Full wwPDB X-ray Structure Validation Report ⓘ

Jan 31, 2016 – 09:38 PM GMT

PDB ID : 1PWX

Title : Crystal structure of the haloalcohol dehalogenase HheC complexed with bromide

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Deposited on : 2003-07-02

Resolution : 1.80 Å(reported)

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 (i)

The following experimental techniques were used to determine the structure:
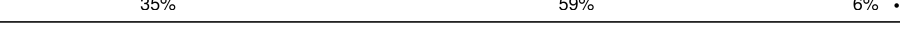*X-RAY DIFFRACTION*

The reported resolution of this entry is 1.80 Å.

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

■ Percentile relative to all X-ray structures
▯ Percentile relative to X-ray structures of similar resolution
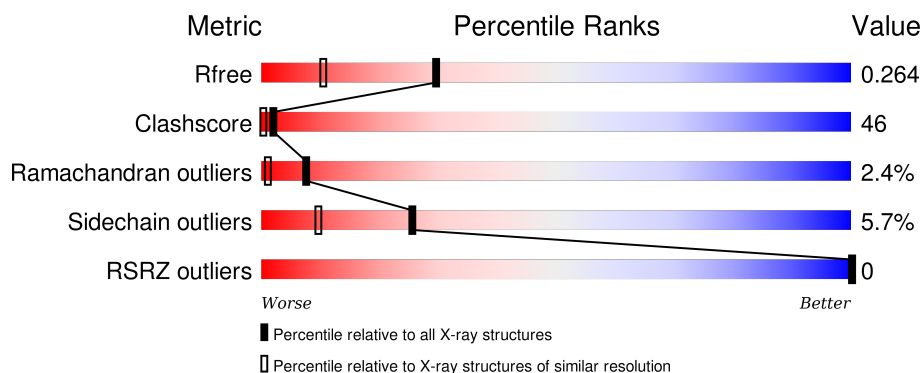
Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	91344	4533 (1.80-1.80)
Clashscore	102246	5383 (1.80-1.80)
Ramachandran outliers	100387	5320 (1.80-1.80)
Sidechain outliers	100360	5319 (1.80-1.80)
RSRZ outliers	91569	4547 (1.80-1.80)

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 <=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	254	43% 52% • •
1	B	254	37% 57% • •
1	C	254	40% 52% 7% •
1	D	254	35% 59% 6% •

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard

residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
2	BR	A	601	-	-	X	-
2	BR	A	606	-	-	X	-
2	BR	B	608	-	-	X	-

2 Entry composition (i)

There are 3 unique types of molecules in this entry. The entry contains 8201 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 halohydrin dehalogenase.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	252	Total	C	N	O	S	0	0	0
			1915	1233	319	355	8			
1	B	252	Total	C	N	O	S	0	0	0
			1919	1234	318	359	8			
1	C	252	Total	C	N	O	S	0	0	0
			1915	1232	318	357	8			
1	D	252	Total	C	N	O	S	0	0	0
			1919	1236	320	355	8			

- Molecule 2 is BROMIDE ION (three-letter code: BR) (formula: Br).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
2	B	3	Total	Br	0	0
			3	3		
2	A	2	Total	Br	0	0
			2	2		
2	D	1	Total	Br	0	0
			1	1		
2	C	2	Total	Br	0	0
			2	2		

- Molecule 3 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	A	144	Total	O	0	0
			144	144		
3	B	119	Total	O	0	0
			119	119		
3	C	129	Total	O	0	0
			129	129		
3	D	133	Total	O	0	0
			133	133		

3 Residue-property plots ⓘ

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

- Molecule 1: halohydrin dehalogenase
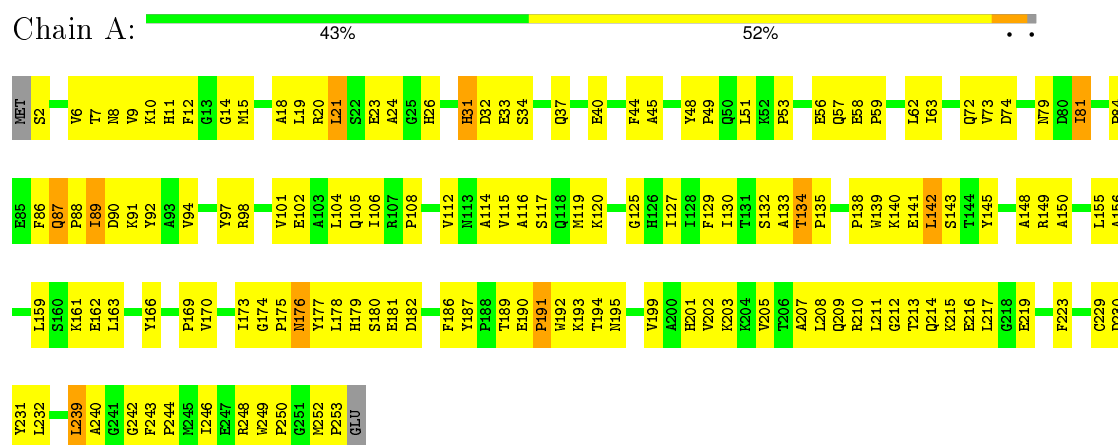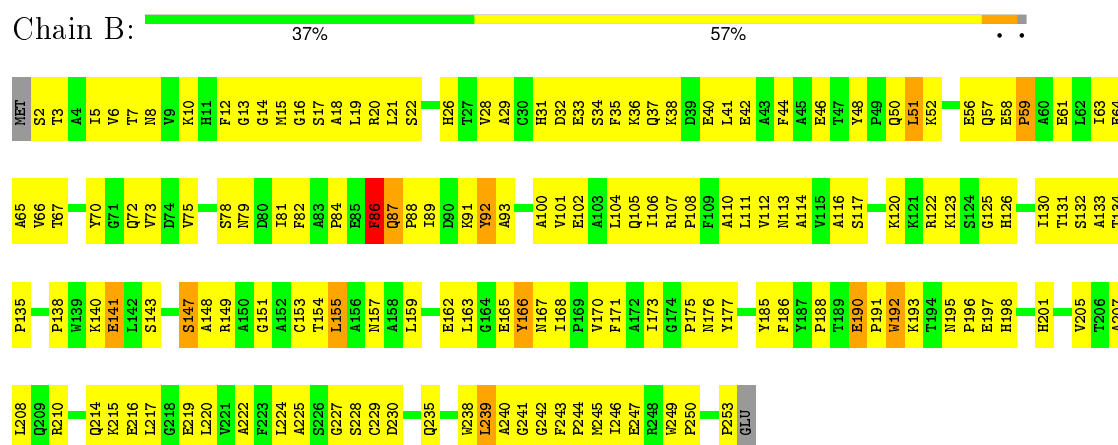
Chain A:

- Molecule 1: halohydrin dehalogenase

Chain B:

- Molecule 1: halohydrin dehalogenase

Chain C:

• Molecule 1: halohydrin dehalogenase

Chain D:

35%   59%   6% ·
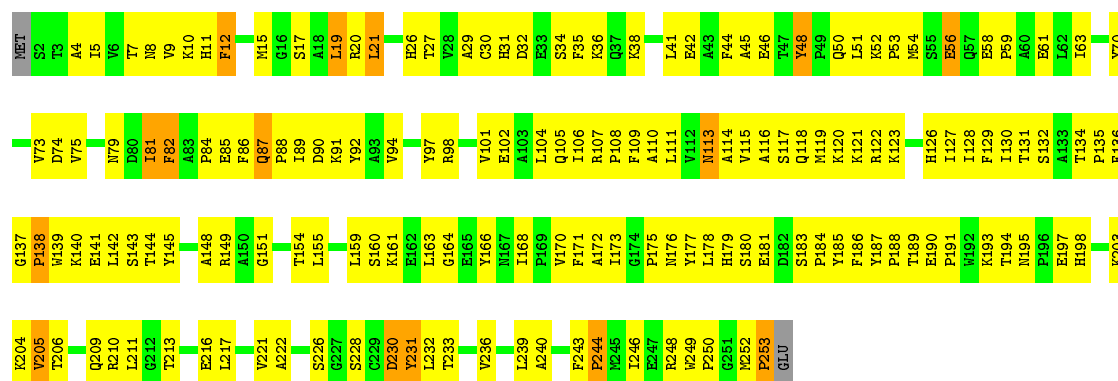
4 Data and refinement statistics (i)

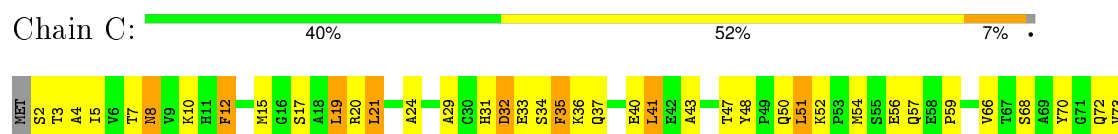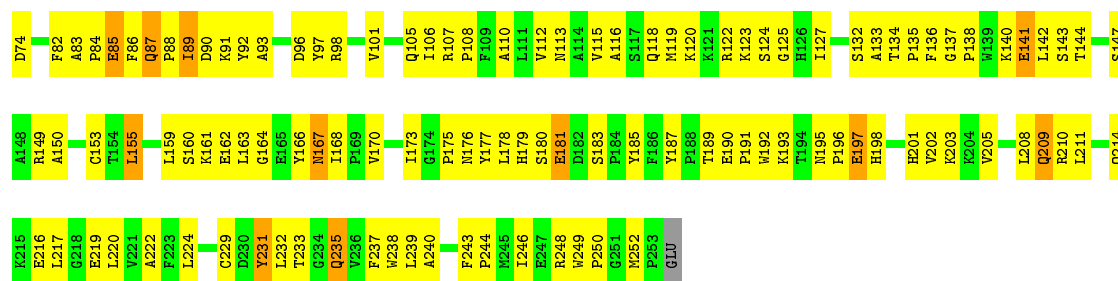| Property	Value	Source
Space group	P 43	Depositor
Cell constants a, b, c, α, β, γ	103.21Å 103.21Å 117.41Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	38.76 – 1.80 38.76 – 1.75	Depositor EDS
% Data completeness (in resolution range)	97.9 (38.76-1.80) 97.8 (38.76-1.75)	Depositor EDS
R_{merge}	0.08	Depositor
R_{sym}	0.07	Depositor
$< I/\sigma(I) >$ [1]	7.49 (at 1.75Å)	Xtriage
Refinement program	CNX, CNS 1.1	Depositor
R, R_{free}	0.226 , 0.313 0.206 , 0.264	Depositor DCC
R_{free} test set	8691 reflections (8.48%)	DCC
Wilson B-factor (Å^2)	2.5	Xtriage
Anisotropy	0.363	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.35 , 115.1	EDS
Estimated twinning fraction	0.499 for h,-k,-l	Xtriage
L-test for twinning[2]	$< |L| > = 0.22, < L^2 > = 0.07$	Xtriage
Outliers	0 of 121118 reflections	Xtriage
F_o,F_c correlation	0.78	EDS
Total number of atoms	8201	wwPDB-VP
Average B, all atoms (Å^2)	16.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.62% of the height of the origin peak. No significant pseudotranslation is detected.*

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[1]Intensities estimated from amplitudes.
[2]Theoretical values of $< |L| >$, $< L^2 >$ for acentric reflections are 0.5, 0.375 respectively for untwinned datasets, and 0.333, 0.2 for perfectly twinned datasets.

5 Model quality (i)

5.1 Standard geometry (i)

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

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	0.43	0/1969	0.69	0/2686
1	B	0.41	0/1973	0.68	0/2692
1	C	0.43	0/1969	0.70	1/2687 (0.0%)
1	D	0.43	0/1973	0.68	0/2690
All	All	0.43	0/7884	0.69	1/10755 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	D	0	1

There are no bond length outliers.

All (1) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	C	141	GLU	N-CA-C	5.18	124.99	111.00

There are no chirality outliers.

All (1) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	D	48	TYR	Sidechain

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	1915	0	1846	180	0
1	B	1919	0	1843	207	0
1	C	1915	0	1839	198	0
1	D	1919	0	1857	190	0
2	A	2	0	0	7	0
2	B	3	0	0	3	0
2	C	2	0	0	2	0
2	D	1	0	0	0	0
3	A	144	0	0	23	0
3	B	119	0	0	32	0
3	C	129	0	0	17	0
3	D	133	0	0	15	0
All	All	8201	0	7385	693	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 46.

All (693) 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:229:CYS:HA	1:C:216:GLU:HG2	1.36	1.07
1:B:116:ALA:O	1:B:120:LYS:HG3	1.52	1.07
1:A:101:VAL:HG11	1:B:101:VAL:HG11	1.36	1.03
1:A:105:GLN:HE21	1:A:148:ALA:HA	1.23	0.99
1:D:50:GLN:HG2	1:D:51:LEU:HD12	1.43	0.97
1:A:33:GLU:HA	1:A:57:GLN:HE22	1.29	0.96
1:B:117:SER:HA	1:B:120:LYS:HE2	1.47	0.96
1:A:207:ALA:HB3	1:A:242:GLY:HA3	1.45	0.96
1:D:203:LYS:HD3	1:D:209:GLN:HB3	1.47	0.95
1:A:210:ARG:HH12	1:A:212:GLY:HA2	1.34	0.92
1:A:187:TYR:HH	1:C:249:TRP:HZ2	0.96	0.90
1:A:191:PRO:HB2	1:A:195:ASN:CB	2.02	0.90
1:D:240:ALA:HB1	1:D:243:PHE:HB3	1.53	0.89
1:B:191:PRO:HG2	1:B:198:HIS:CD2	2.06	0.89
1:B:38:LYS:O	1:B:42:GLU:HG3	1.73	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:132:SER:HB3	1:C:149:ARG:HG3	1.56	0.87
1:D:88:PRO:HD2	1:D:91:LYS:HG3	1.57	0.85
1:A:8:ASN:HB3	1:A:81:ILE:HD11	1.58	0.85
1:B:56:GLU:HG2	1:B:65:ALA:HB2	1.57	0.85
1:A:90:ASP:HB3	1:B:116:ALA:HB3	1.59	0.84
1:B:133:ALA:HB3	1:B:176:ASN:HB2	1.60	0.84
1:C:5:ILE:HD11	1:C:66:VAL:HG11	1.59	0.83
1:B:215:LYS:O	1:B:219:GLU:HG2	1.78	0.83
1:A:105:GLN:NE2	1:A:148:ALA:HA	1.93	0.83
1:D:63:ILE:HD13	1:D:115:VAL:HB	1.62	0.82
1:D:74:ASP:HA	1:D:122:ARG:HH21	1.45	0.81
1:A:120:LYS:HE3	1:A:166:TYR:CE2	2.15	0.81
1:A:203:LYS:HD2	1:A:209:GLN:HB3	1.62	0.81
1:D:102:GLU:O	1:D:106:ILE:HB	1.81	0.81
1:D:179:HIS:HB2	1:D:211:LEU:HD22	1.62	0.80
1:A:191:PRO:HB2	1:A:195:ASN:HB2	1.61	0.80
1:B:117:SER:HA	1:B:120:LYS:CE	2.11	0.80
1:B:188:PRO:O	1:B:192:TRP:HB2	1.84	0.78
1:A:215:LYS:O	1:A:219:GLU:HG2	1.82	0.78
1:D:120:LYS:HE3	1:D:166:TYR:CZ	2.19	0.78
1:B:51:LEU:HD11	3:B:719:HOH:O	1.83	0.77
1:D:248:ARG:HD2	1:D:252:MET:HE1	1.67	0.77
1:B:15:MET:HE3	1:B:19:LEU:HD11	1.66	0.77
1:A:119:MET:HE1	1:A:127:ILE:HD11	1.65	0.77
1:A:191:PRO:HB2	1:A:195:ASN:HB3	1.67	0.76
1:B:15:MET:O	1:B:19:LEU:HD13	1.85	0.76
1:C:167:ASN:HD22	1:C:167:ASN:C	1.86	0.76
1:A:250:PRO:HD3	1:C:201:HIS:CD2	2.21	0.76
1:C:33:GLU:HA	1:C:57:GLN:OE1	1.85	0.76
1:C:5:ILE:HD13	1:C:73:VAL:HG13	1.67	0.76
1:C:249:TRP:O	1:C:252:MET:HG3	1.86	0.75
1:A:89:ILE:HG12	1:B:112:VAL:HG12	1.67	0.75
1:B:120:LYS:HD2	1:B:166:TYR:CE2	2.22	0.75
1:A:250:PRO:HB3	1:C:197:GLU:OE2	1.86	0.75
1:B:239:LEU:CD2	1:C:231:TYR:HB3	2.16	0.75
1:C:86:PHE:O	1:C:87:GLN:HB2	1.85	0.74
1:B:154:THR:HB	3:B:682:HOH:O	1.87	0.74
1:B:112:VAL:O	1:B:116:ALA:HB2	1.88	0.74
1:C:87:GLN:HG3	1:C:91:LYS:HB2	1.70	0.74
1:B:191:PRO:HB2	1:B:195:ASN:HB2	1.70	0.74
1:D:63:ILE:CD1	1:D:115:VAL:HB	2.18	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:59:PRO:HB3	1:B:111:LEU:HD23	1.70	0.74
1:A:231:TYR:HD1	1:D:239:LEU:HD13	1.53	0.73
1:A:195:ASN:O	1:A:199:VAL:HG23	1.88	0.73
1:B:197:GLU:HB2	3:B:619:HOH:O	1.88	0.73
1:C:136:PHE:HB2	1:C:238:TRP:CZ3	2.24	0.73
1:B:101:VAL:HG12	1:B:106:ILE:HD13	1.69	0.73
1:B:86:PHE:O	1:B:87:GLN:HG2	1.88	0.73
1:D:41:LEU:HD21	3:D:609:HOH:O	1.89	0.73
1:A:11:HIS:HB2	1:A:81:ILE:HD13	1.71	0.72
1:B:13:GLY:HA3	3:B:658:HOH:O	1.89	0.72
1:C:89:ILE:O	1:D:113:ASN:ND2	2.22	0.72
1:A:207:ALA:CB	1:A:242:GLY:HA3	2.20	0.72
1:B:18:ALA:HB1	3:B:719:HOH:O	1.89	0.72
1:D:4:ALA:CB	1:D:75:VAL:HB	2.18	0.71
1:B:217:LEU:HD23	1:B:239:LEU:HD12	1.72	0.71
1:D:74:ASP:HA	1:D:122:ARG:NH2	2.05	0.71
1:D:213:THR:OG1	1:D:216:GLU:HG3	1.90	0.71
1:D:206:THR:HG23	3:D:645:HOH:O	1.89	0.71
1:D:98:ARG:O	1:D:102:GLU:HB2	1.91	0.71
1:B:140:LYS:O	1:B:141:GLU:HB2	1.89	0.71
1:C:191:PRO:HB2	1:C:195:ASN:CB	2.21	0.71
1:C:159:LEU:HD21	1:D:89:ILE:HD12	1.72	0.70
1:A:201:HIS:O	1:A:205:VAL:HG22	1.92	0.70
1:A:142:LEU:HD11	1:A:145:TYR:HB3	1.73	0.70
1:A:173:ILE:O	1:A:175:PRO:HD3	1.91	0.69
1:B:75:VAL:HG22	1:B:126:HIS:HB2	1.73	0.69
1:D:118:GLN:HG3	1:D:122:ARG:HH12	1.58	0.69
1:B:6:VAL:HG13	3:B:623:HOH:O	1.92	0.69
1:C:246:ILE:N	1:C:246:ILE:HD12	2.08	0.69
1:D:203:LYS:CD	1:D:209:GLN:HB3	2.21	0.69
1:D:179:HIS:CD2	1:D:181:GLU:H	2.09	0.69
1:B:41:LEU:O	1:B:41:LEU:HD23	1.93	0.69
1:C:208:LEU:HB3	3:C:636:HOH:O	1.92	0.69
1:B:253:PRO:HD2	3:D:688:HOH:O	1.92	0.68
1:C:3:THR:HB	1:C:72:GLN:O	1.93	0.68
1:B:16:GLY:HA3	1:B:214:GLN:HB3	1.74	0.68
1:B:19:LEU:HD12	1:B:19:LEU:N	2.08	0.68
1:B:20:ARG:O	1:B:20:ARG:HD2	1.93	0.68
1:B:56:GLU:HB3	3:B:667:HOH:O	1.93	0.68
1:B:88:PRO:HB2	1:B:91:LYS:HZ2	1.59	0.68
1:A:88:PRO:HD2	1:A:91:LYS:HB2	1.76	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:204:LYS:HG2	3:D:733:HOH:O	1.93	0.68
1:D:86:PHE:HA	1:D:141:GLU:O	1.93	0.68
1:C:134:THR:OG1	1:C:135:PRO:HD3	1.95	0.67
1:D:88:PRO:HB2	1:D:91:LYS:HG2	1.76	0.67
1:D:120:LYS:HE3	1:D:166:TYR:CE2	2.29	0.67
1:B:19:LEU:HD12	3:B:719:HOH:O	1.94	0.67
1:D:89:ILE:HA	1:D:92:TYR:HD1	1.59	0.67
1:B:134:THR:OG1	1:B:135:PRO:HD3	1.95	0.67
1:C:173:ILE:HD11	1:C:224:LEU:HD11	1.76	0.67
1:B:86:PHE:HD2	1:B:86:PHE:H	1.43	0.67
1:A:203:LYS:CD	1:A:209:GLN:HB3	2.25	0.66
1:A:44:PHE:HB3	3:A:722:HOH:O	1.93	0.66
1:A:88:PRO:HG3	1:A:141:GLU:OE1	1.95	0.66
1:A:9:VAL:O	1:A:15:MET:HG2	1.96	0.66
1:D:58:GLU:HA	1:D:58:GLU:OE2	1.96	0.66
1:B:132:SER:HB3	1:B:149:ARG:HG3	1.78	0.66
1:D:8:ASN:O	1:D:79:ASN:ND2	2.30	0.65
1:A:117:SER:HB3	3:A:635:HOH:O	1.95	0.65
1:B:176:ASN:HB3	1:B:240:ALA:CB	2.27	0.65
1:A:129:PHE:CD1	1:A:156:ALA:HB2	2.32	0.65
1:D:10:LYS:HB2	1:D:32:ASP:OD2	1.97	0.64
1:C:113:ASN:HD22	1:D:90:ASP:HA	1.61	0.64
1:C:84:PRO:HB2	1:C:142:LEU:HD11	1.78	0.64
1:A:210:ARG:NH1	1:A:212:GLY:HA2	2.11	0.64
1:D:115:VAL:HA	1:D:118:GLN:HE21	1.61	0.64
1:D:48:TYR:HB3	1:D:51:LEU:HD13	1.80	0.64
1:B:104:LEU:HD22	1:B:149:ARG:CZ	2.28	0.64
1:C:191:PRO:HG2	1:C:198:HIS:CD2	2.33	0.63
1:D:45:ALA:HB2	1:D:53:PRO:HG3	1.80	0.63
1:A:239:LEU:CD2	1:D:231:TYR:HB3	2.28	0.63
1:D:19:LEU:CD1	1:D:51:LEU:HD11	2.27	0.63
1:A:129:PHE:HD1	1:A:156:ALA:HB2	1.63	0.63
1:C:118:GLN:O	1:C:122:ARG:HG2	1.98	0.63
1:C:116:ALA:HB3	1:D:90:ASP:HB3	1.79	0.63
1:A:248:ARG:HH11	1:C:140:LYS:HB3	1.63	0.63
1:B:131:THR:HG21	1:B:153:CYS:SG	2.38	0.63
1:A:240:ALA:O	1:A:243:PHE:HB3	1.99	0.63
1:C:36:LYS:CB	1:C:57:GLN:NE2	2.62	0.62
1:C:173:ILE:HD13	1:C:237:PHE:CD2	2.34	0.62
1:D:179:HIS:HB2	1:D:211:LEU:CD2	2.28	0.62
1:D:175:PRO:HB3	1:D:239:LEU:HB3	1.80	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:105:GLN:HE21	1:B:148:ALA:HA	1.64	0.62
1:A:34:SER:O	1:A:40:GLU:HB2	1.99	0.62
1:A:162:GLU:HG2	2:A:606:BR:BR	2.54	0.62
1:A:178:LEU:HB3	2:A:601:BR:BR	2.54	0.62
1:A:217:LEU:HD23	1:A:239:LEU:HD12	1.82	0.62
1:C:88:PRO:HG3	1:C:141:GLU:OE1	1.99	0.62
1:C:179:HIS:CE1	1:C:181:GLU:HA	2.35	0.62
1:B:120:LYS:HB3	1:B:166:TYR:CD2	2.35	0.62
3:A:639:HOH:O	1:C:205:VAL:HG11	2.00	0.62
1:C:177:TYR:OH	1:C:205:VAL:HG11	2.00	0.62
1:A:101:VAL:O	1:A:106:ILE:HG12	2.00	0.62
1:A:105:GLN:HE21	1:A:148:ALA:CA	2.04	0.62
1:D:248:ARG:HD2	1:D:252:MET:CE	2.28	0.62
1:C:198:HIS:O	1:C:202:VAL:HG23	2.00	0.62
1:B:151:GLY:HA2	3:B:682:HOH:O	1.99	0.62
1:C:54:MET:HB3	1:C:56:GLU:OE2	2.00	0.61
1:A:150:ALA:HB3	3:B:682:HOH:O	2.00	0.61
1:D:38:LYS:O	1:D:42:GLU:HG2	2.01	0.61
1:A:143:SER:HB2	1:B:155:LEU:HD23	1.83	0.61
1:D:211:LEU:HD12	1:D:211:LEU:H	1.66	0.61
1:C:191:PRO:HB2	1:C:195:ASN:HB2	1.82	0.61
1:B:67:THR:HG23	1:B:72:GLN:HA	1.83	0.61
1:B:228:SER:HB3	1:C:219:GLU:OE1	2.00	0.61
1:D:195:ASN:OD1	1:D:197:GLU:HB2	2.01	0.61
1:B:207:ALA:H	1:B:242:GLY:HA3	1.66	0.61
1:D:29:ALA:HA	1:D:52:LYS:HB2	1.83	0.60
1:A:133:ALA:HB2	1:A:174:GLY:O	2.00	0.60
1:C:202:VAL:HG21	1:C:211:LEU:HD21	1.81	0.60
1:A:253:PRO:HD3	3:A:724:HOH:O	2.01	0.60
1:C:98:ARG:HG2	1:D:106:ILE:HD12	1.82	0.60
1:A:162:GLU:OE1	1:B:89:ILE:N	2.30	0.60
1:B:198:HIS:N	3:B:619:HOH:O	2.34	0.60
1:A:8:ASN:CB	1:A:81:ILE:HD11	2.31	0.60
1:B:18:ALA:CB	3:B:719:HOH:O	2.48	0.60
1:B:241:GLY:HA3	1:C:231:TYR:CE2	2.35	0.60
1:B:41:LEU:C	1:B:41:LEU:HD23	2.21	0.60
1:A:87:GLN:HG3	1:A:91:LYS:HB2	1.83	0.60
1:B:72:GLN:HB2	1:B:122:ARG:HH12	1.66	0.60
1:C:203:LYS:HA	1:C:209:GLN:HB3	1.83	0.60
1:A:33:GLU:HA	1:A:57:GLN:NE2	2.10	0.59
1:A:187:TYR:OH	1:C:249:TRP:HZ2	1.77	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:213:THR:OG1	1:A:216:GLU:HG3	2.02	0.59
1:A:112:VAL:HG11	1:A:159:LEU:HD13	1.83	0.59
1:A:59:PRO:O	1:A:63:ILE:HG12	2.02	0.59
1:B:64:GLU:HA	3:B:629:HOH:O	2.02	0.59
1:B:110:ALA:HB2	3:B:695:HOH:O	2.01	0.59
1:C:201:HIS:CE1	1:C:205:VAL:HG21	2.38	0.59
1:A:141:GLU:HA	3:A:615:HOH:O	2.01	0.59
1:B:87:GLN:HA	1:B:87:GLN:HE21	1.68	0.59
1:B:29:ALA:HA	1:B:52:LYS:HB2	1.85	0.59
1:D:115:VAL:HG23	1:D:118:GLN:NE2	2.18	0.58
1:C:173:ILE:HD12	1:C:220:LEU:HD21	1.85	0.58
1:D:86:PHE:CZ	1:D:142:LEU:HD22	2.38	0.58
1:A:20:ARG:HH12	1:A:24:ALA:HB2	1.68	0.58
1:D:243:PHE:HB2	3:D:645:HOH:O	2.03	0.58
1:A:203:LYS:HE3	3:A:728:HOH:O	2.03	0.58
1:D:102:GLU:HA	1:D:106:ILE:CG1	2.33	0.58
1:C:202:VAL:HG21	1:C:211:LEU:CD2	2.34	0.58
1:A:88:PRO:HD2	1:A:91:LYS:CG	2.33	0.58
1:D:205:VAL:O	1:D:244:PRO:HA	2.03	0.58
3:C:666:HOH:O	1:D:98:ARG:HD3	2.04	0.58
1:C:37:GLN:HB2	1:C:40:GLU:CG	2.34	0.58
1:B:107:ARG:O	1:B:107:ARG:HD3	2.04	0.57
1:A:108:PRO:O	1:A:112:VAL:HG23	2.04	0.57
1:C:106:ILE:HD13	1:D:97:TYR:CD2	2.39	0.57
1:D:4:ALA:HB2	1:D:75:VAL:HB	1.86	0.57
1:A:143:SER:HB2	1:B:155:LEU:CD2	2.33	0.57
1:C:160:SER:HB2	1:C:233:THR:OG1	2.03	0.57
1:B:246:ILE:N	2:B:608:BR:BR	2.78	0.57
1:B:61:GLU:HG3	3:B:667:HOH:O	2.03	0.57
1:A:51:LEU:HD11	3:A:748:HOH:O	2.04	0.57
1:A:203:LYS:HD2	1:A:209:GLN:CB	2.31	0.57
1:B:81:ILE:HD12	1:B:81:ILE:O	2.03	0.57
1:B:217:LEU:HG	3:B:658:HOH:O	2.04	0.57
1:A:243:PHE:HE2	3:A:631:HOH:O	1.87	0.57
1:A:202:VAL:HB	3:A:737:HOH:O	2.05	0.57
1:B:227:GLY:HA2	1:B:230:ASP:OD1	2.04	0.57
1:C:179:HIS:HE1	1:C:181:GLU:HA	1.69	0.57
1:D:134:THR:OG1	1:D:135:PRO:HD3	2.05	0.57
1:A:231:TYR:CD1	1:D:239:LEU:HD13	2.35	0.57
1:A:10:LYS:HD2	1:A:32:ASP:OD1	2.05	0.57
1:C:20:ARG:HG3	1:C:222:ALA:HB2	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:134:THR:N	1:A:135:PRO:CD	2.68	0.57
1:C:167:ASN:C	1:C:167:ASN:ND2	2.58	0.57
1:D:21:LEU:HG	1:D:26:HIS:HD2	1.70	0.57
1:B:59:PRO:HB3	1:B:111:LEU:CD2	2.34	0.57
1:B:8:ASN:N	1:B:31:HIS:O	2.37	0.57
1:A:6:VAL:HG21	1:A:18:ALA:HB2	1.85	0.57
1:A:114:ALA:HB2	3:A:620:HOH:O	2.05	0.56
3:A:698:HOH:O	1:B:88:PRO:HB3	2.05	0.56
1:B:15:MET:CE	1:B:19:LEU:HD11	2.35	0.56
1:D:41:LEU:HG	1:D:53:PRO:HB2	1.87	0.56
1:C:90:ASP:HA	1:D:113:ASN:ND2	2.20	0.56
1:B:207:ALA:HB3	1:B:242:GLY:HA3	1.87	0.56
1:D:172:ALA:HB3	1:D:236:VAL:HG22	1.87	0.56
1:B:190:GLU:HG3	1:B:190:GLU:O	2.04	0.56
1:C:202:VAL:HG11	1:C:211:LEU:HD23	1.87	0.56
1:A:155:LEU:HB2	1:B:147:SER:HB3	1.88	0.56
1:B:176:ASN:OD1	1:B:177:TYR:CD1	2.58	0.56
1:A:88:PRO:HD2	1:A:91:LYS:CB	2.36	0.56
1:C:153:CYS:HB2	3:C:683:HOH:O	2.04	0.56
1:C:192:TRP:CE3	1:C:198:HIS:HB3	2.41	0.56
1:B:173:ILE:HG21	1:B:217:LEU:CD2	2.36	0.56
1:D:132:SER:OG	1:D:134:THR:HG23	2.04	0.56
1:C:180:SER:HB2	1:C:183:SER:HB3	1.86	0.56
1:A:119:MET:CE	1:A:127:ILE:HD11	2.35	0.56
1:A:201:HIS:CD2	1:C:249:TRP:HD1	2.24	0.56
1:C:120:LYS:HZ2	1:D:88:PRO:HB3	1.69	0.56
1:A:98:ARG:HG3	1:A:98:ARG:HH11	1.71	0.56
1:A:90:ASP:HB3	1:B:116:ALA:CB	2.33	0.55
1:B:247:GLU:HB3	1:D:205:VAL:HG11	1.88	0.55
1:C:119:MET:SD	1:C:127:ILE:HD11	2.46	0.55
1:B:15:MET:HE3	1:B:19:LEU:CD1	2.33	0.55
1:C:132:SER:HB3	1:C:149:ARG:CG	2.32	0.55
1:D:163:LEU:HB3	1:D:168:ILE:HB	1.87	0.55
1:B:2:SER:HB3	1:B:26:HIS:ND1	2.21	0.55
1:D:203:LYS:HD3	1:D:209:GLN:CB	2.29	0.55
1:D:4:ALA:HB1	1:D:75:VAL:HB	1.87	0.55
3:C:651:HOH:O	1:D:141:GLU:HA	2.05	0.55
1:A:210:ARG:NH1	1:A:211:LEU:O	2.40	0.55
1:A:193:LYS:HE2	1:A:211:LEU:HD12	1.88	0.55
1:A:12:PHE:CE2	1:A:130:ILE:HG22	2.41	0.55
1:D:102:GLU:OE2	1:D:106:ILE:HG21	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:89:ILE:HA	1:D:92:TYR:CD1	2.40	0.55
3:C:615:HOH:O	1:D:143:SER:HB3	2.06	0.55
1:B:166:TYR:HB2	1:B:168:ILE:HD12	1.89	0.55
1:C:68:SER:HB2	3:C:711:HOH:O	2.07	0.55
1:D:184:PRO:O	1:D:186:PHE:HA	2.07	0.55
1:D:12:PHE:CE2	1:D:130:ILE:HG22	2.42	0.55
1:A:179:HIS:CE1	1:A:193:LYS:HD2	2.42	0.55
1:C:162:GLU:HA	1:D:140:LYS:HG2	1.89	0.55
1:D:9:VAL:HG11	1:D:30:CYS:HB3	1.89	0.55
1:B:120:LYS:HD2	1:B:166:TYR:HE2	1.71	0.54
1:B:117:SER:CA	1:B:120:LYS:HE2	2.28	0.54
1:D:5:ILE:HG13	1:D:73:VAL:HG13	1.89	0.54
1:B:87:GLN:CA	1:B:87:GLN:HE21	2.19	0.54
1:B:208:LEU:HD13	1:B:210:ARG:NH2	2.23	0.54
1:C:173:ILE:HD12	1:C:220:LEU:CD2	2.37	0.54
1:A:239:LEU:HD22	1:D:231:TYR:HB3	1.89	0.54
1:B:166:TYR:HB2	1:B:168:ILE:CD1	2.38	0.54
1:D:12:PHE:HZ	1:D:131:THR:O	1.90	0.54
1:B:222:ALA:HB1	3:B:678:HOH:O	2.08	0.54
1:B:58:GLU:HA	1:B:58:GLU:OE1	2.08	0.54
1:C:162:GLU:CA	1:D:140:LYS:HG2	2.38	0.54
1:C:7:THR:HA	1:C:31:HIS:HB3	1.89	0.54
1:B:235:GLN:HA	3:B:653:HOH:O	2.07	0.54
1:B:240:ALA:HB1	1:B:243:PHE:HB3	1.90	0.54
1:C:101:VAL:HG13	1:C:105:GLN:NE2	2.22	0.54
1:C:178:LEU:O	1:C:187:TYR:HB2	2.08	0.54
1:B:56:GLU:HG2	1:B:65:ALA:CB	2.33	0.53
1:D:9:VAL:O	1:D:15:MET:SD	2.67	0.53
1:B:37:GLN:O	1:B:40:GLU:HB2	2.09	0.53
1:A:125:GLY:O	1:A:169:PRO:HD2	2.07	0.53
1:D:203:LYS:O	1:D:203:LYS:HG3	2.08	0.53
1:B:250:PRO:HG2	1:D:198:HIS:HA	1.90	0.53
1:C:240:ALA:HB1	1:C:243:PHE:HB3	1.90	0.53
1:B:101:VAL:HG12	1:B:106:ILE:CD1	2.38	0.53
1:B:73:VAL:O	1:B:122:ARG:NH2	2.42	0.53
1:D:11:HIS:O	1:D:79:ASN:ND2	2.37	0.53
1:C:50:GLN:HG2	1:C:51:LEU:HD13	1.89	0.53
1:B:66:VAL:HG13	1:B:70:TYR:HD2	1.74	0.53
1:A:210:ARG:HB3	3:A:609:HOH:O	2.08	0.53
1:A:250:PRO:HD3	1:C:201:HIS:CG	2.44	0.53
1:B:16:GLY:CA	1:B:214:GLN:HB3	2.38	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:27:THR:HG21	1:D:70:TYR:CD1	2.44	0.53
1:B:176:ASN:HB3	1:B:240:ALA:HB1	1.91	0.53
1:B:12:PHE:HA	1:B:185:TYR:O	2.09	0.53
1:B:245:MET:SD	1:C:161:LYS:HD2	2.48	0.53
1:B:101:VAL:HG23	3:B:616:HOH:O	2.09	0.53
1:B:191:PRO:O	1:B:193:LYS:N	2.42	0.53
1:B:173:ILE:O	1:B:175:PRO:HD3	2.09	0.53
1:C:87:GLN:CD	1:C:91:LYS:HD3	2.30	0.53
1:C:246:ILE:HD12	1:C:246:ILE:H	1.73	0.53
1:B:101:VAL:O	1:B:105:GLN:HB2	2.09	0.53
1:A:15:MET:CE	1:A:19:LEU:HD22	2.38	0.53
1:C:217:LEU:HD13	1:C:217:LEU:C	2.29	0.53
1:B:247:GLU:HB3	1:D:205:VAL:CG1	2.38	0.53
1:D:84:PRO:HB2	1:D:142:LEU:HD11	1.91	0.53
1:A:105:GLN:O	1:A:108:PRO:HG2	2.08	0.52
1:B:79:ASN:HB2	1:B:130:ILE:HD12	1.90	0.52
1:A:87:GLN:HG3	1:A:91:LYS:CB	2.38	0.52
1:A:248:ARG:HB2	3:A:683:HOH:O	2.09	0.52
1:B:207:ALA:CB	1:B:242:GLY:HA3	2.39	0.52
1:D:85:GLU:O	1:D:142:LEU:HD12	2.09	0.52
1:C:113:ASN:ND2	1:D:90:ASP:HA	2.24	0.52
1:B:72:GLN:NE2	1:B:122:ARG:NH1	2.57	0.52
1:C:83:ALA:HB2	1:C:185:TYR:HE1	1.74	0.52
1:A:133:ALA:HB3	1:A:176:ASN:HB2	1.90	0.52
1:D:35:PHE:HB3	1:D:54:MET:O	2.10	0.52
1:A:252:MET:HG2	3:A:632:HOH:O	2.10	0.52
1:D:19:LEU:HD13	1:D:51:LEU:HD11	1.91	0.52
1:D:252:MET:O	1:D:253:PRO:O	2.28	0.52
1:C:190:GLU:OE2	1:C:191:PRO:HA	2.09	0.52
1:A:208:LEU:HD12	1:D:231:TYR:CD2	2.45	0.52
1:B:173:ILE:HG21	1:B:217:LEU:HD23	1.92	0.52
1:B:87:GLN:HA	1:B:87:GLN:NE2	2.25	0.52
1:D:184:PRO:HA	1:D:188:PRO:HD3	1.91	0.52
1:C:29:ALA:HA	1:C:52:LYS:O	2.10	0.52
1:D:58:GLU:HB2	1:D:61:GLU:HB2	1.92	0.52
1:C:10:LYS:HB2	1:C:32:ASP:OD2	2.10	0.52
1:B:58:GLU:HB2	1:B:61:GLU:HG2	1.90	0.51
1:A:104:LEU:HD11	1:A:145:TYR:CD2	2.46	0.51
1:C:101:VAL:HG11	1:D:101:VAL:HG11	1.92	0.51
1:A:112:VAL:HG12	1:B:89:ILE:HG12	1.92	0.51
1:C:191:PRO:HB2	1:C:195:ASN:HB3	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:133:ALA:O	1:C:136:PHE:HB3	2.10	0.51
1:D:88:PRO:HD2	1:D:91:LYS:CG	2.36	0.51
1:A:250:PRO:HG3	1:C:201:HIS:HB2	1.92	0.51
1:B:132:SER:HB3	1:B:149:ARG:CG	2.39	0.51
1:B:159:LEU:O	1:B:163:LEU:HB2	2.10	0.51
1:C:89:ILE:HD13	1:C:89:ILE:C	2.31	0.51
1:C:118:GLN:HG3	1:C:119:MET:N	2.26	0.51
1:D:7:THR:O	1:D:79:ASN:HB3	2.10	0.51
1:D:20:ARG:HD2	3:D:604:HOH:O	2.09	0.51
1:B:191:PRO:HB2	1:B:195:ASN:CB	2.40	0.51
1:B:243:PHE:CG	1:B:244:PRO:HA	2.46	0.51
1:C:160:SER:HB3	1:C:170:VAL:HB	1.92	0.51
1:C:120:LYS:HE3	1:C:166:TYR:CE2	2.46	0.51
1:D:63:ILE:HG22	3:D:678:HOH:O	2.10	0.51
1:C:173:ILE:HD11	1:C:224:LEU:CD1	2.39	0.51
1:C:31:HIS:O	1:C:32:ASP:HB2	2.11	0.50
1:B:216:GLU:HG2	1:C:229:CYS:HA	1.93	0.50
1:C:195:ASN:O	1:C:197:GLU:N	2.44	0.50
1:A:231:TYR:HB2	1:D:216:GLU:OE1	2.11	0.50
1:C:15:MET:HG2	2:C:607:BR:BR	2.66	0.50
1:B:140:LYS:O	1:B:141:GLU:CB	2.58	0.50
1:A:104:LEU:HD22	1:A:149:ARG:CZ	2.41	0.50
1:D:188:PRO:HG2	1:D:190:GLU:O	2.12	0.50
1:D:91:LYS:HD3	3:D:611:HOH:O	2.10	0.50
1:B:31:HIS:HD2	3:B:709:HOH:O	1.94	0.50
1:D:108:PRO:HB2	1:D:129:PHE:CZ	2.45	0.50
1:C:17:SER:O	1:C:21:LEU:HB2	2.11	0.50
1:B:102:GLU:HA	1:B:106:ILE:HB	1.93	0.50
1:C:98:ARG:NH1	3:C:608:HOH:O	2.45	0.50
1:C:203:LYS:O	1:C:209:GLN:HG2	2.11	0.50
1:B:249:TRP:HZ2	1:D:187:TYR:HH	1.59	0.50
1:D:115:VAL:O	1:D:116:ALA:C	2.50	0.50
1:C:89:ILE:HD11	1:D:113:ASN:HA	1.93	0.50
1:D:149:ARG:NH1	3:D:628:HOH:O	2.41	0.50
1:C:193:LYS:HE2	3:C:685:HOH:O	2.11	0.50
1:B:208:LEU:HD12	1:C:231:TYR:CD2	2.47	0.49
1:D:246:ILE:N	1:D:246:ILE:HD12	2.27	0.49
1:D:197:GLU:N	1:D:197:GLU:OE2	2.46	0.49
1:C:48:TYR:HB3	1:C:51:LEU:HD22	1.94	0.49
1:A:162:GLU:CG	2:A:606:BR:BR	3.15	0.49
1:C:5:ILE:HA	1:C:29:ALA:O	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:12:PHE:O	1:B:214:GLN:NE2	2.45	0.49
3:A:688:HOH:O	1:D:161:LYS:HE3	2.12	0.49
1:B:239:LEU:HD22	1:C:231:TYR:HB3	1.94	0.49
1:C:179:HIS:O	1:C:214:GLN:HG2	2.12	0.49
1:A:45:ALA:HB2	1:A:53:PRO:HG3	1.94	0.49
1:B:176:ASN:HB3	1:B:240:ALA:HB2	1.93	0.49
1:A:163:LEU:HD12	1:A:170:VAL:HG21	1.95	0.49
1:D:81:ILE:HD13	1:D:81:ILE:N	2.26	0.49
1:C:50:GLN:OE1	1:C:50:GLN:N	2.41	0.49
1:A:115:VAL:HG13	1:A:119:MET:HE1	1.95	0.49
1:A:142:LEU:CD1	1:A:145:TYR:HB3	2.41	0.49
1:D:7:THR:O	1:D:8:ASN:C	2.51	0.49
1:C:37:GLN:HB2	1:C:40:GLU:HG3	1.94	0.49
1:B:21:LEU:HB3	1:B:28:VAL:HG21	1.95	0.49
1:B:19:LEU:H	1:B:19:LEU:HD12	1.74	0.49
1:C:210:ARG:NH1	1:C:211:LEU:O	2.46	0.49
1:C:87:GLN:CG	1:C:91:LYS:HB2	2.41	0.49
1:A:141:GLU:OE2	1:C:248:ARG:NH1	2.38	0.49
1:A:104:LEU:HD13	1:A:149:ARG:HG2	1.95	0.49
1:D:81:ILE:H	1:D:81:ILE:HD13	1.77	0.49
1:C:7:THR:O	1:C:8:ASN:C	2.52	0.49
1:A:15:MET:HE1	1:A:19:LEU:HD22	1.95	0.48
1:C:164:GLY:HA2	3:C:617:HOH:O	2.13	0.48
1:A:12:PHE:HE1	2:A:601:BR:BR	2.51	0.48
1:A:20:ARG:HA	1:A:23:GLU:CB	2.42	0.48
1:C:20:ARG:NH1	1:C:20:ARG:O	2.43	0.48
1:A:132:SER:HB3	1:A:149:ARG:HG3	1.95	0.48
1:C:140:LYS:HG2	1:C:141:GLU:HG3	1.94	0.48
1:B:34:SER:C	1:B:36:LYS:H	2.17	0.48
1:A:12:PHE:HB2	1:A:81:ILE:CG2	2.43	0.48
1:B:44:PHE:C	1:B:46:GLU:H	2.16	0.48
1:C:5:ILE:HD11	1:C:73:VAL:HG22	1.95	0.48
1:C:138:PRO:HD3	3:C:662:HOH:O	2.13	0.48
1:D:116:ALA:O	1:D:120:LYS:HG3	2.14	0.48
1:C:74:ASP:O	1:C:125:GLY:HA2	2.14	0.48
1:B:188:PRO:HD2	1:B:192:TRP:CD1	2.48	0.48
1:D:52:LYS:HE3	1:D:70:TYR:HE1	1.79	0.48
1:D:97:TYR:CD1	1:D:144:THR:HG22	2.49	0.48
1:B:7:THR:HA	1:B:31:HIS:HB3	1.96	0.48
1:D:121:LYS:HG2	3:D:685:HOH:O	2.13	0.48
1:D:210:ARG:HB2	3:D:725:HOH:O	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:250:PRO:HA	3:C:652:HOH:O	2.13	0.48
1:B:75:VAL:HG21	1:B:225:ALA:HB1	1.94	0.48
1:C:90:ASP:HA	1:D:113:ASN:HD22	1.78	0.48
1:B:5:ILE:HG13	1:B:73:VAL:HG13	1.96	0.48
1:D:7:THR:HA	1:D:31:HIS:HB3	1.96	0.48
1:D:119:MET:HE1	1:D:126:HIS:N	2.29	0.47
1:A:242:GLY:CA	1:D:233:THR:HG23	2.43	0.47
1:A:192:TRP:HH2	1:C:249:TRP:CD1	2.31	0.47
1:B:192:TRP:HH2	1:D:249:TRP:CD1	2.32	0.47
1:C:136:PHE:HB2	1:C:238:TRP:CE3	2.49	0.47
1:A:138:PRO:O	1:C:246:ILE:HD13	2.13	0.47
1:C:232:LEU:HD22	1:C:235:GLN:HG3	1.96	0.47
1:B:12:PHE:HB2	1:B:81:ILE:CG2	2.44	0.47
1:C:176:ASN:HA	2:C:602:BR:BR	2.69	0.47
1:C:57:GLN:HB3	3:C:610:HOH:O	2.13	0.47
1:A:155:LEU:CD2	1:B:143:SER:HB3	2.44	0.47
1:B:155:LEU:HD22	1:B:159:LEU:CD1	2.44	0.47
1:D:178:LEU:HD21	1:D:217:LEU:HB2	1.95	0.47
1:A:11:HIS:HB2	1:A:81:ILE:CD1	2.41	0.47
1:C:167:ASN:O	1:C:168:ILE:HD13	2.14	0.47
1:A:249:TRP:HA	1:C:201:HIS:NE2	2.29	0.47
1:C:89:ILE:CD1	1:D:113:ASN:HA	2.44	0.47
1:D:9:VAL:HG22	1:D:9:VAL:O	2.14	0.47
1:D:117:SER:O	1:D:121:LYS:HG3	2.15	0.47
1:D:127:ILE:HD12	1:D:170:VAL:HG22	1.96	0.47
1:A:101:VAL:O	1:A:105:GLN:HB2	2.14	0.47
1:D:180:SER:HB2	1:D:183:SER:HB3	1.97	0.47
1:A:112:VAL:HG11	1:A:159:LEU:CD1	2.44	0.47
1:A:179:HIS:CE1	1:A:189:THR:HG1	2.31	0.47
1:C:4:ALA:C	1:C:5:ILE:HD12	2.35	0.47
1:D:211:LEU:HD12	1:D:211:LEU:N	2.29	0.47
1:B:66:VAL:O	1:B:70:TYR:N	2.39	0.47
1:D:107:ARG:N	1:D:108:PRO:HD2	2.30	0.47
1:A:190:GLU:OE2	1:A:194:THR:OG1	2.22	0.47
1:C:192:TRP:HB3	1:C:211:LEU:HD11	1.97	0.47
1:D:194:THR:OG1	1:D:195:ASN:N	2.37	0.47
1:C:105:GLN:O	1:D:97:TYR:HE2	1.98	0.47
1:A:179:HIS:NE2	1:A:193:LYS:HD2	2.29	0.47
1:D:111:LEU:O	1:D:114:ALA:HB3	2.15	0.47
1:C:132:SER:CB	1:C:149:ARG:HG3	2.36	0.47
1:C:86:PHE:O	1:C:87:GLN:CB	2.59	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:56:GLU:HG2	1:D:61:GLU:O	2.15	0.47
1:A:89:ILE:HB	3:A:725:HOH:O	2.14	0.46
1:A:79:ASN:HA	1:A:130:ILE:HB	1.97	0.46
1:B:243:PHE:CZ	1:D:246:ILE:HG21	2.50	0.46
1:B:205:VAL:O	1:B:245:MET:HG2	2.15	0.46
1:D:173:ILE:HG22	1:D:175:PRO:HD3	1.97	0.46
1:C:101:VAL:HG13	1:C:105:GLN:HB2	1.96	0.46
1:A:97:TYR:CE2	1:B:106:ILE:HA	2.50	0.46
1:D:50:GLN:HG2	1:D:51:LEU:CD1	2.29	0.46
1:A:139:TRP:HB3	1:C:248:ARG:HG2	1.97	0.46
1:A:89:ILE:HA	3:A:750:HOH:O	2.15	0.46
1:C:173:ILE:HD13	1:C:237:PHE:HD2	1.77	0.46
1:B:37:GLN:HB3	3:B:665:HOH:O	2.15	0.46
1:A:223:PHE:HA	3:A:716:HOH:O	2.15	0.46
1:A:177:TYR:HH	1:A:201:HIS:CD2	2.33	0.46
1:D:45:ALA:HB2	1:D:53:PRO:CG	2.44	0.46
1:D:86:PHE:CE1	1:D:142:LEU:HB2	2.49	0.46
1:C:107:ARG:HD2	3:C:684:HOH:O	2.16	0.46
1:A:229:CYS:SG	1:A:232:LEU:HG	2.56	0.46
1:A:246:ILE:HG13	1:C:137:GLY:O	2.16	0.46
1:A:102:GLU:HA	1:A:106:ILE:CG1	2.45	0.46
2:A:606:BR:BR	1:B:141:GLU:N	2.88	0.46
1:C:73:VAL:O	1:C:122:ARG:NH2	2.43	0.46
1:C:20:ARG:HH12	1:C:24:ALA:N	2.14	0.46
1:B:112:VAL:HG23	3:B:649:HOH:O	2.16	0.46
1:B:56:GLU:HA	3:B:632:HOH:O	2.16	0.46
1:B:107:ARG:HA	3:B:637:HOH:O	2.15	0.46
1:B:246:ILE:HG21	1:D:137:GLY:O	2.16	0.46
1:A:2:SER:HB2	1:A:74:ASP:HB2	1.98	0.46
1:B:195:ASN:HA	1:B:196:PRO:HD3	1.82	0.46
1:A:140:LYS:CG	1:C:248:ARG:HD3	2.46	0.46
1:A:246:ILE:HG13	1:C:137:GLY:C	2.37	0.46
1:A:31:HIS:HA	3:A:622:HOH:O	2.15	0.46
1:C:37:GLN:O	1:C:40:GLU:HB2	2.16	0.45
1:C:20:ARG:NH1	1:C:24:ALA:HB2	2.31	0.45
1:D:105:GLN:NE2	1:D:148:ALA:HA	2.31	0.45
1:A:56:GLU:O	1:A:62:LEU:HD13	2.15	0.45
1:C:210:ARG:HG3	1:C:210:ARG:HH11	1.81	0.45
1:D:34:SER:C	1:D:36:LYS:H	2.20	0.45
1:B:18:ALA:C	3:B:719:HOH:O	2.55	0.45
1:D:104:LEU:HD12	1:D:148:ALA:HB3	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:186:PHE:CD1	1:A:186:PHE:N	2.85	0.45
1:C:34:SER:C	1:C:36:LYS:N	2.68	0.45
1:C:43:ALA:O	1:C:47:THR:N	2.35	0.45
1:B:120:LYS:CB	1:B:166:TYR:CD2	3.00	0.45
1:A:94:VAL:HG11	3:B:695:HOH:O	2.15	0.45
1:C:249:TRP:HB3	1:C:250:PRO:HD2	1.97	0.45
1:C:246:ILE:N	1:C:246:ILE:CD1	2.77	0.45
1:C:110:ALA:O	1:C:113:ASN:HB3	2.17	0.45
1:C:12:PHE:CE1	1:C:175:PRO:HG2	2.52	0.45
1:D:171:PHE:HE2	1:D:232:LEU:C	2.20	0.45
1:D:189:THR:HG23	1:D:193:LYS:HB2	1.98	0.45
1:A:248:ARG:HG3	3:A:711:HOH:O	2.17	0.45
1:B:155:LEU:HD22	1:B:159:LEU:HD11	1.99	0.45
1:D:190:GLU:HB2	3:D:706:HOH:O	2.15	0.45
1:B:82:PHE:O	1:B:84:PRO:HD3	2.16	0.45
1:C:190:GLU:HA	1:C:191:PRO:HA	1.80	0.44
1:B:111:LEU:O	1:B:114:ALA:HB3	2.17	0.44
1:B:56:GLU:H	1:B:56:GLU:CD	2.20	0.44
1:B:217:LEU:HD23	1:B:239:LEU:CD1	2.44	0.44
1:D:97:TYR:CE1	1:D:144:THR:HA	2.53	0.44
1:D:94:VAL:HG21	3:D:721:HOH:O	2.17	0.44
1:A:33:GLU:CA	1:A:57:GLN:HE22	2.13	0.44
1:C:34:SER:O	1:C:36:LYS:N	2.51	0.44
1:B:8:ASN:HB2	1:B:79:ASN:HD22	1.82	0.44
1:D:102:GLU:HA	1:D:106:ILE:HG13	1.99	0.44
1:A:140:LYS:HA	3:A:613:HOH:O	2.18	0.44
1:D:58:GLU:OE2	1:D:58:GLU:CA	2.60	0.44
1:D:191:PRO:O	1:D:198:HIS:HB2	2.18	0.44
1:C:101:VAL:HG11	1:D:101:VAL:CG1	2.48	0.44
1:A:58:GLU:HG3	3:A:729:HOH:O	2.18	0.44
1:C:36:LYS:CB	1:C:57:GLN:HE22	2.31	0.44
1:B:13:GLY:HA2	1:B:214:GLN:HE22	1.83	0.44
1:A:180:SER:O	1:A:181:GLU:HB2	2.18	0.44
1:A:162:GLU:OE1	1:B:88:PRO:HA	2.18	0.44
1:D:243:PHE:HA	1:D:244:PRO:HA	1.80	0.44
1:C:123:LYS:HD3	3:C:679:HOH:O	2.18	0.44
1:C:191:PRO:HG2	1:C:198:HIS:CG	2.52	0.44
1:B:3:THR:HG21	1:B:72:GLN:O	2.17	0.44
1:D:84:PRO:HB3	1:D:145:TYR:CG	2.52	0.44
1:A:243:PHE:CD2	1:A:244:PRO:HA	2.53	0.44
1:B:201:HIS:HB2	1:D:250:PRO:HG3	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:181:GLU:OE2	1:A:214:GLN:HG3	2.18	0.44
1:B:48:TYR:HA	3:B:610:HOH:O	2.18	0.44
1:A:102:GLU:HA	1:A:106:ILE:HB	1.99	0.44
1:A:87:GLN:HB2	1:A:92:TYR:CE2	2.52	0.44
1:C:15:MET:O	1:C:19:LEU:HD22	2.17	0.44
1:B:238:TRP:N	1:C:235:GLN:OE1	2.44	0.44
1:D:230:ASP:HB2	3:D:666:HOH:O	2.18	0.44
1:B:38:LYS:O	1:B:42:GLU:CG	2.57	0.44
1:D:31:HIS:O	1:D:32:ASP:HB2	2.17	0.44
1:A:21:LEU:HA	1:A:21:LEU:HD12	1.82	0.44
1:A:116:ALA:HA	1:A:119:MET:HE2	2.00	0.44
1:D:81:ILE:O	1:D:82:PHE:HB2	2.17	0.44
1:B:201:HIS:O	1:B:205:VAL:HG22	2.18	0.44
1:A:243:PHE:CG	1:A:244:PRO:HA	2.52	0.43
1:D:12:PHE:HA	1:D:185:TYR:O	2.18	0.43
1:C:147:SER:HA	1:D:154:THR:CG2	2.48	0.43
1:C:167:ASN:O	1:C:167:ASN:ND2	2.49	0.43
1:C:107:ARG:N	1:C:108:PRO:HD2	2.34	0.43
1:B:170:VAL:HG23	3:B:633:HOH:O	2.18	0.43
1:B:33:GLU:HA	1:B:57:GLN:OE1	2.18	0.43
1:A:7:THR:O	1:A:79:ASN:HB3	2.19	0.43
1:A:72:GLN:NE2	1:A:74:ASP:OD2	2.49	0.43
1:C:52:LYS:HB3	1:C:70:TYR:OH	2.18	0.43
1:C:209:GLN:HG2	3:C:659:HOH:O	2.18	0.43
1:C:5:ILE:HD13	1:C:73:VAL:CG1	2.41	0.43
1:D:59:PRO:HD3	1:D:107:ARG:NH1	2.33	0.43
1:D:17:SER:OG	1:D:221:VAL:HG21	2.19	0.43
1:B:78:SER:OG	1:B:108:PRO:HB3	2.18	0.43
1:B:125:GLY:O	1:B:168:ILE:HA	2.19	0.43
1:C:5:ILE:N	1:C:5:ILE:HD12	2.32	0.43
1:B:110:ALA:O	1:B:114:ALA:N	2.48	0.43
1:C:59:PRO:HG2	3:C:649:HOH:O	2.19	0.43
1:A:86:PHE:HA	1:A:141:GLU:O	2.19	0.43
1:B:134:THR:HG22	3:B:662:HOH:O	2.17	0.43
1:B:100:ALA:HB3	3:B:616:HOH:O	2.17	0.43
1:A:175:PRO:HB2	2:A:601:BR:BR	2.73	0.43
1:D:177:TYR:O	1:D:211:LEU:HA	2.19	0.43
1:B:19:LEU:CD1	1:B:19:LEU:N	2.79	0.43
1:B:87:GLN:O	1:B:88:PRO:C	2.57	0.43
1:B:185:TYR:HA	1:B:186:PHE:HA	1.66	0.43
1:B:131:THR:HG22	1:B:132:SER:N	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:162:GLU:HG3	1:B:163:LEU:N	2.34	0.43
1:A:63:ILE:HG23	1:A:73:VAL:HG21	1.99	0.43
1:D:137:GLY:N	1:D:138:PRO:HD3	2.34	0.43
1:C:85:GLU:O	1:C:92:TYR:CE2	2.72	0.43
1:A:207:ALA:O	1:D:164:GLY:C	2.57	0.42
1:A:9:VAL:HA	1:A:14:GLY:HA3	2.00	0.42
1:C:12:PHE:O	1:C:214:GLN:NE2	2.52	0.42
1:C:101:VAL:O	1:C:105:GLN:N	2.50	0.42
1:D:44:PHE:C	1:D:46:GLU:N	2.73	0.42
1:C:191:PRO:CB	1:C:195:ASN:HB2	2.49	0.42
1:C:155:LEU:HD22	1:C:159:LEU:HD11	2.01	0.42
1:D:87:GLN:HB3	1:D:87:GLN:HE21	1.60	0.42
1:B:191:PRO:CG	1:B:198:HIS:CD2	2.92	0.42
1:D:115:VAL:O	1:D:118:GLN:HG2	2.19	0.42
1:B:14:GLY:HA2	3:B:623:HOH:O	2.19	0.42
1:A:91:LYS:HD3	1:A:91:LYS:HA	1.73	0.42
1:D:82:PHE:O	1:D:84:PRO:HD3	2.19	0.42
1:B:227:GLY:HA2	1:B:230:ASP:CG	2.40	0.42
1:C:97:TYR:CD1	1:C:144:THR:HA	2.54	0.42
1:A:179:HIS:HD2	1:A:187:TYR:O	2.02	0.42
1:C:122:ARG:NE	1:C:124:SER:OG	2.52	0.42
1:B:138:PRO:O	1:D:246:ILE:HD13	2.19	0.42
1:C:36:LYS:CB	1:C:57:GLN:HE21	2.32	0.42
1:B:20:ARG:C	1:B:20:ARG:HD2	2.37	0.42
1:C:220:LEU:O	1:C:224:LEU:HG	2.19	0.42
1:B:163:LEU:HD23	1:B:163:LEU:HA	1.82	0.42
1:B:245:MET:HA	2:B:608:BR:BR	2.74	0.42
1:D:155:LEU:CD2	1:D:159:LEU:HD11	2.48	0.42
1:B:5:ILE:HG22	1:B:6:VAL:N	2.34	0.42
1:A:134:THR:N	1:A:135:PRO:HD3	2.35	0.42
1:B:140:LYS:HE3	1:B:140:LYS:HB2	1.91	0.42
1:D:128:ILE:CG2	1:D:173:ILE:HD13	2.50	0.42
1:D:88:PRO:CD	1:D:91:LYS:HG3	2.41	0.42
1:B:2:SER:N	2:B:605:BR:BR	3.08	0.42
1:B:220:LEU:O	1:B:224:LEU:HG	2.19	0.42
1:B:193:LYS:HE2	1:B:193:LYS:HB3	1.92	0.42
1:D:98:ARG:NH1	1:D:98:ARG:HG3	2.35	0.42
1:A:248:ARG:NH1	1:C:140:LYS:HB3	2.33	0.42
1:D:136:PHE:O	1:D:136:PHE:CD1	2.73	0.42
1:A:37:GLN:HB2	1:A:40:GLU:HG2	2.02	0.42
1:A:97:TYR:CE2	1:B:106:ILE:HD12	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:88:PRO:HD2	1:B:91:LYS:HD2	2.01	0.41
1:C:56:GLU:H	1:C:56:GLU:CD	2.23	0.41
1:A:140:LYS:HG2	1:C:248:ARG:HD3	2.01	0.41
1:B:29:ALA:HA	1:B:52:LYS:O	2.20	0.41
1:B:165:GLU:C	1:B:167:ASN:H	2.24	0.41
1:A:210:ARG:HG3	1:A:210:ARG:HH11	1.86	0.41
1:C:244:PRO:O	1:C:246:ILE:HD12	2.20	0.41
1:B:246:ILE:HG22	1:D:139:TRP:CD1	2.56	0.41
1:C:74:ASP:HA	1:C:122:ARG:NH2	2.34	0.41
1:D:151:GLY:O	1:D:155:LEU:HB2	2.20	0.41
1:A:26:HIS:CD2	1:A:26:HIS:H	2.38	0.41
1:A:89:ILE:HG12	1:B:112:VAL:CG1	2.44	0.41
1:A:162:GLU:HB3	2:A:606:BR:BR	2.75	0.41
1:A:101:VAL:CG1	1:B:101:VAL:HG11	2.26	0.41
1:A:161:LYS:HG3	1:B:138:PRO:HB2	2.02	0.41
1:D:58:GLU:O	1:D:61:GLU:HB3	2.21	0.41
1:A:98:ARG:NH1	1:A:98:ARG:HG3	2.34	0.41
1:C:93:ALA:O	1:C:96:ASP:HB2	2.20	0.41
1:A:120:LYS:HE3	1:A:166:TYR:CZ	2.55	0.41
1:C:155:LEU:HD22	1:C:159:LEU:CD1	2.51	0.41
1:D:84:PRO:HB3	1:D:145:TYR:CD2	2.56	0.41
1:D:105:GLN:O	1:D:108:PRO:HG2	2.20	0.41
1:A:90:ASP:HB2	3:A:739:HOH:O	2.20	0.41
1:C:120:LYS:O	1:C:123:LYS:HG2	2.21	0.41
1:B:17:SER:HB2	3:B:623:HOH:O	2.20	0.41
1:D:21:LEU:HA	1:D:21:LEU:HD12	1.92	0.41
1:B:44:PHE:C	1:B:46:GLU:N	2.73	0.41
1:C:144:THR:HG22	1:D:109:PHE:CE2	2.55	0.41
1:A:219:GLU:HG3	1:D:228:SER:HB3	2.03	0.41
1:A:169:PRO:HG3	1:A:230:ASP:HB3	2.02	0.41
1:D:222:ALA:O	1:D:226:SER:HB3	2.20	0.41
1:C:35:PHE:HB3	1:C:41:LEU:HD12	2.03	0.41
1:B:122:ARG:O	1:B:123:LYS:HB2	2.20	0.41
1:D:129:PHE:CE1	1:D:155:LEU:HD13	2.56	0.41
1:D:59:PRO:HG2	1:D:110:ALA:HB1	2.03	0.41
1:B:10:LYS:HD2	1:B:32:ASP:OD1	2.21	0.41
1:B:92:TYR:HB3	1:B:93:ALA:H	1.63	0.41
1:C:192:TRP:CZ3	1:C:201:HIS:HD2	2.39	0.41
1:A:138:PRO:HG2	1:B:157:ASN:OD1	2.21	0.41
1:B:2:SER:HB3	1:B:26:HIS:CE1	2.56	0.41
1:C:8:ASN:HA	3:C:686:HOH:O	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:122:ARG:O	1:C:123:LYS:HB2	2.22	0.40
1:A:127:ILE:HB	1:A:170:VAL:HG22	2.03	0.40
1:C:208:LEU:O	1:C:210:ARG:N	2.54	0.40
1:D:190:GLU:OE1	1:D:194:THR:HG21	2.22	0.40
1:B:112:VAL:O	1:B:116:ALA:CB	2.63	0.40
1:A:176:ASN:O	1:A:177:TYR:HB2	2.22	0.40
1:C:115:VAL:HG11	1:C:119:MET:HE1	2.04	0.40
1:C:34:SER:C	1:C:36:LYS:H	2.25	0.40
1:C:88:PRO:HB3	3:D:727:HOH:O	2.21	0.40
1:C:108:PRO:O	1:C:112:VAL:HG23	2.21	0.40
1:A:48:TYR:HA	1:A:49:PRO:HD2	1.96	0.40
1:A:129:PHE:CE1	1:A:155:LEU:HD12	2.56	0.40
1:D:190:GLU:HA	1:D:191:PRO:HA	1.86	0.40
1:C:21:LEU:HA	1:C:21:LEU:HD12	1.92	0.40
1:B:63:ILE:HD12	1:B:63:ILE:N	2.36	0.40
1:C:5:ILE:CD1	1:C:66:VAL:HG11	2.41	0.40
1:C:52:LYS:HD2	1:C:70:TYR:OH	2.20	0.40
1:D:149:ARG:NH2	1:D:186:PHE:CZ	2.89	0.40
1:C:2:SER:HB2	1:C:74:ASP:CG	2.41	0.40
1:D:176:ASN:O	1:D:177:TYR:HB2	2.20	0.40
1:C:163:LEU:HB3	1:C:168:ILE:HB	2.02	0.40
1:C:147:SER:O	1:C:150:ALA:HB3	2.21	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	250/254 (98%)	219 (88%)	28 (11%)	3 (1%)	16	4
1	B	250/254 (98%)	205 (82%)	39 (16%)	6 (2%)	7	1
1	C	250/254 (98%)	214 (86%)	26 (10%)	10 (4%)	4	0

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	D	250/254 (98%)	218 (87%)	27 (11%)	5 (2%)	9	2
All	All	1000/1016 (98%)	856 (86%)	120 (12%)	24 (2%)	7	1

All (24) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	84	PRO
1	B	86	PHE
1	B	192	TRP
1	C	87	GLN
1	B	35	PHE
1	C	82	PHE
1	C	181	GLU
1	C	209	GLN
1	D	123	LYS
1	A	89	ILE
1	A	142	LEU
1	B	59	PRO
1	B	92	TYR
1	B	141	GLU
1	C	189	THR
1	D	82	PHE
1	D	138	PRO
1	C	8	ASN
1	C	32	ASP
1	C	35	PHE
1	C	143	SER
1	C	196	PRO
1	D	56	GLU
1	D	160	SER

5.3.2 Protein sidechains (i)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	196/208 (94%)	187 (95%)	9 (5%)	33	15
1	B	197/208 (95%)	185 (94%)	12 (6%)	23	8
1	C	196/208 (94%)	183 (93%)	13 (7%)	21	7
1	D	197/208 (95%)	186 (94%)	11 (6%)	26	10
All	All	786/832 (94%)	741 (94%)	45 (6%)	25	10

All (45) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	21	LEU
1	A	31	HIS
1	A	81	ILE
1	A	87	GLN
1	A	134	THR
1	A	176	ASN
1	A	182	ASP
1	A	191	PRO
1	A	239	LEU
1	B	22	SER
1	B	50	GLN
1	B	51	LEU
1	B	86	PHE
1	B	87	GLN
1	B	113	ASN
1	B	147	SER
1	B	155	LEU
1	B	166	TYR
1	B	171	PHE
1	B	190	GLU
1	B	239	LEU
1	C	12	PHE
1	C	19	LEU
1	C	21	LEU
1	C	41	LEU
1	C	51	LEU
1	C	85	GLU
1	C	89	ILE
1	C	155	LEU
1	C	167	ASN
1	C	197	GLU
1	C	231	TYR
1	C	235	GLN

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Mol	Chain	Res	Type
1	C	239	LEU
1	D	12	PHE
1	D	19	LEU
1	D	21	LEU
1	D	81	ILE
1	D	87	GLN
1	D	113	ASN
1	D	205	VAL
1	D	230	ASP
1	D	231	TYR
1	D	244	PRO
1	D	253	PRO

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (20) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	57	GLN
1	A	87	GLN
1	A	105	GLN
1	A	176	ASN
1	A	198	HIS
1	B	72	GLN
1	B	87	GLN
1	B	105	GLN
1	C	37	GLN
1	C	72	GLN
1	C	105	GLN
1	C	113	ASN
1	C	167	ASN
1	C	201	HIS
1	D	26	HIS
1	D	37	GLN
1	D	87	GLN
1	D	105	GLN
1	D	113	ASN
1	D	118	GLN

5.3.3　RNA (i)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates (i)

There are no carbohydrates in this entry.

5.6 Ligand geometry (i)

Of 8 ligands modelled in this entry, 8 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

6 Fit of model and data (i)

6.1 Protein, DNA and RNA chains (i)

In the following table, the column labelled '#RSRZ> 2' contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 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	252/254 (99%)	-0.33	0	100	100	7, 15, 22, 33	0
1	B	252/254 (99%)	-0.33	0	100	100	7, 16, 25, 34	0
1	C	252/254 (99%)	-0.32	0	100	100	7, 15, 23, 34	0
1	D	252/254 (99%)	-0.30	0	100	100	7, 16, 23, 36	0
All	All	1008/1016 (99%)	-0.32	0	100	100	7, 16, 23, 36	0

There are no RSRZ outliers to report.

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

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

6.3 Carbohydrates (i)

There are no carbohydrates in this entry.

6.4 Ligands (i)

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(Å^2)	Q<0.9
2	BR	A	601	1/1	1.00	0.03	-5.36	15,15,15,15	0
2	BR	C	602	1/1	1.00	0.03	-5.38	15,15,15,15	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å²)	Q<0.9
2	BR	B	608	1/1	1.00	0.01	-6.03	3,3,3,3	0
2	BR	D	603	1/1	1.00	0.04	-6.08	15,15,15,15	0
2	BR	B	604	1/1	1.00	0.03	-6.18	15,15,15,15	0
2	BR	A	606	1/1	1.00	0.01	-6.87	5,5,5,5	0
2	BR	C	607	1/1	1.00	0.01	-7.92	6,6,6,6	0
2	BR	B	605	1/1	1.00	0.01	-	10,10,10,10	0

6.5 Other polymers (i)

There are no such residues in this entry.