



Full wwPDB X-ray Structure Validation Report ⓘ

Feb 1, 2016 – 06:23 AM GMT

PDB ID : 2WRF
Title : STRUCTURE OF H2 AVIAN JENA HEMAGGLUTININ WITH HUMAN RECEPTOR
Authors : Liu, J.; Stevens, D.J.; Haire, L.F.; Walker, P.A.; Coombs, P.J.; Russell, R.J.; Gamblin, S.J.; Skehel, J.J.
Deposited on : 2009-09-01
Resolution : 3.10 Å(reported)

This is a Full wwPDB X-ray Structure Validation Report for a publicly released PDB entry.
We welcome your comments at validation@mail.wwpdb.org
A user guide is available at
<http://wwpdb.org/validation/2016/XrayValidationReportHelp>
with specific help available everywhere you see the ⓘ symbol.

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

MolProbity : 4.02b-467
Mogul : 1.7 (RC4), CSD as536be (2015)
Xtriage (Phenix) : 1.9-1692
EDS : rb-20026688
Percentile statistics : 20151230.v01 (using entries in the PDB archive December 30th 2015)
Refmac : 5.8.0135
CCP4 : 6.5.0
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : trunk26865

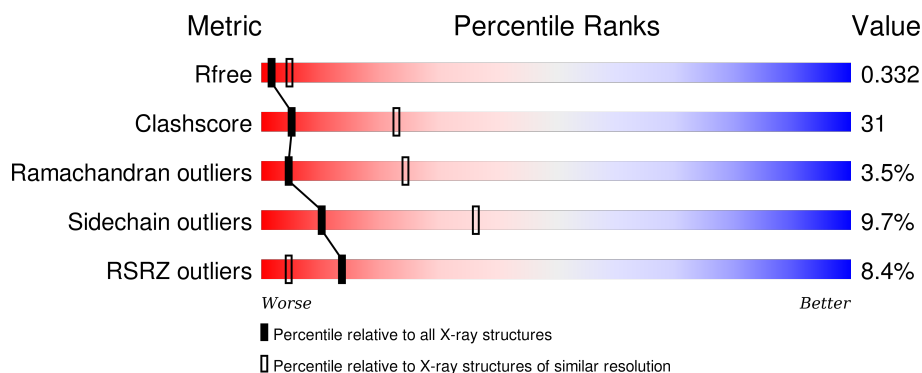
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.10 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	91344	1114 (3.14-3.06)
Clashscore	102246	1222 (3.14-3.06)
Ramachandran outliers	100387	1174 (3.14-3.06)
Sidechain outliers	100360	1174 (3.14-3.06)
RSRZ outliers	91569	1119 (3.14-3.06)

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

Mol	Chain	Length	Quality of chain
1	A	507	<div> <div>4%</div> <div>32% 48% 15% . .</div> </div>
1	B	507	<div> <div>5%</div> <div>54% 37% . .</div> </div>
1	C	507	<div> <div>6%</div> <div>55% 37% . .</div> </div>
1	D	507	<div> <div>9%</div> <div>37% 49% 9% . .</div> </div>
1	E	507	<div> <div>12%</div> <div>53% 39% . .</div> </div>

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Mol	Chain	Length	Quality of chain
1	F	507	<div><div></div><div>9%</div><div>53%</div><div>39%</div><div></div><div></div></div>
1	G	507	<div><div></div><div>9%</div><div>49%</div><div>36%</div><div>9%</div><div></div></div>
1	H	507	<div><div></div><div>10%</div><div>54%</div><div>36%</div><div>5%</div><div></div></div>
1	I	507	<div><div></div><div>8%</div><div>56%</div><div>35%</div><div>5%</div><div></div></div>

2 Entry composition

There are 3 unique types of molecules in this entry. The entry contains 34577 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called HEMAGGLUTININ.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	486	Total	C	N	O	S	0	0	0
			3837	2409	656	748	24			
1	B	486	Total	C	N	O	S	0	0	0
			3837	2409	656	748	24			
1	C	486	Total	C	N	O	S	0	0	0
			3834	2408	655	747	24			
1	D	486	Total	C	N	O	S	0	0	0
			3837	2409	656	748	24			
1	E	486	Total	C	N	O	S	0	0	0
			3837	2409	656	748	24			
1	F	486	Total	C	N	O	S	0	0	0
			3834	2408	655	747	24			
1	G	486	Total	C	N	O	S	0	0	0
			3837	2409	656	748	24			
1	H	486	Total	C	N	O	S	0	0	0
			3837	2409	656	748	24			
1	I	486	Total	C	N	O	S	0	0	0
			3834	2408	655	747	24			

There are 36 discrepancies between the modelled and reference sequences:

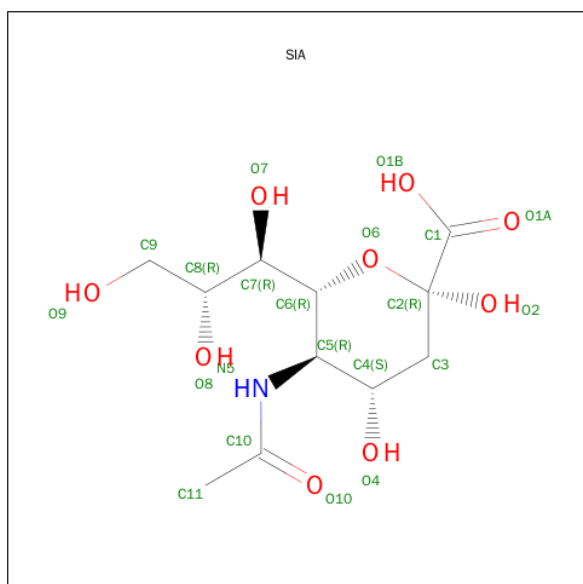
Chain	Residue	Modelled	Actual	Comment	Reference
A	109	ILE	LEU	CONFLICT	UNP Q67326
A	142	ASP	GLY	CONFLICT	UNP Q67326
A	374	PHE	ILE	CONFLICT	UNP Q67326
A	459	VAL	ALA	CONFLICT	UNP Q67326
B	109	ILE	LEU	CONFLICT	UNP Q67326
B	142	ASP	GLY	CONFLICT	UNP Q67326
B	374	PHE	ILE	CONFLICT	UNP Q67326
B	459	VAL	ALA	CONFLICT	UNP Q67326
C	109	ILE	LEU	CONFLICT	UNP Q67326
C	142	ASP	GLY	CONFLICT	UNP Q67326
C	374	PHE	ILE	CONFLICT	UNP Q67326

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Chain	Residue	Modelled	Actual	Comment	Reference
C	459	VAL	ALA	CONFLICT	UNP Q67326
D	109	ILE	LEU	CONFLICT	UNP Q67326
D	142	ASP	GLY	CONFLICT	UNP Q67326
D	374	PHE	ILE	CONFLICT	UNP Q67326
D	459	VAL	ALA	CONFLICT	UNP Q67326
E	109	ILE	LEU	CONFLICT	UNP Q67326
E	142	ASP	GLY	CONFLICT	UNP Q67326
E	374	PHE	ILE	CONFLICT	UNP Q67326
E	459	VAL	ALA	CONFLICT	UNP Q67326
F	109	ILE	LEU	CONFLICT	UNP Q67326
F	142	ASP	GLY	CONFLICT	UNP Q67326
F	374	PHE	ILE	CONFLICT	UNP Q67326
F	459	VAL	ALA	CONFLICT	UNP Q67326
G	109	ILE	LEU	CONFLICT	UNP Q67326
G	142	ASP	GLY	CONFLICT	UNP Q67326
G	374	PHE	ILE	CONFLICT	UNP Q67326
G	459	VAL	ALA	CONFLICT	UNP Q67326
H	109	ILE	LEU	CONFLICT	UNP Q67326
H	142	ASP	GLY	CONFLICT	UNP Q67326
H	374	PHE	ILE	CONFLICT	UNP Q67326
H	459	VAL	ALA	CONFLICT	UNP Q67326
I	109	ILE	LEU	CONFLICT	UNP Q67326
I	142	ASP	GLY	CONFLICT	UNP Q67326
I	374	PHE	ILE	CONFLICT	UNP Q67326
I	459	VAL	ALA	CONFLICT	UNP Q67326

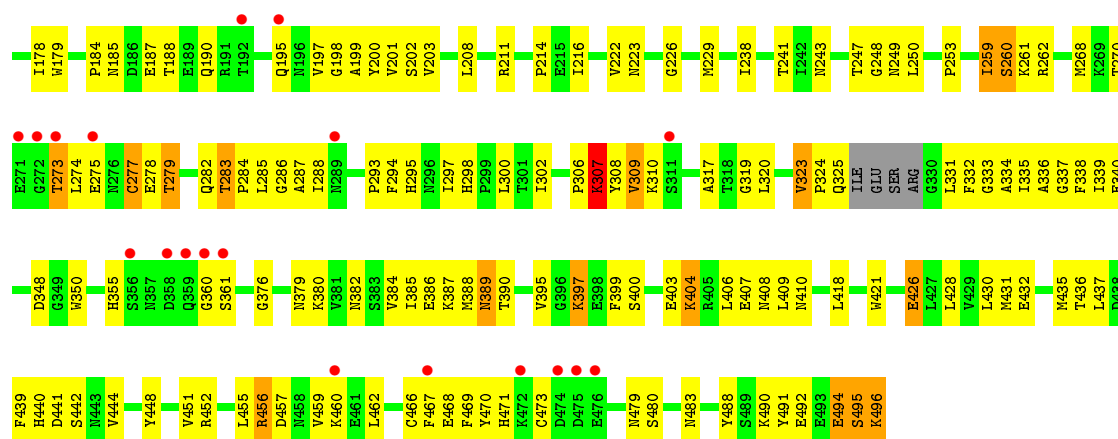
- Molecule 2 is SUGAR (O-SIALIC ACID) (three-letter code: SIA) (formula: $C_{11}H_{19}NO_9$).



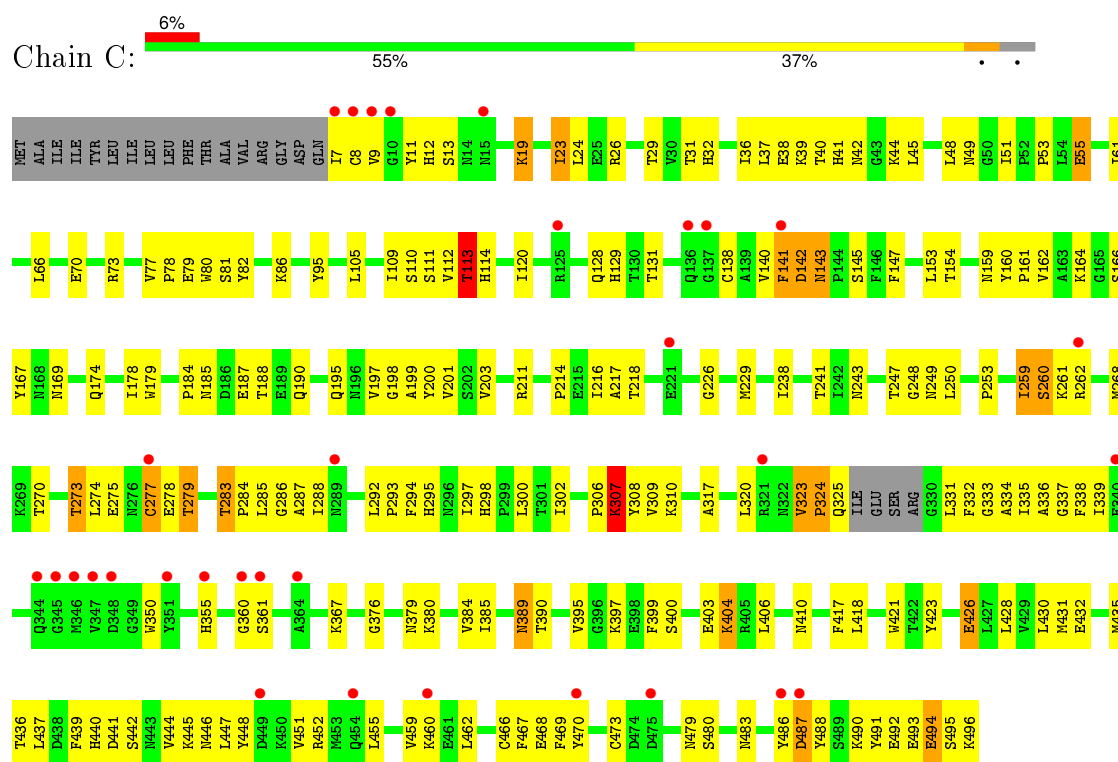
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
2	D	1	Total	C	N	O	0	0
			21	11	1	9		

- Molecule 3 is a polymer of unknown type called SUGAR (2-MER).

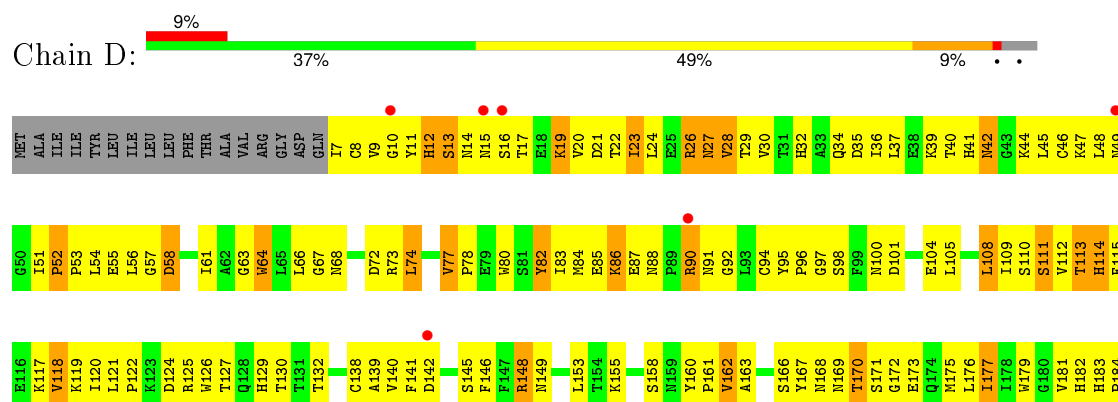
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
3	F	2	Total	C	N	O	0	0
			32	17	1	14		

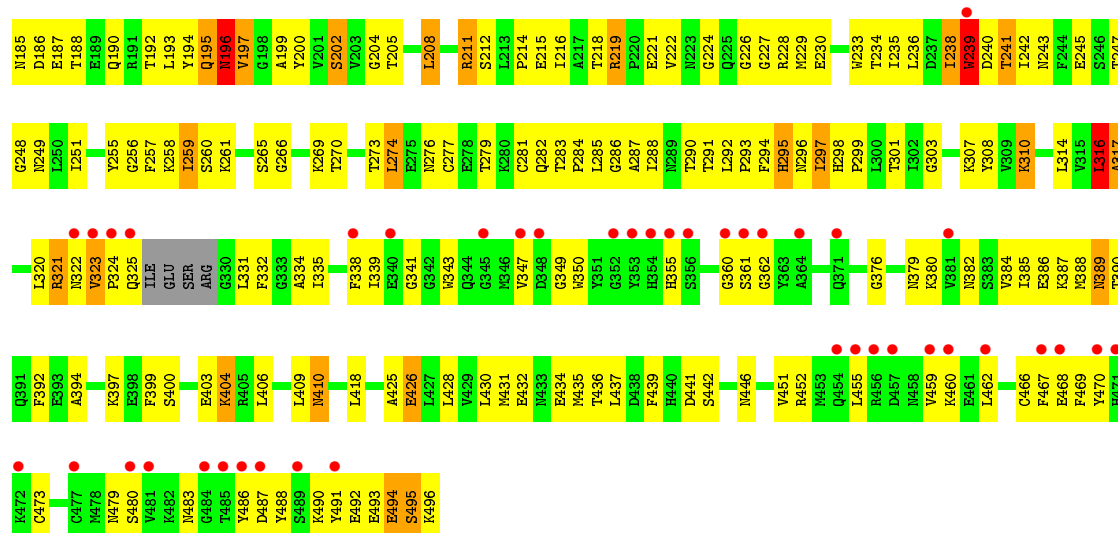


• Molecule 1: HEMAGGLUTININ

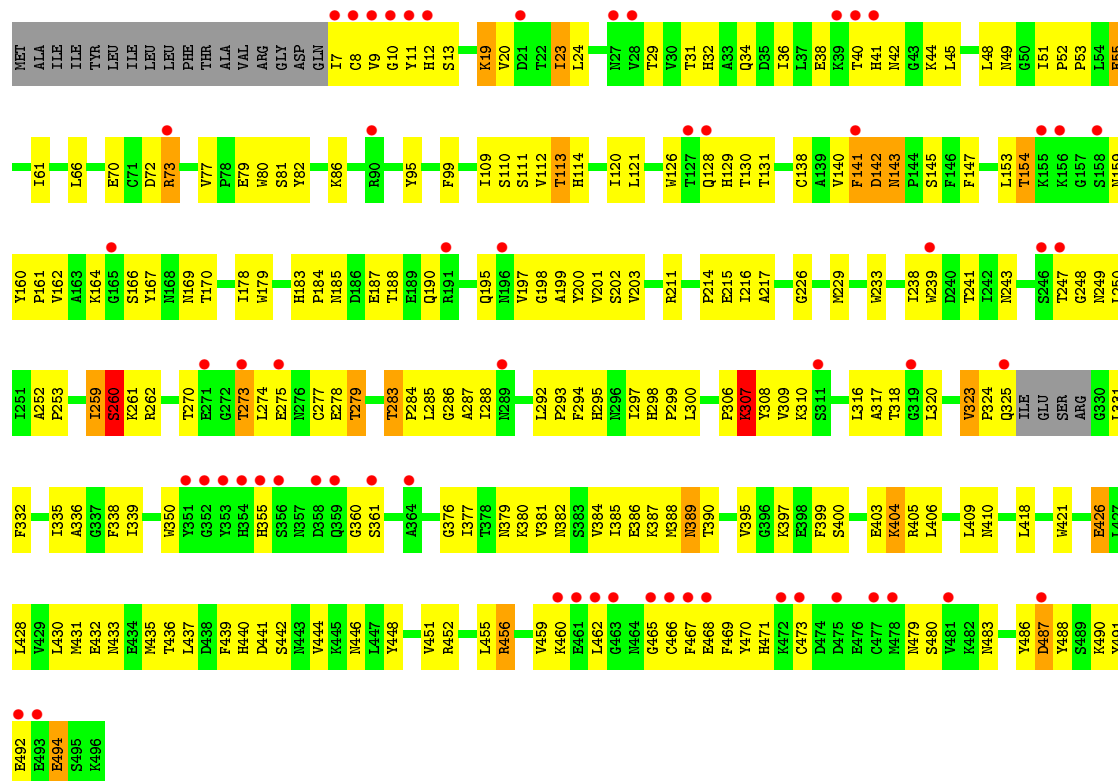


• Molecule 1: HEMAGGLUTININ

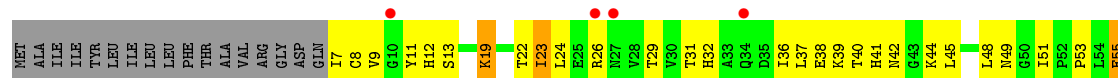


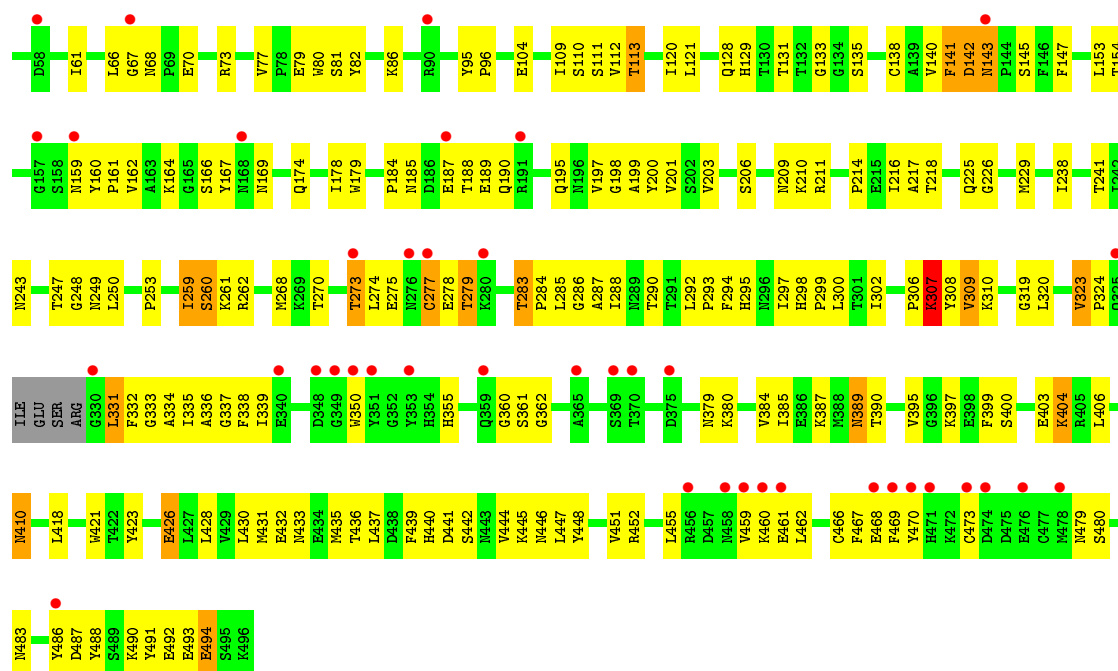


• Molecule 1: HEMAGGLUTININ

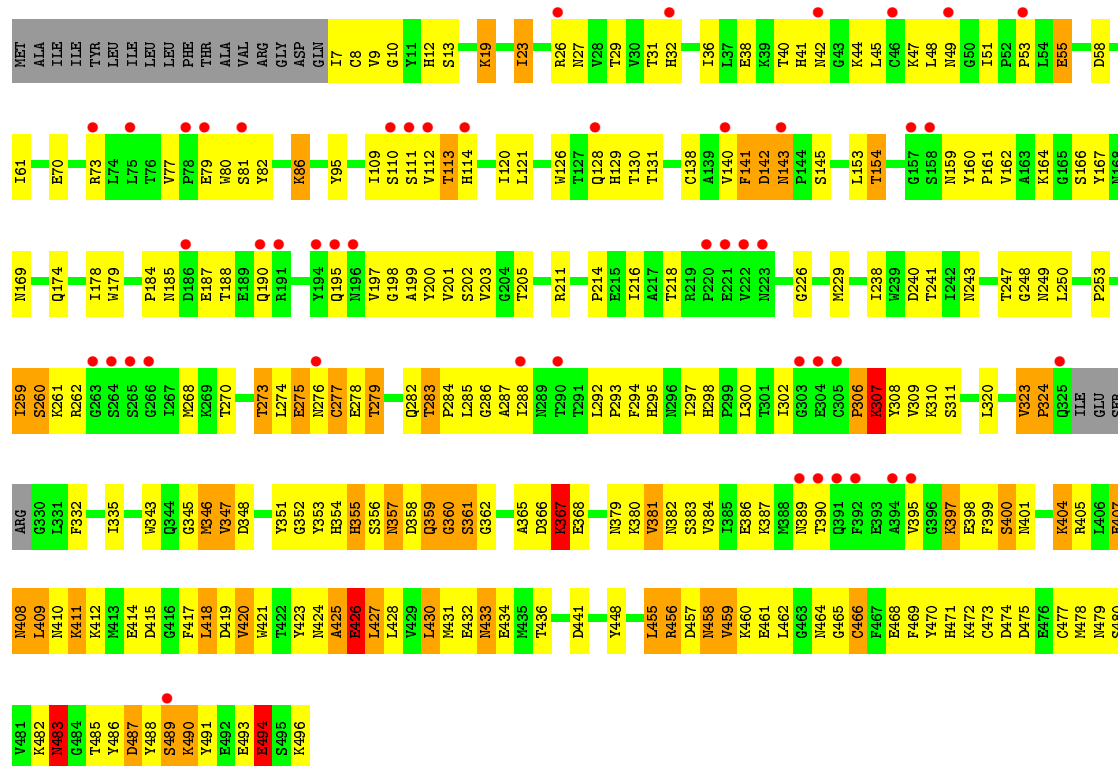


• Molecule 1: HEMAGGLUTININ





• Molecule 1: HEMAGGLUTININ



• Molecule 1: HEMAGGLUTININ



4 Data and refinement statistics

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α , β , γ	134.17Å 113.28Å 184.67Å 90.00° 92.20° 90.00°	Depositor
Resolution (Å)	29.92 – 3.10 29.92 – 3.10	Depositor EDS
% Data completeness (in resolution range)	92.8 (29.92-3.10) 99.6 (29.92-3.10)	Depositor EDS
R_{merge}	0.11	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	2.14 (at 3.11Å)	Xtriage
Refinement program	PHENIX (PHENIX.REFINE)	Depositor
R, R_{free}	0.273 , 0.337 0.269 , 0.332	Depositor DCC
R_{free} test set	4990 reflections (4.99%)	DCC
Wilson B-factor (Å ²)	68.7	Xtriage
Anisotropy	0.586	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.27 , 53.0	EDS
Estimated twinning fraction	0.019 for h,-k,-l	Xtriage
L-test for twinning ²	$\langle L \rangle = 0.49$, $\langle L^2 \rangle = 0.32$	Xtriage
Outliers	0 of 100091 reflections	Xtriage
F_o, F_c correlation	0.87	EDS
Total number of atoms	34577	wwPDB-VP
Average B, all atoms (Å ²)	87.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.73% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

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

5 Model quality

5.1 Standard geometry

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

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	0.47	0/3923	0.68	1/5309 (0.0%)
1	B	0.40	0/3923	0.53	0/5309
1	C	0.38	0/3920	0.51	0/5305
1	D	0.44	0/3923	0.63	1/5309 (0.0%)
1	E	0.35	0/3923	0.50	0/5309
1	F	0.34	0/3920	0.49	0/5305
1	G	0.47	0/3923	0.63	0/5309
1	H	0.41	0/3923	0.53	0/5309
1	I	0.40	0/3920	0.52	0/5305
All	All	0.41	0/35298	0.56	2/47769 (0.0%)

There are no bond length outliers.

All (2) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	314	LEU	CA-CB-CG	5.74	128.51	115.30
1	D	251	ILE	N-CA-C	-5.12	97.19	111.00

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-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 hydrogen atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	3837	0	3674	344	0
1	B	3837	0	3672	205	0
1	C	3834	0	3666	211	0
1	D	3837	0	3672	308	0
1	E	3837	0	3672	264	0
1	F	3834	0	3666	234	0
1	G	3837	0	3672	289	0
1	H	3837	0	3672	216	0
1	I	3834	0	3666	185	0
2	D	21	0	18	1	0
3	F	32	0	28	7	0
All	All	34577	0	33078	2079	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 31.

All (2079) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:471:HIS:HB3	1:B:494:GLU:HG2	1.19	1.18
1:E:11:TYR:CE2	1:E:335:ILE:HA	1.83	1.14
1:G:7:ILE:HD11	1:G:482:LYS:HE3	1.15	1.12
1:C:9:VAL:HG21	1:C:448:TYR:HA	1.31	1.11
1:G:459:VAL:HG12	1:G:469:PHE:HA	1.22	1.11
1:H:7:ILE:HA	1:H:355:HIS:HA	1.28	1.11
1:F:9:VAL:HG21	1:F:448:TYR:HA	1.31	1.10
1:E:72:ASP:HB3	1:G:275:GLU:HB2	1.35	1.09
1:D:293:PRO:HG3	1:D:385:ILE:HA	1.34	1.09
1:E:387:LYS:HD3	1:F:426:GLU:HG2	1.34	1.09
1:E:9:VAL:HG21	1:E:448:TYR:HA	1.22	1.09
1:E:7:ILE:HG22	1:E:467:PHE:HB2	1.29	1.06
1:D:236:LEU:HD22	1:D:242:ILE:HG22	1.37	1.06
1:A:459:VAL:HG12	1:A:469:PHE:HA	1.32	1.05
1:E:283:THR:HG22	1:E:285:LEU:H	1.21	1.05
1:H:283:THR:HG22	1:H:285:LEU:H	1.21	1.05
1:B:9:VAL:HG21	1:B:448:TYR:HA	1.35	1.04
1:D:168:ASN:HA	1:D:241:THR:HB	1.38	1.03
1:I:283:THR:HG22	1:I:285:LEU:H	1.21	1.02
1:G:409:LEU:HD11	1:I:410:ASN:HB2	1.42	1.02
1:C:283:THR:HG22	1:C:285:LEU:H	1.21	1.01
1:A:181:VAL:HG22	1:A:201:VAL:HG21	1.41	1.00
1:B:283:THR:HG22	1:B:285:LEU:H	1.23	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:95:TYR:HD2	1:D:229:MET:HG3	1.26	1.00
1:F:283:THR:HG22	1:F:285:LEU:H	1.23	0.99
1:G:283:THR:HG22	1:G:285:LEU:H	1.26	0.99
1:E:73:ARG:HB2	1:G:44:LYS:HZ1	1.26	0.98
1:H:190:GLN:HE22	1:H:249:ASN:HD21	1.11	0.97
1:E:259:ILE:HG23	1:E:260:SER:H	1.30	0.97
1:G:7:ILE:HA	1:G:355:HIS:HA	1.48	0.96
1:C:259:ILE:HG23	1:C:260:SER:H	1.29	0.96
1:E:9:VAL:O	1:E:339:ILE:HD13	1.65	0.95
1:H:384:VAL:HG22	1:H:428:LEU:HD21	1.48	0.95
1:B:259:ILE:HG23	1:B:260:SER:H	1.31	0.95
1:B:190:GLN:HE22	1:B:249:ASN:HD21	1.06	0.95
1:E:141:PHE:CE1	1:G:47:LYS:HE2	2.02	0.95
1:C:190:GLN:HE22	1:C:249:ASN:HD21	1.11	0.95
1:D:95:TYR:CD2	1:D:229:MET:HG3	2.03	0.94
1:D:23:ILE:HG13	1:F:380:LYS:HA	1.48	0.93
1:B:459:VAL:HG12	1:B:469:PHE:HA	1.49	0.93
1:G:190:GLN:HE22	1:G:249:ASN:HD21	1.11	0.93
1:A:410:ASN:HB2	1:B:409:LEU:HD11	1.50	0.93
1:E:9:VAL:HG11	1:E:448:TYR:HB2	1.49	0.93
1:G:408:ASN:HD21	1:I:397:LYS:NZ	1.67	0.93
1:I:459:VAL:HG12	1:I:469:PHE:HA	1.50	0.92
1:B:7:ILE:HG22	1:B:467:PHE:HB2	1.52	0.92
1:D:283:THR:HG22	1:D:285:LEU:H	1.33	0.92
1:D:23:ILE:HD11	1:F:380:LYS:HE2	1.51	0.92
1:H:23:ILE:HG22	1:H:434:GLU:HG2	1.49	0.92
1:H:8:CYS:N	1:H:354:HIS:O	2.02	0.92
1:E:190:GLN:HE22	1:E:249:ASN:HD21	1.10	0.92
1:A:282:GLN:HE21	1:A:283:THR:H	1.17	0.92
1:F:190:GLN:HE22	1:F:249:ASN:HD21	1.08	0.92
1:H:455:LEU:HD23	1:H:459:VAL:HG21	1.52	0.91
1:A:197:VAL:HG12	1:A:198:GLY:H	1.32	0.91
1:F:259:ILE:HG23	1:F:260:SER:H	1.35	0.91
1:G:8:CYS:O	1:G:353:TYR:HA	1.70	0.91
1:E:459:VAL:HG12	1:E:469:PHE:HA	1.51	0.91
1:I:190:GLN:HE22	1:I:249:ASN:HD21	1.11	0.90
1:I:259:ILE:HG23	1:I:260:SER:H	1.36	0.90
1:B:259:ILE:HG23	1:B:260:SER:N	1.86	0.90
1:I:384:VAL:HG22	1:I:428:LEU:HD21	1.54	0.90
1:B:387:LYS:HD3	1:C:426:GLU:HG2	1.51	0.90
1:D:459:VAL:HG12	1:D:469:PHE:HA	1.54	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:259:ILE:HG23	1:F:260:SER:N	1.87	0.89
1:A:282:GLN:HE21	1:A:283:THR:N	1.71	0.89
1:H:459:VAL:HG12	1:H:469:PHE:HA	1.51	0.89
1:E:259:ILE:HG23	1:E:260:SER:N	1.86	0.89
1:A:190:GLN:HE22	1:A:249:ASN:HD21	1.21	0.89
1:H:259:ILE:HG23	1:H:260:SER:H	1.35	0.89
1:E:9:VAL:HB	1:E:448:TYR:HD1	1.37	0.89
1:E:11:TYR:HB3	1:E:444:VAL:HG21	1.55	0.89
1:E:72:ASP:HB3	1:G:275:GLU:CB	2.02	0.88
1:F:459:VAL:HG12	1:F:469:PHE:HA	1.53	0.88
1:C:459:VAL:HG12	1:C:469:PHE:HA	1.55	0.88
1:D:279:THR:HB	1:D:287:ALA:HB1	1.56	0.88
1:G:259:ILE:HG23	1:G:260:SER:H	1.36	0.88
1:D:227:GLY:O	1:D:228:ARG:HD3	1.73	0.88
1:C:7:ILE:HG22	1:C:467:PHE:HB2	1.53	0.88
1:D:384:VAL:HG22	1:D:428:LEU:HD21	1.56	0.87
1:G:243:ASN:HB2	1:H:218:THR:O	1.74	0.87
1:C:259:ILE:HG23	1:C:260:SER:N	1.87	0.87
1:E:169:ASN:HD22	1:E:238:ILE:HA	1.39	0.87
1:D:141:PHE:N	1:D:142:ASP:HA	1.89	0.87
1:I:23:ILE:HG22	1:I:434:GLU:HG2	1.58	0.86
1:A:53:PRO:HD2	1:A:274:LEU:HD22	1.57	0.86
1:E:7:ILE:O	1:E:467:PHE:N	2.09	0.86
1:D:108:LEU:HD21	1:D:235:ILE:HD11	1.57	0.86
1:B:384:VAL:HG22	1:B:428:LEU:HD21	1.57	0.86
1:D:53:PRO:HD2	1:D:274:LEU:HD13	1.58	0.86
1:I:259:ILE:HG23	1:I:260:SER:N	1.90	0.86
1:E:471:HIS:HB3	1:E:494:GLU:HG2	1.57	0.86
1:G:395:VAL:HG22	1:H:412:LYS:HE2	1.57	0.86
1:A:184:PRO:HB3	1:A:189:GLU:HG2	1.58	0.86
1:E:72:ASP:CB	1:G:275:GLU:HB2	2.06	0.86
1:G:459:VAL:CG1	1:G:469:PHE:HA	2.06	0.85
1:A:431:MET:O	1:A:433:ASN:N	2.09	0.85
1:G:7:ILE:CD1	1:G:482:LYS:HE3	2.03	0.85
1:A:94:CYS:HB2	1:A:138:CYS:SG	2.17	0.85
1:G:283:THR:HB	1:G:286:GLY:O	1.77	0.85
1:G:259:ILE:HG23	1:G:260:SER:N	1.91	0.85
1:H:259:ILE:HG23	1:H:260:SER:N	1.91	0.85
1:C:141:PHE:N	1:C:142:ASP:HA	1.90	0.85
1:C:455:LEU:HD23	1:C:459:VAL:HG21	1.59	0.84
1:E:384:VAL:HG22	1:E:428:LEU:HD21	1.58	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:283:THR:HB	1:E:286:GLY:O	1.76	0.84
1:A:335:ILE:HG13	1:A:441:ASP:HA	1.59	0.84
1:G:432:GLU:HA	1:G:432:GLU:OE1	1.76	0.84
1:A:262:ARG:HH11	1:A:262:ARG:HG3	1.42	0.84
1:E:73:ARG:CB	1:G:44:LYS:HZ1	1.89	0.84
1:D:120:ILE:O	1:D:121:LEU:HD23	1.78	0.84
1:B:471:HIS:CB	1:B:494:GLU:HG2	2.04	0.83
1:A:166:SER:HB2	1:A:243:ASN:ND2	1.93	0.83
1:I:462:LEU:HD11	1:I:468:GLU:HB2	1.60	0.83
1:H:283:THR:HB	1:H:286:GLY:O	1.78	0.83
1:I:141:PHE:N	1:I:142:ASP:HA	1.93	0.83
1:D:205:THR:HG22	1:D:242:ILE:HA	1.59	0.83
1:F:462:LEU:HD11	1:F:468:GLU:HB2	1.61	0.83
1:H:169:ASN:HD22	1:H:238:ILE:HA	1.43	0.83
1:F:384:VAL:HG22	1:F:428:LEU:HD21	1.58	0.83
1:C:384:VAL:HG22	1:C:428:LEU:HD21	1.59	0.83
1:E:141:PHE:HE1	1:G:47:LYS:HE2	1.43	0.83
1:I:143:ASN:N	1:I:143:ASN:HD22	1.77	0.83
1:G:259:ILE:O	1:G:260:SER:HB2	1.78	0.83
1:F:141:PHE:N	1:F:142:ASP:HA	1.93	0.83
1:G:41:HIS:HB3	1:G:297:ILE:HD13	1.60	0.82
1:A:399:PHE:CG	1:A:407:GLU:HB2	2.15	0.82
1:G:141:PHE:N	1:G:142:ASP:HA	1.93	0.82
1:E:141:PHE:N	1:E:142:ASP:HA	1.94	0.82
1:D:455:LEU:HD23	1:D:459:VAL:HG21	1.60	0.82
1:C:143:ASN:N	1:C:143:ASN:HD22	1.74	0.82
1:E:455:LEU:HD23	1:E:459:VAL:HG21	1.59	0.82
1:F:169:ASN:HD22	1:F:238:ILE:HA	1.43	0.82
1:H:41:HIS:HB3	1:H:297:ILE:HD13	1.60	0.82
1:H:143:ASN:HD22	1:H:143:ASN:N	1.76	0.82
1:F:41:HIS:HB3	1:F:297:ILE:HD13	1.60	0.82
1:E:9:VAL:HG21	1:E:448:TYR:CA	2.09	0.82
1:B:455:LEU:HD23	1:B:459:VAL:HG21	1.62	0.82
1:E:320:LEU:HD12	1:E:335:ILE:HD13	1.61	0.82
1:F:283:THR:HB	1:F:286:GLY:O	1.80	0.82
1:F:185:ASN:HD21	1:F:226:GLY:HA3	1.45	0.82
1:E:143:ASN:N	1:E:143:ASN:HD22	1.75	0.81
1:G:143:ASN:HD22	1:G:143:ASN:N	1.76	0.81
1:I:185:ASN:HD21	1:I:226:GLY:HA3	1.44	0.81
1:E:300:LEU:HA	1:E:395:VAL:HB	1.60	0.81
1:C:185:ASN:HD21	1:C:226:GLY:HA3	1.43	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:259:ILE:O	1:E:260:SER:HB2	1.78	0.81
1:F:7:ILE:HG22	1:F:467:PHE:HB2	1.61	0.81
1:B:143:ASN:N	1:B:143:ASN:HD22	1.75	0.81
1:G:185:ASN:HD21	1:G:226:GLY:HA3	1.45	0.81
1:B:169:ASN:HD22	1:B:238:ILE:HA	1.45	0.81
1:B:185:ASN:HD21	1:B:226:GLY:HA3	1.43	0.81
1:I:169:ASN:HD22	1:I:238:ILE:HA	1.46	0.81
1:F:455:LEU:HD23	1:F:459:VAL:HG21	1.63	0.81
1:A:44:LYS:O	1:A:286:GLY:HA2	1.81	0.81
1:A:334:ALA:HB2	1:A:445:LYS:HB2	1.61	0.81
1:H:141:PHE:N	1:H:142:ASP:HA	1.93	0.81
1:B:141:PHE:N	1:B:142:ASP:HA	1.93	0.81
1:C:169:ASN:HD22	1:C:238:ILE:HA	1.44	0.81
1:B:462:LEU:HD11	1:B:468:GLU:HB2	1.62	0.81
1:I:455:LEU:HD23	1:I:459:VAL:HG21	1.61	0.81
1:C:143:ASN:HD21	1:G:19:LYS:HD3	1.46	0.81
1:H:8:CYS:O	1:H:343:TRP:HH2	1.65	0.81
1:D:175:MET:HA	1:D:257:PHE:O	1.81	0.80
1:B:320:LEU:HD12	1:B:335:ILE:HD13	1.61	0.80
1:D:283:THR:HB	1:D:286:GLY:O	1.82	0.80
1:I:283:THR:HB	1:I:286:GLY:O	1.79	0.80
1:C:283:THR:HB	1:C:286:GLY:O	1.81	0.80
1:D:12:HIS:CD2	1:D:13:SER:H	1.99	0.80
1:D:462:LEU:HD11	1:D:468:GLU:HB2	1.64	0.80
1:I:295:HIS:HD2	1:I:297:ILE:H	1.27	0.80
1:G:387:LYS:NZ	1:H:426:GLU:HG2	1.97	0.80
1:D:28:VAL:O	1:D:30:VAL:HG13	1.80	0.80
1:B:9:VAL:HB	1:B:448:TYR:HD1	1.46	0.80
1:E:380:LYS:HA	1:F:23:ILE:HG12	1.63	0.80
1:B:283:THR:HB	1:B:286:GLY:O	1.81	0.80
1:H:462:LEU:HD11	1:H:468:GLU:HB2	1.63	0.79
1:G:8:CYS:O	1:G:354:HIS:N	2.14	0.79
1:D:168:ASN:CA	1:D:241:THR:HB	2.12	0.79
1:E:471:HIS:CB	1:E:494:GLU:HG2	2.12	0.79
1:E:41:HIS:HB3	1:E:297:ILE:HD13	1.63	0.79
1:C:41:HIS:HB3	1:C:297:ILE:HD13	1.64	0.79
1:A:346:MET:HE3	1:A:352:GLY:HA3	1.64	0.79
1:B:259:ILE:O	1:B:260:SER:HB2	1.80	0.79
1:F:143:ASN:HD22	1:F:143:ASN:N	1.77	0.79
1:E:293:PRO:HG3	1:E:385:ILE:HA	1.64	0.79
1:A:56:LEU:HD12	1:A:85:GLU:HB2	1.64	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:169:ASN:HD22	1:G:238:ILE:HA	1.46	0.79
1:C:462:LEU:HD11	1:C:468:GLU:HB2	1.62	0.79
1:E:185:ASN:HD21	1:E:226:GLY:HA3	1.46	0.79
1:D:80:TRP:CE2	1:D:112:VAL:HG22	2.17	0.79
1:E:320:LEU:CD1	1:E:335:ILE:HD13	2.12	0.79
1:A:321:ARG:HH21	1:A:437:LEU:HD23	1.48	0.79
1:E:295:HIS:HD2	1:E:297:ILE:H	1.30	0.79
1:C:295:HIS:HD2	1:C:297:ILE:H	1.31	0.78
1:D:218:THR:O	1:F:243:ASN:HB2	1.82	0.78
1:E:11:TYR:CD2	1:E:335:ILE:HG12	2.17	0.78
1:F:11:TYR:CE2	1:F:335:ILE:HA	2.19	0.78
1:H:185:ASN:HD21	1:H:226:GLY:HA3	1.46	0.78
1:E:379:ASN:HD22	1:F:26:ARG:NH1	1.81	0.78
1:D:41:HIS:CD2	1:D:297:ILE:HD13	2.18	0.78
1:E:462:LEU:HD11	1:E:468:GLU:HB2	1.63	0.78
1:D:36:ILE:HA	1:D:292:LEU:HD22	1.63	0.78
1:F:295:HIS:HD2	1:F:297:ILE:H	1.30	0.78
1:B:41:HIS:HB3	1:B:297:ILE:HD13	1.66	0.78
1:G:493:GLU:O	1:G:494:GLU:HB2	1.81	0.78
1:B:11:TYR:CE2	1:B:335:ILE:HA	2.19	0.78
1:H:7:ILE:HG13	1:H:355:HIS:HB3	1.64	0.77
1:A:451:VAL:O	1:A:467:PHE:HE2	1.67	0.77
1:G:458:ASN:O	1:G:459:VAL:HG13	1.84	0.77
1:E:7:ILE:HG22	1:E:467:PHE:CB	2.11	0.77
1:D:202:SER:OG	1:E:217:ALA:HB2	1.84	0.77
1:C:9:VAL:O	1:C:339:ILE:HD13	1.85	0.77
1:D:187:GLU:O	1:D:190:GLN:HB3	1.84	0.77
1:C:324:PRO:O	1:C:325:GLN:HB2	1.85	0.77
1:A:47:LYS:HB3	1:A:51:ILE:O	1.84	0.76
1:F:9:VAL:O	1:F:339:ILE:HD13	1.85	0.76
1:A:282:GLN:HE21	1:A:282:GLN:HA	1.50	0.76
1:C:259:ILE:O	1:C:260:SER:HB2	1.86	0.76
1:F:320:LEU:HB3	1:F:440:HIS:CG	2.20	0.76
1:F:259:ILE:O	1:F:260:SER:HB2	1.82	0.76
1:I:259:ILE:O	1:I:260:SER:HB2	1.82	0.76
1:A:332:PHE:CE2	1:A:442:SER:HB2	2.21	0.76
1:H:7:ILE:HA	1:H:355:HIS:CA	2.12	0.75
1:I:41:HIS:HB3	1:I:297:ILE:HD13	1.66	0.75
1:C:11:TYR:CE2	1:C:335:ILE:HA	2.22	0.75
1:C:143:ASN:HD21	1:G:19:LYS:CD	1.99	0.75
1:C:9:VAL:HB	1:C:448:TYR:HD1	1.51	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:12:HIS:HB2	1:A:350:TRP:O	1.86	0.75
1:D:26:ARG:HH11	1:F:379:ASN:HD22	1.35	0.75
1:A:323:VAL:N	1:A:324:PRO:HD3	2.02	0.75
1:E:320:LEU:HB3	1:E:440:HIS:CG	2.22	0.75
1:A:307:LYS:HE2	1:A:421:TRP:CE2	2.22	0.75
1:A:302:ILE:HG23	1:A:394:ALA:HB2	1.69	0.75
1:E:202:SER:HB2	1:F:217:ALA:HB2	1.68	0.75
1:I:283:THR:CG2	1:I:285:LEU:H	2.00	0.75
1:A:282:GLN:NE2	1:A:283:THR:H	1.84	0.75
1:A:66:LEU:O	1:A:149:ASN:HB2	1.86	0.74
1:C:320:LEU:HB3	1:C:440:HIS:CG	2.22	0.74
1:G:211:ARG:NH1	1:H:216:ILE:HB	2.00	0.74
1:I:283:THR:HG22	1:I:285:LEU:N	2.00	0.74
1:B:320:LEU:HB3	1:B:440:HIS:CG	2.22	0.74
1:E:376:GLY:C	1:F:24:LEU:HD22	2.07	0.74
1:B:190:GLN:HE22	1:B:249:ASN:ND2	1.83	0.73
1:A:38:GLU:OE1	1:A:290:THR:HB	1.88	0.73
1:H:8:CYS:O	1:H:354:HIS:N	2.20	0.73
1:G:7:ILE:HD11	1:G:482:LYS:CE	2.08	0.73
1:G:409:LEU:HD11	1:I:410:ASN:CB	2.16	0.73
1:F:189:GLU:OE2	3:F:1497:SIA:H92	1.87	0.73
1:A:58:ASP:HB3	1:A:86:LYS:HD3	1.70	0.73
1:H:283:THR:HG22	1:H:285:LEU:N	2.00	0.73
1:D:22:THR:HB	1:D:434:GLU:OE2	1.89	0.73
1:D:45:LEU:HD11	1:D:270:THR:HG21	1.71	0.73
1:A:19:LYS:HZ3	1:A:27:ASN:HB3	1.53	0.73
1:H:259:ILE:O	1:H:260:SER:HB2	1.88	0.73
1:E:283:THR:HG22	1:E:285:LEU:N	2.02	0.73
1:F:320:LEU:HD12	1:F:335:ILE:HD13	1.71	0.73
1:G:308:TYR:CD2	1:G:418:LEU:HD11	2.24	0.72
1:B:278:GLU:HG3	1:B:279:THR:N	2.04	0.72
1:B:283:THR:HG22	1:B:285:LEU:N	2.02	0.72
1:B:7:ILE:O	1:B:467:PHE:N	2.22	0.72
1:E:278:GLU:HG3	1:E:279:THR:N	2.03	0.72
1:H:295:HIS:HD2	1:H:297:ILE:H	1.36	0.72
1:G:8:CYS:HB2	1:G:354:HIS:HB3	1.69	0.72
1:C:283:THR:HG22	1:C:285:LEU:N	2.01	0.72
1:B:283:THR:CG2	1:B:285:LEU:H	2.02	0.72
1:B:190:GLN:NE2	1:B:249:ASN:HD21	1.85	0.72
1:F:190:GLN:HE22	1:F:249:ASN:ND2	1.86	0.72
1:F:283:THR:HG22	1:F:285:LEU:N	2.03	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:26:ARG:HD3	1:F:379:ASN:HD22	1.53	0.72
1:A:493:GLU:O	1:A:494:GLU:HB2	1.90	0.72
1:E:320:LEU:HB3	1:E:440:HIS:CB	2.20	0.71
1:B:323:VAL:HG11	1:B:336:ALA:HB2	1.72	0.71
1:E:11:TYR:CE1	1:E:335:ILE:HG23	2.25	0.71
1:C:9:VAL:HG11	1:C:448:TYR:HB2	1.72	0.71
1:A:158:SER:O	1:A:195:GLN:HG2	1.89	0.71
1:E:141:PHE:CZ	1:G:47:LYS:HE2	2.25	0.71
1:E:379:ASN:HD22	1:F:26:ARG:CZ	2.03	0.71
1:B:295:HIS:HD2	1:B:297:ILE:H	1.37	0.71
1:C:143:ASN:ND2	1:G:19:LYS:HE3	2.05	0.71
1:A:380:LYS:HG3	1:A:380:LYS:O	1.87	0.71
1:C:199:ALA:HB3	1:C:249:ASN:HD22	1.56	0.71
1:C:283:THR:CG2	1:C:285:LEU:H	2.00	0.71
1:F:320:LEU:HD23	1:F:320:LEU:H	1.55	0.71
1:G:8:CYS:O	1:G:353:TYR:CA	2.39	0.70
1:D:282:GLN:HG3	1:D:283:THR:H	1.56	0.70
1:G:295:HIS:HD2	1:G:297:ILE:H	1.36	0.70
1:I:190:GLN:HE22	1:I:249:ASN:ND2	1.88	0.70
1:I:324:PRO:O	1:I:325:GLN:HB2	1.90	0.70
1:C:320:LEU:HD12	1:C:335:ILE:HD13	1.73	0.70
1:H:7:ILE:CA	1:H:355:HIS:HA	2.16	0.70
1:G:382:ASN:O	1:G:386:GLU:HG3	1.91	0.70
1:H:283:THR:CG2	1:H:285:LEU:H	2.01	0.70
1:B:9:VAL:HG11	1:B:448:TYR:HB2	1.73	0.70
1:A:282:GLN:HE21	1:A:282:GLN:CA	2.03	0.70
1:A:99:PHE:HZ	1:A:178:ILE:HD13	1.57	0.70
1:F:9:VAL:HB	1:F:448:TYR:HD1	1.56	0.70
1:D:41:HIS:HD2	1:D:297:ILE:HD13	1.56	0.70
1:E:320:LEU:HD23	1:E:320:LEU:H	1.56	0.70
1:A:208:LEU:HD12	1:A:209:ASN:H	1.57	0.70
1:B:379:ASN:HD22	1:C:26:ARG:CZ	2.05	0.69
1:D:139:ALA:HB1	1:D:142:ASP:HB2	1.73	0.69
1:H:496:LYS:N	1:H:496:LYS:HD2	2.07	0.69
1:A:201:VAL:HG13	1:A:250:LEU:HB2	1.74	0.69
1:G:480:SER:HB2	1:G:485:THR:O	1.91	0.69
1:E:387:LYS:CD	1:F:426:GLU:HG2	2.19	0.69
1:C:293:PRO:HG3	1:C:385:ILE:HA	1.75	0.69
1:F:283:THR:CG2	1:F:285:LEU:H	2.01	0.69
1:A:197:VAL:HG12	1:A:198:GLY:N	2.08	0.69
1:E:8:CYS:HA	1:E:466:CYS:HA	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:9:VAL:CB	1:E:448:TYR:HD1	2.04	0.69
1:G:408:ASN:HD21	1:I:397:LYS:HZ3	1.41	0.69
1:H:24:LEU:HD12	1:H:434:GLU:OE1	1.93	0.69
1:E:190:GLN:HE22	1:E:249:ASN:ND2	1.88	0.69
1:G:283:THR:HG22	1:G:285:LEU:N	2.05	0.69
1:E:11:TYR:CZ	1:E:335:ILE:HA	2.27	0.69
1:E:9:VAL:CG2	1:E:448:TYR:HA	2.12	0.69
1:B:379:ASN:HD22	1:C:26:ARG:NH1	1.90	0.69
1:F:300:LEU:HA	1:F:395:VAL:HB	1.74	0.68
1:A:97:GLY:HA3	1:A:229:MET:O	1.93	0.68
1:E:190:GLN:NE2	1:E:249:ASN:HD21	1.89	0.68
1:H:199:ALA:HB3	1:H:249:ASN:HD22	1.58	0.68
1:D:426:GLU:HG2	1:F:387:LYS:HD3	1.74	0.68
1:I:19:LYS:HE2	1:I:29:THR:OG1	1.93	0.68
1:A:203:VAL:HG22	1:A:244:PHE:CD1	2.29	0.68
1:E:9:VAL:HB	1:E:448:TYR:CD1	2.26	0.68
1:A:95:TYR:CE1	1:A:225:GLN:HG3	2.29	0.68
1:G:346:MET:SD	1:G:352:GLY:HA3	2.34	0.68
1:I:199:ALA:HB3	1:I:249:ASN:HD22	1.58	0.68
1:G:479:ASN:O	1:G:483:ASN:HB2	1.92	0.68
1:A:14:ASN:H	1:A:322:ASN:HD21	1.40	0.68
1:A:281:CYS:HB2	1:A:304:GLU:O	1.94	0.68
1:G:448:TYR:CE1	1:G:465:GLY:HA2	2.29	0.68
1:D:387:LYS:HD3	1:E:426:GLU:HG2	1.76	0.68
1:A:410:ASN:HB2	1:B:409:LEU:CD1	2.23	0.67
1:F:190:GLN:NE2	1:F:249:ASN:HD21	1.88	0.67
1:I:190:GLN:NE2	1:I:249:ASN:HD21	1.90	0.67
1:G:190:GLN:HE22	1:G:249:ASN:ND2	1.89	0.67
1:A:154:THR:O	1:A:155:LYS:HB3	1.94	0.67
1:B:293:PRO:CG	1:B:385:ILE:HG12	2.24	0.67
1:C:190:GLN:HE22	1:C:249:ASN:ND2	1.88	0.67
1:A:282:GLN:NE2	1:A:282:GLN:HA	2.09	0.67
1:C:143:ASN:ND2	1:G:19:LYS:HD3	2.08	0.67
1:E:283:THR:CG2	1:E:285:LEU:H	2.03	0.67
1:D:26:ARG:HD3	1:F:379:ASN:ND2	2.09	0.67
1:G:199:ALA:HB3	1:G:249:ASN:HD22	1.59	0.67
1:A:205:THR:HG22	1:A:242:ILE:HA	1.75	0.67
1:F:199:ALA:HB3	1:F:249:ASN:HD22	1.60	0.67
1:H:459:VAL:CG1	1:H:469:PHE:HA	2.25	0.67
1:H:95:TYR:CD2	1:H:229:MET:HG3	2.30	0.67
1:G:332:PHE:HB2	1:G:441:ASP:OD2	1.94	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:379:ASN:HD22	1:B:26:ARG:NH1	1.91	0.67
1:I:320:LEU:HD23	1:I:320:LEU:H	1.60	0.67
1:H:355:HIS:H	1:H:355:HIS:CD2	2.12	0.67
1:G:259:ILE:O	1:G:260:SER:CB	2.43	0.67
1:I:278:GLU:HG3	1:I:279:THR:N	2.09	0.67
1:A:455:LEU:HB3	1:A:459:VAL:CG2	2.25	0.67
1:F:293:PRO:HG3	1:F:385:ILE:HA	1.77	0.67
1:B:320:LEU:CD1	1:B:335:ILE:HD13	2.24	0.67
1:A:302:ILE:HG23	1:A:394:ALA:CB	2.24	0.67
1:F:133:GLY:HA3	3:F:1497:SIA:H113	1.75	0.67
1:B:199:ALA:HB3	1:B:249:ASN:HD22	1.59	0.66
1:G:425:ALA:O	1:G:427:LEU:N	2.27	0.66
1:E:199:ALA:HB3	1:E:249:ASN:HD22	1.58	0.66
1:D:53:PRO:CD	1:D:274:LEU:HD13	2.25	0.66
1:A:486:TYR:CG	1:A:487:ASP:N	2.64	0.66
1:F:9:VAL:HG11	1:F:448:TYR:HB2	1.76	0.66
1:H:8:CYS:O	1:H:343:TRP:CH2	2.48	0.66
1:I:459:VAL:CG1	1:I:469:PHE:HA	2.26	0.66
1:D:12:HIS:CG	1:D:13:SER:H	2.14	0.66
1:A:9:VAL:HG21	1:A:448:TYR:HA	1.77	0.66
1:C:278:GLU:HG3	1:C:279:THR:N	2.11	0.66
1:A:457:ASP:C	1:A:459:VAL:H	1.99	0.66
1:C:190:GLN:NE2	1:C:249:ASN:HD21	1.89	0.66
1:A:399:PHE:CD2	1:A:407:GLU:HB2	2.30	0.66
1:B:320:LEU:HD23	1:B:320:LEU:H	1.61	0.66
1:D:248:GLY:O	1:D:249:ASN:HB2	1.94	0.66
1:H:190:GLN:HE22	1:H:249:ASN:ND2	1.89	0.66
1:A:248:GLY:C	1:A:249:ASN:HD22	1.99	0.66
1:A:12:HIS:CD2	1:A:13:SER:N	2.64	0.66
1:A:476:GLU:O	1:A:480:SER:HB3	1.95	0.66
1:G:320:LEU:H	1:G:320:LEU:HD23	1.60	0.66
1:G:283:THR:CG2	1:G:285:LEU:H	2.05	0.66
1:E:95:TYR:CD2	1:E:229:MET:HG3	2.31	0.66
1:E:323:VAL:HG11	1:E:336:ALA:HB2	1.78	0.66
1:A:320:LEU:HD23	1:A:320:LEU:H	1.61	0.66
1:A:166:SER:HB2	1:A:243:ASN:HD22	1.56	0.66
1:G:346:MET:HE1	1:G:365:ALA:CA	2.25	0.66
1:D:45:LEU:HA	1:D:282:GLN:NE2	2.11	0.65
1:F:479:ASN:O	1:F:483:ASN:HB2	1.96	0.65
1:G:408:ASN:HD21	1:I:397:LYS:HZ1	1.44	0.65
1:G:211:ARG:HH11	1:H:216:ILE:HB	1.61	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:345:GLY:O	1:G:347:VAL:HG22	1.97	0.65
1:I:95:TYR:CD2	1:I:229:MET:HG3	2.31	0.65
1:E:11:TYR:HB3	1:E:444:VAL:CG2	2.25	0.65
1:H:190:GLN:NE2	1:H:249:ASN:HD21	1.91	0.65
1:H:8:CYS:H	1:H:354:HIS:C	2.00	0.65
1:D:109:ILE:HG22	1:D:259:ILE:HD11	1.77	0.65
1:B:431:MET:O	1:B:432:GLU:HB2	1.96	0.65
1:D:182:HIS:O	1:D:184:PRO:HD3	1.96	0.65
1:E:259:ILE:O	1:E:260:SER:CB	2.44	0.65
1:G:95:TYR:CD2	1:G:229:MET:HG3	2.32	0.65
1:E:73:ARG:HD2	1:G:276:ASN:O	1.96	0.65
1:F:278:GLU:HG3	1:F:279:THR:N	2.12	0.65
1:D:186:ASP:HA	1:D:216:ILE:HG21	1.77	0.65
1:G:379:ASN:HB3	1:H:26:ARG:CZ	2.26	0.65
1:E:211:ARG:HD2	1:F:216:ILE:O	1.96	0.65
1:A:38:GLU:HG2	1:A:290:THR:HG21	1.78	0.65
1:C:11:TYR:HB3	1:C:444:VAL:HG21	1.77	0.65
1:B:459:VAL:CG1	1:B:469:PHE:HA	2.24	0.65
1:C:7:ILE:O	1:C:467:PHE:N	2.28	0.65
1:D:32:HIS:CE1	1:D:350:TRP:HE1	2.15	0.65
1:A:343:TRP:CZ3	1:A:354:HIS:HB2	2.32	0.65
1:F:320:LEU:HB3	1:F:440:HIS:CB	2.27	0.65
1:F:133:GLY:CA	3:F:1497:SIA:H113	2.27	0.65
1:D:479:ASN:O	1:D:483:ASN:HB2	1.97	0.65
1:G:166:SER:HB2	1:G:243:ASN:HD22	1.62	0.65
1:D:24:LEU:HD12	1:D:434:GLU:CD	2.16	0.65
1:A:41:HIS:HB3	1:A:297:ILE:HD13	1.78	0.65
1:C:320:LEU:HD23	1:C:320:LEU:H	1.61	0.65
1:A:105:LEU:HB2	1:A:233:TRP:CE2	2.32	0.65
1:D:182:HIS:CD2	1:D:194:TYR:OH	2.50	0.65
1:A:23:ILE:HD11	1:C:380:LYS:HG3	1.79	0.65
1:D:238:ILE:HG23	1:D:239:TRP:CD2	2.33	0.64
1:F:11:TYR:HB3	1:F:444:VAL:HG21	1.78	0.64
1:H:278:GLU:HG3	1:H:279:THR:N	2.12	0.64
1:H:293:PRO:HB2	1:H:294:PHE:CE2	2.32	0.64
1:G:367:LYS:HE2	1:G:367:LYS:HA	1.79	0.64
1:A:455:LEU:HB3	1:A:459:VAL:HG22	1.79	0.64
1:H:455:LEU:HB3	1:H:459:VAL:HG22	1.78	0.64
1:B:202:SER:HB2	1:C:217:ALA:HB2	1.80	0.64
1:C:78:PRO:HG2	1:E:114:HIS:CE1	2.32	0.64
1:G:379:ASN:HB3	1:H:26:ARG:NH2	2.13	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:111:SER:O	1:D:261:LYS:HE3	1.98	0.64
1:H:479:ASN:O	1:H:483:ASN:HB2	1.98	0.64
1:E:159:ASN:O	1:E:161:PRO:HD3	1.98	0.64
1:A:387:LYS:HD2	1:B:426:GLU:HG2	1.78	0.64
1:D:431:MET:O	1:D:432:GLU:HB2	1.97	0.64
1:E:11:TYR:CZ	1:E:335:ILE:HG23	2.32	0.64
1:H:293:PRO:HB2	1:H:294:PHE:CD2	2.32	0.64
1:E:7:ILE:HG23	1:E:467:PHE:CD2	2.33	0.64
1:D:282:GLN:HG3	1:D:283:THR:N	2.13	0.64
1:D:120:ILE:HG12	1:D:256:GLY:H	1.63	0.64
1:I:431:MET:O	1:I:432:GLU:HB2	1.98	0.64
1:A:26:ARG:HD3	1:C:379:ASN:ND2	2.13	0.64
1:H:10:GLY:N	1:H:343:TRP:CH2	2.65	0.64
1:A:451:VAL:O	1:A:467:PHE:CE2	2.51	0.64
1:I:159:ASN:O	1:I:161:PRO:HD3	1.98	0.64
1:C:199:ALA:HB3	1:C:249:ASN:ND2	2.13	0.64
1:E:459:VAL:CG1	1:E:469:PHE:HA	2.26	0.64
1:F:259:ILE:O	1:F:260:SER:CB	2.46	0.63
1:E:479:ASN:O	1:E:483:ASN:HB2	1.98	0.63
1:D:294:PHE:CE1	1:D:425:ALA:HB2	2.33	0.63
1:G:19:LYS:HE2	1:G:29:THR:OG1	1.97	0.63
1:D:37:LEU:HB2	1:D:314:LEU:HB2	1.80	0.63
1:A:108:LEU:HD12	1:A:261:LYS:HD2	1.80	0.63
1:B:293:PRO:HG3	1:B:385:ILE:HA	1.80	0.63
1:E:143:ASN:ND2	1:E:143:ASN:N	2.45	0.63
1:C:455:LEU:HB3	1:C:459:VAL:HG22	1.80	0.63
1:B:320:LEU:HB3	1:B:440:HIS:CB	2.27	0.63
1:G:293:PRO:HB2	1:G:294:PHE:CE2	2.33	0.63
1:B:479:ASN:O	1:B:483:ASN:HB2	1.98	0.63
1:E:73:ARG:CB	1:G:44:LYS:NZ	2.61	0.63
1:I:259:ILE:O	1:I:260:SER:CB	2.46	0.63
1:A:413:MET:HG2	1:A:414:GLU:N	2.13	0.63
1:E:11:TYR:OH	1:E:336:ALA:N	2.24	0.63
1:E:7:ILE:N	1:E:467:PHE:O	2.31	0.63
1:D:108:LEU:HD12	1:D:261:LYS:HD2	1.80	0.63
1:A:334:ALA:HB3	1:A:441:ASP:OD1	1.98	0.63
1:G:159:ASN:O	1:G:161:PRO:HD3	1.98	0.63
1:E:307:LYS:HE2	1:E:421:TRP:CE2	2.34	0.63
1:A:42:ASN:HB2	1:A:287:ALA:HB3	1.79	0.63
1:E:455:LEU:HB3	1:E:459:VAL:HG22	1.80	0.63
1:C:335:ILE:HG13	1:C:441:ASP:HA	1.81	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:478:MET:C	1:A:480:SER:H	2.00	0.63
1:I:479:ASN:O	1:I:483:ASN:HB2	1.98	0.63
1:D:109:ILE:CG2	1:D:259:ILE:HD11	2.29	0.63
1:B:259:ILE:O	1:B:260:SER:CB	2.46	0.63
1:C:141:PHE:O	1:G:19:LYS:HB2	1.99	0.63
1:C:143:ASN:ND2	1:C:143:ASN:N	2.46	0.62
1:D:288:ILE:HG12	1:D:297:ILE:HD12	1.81	0.62
1:B:293:PRO:HB2	1:B:294:PHE:CD2	2.34	0.62
1:A:10:GLY:HA3	1:A:343:TRP:CZ2	2.34	0.62
1:D:182:HIS:HD2	1:D:194:TYR:OH	1.82	0.62
1:C:479:ASN:O	1:C:483:ASN:HB2	1.98	0.62
1:F:389:ASN:HD22	1:F:390:THR:H	1.47	0.62
1:C:389:ASN:HD22	1:C:390:THR:H	1.47	0.62
1:D:205:THR:CG2	1:D:242:ILE:HA	2.29	0.62
1:A:431:MET:C	1:A:433:ASN:H	2.01	0.62
1:A:379:ASN:HD22	1:B:26:ARG:CZ	2.12	0.62
1:D:120:ILE:HD13	1:D:177:ILE:HD13	1.80	0.62
1:D:298:HIS:ND1	1:D:299:PRO:HD2	2.13	0.62
1:G:53:PRO:HD2	1:G:274:LEU:HD13	1.81	0.62
1:F:455:LEU:HB3	1:F:459:VAL:HG22	1.82	0.62
1:H:23:ILE:HG22	1:H:434:GLU:CG	2.27	0.62
1:A:335:ILE:CG1	1:A:441:ASP:HA	2.28	0.62
1:A:462:LEU:HD13	1:A:466:CYS:O	1.99	0.62
1:I:55:GLU:OE2	1:I:273:THR:HG22	1.99	0.62
1:G:293:PRO:HB2	1:G:294:PHE:CD2	2.35	0.62
1:H:431:MET:O	1:H:432:GLU:HB2	1.99	0.62
1:A:183:HIS:HB3	1:A:219:ARG:NH2	2.15	0.62
1:G:455:LEU:HB3	1:G:459:VAL:CG2	2.30	0.62
1:F:199:ALA:HB3	1:F:249:ASN:ND2	2.15	0.62
1:D:459:VAL:CG1	1:D:469:PHE:HA	2.30	0.62
1:B:295:HIS:CE1	1:B:308:TYR:HB2	2.35	0.62
1:A:51:ILE:HG22	1:A:52:PRO:CD	2.30	0.62
1:C:320:LEU:HB3	1:C:440:HIS:CB	2.29	0.62
1:F:159:ASN:O	1:F:161:PRO:HD3	2.00	0.62
1:A:168:ASN:CA	1:A:241:THR:HG22	2.30	0.62
1:H:22:THR:HG22	1:H:433:ASN:HB3	1.82	0.62
1:C:159:ASN:O	1:C:161:PRO:HD3	1.99	0.62
1:E:166:SER:HB2	1:E:243:ASN:HD22	1.65	0.62
1:G:190:GLN:NE2	1:G:249:ASN:HD21	1.91	0.62
1:F:389:ASN:HD22	1:F:390:THR:N	1.97	0.62
1:F:178:ILE:O	1:F:253:PRO:HG3	1.99	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:338:PHE:CE1	1:C:339:ILE:HG13	2.35	0.61
1:E:166:SER:CB	1:E:243:ASN:HD22	2.13	0.61
1:A:305:CYS:HB3	1:A:306:PRO:HD2	1.81	0.61
1:D:310:LYS:NZ	1:D:418:LEU:HD23	2.15	0.61
1:D:108:LEU:CD1	1:D:261:LYS:HD2	2.31	0.61
1:F:143:ASN:ND2	1:F:143:ASN:N	2.48	0.61
1:H:332:PHE:CZ	1:I:331:LEU:HD12	2.35	0.61
1:B:95:TYR:CD2	1:B:229:MET:HG3	2.35	0.61
1:A:118:VAL:HG11	1:A:258:LYS:HD2	1.82	0.61
1:D:7:ILE:HG22	1:D:467:PHE:HB2	1.82	0.61
1:A:282:GLN:NE2	1:A:283:THR:N	2.43	0.61
1:C:143:ASN:ND2	1:G:19:LYS:CE	2.63	0.61
1:H:19:LYS:HE2	1:H:29:THR:OG1	2.00	0.61
1:B:389:ASN:HD22	1:B:390:THR:H	1.48	0.61
1:C:259:ILE:O	1:C:260:SER:CB	2.47	0.61
1:A:168:ASN:HA	1:A:241:THR:HG22	1.81	0.61
1:H:178:ILE:O	1:H:253:PRO:HG3	1.99	0.61
1:H:199:ALA:HB3	1:H:249:ASN:ND2	2.15	0.61
1:B:278:GLU:HG3	1:B:279:THR:H	1.66	0.61
1:G:346:MET:HE1	1:G:365:ALA:HA	1.82	0.61
1:H:159:ASN:O	1:H:161:PRO:HD3	2.00	0.61
1:G:455:LEU:HB3	1:G:459:VAL:HG21	1.83	0.61
1:I:248:GLY:O	1:I:249:ASN:HB2	2.00	0.61
1:I:142:ASP:C	1:I:143:ASN:HD22	2.04	0.61
1:A:183:HIS:HB3	1:A:219:ARG:HH22	1.66	0.61
1:G:357:ASN:HB3	1:G:359:GLN:H	1.66	0.61
1:B:9:VAL:O	1:B:339:ILE:HD13	2.01	0.61
1:G:248:GLY:O	1:G:249:ASN:HB2	2.01	0.61
1:F:225:GLN:NE2	3:F:1497:SIA:O1A	2.34	0.61
1:C:495:SER:C	1:C:496:LYS:HD2	2.21	0.61
1:H:389:ASN:HD22	1:H:390:THR:H	1.48	0.61
1:E:389:ASN:HD22	1:E:390:THR:H	1.48	0.61
1:E:389:ASN:HD22	1:E:390:THR:N	1.99	0.61
1:B:159:ASN:O	1:B:161:PRO:HD3	2.00	0.61
1:G:278:GLU:HG3	1:G:279:THR:N	2.15	0.61
1:C:12:HIS:N	1:C:350:TRP:O	2.24	0.61
1:D:455:LEU:HB3	1:D:459:VAL:HG22	1.81	0.61
1:C:140:VAL:C	1:C:142:ASP:HA	2.22	0.61
1:D:389:ASN:HD22	1:D:390:THR:N	1.98	0.61
1:F:323:VAL:HG11	1:F:336:ALA:HB2	1.82	0.61
1:E:248:GLY:O	1:E:249:ASN:HB2	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:19:LYS:HE2	1:E:29:THR:OG1	2.01	0.60
1:D:195:GLN:HA	1:D:195:GLN:HE21	1.66	0.60
1:D:11:TYR:CE2	1:D:335:ILE:HA	2.36	0.60
1:G:7:ILE:HA	1:G:355:HIS:CA	2.28	0.60
1:H:248:GLY:O	1:H:249:ASN:HB2	2.00	0.60
1:E:199:ALA:HB3	1:E:249:ASN:ND2	2.15	0.60
1:H:389:ASN:HD22	1:H:390:THR:N	2.00	0.60
1:E:431:MET:O	1:E:432:GLU:HB2	2.00	0.60
1:G:111:SER:O	1:G:261:LYS:HE3	2.01	0.60
1:B:355:HIS:H	1:B:355:HIS:CD2	2.19	0.60
1:B:338:PHE:CE1	1:B:339:ILE:HG13	2.36	0.60
1:A:283:THR:HG23	1:A:298:HIS:HB3	1.82	0.60
1:D:310:LYS:HZ2	1:D:418:LEU:HD23	1.66	0.60
1:C:166:SER:HB2	1:C:243:ASN:HD22	1.65	0.60
1:A:382:ASN:HD22	1:A:382:ASN:N	1.99	0.60
1:C:53:PRO:HD2	1:C:274:LEU:HD13	1.84	0.60
1:B:143:ASN:ND2	1:B:143:ASN:N	2.46	0.60
1:C:300:LEU:HA	1:C:395:VAL:HB	1.83	0.60
1:D:130:THR:HG22	1:D:132:THR:H	1.67	0.60
1:D:322:ASN:O	1:D:323:VAL:HG13	2.01	0.60
1:D:171:SER:HB2	1:D:258:LYS:NZ	2.16	0.60
1:B:55:GLU:OE2	1:B:273:THR:HG22	2.01	0.60
1:D:20:VAL:HG13	1:D:30:VAL:HG21	1.83	0.60
1:A:452:ARG:HG3	1:A:467:PHE:CZ	2.36	0.60
1:I:389:ASN:HD22	1:I:390:THR:H	1.48	0.60
1:F:95:TYR:CD2	1:F:229:MET:HG3	2.37	0.60
1:A:37:LEU:HB2	1:A:314:LEU:HB2	1.83	0.60
1:B:455:LEU:HB3	1:B:459:VAL:HG22	1.83	0.60
1:C:459:VAL:CG1	1:C:469:PHE:HA	2.30	0.60
1:A:338:PHE:CE1	1:A:339:ILE:HG13	2.35	0.60
1:G:346:MET:HE1	1:G:365:ALA:N	2.16	0.60
1:F:355:HIS:H	1:F:355:HIS:CD2	2.18	0.60
1:H:259:ILE:O	1:H:260:SER:CB	2.49	0.60
1:E:471:HIS:HB3	1:E:494:GLU:CG	2.31	0.60
1:A:30:VAL:HA	1:A:321:ARG:HA	1.82	0.60
1:E:355:HIS:CD2	1:E:355:HIS:H	2.19	0.60
1:E:338:PHE:CE1	1:E:339:ILE:HG13	2.36	0.60
1:D:279:THR:CB	1:D:287:ALA:HB1	2.31	0.60
1:B:111:SER:O	1:B:261:LYS:HE3	2.01	0.60
1:I:355:HIS:H	1:I:355:HIS:CD2	2.20	0.60
1:G:199:ALA:HB3	1:G:249:ASN:ND2	2.15	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:431:MET:O	1:F:432:GLU:HB2	2.00	0.60
1:D:211:ARG:NH1	1:E:216:ILE:O	2.35	0.60
1:D:66:LEU:O	1:D:149:ASN:HB2	2.01	0.60
1:H:53:PRO:HD2	1:H:274:LEU:HD13	1.83	0.60
1:I:455:LEU:HB3	1:I:459:VAL:HG22	1.82	0.60
1:E:111:SER:O	1:E:261:LYS:HE3	2.01	0.60
1:I:323:VAL:HG11	1:I:336:ALA:HB2	1.83	0.60
1:F:166:SER:HB2	1:F:243:ASN:HD22	1.67	0.59
1:B:389:ASN:HD22	1:B:390:THR:N	1.99	0.59
1:G:178:ILE:O	1:G:253:PRO:HG3	2.02	0.59
1:I:259:ILE:CG2	1:I:260:SER:N	2.63	0.59
1:H:143:ASN:ND2	1:H:143:ASN:N	2.47	0.59
1:E:32:HIS:CE1	1:E:350:TRP:HE1	2.21	0.59
1:H:142:ASP:C	1:H:143:ASN:HD22	2.06	0.59
1:G:420:VAL:HG12	1:G:421:TRP:N	2.17	0.59
1:A:424:ASN:O	1:A:426:GLU:N	2.33	0.59
1:D:24:LEU:HA	1:F:379:ASN:HB2	1.85	0.59
1:D:162:VAL:CG2	1:D:247:THR:HG22	2.31	0.59
1:A:471:HIS:CE1	1:A:491:TYR:CD1	2.90	0.59
1:F:185:ASN:HD21	1:F:226:GLY:CA	2.15	0.59
1:C:295:HIS:CE1	1:C:308:TYR:HB2	2.37	0.59
1:E:278:GLU:HG3	1:E:279:THR:H	1.67	0.59
1:I:199:ALA:HB3	1:I:249:ASN:ND2	2.16	0.59
1:B:11:TYR:HB3	1:B:444:VAL:HG21	1.85	0.59
1:H:166:SER:CB	1:H:243:ASN:HD22	2.16	0.59
1:H:111:SER:O	1:H:261:LYS:HE3	2.02	0.59
1:A:455:LEU:HD12	1:A:486:TYR:CE2	2.38	0.59
1:A:282:GLN:NE2	1:A:282:GLN:CA	2.66	0.59
1:A:47:LYS:O	1:A:279:THR:HG22	2.02	0.59
1:F:53:PRO:HD2	1:F:274:LEU:HD13	1.84	0.59
1:F:338:PHE:CE1	1:F:339:ILE:HG13	2.38	0.59
1:D:238:ILE:O	1:D:240:ASP:N	2.36	0.59
1:G:409:LEU:CD1	1:I:410:ASN:HB2	2.25	0.59
1:E:142:ASP:C	1:E:143:ASN:HD22	2.05	0.59
1:I:389:ASN:HD22	1:I:390:THR:N	2.00	0.59
1:A:140:VAL:HG12	1:A:141:PHE:N	2.18	0.59
1:G:166:SER:CB	1:G:243:ASN:HD22	2.15	0.58
1:F:295:HIS:CE1	1:F:308:TYR:HB2	2.38	0.58
1:G:382:ASN:HB3	1:G:386:GLU:OE2	2.03	0.58
1:C:293:PRO:CG	1:C:385:ILE:HG12	2.33	0.58
1:B:293:PRO:HB2	1:B:294:PHE:CE2	2.38	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:389:ASN:HD22	1:D:390:THR:H	1.48	0.58
1:G:458:ASN:ND2	1:G:491:TYR:HB2	2.18	0.58
1:B:248:GLY:O	1:B:249:ASN:HB2	2.01	0.58
1:D:23:ILE:CD1	1:F:380:LYS:HE2	2.30	0.58
1:D:118:VAL:HG23	1:D:120:ILE:HG23	1.84	0.58
1:D:214:PRO:HG3	1:D:249:ASN:OD1	2.02	0.58
1:D:183:HIS:HB3	1:D:219:ARG:HH22	1.68	0.58
1:D:108:LEU:CD2	1:D:235:ILE:HD11	2.31	0.58
1:H:335:ILE:HG13	1:H:441:ASP:HA	1.84	0.58
1:A:93:LEU:H	1:A:93:LEU:HD12	1.68	0.58
1:G:142:ASP:C	1:G:143:ASN:HD22	2.06	0.58
1:F:11:TYR:HB3	1:F:444:VAL:CG2	2.33	0.58
1:C:389:ASN:HD22	1:C:390:THR:N	1.99	0.58
1:A:382:ASN:ND2	1:A:382:ASN:N	2.51	0.58
1:E:7:ILE:CG2	1:E:467:PHE:CD2	2.86	0.58
1:A:282:GLN:HE22	1:A:286:GLY:C	2.07	0.58
1:D:53:PRO:HG3	1:D:82:TYR:CE2	2.38	0.58
1:I:185:ASN:HD21	1:I:226:GLY:CA	2.16	0.58
1:A:351:TYR:N	1:A:351:TYR:CD2	2.65	0.58
1:I:293:PRO:HB2	1:I:294:PHE:CE2	2.38	0.58
1:A:418:LEU:O	1:A:422:THR:HB	2.04	0.58
1:D:355:HIS:CD2	1:D:355:HIS:H	2.20	0.58
1:H:320:LEU:HD23	1:H:320:LEU:H	1.67	0.58
1:E:259:ILE:CG2	1:E:260:SER:H	2.06	0.58
1:F:480:SER:HA	1:F:483:ASN:HB2	1.85	0.58
1:A:413:MET:O	1:A:416:GLY:N	2.35	0.58
1:A:219:ARG:HG3	1:A:226:GLY:O	2.04	0.58
1:C:355:HIS:H	1:C:355:HIS:CD2	2.20	0.58
1:D:265:SER:OG	1:D:266:GLY:N	2.37	0.58
1:E:9:VAL:C	1:E:339:ILE:HD13	2.23	0.58
1:B:142:ASP:C	1:B:143:ASN:HD22	2.05	0.58
1:E:295:HIS:CE1	1:E:308:TYR:HB2	2.38	0.58
1:A:176:LEU:HA	1:A:235:ILE:HD13	1.84	0.58
1:D:19:LYS:HE2	1:D:29:THR:OG1	2.04	0.58
1:C:95:TYR:CD2	1:C:229:MET:HG3	2.38	0.58
1:E:310:LYS:HD2	1:E:418:LEU:CD2	2.33	0.58
1:A:396:GLY:O	1:A:397:LYS:HG2	2.03	0.58
1:D:295:HIS:HD2	1:D:296:ASN:N	2.02	0.58
1:C:185:ASN:HD21	1:C:226:GLY:CA	2.15	0.58
1:C:111:SER:O	1:C:261:LYS:HE3	2.04	0.58
1:A:490:LYS:HE3	1:A:491:TYR:CE2	2.37	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:259:ILE:CG2	1:H:260:SER:N	2.63	0.58
1:F:19:LYS:HE2	1:F:29:THR:OG1	2.03	0.58
1:B:8:CYS:HA	1:B:466:CYS:HA	1.86	0.58
1:B:166:SER:CB	1:B:243:ASN:HD22	2.17	0.58
1:I:288:ILE:CD1	1:I:297:ILE:HD12	2.34	0.58
1:A:56:LEU:O	1:A:57:GLY:C	2.42	0.58
1:G:489:SER:O	1:G:490:LYS:HB2	2.04	0.58
1:I:480:SER:HA	1:I:483:ASN:HB2	1.85	0.58
1:B:243:ASN:HB2	1:C:218:THR:O	2.04	0.58
1:G:357:ASN:ND2	1:G:473:CYS:O	2.34	0.57
1:A:155:LYS:HE2	1:A:192:THR:O	2.04	0.57
1:I:53:PRO:HD2	1:I:274:LEU:HD13	1.86	0.57
1:D:310:LYS:NZ	1:D:418:LEU:CD2	2.67	0.57
1:B:199:ALA:HB3	1:B:249:ASN:ND2	2.19	0.57
1:F:459:VAL:CG1	1:F:469:PHE:HA	2.29	0.57
1:G:259:ILE:CG2	1:G:260:SER:N	2.63	0.57
1:G:308:TYR:HD2	1:G:418:LEU:HD11	1.68	0.57
1:A:451:VAL:O	1:A:451:VAL:HG12	2.04	0.57
1:A:279:THR:C	1:A:280:LYS:HD2	2.24	0.57
1:E:480:SER:HA	1:E:483:ASN:HB2	1.85	0.57
1:G:143:ASN:ND2	1:G:143:ASN:N	2.46	0.57
1:D:193:LEU:HB2	1:D:194:TYR:CD2	2.40	0.57
1:A:283:THR:HG22	1:A:285:LEU:H	1.69	0.57
1:A:350:TRP:H	1:A:370:THR:CG2	2.17	0.57
1:F:335:ILE:HG13	1:F:441:ASP:HA	1.86	0.57
1:C:431:MET:O	1:C:432:GLU:HB2	2.03	0.57
1:F:142:ASP:C	1:F:143:ASN:HD22	2.06	0.57
1:D:13:SER:CB	1:D:324:PRO:HG3	2.34	0.57
1:C:11:TYR:HB3	1:C:444:VAL:CG2	2.34	0.57
1:H:480:SER:HA	1:H:483:ASN:HB2	1.86	0.57
1:D:42:ASN:HD22	1:D:44:LYS:HB2	1.70	0.57
1:B:179:TRP:CE2	1:B:203:VAL:HG21	2.40	0.57
1:D:376:GLY:C	1:E:24:LEU:HD22	2.24	0.57
1:F:12:HIS:HB2	1:F:350:TRP:HA	1.85	0.57
1:I:111:SER:O	1:I:261:LYS:HE3	2.04	0.57
1:B:211:ARG:NH1	1:C:216:ILE:HB	2.19	0.57
1:A:19:LYS:HD2	1:A:29:THR:HG23	1.87	0.57
1:D:308:TYR:O	1:D:418:LEU:HD12	2.05	0.57
1:D:295:HIS:C	1:D:295:HIS:CD2	2.78	0.57
1:F:248:GLY:O	1:F:249:ASN:HB2	2.05	0.57
1:G:381:VAL:HG12	1:G:382:ASN:N	2.18	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:203:VAL:HG22	1:A:244:PHE:HD1	1.69	0.57
1:F:293:PRO:HB2	1:F:294:PHE:CE2	2.40	0.57
1:E:53:PRO:HD2	1:E:274:LEU:HD13	1.85	0.57
1:A:45:LEU:HD11	1:A:270:THR:HG21	1.87	0.57
1:C:248:GLY:O	1:C:249:ASN:HB2	2.04	0.57
1:D:228:ARG:NH2	1:F:206:SER:HA	2.20	0.57
1:C:320:LEU:CD1	1:C:335:ILE:HD13	2.34	0.57
1:C:294:PHE:HB3	1:C:309:VAL:HG22	1.87	0.57
1:A:10:GLY:HA3	1:A:343:TRP:CH2	2.39	0.57
1:A:23:ILE:HB	1:A:430:LEU:HB3	1.86	0.57
1:B:480:SER:HA	1:B:483:ASN:HB2	1.87	0.57
1:D:493:GLU:O	1:D:494:GLU:HB2	2.05	0.57
1:E:335:ILE:HG13	1:E:441:ASP:HA	1.86	0.57
1:G:473:CYS:SG	1:G:478:MET:HE2	2.45	0.57
1:A:284:PRO:HD2	1:A:298:HIS:ND1	2.20	0.57
1:A:51:ILE:N	1:A:51:ILE:HD13	2.20	0.57
1:G:379:ASN:HB3	1:H:26:ARG:NH1	2.20	0.57
1:A:54:LEU:HD13	1:A:80:TRP:CE3	2.40	0.57
1:D:168:ASN:HA	1:D:241:THR:CB	2.25	0.56
1:G:387:LYS:HZ2	1:H:426:GLU:HG2	1.69	0.56
1:F:12:HIS:CB	1:F:350:TRP:HA	2.35	0.56
1:H:387:LYS:HD3	1:I:426:GLU:HG2	1.86	0.56
1:A:165:GLY:O	1:A:244:PHE:N	2.34	0.56
1:D:338:PHE:CE1	1:D:339:ILE:HG13	2.40	0.56
1:A:189:GLU:HG3	1:A:193:LEU:HD12	1.86	0.56
1:G:140:VAL:C	1:G:142:ASP:HA	2.25	0.56
1:I:306:PRO:O	1:I:308:TYR:N	2.38	0.56
1:F:293:PRO:HB2	1:F:294:PHE:CD2	2.40	0.56
1:C:480:SER:HA	1:C:483:ASN:HB2	1.87	0.56
1:H:379:ASN:HB3	1:I:26:ARG:CZ	2.36	0.56
1:H:379:ASN:HD22	1:I:26:ARG:CZ	2.18	0.56
1:C:179:TRP:CE2	1:C:203:VAL:HG21	2.40	0.56
1:E:456:ARG:HD2	1:F:461:GLU:O	2.05	0.56
1:I:166:SER:HB2	1:I:243:ASN:HD22	1.70	0.56
1:I:178:ILE:O	1:I:253:PRO:HG3	2.05	0.56
1:A:81:SER:HB2	1:A:82:TYR:HD2	1.70	0.56
1:A:332:PHE:CD2	1:A:442:SER:HB2	2.41	0.56
1:C:32:HIS:CE1	1:C:350:TRP:HE1	2.24	0.56
1:C:166:SER:CB	1:C:243:ASN:HD22	2.17	0.56
1:I:166:SER:CB	1:I:243:ASN:HD22	2.18	0.56
1:I:197:VAL:HG12	1:I:198:GLY:N	2.21	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:63:GLY:HA2	1:D:92:GLY:O	2.05	0.56
1:H:114:HIS:O	1:H:259:ILE:O	2.24	0.56
1:A:23:ILE:CD1	1:C:380:LYS:HE2	2.35	0.56
1:C:12:HIS:HB2	1:C:350:TRP:HA	1.88	0.56
1:B:140:VAL:C	1:B:142:ASP:HA	2.25	0.56
1:H:460:LYS:HD2	1:H:470:TYR:CE1	2.40	0.56
1:I:293:PRO:HB2	1:I:294:PHE:CD2	2.39	0.56
1:F:197:VAL:HG12	1:F:198:GLY:N	2.21	0.56
1:A:366:ASP:HB3	1:A:369:SER:HB3	1.87	0.56
1:E:141:PHE:CE2	1:G:274:LEU:HD11	2.41	0.56
1:H:140:VAL:C	1:H:142:ASP:HA	2.25	0.56
1:H:410:ASN:HB2	1:I:409:LEU:CD1	2.35	0.56
1:G:470:TYR:O	1:G:471:HIS:HB3	2.06	0.56
1:G:214:PRO:HG2	1:G:249:ASN:ND2	2.21	0.56
1:F:140:VAL:C	1:F:142:ASP:HA	2.26	0.56
1:D:195:GLN:HG3	1:D:195:GLN:O	2.05	0.56
1:B:332:PHE:CE2	1:B:442:SER:HB2	2.41	0.56
1:C:19:LYS:HE2	1:C:29:THR:OG1	2.06	0.56
1:A:160:TYR:CE2	1:A:248:GLY:N	2.74	0.56
1:I:160:TYR:CZ	1:I:248:GLY:HA2	2.41	0.56
1:G:384:VAL:HG12	1:G:384:VAL:O	2.06	0.56
1:D:295:HIS:CD2	1:D:296:ASN:N	2.74	0.56
1:G:55:GLU:OE2	1:G:273:THR:HG22	2.06	0.56
1:I:278:GLU:HG3	1:I:279:THR:H	1.69	0.56
1:C:12:HIS:CB	1:C:350:TRP:HA	2.36	0.56
1:A:45:LEU:HD22	1:A:84:MET:CE	2.36	0.56
1:H:379:ASN:HB3	1:I:26:ARG:NH1	2.21	0.56
1:D:124:ASP:O	1:D:126:TRP:N	2.39	0.56
1:B:284:PRO:HG2	1:B:298:HIS:CE1	2.40	0.56
1:D:238:ILE:HG23	1:D:239:TRP:CE2	2.40	0.55
1:G:428:LEU:O	1:G:432:GLU:HB2	2.05	0.55
1:C:142:ASP:C	1:C:143:ASN:HD22	2.09	0.55
1:F:111:SER:O	1:F:261:LYS:HE3	2.06	0.55
1:D:113:THR:O	1:D:113:THR:HG23	2.06	0.55
1:E:140:VAL:C	1:E:142:ASP:HA	2.26	0.55
1:I:187:GLU:O	1:I:190:GLN:HB3	2.07	0.55
1:D:120:ILE:CD1	1:D:177:ILE:HD13	2.36	0.55
1:E:460:LYS:HD2	1:E:470:TYR:CE1	2.41	0.55
1:A:211:ARG:HD2	1:B:216:ILE:O	2.05	0.55
1:H:197:VAL:HG12	1:H:198:GLY:N	2.22	0.55
1:D:12:HIS:HE1	1:D:347:VAL:HA	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:420:VAL:O	1:G:423:TYR:HB3	2.07	0.55
1:D:124:ASP:C	1:D:126:TRP:H	2.09	0.55
1:H:399:PHE:CE1	1:H:406:LEU:HG	2.41	0.55
1:B:376:GLY:C	1:C:24:LEU:HD22	2.26	0.55
1:G:387:LYS:HZ1	1:H:426:GLU:HG2	1.71	0.55
1:A:55:GLU:O	1:A:74:LEU:HD21	2.07	0.55
1:D:288:ILE:CG1	1:D:297:ILE:HD12	2.37	0.55
1:F:293:PRO:CG	1:F:385:ILE:HG12	2.36	0.55
1:G:42:ASN:OD1	1:G:44:LYS:HE2	2.07	0.55
1:I:214:PRO:HG2	1:I:249:ASN:ND2	2.21	0.55
1:C:143:ASN:ND2	1:G:19:LYS:CD	2.69	0.55
1:I:460:LYS:HD2	1:I:470:TYR:CE1	2.42	0.55
1:F:460:LYS:HD2	1:F:470:TYR:CE1	2.41	0.55
1:C:55:GLU:HG3	1:C:274:LEU:HD22	1.88	0.55
1:D:129:HIS:NE2	1:D:161:PRO:O	2.39	0.55
1:I:42:ASN:HB3	1:I:287:ALA:H	1.71	0.55
1:F:259:ILE:CG2	1:F:260:SER:N	2.59	0.55
1:G:185:ASN:HD21	1:G:226:GLY:CA	2.17	0.55
1:B:185:ASN:HD21	1:B:226:GLY:CA	2.17	0.55
1:F:11:TYR:CD2	1:F:335:ILE:HG12	2.42	0.55
1:C:197:VAL:HG12	1:C:198:GLY:N	2.22	0.55
1:H:55:GLU:OE2	1:H:273:THR:HG22	2.07	0.55
1:E:310:LYS:HD2	1:E:418:LEU:HD21	1.89	0.55
1:E:55:GLU:OE2	1:E:273:THR:HG22	2.07	0.55
1:D:53:PRO:HG3	1:D:82:TYR:CZ	2.42	0.55
1:E:288:ILE:CD1	1:E:297:ILE:HD12	2.37	0.55
1:F:166:SER:CB	1:F:243:ASN:HD22	2.19	0.55
1:F:320:LEU:CD1	1:F:335:ILE:HD13	2.35	0.55
1:A:382:ASN:H	1:A:382:ASN:ND2	2.05	0.55
1:F:12:HIS:N	1:F:350:TRP:O	2.26	0.55
1:B:211:ARG:NH1	1:C:216:ILE:O	2.40	0.55
1:E:317:ALA:N	1:E:433:ASN:OD1	2.26	0.55
1:C:259:ILE:CG2	1:C:260:SER:H	2.06	0.55
1:I:143:ASN:N	1:I:143:ASN:ND2	2.47	0.55
1:B:293:PRO:HG3	1:B:385:ILE:HG23	1.88	0.55
1:E:169:ASN:ND2	1:E:238:ILE:HA	2.17	0.54
1:D:108:LEU:HD12	1:D:108:LEU:C	2.28	0.54
1:G:288:ILE:CD1	1:G:297:ILE:HD12	2.37	0.54
1:G:343:TRP:HE3	1:G:346:MET:CG	2.20	0.54
1:D:480:SER:HA	1:D:483:ASN:HB2	1.88	0.54
1:B:55:GLU:HG3	1:B:274:LEU:HD22	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:293:PRO:HG3	1:I:385:ILE:HG12	1.88	0.54
1:B:310:LYS:HD2	1:B:418:LEU:HD21	1.89	0.54
1:E:197:VAL:HG12	1:E:198:GLY:N	2.21	0.54
1:I:140:VAL:C	1:I:142:ASP:HA	2.27	0.54
1:H:185:ASN:HD21	1:H:226:GLY:CA	2.16	0.54
1:A:51:ILE:HG21	1:A:79:GLU:HG2	1.87	0.54
1:A:77:VAL:HG22	1:A:79:GLU:H	1.70	0.54
1:H:166:SER:HB2	1:H:243:ASN:HD22	1.71	0.54
1:F:179:TRP:CE2	1:F:203:VAL:HG21	2.43	0.54
1:H:42:ASN:HB3	1:H:287:ALA:H	1.72	0.54
1:A:445:LYS:O	1:A:445:LYS:HG3	2.07	0.54
1:A:36:ILE:O	1:A:292:LEU:HD22	2.07	0.54
1:B:166:SER:HB2	1:B:243:ASN:HD22	1.73	0.54
1:B:197:VAL:HG12	1:B:198:GLY:N	2.21	0.54
1:A:160:TYR:CZ	1:A:248:GLY:HA2	2.42	0.54
1:H:278:GLU:HG3	1:H:279:THR:H	1.71	0.54
1:G:197:VAL:HG12	1:G:198:GLY:N	2.22	0.54
1:G:26:ARG:CZ	1:I:379:ASN:HD22	2.21	0.54
1:C:460:LYS:HD2	1:C:470:TYR:CE1	2.43	0.54
1:A:460:LYS:HG3	1:A:468:GLU:CG	2.37	0.54
1:E:376:GLY:HA2	1:F:24:LEU:HB3	1.89	0.54
1:A:351:TYR:HE2	1:A:370:THR:HA	1.73	0.54
1:F:399:PHE:CE1	1:F:406:LEU:HG	2.43	0.54
1:E:320:LEU:HD13	1:E:335:ILE:HD13	1.90	0.54
1:G:455:LEU:CG	1:G:459:VAL:HG21	2.38	0.54
1:D:239:TRP:CD2	1:D:239:TRP:N	2.76	0.54
1:H:160:TYR:CZ	1:H:248:GLY:HA2	2.43	0.54
1:E:376:GLY:CA	1:F:24:LEU:HB3	2.37	0.54
1:D:158:SER:O	1:D:195:GLN:HG2	2.08	0.54
1:G:179:TRP:CE2	1:G:203:VAL:HG21	2.43	0.54
1:A:117:LYS:HG3	1:A:257:PHE:CE1	2.43	0.54
1:A:64:TRP:HE1	1:A:76:THR:HG22	1.73	0.54
1:A:78:PRO:O	1:A:114:HIS:HB2	2.07	0.54
1:G:379:ASN:HD22	1:H:26:ARG:CZ	2.20	0.54
1:E:488:TYR:O	1:E:492:GLU:HB2	2.07	0.54
1:D:160:TYR:CZ	1:D:248:GLY:HA2	2.42	0.54
1:H:432:GLU:H	1:H:435:MET:HG3	1.71	0.54
1:B:53:PRO:HD2	1:B:274:LEU:HD13	1.89	0.54
1:B:436:THR:O	1:B:439:PHE:HB3	2.07	0.54
1:G:8:CYS:O	1:G:353:TYR:C	2.47	0.54
1:F:187:GLU:O	1:F:190:GLN:HB3	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:323:VAL:HG11	1:C:336:ALA:HB2	1.90	0.54
1:D:140:VAL:HG12	1:D:141:PHE:CD2	2.43	0.53
1:D:108:LEU:HD21	1:D:235:ILE:CD1	2.34	0.53
1:D:55:GLU:OE1	1:D:274:LEU:HD23	2.08	0.53
1:D:290:THR:OG1	1:D:291:THR:N	2.41	0.53
1:G:23:ILE:HG22	1:G:434:GLU:HG2	1.90	0.53
1:G:360:GLY:O	1:G:361:SER:HB2	2.08	0.53
1:G:42:ASN:HB3	1:G:287:ALA:H	1.74	0.53
1:D:303:GLY:HA2	1:D:392:PHE:CD1	2.43	0.53
1:G:160:TYR:CZ	1:G:248:GLY:HA2	2.43	0.53
1:C:288:ILE:CD1	1:C:297:ILE:HD12	2.38	0.53
1:F:284:PRO:HG2	1:F:298:HIS:CE1	2.44	0.53
1:G:448:TYR:HE1	1:G:465:GLY:HA2	1.72	0.53
1:A:417:PHE:CD1	1:C:417:PHE:HE1	2.26	0.53
1:G:427:LEU:HD12	1:G:431:MET:HE2	1.91	0.53
1:I:462:LEU:HD11	1:I:468:GLU:CB	2.37	0.53
1:D:460:LYS:HD2	1:D:470:TYR:CE1	2.43	0.53
1:E:293:PRO:HB2	1:E:294:PHE:CD2	2.44	0.53
1:D:80:TRP:CE2	1:D:112:VAL:CG2	2.90	0.53
1:B:288:ILE:CD1	1:B:297:ILE:HD12	2.38	0.53
1:B:380:LYS:HA	1:C:23:ILE:HG12	1.90	0.53
1:A:202:SER:HB3	1:A:211:ARG:HG3	1.91	0.53
1:I:268:MET:HE3	1:I:302:ILE:HD12	1.90	0.53
1:C:214:PRO:HG2	1:C:249:ASN:ND2	2.24	0.53
1:F:214:PRO:HG2	1:F:249:ASN:ND2	2.22	0.53
1:I:24:LEU:HD12	1:I:434:GLU:OE1	2.08	0.53
1:I:490:LYS:HE3	1:I:491:TYR:CE2	2.44	0.53
1:G:184:PRO:O	1:G:216:ILE:HG23	2.09	0.53
1:G:455:LEU:O	1:G:456:ARG:HB2	2.08	0.53
1:G:408:ASN:ND2	1:I:397:LYS:NZ	2.48	0.53
1:G:166:SER:HB2	1:G:243:ASN:ND2	2.24	0.53
1:I:306:PRO:O	1:I:307:LYS:C	2.47	0.53
1:D:288:ILE:HG12	1:D:297:ILE:CD1	2.38	0.53
1:D:36:ILE:HG13	1:D:314:LEU:HB3	1.91	0.53
1:A:51:ILE:HG22	1:A:52:PRO:HD2	1.90	0.53
1:B:494:GLU:O	1:B:495:SER:C	2.47	0.53
1:E:379:ASN:HB2	1:F:24:LEU:HA	1.91	0.53
1:G:9:VAL:HA	1:G:352:GLY:O	2.09	0.53
1:I:128:GLN:HB3	1:I:161:PRO:HG2	1.91	0.53
1:G:284:PRO:HG2	1:G:298:HIS:CE1	2.44	0.53
1:G:404:LYS:HA	1:G:404:LYS:HE3	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:160:TYR:CZ	1:C:248:GLY:HA2	2.43	0.53
1:D:26:ARG:O	1:D:27:ASN:HB2	2.08	0.53
1:G:408:ASN:C	1:G:408:ASN:ND2	2.62	0.53
1:F:55:GLU:OE2	1:F:273:THR:HG22	2.08	0.53
1:D:42:ASN:HB2	1:D:44:LYS:H	1.74	0.53
1:G:26:ARG:CZ	1:I:379:ASN:HB3	2.39	0.53
1:B:488:TYR:O	1:B:492:GLU:HB2	2.08	0.53
1:F:462:LEU:HD11	1:F:468:GLU:CB	2.36	0.53
1:E:284:PRO:HG2	1:E:298:HIS:CE1	2.44	0.53
1:A:461:GLU:HG3	1:A:467:PHE:HE1	1.72	0.53
1:D:215:GLU:OE1	1:F:210:LYS:HA	2.09	0.53
1:C:178:ILE:O	1:C:253:PRO:HG3	2.09	0.53
1:G:460:LYS:HD3	1:G:470:TYR:OH	2.09	0.53
1:C:114:HIS:O	1:C:259:ILE:O	2.26	0.53
1:E:376:GLY:C	1:F:24:LEU:CD2	2.77	0.53
1:A:451:VAL:O	1:A:452:ARG:HB2	2.08	0.53
1:B:294:PHE:HB3	1:B:309:VAL:HG22	1.90	0.53
1:D:310:LYS:HZ2	1:D:418:LEU:CD2	2.22	0.53
1:A:218:THR:HG22	1:A:218:THR:O	2.09	0.53
1:F:55:GLU:HG3	1:F:274:LEU:HD22	1.91	0.53
1:H:338:PHE:CE1	1:H:339:ILE:HG13	2.44	0.53
1:H:436:THR:O	1:H:439:PHE:HB3	2.09	0.53
1:H:214:PRO:HG2	1:H:249:ASN:ND2	2.23	0.52
1:E:293:PRO:HB2	1:E:294:PHE:CE2	2.43	0.52
1:C:55:GLU:OE2	1:C:273:THR:HG22	2.08	0.52
1:D:57:GLY:O	1:D:86:LYS:HD3	2.10	0.52
1:A:199:ALA:HA	1:A:247:THR:OG1	2.09	0.52
1:D:72:ASP:O	1:D:74:LEU:N	2.41	0.52
1:E:214:PRO:HG2	1:E:249:ASN:ND2	2.23	0.52
1:A:38:GLU:N	1:A:294:PHE:O	2.39	0.52
1:F:307:LYS:HE2	1:F:421:TRP:CE2	2.44	0.52
1:B:460:LYS:HD2	1:B:470:TYR:CE1	2.44	0.52
1:A:23:ILE:O	1:A:23:ILE:HG12	2.08	0.52
1:B:200:TYR:CE1	1:B:247:THR:HG23	2.44	0.52
1:E:8:CYS:HA	1:E:465:GLY:O	2.09	0.52
1:B:160:TYR:CZ	1:B:248:GLY:HA2	2.44	0.52
1:H:9:VAL:C	1:H:343:TRP:CH2	2.82	0.52
1:A:392:PHE:CD2	1:A:392:PHE:C	2.83	0.52
1:D:12:HIS:CD2	1:D:13:SER:N	2.74	0.52
1:E:55:GLU:HG3	1:E:274:LEU:HD22	1.90	0.52
1:C:8:CYS:HA	1:C:466:CYS:HA	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:45:LEU:CD1	1:D:270:THR:HG21	2.37	0.52
1:A:190:GLN:HG2	1:A:197:VAL:HG22	1.90	0.52
1:A:82:TYR:CE1	1:A:268:MET:HE2	2.44	0.52
1:B:11:TYR:CD2	1:B:335:ILE:HG12	2.44	0.52
1:D:30:VAL:HG12	1:D:321:ARG:HA	1.92	0.52
1:D:80:TRP:CZ2	1:D:112:VAL:HG21	2.45	0.52
1:F:278:GLU:HG3	1:F:279:THR:H	1.74	0.52
1:A:26:ARG:HD3	1:C:379:ASN:HD22	1.75	0.52
1:H:488:TYR:O	1:H:492:GLU:HB2	2.08	0.52
1:B:201:VAL:HG22	1:B:250:LEU:HB2	1.91	0.52
1:A:495:SER:O	1:A:496:LYS:HB2	2.09	0.52
1:G:55:GLU:HG3	1:G:274:LEU:HD22	1.92	0.52
1:A:53:PRO:HG3	1:A:82:TYR:CZ	2.44	0.52
1:A:94:CYS:CB	1:A:138:CYS:SG	2.95	0.52
1:F:288:ILE:CD1	1:F:297:ILE:HD12	2.40	0.52
1:E:294:PHE:HB3	1:E:309:VAL:HG22	1.92	0.52
1:G:167:TYR:CE2	1:G:169:ASN:HA	2.45	0.52
1:A:460:LYS:HG2	1:A:470:TYR:CE1	2.44	0.52
1:D:162:VAL:HG22	1:D:247:THR:HG22	1.91	0.52
1:G:311:SER:HB3	1:G:426:GLU:OE2	2.10	0.52
1:D:105:LEU:HB2	1:D:233:TRP:CE2	2.45	0.52
1:E:42:ASN:HB3	1:E:287:ALA:H	1.75	0.52
1:G:7:ILE:HG13	1:G:355:HIS:HB3	1.90	0.52
1:D:120:ILE:HG12	1:D:256:GLY:N	2.24	0.52
1:B:11:TYR:HB3	1:B:444:VAL:CG2	2.40	0.52
1:G:493:GLU:O	1:G:494:GLU:CB	2.57	0.52
1:D:67:GLY:O	1:D:68:ASN:C	2.47	0.52
1:C:162:VAL:HG12	1:C:164:LYS:HG3	1.92	0.52
1:G:243:ASN:CB	1:H:218:THR:HB	2.40	0.52
1:G:397:LYS:HG2	1:G:397:LYS:O	2.10	0.52
1:F:169:ASN:ND2	1:F:238:ILE:HA	2.20	0.52
1:A:331:LEU:HD22	1:C:442:SER:OG	2.10	0.52
1:G:367:LYS:HE2	1:G:367:LYS:CA	2.40	0.52
1:B:259:ILE:CG2	1:B:260:SER:N	2.59	0.52
1:E:160:TYR:CZ	1:E:248:GLY:HA2	2.45	0.52
1:G:306:PRO:O	1:G:307:LYS:C	2.47	0.52
1:A:420:VAL:HG12	1:A:421:TRP:N	2.25	0.52
1:G:343:TRP:HE3	1:G:346:MET:HG2	1.75	0.52
1:A:23:ILE:HD11	1:C:380:LYS:CG	2.40	0.52
1:E:307:LYS:HD2	1:E:421:TRP:CD1	2.45	0.52
1:D:67:GLY:O	1:D:148:ARG:HG2	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:493:GLU:O	1:C:494:GLU:CB	2.58	0.52
1:G:162:VAL:HG12	1:G:164:LYS:HG3	1.92	0.52
1:B:214:PRO:HG2	1:B:249:ASN:ND2	2.25	0.52
1:A:197:VAL:CG1	1:A:198:GLY:H	2.15	0.52
1:F:294:PHE:HB3	1:F:309:VAL:HG22	1.92	0.52
1:H:332:PHE:CE2	1:H:442:SER:HB2	2.45	0.52
1:D:195:GLN:O	1:D:196:ASN:HB3	2.09	0.52
1:D:183:HIS:CE1	1:D:215:GLU:HB2	2.44	0.52
1:B:300:LEU:HA	1:B:395:VAL:HB	1.91	0.52
1:A:151:VAL:N	1:A:252:ALA:O	2.36	0.52
1:C:42:ASN:HB3	1:C:287:ALA:H	1.74	0.52
1:I:332:PHE:CE2	1:I:442:SER:HB2	2.45	0.52
1:E:442:SER:OG	1:F:331:LEU:O	2.26	0.52
1:C:462:LEU:HD11	1:C:468:GLU:CB	2.37	0.51
1:A:195:GLN:O	1:A:196:ASN:HB3	2.10	0.51
1:G:379:ASN:O	1:G:380:LYS:C	2.46	0.51
1:D:219:ARG:HD3	1:D:226:GLY:O	2.09	0.51
1:D:221:GLU:OE1	1:D:224:GLY:HA2	2.10	0.51
1:C:187:GLU:O	1:C:190:GLN:HB3	2.10	0.51
1:I:53:PRO:HG3	1:I:82:TYR:CZ	2.45	0.51
1:A:116:GLU:OE1	1:A:258:LYS:HD3	2.10	0.51
1:A:417:PHE:CD1	1:C:417:PHE:CE1	2.97	0.51
1:F:310:LYS:HD2	1:F:418:LEU:HD21	1.91	0.51
1:G:457:ASP:C	1:G:459:VAL:H	2.13	0.51
1:C:259:ILE:CG2	1:C:260:SER:N	2.60	0.51
1:C:293:PRO:HB2	1:C:294:PHE:CE2	2.45	0.51
1:A:478:MET:C	1:A:480:SER:N	2.64	0.51
1:G:128:GLN:HB3	1:G:161:PRO:HG2	1.92	0.51
1:E:12:HIS:HB2	1:E:350:TRP:HA	1.91	0.51
1:C:284:PRO:HG2	1:C:298:HIS:CE1	2.45	0.51
1:B:48:LEU:O	1:B:49:ASN:HB2	2.10	0.51
1:H:174:GLN:O	1:H:259:ILE:HG22	2.11	0.51
1:A:305:CYS:O	1:A:306:PRO:O	2.29	0.51
1:D:10:GLY:HA2	1:D:339:ILE:HG21	1.92	0.51
1:F:162:VAL:HG12	1:F:164:LYS:HG3	1.92	0.51
1:F:332:PHE:CE2	1:F:442:SER:HB2	2.46	0.51
1:A:59:CYS:O	1:A:89:PRO:HB3	2.10	0.51
1:E:9:VAL:CG2	1:E:448:TYR:HD1	2.23	0.51
1:G:409:LEU:HD11	1:I:410:ASN:OD1	2.10	0.51
1:D:23:ILE:CG1	1:F:380:LYS:HA	2.30	0.51
1:D:96:PRO:HG3	1:D:222:VAL:O	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:432:GLU:H	1:I:435:MET:HG3	1.76	0.51
1:D:195:GLN:O	1:D:196:ASN:CB	2.59	0.51
1:B:32:HIS:CE1	1:B:350:TRP:HE1	2.29	0.51
1:F:488:TYR:O	1:F:492:GLU:HB2	2.10	0.51
1:A:102:TYR:O	1:A:106:LYS:HB2	2.10	0.51
1:B:9:VAL:CB	1:B:448:TYR:HD1	2.22	0.51
1:H:10:GLY:HA3	1:H:343:TRP:CE2	2.46	0.51
1:F:160:TYR:CZ	1:F:248:GLY:HA2	2.45	0.51
1:F:7:ILE:O	1:F:467:PHE:N	2.38	0.51
1:A:323:VAL:N	1:A:324:PRO:CD	2.74	0.51
1:C:293:PRO:HB2	1:C:294:PHE:CD2	2.45	0.51
1:A:424:ASN:C	1:A:426:GLU:H	2.13	0.51
1:D:404:LYS:HB2	1:F:104:GLU:OE1	2.10	0.51
1:A:13:SER:CB	1:A:324:PRO:HG3	2.40	0.51
1:E:243:ASN:HB2	1:F:218:THR:O	2.10	0.51
1:I:184:PRO:O	1:I:216:ILE:HG23	2.11	0.51
1:E:400:SER:OG	1:E:403:GLU:HG3	2.11	0.51
1:E:185:ASN:HD21	1:E:226:GLY:CA	2.19	0.51
1:G:218:THR:O	1:I:243:ASN:HB2	2.11	0.51
1:D:126:TRP:CZ3	1:D:153:LEU:HD11	2.46	0.51
1:E:48:LEU:O	1:E:49:ASN:HB2	2.11	0.51
1:A:7:ILE:O	1:A:467:PHE:HB2	2.11	0.51
1:D:216:ILE:HB	1:F:211:ARG:NH1	2.25	0.51
1:I:399:PHE:CE1	1:I:406:LEU:HG	2.46	0.51
1:D:332:PHE:CE2	1:D:442:SER:HB2	2.46	0.51
1:A:9:VAL:O	1:A:339:ILE:HD13	2.10	0.51
1:C:166:SER:HB2	1:C:243:ASN:ND2	2.25	0.51
1:C:48:LEU:O	1:C:49:ASN:HB2	2.10	0.51
1:I:335:ILE:HG13	1:I:441:ASP:HA	1.92	0.51
1:A:83:ILE:HB	1:A:267:ILE:HG13	1.93	0.51
1:E:10:GLY:HA2	1:E:339:ILE:HG21	1.91	0.50
1:A:457:ASP:C	1:A:459:VAL:N	2.65	0.50
1:I:22:THR:HG22	1:I:433:ASN:HB3	1.93	0.50
1:D:52:PRO:O	1:D:80:TRP:HA	2.11	0.50
1:A:178:ILE:O	1:A:253:PRO:HG3	2.11	0.50
1:E:20:VAL:HB	1:E:433:ASN:ND2	2.26	0.50
1:A:475:ASP:O	1:A:479:ASN:HB3	2.11	0.50
1:G:458:ASN:C	1:G:459:VAL:HG22	2.31	0.50
1:A:181:VAL:CG2	1:A:201:VAL:HG21	2.29	0.50
1:F:295:HIS:HD2	1:F:297:ILE:N	2.06	0.50
1:A:461:GLU:HG3	1:A:467:PHE:CE1	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:179:TRP:CE2	1:A:203:VAL:HG21	2.46	0.50
1:E:166:SER:HB2	1:E:243:ASN:ND2	2.25	0.50
1:D:11:TYR:CZ	1:D:335:ILE:HG23	2.46	0.50
1:I:294:PHE:HB3	1:I:309:VAL:HG22	1.93	0.50
1:H:486:TYR:CG	1:H:487:ASP:N	2.79	0.50
1:A:166:SER:CB	1:A:243:ASN:ND2	2.71	0.50
1:D:83:ILE:HD11	1:D:109:ILE:O	2.12	0.50
1:A:395:VAL:O	1:A:396:GLY:O	2.29	0.50
1:E:332:PHE:CE2	1:E:442:SER:HB2	2.45	0.50
1:G:405:ARG:HD2	1:I:398:GLU:O	2.11	0.50
1:D:293:PRO:HD3	1:D:385:ILE:HG12	1.93	0.50
1:A:462:LEU:HD12	1:A:462:LEU:N	2.27	0.50
1:D:196:ASN:O	1:D:196:ASN:ND2	2.33	0.50
1:D:335:ILE:HG13	1:D:441:ASP:HA	1.93	0.50
1:I:284:PRO:HG2	1:I:298:HIS:CE1	2.46	0.50
1:C:310:LYS:HD2	1:C:418:LEU:HD21	1.94	0.50
1:H:7:ILE:CG1	1:H:355:HIS:HB3	2.38	0.50
1:H:167:TYR:CE2	1:H:169:ASN:HA	2.46	0.50
1:B:169:ASN:ND2	1:B:238:ILE:HA	2.23	0.50
1:A:351:TYR:HD2	1:A:351:TYR:H	1.56	0.50
1:I:486:TYR:CG	1:I:487:ASP:N	2.79	0.50
1:C:317:ALA:O	1:C:436:THR:HG21	2.12	0.50
1:G:458:ASN:HD21	1:G:491:TYR:HB2	1.74	0.50
1:E:7:ILE:O	1:E:467:PHE:HD2	1.94	0.50
1:F:129:HIS:NE2	1:F:161:PRO:HD2	2.27	0.50
1:I:293:PRO:CG	1:I:385:ILE:HG12	2.41	0.50
1:H:490:LYS:HE3	1:H:491:TYR:CE2	2.46	0.50
1:D:488:TYR:O	1:D:492:GLU:HB2	2.12	0.50
1:E:141:PHE:HE2	1:G:274:LEU:HD11	1.76	0.50
1:A:282:GLN:HE22	1:A:287:ALA:N	2.10	0.50
1:C:332:PHE:CE2	1:C:442:SER:HB2	2.46	0.50
1:E:278:GLU:CG	1:E:279:THR:N	2.73	0.50
1:C:129:HIS:NE2	1:C:161:PRO:HD2	2.26	0.50
1:E:490:LYS:HE3	1:E:491:TYR:CE2	2.47	0.50
1:E:388:MET:HE2	1:F:423:TYR:CE1	2.47	0.50
1:E:73:ARG:CZ	1:G:276:ASN:O	2.59	0.50
1:A:283:THR:HA	1:A:301:THR:HG22	1.94	0.50
1:A:452:ARG:C	1:A:454:GLN:H	2.14	0.50
1:A:219:ARG:HH11	1:A:219:ARG:HG2	1.77	0.50
1:E:436:THR:O	1:E:439:PHE:HB3	2.12	0.50
1:G:366:ASP:C	1:G:368:GLU:H	2.15	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:451:VAL:HG12	1:H:452:ARG:N	2.26	0.50
1:E:259:ILE:CG2	1:E:260:SER:N	2.59	0.50
1:C:294:PHE:HB3	1:C:309:VAL:CG2	2.41	0.50
1:H:128:GLN:HB3	1:H:161:PRO:HG2	1.94	0.50
1:C:432:GLU:H	1:C:435:MET:HG3	1.77	0.50
1:C:42:ASN:OD1	1:C:44:LYS:HE2	2.12	0.50
1:C:490:LYS:HE3	1:C:491:TYR:CE2	2.46	0.50
1:I:120:ILE:O	1:I:121:LEU:HD23	2.12	0.50
1:G:53:PRO:CD	1:G:274:LEU:HD13	2.42	0.49
1:D:36:ILE:O	1:D:292:LEU:HB3	2.11	0.49
1:C:444:VAL:O	1:C:447:LEU:N	2.44	0.49
1:D:211:ARG:HB2	1:E:215:GLU:HB3	1.93	0.49
1:E:184:PRO:O	1:E:216:ILE:HG23	2.12	0.49
1:D:380:LYS:HA	1:E:23:ILE:HG12	1.93	0.49
1:D:409:LEU:CD1	1:F:410:ASN:HB2	2.42	0.49
1:E:178:ILE:O	1:E:253:PRO:HG3	2.11	0.49
1:A:389:ASN:HD22	1:A:390:THR:H	1.59	0.49
1:D:240:ASP:C	1:D:241:THR:HG22	2.32	0.49
1:E:138:CYS:O	1:E:145:SER:HB3	2.12	0.49
1:A:94:CYS:SG	1:A:138:CYS:SG	3.10	0.49
1:E:432:GLU:H	1:E:435:MET:HG3	1.76	0.49
1:B:332:PHE:CD2	1:B:442:SER:HB2	2.48	0.49
1:A:216:ILE:HB	1:C:211:ARG:NH1	2.27	0.49
1:D:12:HIS:CG	1:D:13:SER:N	2.78	0.49
1:D:20:VAL:CG1	1:D:30:VAL:HG21	2.41	0.49
1:C:128:GLN:HB3	1:C:161:PRO:HG2	1.94	0.49
1:D:8:CYS:HB3	1:D:343:TRP:HZ2	1.78	0.49
1:E:11:TYR:HE2	1:E:335:ILE:HA	1.62	0.49
1:D:283:THR:HG22	1:D:285:LEU:N	2.14	0.49
1:G:430:LEU:C	1:G:431:MET:O	2.48	0.49
1:G:306:PRO:O	1:G:308:TYR:N	2.45	0.49
1:C:307:LYS:HE2	1:C:421:TRP:CE2	2.47	0.49
1:A:320:LEU:HD23	1:A:320:LEU:N	2.27	0.49
1:D:432:GLU:H	1:D:435:MET:HG3	1.78	0.49
1:G:26:ARG:NH1	1:I:379:ASN:HB3	2.27	0.49
1:D:100:ASN:O	1:D:101:ASP:HB2	2.12	0.49
1:G:45:LEU:H	1:G:45:LEU:HD12	1.77	0.49
1:G:474:ASP:O	1:G:477:CYS:HB3	2.13	0.49
1:F:120:ILE:O	1:F:121:LEU:HD23	2.12	0.49
1:E:162:VAL:HG12	1:E:164:LYS:HG3	1.94	0.49
1:F:338:PHE:CE1	1:F:339:ILE:CG1	2.96	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:424:ASN:O	1:G:425:ALA:O	2.30	0.49
1:G:243:ASN:HB3	1:H:218:THR:HB	1.95	0.49
1:F:184:PRO:O	1:F:216:ILE:HG23	2.12	0.49
1:H:53:PRO:HG3	1:H:82:TYR:CZ	2.48	0.49
1:E:120:ILE:O	1:E:121:LEU:HD23	2.12	0.49
1:D:14:ASN:O	1:D:16:SER:N	2.45	0.49
1:H:493:GLU:O	1:H:494:GLU:CB	2.60	0.49
1:H:493:GLU:O	1:H:494:GLU:HB3	2.12	0.49
1:D:23:ILE:CG1	1:D:23:ILE:O	2.61	0.49
1:A:282:GLN:C	1:A:282:GLN:HE21	2.16	0.49
1:I:174:GLN:O	1:I:259:ILE:HG22	2.13	0.49
1:C:142:ASP:OD2	1:G:27:ASN:OD1	2.31	0.49
1:A:28:VAL:HG12	1:A:30:VAL:HG12	1.93	0.49
1:A:460:LYS:O	1:A:468:GLU:HB3	2.12	0.49
1:I:201:VAL:HG22	1:I:250:LEU:HB2	1.95	0.49
1:H:10:GLY:O	1:H:346:MET:HE1	2.12	0.49
1:C:167:TYR:CE2	1:C:169:ASN:HA	2.48	0.49
1:F:189:GLU:OE2	3:F:1497:SIA:C9	2.59	0.49
1:D:42:ASN:CB	1:D:44:LYS:H	2.25	0.49
1:D:14:ASN:OD1	1:D:16:SER:HB2	2.11	0.49
1:D:486:TYR:CG	1:D:487:ASP:N	2.79	0.49
1:B:162:VAL:HG12	1:B:164:LYS:HG3	1.94	0.49
1:A:107:HIS:C	1:A:107:HIS:ND1	2.65	0.49
1:C:143:ASN:HD21	1:G:19:LYS:CE	2.23	0.49
1:G:295:HIS:CE1	1:G:308:TYR:HB2	2.48	0.49
1:F:128:GLN:HB3	1:F:161:PRO:HG2	1.93	0.49
1:E:9:VAL:HG11	1:E:448:TYR:CB	2.34	0.49
1:G:187:GLU:O	1:G:190:GLN:HB3	2.12	0.49
1:G:288:ILE:HD11	1:G:297:ILE:HD12	1.95	0.49
1:I:167:TYR:CE2	1:I:169:ASN:HA	2.47	0.49
1:B:317:ALA:O	1:B:436:THR:HG21	2.12	0.49
1:D:204:GLY:HA2	1:D:208:LEU:O	2.13	0.49
1:E:167:TYR:CE2	1:E:169:ASN:HA	2.47	0.49
1:E:471:HIS:HB2	1:E:494:GLU:HG2	1.91	0.49
1:I:295:HIS:CE1	1:I:308:TYR:HB2	2.48	0.49
1:D:80:TRP:CZ2	1:D:112:VAL:CG2	2.96	0.49
1:B:432:GLU:H	1:B:435:MET:HG3	1.77	0.49
1:B:128:GLN:HB3	1:B:161:PRO:HG2	1.94	0.49
1:H:55:GLU:HG3	1:H:274:LEU:HD22	1.94	0.49
1:F:32:HIS:CE1	1:F:350:TRP:HE1	2.31	0.49
1:E:179:TRP:CE2	1:E:203:VAL:HG21	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:48:LEU:O	1:F:49:ASN:HB2	2.12	0.49
1:I:179:TRP:CE2	1:I:203:VAL:HG21	2.48	0.49
1:H:284:PRO:HG2	1:H:298:HIS:CE1	2.47	0.49
1:E:7:ILE:HG23	1:E:467:PHE:HD2	1.78	0.48
1:G:428:LEU:O	1:G:431:MET:O	2.31	0.48
1:I:169:ASN:ND2	1:I:238:ILE:HA	2.23	0.48
1:E:295:HIS:HD2	1:E:297:ILE:N	2.06	0.48
1:B:293:PRO:HG3	1:B:385:ILE:HG12	1.93	0.48
1:H:410:ASN:HB2	1:I:409:LEU:HD11	1.95	0.48
1:G:205:THR:C	1:H:220:PRO:HD2	2.34	0.48
1:F:42:ASN:OD1	1:F:44:LYS:HE2	2.13	0.48
1:A:135:SER:N	1:A:144:PRO:HB3	2.28	0.48
1:B:335:ILE:HG13	1:B:441:ASP:HA	1.95	0.48
1:D:462:LEU:HD11	1:D:468:GLU:CB	2.38	0.48
1:H:53:PRO:CD	1:H:274:LEU:HD13	2.43	0.48
1:E:486:TYR:CG	1:E:487:ASP:N	2.79	0.48
1:H:187:GLU:O	1:H:190:GLN:HB3	2.13	0.48
1:E:140:VAL:HG12	1:E:141:PHE:N	2.28	0.48
1:B:167:TYR:CE2	1:B:169:ASN:HA	2.48	0.48
1:B:462:LEU:HD11	1:B:468:GLU:CB	2.39	0.48
1:D:12:HIS:CE1	1:D:347:VAL:HA	2.48	0.48
1:H:184:PRO:O	1:H:216:ILE:HG23	2.13	0.48
1:F:133:GLY:HA3	3:F:1497:SIA:C11	2.41	0.48
1:A:460:LYS:HE2	1:A:468:GLU:HG2	1.95	0.48
1:A:369:SER:H	1:A:371:GLN:H	1.61	0.48
1:F:490:LYS:HE3	1:F:491:TYR:CE2	2.48	0.48
1:F:45:LEU:CD2	1:F:270:THR:HG21	2.43	0.48
1:E:316:LEU:HD11	1:E:384:VAL:HG11	1.95	0.48
1:H:294:PHE:HB3	1:H:309:VAL:CG2	2.43	0.48
1:E:128:GLN:HB3	1:E:161:PRO:HG2	1.94	0.48
1:A:140:VAL:HG12	1:A:141:PHE:H	1.78	0.48
1:B:184:PRO:O	1:B:216:ILE:HG23	2.14	0.48
1:H:31:THR:C	1:H:32:HIS:CG	2.86	0.48
1:E:399:PHE:CE1	1:E:406:LEU:HG	2.49	0.48
1:G:355:HIS:CD2	1:G:361:SER:HB3	2.48	0.48
1:G:455:LEU:HD23	1:G:459:VAL:HG21	1.95	0.48
1:E:9:VAL:CG2	1:E:448:TYR:CD1	2.97	0.48
1:D:168:ASN:O	1:D:170:THR:HG22	2.13	0.48
1:D:23:ILE:O	1:F:379:ASN:C	2.52	0.48
1:A:262:ARG:NH1	1:A:262:ARG:HG3	2.19	0.48
1:B:294:PHE:HB3	1:B:309:VAL:CG2	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:278:GLU:HG3	1:G:279:THR:H	1.79	0.48
1:I:294:PHE:HB3	1:I:309:VAL:CG2	2.43	0.48
1:E:310:LYS:HB2	1:E:418:LEU:HD21	1.95	0.48
1:I:488:TYR:O	1:I:492:GLU:HB2	2.13	0.48
1:F:42:ASN:HB3	1:F:287:ALA:H	1.79	0.48
1:D:87:GLU:OE1	1:D:269:LYS:HD2	2.14	0.48
1:A:17:THR:O	1:A:18:GLU:C	2.50	0.48
1:C:338:PHE:CE1	1:C:339:ILE:CG1	2.97	0.48
1:E:114:HIS:O	1:E:259:ILE:O	2.32	0.48
1:D:108:LEU:HD12	1:D:108:LEU:O	2.14	0.48
1:I:278:GLU:O	1:I:279:THR:HB	2.13	0.48
1:F:53:PRO:HG3	1:F:82:TYR:CZ	2.49	0.48
1:D:494:GLU:HG3	1:D:494:GLU:O	2.12	0.48
1:C:486:TYR:CG	1:C:487:ASP:N	2.79	0.48
1:A:206:SER:HG	1:A:240:ASP:CG	2.17	0.48
1:I:66:LEU:O	1:I:147:PHE:HB3	2.13	0.48
1:B:19:LYS:HE2	1:B:29:THR:OG1	2.14	0.48
1:H:306:PRO:O	1:H:308:TYR:N	2.47	0.48
1:C:293:PRO:HG3	1:C:385:ILE:HG23	1.95	0.48
1:E:42:ASN:OD1	1:E:44:LYS:HE2	2.13	0.48
1:H:45:LEU:HD12	1:H:45:LEU:H	1.79	0.48
1:H:48:LEU:O	1:H:49:ASN:HB2	2.14	0.48
1:B:42:ASN:HB3	1:B:287:ALA:H	1.79	0.48
1:D:294:PHE:O	1:D:295:HIS:HB3	2.13	0.48
1:D:83:ILE:HD12	1:D:110:SER:HA	1.96	0.48
1:H:278:GLU:O	1:H:279:THR:HB	2.14	0.48
1:D:183:HIS:ND1	1:F:209:ASN:ND2	2.59	0.48
1:I:42:ASN:OD1	1:I:44:LYS:HE2	2.13	0.48
1:C:488:TYR:O	1:C:492:GLU:HB2	2.13	0.48
1:I:436:THR:O	1:I:439:PHE:HB3	2.13	0.48
1:H:77:VAL:HG22	1:H:79:GLU:O	2.14	0.48
1:D:294:PHE:CZ	1:D:425:ALA:HB2	2.49	0.48
1:G:200:TYR:CE1	1:G:211:ARG:NH2	2.82	0.48
1:B:278:GLU:CG	1:B:279:THR:N	2.74	0.48
1:G:332:PHE:CZ	1:H:331:LEU:HD12	2.49	0.48
1:D:490:LYS:HE3	1:D:491:TYR:CE2	2.48	0.48
1:G:38:GLU:OE2	1:G:40:THR:HG22	2.14	0.48
1:D:119:LYS:HA	1:D:255:TYR:CD1	2.48	0.48
1:D:242:ILE:HG12	1:D:243:ASN:N	2.29	0.48
1:A:262:ARG:HH11	1:A:262:ARG:CG	2.17	0.48
1:D:36:ILE:C	1:D:292:LEU:HD13	2.34	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:200:TYR:CE1	1:F:211:ARG:NH2	2.82	0.48
1:B:53:PRO:HG3	1:B:82:TYR:CZ	2.48	0.48
1:H:166:SER:HB2	1:H:243:ASN:ND2	2.29	0.48
1:D:104:GLU:OE2	1:E:405:ARG:HB2	2.14	0.48
1:H:162:VAL:HG12	1:H:164:LYS:HG3	1.95	0.48
1:B:490:LYS:HE3	1:B:491:TYR:CE2	2.49	0.47
1:H:200:TYR:CE1	1:H:211:ARG:NH2	2.82	0.47
1:A:61:ILE:O	1:A:65:LEU:HD12	2.14	0.47
1:C:200:TYR:CE1	1:C:247:THR:HG23	2.49	0.47
1:G:268:MET:HE3	1:G:302:ILE:HD12	1.95	0.47
1:H:179:TRP:CE2	1:H:203:VAL:HG21	2.49	0.47
1:A:124:ASP:OD2	1:A:125:ARG:HG3	2.14	0.47
1:G:490:LYS:O	1:G:493:GLU:HB2	2.15	0.47
1:A:36:ILE:HD11	1:A:429:VAL:CG2	2.44	0.47
1:F:432:GLU:H	1:F:435:MET:HG3	1.78	0.47
1:I:166:SER:HB2	1:I:243:ASN:ND2	2.29	0.47
1:A:417:PHE:CE1	1:C:417:PHE:CE1	3.02	0.47
1:H:200:TYR:CE1	1:H:247:THR:HG23	2.49	0.47
1:B:399:PHE:CE1	1:B:406:LEU:HG	2.49	0.47
1:G:417:PHE:CE1	1:H:416:GLY:C	2.87	0.47
1:I:162:VAL:HG12	1:I:164:LYS:HG3	1.95	0.47
1:A:375:ASP:N	1:A:375:ASP:OD1	2.35	0.47
1:I:114:HIS:O	1:I:259:ILE:O	2.32	0.47
1:H:120:ILE:O	1:H:121:LEU:HD23	2.15	0.47
1:F:277:CYS:HB2	1:F:278:GLU:H	1.59	0.47
1:I:55:GLU:HG3	1:I:274:LEU:HD22	1.96	0.47
1:A:378:THR:O	1:A:381:VAL:HB	2.15	0.47
1:E:490:LYS:C	1:E:492:GLU:H	2.17	0.47
1:E:73:ARG:CA	1:G:44:LYS:NZ	2.78	0.47
1:G:174:GLN:O	1:G:259:ILE:HG22	2.13	0.47
1:B:11:TYR:CZ	1:B:335:ILE:HA	2.50	0.47
1:E:293:PRO:CG	1:E:385:ILE:HG12	2.44	0.47
1:D:186:ASP:HA	1:D:216:ILE:CG2	2.42	0.47
1:H:332:PHE:CD2	1:H:442:SER:HB2	2.48	0.47
1:A:171:SER:HB2	1:A:258:LYS:HE3	1.97	0.47
1:D:400:SER:OG	1:D:403:GLU:HG3	2.14	0.47
1:D:325:GLN:HG3	1:D:341:GLY:HA3	1.95	0.47
1:F:400:SER:OG	1:F:403:GLU:HG3	2.15	0.47
1:C:143:ASN:HD21	1:G:19:LYS:HE3	1.79	0.47
1:H:306:PRO:O	1:H:307:LYS:C	2.51	0.47
1:C:169:ASN:ND2	1:C:238:ILE:HA	2.22	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:278:GLU:HG3	1:C:279:THR:H	1.77	0.47
1:F:53:PRO:CD	1:F:274:LEU:HD13	2.45	0.47
1:D:266:GLY:HA3	1:D:394:ALA:HB1	1.95	0.47
1:B:130:THR:HB	1:B:154:THR:OG1	2.13	0.47
1:I:404:LYS:HA	1:I:404:LYS:HD2	1.63	0.47
1:E:294:PHE:HB3	1:E:309:VAL:CG2	2.45	0.47
1:C:11:TYR:CD2	1:C:335:ILE:HG12	2.49	0.47
1:E:278:GLU:O	1:E:279:THR:HB	2.15	0.47
1:E:66:LEU:O	1:E:147:PHE:HB3	2.15	0.47
1:E:324:PRO:O	1:E:325:GLN:HB2	2.15	0.47
1:E:187:GLU:O	1:E:190:GLN:HB3	2.15	0.47
1:I:295:HIS:HD2	1:I:297:ILE:N	2.05	0.47
1:D:20:VAL:HG13	1:D:30:VAL:CG2	2.43	0.47
1:A:178:ILE:HG12	1:A:233:TRP:HB3	1.96	0.47
1:E:211:ARG:NH1	1:F:216:ILE:HB	2.29	0.47
1:A:460:LYS:HG3	1:A:468:GLU:HG2	1.95	0.47
1:C:129:HIS:CD2	1:C:161:PRO:HD2	2.50	0.47
1:D:219:ARG:NH2	1:F:209:ASN:OD1	2.44	0.47
1:H:42:ASN:OD1	1:H:44:LYS:HE2	2.15	0.47
1:I:490:LYS:C	1:I:492:GLU:H	2.17	0.47
1:F:310:LYS:HD2	1:F:418:LEU:CD2	2.44	0.47
1:G:240:ASP:OD1	1:H:220:PRO:HG2	2.15	0.47
1:C:80:TRP:CE2	1:C:112:VAL:HG22	2.49	0.47
1:A:458:ASN:OD1	1:A:488:TYR:CE1	2.68	0.47
1:F:66:LEU:O	1:F:147:PHE:HB3	2.14	0.47
1:E:201:VAL:HG22	1:E:250:LEU:HB2	1.96	0.47
1:H:201:VAL:HG22	1:H:250:LEU:HB2	1.96	0.47
1:G:462:LEU:H	1:G:462:LEU:CD1	2.27	0.47
1:D:34:GLN:CG	1:D:35:ASP:N	2.78	0.47
1:D:163:ALA:O	1:D:245:GLU:HA	2.15	0.47
1:G:471:HIS:CE1	1:G:491:TYR:CD1	3.03	0.47
1:G:42:ASN:HB2	1:G:287:ALA:O	2.15	0.47
1:A:248:GLY:O	1:A:249:ASN:HB2	2.14	0.47
1:E:379:ASN:HB3	1:F:23:ILE:O	2.14	0.47
1:B:307:LYS:HE2	1:B:421:TRP:CE2	2.50	0.47
1:B:277:CYS:HB2	1:B:278:GLU:H	1.60	0.47
1:D:436:THR:O	1:D:439:PHE:HB3	2.14	0.47
1:G:7:ILE:HB	1:G:478:MET:SD	2.54	0.47
1:E:73:ARG:CD	1:G:276:ASN:O	2.63	0.47
1:H:23:ILE:CG2	1:H:434:GLU:HG2	2.34	0.47
1:A:38:GLU:OE2	1:A:39:LYS:N	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:81:SER:HB2	1:A:82:TYR:CD2	2.50	0.47
1:H:288:ILE:CD1	1:H:297:ILE:HD12	2.44	0.47
1:H:42:ASN:HB2	1:H:287:ALA:O	2.14	0.47
1:A:117:LYS:HE3	1:A:255:TYR:CG	2.50	0.47
1:H:417:PHE:CZ	1:I:416:GLY:HA3	2.49	0.47
1:H:268:MET:HE3	1:H:302:ILE:HD12	1.95	0.47
1:A:455:LEU:HB3	1:A:459:VAL:HG21	1.97	0.47
1:A:138:CYS:O	1:A:145:SER:HB3	2.15	0.47
1:I:288:ILE:HD11	1:I:297:ILE:HD12	1.97	0.47
1:A:95:TYR:HD2	1:A:229:MET:HG3	1.79	0.47
1:F:294:PHE:HB3	1:F:309:VAL:CG2	2.45	0.47
1:D:155:LYS:HE2	1:D:192:THR:O	2.14	0.47
1:B:120:ILE:O	1:B:121:LEU:HD23	2.15	0.47
1:B:178:ILE:O	1:B:253:PRO:HG3	2.15	0.47
1:I:142:ASP:N	1:I:142:ASP:OD2	2.48	0.46
1:H:462:LEU:HD11	1:H:468:GLU:CB	2.39	0.46
1:A:77:VAL:HG23	1:A:78:PRO:HD2	1.97	0.46
1:B:166:SER:HB2	1:B:243:ASN:ND2	2.30	0.46
1:H:31:THR:O	1:H:32:HIS:CD2	2.69	0.46
1:A:404:LYS:HA	1:A:404:LYS:HD3	1.54	0.46
1:E:9:VAL:O	1:E:339:ILE:CD1	2.50	0.46
1:A:459:VAL:HG12	1:A:469:PHE:CA	2.23	0.46
1:A:154:THR:O	1:A:193:LEU:O	2.34	0.46
1:C:138:CYS:O	1:C:145:SER:HB3	2.14	0.46
1:I:138:CYS:O	1:I:145:SER:HB3	2.14	0.46
1:H:169:ASN:ND2	1:H:238:ILE:HA	2.22	0.46
1:D:248:GLY:C	1:D:249:ASN:HD22	2.18	0.46
1:D:185:ASN:O	1:D:186:ASP:HB3	2.15	0.46
1:E:200:TYR:CE1	1:E:211:ARG:NH2	2.82	0.46
1:A:168:ASN:CB	1:A:241:THR:HG22	2.45	0.46
1:B:80:TRP:CE2	1:B:112:VAL:HG22	2.50	0.46
1:A:12:HIS:CD2	1:A:13:SER:C	2.89	0.46
1:E:462:LEU:HD11	1:E:468:GLU:CB	2.39	0.46
1:G:200:TYR:CE1	1:G:247:THR:HG23	2.51	0.46
1:A:95:TYR:CD2	1:A:229:MET:HG3	2.50	0.46
1:G:448:TYR:OH	1:G:461:GLU:HG3	2.15	0.46
1:D:193:LEU:HB2	1:D:194:TYR:CE2	2.50	0.46
1:I:7:ILE:HA	1:I:355:HIS:HA	1.96	0.46
1:H:410:ASN:HB2	1:I:409:LEU:HD13	1.96	0.46
1:B:42:ASN:OD1	1:B:44:LYS:HE2	2.16	0.46
1:I:338:PHE:CE1	1:I:339:ILE:HG13	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:48:LEU:O	1:G:49:ASN:HB2	2.14	0.46
1:B:382:ASN:O	1:B:386:GLU:N	2.47	0.46
1:G:357:ASN:OD1	1:G:475:ASP:OD1	2.33	0.46
1:E:7:ILE:HG22	1:E:467:PHE:CG	2.51	0.46
1:A:154:THR:O	1:A:155:LYS:CB	2.60	0.46
1:F:166:SER:HB2	1:F:243:ASN:ND2	2.29	0.46
1:B:323:VAL:HA	1:B:324:PRO:HD3	1.62	0.46
1:E:456:ARG:CD	1:F:461:GLU:O	2.64	0.46
1:B:310:LYS:HD2	1:B:418:LEU:CD2	2.45	0.46
1:B:12:HIS:N	1:B:350:TRP:O	2.32	0.46
1:B:268:MET:HE3	1:B:302:ILE:HD12	1.98	0.46
1:B:187:GLU:O	1:B:190:GLN:HB3	2.15	0.46
1:F:278:GLU:O	1:F:279:THR:HB	2.15	0.46
1:G:383:SER:HB3	1:H:26:ARG:NH2	2.30	0.46
1:D:155:LYS:HD3	1:D:195:GLN:HB2	1.98	0.46
1:A:117:LYS:HG3	1:A:257:PHE:CD1	2.51	0.46
1:I:332:PHE:CD2	1:I:442:SER:HB2	2.50	0.46
1:F:490:LYS:C	1:F:492:GLU:H	2.19	0.46
1:A:402:LEU:HD23	1:A:402:LEU:HA	1.67	0.46
1:A:428:LEU:HD23	1:A:428:LEU:C	2.35	0.46
1:A:94:CYS:HB3	1:A:137:GLY:O	2.15	0.46
1:C:141:PHE:N	1:C:142:ASP:CA	2.73	0.46
1:D:118:VAL:CG2	1:D:120:ILE:HG23	2.46	0.46
1:G:488:TYR:O	1:G:490:LYS:N	2.49	0.46
1:H:36:ILE:O	1:H:292:LEU:HB3	2.16	0.46
1:D:183:HIS:HB3	1:D:219:ARG:NH2	2.30	0.46
1:E:53:PRO:HG3	1:E:82:TYR:CZ	2.51	0.46
1:B:12:HIS:CB	1:B:350:TRP:HA	2.46	0.46
1:C:436:THR:O	1:C:439:PHE:HB3	2.15	0.46
1:B:338:PHE:CE1	1:B:339:ILE:CG1	2.98	0.46
1:C:295:HIS:HD2	1:C:297:ILE:N	2.07	0.46
1:I:53:PRO:CD	1:I:274:LEU:HD13	2.45	0.46
1:I:42:ASN:HB2	1:I:287:ALA:O	2.15	0.46
1:F:442:SER:O	1:F:446:ASN:HB2	2.16	0.46
1:A:61:ILE:CG2	1:A:109:ILE:HD11	2.45	0.46
1:D:399:PHE:CE1	1:D:406:LEU:HG	2.51	0.46
1:H:12:HIS:CE1	1:H:13:SER:O	2.68	0.46
1:A:182:HIS:HD2	1:A:194:TYR:HE2	1.63	0.46
1:G:201:VAL:HG22	1:G:250:LEU:HB2	1.97	0.46
1:E:338:PHE:CE1	1:E:339:ILE:CG1	2.99	0.46
1:F:167:TYR:CE2	1:F:169:ASN:HA	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:324:PRO:HB2	1:I:325:GLN:H	1.53	0.46
1:D:11:TYR:HE2	1:D:335:ILE:HA	1.80	0.46
1:G:310:LYS:HD3	1:I:389:ASN:OD1	2.15	0.46
1:D:58:ASP:HB3	1:D:90:ARG:HB2	1.97	0.46
1:C:490:LYS:C	1:C:492:GLU:H	2.20	0.46
1:I:200:TYR:CE1	1:I:247:THR:HG23	2.50	0.46
1:C:77:VAL:HG22	1:C:79:GLU:O	2.16	0.46
1:D:293:PRO:HG3	1:D:385:ILE:CA	2.25	0.46
1:B:387:LYS:CD	1:C:426:GLU:HG2	2.34	0.46
1:H:140:VAL:HG12	1:H:141:PHE:N	2.30	0.46
1:E:288:ILE:HD11	1:E:297:ILE:HD12	1.97	0.46
1:D:51:ILE:HG23	1:D:52:PRO:HD2	1.97	0.46
1:B:278:GLU:O	1:B:279:THR:HB	2.16	0.46
1:D:54:LEU:HD21	1:D:64:TRP:CZ3	2.51	0.46
1:D:7:ILE:O	1:D:466:CYS:HA	2.16	0.46
1:B:129:HIS:NE2	1:B:161:PRO:HD2	2.31	0.46
1:A:93:LEU:N	1:A:93:LEU:HD12	2.31	0.46
1:A:61:ILE:HD11	1:A:83:ILE:HD13	1.98	0.46
1:H:400:SER:OG	1:H:403:GLU:HG3	2.16	0.46
1:C:201:VAL:HG22	1:C:250:LEU:HB2	1.96	0.46
1:C:333:GLY:O	1:C:337:GLY:HA3	2.16	0.46
1:C:38:GLU:OE2	1:C:40:THR:HG22	2.16	0.46
1:G:399:PHE:HB2	1:G:407:GLU:HG2	1.98	0.46
1:I:38:GLU:OE2	1:I:40:THR:HG22	2.16	0.46
1:H:10:GLY:HA3	1:H:343:TRP:CZ2	2.52	0.46
1:I:23:ILE:H	1:I:434:GLU:HB2	1.81	0.46
1:B:306:PRO:O	1:B:308:TYR:N	2.49	0.46
1:G:346:MET:HE3	1:G:346:MET:HA	1.98	0.46
1:F:278:GLU:CG	1:F:279:THR:N	2.79	0.46
1:E:211:ARG:NH1	1:F:216:ILE:O	2.45	0.46
1:H:490:LYS:C	1:H:492:GLU:H	2.19	0.46
1:I:200:TYR:CE1	1:I:211:ARG:NH2	2.84	0.46
1:D:53:PRO:HG2	1:D:84:MET:SD	2.57	0.45
1:G:138:CYS:O	1:G:145:SER:HB3	2.16	0.45
1:H:460:LYS:CG	1:H:468:GLU:HB3	2.46	0.45
1:F:11:TYR:CZ	1:F:335:ILE:HG23	2.51	0.45
1:G:480:SER:HA	1:G:483:ASN:HB2	1.97	0.45
1:A:229:MET:SD	1:A:251:ILE:HG13	2.56	0.45
1:C:278:GLU:O	1:C:279:THR:HB	2.15	0.45
1:E:200:TYR:CE1	1:E:247:THR:HG23	2.50	0.45
1:C:53:PRO:HG3	1:C:82:TYR:CZ	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:371:GLN:CA	1:A:371:GLN:HE21	2.29	0.45
1:A:61:ILE:HG21	1:A:109:ILE:HD11	1.97	0.45
1:D:490:LYS:C	1:D:492:GLU:H	2.19	0.45
1:F:38:GLU:OE2	1:F:40:THR:HG22	2.17	0.45
1:I:48:LEU:O	1:I:49:ASN:HB2	2.15	0.45
1:F:36:ILE:O	1:F:292:LEU:HB3	2.16	0.45
1:C:404:LYS:HD2	1:C:404:LYS:HA	1.65	0.45
1:I:36:ILE:O	1:I:292:LEU:HB3	2.16	0.45
1:C:174:GLN:O	1:C:259:ILE:HG22	2.17	0.45
1:D:37:LEU:CB	1:D:314:LEU:HB2	2.46	0.45
1:B:288:ILE:HD11	1:B:297:ILE:HD12	1.97	0.45
1:A:36:ILE:HG13	1:A:314:LEU:HB3	1.98	0.45
1:C:184:PRO:O	1:C:216:ILE:HG23	2.16	0.45
1:B:105:LEU:O	1:B:109:ILE:HG12	2.16	0.45
1:D:181:VAL:HG12	1:D:181:VAL:O	2.16	0.45
1:G:288:ILE:HG12	1:G:297:ILE:HD12	1.98	0.45
1:G:140:VAL:HG12	1:G:141:PHE:N	2.30	0.45
1:D:288:ILE:HG22	1:D:290:THR:HG22	1.98	0.45
1:C:278:GLU:CG	1:C:279:THR:N	2.78	0.45
1:H:45:LEU:CD2	1:H:270:THR:HG21	2.46	0.45
1:A:477:CYS:O	1:A:481:VAL:HG23	2.16	0.45
1:G:459:VAL:HG12	1:G:468:GLU:O	2.17	0.45
1:I:460:LYS:CG	1:I:468:GLU:HB3	2.46	0.45
1:H:295:HIS:CE1	1:H:308:TYR:HB2	2.51	0.45
1:A:380:LYS:HE3	1:A:380:LYS:HB2	1.55	0.45
1:D:216:ILE:O	1:F:211:ARG:HD2	2.17	0.45
1:A:397:LYS:NZ	1:B:408:ASN:HD22	2.15	0.45
1:E:53:PRO:CD	1:E:274:LEU:HD13	2.46	0.45
1:G:366:ASP:O	1:G:368:GLU:N	2.49	0.45
1:A:353:TYR:CD2	1:A:482:LYS:HE3	2.52	0.45
1:F:486:TYR:CG	1:F:487:ASP:N	2.80	0.45
1:I:10:GLY:HA3	1:I:343:TRP:CZ2	2.52	0.45
1:B:496:LYS:HE3	1:B:496:LYS:N	2.32	0.45
1:D:293:PRO:HB2	1:D:294:PHE:CE2	2.52	0.45
1:C:306:PRO:O	1:C:308:TYR:N	2.49	0.45
1:B:31:THR:C	1:B:32:HIS:CG	2.89	0.45
1:A:173:GLU:CD	1:A:260:SER:HB2	2.37	0.45
1:C:45:LEU:CD2	1:C:270:THR:HG21	2.46	0.45
1:D:146:PHE:HE1	1:D:229:MET:HE3	1.80	0.45
1:G:408:ASN:O	1:G:412:LYS:HB2	2.16	0.45
1:G:430:LEU:O	1:G:433:ASN:HB2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:140:VAL:HG12	1:I:141:PHE:N	2.32	0.45
1:I:277:CYS:HB2	1:I:278:GLU:H	1.60	0.45
1:C:277:CYS:HB2	1:C:278:GLU:H	1.58	0.45
1:I:77:VAL:HG22	1:I:79:GLU:O	2.16	0.45
1:H:38:GLU:OE2	1:H:40:THR:HG22	2.17	0.45
1:G:77:VAL:HG22	1:G:79:GLU:O	2.17	0.45
1:G:53:PRO:HG3	1:G:82:TYR:CZ	2.52	0.45
1:D:23:ILE:HD11	1:F:380:LYS:CG	2.47	0.45
1:F:140:VAL:HG12	1:F:141:PHE:N	2.32	0.45
1:D:190:GLN:HE21	1:D:197:VAL:HA	1.82	0.45
1:C:332:PHE:CD2	1:C:442:SER:HB2	2.51	0.45
1:H:277:CYS:HB2	1:H:278:GLU:H	1.58	0.45
1:E:12:HIS:CE1	1:E:13:SER:O	2.70	0.45
1:G:45:LEU:N	1:G:45:LEU:HD12	2.32	0.45
1:H:31:THR:O	1:H:32:HIS:CG	2.70	0.45
1:H:130:THR:HB	1:H:154:THR:OG1	2.16	0.45
1:C:51:ILE:HB	1:C:81:SER:HB3	1.98	0.45
1:A:345:GLY:HA3	1:A:363:TYR:CE2	2.52	0.45
1:G:464:ASN:OD1	1:G:466:CYS:HB2	2.17	0.45
1:B:45:LEU:CD2	1:B:270:THR:HG21	2.47	0.45
1:H:58:ASP:HA	1:H:86:LYS:HD3	1.98	0.45
1:B:451:VAL:HG12	1:B:452:ARG:N	2.32	0.45
1:A:283:THR:HG22	1:A:284:PRO:N	2.32	0.45
1:D:47:LYS:O	1:D:279:THR:HG22	2.17	0.45
1:B:319:GLY:C	1:B:440:HIS:NE2	2.70	0.45
1:A:11:TYR:HA	1:A:351:TYR:HA	1.98	0.45
1:A:13:SER:CB	1:A:344:GLN:NE2	2.79	0.45
1:E:460:LYS:CG	1:E:468:GLU:HB3	2.47	0.45
1:E:332:PHE:CD2	1:E:442:SER:HB2	2.52	0.45
1:F:80:TRP:CE2	1:F:112:VAL:HG22	2.52	0.45
1:D:361:SER:HA	1:D:362:GLY:HA3	1.73	0.45
1:E:452:ARG:HB2	1:E:467:PHE:HZ	1.81	0.45
1:C:142:ASP:N	1:C:142:ASP:OD2	2.50	0.45
1:F:460:LYS:CG	1:F:468:GLU:HB3	2.47	0.45
1:E:278:GLU:CG	1:E:279:THR:H	2.29	0.45
1:A:31:THR:HG23	1:A:320:LEU:O	2.17	0.45
1:B:129:HIS:CD2	1:B:161:PRO:HD2	2.52	0.45
1:G:120:ILE:O	1:G:121:LEU:HD23	2.17	0.45
1:G:455:LEU:O	1:G:456:ARG:CB	2.65	0.45
1:B:320:LEU:HB3	1:B:440:HIS:HB3	1.97	0.45
1:B:278:GLU:CG	1:B:279:THR:H	2.29	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:200:TYR:CE1	1:D:247:THR:HG23	2.52	0.45
1:H:166:SER:HB3	1:H:243:ASN:HD22	1.82	0.45
1:E:442:SER:O	1:E:446:ASN:HB2	2.17	0.45
1:A:170:THR:HG22	1:A:239:TRP:CE3	2.52	0.45
1:D:26:ARG:HG2	1:F:379:ASN:HD21	1.81	0.44
1:G:414:GLU:OE2	1:H:412:LYS:NZ	2.49	0.44
1:B:138:CYS:O	1:B:145:SER:HB3	2.17	0.44
1:A:195:GLN:O	1:A:196:ASN:CB	2.64	0.44
1:C:53:PRO:CD	1:C:274:LEU:HD13	2.46	0.44
1:H:452:ARG:HB2	1:H:467:PHE:HZ	1.82	0.44
1:C:200:TYR:CE1	1:C:211:ARG:NH2	2.85	0.44
1:B:77:VAL:HG22	1:B:79:GLU:O	2.16	0.44
1:D:77:VAL:HA	1:D:78:PRO:HD3	1.81	0.44
1:G:455:LEU:CB	1:G:459:VAL:HG21	2.47	0.44
1:D:172:GLY:HA2	1:D:239:TRP:CH2	2.52	0.44
1:D:238:ILE:HG23	1:D:239:TRP:CG	2.52	0.44
1:C:288:ILE:HD11	1:C:297:ILE:HD12	2.00	0.44
1:D:248:GLY:O	1:D:249:ASN:CB	2.65	0.44
1:I:129:HIS:CD2	1:I:161:PRO:HD2	2.52	0.44
1:B:179:TRP:CH2	1:B:208:LEU:HD21	2.52	0.44
1:F:436:THR:O	1:F:439:PHE:HB3	2.16	0.44
1:I:45:LEU:CD2	1:I:270:THR:HG21	2.47	0.44
1:C:268:MET:HE3	1:C:302:ILE:HD12	1.99	0.44
1:G:355:HIS:O	1:G:361:SER:HB2	2.18	0.44
1:A:469:PHE:CE1	1:A:471:HIS:CE1	3.05	0.44
1:D:239:TRP:CE3	1:D:239:TRP:N	2.77	0.44
1:H:278:GLU:CG	1:H:279:THR:N	2.80	0.44
1:A:126:TRP:CZ3	1:A:153:LEU:HD11	2.52	0.44
1:F:493:GLU:O	1:F:494:GLU:HB2	2.17	0.44
1:G:202:SER:HB2	1:H:216:ILE:O	2.17	0.44
1:A:343:TRP:CH2	1:A:354:HIS:HB2	2.52	0.44
1:C:310:LYS:HD2	1:C:418:LEU:CD2	2.47	0.44
1:E:250:LEU:HD21	1:E:252:ALA:HB2	1.99	0.44
1:B:38:GLU:OE2	1:B:40:THR:HG22	2.17	0.44
1:A:67:GLY:O	1:A:148:ARG:HG2	2.18	0.44
1:A:436:THR:O	1:A:436:THR:HG22	2.17	0.44
1:F:404:LYS:HD2	1:F:404:LYS:HA	1.60	0.44
1:B:460:LYS:CG	1:B:468:GLU:HB3	2.47	0.44
1:C:288:ILE:HG12	1:C:297:ILE:HD12	2.00	0.44
1:A:23:ILE:HD11	1:C:380:LYS:HE2	1.99	0.44
1:A:418:LEU:HA	1:A:418:LEU:HD12	1.63	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:9:VAL:O	1:D:339:ILE:HD13	2.17	0.44
1:D:332:PHE:CD2	1:D:442:SER:HB2	2.53	0.44
1:D:8:CYS:O	1:D:343:TRP:HH2	2.01	0.44
1:G:462:LEU:HD12	1:G:462:LEU:N	2.32	0.44
1:B:360:GLY:O	1:B:361:SER:HB2	2.18	0.44
1:A:487:ASP:O	1:A:491:TYR:HD2	2.00	0.44
1:I:460:LYS:HG2	1:I:468:GLU:HB3	2.00	0.44
1:E:298:HIS:HE1	1:E:300:LEU:HD12	1.83	0.44
1:B:140:VAL:HG12	1:B:141:PHE:N	2.31	0.44
1:E:129:HIS:NE2	1:E:161:PRO:HD2	2.32	0.44
1:A:219:ARG:CG	1:A:226:GLY:O	2.66	0.44
1:B:200:TYR:CE1	1:B:211:ARG:NH2	2.86	0.44
1:D:48:LEU:HD23	1:D:392:PHE:HE1	1.83	0.44
1:F:332:PHE:CD2	1:F:442:SER:HB2	2.52	0.44
1:G:417:PHE:CZ	1:H:416:GLY:HA3	2.52	0.44
1:E:452:ARG:HB2	1:E:467:PHE:CZ	2.53	0.44
1:C:140:VAL:HG12	1:C:141:PHE:N	2.32	0.44
1:H:288:ILE:HG12	1:H:297:ILE:HD12	2.00	0.44
1:E:376:GLY:O	1:F:24:LEU:HD23	2.17	0.44
1:A:460:LYS:HG3	1:A:468:GLU:HB3	1.99	0.44
1:H:332:PHE:HZ	1:I:331:LEU:HD12	1.80	0.44
1:D:61:ILE:HG13	1:D:85:GLU:OE2	2.18	0.44
1:D:495:SER:O	1:D:496:LYS:C	2.56	0.44
1:B:388:MET:HE2	1:C:423:TYR:CE1	2.53	0.44
1:B:7:ILE:N	1:B:467:PHE:O	2.51	0.44
1:H:8:CYS:C	1:H:343:TRP:HH2	2.18	0.44
1:E:306:PRO:O	1:E:308:TYR:N	2.50	0.44
1:A:351:TYR:CE2	1:A:370:THR:HA	2.50	0.44
1:A:280:LYS:N	1:A:280:LYS:HD2	2.33	0.44
1:B:53:PRO:CD	1:B:274:LEU:HD13	2.48	0.44
1:D:409:LEU:HD11	1:F:410:ASN:HB2	2.00	0.44
1:I:80:TRP:CE2	1:I:112:VAL:HG22	2.53	0.44
1:D:410:ASN:HB2	1:E:409:LEU:HD11	2.00	0.44
1:C:360:GLY:O	1:C:361:SER:HB2	2.18	0.44
1:E:404:LYS:HD2	1:E:404:LYS:HA	1.69	0.44
1:A:455:LEU:HD23	1:A:459:VAL:HG21	2.00	0.44
1:E:140:VAL:HG23	1:E:145:SER:CB	2.48	0.44
1:A:283:THR:HB	1:A:286:GLY:H	1.82	0.44
1:A:160:TYR:HE2	1:A:248:GLY:N	2.15	0.44
1:E:31:THR:C	1:E:32:HIS:CG	2.91	0.44
1:H:452:ARG:HB2	1:H:467:PHE:CZ	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:399:PHE:CE1	1:C:406:LEU:HG	2.53	0.44
1:E:80:TRP:CE2	1:E:112:VAL:HG22	2.53	0.44
1:G:354:HIS:ND1	1:G:354:HIS:O	2.51	0.43
1:B:9:VAL:HG11	1:B:448:TYR:CB	2.45	0.43
1:C:113:THR:HA	1:C:114:HIS:HA	1.89	0.43
1:H:113:THR:HA	1:H:114:HIS:HA	1.88	0.43
1:G:114:HIS:O	1:G:259:ILE:O	2.36	0.43
1:D:12:HIS:HB2	1:D:350:TRP:HA	1.99	0.43
1:H:460:LYS:HG2	1:H:468:GLU:HB3	2.00	0.43
1:A:476:GLU:OE1	1:A:476:GLU:HA	2.18	0.43
1:I:129:HIS:NE2	1:I:161:PRO:HD2	2.32	0.43
1:C:12:HIS:CE1	1:C:13:SER:O	2.71	0.43
1:D:338:PHE:CE1	1:D:339:ILE:CG1	3.00	0.43
1:A:134:GLY:O	1:A:135:SER:HB2	2.18	0.43
1:F:494:GLU:HG2	1:F:494:GLU:O	2.17	0.43
1:B:66:LEU:O	1:B:147:PHE:HB3	2.18	0.43
1:C:66:LEU:O	1:C:147:PHE:HB3	2.17	0.43
1:A:358:ASP:HB2	1:A:472:LYS:NZ	2.33	0.43
1:H:355:HIS:CD2	1:H:355:HIS:N	2.82	0.43
1:B:452:ARG:HB2	1:B:467:PHE:HZ	1.83	0.43
1:G:414:GLU:HG3	1:H:412:LYS:HE3	1.99	0.43
1:F:11:TYR:CZ	1:F:335:ILE:HA	2.53	0.43
1:A:380:LYS:HZ3	1:A:432:GLU:HB3	1.84	0.43
1:F:298:HIS:HA	1:F:299:PRO:HD3	1.88	0.43
1:B:355:HIS:N	1:B:355:HIS:CD2	2.86	0.43
1:B:166:SER:HB3	1:B:243:ASN:HD22	1.83	0.43
1:F:12:HIS:CE1	1:F:13:SER:O	2.71	0.43
1:A:170:THR:HG22	1:A:239:TRP:HE3	1.83	0.43
1:H:414:GLU:OE2	1:I:412:LYS:HE3	2.18	0.43
1:G:471:HIS:ND1	1:G:472:LYS:O	2.39	0.43
1:D:146:PHE:CE1	1:D:229:MET:CE	3.01	0.43
1:D:452:ARG:HB2	1:D:467:PHE:HZ	1.83	0.43
1:F:31:THR:C	1:F:32:HIS:CG	2.92	0.43
1:F:42:ASN:HB2	1:F:287:ALA:O	2.18	0.43
1:H:45:LEU:HD12	1:H:45:LEU:N	2.32	0.43
1:A:126:TRP:CG	1:A:153:LEU:HD21	2.53	0.43
1:I:422:THR:O	1:I:423:TYR:C	2.57	0.43
1:G:471:HIS:NE2	1:G:486:TYR:OH	2.52	0.43
1:D:228:ARG:HH22	1:F:206:SER:HA	1.83	0.43
1:I:140:VAL:HG23	1:I:145:SER:CB	2.49	0.43
1:D:460:LYS:CG	1:D:468:GLU:HB3	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:299:PRO:O	1:D:301:THR:HG23	2.18	0.43
1:E:310:LYS:HD2	1:E:418:LEU:HD23	2.00	0.43
1:E:34:GLN:OE1	1:E:381:VAL:HG11	2.18	0.43
1:F:268:MET:HE3	1:F:302:ILE:HD12	1.99	0.43
1:E:11:TYR:CE2	1:E:335:ILE:CA	2.76	0.43
1:A:445:LYS:C	1:A:446:ASN:HD22	2.21	0.43
1:F:319:GLY:C	1:F:440:HIS:NE2	2.72	0.43
1:C:320:LEU:HB3	1:C:440:HIS:HB3	1.99	0.43
1:I:53:PRO:HG3	1:I:82:TYR:CE2	2.53	0.43
1:F:129:HIS:CD2	1:F:161:PRO:HD2	2.53	0.43
1:G:36:ILE:O	1:G:292:LEU:HB3	2.17	0.43
1:A:200:TYR:C	1:A:200:TYR:CD2	2.92	0.43
1:A:283:THR:CG2	1:A:298:HIS:HB3	2.46	0.43
1:A:38:GLU:HB3	1:A:294:PHE:O	2.18	0.43
1:C:460:LYS:CG	1:C:468:GLU:HB3	2.48	0.43
1:A:7:ILE:HG21	1:A:451:VAL:HG11	2.01	0.43
1:I:278:GLU:O	1:I:279:THR:CB	2.67	0.43
1:G:380:LYS:O	1:G:384:VAL:HG23	2.19	0.43
1:H:294:PHE:HB3	1:H:309:VAL:HG22	1.99	0.43
1:A:35:ASP:OD1	1:A:314:LEU:O	2.36	0.43
1:D:379:ASN:HB2	1:E:24:LEU:HA	2.01	0.43
1:E:45:LEU:CD2	1:E:270:THR:HG21	2.48	0.43
1:G:353:TYR:CE2	1:G:482:LYS:HG2	2.52	0.43
1:A:410:ASN:CB	1:B:409:LEU:HD11	2.35	0.43
1:B:452:ARG:HB2	1:B:467:PHE:CZ	2.54	0.43
1:A:298:HIS:HA	1:A:299:PRO:HD3	1.74	0.43
1:C:451:VAL:HG12	1:C:452:ARG:N	2.34	0.43
1:H:295:HIS:HD2	1:H:297:ILE:N	2.09	0.43
1:B:460:LYS:HG2	1:B:468:GLU:HB3	2.01	0.43
1:E:202:SER:HB2	1:F:217:ALA:CB	2.45	0.43
1:D:126:TRP:CE3	1:D:153:LEU:HD11	2.53	0.43
1:I:290:THR:OG1	1:I:292:LEU:HG	2.18	0.43
1:H:131:THR:HG22	1:H:153:LEU:CD2	2.49	0.43
1:A:373:ALA:HB1	1:A:440:HIS:HE1	1.84	0.43
1:I:360:GLY:O	1:I:361:SER:HB2	2.18	0.43
1:G:58:ASP:HA	1:G:86:LYS:HD3	2.00	0.43
1:A:156:LYS:HE2	1:A:156:LYS:HB3	1.62	0.43
1:C:9:VAL:CB	1:C:448:TYR:HD1	2.26	0.43
1:A:456:ARG:HB2	1:A:457:ASP:H	1.73	0.43
1:B:12:HIS:CE1	1:B:13:SER:O	2.71	0.43
1:A:345:GLY:HA3	1:A:363:TYR:CD2	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:360:GLY:O	1:D:361:SER:HB2	2.19	0.43
1:F:8:CYS:HA	1:F:466:CYS:HA	1.99	0.43
1:B:404:LYS:HD2	1:B:404:LYS:HA	1.64	0.43
1:B:113:THR:HA	1:B:114:HIS:HA	1.88	0.43
1:A:81:SER:O	1:A:111:SER:HB3	2.18	0.43
1:A:338:PHE:CD1	1:A:339:ILE:N	2.87	0.43
1:D:121:LEU:O	1:D:122:PRO:C	2.58	0.43
1:F:288:ILE:HG12	1:F:297:ILE:HD12	2.00	0.43
1:F:293:PRO:HG3	1:F:385:ILE:HG23	1.99	0.43
1:A:23:ILE:HG22	1:A:430:LEU:O	2.18	0.43
1:G:294:PHE:HB3	1:G:309:VAL:CG2	2.49	0.43
1:H:80:TRP:CE2	1:H:112:VAL:HG22	2.54	0.43
1:H:155:LYS:HE2	1:H:192:THR:O	2.19	0.43
1:G:31:THR:C	1:G:32:HIS:CG	2.91	0.43
1:G:80:TRP:CE2	1:G:112:VAL:HG22	2.53	0.43
1:A:474:ASP:N	1:A:474:ASP:OD2	2.52	0.43
1:E:323:VAL:HG11	1:E:336:ALA:CB	2.47	0.43
1:D:95:TYR:CD2	1:D:229:MET:CG	2.90	0.43
1:F:174:GLN:O	1:F:259:ILE:HG22	2.18	0.43
1:A:23:ILE:O	1:A:23:ILE:CG1	2.66	0.43
1:G:411:LYS:O	1:G:415:ASP:HB2	2.18	0.43
1:E:360:GLY:O	1:E:361:SER:HB2	2.18	0.43
1:H:66:LEU:O	1:H:147:PHE:HB3	2.19	0.43
1:I:12:HIS:CE1	1:I:13:SER:O	2.72	0.43
1:F:131:THR:HG22	1:F:153:LEU:CD2	2.49	0.43
1:G:427:LEU:CD1	1:G:431:MET:HE2	2.49	0.42
1:D:261:LYS:HB3	1:D:261:LYS:HE2	1.84	0.42
1:F:141:PHE:N	1:F:142:ASP:CA	2.76	0.42
1:D:202:SER:HG	1:E:217:ALA:HB2	1.81	0.42
1:H:495:SER:C	1:H:496:LYS:HD2	2.39	0.42
1:F:184:PRO:HD2	1:F:216:ILE:HG12	2.01	0.42
1:E:129:HIS:CD2	1:E:161:PRO:HD2	2.54	0.42
1:A:381:VAL:HG12	1:A:382:ASN:HD22	1.84	0.42
1:G:405:ARG:HB2	1:G:405:ARG:HE	1.48	0.42
1:G:405:ARG:NH1	1:I:399:PHE:HA	2.34	0.42
1:A:436:THR:CG2	1:A:436:THR:O	2.65	0.42
1:G:12:HIS:CE1	1:G:13:SER:O	2.72	0.42
1:D:316:LEU:O	1:D:317:ALA:HB2	2.18	0.42
1:C:36:ILE:O	1:C:292:LEU:HB3	2.18	0.42
1:D:166:SER:OG	1:D:243:ASN:ND2	2.52	0.42
1:D:284:PRO:O	1:D:285:LEU:HD23	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:278:GLU:O	1:H:279:THR:CB	2.66	0.42
1:D:410:ASN:HB2	1:E:409:LEU:CD1	2.50	0.42
1:G:360:GLY:O	1:G:361:SER:CB	2.66	0.42
1:B:306:PRO:O	1:B:307:LYS:C	2.57	0.42
1:G:320:LEU:N	1:G:320:LEU:HD23	2.32	0.42
1:F:200:TYR:CE1	1:F:247:THR:HG23	2.54	0.42
1:A:462:LEU:N	1:A:462:LEU:CD1	2.82	0.42
1:D:308:TYR:CD2	1:D:418:LEU:CD1	3.02	0.42
1:C:31:THR:C	1:C:32:HIS:CG	2.92	0.42
1:A:366:ASP:OD2	1:A:368:GLU:HB3	2.19	0.42
1:E:42:ASN:HB2	1:E:287:ALA:O	2.20	0.42
1:D:8:CYS:HB3	1:D:343:TRP:CZ2	2.54	0.42
1:H:360:GLY:O	1:H:361:SER:HB2	2.19	0.42
1:H:361:SER:HA	1:H:362:GLY:HA3	1.73	0.42
1:H:464:ASN:OD1	1:H:466:CYS:HB2	2.18	0.42
1:I:31:THR:C	1:I:32:HIS:CG	2.92	0.42
1:E:9:VAL:HG21	1:E:448:TYR:CD1	2.54	0.42
1:E:451:VAL:HG12	1:E:452:ARG:N	2.33	0.42
1:D:82:TYR:CD2	1:D:82:TYR:N	2.87	0.42
1:H:138:CYS:O	1:H:145:SER:HB3	2.20	0.42
1:F:452:ARG:HB2	1:F:467:PHE:CZ	2.55	0.42
1:F:452:ARG:HB2	1:F:467:PHE:HZ	1.83	0.42
1:G:202:SER:HB2	1:H:217:ALA:HB2	2.00	0.42
1:D:452:ARG:HB2	1:D:467:PHE:CZ	2.54	0.42
1:G:278:GLU:CG	1:G:279:THR:N	2.81	0.42
1:D:48:LEU:HD23	1:D:392:PHE:CE1	2.55	0.42
1:B:490:LYS:C	1:B:492:GLU:H	2.20	0.42
1:F:45:LEU:H	1:F:45:LEU:HD12	1.84	0.42
1:F:445:LYS:O	1:F:445:LYS:HG3	2.19	0.42
1:G:457:ASP:C	1:G:459:VAL:N	2.72	0.42
1:D:293:PRO:HB3	1:D:388:MET:HB2	2.02	0.42
1:G:409:LEU:HD11	1:I:410:ASN:CG	2.39	0.42
1:G:425:ALA:O	1:G:428:LEU:N	2.53	0.42
1:H:8:CYS:HB2	1:H:354:HIS:HB3	2.01	0.42
1:A:334:ALA:HA	1:A:338:PHE:CE2	2.54	0.42
1:F:288:ILE:HD11	1:F:297:ILE:HD12	2.01	0.42
1:F:306:PRO:O	1:F:308:TYR:N	2.51	0.42
1:A:452:ARG:HH21	1:A:453:MET:CG	2.33	0.42
1:G:278:GLU:O	1:G:279:THR:HB	2.19	0.42
1:B:12:HIS:HB2	1:B:350:TRP:HA	2.01	0.42
1:I:298:HIS:HE1	1:I:300:LEU:HD12	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:130:THR:HB	1:I:154:THR:OG1	2.20	0.42
1:G:130:THR:HB	1:G:154:THR:OG1	2.19	0.42
1:E:320:LEU:HD23	1:E:320:LEU:N	2.30	0.42
1:B:174:GLN:O	1:B:259:ILE:HG22	2.19	0.42
1:D:283:THR:CB	1:D:286:GLY:O	2.61	0.42
1:D:46:CYS:HB3	1:D:47:LYS:H	1.62	0.42
1:G:294:PHE:HB3	1:G:309:VAL:HG22	2.00	0.42
1:F:360:GLY:O	1:F:361:SER:HB2	2.20	0.42
1:E:130:THR:HB	1:E:154:THR:OG1	2.19	0.42
1:D:242:ILE:CG1	1:D:243:ASN:N	2.82	0.42
1:D:169:ASN:O	1:D:239:TRP:HE3	2.03	0.42
1:A:48:LEU:O	1:A:49:ASN:C	2.58	0.42
1:F:138:CYS:O	1:F:145:SER:HB3	2.19	0.42
1:B:141:PHE:N	1:B:142:ASP:CA	2.75	0.42
1:A:454:GLN:OE1	1:A:484:GLY:O	2.37	0.42
1:I:278:GLU:CG	1:I:279:THR:N	2.78	0.42
1:D:117:LYS:HG3	1:D:255:TYR:HB3	2.01	0.42
1:E:45:LEU:H	1:E:45:LEU:HD12	1.84	0.42
1:E:38:GLU:OE2	1:E:40:THR:HG22	2.19	0.42
1:F:51:ILE:HB	1:F:81:SER:HB3	2.01	0.42
1:F:77:VAL:HG22	1:F:79:GLU:O	2.19	0.42
1:A:299:PRO:HG3	1:A:308:TYR:CZ	2.53	0.42
1:D:96:PRO:CG	1:D:222:VAL:O	2.68	0.42
1:A:48:LEU:HB3	1:A:81:SER:HB3	2.01	0.42
1:A:28:VAL:HG12	1:A:30:VAL:CG1	2.50	0.42
1:F:320:LEU:HB3	1:F:440:HIS:HB3	2.00	0.42
1:D:214:PRO:HG3	1:D:249:ASN:CG	2.38	0.42
1:G:129:HIS:NE2	1:G:161:PRO:HD2	2.34	0.42
1:A:462:LEU:HD11	1:A:468:GLU:N	2.34	0.42
1:D:58:ASP:HA	1:D:86:LYS:HD3	2.01	0.42
1:I:250:LEU:HD21	1:I:252:ALA:HB2	2.01	0.42
1:F:201:VAL:HG22	1:F:250:LEU:HB2	2.01	0.42
1:H:37:LEU:O	1:H:39:LYS:HE2	2.20	0.42
1:I:37:LEU:O	1:I:39:LYS:HE2	2.20	0.42
1:E:379:ASN:ND2	1:F:26:ARG:CZ	2.79	0.42
1:G:348:ASP:O	1:G:365:ALA:CB	2.68	0.42
1:H:430:LEU:C	1:H:431:MET:O	2.58	0.42
1:G:277:CYS:O	1:G:278:GLU:HB2	2.20	0.42
1:I:400:SER:OG	1:I:403:GLU:HG3	2.19	0.42
1:B:348:ASP:N	1:B:348:ASP:OD1	2.53	0.42
1:C:367:LYS:HE2	1:C:367:LYS:HB3	1.95	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:96:PRO:HG3	1:A:222:VAL:HG12	2.02	0.42
1:E:320:LEU:HD13	1:E:335:ILE:CD1	2.49	0.42
1:D:169:ASN:C	1:D:169:ASN:OD1	2.58	0.42
1:B:259:ILE:CG2	1:B:260:SER:H	2.07	0.42
1:G:432:GLU:OE2	1:H:23:ILE:HD13	2.20	0.42
1:G:348:ASP:N	1:G:348:ASP:OD1	2.53	0.42
1:F:361:SER:HA	1:F:362:GLY:HA3	1.73	0.42
1:I:67:GLY:O	1:I:68:ASN:C	2.55	0.42
1:I:58:ASP:HA	1:I:86:LYS:HD3	2.02	0.42
1:G:471:HIS:CD2	1:G:491:TYR:HB3	2.55	0.41
1:E:73:ARG:C	1:G:44:LYS:NZ	2.74	0.41
1:I:259:ILE:CG2	1:I:260:SER:H	2.12	0.41
1:H:120:ILE:HB	1:H:167:TYR:CD1	2.55	0.41
1:G:140:VAL:HG23	1:G:145:SER:CB	2.50	0.41
1:F:444:VAL:O	1:F:447:LEU:N	2.52	0.41
1:I:325:GLN:C	1:I:325:GLN:NE2	2.74	0.41
1:G:45:LEU:CD2	1:G:270:THR:HG21	2.50	0.41
1:A:107:HIS:ND1	1:A:107:HIS:O	2.53	0.41
1:B:45:LEU:H	1:B:45:LEU:HD12	1.85	0.41
1:H:126:TRP:HB2	1:H:131:THR:HG21	2.02	0.41
1:E:131:THR:HG22	1:E:153:LEU:CD2	2.49	0.41
1:E:99:PHE:HE1	1:E:233:TRP:CD1	2.37	0.41
1:E:323:VAL:HA	1:E:324:PRO:HD3	1.79	0.41
1:D:222:VAL:HG23	1:D:228:ARG:HH12	1.84	0.41
1:A:335:ILE:HG13	1:A:441:ASP:CA	2.38	0.41
1:H:183:HIS:HA	1:H:184:PRO:HD3	1.89	0.41
1:I:278:GLU:CG	1:I:279:THR:H	2.32	0.41
1:D:54:LEU:HB3	1:D:83:ILE:HG12	2.02	0.41
1:C:355:HIS:N	1:C:355:HIS:CD2	2.87	0.41
1:I:51:ILE:HB	1:I:81:SER:HB3	2.00	0.41
1:H:348:ASP:N	1:H:348:ASP:OD1	2.53	0.41
1:D:23:ILE:HD11	1:F:380:LYS:HG3	2.02	0.41
1:A:38:GLU:O	1:A:295:HIS:HA	2.20	0.41
1:C:140:VAL:HG23	1:C:145:SER:CB	2.50	0.41
1:F:306:PRO:O	1:F:307:LYS:C	2.58	0.41
1:I:277:CYS:O	1:I:278:GLU:HB2	2.19	0.41
1:H:36:ILE:HB	1:H:293:PRO:HD2	2.02	0.41
1:D:355:HIS:CD2	1:D:355:HIS:N	2.88	0.41
1:G:462:LEU:N	1:G:462:LEU:CD1	2.84	0.41
1:I:338:PHE:CE1	1:I:339:ILE:CG1	3.03	0.41
1:E:51:ILE:HB	1:E:81:SER:HB3	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:51:ILE:HB	1:G:81:SER:HB3	2.00	0.41
1:B:67:GLY:O	1:B:68:ASN:C	2.59	0.41
1:D:97:GLY:HA3	1:D:229:MET:O	2.20	0.41
1:A:42:ASN:C	1:A:44:LYS:H	2.22	0.41
1:E:295:HIS:CD2	1:E:297:ILE:H	2.21	0.41
1:H:298:HIS:HE1	1:H:300:LEU:HD12	1.85	0.41
1:H:31:THR:HB	1:H:32:HIS:CE1	2.54	0.41
1:G:77:VAL:HG22	1:G:79:GLU:H	1.85	0.41
1:E:126:TRP:HB2	1:E:131:THR:HG21	2.03	0.41
1:B:400:SER:OG	1:B:403:GLU:HG3	2.21	0.41
1:C:131:THR:HG22	1:C:153:LEU:CD2	2.50	0.41
1:E:141:PHE:HE2	1:G:274:LEU:CD1	2.33	0.41
1:G:346:MET:SD	1:G:352:GLY:CA	3.05	0.41
1:F:95:TYR:HA	1:F:96:PRO:HD3	1.94	0.41
1:E:12:HIS:CB	1:E:350:TRP:HA	2.50	0.41
1:I:126:TRP:HB2	1:I:131:THR:HG21	2.02	0.41
1:I:131:THR:HG22	1:I:153:LEU:CD2	2.51	0.41
1:H:456:ARG:HB2	1:H:457:ASP:H	1.66	0.41
1:H:105:LEU:O	1:H:109:ILE:HG12	2.20	0.41
1:D:167:TYR:CE2	1:D:169:ASN:HA	2.56	0.41
1:G:412:LYS:HD2	1:G:412:LYS:HA	1.71	0.41
1:F:259:ILE:CG2	1:F:260:SER:H	2.10	0.41
1:E:299:PRO:O	1:E:395:VAL:HG21	2.19	0.41
1:B:142:ASP:N	1:B:142:ASP:OD2	2.53	0.41
1:A:57:GLY:O	1:A:86:LYS:HG3	2.21	0.41
1:C:442:SER:O	1:C:446:ASN:HB2	2.21	0.41
1:H:278:GLU:CG	1:H:279:THR:H	2.33	0.41
1:F:355:HIS:N	1:F:355:HIS:CD2	2.87	0.41
1:E:183:HIS:HA	1:E:184:PRO:HD3	1.87	0.41
1:B:12:HIS:CE1	1:B:14:ASN:HB3	2.55	0.41
1:I:399:PHE:CG	1:I:407:GLU:HB2	2.55	0.41
1:G:486:TYR:O	1:G:487:ASP:CB	2.68	0.41
1:B:282:GLN:HG3	1:B:283:THR:N	2.35	0.41
1:A:160:TYR:CE2	1:A:248:GLY:CA	3.03	0.41
1:C:307:LYS:HB2	1:C:307:LYS:NZ	2.36	0.41
1:D:51:ILE:CG2	1:D:52:PRO:CD	2.99	0.41
1:A:344:GLN:CD	1:A:344:GLN:N	2.74	0.41
1:E:460:LYS:HG2	1:E:468:GLU:HB3	2.02	0.41
1:B:379:ASN:HB3	1:C:23:ILE:O	2.21	0.41
1:G:346:MET:CE	1:G:346:MET:HA	2.49	0.41
1:B:293:PRO:HG3	1:B:385:ILE:CA	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:335:ILE:HG13	1:G:441:ASP:HA	2.03	0.41
1:A:473:CYS:SG	1:A:478:MET:HG2	2.61	0.41
1:A:218:THR:HG22	1:C:243:ASN:CB	2.51	0.41
1:A:309:VAL:HA	1:A:418:LEU:HD11	2.03	0.41
1:A:397:LYS:HE3	1:A:397:LYS:HB3	1.86	0.41
1:G:298:HIS:HE1	1:G:300:LEU:HD12	1.85	0.41
1:B:222:VAL:O	1:B:223:ASN:HB2	2.21	0.41
1:I:444:VAL:O	1:I:447:LEU:N	2.51	0.41
1:H:404:LYS:HD2	1:H:404:LYS:HA	1.69	0.41
1:H:355:HIS:HD2	1:H:355:HIS:H	1.66	0.41
1:D:293:PRO:HB2	1:D:294:PHE:CD2	2.55	0.41
1:G:282:GLN:HG3	1:G:283:THR:N	2.35	0.41
1:A:56:LEU:HA	1:A:74:LEU:HD11	2.03	0.41
1:B:399:PHE:CG	1:B:407:GLU:HB2	2.56	0.41
1:E:36:ILE:O	1:E:292:LEU:HB3	2.19	0.41
1:G:354:HIS:HA	1:G:362:GLY:O	2.21	0.41
1:D:26:ARG:HA	1:D:26:ARG:HD2	1.84	0.41
1:A:48:LEU:HD23	1:A:392:PHE:HE1	1.86	0.41
1:F:451:VAL:HG12	1:F:452:ARG:N	2.35	0.41
1:B:140:VAL:HG23	1:B:145:SER:CB	2.50	0.41
1:A:13:SER:HA	1:A:322:ASN:OD1	2.21	0.41
1:G:10:GLY:HA3	1:G:343:TRP:CH2	2.56	0.41
1:I:279:THR:OG1	1:I:281:CYS:O	2.33	0.41
1:D:259:ILE:CG2	1:D:259:ILE:O	2.67	0.41
1:D:451:VAL:HG12	1:D:452:ARG:N	2.35	0.41
1:I:197:VAL:CG1	1:I:198:GLY:N	2.84	0.41
1:I:42:ASN:HD22	1:I:287:ALA:HB3	1.85	0.41
1:E:317:ALA:O	1:E:436:THR:HG21	2.21	0.41
1:E:197:VAL:CG1	1:E:198:GLY:N	2.84	0.41
1:F:333:GLY:O	1:F:337:GLY:HA3	2.21	0.41
1:A:107:HIS:O	1:A:110:SER:HB2	2.21	0.41
1:A:206:SER:OG	1:A:240:ASP:OD1	2.39	0.41
1:B:42:ASN:HB2	1:B:287:ALA:O	2.21	0.41
1:F:22:THR:HG22	1:F:433:ASN:HB3	2.02	0.41
1:F:67:GLY:O	1:F:68:ASN:C	2.59	0.41
1:A:447:LEU:HD12	1:A:447:LEU:HA	1.68	0.41
1:D:114:HIS:HB2	1:D:115:PHE:H	1.52	0.41
1:C:400:SER:OG	1:C:403:GLU:HG3	2.20	0.41
1:E:77:VAL:HG22	1:E:79:GLU:O	2.21	0.41
2:D:1497:SIA:H6	2:D:1497:SIA:O1A	2.21	0.41
1:C:452:ARG:HB2	1:C:467:PHE:HZ	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:293:PRO:HG3	1:C:385:ILE:HG12	2.03	0.41
1:H:211:ARG:NH1	1:I:216:ILE:HB	2.36	0.41
1:E:34:GLN:NE2	1:E:381:VAL:HG21	2.36	0.41
1:A:222:VAL:C	1:A:224:GLY:N	2.75	0.41
1:E:382:ASN:O	1:E:386:GLU:N	2.52	0.41
1:F:37:LEU:O	1:F:39:LYS:HE2	2.21	0.41
1:A:24:LEU:HD22	1:C:376:GLY:CA	2.51	0.41
1:D:138:CYS:O	1:D:145:SER:HB3	2.21	0.41
1:B:51:ILE:HB	1:B:81:SER:HB3	2.03	0.41
1:D:243:ASN:HA	1:D:243:ASN:HD22	1.73	0.40
1:A:469:PHE:HE1	1:A:471:HIS:NE2	2.18	0.40
1:E:73:ARG:NH1	1:G:276:ASN:O	2.54	0.40
1:G:427:LEU:O	1:G:428:LEU:C	2.59	0.40
1:H:24:LEU:HD12	1:H:434:GLU:CD	2.41	0.40
1:D:12:HIS:ND1	1:D:349:GLY:O	2.53	0.40
1:G:332:PHE:N	1:G:441:ASP:OD2	2.53	0.40
1:D:310:LYS:HZ1	1:D:418:LEU:CD2	2.34	0.40
1:D:199:ALA:HA	1:D:247:THR:OG1	2.21	0.40
1:F:45:LEU:N	1:F:45:LEU:HD12	2.36	0.40
1:G:323:VAL:HA	1:G:324:PRO:HD3	1.66	0.40
1:B:333:GLY:O	1:B:337:GLY:HA3	2.21	0.40
1:D:179:TRP:HZ3	1:D:234:THR:HG22	1.86	0.40
1:B:456:ARG:HB2	1:B:457:ASP:H	1.66	0.40
1:B:397:LYS:HE3	1:B:397:LYS:HB3	1.86	0.40
1:C:445:LYS:HG3	1:C:445:LYS:O	2.20	0.40
1:G:355:HIS:HB2	1:G:478:MET:SD	2.61	0.40
1:G:455:LEU:HG	1:G:459:VAL:HG21	2.04	0.40
1:D:120:ILE:HG21	1:D:175:MET:SD	2.61	0.40
1:D:51:ILE:CG2	1:D:52:PRO:HD2	2.50	0.40
1:F:135:SER:OG	3:F:1497:SIA:O1A	2.33	0.40
1:G:278:GLU:O	1:G:279:THR:CB	2.69	0.40
1:A:218:THR:O	1:C:243:ASN:HB2	2.21	0.40
1:D:200:TYR:CE1	1:D:247:THR:CG2	3.04	0.40
1:E:446:ASN:HD21	1:F:333:GLY:N	2.19	0.40
1:D:442:SER:O	1:D:446:ASN:HB2	2.21	0.40
1:A:18:GLU:OE1	1:A:33:ALA:HB3	2.21	0.40
1:A:295:HIS:HD2	1:A:297:ILE:H	1.69	0.40
1:I:22:THR:HB	1:I:434:GLU:OE2	2.22	0.40
1:C:120:ILE:HB	1:C:167:TYR:CD1	2.57	0.40
1:C:460:LYS:HG2	1:C:468:GLU:HB3	2.03	0.40
1:A:191:ARG:HG2	1:A:195:GLN:NE2	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:105:LEU:HD12	1:A:108:LEU:HD23	2.02	0.40
1:F:298:HIS:HE1	1:F:300:LEU:HD12	1.86	0.40
1:G:380:LYS:HD2	1:G:436:THR:OG1	2.21	0.40
1:G:129:HIS:CD2	1:G:161:PRO:HD2	2.56	0.40
1:A:167:TYR:O	1:A:241:THR:HA	2.21	0.40
1:F:197:VAL:CG1	1:F:198:GLY:N	2.84	0.40
1:B:184:PRO:HD2	1:B:216:ILE:HG12	2.03	0.40
1:C:197:VAL:CG1	1:C:198:GLY:N	2.85	0.40
1:H:338:PHE:CE1	1:H:339:ILE:CG1	3.05	0.40
1:E:442:SER:CB	1:F:331:LEU:HD13	2.51	0.40
1:A:475:ASP:O	1:A:479:ASN:N	2.53	0.40
1:D:34:GLN:CG	1:D:35:ASP:H	2.35	0.40
1:C:105:LEU:O	1:C:109:ILE:HG12	2.21	0.40
1:C:37:LEU:O	1:C:39:LYS:HE2	2.21	0.40
1:G:400:SER:OG	1:G:401:ASN:N	2.53	0.40
1:E:9:VAL:N	1:E:465:GLY:O	2.43	0.40
1:F:140:VAL:HG23	1:F:145:SER:CB	2.51	0.40
1:A:399:PHE:CB	1:A:407:GLU:HB2	2.52	0.40
1:C:306:PRO:O	1:C:307:LYS:C	2.60	0.40
1:A:379:ASN:ND2	1:B:26:ARG:CZ	2.83	0.40
1:F:277:CYS:O	1:F:278:GLU:HB2	2.22	0.40
1:G:384:VAL:CG1	1:G:384:VAL:O	2.67	0.40
1:E:184:PRO:HD2	1:E:216:ILE:HG12	2.04	0.40
1:G:419:ASP:O	1:G:420:VAL:C	2.59	0.40
1:C:184:PRO:HD2	1:C:216:ILE:HG12	2.04	0.40
1:E:51:ILE:HA	1:E:52:PRO:HD3	1.94	0.40
1:G:126:TRP:HB2	1:G:131:THR:HG21	2.04	0.40
1:G:131:THR:HG22	1:G:153:LEU:CD2	2.52	0.40
1:H:323:VAL:HA	1:H:324:PRO:HD3	1.87	0.40
1:E:318:THR:HB	1:E:377:ILE:HG21	2.02	0.40
1:H:51:ILE:HB	1:H:81:SER:HB3	2.02	0.40
1:E:170:THR:HA	1:E:239:TRP:CZ3	2.56	0.40
1:D:146:PHE:HE1	1:D:229:MET:CE	2.34	0.40
1:B:114:HIS:O	1:B:259:ILE:O	2.38	0.40
1:A:297:ILE:O	1:A:298:HIS:HB2	2.20	0.40
1:A:41:HIS:O	1:A:43:GLY:N	2.54	0.40
1:H:140:VAL:HG23	1:H:145:SER:CB	2.51	0.40
1:A:321:ARG:HG3	1:A:322:ASN:N	2.37	0.40
1:A:332:PHE:CE1	1:C:332:PHE:HE1	2.39	0.40
1:H:129:HIS:NE2	1:H:161:PRO:HD2	2.37	0.40
1:H:243:ASN:HB2	1:I:218:THR:O	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:290:THR:OG1	1:F:292:LEU:HG	2.22	0.40
1:F:77:VAL:HG22	1:F:79:GLU:H	1.87	0.40
1:G:131:THR:HG22	1:G:153:LEU:HD22	2.04	0.40
1:D:382:ASN:O	1:D:386:GLU:N	2.50	0.40
1:I:474:ASP:OD2	1:I:474:ASP:N	2.54	0.40
1:H:474:ASP:OD2	1:H:474:ASP:N	2.51	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the backbone conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	482/507 (95%)	371 (77%)	80 (17%)	31 (6%)	2	10
1	B	482/507 (95%)	408 (85%)	62 (13%)	12 (2%)	7	32
1	C	482/507 (95%)	407 (84%)	63 (13%)	12 (2%)	7	32
1	D	482/507 (95%)	384 (80%)	74 (15%)	24 (5%)	3	16
1	E	482/507 (95%)	411 (85%)	60 (12%)	11 (2%)	8	35
1	F	482/507 (95%)	407 (84%)	63 (13%)	12 (2%)	7	32
1	G	482/507 (95%)	393 (82%)	61 (13%)	28 (6%)	2	12
1	H	482/507 (95%)	406 (84%)	64 (13%)	12 (2%)	7	32
1	I	482/507 (95%)	403 (84%)	69 (14%)	10 (2%)	9	37
All	All	4338/4563 (95%)	3590 (83%)	596 (14%)	152 (4%)	4	24

All (152) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	30	VAL
1	A	155	LYS

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Mol	Chain	Res	Type
1	A	196	ASN
1	A	276	ASN
1	A	306	PRO
1	A	357	ASN
1	A	396	GLY
1	A	432	GLU
1	A	452	ARG
1	A	479	ASN
1	A	494	GLU
1	B	260	SER
1	B	307	LYS
1	B	494	GLU
1	C	260	SER
1	C	307	LYS
1	C	494	GLU
1	D	42	ASN
1	D	113	THR
1	D	196	ASN
1	D	238	ILE
1	D	239	TRP
1	D	320	LEU
1	D	494	GLU
1	E	260	SER
1	E	307	LYS
1	E	494	GLU
1	F	260	SER
1	F	307	LYS
1	F	494	GLU
1	G	260	SER
1	G	307	LYS
1	G	425	ALA
1	G	426	GLU
1	G	433	ASN
1	G	490	LYS
1	G	494	GLU
1	H	260	SER
1	H	307	LYS
1	I	260	SER
1	I	307	LYS
1	A	42	ASN
1	A	49	ASN
1	A	57	GLY

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Mol	Chain	Res	Type
1	A	87	GLU
1	A	140	VAL
1	A	368	GLU
1	A	369	SER
1	A	431	MET
1	A	436	THR
1	A	474	ASP
1	B	113	THR
1	B	279	THR
1	B	495	SER
1	C	279	THR
1	D	13	SER
1	D	64	TRP
1	D	125	ARG
1	D	127	THR
1	D	276	ASN
1	D	277	CYS
1	E	279	THR
1	F	113	THR
1	F	279	THR
1	G	113	THR
1	G	279	THR
1	G	367	LYS
1	G	418	LEU
1	G	458	ASN
1	H	279	THR
1	I	113	THR
1	I	262	ARG
1	I	279	THR
1	I	324	PRO
1	A	209	ASN
1	A	220	PRO
1	A	425	ALA
1	B	262	ARG
1	C	113	THR
1	C	259	ILE
1	C	262	ARG
1	C	324	PRO
1	D	15	ASN
1	E	113	THR
1	E	262	ARG
1	F	262	ARG

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Mol	Chain	Res	Type
1	G	262	ARG
1	G	361	SER
1	G	400	SER
1	G	420	VAL
1	G	456	ARG
1	G	483	ASN
1	G	487	ASP
1	G	489	SER
1	H	113	THR
1	H	262	ARG
1	I	430	LEU
1	A	89	PRO
1	A	361	SER
1	A	458	ASN
1	B	195	GLN
1	B	259	ILE
1	C	195	GLN
1	C	430	LEU
1	D	27	ASN
1	D	49	ASN
1	D	317	ALA
1	D	430	LEU
1	E	195	GLN
1	E	259	ILE
1	E	430	LEU
1	F	195	GLN
1	F	259	ILE
1	G	195	GLN
1	G	259	ILE
1	H	195	GLN
1	H	259	ILE
1	H	430	LEU
1	H	494	GLU
1	I	195	GLN
1	I	259	ILE
1	A	445	LYS
1	A	456	ARG
1	B	334	ALA
1	B	340	GLU
1	D	12	HIS
1	D	73	ARG
1	D	297	ILE

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Mol	Chain	Res	Type
1	D	316	LEU
1	D	334	ALA
1	F	334	ALA
1	F	430	LEU
1	G	324	PRO
1	G	455	LEU
1	H	324	PRO
1	H	487	ASP
1	A	323	VAL
1	B	430	LEU
1	C	334	ALA
1	C	487	ASP
1	E	487	ASP
1	G	397	LYS
1	F	324	PRO
1	G	360	GLY
1	G	109	ILE
1	D	28	VAL
1	E	109	ILE
1	G	306	PRO
1	I	109	ILE
1	A	298	HIS
1	F	109	ILE
1	H	109	ILE

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	422/444 (95%)	347 (82%)	75 (18%)	2	10
1	B	422/444 (95%)	389 (92%)	33 (8%)	16	49
1	C	421/444 (95%)	392 (93%)	29 (7%)	19	55
1	D	422/444 (95%)	361 (86%)	61 (14%)	4	16
1	E	422/444 (95%)	391 (93%)	31 (7%)	17	52

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	F	421/444 (95%)	391 (93%)	30 (7%)	18	54
1	G	422/444 (95%)	374 (89%)	48 (11%)	7	28
1	H	422/444 (95%)	391 (93%)	31 (7%)	17	52
1	I	421/444 (95%)	389 (92%)	32 (8%)	16	51
All	All	3795/3996 (95%)	3425 (90%)	370 (10%)	10	36

All (370) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	17	THR
1	A	19	LYS
1	A	21	ASP
1	A	23	ILE
1	A	26	ARG
1	A	29	THR
1	A	36	ILE
1	A	45	LEU
1	A	51	ILE
1	A	65	LEU
1	A	70	GLU
1	A	73	ARG
1	A	74	LEU
1	A	77	VAL
1	A	79	GLU
1	A	81	SER
1	A	93	LEU
1	A	94	CYS
1	A	98	SER
1	A	99	PHE
1	A	108	LEU
1	A	114	HIS
1	A	132	THR
1	A	136	GLN
1	A	141	PHE
1	A	145	SER
1	A	151	VAL
1	A	154	THR
1	A	158	SER
1	A	159	ASN
1	A	173	GLU
1	A	186	ASP

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Mol	Chain	Res	Type
1	A	188	THR
1	A	193	LEU
1	A	196	ASN
1	A	201	VAL
1	A	206	SER
1	A	207	THR
1	A	212	SER
1	A	219	ARG
1	A	234	THR
1	A	259	ILE
1	A	273	THR
1	A	274	LEU
1	A	280	LYS
1	A	281	CYS
1	A	282	GLN
1	A	309	VAL
1	A	315	VAL
1	A	320	LEU
1	A	323	VAL
1	A	331	LEU
1	A	335	ILE
1	A	343	TRP
1	A	348	ASP
1	A	350	TRP
1	A	351	TYR
1	A	359	GLN
1	A	366	ASP
1	A	371	GLN
1	A	375	ASP
1	A	380	LYS
1	A	382	ASN
1	A	389	ASN
1	A	390	THR
1	A	395	VAL
1	A	407	GLU
1	A	410	ASN
1	A	428	LEU
1	A	452	ARG
1	A	457	ASP
1	A	460	LYS
1	A	469	PHE
1	A	494	GLU

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Mol	Chain	Res	Type
1	A	496	LYS
1	B	19	LYS
1	B	23	ILE
1	B	55	GLU
1	B	61	ILE
1	B	70	GLU
1	B	73	ARG
1	B	86	LYS
1	B	110	SER
1	B	113	THR
1	B	141	PHE
1	B	142	ASP
1	B	143	ASN
1	B	154	THR
1	B	188	THR
1	B	241	THR
1	B	273	THR
1	B	275	GLU
1	B	277	CYS
1	B	283	THR
1	B	307	LYS
1	B	309	VAL
1	B	323	VAL
1	B	325	GLN
1	B	331	LEU
1	B	389	ASN
1	B	397	LYS
1	B	404	LYS
1	B	410	ASN
1	B	426	GLU
1	B	437	LEU
1	B	456	ARG
1	B	473	CYS
1	B	496	LYS
1	C	19	LYS
1	C	23	ILE
1	C	55	GLU
1	C	61	ILE
1	C	70	GLU
1	C	73	ARG
1	C	86	LYS
1	C	110	SER

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Mol	Chain	Res	Type
1	C	113	THR
1	C	141	PHE
1	C	142	ASP
1	C	143	ASN
1	C	154	THR
1	C	188	THR
1	C	241	THR
1	C	273	THR
1	C	275	GLU
1	C	277	CYS
1	C	283	THR
1	C	307	LYS
1	C	323	VAL
1	C	331	LEU
1	C	389	ASN
1	C	397	LYS
1	C	404	LYS
1	C	410	ASN
1	C	426	GLU
1	C	437	LEU
1	C	473	CYS
1	D	17	THR
1	D	19	LYS
1	D	21	ASP
1	D	23	ILE
1	D	26	ARG
1	D	39	LYS
1	D	40	THR
1	D	52	PRO
1	D	56	LEU
1	D	58	ASP
1	D	74	LEU
1	D	77	VAL
1	D	82	TYR
1	D	86	LYS
1	D	88	ASN
1	D	90	ARG
1	D	91	ASN
1	D	94	CYS
1	D	98	SER
1	D	108	LEU
1	D	111	SER

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Mol	Chain	Res	Type
1	D	114	HIS
1	D	118	VAL
1	D	148	ARG
1	D	162	VAL
1	D	170	THR
1	D	173	GLU
1	D	176	LEU
1	D	177	ILE
1	D	188	THR
1	D	195	GLN
1	D	196	ASN
1	D	197	VAL
1	D	202	SER
1	D	208	LEU
1	D	211	ARG
1	D	212	SER
1	D	219	ARG
1	D	230	GLU
1	D	239	TRP
1	D	241	THR
1	D	259	ILE
1	D	260	SER
1	D	273	THR
1	D	274	LEU
1	D	281	CYS
1	D	295	HIS
1	D	307	LYS
1	D	310	LYS
1	D	316	LEU
1	D	321	ARG
1	D	323	VAL
1	D	331	LEU
1	D	389	ASN
1	D	397	LYS
1	D	404	LYS
1	D	410	ASN
1	D	426	GLU
1	D	437	LEU
1	D	473	CYS
1	D	495	SER
1	E	19	LYS
1	E	23	ILE

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Mol	Chain	Res	Type
1	E	55	GLU
1	E	61	ILE
1	E	70	GLU
1	E	73	ARG
1	E	86	LYS
1	E	110	SER
1	E	113	THR
1	E	141	PHE
1	E	142	ASP
1	E	143	ASN
1	E	154	THR
1	E	188	THR
1	E	241	THR
1	E	260	SER
1	E	273	THR
1	E	275	GLU
1	E	277	CYS
1	E	283	THR
1	E	307	LYS
1	E	323	VAL
1	E	331	LEU
1	E	389	ASN
1	E	397	LYS
1	E	404	LYS
1	E	410	ASN
1	E	426	GLU
1	E	437	LEU
1	E	456	ARG
1	E	473	CYS
1	F	19	LYS
1	F	23	ILE
1	F	55	GLU
1	F	61	ILE
1	F	70	GLU
1	F	73	ARG
1	F	86	LYS
1	F	110	SER
1	F	113	THR
1	F	141	PHE
1	F	142	ASP
1	F	143	ASN
1	F	154	THR

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Mol	Chain	Res	Type
1	F	188	THR
1	F	241	THR
1	F	273	THR
1	F	275	GLU
1	F	277	CYS
1	F	283	THR
1	F	307	LYS
1	F	309	VAL
1	F	323	VAL
1	F	331	LEU
1	F	389	ASN
1	F	397	LYS
1	F	404	LYS
1	F	410	ASN
1	F	426	GLU
1	F	437	LEU
1	F	473	CYS
1	G	19	LYS
1	G	23	ILE
1	G	55	GLU
1	G	61	ILE
1	G	70	GLU
1	G	73	ARG
1	G	86	LYS
1	G	110	SER
1	G	113	THR
1	G	141	PHE
1	G	142	ASP
1	G	143	ASN
1	G	154	THR
1	G	188	THR
1	G	241	THR
1	G	273	THR
1	G	275	GLU
1	G	277	CYS
1	G	283	THR
1	G	307	LYS
1	G	323	VAL
1	G	346	MET
1	G	347	VAL
1	G	351	TYR
1	G	355	HIS

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Mol	Chain	Res	Type
1	G	356	SER
1	G	357	ASN
1	G	358	ASP
1	G	359	GLN
1	G	367	LYS
1	G	381	VAL
1	G	389	ASN
1	G	390	THR
1	G	398	GLU
1	G	404	LYS
1	G	407	GLU
1	G	408	ASN
1	G	409	LEU
1	G	410	ASN
1	G	411	LYS
1	G	426	GLU
1	G	427	LEU
1	G	430	LEU
1	G	459	VAL
1	G	466	CYS
1	G	483	ASN
1	G	494	GLU
1	G	496	LYS
1	H	19	LYS
1	H	23	ILE
1	H	55	GLU
1	H	61	ILE
1	H	70	GLU
1	H	73	ARG
1	H	86	LYS
1	H	110	SER
1	H	113	THR
1	H	141	PHE
1	H	142	ASP
1	H	143	ASN
1	H	154	THR
1	H	188	THR
1	H	241	THR
1	H	273	THR
1	H	275	GLU
1	H	277	CYS
1	H	283	THR

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Mol	Chain	Res	Type
1	H	307	LYS
1	H	323	VAL
1	H	325	GLN
1	H	389	ASN
1	H	397	LYS
1	H	404	LYS
1	H	410	ASN
1	H	426	GLU
1	H	437	LEU
1	H	456	ARG
1	H	473	CYS
1	H	493	GLU
1	I	19	LYS
1	I	23	ILE
1	I	55	GLU
1	I	61	ILE
1	I	70	GLU
1	I	73	ARG
1	I	86	LYS
1	I	110	SER
1	I	113	THR
1	I	141	PHE
1	I	142	ASP
1	I	143	ASN
1	I	154	THR
1	I	188	THR
1	I	241	THR
1	I	273	THR
1	I	275	GLU
1	I	277	CYS
1	I	283	THR
1	I	307	LYS
1	I	309	VAL
1	I	323	VAL
1	I	325	GLN
1	I	351	TYR
1	I	389	ASN
1	I	397	LYS
1	I	404	LYS
1	I	410	ASN
1	I	426	GLU
1	I	437	LEU

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Mol	Chain	Res	Type
1	I	456	ARG
1	I	473	CYS

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (147) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	34	GLN
1	A	88	ASN
1	A	129	HIS
1	A	182	HIS
1	A	196	ASN
1	A	225	GLN
1	A	243	ASN
1	A	249	ASN
1	A	282	GLN
1	A	354	HIS
1	A	359	GLN
1	A	371	GLN
1	A	379	ASN
1	A	382	ASN
1	A	389	ASN
1	A	391	GLN
1	A	440	HIS
1	A	446	ASN
1	B	34	GLN
1	B	91	ASN
1	B	136	GLN
1	B	143	ASN
1	B	159	ASN
1	B	182	HIS
1	B	185	ASN
1	B	243	ASN
1	B	249	ASN
1	B	295	HIS
1	B	354	HIS
1	B	355	HIS
1	B	371	GLN
1	B	379	ASN
1	B	389	ASN
1	B	391	GLN
1	B	408	ASN
1	C	34	GLN

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Mol	Chain	Res	Type
1	C	91	ASN
1	C	136	GLN
1	C	143	ASN
1	C	159	ASN
1	C	182	HIS
1	C	185	ASN
1	C	243	ASN
1	C	249	ASN
1	C	295	HIS
1	C	354	HIS
1	C	355	HIS
1	C	371	GLN
1	C	379	ASN
1	C	389	ASN
1	C	391	GLN
1	C	446	ASN
1	D	12	HIS
1	D	41	HIS
1	D	42	ASN
1	D	49	ASN
1	D	88	ASN
1	D	100	ASN
1	D	159	ASN
1	D	182	HIS
1	D	195	GLN
1	D	243	ASN
1	D	249	ASN
1	D	295	HIS
1	D	354	HIS
1	D	355	HIS
1	D	371	GLN
1	D	379	ASN
1	D	389	ASN
1	D	391	GLN
1	E	34	GLN
1	E	91	ASN
1	E	136	GLN
1	E	143	ASN
1	E	159	ASN
1	E	182	HIS
1	E	185	ASN
1	E	243	ASN

Continued on next page...

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Mol	Chain	Res	Type
1	E	249	ASN
1	E	295	HIS
1	E	354	HIS
1	E	355	HIS
1	E	371	GLN
1	E	379	ASN
1	E	389	ASN
1	E	391	GLN
1	E	446	ASN
1	F	34	GLN
1	F	91	ASN
1	F	143	ASN
1	F	159	ASN
1	F	182	HIS
1	F	185	ASN
1	F	243	ASN
1	F	249	ASN
1	F	295	HIS
1	F	354	HIS
1	F	355	HIS
1	F	371	GLN
1	F	379	ASN
1	F	389	ASN
1	F	391	GLN
1	G	34	GLN
1	G	91	ASN
1	G	136	GLN
1	G	143	ASN
1	G	159	ASN
1	G	182	HIS
1	G	185	ASN
1	G	243	ASN
1	G	249	ASN
1	G	295	HIS
1	G	408	ASN
1	H	34	GLN
1	H	91	ASN
1	H	136	GLN
1	H	143	ASN
1	H	159	ASN
1	H	182	HIS
1	H	185	ASN

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Mol	Chain	Res	Type
1	H	243	ASN
1	H	249	ASN
1	H	295	HIS
1	H	355	HIS
1	H	371	GLN
1	H	379	ASN
1	H	389	ASN
1	H	391	GLN
1	I	15	ASN
1	I	34	GLN
1	I	91	ASN
1	I	136	GLN
1	I	143	ASN
1	I	159	ASN
1	I	182	HIS
1	I	185	ASN
1	I	243	ASN
1	I	249	ASN
1	I	295	HIS
1	I	325	GLN
1	I	344	GLN
1	I	354	HIS
1	I	355	HIS
1	I	371	GLN
1	I	379	ASN
1	I	389	ASN
1	I	408	ASN

5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates ⓘ

2 carbohydrates 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	$\# Z > 2$
3	SIA	F	1497	3	16,20,21	0.38	0	18,28,31	1.65	4 (22%)
3	GAL	F	1498	3	12,12,12	0.51	0	17,17,17	1.33	2 (11%)

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
3	SIA	F	1497	3	-	0/14/34/38	0/1/1/1
3	GAL	F	1498	3	-	0/2/22/22	0/1/1/1

There are no bond length outliers.

All (6) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed($^{\circ}$)	Ideal($^{\circ}$)
3	F	1497	SIA	C8-C7-C6	-3.24	106.49	113.01
3	F	1497	SIA	C3-C4-C5	-3.04	108.09	111.47
3	F	1497	SIA	C7-C6-C5	2.32	117.83	114.32
3	F	1498	GAL	O5-C1-C2	2.62	113.98	109.80
3	F	1497	SIA	C6-C5-N5	3.32	116.87	111.07
3	F	1498	GAL	C1-C2-C3	3.40	115.49	110.43

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

1 monomer is involved in 7 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	F	1497	SIA	7	0

5.6 Ligand geometry

1 ligand is modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\# Z > 2$	Counts	RMSZ	$\# Z > 2$
2	SIA	D	1497	-	17,21,21	0.69	0	19,31,31	1.18	2 (10%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	SIA	D	1497	-	-	0/14/38/38	0/1/1/1

There are no bond length outliers.

All (2) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	D	1497	SIA	C7-C6-C5	-3.11	109.62	114.32
2	D	1497	SIA	O2-C2-C3	2.01	111.91	109.41

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

1 monomer is involved in 1 short contact:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	D	1497	SIA	1	0

5.7 Other polymers ⓘ

There are no such residues in this entry.

5.8 Polymer linkage issues ⓘ

There are no chain breaks in this entry.

6 Fit of model and data ⓘ

6.1 Protein, DNA and RNA chains ⓘ

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2		OWAB(Å ²)	Q<0.9
1	A	486/507 (95%)	-0.07	21 (4%)	39 18	23, 64, 148, 275	0
1	B	486/507 (95%)	0.12	23 (4%)	35 16	27, 66, 148, 278	0
1	C	486/507 (95%)	0.22	32 (6%)	22 8	24, 78, 160, 298	0
1	D	486/507 (95%)	0.25	48 (9%)	9 3	26, 71, 222, 378	0
1	E	486/507 (95%)	0.54	60 (12%)	5 2	31, 94, 232, 308	0
1	F	486/507 (95%)	0.43	44 (9%)	11 4	40, 96, 188, 258	0
1	G	486/507 (95%)	0.27	48 (9%)	9 3	20, 70, 182, 365	0
1	H	486/507 (95%)	0.55	53 (10%)	7 2	20, 73, 179, 367	0
1	I	486/507 (95%)	0.35	39 (8%)	15 5	26, 73, 195, 376	0
All	All	4374/4563 (95%)	0.30	368 (8%)	14 4	20, 76, 188, 378	0

All (368) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	H	263	GLY	15.2
1	G	265	SER	13.3
1	I	391	GLN	10.6
1	H	75	LEU	10.2
1	D	486	TYR	9.7
1	G	390	THR	9.4
1	I	390	THR	9.2
1	H	276	ASN	8.3
1	I	392	PHE	8.2
1	I	265	SER	8.0
1	I	276	ASN	7.7
1	D	348	ASP	7.6
1	H	265	SER	7.2
1	D	356	SER	7.1
1	F	351	TYR	6.9

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Mol	Chain	Res	Type	RSRZ
1	F	460	LYS	6.8
1	H	392	PHE	6.8
1	H	304	GLU	6.7
1	D	361	SER	6.6
1	H	262	ARG	6.5
1	D	460	LYS	6.5
1	G	111	SER	6.5
1	H	141	PHE	6.4
1	G	221	GLU	6.4
1	I	264	SER	6.3
1	I	51	ILE	6.2
1	G	195	GLN	6.2
1	F	469	PHE	6.1
1	B	358	ASP	5.9
1	H	157	GLY	5.8
1	E	9	VAL	5.8
1	G	264	SER	5.6
1	F	349	GLY	5.6
1	D	468	GLU	5.5
1	A	10	GLY	5.3
1	F	459	VAL	5.3
1	I	75	LEU	5.2
1	F	325	GLN	5.2
1	H	142	ASP	5.1
1	E	27	ASN	5.1
1	B	275	GLU	5.0
1	G	304	GLU	5.0
1	D	470	TYR	5.0
1	C	460	LYS	4.9
1	A	486	TYR	4.9
1	F	478	MET	4.9
1	D	355	HIS	4.9
1	H	391	GLN	4.8
1	E	352	GLY	4.8
1	G	263	GLY	4.7
1	E	356	SER	4.7
1	D	360	GLY	4.7
1	H	111	SER	4.7
1	G	391	GLN	4.7
1	D	456	ARG	4.7
1	I	15	ASN	4.6
1	H	303	GLY	4.6

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Mol	Chain	Res	Type	RSRZ
1	H	261	LYS	4.6
1	D	354	HIS	4.6
1	D	455	LEU	4.5
1	E	8	CYS	4.5
1	E	10	GLY	4.5
1	G	49	ASN	4.4
1	B	475	ASP	4.4
1	C	141	PHE	4.4
1	D	487	ASP	4.4
1	I	111	SER	4.3
1	I	472	LYS	4.3
1	E	355	HIS	4.3
1	E	359	GLN	4.3
1	I	49	ASN	4.3
1	F	350	TRP	4.3
1	E	90	ARG	4.3
1	H	81	SER	4.3
1	I	262	ARG	4.3
1	E	467	PHE	4.2
1	G	325	GLN	4.2
1	F	348	ASP	4.2
1	H	49	ASN	4.2
1	F	159	ASN	4.2
1	H	389	ASN	4.1
1	F	27	ASN	4.0
1	C	487	ASP	4.0
1	A	276	ASN	4.0
1	C	10	GLY	4.0
1	H	394	ALA	3.9
1	G	266	GLY	3.9
1	C	262	ARG	3.9
1	H	8	CYS	3.9
1	E	40	THR	3.9
1	H	390	THR	3.8
1	A	15	ASN	3.8
1	B	271	GLU	3.8
1	E	73	ARG	3.8
1	E	477	CYS	3.7
1	F	10	GLY	3.7
1	G	276	ASN	3.7
1	E	325	GLN	3.7
1	E	275	GLU	3.7

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Mol	Chain	Res	Type	RSRZ
1	C	345	GLY	3.6
1	F	473	CYS	3.6
1	D	353	TYR	3.6
1	H	46	CYS	3.6
1	I	48	LEU	3.6
1	E	461	GLU	3.5
1	E	493	GLU	3.5
1	B	272	GLY	3.5
1	D	457	ASP	3.5
1	E	478	MET	3.5
1	G	389	ASN	3.5
1	H	112	VAL	3.4
1	E	358	ASP	3.4
1	B	460	LYS	3.4
1	D	480	SER	3.4
1	H	489	SER	3.4
1	F	187	GLU	3.4
1	G	194	TYR	3.4
1	F	458	ASN	3.4
1	F	476	GLU	3.4
1	D	371	GLN	3.3
1	E	473	CYS	3.3
1	G	81	SER	3.3
1	D	15	ASN	3.3
1	D	489	SER	3.3
1	H	360	GLY	3.3
1	E	141	PHE	3.3
1	F	470	TYR	3.3
1	D	340	GLU	3.3
1	E	289	ASN	3.3
1	D	484	GLY	3.3
1	H	137	GLY	3.3
1	A	16	SER	3.3
1	A	358	ASP	3.3
1	C	277	CYS	3.2
1	E	353	TYR	3.2
1	E	7	ILE	3.2
1	E	463	GLY	3.2
1	F	276	ASN	3.2
1	F	474	ASP	3.2
1	H	264	SER	3.2
1	I	393	GLU	3.2

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Mol	Chain	Res	Type	RSRZ
1	E	466	CYS	3.2
1	H	395	VAL	3.2
1	B	359	GLN	3.2
1	G	128	GLN	3.2
1	H	114	HIS	3.2
1	I	303	GLY	3.2
1	A	487	ASP	3.1
1	B	50	GLY	3.1
1	C	8	CYS	3.1
1	H	47	LYS	3.1
1	H	487	ASP	3.1
1	G	305	CYS	3.1
1	D	338	PHE	3.1
1	G	79	GLU	3.1
1	H	386	GLU	3.1
1	D	459	VAL	3.1
1	D	362	GLY	3.1
1	B	472	LYS	3.1
1	F	369	SER	3.1
1	E	492	GLU	3.1
1	I	172	GLY	3.1
1	E	271	GLU	3.0
1	H	44	LYS	3.0
1	H	53	PRO	3.0
1	D	90	ARG	3.0
1	D	322	ASN	3.0
1	A	352	GLY	3.0
1	I	290	THR	3.0
1	B	360	GLY	3.0
1	H	7	ILE	3.0
1	D	477	CYS	3.0
1	B	192	THR	3.0
1	I	136	GLN	3.0
1	I	291	THR	3.0
1	G	32	HIS	3.0
1	A	489	SER	3.0
1	I	489	SER	3.0
1	F	34	GLN	3.0
1	C	475	ASP	3.0
1	G	394	ALA	3.0
1	G	489	SER	2.9
1	E	156	LYS	2.9

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Mol	Chain	Res	Type	RSRZ
1	G	196	ASN	2.9
1	C	364	ALA	2.9
1	E	354	HIS	2.9
1	I	358	ASP	2.9
1	I	394	ALA	2.9
1	E	472	LYS	2.9
1	D	347	VAL	2.9
1	H	280	LYS	2.9
1	E	11	TYR	2.9
1	E	361	SER	2.9
1	I	388	MET	2.9
1	E	246	SER	2.9
1	G	140	VAL	2.9
1	D	352	GLY	2.9
1	F	468	GLU	2.9
1	I	280	LYS	2.9
1	D	381	VAL	2.9
1	G	303	GLY	2.9
1	D	364	ALA	2.8
1	F	280	LYS	2.8
1	B	476	GLU	2.8
1	D	471	HIS	2.8
1	B	195	GLN	2.8
1	H	195	GLN	2.8
1	H	325	GLN	2.8
1	G	26	ARG	2.8
1	C	136	GLN	2.8
1	D	481	VAL	2.8
1	C	346	MET	2.8
1	F	375	ASP	2.8
1	G	220	PRO	2.8
1	B	467	PHE	2.7
1	G	190	GLN	2.7
1	A	485	THR	2.7
1	F	471	HIS	2.7
1	G	114	HIS	2.7
1	E	21	ASP	2.7
1	C	9	VAL	2.7
1	B	311	SER	2.7
1	I	387	LYS	2.7
1	C	340	GLU	2.7
1	H	359	GLN	2.7

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Mol	Chain	Res	Type	RSRZ
1	C	351	TYR	2.7
1	A	324	PRO	2.7
1	A	350	TRP	2.7
1	F	456	ARG	2.7
1	E	475	ASP	2.7
1	E	158	SER	2.7
1	E	465	GLY	2.7
1	E	351	TYR	2.7
1	H	42	ASN	2.7
1	E	128	GLN	2.7
1	E	487	ASP	2.7
1	H	159	ASN	2.6
1	G	222	VAL	2.6
1	F	58	ASP	2.6
1	B	289	ASN	2.6
1	D	491	TYR	2.6
1	C	454	GLN	2.6
1	E	239	TRP	2.6
1	B	273	THR	2.6
1	G	42	ASN	2.6
1	D	485	THR	2.6
1	D	345	GLY	2.6
1	G	395	VAL	2.6
1	C	486	TYR	2.6
1	F	67	GLY	2.5
1	C	289	ASN	2.5
1	F	461	GLU	2.5
1	D	16	SER	2.5
1	A	325	GLN	2.5
1	C	355	HIS	2.5
1	H	222	VAL	2.5
1	F	90	ARG	2.5
1	D	142	ASP	2.5
1	E	12	HIS	2.5
1	E	155	LYS	2.5
1	D	323	VAL	2.5
1	A	17	THR	2.5
1	G	191	ARG	2.5
1	I	79	GLU	2.5
1	F	353	TYR	2.5
1	B	356	SER	2.5
1	B	474	ASP	2.5

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Mol	Chain	Res	Type	RSRZ
1	G	290	THR	2.4
1	G	223	ASN	2.4
1	E	191	ARG	2.4
1	E	460	LYS	2.4
1	E	468	GLU	2.4
1	E	28	VAL	2.4
1	D	49	ASN	2.4
1	C	347	VAL	2.4
1	I	42	ASN	2.4
1	I	386	GLU	2.4
1	C	15	ASN	2.4
1	I	109	ILE	2.3
1	G	157	GLY	2.3
1	C	348	ASP	2.3
1	I	266	GLY	2.3
1	A	29	THR	2.3
1	I	395	VAL	2.3
1	I	191	ARG	2.3
1	C	360	GLY	2.3
1	I	110	SER	2.3
1	B	141	PHE	2.3
1	I	256	GLY	2.3
1	E	462	LEU	2.3
1	C	361	SER	2.3
1	A	362	GLY	2.3
1	G	75	LEU	2.3
1	E	364	ALA	2.3
1	C	125	ARG	2.3
1	I	53	PRO	2.3
1	C	470	TYR	2.3
1	F	277	CYS	2.3
1	B	361	SER	2.3
1	E	311	SER	2.3
1	F	370	THR	2.3
1	H	310	LYS	2.3
1	A	472	LYS	2.3
1	H	128	GLN	2.2
1	H	305	CYS	2.2
1	I	81	SER	2.2
1	G	392	PHE	2.2
1	E	247	THR	2.2
1	G	143	ASN	2.2

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Mol	Chain	Res	Type	RSRZ
1	G	73	ARG	2.2
1	G	288	ILE	2.2
1	H	73	ARG	2.2
1	C	7	ILE	2.2
1	G	112	VAL	2.2
1	F	340	GLU	2.2
1	H	393	GLU	2.2
1	H	388	MET	2.2
1	H	260	SER	2.2
1	E	273	THR	2.2
1	E	39	LYS	2.2
1	D	472	LYS	2.2
1	D	10	GLY	2.2
1	C	321	ARG	2.2
1	B	34	GLN	2.2
1	G	110	SER	2.2
1	C	137	GLY	2.2
1	D	324	PRO	2.2
1	E	319	GLY	2.2
1	G	186	ASP	2.2
1	F	330	GLY	2.1
1	B	9	VAL	2.1
1	E	481	VAL	2.1
1	F	26	ARG	2.1
1	A	456	ARG	2.1
1	D	325	GLN	2.1
1	E	165	GLY	2.1
1	C	221	GLU	2.1
1	G	158	SER	2.1
1	E	41	HIS	2.1
1	E	127	THR	2.1
1	D	467	PHE	2.1
1	H	300	LEU	2.1
1	F	143	ASN	2.1
1	F	273	THR	2.1
1	F	486	TYR	2.1
1	A	365	ALA	2.1
1	A	491	TYR	2.1
1	F	359	GLN	2.1
1	H	400	SER	2.1
1	A	124	ASP	2.1
1	C	344	GLN	2.1

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Mol	Chain	Res	Type	RSRZ
1	D	239	TRP	2.1
1	D	462	LEU	2.1
1	G	46	CYS	2.1
1	F	191	ARG	2.1
1	H	474	ASP	2.0
1	G	53	PRO	2.0
1	F	168	ASN	2.0
1	D	454	GLN	2.0
1	I	398	GLU	2.0
1	G	78	PRO	2.0
1	I	47	LYS	2.0
1	F	157	GLY	2.0
1	E	196	ASN	2.0
1	H	290	THR	2.0
1	H	293	PRO	2.0
1	C	449	ASP	2.0
1	F	365	ALA	2.0

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

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

6.3 Carbohydrates [i](#)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. LLDF column lists the quality of electron density of the group with respect to its neighbouring residues in protein, DNA or RNA chains. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
3	SIA	F	1497	20/21	0.90	0.16	-0.98	89,89,89,89	0
3	GAL	F	1498	12/12	0.87	0.17	-	89,89,89,89	0

6.4 Ligands [i](#)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. LLDF column lists the quality of electron density of the group with respect to its neighbouring residues in protein, DNA or RNA chains. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors

of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
2	SIA	D	1497	21/21	0.92	0.17	0.23	52,52,52,52	0

6.5 Other polymers [i](#)

There are no such residues in this entry.