



# Full wwPDB X-ray Structure Validation Report i

Feb 28, 2014 – 12:03 AM GMT

PDB ID : 2NYL  
Title : Crystal structure of Protein Phosphatase 2A (PP2A) holoenzyme with the catalytic subunit carboxyl terminus truncated  
Authors : Xing, Y.; Xu, Y.; Chen, Y.; Chao, Y.; Lin, Z.; Shi, Y.  
Deposited on : 2006-11-20  
Resolution : 3.80 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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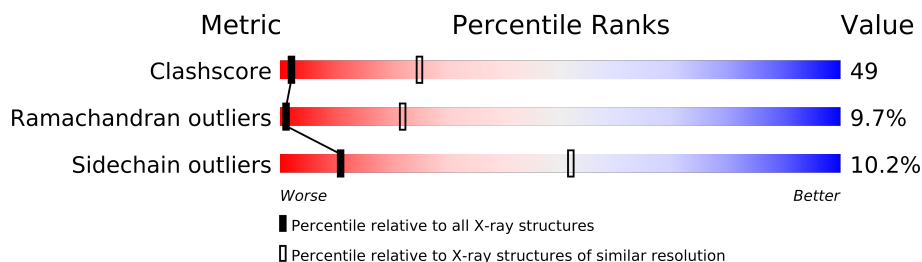
The following versions of software and data (see [references](#)) were used in the production of this report:

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 3.80 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	1100 (4.10-3.50)
Ramachandran outliers	78287	1050 (4.10-3.50)
Sidechain outliers	78261	1042 (4.10-3.50)

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	582	
1	D	582	
2	B	388	
2	E	388	
3	C	293	
3	F	293	
4	G	7	
4	H	7	

## 2 Entry composition

There are 5 unique types of molecules in this entry. The entry contains 20212 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 Protein phosphatase 2, regulatory subunit A (PR 65), alpha isoform.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
1	A	582	Total	C	N	O	S	Se	0	0	0
			4535	2881	764	863	14	13			
1	D	582	Total	C	N	O	S	Se	0	0	0
			4535	2881	764	863	14	13			

- Molecule 2 is a protein called Serine/threonine-proteinphosphatase 2A 56 kDa regulatory subunit gamma isoform.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
2	B	388	Total	C	N	O	S	Se	0	0	0
			3131	2043	513	561	3	11			
2	E	388	Total	C	N	O	S	Se	0	0	0
			3131	2043	513	561	3	11			

- Molecule 3 is a protein called Serine/threonine-proteinphosphatase 2A catalytic subunit alpha isoform.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	C	293	Total	C	N	O	S	0	0	0
			2367	1497	405	450	15			
3	F	293	Total	C	N	O	S	0	0	0
			2367	1497	405	450	15			

- Molecule 4 is a protein called microcystin LR.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
4	G	7	Total	C	N	O	0	0	0
			71	49	10	12			
4	H	7	Total	C	N	O	0	0	0
			71	49	10	12			

- Molecule 5 is MANGANESE (II) ION (three-letter code: MN) (formula: Mn).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
5	C	2	Total 2	Mn 2	0	0
5	F	2	Total 2	Mn 2	0	0

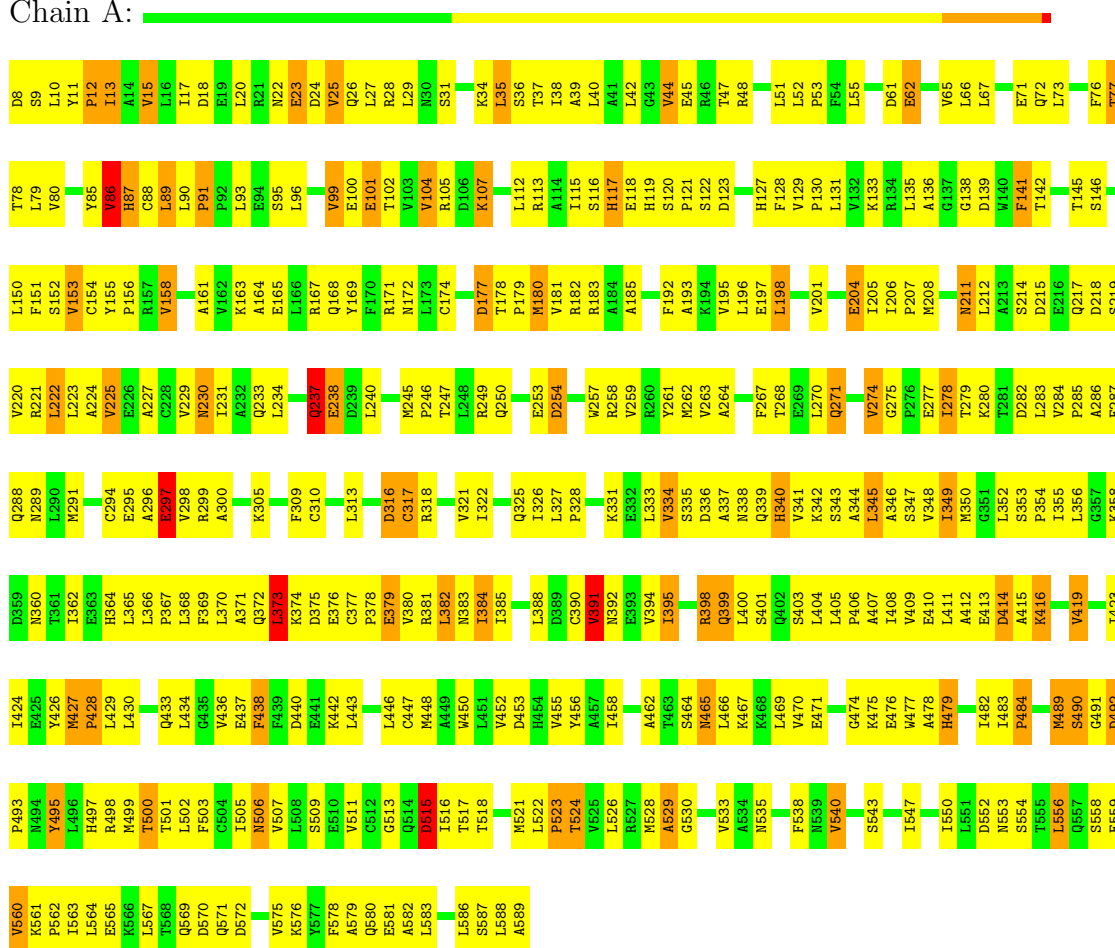
### 3 Residue-property plots

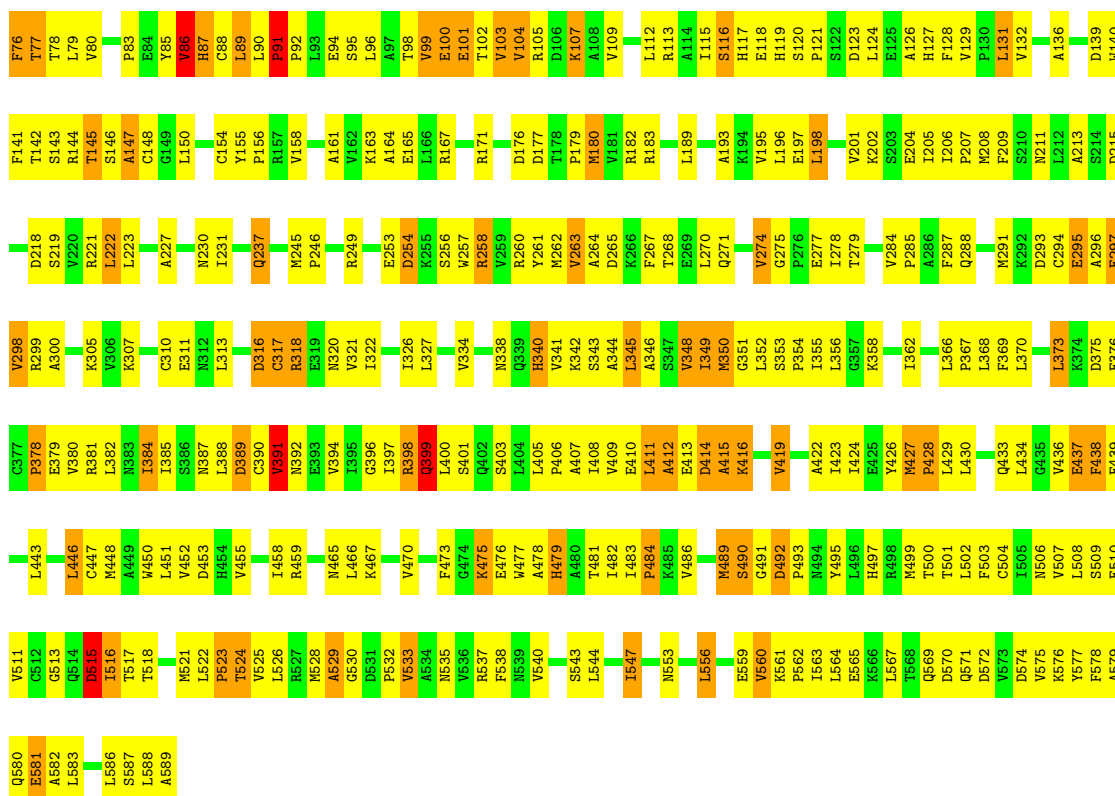
These plots are drawn for all protein, RNA and DNA chains in the entry. The first graphic for a chain summarises the proportions of errors displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are color-coded according 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: Protein phosphatase 2, regulatory subunit A (PR 65), alpha isoform

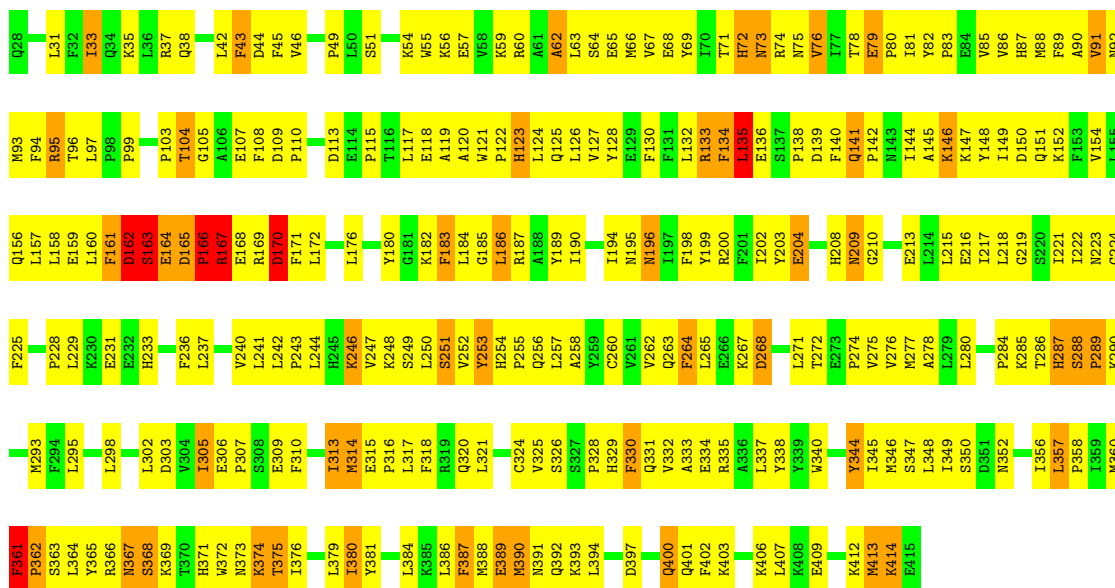
Chain A:





- Molecule 2: Serine/threonine-proteinphosphatase 2A 56 kDa regulatory subunit gamma isoform

Chain B:



- Molecule 2: Serine/threonine-proteinphosphatase 2A 56 kDa regulatory subunit gamma isoform

Chain E:





- Molecule 4: microcystin LR

Chain G: 



- Molecule 4: microcystin LR

Chain H: 





## 4 Data and refinement statistics

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

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	108.48Å 159.85Å 270.37Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	100.00 – 3.80	Depositor
% Data completeness (in resolution range)	99.6 (100.00-3.80)	Depositor
$R_{merge}$	0.11	Depositor
$R_{sym}$	(Not available)	Depositor
Refinement program	CNS	Depositor
R, $R_{free}$	0.282 , 0.335	Depositor
Estimated twinning fraction	No twinning to report.	Xtriage
Total number of atoms	20212	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	80.0	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: ACB, DAL, DAM, MN, 1ZN, FGA

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	0.50	0/4596	0.72	0/6218
1	D	0.58	0/4596	0.75	0/6218
2	B	0.51	0/3202	0.74	3/4326 (0.1%)
2	E	0.53	0/3202	0.75	4/4326 (0.1%)
3	C	0.49	0/2424	0.73	0/3285
3	F	0.51	0/2424	0.74	1/3285 (0.0%)
4	G	0.36	0/17	0.80	0/19
4	H	0.38	0/17	0.89	0/19
All	All	0.53	0/20478	0.74	8/27696 (0.0%)

There are no bond length outliers.

All (8) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	162	ASP	N-CA-C	6.79	129.35	111.00
2	E	162	ASP	N-CA-C	6.71	129.12	111.00
2	E	163	SER	N-CA-C	6.21	127.77	111.00
2	B	163	SER	N-CA-C	5.95	127.06	111.00
2	E	219	GLY	N-CA-C	-5.95	98.24	113.10
2	E	49	PRO	N-CA-CB	5.48	109.88	103.30
2	B	49	PRO	N-CA-CB	5.41	109.79	103.30
3	F	269	CYS	N-CA-C	5.04	124.61	111.00

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	4535	0	4637	449	0
1	D	4535	0	4637	431	0
2	B	3131	0	3050	330	0
2	E	3131	0	3050	359	0
3	C	2367	0	2268	222	0
3	F	2367	0	2268	216	0
4	G	71	0	67	2	0
4	H	71	0	67	4	0
5	C	2	0	0	0	0
5	F	2	0	0	0	0
All	All	20212	0	20044	1984	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 49.

All (1984) close contacts within the same asymmetric unit are listed below.

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:D:278:ILE:HD12	1:D:278:ILE:H	1.10	1.12
2:E:325:VAL:HG13	2:E:337:LEU:HD11	1.29	1.11
1:D:350:MSE:HE1	1:D:391:VAL:HG13	1.24	1.10
2:B:277:MSE:HE1	2:B:316:PRO:HG3	1.35	1.08
2:E:340:TRP:HA	2:E:346:MSE:HE3	1.34	1.06
1:A:288:GLN:HA	1:A:291:MSE:HE3	1.34	1.06
2:E:146:LYS:HE3	2:E:147:LYS:HE3	1.35	1.05
1:A:278:ILE:HD12	1:A:278:ILE:H	1.18	1.02
1:D:500:THR:HA	1:D:503:PHE:HD1	1.25	1.01
3:C:13:TRP:HE1	3:C:27:GLN:NE2	1.58	1.00
1:D:416:LYS:O	1:D:419:VAL:HG23	1.61	1.00
1:A:535:ASN:HA	1:A:538:PHE:CE2	1.95	0.99
1:A:38:ILE:O	1:A:42:LEU:HB2	1.61	0.99
1:A:25:VAL:HG22	1:A:28:ARG:HH21	1.28	0.99
1:A:502:LEU:HD11	1:A:540:VAL:HG23	1.45	0.98
2:B:208:HIS:HD2	2:B:209:ASN:H	1.15	0.95
1:A:392:ASN:HB3	1:A:400:LEU:HD22	1.47	0.94

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:C:239:ARG:HH12	3:C:242:GLN:HG3	1.32	0.94
1:A:350:MSE:HE1	1:A:391:VAL:HG22	1.48	0.93
1:D:427:MSE:HA	1:D:427:MSE:HE3	1.47	0.93
1:A:427:MSE:HE3	1:A:427:MSE:HA	1.49	0.93
1:D:535:ASN:HA	1:D:538:PHE:CE2	2.05	0.92
2:B:160:LEU:O	2:B:162:ASP:N	2.02	0.92
2:E:318:PHE:HD2	2:E:360:MSE:HE2	1.35	0.91
3:F:237:VAL:HB	3:F:256:VAL:HG23	1.49	0.91
1:A:526:LEU:HD22	1:A:563:ILE:HG21	1.51	0.91
1:D:77:THR:HG21	1:D:118:GLU:HG3	1.53	0.91
1:D:338:ASN:HD22	1:D:341:VAL:HG23	1.36	0.91
3:F:159:VAL:HG23	3:F:163:ILE:HB	1.52	0.91
1:A:385:ILE:HD11	1:A:411:LEU:HG	1.52	0.90
1:D:392:ASN:HD21	1:D:433:GLN:HE22	1.18	0.90
1:D:448:MSE:HE2	1:D:448:MSE:HA	1.54	0.90
2:E:164:GLU:O	2:E:165:ASP:O	1.90	0.90
2:E:318:PHE:CD2	2:E:360:MSE:HE2	2.07	0.89
1:A:270:LEU:O	1:A:274:VAL:HG23	1.71	0.89
1:A:452:VAL:HG13	1:A:497:HIS:CD2	2.07	0.89
3:F:240:ALA:HA	3:F:258:THR:HG23	1.54	0.89
2:B:80:PRO:HG2	2:B:82:TYR:CE2	2.08	0.89
1:D:38:ILE:O	1:D:42:LEU:HB2	1.73	0.88
2:E:208:HIS:HD2	2:E:209:ASN:H	1.20	0.88
1:A:227:ALA:O	1:A:231:ILE:HG13	1.72	0.88
2:E:218:LEU:HD23	2:E:221:ILE:HD12	1.55	0.88
1:A:343:SER:CA	1:A:380:VAL:HG22	2.04	0.88
3:C:123:ILE:HG23	3:C:127:TYR:HD2	1.37	0.88
1:A:225:VAL:HG11	1:A:262:MSE:HB3	1.57	0.87
2:B:340:TRP:HA	2:B:346:MSE:HE3	1.55	0.87
1:D:180:MSE:HE3	1:D:180:MSE:H	1.40	0.87
2:E:128:TYR:HB3	2:E:171:PHE:CD2	2.08	0.87
1:D:278:ILE:CD1	1:D:278:ILE:H	1.88	0.87
1:D:409:VAL:HG13	1:D:446:LEU:HD21	1.56	0.87
2:B:251:SER:HA	2:B:293:MSE:HE1	1.55	0.86
1:A:362:ILE:HD13	1:A:399:GLN:HG3	1.56	0.86
3:F:239:ARG:HH12	3:F:242:GLN:HG3	1.39	0.86
1:A:300:ALA:HB2	1:A:341:VAL:HG22	1.56	0.86
1:D:77:THR:CG2	1:D:118:GLU:HG3	2.05	0.86
2:B:318:PHE:HD2	2:B:360:MSE:HE2	1.41	0.86
2:B:313:ILE:O	2:B:316:PRO:HD2	1.75	0.86
2:B:146:LYS:HE3	2:B:147:LYS:HE3	1.57	0.86
1:D:35:LEU:HD21	1:D:55:LEU:HD11	1.58	0.86

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:C:203:PRO:HD2	3:C:242:GLN:OE1	1.74	0.86
3:C:67:GLU:HB2	3:C:292:ALA:HB2	1.58	0.86
2:E:202:ILE:HD11	2:E:244:LEU:HG	1.58	0.85
1:A:25:VAL:HG22	1:A:28:ARG:NH2	1.91	0.85
1:A:405:LEU:O	1:A:409:VAL:HG23	1.76	0.85
2:E:277:MSE:HE1	2:E:316:PRO:HG3	1.57	0.85
1:D:392:ASN:ND2	1:D:433:GLN:HE22	1.73	0.84
2:B:329:HIS:CD2	2:B:331:GLN:HB2	2.12	0.84
1:A:477:TRP:CH2	1:A:482:ILE:HD11	2.11	0.84
2:B:318:PHE:CD2	2:B:360:MSE:HE2	2.12	0.84
2:B:388:MSE:HE2	2:B:392:GLN:HE22	1.41	0.84
1:D:79:LEU:H	1:D:79:LEU:HD12	1.42	0.84
1:A:352:LEU:HA	1:A:355:ILE:HD12	1.58	0.84
2:E:160:LEU:O	2:E:162:ASP:N	2.10	0.84
1:D:561:LYS:O	1:D:565:GLU:HG2	1.77	0.84
2:B:83:PRO:HB3	2:B:148:TYR:CD1	2.13	0.83
1:D:35:LEU:HD11	1:D:51:LEU:HD11	1.61	0.83
1:A:71:GLU:HG3	1:A:107:LYS:HE3	1.59	0.83
2:E:88:MSE:HE2	2:E:92:ASN:ND2	1.93	0.83
1:A:564:LEU:HD22	1:A:583:LEU:HD21	1.59	0.83
2:B:373:ASN:ND2	2:B:376:ILE:HG23	1.94	0.82
3:C:115:ARG:NH1	3:C:151:ASP:HA	1.93	0.82
1:D:22:ASN:ND2	1:D:27:LEU:HD12	1.95	0.82
1:D:310:CYS:HA	1:D:313:LEU:HD12	1.61	0.82
2:B:208:HIS:HD2	2:B:209:ASN:N	1.78	0.82
1:D:407:ALA:O	1:D:411:LEU:HD22	1.79	0.81
2:E:251:SER:HA	2:E:293:MSE:HE1	1.61	0.81
3:F:123:ILE:HG23	3:F:127:TYR:HD2	1.44	0.81
2:B:78:THR:C	2:B:80:PRO:HD2	2.01	0.80
1:A:452:VAL:HG13	1:A:497:HIS:NE2	1.97	0.80
1:D:261:TYR:HA	1:D:298:VAL:HG22	1.62	0.80
1:D:405:LEU:O	1:D:409:VAL:HG23	1.82	0.80
1:D:390:CYS:O	1:D:392:ASN:N	2.15	0.80
3:F:239:ARG:HH12	3:F:242:GLN:CG	1.94	0.80
1:D:502:LEU:HD11	1:D:540:VAL:HG23	1.61	0.80
2:B:202:ILE:HD11	2:B:244:LEU:HG	1.60	0.80
3:C:159:VAL:HG23	3:C:163:ILE:HB	1.64	0.80
1:A:205:ILE:HA	1:A:208:MSE:HE3	1.62	0.79
1:D:452:VAL:HG13	1:D:497:HIS:CD2	2.18	0.79
1:A:347:SER:HB3	1:A:383:ASN:HD22	1.47	0.79
1:A:338:ASN:HD22	1:A:341:VAL:HG23	1.47	0.79
1:D:564:LEU:HD22	1:D:583:LEU:HD21	1.64	0.79

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:343:SER:HA	1:A:380:VAL:HG22	1.63	0.79
1:D:490:SER:HB2	1:D:528:MSE:HE3	1.64	0.79
3:C:237:VAL:HB	3:C:256:VAL:HG23	1.65	0.79
1:A:409:VAL:HG13	1:A:446:LEU:HD21	1.65	0.79
1:D:79:LEU:N	1:D:79:LEU:HD12	1.98	0.79
2:E:373:ASN:ND2	2:E:376:ILE:HG23	1.98	0.79
3:F:209:TRP:N	3:F:224:ILE:HD11	1.99	0.78
2:E:88:MSE:HE2	2:E:92:ASN:HD22	1.47	0.78
2:E:85:VAL:HG11	2:E:134:PHE:CD1	2.19	0.78
3:F:52:VAL:HG12	3:F:79:ASN:HB3	1.65	0.78
2:E:330:PHE:CE1	2:E:331:GLN:HG2	2.19	0.78
2:E:164:GLU:O	2:E:165:ASP:C	2.22	0.78
1:D:427:MSE:HA	1:D:427:MSE:CE	2.15	0.77
1:A:401:SER:HB3	1:A:434:LEU:HD21	1.66	0.77
3:C:50:CYS:HB2	3:C:51:PRO:HA	1.67	0.77
2:E:59:LYS:HD3	2:E:123:HIS:NE2	2.00	0.77
3:C:209:TRP:N	3:C:224:ILE:HD11	1.99	0.77
1:A:564:LEU:O	1:A:564:LEU:HD23	1.83	0.77
3:F:50:CYS:HB2	3:F:51:PRO:HA	1.64	0.77
1:D:427:MSE:HE1	1:D:430:LEU:HD12	1.64	0.77
1:A:482:ILE:C	1:A:484:PRO:HD2	2.05	0.77
1:A:495:TYR:O	1:A:499:MSE:HG3	1.85	0.77
2:B:164:GLU:HB3	2:B:168:GLU:HB2	1.67	0.77
3:C:214:ARG:HH11	3:C:214:ARG:HG2	1.50	0.77
1:A:90:LEU:HB2	1:A:91:PRO:HD3	1.66	0.77
1:A:500:THR:HA	1:A:503:PHE:HD1	1.48	0.77
2:B:128:TYR:HB3	2:B:171:PHE:CD2	2.20	0.77
2:B:164:GLU:O	2:B:165:ASP:O	2.02	0.77
1:A:416:LYS:O	1:A:419:VAL:HG23	1.85	0.77
1:A:278:ILE:H	1:A:278:ILE:CD1	1.93	0.77
2:E:223:ASN:HD22	2:E:263:GLN:HE21	1.33	0.77
1:D:25:VAL:HG22	1:D:28:ARG:NH2	1.99	0.77
1:A:467:LYS:HB2	1:A:507:VAL:CG1	2.15	0.76
2:B:190:ILE:O	2:B:194:ILE:HG13	1.83	0.76
3:F:203:PRO:HD2	3:F:242:GLN:OE1	1.85	0.76
2:B:208:HIS:CD2	2:B:209:ASN:H	2.02	0.76
1:A:561:LYS:O	1:A:565:GLU:HG2	1.86	0.76
2:E:78:THR:C	2:E:80:PRO:HD2	2.06	0.76
2:B:80:PRO:HG2	2:B:82:TYR:HE2	1.50	0.76
1:D:564:LEU:HD22	1:D:583:LEU:CD2	2.16	0.76
2:B:222:ILE:HD13	2:B:264:PHE:HD1	1.50	0.76
1:D:278:ILE:N	1:D:278:ILE:HD12	1.94	0.76

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:C:62:PHE:HD2	3:C:63:HIS:HD2	1.34	0.76
1:A:180:MSE:HE2	1:A:183:ARG:HH22	1.50	0.76
1:D:429:LEU:O	1:D:433:GLN:HG3	1.85	0.75
2:E:83:PRO:HB3	2:E:148:TYR:CD1	2.21	0.75
2:E:388:MSE:HE2	2:E:392:GLN:HE22	1.51	0.75
3:F:28:VAL:HG11	3:F:142:VAL:HG13	1.69	0.75
2:E:85:VAL:HG11	2:E:134:PHE:HD1	1.52	0.75
1:A:102:THR:HG22	1:A:105:ARG:NH2	2.00	0.75
1:A:237:GLN:NE2	1:A:278:ILE:HD11	2.02	0.75
1:D:500:THR:HA	1:D:503:PHE:CD1	2.17	0.75
2:E:325:VAL:CG1	2:E:337:LEU:HD11	2.14	0.74
1:D:428:PRO:HD3	1:D:465:ASN:HD21	1.52	0.74
2:B:165:ASP:O	2:B:167:ARG:N	2.20	0.74
2:B:242:LEU:HD13	2:B:278:ALA:CB	2.17	0.74
2:B:218:LEU:HD23	2:B:221:ILE:HD12	1.70	0.74
3:F:89:ARG:HD2	3:F:266:CYS:SG	2.28	0.74
3:F:104:LYS:N	3:F:111:ILE:HD11	2.01	0.74
2:E:134:PHE:CD2	2:E:135:LEU:N	2.56	0.74
2:B:118:GLU:HB3	2:B:164:GLU:CG	2.18	0.74
3:F:67:GLU:HB2	3:F:292:ALA:HB2	1.68	0.74
2:B:325:VAL:HG13	2:B:337:LEU:HD11	1.69	0.74
2:B:133:ARG:HA	2:B:136:GLU:OE2	1.88	0.74
1:D:44:VAL:HG22	1:D:45:GLU:N	2.02	0.74
2:E:43:PHE:O	2:E:45:PHE:N	2.20	0.74
3:F:243:LEU:HD22	4:H:7:DAM:HM3	1.70	0.74
3:C:170:LEU:H	3:C:220:PHE:HE2	1.34	0.73
2:B:121:TRP:N	2:B:122:PRO:HD2	2.03	0.73
1:A:366:LEU:O	1:A:370:LEU:HD23	1.88	0.73
2:E:364:LEU:HB2	2:E:384:LEU:HD21	1.68	0.73
1:D:79:LEU:H	1:D:79:LEU:CD1	2.01	0.73
2:E:223:ASN:ND2	2:E:263:GLN:HE21	1.86	0.73
1:D:401:SER:HB3	1:D:434:LEU:HD21	1.70	0.73
1:D:556:LEU:O	1:D:560:VAL:HB	1.88	0.73
2:E:391:ASN:ND2	2:E:394:LEU:HD12	2.03	0.73
1:D:197:GLU:CD	1:D:197:GLU:H	1.89	0.73
1:A:564:LEU:HD22	1:A:583:LEU:CD2	2.18	0.73
2:E:80:PRO:HG2	2:E:82:TYR:CE2	2.24	0.73
1:A:556:LEU:O	1:A:560:VAL:HB	1.89	0.73
3:C:229:ASN:HA	3:C:234:LEU:HB2	1.71	0.73
1:A:278:ILE:HD12	1:A:278:ILE:N	2.00	0.73
2:E:208:HIS:HD2	2:E:209:ASN:N	1.87	0.73
2:E:242:LEU:HD13	2:E:278:ALA:CB	2.18	0.73

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:208:HIS:CD2	2:B:209:ASN:N	2.56	0.73
1:A:179:PRO:HB2	1:A:180:MSE:HE3	1.71	0.73
2:E:145:ALA:O	2:E:147:LYS:N	2.21	0.73
3:C:68:LEU:HD23	3:C:68:LEU:C	2.08	0.73
2:E:71:THR:HG21	2:E:133:ARG:HH11	1.53	0.72
3:F:214:ARG:HH11	3:F:214:ARG:HG2	1.54	0.72
1:D:495:TYR:HE2	1:D:535:ASN:HD22	1.36	0.72
1:A:155:TYR:CZ	1:A:163:LYS:HB3	2.24	0.72
2:E:371:HIS:CD2	2:E:376:ILE:HD11	2.25	0.72
3:F:143:TRP:CE2	3:F:147:THR:HG21	2.23	0.72
2:B:371:HIS:CD2	2:B:376:ILE:HD11	2.24	0.72
1:D:369:PHE:O	1:D:373:LEU:HB2	1.88	0.72
1:A:427:MSE:CE	1:A:427:MSE:HA	2.19	0.72
1:A:452:VAL:O	1:A:452:VAL:HG12	1.90	0.72
2:E:208:HIS:CD2	2:E:209:ASN:H	2.07	0.72
1:D:183:ARG:NH2	2:E:200:ARG:HD2	2.04	0.72
1:D:524:THR:O	1:D:528:MSE:HG3	1.90	0.72
2:E:313:ILE:HD12	2:E:313:ILE:N	2.05	0.72
1:D:109:VAL:HG13	1:D:150:LEU:HD21	1.71	0.72
2:B:118:GLU:HB3	2:B:164:GLU:HG2	1.72	0.71
2:E:313:ILE:H	2:E:313:ILE:HD12	1.55	0.71
2:E:121:TRP:N	2:E:122:PRO:HD2	2.05	0.71
2:E:190:ILE:O	2:E:194:ILE:HG13	1.90	0.71
2:E:391:ASN:OD1	2:E:394:LEU:HB2	1.91	0.71
1:D:104:VAL:HG12	1:D:105:ARG:N	2.05	0.71
2:E:406:LYS:O	2:E:406:LYS:HD3	1.89	0.71
2:B:313:ILE:HD12	2:B:313:ILE:H	1.55	0.71
3:C:220:PHE:HA	3:C:224:ILE:HD12	1.72	0.71
2:E:186:LEU:HB3	2:E:190:ILE:CD1	2.20	0.71
1:A:362:ILE:CD1	1:A:399:GLN:HG3	2.21	0.71
1:A:448:MSE:HA	1:A:448:MSE:HE2	1.72	0.71
1:A:261:TYR:HA	1:A:298:VAL:HG22	1.70	0.71
3:F:17:LEU:HD21	3:F:23:LEU:HG	1.72	0.70
2:B:240:VAL:O	2:B:243:PRO:HG2	1.91	0.70
3:F:197:ASP:OD1	3:F:217:GLY:HA2	1.89	0.70
2:E:208:HIS:CD2	2:E:209:ASN:N	2.60	0.70
1:A:35:LEU:HB3	1:A:72:GLN:HG2	1.71	0.70
2:E:165:ASP:O	2:E:167:ARG:N	2.25	0.70
2:E:151:GLN:HB3	2:E:189:TYR:CE2	2.25	0.70
2:E:376:ILE:HA	2:E:379:LEU:HB2	1.73	0.70
1:A:104:VAL:HG12	1:A:105:ARG:N	2.05	0.70
3:C:157:ALA:HB3	3:C:165:CYS:HB2	1.74	0.70

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:E:366:ARG:O	2:E:368:SER:N	2.24	0.70
1:A:258:ARG:HH11	1:A:258:ARG:HG3	1.55	0.70
1:A:407:ALA:O	1:A:411:LEU:HD22	1.92	0.69
2:E:167:ARG:HH11	2:E:167:ARG:CB	2.05	0.69
1:D:66:LEU:HD22	1:D:96:LEU:HD23	1.75	0.69
2:E:288:SER:HB2	2:E:289:PRO:HD3	1.74	0.69
2:B:247:VAL:HG12	2:B:249:SER:H	1.57	0.69
3:F:160:ASP:O	3:F:162:GLN:N	2.25	0.69
3:C:89:ARG:HD2	3:C:266:CYS:SG	2.32	0.69
1:D:161:ALA:O	1:D:165:GLU:HG3	1.92	0.69
2:E:166:PRO:O	2:E:167:ARG:C	2.30	0.69
3:F:137:TYR:CD2	3:F:142:VAL:HG21	2.28	0.69
1:A:35:LEU:HD11	1:A:51:LEU:HD11	1.73	0.69
1:D:115:ILE:O	1:D:115:ILE:HG13	1.92	0.69
2:B:310:PHE:O	2:B:314:MSE:HB2	1.93	0.69
1:D:452:VAL:O	1:D:452:VAL:HG12	1.92	0.69
1:A:193:ALA:HA	1:A:196:LEU:HD12	1.75	0.69
1:A:492:ASP:OD2	1:A:493:PRO:HD2	1.91	0.69
2:B:88:MSE:HE2	2:B:92:ASN:HD22	1.56	0.69
1:A:66:LEU:HD22	1:A:96:LEU:HD23	1.75	0.69
1:D:260:ARG:HH11	1:D:260:ARG:HG3	1.57	0.69
1:A:369:PHE:O	1:A:373:LEU:HB2	1.93	0.69
1:D:90:LEU:HB2	1:D:91:PRO:HD3	1.74	0.69
2:B:43:PHE:O	2:B:45:PHE:N	2.26	0.69
2:E:71:THR:HG21	2:E:133:ARG:NH1	2.08	0.69
2:B:164:GLU:O	2:B:165:ASP:C	2.30	0.69
3:F:13:TRP:HE1	3:F:27:GLN:NE2	1.90	0.69
2:E:169:ARG:HB3	2:E:213:GLU:HG2	1.75	0.69
3:F:165:CYS:SG	3:F:238:SER:HB3	2.33	0.69
2:B:305:ILE:HD13	2:B:306:GLU:H	1.56	0.68
3:C:194:PRO:HG2	3:C:195:MET:H	1.58	0.68
3:F:119:GLU:HG3	3:F:150:PHE:CD1	2.28	0.68
1:A:286:ALA:O	1:A:289:ASN:HB2	1.94	0.68
2:B:366:ARG:O	2:B:368:SER:N	2.27	0.68
1:D:288:GLN:HA	1:D:291:MSE:HE3	1.75	0.68
1:D:428:PRO:HD3	1:D:465:ASN:ND2	2.08	0.68
2:B:164:GLU:CB	2:B:168:GLU:HB2	2.23	0.68
1:A:509:SER:OG	1:A:547:ILE:HG22	1.94	0.68
1:A:428:PRO:HD3	1:A:465:ASN:ND2	2.08	0.68
1:D:499:MSE:HE1	3:F:77:ASP:O	1.94	0.68
2:B:132:LEU:C	2:B:134:PHE:H	1.97	0.68
1:D:20:LEU:HD23	1:D:31:SER:CB	2.24	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:F:139:ASN:CG	3:F:141:ASN:HD22	1.97	0.68
2:B:162:ASP:O	2:B:163:SER:HB2	1.94	0.68
2:E:176:LEU:O	2:E:176:LEU:HG	1.94	0.68
2:B:166:PRO:O	2:B:167:ARG:C	2.33	0.68
2:E:118:GLU:HB3	2:E:164:GLU:HG2	1.75	0.67
2:E:313:ILE:HG22	2:E:317:LEU:HB2	1.76	0.67
1:D:388:LEU:HD12	1:D:408:ILE:HD11	1.77	0.67
1:A:204:GLU:O	1:A:207:PRO:HD2	1.94	0.67
3:C:170:LEU:HB2	3:C:220:PHE:CD2	2.29	0.67
1:A:358:LYS:O	1:A:362:ILE:HG13	1.94	0.67
1:D:362:ILE:HD13	1:D:399:GLN:HG3	1.76	0.67
1:A:44:VAL:HG22	1:A:45:GLU:N	2.09	0.67
1:D:350:MSE:HE1	1:D:391:VAL:CG1	2.14	0.67
1:A:100:GLU:O	1:A:105:ARG:NH1	2.26	0.67
2:B:154:VAL:O	2:B:157:LEU:HB3	1.93	0.67
1:D:556:LEU:CD2	1:D:588:LEU:HD11	2.24	0.67
2:E:166:PRO:O	2:E:169:ARG:N	2.28	0.67
1:D:182:ARG:HH11	1:D:182:ARG:HG3	1.59	0.67
3:F:165:CYS:HA	3:F:238:SER:O	1.94	0.67
1:A:219:SER:HA	1:A:222:LEU:HD22	1.75	0.67
1:D:392:ASN:ND2	1:D:433:GLN:NE2	2.42	0.67
2:E:59:LYS:HA	2:E:62:ALA:HB3	1.77	0.67
1:A:388:LEU:HD13	1:A:408:ILE:HD11	1.77	0.67
2:B:345:ILE:O	2:B:349:ILE:HG13	1.95	0.67
1:D:71:GLU:HG3	1:D:107:LYS:HE3	1.75	0.67
1:D:264:ALA:O	1:D:267:PHE:HB2	1.94	0.67
1:D:509:SER:HA	1:D:521:MSE:HE1	1.77	0.67
2:B:286:THR:HG22	3:C:134:LEU:HB3	1.77	0.67
2:B:313:ILE:HD12	2:B:313:ILE:N	2.09	0.67
2:E:93:MSE:HE2	2:E:128:TYR:OH	1.94	0.67
1:A:524:THR:O	1:A:528:MSE:HG3	1.95	0.67
1:A:411:LEU:O	1:A:413:GLU:N	2.28	0.66
2:E:236:PHE:O	2:E:240:VAL:HB	1.95	0.66
1:A:489:MSE:O	1:A:491:GLY:N	2.28	0.66
3:C:121:ARG:HH11	3:C:121:ARG:HG3	1.60	0.66
1:D:180:MSE:H	1:D:180:MSE:CE	2.07	0.66
3:F:71:ILE:HG22	3:F:72:GLY:N	2.09	0.66
3:C:94:VAL:HG23	3:C:132:GLU:OE2	1.95	0.66
1:A:180:MSE:HE2	1:A:183:ARG:NH2	2.10	0.66
3:F:124:THR:HB	3:F:129:PHE:HB3	1.77	0.66
1:A:467:LYS:O	1:A:471:GLU:HG3	1.96	0.66
2:B:243:PRO:O	2:B:246:LYS:HB2	1.94	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:C:104:LYS:N	3:C:111:ILE:HD11	2.11	0.66
3:F:68:LEU:C	3:F:68:LEU:HD23	2.16	0.66
2:E:165:ASP:OD2	2:E:166:PRO:HD2	1.96	0.66
2:E:93:MSE:O	2:E:95:ARG:HG3	1.96	0.66
1:A:438:PHE:HD1	1:A:438:PHE:O	1.78	0.66
1:A:282:ASP:O	1:A:285:PRO:HD2	1.96	0.66
2:E:381:TYR:CE2	2:E:385:LYS:HD2	2.30	0.66
1:D:388:LEU:CD1	1:D:408:ILE:HD11	2.26	0.66
1:D:427:MSE:CE	1:D:430:LEU:HD12	2.26	0.66
2:B:134:PHE:CD2	2:B:135:LEU:N	2.64	0.66
1:A:364:HIS:O	1:A:367:PRO:HD2	1.96	0.66
1:D:35:LEU:HG	1:D:35:LEU:O	1.96	0.65
2:B:194:ILE:HG21	2:B:218:LEU:HD11	1.79	0.65
1:D:52:LEU:HB2	1:D:53:PRO:HD3	1.76	0.65
3:C:54:VAL:HG22	3:C:81:LEU:HD22	1.78	0.65
3:F:229:ASN:HA	3:F:234:LEU:HB2	1.78	0.65
1:A:24:ASP:O	1:A:26:GLN:N	2.29	0.65
1:A:427:MSE:HE1	1:A:430:LEU:HD12	1.79	0.65
2:E:340:TRP:CH2	2:E:360:MSE:HE3	2.30	0.65
2:E:344:TYR:O	2:E:347:SER:HB3	1.97	0.65
3:C:17:LEU:HD11	3:C:98:THR:HG22	1.77	0.65
1:A:411:LEU:HD22	1:A:411:LEU:H	1.62	0.65
1:D:100:GLU:O	1:D:105:ARG:NH1	2.29	0.65
2:B:85:VAL:HG13	2:B:130:PHE:CE2	2.32	0.65
3:F:240:ALA:HB2	3:F:259:ILE:H	1.62	0.65
1:D:78:THR:HB	1:D:79:LEU:HD12	1.77	0.65
1:D:490:SER:CB	1:D:528:MSE:HE3	2.26	0.65
2:E:356:ILE:C	2:E:358:PRO:HD2	2.17	0.65
2:B:167:ARG:HH11	2:B:167:ARG:CB	2.10	0.65
3:F:141:ASN:HB3	3:F:145:TYR:CE1	2.32	0.65
3:C:42:GLU:HB3	3:C:46:GLN:OE1	1.97	0.65
2:B:200:ARG:HA	2:B:204:GLU:HG3	1.78	0.65
2:E:329:HIS:CD2	2:E:331:GLN:HB2	2.31	0.65
1:A:22:ASN:ND2	1:A:24:ASP:HB3	2.12	0.65
2:E:97:LEU:H	2:E:97:LEU:HD12	1.62	0.65
3:F:174:ILE:HD11	3:F:194:PRO:HB2	1.79	0.65
3:F:157:ALA:HB3	3:F:165:CYS:HB2	1.79	0.65
1:D:408:ILE:HD13	1:D:426:TYR:HE2	1.61	0.65
2:B:218:LEU:O	2:B:222:ILE:HG13	1.97	0.65
3:F:143:TRP:O	3:F:147:THR:HG23	1.96	0.65
2:B:367:ASN:O	2:B:369:LYS:N	2.23	0.65
1:A:388:LEU:CD1	1:A:408:ILE:HD11	2.26	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:157:LEU:O	2:B:160:LEU:HB2	1.96	0.65
3:F:159:VAL:CG2	3:F:163:ILE:HB	2.25	0.65
2:E:128:TYR:HB3	2:E:171:PHE:HD2	1.58	0.65
1:A:427:MSE:HB3	1:A:428:PRO:CD	2.27	0.64
2:B:288:SER:HB2	2:B:289:PRO:HD3	1.78	0.64
2:E:42:LEU:O	2:E:59:LYS:HE3	1.97	0.64
1:A:345:LEU:HD23	1:A:346:ALA:N	2.12	0.64
2:B:330:PHE:CE2	3:C:122:GLN:HG3	2.31	0.64
1:A:325:GLN:O	1:A:328:PRO:HD2	1.96	0.64
1:D:470:VAL:HG11	1:D:511:VAL:HG23	1.79	0.64
3:C:76:PRO:HB3	3:C:107:TYR:CD1	2.32	0.64
3:C:119:GLU:HG3	3:C:150:PHE:CD1	2.32	0.64
1:D:131:LEU:C	1:D:131:LEU:HD23	2.18	0.64
3:F:97:VAL:O	3:F:101:VAL:HG23	1.98	0.64
2:B:59:LYS:HD3	2:B:123:HIS:NE2	2.13	0.64
1:A:211:ASN:HD22	1:A:211:ASN:N	1.95	0.64
1:D:517:THR:HA	1:D:521:MSE:HE2	1.78	0.64
2:E:240:VAL:O	2:E:243:PRO:HG2	1.98	0.64
1:A:44:VAL:HG13	1:A:45:GLU:H	1.62	0.64
2:B:391:ASN:ND2	2:B:394:LEU:HD12	2.12	0.64
1:D:535:ASN:HA	1:D:538:PHE:HE2	1.61	0.64
3:F:115:ARG:HH12	3:F:151:ASP:HA	1.63	0.64
1:D:113:ARG:O	1:D:116:SER:HB3	1.98	0.64
1:A:428:PRO:HD3	1:A:465:ASN:HD21	1.63	0.64
2:B:85:VAL:HG11	2:B:134:PHE:CD1	2.33	0.64
1:D:556:LEU:HD22	1:D:588:LEU:HD11	1.80	0.64
3:C:155:LEU:HD21	3:C:185:ARG:HB2	1.80	0.64
3:C:71:ILE:HG22	3:C:72:GLY:N	2.13	0.64
3:C:274:ALA:HB2	3:C:288:GLN:HA	1.80	0.64
2:E:149:ILE:O	2:E:149:ILE:HG22	1.96	0.64
3:F:170:LEU:H	3:F:220:PHE:HE2	1.44	0.63
2:E:375:THR:HG22	2:E:379:LEU:HD12	1.80	0.63
1:A:158:VAL:HG23	1:A:163:LYS:HG3	1.80	0.63
1:A:528:MSE:C	1:A:530:GLY:H	2.01	0.63
3:C:137:TYR:CD2	3:C:142:VAL:HG21	2.33	0.63
1:A:113:ARG:O	1:A:116:SER:HB3	1.98	0.63
1:A:346:ALA:HB2	1:A:380:VAL:HG13	1.80	0.63
1:A:427:MSE:CE	1:A:430:LEU:HD12	2.28	0.63
2:B:88:MSE:HE2	2:B:92:ASN:ND2	2.13	0.63
2:E:186:LEU:HB3	2:E:190:ILE:HD12	1.80	0.63
1:D:35:LEU:HD21	1:D:55:LEU:CD1	2.27	0.63
2:E:364:LEU:CB	2:E:384:LEU:HD21	2.29	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:166:PRO:O	2:B:169:ARG:N	2.32	0.63
1:D:35:LEU:HB3	1:D:72:GLN:HG2	1.81	0.63
3:F:194:PRO:HG2	3:F:195:MET:H	1.62	0.63
3:C:158:LEU:CD2	3:C:161:GLY:HA2	2.28	0.63
3:C:203:PRO:HA	3:C:220:PHE:CE1	2.34	0.63
2:E:329:HIS:CE1	3:F:125:GLN:HB3	2.34	0.62
2:E:73:ASN:C	2:E:75:ASN:H	2.01	0.62
1:A:556:LEU:CD2	1:A:588:LEU:HD11	2.29	0.62
2:B:151:GLN:HB3	2:B:189:TYR:CE2	2.34	0.62
2:E:330:PHE:O	2:E:334:GLU:HB2	1.99	0.62
2:B:244:LEU:HD22	2:B:253:TYR:CE1	2.34	0.62
3:C:159:VAL:CG2	3:C:163:ILE:HB	2.28	0.62
2:B:364:LEU:HB2	2:B:384:LEU:HD21	1.81	0.62
1:D:237:GLN:NE2	1:D:278:ILE:HD11	2.15	0.62
3:C:239:ARG:NH1	3:C:242:GLN:HG3	2.11	0.62
1:D:528:MSE:C	1:D:530:GLY:H	2.01	0.62
2:E:389:GLU:O	2:E:390:MSE:HB2	1.99	0.62
2:B:236:PHE:O	2:B:240:VAL:HB	1.99	0.62
3:C:276:MET:CE	3:C:278:LEU:HD21	2.29	0.62
1:A:349:ILE:HG23	1:A:350:MSE:N	2.13	0.62
2:B:169:ARG:O	2:B:172:LEU:N	2.33	0.62
1:D:300:ALA:HB2	1:D:341:VAL:HG22	1.80	0.62
2:E:209:ASN:ND2	2:E:209:ASN:N	2.47	0.62
2:E:313:ILE:CG2	2:E:317:LEU:HB2	2.28	0.62
3:F:115:ARG:NH1	3:F:151:ASP:HA	2.14	0.62
1:A:495:TYR:CD2	1:A:533:VAL:HG11	2.34	0.62
3:F:158:LEU:HD12	3:F:163:ILE:O	2.00	0.62
2:E:144:ILE:O	2:E:144:ILE:HG22	2.00	0.62
1:D:11:TYR:N	1:D:12:PRO:HD2	2.15	0.62
1:A:497:HIS:O	1:A:500:THR:HB	1.99	0.62
2:E:133:ARG:HG2	2:E:136:GLU:OE2	2.00	0.62
2:E:170:ASP:O	2:E:173:LYS:HB3	2.00	0.62
1:A:25:VAL:CG2	1:A:28:ARG:HH21	2.09	0.62
1:D:20:LEU:HD23	1:D:31:SER:HB2	1.80	0.62
3:F:209:TRP:H	3:F:224:ILE:HD11	1.65	0.62
2:E:110:PRO:HG3	2:E:249:SER:HB2	1.81	0.62
1:A:382:LEU:HD12	1:A:419:VAL:HG22	1.81	0.62
2:B:233:HIS:O	2:B:236:PHE:HB3	2.00	0.62
3:C:13:TRP:HE1	3:C:27:GLN:HE21	1.45	0.62
3:C:55:CYS:SG	3:C:68:LEU:HD11	2.39	0.62
3:F:62:PHE:O	3:F:65:LEU:HB3	1.99	0.62
1:A:502:LEU:HD22	1:A:543:SER:OG	1.99	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:D:455:VAL:HG23	3:F:71:ILE:HG13	1.82	0.61
2:E:180:TYR:CE1	2:E:187:ARG:HA	2.35	0.61
2:E:391:ASN:CG	2:E:394:LEU:HD12	2.21	0.61
3:F:183:LEU:HD21	3:F:194:PRO:HG3	1.82	0.61
3:F:236:LEU:HD11	3:F:257:VAL:HG12	1.81	0.61
2:E:180:TYR:HE1	2:E:187:ARG:HA	1.65	0.61
1:D:561:LYS:HB3	1:D:562:PRO:HD3	1.81	0.61
3:C:25:GLU:CD	3:C:139:ASN:HD21	2.03	0.61
2:E:80:PRO:HG2	2:E:82:TYR:CD2	2.36	0.61
1:D:427:MSE:O	1:D:429:LEU:N	2.34	0.61
3:C:13:TRP:NE1	3:C:27:GLN:NE2	2.39	0.61
2:B:118:GLU:H	2:B:164:GLU:HG2	1.65	0.61
1:D:34:LYS:O	1:D:36:SER:N	2.33	0.61
1:D:401:SER:HB3	1:D:434:LEU:CD2	2.31	0.61
2:B:329:HIS:CE1	3:C:125:GLN:HB3	2.35	0.61
1:D:398:ARG:HB3	1:D:398:ARG:HH11	1.65	0.61
1:A:245:MSE:O	1:A:249:ARG:HG3	1.99	0.61
1:A:482:ILE:C	1:A:484:PRO:CD	2.68	0.61
3:F:155:LEU:HD21	3:F:185:ARG:HB2	1.83	0.61
1:D:258:ARG:HG3	1:D:258:ARG:HH11	1.66	0.61
2:E:72:HIS:O	2:E:74:ARG:N	2.34	0.61
1:D:538:PHE:HB3	1:D:575:VAL:HA	1.83	0.61
2:B:222:ILE:HD13	2:B:264:PHE:CD1	2.35	0.61
1:D:66:LEU:HD22	1:D:96:LEU:CD2	2.31	0.61
2:E:373:ASN:O	2:E:375:THR:N	2.32	0.61
1:A:77:THR:HG21	1:A:118:GLU:HG3	1.83	0.61
3:F:103:LEU:HB3	3:F:111:ILE:HD13	1.82	0.61
3:C:33:GLU:O	3:C:36:LYS:HB2	2.01	0.61
1:D:385:ILE:HD11	1:D:411:LEU:HG	1.83	0.61
1:A:346:ALA:CB	1:A:380:VAL:HG13	2.31	0.61
1:A:66:LEU:HB3	1:A:104:VAL:HG21	1.83	0.61
1:A:180:MSE:CE	1:A:183:ARG:HH22	2.13	0.61
1:A:35:LEU:HD21	1:A:55:LEU:HD11	1.81	0.61
1:A:438:PHE:HE1	1:A:442:LYS:HB2	1.66	0.61
1:A:39:ALA:HB1	1:A:47:THR:HG21	1.83	0.61
2:B:97:LEU:HD12	2:B:97:LEU:H	1.66	0.60
2:B:321:LEU:HB3	2:B:360:MSE:HE1	1.83	0.60
1:A:171:ARG:HG3	1:A:208:MSE:SE	2.50	0.60
2:E:361:PHE:O	2:E:363:SER:N	2.34	0.60
2:B:364:LEU:CB	2:B:384:LEU:HD21	2.32	0.60
1:A:258:ARG:NH1	1:A:258:ARG:HG3	2.15	0.60
2:E:132:LEU:C	2:E:134:PHE:H	2.05	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:D:526:LEU:HD22	1:D:563:ILE:HG21	1.83	0.60
3:C:97:VAL:HG13	3:C:98:THR:N	2.16	0.60
2:E:325:VAL:HG22	2:E:337:LEU:HD12	1.84	0.60
1:D:427:MSE:HE2	1:D:430:LEU:HB2	1.84	0.60
1:A:477:TRP:CH2	1:A:482:ILE:CD1	2.83	0.60
1:A:424:ILE:HG12	1:A:450:TRP:CE3	2.36	0.60
1:D:467:LYS:HB2	1:D:507:VAL:CG1	2.31	0.60
2:E:313:ILE:O	2:E:316:PRO:HD2	2.01	0.60
2:E:375:THR:CG2	2:E:379:LEU:HD12	2.32	0.60
1:D:205:ILE:HA	1:D:208:MSE:HE3	1.83	0.60
2:E:54:LYS:O	2:E:56:LYS:N	2.29	0.60
1:A:79:LEU:HD12	1:A:79:LEU:N	2.17	0.60
1:D:411:LEU:O	1:D:413:GLU:N	2.34	0.60
3:F:166:LEU:O	3:F:239:ARG:HA	2.02	0.60
2:B:376:ILE:HA	2:B:379:LEU:HB2	1.83	0.60
1:A:52:LEU:HB2	1:A:53:PRO:HD3	1.82	0.60
1:D:436:VAL:HG13	1:D:437:GLU:H	1.65	0.60
2:E:329:HIS:HB3	2:E:332:VAL:HG23	1.83	0.60
1:A:388:LEU:HA	1:A:391:VAL:CG2	2.31	0.60
1:D:564:LEU:HD23	1:D:564:LEU:O	2.02	0.60
2:B:217:ILE:O	2:B:221:ILE:HG13	2.02	0.60
2:B:248:LYS:HD3	2:B:290:LYS:HZ2	1.66	0.60
3:F:220:PHE:HA	3:F:224:ILE:HD12	1.84	0.60
2:B:373:ASN:HD22	2:B:376:ILE:HG23	1.67	0.60
1:A:180:MSE:HE3	1:A:180:MSE:H	1.67	0.60
3:F:214:ARG:NH1	3:F:214:ARG:HG2	2.15	0.60
1:A:284:VAL:HB	1:A:285:PRO:HD3	1.83	0.60
2:E:141:GLN:HB3	2:E:142:PRO:HD2	1.84	0.60
2:B:412:LYS:O	2:B:414:LYS:N	2.34	0.60
2:E:165:ASP:CG	2:E:166:PRO:HD2	2.22	0.60
2:E:79:GLU:N	2:E:80:PRO:CD	2.64	0.60
1:D:85:TYR:O	1:D:87:HIS:N	2.35	0.60
1:A:509:SER:HA	1:A:521:MSE:HE1	1.83	0.60
1:D:140:TRP:HH2	2:E:199:TYR:HH	1.49	0.60
1:D:25:VAL:CG2	1:D:28:ARG:HH21	2.14	0.60
1:D:24:ASP:O	1:D:26:GLN:N	2.35	0.60
2:B:357:LEU:N	2:B:358:PRO:HD2	2.17	0.60
2:B:361:PHE:O	2:B:363:SER:N	2.35	0.60
1:D:268:THR:HG23	1:D:305:LYS:HD2	1.84	0.60
3:C:14:ILE:O	3:C:18:ASN:HB2	2.01	0.60
2:B:222:ILE:HG21	2:B:264:PHE:CD1	2.37	0.59
1:D:270:LEU:O	1:D:274:VAL:HG23	2.02	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:E:325:VAL:HG22	2:E:337:LEU:CD1	2.32	0.59
1:D:448:MSE:CE	1:D:448:MSE:HA	2.31	0.59
3:C:141:ASN:HB3	3:C:145:TYR:CE1	2.38	0.59
1:A:579:ALA:O	1:A:582:ALA:HB3	2.02	0.59
1:A:154:CYS:O	1:A:158:VAL:HG13	2.02	0.59
2:B:60:ARG:HD3	2:B:60:ARG:C	2.22	0.59
1:D:179:PRO:HB2	1:D:180:MSE:HE3	1.83	0.59
2:E:253:TYR:HD2	2:E:253:TYR:H	1.48	0.59
3:F:80:TYR:HB2	3:F:111:ILE:HG22	1.83	0.59
2:E:134:PHE:HD2	2:E:135:LEU:N	1.99	0.59
1:D:261:TYR:CA	1:D:298:VAL:HG22	2.33	0.59
1:A:470:VAL:HG22	1:A:478:ALA:HB2	1.84	0.59
1:D:274:VAL:HG12	1:D:278:ILE:HB	1.85	0.59
3:C:166:LEU:O	3:C:239:ARG:HA	2.03	0.59
2:B:251:SER:HA	2:B:293:MSE:CE	2.31	0.59
1:D:25:VAL:CG2	1:D:28:ARG:NH2	2.66	0.59
2:B:93:MSE:O	2:B:95:ARG:HG3	2.02	0.59
2:B:110:PRO:HA	2:B:113:ASP:OD2	2.03	0.59
2:E:169:ARG:O	2:E:172:LEU:N	2.36	0.59
3:F:240:ALA:CB	3:F:259:ILE:H	2.16	0.59
1:D:528:MSE:O	1:D:530:GLY:N	2.36	0.59
1:D:455:VAL:HG23	3:F:71:ILE:HA	1.85	0.59
2:E:276:VAL:HG11	2:E:313:ILE:HG21	1.85	0.59
3:C:214:ARG:NH1	3:C:214:ARG:HG2	2.18	0.59
3:C:160:ASP:O	3:C:162:GLN:N	2.36	0.59
2:E:79:GLU:N	2:E:80:PRO:HD2	2.17	0.58
3:C:57:ASP:O	3:C:261:SER:HB2	2.03	0.58
2:E:83:PRO:C	2:E:85:VAL:H	2.07	0.58
1:D:22:ASN:ND2	1:D:24:ASP:HB3	2.17	0.58
1:A:438:PHE:HD1	1:A:438:PHE:C	2.07	0.58
3:C:284:TYR:N	3:C:284:TYR:CD2	2.68	0.58
2:E:183:PHE:N	2:E:183:PHE:CD1	2.71	0.58
1:D:350:MSE:HE2	1:D:369:PHE:CE1	2.38	0.58
1:A:270:LEU:C	1:A:274:VAL:HG23	2.24	0.58
2:E:186:LEU:O	2:E:190:ILE:HD12	2.02	0.58
1:A:247:THR:O	1:A:250:GLN:HB3	2.03	0.58
1:D:570:ASP:OD2	1:D:571:GLN:N	2.36	0.58
1:D:588:LEU:O	1:D:589:ALA:HB2	2.03	0.58
2:B:176:LEU:HD11	2:B:190:ILE:HG12	1.86	0.58
3:F:29:LYS:HD2	3:F:145:TYR:CE2	2.38	0.58
3:C:261:SER:O	3:C:263:PRO:HD3	2.03	0.58
2:B:313:ILE:O	2:B:315:GLU:N	2.36	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:E:83:PRO:C	2:E:85:VAL:N	2.57	0.58
2:B:164:GLU:HB3	2:B:168:GLU:CB	2.34	0.58
2:B:253:TYR:HD2	2:B:253:TYR:H	1.52	0.58
2:E:60:ARG:C	2:E:60:ARG:HD3	2.23	0.58
1:A:572:ASP:OD2	3:C:110:ARG:NH2	2.36	0.58
2:E:71:THR:O	2:E:73:ASN:N	2.34	0.58
3:C:45:VAL:HG22	3:C:156:THR:OG1	2.04	0.58
2:B:183:PHE:CD1	2:B:183:PHE:N	2.71	0.58
3:F:147:THR:HA	3:F:150:PHE:CD2	2.38	0.58
1:D:109:VAL:O	1:D:113:ARG:HG3	2.02	0.58
1:A:79:LEU:HD12	1:A:79:LEU:H	1.68	0.58
2:B:128:TYR:O	2:B:132:LEU:HB2	2.03	0.58
3:C:103:LEU:HB3	3:C:111:ILE:HD13	1.85	0.58
1:A:588:LEU:O	1:A:589:ALA:HB2	2.04	0.58
3:F:46:GLN:O	3:F:157:ALA:HA	2.02	0.58
1:D:227:ALA:O	1:D:231:ILE:HG13	2.04	0.58
1:A:464:SER:O	1:A:466:LEU:N	2.37	0.58
2:E:169:ARG:O	2:E:170:ASP:C	2.42	0.58
3:F:170:LEU:HB2	3:F:220:PHE:CD2	2.39	0.58
2:E:373:ASN:C	2:E:375:THR:H	2.06	0.58
1:A:34:LYS:O	1:A:36:SER:N	2.37	0.58
2:B:65:GLU:C	2:B:67:VAL:H	2.06	0.58
1:A:77:THR:CG2	1:A:118:GLU:HG3	2.33	0.58
2:B:242:LEU:N	2:B:243:PRO:HD2	2.19	0.58
1:D:219:SER:HA	1:D:222:LEU:HD22	1.86	0.58
2:E:333:ALA:O	2:E:337:LEU:HD13	2.04	0.57
2:E:337:LEU:HD21	2:E:380:ILE:HG13	1.84	0.57
2:E:330:PHE:CE2	3:F:122:GLN:HG3	2.38	0.57
2:E:119:ALA:O	2:E:120:ALA:HB3	2.04	0.57
2:E:134:PHE:C	2:E:134:PHE:HD2	2.07	0.57
3:C:117:ASN:ND2	3:C:241:HIS:HE1	2.01	0.57
2:E:316:PRO:HG2	2:E:317:LEU:H	1.69	0.57
2:E:244:LEU:HD22	2:E:253:TYR:HE1	1.69	0.57
1:D:262:MSE:O	1:D:264:ALA:N	2.38	0.57
1:D:60:TYR:CD2	1:D:65:VAL:HG11	2.39	0.57
1:A:20:LEU:HD23	1:A:31:SER:CB	2.34	0.57
1:D:533:VAL:HG12	1:D:535:ASN:HB2	1.86	0.57
2:E:209:ASN:HD22	2:E:209:ASN:H	1.50	0.57
3:C:115:ARG:HG3	3:C:119:GLU:HB2	1.84	0.57
1:A:163:LYS:O	1:A:167:ARG:HG3	2.04	0.57
1:A:509:SER:CA	1:A:521:MSE:HE1	2.34	0.57
1:D:509:SER:CA	1:D:521:MSE:HE1	2.35	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:529:ALA:HB2	1:A:540:VAL:HG11	1.85	0.57
1:A:483:ILE:N	1:A:484:PRO:CD	2.68	0.57
3:C:28:VAL:HG11	3:C:142:VAL:HG13	1.86	0.57
3:C:197:ASP:OD1	3:C:217:GLY:HA2	2.05	0.57
1:A:129:VAL:HB	1:A:130:PRO:HD3	1.85	0.57
1:A:427:MSE:HE2	1:A:430:LEU:HB2	1.85	0.57
1:D:72:GLN:O	1:D:74:GLY:N	2.37	0.57
2:B:289:PRO:O	2:B:293:MSE:HG3	2.04	0.57
3:F:106:ARG:O	3:F:108:ARG:N	2.36	0.57
1:A:22:ASN:O	1:A:23:GLU:CB	2.52	0.57
3:C:240:ALA:HA	3:C:258:THR:HG23	1.87	0.57
1:D:261:TYR:C	1:D:261:TYR:CD2	2.77	0.57
1:D:297:GLU:O	1:D:298:VAL:C	2.42	0.57
3:C:143:TRP:O	3:C:147:THR:HG23	2.04	0.57
1:D:479:HIS:ND1	1:D:479:HIS:O	2.34	0.57
3:C:244:VAL:O	3:C:244:VAL:HG23	2.05	0.57
1:A:88:CYS:O	1:A:91:PRO:HD2	2.05	0.57
2:E:406:LYS:HD3	2:E:406:LYS:C	2.25	0.57
3:F:117:ASN:ND2	3:F:241:HIS:HE1	2.03	0.57
1:D:438:PHE:CD1	1:D:438:PHE:C	2.77	0.57
2:E:118:GLU:HB3	2:E:164:GLU:CG	2.35	0.57
2:E:218:LEU:O	2:E:222:ILE:HG13	2.03	0.57
2:E:315:GLU:HB3	2:E:319:ARG:NH2	2.20	0.57
2:B:384:LEU:O	2:B:387:PHE:N	2.35	0.57
3:C:29:LYS:HD2	3:C:145:TYR:CE2	2.40	0.57
3:C:160:ASP:C	3:C:162:GLN:H	2.08	0.57
1:A:217:GLN:O	1:A:220:VAL:HB	2.05	0.57
2:E:340:TRP:HH2	2:E:360:MSE:HE3	1.69	0.57
2:B:80:PRO:HG2	2:B:82:TYR:CD2	2.39	0.57
1:D:179:PRO:HG3	1:D:182:ARG:HH22	1.70	0.57
3:F:176:THR:HA	3:F:232:ASN:OD1	2.05	0.57
2:E:134:PHE:C	2:E:134:PHE:CD2	2.78	0.56
1:A:390:CYS:O	1:A:392:ASN:N	2.37	0.56
2:B:79:GLU:N	2:B:80:PRO:CD	2.67	0.56
2:B:340:TRP:HH2	2:B:360:MSE:HE3	1.70	0.56
3:C:62:PHE:O	3:C:65:LEU:HB3	2.05	0.56
3:C:5:VAL:HG12	3:C:5:VAL:O	2.04	0.56
2:B:302:LEU:HD11	2:B:317:LEU:HD21	1.87	0.56
1:A:535:ASN:HA	1:A:538:PHE:HE2	1.61	0.56
1:A:343:SER:N	1:A:380:VAL:HG22	2.19	0.56
2:E:124:LEU:O	2:E:126:LEU:N	2.38	0.56
1:D:409:VAL:O	1:D:409:VAL:HG12	2.04	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:E:305:ILE:HD13	2:E:306:GLU:H	1.69	0.56
1:D:102:THR:HG22	1:D:105:ARG:NH2	2.20	0.56
1:D:427:MSE:HB3	1:D:428:PRO:CD	2.36	0.56
1:D:533:VAL:CG1	1:D:535:ASN:HB2	2.35	0.56
2:B:118:GLU:HB3	2:B:164:GLU:HG3	1.86	0.56
2:B:340:TRP:CH2	2:B:360:MSE:HE3	2.40	0.56
1:A:352:LEU:HD23	1:A:355:ILE:HD12	1.88	0.56
1:A:322:ILE:HG21	1:A:356:LEU:HD21	1.87	0.56
2:E:162:ASP:O	2:E:163:SER:HB2	2.05	0.56
2:E:262:VAL:O	2:E:265:LEU:N	2.38	0.56
3:F:266:CYS:SG	4:H:2:LEU:HD12	2.45	0.56
1:D:115:ILE:O	1:D:119:HIS:CD2	2.58	0.56
3:C:100:LEU:HA	3:C:103:LEU:HD12	1.86	0.56
1:A:336:ASP:OD1	1:A:337:ALA:N	2.38	0.56
1:A:395:ILE:HD11	1:A:400:LEU:CA	2.35	0.56
1:A:342:LYS:O	1:A:346:ALA:HB2	2.05	0.56
1:A:201:VAL:O	1:A:205:ILE:HB	2.05	0.56
3:F:265:TYR:HB3	3:F:269:CYS:HB2	1.86	0.56
1:A:489:MSE:C	1:A:491:GLY:H	2.09	0.56
3:F:240:ALA:HB1	3:F:259:ILE:O	2.05	0.56
1:A:438:PHE:CD1	1:A:438:PHE:C	2.77	0.56
3:F:101:VAL:O	3:F:105:VAL:HG23	2.05	0.56
3:C:276:MET:HB2	3:C:286:PHE:CE1	2.40	0.56
2:E:255:PRO:HG2	2:E:256:GLN:CD	2.25	0.56
1:A:237:GLN:O	1:A:238:GLU:C	2.43	0.56
1:A:24:ASP:O	1:A:25:VAL:C	2.42	0.56
3:F:284:TYR:CD2	3:F:284:TYR:N	2.72	0.56
2:B:121:TRP:CZ2	2:B:167:ARG:HB3	2.40	0.56
1:D:206:ILE:HB	1:D:207:PRO:HD3	1.88	0.56
2:E:164:GLU:OE2	2:E:164:GLU:C	2.43	0.56
3:F:45:VAL:HA	3:F:156:THR:OG1	2.06	0.56
1:D:438:PHE:C	1:D:438:PHE:HD1	2.09	0.56
2:B:180:TYR:CE1	2:B:187:ARG:HA	2.41	0.56
2:B:35:LYS:C	2:B:37:ARG:H	2.08	0.56
1:A:409:VAL:O	1:A:409:VAL:HG12	2.06	0.56
1:D:145:THR:HG22	1:D:146:SER:N	2.21	0.56
2:E:254:HIS:N	2:E:255:PRO:HD2	2.21	0.56
3:F:53:THR:HG21	3:F:275:ILE:HD12	1.87	0.56
1:A:526:LEU:CD2	1:A:563:ILE:HG21	2.32	0.56
3:F:176:THR:HG23	3:F:179:HIS:HD2	1.69	0.56
1:D:491:GLY:O	1:D:492:ASP:C	2.44	0.56
3:C:253:ASP:O	3:C:255:ASN:N	2.39	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:E:412:LYS:O	2:E:414:LYS:N	2.39	0.56
1:A:350:MSE:HE3	1:A:391:VAL:HG13	1.88	0.55
3:C:240:ALA:HB1	3:C:259:ILE:O	2.05	0.55
2:E:218:LEU:CD2	2:E:221:ILE:HD12	2.32	0.55
1:A:261:TYR:CA	1:A:298:VAL:HG22	2.36	0.55
2:B:119:ALA:O	2:B:120:ALA:HB3	2.05	0.55
3:C:139:ASN:CG	3:C:141:ASN:HD22	2.08	0.55
1:D:436:VAL:HG13	1:D:437:GLU:N	2.20	0.55
2:E:373:ASN:ND2	2:E:376:ILE:H	2.05	0.55
1:A:578:PHE:O	1:A:582:ALA:HB2	2.06	0.55
1:A:310:CYS:HA	1:A:313:LEU:HD12	1.87	0.55
1:A:561:LYS:HB3	1:A:562:PRO:HD3	1.87	0.55
3:C:115:ARG:HH12	3:C:151:ASP:HA	1.67	0.55
3:F:76:PRO:HB3	3:F:107:TYR:CD1	2.41	0.55
1:D:424:ILE:HG12	1:D:450:TRP:CE3	2.41	0.55
2:B:333:ALA:O	2:B:337:LEU:HD13	2.06	0.55
1:D:66:LEU:HB3	1:D:104:VAL:HG21	1.88	0.55
3:F:162:GLN:HB3	3:F:235:THR:CG2	2.36	0.55
1:D:412:ALA:O	1:D:413:GLU:HG3	2.07	0.55
2:B:134:PHE:O	2:B:136:GLU:N	2.39	0.55
2:B:310:PHE:CD1	2:B:348:LEU:HD13	2.42	0.55
1:A:556:LEU:HD22	1:A:588:LEU:HD11	1.89	0.55
1:D:12:PRO:O	1:D:15:VAL:HG12	2.07	0.55
2:E:357:LEU:N	2:E:358:PRO:HD2	2.22	0.55
1:D:154:CYS:O	1:D:158:VAL:HG13	2.07	0.55
3:F:244:VAL:HG23	3:F:244:VAL:O	2.07	0.55
1:A:360:ASN:O	1:A:364:HIS:N	2.38	0.55
1:D:559:GLU:O	1:D:563:ILE:HG22	2.07	0.55
1:A:29:LEU:HA	1:A:65:VAL:HG22	1.89	0.55
1:A:517:THR:HA	1:A:521:MSE:HE2	1.88	0.55
1:D:470:VAL:HG22	1:D:478:ALA:HB2	1.88	0.55
2:B:31:LEU:C	2:B:33:ILE:H	2.10	0.55
1:A:182:ARG:HG3	1:A:182:ARG:HH11	1.70	0.55
2:E:83:PRO:O	2:E:85:VAL:N	2.40	0.54
2:B:330:PHE:O	2:B:334:GLU:HB2	2.06	0.54
3:F:265:TYR:CD2	3:F:266:CYS:N	2.74	0.54
1:D:260:ARG:NH1	1:D:260:ARG:HG3	2.22	0.54
3:C:101:VAL:O	3:C:105:VAL:HG23	2.07	0.54
2:B:406:LYS:O	2:B:406:LYS:HD3	2.06	0.54
3:F:203:PRO:HA	3:F:220:PHE:CE1	2.42	0.54
2:E:189:TYR:O	2:E:190:ILE:C	2.45	0.54
3:F:28:VAL:O	3:F:31:LEU:N	2.41	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:356:ILE:C	2:B:358:PRO:HD2	2.28	0.54
2:E:255:PRO:HG2	2:E:256:GLN:NE2	2.22	0.54
3:C:253:ASP:O	3:C:254:ARG:C	2.45	0.54
2:B:409:GLU:O	2:B:413:MSE:HB2	2.08	0.54
2:B:158:LEU:O	2:B:161:PHE:HD1	1.90	0.54
1:A:197:GLU:CD	1:A:197:GLU:H	2.09	0.54
3:C:10:LEU:HD13	3:C:106:ARG:HB2	1.90	0.54
3:C:170:LEU:HD12	3:C:220:PHE:CD2	2.43	0.54
2:B:73:ASN:C	2:B:75:ASN:H	2.10	0.54
2:E:244:LEU:HD22	2:E:253:TYR:CE1	2.42	0.54
3:C:65:LEU:O	3:C:68:LEU:HB3	2.08	0.54
1:A:438:PHE:CE1	1:A:442:LYS:HB2	2.42	0.54
3:C:248:TYR:CE2	3:C:286:PHE:CD2	2.95	0.54
2:E:350:SER:O	2:E:352:ASN:N	2.39	0.54
1:A:367:PRO:O	1:A:370:LEU:HB2	2.07	0.54
3:F:160:ASP:C	3:F:162:GLN:H	2.11	0.54
3:F:76:PRO:HG3	3:F:107:TYR:CE1	2.43	0.54
1:D:477:TRP:CH2	1:D:482:ILE:HD11	2.42	0.54
2:B:310:PHE:CG	2:B:348:LEU:HD13	2.42	0.54
1:D:91:PRO:HB2	1:D:92:PRO:HD3	1.89	0.54
1:D:381:ARG:O	1:D:385:ILE:HG12	2.07	0.54
1:D:24:ASP:O	1:D:25:VAL:C	2.46	0.54
2:B:250:LEU:HA	2:B:253:TYR:CE2	2.42	0.54
1:A:366:LEU:N	1:A:367:PRO:CD	2.70	0.54
2:B:43:PHE:C	2:B:45:PHE:H	2.09	0.54
1:D:131:LEU:HD23	1:D:132:VAL:N	2.23	0.54
1:A:381:ARG:HH12	1:A:414:ASP:CG	2.11	0.54
2:E:152:LYS:O	2:E:156:GLN:HG3	2.08	0.54
1:D:452:VAL:HG13	1:D:497:HIS:HD2	1.72	0.54
2:B:158:LEU:O	2:B:159:GLU:C	2.44	0.54
2:E:332:VAL:O	2:E:335:ARG:N	2.40	0.54
2:E:316:PRO:HG2	2:E:317:LEU:N	2.23	0.54
2:B:373:ASN:C	2:B:375:THR:H	2.11	0.54
3:C:97:VAL:O	3:C:101:VAL:HG23	2.08	0.54
1:D:317:CYS:O	1:D:320:ASN:N	2.38	0.54
2:E:381:TYR:HE2	2:E:385:LYS:HD2	1.71	0.54
1:D:348:VAL:O	1:D:350:MSE:N	2.41	0.54
1:D:262:MSE:O	1:D:263:VAL:C	2.47	0.54
1:D:408:ILE:CD1	1:D:426:TYR:HE2	2.20	0.54
2:E:211:ILE:HG21	2:E:253:TYR:CD1	2.43	0.54
2:B:380:ILE:HG22	2:B:381:TYR:N	2.22	0.54
3:F:190:PRO:HD3	3:F:195:MET:CE	2.38	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:D:158:VAL:HG23	1:D:163:LYS:HG3	1.90	0.54
1:D:144:ARG:HH21	1:D:176:ASP:CG	2.12	0.54
2:E:138:PRO:O	2:E:140:PHE:CD1	2.61	0.54
1:D:375:ASP:OD2	1:D:376:GLU:N	2.41	0.54
2:E:165:ASP:O	2:E:166:PRO:C	2.45	0.53
1:A:36:SER:C	1:A:38:ILE:H	2.11	0.53
2:B:121:TRP:H	2:B:122:PRO:HD2	1.72	0.53
2:B:79:GLU:N	2:B:80:PRO:HD2	2.22	0.53
3:C:62:PHE:HD2	3:C:63:HIS:CD2	2.23	0.53
1:A:570:ASP:OD2	1:A:571:GLN:N	2.41	0.53
1:D:211:ASN:HD22	1:D:211:ASN:N	2.04	0.53
1:A:423:ILE:O	1:A:426:TYR:N	2.36	0.53
2:B:165:ASP:O	2:B:166:PRO:C	2.46	0.53
1:D:47:THR:HG23	1:D:51:LEU:HD23	1.90	0.53
2:B:141:GLN:HB3	2:B:142:PRO:HD2	1.91	0.53
3:F:10:LEU:HD23	3:F:13:TRP:CE3	2.43	0.53
1:D:171:ARG:HG3	1:D:208:MSE:SE	2.58	0.53
2:B:89:PHE:CE2	2:B:93:MSE:HG3	2.44	0.53
3:C:243:LEU:HD11	3:C:271:ASN:CG	2.29	0.53
1:D:79:LEU:N	1:D:79:LEU:CD1	2.65	0.53
1:A:178:THR:HB	1:A:180:MSE:HG2	1.89	0.53
3:F:189:VAL:HA	3:F:195:MET:HE2	1.90	0.53
2:B:389:GLU:O	2:B:390:MSE:HB2	2.09	0.53
1:A:326:ILE:N	1:A:326:ILE:HD12	2.24	0.53
1:A:479:HIS:ND1	1:A:479:HIS:O	2.39	0.53
1:D:310:CYS:HB3	1:D:322:ILE:HD11	1.90	0.53
1:A:455:VAL:HG23	3:C:71:ILE:HA	1.90	0.53
1:D:284:VAL:HB	1:D:285:PRO:HD3	1.90	0.53
1:A:429:LEU:O	1:A:433:GLN:HG3	2.09	0.53
2:B:149:ILE:O	2:B:149:ILE:HG22	2.08	0.53
2:B:124:LEU:O	2:B:126:LEU:N	2.42	0.53
2:E:197:ILE:HD13	2:E:208:HIS:HE1	1.74	0.53
1:A:352:LEU:HA	1:A:355:ILE:CD1	2.36	0.53
1:A:88:CYS:C	1:A:90:LEU:H	2.11	0.53
3:F:185:ARG:O	3:F:187:GLN:N	2.37	0.53
1:A:116:SER:HB2	1:A:128:PHE:CE1	2.44	0.53
3:C:36:LYS:O	3:C:39:LEU:N	2.40	0.53
1:D:489:MSE:O	1:D:491:GLY:N	2.41	0.53
1:D:405:LEU:HB3	1:D:406:PRO:HD3	1.91	0.53
2:B:393:LYS:HG2	2:B:397:ASP:OD2	2.08	0.53
1:D:586:LEU:O	1:D:587:SER:HB2	2.09	0.53
1:D:528:MSE:C	1:D:530:GLY:N	2.61	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:D:104:VAL:CG1	1:D:105:ARG:N	2.72	0.53
1:A:313:LEU:HD13	1:A:321:VAL:CG2	2.39	0.53
1:D:390:CYS:O	1:D:391:VAL:C	2.47	0.53
2:B:208:HIS:CD2	2:B:210:GLY:H	2.27	0.53
1:A:390:CYS:SG	1:A:391:VAL:N	2.82	0.53
2:E:247:VAL:HG12	2:E:249:SER:H	1.73	0.53
1:A:491:GLY:O	1:A:492:ASP:C	2.47	0.53
2:E:234:LYS:O	2:E:238:LEU:HD23	2.08	0.53
2:B:54:LYS:O	2:B:56:LYS:N	2.33	0.53
3:C:83:MET:HE3	3:C:240:ALA:HB3	1.90	0.53
2:E:211:ILE:CG2	2:E:253:TYR:CD1	2.92	0.53
3:C:185:ARG:O	3:C:187:GLN:N	2.40	0.53
2:B:380:ILE:O	2:B:381:TYR:C	2.48	0.53
2:E:365:TYR:O	2:E:366:ARG:C	2.47	0.53
1:A:470:VAL:HG11	1:A:511:VAL:HG23	1.89	0.53
1:D:198:LEU:CD1	1:D:202:LYS:HE3	2.39	0.53
2:E:91:VAL:O	2:E:91:VAL:HG12	2.08	0.53
3:F:253:ASP:O	3:F:254:ARG:C	2.46	0.53
2:E:42:LEU:CB	2:E:63:LEU:HD21	2.39	0.52
2:B:42:LEU:CB	2:B:63:LEU:HD21	2.39	0.52
1:A:489:MSE:C	1:A:491:GLY:N	2.61	0.52
2:B:108:PHE:HB3	3:C:268:ARG:NH2	2.24	0.52
1:A:350:MSE:HE1	1:A:391:VAL:CG2	2.33	0.52
1:A:405:LEU:N	1:A:406:PRO:CD	2.71	0.52
1:A:105:ARG:HD2	1:A:146:SER:OG	2.09	0.52
3:F:162:GLN:OE1	3:F:235:THR:HG21	2.09	0.52
2:E:87:HIS:O	2:E:91:VAL:HG23	2.09	0.52
2:E:43:PHE:C	2:E:45:PHE:H	2.12	0.52
1:D:448:MSE:HE1	1:D:466:LEU:HD21	1.92	0.52
2:B:254:HIS:O	2:B:257:LEU:HB3	2.10	0.52
1:A:325:GLN:C	1:A:328:PRO:HD2	2.29	0.52
2:B:180:TYR:HE1	2:B:187:ARG:HA	1.73	0.52
1:A:77:THR:HG23	1:A:86:VAL:HG21	1.90	0.52
1:A:35:LEU:HD21	1:A:55:LEU:CD1	2.40	0.52
2:B:285:LYS:O	2:B:286:THR:HG23	2.09	0.52
1:A:29:LEU:HD12	1:A:65:VAL:HG22	1.90	0.52
2:B:85:VAL:HG11	2:B:134:PHE:HD1	1.74	0.52
1:A:358:LYS:HA	1:A:394:VAL:HG12	1.92	0.52
1:A:77:THR:O	1:A:80:VAL:HG12	2.09	0.52
1:D:119:HIS:CD2	1:D:119:HIS:H	2.27	0.52
1:A:130:PRO:O	1:A:133:LYS:HB2	2.10	0.52
1:D:155:TYR:N	1:D:156:PRO:CD	2.72	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:E:304:VAL:HG12	2:E:304:VAL:O	2.09	0.52
2:E:42:LEU:O	2:E:43:PHE:O	2.27	0.52
1:A:408:ILE:HD13	1:A:426:TYR:HE2	1.74	0.52
2:B:71:THR:HG21	2:B:133:ARG:HH11	1.74	0.52
3:C:128:GLY:O	3:C:129:PHE:C	2.46	0.52
1:D:560:VAL:HG12	1:D:561:LYS:N	2.25	0.52
2:E:262:VAL:HG12	2:E:263:GLN:N	2.23	0.52
1:D:506:ASN:HD21	1:D:543:SER:HA	1.75	0.52
2:E:73:ASN:C	2:E:75:ASN:N	2.63	0.52
1:A:506:ASN:HD21	1:A:543:SER:CB	2.23	0.52
3:C:170:LEU:HD12	3:C:220:PHE:CG	2.45	0.52
2:E:250:LEU:O	2:E:252:VAL:N	2.43	0.52
3:F:137:TYR:CG	3:F:142:VAL:HG21	2.44	0.52
3:C:17:LEU:HD21	3:C:23:LEU:HG	1.91	0.52
3:C:252:HIS:O	3:C:255:ASN:HB2	2.10	0.52
3:C:252:HIS:O	3:C:253:ASP:O	2.28	0.52
1:D:345:LEU:HD23	1:D:346:ALA:N	2.25	0.52
3:C:166:LEU:O	3:C:166:LEU:HD23	2.10	0.52
1:D:105:ARG:HD2	1:D:146:SER:OG	2.10	0.52
1:D:358:LYS:O	1:D:362:ILE:HG13	2.10	0.52
1:A:500:THR:HA	1:A:503:PHE:CD1	2.36	0.52
3:C:166:LEU:CD2	3:C:239:ARG:HB3	2.40	0.52
2:B:88:MSE:HE1	2:B:127:VAL:HG22	1.92	0.52
2:E:250:LEU:C	2:E:252:VAL:H	2.11	0.52
2:B:254:HIS:CD2	2:B:293:MSE:HE2	2.44	0.52
2:E:310:PHE:O	2:E:314:MSE:HB2	2.09	0.52
1:A:20:LEU:HD23	1:A:31:SER:HB2	1.90	0.52
1:D:141:PHE:CD1	1:D:142:THR:N	2.78	0.52
1:A:12:PRO:O	1:A:15:VAL:HG12	2.10	0.52
2:E:286:THR:HG22	3:F:134:LEU:HB3	1.91	0.52
1:D:277:GLU:C	1:D:279:THR:N	2.60	0.52
1:D:349:ILE:HG23	1:D:350:MSE:N	2.25	0.52
3:C:209:TRP:H	3:C:224:ILE:HD11	1.73	0.52
2:B:134:PHE:C	2:B:136:GLU:H	2.13	0.52
3:F:166:LEU:HD12	3:F:198:LEU:HD22	1.92	0.52
1:D:20:LEU:HD21	1:D:31:SER:O	2.09	0.52
2:E:256:GLN:H	2:E:256:GLN:CD	2.13	0.52
1:D:164:ALA:HA	1:D:167:ARG:NH1	2.25	0.52
3:C:166:LEU:HD21	3:C:239:ARG:HB3	1.91	0.51
1:A:586:LEU:O	1:A:587:SER:HB2	2.10	0.51
1:A:89:LEU:CD1	1:A:89:LEU:N	2.72	0.51
3:F:189:VAL:HA	3:F:195:MET:CE	2.40	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:D:438:PHE:O	1:D:438:PHE:HD1	1.94	0.51
2:E:35:LYS:C	2:E:37:ARG:H	2.11	0.51
2:E:249:SER:O	2:E:252:VAL:HG23	2.10	0.51
2:E:373:ASN:HD21	2:E:376:ILE:HG23	1.75	0.51
1:A:90:LEU:CB	1:A:91:PRO:HD3	2.37	0.51
3:F:13:TRP:NE1	3:F:27:GLN:NE2	2.57	0.51
1:D:128:PHE:O	1:D:129:VAL:C	2.47	0.51
1:A:424:ILE:HA	1:A:450:TRP:CZ3	2.45	0.51
1:A:29:LEU:HD12	1:A:65:VAL:CG2	2.40	0.51
3:F:121:ARG:HH11	3:F:121:ARG:HG3	1.75	0.51
1:D:366:LEU:HB3	1:D:367:PRO:HD3	1.90	0.51
1:D:410:GLU:O	1:D:411:LEU:C	2.47	0.51
2:E:134:PHE:CE2	2:E:135:LEU:HD22	2.45	0.51
2:E:136:GLU:OE1	2:E:178:ARG:NH1	2.40	0.51
1:A:17:ILE:HG12	1:A:38:ILE:HG23	1.92	0.51
3:C:118:HIS:ND1	3:C:123:ILE:HG21	2.24	0.51
2:B:373:ASN:ND2	2:B:376:ILE:H	2.09	0.51
2:B:189:TYR:O	2:B:190:ILE:C	2.48	0.51
2:B:363:SER:HA	2:B:366:ARG:HB2	1.92	0.51
1:D:155:TYR:CE2	1:D:196:LEU:HD23	2.45	0.51
2:B:72:HIS:O	2:B:74:ARG:N	2.44	0.51
2:B:87:HIS:O	2:B:91:VAL:HG23	2.11	0.51
2:E:65:GLU:C	2:E:67:VAL:H	2.13	0.51
2:B:121:TRP:N	2:B:122:PRO:CD	2.73	0.51
2:E:242:LEU:N	2:E:243:PRO:HD2	2.25	0.51
3:C:81:LEU:HD23	3:C:81:LEU:O	2.10	0.51
1:D:155:TYR:N	1:D:156:PRO:HD3	2.25	0.51
3:F:6:PHE:HE2	3:F:34:LYS:HG3	1.75	0.51
2:B:262:VAL:O	2:B:265:LEU:N	2.43	0.51
2:B:346:MSE:CE	2:B:349:ILE:HD12	2.41	0.51
2:B:145:ALA:O	2:B:147:LYS:N	2.44	0.51
3:C:68:LEU:C	3:C:68:LEU:CD2	2.79	0.51
1:D:91:PRO:HB2	1:D:92:PRO:CD	2.41	0.51
3:C:121:ARG:HG3	3:C:121:ARG:NH1	2.25	0.51
1:A:11:TYR:N	1:A:12:PRO:HD2	2.26	0.51
1:A:174:CYS:SG	1:A:185:ALA:HB1	2.50	0.51
1:A:215:ASP:O	1:A:221:ARG:NH1	2.42	0.51
2:E:271:LEU:O	2:E:274:PRO:HG2	2.10	0.51
2:E:88:MSE:HE1	2:E:127:VAL:HG22	1.93	0.51
2:E:202:ILE:HD11	2:E:244:LEU:CG	2.36	0.51
1:A:515:ASP:O	1:A:518:THR:N	2.43	0.51
1:D:414:ASP:OD2	1:D:415:ALA:N	2.44	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:E:167:ARG:CG	2:E:167:ARG:HH11	2.23	0.51
1:D:419:VAL:O	1:D:422:ALA:HB3	2.10	0.51
2:E:180:TYR:HE2	2:E:221:ILE:HG23	1.76	0.51
2:B:134:PHE:C	2:B:134:PHE:CD2	2.83	0.51
1:A:558:SER:O	1:A:562:PRO:HG2	2.10	0.51
2:B:257:LEU:O	2:B:258:ALA:C	2.49	0.51
3:F:95:GLU:N	3:F:95:GLU:OE1	2.38	0.51
3:C:142:VAL:HA	3:C:145:TYR:HD1	1.76	0.51
1:D:155:TYR:CZ	1:D:163:LYS:HB3	2.46	0.51
1:D:343:SER:HA	1:D:380:VAL:HG22	1.92	0.51
2:E:194:ILE:HG21	2:E:218:LEU:HD11	1.92	0.51
3:F:155:LEU:HD11	3:F:195:MET:HG3	1.93	0.51
2:B:267:LYS:O	2:B:268:ASP:HB2	2.11	0.51
2:E:79:GLU:O	2:E:80:PRO:C	2.50	0.50
3:C:239:ARG:O	3:C:240:ALA:HB2	2.11	0.50
1:A:104:VAL:CG1	1:A:105:ARG:N	2.73	0.50
1:A:168:GLN:NE2	1:A:171:ARG:HH12	2.09	0.50
3:F:141:ASN:O	3:F:145:TYR:CD1	2.64	0.50
3:F:194:PRO:HG2	3:F:195:MET:N	2.26	0.50
1:D:205:ILE:HD13	1:D:208:MSE:HE3	1.93	0.50
3:C:162:GLN:OE1	3:C:235:THR:HG21	2.11	0.50
1:D:155:TYR:CE1	1:D:163:LYS:HB3	2.46	0.50
1:A:161:ALA:O	1:A:164:ALA:HB3	2.11	0.50
3:F:33:GLU:O	3:F:36:LYS:HB2	2.11	0.50
3:F:274:ALA:HB2	3:F:288:GLN:HA	1.94	0.50
1:D:439:PHE:CD1	1:D:443:LEU:HB3	2.47	0.50
1:D:502:LEU:HD21	1:D:540:VAL:HG22	1.93	0.50
1:D:538:PHE:CB	1:D:575:VAL:HA	2.41	0.50
1:D:338:ASN:ND2	1:D:341:VAL:HG23	2.17	0.50
2:E:310:PHE:CG	2:E:348:LEU:HD13	2.45	0.50
1:D:52:LEU:HD11	1:D:89:LEU:HD12	1.93	0.50
2:E:183:PHE:C	2:E:185:GLY:N	2.63	0.50
1:D:245:MSE:O	1:D:249:ARG:HG3	2.10	0.50
3:C:34:LYS:O	3:C:38:ILE:HG13	2.11	0.50
2:B:94:PHE:CD2	2:B:94:PHE:N	2.79	0.50
1:D:518:THR:O	1:D:518:THR:HG22	2.10	0.50
2:E:287:HIS:CE1	2:E:289:PRO:HB2	2.46	0.50
2:E:257:LEU:O	2:E:258:ALA:C	2.50	0.50
1:A:453:ASP:OD2	1:A:458:ILE:HG21	2.11	0.50
3:F:181:ARG:HH11	3:F:181:ARG:HG3	1.76	0.50
2:E:380:ILE:O	2:E:381:TYR:C	2.46	0.50
1:D:529:ALA:HB2	1:D:540:VAL:HG11	1.93	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:C:51:PRO:HB3	3:C:279:ASP:C	2.31	0.50
1:A:282:ASP:C	1:A:285:PRO:HD2	2.32	0.50
3:C:81:LEU:HA	3:C:112:THR:O	2.11	0.50
1:A:257:TRP:CH2	2:B:99:PRO:HB3	2.46	0.50
2:E:332:VAL:O	2:E:333:ALA:C	2.48	0.50
1:D:427:MSE:O	1:D:428:PRO:C	2.49	0.50
1:A:502:LEU:HA	1:A:505:ILE:HD12	1.94	0.50
1:A:560:VAL:HG12	1:A:561:LYS:N	2.26	0.50
3:F:243:LEU:HD12	3:F:260:PHE:CE2	2.47	0.50
3:F:34:LYS:O	3:F:38:ILE:HG13	2.12	0.50
1:D:581:GLU:HG3	1:D:581:GLU:O	2.11	0.50
2:E:121:TRP:CZ2	2:E:167:ARG:HB3	2.46	0.50
3:C:143:TRP:CE2	3:C:147:THR:HG21	2.45	0.50
1:D:489:MSE:HB3	1:D:501:THR:OG1	2.11	0.50
3:C:74:LYS:O	3:C:78:THR:HG22	2.12	0.50
2:B:144:ILE:O	2:B:144:ILE:HG22	2.11	0.50
1:A:230:ASN:O	1:A:234:LEU:HG	2.11	0.50
2:B:134:PHE:C	2:B:134:PHE:HD2	2.15	0.50
1:D:180:MSE:HE2	1:D:183:ARG:NH2	2.27	0.50
1:D:44:VAL:CG2	1:D:45:GLU:N	2.74	0.50
3:C:225:SER:OG	3:C:252:HIS:ND1	2.33	0.50
1:A:372:GLN:O	1:A:374:LYS:N	2.45	0.50
2:E:397:ASP:O	2:E:400:GLN:HB3	2.11	0.50
2:E:400:GLN:O	2:E:401:GLN:C	2.49	0.50
1:D:397:ILE:HG13	1:D:397:ILE:O	2.11	0.50
1:A:456:TYR:CD1	1:A:456:TYR:C	2.84	0.50
2:E:88:MSE:HE1	2:E:127:VAL:HG13	1.94	0.50
3:C:106:ARG:HG3	3:C:107:TYR:N	2.26	0.50
1:A:377:CYS:SG	1:A:380:VAL:HG23	2.51	0.50
3:C:190:PRO:O	3:C:196:CYS:HB2	2.11	0.50
3:F:141:ASN:HB3	3:F:145:TYR:HE1	1.73	0.50
3:F:100:LEU:HA	3:F:103:LEU:HD12	1.94	0.50
1:D:112:LEU:HD13	1:D:150:LEU:HD11	1.92	0.50
1:D:256:SER:OG	2:E:96:THR:HG21	2.11	0.50
1:D:423:ILE:O	1:D:426:TYR:N	2.42	0.50
2:E:218:LEU:HD13	2:E:236:PHE:HZ	1.76	0.50
3:C:190:PRO:HD3	3:C:195:MET:HE1	1.93	0.50
1:A:127:HIS:C	1:A:130:PRO:HD2	2.32	0.50
3:F:276:MET:CE	3:F:278:LEU:HD21	2.42	0.50
1:D:426:TYR:O	1:D:426:TYR:CG	2.65	0.49
1:D:20:LEU:HD23	1:D:31:SER:HB3	1.92	0.49
2:E:35:LYS:O	2:E:38:GLN:N	2.44	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:D:412:ALA:O	1:D:413:GLU:CG	2.60	0.49
2:E:250:LEU:HA	2:E:253:TYR:CE2	2.47	0.49
2:E:89:PHE:CE2	2:E:93:MSE:HG3	2.47	0.49
1:D:322:ILE:HG21	1:D:356:LEU:HD21	1.93	0.49
2:E:223:ASN:HD22	2:E:263:GLN:NE2	2.05	0.49
3:F:183:LEU:HD21	3:F:194:PRO:CG	2.41	0.49
1:D:16:LEU:HD23	1:D:16:LEU:N	2.27	0.49
2:E:164:GLU:C	2:E:165:ASP:O	2.50	0.49
1:D:570:ASP:OD1	1:D:575:VAL:HG11	2.12	0.49
1:A:583:LEU:HD22	1:A:588:LEU:HB2	1.93	0.49
3:F:239:ARG:C	3:F:239:ARG:HD3	2.32	0.49
2:E:253:TYR:CD2	2:E:253:TYR:N	2.79	0.49
3:F:190:PRO:HD3	3:F:195:MET:HE2	1.94	0.49
3:C:243:LEU:HD12	3:C:260:PHE:CD2	2.47	0.49
2:B:195:ASN:O	2:B:198:PHE:N	2.45	0.49
2:E:121:TRP:C	2:E:123:HIS:H	2.16	0.49
2:E:65:GLU:O	2:E:67:VAL:N	2.44	0.49
2:B:65:GLU:C	2:B:67:VAL:N	2.64	0.49
2:E:97:LEU:HD22	2:E:162:ASP:CB	2.42	0.49
1:A:85:TYR:O	1:A:87:HIS:N	2.45	0.49
1:A:155:TYR:OH	1:A:167:ARG:HD3	2.11	0.49
3:C:162:GLN:HB3	3:C:235:THR:CG2	2.42	0.49
2:E:183:PHE:O	2:E:185:GLY:N	2.46	0.49
1:A:313:LEU:HD13	1:A:321:VAL:HG21	1.94	0.49
3:F:276:MET:HB2	3:F:286:PHE:CE1	2.47	0.49
2:E:121:TRP:C	2:E:123:HIS:N	2.66	0.49
1:A:411:LEU:C	1:A:413:GLU:N	2.66	0.49
3:F:251:CYS:SG	3:F:256:VAL:HG12	2.53	0.49
3:F:158:LEU:HA	3:F:163:ILE:O	2.12	0.49
1:A:77:THR:HG23	1:A:86:VAL:CG2	2.43	0.49
2:B:248:LYS:NZ	2:B:290:LYS:HZ2	2.10	0.49
1:A:580:GLN:C	1:A:582:ALA:H	2.16	0.49
1:A:129:VAL:CB	1:A:130:PRO:HD3	2.42	0.49
1:D:489:MSE:C	1:D:491:GLY:H	2.16	0.49
1:D:342:LYS:O	1:D:346:ALA:HB2	2.12	0.49
1:D:245:MSE:O	1:D:246:PRO:C	2.48	0.49
1:D:120:SER:O	1:D:121:PRO:C	2.49	0.49
1:D:426:TYR:O	1:D:426:TYR:CD1	2.64	0.49
2:B:67:VAL:C	2:B:69:TYR:H	2.15	0.49
2:B:88:MSE:SE	2:B:127:VAL:HG13	2.62	0.49
1:A:559:GLU:O	1:A:563:ILE:HG22	2.13	0.49
1:A:399:GLN:NE2	1:A:403:SER:OG	2.46	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:364:HIS:C	1:A:367:PRO:HD2	2.31	0.49
1:D:517:THR:HG23	1:D:521:MSE:HE3	1.95	0.49
3:C:104:LYS:CA	3:C:111:ILE:HD11	2.41	0.49
2:E:175:THR:O	2:E:179:ILE:HG13	2.13	0.49
1:A:141:PHE:CD1	1:A:142:THR:N	2.80	0.49
1:D:410:GLU:O	1:D:412:ALA:N	2.46	0.49
1:A:270:LEU:O	1:A:271:GLN:C	2.51	0.49
3:C:209:TRP:CD2	3:C:224:ILE:HD13	2.48	0.49
1:D:179:PRO:HG3	1:D:182:ARG:NH2	2.27	0.49
3:F:118:HIS:ND1	3:F:123:ILE:HG21	2.27	0.49
2:E:262:VAL:O	2:E:263:GLN:C	2.51	0.49
2:B:64:SER:O	2:B:68:GLU:HG3	2.13	0.49
1:A:112:LEU:HD13	1:A:150:LEU:HD11	1.94	0.49
1:A:552:ASP:OD1	1:A:554:SER:HB3	2.12	0.49
2:E:167:ARG:HB3	2:E:167:ARG:HH11	1.78	0.49
1:A:24:ASP:OD2	1:A:24:ASP:O	2.30	0.49
3:F:166:LEU:CD2	3:F:239:ARG:HB3	2.42	0.49
1:D:588:LEU:O	1:D:589:ALA:CB	2.60	0.49
1:D:297:GLU:O	1:D:299:ARG:N	2.46	0.49
3:F:153:LEU:O	3:F:185:ARG:HD2	2.12	0.49
1:A:204:GLU:C	1:A:207:PRO:HD2	2.32	0.49
1:D:481:THR:HG22	1:D:481:THR:O	2.13	0.49
2:E:118:GLU:H	2:E:164:GLU:HG2	1.76	0.49
1:A:283:LEU:O	1:A:287:PHE:N	2.42	0.49
3:C:24:SER:OG	3:C:27:GLN:HG3	2.13	0.49
2:B:118:GLU:H	2:B:164:GLU:CG	2.25	0.49
2:B:329:HIS:NE2	2:B:331:GLN:HB2	2.26	0.49
2:B:371:HIS:NE2	2:B:376:ILE:HD11	2.27	0.49
1:A:178:THR:OG1	1:A:181:VAL:HG23	2.12	0.49
3:F:57:ASP:HB2	3:F:260:PHE:CE1	2.48	0.49
2:E:141:GLN:HB2	2:E:144:ILE:HG13	1.93	0.49
1:A:29:LEU:HD12	1:A:65:VAL:HA	1.94	0.49
1:A:305:LYS:O	1:A:309:PHE:HB2	2.12	0.49
2:E:367:ASN:O	2:E:369:LYS:N	2.32	0.49
3:F:45:VAL:HG22	3:F:156:THR:OG1	2.12	0.49
2:B:330:PHE:CE1	2:B:331:GLN:HG2	2.48	0.49
1:A:89:LEU:CD1	1:A:89:LEU:H	2.25	0.49
1:A:88:CYS:O	1:A:90:LEU:N	2.46	0.49
3:F:244:VAL:CG2	3:F:244:VAL:O	2.61	0.49
2:E:86:VAL:O	2:E:87:HIS:C	2.51	0.49
3:F:181:ARG:NH1	3:F:181:ARG:HG3	2.27	0.49
2:E:121:TRP:N	2:E:122:PRO:CD	2.75	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:347:SER:HB3	1:A:383:ASN:ND2	2.24	0.48
1:D:183:ARG:CZ	2:E:200:ARG:HD2	2.43	0.48
1:D:405:LEU:HD13	1:D:405:LEU:C	2.33	0.48
1:A:155:TYR:HE1	1:A:167:ARG:HG2	1.78	0.48
2:B:132:LEU:C	2:B:134:PHE:N	2.66	0.48
2:B:63:LEU:O	2:B:67:VAL:HG23	2.13	0.48
3:F:237:VAL:CB	3:F:256:VAL:HG23	2.32	0.48
1:D:86:VAL:C	1:D:88:CYS:H	2.17	0.48
1:A:66:LEU:HD22	1:A:96:LEU:CD2	2.42	0.48
3:C:119:GLU:HG2	3:C:153:LEU:HD12	1.95	0.48
1:A:179:PRO:HD2	2:B:196:ASN:ND2	2.27	0.48
2:E:388:MSE:O	2:E:390:MSE:N	2.46	0.48
2:B:337:LEU:HD21	2:B:380:ILE:HG13	1.94	0.48
3:C:46:GLN:O	3:C:157:ALA:HA	2.13	0.48
3:F:55:CYS:SG	3:F:68:LEU:HD11	2.53	0.48
1:D:574:ASP:OD2	3:F:110:ARG:NE	2.46	0.48
1:D:489:MSE:C	1:D:491:GLY:N	2.67	0.48
1:A:24:ASP:O	1:A:27:LEU:N	2.39	0.48
3:C:239:ARG:HH12	3:C:242:GLN:CG	2.16	0.48
2:E:217:ILE:O	2:E:221:ILE:HG13	2.13	0.48
3:C:115:ARG:HB2	3:C:153:LEU:HB2	1.95	0.48
1:D:67:LEU:HA	1:D:104:VAL:HG22	1.94	0.48
1:A:277:GLU:O	1:A:279:THR:N	2.47	0.48
3:C:58:VAL:O	3:C:61:GLN:HG3	2.14	0.48
3:F:123:ILE:HG23	3:F:127:TYR:CD2	2.35	0.48
2:B:250:LEU:C	2:B:252:VAL:H	2.16	0.48
1:D:260:ARG:NE	1:D:293:ASP:OD2	2.42	0.48
1:D:399:GLN:NE2	1:D:403:SER:OG	2.45	0.48
2:B:68:GLU:HB3	2:B:72:HIS:HD2	1.79	0.48
3:C:176:THR:HA	3:C:232:ASN:OD1	2.13	0.48
2:E:80:PRO:HG2	2:E:82:TYR:HE2	1.73	0.48
2:E:373:ASN:HD22	2:E:376:ILE:HG23	1.75	0.48
1:A:89:LEU:N	1:A:89:LEU:HD12	2.27	0.48
1:D:94:GLU:HB2	1:D:131:LEU:CD1	2.44	0.48
3:F:253:ASP:O	3:F:255:ASN:N	2.45	0.48
1:A:277:GLU:C	1:A:279:THR:N	2.67	0.48
2:E:195:ASN:O	2:E:198:PHE:N	2.46	0.48
1:D:353:SER:N	1:D:354:PRO:HD2	2.29	0.48
1:D:389:ASP:N	1:D:389:ASP:OD2	2.46	0.48
1:A:506:ASN:ND2	1:A:543:SER:HA	2.29	0.48
2:E:259:TYR:O	2:E:263:GLN:HB2	2.12	0.48
3:C:158:LEU:HD21	3:C:161:GLY:HA2	1.96	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:D:12:PRO:O	1:D:13:ILE:C	2.52	0.48
1:A:39:ALA:HB1	1:A:47:THR:CG2	2.44	0.48
2:B:344:TYR:O	2:B:347:SER:HB3	2.12	0.48
1:A:25:VAL:HG13	1:A:62:GLU:HG2	1.95	0.48
1:A:502:LEU:O	1:A:506:ASN:OD1	2.32	0.48
3:C:202:ASP:HA	3:C:239:ARG:NH2	2.29	0.48
1:D:75:THR:C	1:D:77:THR:H	2.17	0.48
3:C:237:VAL:CB	3:C:256:VAL:HG23	2.41	0.48
2:E:245:HIS:CE1	2:E:257:LEU:HD21	2.49	0.48
1:D:398:ARG:O	1:D:399:GLN:C	2.52	0.48
3:C:276:MET:HE3	3:C:278:LEU:HD21	1.95	0.48
2:B:313:ILE:C	2:B:316:PRO:HD2	2.33	0.48
1:D:77:THR:O	1:D:80:VAL:HG12	2.13	0.48
2:E:236:PHE:CD2	2:E:236:PHE:C	2.86	0.48
2:E:287:HIS:O	2:E:288:SER:C	2.52	0.48
3:C:236:LEU:HD11	3:C:257:VAL:HG12	1.95	0.48
2:E:296:ASN:O	2:E:300:GLU:HG3	2.13	0.48
2:E:121:TRP:O	2:E:123:HIS:N	2.47	0.48
3:F:251:CYS:SG	3:F:256:VAL:CG1	3.02	0.48
3:F:142:VAL:HA	3:F:145:TYR:HD1	1.77	0.48
2:B:325:VAL:HG22	2:B:337:LEU:CD1	2.44	0.48
2:B:325:VAL:HG22	2:B:337:LEU:HD12	1.96	0.48
3:F:68:LEU:C	3:F:68:LEU:CD2	2.81	0.48
2:B:391:ASN:CG	2:B:394:LEU:HD12	2.34	0.48
1:D:198:LEU:HD12	1:D:202:LYS:HE3	1.96	0.48
2:B:315:GLU:HB2	2:B:316:PRO:HD3	1.96	0.48
3:C:239:ARG:HD3	3:C:240:ALA:N	2.29	0.48
2:B:42:LEU:O	2:B:59:LYS:HE3	2.14	0.48
1:D:22:ASN:O	1:D:23:GLU:CB	2.61	0.48
3:F:120:SER:O	3:F:124:THR:HG23	2.13	0.48
1:A:52:LEU:HD11	1:A:89:LEU:HD12	1.95	0.48
2:E:356:ILE:O	2:E:359:ILE:N	2.46	0.48
1:D:482:ILE:O	1:D:486:VAL:HG23	2.14	0.48
3:C:176:THR:HG23	3:C:179:HIS:HD2	1.78	0.48
2:B:407:LEU:HD23	2:B:407:LEU:C	2.34	0.48
2:B:400:GLN:O	2:B:401:GLN:C	2.53	0.47
1:A:455:VAL:HG13	1:A:458:ILE:HB	1.95	0.47
1:A:179:PRO:CB	1:A:183:ARG:NH1	2.76	0.47
1:D:43:GLY:O	1:D:44:VAL:C	2.52	0.47
1:D:102:THR:O	1:D:103:VAL:C	2.52	0.47
2:E:255:PRO:HG2	2:E:256:GLN:H	1.79	0.47
1:D:245:MSE:HA	1:D:245:MSE:HE3	1.96	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:375:ASP:OD2	1:A:376:GLU:N	2.47	0.47
3:C:127:TYR:OH	4:G:5:1ZN:H21	2.14	0.47
3:F:28:VAL:HG21	3:F:142:VAL:HG13	1.95	0.47
1:A:155:TYR:HB3	1:A:156:PRO:HD3	1.94	0.47
2:B:365:TYR:O	2:B:366:ARG:C	2.52	0.47
1:A:327:LEU:O	1:A:331:LYS:HG3	2.13	0.47
2:E:183:PHE:C	2:E:185:GLY:H	2.15	0.47
1:A:218:ASP:C	1:A:220:VAL:H	2.16	0.47
1:A:533:VAL:HG12	1:A:535:ASN:HB2	1.95	0.47
3:C:166:LEU:HD11	3:C:169:GLY:C	2.34	0.47
3:C:122:GLN:O	3:C:126:VAL:HG23	2.15	0.47
1:A:102:THR:HG22	1:A:105:ARG:HH22	1.77	0.47
2:E:288:SER:HB2	2:E:289:PRO:CD	2.43	0.47
2:E:215:LEU:HD13	2:E:257:LEU:HA	1.97	0.47
3:F:17:LEU:O	3:F:20:CYS:N	2.36	0.47
1:A:509:SER:O	1:A:550:ILE:HD13	2.14	0.47
1:D:398:ARG:O	1:D:400:LEU:N	2.47	0.47
3:C:276:MET:HE2	3:C:278:LEU:HD21	1.95	0.47
1:A:466:LEU:O	1:A:469:LEU:N	2.43	0.47
2:B:132:LEU:O	2:B:134:PHE:N	2.47	0.47
1:D:40:LEU:C	1:D:42:LEU:N	2.67	0.47
2:E:151:GLN:O	2:E:154:VAL:N	2.47	0.47
2:E:241:LEU:HA	2:E:241:LEU:HD23	1.66	0.47
2:E:97:LEU:HB3	2:E:98:PRO:HD2	1.97	0.47
1:A:382:LEU:HD12	1:A:419:VAL:HG13	1.97	0.47
3:F:119:GLU:HG3	3:F:150:PHE:CE1	2.49	0.47
2:E:409:GLU:O	2:E:413:MSE:HB2	2.13	0.47
1:A:377:CYS:SG	1:A:379:GLU:HB2	2.55	0.47
2:B:186:LEU:O	2:B:190:ILE:HD12	2.14	0.47
2:B:242:LEU:HD13	2:B:278:ALA:HB2	1.94	0.47
1:A:141:PHE:C	1:A:141:PHE:CD1	2.87	0.47
1:A:115:ILE:O	1:A:119:HIS:CD2	2.67	0.47
2:E:285:LYS:HB2	2:E:285:LYS:HE3	1.74	0.47
1:A:499:MSE:O	1:A:501:THR:N	2.47	0.47
1:A:100:GLU:O	1:A:101:GLU:C	2.53	0.47
1:D:317:CYS:O	1:D:318:ARG:C	2.53	0.47
1:D:385:ILE:HD12	1:D:423:ILE:HD11	1.96	0.47
2:E:72:HIS:C	2:E:74:ARG:H	2.17	0.47
2:E:117:LEU:HD23	2:E:164:GLU:OE1	2.15	0.47
3:C:106:ARG:O	3:C:108:ARG:N	2.36	0.47
3:C:45:VAL:HA	3:C:156:THR:OG1	2.14	0.47
2:B:118:GLU:CB	2:B:164:GLU:HG2	2.43	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:59:LYS:HA	2:B:62:ALA:HB3	1.96	0.47
3:C:117:ASN:HB2	3:C:200:TRP:CZ2	2.49	0.47
2:B:335:ARG:HG3	2:B:335:ARG:HH11	1.78	0.47
1:A:96:LEU:HA	1:A:99:VAL:HG23	1.96	0.47
3:C:119:GLU:HG3	3:C:150:PHE:CG	2.49	0.47
1:A:76:PHE:HB2	1:A:89:LEU:HD21	1.95	0.47
1:D:67:LEU:O	1:D:67:LEU:HD12	2.15	0.47
1:D:94:GLU:HB2	1:D:131:LEU:HD12	1.96	0.47
1:D:193:ALA:HB2	1:D:205:ILE:HG13	1.97	0.47
2:B:158:LEU:HD23	2:B:161:PHE:CE1	2.50	0.47
2:B:104:THR:OG1	2:B:105:GLY:N	2.46	0.47
3:C:294:ARG:HH11	3:C:294:ARG:HG2	1.80	0.47
1:A:288:GLN:CA	1:A:291:MSE:HE3	2.25	0.47
3:C:10:LEU:HD23	3:C:13:TRP:CE3	2.50	0.47
1:A:349:ILE:HG23	1:A:350:MSE:H	1.80	0.47
2:B:169:ARG:O	2:B:170:ASP:C	2.53	0.47
3:F:248:TYR:CE2	3:F:286:PHE:CD2	3.03	0.47
1:D:307:LYS:HD2	1:D:351:GLY:HA3	1.97	0.47
1:A:177:ASP:N	1:A:177:ASP:OD1	2.48	0.47
1:D:348:VAL:O	1:D:349:ILE:C	2.53	0.47
1:D:411:LEU:C	1:D:413:GLU:N	2.67	0.47
1:A:349:ILE:CG2	1:A:350:MSE:N	2.78	0.47
3:C:220:PHE:CA	3:C:224:ILE:HD12	2.44	0.47
2:B:169:ARG:HB3	2:B:213:GLU:HG2	1.97	0.47
1:D:17:ILE:HG12	1:D:38:ILE:HG23	1.95	0.47
1:A:225:VAL:HG11	1:A:262:MSE:CB	2.37	0.47
2:E:315:GLU:O	2:E:319:ARG:HB2	2.14	0.47
2:B:250:LEU:O	2:B:252:VAL:N	2.48	0.47
1:A:76:PHE:CB	1:A:89:LEU:HD21	2.45	0.47
2:B:324:CYS:O	2:B:325:VAL:C	2.53	0.47
1:D:119:HIS:CD2	1:D:119:HIS:N	2.83	0.47
3:C:94:VAL:O	3:C:97:VAL:HG12	2.15	0.47
2:B:35:LYS:C	2:B:37:ARG:N	2.68	0.47
1:D:492:ASP:OD2	1:D:493:PRO:HD2	2.15	0.47
3:F:244:VAL:HG21	3:F:248:TYR:N	2.30	0.47
2:B:305:ILE:HD13	2:B:306:GLU:N	2.27	0.47
1:A:452:VAL:HG13	1:A:497:HIS:HE2	1.75	0.47
2:B:388:MSE:HE2	2:B:392:GLN:NE2	2.19	0.47
2:E:251:SER:HA	2:E:293:MSE:CE	2.41	0.47
3:F:87:VAL:O	3:F:88:ASP:HB2	2.14	0.47
3:F:88:ASP:O	3:F:89:ARG:HB2	2.15	0.47
3:F:171:SER:HB2	3:F:197:ASP:HB3	1.96	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:D:522:LEU:N	1:D:523:PRO:CD	2.77	0.47
1:A:119:HIS:H	1:A:119:HIS:CD2	2.33	0.47
1:D:352:LEU:HD23	1:D:355:ILE:HD12	1.96	0.47
1:D:350:MSE:CE	1:D:391:VAL:HG13	2.18	0.46
1:D:535:ASN:HA	1:D:538:PHE:CD2	2.49	0.46
1:A:353:SER:N	1:A:354:PRO:HD2	2.30	0.46
1:A:399:GLN:HE21	1:A:399:GLN:CA	2.27	0.46
2:E:313:ILE:HG22	2:E:314:MSE:N	2.30	0.46
2:B:222:ILE:O	2:B:224:GLY:N	2.47	0.46
3:F:103:LEU:C	3:F:111:ILE:HD11	2.34	0.46
1:A:340:HIS:O	1:A:344:ALA:HB2	2.15	0.46
3:F:5:VAL:O	3:F:5:VAL:HG12	2.14	0.46
2:E:61:ALA:O	2:E:63:LEU:N	2.48	0.46
1:D:495:TYR:O	1:D:499:MSE:HG3	2.14	0.46
2:B:241:LEU:HD23	2:B:241:LEU:HA	1.61	0.46
2:B:335:ARG:HG3	2:B:335:ARG:NH1	2.30	0.46
1:D:61:ASP:N	1:D:62:GLU:OE2	2.47	0.46
1:D:215:ASP:O	1:D:221:ARG:NH1	2.49	0.46
1:D:182:ARG:NH1	1:D:182:ARG:HG3	2.29	0.46
2:B:329:HIS:HD2	2:B:332:VAL:HG23	1.80	0.46
2:B:186:LEU:HB3	2:B:190:ILE:CD1	2.45	0.46
3:C:97:VAL:HG13	3:C:98:THR:H	1.79	0.46
3:F:106:ARG:HG3	3:F:107:TYR:N	2.30	0.46
1:D:349:ILE:HD11	1:D:368:LEU:HD12	1.97	0.46
1:D:384:ILE:CG2	1:D:385:ILE:N	2.78	0.46
1:D:388:LEU:HA	1:D:391:VAL:HG22	1.97	0.46
2:E:145:ALA:O	2:E:146:LYS:C	2.54	0.46
2:E:45:PHE:CB	2:E:59:LYS:HD2	2.46	0.46
2:B:83:PRO:HD3	2:B:148:TYR:CE1	2.50	0.46
3:C:59:HIS:HE1	3:C:118:HIS:CD2	2.34	0.46
2:E:97:LEU:HD22	2:E:162:ASP:HB3	1.97	0.46
3:C:174:ILE:HD11	3:C:194:PRO:HB2	1.98	0.46
1:A:80:VAL:HG22	1:A:80:VAL:O	2.16	0.46
3:F:265:TYR:HD2	3:F:266:CYS:H	1.63	0.46
3:F:236:LEU:HD11	3:F:257:VAL:CG1	2.45	0.46
1:D:388:LEU:HA	1:D:391:VAL:CG2	2.46	0.46
2:E:133:ARG:HA	2:E:136:GLU:OE2	2.15	0.46
2:E:65:GLU:C	2:E:67:VAL:N	2.67	0.46
1:A:22:ASN:O	1:A:23:GLU:HB2	2.16	0.46
1:D:495:TYR:CD2	1:D:533:VAL:HG11	2.50	0.46
2:B:63:LEU:C	2:B:65:GLU:N	2.68	0.46
2:B:215:LEU:HD13	2:B:257:LEU:HA	1.97	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:C:50:CYS:HB2	3:C:51:PRO:CA	2.43	0.46
1:A:179:PRO:HB3	1:A:183:ARG:NH1	2.31	0.46
3:F:171:SER:HB2	3:F:197:ASP:CB	2.45	0.46
1:A:222:LEU:HD23	1:A:223:LEU:N	2.30	0.46
1:A:79:LEU:CD1	1:A:79:LEU:H	2.27	0.46
3:F:76:PRO:HB3	3:F:107:TYR:CG	2.51	0.46
1:A:182:ARG:HG3	1:A:182:ARG:NH1	2.31	0.46
1:D:482:ILE:C	1:D:484:PRO:HD2	2.35	0.46
1:A:476:GLU:CD	1:A:476:GLU:H	2.18	0.46
1:D:338:ASN:HD21	1:D:340:HIS:HB2	1.81	0.46
3:F:158:LEU:CD2	3:F:161:GLY:HA2	2.45	0.46
3:F:43:SER:HG	3:F:45:VAL:C	2.19	0.46
1:A:470:VAL:HG11	1:A:511:VAL:CG2	2.45	0.46
1:A:316:ASP:O	1:A:317:CYS:HB3	2.15	0.46
1:D:579:ALA:O	1:D:582:ALA:HB3	2.16	0.46
1:D:580:GLN:C	1:D:582:ALA:H	2.19	0.46
1:A:229:VAL:O	1:A:233:GLN:HG3	2.16	0.46
1:D:504:CYS:HB3	1:D:508:LEU:HD23	1.96	0.46
3:C:258:THR:C	3:C:259:ILE:HG13	2.35	0.46
2:B:121:TRP:O	2:B:123:HIS:N	2.48	0.46
1:A:339:GLN:HE21	1:A:377:CYS:HB2	1.79	0.46
2:B:186:LEU:HB3	2:B:190:ILE:HD12	1.97	0.46
3:F:162:GLN:HB3	3:F:235:THR:HG21	1.98	0.46
1:A:211:ASN:ND2	1:A:211:ASN:N	2.62	0.46
3:C:272:GLN:OE1	3:C:288:GLN:NE2	2.48	0.46
3:C:141:ASN:O	3:C:145:TYR:CD1	2.68	0.46
3:C:36:LYS:O	3:C:37:GLU:C	2.53	0.46
1:A:141:PHE:HE2	2:B:199:TYR:CD2	2.34	0.46
1:D:253:GLU:O	1:D:254:ASP:C	2.54	0.46
1:A:522:LEU:N	1:A:523:PRO:CD	2.79	0.46
1:A:388:LEU:C	1:A:390:CYS:N	2.67	0.46
1:A:564:LEU:O	1:A:564:LEU:CD2	2.60	0.46
1:A:399:GLN:C	1:A:399:GLN:HE21	2.19	0.46
1:D:277:GLU:C	1:D:279:THR:H	2.19	0.46
2:E:107:GLU:HG2	2:E:107:GLU:H	1.55	0.46
2:B:313:ILE:CG2	2:B:317:LEU:HB2	2.46	0.46
2:E:137:SER:O	2:E:140:PHE:HD1	1.99	0.46
1:D:506:ASN:HD21	1:D:543:SER:CB	2.29	0.46
2:E:35:LYS:O	2:E:37:ARG:N	2.48	0.46
3:F:12:GLN:HE22	3:F:16:GLN:HB2	1.81	0.46
2:E:330:PHE:CD1	2:E:331:GLN:N	2.84	0.46
1:D:378:PRO:O	1:D:379:GLU:C	2.54	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:313:ILE:HG22	2:B:314:MSE:N	2.31	0.46
2:B:313:ILE:HG22	2:B:317:LEU:HB2	1.98	0.46
1:D:179:PRO:O	1:D:180:MSE:C	2.53	0.46
1:A:67:LEU:HD11	1:A:107:LYS:HG3	1.97	0.46
3:C:183:LEU:HD21	3:C:194:PRO:HG3	1.97	0.46
2:B:218:LEU:HA	2:B:218:LEU:HD23	1.80	0.46
1:D:126:ALA:C	1:D:127:HIS:HD2	2.19	0.46
1:D:326:ILE:HG22	1:D:327:LEU:N	2.31	0.46
3:C:12:GLN:O	3:C:12:GLN:NE2	2.49	0.46
3:C:290:ASP:HB3	3:C:291:PRO:HD2	1.97	0.46
2:B:305:ILE:HD12	2:B:310:PHE:N	2.31	0.45
3:C:76:PRO:HB3	3:C:107:TYR:CG	2.51	0.45
3:F:166:LEU:HD23	3:F:239:ARG:HB3	1.97	0.45
2:B:237:LEU:HD12	2:B:241:LEU:HD12	1.98	0.45
3:F:118:HIS:C	3:F:120:SER:H	2.20	0.45
1:D:455:VAL:O	1:D:455:VAL:HG13	2.16	0.45
1:D:525:VAL:HG11	1:D:544:LEU:CD2	2.46	0.45
2:E:242:LEU:HD13	2:E:278:ALA:HB2	1.96	0.45
1:D:401:SER:HA	1:D:405:LEU:HB2	1.98	0.45
1:D:405:LEU:HD13	1:D:409:VAL:CG2	2.46	0.45
2:B:257:LEU:O	2:B:260:CYS:N	2.49	0.45
3:C:67:GLU:HA	3:C:70:ARG:NH1	2.31	0.45
3:F:103:LEU:CB	3:F:111:ILE:HD13	2.46	0.45
3:F:115:ARG:HG3	3:F:119:GLU:HB2	1.98	0.45
1:D:146:SER:O	1:D:147:ALA:C	2.54	0.45
1:A:528:MSE:C	1:A:530:GLY:N	2.65	0.45
2:B:407:LEU:HD23	2:B:407:LEU:O	2.16	0.45
1:D:348:VAL:CG2	1:D:349:ILE:N	2.78	0.45
2:E:69:TYR:CZ	2:E:75:ASN:ND2	2.85	0.45
1:A:395:ILE:HD11	1:A:400:LEU:HA	1.97	0.45
2:B:97:LEU:HD22	2:B:162:ASP:CB	2.47	0.45
3:C:119:GLU:HB3	3:C:150:PHE:HB3	1.98	0.45
1:A:77:THR:HA	1:A:86:VAL:HG23	1.97	0.45
1:A:528:MSE:O	1:A:530:GLY:N	2.49	0.45
2:B:184:LEU:HA	2:B:187:ARG:HG3	1.97	0.45
2:E:103:PRO:HG3	2:E:108:PHE:CD2	2.51	0.45
1:D:370:LEU:HD13	1:D:370:LEU:HA	1.76	0.45
1:D:410:GLU:C	1:D:412:ALA:N	2.69	0.45
1:A:390:CYS:O	1:A:391:VAL:C	2.54	0.45
1:A:400:LEU:HD12	1:A:404:LEU:HD23	1.98	0.45
1:A:408:ILE:HA	1:A:411:LEU:HD23	1.98	0.45
1:D:495:TYR:CD2	1:D:499:MSE:HE2	2.51	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:167:ARG:O	2:B:168:GLU:C	2.54	0.45
2:B:164:GLU:HB2	2:B:168:GLU:HB2	1.99	0.45
2:B:67:VAL:C	2:B:69:TYR:N	2.70	0.45
1:D:42:LEU:HD23	1:D:47:THR:HA	1.99	0.45
2:B:183:PHE:HB2	2:B:186:LEU:HD22	1.97	0.45
3:C:165:CYS:HA	3:C:238:SER:O	2.16	0.45
2:B:265:LEU:HD21	2:B:272:THR:HA	1.98	0.45
2:E:294:PHE:O	2:E:295:LEU:C	2.53	0.45
2:E:273:GLU:OE1	2:E:312:LYS:HD3	2.16	0.45
3:C:265:TYR:HB3	3:C:269:CYS:HB2	1.98	0.45
2:B:124:LEU:C	2:B:126:LEU:N	2.70	0.45
2:B:65:GLU:O	2:B:67:VAL:N	2.49	0.45
2:E:126:LEU:C	2:E:128:TYR:N	2.70	0.45
1:A:490:SER:HB2	1:A:528:MSE:HE3	1.99	0.45
3:F:176:THR:HG23	3:F:179:HIS:CD2	2.49	0.45
3:F:252:HIS:O	3:F:253:ASP:O	2.34	0.45
3:F:95:GLU:OE1	3:F:136:LYS:NZ	2.49	0.45
1:A:552:ASP:O	1:A:554:SER:N	2.50	0.45
3:C:294:ARG:HG2	3:C:294:ARG:NH1	2.32	0.45
1:D:327:LEU:O	1:D:327:LEU:HG	2.16	0.45
1:D:295:GLU:O	1:D:296:ALA:C	2.54	0.45
2:B:298:LEU:HD12	2:B:298:LEU:HA	1.45	0.45
2:E:118:GLU:HG3	2:E:119:ALA:O	2.16	0.45
1:A:343:SER:CB	1:A:380:VAL:HG22	2.46	0.45
3:C:120:SER:O	3:C:124:THR:HG23	2.15	0.45
1:D:560:VAL:O	1:D:561:LYS:C	2.55	0.45
1:A:88:CYS:C	1:A:90:LEU:N	2.70	0.45
1:A:52:LEU:HD12	1:A:88:CYS:HB3	1.98	0.45
1:A:179:PRO:CB	1:A:183:ARG:HH12	2.29	0.45
2:B:242:LEU:HD11	2:B:275:VAL:HA	1.99	0.45
1:A:365:LEU:C	1:A:367:PRO:HD2	2.37	0.45
3:F:24:SER:OG	3:F:27:GLN:HG3	2.17	0.45
1:A:12:PRO:O	1:A:13:ILE:C	2.55	0.45
1:A:237:GLN:CD	1:A:278:ILE:HD11	2.36	0.45
1:A:400:LEU:HD12	1:A:404:LEU:CD2	2.45	0.45
1:D:35:LEU:O	1:D:76:PHE:HZ	1.99	0.45
1:D:22:ASN:HD21	1:D:24:ASP:HB3	1.82	0.45
2:B:182:LYS:HB2	2:B:183:PHE:CD1	2.52	0.45
3:F:194:PRO:CG	3:F:195:MET:H	2.30	0.45
1:D:262:MSE:O	1:D:265:ASP:N	2.49	0.45
1:A:327:LEU:N	1:A:328:PRO:CD	2.78	0.45
3:C:137:TYR:CG	3:C:142:VAL:HG21	2.51	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:F:12:GLN:O	3:F:15:GLU:HB3	2.16	0.45
2:E:402:PHE:O	2:E:403:LYS:C	2.55	0.45
2:E:121:TRP:CE2	2:E:167:ARG:NH1	2.85	0.45
2:E:44:ASP:O	2:E:45:PHE:C	2.55	0.45
2:E:85:VAL:HG11	2:E:134:PHE:CE1	2.52	0.45
1:A:384:ILE:HG22	1:A:385:ILE:N	2.31	0.45
3:C:203:PRO:HB3	3:C:220:PHE:HE1	1.82	0.45
3:C:172:PRO:HG3	3:C:209:TRP:CD2	2.51	0.45
1:D:38:ILE:HD12	1:D:38:ILE:N	2.32	0.45
1:D:405:LEU:HD13	1:D:409:VAL:HG23	1.99	0.45
3:F:134:LEU:HD12	3:F:134:LEU:N	2.32	0.45
1:D:257:TRP:CZ2	2:E:99:PRO:HD3	2.52	0.45
1:A:581:GLU:HG3	1:A:581:GLU:O	2.17	0.45
3:F:14:ILE:O	3:F:18:ASN:HB2	2.17	0.45
2:B:237:LEU:HA	2:B:241:LEU:HB2	1.98	0.45
2:E:162:ASP:O	2:E:163:SER:CB	2.62	0.45
1:D:287:PHE:CD2	1:D:291:MSE:HE2	2.52	0.45
2:E:182:LYS:HB2	2:E:183:PHE:CE1	2.51	0.45
1:D:211:ASN:N	1:D:211:ASN:ND2	2.65	0.45
1:D:120:SER:O	1:D:123:ASP:N	2.50	0.45
1:D:525:VAL:CG1	1:D:544:LEU:HD21	2.47	0.45
2:B:152:LYS:O	2:B:156:GLN:HG3	2.17	0.45
1:D:451:LEU:HD12	1:D:451:LEU:HA	1.64	0.45
3:C:203:PRO:CA	3:C:220:PHE:CE1	2.99	0.45
2:B:71:THR:HG21	2:B:133:ARG:NH1	2.31	0.45
1:D:34:LYS:C	1:D:36:SER:H	2.20	0.45
2:E:250:LEU:C	2:E:252:VAL:N	2.71	0.45
1:A:369:PHE:CD2	1:A:369:PHE:N	2.83	0.45
1:D:90:LEU:HB2	1:D:91:PRO:CD	2.45	0.45
3:C:121:ARG:HG2	3:C:147:THR:HB	1.98	0.45
3:C:93:SER:O	3:C:94:VAL:C	2.55	0.45
1:A:197:GLU:O	1:A:198:LEU:C	2.55	0.45
1:A:333:LEU:O	1:A:335:SER:N	2.49	0.45
3:F:61:GLN:NE2	3:F:64:ASP:OD2	2.50	0.45
2:B:314:MSE:O	2:B:315:GLU:C	2.56	0.44
2:E:43:PHE:HA	2:E:88:MSE:HG2	1.98	0.44
1:A:384:ILE:CG2	1:A:385:ILE:N	2.80	0.44
3:C:166:LEU:HD11	3:C:169:GLY:CA	2.47	0.44
2:E:93:MSE:HE2	2:E:128:TYR:CZ	2.52	0.44
1:D:146:SER:O	1:D:148:CYS:N	2.49	0.44
1:A:297:GLU:O	1:A:298:VAL:C	2.56	0.44
1:A:515:ASP:O	1:A:517:THR:N	2.50	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:44:VAL:CG2	1:A:45:GLU:N	2.79	0.44
1:D:205:ILE:HG22	1:D:206:ILE:N	2.32	0.44
2:E:350:SER:C	2:E:352:ASN:N	2.71	0.44
1:A:221:ARG:O	1:A:224:ALA:HB3	2.17	0.44
1:D:307:LYS:O	1:D:311:GLU:HG3	2.17	0.44
1:A:229:VAL:HG22	1:A:270:LEU:CD2	2.46	0.44
2:B:209:ASN:ND2	2:B:209:ASN:N	2.65	0.44
3:C:43:SER:OG	3:C:45:VAL:C	2.56	0.44
1:D:499:MSE:O	1:D:502:LEU:N	2.50	0.44
2:B:71:THR:O	2:B:73:ASN:N	2.42	0.44
1:A:588:LEU:O	1:A:589:ALA:CB	2.64	0.44
3:C:118:HIS:C	3:C:120:SER:H	2.20	0.44
2:B:244:LEU:HD22	2:B:253:TYR:HE1	1.78	0.44
1:D:44:VAL:HG13	1:D:45:GLU:H	1.82	0.44
3:F:119:GLU:HG2	3:F:153:LEU:HD12	1.99	0.44
1:A:115:ILE:O	1:A:115:ILE:HG13	2.14	0.44
3:F:293:PRO:HG2	3:F:293:PRO:O	2.17	0.44
2:E:31:LEU:C	2:E:33:ILE:H	2.19	0.44
2:B:315:GLU:HB2	2:B:316:PRO:CD	2.47	0.44
1:A:288:GLN:O	1:A:291:MSE:N	2.50	0.44
1:A:271:GLN:HA	1:A:283:LEU:CD1	2.48	0.44
2:B:121:TRP:C	2:B:123:HIS:N	2.69	0.44
1:A:560:VAL:O	1:A:563:ILE:HG22	2.17	0.44
3:C:118:HIS:CE1	3:C:123:ILE:HG21	2.51	0.44
2:E:344:TYR:HE1	2:E:348:LEU:HD11	1.83	0.44
2:E:289:PRO:O	2:E:293:MSE:HG3	2.17	0.44
2:B:250:LEU:C	2:B:252:VAL:N	2.71	0.44
3:C:144:LYS:O	3:C:145:TYR:C	2.56	0.44
1:A:11:TYR:O	1:A:12:PRO:C	2.55	0.44
1:D:439:PHE:CE1	1:D:443:LEU:HB3	2.52	0.44
1:D:218:ASP:HB3	1:D:221:ARG:NH2	2.33	0.44
3:F:12:GLN:NE2	3:F:16:GLN:HB2	2.33	0.44
3:F:156:THR:HG22	3:F:166:LEU:HB3	1.98	0.44
3:C:185:ARG:HG2	3:C:185:ARG:HH11	1.83	0.44
2:E:182:LYS:HB2	2:E:183:PHE:CD1	2.52	0.44
1:A:436:VAL:HG22	1:A:440:ASP:OD2	2.17	0.44
1:D:497:HIS:O	1:D:500:THR:HB	2.18	0.44
2:B:121:TRP:HB3	2:B:122:PRO:CD	2.48	0.44
3:C:123:ILE:HG23	3:C:127:TYR:CD2	2.29	0.44
1:D:39:ALA:HB3	1:D:79:LEU:HD23	1.99	0.44
2:B:242:LEU:HA	2:B:242:LEU:HD23	1.62	0.44
3:F:115:ARG:HB2	3:F:153:LEU:HB2	1.98	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:D:206:ILE:O	1:D:209:PHE:HB3	2.17	0.44
2:B:248:LYS:CD	2:B:290:LYS:HZ2	2.29	0.44
2:B:93:MSE:HA	2:B:93:MSE:HE3	1.99	0.44
1:D:123:ASP:O	1:D:124:LEU:C	2.54	0.44
1:A:22:ASN:ND2	1:A:27:LEU:HD12	2.33	0.44
3:F:239:ARG:HD3	3:F:240:ALA:N	2.33	0.44
2:E:247:VAL:HG12	2:E:248:LYS:N	2.33	0.44
2:B:397:ASP:O	2:B:400:GLN:HB3	2.18	0.44
1:D:587:SER:O	1:D:588:LEU:HD23	2.18	0.44
3:F:87:VAL:HG23	3:F:88:ASP:OD2	2.17	0.44
1:D:100:GLU:O	1:D:101:GLU:C	2.55	0.44
2:B:365:TYR:HD2	2:B:402:PHE:HE2	1.66	0.44
3:F:199:LEU:N	3:F:199:LEU:CD1	2.80	0.44
3:F:7:THR:O	3:F:7:THR:HG22	2.18	0.44
2:B:302:LEU:HA	2:B:305:ILE:HB	1.99	0.44
2:E:121:TRP:H	2:E:122:PRO:HD2	1.82	0.44
2:E:143:ASN:C	2:E:145:ALA:H	2.18	0.44
1:A:61:ASP:N	1:A:62:GLU:OE2	2.50	0.44
1:A:506:ASN:HD21	1:A:543:SER:HA	1.82	0.44
1:D:80:VAL:HG21	1:D:88:CYS:HB2	1.99	0.44
2:E:236:PHE:CE2	2:E:241:LEU:HG	2.52	0.44
1:A:450:TRP:HB3	1:A:462:ALA:HB2	2.00	0.44
1:A:498:ARG:NH2	3:C:280:ASP:OD1	2.44	0.44
2:B:117:LEU:HA	2:B:164:GLU:OE1	2.18	0.44
2:B:97:LEU:HD22	2:B:162:ASP:HB3	1.98	0.44
2:B:85:VAL:HG13	2:B:130:PHE:CZ	2.52	0.44
1:D:36:SER:C	1:D:38:ILE:H	2.22	0.44
2:E:186:LEU:O	2:E:190:ILE:CD1	2.65	0.44
1:D:405:LEU:N	1:D:406:PRO:CD	2.81	0.44
1:D:567:LEU:C	1:D:569:GLN:N	2.70	0.44
1:D:265:ASP:O	1:D:305:LYS:HE3	2.18	0.44
1:D:509:SER:OG	1:D:547:ILE:HG22	2.17	0.44
2:E:35:LYS:C	2:E:37:ARG:N	2.71	0.44
1:A:277:GLU:O	1:A:280:LYS:N	2.51	0.44
1:D:213:ALA:O	1:D:221:ARG:HG2	2.17	0.44
3:C:12:GLN:NE2	3:C:16:GLN:HB2	2.33	0.44
2:E:382:ASN:OD1	2:E:386:LEU:CD1	2.66	0.44
2:E:94:PHE:CD2	2:E:94:PHE:N	2.84	0.44
1:D:381:ARG:HH12	1:D:414:ASP:CG	2.21	0.44
2:B:302:LEU:HA	2:B:302:LEU:HD23	1.85	0.44
2:B:73:ASN:C	2:B:75:ASN:N	2.71	0.44
1:D:448:MSE:CE	1:D:466:LEU:HD21	2.47	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:E:124:LEU:O	2:E:125:GLN:C	2.55	0.44
2:E:313:ILE:CD1	2:E:313:ILE:N	2.77	0.44
3:C:190:PRO:HD3	3:C:195:MET:CE	2.48	0.44
2:B:236:PHE:CD2	2:B:236:PHE:C	2.91	0.44
1:A:261:TYR:C	1:A:261:TYR:CD2	2.91	0.44
1:D:221:ARG:NE	1:D:254:ASP:OD2	2.51	0.44
1:A:24:ASP:C	1:A:24:ASP:OD2	2.56	0.43
2:B:373:ASN:O	2:B:375:THR:N	2.47	0.43
3:C:51:PRO:HB3	3:C:279:ASP:O	2.18	0.43
3:C:68:LEU:O	3:C:71:ILE:HB	2.18	0.43
2:B:326:SER:OG	2:B:363:SER:HB3	2.18	0.43
2:E:85:VAL:HG13	2:E:130:PHE:CE2	2.53	0.43
2:E:67:VAL:C	2:E:69:TYR:N	2.71	0.43
1:A:502:LEU:HD21	1:A:540:VAL:HG22	2.00	0.43
3:F:118:HIS:ND1	3:F:123:ILE:CG2	2.80	0.43
1:A:467:LYS:HB2	1:A:507:VAL:HG13	1.96	0.43
1:D:438:PHE:CD1	1:D:438:PHE:O	2.71	0.43
1:A:277:GLU:C	1:A:279:THR:H	2.21	0.43
1:A:169:TYR:HA	1:A:172:ASN:HD22	1.83	0.43
3:F:81:LEU:HD23	3:F:81:LEU:O	2.18	0.43
3:F:48:VAL:O	3:F:159:VAL:HA	2.18	0.43
3:F:43:SER:OG	3:F:44:ASN:N	2.50	0.43
2:B:287:HIS:O	2:B:288:SER:C	2.56	0.43
3:C:125:GLN:HA	3:C:130:TYR:HB2	1.99	0.43
2:E:245:HIS:HD1	2:E:245:HIS:H	1.66	0.43
1:D:483:ILE:N	1:D:484:PRO:CD	2.81	0.43
1:D:475:LYS:HB2	1:D:516:ILE:CD1	2.47	0.43
2:E:283:TRP:HA	2:E:284:PRO:HD3	1.76	0.43
1:A:120:SER:O	1:A:121:PRO:C	2.56	0.43
2:B:280:LEU:HD11	2:B:317:LEU:HA	2.01	0.43
1:D:500:THR:O	1:D:503:PHE:HB2	2.18	0.43
1:D:40:LEU:C	1:D:42:LEU:H	2.22	0.43
1:D:11:TYR:O	1:D:12:PRO:C	2.56	0.43
1:A:250:GLN:NE2	1:A:250:GLN:O	2.52	0.43
2:E:43:PHE:C	2:E:45:PHE:N	2.70	0.43
2:E:78:THR:HG22	2:E:78:THR:O	2.17	0.43
3:C:76:PRO:HG3	3:C:107:TYR:CE1	2.53	0.43
1:A:570:ASP:OD1	1:A:575:VAL:HG11	2.17	0.43
1:A:27:LEU:O	1:A:28:ARG:C	2.56	0.43
2:B:79:GLU:O	2:B:80:PRO:C	2.55	0.43
2:E:222:ILE:HD13	2:E:264:PHE:HD1	1.83	0.43
2:E:242:LEU:HD11	2:E:275:VAL:HA	2.00	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:C:117:ASN:H	3:C:167:HIS:CD2	2.36	0.43
1:A:322:ILE:CD1	1:A:355:ILE:HG21	2.49	0.43
3:C:187:GLN:HE21	3:C:187:GLN:HB2	1.66	0.43
3:F:123:ILE:N	3:F:123:ILE:HD12	2.34	0.43
2:B:202:ILE:HD11	2:B:244:LEU:CG	2.41	0.43
3:F:51:PRO:HB3	3:F:279:ASP:C	2.38	0.43
1:D:189:LEU:HD11	1:D:205:ILE:HD12	1.99	0.43
2:B:89:PHE:CZ	2:B:93:MSE:HG3	2.54	0.43
2:B:138:PRO:O	2:B:140:PHE:CD1	2.72	0.43
2:E:387:PHE:HD1	2:E:387:PHE:HA	1.68	0.43
1:A:299:ARG:HG3	1:A:299:ARG:HH11	1.83	0.43
1:D:270:LEU:O	1:D:271:GLN:C	2.56	0.43
1:D:408:ILE:HD13	1:D:426:TYR:CE2	2.48	0.43
1:D:40:LEU:O	1:D:42:LEU:N	2.51	0.43
2:B:254:HIS:N	2:B:255:PRO:HD2	2.33	0.43
2:E:313:ILE:HG22	2:E:317:LEU:CB	2.46	0.43
1:A:180:MSE:CE	1:A:180:MSE:H	2.29	0.43
1:A:206:ILE:HB	1:A:207:PRO:HD3	2.00	0.43
1:D:506:ASN:ND2	1:D:543:SER:HA	2.34	0.43
2:B:271:LEU:O	2:B:274:PRO:HD2	2.19	0.43
1:A:535:ASN:HA	1:A:538:PHE:CD2	2.50	0.43
2:E:316:PRO:CG	2:E:317:LEU:N	2.82	0.43
2:B:332:VAL:O	2:B:335:ARG:N	2.52	0.43
2:B:176:LEU:O	2:B:176:LEU:HG	2.19	0.43
1:A:155:TYR:CE1	1:A:167:ARG:HG2	2.54	0.43
3:F:65:LEU:O	3:F:66:MET:C	2.56	0.43
2:E:361:PHE:C	2:E:363:SER:H	2.22	0.43
1:A:78:THR:HB	1:A:79:LEU:HD12	2.00	0.43
1:D:141:PHE:C	1:D:141:PHE:CD1	2.92	0.43
1:D:142:THR:OG1	1:D:143:SER:N	2.51	0.43
1:A:253:GLU:O	1:A:254:ASP:C	2.56	0.43
1:A:136:ALA:C	1:A:138:GLY:H	2.22	0.43
2:E:335:ARG:HG3	2:E:335:ARG:O	2.18	0.43
2:E:63:LEU:C	2:E:65:GLU:N	2.72	0.43
3:C:24:SER:O	3:C:27:GLN:HB2	2.18	0.43
1:A:24:ASP:OD2	1:A:26:GLN:HB3	2.19	0.43
2:B:88:MSE:HE1	2:B:127:VAL:HG13	2.00	0.43
3:C:48:VAL:O	3:C:159:VAL:HA	2.18	0.43
3:C:274:ALA:CB	3:C:288:GLN:HA	2.46	0.43
2:E:256:GLN:CD	2:E:256:GLN:N	2.72	0.43
3:F:131:ASP:O	3:F:132:GLU:C	2.57	0.43
1:D:578:PHE:O	1:D:582:ALA:HB2	2.18	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:254:HIS:CD2	2:B:293:MSE:HB3	2.54	0.43
1:A:179:PRO:HB2	1:A:183:ARG:HH12	1.84	0.43
3:F:17:LEU:CD1	3:F:99:LEU:HA	2.48	0.43
1:D:145:THR:CG2	1:D:146:SER:N	2.78	0.43
2:B:361:PHE:N	2:B:362:PRO:HD2	2.33	0.43
1:D:522:LEU:HD12	1:D:522:LEU:O	2.19	0.43
3:C:162:GLN:HB3	3:C:235:THR:HG21	2.00	0.43
1:D:515:ASP:O	1:D:516:ILE:C	2.57	0.43
1:D:353:SER:HB3	1:D:394:VAL:HG21	2.01	0.43
1:A:9:SER:OG	1:A:10:LEU:N	2.51	0.43
1:A:499:MSE:O	1:A:500:THR:C	2.58	0.43
2:E:222:ILE:O	2:E:224:GLY:N	2.52	0.43
2:E:242:LEU:HD23	2:E:242:LEU:HA	1.75	0.43
2:E:302:LEU:HD11	2:E:317:LEU:HD21	1.99	0.43
1:D:565:GLU:C	1:D:567:LEU:H	2.22	0.43
2:B:35:LYS:O	2:B:38:GLN:N	2.52	0.43
1:A:317:CYS:O	1:A:321:VAL:HG13	2.19	0.42
1:D:506:ASN:HD21	1:D:543:SER:CA	2.32	0.42
1:A:11:TYR:HA	1:A:11:TYR:HD2	1.69	0.42
2:E:393:LYS:HG2	2:E:397:ASP:OD2	2.18	0.42
1:D:350:MSE:HG3	1:D:387:ASN:HB3	2.01	0.42
2:E:67:VAL:C	2:E:69:TYR:H	2.22	0.42
1:A:506:ASN:HD21	1:A:543:SER:CA	2.32	0.42
1:D:179:PRO:O	1:D:182:ARG:N	2.52	0.42
2:E:124:LEU:C	2:E:126:LEU:N	2.72	0.42
2:B:145:ALA:O	2:B:146:LYS:C	2.58	0.42
3:C:279:ASP:OD1	3:C:283:LYS:N	2.51	0.42
2:B:402:PHE:O	2:B:403:LYS:C	2.56	0.42
1:D:509:SER:CB	1:D:547:ILE:HG22	2.50	0.42
3:C:17:LEU:O	3:C:20:CYS:N	2.42	0.42
1:D:507:VAL:HA	1:D:510:GLU:OE1	2.19	0.42
1:D:275:GLY:HA3	1:D:278:ILE:HD13	2.01	0.42
1:A:538:PHE:HB3	1:A:575:VAL:HA	2.01	0.42
1:A:38:ILE:N	1:A:38:ILE:HD12	2.34	0.42
3:F:240:ALA:HA	3:F:258:THR:CG2	2.38	0.42
3:C:85:ASP:OD1	3:C:117:ASN:OD1	2.37	0.42
2:B:321:LEU:HD23	2:B:321:LEU:HA	1.82	0.42
2:E:314:MSE:O	2:E:315:GLU:C	2.58	0.42
3:F:28:VAL:O	3:F:29:LYS:C	2.57	0.42
1:D:260:ARG:CG	1:D:260:ARG:NH1	2.82	0.42
1:D:90:LEU:HA	1:D:90:LEU:HD23	1.76	0.42
1:A:517:THR:HG23	1:A:521:MSE:HE3	2.00	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:F:68:LEU:O	3:F:71:ILE:N	2.47	0.42
1:A:438:PHE:O	1:A:438:PHE:CD1	2.66	0.42
2:E:76:VAL:O	2:E:76:VAL:HG12	2.19	0.42
1:A:131:LEU:HD23	1:A:131:LEU:C	2.39	0.42
1:A:388:LEU:HA	1:A:391:VAL:HG22	2.01	0.42
2:B:133:ARG:HA	2:B:136:GLU:CD	2.40	0.42
2:B:63:LEU:O	2:B:65:GLU:N	2.53	0.42
2:B:97:LEU:HD12	2:B:97:LEU:N	2.32	0.42
1:D:85:TYR:O	1:D:86:VAL:C	2.57	0.42
2:E:202:ILE:HG22	2:E:203:TYR:CD2	2.55	0.42
1:A:482:ILE:O	1:A:484:PRO:N	2.53	0.42
2:E:176:LEU:O	2:E:176:LEU:CG	2.64	0.42
1:D:205:ILE:HD13	1:D:205:ILE:HA	1.79	0.42
1:D:222:LEU:HG	1:D:223:LEU:HD23	2.00	0.42
1:D:141:PHE:HA	1:D:144:ARG:HD3	2.01	0.42
1:A:333:LEU:O	1:A:334:VAL:C	2.57	0.42
1:D:537:ARG:HG3	1:D:537:ARG:HH11	1.84	0.42
2:B:306:GLU:O	2:B:309:GLU:N	2.47	0.42
2:B:85:VAL:O	2:B:88:MSE:HB3	2.19	0.42
3:F:166:LEU:HD23	3:F:166:LEU:O	2.20	0.42
3:F:204:ASP:HB2	3:F:219:THR:HB	2.01	0.42
3:C:124:THR:HB	3:C:129:PHE:HB3	2.00	0.42
2:B:254:HIS:CG	2:B:293:MSE:HE2	2.55	0.42
3:C:125:GLN:HA	3:C:130:TYR:CB	2.50	0.42
3:C:155:LEU:CD1	3:C:195:MET:HG3	2.50	0.42
2:B:183:PHE:C	2:B:185:GLY:H	2.22	0.42
3:F:187:GLN:HE21	3:F:187:GLN:HB2	1.68	0.42
3:C:97:VAL:CG1	3:C:98:THR:N	2.83	0.42
1:D:65:VAL:O	1:D:68:ALA:HB3	2.18	0.42
1:A:326:ILE:N	1:A:326:ILE:CD1	2.82	0.42
3:F:263:PRO:N	3:F:273:ALA:HB2	2.35	0.42
2:E:69:TYR:O	2:E:74:ARG:HB2	2.19	0.42
1:A:560:VAL:O	1:A:561:LYS:C	2.56	0.42
2:E:222:ILE:HD13	2:E:264:PHE:CD1	2.54	0.42
1:D:180:MSE:HE2	1:D:183:ARG:HH22	1.84	0.42
2:B:287:HIS:O	2:B:287:HIS:ND1	2.53	0.42
2:E:313:ILE:H	2:E:313:ILE:CD1	2.27	0.42
2:B:329:HIS:CD2	2:B:332:VAL:HG23	2.55	0.42
2:B:392:GLN:O	2:B:393:LYS:C	2.58	0.42
2:E:288:SER:O	2:E:289:PRO:C	2.57	0.42
2:B:337:LEU:N	2:B:337:LEU:HD12	2.34	0.42
3:C:274:ALA:HB1	3:C:287:LEU:O	2.20	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:E:119:ALA:O	2:E:120:ALA:CB	2.68	0.42
2:E:134:PHE:HE2	2:E:135:LEU:HD22	1.84	0.42
2:E:61:ALA:C	2:E:63:LEU:N	2.72	0.42
1:A:275:GLY:HA3	1:A:278:ILE:HD13	2.00	0.42
1:A:500:THR:O	1:A:503:PHE:HB2	2.19	0.42
1:A:40:LEU:C	1:A:42:LEU:N	2.73	0.42
1:A:22:ASN:HD22	1:A:24:ASP:HB3	1.80	0.42
3:C:156:THR:HG22	3:C:166:LEU:HB3	2.02	0.42
2:B:71:THR:CG2	2:B:133:ARG:HH11	2.32	0.42
2:B:164:GLU:CB	2:B:168:GLU:CB	2.95	0.42
2:B:83:PRO:C	2:B:85:VAL:H	2.22	0.42
1:D:587:SER:C	1:D:588:LEU:HD23	2.40	0.42
2:E:373:ASN:C	2:E:375:THR:N	2.71	0.42
2:B:325:VAL:HG11	2:B:364:LEU:CD2	2.50	0.42
3:F:131:ASP:O	3:F:134:LEU:N	2.53	0.42
2:B:268:ASP:OD1	2:B:268:ASP:C	2.58	0.42
1:A:161:ALA:O	1:A:165:GLU:HG3	2.18	0.42
1:A:552:ASP:O	1:A:552:ASP:OD1	2.38	0.42
4:G:6:FGA:HG3	4:G:7:DAM:HM1	1.79	0.42
3:C:135:ARG:HH11	3:C:135:ARG:HG2	1.83	0.42
2:E:132:LEU:O	2:E:134:PHE:N	2.52	0.42
2:B:157:LEU:HD11	2:B:172:LEU:HD23	2.02	0.42
1:D:76:PHE:O	1:D:80:VAL:HG12	2.19	0.42
1:A:362:ILE:HD13	1:A:399:GLN:CG	2.39	0.42
1:A:85:TYR:O	1:A:86:VAL:C	2.58	0.42
1:A:178:THR:OG1	1:A:181:VAL:CG2	2.67	0.42
3:F:17:LEU:HD12	3:F:99:LEU:HA	2.01	0.42
3:F:66:MET:O	3:F:69:PHE:HB2	2.19	0.42
1:D:572:ASP:OD2	3:F:110:ARG:NH2	2.52	0.42
3:C:61:GLN:HA	3:C:267:TYR:OH	2.20	0.42
1:A:368:LEU:O	1:A:371:ALA:HB3	2.19	0.42
2:B:276:VAL:HG11	2:B:313:ILE:HG21	2.02	0.42
2:E:72:HIS:C	2:E:74:ARG:N	2.71	0.42
1:A:343:SER:OG	1:A:379:GLU:HB3	2.19	0.42
3:C:71:ILE:CG2	3:C:72:GLY:N	2.83	0.42
1:D:197:GLU:O	1:D:201:VAL:HG23	2.19	0.42
3:F:185:ARG:HG2	3:F:185:ARG:HH11	1.85	0.42
3:F:164:PHE:HB2	3:F:234:LEU:HD13	2.01	0.42
3:C:39:LEU:O	3:C:40:THR:C	2.58	0.42
2:B:295:LEU:HA	2:B:295:LEU:HD23	1.79	0.42
2:E:134:PHE:O	2:E:136:GLU:N	2.53	0.42
1:D:180:MSE:N	1:D:180:MSE:HE3	2.21	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:D:567:LEU:C	1:D:569:GLN:H	2.22	0.42
1:A:245:MSE:O	1:A:246:PRO:C	2.56	0.42
1:A:20:LEU:HD23	1:A:31:SER:HB3	2.01	0.42
3:F:54:VAL:HG21	3:F:276:MET:CE	2.50	0.42
1:D:277:GLU:O	1:D:279:THR:N	2.53	0.42
1:A:368:LEU:O	1:A:371:ALA:N	2.53	0.42
3:F:127:TYR:OH	4:H:5:1ZN:H21	2.20	0.41
2:B:202:ILE:HG22	2:B:203:TYR:CG	2.55	0.41
4:H:2:LEU:H	4:H:7:DAM:C	2.33	0.41
3:F:104:LYS:CA	3:F:111:ILE:HD11	2.50	0.41
1:D:44:VAL:O	1:D:46:ARG:N	2.53	0.41
1:D:105:ARG:O	1:D:109:VAL:HG23	2.20	0.41
2:E:368:SER:O	2:E:377:HIS:ND1	2.52	0.41
3:F:54:VAL:HB	3:F:276:MET:HB3	2.02	0.41
1:A:257:TRP:CZ2	2:B:99:PRO:HD3	2.55	0.41
2:B:76:VAL:HG12	2:B:76:VAL:O	2.20	0.41
1:D:334:VAL:O	1:D:334:VAL:HG12	2.20	0.41
1:D:373:LEU:HD11	1:D:385:ILE:HD13	2.02	0.41
1:A:40:LEU:C	1:A:42:LEU:H	2.23	0.41
3:C:203:PRO:HA	3:C:220:PHE:CD1	2.55	0.41
2:B:241:LEU:HD22	2:B:257:LEU:CD1	2.50	0.41
2:E:375:THR:HG22	2:E:376:ILE:N	2.35	0.41
1:A:90:LEU:HB2	1:A:91:PRO:CD	2.43	0.41
2:E:258:ALA:O	2:E:259:TYR:C	2.59	0.41
3:C:134:LEU:O	3:C:136:LYS:N	2.54	0.41
3:C:94:VAL:HB	3:C:95:GLU:OE1	2.20	0.41
1:D:128:PHE:O	1:D:131:LEU:N	2.52	0.41
1:D:258:ARG:HG3	1:D:258:ARG:NH1	2.32	0.41
2:E:361:PHE:C	2:E:363:SER:N	2.73	0.41
1:A:127:HIS:O	1:A:130:PRO:HD2	2.20	0.41
3:F:107:TYR:HB3	3:F:110:ARG:HG3	2.02	0.41
3:C:228:PHE:O	3:C:231:ALA:HB3	2.20	0.41
3:F:93:SER:O	3:F:94:VAL:C	2.58	0.41
2:B:69:TYR:CZ	2:B:75:ASN:ND2	2.87	0.41
3:F:203:PRO:HB3	3:F:220:PHE:HE1	1.85	0.41
3:C:59:HIS:CE1	3:C:85:ASP:HB3	2.55	0.41
2:E:305:ILE:CG2	2:E:348:LEU:HD11	2.50	0.41
1:D:343:SER:O	1:D:346:ALA:HB3	2.20	0.41
1:A:151:PHE:O	1:A:153:VAL:N	2.54	0.41
1:A:295:GLU:O	1:A:296:ALA:C	2.58	0.41
2:E:132:LEU:C	2:E:134:PHE:N	2.71	0.41
2:B:78:THR:HG22	2:B:78:THR:O	2.21	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:E:184:LEU:HA	2:E:187:ARG:HG3	2.01	0.41
2:B:183:PHE:C	2:B:185:GLY:N	2.74	0.41
2:B:183:PHE:CB	2:B:186:LEU:HD22	2.51	0.41
3:F:99:LEU:O	3:F:100:LEU:C	2.57	0.41
3:F:172:PRO:C	3:F:174:ILE:H	2.23	0.41
3:C:286:PHE:O	3:C:287:LEU:HD23	2.20	0.41
1:D:219:SER:HA	1:D:222:LEU:CD2	2.50	0.41
2:B:406:LYS:HD3	2:B:406:LYS:C	2.40	0.41
1:D:245:MSE:CA	1:D:245:MSE:HE3	2.50	0.41
2:E:295:LEU:HD23	2:E:295:LEU:HA	1.77	0.41
2:B:350:SER:C	2:B:352:ASN:N	2.73	0.41
3:F:211:ILE:HD12	3:F:212:SER:H	1.85	0.41
3:C:6:PHE:O	3:C:9:GLU:N	2.53	0.41
1:D:378:PRO:O	1:D:381:ARG:N	2.53	0.41
2:E:121:TRP:CD1	2:E:167:ARG:NH1	2.89	0.41
3:F:169:GLY:HA3	3:F:220:PHE:HE2	1.85	0.41
1:A:377:CYS:O	1:A:378:PRO:C	2.59	0.41
1:A:455:VAL:HG13	1:A:455:VAL:O	2.20	0.41
2:B:357:LEU:HD12	2:B:361:PHE:CE1	2.56	0.41
1:A:509:SER:N	1:A:521:MSE:HE1	2.36	0.41
1:D:522:LEU:O	1:D:526:LEU:HG	2.20	0.41
3:F:76:PRO:HD3	3:F:107:TYR:CZ	2.55	0.41
3:F:276:MET:HE3	3:F:278:LEU:HD21	2.02	0.41
3:F:121:ARG:N	3:F:188:GLU:OE2	2.54	0.41
1:D:515:ASP:O	1:D:518:THR:N	2.52	0.41
1:A:119:HIS:N	1:A:119:HIS:CD2	2.89	0.41
1:A:73:LEU:HB2	1:A:93:LEU:HD21	2.03	0.41
2:B:316:PRO:HG2	2:B:317:LEU:N	2.36	0.41
2:E:145:ALA:O	2:E:148:TYR:N	2.31	0.41
1:D:503:PHE:O	1:D:504:CYS:C	2.59	0.41
1:A:411:LEU:C	1:A:413:GLU:H	2.23	0.41
1:A:423:ILE:HA	1:A:423:ILE:HD13	1.81	0.41
3:C:170:LEU:HB2	3:C:220:PHE:HD2	1.80	0.41
2:B:83:PRO:C	2:B:85:VAL:N	2.74	0.41
2:E:313:ILE:C	2:E:316:PRO:HD2	2.40	0.41
1:A:196:LEU:CD1	1:A:205:ILE:HD11	2.51	0.41
1:A:90:LEU:CB	1:A:91:PRO:CD	2.97	0.41
2:B:387:PHE:HA	2:B:387:PHE:HD1	1.76	0.41
2:B:365:TYR:CD2	2:B:402:PHE:HE2	2.37	0.41
1:D:285:PRO:HA	1:D:288:GLN:OE1	2.20	0.41
1:D:521:MSE:C	1:D:523:PRO:CD	2.89	0.41
3:C:100:LEU:HA	3:C:100:LEU:HD23	1.87	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:D:482:ILE:C	1:D:484:PRO:CD	2.89	0.41
1:D:475:LYS:HB2	1:D:516:ILE:HD11	2.01	0.41
3:C:96:THR:O	3:C:99:LEU:HB3	2.20	0.41
1:D:427:MSE:CE	1:D:430:LEU:HB2	2.50	0.41
2:E:346:MSE:CE	2:E:349:ILE:HD12	2.51	0.41
1:A:426:TYR:O	1:A:426:TYR:CD1	2.73	0.41
2:B:124:LEU:O	2:B:127:VAL:N	2.54	0.41
2:B:134:PHE:CE2	2:B:135:LEU:HD22	2.56	0.41
2:E:184:LEU:HD23	2:E:187:ARG:CZ	2.51	0.41
3:C:118:HIS:ND1	3:C:123:ILE:CG2	2.83	0.41
1:A:205:ILE:HD13	1:A:208:MSE:HE3	2.03	0.41
3:F:194:PRO:CG	3:F:195:MET:N	2.84	0.41
1:D:90:LEU:CB	1:D:91:PRO:HD3	2.47	0.41
1:D:398:ARG:CB	1:D:398:ARG:HH11	2.32	0.41
1:D:563:ILE:O	1:D:563:ILE:HG12	2.20	0.41
2:B:285:LYS:HE3	2:B:285:LYS:HB2	1.87	0.41
1:D:52:LEU:CB	1:D:53:PRO:HD3	2.48	0.41
1:A:237:GLN:O	1:A:240:LEU:HB2	2.20	0.41
1:A:274:VAL:HG12	1:A:278:ILE:HB	2.02	0.41
1:A:400:LEU:CD1	1:A:404:LEU:HD23	2.50	0.41
2:E:248:LYS:C	2:E:250:LEU:H	2.23	0.41
2:E:180:TYR:CE2	2:E:221:ILE:HG23	2.54	0.41
1:A:259:VAL:O	1:A:262:MSE:HB2	2.20	0.41
3:C:153:LEU:HA	3:C:154:PRO:HD2	1.90	0.41
3:C:154:PRO:HA	3:C:185:ARG:NE	2.35	0.41
3:C:68:LEU:HD23	3:C:69:PHE:N	2.35	0.41
1:A:155:TYR:CE2	1:A:163:LYS:HD3	2.56	0.41
1:D:316:ASP:O	1:D:317:CYS:HB3	2.21	0.41
2:B:86:VAL:O	2:B:87:HIS:C	2.58	0.41
1:A:174:CYS:O	1:A:212:LEU:HD21	2.21	0.41
2:B:271:LEU:O	2:B:274:PRO:HG2	2.21	0.41
1:A:264:ALA:O	1:A:267:PHE:HB2	2.21	0.41
2:E:407:LEU:C	2:E:407:LEU:HD23	2.40	0.41
2:E:80:PRO:O	2:E:81:ILE:C	2.59	0.41
2:E:75:ASN:OD1	2:E:78:THR:OG1	2.38	0.41
1:A:34:LYS:C	1:A:36:SER:H	2.24	0.41
3:C:43:SER:OG	3:C:45:VAL:O	2.35	0.41
2:B:134:PHE:C	2:B:136:GLU:N	2.74	0.41
3:F:204:ASP:N	3:F:220:PHE:O	2.51	0.41
2:E:150:ASP:O	2:E:151:GLN:C	2.58	0.41
2:B:320:GLN:O	2:B:321:LEU:C	2.58	0.41
2:E:316:PRO:CG	2:E:317:LEU:H	2.32	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:E:97:LEU:N	2:E:97:LEU:HD12	2.31	0.41
3:C:163:ILE:HG23	3:C:236:LEU:O	2.20	0.41
1:D:564:LEU:O	1:D:564:LEU:CD2	2.67	0.41
2:B:150:ASP:O	2:B:151:GLN:C	2.59	0.41
1:A:424:ILE:HG12	1:A:450:TRP:CD2	2.55	0.41
1:D:189:LEU:HD11	1:D:205:ILE:CD1	2.51	0.41
1:D:436:VAL:HB	1:D:473:PHE:CE1	2.55	0.41
2:B:109:ASP:HA	2:B:110:PRO:HD2	1.87	0.41
3:F:244:VAL:HG21	3:F:248:TYR:CA	2.51	0.41
1:D:176:ASP:OD1	1:D:177:ASP:N	2.54	0.41
1:D:136:ALA:O	1:D:144:ARG:HG2	2.20	0.41
2:B:68:GLU:H	2:B:68:GLU:HG3	1.72	0.41
2:E:401:GLN:O	2:E:404:ALA:HB3	2.21	0.41
3:C:264:ASN:O	3:C:265:TYR:O	2.39	0.41
3:C:199:LEU:HD12	3:C:199:LEU:N	2.36	0.41
1:D:270:LEU:C	1:D:274:VAL:HG23	2.41	0.41
2:E:63:LEU:O	2:E:67:VAL:HG23	2.21	0.41
2:E:159:GLU:O	2:E:161:PHE:N	2.53	0.41
1:D:98:THR:O	1:D:99:VAL:C	2.58	0.41
1:A:192:PHE:O	1:A:195:VAL:HG22	2.21	0.41
1:D:384:ILE:HG22	1:D:385:ILE:N	2.36	0.40
1:A:398:ARG:O	1:A:399:GLN:C	2.58	0.40
1:A:67:LEU:HA	1:A:104:VAL:HG22	2.02	0.40
2:B:202:ILE:HG22	2:B:203:TYR:CD1	2.57	0.40
2:B:43:PHE:C	2:B:45:PHE:N	2.72	0.40
1:D:455:VAL:HG13	1:D:458:ILE:HB	2.02	0.40
1:A:79:LEU:CD1	1:A:79:LEU:N	2.84	0.40
2:B:158:LEU:O	2:B:161:PHE:CD1	2.74	0.40
1:D:366:LEU:N	1:D:367:PRO:CD	2.83	0.40
2:B:216:GLU:O	2:B:219:GLY:N	2.49	0.40
2:E:332:VAL:O	2:E:334:GLU:N	2.54	0.40
2:E:337:LEU:HD12	2:E:337:LEU:N	2.36	0.40
3:F:43:SER:OG	3:F:45:VAL:C	2.60	0.40
1:A:379:GLU:O	1:A:383:ASN:HB2	2.21	0.40
1:A:262:MSE:O	1:A:263:VAL:C	2.59	0.40
1:A:353:SER:HB3	1:A:394:VAL:HG21	2.03	0.40
2:E:97:LEU:HD22	2:E:162:ASP:HB2	2.03	0.40
1:A:86:VAL:C	1:A:88:CYS:H	2.24	0.40
3:F:266:CYS:O	3:F:267:TYR:HB2	2.21	0.40
1:D:94:GLU:HG2	1:D:94:GLU:O	2.21	0.40
3:C:56:GLY:N	3:C:261:SER:OG	2.49	0.40
1:A:218:ASP:C	1:A:220:VAL:N	2.74	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:72:HIS:C	2:B:74:ARG:H	2.24	0.40
1:A:131:LEU:HD23	1:A:135:LEU:HD12	2.03	0.40
2:B:372:TRP:O	2:B:374:LYS:N	2.54	0.40
1:A:410:GLU:O	1:A:411:LEU:C	2.59	0.40
3:F:50:CYS:HB2	3:F:51:PRO:CA	2.43	0.40
1:D:124:LEU:O	1:D:126:ALA:N	2.54	0.40
3:F:81:LEU:HA	3:F:112:THR:O	2.21	0.40
2:E:283:TRP:HZ3	2:E:298:LEU:CD2	2.34	0.40
1:A:120:SER:O	1:A:123:ASP:N	2.54	0.40
2:E:117:LEU:HA	2:E:164:GLU:OE1	2.21	0.40
2:E:67:VAL:O	2:E:69:TYR:N	2.53	0.40
1:A:395:ILE:HD11	1:A:400:LEU:HB2	2.04	0.40
1:A:427:MSE:N	1:A:428:PRO:HD2	2.36	0.40
1:A:587:SER:C	1:A:588:LEU:HD23	2.41	0.40
2:E:109:ASP:OD1	2:E:110:PRO:HD2	2.21	0.40
1:A:353:SER:HB2	1:A:354:PRO:CD	2.52	0.40
3:C:155:LEU:HD11	3:C:195:MET:HG3	2.03	0.40
1:D:25:VAL:O	1:D:26:GLN:C	2.60	0.40
3:C:212:SER:OG	3:C:214:ARG:HB2	2.22	0.40
3:F:162:GLN:O	3:F:235:THR:HG22	2.21	0.40
3:F:121:ARG:HG3	3:F:121:ARG:NH1	2.35	0.40
1:D:29:LEU:HD13	1:D:64:GLU:HG2	2.03	0.40
1:D:453:ASP:O	1:D:459:ARG:HD3	2.21	0.40
2:B:306:GLU:O	2:B:307:PRO:C	2.59	0.40
2:E:121:TRP:HB3	2:E:122:PRO:CD	2.51	0.40
2:E:85:VAL:HB	2:E:134:PHE:HE1	1.86	0.40
1:A:274:VAL:HG21	1:A:283:LEU:HD11	2.02	0.40
1:D:76:PHE:N	1:D:76:PHE:CD1	2.90	0.40
3:F:209:TRP:CD2	3:F:224:ILE:HD13	2.57	0.40
2:E:208:HIS:HB3	2:E:211:ILE:HD13	2.03	0.40
1:D:23:GLU:HG2	1:D:23:GLU:O	2.20	0.40
3:F:51:PRO:O	3:F:52:VAL:HG13	2.22	0.40
1:A:572:ASP:CG	3:C:110:ARG:HH21	2.25	0.40
2:E:161:PHE:CD2	2:E:214:LEU:HG	2.56	0.40
1:A:567:LEU:C	1:A:569:GLN:N	2.74	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	580/582 (100%)	411 (71%)	124 (21%)	45 (8%)	1	30
1	D	580/582 (100%)	411 (71%)	119 (20%)	50 (9%)	1	26
2	B	386/388 (100%)	234 (61%)	97 (25%)	55 (14%)	0	10
2	E	386/388 (100%)	234 (61%)	95 (25%)	57 (15%)	0	9
3	C	291/293 (99%)	203 (70%)	69 (24%)	19 (6%)	2	37
3	F	291/293 (99%)	210 (72%)	63 (22%)	18 (6%)	2	38
4	G	1/7 (14%)	1 (100%)	0	0	100	100
4	H	1/7 (14%)	1 (100%)	0	0	100	100
All	All	2516/2540 (99%)	1705 (68%)	567 (22%)	244 (10%)	1	22

All (244) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	25	VAL
1	A	35	LEU
1	A	44	VAL
1	A	317	CYS
1	A	391	VAL
1	A	412	ALA
1	A	560	VAL
2	B	33	ILE
2	B	43	PHE
2	B	44	ASP
2	B	46	VAL
2	B	55	TRP
2	B	57	GLU
2	B	73	ASN
2	B	81	ILE
2	B	103	PRO
2	B	104	THR
2	B	146	LYS
2	B	161	PHE

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Mol	Chain	Res	Type
2	B	165	ASP
2	B	166	PRO
2	B	167	ARG
2	B	229	LEU
2	B	268	ASP
2	B	367	ASN
2	B	368	SER
2	B	390	MSE
2	B	413	MSE
3	C	94	VAL
3	C	254	ARG
3	C	265	TYR
1	D	25	VAL
1	D	35	LEU
1	D	44	VAL
1	D	73	LEU
1	D	391	VAL
1	D	415	ALA
1	D	515	ASP
2	E	33	ILE
2	E	43	PHE
2	E	44	ASP
2	E	46	VAL
2	E	55	TRP
2	E	57	GLU
2	E	72	HIS
2	E	73	ASN
2	E	146	LYS
2	E	161	PHE
2	E	165	ASP
2	E	166	PRO
2	E	167	ARG
2	E	229	LEU
2	E	367	ASN
2	E	368	SER
2	E	390	MSE
2	E	413	MSE
3	F	94	VAL
3	F	254	ARG
3	F	265	TYR
1	A	23	GLU
1	A	86	VAL

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Mol	Chain	Res	Type
1	A	89	LEU
1	A	238	GLU
1	A	254	ASP
1	A	274	VAL
1	A	318	ARG
1	A	349	ILE
1	A	373	LEU
1	A	415	ALA
1	A	465	ASN
1	A	474	GLY
1	A	490	SER
1	A	500	THR
1	A	513	GLY
1	A	515	ASP
1	A	553	ASN
2	B	72	HIS
2	B	76	VAL
2	B	125	GLN
2	B	135	LEU
2	B	223	ASN
2	B	287	HIS
2	B	314	MSE
2	B	374	LYS
2	B	389	GLU
3	C	41	LYS
3	C	135	ARG
3	C	161	GLY
3	C	207	GLY
3	C	240	ALA
3	C	253	ASP
3	C	270	GLY
1	D	76	PHE
1	D	86	VAL
1	D	147	ALA
1	D	254	ASP
1	D	263	VAL
1	D	274	VAL
1	D	297	GLU
1	D	317	CYS
1	D	349	ILE
1	D	412	ALA
1	D	513	GLY

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Mol	Chain	Res	Type
1	D	529	ALA
1	D	560	VAL
1	D	576	LYS
2	E	51	SER
2	E	76	VAL
2	E	81	ILE
2	E	104	THR
2	E	125	GLN
2	E	160	LEU
2	E	223	ASN
2	E	251	SER
2	E	313	ILE
2	E	351	ASP
2	E	374	LYS
2	E	389	GLU
2	E	414	LYS
3	F	108	ARG
3	F	129	PHE
3	F	161	GLY
3	F	207	GLY
3	F	240	ALA
3	F	269	CYS
1	A	37	THR
1	A	152	SER
1	A	484	PRO
1	A	529	ALA
2	B	51	SER
2	B	90	ALA
2	B	163	SER
2	B	170	ASP
2	B	204	GLU
2	B	251	SER
2	B	284	PRO
2	B	362	PRO
3	C	108	ARG
3	C	231	ALA
1	D	23	GLU
1	D	318	ARG
1	D	344	ALA
1	D	399	GLN
1	D	416	LYS
1	D	428	PRO

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Mol	Chain	Res	Type
1	D	490	SER
1	D	553	ASN
2	E	36	LEU
2	E	62	ALA
2	E	90	ALA
2	E	135	LEU
2	E	287	HIS
2	E	361	PHE
2	E	400	GLN
3	F	41	LYS
3	F	60	GLY
3	F	107	TYR
3	F	173	SER
3	F	186	LEU
3	F	253	ASP
1	A	99	VAL
1	A	117	HIS
1	A	297	GLU
1	A	334	VAL
2	B	62	ALA
2	B	66	MSE
2	B	133	ARG
2	B	196	ASN
2	B	313	ILE
2	B	361	PHE
2	B	400	GLN
2	B	414	LYS
3	C	36	LYS
3	C	129	PHE
3	C	186	LEU
3	C	282	LEU
1	D	12	PRO
1	D	100	GLU
1	D	103	VAL
1	D	298	VAL
1	D	533	VAL
1	D	577	TYR
2	E	66	MSE
2	E	84	GLU
2	E	103	PRO
2	E	170	ASP
2	E	268	ASP

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Mol	Chain	Res	Type
2	E	271	LEU
2	E	362	PRO
1	A	12	PRO
1	A	87	HIS
1	A	237	GLN
1	A	271	GLN
1	A	416	LYS
1	A	428	PRO
1	A	506	ASN
2	B	141	GLN
2	B	330	PHE
3	C	107	TYR
1	D	28	ARG
1	D	45	GLU
1	D	87	HIS
1	D	117	HIS
1	D	516	ILE
1	D	547	ILE
1	D	581	GLU
2	E	86	VAL
2	E	133	ARG
2	E	163	SER
2	E	196	ASN
2	E	330	PHE
3	F	43	SER
3	F	282	LEU
1	A	516	ILE
1	A	523	PRO
1	A	576	LYS
2	B	79	GLU
2	B	303	ASP
2	B	328	PRO
3	C	88	ASP
1	D	396	GLY
1	D	492	ASP
1	D	532	PRO
2	E	343	GLU
2	B	228	PRO
1	D	91	PRO
2	E	141	GLN
2	E	305	ILE
3	F	28	VAL

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Mol	Chain	Res	Type
1	A	13	ILE
1	A	158	VAL
1	A	492	ASP
2	B	91	VAL
1	D	484	PRO
2	E	284	PRO
2	B	115	PRO
2	B	288	SER
1	D	13	ILE
1	D	99	VAL
2	E	79	GLU
2	E	228	PRO
2	E	262	VAL
3	C	90	GLY
1	D	523	PRO

### 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	509/496 (103%)	450 (88%)	59 (12%)	8	44
1	D	509/496 (103%)	450 (88%)	59 (12%)	8	44
2	B	331/351 (94%)	299 (90%)	32 (10%)	12	54
2	E	331/351 (94%)	295 (89%)	36 (11%)	9	48
3	C	259/259 (100%)	239 (92%)	20 (8%)	18	66
3	F	259/259 (100%)	241 (93%)	18 (7%)	22	70
4	G	2/2 (100%)	2 (100%)	0	100	100
4	H	2/2 (100%)	2 (100%)	0	100	100
All	All	2202/2216 (99%)	1978 (90%)	224 (10%)	11	52

All (224) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	8	ASP
1	A	15	VAL

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Mol	Chain	Res	Type
1	A	18	ASP
1	A	48	ARG
1	A	62	GLU
1	A	77	THR
1	A	86	VAL
1	A	91	PRO
1	A	95	SER
1	A	101	GLU
1	A	104	VAL
1	A	107	LYS
1	A	117	HIS
1	A	122	SER
1	A	139	ASP
1	A	141	PHE
1	A	145	THR
1	A	153	VAL
1	A	177	ASP
1	A	180	MSE
1	A	198	LEU
1	A	204	GLU
1	A	211	ASN
1	A	214	SER
1	A	222	LEU
1	A	225	VAL
1	A	230	ASN
1	A	237	GLN
1	A	268	THR
1	A	278	ILE
1	A	294	CYS
1	A	297	GLU
1	A	316	ASP
1	A	340	HIS
1	A	345	LEU
1	A	348	VAL
1	A	373	LEU
1	A	379	GLU
1	A	382	LEU
1	A	384	ILE
1	A	391	VAL
1	A	395	ILE
1	A	398	ARG
1	A	399	GLN

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Mol	Chain	Res	Type
1	A	414	ASP
1	A	419	VAL
1	A	427	MSE
1	A	437	GLU
1	A	438	PHE
1	A	443	LEU
1	A	447	CYS
1	A	475	LYS
1	A	479	HIS
1	A	489	MSE
1	A	495	TYR
1	A	515	ASP
1	A	524	THR
1	A	540	VAL
1	A	556	LEU
2	B	95	ARG
2	B	96	THR
2	B	107	GLU
2	B	123	HIS
2	B	134	PHE
2	B	135	LEU
2	B	139	ASP
2	B	162	ASP
2	B	164	GLU
2	B	166	PRO
2	B	167	ARG
2	B	170	ASP
2	B	183	PHE
2	B	186	LEU
2	B	209	ASN
2	B	225	PHE
2	B	231	GLU
2	B	246	LYS
2	B	253	TYR
2	B	256	GLN
2	B	263	GLN
2	B	264	PHE
2	B	289	PRO
2	B	305	ILE
2	B	338	TYR
2	B	344	TYR
2	B	357	LEU

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Mol	Chain	Res	Type
2	B	361	PHE
2	B	375	THR
2	B	380	ILE
2	B	386	LEU
2	B	387	PHE
3	C	18	ASN
3	C	75	SER
3	C	78	THR
3	C	81	LEU
3	C	99	LEU
3	C	110	ARG
3	C	119	GLU
3	C	159	VAL
3	C	160	ASP
3	C	166	LEU
3	C	173	SER
3	C	187	GLN
3	C	196	CYS
3	C	204	ASP
3	C	235	THR
3	C	239	ARG
3	C	242	GLN
3	C	280	ASP
3	C	284	TYR
3	C	294	ARG
1	D	8	ASP
1	D	15	VAL
1	D	18	ASP
1	D	44	VAL
1	D	53	PRO
1	D	62	GLU
1	D	71	GLU
1	D	77	THR
1	D	83	PRO
1	D	86	VAL
1	D	89	LEU
1	D	91	PRO
1	D	95	SER
1	D	101	GLU
1	D	104	VAL
1	D	107	LYS
1	D	116	SER

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Mol	Chain	Res	Type
1	D	131	LEU
1	D	139	ASP
1	D	145	THR
1	D	180	MSE
1	D	195	VAL
1	D	198	LEU
1	D	204	GLU
1	D	222	LEU
1	D	230	ASN
1	D	237	GLN
1	D	258	ARG
1	D	294	CYS
1	D	295	GLU
1	D	316	ASP
1	D	321	VAL
1	D	340	HIS
1	D	345	LEU
1	D	348	VAL
1	D	350	MSE
1	D	373	LEU
1	D	378	PRO
1	D	382	LEU
1	D	384	ILE
1	D	389	ASP
1	D	391	VAL
1	D	398	ARG
1	D	399	GLN
1	D	411	LEU
1	D	414	ASP
1	D	419	VAL
1	D	427	MSE
1	D	437	GLU
1	D	438	PHE
1	D	446	LEU
1	D	447	CYS
1	D	475	LYS
1	D	476	GLU
1	D	479	HIS
1	D	489	MSE
1	D	515	ASP
1	D	524	THR
1	D	556	LEU

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Mol	Chain	Res	Type
2	E	83	PRO
2	E	92	ASN
2	E	95	ARG
2	E	96	THR
2	E	98	PRO
2	E	101	SER
2	E	107	GLU
2	E	128	TYR
2	E	134	PHE
2	E	135	LEU
2	E	139	ASP
2	E	162	ASP
2	E	164	GLU
2	E	166	PRO
2	E	167	ARG
2	E	170	ASP
2	E	183	PHE
2	E	186	LEU
2	E	209	ASN
2	E	225	PHE
2	E	236	PHE
2	E	253	TYR
2	E	256	GLN
2	E	263	GLN
2	E	264	PHE
2	E	289	PRO
2	E	298	LEU
2	E	303	ASP
2	E	305	ILE
2	E	338	TYR
2	E	357	LEU
2	E	361	PHE
2	E	370	THR
2	E	379	LEU
2	E	386	LEU
2	E	387	PHE
3	F	18	ASN
3	F	43	SER
3	F	68	LEU
3	F	71	ILE
3	F	81	LEU
3	F	110	ARG

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Mol	Chain	Res	Type
3	F	119	GLU
3	F	159	VAL
3	F	160	ASP
3	F	166	LEU
3	F	187	GLN
3	F	204	ASP
3	F	235	THR
3	F	239	ARG
3	F	242	GLN
3	F	256	VAL
3	F	284	TYR
3	F	294	ARG

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (65) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	22	ASN
1	A	26	GLN
1	A	119	HIS
1	A	168	GLN
1	A	172	ASN
1	A	200	ASN
1	A	211	ASN
1	A	230	ASN
1	A	271	GLN
1	A	338	ASN
1	A	339	GLN
1	A	383	ASN
1	A	399	GLN
1	A	465	ASN
1	A	506	ASN
1	A	580	GLN
2	B	72	HIS
2	B	92	ASN
2	B	177	HIS
2	B	196	ASN
2	B	208	HIS
2	B	209	ASN
2	B	254	HIS
2	B	329	HIS
2	B	373	ASN
2	B	392	GLN

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Mol	Chain	Res	Type
3	C	12	GLN
3	C	27	GLN
3	C	44	ASN
3	C	63	HIS
3	C	141	ASN
3	C	179	HIS
3	C	187	GLN
3	C	288	GLN
1	D	22	ASN
1	D	119	HIS
1	D	127	HIS
1	D	200	ASN
1	D	211	ASN
1	D	230	ASN
1	D	271	GLN
1	D	338	ASN
1	D	392	ASN
1	D	399	GLN
1	D	465	ASN
1	D	506	ASN
1	D	539	ASN
1	D	580	GLN
2	E	72	HIS
2	E	92	ASN
2	E	177	HIS
2	E	208	HIS
2	E	209	ASN
2	E	223	ASN
2	E	254	HIS
2	E	329	HIS
2	E	373	ASN
2	E	392	GLN
3	F	12	GLN
3	F	27	GLN
3	F	44	ASN
3	F	63	HIS
3	F	141	ASN
3	F	179	HIS
3	F	187	GLN



### 5.3.3 RNA ⓘ

There are no RNA chains in this entry.

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

10 non-standard protein/DNA/RNA residues 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$
4	DAL	G	1	4	4,4,5	9.29	2 (50%)	3,4,6	8.12	1 (33%)
4	ACB	G	3	4	8,8,9	6.25	1 (12%)	9,10,12	16.36	2 (22%)
4	1ZN	G	5	4	23,23,24	4.25	1 (4%)	28,29,31	9.50	2 (7%)
4	FGA	G	6	4	8,8,9	6.56	5 (62%)	7,9,11	1.81	2 (28%)
4	DAM	G	7	3,4	4,5,6	3.01	2 (50%)	2,5,7	2.68	2 (100%)
4	DAL	H	1	4	4,4,5	9.12	2 (50%)	3,4,6	8.22	2 (66%)
4	ACB	H	3	4	8,8,9	6.35	1 (12%)	9,10,12	16.57	2 (22%)
4	1ZN	H	5	4	23,23,24	4.11	1 (4%)	28,29,31	9.50	2 (7%)
4	FGA	H	6	4	8,8,9	6.80	5 (62%)	7,9,11	1.61	2 (28%)
4	DAM	H	7	3,4	4,5,6	2.98	2 (50%)	2,5,7	2.78	2 (100%)

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
4	DAL	G	1	4	-	0/0/2/4	0/0/0/0
4	ACB	G	3	4	-	0/8/10/12	0/0/0/0
4	1ZN	G	5	4	-	0/22/25/27	0/1/1/1
4	FGA	G	6	4	-	0/7/8/9	0/0/0/0
4	DAM	G	7	3,4	-	0/0/4/6	0/0/0/0
4	DAL	H	1	4	-	0/0/2/4	0/0/0/0
4	ACB	H	3	4	-	0/8/10/12	0/0/0/0

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
4	1ZN	H	5	4	-	0/22/25/27	0/1/1/1
4	FGA	H	6	4	-	0/7/8/9	0/0/0/0
4	DAM	H	7	3,4	-	0/0/4/6	0/0/0/0

All (22) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	G	5	1ZN	O3-C20	19.79	1.25	1.11
4	H	5	1ZN	O3-C20	19.31	1.24	1.11
4	H	6	FGA	OE1-CD	18.02	1.23	1.11
4	H	3	ACB	OD1-CG	17.70	1.23	1.11
4	G	1	DAL	O-C	17.66	1.23	1.11
4	H	1	DAL	O-C	17.52	1.23	1.11
4	G	3	ACB	OD1-CG	17.44	1.23	1.11
4	G	6	FGA	OE1-CD	17.40	1.23	1.11
4	G	1	DAL	CA-C	5.71	1.59	1.48
4	G	7	DAM	CA-N	5.18	1.43	1.34
4	H	1	DAL	CA-C	5.03	1.58	1.48
4	H	7	DAM	CA-N	5.00	1.43	1.34
4	H	6	FGA	O-C	4.72	1.38	1.22
4	G	6	FGA	O-C	4.60	1.37	1.22
4	H	6	FGA	OXT-C	-2.51	1.21	1.30
4	H	6	FGA	CG-CD	2.50	1.54	1.47
4	H	6	FGA	CB-CG	2.48	1.58	1.52
4	G	6	FGA	CG-CD	2.36	1.54	1.47
4	G	6	FGA	CB-CG	2.32	1.58	1.52
4	G	7	DAM	O-C	2.10	1.24	1.17
4	G	6	FGA	OXT-C	-2.05	1.22	1.30
4	H	7	DAM	CB-CA	-2.02	1.32	1.37

All (19) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	G	5	1ZN	O3-C20-C18	-50.04	120.83	176.50
4	H	5	1ZN	O3-C20-C18	-50.03	120.85	176.50
4	H	3	ACB	OD1-CG-CB	-49.37	121.58	176.50
4	G	3	ACB	OD1-CG-CB	-48.81	122.21	176.50
4	H	1	DAL	C-CA-N	-14.06	111.67	113.27
4	G	1	DAL	C-CA-N	-13.97	111.69	113.27
4	H	3	ACB	C4-CB-CG	5.28	110.81	108.46
4	G	3	ACB	C4-CB-CG	4.65	110.53	108.46
4	G	6	FGA	OXT-C-CA	3.65	125.07	116.88

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	H	5	1ZN	C19-C18-C20	-3.30	106.99	108.46
4	H	6	FGA	OXT-C-CA	3.14	123.93	116.88
4	H	7	DAM	CM-N-CA	-2.97	116.01	124.79
4	G	7	DAM	CM-N-CA	-2.94	116.11	124.79
4	G	6	FGA	O-C-CA	-2.89	110.01	118.36
4	H	7	DAM	CB-CA-N	-2.57	120.35	126.29
4	G	7	DAM	CB-CA-N	-2.40	120.75	126.29
4	H	6	FGA	O-C-CA	-2.39	111.48	118.36
4	G	5	1ZN	C17-C16-C15	-2.18	120.26	123.80
4	H	1	DAL	CB-CA-C	2.04	109.37	108.46

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

## 5.5 Carbohydrates ⓘ

There are no carbohydrates in this entry.

## 5.6 Ligand geometry ⓘ

Of 4 ligands modelled in this entry, 4 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

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.