



# Full wwPDB X-ray Structure Validation Report

Mar 1, 2014 – 12:26 AM GMT

PDB ID : 1J1W  
Title : Crystal Structure Of The Monomeric Isocitrate Dehydrogenase In Complex With NADP+  
Authors : Yasutake, Y.; Watanabe, S.; Yao, M.; Takada, Y.; Fukunaga, N.; Tanaka, I.  
Deposited on : 2002-12-19  
Resolution : 3.20 Å(reported)

This is a full wwPDB validation report for a publicly released PDB entry.  
We welcome your comments at [validation@mail.wwpdb.org](mailto:validation@mail.wwpdb.org)  
A user guide is available at <http://wwpdb.org/ValidationPDFNotes.html>

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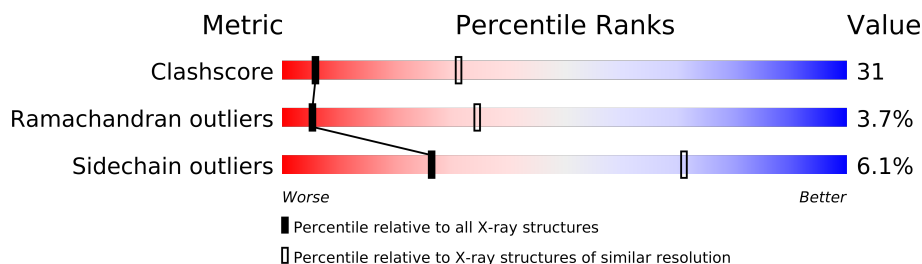
The following versions of software and data (see [references](#)) were used in the production of this report:

MolProbity : 4.02b-467  
Mogul : 1.15 2013  
Xtriage (Phenix) : **NOT EXECUTED**  
EDS : **NOT EXECUTED**  
Percentile statistics : 21963  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et. al. (1996)  
Validation Pipeline (wwPDB-VP) : stable22683

# 1 Overall quality at a glance

The reported resolution of this entry is 3.20 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))
Clashscore	79885	1078 (3.26-3.14)
Ramachandran outliers	78287	1059 (3.26-3.14)
Sidechain outliers	78261	1058 (3.26-3.14)

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

Note EDS was not executed.

Mol	Chain	Length	Quality of chain
1	A	741	
1	B	741	
1	C	741	
1	D	741	

## 2 Entry composition

There are 3 unique types of molecules in this entry. The entry contains 23181 atoms, of which 0 are hydrogen and 0 are deuterium.

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

- Molecule 1 is a protein called Isocitrate Dehydrogenase.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	738	Total	C	N	O	S	0	0	0
			5636	3562	967	1087	20			
1	B	738	Total	C	N	O	S	0	0	0
			5636	3562	967	1087	20			
1	C	738	Total	C	N	O	S	0	0	0
			5636	3562	967	1087	20			
1	D	738	Total	C	N	O	S	0	0	0
			5636	3562	967	1087	20			

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	727	MET	ILE	SEE REMARK 999	UNP P16100
B	727	MET	ILE	SEE REMARK 999	UNP P16100
C	727	MET	ILE	SEE REMARK 999	UNP P16100
D	727	MET	ILE	SEE REMARK 999	UNP P16100

- Molecule 2 is NADP NICOTINAMIDE-ADENINE-DINUCLEOTIDEPHOSPHATE (three-letter code: NAP) (formula:  $C_{21}H_{28}N_7O_{17}P_3$ ).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
2	A	1	Total	C	N	O	P	0	0
			48	21	7	17	3		
2	B	1	Total	C	N	O	P	0	0
			48	21	7	17	3		
2	C	1	Total	C	N	O	P	0	0
			48	21	7	17	3		
2	D	1	Total	C	N	O	P	0	0
			48	21	7	17	3		

- Molecule 3 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	A	123	Total	O	0	0
			123	123		
3	B	101	Total	O	0	0
			101	101		
3	C	99	Total	O	0	0
			99	99		
3	D	122	Total	O	0	0
			122	122		

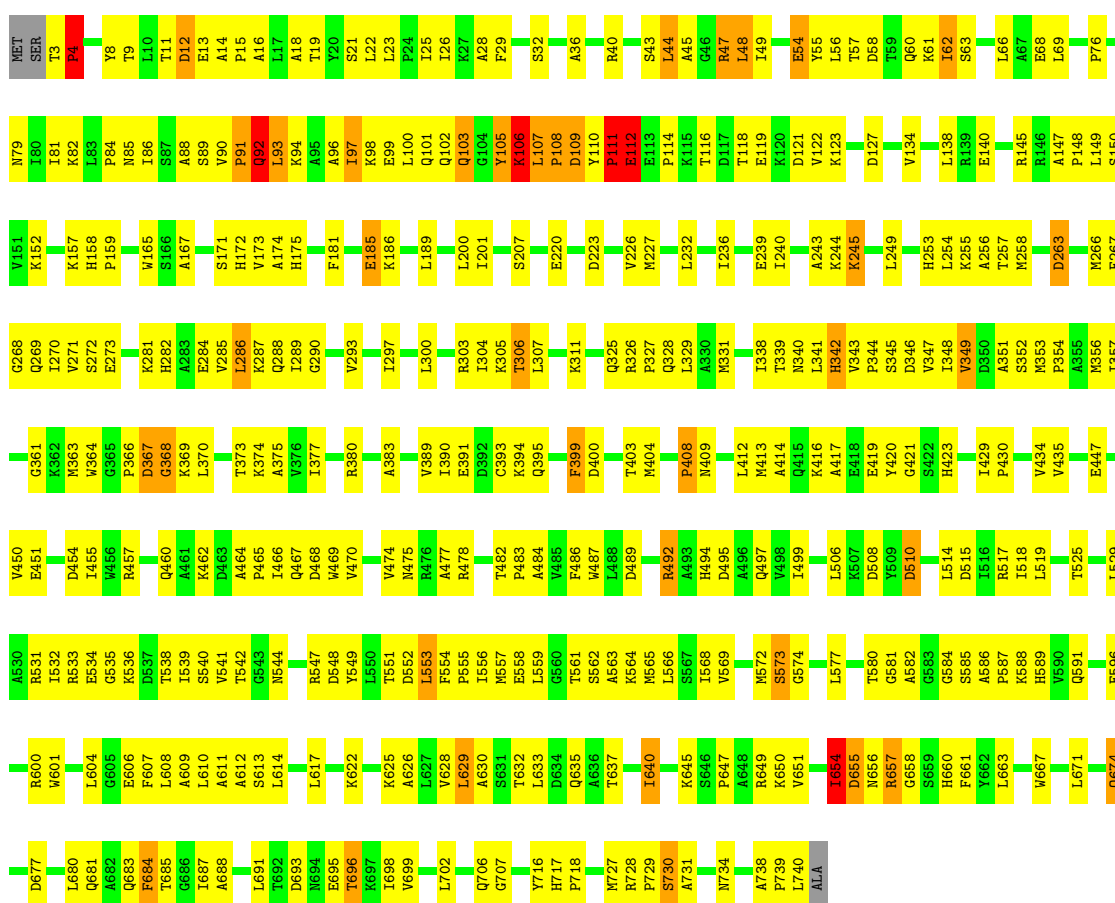
### 3 Residue-property plots

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

Note EDS was not executed.

#### • Molecule 1: Isocitrate Dehydrogenase

Chain A:

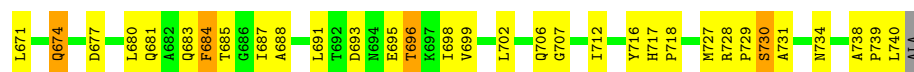


#### • Molecule 1: Isocitrate Dehydrogenase

Chain B:

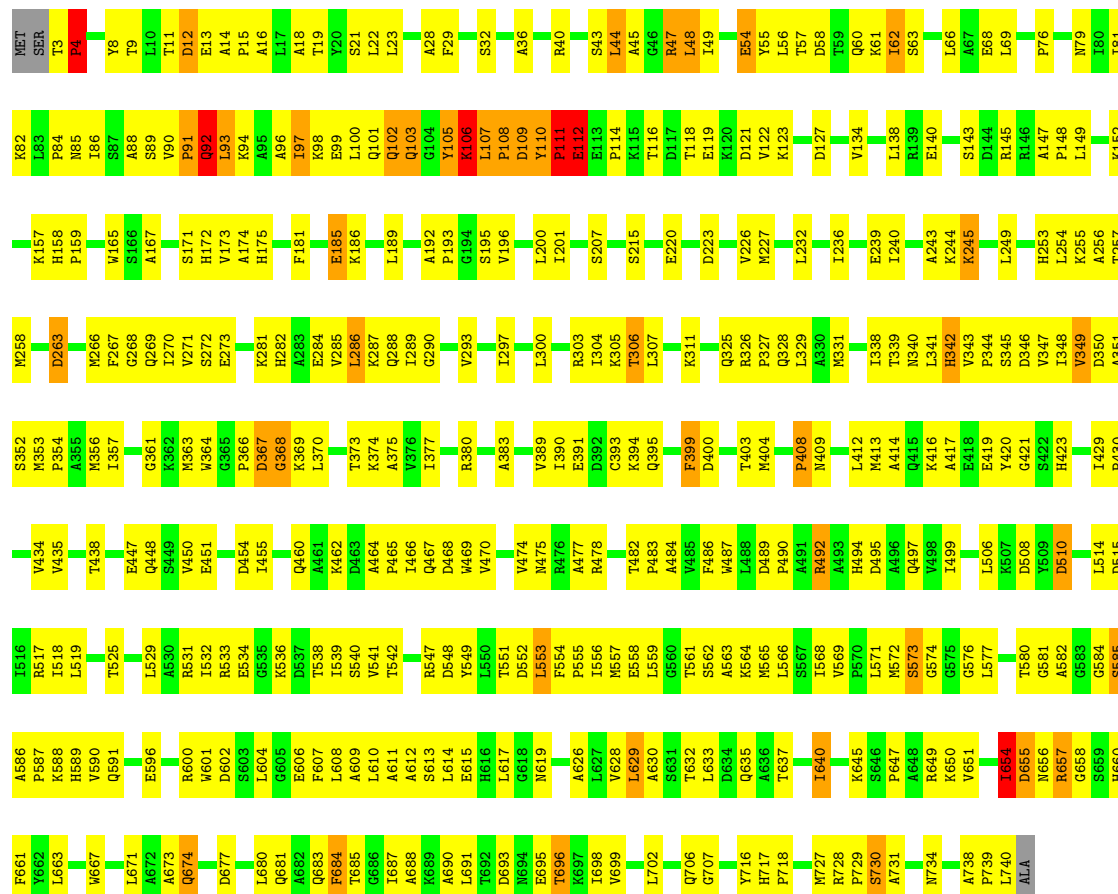






• Molecule 1: Isocitrate Dehydrogenase

Chain D:



## 4 Data and refinement statistics

Xtriage (Phenix) and EDS were not executed - this section will therefore be incomplete.

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	113.50Å 110.41Å 133.70Å 90.00° 90.16° 90.00°	Depositor
Resolution (Å)	10.00 – 3.20	Depositor
% Data completeness (in resolution range)	88.8 (10.00-3.20)	Depositor
$R_{merge}$	(Not available)	Depositor
$R_{sym}$	0.09	Depositor
Refinement program	CNS	Depositor
R, $R_{free}$	0.260 , 0.297	Depositor
Estimated twinning fraction	No twinning to report.	Xtriage
Total number of atoms	23181	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	36.0	wwPDB-VP



## 5 Model quality

### 5.1 Standard geometry

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

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	0.41	0/5742	0.70	6/7783 (0.1%)
1	B	0.41	0/5742	0.70	6/7783 (0.1%)
1	C	0.40	0/5742	0.70	6/7783 (0.1%)
1	D	0.41	0/5742	0.70	6/7783 (0.1%)
All	All	0.41	0/22968	0.70	24/31132 (0.1%)

There are no bond length outliers.

All (24) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	111	PRO	N-CA-C	8.39	133.92	112.10
1	C	111	PRO	N-CA-C	8.35	133.80	112.10
1	D	111	PRO	N-CA-C	8.28	133.64	112.10
1	B	111	PRO	N-CA-C	8.28	133.62	112.10
1	B	654	ILE	N-CA-C	7.84	132.17	111.00
1	C	654	ILE	N-CA-C	7.84	132.17	111.00
1	A	654	ILE	N-CA-C	7.82	132.10	111.00
1	D	112	GLU	N-CA-C	7.79	132.04	111.00
1	D	654	ILE	N-CA-C	7.76	131.96	111.00
1	A	112	GLU	N-CA-C	7.69	131.76	111.00
1	C	112	GLU	N-CA-C	7.63	131.59	111.00
1	B	112	GLU	N-CA-C	7.63	131.59	111.00
1	C	12	ASP	N-CA-C	6.71	129.10	111.00
1	A	12	ASP	N-CA-C	6.65	128.96	111.00
1	D	12	ASP	N-CA-C	6.58	128.76	111.00
1	B	12	ASP	N-CA-C	6.49	128.52	111.00
1	C	111	PRO	C-N-CA	5.47	135.38	121.70
1	B	111	PRO	C-N-CA	5.45	135.32	121.70
1	D	110	TYR	C-N-CD	-5.41	108.71	120.60
1	D	111	PRO	C-N-CA	5.37	135.14	121.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	111	PRO	C-N-CA	5.37	135.12	121.70
1	B	110	TYR	C-N-CD	-5.18	109.19	120.60
1	A	110	TYR	C-N-CD	-5.07	109.44	120.60
1	C	110	TYR	C-N-CD	-5.06	109.46	120.60

There are no chirality outliers.

There are no planarity outliers.

## 5.2 Close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	5636	0	5687	365	0
1	B	5636	0	5687	351	0
1	C	5636	0	5687	362	0
1	D	5636	0	5687	352	0
2	A	48	0	25	4	0
2	B	48	0	25	4	0
2	C	48	0	25	2	0
2	D	48	0	25	5	0
3	A	123	0	0	2	0
3	B	101	0	0	1	0
3	C	99	0	0	2	0
3	D	122	0	0	5	0
All	All	23181	0	22848	1424	0

Clashscore is defined as the number of clashes calculated for the entry per 1000 atoms (including hydrogens) of the entry. The overall clashscore for this entry is 31.

All (1424) close contacts within the same asymmetric unit are listed below.

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:622:LYS:NZ	1:C:441:SER:HB3	1.69	1.07
1:D:561:THR:HG22	1:D:563:ALA:H	1.24	0.99
1:A:622:LYS:HZ1	1:C:441:SER:HB3	1.25	0.98
1:C:478:ARG:HH12	1:C:510:ASP:HB3	1.29	0.96

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:C:561:THR:HG22	1:C:563:ALA:H	1.27	0.96
1:B:478:ARG:HH12	1:B:510:ASP:HB3	1.28	0.95
1:C:614:LEU:HD13	1:C:629:LEU:HD13	1.48	0.95
1:A:561:THR:HG22	1:A:563:ALA:H	1.28	0.94
1:B:307:LEU:HD12	1:B:311:LYS:HD3	1.48	0.94
1:A:478:ARG:HH12	1:A:510:ASP:HB3	1.30	0.94
1:A:632:THR:HG21	1:A:671:LEU:HD23	1.46	0.94
1:B:561:THR:HG22	1:B:563:ALA:H	1.28	0.94
1:B:614:LEU:HD13	1:B:629:LEU:HD13	1.48	0.94
1:D:478:ARG:HH12	1:D:510:ASP:HB3	1.30	0.93
1:C:307:LEU:HD12	1:C:311:LYS:HD3	1.48	0.93
1:D:307:LEU:HD12	1:D:311:LYS:HD3	1.48	0.93
1:A:307:LEU:HD12	1:A:311:LYS:HD3	1.49	0.93
1:A:622:LYS:CE	1:C:441:SER:HB3	1.97	0.92
1:B:632:THR:HG21	1:B:671:LEU:HD23	1.49	0.92
1:D:614:LEU:HD13	1:D:629:LEU:HD13	1.51	0.92
1:A:614:LEU:HD13	1:A:629:LEU:HD13	1.50	0.92
1:D:632:THR:HG21	1:D:671:LEU:HD23	1.50	0.91
1:C:632:THR:HG21	1:C:671:LEU:HD23	1.50	0.91
1:B:100:LEU:HD23	1:B:716:TYR:HB2	1.51	0.91
1:B:44:LEU:HD13	1:B:97:ILE:HG21	1.51	0.90
1:C:44:LEU:HD13	1:C:97:ILE:HG21	1.52	0.90
1:A:569:VAL:HB	1:A:577:LEU:HB3	1.52	0.90
1:C:100:LEU:HD23	1:C:716:TYR:HB2	1.51	0.90
1:D:100:LEU:HD23	1:D:716:TYR:HB2	1.51	0.90
1:D:650:LYS:HD3	1:D:651:VAL:H	1.33	0.90
1:D:569:VAL:HB	1:D:577:LEU:HB3	1.53	0.89
1:C:569:VAL:HB	1:C:577:LEU:HB3	1.53	0.89
1:A:100:LEU:HD23	1:A:716:TYR:HB2	1.52	0.89
1:A:44:LEU:HD13	1:A:97:ILE:HG21	1.54	0.88
1:D:44:LEU:HD13	1:D:97:ILE:HG21	1.54	0.88
1:A:650:LYS:HD3	1:A:651:VAL:H	1.35	0.88
1:B:569:VAL:HB	1:B:577:LEU:HB3	1.54	0.88
1:D:561:THR:HG22	1:D:563:ALA:N	1.89	0.87
1:C:650:LYS:HD3	1:C:651:VAL:H	1.35	0.87
1:B:650:LYS:HD3	1:B:651:VAL:H	1.36	0.87
1:A:257:THR:HG22	1:A:345:SER:OG	1.75	0.87
1:D:45:ALA:HA	1:D:48:LEU:HD12	1.58	0.86
1:B:236:ILE:HD13	1:B:270:ILE:HG12	1.55	0.86
1:B:44:LEU:HD22	1:B:48:LEU:HD11	1.57	0.86
1:C:561:THR:HG22	1:C:563:ALA:N	1.90	0.85
1:A:45:ALA:HA	1:A:48:LEU:HD12	1.59	0.85

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:236:ILE:HD13	1:A:270:ILE:HG12	1.56	0.85
1:C:93:LEU:O	1:C:97:ILE:HG23	1.76	0.85
1:B:93:LEU:O	1:B:97:ILE:HG23	1.76	0.85
1:B:561:THR:HG22	1:B:563:ALA:N	1.91	0.85
1:D:93:LEU:O	1:D:97:ILE:HG23	1.76	0.85
1:C:236:ILE:HD13	1:C:270:ILE:HG12	1.56	0.85
1:A:93:LEU:O	1:A:97:ILE:HG23	1.76	0.84
1:B:45:ALA:HA	1:B:48:LEU:HD12	1.59	0.84
1:C:257:THR:HG22	1:C:345:SER:OG	1.77	0.84
1:C:562:SER:HB2	1:C:582:ALA:HB3	1.57	0.84
1:C:45:ALA:HA	1:C:48:LEU:HD12	1.60	0.84
1:A:561:THR:HG22	1:A:563:ALA:N	1.92	0.84
1:D:44:LEU:HD22	1:D:48:LEU:HD11	1.58	0.84
1:D:257:THR:HG22	1:D:345:SER:OG	1.78	0.84
1:C:61:LYS:HG2	1:C:62:ILE:H	1.43	0.83
1:B:61:LYS:HG2	1:B:62:ILE:H	1.43	0.83
1:D:562:SER:HB2	1:D:582:ALA:HB3	1.58	0.83
1:B:562:SER:HB2	1:B:582:ALA:HB3	1.58	0.83
1:D:236:ILE:HD13	1:D:270:ILE:HG12	1.58	0.83
1:C:44:LEU:HD22	1:C:48:LEU:HD11	1.60	0.82
1:D:61:LYS:HG2	1:D:62:ILE:H	1.44	0.82
1:C:515:ASP:HB3	1:C:517:ARG:HH21	1.42	0.82
1:A:44:LEU:HD22	1:A:48:LEU:HD11	1.60	0.82
1:B:28:ALA:HB1	1:B:740:LEU:HD21	1.62	0.82
1:A:562:SER:HB2	1:A:582:ALA:HB3	1.60	0.82
1:A:515:ASP:HB3	1:A:517:ARG:HH21	1.43	0.82
1:D:515:ASP:HB3	1:D:517:ARG:HH21	1.44	0.81
1:C:145:ARG:HD2	1:C:551:THR:HG21	1.62	0.81
1:A:61:LYS:HG2	1:A:62:ILE:H	1.45	0.81
1:B:257:THR:HG22	1:B:345:SER:OG	1.80	0.81
1:C:28:ALA:HB1	1:C:740:LEU:HD21	1.63	0.81
1:D:92:GLN:O	1:D:96:ALA:HB3	1.81	0.80
1:A:28:ALA:HB1	1:A:740:LEU:HD21	1.64	0.80
1:A:92:GLN:O	1:A:96:ALA:HB3	1.82	0.80
1:B:92:GLN:O	1:B:96:ALA:HB3	1.82	0.80
1:A:145:ARG:HD2	1:A:551:THR:HG21	1.64	0.80
1:D:97:ILE:HG22	1:D:716:TYR:CE1	2.18	0.79
1:D:28:ALA:HB1	1:D:740:LEU:HD21	1.64	0.79
1:B:515:ASP:HB3	1:B:517:ARG:HH21	1.45	0.79
1:A:607:PHE:CE1	1:A:663:LEU:HD22	2.18	0.79
1:A:97:ILE:HG22	1:A:716:TYR:CE1	2.18	0.79
1:C:464:ALA:HB3	1:C:465:PRO:HD3	1.65	0.79

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:C:97:ILE:HG22	1:C:716:TYR:CE1	2.19	0.78
1:B:145:ARG:HD2	1:B:551:THR:HG21	1.65	0.78
1:B:464:ALA:HB3	1:B:465:PRO:HD3	1.65	0.78
1:A:97:ILE:HD13	1:A:98:LYS:N	1.98	0.78
1:D:464:ALA:HB3	1:D:465:PRO:HD3	1.65	0.78
1:A:464:ALA:HB3	1:A:465:PRO:HD3	1.65	0.78
1:A:622:LYS:HE3	1:C:441:SER:HB3	1.64	0.78
1:C:92:GLN:O	1:C:96:ALA:HB3	1.84	0.78
1:C:97:ILE:HD13	1:C:98:LYS:N	1.98	0.77
1:D:145:ARG:HD2	1:D:551:THR:HG21	1.65	0.77
1:B:607:PHE:CE1	1:B:663:LEU:HD22	2.20	0.77
1:D:227:MET:HG2	1:D:266:MET:HE3	1.66	0.77
1:D:97:ILE:HD13	1:D:98:LYS:N	1.99	0.77
1:B:97:ILE:HG22	1:B:716:TYR:CE1	2.21	0.76
1:B:112:GLU:O	1:B:114:PRO:HD3	1.85	0.76
1:D:671:LEU:O	1:D:674:GLN:HG3	1.86	0.76
1:A:112:GLU:O	1:A:114:PRO:HD3	1.85	0.76
1:C:671:LEU:O	1:C:674:GLN:HG3	1.86	0.76
1:B:681:GLN:O	1:B:685:THR:HG23	1.85	0.76
1:A:671:LEU:O	1:A:674:GLN:HG3	1.86	0.76
1:C:112:GLU:O	1:C:114:PRO:HD3	1.86	0.76
1:A:681:GLN:O	1:A:685:THR:HG23	1.86	0.75
1:B:44:LEU:CD1	1:B:97:ILE:HG21	2.16	0.75
1:A:460:GLN:HE21	1:A:462:LYS:NZ	1.83	0.75
1:B:671:LEU:O	1:B:674:GLN:HG3	1.87	0.75
1:B:97:ILE:HD13	1:B:98:LYS:N	2.00	0.75
1:B:227:MET:HG2	1:B:266:MET:HE3	1.67	0.75
1:D:681:GLN:O	1:D:685:THR:HG23	1.86	0.75
1:C:607:PHE:CE1	1:C:663:LEU:HD22	2.22	0.75
1:C:681:GLN:O	1:C:685:THR:HG23	1.87	0.74
1:D:112:GLU:O	1:D:114:PRO:HD3	1.87	0.74
1:D:460:GLN:HE21	1:D:462:LYS:NZ	1.84	0.74
1:A:492:ARG:HB3	1:A:492:ARG:HH11	1.51	0.74
1:D:607:PHE:CE1	1:D:663:LEU:HD22	2.23	0.74
1:C:227:MET:HG2	1:C:266:MET:HE3	1.67	0.74
1:A:227:MET:HG2	1:A:266:MET:HE3	1.68	0.74
1:C:460:GLN:HE21	1:C:462:LYS:NZ	1.84	0.74
1:D:602:ASP:N	2:D:1003:NAP:N1A	2.32	0.73
1:A:647:PRO:HA	1:A:654:ILE:CG2	2.18	0.73
1:B:647:PRO:HA	1:B:654:ILE:CG2	2.18	0.73
1:C:647:PRO:HA	1:C:654:ILE:CG2	2.18	0.73
1:B:492:ARG:HH11	1:B:492:ARG:HB3	1.52	0.73

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:C:492:ARG:HH11	1:C:492:ARG:HB3	1.53	0.73
1:B:460:GLN:HE21	1:B:462:LYS:NZ	1.85	0.73
1:B:466:ILE:O	1:B:469:TRP:HB3	1.89	0.73
1:D:647:PRO:HA	1:D:654:ILE:CG2	2.19	0.72
1:C:56:LEU:HA	1:C:60:GLN:HE21	1.53	0.72
1:B:518:ILE:O	1:B:519:LEU:HD23	1.90	0.72
1:B:109:ASP:N	1:B:109:ASP:OD2	2.20	0.72
1:B:61:LYS:HG2	1:B:62:ILE:N	2.04	0.72
1:D:109:ASP:N	1:D:109:ASP:OD2	2.20	0.72
1:D:650:LYS:HD3	1:D:651:VAL:N	2.04	0.72
1:A:285:VAL:HG13	1:A:286:LEU:HD13	1.71	0.72
1:C:91:PRO:HG2	1:C:344:PRO:CD	2.20	0.72
1:D:44:LEU:CD1	1:D:97:ILE:HG21	2.19	0.72
1:C:61:LYS:HG2	1:C:62:ILE:N	2.05	0.71
1:A:466:ILE:O	1:A:469:TRP:HB3	1.90	0.71
1:D:285:VAL:HG13	1:D:286:LEU:HD13	1.71	0.71
1:A:56:LEU:HA	1:A:60:GLN:HE21	1.54	0.71
1:A:91:PRO:HG2	1:A:344:PRO:CD	2.20	0.71
1:A:556:ILE:HG22	1:A:557:MET:HE3	1.73	0.71
1:A:236:ILE:O	1:A:240:ILE:HG13	1.91	0.71
1:C:100:LEU:CD2	1:C:716:TYR:H	2.03	0.71
1:D:100:LEU:CD2	1:D:716:TYR:H	2.03	0.71
1:B:100:LEU:CD2	1:B:716:TYR:H	2.03	0.71
1:C:518:ILE:O	1:C:519:LEU:HD23	1.91	0.71
1:C:44:LEU:CD1	1:C:97:ILE:HG21	2.19	0.71
1:D:84:PRO:HB3	1:D:584:GLY:HA2	1.73	0.71
1:D:518:ILE:O	1:D:519:LEU:HD23	1.91	0.71
1:D:492:ARG:HB3	1:D:492:ARG:HH11	1.54	0.71
1:B:285:VAL:HG13	1:B:286:LEU:HD13	1.71	0.71
1:D:91:PRO:HG2	1:D:344:PRO:CD	2.21	0.71
1:D:61:LYS:HG2	1:D:62:ILE:N	2.06	0.71
1:C:285:VAL:HG13	1:C:286:LEU:HD13	1.72	0.71
1:C:529:LEU:O	1:C:532:ILE:HG22	1.90	0.71
1:B:56:LEU:HA	1:B:60:GLN:HE21	1.55	0.70
2:D:1003:NAP:H51A	2:D:1003:NAP:H8A	1.72	0.70
1:C:109:ASP:OD2	1:C:109:ASP:N	2.21	0.70
1:D:466:ILE:O	1:D:469:TRP:HB3	1.91	0.70
1:D:727:MET:C	1:D:729:PRO:HD3	2.12	0.70
1:A:727:MET:C	1:A:729:PRO:HD3	2.12	0.70
1:C:727:MET:C	1:C:729:PRO:HD3	2.12	0.70
1:A:100:LEU:CD2	1:A:716:TYR:H	2.04	0.70
1:A:518:ILE:O	1:A:519:LEU:HD23	1.92	0.70

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:650:LYS:HD3	1:A:651:VAL:N	2.06	0.70
1:C:466:ILE:O	1:C:469:TRP:HB3	1.92	0.70
1:B:727:MET:C	1:B:729:PRO:HD3	2.12	0.70
1:B:91:PRO:HG2	1:B:344:PRO:CD	2.22	0.70
1:A:109:ASP:N	1:A:109:ASP:OD2	2.22	0.70
1:C:650:LYS:HD3	1:C:651:VAL:N	2.06	0.69
1:A:61:LYS:HG2	1:A:62:ILE:N	2.07	0.69
1:D:56:LEU:HA	1:D:60:GLN:HE21	1.56	0.69
1:B:147:ALA:HB2	1:B:559:LEU:HD11	1.74	0.69
1:D:97:ILE:HG22	1:D:716:TYR:CD1	2.28	0.69
1:B:650:LYS:HD3	1:B:651:VAL:N	2.07	0.69
1:A:84:PRO:HB3	1:A:584:GLY:HA2	1.75	0.69
1:C:84:PRO:HB3	1:C:584:GLY:HA2	1.75	0.69
1:C:556:ILE:HG22	1:C:557:MET:HE3	1.75	0.69
1:B:529:LEU:O	1:B:532:ILE:HG22	1.92	0.69
1:A:44:LEU:CD1	1:A:97:ILE:HG21	2.22	0.68
1:C:91:PRO:HG2	1:C:344:PRO:HD2	1.75	0.68
2:B:1001:NAP:H51A	2:B:1001:NAP:H8A	1.73	0.68
2:A:1000:NAP:H51A	2:A:1000:NAP:H8A	1.73	0.68
1:B:84:PRO:HB3	1:B:584:GLY:HA2	1.76	0.68
1:A:91:PRO:HG2	1:A:344:PRO:HD2	1.74	0.68
1:A:529:LEU:O	1:A:532:ILE:HG22	1.93	0.68
1:D:556:ILE:HG22	1:D:557:MET:HE3	1.76	0.68
1:B:91:PRO:O	1:B:93:LEU:N	2.27	0.68
1:D:236:ILE:O	1:D:240:ILE:HG13	1.94	0.68
1:A:91:PRO:O	1:A:93:LEU:N	2.27	0.68
1:A:657:ARG:HA	1:A:660:HIS:HB2	1.74	0.68
1:C:236:ILE:O	1:C:240:ILE:HG13	1.94	0.68
1:D:91:PRO:HG2	1:D:344:PRO:HD2	1.75	0.68
1:A:97:ILE:HG22	1:A:716:TYR:CD1	2.28	0.68
1:C:657:ARG:HA	1:C:660:HIS:HB2	1.74	0.68
1:B:91:PRO:HG2	1:B:344:PRO:HD2	1.76	0.68
1:D:91:PRO:O	1:D:93:LEU:N	2.27	0.68
1:B:556:ILE:HG22	1:B:557:MET:HE3	1.76	0.68
1:B:657:ARG:HA	1:B:660:HIS:HB2	1.74	0.67
2:C:1002:NAP:H8A	2:C:1002:NAP:H51A	1.74	0.67
1:A:556:ILE:HG22	1:A:557:MET:CE	2.25	0.67
1:C:91:PRO:O	1:C:93:LEU:N	2.28	0.67
1:C:556:ILE:HG22	1:C:557:MET:CE	2.25	0.67
1:B:100:LEU:HD21	1:B:716:TYR:H	1.59	0.67
1:D:728:ARG:N	1:D:729:PRO:HD3	2.09	0.67
1:B:556:ILE:HG22	1:B:557:MET:CE	2.25	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:D:529:LEU:O	1:D:532:ILE:HG22	1.94	0.67
1:D:147:ALA:HB2	1:D:559:LEU:HD11	1.76	0.67
1:A:728:ARG:N	1:A:729:PRO:HD3	2.09	0.67
1:B:236:ILE:O	1:B:240:ILE:HG13	1.95	0.67
1:B:408:PRO:O	1:B:540:SER:HB3	1.96	0.66
1:D:282:HIS:HB3	1:D:285:VAL:CG1	2.26	0.66
1:D:657:ARG:HA	1:D:660:HIS:HB2	1.76	0.66
1:B:728:ARG:N	1:B:729:PRO:HD3	2.10	0.66
1:D:525:THR:O	1:D:529:LEU:HG	1.95	0.66
1:D:408:PRO:O	1:D:540:SER:HB3	1.96	0.66
1:D:8:TYR:HE2	1:D:19:THR:HG23	1.60	0.66
1:D:100:LEU:HD21	1:D:716:TYR:H	1.61	0.66
1:C:525:THR:O	1:C:529:LEU:HG	1.95	0.66
1:A:525:THR:O	1:A:529:LEU:HG	1.95	0.66
1:C:728:ARG:N	1:C:729:PRO:HD3	2.10	0.66
1:C:515:ASP:HB3	1:C:517:ARG:NH2	2.10	0.66
1:B:8:TYR:HE2	1:B:19:THR:HG23	1.61	0.66
1:C:97:ILE:HG22	1:C:716:TYR:CD1	2.30	0.65
1:A:460:GLN:HE21	1:A:462:LYS:HZ3	1.41	0.65
1:A:8:TYR:HE2	1:A:19:THR:HG23	1.61	0.65
1:A:640:ILE:HD13	1:A:645:LYS:HB2	1.78	0.65
1:D:89:SER:O	1:D:93:LEU:HB2	1.95	0.65
1:A:408:PRO:O	1:A:540:SER:HB3	1.97	0.65
1:B:282:HIS:HB3	1:B:285:VAL:CG1	2.27	0.65
1:C:460:GLN:HE21	1:C:462:LYS:HZ3	1.42	0.65
1:C:640:ILE:HD13	1:C:645:LYS:HB2	1.79	0.65
1:C:408:PRO:O	1:C:540:SER:HB3	1.97	0.65
1:A:628:VAL:O	1:A:632:THR:HG23	1.96	0.65
1:A:89:SER:O	1:A:93:LEU:HB2	1.96	0.65
1:B:525:THR:O	1:B:529:LEU:HG	1.96	0.65
1:B:628:VAL:O	1:B:632:THR:HG23	1.96	0.65
1:B:460:GLN:HE21	1:B:462:LYS:HZ3	1.43	0.65
1:D:460:GLN:HE21	1:D:462:LYS:HZ3	1.43	0.65
1:A:147:ALA:HB2	1:A:559:LEU:HD11	1.78	0.65
1:A:282:HIS:HB3	1:A:285:VAL:CG1	2.27	0.65
1:C:628:VAL:O	1:C:632:THR:HG23	1.96	0.65
1:C:8:TYR:HE2	1:C:19:THR:HG23	1.61	0.65
1:C:282:HIS:HB3	1:C:285:VAL:CG1	2.27	0.65
1:C:89:SER:O	1:C:93:LEU:HB2	1.96	0.65
1:A:515:ASP:HB3	1:A:517:ARG:NH2	2.11	0.64
1:D:640:ILE:HD13	1:D:645:LYS:HB2	1.79	0.64
1:C:100:LEU:HD21	1:C:716:TYR:H	1.61	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:B:640:ILE:HD13	1:B:645:LYS:HB2	1.80	0.64
1:B:97:ILE:HG22	1:B:716:TYR:CD1	2.32	0.64
1:D:515:ASP:HB3	1:D:517:ARG:NH2	2.12	0.64
1:A:112:GLU:CD	1:A:303:ARG:HH22	2.00	0.64
1:D:600:ARG:HH11	1:D:649:ARG:NH1	1.96	0.64
1:A:647:PRO:HA	1:A:654:ILE:HG22	1.79	0.64
1:D:556:ILE:HG22	1:D:557:MET:CE	2.28	0.64
1:B:89:SER:O	1:B:93:LEU:HB2	1.98	0.64
1:C:647:PRO:HA	1:C:654:ILE:HG22	1.79	0.64
1:A:189:LEU:HB2	1:A:497:GLN:OE1	1.98	0.64
1:D:112:GLU:CD	1:D:303:ARG:HH22	2.00	0.63
1:D:561:THR:HG21	1:D:563:ALA:HB3	1.79	0.63
1:D:282:HIS:HB3	1:D:285:VAL:HG12	1.78	0.63
1:B:647:PRO:HA	1:B:654:ILE:HG22	1.80	0.63
1:C:147:ALA:HB2	1:C:559:LEU:HD11	1.79	0.63
1:C:561:THR:HG21	1:C:563:ALA:HB3	1.79	0.63
1:C:112:GLU:CD	1:C:303:ARG:HH22	2.01	0.63
1:D:628:VAL:O	1:D:632:THR:HG23	1.98	0.63
1:B:515:ASP:HB3	1:B:517:ARG:NH2	2.13	0.63
1:D:647:PRO:HA	1:D:654:ILE:HG22	1.80	0.63
1:A:561:THR:HG21	1:A:563:ALA:HB3	1.79	0.63
1:A:232:LEU:HD23	1:A:269:GLN:NE2	2.13	0.63
1:B:112:GLU:CD	1:B:303:ARG:HH22	2.02	0.63
1:B:600:ARG:HH11	1:B:649:ARG:NH1	1.97	0.63
1:D:189:LEU:HB2	1:D:497:GLN:OE1	1.99	0.63
1:C:637:THR:O	1:C:640:ILE:HB	1.99	0.62
1:B:391:GLU:OE2	1:B:394:LYS:HD2	2.00	0.62
1:B:232:LEU:HD23	1:B:269:GLN:NE2	2.13	0.62
1:D:232:LEU:HD23	1:D:269:GLN:NE2	2.13	0.62
1:C:409:ASN:HA	1:C:540:SER:O	1.99	0.62
1:C:232:LEU:HD23	1:C:269:GLN:NE2	2.13	0.62
1:C:165:TRP:CD2	1:C:393:CYS:HB3	2.34	0.62
1:A:175:HIS:HD2	1:A:380:ARG:HG2	1.65	0.62
1:A:600:ARG:HH11	1:A:649:ARG:NH1	1.98	0.62
1:B:561:THR:HG21	1:B:563:ALA:HB3	1.80	0.62
1:A:391:GLU:OE2	1:A:394:LYS:HD2	2.00	0.62
1:B:282:HIS:HB3	1:B:285:VAL:HG12	1.79	0.62
1:A:282:HIS:HB3	1:A:285:VAL:HG12	1.79	0.61
1:B:189:LEU:HB2	1:B:497:GLN:OE1	1.99	0.61
1:A:165:TRP:CD2	1:A:393:CYS:HB3	2.35	0.61
1:A:739:PRO:HG2	3:A:3323:HOH:O	1.99	0.61
1:B:175:HIS:HD2	1:B:380:ARG:HG2	1.65	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:C:391:GLU:OE2	1:C:394:LYS:HD2	2.01	0.61
1:A:57:THR:OG1	1:A:60:GLN:HG2	2.01	0.61
1:D:165:TRP:CD2	1:D:393:CYS:HB3	2.35	0.61
1:D:614:LEU:HB3	1:D:630:ALA:HB2	1.81	0.61
1:C:57:THR:OG1	1:C:60:GLN:HG2	2.01	0.61
1:C:614:LEU:HB3	1:C:630:ALA:HB2	1.81	0.61
1:C:353:MET:HB2	1:C:354:PRO:HD3	1.83	0.61
1:C:189:LEU:HB2	1:C:497:GLN:OE1	2.00	0.61
1:C:600:ARG:HH11	1:C:649:ARG:NH1	1.99	0.61
1:C:175:HIS:HD2	1:C:380:ARG:HG2	1.66	0.61
1:D:343:VAL:HB	1:D:346:ASP:OD2	2.01	0.61
1:A:614:LEU:HB3	1:A:630:ALA:HB2	1.81	0.61
1:A:409:ASN:HA	1:A:540:SER:O	2.01	0.61
1:A:343:VAL:HB	1:A:346:ASP:OD2	2.01	0.61
1:C:13:GLU:O	1:C:16:ALA:HB3	2.01	0.61
1:B:478:ARG:NH1	1:B:510:ASP:HB3	2.07	0.60
1:C:282:HIS:HB3	1:C:285:VAL:HG12	1.80	0.60
1:B:57:THR:H	1:B:60:GLN:HE21	1.47	0.60
1:B:409:ASN:HA	1:B:540:SER:O	2.01	0.60
1:D:175:HIS:HD2	1:D:380:ARG:HG2	1.66	0.60
1:D:677:ASP:CG	1:D:680:LEU:HD13	2.22	0.60
1:D:56:LEU:HB3	1:D:60:GLN:HG3	1.83	0.60
1:D:532:ILE:HG23	1:D:533:ARG:N	2.17	0.60
1:D:534:GLU:HG3	1:D:536:LYS:HG2	1.84	0.60
1:C:478:ARG:NH1	1:C:510:ASP:HB3	2.08	0.60
1:A:687:ILE:O	1:A:691:LEU:HD23	2.00	0.60
1:A:45:ALA:O	1:A:49:ILE:HG13	2.01	0.60
1:A:353:MET:HB2	1:A:354:PRO:HD3	1.84	0.60
1:B:165:TRP:CD2	1:B:393:CYS:HB3	2.36	0.60
1:A:100:LEU:HD21	1:A:716:TYR:H	1.64	0.60
1:D:57:THR:OG1	1:D:60:GLN:HG2	2.02	0.60
1:D:730:SER:O	1:D:734:ASN:ND2	2.35	0.60
1:A:244:LYS:HA	1:A:327:PRO:HG3	1.83	0.59
1:B:566:LEU:HD21	1:B:568:ILE:HG13	1.83	0.59
1:D:14:ALA:HB3	1:D:15:PRO:HD3	1.82	0.59
1:B:532:ILE:HG23	1:B:533:ARG:N	2.17	0.59
1:D:353:MET:HB2	1:D:354:PRO:HD3	1.85	0.59
1:D:637:THR:O	1:D:640:ILE:HB	2.02	0.59
1:A:677:ASP:CG	1:A:680:LEU:HD13	2.23	0.59
1:D:45:ALA:O	1:D:49:ILE:HG13	2.02	0.59
1:D:57:THR:H	1:D:60:GLN:HE21	1.49	0.59
1:D:3:THR:O	1:D:4:PRO:C	2.40	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:534:GLU:HG3	1:A:536:LYS:HG2	1.84	0.59
1:D:687:ILE:O	1:D:691:LEU:HD23	2.01	0.59
1:C:730:SER:O	1:C:734:ASN:ND2	2.36	0.59
1:B:687:ILE:O	1:B:691:LEU:HD23	2.01	0.59
1:D:244:LYS:HA	1:D:327:PRO:HG3	1.84	0.59
1:B:730:SER:O	1:B:734:ASN:ND2	2.36	0.59
1:B:534:GLU:HG3	1:B:536:LYS:HG2	1.85	0.59
1:C:3:THR:N	1:C:4:PRO:CD	2.66	0.59
1:B:614:LEU:HB3	1:B:630:ALA:HB2	1.83	0.59
1:D:391:GLU:OE2	1:D:394:LYS:HD2	2.03	0.59
1:C:687:ILE:O	1:C:691:LEU:HD23	2.01	0.59
1:D:158:HIS:N	1:D:159:PRO:HD3	2.18	0.59
1:B:56:LEU:HB3	1:B:60:GLN:HG3	1.85	0.59
1:B:637:THR:O	1:B:640:ILE:HB	2.03	0.59
1:C:343:VAL:HB	1:C:346:ASP:OD2	2.03	0.59
1:B:3:THR:N	1:B:4:PRO:CD	2.66	0.59
1:D:3:THR:N	1:D:4:PRO:CD	2.66	0.59
1:C:3:THR:O	1:C:4:PRO:C	2.41	0.59
1:A:3:THR:O	1:A:4:PRO:C	2.41	0.59
1:A:478:ARG:NH1	1:A:510:ASP:HB3	2.09	0.59
1:B:57:THR:OG1	1:B:60:GLN:HG2	2.03	0.59
1:C:99:GLU:C	1:C:101:GLN:N	2.54	0.59
1:C:651:VAL:HG13	1:C:706:GLN:HB3	1.84	0.59
1:C:677:ASP:CG	1:C:680:LEU:HD13	2.24	0.59
1:A:637:THR:O	1:A:640:ILE:HB	2.03	0.58
1:B:244:LYS:HA	1:B:327:PRO:HG3	1.84	0.58
1:A:651:VAL:HG13	1:A:706:GLN:HB3	1.84	0.58
1:B:677:ASP:CG	1:B:680:LEU:HD13	2.24	0.58
1:A:158:HIS:N	1:A:159:PRO:HD3	2.18	0.58
1:A:13:GLU:O	1:A:16:ALA:HB3	2.03	0.58
1:C:244:LYS:HA	1:C:327:PRO:HG3	1.84	0.58
1:B:147:ALA:CB	1:B:559:LEU:HD11	2.33	0.58
1:A:56:LEU:HB3	1:A:60:GLN:HG3	1.85	0.58
1:B:353:MET:HB2	1:B:354:PRO:HD3	1.86	0.58
1:B:3:THR:O	1:B:4:PRO:C	2.42	0.58
1:A:3:THR:N	1:A:4:PRO:CD	2.67	0.58
1:A:532:ILE:HG23	1:A:533:ARG:N	2.19	0.58
1:A:172:HIS:CE1	1:A:374:LYS:HG3	2.38	0.58
1:D:651:VAL:HG13	1:D:706:GLN:HB3	1.84	0.58
1:B:651:VAL:HG13	1:B:706:GLN:HB3	1.85	0.58
1:C:534:GLU:HG3	1:C:536:LYS:HG2	1.86	0.58
1:D:478:ARG:NH1	1:D:510:ASP:HB3	2.09	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:C:57:THR:H	1:C:60:GLN:HE21	1.50	0.58
1:B:13:GLU:O	1:B:16:ALA:HB3	2.04	0.58
1:B:343:VAL:HB	1:B:346:ASP:OD2	2.04	0.58
1:D:172:HIS:CE1	1:D:374:LYS:HG3	2.38	0.58
1:B:79:ASN:OD1	1:B:613:SER:HB2	2.03	0.58
1:D:173:VAL:HG23	1:D:390:ILE:HD12	1.86	0.58
1:A:492:ARG:CB	1:A:492:ARG:HH11	2.16	0.57
1:A:340:ASN:ND2	1:A:347:VAL:HG21	2.19	0.57
1:B:158:HIS:N	1:B:159:PRO:HD3	2.19	0.57
1:D:172:HIS:NE2	1:D:374:LYS:HG3	2.19	0.57
1:C:529:LEU:C	1:C:532:ILE:HG22	2.24	0.57
1:D:542:THR:HA	3:D:3314:HOH:O	2.03	0.57
1:B:99:GLU:C	1:B:101:GLN:N	2.56	0.57
1:C:340:ASN:ND2	1:C:347:VAL:HG21	2.20	0.57
1:C:45:ALA:O	1:C:49:ILE:HG13	2.04	0.57
1:D:101:GLN:O	1:D:102:GLN:C	2.41	0.57
1:A:99:GLU:C	1:A:101:GLN:N	2.56	0.57
1:B:14:ALA:HB3	1:B:15:PRO:HD3	1.84	0.57
1:D:76:PRO:HA	1:D:573:SER:O	2.04	0.57
1:C:532:ILE:HG23	1:C:533:ARG:N	2.20	0.57
1:B:354:PRO:HB2	1:B:556:ILE:HD12	1.86	0.57
1:A:11:THR:OG1	1:A:12:ASP:N	2.35	0.57
1:C:158:HIS:N	1:C:159:PRO:HD3	2.20	0.57
1:A:622:LYS:HE3	1:C:441:SER:CB	2.32	0.57
1:B:9:THR:HG23	1:B:81:ILE:O	2.05	0.57
1:D:566:LEU:HD21	1:D:568:ILE:HG13	1.86	0.57
1:B:45:ALA:O	1:B:49:ILE:HG13	2.05	0.57
1:A:730:SER:O	1:A:734:ASN:ND2	2.38	0.56
1:D:11:THR:OG1	1:D:12:ASP:N	2.36	0.56
1:A:79:ASN:OD1	1:A:613:SER:HB2	2.04	0.56
1:B:340:ASN:ND2	1:B:347:VAL:HG21	2.21	0.56
1:C:172:HIS:CE1	1:C:374:LYS:HG3	2.39	0.56
1:B:172:HIS:CE1	1:B:374:LYS:HG3	2.39	0.56
1:B:57:THR:H	1:B:60:GLN:NE2	2.03	0.56
1:C:90:VAL:O	1:C:91:PRO:O	2.23	0.56
1:C:56:LEU:HB3	1:C:60:GLN:HG3	1.87	0.56
1:D:409:ASN:HA	1:D:540:SER:O	2.06	0.56
1:A:173:VAL:HG23	1:A:390:ILE:HD12	1.87	0.56
1:C:413:MET:HA	1:C:417:ALA:HB3	1.86	0.56
1:B:173:VAL:HG23	1:B:390:ILE:HD12	1.87	0.56
1:B:304:ILE:HA	1:B:307:LEU:HD23	1.86	0.56
1:D:99:GLU:C	1:D:101:GLN:N	2.57	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:B:22:LEU:HB2	1:B:660:HIS:CE1	2.40	0.56
1:A:244:LYS:CA	1:A:327:PRO:HG3	2.36	0.56
1:B:172:HIS:NE2	1:B:374:LYS:HG3	2.20	0.56
1:C:11:THR:OG1	1:C:12:ASP:N	2.36	0.56
1:D:79:ASN:OD1	1:D:613:SER:HB2	2.05	0.56
1:A:429:ILE:HG13	1:A:450:VAL:HB	1.87	0.56
1:B:731:ALA:HA	1:B:734:ASN:HD22	1.71	0.56
1:C:118:THR:O	1:C:122:VAL:HG23	2.06	0.56
1:A:76:PRO:HA	1:A:573:SER:O	2.05	0.56
1:C:731:ALA:HA	1:C:734:ASN:HD22	1.71	0.56
1:A:172:HIS:NE2	1:A:374:LYS:HG3	2.21	0.56
1:C:172:HIS:NE2	1:C:374:LYS:HG3	2.21	0.56
1:A:413:MET:HA	1:A:417:ALA:HB3	1.87	0.56
1:D:340:ASN:ND2	1:D:347:VAL:HG21	2.21	0.56
1:C:303:ARG:O	1:C:306:THR:HG22	2.06	0.56
1:C:492:ARG:CB	1:C:492:ARG:HH11	2.18	0.56
1:A:331:MET:SD	1:A:339:THR:HG22	2.46	0.56
1:C:9:THR:HG23	1:C:81:ILE:O	2.06	0.56
1:D:413:MET:HA	1:D:417:ALA:HB3	1.87	0.56
1:A:622:LYS:HZ1	1:C:441:SER:CB	2.09	0.56
1:C:173:VAL:HG23	1:C:390:ILE:HD12	1.88	0.56
1:D:43:SER:O	1:D:47:ARG:HB2	2.05	0.56
1:B:11:THR:OG1	1:B:12:ASP:N	2.37	0.56
1:C:79:ASN:OD1	1:C:613:SER:HB2	2.05	0.56
1:D:586:ALA:O	1:D:589:HIS:HB2	2.06	0.56
1:D:13:GLU:O	1:D:16:ALA:HB3	2.06	0.56
1:A:14:ALA:HB3	1:A:15:PRO:HD3	1.87	0.55
1:D:731:ALA:HA	1:D:734:ASN:HD22	1.71	0.55
1:D:377:ILE:HG22	1:D:377:ILE:O	2.05	0.55
1:C:57:THR:H	1:C:60:GLN:NE2	2.04	0.55
1:B:492:ARG:HH11	1:B:492:ARG:CB	2.18	0.55
1:B:529:LEU:C	1:B:532:ILE:HG22	2.26	0.55
1:A:389:VAL:HG22	1:A:529:LEU:HD11	1.86	0.55
1:C:76:PRO:HA	1:C:573:SER:O	2.06	0.55
1:D:738:ALA:HB3	1:D:739:PRO:HD3	1.87	0.55
1:C:614:LEU:HD13	1:C:629:LEU:CD1	2.31	0.55
1:B:303:ARG:O	1:B:306:THR:HG22	2.07	0.55
1:D:304:ILE:HA	1:D:307:LEU:HD23	1.86	0.55
1:A:267:PHE:O	1:A:271:VAL:HG23	2.06	0.55
1:A:738:ALA:HB3	1:A:739:PRO:HD3	1.87	0.55
1:B:562:SER:O	1:B:565:MET:HG2	2.07	0.55
1:B:614:LEU:HD13	1:B:629:LEU:CD1	2.30	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:D:303:ARG:O	1:D:306:THR:HG22	2.07	0.55
1:A:57:THR:H	1:A:60:GLN:HE21	1.53	0.55
1:D:244:LYS:CA	1:D:327:PRO:HG3	2.37	0.55
1:B:596:GLU:O	1:B:707:GLY:N	2.39	0.55
1:D:147:ALA:CB	1:D:559:LEU:HD11	2.36	0.55
1:A:304:ILE:HA	1:A:307:LEU:HD23	1.87	0.55
1:B:738:ALA:HB3	1:B:739:PRO:HD3	1.87	0.55
1:B:738:ALA:HB1	1:C:526:ARG:HE	1.72	0.55
1:B:413:MET:HA	1:B:417:ALA:HB3	1.87	0.55
1:C:566:LEU:HD21	1:C:568:ILE:HG13	1.88	0.55
1:B:566:LEU:CD2	1:B:568:ILE:HG13	2.37	0.55
1:C:43:SER:O	1:C:47:ARG:HB2	2.06	0.55
1:D:123:LYS:HD3	1:D:127:ASP:OD2	2.06	0.55
1:A:82:LYS:HE2	1:A:134:VAL:HG11	1.88	0.55
1:A:303:ARG:O	1:A:306:THR:HG22	2.07	0.55
1:B:91:PRO:O	1:B:92:GLN:C	2.44	0.55
1:D:267:PHE:O	1:D:271:VAL:HG23	2.07	0.55
1:A:529:LEU:C	1:A:532:ILE:HG22	2.27	0.55
1:D:529:LEU:C	1:D:532:ILE:HG22	2.27	0.55
1:D:57:THR:H	1:D:60:GLN:NE2	2.05	0.55
1:B:226:VAL:HG23	1:B:455:ILE:O	2.07	0.55
1:D:148:PRO:HG2	1:D:608:LEU:HD13	1.87	0.55
1:A:586:ALA:O	1:A:589:HIS:HB2	2.07	0.55
1:C:273:GLU:HG3	1:C:273:GLU:O	2.06	0.55
1:D:562:SER:O	1:D:565:MET:HG2	2.07	0.55
1:C:56:LEU:CA	1:C:60:GLN:HE21	2.19	0.55
1:C:244:LYS:CA	1:C:327:PRO:HG3	2.37	0.55
1:A:551:THR:O	1:A:555:PRO:HG2	2.07	0.54
1:B:354:PRO:CB	1:B:556:ILE:HD12	2.37	0.54
1:C:586:ALA:O	1:C:589:HIS:HB2	2.07	0.54
1:D:226:VAL:HG23	1:D:455:ILE:O	2.07	0.54
1:C:561:THR:CG2	1:C:563:ALA:HB3	2.37	0.54
1:B:244:LYS:CA	1:B:327:PRO:HG3	2.38	0.54
1:C:304:ILE:HA	1:C:307:LEU:HD23	1.88	0.54
1:A:90:VAL:O	1:A:91:PRO:O	2.25	0.54
1:A:91:PRO:O	1:A:92:GLN:C	2.45	0.54
1:D:62:ILE:O	1:D:62:ILE:HG23	2.07	0.54
1:A:691:LEU:HD22	1:A:691:LEU:N	2.21	0.54
1:C:148:PRO:HG2	1:C:608:LEU:HD13	1.87	0.54
1:B:377:ILE:O	1:B:377:ILE:HG22	2.06	0.54
1:C:738:ALA:HB3	1:C:739:PRO:HD3	1.88	0.54
1:A:562:SER:O	1:A:565:MET:HG2	2.07	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:99:GLU:O	1:A:103:GLN:HB2	2.07	0.54
1:A:43:SER:O	1:A:47:ARG:HB2	2.06	0.54
1:D:596:GLU:O	1:D:707:GLY:N	2.40	0.54
1:D:82:LYS:HE2	1:D:134:VAL:HG11	1.88	0.54
1:D:395:GLN:O	1:D:395:GLN:HG2	2.07	0.54
1:B:281:LYS:HG2	1:B:282:HIS:CE1	2.42	0.54
1:B:90:VAL:O	1:B:91:PRO:O	2.25	0.54
1:C:91:PRO:O	1:C:92:GLN:C	2.45	0.54
1:D:492:ARG:HH11	1:D:492:ARG:CB	2.20	0.54
1:D:389:VAL:HG22	1:D:529:LEU:HD11	1.88	0.54
1:B:691:LEU:N	1:B:691:LEU:HD22	2.21	0.54
1:C:596:GLU:O	1:C:707:GLY:N	2.40	0.54
1:A:731:ALA:HA	1:A:734:ASN:HD22	1.73	0.54
1:B:101:GLN:O	1:B:102:GLN:C	2.44	0.54
1:D:99:GLU:O	1:D:103:GLN:HB2	2.08	0.54
1:D:580:THR:HG22	1:D:581:GLY:N	2.22	0.54
1:B:300:LEU:C	1:B:300:LEU:HD23	2.28	0.54
1:A:588:LYS:HA	1:A:591:GLN:CD	2.28	0.54
1:A:101:GLN:O	1:A:102:GLN:C	2.44	0.54
1:A:56:LEU:CA	1:A:60:GLN:HE21	2.20	0.54
1:C:551:THR:O	1:C:555:PRO:HG2	2.07	0.54
1:C:429:ILE:HG13	1:C:450:VAL:HB	1.89	0.54
1:B:429:ILE:HG13	1:B:450:VAL:HB	1.89	0.54
1:A:281:LYS:HG2	1:A:282:HIS:CE1	2.42	0.54
1:B:389:VAL:HG22	1:B:529:LEU:HD11	1.88	0.54
1:B:15:PRO:HG3	1:B:601:TRP:CH2	2.42	0.54
1:C:691:LEU:N	1:C:691:LEU:HD22	2.22	0.54
1:D:561:THR:CG2	1:D:563:ALA:HB3	2.38	0.54
1:A:561:THR:CG2	1:A:563:ALA:HB3	2.38	0.54
1:D:185:GLU:O	1:D:186:LYS:HG3	2.08	0.54
1:B:148:PRO:HG2	1:B:608:LEU:HD13	1.88	0.54
1:B:338:ILE:HA	1:B:342:HIS:CD2	2.43	0.54
1:D:429:ILE:HG13	1:D:450:VAL:HB	1.89	0.54
1:D:91:PRO:O	1:D:92:GLN:C	2.45	0.53
1:A:300:LEU:HD23	1:A:300:LEU:C	2.29	0.53
1:D:588:LYS:HA	1:D:591:GLN:CD	2.28	0.53
1:B:257:THR:HG22	1:B:345:SER:HG	1.71	0.53
1:A:185:GLU:O	1:A:186:LYS:HG3	2.08	0.53
1:C:389:VAL:HG22	1:C:529:LEU:HD11	1.88	0.53
1:A:15:PRO:HG3	1:A:601:TRP:CH2	2.43	0.53
1:C:82:LYS:HE2	1:C:134:VAL:HG11	1.89	0.53
1:B:118:THR:O	1:B:122:VAL:HG23	2.08	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:147:ALA:CB	1:A:559:LEU:HD11	2.37	0.53
1:C:101:GLN:O	1:C:102:GLN:C	2.44	0.53
1:D:61:LYS:HB2	3:D:3025:HOH:O	2.08	0.53
1:C:185:GLU:O	1:C:186:LYS:HG3	2.08	0.53
1:C:14:ALA:HB3	1:C:15:PRO:HD3	1.89	0.53
1:A:596:GLU:O	1:A:707:GLY:N	2.41	0.53
1:D:300:LEU:HD23	1:D:300:LEU:C	2.29	0.53
1:B:43:SER:O	1:B:47:ARG:HB2	2.07	0.53
1:A:580:THR:HG22	1:A:581:GLY:N	2.22	0.53
1:B:56:LEU:CA	1:B:60:GLN:HE21	2.20	0.53
1:D:566:LEU:CD2	1:D:568:ILE:HG13	2.39	0.53
1:C:354:PRO:HB2	1:C:556:ILE:HD12	1.90	0.53
1:C:15:PRO:HG3	1:C:601:TRP:CH2	2.43	0.53
1:A:338:ILE:HA	1:A:342:HIS:CD2	2.43	0.53
1:B:76:PRO:HA	1:B:573:SER:O	2.08	0.53
1:A:566:LEU:HD21	1:A:568:ILE:HG13	1.89	0.53
1:A:9:THR:HG23	1:A:81:ILE:O	2.09	0.53
1:C:281:LYS:HG2	1:C:282:HIS:CE1	2.43	0.53
1:A:57:THR:H	1:A:60:GLN:NE2	2.07	0.53
1:C:338:ILE:HA	1:C:342:HIS:CD2	2.44	0.53
1:D:107:LEU:HD11	3:D:3057:HOH:O	2.09	0.53
1:C:22:LEU:HB2	1:C:660:HIS:CE1	2.43	0.53
1:A:118:THR:O	1:A:122:VAL:HG23	2.09	0.53
1:A:326:ARG:HG3	1:A:326:ARG:HH11	1.73	0.53
1:C:267:PHE:O	1:C:271:VAL:HG23	2.09	0.53
1:D:181:PHE:CE1	1:D:227:MET:HB2	2.44	0.53
1:C:300:LEU:C	1:C:300:LEU:HD23	2.29	0.53
1:B:245:LYS:HA	1:B:245:LYS:HE2	1.90	0.53
1:B:489:ASP:O	1:B:495:ASP:HB2	2.09	0.53
1:D:90:VAL:O	1:D:91:PRO:O	2.27	0.53
1:A:62:ILE:HG23	1:A:62:ILE:O	2.09	0.53
1:D:3:THR:O	1:D:36:ALA:HB3	2.09	0.53
1:D:399:PHE:HB2	1:D:404:MET:SD	2.48	0.53
1:B:181:PHE:CE1	1:B:227:MET:HB2	2.44	0.53
1:A:377:ILE:HG22	1:A:377:ILE:O	2.08	0.53
1:A:657:ARG:HB2	3:A:3317:HOH:O	2.09	0.52
1:B:331:MET:SD	1:B:339:THR:HG22	2.50	0.52
1:B:273:GLU:O	1:B:273:GLU:HG3	2.09	0.52
1:D:92:GLN:O	1:D:96:ALA:CB	2.55	0.52
1:C:414:ALA:HB3	1:C:465:PRO:HB3	1.91	0.52
1:B:185:GLU:O	1:B:186:LYS:HG3	2.09	0.52
1:A:85:ASN:H	2:A:1000:NAP:H71N	1.58	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:148:PRO:HG2	1:A:608:LEU:HD13	1.90	0.52
1:D:331:MET:SD	1:D:339:THR:HG22	2.50	0.52
1:D:245:LYS:HA	1:D:245:LYS:HE2	1.91	0.52
1:B:586:ALA:O	1:B:589:HIS:HB2	2.09	0.52
1:B:561:THR:CG2	1:B:563:ALA:HB3	2.39	0.52
1:D:281:LYS:HG2	1:D:282:HIS:CE1	2.44	0.52
1:C:529:LEU:HA	1:C:532:ILE:CG2	2.39	0.52
1:D:338:ILE:HA	1:D:342:HIS:CD2	2.44	0.52
1:A:395:GLN:HG2	1:A:395:GLN:O	2.09	0.52
1:B:395:GLN:O	1:B:395:GLN:HG2	2.09	0.52
1:B:57:THR:N	1:B:60:GLN:HE21	2.07	0.52
1:A:57:THR:H	1:A:60:GLN:CG	2.22	0.52
1:A:414:ALA:HB3	1:A:465:PRO:HB3	1.91	0.52
1:B:691:LEU:CD2	1:B:691:LEU:N	2.72	0.52
1:D:118:THR:O	1:D:122:VAL:HG23	2.10	0.52
1:B:468:ASP:HB2	1:B:572:MET:CE	2.39	0.52
1:B:201:ILE:HB	1:B:434:VAL:HG12	1.91	0.52
1:C:377:ILE:O	1:C:377:ILE:HG22	2.09	0.52
1:D:56:LEU:CA	1:D:60:GLN:HE21	2.21	0.52
1:D:691:LEU:HD22	1:D:691:LEU:N	2.24	0.52
1:C:691:LEU:CD2	1:C:691:LEU:N	2.73	0.52
1:A:3:THR:O	1:A:36:ALA:HB3	2.10	0.52
1:C:245:LYS:HA	1:C:245:LYS:HE2	1.91	0.52
1:B:99:GLU:O	1:B:103:GLN:HB2	2.10	0.52
1:D:57:THR:H	1:D:60:GLN:CG	2.22	0.52
1:D:354:PRO:HB2	1:D:556:ILE:HD12	1.92	0.52
1:C:175:HIS:HD2	1:C:380:ARG:CG	2.22	0.52
1:C:588:LYS:HA	1:C:591:GLN:CD	2.30	0.52
1:A:328:GLN:HB3	1:A:366:PRO:CG	2.40	0.52
1:D:328:GLN:HB3	1:D:366:PRO:HG2	1.91	0.52
1:C:395:GLN:O	1:C:395:GLN:HG2	2.10	0.52
1:C:147:ALA:CB	1:C:559:LEU:HD11	2.39	0.52
1:A:614:LEU:HD13	1:A:629:LEU:CD1	2.34	0.52
1:D:15:PRO:HG3	1:D:601:TRP:CH2	2.45	0.52
1:B:357:ILE:HD13	1:B:389:VAL:HG12	1.92	0.52
1:A:328:GLN:HB3	1:A:366:PRO:HG2	1.91	0.52
1:C:331:MET:SD	1:C:339:THR:HG22	2.50	0.52
1:A:123:LYS:HD3	1:A:127:ASP:OD2	2.10	0.52
1:C:431:ALA:HB2	3:C:3299:HOH:O	2.09	0.52
1:A:245:LYS:HA	1:A:245:LYS:HE2	1.91	0.52
1:D:326:ARG:HH11	1:D:326:ARG:HG3	1.74	0.52
1:B:92:GLN:O	1:B:96:ALA:CB	2.55	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:C:49:ILE:O	1:C:56:LEU:HD11	2.09	0.52
1:C:56:LEU:HA	1:C:60:GLN:NE2	2.24	0.52
1:D:328:GLN:HB3	1:D:366:PRO:CG	2.40	0.52
1:A:399:PHE:HB2	1:A:404:MET:SD	2.50	0.52
1:A:92:GLN:O	1:A:96:ALA:CB	2.56	0.51
1:B:267:PHE:O	1:B:271:VAL:HG23	2.10	0.51
1:A:691:LEU:CD2	1:A:691:LEU:N	2.73	0.51
1:B:123:LYS:HD3	1:B:127:ASP:OD2	2.10	0.51
1:D:201:ILE:HB	1:D:434:VAL:HG12	1.92	0.51
1:C:328:GLN:HB3	1:C:366:PRO:CG	2.40	0.51
1:D:49:ILE:O	1:D:56:LEU:HD11	2.09	0.51
1:C:181:PHE:CE1	1:C:227:MET:HB2	2.46	0.51
1:A:175:HIS:HD2	1:A:380:ARG:CG	2.22	0.51
1:C:297:ILE:HD11	1:C:300:LEU:HD13	1.91	0.51
1:D:489:ASP:O	1:D:495:ASP:HB2	2.11	0.51
1:C:562:SER:O	1:C:565:MET:HG2	2.10	0.51
1:C:88:ALA:HA	1:C:93:LEU:HD13	1.93	0.51
1:D:585:SER:O	2:D:1003:NAP:O2A	2.29	0.51
1:C:468:ASP:HB2	1:C:572:MET:CE	2.40	0.51
1:B:49:ILE:O	1:B:56:LEU:HD11	2.10	0.51
1:D:57:THR:N	1:D:60:GLN:HE21	2.08	0.51
1:A:587:PRO:O	1:A:591:GLN:HG3	2.10	0.51
1:B:328:GLN:HB3	1:B:366:PRO:CG	2.40	0.51
1:A:201:ILE:HD13	1:A:207:SER:HB2	1.92	0.51
1:B:529:LEU:HA	1:B:532:ILE:CG2	2.41	0.51
1:B:588:LYS:HA	1:B:591:GLN:CD	2.30	0.51
1:C:94:LYS:HE3	1:C:98:LYS:HZ2	1.76	0.51
1:A:357:ILE:HD13	1:A:389:VAL:HG12	1.93	0.51
1:A:529:LEU:HA	1:A:532:ILE:CG2	2.41	0.51
1:A:22:LEU:HB2	1:A:660:HIS:CE1	2.45	0.51
1:B:328:GLN:HB3	1:B:366:PRO:HG2	1.92	0.51
1:C:201:ILE:HB	1:C:434:VAL:HG12	1.92	0.51
1:C:326:ARG:HH11	1:C:326:ARG:HG3	1.75	0.51
1:A:622:LYS:HB3	1:C:443:LYS:HD2	1.93	0.51
1:A:49:ILE:O	1:A:56:LEU:HD11	2.10	0.51
1:D:85:ASN:H	2:D:1003:NAP:H71N	1.57	0.51
1:C:328:GLN:HB3	1:C:366:PRO:HG2	1.92	0.51
1:A:632:THR:O	1:A:635:GLN:N	2.43	0.51
1:A:304:ILE:C	1:A:306:THR:H	2.14	0.51
1:B:62:ILE:HG23	1:B:62:ILE:O	2.11	0.51
1:C:304:ILE:C	1:C:306:THR:H	2.14	0.51
1:C:57:THR:H	1:C:60:GLN:CG	2.24	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:C:601:TRP:O	1:C:656:ASN:OD1	2.29	0.51
1:B:175:HIS:HD2	1:B:380:ARG:CG	2.23	0.51
1:B:3:THR:O	1:B:36:ALA:HB3	2.11	0.51
1:B:56:LEU:HA	1:B:60:GLN:NE2	2.25	0.50
1:D:462:LYS:O	1:D:465:PRO:HD2	2.12	0.50
1:D:566:LEU:HD21	1:D:568:ILE:CD1	2.41	0.50
1:B:97:ILE:O	1:B:101:GLN:HG2	2.11	0.50
1:B:201:ILE:HD13	1:B:207:SER:HB2	1.93	0.50
1:B:54:GLU:HG2	1:B:55:TYR:N	2.24	0.50
1:D:468:ASP:HB2	1:D:572:MET:CE	2.40	0.50
1:C:57:THR:N	1:C:60:GLN:HE21	2.09	0.50
1:C:529:LEU:HA	1:C:532:ILE:HG22	1.92	0.50
1:A:105:TYR:HB3	1:A:106:LYS:HG2	1.93	0.50
1:B:326:ARG:HG3	1:B:326:ARG:HH11	1.76	0.50
1:C:97:ILE:O	1:C:101:GLN:HG2	2.11	0.50
1:A:56:LEU:HA	1:A:60:GLN:NE2	2.25	0.50
1:D:551:THR:O	1:D:555:PRO:HG2	2.11	0.50
1:D:529:LEU:HA	1:D:532:ILE:CG2	2.41	0.50
1:A:468:ASP:HB2	1:A:572:MET:HE1	1.94	0.50
1:B:304:ILE:C	1:B:306:THR:H	2.14	0.50
1:C:102:GLN:O	1:C:103:GLN:C	2.49	0.50
1:C:99:GLU:O	1:C:103:GLN:HB2	2.11	0.50
1:A:412:LEU:HD13	1:A:469:TRP:HB2	1.94	0.50
1:D:532:ILE:CG2	1:D:533:ARG:N	2.75	0.50
1:D:19:THR:HG22	1:D:23:LEU:HB2	1.93	0.50
1:A:8:TYR:CE2	1:A:19:THR:HG23	2.44	0.50
1:C:8:TYR:CE2	1:C:19:THR:HG23	2.44	0.50
1:B:94:LYS:HE3	1:B:98:LYS:HZ2	1.77	0.50
1:D:8:TYR:CE2	1:D:19:THR:HG23	2.44	0.50
1:A:297:ILE:HD11	1:A:300:LEU:HD13	1.92	0.50
1:C:40:ARG:HG3	1:C:69:LEU:HD21	1.94	0.50
1:A:489:ASP:O	1:A:495:ASP:HB2	2.12	0.50
1:C:92:GLN:O	1:C:96:ALA:CB	2.57	0.50
1:D:97:ILE:O	1:D:101:GLN:HG2	2.12	0.50
1:C:354:PRO:CB	1:C:556:ILE:HD12	2.42	0.50
1:D:9:THR:HG23	1:D:81:ILE:O	2.12	0.50
1:A:102:GLN:O	1:A:103:GLN:C	2.49	0.50
1:A:181:PHE:CE1	1:A:227:MET:HB2	2.47	0.50
1:B:412:LEU:HD13	1:B:469:TRP:HB2	1.94	0.50
1:C:412:LEU:HD13	1:C:469:TRP:HB2	1.94	0.50
1:A:656:ASN:ND2	1:A:660:HIS:NE2	2.60	0.50
1:D:691:LEU:CD2	1:D:691:LEU:N	2.75	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:C:201:ILE:HD13	1:C:207:SER:HB2	1.94	0.50
1:D:412:LEU:HD13	1:D:469:TRP:HB2	1.94	0.50
1:B:601:TRP:O	1:B:656:ASN:OD1	2.30	0.50
1:C:566:LEU:CD2	1:C:568:ILE:HG13	2.42	0.50
1:B:253:HIS:CD2	1:B:375:ALA:HB1	2.47	0.50
1:B:102:GLN:O	1:B:103:GLN:C	2.50	0.49
1:B:57:THR:H	1:B:60:GLN:CG	2.25	0.49
1:D:102:GLN:O	1:D:103:GLN:C	2.50	0.49
1:A:88:ALA:HA	1:A:93:LEU:HD13	1.94	0.49
1:D:227:MET:CG	1:D:266:MET:HE3	2.40	0.49
1:C:357:ILE:HD13	1:C:389:VAL:HG12	1.94	0.49
1:D:22:LEU:HB2	1:D:660:HIS:CE1	2.46	0.49
1:B:82:LYS:HE2	1:B:134:VAL:HG11	1.92	0.49
1:A:354:PRO:HB2	1:A:556:ILE:HD12	1.94	0.49
1:B:532:ILE:CG2	1:B:533:ARG:N	2.76	0.49
1:D:637:THR:O	1:D:640:ILE:N	2.42	0.49
1:C:3:THR:O	1:C:36:ALA:HB3	2.12	0.49
1:A:468:ASP:HB2	1:A:572:MET:CE	2.42	0.49
1:A:54:GLU:HG2	1:A:55:TYR:N	2.26	0.49
1:D:147:ALA:N	1:D:565:MET:HE3	2.27	0.49
1:D:175:HIS:HD2	1:D:380:ARG:CG	2.24	0.49
1:C:489:ASP:O	1:C:495:ASP:HB2	2.13	0.49
1:C:399:PHE:HB2	1:C:404:MET:SD	2.52	0.49
1:D:289:ILE:HD13	1:D:307:LEU:HD21	1.94	0.49
1:A:97:ILE:O	1:A:101:GLN:HG2	2.12	0.49
1:A:19:THR:HG22	1:A:23:LEU:HB2	1.94	0.49
1:B:566:LEU:HA	3:B:3071:HOH:O	2.13	0.49
1:A:506:LEU:C	1:A:508:ASP:H	2.16	0.49
1:A:253:HIS:CD2	1:A:375:ALA:HB1	2.48	0.49
1:A:304:ILE:O	1:A:306:THR:N	2.45	0.49
1:B:529:LEU:HA	1:B:532:ILE:HG22	1.94	0.49
1:A:529:LEU:HA	1:A:532:ILE:HG22	1.93	0.49
1:C:656:ASN:ND2	1:C:660:HIS:NE2	2.60	0.49
1:C:19:THR:HG22	1:C:23:LEU:HB2	1.94	0.49
1:D:54:GLU:HG2	1:D:55:TYR:N	2.26	0.49
1:D:304:ILE:C	1:D:306:THR:H	2.16	0.49
1:A:289:ILE:HD13	1:A:307:LEU:HD21	1.94	0.49
1:C:462:LYS:O	1:C:465:PRO:HD2	2.13	0.49
1:B:8:TYR:CE2	1:B:19:THR:HG23	2.44	0.49
1:C:139:ARG:HB3	1:C:413:MET:HE3	1.94	0.49
1:C:495:ASP:O	1:C:499:ILE:HG13	2.12	0.49
1:B:147:ALA:N	1:B:565:MET:HE3	2.27	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:D:601:TRP:O	1:D:656:ASN:OD1	2.30	0.49
1:A:601:TRP:O	1:A:656:ASN:OD1	2.31	0.49
1:C:329:LEU:HD11	1:C:341:LEU:HD12	1.93	0.49
1:C:304:ILE:O	1:C:306:THR:N	2.45	0.49
1:D:357:ILE:HD13	1:D:389:VAL:HG12	1.95	0.49
1:A:201:ILE:HB	1:A:434:VAL:HG12	1.94	0.49
1:B:462:LYS:O	1:B:465:PRO:HD2	2.13	0.49
1:C:586:ALA:O	1:C:589:HIS:N	2.44	0.49
1:C:200:LEU:HD22	1:C:430:PRO:HD2	1.95	0.49
1:A:566:LEU:CD2	1:A:568:ILE:HG13	2.43	0.49
1:A:148:PRO:O	1:A:149:LEU:C	2.51	0.49
1:D:626:ALA:O	1:D:629:LEU:HD12	2.12	0.49
1:B:566:LEU:HD21	1:B:568:ILE:CD1	2.43	0.49
1:D:587:PRO:O	1:D:591:GLN:HG3	2.12	0.49
1:C:40:ARG:HD2	1:C:68:GLU:OE1	2.13	0.49
1:D:56:LEU:HA	1:D:60:GLN:NE2	2.27	0.48
1:D:600:ARG:HH12	2:D:1003:NAP:P2B	2.36	0.48
1:D:351:ALA:O	1:D:354:PRO:HD2	2.13	0.48
1:B:297:ILE:HD11	1:B:300:LEU:HD13	1.94	0.48
1:C:123:LYS:HE3	3:C:3378:HOH:O	2.12	0.48
1:B:174:ALA:HB1	1:B:239:GLU:OE2	2.13	0.48
1:C:253:HIS:CD2	1:C:375:ALA:HB1	2.48	0.48
1:C:54:GLU:HG2	1:C:55:TYR:N	2.27	0.48
1:B:88:ALA:HA	1:B:93:LEU:HD13	1.95	0.48
1:D:174:ALA:HB1	1:D:239:GLU:OE2	2.13	0.48
1:D:329:LEU:HD11	1:D:341:LEU:HD12	1.94	0.48
1:A:94:LYS:HE3	1:A:98:LYS:HZ2	1.78	0.48
1:A:532:ILE:CG2	1:A:533:ARG:N	2.77	0.48
1:B:94:LYS:O	1:B:97:ILE:HD13	2.14	0.48
1:C:62:ILE:HG23	1:C:62:ILE:O	2.14	0.48
1:D:529:LEU:HA	1:D:532:ILE:HG22	1.94	0.48
1:B:637:THR:O	1:B:640:ILE:N	2.44	0.48
1:D:506:LEU:C	1:D:508:ASP:H	2.17	0.48
1:D:253:HIS:CD2	1:D:375:ALA:HB1	2.49	0.48
1:B:351:ALA:O	1:B:354:PRO:HD2	2.14	0.48
1:A:586:ALA:O	1:A:589:HIS:N	2.46	0.48
1:C:69:LEU:HB3	1:C:138:LEU:HD21	1.96	0.48
1:D:586:ALA:O	1:D:589:HIS:N	2.45	0.48
1:A:57:THR:N	1:A:60:GLN:HE21	2.11	0.48
1:D:157:LYS:C	1:D:159:PRO:HD3	2.34	0.48
1:D:201:ILE:HD13	1:D:207:SER:HB2	1.96	0.48
1:D:273:GLU:HG3	1:D:273:GLU:O	2.13	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:D:97:ILE:HD13	1:D:98:LYS:H	1.77	0.48
1:A:257:THR:OG1	1:A:258:MET:N	2.46	0.48
1:C:637:THR:O	1:C:640:ILE:N	2.44	0.48
1:B:587:PRO:O	1:B:591:GLN:HG3	2.13	0.48
1:C:369:LYS:NZ	1:C:369:LYS:HB2	2.29	0.48
1:A:622:LYS:NZ	1:C:441:SER:CB	2.59	0.48
1:A:548:ASP:O	1:A:549:TYR:C	2.52	0.48
1:B:40:ARG:HG3	1:B:69:LEU:HD21	1.96	0.48
1:B:19:THR:HG22	1:B:23:LEU:HB2	1.96	0.47
1:A:637:THR:O	1:A:640:ILE:N	2.44	0.47
1:B:200:LEU:HD22	1:B:430:PRO:HD2	1.96	0.47
1:D:304:ILE:O	1:D:306:THR:N	2.47	0.47
1:D:614:LEU:CB	1:D:630:ALA:HB2	2.45	0.47
1:D:354:PRO:CB	1:D:556:ILE:HD12	2.44	0.47
1:B:369:LYS:HB2	1:B:369:LYS:NZ	2.29	0.47
1:B:580:THR:HG22	1:B:581:GLY:N	2.28	0.47
1:C:614:LEU:CB	1:C:630:ALA:HB2	2.45	0.47
1:D:94:LYS:O	1:D:97:ILE:HD13	2.14	0.47
1:A:94:LYS:O	1:A:97:ILE:HD13	2.15	0.47
1:C:267:PHE:O	1:C:270:ILE:HB	2.14	0.47
1:C:466:ILE:O	1:C:470:VAL:HG23	2.13	0.47
1:A:172:HIS:NE2	1:A:374:LYS:NZ	2.53	0.47
1:D:297:ILE:HD11	1:D:300:LEU:HD13	1.95	0.47
1:A:349:VAL:HA	1:A:352:SER:OG	2.15	0.47
1:D:223:ASP:OD2	1:D:494:HIS:ND1	2.47	0.47
1:C:548:ASP:O	1:C:549:TYR:C	2.52	0.47
1:A:369:LYS:NZ	1:A:369:LYS:HB2	2.29	0.47
1:A:553:LEU:HG	1:A:554:PHE:N	2.29	0.47
1:B:561:THR:HG22	1:B:562:SER:N	2.28	0.47
1:A:626:ALA:O	1:A:629:LEU:HD12	2.14	0.47
1:C:29:PHE:CE2	1:C:684:PHE:HE2	2.33	0.47
1:D:88:ALA:HA	1:D:93:LEU:HD13	1.96	0.47
1:B:717:HIS:N	1:B:718:PRO:HD3	2.29	0.47
1:C:349:VAL:HA	1:C:352:SER:OG	2.15	0.47
1:D:717:HIS:N	1:D:718:PRO:HD3	2.29	0.47
1:C:105:TYR:HB3	1:C:106:LYS:HG2	1.95	0.47
1:D:558:GLU:HG3	1:D:559:LEU:HG	1.96	0.47
1:C:147:ALA:N	1:C:565:MET:HE3	2.29	0.47
1:C:304:ILE:C	1:C:306:THR:N	2.68	0.47
1:A:200:LEU:HD22	1:A:430:PRO:HD2	1.96	0.47
1:A:273:GLU:HG3	1:A:273:GLU:O	2.14	0.47
1:A:304:ILE:C	1:A:306:THR:N	2.68	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:C:532:ILE:CG2	1:C:533:ARG:N	2.78	0.47
1:B:399:PHE:HB2	1:B:404:MET:SD	2.54	0.47
1:A:610:LEU:C	1:A:612:ALA:H	2.17	0.47
1:C:506:LEU:C	1:C:508:ASP:H	2.18	0.47
1:C:174:ALA:HB1	1:C:239:GLU:OE2	2.15	0.47
1:B:304:ILE:O	1:B:306:THR:N	2.47	0.47
1:D:414:ALA:HB3	1:D:465:PRO:HB3	1.96	0.47
1:D:657:ARG:HD2	1:D:702:LEU:HD21	1.96	0.47
1:C:47:ARG:HH11	1:C:47:ARG:HG2	1.79	0.47
1:C:148:PRO:O	1:C:149:LEU:C	2.52	0.47
1:D:200:LEU:HD22	1:D:430:PRO:HD2	1.97	0.47
1:A:40:ARG:HG3	1:A:69:LEU:HD21	1.97	0.47
1:D:369:LYS:NZ	1:D:369:LYS:HB2	2.30	0.47
1:C:564:LYS:CG	1:C:604:LEU:HD23	2.45	0.47
1:C:289:ILE:HD13	1:C:307:LEU:HD21	1.97	0.47
1:C:671:LEU:HD12	1:C:684:PHE:CD2	2.49	0.47
1:D:226:VAL:HA	1:D:455:ILE:O	2.15	0.47
1:D:40:ARG:HG3	1:D:69:LEU:HD21	1.97	0.47
1:C:356:MET:O	1:C:361:GLY:HA2	2.15	0.47
1:A:116:THR:OG1	1:A:119:GLU:HG3	2.15	0.47
1:B:289:ILE:HD13	1:B:307:LEU:HD21	1.97	0.47
1:D:687:ILE:O	1:D:688:ALA:C	2.53	0.47
1:D:564:LYS:CG	1:D:604:LEU:HD23	2.45	0.47
1:A:566:LEU:HD21	1:A:568:ILE:CD1	2.45	0.47
1:A:610:LEU:C	1:A:612:ALA:N	2.69	0.47
1:C:223:ASP:OD2	1:C:494:HIS:ND1	2.48	0.47
1:A:226:VAL:HG23	1:A:455:ILE:O	2.15	0.47
1:B:564:LYS:CG	1:B:604:LEU:HD23	2.45	0.47
1:C:553:LEU:HG	1:C:554:PHE:N	2.30	0.47
1:B:185:GLU:OE1	1:B:492:ARG:NH1	2.48	0.47
1:C:566:LEU:HD21	1:C:568:ILE:CD1	2.45	0.47
1:D:148:PRO:O	1:D:149:LEU:C	2.53	0.47
1:B:495:ASP:O	1:B:499:ILE:HG13	2.15	0.47
1:A:147:ALA:N	1:A:565:MET:HE3	2.29	0.46
1:B:558:GLU:HG3	1:B:559:LEU:HG	1.97	0.46
1:C:632:THR:O	1:C:635:GLN:N	2.48	0.46
1:C:89:SER:H	1:C:93:LEU:CB	2.28	0.46
1:C:157:LYS:C	1:C:159:PRO:HD3	2.36	0.46
1:B:586:ALA:O	1:B:589:HIS:N	2.46	0.46
1:D:106:LYS:HG2	1:D:106:LYS:H	1.38	0.46
1:C:226:VAL:HG23	1:C:455:ILE:O	2.15	0.46
1:A:356:MET:O	1:A:361:GLY:HA2	2.15	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:D:610:LEU:C	1:D:612:ALA:H	2.18	0.46
1:A:558:GLU:HG3	1:A:559:LEU:HG	1.97	0.46
1:B:304:ILE:C	1:B:306:THR:N	2.69	0.46
1:A:614:LEU:CB	1:A:630:ALA:HB2	2.46	0.46
1:C:587:PRO:O	1:C:591:GLN:HG3	2.14	0.46
1:C:123:LYS:HD3	1:C:127:ASP:OD2	2.15	0.46
1:B:506:LEU:C	1:B:508:ASP:H	2.19	0.46
1:C:610:LEU:C	1:C:612:ALA:N	2.69	0.46
1:C:99:GLU:O	1:C:100:LEU:C	2.54	0.46
1:D:105:TYR:HB3	1:D:106:LYS:HG2	1.96	0.46
1:C:558:GLU:HG3	1:C:559:LEU:HG	1.97	0.46
1:C:48:LEU:HD11	1:C:97:ILE:HG13	1.98	0.46
1:D:48:LEU:HD11	1:D:97:ILE:HG13	1.98	0.46
1:D:610:LEU:C	1:D:612:ALA:N	2.69	0.46
1:B:356:MET:O	1:B:361:GLY:HA2	2.16	0.46
1:A:174:ALA:HB1	1:A:239:GLU:OE2	2.16	0.46
1:D:548:ASP:O	1:D:549:TYR:C	2.53	0.46
1:C:626:ALA:O	1:C:629:LEU:HD12	2.15	0.46
1:C:611:ALA:HB2	1:C:633:LEU:HG	1.97	0.46
1:C:94:LYS:O	1:C:97:ILE:HD13	2.16	0.46
1:B:157:LYS:C	1:B:159:PRO:HD3	2.36	0.46
1:A:632:THR:O	1:A:635:GLN:HB3	2.15	0.46
1:A:671:LEU:HD12	1:A:684:PHE:CD2	2.50	0.46
1:D:98:LYS:O	1:D:102:GLN:HG3	2.16	0.46
1:C:257:THR:OG1	1:C:258:MET:N	2.48	0.46
1:A:600:ARG:HH12	2:A:1000:NAP:P2B	2.38	0.46
1:A:69:LEU:HB3	1:A:138:LEU:HD21	1.98	0.46
1:C:610:LEU:C	1:C:612:ALA:H	2.18	0.46
1:B:106:LYS:HG2	1:B:106:LYS:H	1.39	0.46
1:A:329:LEU:HD11	1:A:341:LEU:HD12	1.96	0.46
1:D:561:THR:CG2	1:D:563:ALA:H	2.11	0.46
1:B:614:LEU:CB	1:B:630:ALA:HB2	2.46	0.46
1:D:304:ILE:C	1:D:306:THR:N	2.70	0.46
1:B:610:LEU:C	1:B:612:ALA:N	2.69	0.46
1:A:157:LYS:C	1:A:159:PRO:HD3	2.36	0.46
1:B:105:TYR:HB3	1:B:106:LYS:HG2	1.96	0.46
1:C:580:THR:HG22	1:C:581:GLY:N	2.30	0.46
1:D:349:VAL:HA	1:D:352:SER:OG	2.16	0.46
1:B:414:ALA:HB3	1:B:465:PRO:HB3	1.98	0.46
1:C:185:GLU:OE1	1:C:492:ARG:NH1	2.49	0.46
1:B:687:ILE:HG23	1:B:691:LEU:HD21	1.98	0.46
1:D:495:ASP:O	1:D:499:ILE:HG13	2.16	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:B:548:ASP:O	1:B:549:TYR:C	2.54	0.46
1:A:29:PHE:CE2	1:A:684:PHE:HE2	2.34	0.46
1:B:98:LYS:O	1:B:102:GLN:HG3	2.16	0.46
1:B:657:ARG:HD2	1:B:702:LEU:HD21	1.98	0.46
1:B:172:HIS:NE2	1:B:374:LYS:NZ	2.55	0.46
1:A:586:ALA:HB3	1:A:589:HIS:HB2	1.98	0.46
1:A:40:ARG:HD2	1:A:68:GLU:OE1	2.16	0.46
1:D:561:THR:HG22	1:D:562:SER:N	2.31	0.45
1:B:585:SER:O	2:B:1001:NAP:O2A	2.34	0.45
1:A:687:ILE:O	1:A:688:ALA:C	2.54	0.45
1:B:105:TYR:CD1	1:B:105:TYR:N	2.84	0.45
1:A:561:THR:HG22	1:A:562:SER:N	2.31	0.45
1:B:610:LEU:C	1:B:612:ALA:H	2.19	0.45
1:A:48:LEU:HD11	1:A:97:ILE:HG13	1.98	0.45
1:B:257:THR:OG1	1:B:258:MET:N	2.49	0.45
1:A:462:LYS:O	1:A:465:PRO:HD2	2.17	0.45
1:D:656:ASN:ND2	1:D:660:HIS:NE2	2.64	0.45
1:A:89:SER:CB	1:A:93:LEU:HD12	2.46	0.45
1:A:89:SER:H	1:A:93:LEU:CB	2.29	0.45
1:B:656:ASN:ND2	1:B:660:HIS:NE2	2.64	0.45
1:B:40:ARG:HD2	1:B:68:GLU:OE1	2.17	0.45
1:C:172:HIS:NE2	1:C:374:LYS:NZ	2.54	0.45
1:A:326:ARG:CG	1:A:326:ARG:HH11	2.30	0.45
1:D:609:ALA:O	1:D:612:ALA:HB3	2.15	0.45
1:B:329:LEU:HD11	1:B:341:LEU:HD12	1.97	0.45
1:D:100:LEU:HD23	1:D:716:TYR:CB	2.36	0.45
1:D:89:SER:H	1:D:93:LEU:CB	2.29	0.45
1:D:257:THR:OG1	1:D:258:MET:N	2.49	0.45
1:B:257:THR:HG21	1:B:348:ILE:CD1	2.47	0.45
1:B:12:ASP:HB2	1:B:86:ILE:HG13	1.98	0.45
1:B:285:VAL:HG21	1:B:311:LYS:HE3	1.99	0.45
1:B:100:LEU:HD23	1:B:716:TYR:CB	2.36	0.45
1:C:236:ILE:CD1	1:C:270:ILE:HG12	2.39	0.45
1:A:354:PRO:CB	1:A:556:ILE:HD12	2.47	0.45
1:B:148:PRO:O	1:B:149:LEU:C	2.54	0.45
1:B:69:LEU:HB3	1:B:138:LEU:HD21	1.99	0.45
1:B:223:ASP:OD2	1:B:494:HIS:ND1	2.49	0.45
1:A:611:ALA:HB2	1:A:633:LEU:HG	1.98	0.45
1:B:626:ALA:O	1:B:629:LEU:HD12	2.16	0.45
1:B:671:LEU:HD12	1:B:684:PHE:CD2	2.51	0.45
1:C:92:GLN:O	1:C:96:ALA:N	2.50	0.45
1:D:99:GLU:O	1:D:100:LEU:C	2.55	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:B:267:PHE:O	1:B:270:ILE:HB	2.16	0.45
1:A:21:SER:OG	1:A:657:ARG:HG3	2.16	0.45
1:B:687:ILE:O	1:B:688:ALA:C	2.55	0.45
1:A:377:ILE:HG22	1:A:383:ALA:HB2	1.97	0.45
1:A:105:TYR:CD1	1:A:105:TYR:N	2.85	0.45
1:D:105:TYR:CD1	1:D:105:TYR:N	2.85	0.45
1:B:349:VAL:HA	1:B:352:SER:OG	2.17	0.45
1:C:487:TRP:CG	1:C:542:THR:HG22	2.52	0.45
1:B:48:LEU:HD11	1:B:97:ILE:HG13	1.99	0.45
1:B:92:GLN:O	1:B:96:ALA:N	2.50	0.45
1:A:466:ILE:O	1:A:470:VAL:HG23	2.16	0.45
1:B:602:ASP:N	2:B:1001:NAP:N1A	2.46	0.45
1:C:21:SER:OG	1:C:657:ARG:HG3	2.17	0.45
1:D:12:ASP:HB2	1:D:86:ILE:HG13	1.98	0.45
1:C:116:THR:OG1	1:C:119:GLU:HG3	2.17	0.45
1:B:116:THR:OG1	1:B:119:GLU:HG3	2.17	0.45
1:C:89:SER:CB	1:C:93:LEU:HD12	2.47	0.45
1:C:89:SER:N	1:C:93:LEU:HD12	2.32	0.45
1:A:267:PHE:O	1:A:270:ILE:HB	2.17	0.45
1:C:657:ARG:HD2	1:C:702:LEU:HD21	1.99	0.45
1:B:377:ILE:HG22	1:B:383:ALA:HB2	1.97	0.45
1:C:105:TYR:CD1	1:C:105:TYR:N	2.85	0.45
1:D:571:LEU:HD12	1:D:576:GLY:N	2.32	0.45
1:A:223:ASP:OD2	1:A:494:HIS:ND1	2.50	0.45
1:D:89:SER:CB	1:D:93:LEU:HD12	2.47	0.45
1:B:466:ILE:O	1:B:470:VAL:HG23	2.16	0.45
1:B:85:ASN:H	2:B:1001:NAP:H71N	1.65	0.45
1:A:657:ARG:HD2	1:A:702:LEU:HD21	1.99	0.45
1:D:687:ILE:HG23	1:D:691:LEU:HD21	1.99	0.45
1:C:687:ILE:O	1:C:688:ALA:C	2.55	0.45
1:B:564:LYS:HG2	1:B:604:LEU:HD23	1.99	0.45
1:B:615:GLU:HG2	1:B:619:ASN:HD22	1.83	0.45
1:B:89:SER:H	1:B:93:LEU:CB	2.30	0.44
1:A:99:GLU:O	1:A:103:GLN:CB	2.65	0.44
1:C:600:ARG:HG3	1:C:600:ARG:HH11	1.81	0.44
1:D:586:ALA:HB3	1:D:589:HIS:HB2	1.99	0.44
1:D:40:ARG:HD2	1:D:68:GLU:OE1	2.17	0.44
1:A:171:SER:HA	1:A:373:THR:O	2.17	0.44
1:C:561:THR:HG22	1:C:562:SER:N	2.31	0.44
1:A:632:THR:HG1	1:A:667:TRP:HE1	1.63	0.44
1:B:609:ALA:O	1:B:612:ALA:HB3	2.16	0.44
1:C:94:LYS:HE3	1:C:98:LYS:NZ	2.32	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:D:69:LEU:HB3	1:D:138:LEU:HD21	1.99	0.44
1:B:487:TRP:CG	1:B:542:THR:HG22	2.53	0.44
1:D:553:LEU:HG	1:D:554:PHE:N	2.32	0.44
1:B:94:LYS:HE3	1:B:98:LYS:NZ	2.32	0.44
1:A:257:THR:HG21	1:A:348:ILE:CD1	2.48	0.44
1:D:257:THR:HG21	1:D:348:ILE:CD1	2.48	0.44
1:A:351:ALA:O	1:A:354:PRO:HD2	2.18	0.44
1:D:564:LYS:HG2	1:D:604:LEU:HD23	1.99	0.44
1:C:564:LYS:HG2	1:C:604:LEU:HD23	1.99	0.44
1:D:116:THR:OG1	1:D:119:GLU:HG3	2.18	0.44
1:B:611:ALA:HB2	1:B:633:LEU:HG	1.98	0.44
1:D:600:ARG:HH11	1:D:649:ARG:HH11	1.63	0.44
1:C:15:PRO:O	1:C:18:ALA:HB3	2.18	0.44
1:C:586:ALA:HB3	1:C:589:HIS:HB2	2.00	0.44
1:D:268:GLY:O	1:D:272:SER:N	2.51	0.44
1:B:698:ILE:O	1:B:699:VAL:C	2.54	0.44
1:A:717:HIS:N	1:A:718:PRO:HD3	2.32	0.44
1:A:285:VAL:HG21	1:A:311:LYS:HE3	2.00	0.44
1:B:632:THR:O	1:B:635:GLN:N	2.50	0.44
1:D:29:PHE:CE2	1:D:684:PHE:HE2	2.36	0.44
1:C:100:LEU:HD23	1:C:716:TYR:CB	2.36	0.44
1:A:185:GLU:OE1	1:A:492:ARG:NH1	2.50	0.44
1:D:54:GLU:HG2	1:D:55:TYR:CD1	2.53	0.44
1:A:609:ALA:O	1:A:612:ALA:HB3	2.16	0.44
1:C:99:GLU:C	1:C:101:GLN:H	2.21	0.44
1:A:91:PRO:C	1:A:93:LEU:N	2.70	0.44
1:B:551:THR:O	1:B:555:PRO:HG2	2.17	0.44
1:D:3:THR:N	1:D:4:PRO:HD2	2.33	0.44
1:A:535:GLY:O	1:A:536:LYS:HD3	2.18	0.44
1:D:531:ARG:HG2	1:D:531:ARG:HH11	1.83	0.44
1:D:99:GLU:O	1:D:103:GLN:CB	2.66	0.44
1:A:57:THR:H	1:A:60:GLN:HG3	1.83	0.44
1:A:600:ARG:HH11	1:A:649:ARG:HH11	1.64	0.44
1:B:552:ASP:O	1:B:556:ILE:HG13	2.18	0.44
1:B:226:VAL:HA	1:B:455:ILE:O	2.18	0.44
1:D:671:LEU:HD12	1:D:684:PHE:CD2	2.52	0.44
1:B:91:PRO:C	1:B:93:LEU:N	2.70	0.44
1:B:99:GLU:O	1:B:100:LEU:C	2.56	0.44
1:C:102:GLN:HG2	1:C:108:PRO:HD2	2.00	0.44
1:A:99:GLU:O	1:A:100:LEU:C	2.56	0.44
1:D:258:MET:O	1:D:423:HIS:CE1	2.71	0.44
1:C:351:ALA:O	1:C:354:PRO:HD2	2.18	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:B:32:SER:HB2	1:B:683:GLN:OE1	2.18	0.44
1:D:695:GLU:O	1:D:699:VAL:HG23	2.18	0.44
1:C:531:ARG:HG2	1:C:531:ARG:HH11	1.83	0.44
1:D:632:THR:HG1	1:D:667:TRP:HE1	1.64	0.44
1:C:149:LEU:O	1:C:150:SER:C	2.56	0.44
1:C:717:HIS:N	1:C:718:PRO:HD3	2.33	0.44
1:C:13:GLU:HB3	1:C:590:VAL:HG21	2.00	0.43
1:B:3:THR:N	1:B:4:PRO:HD2	2.33	0.43
1:C:12:ASP:OD1	1:C:43:SER:HB2	2.18	0.43
1:C:429:ILE:HA	1:C:430:PRO:HD3	1.69	0.43
1:C:377:ILE:HG22	1:C:383:ALA:HB2	1.98	0.43
1:C:226:VAL:HA	1:C:455:ILE:O	2.18	0.43
1:B:451:GLU:O	1:B:454:ASP:HB2	2.18	0.43
1:B:171:SER:HA	1:B:373:THR:O	2.18	0.43
1:D:32:SER:HB2	1:D:683:GLN:OE1	2.18	0.43
1:A:244:LYS:HE2	1:A:325:GLN:O	2.18	0.43
1:B:429:ILE:HA	1:B:430:PRO:HD3	1.70	0.43
1:A:419:GLU:O	1:A:421:GLY:N	2.51	0.43
1:C:32:SER:HB2	1:C:683:GLN:OE1	2.18	0.43
1:A:564:LYS:CG	1:A:604:LEU:HD23	2.48	0.43
1:A:100:LEU:HD23	1:A:716:TYR:CB	2.37	0.43
1:A:89:SER:N	1:A:93:LEU:HD12	2.33	0.43
1:B:167:ALA:HA	1:B:394:LYS:O	2.18	0.43
1:C:687:ILE:HG23	1:C:691:LEU:HD21	2.00	0.43
1:A:3:THR:N	1:A:4:PRO:HD2	2.33	0.43
1:B:13:GLU:HB3	1:B:590:VAL:HG21	2.00	0.43
1:D:377:ILE:HG22	1:D:383:ALA:HB2	1.98	0.43
1:C:326:ARG:CG	1:C:326:ARG:HH11	2.31	0.43
1:D:171:SER:HA	1:D:373:THR:O	2.18	0.43
1:B:29:PHE:CE2	1:B:684:PHE:HE2	2.37	0.43
1:C:89:SER:H	1:C:93:LEU:HD12	1.83	0.43
1:D:102:GLN:HG2	1:D:108:PRO:HD2	2.00	0.43
1:B:220:GLU:OE2	1:B:460:GLN:HB2	2.17	0.43
1:D:326:ARG:CG	1:D:326:ARG:HH11	2.31	0.43
1:C:54:GLU:HG2	1:C:55:TYR:CD1	2.53	0.43
1:A:288:GLN:C	1:A:290:GLY:H	2.20	0.43
1:B:632:THR:HG1	1:B:667:TRP:HE1	1.64	0.43
1:A:220:GLU:OE2	1:A:460:GLN:HB2	2.17	0.43
1:A:687:ILE:HG23	1:A:691:LEU:HD21	2.01	0.43
1:C:297:ILE:HD12	1:C:297:ILE:HA	1.88	0.43
1:C:400:ASP:HB3	1:C:403:THR:OG1	2.19	0.43
1:D:140:GLU:OE1	1:D:140:GLU:HA	2.19	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:D:514:LEU:N	1:D:514:LEU:HD22	2.34	0.43
1:B:553:LEU:HG	1:B:554:PHE:N	2.33	0.43
1:B:99:GLU:O	1:B:103:GLN:CB	2.67	0.43
1:D:92:GLN:O	1:D:96:ALA:N	2.52	0.43
1:A:94:LYS:O	1:A:97:ILE:CD1	2.67	0.43
1:B:586:ALA:HB3	1:B:589:HIS:HB2	2.01	0.43
1:D:658:GLY:O	1:D:661:PHE:HB3	2.18	0.43
1:D:91:PRO:C	1:D:93:LEU:N	2.71	0.43
1:D:89:SER:N	1:D:93:LEU:HD12	2.34	0.43
1:A:89:SER:H	1:A:93:LEU:HD12	1.83	0.43
1:D:466:ILE:O	1:D:470:VAL:HG23	2.18	0.43
1:B:600:ARG:HH11	1:B:649:ARG:HH11	1.65	0.43
1:C:3:THR:N	1:C:4:PRO:HD2	2.34	0.43
1:B:253:HIS:HD2	1:B:375:ALA:HB1	1.82	0.43
1:B:615:GLU:HG2	1:B:619:ASN:ND2	2.33	0.43
1:C:695:GLU:O	1:C:699:VAL:HG23	2.19	0.43
1:C:615:GLU:HG2	1:C:619:ASN:HD22	1.84	0.43
1:A:622:LYS:CE	1:C:441:SER:CB	2.83	0.43
1:B:107:LEU:O	1:B:108:PRO:O	2.37	0.43
1:C:91:PRO:C	1:C:93:LEU:N	2.71	0.43
1:D:57:THR:H	1:D:60:GLN:HG3	1.84	0.43
1:C:257:THR:HG21	1:C:348:ILE:CD1	2.49	0.43
1:D:348:ILE:HG22	1:D:350:ASP:OD1	2.19	0.43
1:A:429:ILE:HA	1:A:430:PRO:HD3	1.70	0.43
1:A:297:ILE:HA	1:A:297:ILE:HD12	1.88	0.43
1:B:326:ARG:CG	1:B:326:ARG:HH11	2.32	0.43
1:C:369:LYS:NZ	1:C:369:LYS:CB	2.82	0.43
1:A:554:PHE:O	1:A:558:GLU:HG2	2.19	0.43
1:A:167:ALA:HA	1:A:394:LYS:O	2.19	0.43
1:A:54:GLU:HG2	1:A:55:TYR:CD1	2.54	0.43
1:C:171:SER:HA	1:C:373:THR:O	2.18	0.43
1:C:367:ASP:CG	1:C:368:GLY:H	2.21	0.43
1:C:83:LEU:N	1:C:83:LEU:HD12	2.33	0.43
1:B:633:LEU:O	1:B:634:ASP:C	2.57	0.43
1:D:632:THR:O	1:D:635:GLN:N	2.51	0.43
1:C:89:SER:O	1:C:90:VAL:C	2.57	0.43
1:D:267:PHE:O	1:D:270:ILE:HB	2.19	0.43
1:D:395:GLN:O	1:D:395:GLN:CG	2.66	0.43
1:D:297:ILE:HA	1:D:297:ILE:HD12	1.88	0.43
1:B:47:ARG:HG2	1:B:47:ARG:HH11	1.83	0.43
1:D:288:GLN:C	1:D:290:GLY:H	2.21	0.43
1:B:419:GLU:O	1:B:421:GLY:N	2.52	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:484:ALA:HB2	1:A:539:ILE:HB	2.01	0.43
1:A:364:TRP:CE2	1:A:370:LEU:HD21	2.54	0.43
1:C:435:VAL:O	1:C:447:GLU:HA	2.18	0.43
1:D:254:LEU:HB3	1:D:263:ASP:OD2	2.19	0.43
1:B:478:ARG:HH12	1:B:510:ASP:CB	2.14	0.42
1:D:244:LYS:HE2	1:D:325:GLN:O	2.19	0.42
1:B:102:GLN:HG2	1:B:108:PRO:HD2	2.01	0.42
1:C:99:GLU:O	1:C:103:GLN:CB	2.67	0.42
1:D:89:SER:H	1:D:93:LEU:HD12	1.84	0.42
1:A:98:LYS:O	1:A:102:GLN:HG3	2.20	0.42
1:D:232:LEU:HG	1:D:236:ILE:HD11	2.00	0.42
1:C:167:ALA:HA	1:C:394:LYS:O	2.19	0.42
1:A:535:GLY:C	1:A:536:LYS:HD3	2.40	0.42
1:C:687:ILE:CG2	1:C:691:LEU:HD21	2.49	0.42
1:A:495:ASP:O	1:A:499:ILE:HG13	2.19	0.42
1:A:254:LEU:HB3	1:A:263:ASP:OD2	2.19	0.42
1:B:482:THR:HG23	1:B:483:PRO:HD2	2.01	0.42
1:B:367:ASP:CG	1:B:368:GLY:H	2.21	0.42
1:D:467:GLN:HB3	3:D:3252:HOH:O	2.19	0.42
1:C:285:VAL:HG21	1:C:311:LYS:HE3	2.01	0.42
1:B:99:GLU:C	1:B:101:GLN:H	2.23	0.42
1:C:98:LYS:HE3	1:C:98:LYS:HB2	1.62	0.42
1:D:600:ARG:NH1	1:D:649:ARG:NH1	2.64	0.42
1:A:600:ARG:NH1	2:A:1000:NAP:O3X	2.52	0.42
1:D:687:ILE:CG2	1:D:691:LEU:HD21	2.49	0.42
1:B:687:ILE:CG2	1:B:691:LEU:HD21	2.49	0.42
1:C:200:LEU:CD2	1:C:430:PRO:HD2	2.49	0.42
1:B:254:LEU:HB3	1:B:263:ASP:OD2	2.20	0.42
1:A:658:GLY:O	1:A:661:PHE:HB3	2.19	0.42
1:D:611:ALA:HB2	1:D:633:LEU:HG	2.01	0.42
1:A:140:GLU:OE1	1:A:140:GLU:HA	2.19	0.42
1:B:514:LEU:N	1:B:514:LEU:HD22	2.34	0.42
1:D:367:ASP:CG	1:D:368:GLY:H	2.21	0.42
1:C:478:ARG:HH12	1:C:510:ASP:CB	2.15	0.42
1:B:89:SER:O	1:B:90:VAL:C	2.58	0.42
1:B:94:LYS:O	1:B:97:ILE:CD1	2.68	0.42
1:A:89:SER:O	1:A:90:VAL:C	2.57	0.42
1:D:220:GLU:OE2	1:D:460:GLN:HB2	2.18	0.42
1:B:149:LEU:O	1:B:150:SER:C	2.57	0.42
1:D:698:ILE:O	1:D:699:VAL:C	2.56	0.42
1:D:482:THR:HG23	1:D:483:PRO:HD2	2.01	0.42
1:A:32:SER:HB2	1:A:683:GLN:OE1	2.19	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:D:435:VAL:O	1:D:447:GLU:HA	2.19	0.42
1:C:288:GLN:C	1:C:290:GLY:H	2.21	0.42
1:C:554:PHE:O	1:C:558:GLU:HG2	2.19	0.42
1:D:632:THR:O	1:D:635:GLN:HB3	2.18	0.42
1:C:632:THR:O	1:C:635:GLN:HB3	2.18	0.42
1:C:57:THR:H	1:C:60:GLN:HG3	1.85	0.42
1:A:353:MET:O	1:A:354:PRO:C	2.54	0.42
1:C:529:LEU:CA	1:C:532:ILE:HG22	2.48	0.42
1:A:400:ASP:HB3	1:A:403:THR:OG1	2.20	0.42
1:C:99:GLU:O	1:C:101:GLN:N	2.53	0.42
1:A:92:GLN:O	1:A:96:ALA:N	2.53	0.42
1:D:255:LYS:C	1:D:257:THR:H	2.23	0.42
1:C:600:ARG:HH11	1:C:649:ARG:HH11	1.66	0.42
1:B:468:ASP:HB2	1:B:572:MET:HE3	2.01	0.42
1:C:284:GLU:HA	1:C:287:LYS:HB3	2.02	0.42
1:C:25:ILE:O	1:C:26:ILE:C	2.57	0.42
1:D:364:TRP:CE2	1:D:370:LEU:HD21	2.55	0.42
1:B:348:ILE:HG22	1:B:350:ASP:OD1	2.20	0.42
1:C:489:ASP:HA	1:C:490:PRO:HD3	1.91	0.42
1:A:435:VAL:O	1:A:447:GLU:HA	2.19	0.42
1:C:614:LEU:HA	1:C:614:LEU:HD23	1.92	0.42
1:B:632:THR:O	1:B:635:GLN:HB3	2.19	0.42
1:C:97:ILE:HD13	1:C:98:LYS:H	1.77	0.42
1:A:255:LYS:C	1:A:257:THR:H	2.23	0.42
1:C:271:VAL:HB	1:C:293:VAL:HG22	2.00	0.42
1:D:487:TRP:CG	1:D:542:THR:HG22	2.55	0.42
1:D:429:ILE:HA	1:D:430:PRO:HD3	1.70	0.42
1:B:369:LYS:CB	1:B:369:LYS:NZ	2.82	0.42
1:B:400:ASP:HB3	1:B:403:THR:OG1	2.20	0.42
1:C:254:LEU:HB3	1:C:263:ASP:OD2	2.20	0.42
1:D:356:MET:O	1:D:361:GLY:HA2	2.20	0.42
1:B:671:LEU:HD12	1:B:684:PHE:CE2	2.54	0.42
1:C:97:ILE:HG22	1:C:716:TYR:CZ	2.53	0.42
1:D:98:LYS:HB2	1:D:98:LYS:HE3	1.61	0.42
1:B:557:MET:HA	1:B:557:MET:HE2	2.01	0.42
1:D:566:LEU:HD21	1:D:568:ILE:CG1	2.50	0.42
1:B:695:GLU:HG2	1:B:696:THR:N	2.35	0.42
1:A:284:GLU:HA	1:A:287:LYS:HB3	2.02	0.42
1:D:249:LEU:CD1	1:D:363:MET:O	2.68	0.42
1:C:514:LEU:N	1:C:514:LEU:HD22	2.35	0.42
1:D:554:PHE:O	1:D:558:GLU:HG2	2.20	0.42
1:A:94:LYS:HE3	1:A:98:LYS:NZ	2.34	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:99:GLU:C	1:A:101:GLN:H	2.23	0.42
1:A:181:PHE:CE2	1:A:457:ARG:HD3	2.55	0.42
1:D:236:ILE:CD1	1:D:270:ILE:HG12	2.41	0.42
1:D:13:GLU:HB3	1:D:590:VAL:HG21	2.02	0.42
1:C:419:GLU:O	1:C:421:GLY:N	2.53	0.42
1:D:400:ASP:HB3	1:D:403:THR:OG1	2.20	0.42
1:B:382:TYR:CE1	1:B:545:VAL:HG11	2.55	0.42
1:C:663:LEU:O	1:C:667:TRP:HB2	2.19	0.41
1:D:15:PRO:O	1:D:18:ALA:HB3	2.20	0.41
1:D:657:ARG:NH2	1:D:728:ARG:HB3	2.35	0.41
1:C:12:ASP:HB2	1:C:86:ILE:HG13	2.01	0.41
1:D:200:LEU:CD2	1:D:430:PRO:HD2	2.50	0.41
1:A:253:HIS:HD2	1:A:375:ALA:HB1	1.84	0.41
1:A:369:LYS:NZ	1:A:369:LYS:CB	2.83	0.41
1:D:369:LYS:NZ	1:D:369:LYS:CB	2.83	0.41
1:C:610:LEU:O	1:C:612:ALA:N	2.52	0.41
1:D:695:GLU:HG2	1:D:696:THR:N	2.35	0.41
1:B:364:TRP:CE2	1:B:370:LEU:HD21	2.55	0.41
1:B:284:GLU:HA	1:B:287:LYS:HB3	2.02	0.41
1:D:192:ALA:HA	1:D:193:PRO:HD3	1.90	0.41
1:C:671:LEU:HD12	1:C:684:PHE:CE2	2.55	0.41
1:D:107:LEU:O	1:D:108:PRO:O	2.38	0.41
1:D:97:ILE:HG22	1:D:716:TYR:CZ	2.53	0.41
1:A:97:ILE:HD13	1:A:98:LYS:H	1.77	0.41
1:D:728:ARG:N	1:D:729:PRO:CD	2.82	0.41
1:D:353:MET:O	1:D:354:PRO:C	2.56	0.41
1:C:85:ASN:H	2:C:1002:NAP:H71N	1.68	0.41
1:D:489:ASP:HA	1:D:490:PRO:HD3	1.91	0.41
1:C:364:TRP:CE2	1:C:370:LEU:HD21	2.55	0.41
1:B:477:ALA:HA	1:B:539:ILE:HD12	2.02	0.41
1:C:268:GLY:O	1:C:272:SER:N	2.53	0.41
1:D:284:GLU:HA	1:D:287:LYS:HB3	2.02	0.41
1:C:561:THR:CG2	1:C:563:ALA:H	2.15	0.41
1:A:98:LYS:HB2	1:A:98:LYS:HE3	1.62	0.41
1:A:15:PRO:O	1:A:18:ALA:HB3	2.20	0.41
1:B:600:ARG:NH1	1:B:649:ARG:NH1	2.65	0.41
1:B:695:GLU:O	1:B:699:VAL:HG23	2.21	0.41
1:B:531:ARG:HG2	1:B:531:ARG:HH11	1.85	0.41
1:D:671:LEU:C	1:D:673:ALA:H	2.23	0.41
1:C:181:PHE:CE2	1:C:457:ARG:HD3	2.55	0.41
1:C:557:MET:HE2	1:C:557:MET:HA	2.02	0.41
1:A:600:ARG:NH1	1:A:649:ARG:NH1	2.65	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:B:21:SER:OG	1:B:657:ARG:HG3	2.20	0.41
1:A:47:ARG:HH11	1:A:47:ARG:HG2	1.85	0.41
1:B:200:LEU:CD2	1:B:430:PRO:HD2	2.51	0.41
1:A:226:VAL:HA	1:A:455:ILE:O	2.21	0.41
1:A:268:GLY:O	1:A:272:SER:N	2.53	0.41
1:B:658:GLY:O	1:B:661:PHE:HB3	2.20	0.41
1:D:143:SER:HB3	1:D:547:ARG:HD2	2.02	0.41
1:B:29:PHE:CE2	1:B:667:TRP:HB3	2.56	0.41
1:B:97:ILE:HG22	1:B:716:TYR:CZ	2.54	0.41
1:C:98:LYS:O	1:C:102:GLN:HG3	2.21	0.41
1:D:94:LYS:O	1:D:97:ILE:CD1	2.69	0.41
1:A:107:LEU:O	1:A:108:PRO:O	2.38	0.41
1:D:185:GLU:OE1	1:D:492:ARG:NH1	2.53	0.41
1:D:167:ALA:HA	1:D:394:LYS:O	2.20	0.41
1:B:54:GLU:HG2	1:B:55:TYR:CD1	2.55	0.41
1:A:564:LYS:HG2	1:A:604:LEU:HD23	2.03	0.41
1:D:474:VAL:O	1:D:475:ASN:C	2.58	0.41
1:B:143:SER:HB3	1:B:547:ARG:HD2	2.02	0.41
1:A:367:ASP:CG	1:A:368:GLY:H	2.22	0.41
1:A:514:LEU:N	1:A:514:LEU:HD22	2.36	0.41
1:D:451:GLU:O	1:D:454:ASP:HB2	2.21	0.41
1:A:633:LEU:HB2	1:A:667:TRP:CZ2	2.56	0.41
1:C:632:THR:O	1:C:633:LEU:C	2.57	0.41
1:C:632:THR:HG1	1:C:667:TRP:HE1	1.66	0.41
1:B:89:SER:N	1:B:93:LEU:HD12	2.36	0.41
1:C:89:SER:H	1:C:93:LEU:HB2	1.85	0.41
1:A:102:GLN:HG2	1:A:108:PRO:HD2	2.02	0.41
1:B:62:ILE:O	1:B:63:SER:C	2.58	0.41
1:A:492:ARG:CG	1:A:492:ARG:HH11	2.33	0.41
1:B:557:MET:HA	1:B:557:MET:CE	2.50	0.41
1:B:15:PRO:O	1:B:18:ALA:HB3	2.20	0.41
1:A:12:ASP:HB2	1:A:86:ILE:HG13	2.02	0.41
1:A:12:ASP:OD1	1:A:43:SER:HB2	2.20	0.41
1:C:573:SER:O	1:C:575:GLY:N	2.53	0.41
1:D:604:LEU:O	1:D:608:LEU:HG	2.21	0.41
1:A:239:GLU:O	1:A:243:ALA:HB2	2.21	0.41
1:C:615:GLU:HG2	1:C:619:ASN:ND2	2.35	0.41
1:A:25:ILE:O	1:A:26:ILE:C	2.58	0.41
1:B:140:GLU:HA	1:B:140:GLU:OE1	2.21	0.41
1:A:561:THR:CG2	1:A:563:ALA:H	2.15	0.41
1:B:98:LYS:HB2	1:B:98:LYS:HE3	1.64	0.41
1:C:107:LEU:O	1:C:108:PRO:O	2.39	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:D:94:LYS:HE3	1:D:98:LYS:HZ2	1.86	0.41
1:D:271:VAL:HB	1:D:293:VAL:HG22	2.02	0.41
1:A:557:MET:HA	1:A:557:MET:HE2	2.02	0.41
1:B:566:LEU:HD21	1:B:568:ILE:CG1	2.48	0.41
1:C:395:GLN:O	1:C:395:GLN:CG	2.68	0.41
1:C:253:HIS:HD2	1:C:375:ALA:HB1	1.84	0.41
1:A:288:GLN:C	1:A:290:GLY:N	2.74	0.41
1:C:571:LEU:HD12	1:C:576:GLY:N	2.36	0.41
1:A:451:GLU:O	1:A:454:ASP:HB2	2.21	0.41
1:B:268:GLY:O	1:B:272:SER:N	2.54	0.41
1:D:484:ALA:HB2	1:D:539:ILE:HB	2.03	0.41
1:B:57:THR:H	1:B:60:GLN:HG3	1.86	0.41
1:C:94:LYS:O	1:C:97:ILE:CD1	2.69	0.41
1:C:220:GLU:OE2	1:C:460:GLN:HB2	2.19	0.41
1:C:468:ASP:HB2	1:C:572:MET:HE3	2.02	0.41
1:D:477:ALA:HA	1:D:539:ILE:HD12	2.03	0.41
1:A:249:LEU:CD1	1:A:363:MET:O	2.69	0.41
1:D:419:GLU:O	1:D:421:GLY:N	2.54	0.41
1:C:658:GLY:O	1:C:661:PHE:HB3	2.20	0.41
1:A:663:LEU:O	1:A:667:TRP:HB2	2.20	0.41
1:A:478:ARG:HH12	1:A:510:ASP:CB	2.16	0.41
1:A:671:LEU:HD12	1:A:684:PHE:CE2	2.56	0.41
1:D:285:VAL:HG21	1:D:311:LYS:HE3	2.03	0.41
1:B:89:SER:CB	1:B:93:LEU:HD12	2.51	0.41
1:A:97:ILE:HG22	1:A:716:TYR:CZ	2.54	0.41
1:A:728:ARG:N	1:A:729:PRO:CD	2.82	0.41
1:B:529:LEU:CA	1:B:532:ILE:HG22	2.50	0.41
1:C:552:ASP:O	1:C:556:ILE:HG13	2.21	0.41
1:A:14:ALA:O	1:A:15:PRO:C	2.58	0.41
1:A:625:LYS:HE3	1:A:680:LEU:HD11	2.03	0.41
1:C:687:ILE:HG22	1:C:691:LEU:CD2	2.51	0.41
1:D:47:ARG:HH11	1:D:47:ARG:HG2	1.85	0.41
1:A:149:LEU:O	1:A:150:SER:C	2.59	0.41
1:A:149:LEU:O	1:A:152:LYS:N	2.54	0.41
1:A:487:TRP:CG	1:A:542:THR:HG22	2.56	0.41
1:A:482:THR:HG23	1:A:483:PRO:HD2	2.02	0.41
1:A:531:ARG:HH11	1:A:531:ARG:HG2	1.86	0.41
1:A:695:GLU:O	1:A:699:VAL:HG23	2.21	0.41
1:A:698:ILE:O	1:A:699:VAL:C	2.57	0.41
1:B:228:SER:HB3	1:B:231:ALA:HB3	2.02	0.41
1:D:195:SER:HA	1:D:215:SER:HA	2.03	0.41
1:C:195:SER:HA	1:C:215:SER:HA	2.03	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:B:554:PHE:O	1:B:558:GLU:HG2	2.21	0.41
1:B:610:LEU:HB3	1:B:633:LEU:HD21	2.01	0.41
1:D:94:LYS:HZ3	1:D:111:PRO:HB3	1.86	0.41
1:A:271:VAL:HB	1:A:293:VAL:HG22	2.02	0.41
1:C:14:ALA:O	1:C:15:PRO:C	2.58	0.41
1:C:625:LYS:HE3	1:C:680:LEU:HD11	2.03	0.41
1:D:149:LEU:O	1:D:152:LYS:N	2.54	0.41
1:A:326:ARG:NH1	1:A:326:ARG:CG	2.84	0.41
1:B:395:GLN:CG	1:B:395:GLN:O	2.69	0.41
1:D:239:GLU:O	1:D:243:ALA:HB2	2.21	0.41
1:B:195:SER:HA	1:B:215:SER:HA	2.03	0.41
1:B:571:LEU:HD12	1:B:576:GLY:N	2.36	0.41
1:D:615:GLU:HG2	1:D:619:ASN:HD22	1.86	0.41
1:D:110:TYR:HA	1:D:111:PRO:HD3	1.51	0.40
1:A:266:MET:O	1:A:270:ILE:HG13	2.21	0.40
1:B:255:LYS:C	1:B:257:THR:H	2.25	0.40
1:A:467:GLN:C	1:A:469:TRP:N	2.74	0.40
1:D:21:SER:OG	1:D:657:ARG:HG3	2.21	0.40
1:B:728:ARG:N	1:B:729:PRO:CD	2.83	0.40
1:C:353:MET:O	1:C:354:PRO:C	2.57	0.40
1:B:297:ILE:HA	1:B:297:ILE:HD12	1.91	0.40
1:C:695:GLU:HG2	1:C:696:THR:N	2.36	0.40
1:C:698:ILE:O	1:C:699:VAL:C	2.59	0.40
1:A:544:ASN:O	1:A:547:ARG:HB3	2.21	0.40
1:B:25:ILE:O	1:B:26:ILE:C	2.59	0.40
1:B:486:PHE:HA	1:B:541:VAL:O	2.20	0.40
1:A:474:VAL:O	1:A:475:ASN:C	2.59	0.40
1:A:486:PHE:HA	1:A:541:VAL:O	2.20	0.40
1:B:610:LEU:O	1:B:612:ALA:N	2.53	0.40
1:B:632:THR:O	1:B:633:LEU:C	2.58	0.40
1:A:614:LEU:HD23	1:A:614:LEU:HA	1.94	0.40
1:B:89:SER:H	1:B:93:LEU:HD12	1.86	0.40
1:A:232:LEU:HG	1:A:236:ILE:HD11	2.03	0.40
1:A:529:LEU:CA	1:A:532:ILE:HG22	2.50	0.40
1:A:687:ILE:CG2	1:A:691:LEU:HD21	2.51	0.40
1:C:244:LYS:HE2	1:C:325:GLN:O	2.21	0.40
1:A:200:LEU:CD2	1:A:430:PRO:HD2	2.51	0.40
1:B:377:ILE:CG2	1:B:383:ALA:HB2	2.52	0.40
1:A:395:GLN:O	1:A:395:GLN:CG	2.69	0.40
1:A:610:LEU:O	1:A:612:ALA:N	2.53	0.40
1:C:712:ILE:HD12	1:C:718:PRO:HB3	2.02	0.40
1:B:142:ASN:O	1:B:570:PRO:HD2	2.21	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:C:376:VAL:O	1:C:378:PRO:HD3	2.22	0.40
1:B:288:GLN:C	1:B:290:GLY:H	2.23	0.40
1:A:29:PHE:CE2	1:A:667:TRP:HB3	2.57	0.40
1:A:258:MET:O	1:A:423:HIS:CE1	2.74	0.40
1:A:244:LYS:CB	1:A:327:PRO:HG3	2.52	0.40
1:B:149:LEU:O	1:B:152:LYS:N	2.55	0.40
1:B:573:SER:O	1:B:575:GLY:N	2.54	0.40
1:A:419:GLU:C	1:A:421:GLY:H	2.25	0.40
1:A:695:GLU:HG2	1:A:696:THR:N	2.36	0.40
1:D:196:VAL:HA	1:D:438:THR:O	2.20	0.40
1:C:484:ALA:HB2	1:C:539:ILE:HB	2.03	0.40
1:D:486:PHE:HA	1:D:541:VAL:O	2.20	0.40
1:C:451:GLU:O	1:C:454:ASP:HB2	2.22	0.40
1:C:382:TYR:CE1	1:C:545:VAL:HG11	2.57	0.40
1:B:663:LEU:O	1:B:667:TRP:HB2	2.20	0.40
1:D:89:SER:O	1:D:90:VAL:C	2.59	0.40
1:A:94:LYS:HZ1	1:A:111:PRO:HB3	1.87	0.40
1:C:293:VAL:C	1:C:295:ASN:H	2.25	0.40
1:C:348:ILE:HG22	1:C:350:ASP:OD1	2.21	0.40
1:D:14:ALA:O	1:D:15:PRO:C	2.59	0.40
1:D:687:ILE:HG22	1:D:691:LEU:CD2	2.52	0.40
1:B:625:LYS:HE3	1:B:680:LEU:HD11	2.04	0.40
1:B:139:ARG:HB3	1:B:413:MET:HE3	2.02	0.40
1:D:610:LEU:O	1:D:612:ALA:N	2.53	0.40
1:D:671:LEU:HD12	1:D:684:PHE:CE2	2.56	0.40
1:C:633:LEU:O	1:C:634:ASP:C	2.60	0.40
1:D:186:LYS:HD2	1:D:448:GLN:HG2	2.03	0.40
1:C:728:ARG:N	1:C:729:PRO:CD	2.83	0.40
1:B:244:LYS:HE2	1:B:325:GLN:O	2.21	0.40
1:C:413:MET:HA	1:C:544:ASN:ND2	2.36	0.40
1:D:564:LYS:HE2	3:D:3133:HOH:O	2.22	0.40
1:D:253:HIS:HD2	1:D:375:ALA:HB1	1.85	0.40
1:A:477:ALA:HA	1:A:539:ILE:HD12	2.04	0.40
1:C:477:ALA:HA	1:C:539:ILE:HD12	2.04	0.40

There are no symmetry-related clashes.

## 5.3 Torsion angles

### 5.3.1 Protein backbone ⓘ

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution. The Analysed column shows the number of residues for which the backbone conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	736/741 (99%)	591 (80%)	119 (16%)	26 (4%)	6	37
1	B	736/741 (99%)	587 (80%)	122 (17%)	27 (4%)	5	34
1	C	736/741 (99%)	590 (80%)	119 (16%)	27 (4%)	5	34
1	D	736/741 (99%)	588 (80%)	120 (16%)	28 (4%)	5	34
All	All	2944/2964 (99%)	2356 (80%)	480 (16%)	108 (4%)	5	34

All (108) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	91	PRO
1	A	103	GLN
1	A	108	PRO
1	A	573	SER
1	B	91	PRO
1	B	103	GLN
1	B	108	PRO
1	B	573	SER
1	C	91	PRO
1	C	103	GLN
1	C	108	PRO
1	C	573	SER
1	D	91	PRO
1	D	103	GLN
1	D	108	PRO
1	D	573	SER
1	A	62	ILE
1	A	63	SER
1	A	92	GLN
1	A	93	LEU
1	A	112	GLU
1	A	553	LEU
1	A	574	GLY
1	A	654	ILE

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Mol	Chain	Res	Type
1	B	62	ILE
1	B	63	SER
1	B	92	GLN
1	B	93	LEU
1	B	112	GLU
1	B	574	GLY
1	B	654	ILE
1	C	62	ILE
1	C	63	SER
1	C	92	GLN
1	C	93	LEU
1	C	112	GLU
1	C	553	LEU
1	C	574	GLY
1	C	654	ILE
1	D	62	ILE
1	D	63	SER
1	D	92	GLN
1	D	93	LEU
1	D	112	GLU
1	D	574	GLY
1	D	654	ILE
1	A	106	LYS
1	A	111	PRO
1	A	185	GLU
1	A	256	ALA
1	A	305	LYS
1	A	420	TYR
1	A	655	ASP
1	B	106	LYS
1	B	111	PRO
1	B	420	TYR
1	B	553	LEU
1	B	655	ASP
1	C	106	LYS
1	C	111	PRO
1	C	185	GLU
1	C	305	LYS
1	C	420	TYR
1	C	655	ASP
1	D	106	LYS
1	D	111	PRO

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Mol	Chain	Res	Type
1	D	420	TYR
1	D	553	LEU
1	D	655	ASP
1	A	4	PRO
1	A	368	GLY
1	A	617	LEU
1	A	730	SER
1	B	4	PRO
1	B	185	GLU
1	B	256	ALA
1	B	305	LYS
1	B	367	ASP
1	B	368	GLY
1	B	617	LEU
1	B	730	SER
1	C	4	PRO
1	C	256	ALA
1	C	368	GLY
1	C	617	LEU
1	C	730	SER
1	D	4	PRO
1	D	102	GLN
1	D	185	GLU
1	D	256	ALA
1	D	305	LYS
1	D	368	GLY
1	D	617	LEU
1	D	730	SER
1	A	367	ASP
1	A	408	PRO
1	B	102	GLN
1	B	408	PRO
1	C	102	GLN
1	C	367	ASP
1	C	408	PRO
1	D	367	ASP
1	D	408	PRO
1	D	690	ALA
1	A	349	VAL
1	B	349	VAL
1	D	349	VAL
1	C	349	VAL

### 5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all 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	599/601 (100%)	563 (94%)	36 (6%)	27	72
1	B	599/601 (100%)	563 (94%)	36 (6%)	27	72
1	C	599/601 (100%)	562 (94%)	37 (6%)	26	70
1	D	599/601 (100%)	563 (94%)	36 (6%)	27	72
All	All	2396/2404 (100%)	2251 (94%)	145 (6%)	26	71

All (145) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	4	PRO
1	A	44	LEU
1	A	47	ARG
1	A	48	LEU
1	A	54	GLU
1	A	58	ASP
1	A	66	LEU
1	A	92	GLN
1	A	97	ILE
1	A	105	TYR
1	A	106	LYS
1	A	107	LEU
1	A	109	ASP
1	A	121	ASP
1	A	245	LYS
1	A	263	ASP
1	A	286	LEU
1	A	306	THR
1	A	342	HIS
1	A	399	PHE
1	A	416	LYS
1	A	492	ARG
1	A	510	ASP
1	A	538	THR
1	A	552	ASP
1	A	585	SER

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Mol	Chain	Res	Type
1	A	606	GLU
1	A	629	LEU
1	A	640	ILE
1	A	654	ILE
1	A	655	ASP
1	A	657	ARG
1	A	674	GLN
1	A	684	PHE
1	A	693	ASP
1	A	696	THR
1	B	4	PRO
1	B	44	LEU
1	B	47	ARG
1	B	48	LEU
1	B	54	GLU
1	B	58	ASP
1	B	66	LEU
1	B	92	GLN
1	B	97	ILE
1	B	105	TYR
1	B	106	LYS
1	B	107	LEU
1	B	109	ASP
1	B	121	ASP
1	B	245	LYS
1	B	263	ASP
1	B	286	LEU
1	B	306	THR
1	B	342	HIS
1	B	399	PHE
1	B	416	LYS
1	B	492	ARG
1	B	510	ASP
1	B	538	THR
1	B	552	ASP
1	B	585	SER
1	B	606	GLU
1	B	629	LEU
1	B	640	ILE
1	B	654	ILE
1	B	655	ASP
1	B	657	ARG

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Mol	Chain	Res	Type
1	B	674	GLN
1	B	684	PHE
1	B	693	ASP
1	B	696	THR
1	C	4	PRO
1	C	11	THR
1	C	44	LEU
1	C	47	ARG
1	C	48	LEU
1	C	54	GLU
1	C	58	ASP
1	C	66	LEU
1	C	92	GLN
1	C	97	ILE
1	C	105	TYR
1	C	106	LYS
1	C	107	LEU
1	C	109	ASP
1	C	121	ASP
1	C	245	LYS
1	C	263	ASP
1	C	286	LEU
1	C	306	THR
1	C	342	HIS
1	C	399	PHE
1	C	416	LYS
1	C	492	ARG
1	C	510	ASP
1	C	538	THR
1	C	552	ASP
1	C	585	SER
1	C	606	GLU
1	C	629	LEU
1	C	640	ILE
1	C	654	ILE
1	C	655	ASP
1	C	657	ARG
1	C	674	GLN
1	C	684	PHE
1	C	693	ASP
1	C	696	THR
1	D	4	PRO

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Mol	Chain	Res	Type
1	D	44	LEU
1	D	47	ARG
1	D	48	LEU
1	D	54	GLU
1	D	58	ASP
1	D	66	LEU
1	D	92	GLN
1	D	97	ILE
1	D	105	TYR
1	D	106	LYS
1	D	107	LEU
1	D	109	ASP
1	D	121	ASP
1	D	245	LYS
1	D	263	ASP
1	D	286	LEU
1	D	306	THR
1	D	342	HIS
1	D	399	PHE
1	D	416	LYS
1	D	492	ARG
1	D	510	ASP
1	D	538	THR
1	D	552	ASP
1	D	585	SER
1	D	606	GLU
1	D	629	LEU
1	D	640	ILE
1	D	654	ILE
1	D	655	ASP
1	D	657	ARG
1	D	674	GLN
1	D	684	PHE
1	D	693	ASP
1	D	696	THR

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (72) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	60	GLN
1	A	153	ASN
1	A	217	GLN

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Mol	Chain	Res	Type
1	A	234	ASN
1	A	269	GLN
1	A	282	HIS
1	A	295	ASN
1	A	320	GLN
1	A	423	HIS
1	A	460	GLN
1	A	591	GLN
1	A	619	ASN
1	A	635	GLN
1	A	656	ASN
1	A	660	HIS
1	A	669	GLN
1	B	60	GLN
1	B	135	ASN
1	B	153	ASN
1	B	175	HIS
1	B	217	GLN
1	B	234	ASN
1	B	269	GLN
1	B	282	HIS
1	B	295	ASN
1	B	320	GLN
1	B	423	HIS
1	B	460	GLN
1	B	591	GLN
1	B	619	ASN
1	B	635	GLN
1	B	656	ASN
1	B	660	HIS
1	B	669	GLN
1	C	60	GLN
1	C	135	ASN
1	C	175	HIS
1	C	217	GLN
1	C	234	ASN
1	C	269	GLN
1	C	282	HIS
1	C	295	ASN
1	C	320	GLN
1	C	340	ASN
1	C	395	GLN

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Mol	Chain	Res	Type
1	C	423	HIS
1	C	460	GLN
1	C	475	ASN
1	C	591	GLN
1	C	619	ASN
1	C	635	GLN
1	C	656	ASN
1	C	660	HIS
1	C	669	GLN
1	C	694	ASN
1	D	60	GLN
1	D	153	ASN
1	D	175	HIS
1	D	217	GLN
1	D	234	ASN
1	D	269	GLN
1	D	282	HIS
1	D	295	ASN
1	D	320	GLN
1	D	423	HIS
1	D	460	GLN
1	D	591	GLN
1	D	619	ASN
1	D	635	GLN
1	D	656	ASN
1	D	660	HIS
1	D	669	GLN

### 5.3.3 RNA ⓘ

There are no RNA chains in this entry.

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

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

### 5.5 Carbohydrates ⓘ

There are no carbohydrates in this entry.

## 5.6 Ligand geometry ⓘ

4 ligands are modelled in this entry.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the chemical component dictionary. The Link column lists molecule types, if any, to which the group is linked. 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  $|Z| > 2$  is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# $ Z  > 2$	Counts	RMSZ	# $ Z  > 2$
2	NAP	A	1000	-	52,52,52	1.79	9 (17%)	80,80,80	1.77	15 (18%)
2	NAP	B	1001	-	52,52,52	1.80	11 (21%)	80,80,80	1.75	18 (22%)
2	NAP	C	1002	-	52,52,52	1.83	13 (25%)	80,80,80	1.80	16 (20%)
2	NAP	D	1003	-	52,52,52	1.78	11 (21%)	80,80,80	1.77	16 (20%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the chemical component dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	NAP	A	1000	-	-	0/35/67/67	0/3/5/5
2	NAP	B	1001	-	-	0/35/67/67	0/3/5/5
2	NAP	C	1002	-	-	0/35/67/67	0/3/5/5
2	NAP	D	1003	-	-	0/35/67/67	0/3/5/5

All (44) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	A	1000	NAP	C2N-N1N	6.55	1.43	1.35
2	B	1001	NAP	C2N-N1N	6.38	1.43	1.35
2	D	1003	NAP	C2N-N1N	6.14	1.43	1.35
2	C	1002	NAP	C2N-N1N	5.99	1.43	1.35
2	C	1002	NAP	C4N-C3N	4.84	1.47	1.39
2	B	1001	NAP	C4N-C3N	4.73	1.47	1.39
2	A	1000	NAP	C4N-C3N	4.61	1.47	1.39
2	D	1003	NAP	C4N-C3N	4.50	1.47	1.39
2	B	1001	NAP	C2A-N1A	3.73	1.41	1.33
2	A	1000	NAP	C2A-N1A	3.54	1.40	1.33
2	C	1002	NAP	C2D-C1D	-3.52	1.48	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	D	1003	NAP	O4D-C1D	3.38	1.46	1.41
2	B	1001	NAP	C2A-N3A	3.34	1.38	1.32
2	C	1002	NAP	C2A-N1A	3.30	1.40	1.33
2	C	1002	NAP	C2A-N3A	3.27	1.38	1.32
2	C	1002	NAP	C6N-N1N	3.13	1.44	1.35
2	D	1003	NAP	C2A-N1A	3.11	1.40	1.33
2	D	1003	NAP	PA-O1A	-3.05	1.39	1.51
2	D	1003	NAP	C6N-N1N	3.02	1.44	1.35
2	A	1000	NAP	C6N-N1N	2.99	1.43	1.35
2	A	1000	NAP	PA-O1A	-2.88	1.40	1.51
2	C	1002	NAP	PA-O1A	-2.84	1.40	1.51
2	B	1001	NAP	O4D-C1D	2.83	1.45	1.41
2	A	1000	NAP	C2A-N3A	2.80	1.37	1.32
2	B	1001	NAP	PA-O1A	-2.77	1.40	1.51
2	B	1001	NAP	C6N-N1N	2.76	1.43	1.35
2	D	1003	NAP	C2A-N3A	2.72	1.37	1.32
2	A	1000	NAP	O4D-C1D	2.64	1.45	1.41
2	C	1002	NAP	O4D-C1D	2.60	1.45	1.41
2	C	1002	NAP	C4A-N3A	2.59	1.39	1.35
2	B	1001	NAP	C3N-C7N	2.54	1.54	1.50
2	A	1000	NAP	C2D-C1D	-2.52	1.49	1.53
2	B	1001	NAP	C4A-N3A	2.44	1.39	1.35
2	D	1003	NAP	C3N-C7N	2.43	1.54	1.50
2	C	1002	NAP	C3N-C7N	2.35	1.54	1.50
2	A	1000	NAP	C3N-C7N	2.18	1.54	1.50
2	C	1002	NAP	O4B-C4B	2.17	1.50	1.45
2	C	1002	NAP	C6N-C5N	2.17	1.43	1.38
2	B	1001	NAP	C2D-C1D	-2.15	1.50	1.53
2	D	1003	NAP	O4B-C4B	2.12	1.50	1.45
2	B	1001	NAP	C2B-C1B	2.05	1.56	1.52
2	C	1002	NAP	C5N-C4N	2.04	1.43	1.39
2	D	1003	NAP	C2B-C1B	2.04	1.56	1.52
2	D	1003	NAP	C2D-C1D	-2.03	1.50	1.53

All (65) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	D	1003	NAP	N3A-C2A-N1A	-7.02	122.84	128.71
2	C	1002	NAP	N3A-C2A-N1A	-7.02	122.84	128.71
2	A	1000	NAP	N3A-C2A-N1A	-6.84	122.99	128.71
2	B	1001	NAP	N3A-C2A-N1A	-6.79	123.03	128.71
2	C	1002	NAP	O4D-C1D-N1N	-5.48	102.35	107.95

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	A	1000	NAP	O4D-C1D-N1N	-5.46	102.36	107.95
2	C	1002	NAP	O4B-C1B-C2B	-5.28	102.01	106.95
2	D	1003	NAP	O4D-C1D-N1N	-5.21	102.62	107.95
2	B	1001	NAP	O4D-C1D-N1N	-5.08	102.75	107.95
2	D	1003	NAP	O4B-C1B-C2B	-4.89	102.38	106.95
2	B	1001	NAP	O4B-C1B-C2B	-4.86	102.40	106.95
2	A	1000	NAP	O4B-C1B-C2B	-4.79	102.47	106.95
2	A	1000	NAP	O4B-C1B-N9A	4.01	112.17	108.44
2	B	1001	NAP	O4B-C1B-N9A	3.51	111.70	108.44
2	D	1003	NAP	O4B-C1B-N9A	3.43	111.63	108.44
2	C	1002	NAP	C3N-C7N-N7N	3.41	121.65	117.77
2	C	1002	NAP	O4B-C1B-N9A	3.30	111.51	108.44
2	D	1003	NAP	C3N-C7N-N7N	3.28	121.51	117.77
2	C	1002	NAP	C8A-N9A-C1B	3.25	132.79	126.38
2	B	1001	NAP	C3N-C7N-N7N	3.24	121.46	117.77
2	A	1000	NAP	C3N-C7N-N7N	3.13	121.33	117.77
2	B	1001	NAP	C2D-C1D-N1N	3.05	119.02	113.86
2	D	1003	NAP	C8A-N9A-C1B	3.02	132.32	126.38
2	B	1001	NAP	C8A-N9A-C1B	3.00	132.30	126.38
2	A	1000	NAP	O7N-C7N-C3N	-2.99	116.21	119.58
2	C	1002	NAP	O7N-C7N-C3N	-2.95	116.25	119.58
2	A	1000	NAP	C8A-N9A-C1B	2.94	132.18	126.38
2	C	1002	NAP	C2D-C1D-N1N	2.91	118.79	113.86
2	A	1000	NAP	C2D-C1D-N1N	2.88	118.73	113.86
2	B	1001	NAP	O7N-C7N-C3N	-2.77	116.45	119.58
2	D	1003	NAP	C2D-C1D-N1N	2.76	118.53	113.86
2	D	1003	NAP	P2B-O2B-C2B	2.71	127.66	121.96
2	D	1003	NAP	O7N-C7N-C3N	-2.71	116.53	119.58
2	A	1000	NAP	P2B-O2B-C2B	2.67	127.58	121.96
2	D	1003	NAP	C5A-C6A-N6A	2.65	126.71	120.72
2	B	1001	NAP	P2B-O2B-C2B	2.65	127.53	121.96
2	A	1000	NAP	C2N-C3N-C4N	2.64	121.30	118.31
2	C	1002	NAP	C8A-N9A-C4A	-2.62	104.90	106.90
2	D	1003	NAP	C2N-C3N-C4N	2.61	121.27	118.31
2	A	1000	NAP	C5A-C6A-N6A	2.51	126.39	120.72
2	C	1002	NAP	C1B-N9A-C4A	-2.50	122.31	126.64
2	B	1001	NAP	C5A-C6A-N6A	2.48	126.33	120.72
2	C	1002	NAP	P2B-O2B-C2B	2.47	127.16	121.96
2	C	1002	NAP	C2N-C3N-C4N	2.47	121.11	118.31
2	B	1001	NAP	O2A-PA-O1A	2.42	125.73	112.21
2	D	1003	NAP	O2A-PA-O1A	2.41	125.69	112.21
2	A	1000	NAP	C1B-N9A-C4A	-2.39	122.51	126.64

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	D	1003	NAP	C8A-N9A-C4A	-2.38	105.08	106.90
2	B	1001	NAP	C8A-N9A-C4A	-2.38	105.08	106.90
2	A	1000	NAP	N3A-C4A-N9A	2.36	129.70	125.43
2	D	1003	NAP	C1B-N9A-C4A	-2.34	122.60	126.64
2	B	1001	NAP	C1B-N9A-C4A	-2.33	122.62	126.64
2	C	1002	NAP	O2A-PA-O1A	2.32	125.19	112.21
2	B	1001	NAP	C2N-C3N-C4N	2.31	120.93	118.31
2	C	1002	NAP	C4B-O4B-C1B	2.30	112.25	109.75
2	C	1002	NAP	C5A-C6A-N6A	2.30	125.92	120.72
2	B	1001	NAP	N3A-C4A-N9A	2.26	129.51	125.43
2	C	1002	NAP	N3A-C4A-N9A	2.25	129.49	125.43
2	D	1003	NAP	N3A-C4A-N9A	2.25	129.49	125.43
2	A	1000	NAP	O2A-PA-O1A	2.24	124.74	112.21
2	B	1001	NAP	O2X-P2B-O2B	-2.16	100.86	107.09
2	B	1001	NAP	C4B-O4B-C1B	2.11	112.04	109.75
2	A	1000	NAP	C8A-N9A-C4A	-2.09	105.31	106.90
2	B	1001	NAP	O5B-C5B-C4B	-2.06	101.38	108.94
2	D	1003	NAP	C4A-C5A-N7A	2.06	111.28	109.52

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

## 5.7 Other polymers ⓘ

There are no such residues in this entry.

## 5.8 Polymer linkage issues

There are no chain breaks in this entry.

## 6 Fit of model and data ⓘ

### 6.1 Protein, DNA and RNA chains ⓘ

EDS was not executed - this section will therefore be empty.

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

EDS was not executed - this section will therefore be empty.

### 6.3 Carbohydrates ⓘ

EDS was not executed - this section will therefore be empty.

### 6.4 Ligands ⓘ

EDS was not executed - this section will therefore be empty.

### 6.5 Other polymers ⓘ

EDS was not executed - this section will therefore be empty.