRO:O	1:A:510:ARG:NE	2.26	0.54
1:B:406:TRP:CZ2	1:B:541:PHE:HB2	2.42	0.54
1:A:151:ARG:HH12	1:A:160:GLY:CA	2.21	0.54
1:A:84:TRP:CD1	1:A:85:ASN:HA	2.40	0.54
1:B:69:GLU:HB3	1:B:101:GLN:HB2	1.88	0.54
1:B:118:ILE:HD11	1:B:146:VAL:HG13	1.90	0.54
1:A:441:ASP:O	1:A:445:ASN:ND2	2.35	0.54
1:B:453:TYR:HA	1:B:509:MET:HE1	1.88	0.54
1:A:212:ILE:CG2	1:A:213:ASP:N	2.70	0.54
1:A:245:SER:O	1:A:316:ASP:HB2	2.08	0.54
1:A:431:ILE:C	1:A:459:HIS:CD2	2.80	0.54
1:B:270:VAL:O	1:B:271:TRP:HB2	2.07	0.54
1:B:158:ILE:HG21	1:B:507:PRO:CD	2.37	0.54
1:A:410:LYS:HZ3	1:A:413:VAL:HG21	1.72	0.54
1:B:255:VAL:HG21	1:B:281:HIS:CD2	2.43	0.54
1:B:459:HIS:O	1:B:460:ALA:CB	2.56	0.54
1:A:330:THR:CG2	2:A:712:HOH:O	1.97	0.54
1:A:457:ARG:HG2	1:A:458:GLY:O	2.07	0.54
1:B:458:GLY:O	1:B:459:HIS:HB2	2.07	0.54
1:B:633:ALA:HB2	1:B:642:VAL:HG22	1.90	0.54
1:A:264:SER:C	1:A:266:THR:N	2.60	0.54
1:A:100:TYR:CG	1:A:385:ARG:HD3	2.43	0.54
1:A:406:TRP:CD2	1:A:442:LEU:HD13	2.42	0.54
1:A:618:GLY:N	1:A:621:TYR:CZ	2.76	0.54
1:B:590:ASN:HD22	1:B:590:ASN:C	2.08	0.54
1:A:383:LEU:CD2	1:A:396:ALA:HB3	2.37	0.54
1:A:440:ALA:HB2	1:A:472:PHE:HB3	1.91	0.54
1:A:85:ASN:OD1	1:A:88:SER:CB	2.56	0.54
1:B:118:ILE:CG1	1:B:120:PHE:CE1	2.91	0.54
1:B:612:TYR:HB2	1:B:628:LEU:HD12	1.90	0.54
1:B:446:TRP:O	1:B:446:TRP:HD1	1.91	0.53
1:A:504:ASN:OD1	1:A:505:GLY:CA	2.56	0.53
1:A:192:ILE:HG23	1:A:195:ALA:H	1.71	0.53
1:A:210:MET:HG3	1:A:247:TRP:CZ3	2.43	0.53
1:B:106:MET:HE3	1:B:135:ILE:HG13	1.89	0.53
1:B:638:ASP:C	1:B:639:LYS:HG2	2.28	0.53
1:A:236:ARG:HD3	1:B:661:ILE:HG12	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:219:ARG:HH11	1:B:254:LYS:HD2	1.69	0.53
1:B:291:PHE:CD1	1:B:291:PHE:N	2.76	0.53
1:A:84:TRP:CZ2	1:A:356:HIS:CG	2.97	0.53
1:A:402:ASN:OD1	1:A:408:HIS:HB3	2.08	0.53
1:A:464:THR:CG2	1:A:465:ASN:N	2.72	0.53
1:A:72:GLY:HA3	1:A:95:LYS:HG2	1.89	0.53
1:B:299:VAL:O	1:B:303:TRP:N	2.29	0.53
1:A:74:LEU:O	1:A:75:LEU:C	2.46	0.53
1:B:555:LEU:HB3	1:B:570:MET:HE2	1.89	0.53
1:A:119:LEU:HD11	1:A:389:LEU:HD23	1.88	0.53
1:A:133:GLU:C	1:A:134:LYS:HE3	2.28	0.53
1:A:436:PHE:HE2	1:A:467:LYS:HB3	1.72	0.53
1:B:594:PRO:C	1:B:596:THR:N	2.59	0.53
1:B:651:TYR:CD2	1:B:652:ASN:N	2.68	0.53
1:B:74:LEU:CD2	1:B:75:LEU:N	2.68	0.53
1:A:272:VAL:HG21	1:A:280:PHE:CB	2.39	0.53
1:B:254:LYS:HE2	1:B:286:PRO:O	2.09	0.53
1:B:273:LYS:O	1:B:352:HIS:HE1	1.92	0.53
1:A:186:SER:CB	1:A:187:PRO:CD	2.85	0.53
1:A:229:PRO:CA	1:A:231:PRO:HD3	2.38	0.53
1:B:512:VAL:HG12	1:B:522:LEU:HD13	1.90	0.53
1:A:79:LYS:HZ2	1:A:95:LYS:HD3	1.74	0.52
1:B:633:ALA:CB	1:B:642:VAL:HG22	2.40	0.52
1:A:630:GLN:HB3	1:A:645:THR:OG1	2.09	0.52
1:B:59:PRO:O	1:B:60:GLU:HB2	2.09	0.52
1:A:236:ARG:O	1:A:240:ILE:HG13	2.09	0.52
1:A:306:LEU:CD1	1:A:374:ALA:HA	2.39	0.52
1:A:468:GLU:HB2	1:A:471:VAL:HG23	1.91	0.52
1:A:627:SER:HB3	1:A:647:LYS:HE2	1.91	0.52
1:A:238:LEU:O	1:A:243:PHE:CA	2.57	0.52
1:A:101:GLN:HG3	1:A:387:ASN:H	1.68	0.52
1:A:519:ASP:OD1	1:A:521:SER:N	2.42	0.52
1:A:587:THR:HB	1:A:590:ASN:ND2	2.21	0.52
1:B:189:SER:O	1:B:191:VAL:CG1	2.44	0.52
1:A:111:LYS:HG2	1:A:520:LEU:HD11	1.92	0.52
1:A:226:LYS:C	1:A:228:PHE:H	2.11	0.52
1:B:459:HIS:CE1	1:B:460:ALA:HA	2.44	0.52
1:B:181:CYS:O	1:B:459:HIS:HB2	2.10	0.52
1:B:555:LEU:HD23	1:B:570:MET:HE2	1.88	0.52
1:B:470:TRP:C	1:B:472:PHE:N	2.58	0.52
1:A:379:ARG:NH2	1:A:614:ASP:OD2	2.41	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:434:PHE:CD2	1:B:434:PHE:C	2.83	0.52
1:A:268:ASN:O	1:A:293:ASP:CB	2.58	0.52
1:A:466:ASN:N	1:A:466:ASN:OD1	2.43	0.52
1:B:225:PRO:O	1:B:226:LYS:O	2.28	0.52
1:B:65:TYR:OH	1:B:523:ARG:HG2	2.09	0.52
1:A:587:THR:CB	1:A:590:ASN:HD22	2.22	0.52
1:B:285:TRP:CB	1:B:286:PRO:CD	2.88	0.52
1:A:407:ASP:O	1:A:411:MET:HB2	2.10	0.51
1:A:627:SER:HB2	1:A:647:LYS:CE	2.40	0.51
1:A:72:GLY:C	1:A:74:LEU:H	2.14	0.51
1:B:91:TYR:CE2	1:B:415:MET:CE	2.93	0.51
1:B:182:ARG:HE	1:B:466:ASN:HA	1.73	0.51
1:A:232:LYS:O	1:A:233:ALA:CB	2.57	0.51
1:A:630:GLN:HB3	1:A:645:THR:HG1	1.75	0.51
1:A:108:GLY:O	1:A:115:ALA:HA	2.11	0.51
1:B:323:ASN:OD1	1:B:360:GLY:HA3	2.10	0.51
1:A:209:TRP:CH2	1:A:383:LEU:HD12	2.44	0.51
1:A:293:ASP:O	1:A:299:VAL:HB	2.11	0.51
1:B:123:THR:CG2	1:B:124:TRP:HE3	2.23	0.51
1:B:158:ILE:HG21	1:B:507:PRO:HD2	1.91	0.51
1:B:307:TYR:CD1	1:B:307:TYR:N	2.78	0.51
1:B:510:ARG:NH1	1:B:533:ASP:OD1	2.43	0.51
1:B:632:VAL:O	1:B:642:VAL:HG13	2.11	0.51
1:A:145:ARG:HE	1:A:147:PHE:HE2	1.58	0.51
1:A:165:THR:HG21	1:A:390:GLY:HA2	1.91	0.51
1:A:497:LEU:HD11	1:A:532:GLY:HA3	1.92	0.51
1:A:621:TYR:HB2	1:A:625:ASP:H	1.74	0.51
1:B:227:SER:O	1:B:228:PHE:HB2	2.09	0.51
1:B:270:VAL:O	1:B:271:TRP:CG	2.64	0.51
1:A:230:ASN:ND2	1:A:234:VAL:CB	2.74	0.51
1:A:245:SER:CB	1:A:314:GLY:O	2.58	0.51
1:A:511:PRO:HG2	1:A:514:PHE:CG	2.46	0.51
1:A:627:SER:HB2	1:A:647:LYS:HE2	1.92	0.51
1:B:350:GLY:O	1:B:352:HIS:N	2.39	0.51
1:B:251:PRO:HG3	1:B:363:MET:SD	2.51	0.51
1:B:584:ILE:CG1	1:B:589:GLU:HB2	2.41	0.51
1:A:105:TRP:HH2	1:A:157:VAL:CG1	2.24	0.51
1:A:225:PRO:HA	1:A:229:PRO:HG3	1.88	0.51
1:B:543:ASN:O	1:B:545:PRO:HD3	2.11	0.51
1:A:101:GLN:HG3	1:A:386:SER:HA	1.93	0.51
1:A:209:TRP:CE3	1:A:319:TRP:CE3	2.96	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:304:ARG:HB3	1:A:370:GLY:CA	2.41	0.51
1:A:405:CYS:SG	1:A:408:HIS:ND1	2.84	0.51
1:B:353:LEU:O	1:B:354:GLN:HG2	2.11	0.51
1:B:487:ARG:O	1:B:490:LEU:HB2	2.11	0.51
1:A:126:ALA:CB	1:A:137:LEU:HD11	2.41	0.51
1:B:509:MET:HG3	1:B:529:PHE:HD2	1.73	0.51
1:A:48:THR:CB	1:A:53:ASN:HB2	2.41	0.50
1:A:607:ALA:HB3	1:A:633:ALA:HB3	1.92	0.50
1:B:403:GLY:C	1:B:405:CYS:H	2.15	0.50
1:B:534:ASN:OD1	1:B:573:ARG:NE	2.44	0.50
1:B:638:ASP:C	1:B:639:LYS:CG	2.79	0.50
1:B:86:THR:O	1:B:100:TYR:CD1	2.63	0.50
1:A:472:PHE:HB2	1:A:476:VAL:HG21	1.92	0.50
1:B:321:ASP:O	1:B:322:VAL:HB	2.11	0.50
1:A:94:ASP:C	1:A:95:LYS:CG	2.67	0.50
1:A:86:THR:O	1:A:87:ASP:C	2.45	0.50
1:B:557:LEU:CD1	1:B:557:LEU:N	2.73	0.50
1:A:262:TYR:CD1	1:A:262:TYR:C	2.85	0.50
1:A:457:ARG:N	2:A:704:HOH:O	2.36	0.50
1:A:641:THR:CB	1:A:643:LYS:NZ	2.67	0.50
1:B:406:TRP:CZ3	1:B:442:LEU:HD12	2.46	0.50
1:B:516:ASP:HB3	1:B:519:ASP:CB	2.39	0.50
1:A:179:GLN:CB	1:A:209:TRP:HE1	2.08	0.50
1:A:324:GLU:N	1:A:325:PRO:CA	2.72	0.50
1:A:384:THR:HG22	1:A:395:ALA:HB1	1.93	0.50
1:A:552:TRP:HB3	1:A:571:LYS:HB3	1.92	0.50
1:B:348:PRO:HG2	1:B:348:PRO:O	2.12	0.50
1:B:567:GLN:O	1:B:568:ALA:HB3	2.12	0.50
1:A:120:PHE:HB2	1:A:137:LEU:HD22	1.92	0.50
1:B:248:MET:HG2	1:B:249:ILE:N	2.26	0.50
1:B:485:GLU:HG2	1:B:583:ILE:CG2	2.41	0.50
1:B:649:GLY:O	1:B:650:LYS:CB	2.59	0.50
1:B:63:SER:CA	1:B:76:ARG:HH21	2.22	0.50
1:B:72:GLY:CA	1:B:73:SER:HB2	2.24	0.50
1:B:62:THR:O	1:B:63:SER:CB	2.54	0.49
1:A:180:GLN:HG3	1:A:181:CYS:N	2.27	0.49
1:A:236:ARG:HG2	1:A:240:ILE:CD1	2.42	0.49
1:B:361:PHE:CZ	1:B:394:TYR:HE2	2.30	0.49
1:B:364:VAL:CG2	1:B:384:THR:HB	2.42	0.49
1:B:437:ASN:O	1:B:438:ALA:HB3	2.11	0.49
1:A:181:CYS:HB3	1:A:209:TRP:HB2	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:414:PRO:HG3	1:A:526:GLU:HB2	1.94	0.49
1:B:182:ARG:NE	1:B:466:ASN:HA	2.27	0.49
1:B:83:LEU:N	1:B:83:LEU:CD1	2.73	0.49
1:A:182:ARG:HD3	1:A:194:ILE:HG13	1.95	0.49
1:A:77:ASN:N	1:A:77:ASN:ND2	2.60	0.49
1:B:270:VAL:HG13	1:B:271:TRP:CD2	2.48	0.49
1:A:84:TRP:NE1	1:A:356:HIS:CD2	2.80	0.49
1:B:228:PHE:N	1:B:229:PRO:CD	2.75	0.49
1:B:257:PRO:HA	1:B:259:TYR:HE2	1.76	0.49
1:B:64:ILE:N	1:B:76:ARG:NH2	2.56	0.49
1:A:280:PHE:CE1	1:A:336:PRO:HD3	2.41	0.49
1:A:420:GLY:CA	1:A:507:PRO:HG3	2.43	0.49
1:B:311:LEU:HD23	1:B:315:VAL:HB	1.93	0.49
1:B:179:GLN:OE1	1:B:455:PHE:HE1	1.95	0.49
1:A:192:ILE:CG2	1:A:195:ALA:N	2.73	0.49
1:B:212:ILE:CG1	1:B:213:ASP:N	2.73	0.49
1:B:592:LEU:HG	1:B:592:LEU:O	2.13	0.49
1:B:593:ASP:HB3	1:B:594:PRO:CD	2.41	0.49
1:B:604:GLN:HA	1:B:604:GLN:NE2	2.28	0.49
1:B:379:ARG:CG	1:B:619:TRP:HA	2.43	0.49
1:A:125:LYS:HE2	1:A:356:HIS:H	1.78	0.49
1:B:109:VAL:HB	1:B:523:ARG:NH1	2.28	0.49
1:B:379:ARG:HG3	1:B:619:TRP:HA	1.95	0.49
1:B:70:VAL:HG13	1:B:71:THR:N	2.28	0.49
1:A:105:TRP:CZ2	1:A:161:LEU:HD22	2.47	0.49
1:A:170:MET:CE	1:A:498:LEU:HG	2.42	0.49
1:A:619:TRP:O	1:A:621:TYR:CD1	2.66	0.49
1:A:84:TRP:CH2	1:A:356:HIS:CB	2.96	0.49
1:B:204:PRO:HB3	1:B:585:GLN:HA	1.92	0.49
1:B:219:ARG:HH11	1:B:254:LYS:CB	2.23	0.49
1:A:100:TYR:CD1	1:A:385:ARG:HD3	2.47	0.49
1:A:459:HIS:ND1	1:A:460:ALA:HB2	2.28	0.49
1:A:503:THR:HG23	1:A:504:ASN:N	2.27	0.49
1:A:336:PRO:O	1:A:336:PRO:HG2	2.12	0.48
1:A:173:ARG:HH21	1:A:590:ASN:HB3	1.78	0.48
1:A:261:VAL:HG13	1:A:262:TYR:N	2.28	0.48
1:A:466:ASN:O	1:A:467:LYS:NZ	2.34	0.48
1:B:187:PRO:HA	1:B:188:ASP:C	2.33	0.48
1:B:443:PHE:CD2	1:B:472:PHE:CE2	3.01	0.48
1:A:379:ARG:HE	1:A:618:GLY:C	2.16	0.48
1:B:356:HIS:O	1:B:357:ASN:HB2	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:459:HIS:ND1	1:B:460:ALA:HA	2.28	0.48
1:A:383:LEU:HD23	1:A:396:ALA:HB3	1.95	0.48
1:B:181:CYS:O	1:B:459:HIS:CB	2.62	0.48
1:B:471:VAL:O	1:B:471:VAL:HG12	2.13	0.48
1:A:304:ARG:CB	1:A:370:GLY:CA	2.91	0.48
1:A:434:PHE:N	1:A:434:PHE:CD1	2.82	0.48
1:A:572:ILE:HG23	1:A:572:ILE:O	2.14	0.48
1:B:118:ILE:CG1	1:B:120:PHE:CZ	2.97	0.48
1:B:115:ALA:CB	1:B:154:PRO:HA	2.41	0.48
1:B:171:ILE:HD12	1:B:175:ALA:CB	2.42	0.48
1:B:434:PHE:C	1:B:434:PHE:HD2	2.17	0.48
1:B:634:GLU:O	1:B:635:ARG:CG	2.62	0.48
1:A:264:SER:C	1:A:266:THR:H	2.15	0.48
1:A:101:GLN:CD	1:A:387:ASN:CB	2.80	0.48
1:A:82:LYS:HD2	1:A:98:ARG:H	1.78	0.48
1:B:257:PRO:C	1:B:259:TYR:CE2	2.87	0.48
1:B:536:LEU:CD2	1:B:548:PRO:HD2	2.44	0.48
1:A:307:TYR:HA	1:A:310:PHE:CD2	2.49	0.48
1:A:308:LYS:H	1:A:308:LYS:HG3	1.52	0.48
1:A:86:THR:CG2	1:A:333:LYS:HB3	2.37	0.48
1:A:456:ALA:CA	2:A:704:HOH:O	2.60	0.48
1:A:173:ARG:HD3	1:A:495:TYR:CE2	2.49	0.48
1:A:69:GLU:C	1:A:70:VAL:CG1	2.82	0.48
1:B:472:PHE:O	1:B:476:VAL:CG2	2.61	0.48
1:A:192:ILE:HG22	1:A:195:ALA:N	2.26	0.48
1:A:262:TYR:HD1	1:A:262:TYR:C	2.17	0.48
1:B:188:ASP:HB3	1:B:189:SER:CA	2.43	0.48
1:B:351:THR:OG1	1:B:351:THR:O	2.32	0.48
1:B:610:ASN:HA	1:B:629:LEU:O	2.13	0.48
1:B:63:SER:N	1:B:76:ARG:HH22	2.10	0.48
1:B:118:ILE:HD13	1:B:148:ILE:CG1	2.43	0.48
1:A:382:ILE:HG13	1:A:383:LEU:N	2.29	0.47
1:A:413:VAL:HB	1:A:414:PRO:CD	2.36	0.47
1:A:72:GLY:HA3	1:A:95:LYS:CG	2.43	0.47
1:B:118:ILE:CD1	1:B:146:VAL:HG13	2.44	0.47
1:B:173:ARG:O	1:B:176:LEU:HB2	2.14	0.47
1:B:285:TRP:CB	1:B:286:PRO:HD3	2.44	0.47
1:B:449:PHE:CB	1:B:539:PRO:HG3	2.43	0.47
1:A:259:TYR:CE1	1:A:262:TYR:O	2.67	0.47
1:A:312:ALA:HB2	1:A:315:VAL:H	1.79	0.47
1:A:68:GLY:N	1:A:422:SER:OG	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:587:THR:CB	1:A:590:ASN:ND2	2.77	0.47
1:B:171:ILE:O	1:B:379:ARG:NH1	2.43	0.47
1:B:224:ASN:H	1:B:225:PRO:CD	2.26	0.47
1:B:247:TRP:HD1	1:B:315:VAL:HG13	1.79	0.47
1:A:361:PHE:C	1:A:361:PHE:CD1	2.87	0.47
1:A:91:TYR:O	1:A:92:GLY:C	2.53	0.47
1:B:248:MET:HB2	1:B:319:TRP:CH2	2.45	0.47
1:B:158:ILE:HD11	1:B:421:LEU:CD2	2.43	0.47
1:A:278:LYS:HD3	1:A:279:ASN:OD1	2.15	0.47
1:A:285:TRP:N	1:A:286:PRO:CD	2.77	0.47
1:A:367:SER:CB	1:A:382:ILE:HD13	2.45	0.47
1:A:436:PHE:CE2	1:A:460:ALA:HB1	2.49	0.47
1:A:379:ARG:NE	1:A:618:GLY:O	2.47	0.47
1:A:489:ILE:O	1:A:489:ILE:HG13	2.13	0.47
1:B:216:ASP:C	1:B:218:TYR:H	2.17	0.47
1:B:443:PHE:CD2	1:B:472:PHE:HE2	2.32	0.47
1:B:75:LEU:N	1:B:75:LEU:HD22	2.30	0.47
1:A:465:ASN:O	1:A:466:ASN:CB	2.63	0.47
1:B:420:GLY:HA3	1:B:507:PRO:HB3	1.96	0.47
1:B:527:GLU:CB	1:B:543:ASN:HD22	2.28	0.47
1:B:538:ILE:O	1:B:538:ILE:HG23	2.15	0.47
1:B:324:GLU:N	1:B:325:PRO:HA	2.30	0.47
1:A:160:GLY:HA2	1:A:163:GLU:CD	2.35	0.47
1:B:259:TYR:HE1	1:B:263:LYS:CB	2.28	0.47
1:B:259:TYR:CE1	1:B:262:TYR:O	2.68	0.47
1:B:270:VAL:CG2	1:B:292:PRO:HB3	2.44	0.47
1:B:415:MET:O	1:B:418:THR:CG2	2.53	0.47
1:B:534:ASN:CG	1:B:576:ALA:CB	2.83	0.47
1:B:449:PHE:HB3	1:B:539:PRO:HG3	1.97	0.47
1:A:398:TRP:HE3	1:A:398:TRP:O	1.98	0.47
1:A:171:ILE:HG13	1:A:498:LEU:HD21	1.96	0.47
1:B:246:ALA:HA	1:B:317:GLY:O	2.15	0.47
1:A:120:PHE:CB	1:A:137:LEU:HD22	2.45	0.47
1:A:402:ASN:HB3	1:A:433:GLY:CA	2.38	0.47
1:A:457:ARG:HG2	1:A:458:GLY:N	2.30	0.47
1:A:519:ASP:OD1	1:A:521:SER:HB2	2.15	0.47
1:B:272:VAL:O	1:B:274:THR:N	2.47	0.47
1:B:430:ASP:O	1:B:457:ARG:O	2.32	0.47
1:B:488:TYR:HB3	1:B:584:ILE:HG22	1.97	0.47
1:B:498:LEU:HA	1:B:508:ILE:HD11	1.97	0.47
1:A:209:TRP:N	1:A:209:TRP:CD1	2.83	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:124:TRP:CZ2	1:A:355:TYR:CE1	3.03	0.46
1:A:76:ARG:HH11	1:A:523:ARG:HB3	1.80	0.46
1:A:86:THR:CG2	1:A:87:ASP:N	2.77	0.46
1:B:304:ARG:O	1:B:307:TYR:HB3	2.15	0.46
1:A:131:THR:CG2	1:A:132:ASP:H	2.05	0.46
1:A:262:TYR:HE1	1:A:264:SER:HG	1.59	0.46
1:A:272:VAL:CG1	1:A:336:PRO:CB	2.87	0.46
1:A:405:CYS:O	1:A:406:TRP:CB	2.63	0.46
1:A:432:GLY:CA	1:A:436:PHE:HE1	2.28	0.46
1:A:627:SER:HB2	1:A:647:LYS:NZ	2.29	0.46
1:B:411:MET:C	1:B:414:PRO:HD2	2.34	0.46
1:A:312:ALA:HB2	1:A:315:VAL:N	2.30	0.46
1:A:460:ALA:HB3	1:A:467:LYS:CD	2.28	0.46
1:B:257:PRO:CA	1:B:259:TYR:HE2	2.26	0.46
1:A:392:GLN:HA	1:A:395:ALA:O	2.16	0.46
1:A:506:MET:CB	1:A:507:PRO:HD2	2.26	0.46
1:A:76:ARG:NH1	1:A:523:ARG:HB3	2.30	0.46
1:A:69:GLU:C	1:A:70:VAL:HG13	2.35	0.46
1:A:86:THR:HG22	1:A:87:ASP:N	2.31	0.46
1:B:409:LEU:HB2	1:B:446:TRP:CE3	2.50	0.46
1:B:542:ALA:C	1:B:543:ASN:OD1	2.54	0.46
1:A:447:ILE:HA	1:A:447:ILE:HD12	1.71	0.46
1:A:544:GLN:CB	1:A:545:PRO:HA	2.45	0.46
1:B:204:PRO:HB3	1:B:585:GLN:CD	2.36	0.46
1:B:630:GLN:HG2	1:B:645:THR:OG1	2.16	0.46
1:A:101:GLN:HG2	1:A:387:ASN:C	2.35	0.46
1:A:431:ILE:HG13	1:A:447:ILE:HD13	1.97	0.46
1:A:506:MET:HE2	1:A:506:MET:HB2	1.94	0.46
1:A:81:ILE:O	1:A:128:LEU:N	2.48	0.46
1:A:118:ILE:HG12	1:A:120:PHE:CE1	2.50	0.46
1:A:253:ALA:O	1:A:289:ALA:HA	2.15	0.46
1:A:436:PHE:CD2	1:A:460:ALA:HB1	2.51	0.46
1:B:285:TRP:N	1:B:286:PRO:CD	2.78	0.46
1:B:162:SER:OG	1:B:505:GLY:HA3	2.14	0.46
1:B:612:TYR:OH	1:B:621:TYR:CB	2.64	0.46
1:B:87:ASP:N	1:B:87:ASP:OD1	2.38	0.46
1:B:86:THR:HG23	1:B:88:SER:OG	2.15	0.46
1:A:245:SER:CB	1:A:247:TRP:HE1	2.29	0.46
1:A:170:MET:HE3	1:A:499:HIS:HA	1.98	0.46
1:A:627:SER:CB	1:A:647:LYS:HZ3	2.23	0.46
1:A:89:GLY:HA3	1:A:100:TYR:CE2	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:190:ARG:HD2	1:A:193:GLU:OE1	2.15	0.46
1:A:233:ALA:O	1:A:235:ASN:N	2.49	0.46
1:A:176:LEU:HD11	1:A:495:TYR:HD1	1.81	0.46
1:B:565:LYS:C	1:B:566:TYR:CD1	2.90	0.46
1:A:431:ILE:O	1:A:459:HIS:NE2	2.49	0.45
1:A:465:ASN:HB3	1:A:466:ASN:OD1	2.16	0.45
1:A:491:LEU:CB	1:A:492:PRO:HD3	2.46	0.45
1:A:536:LEU:HD23	1:A:571:LYS:HD3	1.98	0.45
1:A:581:GLY:O	1:A:582:LYS:CB	2.58	0.45
1:A:628:LEU:N	1:A:647:LYS:HZ3	2.13	0.45
1:B:112:ASP:HB2	1:B:114:THR:H	1.80	0.45
1:B:356:HIS:O	1:B:357:ASN:CB	2.65	0.45
1:B:634:GLU:O	1:B:635:ARG:HG3	2.15	0.45
1:A:306:LEU:HD12	1:A:374:ALA:HA	1.99	0.45
1:B:424:GLN:HG3	1:B:424:GLN:O	2.14	0.45
1:B:486:ARG:O	1:B:489:ILE:HG13	2.16	0.45
1:A:194:ILE:HD12	1:A:470:TRP:HZ2	1.81	0.45
1:A:278:LYS:CD	1:A:279:ASN:H	2.30	0.45
1:B:653:THR:C	1:B:654:GLU:HG2	2.36	0.45
1:B:126:ALA:HB1	1:B:137:LEU:CD2	2.41	0.45
1:B:162:SER:CB	1:B:504:ASN:O	2.63	0.45
1:B:173:ARG:HD2	1:B:613:TRP:CH2	2.50	0.45
1:B:304:ARG:HG2	1:B:369:GLU:HB2	1.97	0.45
1:B:530:LEU:HB3	1:B:532:GLY:O	2.15	0.45
1:B:635:ARG:HE	1:B:636:ASN:ND2	2.09	0.45
1:A:179:GLN:CG	1:A:207:VAL:HB	2.33	0.45
1:A:77:ASN:N	1:A:77:ASN:HD22	2.14	0.45
1:B:620:SER:HB3	1:B:621:TYR:H	1.59	0.45
1:A:203:ILE:CG2	1:A:484:LEU:HD12	2.47	0.45
1:A:236:ARG:HE	1:A:240:ILE:HD11	1.82	0.45
1:A:272:VAL:CG1	1:A:336:PRO:HG3	2.24	0.45
1:A:545:PRO:O	1:A:546:ALA:C	2.51	0.45
1:B:350:GLY:C	1:B:352:HIS:N	2.69	0.45
1:B:91:TYR:CE2	1:B:415:MET:HE1	2.51	0.45
1:A:431:ILE:HG23	1:A:446:TRP:CB	2.46	0.45
1:A:467:LYS:NZ	1:A:467:LYS:HB3	2.32	0.45
1:B:168:MET:HA	1:B:392:GLN:O	2.17	0.45
1:A:130:SER:HB3	1:A:135:ILE:HA	1.99	0.45
1:A:270:VAL:HG12	1:A:293:ASP:HA	1.98	0.45
1:A:73:SER:N	1:A:95:LYS:HE3	2.29	0.45
1:B:116:PHE:HA	1:B:150:ASP:HA	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:183:PHE:HA	1:B:212:ILE:CA	2.46	0.45
1:B:262:TYR:O	1:B:262:TYR:CD2	2.70	0.45
1:B:565:LYS:C	1:B:566:TYR:HD1	2.20	0.45
1:A:293:ASP:O	1:A:299:VAL:CB	2.64	0.45
1:A:84:TRP:CH2	1:A:356:HIS:CG	3.05	0.45
1:A:410:LYS:HZ3	1:A:413:VAL:CG2	2.30	0.45
1:A:75:LEU:HD12	1:A:75:LEU:HA	1.78	0.45
1:B:223:PHE:HB2	1:B:224:ASN:CA	2.47	0.45
1:B:91:TYR:CE2	1:B:415:MET:HE3	2.51	0.45
1:A:271:TRP:O	1:A:337:GLU:OE2	2.34	0.45
1:A:361:PHE:CD2	1:A:388:PHE:HB3	2.52	0.45
1:A:434:PHE:CE2	1:A:461:CYS:CB	3.00	0.45
1:B:106:MET:CE	1:B:135:ILE:HG13	2.47	0.45
1:B:273:LYS:O	1:B:352:HIS:CE1	2.70	0.45
1:B:382:ILE:O	1:B:383:LEU:HD23	2.17	0.45
1:B:402:ASN:HB2	1:B:430:ASP:CG	2.38	0.45
1:B:437:ASN:CA	1:B:465:ASN:OD1	2.57	0.45
1:A:324:GLU:OE2	1:A:385:ARG:HD2	2.17	0.44
1:A:410:LYS:O	1:A:414:PRO:HD2	2.18	0.44
1:A:409:LEU:HA	1:A:446:TRP:CZ2	2.52	0.44
1:A:426:PHE:CD2	1:A:455:PHE:HB2	2.50	0.44
1:B:245:SER:OG	1:B:247:TRP:CD1	2.52	0.44
1:B:323:ASN:OD1	1:B:360:GLY:CA	2.65	0.44
1:A:248:MET:HB2	1:A:319:TRP:CE2	2.47	0.44
1:A:402:ASN:O	1:A:434:PHE:O	2.34	0.44
1:A:627:SER:HB2	1:A:647:LYS:HZ3	1.83	0.44
1:B:458:GLY:O	1:B:459:HIS:CB	2.66	0.44
1:B:499:HIS:CE1	1:B:612:TYR:CE2	3.05	0.44
1:B:474:GLN:CA	1:B:474:GLN:NE2	2.80	0.44
1:A:86:THR:CG2	1:A:87:ASP:OD1	2.53	0.44
1:A:89:GLY:O	1:A:90:ALA:CB	2.65	0.44
1:B:270:VAL:HG23	1:B:293:ASP:H	1.83	0.44
1:B:270:VAL:CG2	1:B:292:PRO:CB	2.96	0.44
1:B:652:ASN:ND2	1:B:656:LYS:O	2.51	0.44
1:A:236:ARG:HH11	1:B:661:ILE:HG23	1.78	0.44
1:A:398:TRP:CE3	1:A:398:TRP:O	2.70	0.44
1:A:520:LEU:HA	1:A:520:LEU:HD23	1.80	0.44
1:A:72:GLY:C	1:A:74:LEU:N	2.70	0.44
1:B:257:PRO:O	1:B:259:TYR:CE2	2.70	0.44
1:B:311:LEU:HD23	1:B:311:LEU:HA	1.83	0.44
1:A:297:PRO:HA	1:A:300:ASN:ND2	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:424:GLN:HA	1:B:425:PRO:HD3	1.88	0.44
1:A:256:ASP:HA	1:A:257:PRO:HD3	1.86	0.44
1:B:180:GLN:O	1:B:181:CYS:CB	2.60	0.44
1:B:419:LEU:HD13	1:B:427:SER:HB3	2.00	0.44
1:B:520:LEU:CD1	1:B:520:LEU:N	2.79	0.44
1:B:577:ILE:HA	1:B:598:LEU:O	2.18	0.44
1:B:62:THR:HB	1:B:64:ILE:CD1	2.46	0.44
1:B:93:VAL:O	1:B:97:THR:CA	2.65	0.44
1:A:538:ILE:O	1:A:568:ALA:HB1	2.17	0.44
1:A:577:ILE:HB	1:A:609:GLY:CA	2.47	0.44
1:B:229:PRO:HD2	1:B:230:ASN:H	1.83	0.44
1:A:111:LYS:C	1:A:112:ASP:O	2.55	0.44
1:A:182:ARG:O	1:A:183:PHE:CB	2.66	0.44
1:A:211:ASP:OD1	1:A:212:ILE:HB	2.18	0.44
1:B:224:ASN:O	1:B:228:PHE:O	2.36	0.44
1:B:433:GLY:HA3	1:B:460:ALA:CB	2.40	0.44
1:B:446:TRP:O	1:B:446:TRP:CD1	2.70	0.44
1:B:541:PHE:O	1:B:541:PHE:CD1	2.70	0.44
1:A:173:ARG:HG2	1:A:491:LEU:HD11	1.99	0.43
1:A:525:GLU:HB2	1:A:546:ALA:HB3	1.99	0.43
1:B:493:TYR:O	1:B:497:LEU:HG	2.18	0.43
1:A:466:ASN:CB	1:A:471:VAL:HG11	2.39	0.43
1:A:83:LEU:O	1:A:84:TRP:HB2	2.17	0.43
1:B:224:ASN:HB3	1:B:225:PRO:HD3	2.00	0.43
1:B:459:HIS:O	1:B:460:ALA:HB3	2.19	0.43
1:B:661:ILE:H	1:B:661:ILE:HG13	1.56	0.43
1:A:107:MET:HA	1:A:116:PHE:O	2.18	0.43
1:A:212:ILE:O	1:A:215:MET:HE2	2.18	0.43
1:B:274:THR:CG2	1:B:275:ALA:N	2.80	0.43
1:B:306:LEU:HD22	1:B:306:LEU:O	2.17	0.43
1:B:320:ASN:O	1:B:385:ARG:N	2.38	0.43
1:A:413:VAL:O	1:A:417:LEU:HG	2.19	0.43
1:A:525:GLU:OE2	1:A:545:PRO:CD	2.66	0.43
1:A:629:LEU:HD22	1:A:644:LEU:HD21	1.99	0.43
1:A:84:TRP:HA	1:A:357:ASN:CG	2.38	0.43
1:B:227:SER:O	1:B:228:PHE:CB	2.63	0.43
1:A:126:ALA:O	1:A:127:GLU:CB	2.66	0.43
1:A:305:ASN:O	1:A:306:LEU:CB	2.66	0.43
1:B:446:TRP:C	1:B:446:TRP:CD1	2.92	0.43
1:B:491:LEU:N	1:B:492:PRO:CD	2.81	0.43
1:B:538:ILE:CG2	1:B:569:LYS:HB2	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:59:PRO:O	1:B:60:GLU:CB	2.65	0.43
1:A:197:THR:O	1:A:201:LYS:HG3	2.18	0.43
1:A:249:ILE:HG22	1:A:250:ASP:N	2.34	0.43
1:A:577:ILE:HG12	1:A:599:VAL:HG22	2.00	0.43
1:A:84:TRP:HA	1:A:357:ASN:HD21	1.83	0.43
1:A:84:TRP:HA	1:A:357:ASN:ND2	2.33	0.43
1:B:179:GLN:HA	1:B:207:VAL:O	2.17	0.43
1:B:282:GLY:O	1:B:288:ALA:HA	2.18	0.43
1:B:305:ASN:HD21	1:B:307:TYR:HE1	1.67	0.43
1:B:606:LYS:HZ1	1:B:634:GLU:HG3	1.81	0.43
1:B:635:ARG:HE	1:B:636:ASN:HB2	1.83	0.43
1:A:466:ASN:O	1:A:467:LYS:CB	2.64	0.43
1:B:121:ASP:O	1:B:144:PHE:HB2	2.18	0.43
1:B:118:ILE:HG13	1:B:120:PHE:CZ	2.54	0.43
1:B:169:PRO:HD2	2:B:704:HOH:O	2.19	0.43
1:B:623:LYS:HB2	1:B:625:ASP:H	1.84	0.43
1:A:397:THR:O	1:A:398:TRP:CD1	2.71	0.43
1:B:180:GLN:OE1	1:B:181:CYS:N	2.51	0.43
1:B:180:GLN:O	1:B:209:TRP:O	2.36	0.43
1:B:461:CYS:HB3	1:B:463:GLY:H	1.83	0.43
1:A:313:GLN:O	1:A:313:GLN:HG3	2.19	0.43
1:A:304:ARG:HB3	1:A:370:GLY:HA3	2.01	0.43
1:B:426:PHE:CE2	1:B:455:PHE:HB2	2.54	0.43
1:B:443:PHE:CG	1:B:472:PHE:CE2	3.07	0.43
1:B:479:ALA:CB	1:B:566:TYR:HD2	2.19	0.43
1:A:238:LEU:O	1:A:243:PHE:N	2.52	0.42
1:A:459:HIS:C	1:A:459:HIS:ND1	2.73	0.42
1:A:434:PHE:CE2	1:A:461:CYS:HB2	2.54	0.42
1:B:91:TYR:CG	1:B:415:MET:HE1	2.53	0.42
1:B:586:ASN:HB3	1:B:588:THR:H	1.84	0.42
1:B:85:ASN:HB2	1:B:356:HIS:HD2	1.84	0.42
1:A:105:TRP:CH2	1:A:157:VAL:CG1	3.01	0.42
1:A:587:THR:HG22	1:A:590:ASN:HD21	1.84	0.42
1:A:649:GLY:O	1:A:650:LYS:CB	2.65	0.42
1:B:307:TYR:HD2	1:B:374:ALA:CA	2.31	0.42
1:A:271:TRP:CD1	1:A:271:TRP:N	2.84	0.42
1:A:319:TRP:CD1	1:A:321:ASP:HB2	2.54	0.42
1:A:367:SER:HB3	1:A:382:ILE:HD13	2.01	0.42
1:A:503:THR:CG2	1:A:504:ASN:N	2.82	0.42
1:B:255:VAL:HG12	1:B:262:TYR:CE1	2.54	0.42
1:B:277:GLY:CA	1:B:278:LYS:HD3	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:253:ALA:HB3	1:B:290:ALA:HB3	2.00	0.42
1:A:159:ARG:HG2	1:A:504:ASN:HB2	2.01	0.42
1:A:199:ARG:NH2	1:A:242:GLY:O	2.51	0.42
1:A:300:ASN:O	1:A:304:ARG:HG2	2.20	0.42
1:A:84:TRP:CZ2	1:A:334:THR:HG21	2.46	0.42
1:A:402:ASN:CB	1:A:433:GLY:HA3	2.42	0.42
1:A:58:VAL:CG2	1:A:116:PHE:HZ	2.32	0.42
1:B:85:ASN:OD1	1:B:100:TYR:O	2.37	0.42
1:B:59:PRO:HD3	1:B:133:GLU:O	2.19	0.42
1:B:209:TRP:HE1	1:B:457:ARG:HD2	1.85	0.42
1:B:223:PHE:CB	1:B:224:ASN:CA	2.96	0.42
1:B:474:GLN:C	1:B:474:GLN:NE2	2.73	0.42
1:B:635:ARG:CD	1:B:639:LYS:O	2.68	0.42
1:B:81:ILE:CG2	1:B:128:LEU:HB2	2.49	0.42
1:A:254:LYS:HA	1:A:289:ALA:HA	2.01	0.42
1:A:58:VAL:H	1:A:134:LYS:HD3	1.85	0.42
1:A:645:THR:O	1:A:646:LYS:HD2	2.19	0.42
1:B:158:ILE:HD11	1:B:421:LEU:HD22	2.01	0.42
1:B:183:PHE:HA	1:B:212:ILE:HA	2.01	0.42
1:B:193:GLU:OE1	1:B:241:ARG:NH1	2.53	0.42
1:B:493:TYR:HE2	1:B:531:VAL:HG12	1.85	0.42
1:A:439:ASP:N	1:A:439:ASP:OD1	2.47	0.42
1:A:431:ILE:C	1:A:459:HIS:NE2	2.73	0.42
1:A:238:LEU:HA	1:A:238:LEU:HD12	1.84	0.42
1:A:82:LYS:HB2	1:A:98:ARG:CB	2.50	0.42
1:B:122:THR:HB	1:B:144:PHE:CD2	2.54	0.42
1:B:224:ASN:HB3	1:B:225:PRO:CD	2.49	0.42
1:B:431:ILE:HD13	1:B:447:ILE:HD12	2.01	0.42
1:A:181:CYS:O	1:A:182:ARG:HB2	2.19	0.42
1:A:262:TYR:CD1	1:A:262:TYR:O	2.70	0.42
1:B:112:ASP:CB	1:B:114:THR:H	2.32	0.42
1:B:231:PRO:HB2	1:B:313:GLN:HB3	2.02	0.42
1:B:371:ILE:HG21	1:B:380:PRO:HB3	2.01	0.42
1:A:272:VAL:HG13	1:A:336:PRO:CB	2.39	0.42
1:A:536:LEU:HB3	1:A:571:LYS:HB2	2.02	0.42
1:B:368:ARG:HD2	1:B:394:TYR:O	2.19	0.42
1:A:103:HIS:HB3	1:A:389:LEU:HD13	2.01	0.42
1:A:162:SER:O	1:A:166:GLY:CA	2.68	0.42
1:A:198:PHE:CD1	1:A:205:CYS:HB2	2.55	0.42
1:A:254:LYS:HB2	1:A:286:PRO:HB2	2.02	0.42
1:A:293:ASP:C	1:A:295:THR:H	2.23	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:307:TYR:HA	1:A:310:PHE:HE2	1.81	0.42
1:A:308:LYS:HE2	1:A:308:LYS:HB2	1.77	0.42
1:A:397:THR:CG2	1:A:424:GLN:HG2	2.45	0.42
1:A:490:LEU:HA	1:A:490:LEU:HD23	1.80	0.42
1:A:525:GLU:OE2	1:A:545:PRO:HD2	2.20	0.42
1:A:58:VAL:HG13	1:A:59:PRO:O	2.19	0.42
1:B:81:ILE:HG23	1:B:128:LEU:CB	2.48	0.42
1:B:80:THR:OG1	1:B:130:SER:OG	2.07	0.42
1:A:133:GLU:HA	1:A:134:LYS:CE	2.44	0.41
1:A:220:ILE:O	1:A:221:PHE:HB2	2.19	0.41
1:A:587:THR:HG22	1:A:590:ASN:ND2	2.34	0.41
1:A:94:ASP:O	1:A:95:LYS:CG	2.68	0.41
1:B:406:TRP:HZ2	1:B:541:PHE:CB	2.30	0.41
1:A:242:GLY:HA3	1:A:586:ASN:ND2	2.35	0.41
1:A:68:GLY:HA2	1:A:422:SER:OG	2.20	0.41
1:B:238:LEU:O	1:B:243:PHE:HB2	2.19	0.41
1:B:404:SER:C	1:B:442:LEU:HD21	2.41	0.41
1:B:538:ILE:HD11	1:B:545:PRO:HG3	2.00	0.41
1:B:566:TYR:C	1:B:567:GLN:HG2	2.41	0.41
1:B:485:GLU:HG2	1:B:583:ILE:HG23	2.02	0.41
1:B:611:MET:HE2	1:B:611:MET:HB2	1.80	0.41
1:B:621:TYR:N	1:B:621:TYR:CD1	2.88	0.41
1:B:94:ASP:C	1:B:96:GLY:N	2.74	0.41
1:A:471:VAL:C	1:A:473:GLY:H	2.24	0.41
1:B:158:ILE:HG21	1:B:507:PRO:HD3	2.02	0.41
1:B:189:SER:OG	1:B:190:ARG:N	2.53	0.41
1:B:348:PRO:HA	1:B:349:ALA:HA	1.57	0.41
1:B:249:ILE:HG22	1:B:250:ASP:N	2.35	0.41
1:B:406:TRP:NE1	1:B:541:PHE:HE2	1.95	0.41
1:B:649:GLY:O	1:B:650:LYS:HB2	2.20	0.41
1:B:323:ASN:O	1:B:359:TYR:HD2	2.04	0.41
1:B:109:VAL:HB	1:B:523:ARG:HH11	1.85	0.41
1:A:278:LYS:HD3	1:A:279:ASN:H	1.85	0.41
1:B:109:VAL:HG12	1:B:113:GLY:HA2	2.03	0.41
1:B:187:PRO:HA	1:B:188:ASP:O	2.21	0.41
1:A:182:ARG:HH21	1:A:190:ARG:CB	2.00	0.41
1:A:332:ASN:C	1:A:333:LYS:CG	2.81	0.41
1:A:361:PHE:HD2	1:A:388:PHE:HB3	1.85	0.41
1:A:468:GLU:OE1	1:A:470:TRP:NE1	2.54	0.41
1:A:486:ARG:C	1:A:489:ILE:HG22	2.39	0.41
1:A:586:ASN:OD1	1:A:588:THR:CB	2.65	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:298:LYS:CA	1:B:301:LYS:HE3	2.50	0.41
1:B:464:THR:O	1:B:465:ASN:CB	2.60	0.41
1:B:653:THR:HB	1:B:654:GLU:HG2	2.02	0.41
1:A:469:PRO:HD2	1:A:470:TRP:CZ3	2.56	0.41
1:B:474:GLN:CA	1:B:474:GLN:HE21	2.33	0.41
1:B:612:TYR:C	1:B:612:TYR:CD1	2.93	0.41
1:A:189:SER:HB2	1:A:190:ARG:H	1.69	0.41
1:A:375:ARG:HD2	1:A:375:ARG:C	2.41	0.41
1:A:491:LEU:HB3	1:A:492:PRO:HD3	2.02	0.41
1:B:375:ARG:HA	1:B:376:PRO:HD2	1.77	0.41
1:A:134:LYS:CE	1:A:134:LYS:N	2.83	0.41
1:A:191:VAL:O	1:A:192:ILE:CB	2.61	0.41
1:B:270:VAL:HB	1:B:299:VAL:HG22	2.02	0.41
1:A:268:ASN:O	1:A:293:ASP:HB2	2.21	0.41
1:A:304:ARG:HG2	1:A:304:ARG:H	1.58	0.41
1:A:368:ARG:HB2	1:A:382:ILE:HG21	2.03	0.41
1:B:253:ALA:H	1:B:290:ALA:H	1.68	0.41
1:B:318:VAL:O	1:B:382:ILE:HA	2.21	0.41
1:B:328:ASN:O	1:B:329:ASP:CB	2.69	0.41
1:B:429:ALA:HB3	1:B:453:TYR:CZ	2.56	0.41
1:B:547:LEU:HA	1:B:548:PRO:HD3	1.96	0.41
1:B:95:LYS:HG2	1:B:96:GLY:N	2.35	0.41
1:A:434:PHE:N	1:A:434:PHE:HD1	2.19	0.40
1:A:53:ASN:OD1	1:A:138:LYS:HG2	2.21	0.40
1:B:421:LEU:HA	1:B:421:LEU:HD23	1.82	0.40
1:B:590:ASN:ND2	1:B:590:ASN:C	2.72	0.40
1:B:94:ASP:O	1:B:95:LYS:HB3	2.21	0.40
1:A:249:ILE:CG2	1:A:250:ASP:N	2.83	0.40
1:B:179:GLN:HA	1:B:207:VAL:HG23	1.44	0.40
1:B:328:ASN:ND2	1:B:328:ASN:C	2.73	0.40
1:A:180:GLN:O	1:A:209:TRP:HD1	2.04	0.40
1:A:123:THR:CG2	1:A:355:TYR:HD2	2.33	0.40
1:B:176:LEU:HD11	1:B:498:LEU:HD22	2.03	0.40
1:B:70:VAL:CG2	1:B:71:THR:H	2.02	0.40
1:A:312:ALA:HB3	1:A:313:GLN:HA	1.32	0.40
1:A:308:LYS:HB3	1:A:315:VAL:HG11	2.02	0.40
1:B:454:PRO:HD3	1:B:509:MET:HE2	1.94	0.40
1:B:605:GLY:C	1:B:606:LYS:HG3	2.41	0.40
1:A:169:PRO:HG2	1:A:393:ARG:O	2.22	0.40
1:A:254:LYS:HG2	1:A:255:VAL:H	1.86	0.40
1:A:262:TYR:HE1	1:A:264:SER:OG	1.98	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:418:THR:HG23	1:B:419:LEU:N	2.36	0.40
1:B:470:TRP:O	1:B:472:PHE:N	2.55	0.40
1:B:75:LEU:N	1:B:75:LEU:CD2	2.84	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	Interatomic distance (Å)	Clash overlap (Å)
1:A:554:GLU:OE1	1:A:653:THR:OG1[2_557]	0.80	1.40
1:A:521:SER:OG	1:B:377:GLU:CB[2_557]	1.36	0.84
1:A:554:GLU:CD	1:A:653:THR:OG1[2_557]	1.72	0.48
1:A:554:GLU:OE2	1:A:652:ASN:O[2_557]	1.90	0.30
1:A:554:GLU:OE1	1:A:653:THR:CB[2_557]	1.98	0.22
2:A:714:HOH:O	2:A:715:HOH:O[2_547]	2.14	0.06

## 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	582/697 (84%)	471 (81%)	66 (11%)	45 (8%)	<a href="#">1</a> <a href="#">1</a>
1	B	581/697 (83%)	464 (80%)	64 (11%)	53 (9%)	<a href="#">1</a> <a href="#">0</a>
All	All	1163/1394 (83%)	935 (80%)	130 (11%)	98 (8%)	<a href="#">1</a> <a href="#">1</a>

All (98) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	84	TRP
1	A	87	ASP
1	A	90	ALA
1	A	93	VAL
1	A	112	ASP

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	A	127	GLU
1	A	193	GLU
1	A	229	PRO
1	A	274	THR
1	A	275	ALA
1	A	276	ASP
1	A	278	LYS
1	A	437	ASN
1	A	467	LYS
1	A	506	MET
1	A	545	PRO
1	A	650	LYS
1	A	654	GLU
1	B	59	PRO
1	B	72	GLY
1	B	181	CYS
1	B	190	ARG
1	B	211	ASP
1	B	212	ILE
1	B	215	MET
1	B	226	LYS
1	B	263	LYS
1	B	268	ASN
1	B	271	TRP
1	B	323	ASN
1	B	327	ILE
1	B	353	LEU
1	B	355	TYR
1	B	434	PHE
1	B	435	LEU
1	B	437	ASN
1	B	542	ALA
1	B	546	ALA
1	B	564	ASP
1	B	565	LYS
1	B	593	ASP
1	B	595	LEU
1	B	663	ILE
1	A	52	ALA
1	A	53	ASN
1	A	56	LEU
1	A	85	ASN

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	A	92	GLY
1	A	182	ARG
1	A	400	GLY
1	A	406	TRP
1	A	435	LEU
1	B	60	GLU
1	B	63	SER
1	B	79	LYS
1	B	460	ALA
1	B	468	GLU
1	B	523	ARG
1	B	555	LEU
1	B	568	ALA
1	B	639	LYS
1	B	657	ASP
1	A	48	THR
1	A	95	LYS
1	A	131	THR
1	A	187	PRO
1	A	189	SER
1	A	233	ALA
1	A	466	ASN
1	A	554	GLU
1	A	582	LYS
1	B	84	TRP
1	B	97	THR
1	B	184	SER
1	B	224	ASN
1	B	438	ALA
1	B	459	HIS
1	B	543	ASN
1	B	635	ARG
1	B	650	LYS
1	B	662	LYS
1	A	183	PHE
1	A	223	PHE
1	A	232	LYS
1	A	273	LYS
1	B	125	LYS
1	A	107	MET
1	A	192	ILE
1	A	336	PRO

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Mol	Chain	Res	Type
1	B	186	SER
1	B	471	VAL
1	B	544	GLN
1	B	547	LEU
1	B	556	SER
1	A	330	THR
1	B	436	PHE
1	A	431	ILE
1	B	539	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	464/579 (80%)	369 (80%)	95 (20%)	1	3
1	B	462/579 (80%)	368 (80%)	94 (20%)	1	3
All	All	926/1158 (80%)	737 (80%)	189 (20%)	1	3

All (189) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	47	LEU
1	A	56	LEU
1	A	76	ARG
1	A	77	ASN
1	A	79	LYS
1	A	80	THR
1	A	82	LYS
1	A	85	ASN
1	A	105	TRP
1	A	110	ARG
1	A	114	THR
1	A	122	THR
1	A	125	LYS
1	A	134	LYS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	A	137	LEU
1	A	170	MET
1	A	181	CYS
1	A	183	PHE
1	A	185	TYR
1	A	188	ASP
1	A	189	SER
1	A	190	ARG
1	A	200	LEU
1	A	201	LYS
1	A	206	ASP
1	A	212	ILE
1	A	216	ASP
1	A	223	PHE
1	A	238	LEU
1	A	254	LYS
1	A	260	PHE
1	A	261	VAL
1	A	262	TYR
1	A	270	VAL
1	A	278	LYS
1	A	279	ASN
1	A	283	ASP
1	A	298	LYS
1	A	300	ASN
1	A	304	ARG
1	A	306	LEU
1	A	308	LYS
1	A	319	TRP
1	A	333	LYS
1	A	334	THR
1	A	335	MET
1	A	337	GLU
1	A	355	TYR
1	A	362	LEU
1	A	368	ARG
1	A	377	GLU
1	A	382	ILE
1	A	385	ARG
1	A	404	SER
1	A	406	TRP
1	A	408	HIS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	A	409	LEU
1	A	410	LYS
1	A	411	MET
1	A	419	LEU
1	A	426	PHE
1	A	427	SER
1	A	434	PHE
1	A	436	PHE
1	A	437	ASN
1	A	446	TRP
1	A	461	CYS
1	A	465	ASN
1	A	466	ASN
1	A	467	LYS
1	A	480	SER
1	A	489	ILE
1	A	491	LEU
1	A	510	ARG
1	A	513	PHE
1	A	515	SER
1	A	526	GLU
1	A	538	ILE
1	A	543	ASN
1	A	547	LEU
1	A	549	LYS
1	A	553	LYS
1	A	555	LEU
1	A	584	ILE
1	A	589	GLU
1	A	592	LEU
1	A	604	GLN
1	A	608	SER
1	A	632	VAL
1	A	643	LYS
1	A	646	LYS
1	A	647	LYS
1	A	650	LYS
1	A	652	ASN
1	A	653	THR
1	B	63	SER
1	B	69	GLU
1	B	70	VAL

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	B	71	THR
1	B	76	ARG
1	B	80	THR
1	B	81	ILE
1	B	86	THR
1	B	87	ASP
1	B	88	SER
1	B	94	ASP
1	B	95	LYS
1	B	103	HIS
1	B	105	TRP
1	B	119	LEU
1	B	123	THR
1	B	130	SER
1	B	152	GLU
1	B	155	GLN
1	B	164	LEU
1	B	192	ILE
1	B	207	VAL
1	B	210	MET
1	B	212	ILE
1	B	219	ARG
1	B	234	VAL
1	B	235	ASN
1	B	256	ASP
1	B	264	SER
1	B	271	TRP
1	B	273	LYS
1	B	274	THR
1	B	278	LYS
1	B	279	ASN
1	B	301	LYS
1	B	306	LEU
1	B	307	TYR
1	B	308	LYS
1	B	319	TRP
1	B	328	ASN
1	B	351	THR
1	B	354	GLN
1	B	355	TYR
1	B	357	ASN
1	B	368	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	B	382	ILE
1	B	397	THR
1	B	399	THR
1	B	401	ASP
1	B	404	SER
1	B	410	LYS
1	B	426	PHE
1	B	427	SER
1	B	434	PHE
1	B	435	LEU
1	B	437	ASN
1	B	445	ASN
1	B	457	ARG
1	B	464	THR
1	B	465	ASN
1	B	472	PHE
1	B	474	GLN
1	B	475	LYS
1	B	489	ILE
1	B	491	LEU
1	B	515	SER
1	B	522	LEU
1	B	523	ARG
1	B	543	ASN
1	B	544	GLN
1	B	555	LEU
1	B	556	SER
1	B	564	ASP
1	B	565	LYS
1	B	566	TYR
1	B	569	LYS
1	B	571	LYS
1	B	590	ASN
1	B	592	LEU
1	B	610	ASN
1	B	620	SER
1	B	623	LYS
1	B	629	LEU
1	B	635	ARG
1	B	639	LYS
1	B	645	THR
1	B	648	THR

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Mol	Chain	Res	Type
1	B	652	ASN
1	B	653	THR
1	B	654	GLU
1	B	655	ASN
1	B	656	LYS
1	B	660	VAL
1	B	662	LYS

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (17) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	101	GLN
1	A	230	ASN
1	A	235	ASN
1	A	239	HIS
1	A	258	ASN
1	A	328	ASN
1	A	356	HIS
1	A	424	GLN
1	A	655	ASN
1	B	281	HIS
1	B	305	ASN
1	B	352	HIS
1	B	357	ASN
1	B	474	GLN
1	B	604	GLN
1	B	636	ASN
1	B	655	ASN

### 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 carbohydrates 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](#)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
1	B	2

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	B	594:PRO	C	595:LEU	N	1.64
1	B	434:PHE	C	435:LEU	N	0.19

## 6 Fit of model and data [i](#)

### 6.1 Protein, DNA and RNA chains [i](#)

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	588/697 (84%)	1.22	128 (21%) <b>0</b> <b>0</b>	10, 42, 120, 162	0
1	B	587/697 (84%)	1.18	116 (19%) <b>1</b> <b>0</b>	11, 43, 110, 166	0
All	All	1175/1394 (84%)	1.20	244 (20%) <b>1</b> <b>0</b>	10, 42, 117, 166	0

All (244) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	274	THR	11.1
1	A	260	PHE	8.7
1	B	637	GLY	8.3
1	B	58	VAL	8.0
1	B	211	ASP	7.1
1	A	93	VAL	6.9
1	A	271	TRP	6.8
1	B	274	THR	6.7
1	A	186	SER	6.5
1	B	259	TYR	6.4
1	A	273	LYS	6.4
1	A	544	GLN	6.1
1	A	312	ALA	5.9
1	A	91	TYR	5.6
1	B	281	HIS	5.6
1	A	48	THR	5.6
1	B	437	ASN	5.6
1	A	435	LEU	5.5
1	A	54	ALA	5.5
1	A	183	PHE	5.4
1	B	461	CYS	5.4
1	A	222	THR	5.3
1	A	50	GLY	5.1
1	B	277	GLY	5.1

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	A	228	PHE	5.1
1	A	47	LEU	5.1
1	B	222	THR	5.1
1	B	619	TRP	5.0
1	A	275	ALA	5.0
1	A	233	ALA	5.0
1	B	288	ALA	5.0
1	B	376	PRO	4.9
1	B	348	PRO	4.8
1	B	132	ASP	4.8
1	A	461	CYS	4.7
1	B	268	ASN	4.7
1	B	76	ARG	4.6
1	A	290	ALA	4.6
1	A	313	GLN	4.5
1	B	464	THR	4.5
1	A	277	GLY	4.5
1	A	276	ASP	4.4
1	B	270	VAL	4.4
1	B	462	ALA	4.4
1	B	658	MET	4.3
1	A	187	PRO	4.3
1	B	215	MET	4.3
1	A	231	PRO	4.3
1	A	272	VAL	4.3
1	A	284	ALA	4.3
1	B	621	TYR	4.2
1	B	135	ILE	4.2
1	A	331	PRO	4.1
1	A	131	THR	4.1
1	A	465	ASN	4.0
1	B	210	MET	4.0
1	A	89	GLY	4.0
1	A	291	PHE	4.0
1	B	260	PHE	3.9
1	B	212	ILE	3.9
1	A	92	GLY	3.9
1	B	432	GLY	3.8
1	A	86	THR	3.8
1	A	56	LEU	3.7
1	B	638	ASP	3.7
1	B	636	ASN	3.7

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	B	131	THR	3.7
1	A	335	MET	3.7
1	B	566	TYR	3.7
1	A	434	PHE	3.7
1	A	261	VAL	3.7
1	B	77	ASN	3.7
1	A	188	ASP	3.6
1	A	336	PRO	3.6
1	B	228	PHE	3.6
1	B	186	SER	3.6
1	A	464	THR	3.6
1	A	292	PRO	3.6
1	A	281	HIS	3.5
1	A	185	TYR	3.5
1	B	141	GLY	3.5
1	B	267	GLU	3.5
1	A	232	LYS	3.5
1	B	620	SER	3.4
1	B	258	ASN	3.4
1	A	471	VAL	3.4
1	B	266	THR	3.4
1	B	653	THR	3.3
1	A	55	SER	3.3
1	A	110	ARG	3.3
1	A	52	ALA	3.3
1	B	234	VAL	3.3
1	B	283	ASP	3.2
1	B	93	VAL	3.2
1	A	191	VAL	3.2
1	A	311	LEU	3.2
1	A	264	SER	3.2
1	A	148	ILE	3.1
1	B	278	LYS	3.1
1	A	404	SER	3.1
1	A	296	SER	3.1
1	A	112	ASP	3.1
1	A	190	ARG	3.0
1	A	58	VAL	3.0
1	B	209	TRP	3.0
1	B	604	GLN	3.0
1	B	216	ASP	3.0
1	B	70	VAL	3.0

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	B	404	SER	3.0
1	B	406	TRP	3.0
1	B	289	ALA	3.0
1	B	78	GLY	2.9
1	A	90	ALA	2.9
1	A	376	PRO	2.9
1	A	618	GLY	2.9
1	B	355	TYR	2.9
1	B	126	ALA	2.9
1	B	541	PHE	2.9
1	A	438	ALA	2.9
1	A	554	GLU	2.9
1	A	189	SER	2.9
1	A	265	GLY	2.9
1	A	97	THR	2.8
1	B	182	ARG	2.8
1	B	272	VAL	2.8
1	A	591	SER	2.8
1	B	350	GLY	2.8
1	A	96	GLY	2.8
1	B	595	LEU	2.8
1	A	287	GLY	2.8
1	B	224	ASN	2.8
1	A	399	THR	2.8
1	A	545	PRO	2.7
1	B	460	ALA	2.7
1	B	287	GLY	2.7
1	A	405	CYS	2.7
1	A	467	LYS	2.7
1	B	256	ASP	2.7
1	B	185	TYR	2.7
1	B	307	TYR	2.7
1	A	289	ALA	2.7
1	A	234	VAL	2.7
1	B	542	ALA	2.7
1	A	53	ASN	2.7
1	A	280	PHE	2.7
1	B	119	LEU	2.7
1	A	51	LYS	2.7
1	B	142	ILE	2.7
1	B	431	ILE	2.7
1	B	467	LYS	2.6

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	B	282	GLY	2.6
1	A	259	TYR	2.6
1	A	365	LYS	2.6
1	B	351	THR	2.6
1	A	279	ASN	2.6
1	B	472	PHE	2.6
1	B	663	ILE	2.6
1	A	310	PHE	2.6
1	A	406	TRP	2.5
1	A	338	ASP	2.5
1	B	81	ILE	2.5
1	A	223	PHE	2.5
1	A	267	GLU	2.5
1	A	268	ASN	2.5
1	A	437	ASN	2.5
1	A	219	ARG	2.5
1	A	253	ALA	2.5
1	A	285	TRP	2.5
1	B	91	TYR	2.5
1	B	347	LEU	2.5
1	A	621	TYR	2.5
1	B	433	GLY	2.4
1	B	227	SER	2.4
1	B	84	TRP	2.4
1	A	218	TYR	2.4
1	B	194	ILE	2.4
1	B	657	ASP	2.4
1	B	217	GLY	2.4
1	A	137	LEU	2.4
1	A	282	GLY	2.4
1	A	215	MET	2.4
1	A	506	MET	2.4
1	A	288	ALA	2.4
1	A	590	ASN	2.4
1	A	212	ILE	2.4
1	A	295	THR	2.3
1	A	334	THR	2.3
1	B	153	SER	2.3
1	B	180	GLN	2.3
1	A	88	SER	2.3
1	A	477	GLU	2.3
1	A	144	PHE	2.3

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	A	57	THR	2.3
1	B	540	ALA	2.3
1	B	551	ILE	2.3
1	B	463	GLY	2.3
1	B	187	PRO	2.3
1	B	284	ALA	2.3
1	A	355	TYR	2.3
1	A	543	ASN	2.2
1	B	184	SER	2.2
1	B	62	THR	2.2
1	A	442	LEU	2.2
1	B	435	LEU	2.2
1	B	96	GLY	2.2
1	A	623	LYS	2.2
1	B	229	PRO	2.2
1	B	207	VAL	2.2
1	B	660	VAL	2.2
1	B	442	LEU	2.2
1	B	459	HIS	2.2
1	B	247	TRP	2.2
1	A	307	TYR	2.2
1	B	223	PHE	2.2
1	A	636	ASN	2.1
1	A	403	GLY	2.1
1	B	430	ASP	2.1
1	B	218	TYR	2.1
1	B	346	LYS	2.1
1	A	123	THR	2.1
1	A	337	GLU	2.1
1	A	466	ASN	2.1
1	A	505	GLY	2.1
1	A	71	THR	2.1
1	A	551	ILE	2.1
1	A	306	LEU	2.1
1	A	317	GLY	2.1
1	A	266	THR	2.1
1	B	189	SER	2.1
1	B	264	SER	2.1
1	A	329	ASP	2.1
1	B	356	HIS	2.1
1	B	253	ALA	2.1
1	B	594	PRO	2.1

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Mol	Chain	Res	Type	RSRZ
1	B	405	CYS	2.1
1	B	275	ALA	2.1
1	A	431	ILE	2.0
1	B	605	GLY	2.0
1	A	432	GLY	2.0
1	B	273	LYS	2.0
1	A	225	PRO	2.0
1	A	330	THR	2.0
1	B	294	PHE	2.0
1	B	409	LEU	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 carbohydrates 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.