



Full wwPDB X-ray Structure Validation Report ⓘ

Nov 7, 2023 – 06:46 PM JST

PDB ID : 8H75
Title : FGFR2 in complex with YJ001
Authors : Yan, X.E.; Yun, C.H.
Deposited on : 2022-10-19
Resolution : 3.75 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

<https://www.wwpdb.org/validation/2017/XrayValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

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

MolProbity : 4.02b-467
Mogul : 1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix) : 1.13
EDS : 2.36
buster-report : 1.1.7 (2018)
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac : 5.8.0158
CCP4 : 7.0.044 (Gargrove)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.36

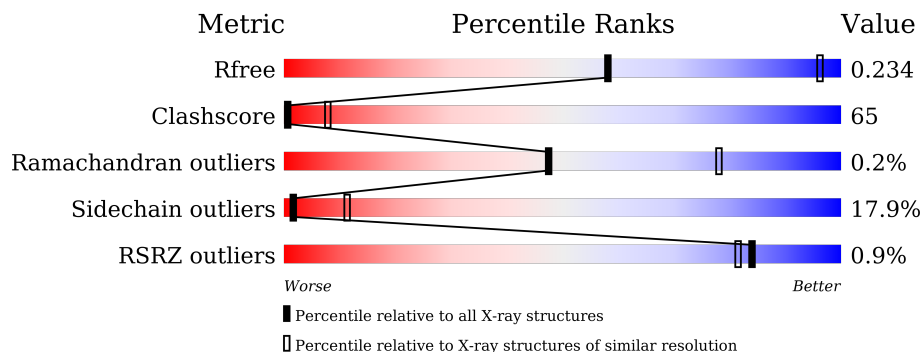
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.75 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	1039 (3.94-3.58)
Clashscore	141614	1051 (3.92-3.60)
Ramachandran outliers	138981	1015 (3.92-3.60)
Sidechain outliers	138945	1011 (3.92-3.60)
RSRZ outliers	127900	1050 (3.96-3.56)

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

Mol	Chain	Length	Quality of chain
1	A	312	
1	B	312	
1	C	312	
1	D	312	

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 crite-

ria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
1	PTR	A	656	-	-	X	-
3	CL	A	1002	-	-	X	-

2 Entry composition

There are 4 unique types of molecules in this entry. The entry contains 8793 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.

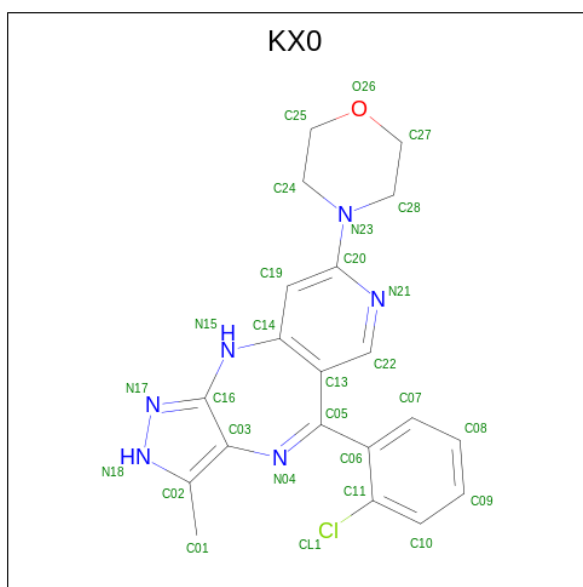
- Molecule 1 is a protein called Fibroblast growth factor receptor 2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace	
			Total	C	N	O	P				S
1	A	285	2207	1403	374	410	1	19	0	0	0
1	B	283	2203	1403	371	408	1	20	0	0	0
1	C	275	2087	1326	364	378		19	0	0	0
1	D	277	2157	1378	363	396		20	0	0	0

There are 8 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	457	GLY	-	expression tag	UNP P21802
A	458	HIS	-	expression tag	UNP P21802
B	457	GLY	-	expression tag	UNP P21802
B	458	HIS	-	expression tag	UNP P21802
C	457	GLY	-	expression tag	UNP P21802
C	458	HIS	-	expression tag	UNP P21802
D	457	GLY	-	expression tag	UNP P21802
D	458	HIS	-	expression tag	UNP P21802

- Molecule 2 is Tinengotinib (three-letter code: KX0) (formula: C₂₀H₁₉ClN₆O) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	
			Total	C	Cl	N			O
2	A	1	28	20	1	6	1	0	0
2	B	1	28	20	1	6	1	0	0
2	C	1	28	20	1	6	1	0	0
2	D	1	28	20	1	6	1	0	0

- Molecule 3 is CHLORIDE ION (three-letter code: CL) (formula: Cl).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	A	1	Total	Cl	0	0
			1	1		

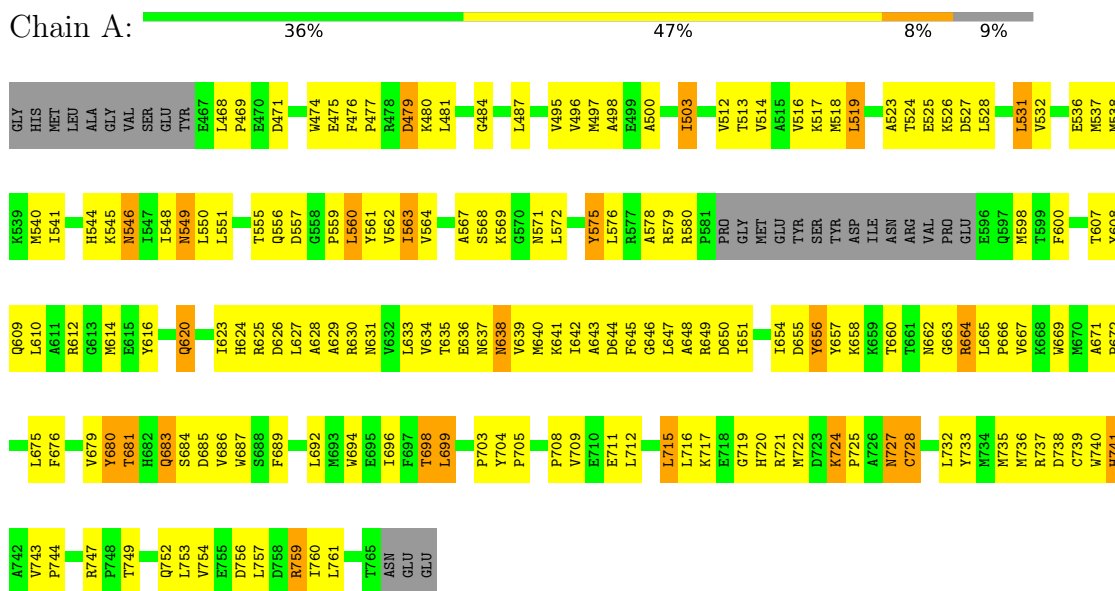
- Molecule 4 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
4	A	4	Total	O	0	0
			4	4		
4	B	6	Total	O	0	0
			6	6		
4	C	6	Total	O	0	0
			6	6		
4	D	10	Total	O	0	0
			10	10		

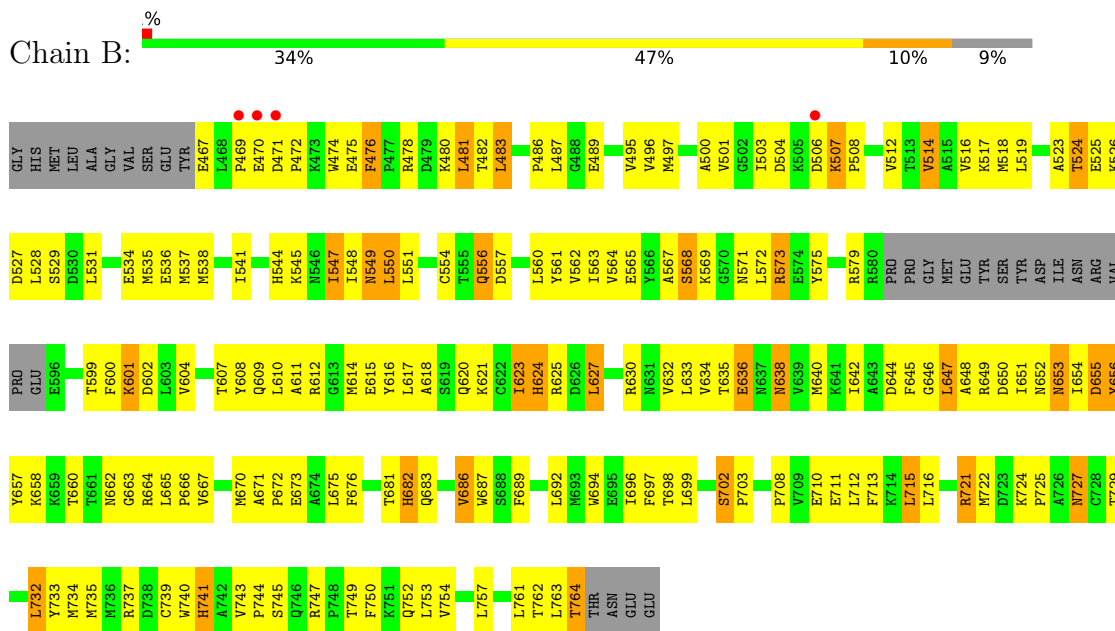
3 Residue-property plots

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes 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: Fibroblast growth factor receptor 2



- Molecule 1: Fibroblast growth factor receptor 2



4 Data and refinement statistics i

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α , β , γ	43.02Å 198.59Å 67.20Å 90.00° 92.94° 90.00°	Depositor
Resolution (Å)	27.80 – 3.75 33.56 – 3.75	Depositor EDS
% Data completeness (in resolution range)	70.6 (27.80-3.75) 90.3 (33.56-3.75)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	2.41 (at 3.76Å)	Xtrriage
Refinement program	PHENIX 1.13_2998	Depositor
R, R_{free}	0.214 , 0.238 0.223 , 0.234	Depositor DCC
R_{free} test set	562 reflections (5.39%)	wwPDB-VP
Wilson B-factor (Å ²)	53.6	Xtrriage
Anisotropy	0.315	Xtrriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.25 , 59.4	EDS
L-test for twinning ²	$\langle L \rangle = 0.48$, $\langle L^2 \rangle = 0.31$	Xtrriage
Estimated twinning fraction	0.065 for h,-k,-l	Xtrriage
F_o, F_c correlation	0.84	EDS
Total number of atoms	8793	wwPDB-VP
Average B, all atoms (Å ²)	61.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 4.32% 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, 0.333 respectively for untwinned datasets, and 0.375, 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: KX0, PTR, CL

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	0.62	0/2235	0.77	0/3028
1	B	0.63	0/2230	0.84	1/3015 (0.0%)
1	C	0.56	0/2126	0.77	0/2878
1	D	0.60	0/2200	0.76	0/2973
All	All	0.60	0/8791	0.79	1/11894 (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	A	0	1

There are no bond length outliers.

All (1) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed($^{\circ}$)	Ideal($^{\circ}$)
1	B	702	SER	C-N-CD	5.07	139.05	128.40

There are no chirality outliers.

All (1) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	656	PTR	Mainchain

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	2207	0	2142	297	0
1	B	2203	0	2155	310	0
1	C	2087	0	2045	283	0
1	D	2157	0	2121	274	0
2	A	28	0	0	4	0
2	B	28	0	0	2	0
2	C	28	0	0	2	0
2	D	28	0	0	2	0
3	A	1	0	0	6	0
4	A	4	0	0	0	0
4	B	6	0	0	1	0
4	C	6	0	0	0	0
4	D	10	0	0	0	0
All	All	8793	0	8463	1123	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 65.

All (1123) 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:686:VAL:HG12	1:B:750:PHE:CE1	1.55	1.39
1:D:474:TRP:CD1	1:D:539:LYS:HE2	1.57	1.39
1:C:667:VAL:HG21	1:C:709:VAL:CG1	1.54	1.34
1:C:469:PRO:HD3	1:D:469:PRO:CB	1.66	1.25
3:A:1002:CL:CL	1:B:744:PRO:HG2	1.73	1.25
1:D:606:CYS:SG	1:D:640:MET:HE2	1.76	1.24
1:A:744:PRO:HG2	3:A:1002:CL:CL	1.73	1.24
1:B:568:SER:OG	1:B:636:GLU:HB2	1.38	1.23
1:D:621:LYS:HE3	1:D:651:ILE:CG2	1.68	1.22
1:C:667:VAL:CG2	1:C:709:VAL:HG13	1.71	1.21
1:D:487:LEU:CD2	1:D:497:MET:HB2	1.72	1.20
1:B:610:LEU:HD21	1:B:632:VAL:CG1	1.72	1.19
1:B:634:VAL:HG22	1:B:640:MET:CE	1.73	1.19
1:C:480:LYS:CG	1:C:501:VAL:HG22	1.74	1.18

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:469:PRO:CD	1:D:469:PRO:HB2	1.72	1.18
1:B:624:HIS:O	1:B:648:ALA:HB2	1.44	1.17
1:D:667:VAL:HG21	1:D:709:VAL:CG1	1.74	1.16
1:C:694:TRP:NE1	1:C:725:PRO:HG3	1.61	1.14
1:B:524:THR:HG22	1:D:664:ARG:HA	1.14	1.14
1:A:704:TYR:H	1:A:722:MET:HE2	1.06	1.14
1:B:623:ILE:O	1:B:648:ALA:HB1	1.46	1.14
1:D:474:TRP:CD1	1:D:539:LYS:CE	2.31	1.14
1:D:667:VAL:HG21	1:D:709:VAL:HG11	1.21	1.13
1:B:623:ILE:HG12	1:B:651:ILE:HD11	1.14	1.13
1:C:686:VAL:HG21	1:C:747:ARG:HB3	1.21	1.12
1:B:735:MET:HE2	1:B:753:LEU:HD22	1.26	1.12
1:D:478:ARG:CB	1:D:556:GLN:HE21	1.62	1.12
1:D:621:LYS:HE3	1:D:651:ILE:HG21	1.16	1.11
1:B:524:THR:CG2	1:D:664:ARG:HA	1.81	1.10
1:B:610:LEU:HD21	1:B:632:VAL:HG11	1.34	1.10
1:B:623:ILE:HG13	1:B:651:ILE:HG13	1.33	1.10
1:C:581:PRO:CG	1:C:582:PRO:HD3	1.81	1.10
1:A:704:TYR:CD1	1:A:722:MET:CE	2.35	1.10
1:D:606:CYS:SG	1:D:640:MET:CE	2.40	1.09
1:C:480:LYS:HG3	1:C:501:VAL:CG2	1.81	1.09
1:B:686:VAL:HG12	1:B:750:PHE:CD1	1.88	1.09
1:D:621:LYS:CE	1:D:651:ILE:HG22	1.83	1.09
1:D:610:LEU:CD1	1:D:692:LEU:HD21	1.84	1.08
1:D:474:TRP:NE1	1:D:539:LYS:HG2	1.67	1.08
1:D:487:LEU:HD21	1:D:497:MET:CB	1.83	1.07
1:B:601:LYS:HD3	1:B:761:LEU:CD1	1.84	1.07
1:D:634:VAL:HG23	1:D:640:MET:SD	1.94	1.07
1:A:709:VAL:HG11	1:C:523:ALA:HB3	1.37	1.07
1:D:575:TYR:HE1	1:D:579:ARG:CZ	1.66	1.07
1:D:621:LYS:CE	1:D:651:ILE:CG2	2.32	1.07
1:C:581:PRO:HG2	1:C:582:PRO:HD3	1.08	1.06
1:D:683:GLN:O	1:D:686:VAL:HG13	1.56	1.06
1:D:534:GLU:HB2	1:D:646:GLY:HA2	1.07	1.05
1:D:760:ILE:O	1:D:764:THR:HG23	1.56	1.05
1:A:656:PTR:HD2	1:B:743:VAL:HG23	1.35	1.04
1:C:667:VAL:HG21	1:C:709:VAL:HG13	1.08	1.03
1:D:534:GLU:HB2	1:D:646:GLY:CA	1.89	1.03
1:C:672:PRO:HD3	1:C:687:TRP:CD1	1.93	1.03
1:D:495:VAL:HG12	1:D:517:LYS:CA	1.89	1.03
1:D:732:LEU:HD21	1:D:760:ILE:CD1	1.87	1.02

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:544:HIS:CD2	1:C:616:TYR:CB	2.42	1.02
1:D:610:LEU:HD12	1:D:692:LEU:HD21	1.38	1.02
1:A:650:ASP:O	1:A:651:ILE:HD13	1.60	1.01
1:D:575:TYR:HE1	1:D:579:ARG:NH1	1.57	1.01
1:C:581:PRO:HG2	1:C:582:PRO:CD	1.91	1.01
1:D:500:ALA:CB	1:D:503:ILE:HD11	1.91	1.01
1:B:662:ASN:O	1:D:525:GLU:HB3	1.59	1.00
1:B:752:GLN:HB3	4:B:1101:HOH:O	1.57	1.00
1:C:535:MET:HG3	1:C:562:VAL:CG2	1.91	1.00
1:D:526:LYS:HE3	1:D:664:ARG:HD2	1.43	1.00
1:D:495:VAL:HG12	1:D:517:LYS:HA	1.02	1.00
1:B:537:MET:HA	1:B:537:MET:HE3	1.39	1.00
1:D:704:TYR:CD1	1:D:722:MET:SD	2.54	1.00
1:C:686:VAL:HG21	1:C:747:ARG:CB	1.92	0.99
1:B:686:VAL:CG1	1:B:750:PHE:CE1	2.46	0.99
1:B:623:ILE:HG12	1:B:651:ILE:CD1	1.91	0.99
1:D:575:TYR:CE1	1:D:579:ARG:CZ	2.45	0.99
1:A:709:VAL:HG11	1:C:523:ALA:CB	1.92	0.99
1:C:667:VAL:CG2	1:C:709:VAL:CG1	2.34	0.99
1:B:623:ILE:HG13	1:B:651:ILE:CG1	1.91	0.98
1:A:735:MET:SD	1:A:757:LEU:HD21	2.04	0.98
1:C:480:LYS:CG	1:C:501:VAL:CG2	2.40	0.98
1:B:476:PHE:HE2	1:B:503:ILE:CG1	1.76	0.98
1:C:664:ARG:H	1:C:664:ARG:HD3	1.27	0.97
1:A:704:TYR:CD1	1:A:722:MET:HE3	1.98	0.97
1:C:480:LYS:HG3	1:C:501:VAL:HG22	0.97	0.97
1:A:744:PRO:CG	3:A:1002:CL:CL	2.50	0.96
1:D:673:GLU:CG	1:D:747:ARG:HH22	1.76	0.96
1:B:475:GLU:CD	1:B:556:GLN:HG2	1.86	0.96
1:B:556:GLN:HE21	1:B:556:GLN:HA	1.30	0.96
1:B:476:PHE:HE2	1:B:503:ILE:HG13	1.30	0.95
1:B:710:GLU:OE2	1:D:519:LEU:HD12	1.64	0.95
1:B:624:HIS:C	1:B:648:ALA:HB2	1.86	0.95
1:D:683:GLN:OE1	1:D:747:ARG:HB2	1.65	0.95
1:B:634:VAL:HG22	1:B:640:MET:HE2	1.48	0.95
1:C:694:TRP:CD1	1:C:725:PRO:CG	2.49	0.95
1:A:532:VAL:O	1:A:536:GLU:HG2	1.67	0.94
1:A:735:MET:CE	1:A:757:LEU:CD2	2.44	0.94
1:B:569:LYS:HE3	1:B:638:ASN:OD1	1.67	0.94
1:C:480:LYS:HD2	1:C:501:VAL:HG21	1.48	0.94
1:B:614:MET:SD	1:B:627:LEU:CD2	2.56	0.93

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:469:PRO:HD3	1:D:469:PRO:HB2	0.95	0.93
1:B:667:VAL:HG13	1:B:675:LEU:HD21	1.50	0.93
1:A:495:VAL:HG23	1:A:517:LYS:HG2	1.47	0.93
1:A:735:MET:CE	1:A:757:LEU:HD23	1.99	0.93
1:D:534:GLU:CB	1:D:646:GLY:HA2	1.98	0.93
1:B:535:MET:HE1	1:B:560:LEU:HD21	1.46	0.93
1:D:732:LEU:HD21	1:D:760:ILE:HD13	1.48	0.93
1:C:694:TRP:NE1	1:C:725:PRO:CG	2.31	0.93
1:D:495:VAL:CG1	1:D:517:LYS:HG2	1.97	0.93
1:A:571:ASN:HD22	2:A:1001:KX0:C08	1.81	0.93
1:A:628:ALA:CB	1:A:630:ARG:HH12	1.80	0.93
1:C:480:LYS:HD2	1:C:501:VAL:CG2	1.99	0.92
1:A:651:ILE:HG23	1:A:654:ILE:O	1.68	0.92
1:D:621:LYS:HE2	1:D:651:ILE:HG22	1.49	0.92
1:B:519:LEU:HD21	1:B:528:LEU:HA	1.52	0.92
1:A:572:LEU:HD21	1:A:696:ILE:HD11	1.51	0.92
1:C:686:VAL:CG2	1:C:747:ARG:HD3	1.98	0.91
1:B:623:ILE:CG1	1:B:651:ILE:HD11	1.99	0.91
1:C:486:PRO:HA	1:C:496:VAL:HG12	1.53	0.91
1:A:572:LEU:HD21	1:A:696:ILE:CD1	2.00	0.91
1:B:663:GLY:CA	1:D:526:LYS:HB2	2.01	0.90
1:A:572:LEU:CD2	1:A:696:ILE:HD11	2.01	0.90
1:D:541:ILE:CG2	1:D:616:TYR:HE2	1.83	0.90
1:D:495:VAL:CG1	1:D:517:LYS:HA	1.97	0.90
1:B:544:HIS:HD2	1:B:616:TYR:CG	1.88	0.90
1:A:704:TYR:CE1	1:A:722:MET:HE3	2.06	0.90
1:A:575:TYR:HE1	1:A:579:ARG:NE	1.69	0.89
1:B:610:LEU:CD2	1:B:632:VAL:CG1	2.51	0.89
1:C:683:GLN:HE21	1:C:683:GLN:HA	1.38	0.89
1:A:704:TYR:N	1:A:722:MET:HE2	1.87	0.89
1:B:470:GLU:HB3	1:B:556:GLN:OE1	1.72	0.89
1:C:672:PRO:CD	1:C:687:TRP:CD1	2.56	0.89
1:B:610:LEU:CD2	1:B:632:VAL:HG11	2.03	0.89
1:A:735:MET:HE1	1:A:757:LEU:HD23	1.52	0.89
1:B:601:LYS:HE3	1:B:764:THR:C	1.94	0.88
1:C:687:TRP:HH2	1:C:704:TYR:HH	0.95	0.88
1:A:624:HIS:HA	1:A:648:ALA:HB2	1.53	0.88
1:D:541:ILE:HG22	1:D:616:TYR:HE2	1.39	0.88
1:B:601:LYS:HB2	1:B:601:LYS:NZ	1.84	0.88
1:B:575:TYR:HD2	1:B:634:VAL:HG21	1.39	0.88
1:A:698:THR:HG22	1:A:725:PRO:HB3	1.55	0.88

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:525:GLU:CB	1:D:663:GLY:HA2	2.04	0.88
1:B:535:MET:CE	1:B:560:LEU:HD21	2.03	0.88
1:A:524:THR:HG22	1:A:527:ASP:H	1.36	0.87
1:D:715:LEU:HB3	1:D:720:HIS:HB3	1.54	0.87
1:D:637:ASN:O	1:D:637:ASN:ND2	2.07	0.87
1:A:631:ASN:O	1:A:643:ALA:HB3	1.75	0.87
1:A:704:TYR:HD1	1:A:722:MET:CE	1.85	0.87
1:D:500:ALA:HB1	1:D:503:ILE:HD11	1.57	0.87
1:B:524:THR:HG22	1:D:664:ARG:CA	2.03	0.87
1:C:569:LYS:HB2	1:C:634:VAL:HG11	1.55	0.86
1:B:475:GLU:CD	1:B:556:GLN:CG	2.43	0.86
1:D:683:GLN:HA	1:D:686:VAL:CG1	2.05	0.86
1:C:535:MET:HG3	1:C:562:VAL:HG21	1.57	0.86
1:A:575:TYR:CD2	1:A:634:VAL:HG11	2.10	0.86
1:D:724:LYS:NZ	1:D:724:LYS:O	2.08	0.86
1:B:554:CYS:HB2	1:B:561:TYR:HB2	1.57	0.86
1:B:686:VAL:HG12	1:B:750:PHE:HE1	1.39	0.86
1:C:507:LYS:N	1:C:508:PRO:HD3	1.89	0.86
1:A:560:LEU:HD21	1:A:562:VAL:HG23	1.57	0.85
1:C:575:TYR:HE1	1:C:579:ARG:CZ	1.89	0.85
1:B:573:ARG:HG2	1:B:573:ARG:HH21	1.39	0.85
1:B:663:GLY:HA3	1:D:526:LYS:HB2	1.55	0.85
1:B:575:TYR:CD2	1:B:634:VAL:HG21	2.10	0.85
1:C:548:ILE:HG13	1:C:565:GLU:HG3	1.58	0.85
1:C:614:MET:HE3	1:C:614:MET:HA	1.58	0.85
1:D:495:VAL:HG11	1:D:517:LYS:HG2	1.57	0.84
1:A:531:LEU:HD12	1:A:531:LEU:O	1.76	0.84
1:D:481:LEU:HD12	1:D:500:ALA:HB2	1.60	0.83
1:B:601:LYS:CD	1:B:761:LEU:HD11	2.07	0.83
1:D:673:GLU:HG3	1:D:747:ARG:HH22	1.42	0.83
1:B:560:LEU:HD11	1:B:562:VAL:HG23	1.60	0.83
1:D:635:THR:HG23	1:D:641:LYS:HG3	1.60	0.83
1:D:474:TRP:HD1	1:D:539:LYS:HE2	1.07	0.83
1:B:483:LEU:H	1:B:483:LEU:HD13	1.42	0.83
1:D:531:LEU:O	1:D:531:LEU:HD22	1.78	0.83
1:A:628:ALA:CB	1:A:630:ARG:NH1	2.42	0.82
1:B:623:ILE:CG1	1:B:651:ILE:CG1	2.57	0.82
3:A:1002:CL:CL	1:B:744:PRO:CG	2.62	0.82
1:D:487:LEU:HD21	1:D:497:MET:HB2	0.87	0.82
1:B:549:ASN:ND2	1:B:565:GLU:CB	2.43	0.82
1:B:617:LEU:HD12	1:B:617:LEU:O	1.79	0.82

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:737:ARG:HH21	1:C:737:ARG:HG3	1.42	0.82
1:D:478:ARG:CB	1:D:556:GLN:NE2	2.43	0.82
1:C:686:VAL:HG23	1:C:747:ARG:HD3	1.60	0.82
1:B:480:LYS:HG3	1:B:501:VAL:HB	1.60	0.82
1:C:535:MET:HG3	1:C:562:VAL:HG22	1.60	0.82
1:C:480:LYS:CD	1:C:501:VAL:CG2	2.58	0.82
1:C:694:TRP:CD1	1:C:725:PRO:HG3	2.11	0.82
1:D:692:LEU:HD12	1:D:692:LEU:O	1.80	0.81
1:C:575:TYR:CE1	1:C:579:ARG:HD2	2.15	0.81
1:C:603:LEU:HD21	1:C:699:LEU:CD1	2.10	0.81
1:D:474:TRP:HE1	1:D:539:LYS:HG2	1.45	0.81
1:A:664:ARG:HA	1:C:524:THR:CG2	2.11	0.81
1:D:568:SER:HB2	1:D:636:GLU:HG2	1.61	0.81
1:B:601:LYS:CD	1:B:761:LEU:CD1	2.59	0.81
1:B:735:MET:CE	1:B:753:LEU:HD22	2.09	0.81
1:C:575:TYR:HE1	1:C:579:ARG:NE	1.79	0.81
1:A:761:LEU:HD12	1:A:761:LEU:O	1.81	0.81
1:D:631:ASN:O	1:D:643:ALA:HB3	1.79	0.81
1:D:732:LEU:CD2	1:D:760:ILE:CD1	2.58	0.81
1:B:537:MET:HA	1:B:537:MET:CE	2.11	0.80
1:A:475:GLU:OE2	1:A:556:GLN:HG3	1.81	0.80
1:D:635:THR:CG2	1:D:641:LYS:HG3	2.12	0.80
1:C:694:TRP:CD2	1:C:722:MET:SD	2.75	0.80
1:C:743:VAL:HG12	1:C:744:PRO:HD2	1.62	0.80
1:D:704:TYR:HD1	1:D:722:MET:SD	2.00	0.80
1:C:569:LYS:HB2	1:C:634:VAL:CG1	2.12	0.80
1:A:607:THR:HG22	1:A:757:LEU:CD1	2.12	0.80
1:B:476:PHE:CE2	1:B:503:ILE:CG1	2.64	0.79
1:B:610:LEU:HD21	1:B:632:VAL:HG13	1.60	0.79
1:C:478:ARG:CZ	1:C:561:TYR:OH	2.31	0.79
1:B:476:PHE:CE2	1:B:503:ILE:HG13	2.18	0.79
1:A:614:MET:HE3	1:A:614:MET:HA	1.63	0.79
1:D:474:TRP:CE2	1:D:539:LYS:HG2	2.17	0.79
1:B:544:HIS:HD2	1:B:616:TYR:CD2	2.02	0.78
1:B:610:LEU:HD11	1:B:632:VAL:HG11	1.63	0.78
1:C:474:TRP:NE1	1:C:539:LYS:HG2	1.98	0.78
1:B:523:ALA:O	1:D:666:PRO:HA	1.83	0.78
1:C:720:HIS:O	1:C:721:ARG:NH1	2.17	0.78
1:A:623:ILE:O	1:A:648:ALA:HB1	1.84	0.77
1:A:664:ARG:HD3	1:A:664:ARG:N	1.98	0.77
1:B:531:LEU:HD11	1:B:560:LEU:HD11	1.65	0.77

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:692:LEU:HD12	1:A:692:LEU:O	1.84	0.77
1:B:712:LEU:HD12	1:B:712:LEU:O	1.84	0.77
1:A:656:PTR:HD2	1:B:743:VAL:CG2	2.15	0.77
1:A:717:LYS:O	1:B:658:LYS:HD3	1.85	0.77
1:B:623:ILE:CG1	1:B:651:ILE:CD1	2.61	0.77
1:A:495:VAL:CG2	1:A:517:LYS:HG2	2.14	0.76
1:A:698:THR:HG22	1:A:725:PRO:CB	2.14	0.76
1:C:763:LEU:HD13	1:C:763:LEU:O	1.86	0.76
1:D:667:VAL:CG2	1:D:709:VAL:CG1	2.61	0.76
1:A:479:ASP:N	1:A:479:ASP:OD1	2.19	0.76
1:B:573:ARG:HG2	1:B:573:ARG:NH2	1.98	0.76
1:C:732:LEU:HD22	1:C:732:LEU:H	1.51	0.76
1:B:623:ILE:CG1	1:B:651:ILE:HG13	2.13	0.76
1:D:610:LEU:HD13	1:D:692:LEU:HD21	1.68	0.76
1:B:662:ASN:CB	1:D:525:GLU:HG2	2.15	0.76
1:D:683:GLN:O	1:D:686:VAL:CG1	2.32	0.76
1:A:663:GLY:C	1:A:664:ARG:HD3	2.05	0.76
1:D:704:TYR:CE1	1:D:722:MET:SD	2.79	0.76
1:B:544:HIS:CD2	1:B:616:TYR:CB	2.68	0.76
1:C:552:GLY:O	1:C:563:ILE:HB	1.84	0.76
1:C:664:ARG:H	1:C:664:ARG:CD	1.99	0.75
1:B:739:CYS:O	1:B:747:ARG:HD3	1.86	0.75
1:D:552:GLY:O	1:D:563:ILE:HB	1.85	0.75
1:C:698:THR:HG22	1:C:725:PRO:HB3	1.67	0.75
1:B:572:LEU:HD12	1:B:572:LEU:O	1.86	0.75
1:C:478:ARG:NH2	1:C:561:TYR:CE2	2.55	0.75
1:D:634:VAL:CG2	1:D:640:MET:SD	2.73	0.75
1:B:544:HIS:CD2	1:B:616:TYR:CG	2.73	0.75
1:D:720:HIS:ND1	1:D:720:HIS:O	2.18	0.75
1:B:624:HIS:HA	1:B:648:ALA:CB	2.17	0.75
1:D:575:TYR:CE1	1:D:579:ARG:NH1	2.48	0.75
1:A:519:LEU:HD12	1:A:523:ALA:HB2	1.68	0.75
1:A:704:TYR:H	1:A:722:MET:CE	1.94	0.75
1:B:692:LEU:HD12	1:B:692:LEU:O	1.86	0.75
1:B:634:VAL:HG22	1:B:640:MET:HE1	1.68	0.74
1:C:575:TYR:CE1	1:C:579:ARG:CD	2.69	0.74
1:A:516:VAL:HG11	1:A:561:TYR:HB3	1.68	0.74
1:A:541:ILE:CD1	1:A:645:PHE:CE2	2.69	0.74
3:A:1002:CL:CL	1:B:745:SER:OG	2.42	0.74
1:B:483:LEU:HD13	1:B:483:LEU:N	2.02	0.74
1:C:737:ARG:HG3	1:C:737:ARG:NH2	1.98	0.74

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:519:LEU:HD11	1:A:523:ALA:HB1	1.68	0.74
1:B:549:ASN:ND2	1:B:549:ASN:H	1.84	0.74
1:B:624:HIS:CA	1:B:648:ALA:HB2	2.18	0.74
1:B:686:VAL:CG1	1:B:750:PHE:CD1	2.70	0.74
1:D:667:VAL:CG2	1:D:709:VAL:HG11	2.10	0.74
1:A:559:PRO:HG3	1:C:708:PRO:HG3	1.70	0.74
1:B:504:ASP:HB2	1:B:507:LYS:HA	1.68	0.74
1:C:630:ARG:HG3	1:C:630:ARG:HH11	1.53	0.74
1:B:663:GLY:HA2	1:D:526:LYS:CB	2.18	0.73
1:C:600:PHE:CE2	1:C:729:THR:OG1	2.41	0.73
1:D:661:THR:HA	1:D:678:ARG:CB	2.17	0.73
1:C:622:CYS:O	1:C:682:HIS:NE2	2.21	0.73
1:B:623:ILE:O	1:B:648:ALA:CB	2.32	0.73
1:C:724:LYS:N	1:C:724:LYS:HD2	2.04	0.73
1:A:560:LEU:HD13	1:A:560:LEU:O	1.89	0.73
1:A:580:ARG:HE	1:A:699:LEU:CB	2.02	0.73
1:A:628:ALA:HB3	1:A:630:ARG:NH1	2.04	0.73
1:A:704:TYR:CD1	1:A:722:MET:HE1	2.22	0.73
1:C:575:TYR:CE1	1:C:579:ARG:CZ	2.72	0.73
1:D:516:VAL:HG22	1:D:563:ILE:HD13	1.70	0.73
1:B:614:MET:SD	1:B:627:LEU:HD21	2.29	0.73
1:B:662:ASN:O	1:D:525:GLU:CB	2.36	0.72
1:C:522:ASP:OD1	1:C:522:ASP:N	2.22	0.72
1:C:538:MET:SD	1:C:550:LEU:HD13	2.29	0.72
1:D:568:SER:HB2	1:D:636:GLU:CG	2.19	0.72
1:B:535:MET:HE1	1:B:560:LEU:CD2	2.18	0.72
1:A:662:ASN:HB2	1:C:525:GLU:CB	2.20	0.72
1:A:503:ILE:O	1:A:503:ILE:HD12	1.90	0.72
1:C:478:ARG:CZ	1:C:561:TYR:CZ	2.72	0.72
1:D:741:HIS:HB2	1:D:747:ARG:HG2	1.71	0.72
1:A:503:ILE:CG2	1:A:512:VAL:CG2	2.68	0.72
1:B:531:LEU:HD13	1:B:531:LEU:O	1.90	0.72
1:B:727:ASN:N	1:B:727:ASN:HD22	1.87	0.72
1:C:614:MET:HA	1:C:614:MET:CE	2.07	0.72
1:C:621:LYS:O	1:C:651:ILE:N	2.23	0.72
1:A:555:THR:HG22	1:A:555:THR:O	1.90	0.72
1:B:663:GLY:CA	1:D:526:LYS:CB	2.67	0.72
1:B:653:ASN:OD1	1:B:653:ASN:N	2.21	0.71
1:D:546:ASN:OD1	1:D:609:GLN:HB3	1.90	0.71
1:D:673:GLU:HG2	1:D:747:ARG:HH22	1.55	0.71
1:A:567:ALA:HB1	1:A:635:THR:HA	1.71	0.71

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:495:VAL:CG1	1:D:517:LYS:CG	2.67	0.71
1:B:634:VAL:CG2	1:B:640:MET:CE	2.61	0.71
1:C:581:PRO:CB	1:C:582:PRO:HD3	2.20	0.71
1:D:474:TRP:NE1	1:D:539:LYS:CG	2.51	0.71
1:B:550:LEU:HD13	1:B:550:LEU:O	1.90	0.71
1:B:610:LEU:CD2	1:B:632:VAL:HG13	2.19	0.71
1:B:568:SER:CB	1:B:636:GLU:HB2	2.20	0.71
1:B:615:GLU:OE1	1:B:754:VAL:HG21	1.90	0.71
1:B:556:GLN:HE21	1:B:556:GLN:CA	2.00	0.71
1:B:651:ILE:HG23	1:B:655:ASP:HA	1.73	0.71
1:A:476:PHE:CZ	1:A:500:ALA:HB1	2.25	0.71
1:D:495:VAL:HG11	1:D:517:LYS:CG	2.21	0.71
1:B:476:PHE:HE1	1:B:480:LYS:HB3	1.54	0.71
1:D:541:ILE:CG2	1:D:616:TYR:CE2	2.71	0.71
1:D:572:LEU:HD13	1:D:640:MET:HE2	1.71	0.71
1:A:560:LEU:HD21	1:A:562:VAL:CG2	2.21	0.71
1:B:476:PHE:CE2	1:B:503:ILE:HG12	2.26	0.70
1:D:572:LEU:HD13	1:D:640:MET:CE	2.20	0.70
1:B:471:ASP:HB2	1:B:474:TRP:HB2	1.70	0.70
1:B:623:ILE:O	1:B:623:ILE:HD12	1.90	0.70
1:C:667:VAL:HG21	1:C:709:VAL:HG12	1.69	0.70
1:C:688:SER:O	1:C:691:VAL:HG12	1.92	0.70
1:A:735:MET:HE3	1:A:757:LEU:CD2	2.21	0.70
1:D:541:ILE:HG22	1:D:616:TYR:CE2	2.26	0.70
1:A:541:ILE:HD13	1:A:645:PHE:CE2	2.25	0.70
1:C:575:TYR:HE1	1:C:579:ARG:CD	2.04	0.70
1:A:572:LEU:O	1:A:572:LEU:HD12	1.90	0.70
1:B:489:GLU:O	1:B:489:GLU:HG3	1.92	0.70
1:D:547:ILE:HG21	1:D:617:LEU:HD11	1.73	0.70
1:A:712:LEU:HD12	1:A:712:LEU:O	1.91	0.70
1:B:556:GLN:HA	1:B:556:GLN:NE2	2.06	0.69
1:C:694:TRP:HE1	1:C:725:PRO:HD3	1.57	0.69
1:A:572:LEU:HD21	1:A:696:ILE:CG1	2.22	0.69
1:A:689:PHE:HE2	1:A:753:LEU:HD13	1.57	0.69
1:A:704:TYR:CE1	1:A:722:MET:CE	2.71	0.69
1:B:634:VAL:HG22	1:B:640:MET:SD	2.32	0.69
1:A:614:MET:SD	1:A:627:LEU:HD11	2.33	0.69
1:C:694:TRP:NE1	1:C:725:PRO:HD3	2.07	0.69
1:B:624:HIS:HA	1:B:648:ALA:HB2	1.74	0.69
1:B:721:ARG:HG2	1:B:721:ARG:HH11	1.56	0.69
1:C:694:TRP:NE1	1:C:725:PRO:CD	2.55	0.69

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:614:MET:SD	1:A:627:LEU:CD1	2.80	0.69
1:A:667:VAL:HG23	1:C:523:ALA:O	1.92	0.69
1:A:681:THR:H	1:A:684:SER:HB3	1.58	0.69
1:A:683:GLN:HA	1:A:683:GLN:HE21	1.58	0.69
1:B:614:MET:SD	1:B:627:LEU:HD22	2.32	0.69
1:B:687:TRP:HZ3	1:B:721:ARG:HH21	1.37	0.69
1:C:635:THR:O	1:C:636:GLU:C	2.27	0.69
1:A:704:TYR:HD1	1:A:722:MET:HE1	1.54	0.69
1:B:481:LEU:C	1:B:481:LEU:HD23	2.13	0.69
1:C:687:TRP:CH2	1:C:704:TYR:OH	2.39	0.69
1:D:526:LYS:HE3	1:D:664:ARG:CD	2.21	0.69
1:C:519:LEU:HD11	1:C:528:LEU:HG	1.73	0.68
1:A:656:PTR:HD1	1:A:658:LYS:H	1.58	0.68
1:A:546:ASN:N	1:A:546:ASN:HD22	1.92	0.68
1:B:506:ASP:H	1:B:508:PRO:HD3	1.57	0.68
1:A:735:MET:CE	1:A:757:LEU:HD21	2.18	0.68
1:B:601:LYS:HD2	1:B:761:LEU:HD11	1.75	0.68
1:C:535:MET:CG	1:C:562:VAL:CG2	2.68	0.68
1:B:614:MET:HB3	1:B:750:PHE:CE2	2.29	0.68
1:C:560:LEU:HD13	1:C:560:LEU:O	1.94	0.68
1:C:732:LEU:HD22	1:C:732:LEU:N	2.08	0.68
1:A:519:LEU:CD1	1:A:523:ALA:HB1	2.24	0.68
1:A:575:TYR:CE1	1:A:579:ARG:NE	2.59	0.67
1:A:698:THR:HG22	1:A:725:PRO:CG	2.23	0.67
1:C:480:LYS:CD	1:C:501:VAL:HG21	2.21	0.67
1:A:541:ILE:HD13	1:A:645:PHE:HE2	1.59	0.67
1:B:610:LEU:CD1	1:B:632:VAL:HG11	2.24	0.67
1:B:761:LEU:HD12	1:B:761:LEU:O	1.94	0.67
1:D:514:VAL:HG21	1:D:563:ILE:HG23	1.77	0.67
1:D:693:MET:CE	1:D:736:MET:HB2	2.24	0.67
1:A:575:TYR:HE1	1:A:579:ARG:HE	1.40	0.67
1:C:694:TRP:CD1	1:C:725:PRO:CD	2.77	0.67
1:C:694:TRP:HE1	1:C:725:PRO:CD	2.07	0.67
1:D:482:THR:O	1:D:498:ALA:HB1	1.93	0.67
1:A:759:ARG:CG	1:A:760:ILE:N	2.57	0.67
1:C:732:LEU:H	1:C:732:LEU:CD2	2.08	0.67
1:A:610:LEU:CD1	1:A:692:LEU:HD21	2.24	0.67
1:C:694:TRP:CE2	1:C:725:PRO:HG3	2.30	0.67
1:A:537:MET:O	1:A:541:ILE:HG13	1.95	0.67
1:A:683:GLN:HA	1:A:683:GLN:NE2	2.08	0.67
1:B:531:LEU:CD1	1:B:560:LEU:HD11	2.24	0.67

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:519:LEU:HD12	1:A:523:ALA:CB	2.25	0.67
1:A:503:ILE:HG22	1:A:512:VAL:CG2	2.25	0.67
1:B:550:LEU:C	1:B:550:LEU:HD22	2.14	0.67
1:A:541:ILE:O	1:A:616:TYR:CE2	2.48	0.66
1:B:531:LEU:HD13	1:B:531:LEU:C	2.15	0.66
1:C:647:LEU:N	1:C:647:LEU:HD23	2.09	0.66
1:D:673:GLU:CG	1:D:747:ARG:NH2	2.55	0.66
1:A:560:LEU:C	1:A:560:LEU:HD22	2.15	0.66
1:A:503:ILE:CG2	1:A:512:VAL:HG21	2.25	0.66
1:A:625:ARG:HH12	1:A:665:LEU:HD11	1.61	0.66
1:A:671:ALA:HB1	1:A:672:PRO:HD2	1.78	0.66
1:C:694:TRP:CD1	1:C:725:PRO:HD3	2.30	0.65
1:A:656:PTR:HB2	1:B:743:VAL:CG2	2.26	0.65
1:A:719:GLY:HA2	1:A:721:ARG:HH12	1.60	0.65
1:D:621:LYS:HE2	1:D:651:ILE:CG2	2.17	0.65
1:A:575:TYR:HD2	1:A:634:VAL:HG11	1.60	0.65
1:A:495:VAL:CG2	1:A:517:LYS:CG	2.74	0.65
1:C:469:PRO:HD3	1:D:469:PRO:CG	2.25	0.65
1:C:536:GLU:OE1	1:C:536:GLU:HA	1.95	0.65
1:C:475:GLU:HA	1:C:553:ALA:O	1.96	0.65
1:C:703:PRO:CA	1:C:722:MET:HE1	2.25	0.65
1:D:571:ASN:N	1:D:571:ASN:OD1	2.27	0.65
1:A:571:ASN:HB2	1:A:630:ARG:O	1.96	0.65
1:B:572:LEU:HD21	1:B:696:ILE:HG12	1.77	0.65
1:C:600:PHE:CZ	1:C:729:THR:OG1	2.49	0.65
1:A:476:PHE:HZ	1:A:500:ALA:HB1	1.61	0.65
1:A:519:LEU:CD1	1:A:523:ALA:CB	2.75	0.65
1:A:724:LYS:O	1:A:724:LYS:HD3	1.97	0.65
1:D:500:ALA:HB3	1:D:503:ILE:HD11	1.77	0.65
1:D:694:TRP:CZ3	1:D:703:PRO:HA	2.32	0.65
1:D:606:CYS:SG	1:D:640:MET:HE1	2.34	0.64
1:D:470:GLU:HB2	1:D:475:GLU:HG3	1.77	0.64
1:B:467:GLU:OE2	1:D:713:PHE:CD1	2.50	0.64
1:D:568:SER:CB	1:D:636:GLU:HG2	2.27	0.64
1:D:732:LEU:CD2	1:D:760:ILE:HD11	2.26	0.64
1:B:663:GLY:HA2	1:D:526:LYS:H	1.60	0.64
1:C:481:LEU:HG	1:C:481:LEU:O	1.97	0.64
1:A:735:MET:HE1	1:A:757:LEU:CD2	2.18	0.64
1:A:759:ARG:CG	1:A:759:ARG:HH21	2.11	0.64
1:C:581:PRO:CG	1:C:582:PRO:CD	2.65	0.64
1:A:568:SER:HB2	1:A:636:GLU:HB2	1.78	0.64

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:665:LEU:O	1:C:524:THR:HA	1.97	0.64
1:C:575:TYR:CE1	1:C:579:ARG:NH1	2.66	0.64
1:A:651:ILE:CG2	1:A:655:ASP:HA	2.27	0.63
1:D:749:THR:CG2	1:D:750:PHE:N	2.61	0.63
1:C:712:LEU:HD12	1:C:712:LEU:O	1.98	0.63
1:A:739:CYS:SG	1:A:753:LEU:HD11	2.39	0.63
1:C:467:GLU:O	1:D:469:PRO:HG3	1.98	0.63
1:C:720:HIS:ND1	1:C:721:ARG:N	2.46	0.63
1:A:689:PHE:CE2	1:A:753:LEU:CD1	2.81	0.63
1:B:687:TRP:CH2	1:B:721:ARG:NH2	2.67	0.63
1:A:572:LEU:HD21	1:A:696:ILE:HG12	1.81	0.63
1:A:689:PHE:CE2	1:A:753:LEU:HD13	2.34	0.63
1:C:542:GLY:C	1:C:543:LYS:HD2	2.18	0.63
1:D:621:LYS:CE	1:D:651:ILE:HG21	2.04	0.63
1:D:624:HIS:HE1	1:D:644:ASP:O	1.81	0.63
1:B:655:ASP:OD1	1:B:655:ASP:N	2.32	0.63
1:C:537:MET:HG2	1:C:648:ALA:HB3	1.81	0.63
1:D:474:TRP:CD1	1:D:539:LYS:HE3	2.31	0.63
1:C:548:ILE:HG22	1:C:645:PHE:HE1	1.64	0.62
1:B:544:HIS:HB3	1:B:547:ILE:HG23	1.81	0.62
1:B:608:TYR:HA	1:B:757:LEU:HD13	1.81	0.62
1:D:673:GLU:HG3	1:D:747:ARG:NH2	2.14	0.62
1:A:516:VAL:CG1	1:A:561:TYR:HB3	2.29	0.62
1:B:623:ILE:CD1	1:B:649:ARG:O	2.47	0.62
1:B:663:GLY:HA3	1:D:526:LYS:CB	2.29	0.62
1:A:612:ARG:HA	1:A:754:VAL:HG21	1.81	0.62
1:C:478:ARG:NH2	1:C:561:TYR:HE2	1.97	0.62
1:C:610:LEU:HD13	1:C:692:LEU:HD21	1.81	0.62
1:D:531:LEU:HD22	1:D:531:LEU:C	2.17	0.62
1:B:721:ARG:HH11	1:B:721:ARG:CG	2.12	0.62
1:C:628:ALA:HB2	1:C:669:TRP:CD1	2.34	0.62
1:A:572:LEU:HD22	1:A:640:MET:HE1	1.80	0.62
1:A:683:GLN:HE21	1:A:683:GLN:CA	2.13	0.62
1:B:656:PTR:HE1	1:B:656:PTR:O2P	2.00	0.62
1:B:686:VAL:CG1	1:B:750:PHE:HE1	2.03	0.62
1:A:512:VAL:HG23	1:A:512:VAL:O	2.00	0.62
1:A:563:ILE:HD13	1:A:563:ILE:H	1.65	0.62
1:C:686:VAL:CG2	1:C:747:ARG:CD	2.75	0.62
1:C:478:ARG:NH2	1:C:561:TYR:OH	2.33	0.61
1:D:545:LYS:HE3	1:D:639:VAL:HG11	1.82	0.61
1:A:610:LEU:HD12	1:A:692:LEU:HD21	1.81	0.61

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:673:GLU:OE2	1:D:684:SER:HB2	1.98	0.61
1:D:743:VAL:CG1	1:D:744:PRO:HD2	2.29	0.61
1:B:474:TRP:HA	1:B:474:TRP:CE3	2.36	0.61
1:B:651:ILE:HG22	1:B:651:ILE:O	2.01	0.61
1:B:698:THR:HG23	1:B:698:THR:O	1.99	0.61
1:A:525:GLU:HA	1:A:525:GLU:OE2	1.99	0.61
1:A:614:MET:HA	1:A:614:MET:CE	2.31	0.61
1:C:485:LYS:CB	1:C:486:PRO:HD2	2.30	0.61
1:C:665:LEU:HB2	1:C:670:MET:HE3	1.81	0.61
1:C:667:VAL:HG23	1:C:709:VAL:HG13	1.75	0.61
1:A:580:ARG:HE	1:A:699:LEU:HB2	1.63	0.61
1:A:623:ILE:O	1:A:648:ALA:CB	2.49	0.61
1:C:729:THR:HB	1:C:732:LEU:HD23	1.81	0.61
1:D:614:MET:SD	1:D:627:LEU:HD21	2.40	0.61
1:A:524:THR:HG22	1:A:527:ASP:N	2.12	0.61
1:B:531:LEU:CD1	1:B:560:LEU:CD1	2.77	0.61
1:B:573:ARG:HH21	1:B:573:ARG:CG	2.11	0.61
1:C:683:GLN:HA	1:C:683:GLN:NE2	2.13	0.61
1:A:503:ILE:HG23	1:A:512:VAL:HG21	1.82	0.61
1:B:544:HIS:CD2	1:B:616:TYR:HB2	2.35	0.61
1:A:580:ARG:HE	1:A:699:LEU:HB3	1.64	0.61
1:A:647:LEU:HD11	1:A:664:ARG:O	2.00	0.61
1:D:500:ALA:C	1:D:503:ILE:HD11	2.21	0.61
1:D:673:GLU:HG2	1:D:747:ARG:NH2	2.16	0.61
1:A:563:ILE:HD13	1:A:563:ILE:N	2.15	0.61
1:A:560:LEU:CD2	1:A:562:VAL:HG23	2.29	0.60
1:D:623:ILE:HG13	1:D:623:ILE:O	2.01	0.60
1:A:651:ILE:HG22	1:A:651:ILE:O	2.00	0.60
1:A:568:SER:CB	1:A:636:GLU:HB2	2.30	0.60
1:C:469:PRO:CG	1:D:469:PRO:HB2	2.30	0.60
1:B:683:GLN:OE1	1:B:683:GLN:HA	2.02	0.60
1:C:683:GLN:HE21	1:C:683:GLN:CA	2.09	0.60
1:B:610:LEU:HD13	1:B:632:VAL:HG21	1.81	0.60
1:B:617:LEU:HD21	1:B:624:HIS:HB2	1.84	0.60
1:B:694:TRP:CE2	1:B:722:MET:HE3	2.35	0.60
1:A:514:VAL:HG11	1:A:563:ILE:HB	1.84	0.60
1:B:534:GLU:HA	1:B:646:GLY:HA2	1.83	0.60
1:C:703:PRO:HA	1:C:722:MET:HE1	1.83	0.60
1:B:697:PHE:CZ	1:B:732:LEU:HD23	2.37	0.60
1:B:675:LEU:HD22	1:B:713:PHE:CE2	2.37	0.59
1:C:575:TYR:CD1	1:C:579:ARG:HD2	2.36	0.59

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:632:VAL:HG12	1:D:632:VAL:O	2.00	0.59
1:A:724:LYS:HB3	1:A:733:TYR:CG	2.36	0.59
1:B:623:ILE:HD11	1:B:649:ARG:O	2.02	0.59
1:B:663:GLY:HA2	1:D:526:LYS:HB2	1.79	0.59
1:C:672:PRO:HD3	1:C:687:TRP:NE1	2.16	0.59
1:D:624:HIS:CE1	1:D:644:ASP:O	2.55	0.59
1:B:665:LEU:HB2	1:B:670:MET:SD	2.42	0.59
1:A:624:HIS:HA	1:A:648:ALA:CB	2.30	0.59
1:A:628:ALA:HB1	1:A:630:ARG:NH1	2.15	0.59
1:A:689:PHE:CD2	1:A:753:LEU:CD1	2.85	0.59
1:A:698:THR:CG2	1:A:725:PRO:HB3	2.30	0.59
1:B:624:HIS:O	1:B:648:ALA:CB	2.37	0.59
1:C:743:VAL:CG1	1:C:744:PRO:HD2	2.32	0.59
1:A:626:ASP:HB2	1:A:647:LEU:HD12	1.83	0.59
1:C:507:LYS:N	1:C:508:PRO:CD	2.62	0.59
1:C:568:SER:CB	1:C:636:GLU:CB	2.80	0.59
1:B:601:LYS:HB2	1:B:601:LYS:HZ2	1.64	0.59
1:C:547:ILE:O	1:C:547:ILE:HG13	2.02	0.59
1:D:495:VAL:HA	1:D:516:VAL:O	2.02	0.59
1:A:625:ARG:NH1	1:A:665:LEU:HD11	2.18	0.58
1:B:504:ASP:HB2	1:B:508:PRO:HD2	1.84	0.58
1:B:664:ARG:O	1:B:665:LEU:HD23	2.02	0.58
1:A:607:THR:CG2	1:A:757:LEU:HD11	2.33	0.58
1:A:694:TRP:NE1	1:A:725:PRO:HG3	2.17	0.58
1:C:635:THR:HB	1:C:639:VAL:HB	1.86	0.58
1:D:570:GLY:O	1:D:634:VAL:HG12	2.03	0.58
1:B:634:VAL:CG2	1:B:640:MET:HE1	2.29	0.58
1:D:694:TRP:CE3	1:D:703:PRO:HA	2.39	0.58
1:D:708:PRO:HD2	1:D:711:GLU:HB3	1.84	0.58
1:A:698:THR:O	1:A:698:THR:OG1	2.14	0.58
1:C:612:ARG:O	1:C:615:GLU:HB3	2.03	0.58
1:D:704:TYR:HD1	1:D:704:TYR:N	2.02	0.58
1:A:516:VAL:HG22	1:A:563:ILE:HG22	1.85	0.58
1:A:575:TYR:HE1	1:A:579:ARG:CZ	2.15	0.58
1:A:614:MET:SD	1:A:627:LEU:HD12	2.43	0.58
1:A:634:VAL:HG13	1:A:634:VAL:O	2.04	0.58
1:D:501:VAL:HA	1:D:511:ALA:HA	1.86	0.58
1:D:624:HIS:NE2	1:D:643:ALA:O	2.35	0.58
1:B:620:GLN:OE1	1:B:620:GLN:HA	2.04	0.58
1:D:672:PRO:CG	1:D:687:TRP:CH2	2.86	0.58
1:D:732:LEU:HD22	1:D:760:ILE:HD11	1.85	0.58

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:504:ASP:HB2	1:B:507:LYS:CA	2.33	0.57
1:B:514:VAL:HG21	1:B:563:ILE:HG23	1.85	0.57
1:D:710:GLU:OE1	1:D:710:GLU:N	2.30	0.57
1:D:667:VAL:HG21	1:D:709:VAL:HG13	1.82	0.57
1:D:500:ALA:C	1:D:503:ILE:CD1	2.73	0.57
1:B:601:LYS:HD3	1:B:761:LEU:HD13	1.82	0.57
1:C:614:MET:CB	1:C:750:PHE:CE1	2.86	0.57
1:C:729:THR:HB	1:C:732:LEU:CD2	2.33	0.57
1:D:541:ILE:HG23	1:D:616:TYR:CE2	2.40	0.57
1:D:672:PRO:HD3	1:D:687:TRP:CZ2	2.39	0.57
1:A:555:THR:O	1:A:555:THR:CG2	2.52	0.57
1:A:647:LEU:HD21	1:A:664:ARG:HG2	1.86	0.57
1:A:699:LEU:N	1:A:699:LEU:HD13	2.19	0.57
1:B:526:LYS:H	1:D:664:ARG:H	1.53	0.57
1:C:670:MET:SD	1:C:675:LEU:HG	2.44	0.57
1:A:600:PHE:HE2	1:A:727:ASN:O	1.87	0.57
1:B:475:GLU:CD	1:B:556:GLN:CB	2.73	0.57
1:C:614:MET:HB3	1:C:750:PHE:CE1	2.39	0.57
1:A:689:PHE:CD2	1:A:753:LEU:HD12	2.40	0.57
1:B:507:LYS:N	1:B:508:PRO:CD	2.68	0.57
1:A:627:LEU:C	1:A:627:LEU:HD23	2.23	0.57
1:B:665:LEU:HB3	1:B:666:PRO:HD2	1.87	0.57
1:C:535:MET:SD	1:C:562:VAL:CG2	2.93	0.57
1:A:607:THR:CG2	1:A:757:LEU:CD1	2.83	0.57
1:C:535:MET:CG	1:C:562:VAL:HG22	2.31	0.57
1:C:694:TRP:CD1	1:C:725:PRO:HG2	2.39	0.57
1:C:694:TRP:CG	1:C:722:MET:SD	2.98	0.57
1:A:481:LEU:HD11	1:A:498:ALA:HB1	1.86	0.56
1:B:624:HIS:CA	1:B:648:ALA:CB	2.80	0.56
2:D:1001:KX0:C07	2:D:1001:KX0:C22	2.82	0.56
1:B:475:GLU:OE1	1:B:556:GLN:HB2	2.05	0.56
1:B:630:ARG:NH2	1:B:666:PRO:HG3	2.19	0.56
1:C:568:SER:HB3	1:C:636:GLU:CA	2.35	0.56
1:D:487:LEU:CD2	1:D:497:MET:CB	2.62	0.56
1:D:498:ALA:O	1:D:514:VAL:N	2.38	0.56
1:D:704:TYR:CD1	1:D:704:TYR:N	2.73	0.56
1:D:470:GLU:O	1:D:470:GLU:HG3	2.05	0.56
1:D:514:VAL:CG2	1:D:563:ILE:HG23	2.35	0.56
1:C:630:ARG:HG3	1:C:630:ARG:NH1	2.21	0.56
1:C:635:THR:CB	1:C:639:VAL:O	2.54	0.56
1:C:692:LEU:O	1:C:692:LEU:HD12	2.04	0.56

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:531:LEU:HD12	1:B:560:LEU:CD1	2.35	0.56
2:B:1001:KX0:N04	2:B:1001:KX0:CL1	2.76	0.56
1:A:575:TYR:O	1:A:578:ALA:HB3	2.06	0.56
2:D:1001:KX0:N04	2:D:1001:KX0:CL1	2.76	0.56
1:B:518:MET:HE2	1:B:561:TYR:CE1	2.40	0.56
1:C:516:VAL:HG12	1:C:563:ILE:HG12	1.87	0.56
1:C:737:ARG:HH21	1:C:737:ARG:CG	2.13	0.56
1:A:497:MET:HE3	1:A:513:THR:HG21	1.88	0.56
1:A:759:ARG:HG3	1:A:760:ILE:N	2.21	0.56
1:B:486:PRO:HA	1:B:496:VAL:HA	1.88	0.56
1:D:575:TYR:CE1	1:D:579:ARG:HD2	2.41	0.56
1:D:760:ILE:O	1:D:764:THR:CG2	2.44	0.56
1:A:735:MET:HA	1:A:738:ASP:HB2	1.88	0.55
1:C:537:MET:CE	1:C:537:MET:HA	2.35	0.55
1:B:478:ARG:NE	1:B:557:ASP:O	2.39	0.55
1:B:699:LEU:HD22	1:B:699:LEU:N	2.21	0.55
1:B:712:LEU:HD11	1:B:716:LEU:HG	1.88	0.55
1:C:531:LEU:HD13	1:C:531:LEU:O	2.06	0.55
1:D:672:PRO:HG2	1:D:687:TRP:CH2	2.42	0.55
1:B:698:THR:HB	1:B:725:PRO:HB3	1.88	0.55
1:C:603:LEU:HD21	1:C:699:LEU:HD11	1.86	0.55
1:C:687:TRP:CZ2	1:C:704:TYR:OH	2.57	0.55
1:A:614:MET:HE3	1:A:614:MET:CA	2.33	0.55
1:A:628:ALA:HB3	1:A:630:ARG:HH12	1.61	0.55
2:A:1001:KX0:N04	2:A:1001:KX0:CL1	2.77	0.55
1:D:672:PRO:HD3	1:D:687:TRP:CE2	2.41	0.55
1:D:683:GLN:CA	1:D:686:VAL:CG1	2.80	0.55
1:A:759:ARG:HG3	1:A:759:ARG:NH2	2.22	0.55
1:D:614:MET:SD	1:D:627:LEU:CD2	2.95	0.55
1:B:486:PRO:HB3	1:B:496:VAL:HG22	1.88	0.55
1:C:610:LEU:HD12	1:C:696:ILE:HD11	1.88	0.55
1:A:476:PHE:CD2	1:A:503:ILE:HD13	2.42	0.55
1:C:724:LYS:HD2	1:C:724:LYS:H	1.71	0.55
2:C:1001:KX0:C22	2:C:1001:KX0:C07	2.85	0.55
1:D:712:LEU:O	1:D:712:LEU:HD12	2.07	0.55
1:D:749:THR:HG22	1:D:751:LYS:H	1.72	0.55
1:C:612:ARG:HA	1:C:754:VAL:HG21	1.89	0.54
1:C:708:PRO:HG2	1:C:711:GLU:HB3	1.89	0.54
1:D:476:PHE:HB3	1:D:554:CYS:SG	2.47	0.54
1:D:610:LEU:N	1:D:610:LEU:HD23	2.21	0.54
1:D:627:LEU:HD12	1:D:692:LEU:HD22	1.88	0.54

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:610:LEU:HD12	1:B:696:ILE:HD11	1.90	0.54
1:D:499:GLU:HA	1:D:513:THR:HA	1.89	0.54
1:D:546:ASN:O	1:D:641:LYS:HA	2.07	0.54
1:A:531:LEU:HD12	1:A:531:LEU:C	2.23	0.54
1:B:675:LEU:HD22	1:B:713:PHE:HE2	1.72	0.54
1:C:478:ARG:CZ	1:C:561:TYR:CE2	2.91	0.54
1:C:686:VAL:O	1:C:690:GLY:N	2.34	0.54
1:D:575:TYR:CE1	1:D:579:ARG:NE	2.74	0.54
1:B:673:GLU:OE2	1:B:744:PRO:HB3	2.07	0.54
1:C:478:ARG:NH2	1:C:561:TYR:CZ	2.76	0.54
1:A:656:PTR:O	1:A:657:TYR:HB3	2.08	0.54
1:C:622:CYS:HA	1:C:650:ASP:HA	1.88	0.54
1:C:476:PHE:HZ	1:C:501:VAL:O	1.90	0.54
1:B:715:LEU:CD2	1:B:715:LEU:H	2.21	0.54
1:A:568:SER:HB2	1:A:636:GLU:CB	2.37	0.54
1:A:568:SER:OG	1:A:636:GLU:HB2	2.07	0.54
1:B:651:ILE:HD13	1:B:656:PTR:HB3	1.89	0.54
1:A:468:LEU:HB3	1:A:469:PRO:HD2	1.91	0.53
1:C:720:HIS:O	1:C:721:ARG:HG2	2.08	0.53
2:A:1001:KX0:C22	2:A:1001:KX0:C07	2.86	0.53
1:B:471:ASP:O	1:B:472:PRO:C	2.46	0.53
1:B:617:LEU:HD22	1:B:645:PHE:HE1	1.74	0.53
1:A:647:LEU:HD13	1:A:665:LEU:HG	1.90	0.53
1:B:694:TRP:CD2	1:B:722:MET:HE3	2.44	0.53
1:D:495:VAL:CB	1:D:516:VAL:O	2.56	0.53
1:D:512:VAL:HG23	1:D:514:VAL:HG13	1.90	0.53
1:D:689:PHE:CE2	1:D:753:LEU:HD13	2.43	0.53
1:A:477:PRO:HG2	1:A:480:LYS:HG2	1.91	0.53
1:A:711:GLU:HG2	1:A:711:GLU:O	2.09	0.53
1:A:759:ARG:HH21	1:A:759:ARG:HB2	1.73	0.53
1:B:617:LEU:HD22	1:B:645:PHE:CE1	2.43	0.53
1:C:600:PHE:HE2	1:C:729:THR:OG1	1.91	0.53
1:A:474:TRP:CE3	1:A:474:TRP:HA	2.43	0.53
1:A:541:ILE:O	1:A:616:TYR:HE2	1.90	0.53
1:A:669:TRP:CZ2	1:A:703:PRO:HG3	2.42	0.53
1:B:654:ILE:HG23	1:B:654:ILE:O	2.07	0.53
1:C:722:MET:HB3	1:C:740:TRP:CH2	2.44	0.53
1:A:608:TYR:CE1	1:A:612:ARG:HG3	2.44	0.53
1:B:500:ALA:HB1	1:B:503:ILE:HG13	1.90	0.53
1:D:487:LEU:CD1	1:D:515:ALA:HB1	2.38	0.53
1:A:671:ALA:HB1	1:A:672:PRO:CD	2.38	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:683:GLN:NE2	1:A:683:GLN:CA	2.72	0.53
1:C:636:GLU:O	1:C:637:ASN:ND2	2.42	0.53
1:D:699:LEU:HD23	1:D:699:LEU:N	2.23	0.53
1:C:537:MET:HA	1:C:537:MET:HE3	1.89	0.53
1:C:567:ALA:HB3	1:C:633:LEU:HD22	1.89	0.53
1:C:675:LEU:HD23	1:C:675:LEU:O	2.09	0.53
1:D:692:LEU:HD12	1:D:692:LEU:C	2.28	0.53
1:A:559:PRO:HG3	1:C:708:PRO:CG	2.38	0.53
1:B:531:LEU:HD11	1:B:560:LEU:CD1	2.36	0.53
1:B:486:PRO:CA	1:B:496:VAL:HG22	2.39	0.53
1:B:694:TRP:CD2	1:B:722:MET:CE	2.92	0.53
1:B:712:LEU:HD12	1:B:712:LEU:C	2.26	0.53
1:D:575:TYR:CZ	1:D:579:ARG:CZ	2.91	0.53
1:A:607:THR:HG22	1:A:757:LEU:HD12	1.89	0.52
1:B:708:PRO:HG2	1:B:711:GLU:HB3	1.90	0.52
1:D:624:HIS:ND1	1:D:624:HIS:O	2.42	0.52
1:B:475:GLU:CD	1:B:556:GLN:HB2	2.29	0.52
1:C:543:LYS:N	1:C:543:LYS:CD	2.73	0.52
1:C:623:ILE:HG22	1:C:682:HIS:CD2	2.44	0.52
1:B:614:MET:CB	1:B:750:PHE:CE2	2.92	0.52
1:D:575:TYR:OH	1:D:579:ARG:CZ	2.57	0.52
1:D:625:ARG:HH21	1:D:662:ASN:ND2	2.07	0.52
1:A:545:LYS:HE3	1:A:639:VAL:HG13	1.92	0.52
1:C:572:LEU:HD23	1:C:629:ALA:HB1	1.91	0.52
1:D:724:LYS:HB2	1:D:733:TYR:CG	2.45	0.52
1:A:664:ARG:HA	1:C:524:THR:HG22	1.91	0.52
1:B:474:TRP:HA	1:B:474:TRP:HE3	1.73	0.52
1:C:571:ASN:HB2	1:C:630:ARG:O	2.10	0.52
1:B:623:ILE:HD13	1:B:625:ARG:CG	2.39	0.52
1:A:544:HIS:H	1:A:549:ASN:HD22	1.57	0.52
1:C:544:HIS:NE2	1:C:616:TYR:CB	2.72	0.52
1:A:608:TYR:HE1	1:A:612:ARG:HG3	1.72	0.52
1:A:664:ARG:HA	1:C:524:THR:HG21	1.91	0.52
1:B:614:MET:HA	1:B:614:MET:HE3	1.92	0.52
1:A:546:ASN:O	1:A:641:LYS:HA	2.09	0.52
1:A:571:ASN:ND2	2:A:1001:KX0:C08	2.63	0.52
1:B:601:LYS:HD3	1:B:761:LEU:HD12	1.85	0.52
1:C:668:LYS:NZ	1:C:707:ILE:O	2.31	0.52
1:A:761:LEU:HD12	1:A:761:LEU:C	2.28	0.51
1:B:617:LEU:HD12	1:B:617:LEU:C	2.29	0.51
1:B:634:VAL:CG2	1:B:640:MET:HE2	2.32	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:568:SER:HB2	1:C:636:GLU:CB	2.40	0.51
1:C:688:SER:O	1:C:691:VAL:CG1	2.58	0.51
1:D:569:LYS:HB2	1:D:634:VAL:HG13	1.91	0.51
1:B:471:ASP:CB	1:B:474:TRP:HB2	2.39	0.51
1:B:624:HIS:C	1:B:624:HIS:HD1	2.11	0.51
2:B:1001:KX0:C07	2:B:1001:KX0:C22	2.85	0.51
1:B:481:LEU:HD12	1:B:563:ILE:HD11	1.91	0.51
1:A:496:VAL:HG23	1:A:496:VAL:O	2.10	0.51
1:A:538:MET:HB2	1:A:550:LEU:HD22	1.92	0.51
1:C:672:PRO:CG	1:C:687:TRP:NE1	2.74	0.51
1:C:686:VAL:CG2	1:C:747:ARG:HB3	2.15	0.51
1:C:703:PRO:CB	1:C:722:MET:HE1	2.40	0.51
1:B:663:GLY:HA2	1:D:526:LYS:N	2.26	0.51
1:D:699:LEU:N	1:D:699:LEU:CD2	2.73	0.51
1:B:560:LEU:C	1:B:560:LEU:HD13	2.30	0.51
1:B:623:ILE:HD13	1:B:625:ARG:HG3	1.93	0.51
1:D:683:GLN:HA	1:D:686:VAL:HG12	1.89	0.51
1:B:697:PHE:CE1	1:B:732:LEU:HD23	2.46	0.51
1:D:568:SER:CB	1:D:636:GLU:CG	2.85	0.51
1:D:737:ARG:NH1	1:D:737:ARG:HG3	2.26	0.51
1:A:759:ARG:HG2	1:A:760:ILE:H	1.76	0.51
1:B:537:MET:CE	1:B:537:MET:CA	2.85	0.51
1:B:652:ASN:C	1:B:653:ASN:OD1	2.49	0.51
1:C:601:LYS:NZ	1:C:601:LYS:HB3	2.26	0.51
1:D:737:ARG:HG3	1:D:737:ARG:HH11	1.76	0.51
1:A:735:MET:HE3	1:A:757:LEU:HD23	1.84	0.50
1:B:569:LYS:HB2	1:B:634:VAL:HG12	1.93	0.50
1:A:524:THR:HG22	1:A:526:LYS:N	2.27	0.50
1:B:721:ARG:CG	1:B:721:ARG:NH1	2.73	0.50
1:A:699:LEU:HD13	1:A:699:LEU:H	1.76	0.50
1:B:470:GLU:OE1	1:B:472:PRO:HD3	2.11	0.50
1:C:575:TYR:CD1	1:C:579:ARG:NH1	2.78	0.50
1:A:721:ARG:HH11	1:A:721:ARG:HG2	1.77	0.50
1:B:544:HIS:CD2	1:B:616:TYR:CD2	2.92	0.50
1:D:495:VAL:CA	1:D:516:VAL:O	2.58	0.50
1:D:514:VAL:HG21	1:D:563:ILE:CG2	2.41	0.50
1:B:741:HIS:HB2	1:B:747:ARG:HG2	1.93	0.50
1:D:500:ALA:O	1:D:503:ILE:HD13	2.12	0.50
1:D:687:TRP:CD1	1:D:687:TRP:C	2.84	0.50
1:A:687:TRP:CD1	1:A:687:TRP:C	2.85	0.50
1:B:487:LEU:HD21	1:B:497:MET:HB2	1.94	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:469:PRO:CD	1:D:469:PRO:CB	2.51	0.50
1:C:623:ILE:HG13	1:C:625:ARG:HG2	1.93	0.50
1:A:572:LEU:CD1	1:A:576:LEU:HG	2.42	0.50
1:A:759:ARG:HH21	1:A:759:ARG:CB	2.24	0.50
1:B:616:TYR:CD1	1:B:616:TYR:C	2.85	0.50
1:D:559:PRO:HG2	1:D:561:TYR:CE1	2.47	0.50
1:A:546:ASN:OD1	1:A:609:GLN:HB3	2.12	0.49
1:C:623:ILE:HG12	1:C:623:ILE:O	2.11	0.49
1:C:695:GLU:O	1:C:700:GLY:N	2.38	0.49
1:A:572:LEU:HD11	1:A:576:LEU:HG	1.94	0.49
1:B:687:TRP:C	1:B:687:TRP:CD1	2.85	0.49
1:B:531:LEU:HD11	1:B:562:VAL:CG2	2.42	0.49
1:B:541:ILE:HG21	1:B:547:ILE:CD1	2.42	0.49
1:B:638:ASN:OD1	1:B:638:ASN:N	2.44	0.49
1:D:621:LYS:HG2	1:D:652:ASN:HA	1.95	0.49
1:B:504:ASP:HB2	1:B:507:LYS:H	1.78	0.49
1:B:689:PHE:CD1	1:B:692:LEU:HD23	2.48	0.49
1:D:657:TYR:HA	1:D:679:VAL:HB	1.94	0.49
1:D:743:VAL:HG12	1:D:744:PRO:HD2	1.95	0.49
1:B:478:ARG:NE	1:B:554:CYS:HB3	2.28	0.49
1:B:519:LEU:HD21	1:B:528:LEU:CA	2.35	0.49
1:B:600:PHE:CD1	1:B:600:PHE:C	2.85	0.49
1:C:470:GLU:O	1:C:470:GLU:HG3	2.12	0.49
1:C:496:VAL:HG23	1:C:516:VAL:HG22	1.95	0.49
1:C:625:ARG:O	1:C:665:LEU:HD13	2.12	0.49
1:C:694:TRP:CZ3	1:C:703:PRO:HA	2.48	0.49
1:C:704:TYR:H	1:C:722:MET:CE	2.26	0.49
1:D:572:LEU:HD13	1:D:640:MET:HE3	1.94	0.49
1:A:614:MET:CE	1:A:614:MET:CA	2.90	0.49
1:A:656:PTR:O	1:A:680:TYR:O	2.30	0.49
1:C:635:THR:N	1:C:639:VAL:O	2.46	0.49
1:D:495:VAL:HB	1:D:516:VAL:O	2.12	0.49
1:D:683:GLN:HA	1:D:686:VAL:HG11	1.92	0.49
1:A:756:ASP:O	1:A:759:ARG:HG2	2.13	0.49
1:B:495:VAL:HG22	1:B:517:LYS:HG3	1.95	0.49
1:B:724:LYS:HB2	1:B:733:TYR:CG	2.48	0.49
1:C:667:VAL:CG2	1:C:709:VAL:HG11	2.36	0.49
1:D:621:LYS:CG	1:D:651:ILE:HG22	2.43	0.49
1:D:724:LYS:HZ2	1:D:724:LYS:CB	2.26	0.49
1:B:560:LEU:CD1	1:B:562:VAL:HG23	2.37	0.49
1:C:560:LEU:HD13	1:C:560:LEU:C	2.33	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:536:GLU:HA	1:A:536:GLU:OE1	2.12	0.48
1:C:622:CYS:O	1:C:682:HIS:CD2	2.65	0.48
1:C:665:LEU:HB2	1:C:670:MET:CE	2.42	0.48
1:C:731:GLU:OE1	1:C:760:ILE:HD11	2.12	0.48
1:A:541:ILE:HD11	1:A:645:PHE:CD2	2.48	0.48
1:A:544:HIS:H	1:A:549:ASN:ND2	2.11	0.48
1:A:629:ALA:HB2	1:A:692:LEU:CD1	2.43	0.48
1:A:672:PRO:HD3	1:A:687:TRP:CD2	2.48	0.48
1:D:743:VAL:HG13	1:D:744:PRO:HD2	1.96	0.48
1:B:575:TYR:HE1	1:B:579:ARG:CZ	2.27	0.48
1:D:572:LEU:HD21	1:D:696:ILE:HG12	1.94	0.48
1:D:715:LEU:HD13	1:D:715:LEU:N	2.28	0.48
1:A:481:LEU:HD11	1:A:498:ALA:CB	2.42	0.48
1:A:538:MET:HB3	1:A:550:LEU:HB2	1.95	0.48
1:A:610:LEU:HD13	1:A:692:LEU:HD21	1.95	0.48
1:B:727:ASN:N	1:B:727:ASN:ND2	2.60	0.48
1:C:477:PRO:HG2	1:C:480:LYS:HB2	1.95	0.48
1:D:474:TRP:NE1	1:D:539:LYS:CE	2.73	0.48
1:D:635:THR:HG21	1:D:641:LYS:HE3	1.95	0.48
1:A:546:ASN:N	1:A:546:ASN:ND2	2.60	0.48
1:A:651:ILE:HG21	1:A:655:ASP:HA	1.94	0.48
1:A:680:TYR:CE1	1:A:685:ASP:OD1	2.67	0.48
1:B:504:ASP:HB2	1:B:507:LYS:N	2.29	0.48
1:D:683:GLN:C	1:D:686:VAL:HG13	2.31	0.48
1:A:497:MET:HE2	1:A:513:THR:HG23	1.95	0.48
1:A:646:GLY:O	1:A:649:ARG:NH1	2.46	0.48
1:B:601:LYS:O	1:B:602:ASP:C	2.51	0.48
1:C:672:PRO:CD	1:C:687:TRP:NE1	2.75	0.48
1:B:575:TYR:HE1	1:B:579:ARG:NH1	2.10	0.48
1:C:630:ARG:NH1	1:C:630:ARG:CG	2.73	0.48
1:D:694:TRP:HZ3	1:D:703:PRO:HA	1.78	0.48
1:A:496:VAL:CG2	1:A:518:MET:HE1	2.44	0.48
1:A:759:ARG:HH21	1:A:759:ARG:HG3	1.75	0.48
1:A:528:LEU:HD12	1:A:528:LEU:O	2.14	0.48
1:B:486:PRO:HA	1:B:496:VAL:HG22	1.96	0.48
1:B:623:ILE:HD13	1:B:625:ARG:HD2	1.95	0.48
1:A:487:LEU:HD11	1:A:497:MET:HB2	1.95	0.48
1:C:481:LEU:HD11	1:C:498:ALA:CB	2.44	0.48
1:B:527:ASP:OD1	1:B:527:ASP:O	2.32	0.47
1:B:531:LEU:HD11	1:B:562:VAL:HG23	1.96	0.47
1:C:672:PRO:HD3	1:C:687:TRP:CG	2.46	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:625:ARG:HH12	1:A:665:LEU:CD1	2.26	0.47
1:C:535:MET:CG	1:C:562:VAL:HG21	2.37	0.47
1:D:601:LYS:H	1:D:601:LYS:HG2	1.47	0.47
1:C:474:TRP:HE3	1:C:552:GLY:HA2	1.79	0.47
1:D:503:ILE:CD1	1:D:503:ILE:N	2.78	0.47
1:D:555:THR:O	1:D:555:THR:OG1	2.30	0.47
1:D:689:PHE:HE2	1:D:753:LEU:HD13	1.79	0.47
1:B:610:LEU:CD1	1:B:632:VAL:HG21	2.43	0.47
1:C:572:LEU:O	1:C:572:LEU:HG	2.13	0.47
1:C:686:VAL:CG2	1:C:747:ARG:CB	2.80	0.47
1:C:519:LEU:HD22	1:C:523:ALA:HB2	1.96	0.47
1:C:548:ILE:HD12	1:C:641:LYS:HD2	1.95	0.47
1:D:543:LYS:NZ	1:D:549:ASN:HD21	2.13	0.47
1:B:481:LEU:HD23	1:B:481:LEU:O	2.14	0.47
1:B:715:LEU:H	1:B:715:LEU:HD22	1.78	0.47
1:C:686:VAL:HG22	1:C:747:ARG:HD3	1.93	0.47
1:C:724:LYS:N	1:C:724:LYS:CD	2.72	0.47
1:D:476:PHE:HE2	1:D:503:ILE:HA	1.79	0.47
1:D:621:LYS:HG2	1:D:652:ASN:N	2.30	0.47
1:A:724:LYS:HB3	1:A:733:TYR:CD1	2.49	0.47
1:C:501:VAL:HA	1:C:511:ALA:HA	1.97	0.47
1:D:483:LEU:N	1:D:483:LEU:HD23	2.30	0.47
1:D:524:THR:OG1	1:D:527:ASP:HB2	2.14	0.47
1:B:609:GLN:O	1:B:611:ALA:N	2.47	0.47
1:B:621:LYS:HD3	1:B:621:LYS:HA	1.32	0.47
1:B:694:TRP:O	1:B:698:THR:HG22	2.15	0.47
1:B:694:TRP:HZ3	1:B:702:SER:O	1.98	0.47
1:D:537:MET:HG3	1:D:648:ALA:HB3	1.97	0.47
1:D:724:LYS:NZ	1:D:724:LYS:CB	2.73	0.47
1:A:741:HIS:HB2	1:A:747:ARG:HG2	1.97	0.47
1:A:759:ARG:HG2	1:A:760:ILE:N	2.30	0.47
1:B:647:LEU:HD23	1:B:647:LEU:O	2.14	0.47
1:B:687:TRP:HH2	1:B:721:ARG:NH2	2.13	0.47
1:C:519:LEU:HD12	1:C:528:LEU:CD2	2.45	0.47
1:A:657:TYR:CZ	1:A:660:THR:OG1	2.58	0.46
1:A:689:PHE:HE2	1:A:753:LEU:CD1	2.22	0.46
1:A:737:ARG:HD2	1:A:740:TRP:CE3	2.50	0.46
1:B:507:LYS:N	1:B:508:PRO:HD3	2.29	0.46
1:C:568:SER:HB3	1:C:636:GLU:N	2.29	0.46
1:C:729:THR:O	1:C:732:LEU:HD23	2.15	0.46
1:D:667:VAL:CG2	1:D:709:VAL:HG13	2.40	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:541:ILE:O	1:A:616:TYR:OH	2.29	0.46
1:D:568:SER:HB2	1:D:636:GLU:CB	2.44	0.46
1:D:606:CYS:SG	1:D:640:MET:HG2	2.56	0.46
1:D:749:THR:HG22	1:D:750:PHE:N	2.29	0.46
1:D:475:GLU:OE2	1:D:476:PHE:N	2.48	0.46
1:A:724:LYS:HB3	1:A:733:TYR:CD2	2.51	0.46
1:B:518:MET:HE2	1:B:561:TYR:CD1	2.51	0.46
1:A:531:LEU:HD11	1:A:562:VAL:HG21	1.96	0.46
1:C:567:ALA:HB1	1:C:634:VAL:O	2.16	0.46
1:C:620:GLN:HB3	1:C:622:CYS:SG	2.56	0.46
2:C:1001:KX0:N04	2:C:1001:KX0:CL1	2.85	0.46
1:D:575:TYR:OH	1:D:579:ARG:NE	2.48	0.46
1:A:484:GLY:CA	1:A:497:MET:O	2.64	0.46
1:B:481:LEU:HD11	1:B:516:VAL:CG2	2.46	0.46
1:B:524:THR:HB	1:B:527:ASP:H	1.79	0.46
1:B:694:TRP:CG	1:B:722:MET:CE	2.99	0.46
1:C:687:TRP:HZ3	1:C:691:VAL:HB	1.80	0.46
1:A:484:GLY:N	1:A:497:MET:O	2.48	0.46
1:A:725:PRO:HD2	1:A:728:CYS:HB2	1.96	0.46
1:D:495:VAL:HG12	1:D:517:LYS:CG	2.41	0.46
1:D:544:HIS:CD2	1:D:616:TYR:HB2	2.51	0.46
1:A:559:PRO:HG3	1:C:708:PRO:CB	2.46	0.46
1:A:623:ILE:O	1:A:623:ILE:HG13	2.16	0.46
1:B:624:HIS:C	1:B:648:ALA:CB	2.72	0.46
1:C:524:THR:HB	1:C:527:ASP:H	1.81	0.46
1:C:635:THR:HB	1:C:639:VAL:O	2.16	0.46
1:C:683:GLN:O	1:C:686:VAL:HG22	2.16	0.46
1:B:536:GLU:OE1	1:B:536:GLU:HA	2.16	0.46
1:B:618:ALA:HB1	1:B:682:HIS:CD2	2.51	0.46
1:D:751:LYS:O	1:D:751:LYS:HD3	2.16	0.46
1:C:647:LEU:HD12	1:C:665:LEU:HD21	1.99	0.45
1:D:494:GLN:O	1:D:518:MET:N	2.32	0.45
1:D:672:PRO:CD	1:D:687:TRP:CH2	2.99	0.45
1:A:687:TRP:CD1	1:A:687:TRP:O	2.70	0.45
1:B:737:ARG:HA	1:B:737:ARG:HD2	1.74	0.45
1:B:551:LEU:HB2	1:B:563:ILE:HG22	1.97	0.45
1:A:608:TYR:CD2	1:A:761:LEU:HD23	2.52	0.45
1:A:689:PHE:CE2	1:A:753:LEU:HD12	2.51	0.45
1:B:571:ASN:HA	1:B:633:LEU:HA	1.98	0.45
1:C:679:VAL:HG23	1:C:679:VAL:O	2.16	0.45
1:D:531:LEU:HD11	1:D:560:LEU:HD12	1.98	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:651:ILE:CG2	1:B:655:ASP:HA	2.44	0.45
1:C:475:GLU:CG	1:C:555:THR:OG1	2.63	0.45
1:C:687:TRP:O	1:C:687:TRP:CE3	2.70	0.45
1:D:749:THR:HG23	1:D:750:PHE:N	2.32	0.45
1:A:548:ILE:HB	1:A:642:ILE:O	2.16	0.45
1:B:694:TRP:CZ3	1:B:703:PRO:HA	2.52	0.45
1:C:664:ARG:CD	1:C:664:ARG:N	2.73	0.45
1:D:538:MET:HB2	1:D:550:LEU:HD23	1.99	0.45
1:D:600:PHE:CD1	1:D:600:PHE:C	2.89	0.45
1:B:474:TRP:CZ3	1:B:550:LEU:HD13	2.52	0.45
1:C:531:LEU:CD1	1:C:531:LEU:C	2.85	0.45
1:C:689:PHE:O	1:C:689:PHE:CD1	2.70	0.45
1:B:575:TYR:CD1	1:B:575:TYR:O	2.70	0.45
1:C:600:PHE:CD1	1:C:600:PHE:O	2.70	0.45
1:D:470:GLU:HB2	1:D:475:GLU:CG	2.45	0.45
1:A:541:ILE:O	1:A:616:TYR:CZ	2.71	0.44
1:A:657:TYR:CD2	1:A:657:TYR:O	2.70	0.44
1:A:679:VAL:O	1:A:679:VAL:HG23	2.16	0.44
1:A:689:PHE:HD2	1:A:753:LEU:CD1	2.29	0.44
1:D:475:GLU:HA	1:D:553:ALA:O	2.18	0.44
1:D:524:THR:OG1	1:D:527:ASP:CB	2.65	0.44
1:D:548:ILE:HD13	1:D:633:LEU:HD12	1.98	0.44
1:D:749:THR:HG23	1:D:750:PHE:H	1.81	0.44
1:A:708:PRO:HG2	1:A:711:GLU:HB3	2.00	0.44
1:B:614:MET:CG	1:B:627:LEU:HD21	2.47	0.44
1:B:621:LYS:HB3	1:B:652:ASN:HA	1.99	0.44
1:C:544:HIS:CG	1:C:616:TYR:CB	2.98	0.44
1:A:607:THR:HG22	1:A:757:LEU:HD11	1.86	0.44
1:B:650:ASP:OD1	1:B:652:ASN:N	2.43	0.44
1:D:542:GLY:N	1:D:616:TYR:CZ	2.86	0.44
1:B:671:ALA:HA	1:B:687:TRP:CD1	2.52	0.44
1:C:734:MET:O	1:C:735:MET:C	2.54	0.44
1:D:720:HIS:O	1:D:720:HIS:CG	2.70	0.44
1:A:638:ASN:OD1	1:A:638:ASN:N	2.48	0.44
1:A:647:LEU:CD1	1:A:665:LEU:HG	2.47	0.44
1:A:709:VAL:HG21	1:C:523:ALA:HB2	1.99	0.44
1:A:715:LEU:HD12	1:A:720:HIS:HB3	2.00	0.44
1:B:549:ASN:H	1:B:549:ASN:HD22	1.62	0.44
1:B:698:THR:HB	1:B:725:PRO:CB	2.47	0.44
1:C:474:TRP:CE3	1:C:474:TRP:HA	2.52	0.44
1:C:575:TYR:CD1	1:C:575:TYR:O	2.70	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:525:GLU:HB3	1:C:663:GLY:HA2	1.99	0.44
1:A:676:PHE:HB3	1:B:676:PHE:HB3	1.99	0.44
1:B:563:ILE:HG22	1:B:563:ILE:O	2.17	0.44
1:A:625:ARG:NH2	1:A:647:LEU:HD22	2.33	0.44
1:A:627:LEU:C	1:A:627:LEU:CD2	2.86	0.44
1:A:630:ARG:HH22	1:A:666:PRO:HG2	1.82	0.44
1:A:656:PTR:HD1	1:A:657:TYR:N	2.33	0.44
1:B:486:PRO:CB	1:B:496:VAL:HG22	2.47	0.44
1:C:548:ILE:HD12	1:C:641:LYS:CD	2.48	0.44
1:C:675:LEU:C	1:C:675:LEU:CD2	2.85	0.44
1:A:550:LEU:HD12	1:A:551:LEU:H	1.83	0.44
1:A:657:TYR:O	1:A:657:TYR:CG	2.70	0.44
1:B:618:ALA:O	1:B:682:HIS:CE1	2.71	0.44
1:C:704:TYR:H	1:C:722:MET:HE1	1.83	0.44
1:A:476:PHE:CE2	1:A:503:ILE:HD13	2.53	0.43
1:C:687:TRP:CZ3	1:C:691:VAL:HB	2.53	0.43
1:B:504:ASP:CB	1:B:508:PRO:HD2	2.48	0.43
1:B:601:LYS:O	1:B:604:VAL:N	2.51	0.43
1:C:689:PHE:CD2	1:C:753:LEU:HD13	2.53	0.43
1:D:487:LEU:CD1	1:D:515:ALA:CB	2.96	0.43
1:D:575:TYR:O	1:D:575:TYR:CD1	2.71	0.43
1:A:477:PRO:HG2	1:A:480:LYS:CG	2.49	0.43
1:B:617:LEU:CD2	1:B:624:HIS:HB2	2.48	0.43
1:D:550:LEU:C	1:D:550:LEU:HD12	2.39	0.43
1:A:523:ALA:O	1:C:666:PRO:HA	2.19	0.43
1:C:623:ILE:HG22	1:C:682:HIS:HD2	1.83	0.43
1:A:743:VAL:HA	1:A:744:PRO:HD2	1.86	0.43
1:B:727:ASN:HD22	1:B:727:ASN:H	1.64	0.43
1:C:481:LEU:HD11	1:C:498:ALA:HB1	1.99	0.43
1:C:601:LYS:NZ	1:C:601:LYS:CB	2.81	0.43
1:C:686:VAL:HG21	1:C:747:ARG:CG	2.47	0.43
1:A:664:ARG:N	1:A:664:ARG:CD	2.73	0.43
1:C:519:LEU:HD12	1:C:528:LEU:HD21	1.99	0.43
1:B:573:ARG:O	1:B:573:ARG:HG3	2.19	0.43
1:C:627:LEU:HD12	1:C:627:LEU:HA	1.79	0.43
1:A:524:THR:O	1:A:527:ASP:HB2	2.18	0.43
1:B:567:ALA:HB1	1:B:634:VAL:O	2.19	0.43
1:C:720:HIS:C	1:C:721:ARG:HG2	2.39	0.43
1:D:560:LEU:C	1:D:560:LEU:HD13	2.38	0.43
1:A:496:VAL:HG22	1:A:518:MET:CE	2.49	0.43
1:A:656:PTR:HB2	1:B:743:VAL:HG21	1.98	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:568:SER:HB3	1:C:636:GLU:CB	2.49	0.43
1:C:600:PHE:HZ	1:C:729:THR:HG1	1.61	0.43
1:C:720:HIS:O	1:C:721:ARG:CG	2.67	0.43
1:A:683:GLN:HE22	1:A:749:THR:HA	1.83	0.43
1:B:537:MET:HE2	1:B:537:MET:O	2.19	0.43
1:D:724:LYS:HZ2	1:D:724:LYS:HB3	1.83	0.43
1:B:483:LEU:H	1:B:483:LEU:CD1	2.14	0.42
1:B:609:GLN:C	1:B:611:ALA:H	2.23	0.42
1:B:610:LEU:HD13	1:B:692:LEU:HD21	2.01	0.42
1:D:474:TRP:HE1	1:D:539:LYS:CG	2.22	0.42
1:A:548:ILE:CD1	1:A:633:LEU:HD12	2.50	0.42
1:C:691:VAL:HG13	1:C:692:LEU:N	2.33	0.42
1:C:694:TRP:CE3	1:C:722:MET:SD	3.12	0.42
1:D:575:TYR:CE1	1:D:579:ARG:CD	3.01	0.42
1:A:497:MET:CE	1:A:513:THR:HG21	2.49	0.42
1:A:649:ARG:HH21	1:A:664:ARG:HH21	1.68	0.42
1:D:541:ILE:HG21	1:D:547:ILE:CD1	2.49	0.42
1:D:724:LYS:HB2	1:D:733:TYR:CD2	2.53	0.42
1:B:476:PHE:CE1	1:B:480:LYS:HB3	2.44	0.42
1:C:623:ILE:CG1	1:C:625:ARG:HG2	2.50	0.42
1:C:628:ALA:CB	1:C:669:TRP:NE1	2.82	0.42
1:A:495:VAL:CG2	1:A:517:LYS:HG3	2.49	0.42
1:A:756:ASP:O	1:A:760:ILE:HG13	2.19	0.42
1:B:483:LEU:N	1:B:483:LEU:CD1	2.73	0.42
1:B:708:PRO:HG2	1:B:711:GLU:CB	2.50	0.42
1:D:547:ILE:O	1:D:547:ILE:HG13	2.19	0.42
1:C:694:TRP:HE1	1:C:725:PRO:HG3	1.70	0.42
1:A:647:LEU:HD21	1:A:664:ARG:CG	2.48	0.42
1:D:514:VAL:HG23	1:D:514:VAL:O	2.20	0.42
1:D:651:ILE:HA	1:D:651:ILE:HD13	1.63	0.42
1:A:629:ALA:HB2	1:A:692:LEU:HD13	2.01	0.42
1:B:538:MET:HE1	1:B:548:ILE:HG22	2.00	0.42
1:C:738:ASP:O	1:C:748:PRO:HD3	2.20	0.42
1:D:503:ILE:N	1:D:503:ILE:HD12	2.34	0.42
1:D:504:ASP:HB2	1:D:508:PRO:HG2	2.01	0.42
1:D:704:TYR:CE1	1:D:722:MET:CG	3.03	0.42
1:D:728:CYS:O	1:D:728:CYS:SG	2.78	0.42
1:A:540:MET:HE1	1:A:650:ASP:OD2	2.20	0.42
1:A:541:ILE:HD11	1:A:645:PHE:CE2	2.53	0.42
1:A:630:ARG:HG2	1:A:630:ARG:HH11	1.85	0.42
1:C:474:TRP:HE1	1:C:539:LYS:HG2	1.81	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:600:PHE:CD1	1:C:600:PHE:C	2.92	0.42
1:C:617:LEU:HD11	1:C:645:PHE:HE2	1.85	0.42
1:A:567:ALA:HB2	1:A:635:THR:HG22	2.02	0.41
1:B:710:GLU:OE1	1:D:560:LEU:N	2.48	0.41
1:D:724:LYS:NZ	1:D:724:LYS:HB3	2.33	0.41
1:B:549:ASN:O	1:B:564:VAL:HG22	2.20	0.41
1:B:569:LYS:HG3	1:B:635:THR:O	2.21	0.41
1:B:612:ARG:HA	1:B:754:VAL:HG22	2.01	0.41
1:B:715:LEU:CD2	1:B:715:LEU:N	2.81	0.41
1:C:474:TRP:CE3	1:C:552:GLY:HA2	2.54	0.41
1:C:651:ILE:HA	1:C:651:ILE:HD13	1.75	0.41
1:D:683:GLN:C	1:D:686:VAL:CG1	2.88	0.41
1:B:673:GLU:H	1:B:673:GLU:HG2	1.45	0.41
1:C:485:LYS:CB	1:C:486:PRO:CD	2.99	0.41
1:D:550:LEU:HD12	1:D:551:LEU:N	2.34	0.41
1:A:744:PRO:HG3	3:A:1002:CL:CL	2.50	0.41
1:B:487:LEU:CD2	1:B:497:MET:HB2	2.50	0.41
1:B:604:VAL:HG22	1:B:732:LEU:HD21	2.01	0.41
1:C:625:ARG:O	1:C:665:LEU:CD1	2.68	0.41
1:C:671:ALA:HB3	1:C:674:ALA:HB3	2.01	0.41
1:C:683:GLN:NE2	1:C:683:GLN:CA	2.71	0.41
1:C:687:TRP:O	1:C:687:TRP:HE3	2.02	0.41
1:A:540:MET:CE	1:A:650:ASP:OD2	2.69	0.41
1:A:704:TYR:CD1	1:A:704:TYR:N	2.88	0.41
1:A:727:ASN:OD1	1:A:727:ASN:N	2.54	0.41
1:B:545:LYS:HA	1:B:545:LYS:HD2	1.75	0.41
1:B:662:ASN:O	1:D:525:GLU:HG2	2.21	0.41
1:B:672:PRO:HD3	1:B:687:TRP:CD2	2.56	0.41
1:C:548:ILE:HG22	1:C:645:PHE:CE1	2.49	0.41
1:C:686:VAL:CG2	1:C:747:ARG:CG	2.98	0.41
1:A:545:LYS:HE3	1:A:639:VAL:CG1	2.50	0.41
1:B:614:MET:HA	1:B:614:MET:CE	2.50	0.41
1:B:694:TRP:CD2	1:B:722:MET:HE1	2.54	0.41
1:C:474:TRP:CD1	1:C:539:LYS:HD3	2.56	0.41
1:C:575:TYR:CE1	1:C:579:ARG:NE	2.71	0.41
1:D:481:LEU:CD1	1:D:500:ALA:HB2	2.40	0.41
1:A:497:MET:CE	1:A:513:THR:CG2	2.99	0.41
1:A:733:TYR:CZ	1:A:737:ARG:HD3	2.55	0.41
1:D:560:LEU:HD13	1:D:561:TYR:N	2.36	0.41
1:D:682:HIS:O	1:D:686:VAL:HG12	2.21	0.41
1:B:486:PRO:HB3	1:B:496:VAL:CG2	2.50	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:531:LEU:CD1	1:B:531:LEU:C	2.85	0.41
1:C:720:HIS:ND1	1:C:720:HIS:C	2.73	0.41
1:A:608:TYR:O	1:A:608:TYR:CD1	2.74	0.41
1:A:704:TYR:N	1:A:705:PRO:CD	2.84	0.41
1:A:739:CYS:O	1:A:747:ARG:HD3	2.20	0.41
1:B:614:MET:HB3	1:B:750:PHE:CD2	2.55	0.41
1:C:541:ILE:HG21	1:C:547:ILE:CD1	2.51	0.41
1:C:550:LEU:HD12	1:C:550:LEU:HA	1.68	0.41
1:C:551:LEU:HD23	1:C:551:LEU:HA	1.77	0.41
1:C:570:GLY:O	1:C:634:VAL:HG12	2.20	0.41
1:C:581:PRO:CB	1:C:582:PRO:CD	2.96	0.41
1:C:617:LEU:HD23	1:C:622:CYS:HB2	2.03	0.41
1:D:528:LEU:C	1:D:528:LEU:CD2	2.90	0.41
1:A:607:THR:HG21	1:A:757:LEU:HD11	2.03	0.41
1:A:712:LEU:HA	1:A:715:LEU:HD21	2.03	0.41
1:B:609:GLN:O	1:B:612:ARG:N	2.54	0.41
1:C:686:VAL:HG23	1:C:747:ARG:CD	2.41	0.41
1:C:759:ARG:HB2	1:C:759:ARG:NH2	2.36	0.41
1:D:486:PRO:HA	1:D:496:VAL:HA	2.03	0.40
1:D:494:GLN:HE21	1:D:494:GLN:HB3	1.68	0.40
1:A:514:VAL:CG1	1:A:563:ILE:HB	2.50	0.40
1:A:716:LEU:HD23	1:A:716:LEU:HA	1.49	0.40
1:B:694:TRP:CG	1:B:722:MET:HE1	2.56	0.40
1:C:664:ARG:HD3	1:C:664:ARG:N	2.10	0.40
1:C:724:LYS:NZ	1:C:737:ARG:HG2	2.37	0.40
1:D:500:ALA:CA	1:D:503:ILE:HD11	2.50	0.40
1:A:572:LEU:HD22	1:A:640:MET:CE	2.49	0.40
1:A:598:MET:HE2	1:A:598:MET:HB3	2.00	0.40
1:A:620:GLN:OE1	1:A:620:GLN:HA	2.21	0.40
1:B:721:ARG:NH2	1:B:740:TRP:O	2.55	0.40
1:C:541:ILE:HG21	1:C:547:ILE:HD11	2.03	0.40
1:C:600:PHE:HE1	1:C:697:PHE:HE1	1.68	0.40
1:D:481:LEU:HD21	1:D:516:VAL:HG21	2.02	0.40
1:D:535:MET:HE3	1:D:539:LYS:HZ1	1.87	0.40
1:D:621:LYS:HG2	1:D:652:ASN:CA	2.52	0.40
1:D:661:THR:CA	1:D:678:ARG:CB	2.95	0.40
1:A:475:GLU:OE1	1:A:555:THR:HB	2.21	0.40
1:B:518:MET:CE	1:B:561:TYR:CE1	3.04	0.40
1:B:663:GLY:HA2	1:D:526:LYS:HB3	2.01	0.40
1:A:548:ILE:HD13	1:A:633:LEU:HD12	2.03	0.40
1:A:569:LYS:HB2	1:A:634:VAL:HG13	2.03	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:476:PHE:CZ	1:C:501:VAL:O	2.73	0.40
1:D:627:LEU:CD1	1:D:692:LEU:HD22	2.49	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	280/312 (90%)	273 (98%)	7 (2%)	0	100	100
1	B	278/312 (89%)	263 (95%)	13 (5%)	2 (1%)	22	59
1	C	267/312 (86%)	256 (96%)	11 (4%)	0	100	100
1	D	269/312 (86%)	264 (98%)	5 (2%)	0	100	100
All	All	1094/1248 (88%)	1056 (96%)	36 (3%)	2 (0%)	47	78

All (2) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	B	507	LYS
1	B	469	PRO

5.3.2 Protein sidechains [i](#)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	229/272 (84%)	196 (86%)	33 (14%)	3	20
1	B	230/272 (85%)	187 (81%)	43 (19%)	1	10
1	C	214/272 (79%)	174 (81%)	40 (19%)	1	10
1	D	228/272 (84%)	183 (80%)	45 (20%)	1	9
All	All	901/1088 (83%)	740 (82%)	161 (18%)	2	11

All (161) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	471	ASP
1	A	479	ASP
1	A	503	ILE
1	A	519	LEU
1	A	531	LEU
1	A	546	ASN
1	A	549	ASN
1	A	557	ASP
1	A	560	LEU
1	A	563	ILE
1	A	564	VAL
1	A	575	TYR
1	A	620	GLN
1	A	637	ASN
1	A	638	ASN
1	A	644	ASP
1	A	664	ARG
1	A	675	LEU
1	A	680	TYR
1	A	681	THR
1	A	683	GLN
1	A	686	VAL
1	A	698	THR
1	A	699	LEU
1	A	715	LEU
1	A	724	LYS
1	A	727	ASN
1	A	728	CYS
1	A	732	LEU
1	A	736	MET
1	A	741	HIS
1	A	752	GLN
1	A	759	ARG

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	B	476	PHE
1	B	481	LEU
1	B	482	THR
1	B	483	LEU
1	B	512	VAL
1	B	514	VAL
1	B	524	THR
1	B	529	SER
1	B	547	ILE
1	B	549	ASN
1	B	550	LEU
1	B	556	GLN
1	B	568	SER
1	B	573	ARG
1	B	599	THR
1	B	601	LYS
1	B	607	THR
1	B	623	ILE
1	B	624	HIS
1	B	627	LEU
1	B	636	GLU
1	B	638	ASN
1	B	642	ILE
1	B	644	ASP
1	B	647	LEU
1	B	653	ASN
1	B	655	ASP
1	B	657	TYR
1	B	660	THR
1	B	681	THR
1	B	682	HIS
1	B	686	VAL
1	B	715	LEU
1	B	721	ARG
1	B	727	ASN
1	B	729	THR
1	B	732	LEU
1	B	734	MET
1	B	741	HIS
1	B	749	THR
1	B	762	THR
1	B	763	LEU

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	B	764	THR
1	C	467	GLU
1	C	481	LEU
1	C	482	THR
1	C	495	VAL
1	C	497	MET
1	C	519	LEU
1	C	522	ASP
1	C	524	THR
1	C	529	SER
1	C	531	LEU
1	C	535	MET
1	C	548	ILE
1	C	560	LEU
1	C	572	LEU
1	C	598	MET
1	C	601	LYS
1	C	606	CYS
1	C	617	LEU
1	C	620	GLN
1	C	623	ILE
1	C	630	ARG
1	C	633	LEU
1	C	637	ASN
1	C	644	ASP
1	C	651	ILE
1	C	664	ARG
1	C	667	VAL
1	C	675	LEU
1	C	681	THR
1	C	682	HIS
1	C	683	GLN
1	C	687	TRP
1	C	694	TRP
1	C	724	LYS
1	C	728	CYS
1	C	732	LEU
1	C	737	ARG
1	C	741	HIS
1	C	751	LYS
1	C	763	LEU
1	D	468	LEU

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	D	471	ASP
1	D	475	GLU
1	D	492	PHE
1	D	521	ASP
1	D	525	GLU
1	D	528	LEU
1	D	531	LEU
1	D	548	ILE
1	D	550	LEU
1	D	555	THR
1	D	556	GLN
1	D	564	VAL
1	D	599	THR
1	D	601	LYS
1	D	607	THR
1	D	622	CYS
1	D	626	ASP
1	D	627	LEU
1	D	636	GLU
1	D	637	ASN
1	D	640	MET
1	D	644	ASP
1	D	650	ASP
1	D	651	ILE
1	D	657	TYR
1	D	664	ARG
1	D	673	GLU
1	D	675	LEU
1	D	679	VAL
1	D	681	THR
1	D	686	VAL
1	D	694	TRP
1	D	699	LEU
1	D	715	LEU
1	D	720	HIS
1	D	724	LYS
1	D	727	ASN
1	D	728	CYS
1	D	729	THR
1	D	734	MET
1	D	738	ASP
1	D	741	HIS

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	D	749	THR
1	D	752	GLN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (16) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	662	ASN
1	A	683	GLN
1	A	720	HIS
1	A	746	GLN
1	B	544	HIS
1	B	549	ASN
1	B	556	GLN
1	B	727	ASN
1	B	746	GLN
1	C	683	GLN
1	C	741	HIS
1	D	494	GLN
1	D	549	ASN
1	D	556	GLN
1	D	662	ASN
1	D	752	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](#)

2 non-standard protein/DNA/RNA residues are modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
1	PTR	B	656	1	15,16,17	0.75	0	19,22,24	1.29	2 (10%)
1	PTR	A	656	1	15,16,17	0.74	0	19,22,24	0.98	0

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
1	PTR	B	656	1	-	2/10/11/13	0/1/1/1
1	PTR	A	656	1	-	1/10/11/13	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($^{\circ}$)	Ideal($^{\circ}$)
1	B	656	PTR	CG-CB-CA	-3.01	108.00	114.10
1	B	656	PTR	OH-CZ-CE1	2.06	125.35	119.23

There are no chirality outliers.

All (3) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
1	B	656	PTR	N-CA-CB-CG
1	B	656	PTR	C-CA-CB-CG
1	A	656	PTR	C-CA-CB-CG

There are no ring outliers.

2 monomers are involved in 10 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
1	B	656	PTR	2	0
1	A	656	PTR	8	0

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry

Of 5 ligands modelled in this entry, 1 is monoatomic - leaving 4 for Mogul analysis.

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	KX0	D	1001	-	30,32,32	4.74	9 (30%)	32,46,46	1.64	8 (25%)
2	KX0	C	1001	-	30,32,32	4.55	7 (23%)	32,46,46	1.40	6 (18%)
2	KX0	B	1001	-	30,32,32	4.33	9 (30%)	32,46,46	1.37	5 (15%)
2	KX0	A	1001	-	30,32,32	4.57	7 (23%)	32,46,46	1.37	5 (15%)

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	KX0	D	1001	-	-	6/8/16/16	0/5/5/5
2	KX0	C	1001	-	-	6/8/16/16	0/5/5/5
2	KX0	B	1001	-	-	6/8/16/16	0/5/5/5
2	KX0	A	1001	-	-	8/8/16/16	0/5/5/5

All (32) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	D	1001	KX0	C05-N04	23.35	1.44	1.29
2	C	1001	KX0	C05-N04	22.60	1.43	1.29
2	A	1001	KX0	C05-N04	22.53	1.43	1.29
2	B	1001	KX0	C05-N04	21.27	1.43	1.29
2	A	1001	KX0	C14-N15	5.64	1.48	1.41
2	D	1001	KX0	C03-N04	5.54	1.46	1.40
2	B	1001	KX0	C14-N15	5.30	1.48	1.41
2	A	1001	KX0	C03-N04	5.08	1.46	1.40
2	C	1001	KX0	C14-N15	4.94	1.47	1.41
2	C	1001	KX0	C03-N04	4.70	1.45	1.40

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	D	1001	KX0	C14-N15	4.54	1.47	1.41
2	D	1001	KX0	C13-C05	4.19	1.55	1.49
2	A	1001	KX0	C16-N15	3.88	1.47	1.39
2	B	1001	KX0	C16-N15	3.78	1.47	1.39
2	C	1001	KX0	C16-N15	3.56	1.47	1.39
2	D	1001	KX0	C16-N15	3.52	1.46	1.39
2	D	1001	KX0	C06-C05	3.43	1.55	1.49
2	C	1001	KX0	C20-N23	3.30	1.44	1.37
2	C	1001	KX0	C13-C05	3.19	1.53	1.49
2	B	1001	KX0	C13-C05	3.17	1.53	1.49
2	A	1001	KX0	C20-N23	3.10	1.43	1.37
2	B	1001	KX0	C03-N04	2.98	1.43	1.40
2	A	1001	KX0	C13-C05	2.95	1.53	1.49
2	B	1001	KX0	C13-C14	-2.71	1.36	1.41
2	B	1001	KX0	C20-N23	2.70	1.43	1.37
2	B	1001	KX0	C03-C16	-2.69	1.34	1.39
2	D	1001	KX0	C13-C14	-2.46	1.37	1.41
2	D	1001	KX0	C20-N23	2.44	1.42	1.37
2	D	1001	KX0	C02-N18	-2.25	1.31	1.34
2	A	1001	KX0	C13-C14	-2.21	1.37	1.41
2	C	1001	KX0	C13-C14	-2.14	1.37	1.41
2	B	1001	KX0	C02-N18	-2.02	1.31	1.34

All (24) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	D	1001	KX0	C13-C05-N04	-4.56	117.83	125.36
2	B	1001	KX0	C01-C02-N18	3.29	126.88	119.65
2	C	1001	KX0	C13-C14-N15	3.04	126.58	120.87
2	D	1001	KX0	C14-C13-C05	2.97	125.06	121.85
2	B	1001	KX0	C13-C14-N15	2.88	126.28	120.87
2	A	1001	KX0	C01-C02-N18	2.87	125.96	119.65
2	C	1001	KX0	C01-C02-N18	2.79	125.77	119.65
2	D	1001	KX0	C28-N23-C24	-2.78	105.39	111.52
2	C	1001	KX0	C14-C13-C05	2.72	124.79	121.85
2	D	1001	KX0	C13-C14-N15	2.62	125.80	120.87
2	C	1001	KX0	C13-C05-N04	-2.61	121.06	125.36
2	B	1001	KX0	C19-C20-N23	-2.57	119.24	122.29
2	A	1001	KX0	C13-C14-N15	2.48	125.53	120.87
2	B	1001	KX0	C28-N23-C24	-2.46	106.09	111.52
2	A	1001	KX0	C28-N23-C24	-2.42	106.16	111.52
2	C	1001	KX0	C28-N23-C24	-2.32	106.40	111.52

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	D	1001	KX0	C02-C03-C16	-2.21	105.89	107.49
2	A	1001	KX0	C14-C13-C05	2.21	124.24	121.85
2	D	1001	KX0	C01-C02-N18	2.13	124.32	119.65
2	B	1001	KX0	C07-C06-C11	2.09	120.23	117.78
2	C	1001	KX0	C22-N21-C20	2.09	121.11	117.30
2	D	1001	KX0	C27-O26-C25	2.04	116.72	109.89
2	D	1001	KX0	C08-C07-C06	2.04	123.67	119.81
2	A	1001	KX0	C13-C05-N04	-2.01	122.04	125.36

There are no chirality outliers.

All (26) torsion outliers are listed below:

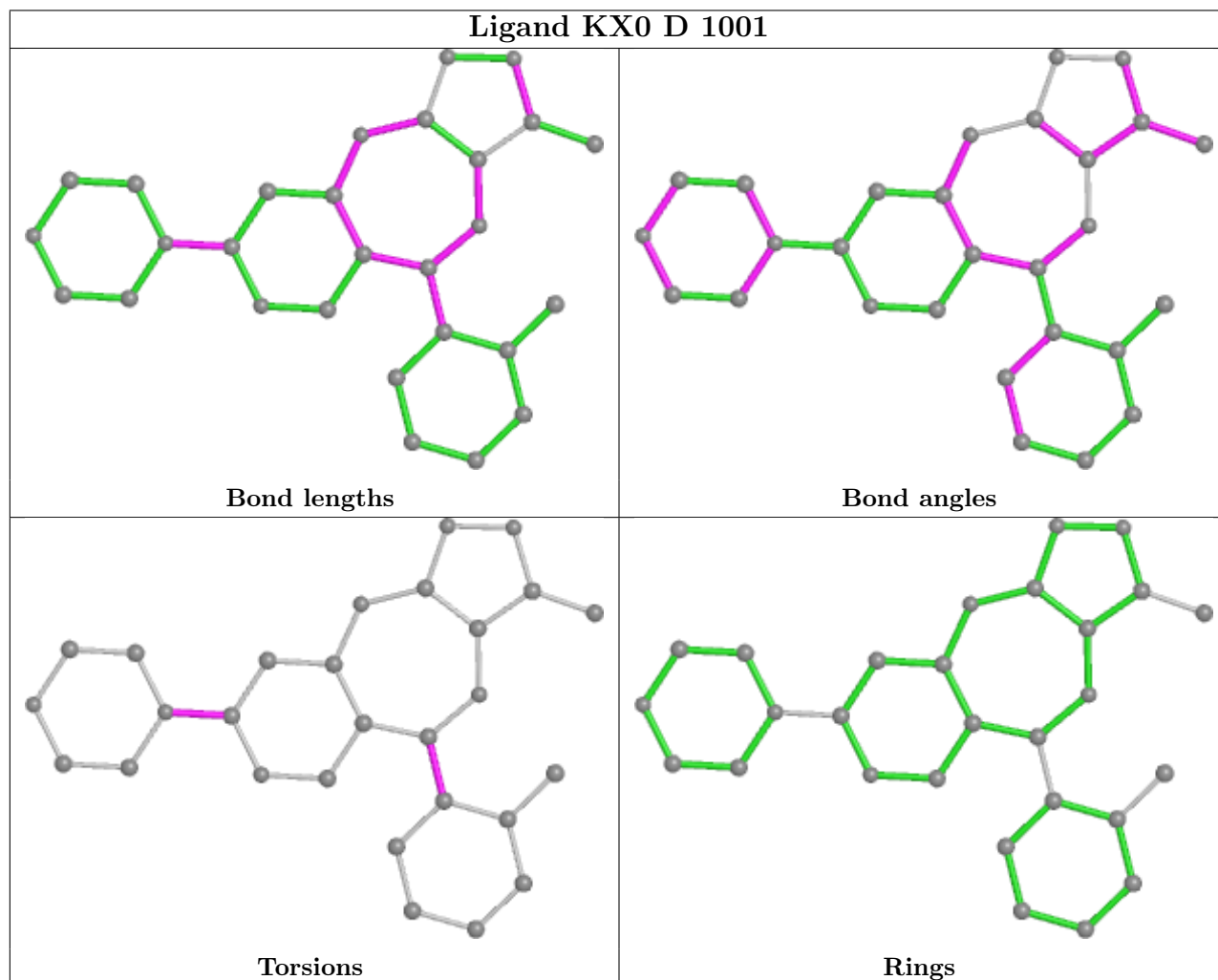
Mol	Chain	Res	Type	Atoms
2	A	1001	KX0	C19-C20-N23-C24
2	A	1001	KX0	N21-C20-N23-C24
2	A	1001	KX0	C13-C05-C06-C07
2	A	1001	KX0	C13-C05-C06-C11
2	A	1001	KX0	N04-C05-C06-C07
2	A	1001	KX0	N04-C05-C06-C11
2	B	1001	KX0	C19-C20-N23-C24
2	B	1001	KX0	N21-C20-N23-C24
2	B	1001	KX0	C13-C05-C06-C07
2	B	1001	KX0	C13-C05-C06-C11
2	B	1001	KX0	N04-C05-C06-C07
2	B	1001	KX0	N04-C05-C06-C11
2	C	1001	KX0	C13-C05-C06-C07
2	C	1001	KX0	C13-C05-C06-C11
2	C	1001	KX0	N04-C05-C06-C07
2	C	1001	KX0	N04-C05-C06-C11
2	D	1001	KX0	C19-C20-N23-C24
2	D	1001	KX0	N21-C20-N23-C24
2	D	1001	KX0	C13-C05-C06-C07
2	D	1001	KX0	C13-C05-C06-C11
2	D	1001	KX0	N04-C05-C06-C07
2	D	1001	KX0	N04-C05-C06-C11
2	C	1001	KX0	N21-C20-N23-C24
2	A	1001	KX0	C19-C20-N23-C28
2	C	1001	KX0	C19-C20-N23-C24
2	A	1001	KX0	N21-C20-N23-C28

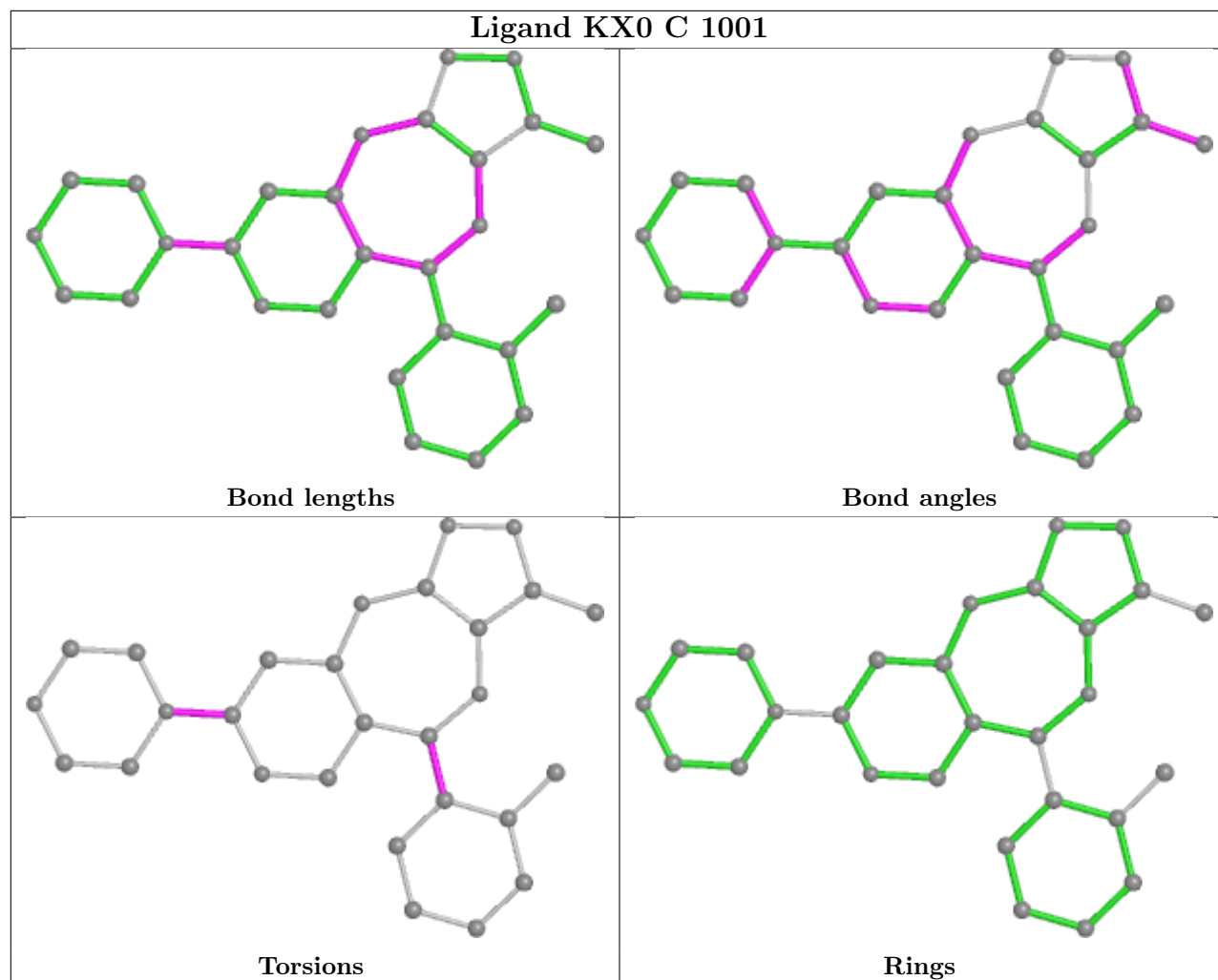
There are no ring outliers.

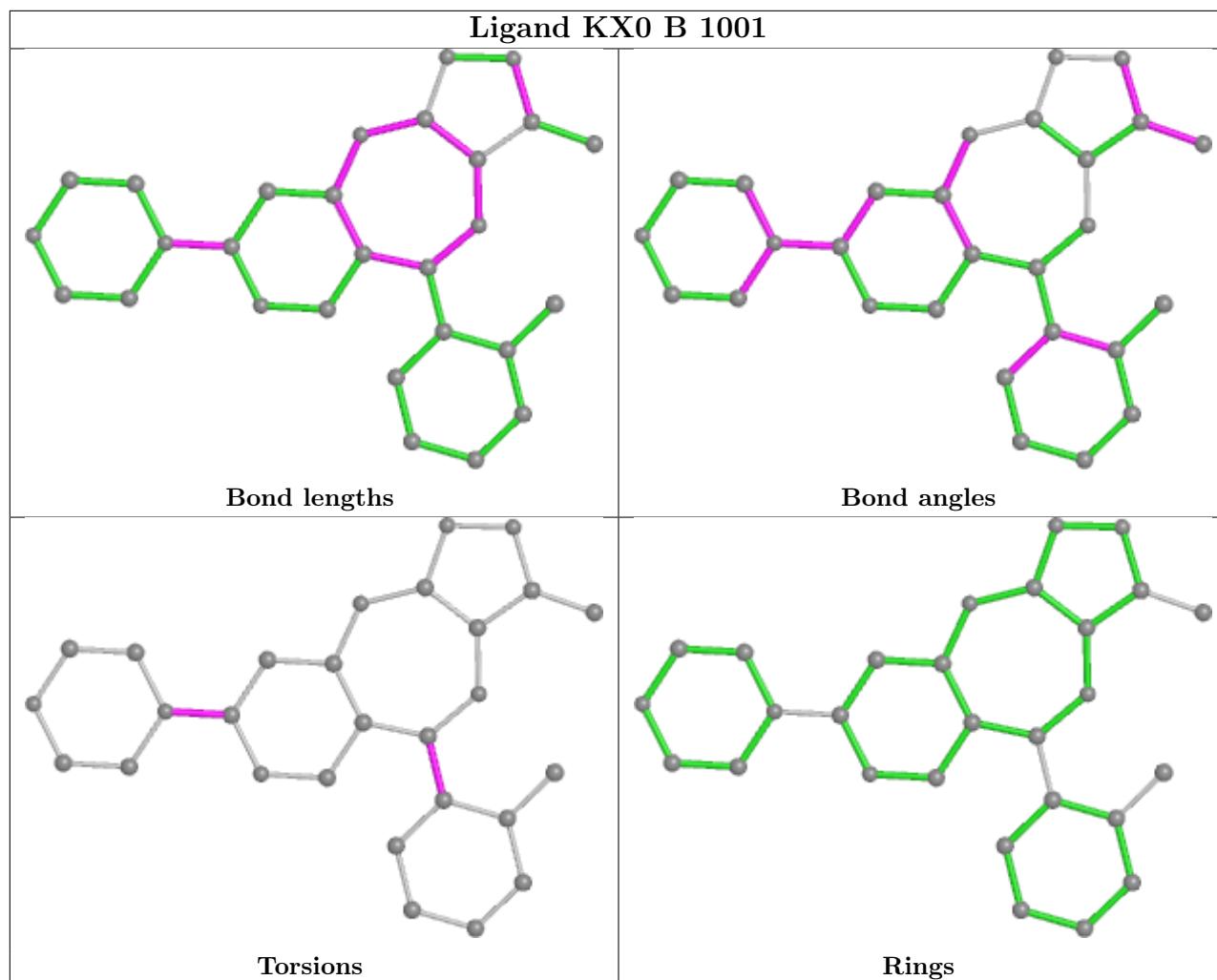
4 monomers are involved in 10 short contacts:

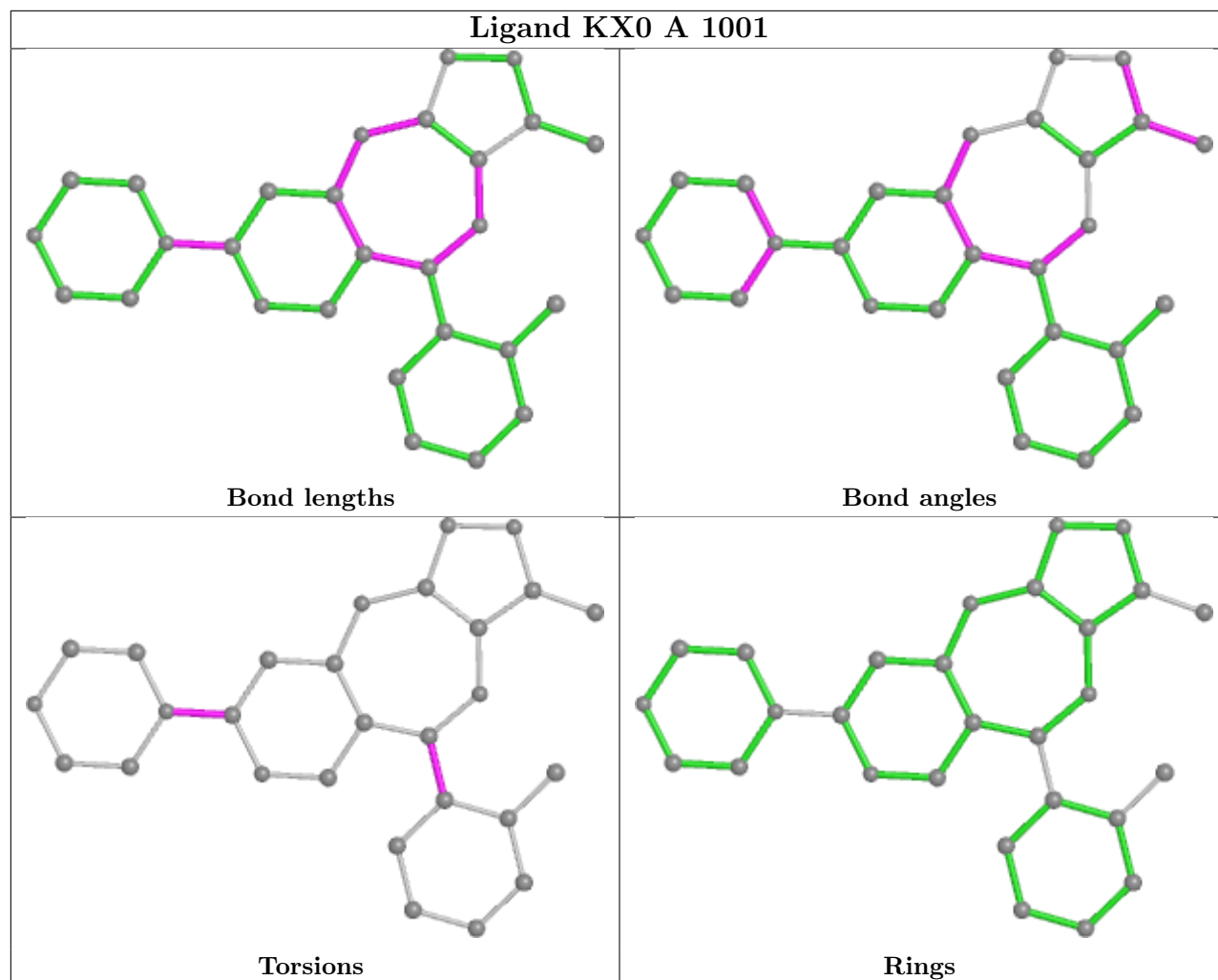
Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	D	1001	KX0	2	0
2	C	1001	KX0	2	0
2	B	1001	KX0	2	0
2	A	1001	KX0	4	0

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.









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	284/312 (91%)	-0.22	0 100 100	31, 54, 82, 102	0
1	B	282/312 (90%)	-0.25	4 (1%) 75 71	37, 56, 92, 113	0
1	C	275/312 (88%)	-0.05	5 (1%) 68 64	36, 66, 87, 138	0
1	D	277/312 (88%)	-0.06	1 (0%) 92 91	42, 64, 89, 130	0
All	All	1118/1248 (89%)	-0.14	10 (0%) 84 81	31, 61, 88, 138	0

All (10) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	D	553	ALA	2.9
1	B	506	ASP	2.8
1	C	659	LYS	2.6
1	B	469	PRO	2.5
1	C	481	LEU	2.3
1	C	567	ALA	2.3
1	C	482	THR	2.3
1	B	470	GLU	2.2
1	C	554	CYS	2.2
1	B	471	ASP	2.1

6.2 Non-standard residues in protein, DNA, RNA chains [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. 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	B-factors(Å ²)	Q<0.9
1	PTR	A	656	16/17	0.85	0.28	65,70,84,108	0
1	PTR	B	656	16/17	0.88	0.28	45,58,74,82	0

6.3 Carbohydrates [i](#)

There are no monosaccharides in this entry.

6.4 Ligands [i](#)

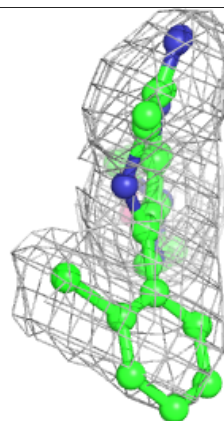
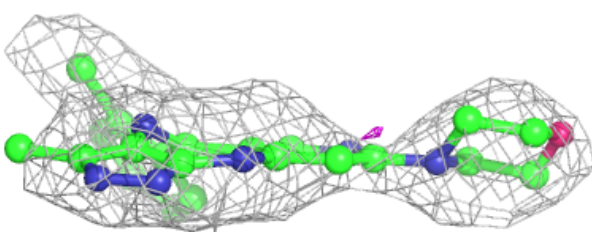
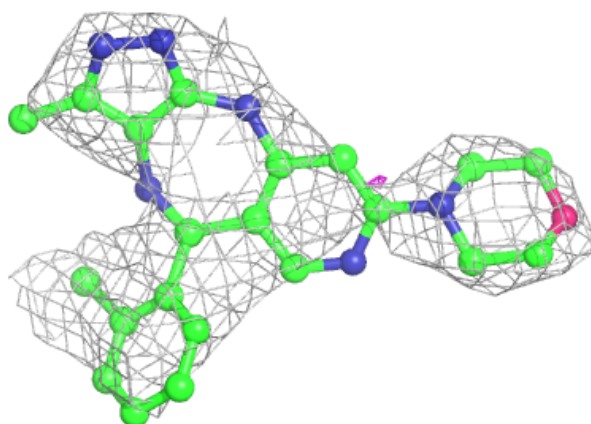
In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
2	KX0	C	1001	28/28	0.87	0.34	57,67,82,83	0
2	KX0	B	1001	28/28	0.89	0.30	41,59,77,104	0
2	KX0	D	1001	28/28	0.90	0.32	51,61,85,92	0
3	CL	A	1002	1/1	0.90	0.16	28,28,28,28	0
2	KX0	A	1001	28/28	0.91	0.29	39,59,69,76	0

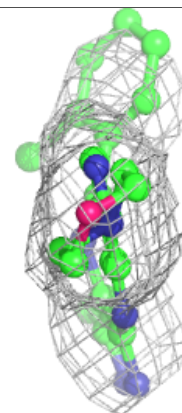
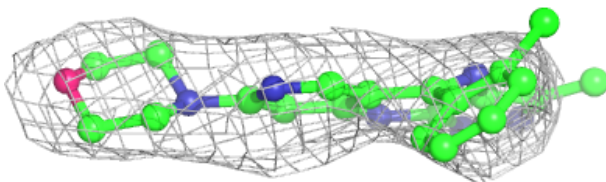
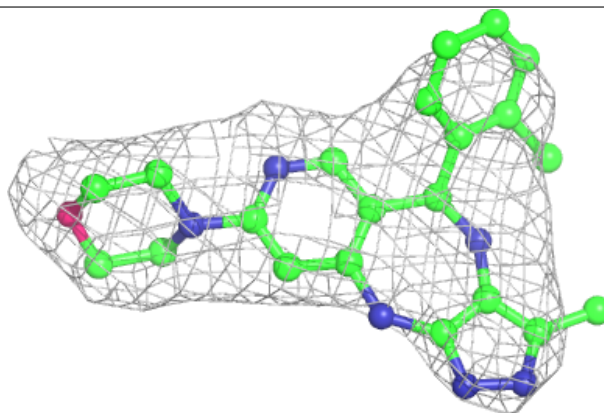
The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation to approximate a three-dimensional view.

Electron density around KX0 C 1001:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

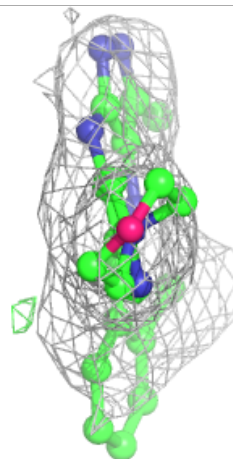
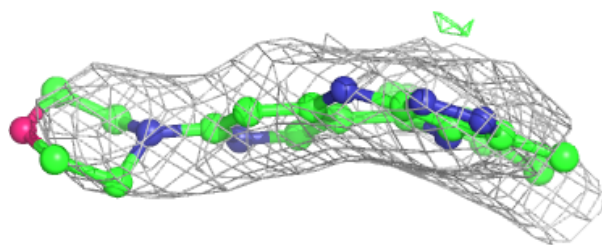
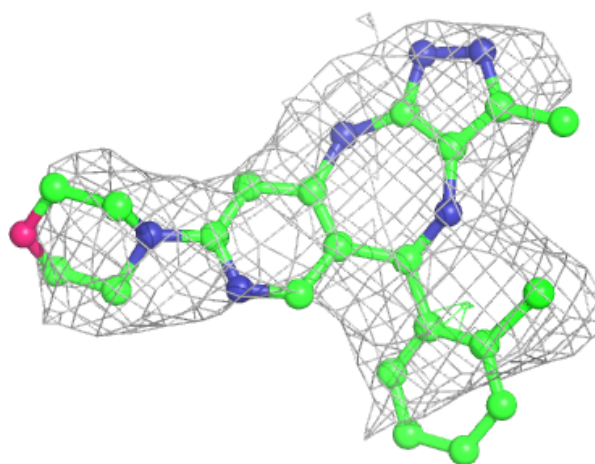
**Electron density around KX0 B 1001:**

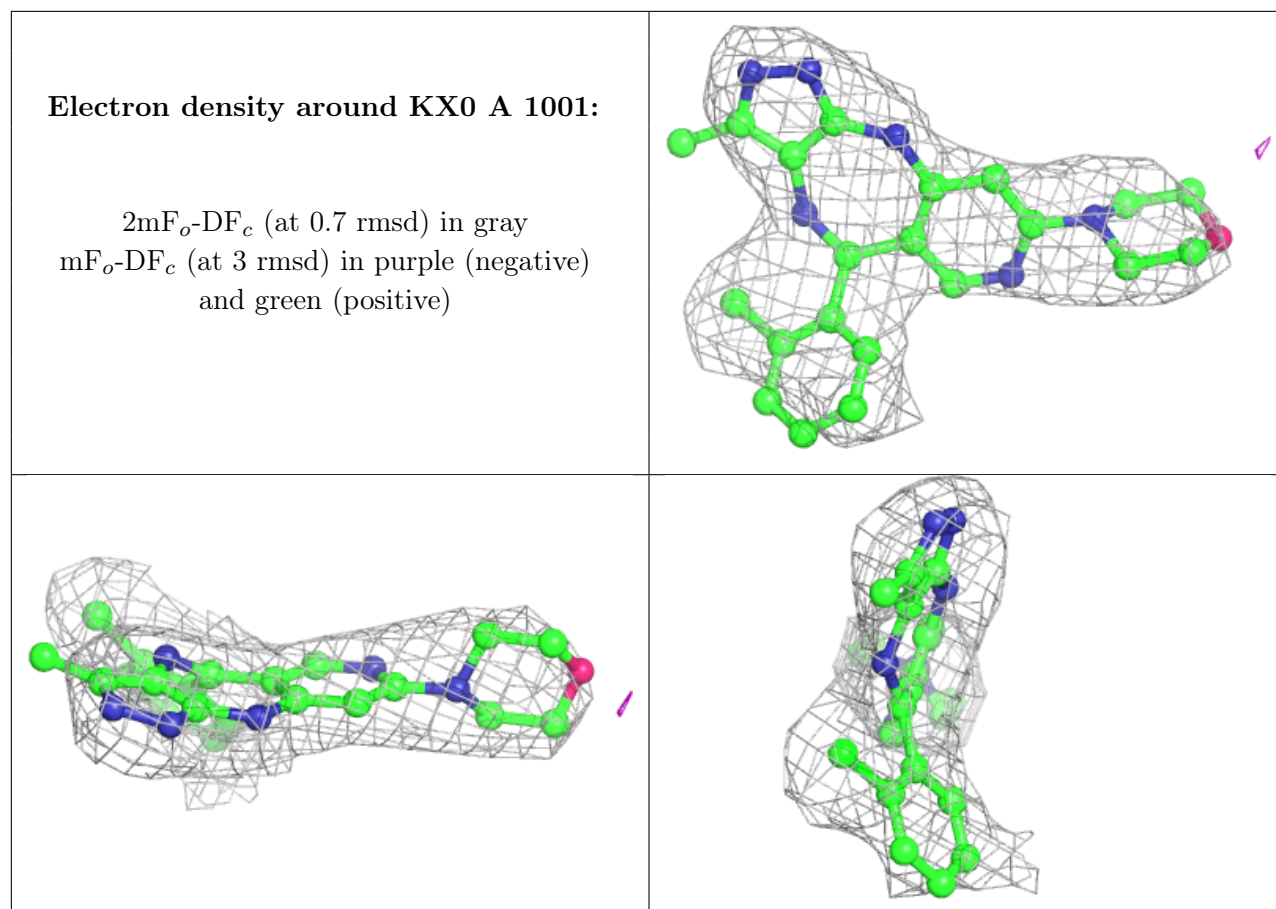
$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



Electron density around KX0 D 1001:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)





6.5 Other polymers [i](#)

There are no such residues in this entry.