Full wwPDB X-ray Structure Validation Report (i)

Oct 11, 2021 – 01:16 AM EDT

PDB ID	:	2Q7M
Title	:	Crystal structure of human FLAP with MK-591
Authors	:	Ferguson, A.D.
Deposited on	:	2007-06-07
Resolution	:	4.25 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 (i) symbol.

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

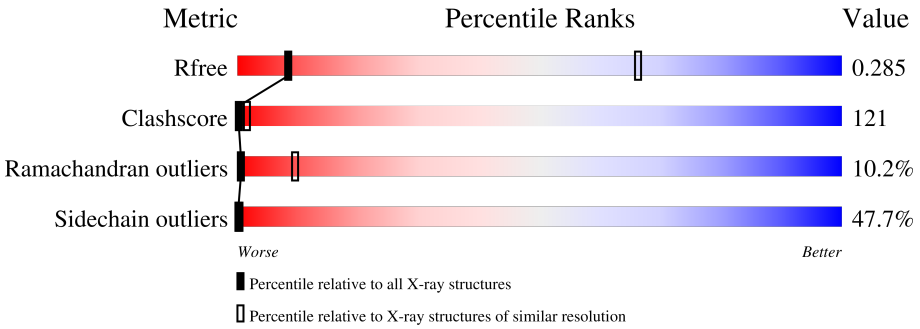
MolProbity	:	4.02b-467
Mogul	:	1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.23.2
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.23.2

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 4.25 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	1017 (4.72-3.78)
Clashscore	141614	1059 (4.72-3.80)
Ramachandran outliers	138981	1014 (4.72-3.80)
Sidechain outliers	138945	1018 (4.72-3.78)

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 <=5%

Mol	Chain	Length	Quality of chain
1	A	161	10% 40% 35% · 14%
1	B	161	7% 45% 36% · 8%
1	C	161	10% 41% 39% · 7%
1	D	161	7% 48% 34% · 9%
1	E	161	7% 45% 31% · 13%
1	F	161	11% 43% 33% 5% 7%

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	2CS	A	502	-	-	X	-
2	2CS	A	503	-	X	X	-
2	2CS	C	501	-	-	X	-
2	2CS	D	504	-	-	X	-
2	2CS	E	505	-	-	X	-
2	2CS	E	506	-	-	X	-

2 Entry composition (i)

There are 2 unique types of molecules in this entry. The entry contains 7233 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.

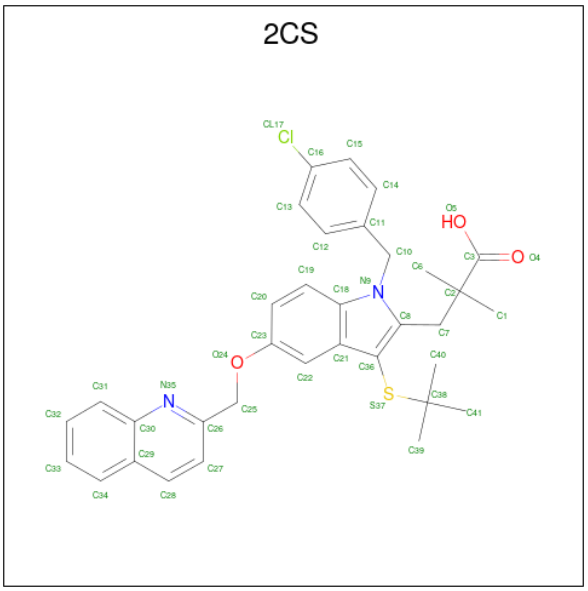
- Molecule 1 is a protein called Arachidonate 5-lipoxygenase-activating protein.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	139	Total	C	N	O	S	0	0	0
			1115	737	182	191	5			
1	B	148	Total	C	N	O	S	0	0	0
			1186	782	192	207	5			
1	C	149	Total	C	N	O	S	0	0	0
			1193	786	193	209	5			
1	D	147	Total	C	N	O	S	0	0	0
			1181	779	191	206	5			
1	E	140	Total	C	N	O	S	0	0	0
			1119	739	183	192	5			
1	F	149	Total	C	N	O	S	0	0	0
			1193	786	193	209	5			

There are 6 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	148	ALA	LYS	engineered mutation	UNP P20292
B	148	ALA	LYS	engineered mutation	UNP P20292
C	148	ALA	LYS	engineered mutation	UNP P20292
D	148	ALA	LYS	engineered mutation	UNP P20292
E	148	ALA	LYS	engineered mutation	UNP P20292
F	148	ALA	LYS	engineered mutation	UNP P20292

- Molecule 2 is 3-[3-(TERT-BUTYLTHIO)-1-(4-CHLOROBENZYL)-5-(QUINOLIN-2-YL METHOXY)-1H-INDOL-2-YL]-2,2-DIMETHYLPROPANOIC ACID (three-letter code: 2CS) (formula: $C_{34}H_{35}ClN_2O_3S$).



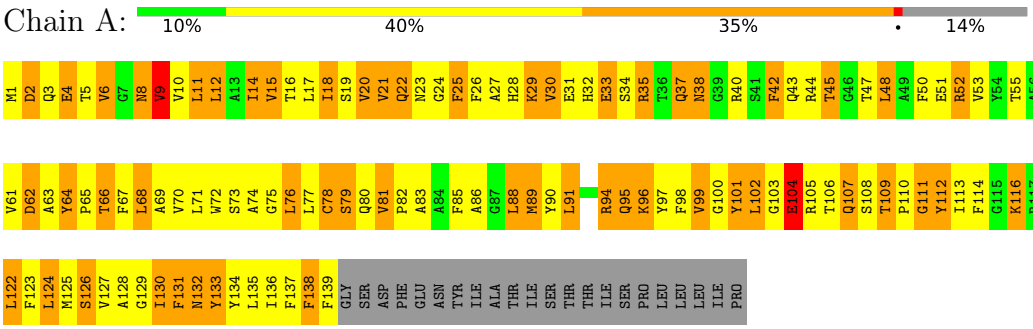
Mol	Chain	Residues	Atoms						ZeroOcc	AltConf
2	A	1	Total	C	Cl	N	O	S	0	0
			41	34	1	2	3	1		
2	A	1	Total	C	Cl	N	O	S	0	0
			41	34	1	2	3	1		
2	C	1	Total	C	Cl	N	O	S	0	0
			41	34	1	2	3	1		
2	D	1	Total	C	Cl	N	O	S	0	0
			41	34	1	2	3	1		
2	E	1	Total	C	Cl	N	O	S	0	0
			41	34	1	2	3	1		
2	E	1	Total	C	Cl	N	O	S	0	0
			41	34	1	2	3	1		

3 Residue-property plots (i)

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. 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. 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.

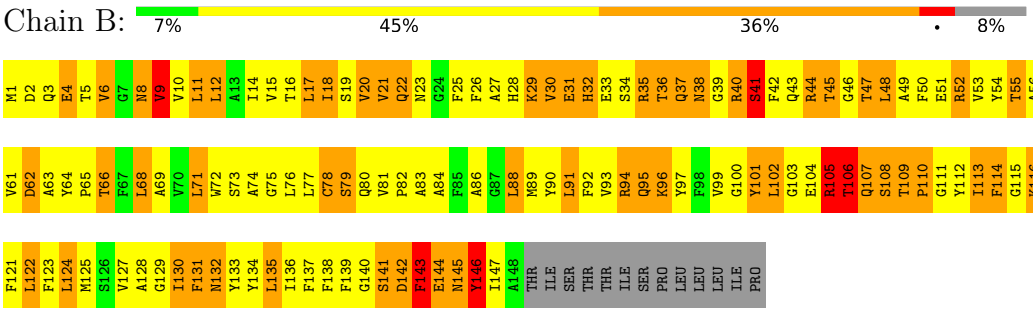
• Molecule 1: Arachidonate 5-lipoxygenase-activating protein

Chain A:



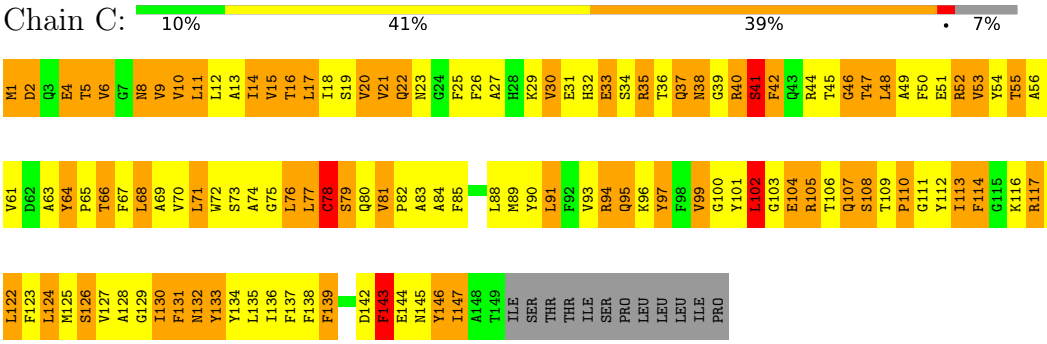
• Molecule 1: Arachidonate 5-lipoxygenase-activating protein

Chain B:



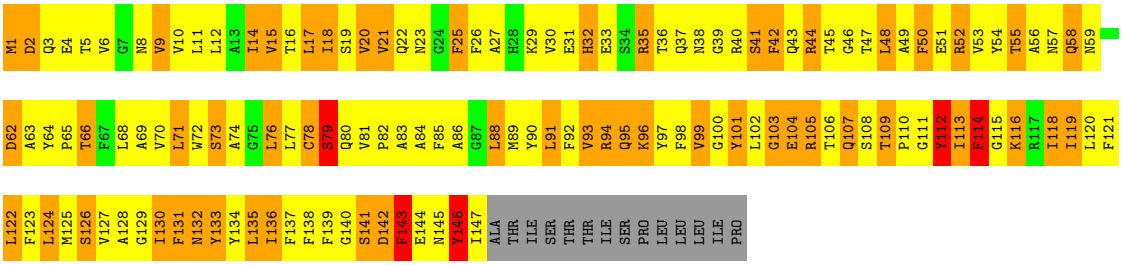
• Molecule 1: Arachidonate 5-lipoxygenase-activating protein

Chain C:



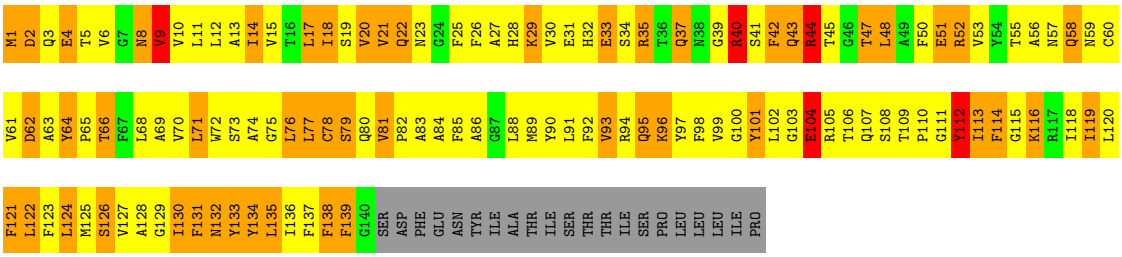
• Molecule 1: Arachidonate 5-lipoxygenase-activating protein

Chain D:



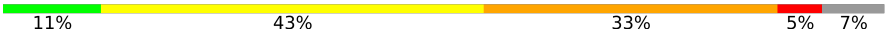
• Molecule 1: Arachidonate 5-lipoxygenase-activating protein

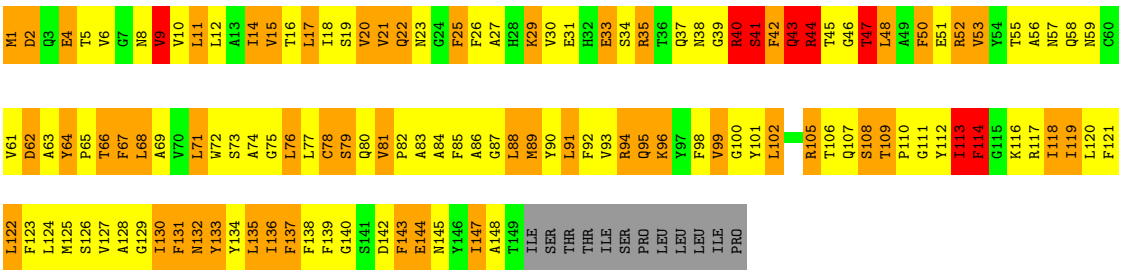
Chain E:



• Molecule 1: Arachidonate 5-lipoxygenase-activating protein

Chain F:





4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 4 21 2	Depositor
Cell constants a, b, c, α, β, γ	180.60Å 180.60Å 140.57Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	20.00 – 4.25 38.81 – 4.25	Depositor EDS
% Data completeness (in resolution range)	99.3 (20.00-4.25) 99.3 (38.81-4.25)	Depositor EDS
R_{merge}	0.06	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	3.99 (at 4.28Å)	Xtriage
Refinement program	BUSTER-TNT 1.9.3	Depositor
R, R_{free}	0.242 , 0.283 0.257 , 0.285	Depositor DCC
R_{free} test set	849 reflections (5.06%)	wwPDB-VP
Wilson B-factor (Å^2)	193.6	Xtriage
Anisotropy	0.033	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.27 , 194.0	EDS
L-test for twinning[2]	$< \|L\| > = 0.51$, $< L^2 > = 0.35$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.88	EDS
Total number of atoms	7233	wwPDB-VP
Average B, all atoms (Å^2)	191.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 13.08% of the height of the origin peak. No significant pseudotranslation is detected.*

[1] Intensities estimated from amplitudes.

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

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: 2CS

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	0.40	0/1144	0.61	1/1551 (0.1%)
1	B	0.41	0/1217	0.61	0/1650
1	C	0.44	0/1224	0.63	0/1660
1	D	0.43	0/1212	0.61	0/1643
1	E	0.40	0/1148	0.60	0/1556
1	F	0.43	0/1224	0.61	0/1660
All	All	0.42	0/7169	0.61	1/9720 (0.0%)

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	A	109	THR	C-N-CD	-7.20	104.76	120.60

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	1115	0	1113	292	0
1	B	1186	0	1171	334	0
1	C	1193	0	1178	292	0
1	D	1181	0	1166	328	0

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	E	1119	0	1116	317	0
1	F	1193	0	1178	308	0
2	A	82	0	68	58	0
2	C	41	0	34	21	0
2	D	41	0	34	29	0
2	E	82	0	68	66	0
All	All	7233	0	7126	1731	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 121.

All (1731) 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:E:120:LEU:HD23	2:E:506:2CS:H412	1.23	1.14
1:F:81:VAL:HG13	1:F:82:PRO:HD3	1.30	1.13
1:E:81:VAL:HG13	1:E:82:PRO:HD3	1.28	1.13
1:D:53:VAL:HG23	1:D:102:LEU:HD21	1.23	1.12
2:E:505:2CS:H61	2:E:505:2CS:H102	1.30	1.12
1:A:113:ILE:HD12	1:B:31:GLU:HG2	1.28	1.10
2:E:506:2CS:H413	2:E:506:2CS:H71	1.34	1.10
1:E:21:VAL:HG23	2:E:505:2CS:H402	1.35	1.09
1:E:124:LEU:HD12	1:E:127:VAL:HG11	1.28	1.09
1:D:74:ALA:HB1	1:D:125:MET:HE2	1.34	1.09
1:B:89:MET:HB2	1:B:118:ILE:HD11	1.28	1.08
1:E:44:ARG:HB2	1:E:44:ARG:HH11	1.18	1.08
1:D:101:TYR:HA	1:D:109:THR:HG21	1.36	1.08
2:D:504:2CS:H71	2:D:504:2CS:H393	1.26	1.07
1:F:116:LYS:HA	1:F:119:ILE:HD11	1.36	1.07
2:E:506:2CS:CL17	1:F:25:PHE:HB2	1.91	1.07
1:E:25:PHE:HB2	2:E:505:2CS:CL17	1.92	1.07
1:D:109:THR:H	1:E:40:ARG:NH1	1.53	1.06
2:A:502:2CS:H12	2:A:502:2CS:H62	1.35	1.06
1:D:42:PHE:HE1	1:F:110:PRO:HB2	1.20	1.06
1:A:119:ILE:HG13	2:A:503:2CS:H22	1.33	1.04
1:B:8:ASN:HD22	1:B:8:ASN:N	1.54	1.04
1:A:8:ASN:ND2	1:A:8:ASN:H	1.53	1.02
1:D:83:ALA:HA	1:D:125:MET:HE1	1.42	1.02
2:A:503:2CS:CL17	1:B:25:PHE:HB2	1.97	1.01
1:A:8:ASN:HD22	1:A:8:ASN:N	1.58	1.00
1:C:47:THR:HG22	1:C:49:ALA:H	1.22	1.00

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2:ASP:HB2	1:C:5:THR:HG23	1.43	0.99
1:E:124:LEU:HA	1:E:127:VAL:HG12	1.44	0.99
1:E:8:ASN:H	1:E:8:ASN:HD22	1.09	0.99
1:E:116:LYS:HA	1:E:119:ILE:HD11	1.46	0.98
1:A:40:ARG:HD3	1:C:110:PRO:HG3	1.46	0.98
1:A:133:TYR:HA	1:A:136:ILE:HD12	1.47	0.97
1:B:8:ASN:H	1:B:8:ASN:ND2	1.54	0.97
1:C:133:TYR:HA	1:C:136:ILE:HD12	1.47	0.97
1:C:25:PHE:HB2	2:C:501:2CS:CL17	2.03	0.95
1:E:44:ARG:HH12	1:F:43:GLN:HB2	1.27	0.95
1:E:109:THR:HG23	1:F:40:ARG:NH2	1.81	0.94
1:B:83:ALA:HA	1:B:125:MET:HE1	1.50	0.94
1:C:55:THR:HG23	1:C:101:TYR:HE2	1.33	0.94
1:D:124:LEU:HA	1:D:127:VAL:HG12	1.50	0.94
1:A:10:VAL:HG13	1:C:130:ILE:HD11	1.45	0.94
1:D:110:PRO:HD3	1:E:40:ARG:NH1	1.82	0.93
1:B:116:LYS:HA	1:B:119:ILE:HD11	1.51	0.93
1:C:94:ARG:HG2	1:C:114:PHE:CE1	2.05	0.92
1:C:10:VAL:HG12	1:C:11:LEU:HD13	1.49	0.92
1:A:66:THR:HG23	1:B:23:ASN:HD22	1.33	0.92
1:A:33:GLU:HB3	1:A:50:PHE:HB2	1.51	0.92
1:D:89:MET:HB2	1:D:118:ILE:HD11	1.52	0.92
1:E:5:THR:HA	1:E:8:ASN:HD21	1.34	0.92
1:D:17:LEU:HD11	1:F:126:SER:HB3	1.48	0.92
2:A:502:2CS:H403	1:C:120:LEU:HA	1.51	0.91
1:B:1:MET:HG2	1:B:6:VAL:HG13	1.51	0.91
1:D:48:LEU:H	1:D:48:LEU:HD22	1.36	0.91
2:E:505:2CS:H392	2:E:505:2CS:H22	1.52	0.91
1:A:11:LEU:HD13	1:A:80:GLN:HE22	1.36	0.91
1:E:101:TYR:HE1	1:E:110:PRO:HD2	1.36	0.90
1:F:19:SER:HB3	1:F:91:LEU:HD11	1.53	0.90
1:C:18:ILE:CG2	1:C:91:LEU:HD23	2.02	0.90
1:A:124:LEU:HA	1:A:127:VAL:HG12	1.53	0.90
1:D:110:PRO:HD3	1:E:40:ARG:HH11	1.32	0.90
1:F:94:ARG:HA	1:F:114:PHE:CZ	2.07	0.89
1:B:105:ARG:HB3	1:B:105:ARG:HH11	1.35	0.89
1:C:18:ILE:HG22	1:C:91:LEU:HD23	1.55	0.89
1:C:19:SER:HB3	1:C:91:LEU:HD21	1.52	0.89
1:D:109:THR:H	1:E:40:ARG:HH11	1.19	0.89
1:A:43:GLN:HE22	1:C:54:TYR:HD2	1.16	0.88
2:A:502:2CS:H252	1:C:119:ILE:HD12	1.54	0.88

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:83:ALA:HA	1:C:125:MET:HE1	1.56	0.88
1:F:133:TYR:HA	1:F:136:ILE:CD1	2.02	0.88
1:E:18:ILE:CG2	1:E:91:LEU:HD23	2.03	0.88
1:D:79:SER:HB3	1:D:82:PRO:CD	2.04	0.87
1:F:105:ARG:HH11	1:F:105:ARG:HG3	1.38	0.87
2:A:503:2CS:H102	2:A:503:2CS:H12A	1.56	0.87
1:E:123:PHE:HD1	1:E:124:LEU:HD13	1.40	0.87
1:B:124:LEU:HA	1:B:127:VAL:HG12	1.55	0.86
1:D:96:LYS:HD2	1:D:96:LYS:N	1.91	0.86
1:E:86:ALA:HB2	1:E:121:PHE:HE2	1.39	0.86
1:E:120:LEU:CD2	2:E:506:2CS:H412	2.06	0.85
1:A:11:LEU:HD13	1:A:80:GLN:NE2	1.90	0.85
1:D:113:ILE:O	1:D:114:PHE:HB2	1.76	0.85
1:E:8:ASN:H	1:E:8:ASN:ND2	1.70	0.85
1:E:55:THR:HG21	1:F:40:ARG:HG2	1.59	0.85
2:D:504:2CS:H71	2:D:504:2CS:C39	2.04	0.85
1:E:112:TYR:CD2	1:F:30:VAL:HG11	2.12	0.85
1:F:53:VAL:HG23	1:F:102:LEU:HD11	1.57	0.85
1:F:113:ILE:HG22	1:F:114:PHE:H	1.41	0.85
1:C:94:ARG:HG2	1:C:114:PHE:HE1	1.40	0.84
1:A:43:GLN:HA	1:C:44:ARG:HH21	1.40	0.84
1:B:74:ALA:HB1	1:B:125:MET:HE2	1.56	0.84
1:B:46:GLY:HA3	1:B:50:PHE:HD2	1.42	0.84
1:E:119:ILE:CG1	2:E:506:2CS:H22	2.06	0.84
1:E:29:LYS:N	1:E:29:LYS:HD2	1.91	0.84
1:E:44:ARG:HH11	1:E:44:ARG:CB	1.90	0.84
1:B:96:LYS:N	1:B:96:LYS:HD2	1.92	0.83
1:F:143:PHE:HD1	1:F:144:GLU:N	1.75	0.83
2:C:501:2CS:C14	2:C:501:2CS:H61	2.09	0.83
1:D:21:VAL:CG2	2:D:504:2CS:H411	2.08	0.83
1:A:119:ILE:CG1	2:A:503:2CS:H22	2.08	0.83
1:D:27:ALA:HB2	2:D:504:2CS:C32	2.09	0.83
1:D:42:PHE:HE2	1:F:112:TYR:HA	1.42	0.83
1:D:97:TYR:HE1	1:D:111:GLY:HA2	1.43	0.83
1:B:121:PHE:HB2	1:F:139:PHE:CE2	2.12	0.83
2:A:503:2CS:H71	2:A:503:2CS:H393	1.60	0.82
1:A:73:SER:O	1:A:77:LEU:HB2	1.79	0.82
2:A:503:2CS:H72	2:A:503:2CS:H412	1.61	0.82
1:B:6:VAL:O	1:B:10:VAL:HG23	1.79	0.82
2:E:506:2CS:H71	2:E:506:2CS:C41	2.08	0.82
1:A:18:ILE:HG22	1:A:91:LEU:HD23	1.60	0.82

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:124:LEU:HA	1:E:127:VAL:CG1	2.09	0.82
1:E:120:LEU:O	1:E:124:LEU:HD22	1.80	0.82
1:D:116:LYS:HE3	2:E:505:2CS:C19	2.08	0.82
1:D:133:TYR:HA	1:D:136:ILE:HD12	1.60	0.82
1:C:2:ASP:HB2	1:C:5:THR:CG2	2.09	0.81
1:D:120:LEU:HD23	2:E:505:2CS:S37	2.20	0.81
1:F:124:LEU:HA	1:F:127:VAL:HG12	1.62	0.81
1:C:35:ARG:HA	1:C:35:ARG:HE	1.45	0.81
1:C:124:LEU:HA	1:C:127:VAL:HG12	1.63	0.81
1:E:11:LEU:H	1:E:80:GLN:HE22	1.28	0.81
1:E:132:ASN:HD21	1:E:136:ILE:HD11	1.43	0.81
1:F:81:VAL:CG1	1:F:82:PRO:HD3	2.11	0.81
1:E:18:ILE:HG22	1:E:91:LEU:HD23	1.61	0.81
1:B:139:PHE:CZ	1:F:120:LEU:HD12	2.16	0.81
1:E:48:LEU:O	1:E:52:ARG:HB2	1.80	0.81
1:D:42:PHE:CE1	1:F:110:PRO:HB2	2.11	0.81
1:E:66:THR:HG22	1:F:20:VAL:CG2	2.11	0.81
1:A:101:TYR:OH	1:B:42:PHE:HB3	1.80	0.81
1:E:11:LEU:HD23	1:E:80:GLN:OE1	1.81	0.81
1:B:120:LEU:HD23	2:C:501:2CS:S37	2.20	0.80
1:B:144:GLU:HB3	1:B:146:TYR:CZ	2.15	0.80
1:D:101:TYR:CA	1:D:109:THR:HG21	2.10	0.80
1:D:101:TYR:HD1	1:D:109:THR:HG22	1.44	0.80
1:D:116:LYS:HE3	2:E:505:2CS:C20	2.12	0.80
2:D:504:2CS:H22	1:F:119:ILE:CG1	2.11	0.80
1:E:120:LEU:HA	2:E:506:2CS:H393	1.61	0.80
1:A:110:PRO:CB	1:B:35:ARG:HH22	1.94	0.80
1:F:88:LEU:HD13	1:F:89:MET:N	1.95	0.80
1:A:11:LEU:HD22	1:A:80:GLN:CD	2.02	0.80
1:E:11:LEU:H	1:E:80:GLN:NE2	1.78	0.80
1:F:17:LEU:O	1:F:20:VAL:HG12	1.81	0.80
2:E:506:2CS:C32	1:F:27:ALA:HB2	2.11	0.80
1:A:8:ASN:H	1:A:8:ASN:HD22	0.82	0.80
1:D:108:SER:HA	1:E:40:ARG:CG	2.12	0.80
1:C:120:LEU:O	1:C:124:LEU:HD22	1.81	0.80
1:F:96:LYS:N	1:F:96:LYS:HD2	1.97	0.80
1:B:11:LEU:O	1:B:15:VAL:HG12	1.81	0.79
1:F:19:SER:CB	1:F:91:LEU:HD11	2.12	0.79
1:D:21:VAL:HG23	2:D:504:2CS:H411	1.65	0.79
1:D:53:VAL:HG23	1:D:102:LEU:CD2	2.09	0.79
1:C:112:TYR:O	1:C:113:ILE:HG13	1.82	0.79

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:14:ILE:O	1:D:18:ILE:HD12	1.81	0.79
1:B:144:GLU:HB3	1:B:146:TYR:CE1	2.18	0.79
1:D:83:ALA:CA	1:D:125:MET:HE1	2.12	0.79
1:E:81:VAL:CG1	1:E:82:PRO:HD3	2.12	0.79
1:A:18:ILE:CG2	1:A:91:LEU:HD23	2.12	0.79
1:D:11:LEU:HB2	1:D:80:GLN:NE2	1.97	0.79
1:E:21:VAL:HG23	2:E:505:2CS:C40	2.12	0.79
1:F:55:THR:HG22	1:F:101:TYR:HE2	1.47	0.79
1:C:70:VAL:HG23	1:C:122:LEU:HB3	1.62	0.79
1:C:55:THR:HG23	1:C:101:TYR:CE2	2.17	0.79
1:D:48:LEU:O	1:D:52:ARG:HB2	1.82	0.79
1:E:1:MET:HE2	1:E:6:VAL:HG23	1.65	0.79
1:A:40:ARG:HH21	1:C:107:GLN:HG2	1.46	0.78
1:C:30:VAL:HG23	1:C:53:VAL:CG1	2.13	0.78
1:D:116:LYS:HE3	2:E:505:2CS:C18	2.13	0.78
1:B:48:LEU:HD12	1:B:52:ARG:HD3	1.63	0.78
1:C:11:LEU:HD22	1:C:80:GLN:NE2	1.98	0.78
1:E:122:LEU:HD12	1:E:125:MET:HE2	1.66	0.78
1:D:2:ASP:O	1:D:6:VAL:HG23	1.84	0.78
1:A:113:ILE:HD11	1:B:27:ALA:O	1.84	0.78
1:D:18:ILE:CG2	1:D:91:LEU:HD23	2.14	0.78
1:E:109:THR:HG23	1:F:40:ARG:HH21	1.44	0.78
1:E:119:ILE:HG13	2:E:506:2CS:H22	1.65	0.78
1:A:25:PHE:HB2	2:A:502:2CS:C15	2.13	0.78
1:E:120:LEU:HD23	2:E:506:2CS:C41	2.09	0.78
1:B:105:ARG:HH11	1:B:105:ARG:CB	1.95	0.77
1:D:108:SER:HB2	1:E:40:ARG:NH1	1.99	0.77
1:E:30:VAL:CG2	1:E:53:VAL:HG12	2.13	0.77
1:A:6:VAL:O	1:A:10:VAL:HG23	1.85	0.77
1:A:124:LEU:HA	1:A:127:VAL:CG1	2.15	0.77
1:B:4:GLU:OE1	1:B:5:THR:HG23	1.84	0.77
1:E:6:VAL:O	1:E:10:VAL:HG23	1.85	0.77
1:E:25:PHE:HD2	1:E:26:PHE:HD1	1.31	0.77
1:F:12:LEU:HD12	1:F:72:TRP:CE3	2.20	0.77
1:D:32:HIS:O	1:D:36:THR:HG23	1.83	0.77
1:B:74:ALA:HB1	1:B:125:MET:HB2	1.65	0.76
1:C:72:TRP:O	1:C:76:LEU:HD22	1.84	0.76
1:F:133:TYR:CD2	1:F:134:TYR:HD1	2.02	0.76
1:B:88:LEU:O	1:B:88:LEU:HD22	1.85	0.76
1:A:10:VAL:HG13	1:C:130:ILE:CD1	2.16	0.76
2:A:502:2CS:H62	2:A:502:2CS:C12	2.12	0.76

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:11:LEU:H	1:D:80:GLN:NE2	1.84	0.76
1:E:8:ASN:HD22	1:E:8:ASN:N	1.84	0.76
1:C:21:VAL:CG2	2:C:501:2CS:H411	2.15	0.76
1:A:48:LEU:O	1:A:52:ARG:HB2	1.85	0.76
1:F:4:GLU:OE1	1:F:5:THR:HG23	1.85	0.76
1:B:112:TYR:CD2	1:C:30:VAL:HG11	2.21	0.75
1:C:100:GLY:O	1:C:109:THR:HG21	1.85	0.75
2:E:506:2CS:H102	2:E:506:2CS:O4	1.86	0.75
1:B:83:ALA:CA	1:B:125:MET:HE1	2.16	0.75
1:B:105:ARG:NH1	1:B:106:THR:H	1.84	0.75
1:E:124:LEU:HD12	1:E:127:VAL:CG1	2.10	0.75
1:A:120:LEU:O	1:A:124:LEU:HD22	1.85	0.75
1:B:48:LEU:O	1:B:52:ARG:HB2	1.86	0.75
1:D:88:LEU:O	1:D:88:LEU:HD22	1.86	0.75
1:C:123:PHE:HD1	1:C:124:LEU:HD13	1.50	0.75
1:E:14:ILE:O	1:E:18:ILE:HD13	1.86	0.75
1:B:14:ILE:O	1:B:18:ILE:HD13	1.87	0.75
1:D:19:SER:HB3	1:D:91:LEU:HD11	1.67	0.75
1:E:30:VAL:HG22	1:E:53:VAL:HG12	1.67	0.75
1:A:97:TYR:OH	1:A:112:TYR:HA	1.87	0.75
1:A:42:PHE:HB3	1:A:50:PHE:HZ	1.50	0.75
1:B:48:LEU:HD12	1:B:48:LEU:O	1.86	0.75
2:E:506:2CS:H413	2:E:506:2CS:C7	2.16	0.75
1:F:53:VAL:CG2	1:F:102:LEU:HD11	2.17	0.74
1:C:37:GLN:NE2	1:C:47:THR:HG21	2.02	0.74
1:E:48:LEU:HD13	1:E:52:ARG:HD3	1.67	0.74
1:A:43:GLN:HA	1:C:44:ARG:NH2	2.02	0.74
1:D:11:LEU:HD23	1:D:80:GLN:HE22	1.53	0.74
1:B:19:SER:HB3	1:B:91:LEU:HD11	1.68	0.74
1:C:135:LEU:N	1:C:135:LEU:HD23	2.03	0.74
1:E:37:GLN:OE1	1:E:47:THR:HG22	1.88	0.74
1:E:44:ARG:NH1	1:F:43:GLN:HB2	2.01	0.74
1:E:101:TYR:CE1	1:E:110:PRO:HD2	2.22	0.74
1:C:79:SER:OG	1:C:82:PRO:HD3	1.88	0.74
1:D:108:SER:HA	1:E:40:ARG:HG2	1.70	0.74
1:E:72:TRP:O	1:E:76:LEU:HD22	1.86	0.74
1:A:96:LYS:HD2	1:A:96:LYS:N	2.01	0.74
1:D:47:THR:HG22	1:D:49:ALA:H	1.53	0.74
1:D:120:LEU:HD13	1:D:124:LEU:HD21	1.69	0.74
1:A:43:GLN:NE2	1:C:54:TYR:HD2	1.86	0.73
1:C:73:SER:O	1:C:77:LEU:HB2	1.89	0.73

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:66:THR:HG22	1:F:20:VAL:HG22	1.70	0.73
1:A:108:SER:O	1:A:110:PRO:HD3	1.87	0.73
1:E:21:VAL:CG2	2:E:505:2CS:H402	2.14	0.73
2:D:504:2CS:H12A	1:F:116:LYS:HE3	1.70	0.73
1:F:52:ARG:HH11	1:F:52:ARG:HG3	1.51	0.73
1:B:133:TYR:HD1	1:B:134:TYR:HD1	1.37	0.73
1:C:74:ALA:HB1	1:C:125:MET:HB2	1.71	0.73
1:E:102:LEU:O	1:E:102:LEU:HD22	1.88	0.73
1:A:74:ALA:HB1	1:A:125:MET:HB2	1.71	0.73
1:A:112:TYR:HB3	1:B:42:PHE:HE2	1.53	0.73
1:D:124:LEU:HA	1:D:127:VAL:CG1	2.19	0.73
1:F:52:ARG:HH21	1:F:105:ARG:HD2	1.51	0.73
1:D:116:LYS:HZ1	2:E:505:2CS:C21	2.01	0.73
1:E:119:ILE:CD1	2:E:506:2CS:H22	2.19	0.73
1:E:28:HIS:HD2	1:E:29:LYS:NZ	1.87	0.73
1:F:33:GLU:HB3	1:F:50:PHE:HB2	1.69	0.73
1:B:139:PHE:CD2	1:F:121:PHE:HB2	2.23	0.72
1:E:122:LEU:HD12	1:E:125:MET:CE	2.19	0.72
2:A:503:2CS:C31	1:B:27:ALA:HB2	2.19	0.72
1:D:45:THR:OG1	1:F:44:ARG:HB2	1.89	0.72
1:D:74:ALA:HB1	1:D:125:MET:CE	2.17	0.72
1:E:22:GLN:O	1:E:25:PHE:HB3	1.90	0.72
1:A:31:GLU:CD	1:C:113:ILE:HD11	2.08	0.72
1:B:101:TYR:OH	1:C:42:PHE:HB3	1.89	0.72
1:D:11:LEU:HB2	1:D:80:GLN:HE21	1.54	0.72
1:A:42:PHE:HD2	1:A:50:PHE:CZ	2.07	0.72
1:E:25:PHE:HD2	1:E:26:PHE:CD1	2.07	0.72
1:B:76:LEU:HB3	1:C:1:MET:CE	2.19	0.72
1:B:132:ASN:HD21	1:B:136:ILE:HD11	1.52	0.72
1:C:74:ALA:HB1	1:C:125:MET:HE2	1.71	0.72
1:D:79:SER:HB3	1:D:82:PRO:HD3	1.71	0.72
1:C:14:ILE:HG22	1:C:15:VAL:N	2.05	0.72
1:F:74:ALA:HB1	1:F:125:MET:HB2	1.71	0.72
1:D:56:ALA:HA	1:D:101:TYR:HD2	1.55	0.72
1:E:37:GLN:HE22	1:E:47:THR:CG2	2.02	0.72
1:E:97:TYR:HD2	1:E:114:PHE:CE2	2.08	0.72
1:F:133:TYR:HD2	1:F:134:TYR:HD1	1.37	0.72
1:B:119:ILE:HG12	2:C:501:2CS:H22	1.72	0.71
1:B:123:PHE:HD1	1:B:124:LEU:HD13	1.55	0.71
1:D:73:SER:O	1:D:77:LEU:HB2	1.90	0.71
1:D:116:LYS:HA	1:D:116:LYS:CE	2.20	0.71

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:505:2CS:H61	2:E:505:2CS:C10	2.13	0.71
1:E:119:ILE:HD11	2:E:506:2CS:H22	1.72	0.71
1:E:135:LEU:N	1:E:135:LEU:HD23	2.04	0.71
1:B:89:MET:HB2	1:B:118:ILE:CD1	2.15	0.71
1:E:86:ALA:HB2	1:E:121:PHE:CE2	2.26	0.71
1:C:101:TYR:O	1:C:102:LEU:HB3	1.89	0.71
1:D:109:THR:N	1:E:40:ARG:HH11	1.88	0.71
1:D:132:ASN:O	1:D:135:LEU:HB2	1.89	0.71
1:D:120:LEU:HD13	1:D:124:LEU:CD2	2.21	0.71
1:A:5:THR:HA	1:A:8:ASN:HD21	1.55	0.71
1:B:1:MET:CG	1:B:6:VAL:HG13	2.20	0.71
2:C:501:2CS:C3	2:C:501:2CS:H102	2.19	0.71
1:F:40:ARG:O	1:F:42:PHE:N	2.24	0.71
1:B:74:ALA:HB1	1:B:125:MET:CE	2.21	0.71
1:D:79:SER:HB3	1:D:82:PRO:CG	2.19	0.71
1:F:88:LEU:O	1:F:88:LEU:HD22	1.91	0.71
1:A:10:VAL:HG21	1:C:133:TYR:CE2	2.26	0.71
1:C:14:ILE:O	1:C:18:ILE:HD13	1.89	0.71
1:E:124:LEU:CA	1:E:127:VAL:HG12	2.19	0.71
2:A:503:2CS:H393	2:A:503:2CS:C7	2.21	0.70
1:A:112:TYR:HB3	1:B:42:PHE:CE2	2.26	0.70
1:B:11:LEU:HD22	1:B:80:GLN:CD	2.11	0.70
1:B:64:TYR:N	1:B:65:PRO:HD2	2.06	0.70
1:B:122:LEU:HD12	1:B:125:MET:HE2	1.72	0.70
1:F:9:VAL:N	1:F:80:GLN:NE2	2.38	0.70
1:B:130:ILE:CD1	1:C:14:ILE:HD12	2.20	0.70
1:C:18:ILE:HG22	1:C:19:SER:N	2.06	0.70
1:F:6:VAL:O	1:F:10:VAL:HG23	1.91	0.70
1:C:47:THR:HG22	1:C:48:LEU:N	2.06	0.70
1:D:44:ARG:HB3	1:E:44:ARG:NH2	2.07	0.70
1:B:71:LEU:O	1:B:71:LEU:HD22	1.91	0.70
1:C:30:VAL:HG23	1:C:53:VAL:HG12	1.72	0.70
1:D:18:ILE:HG22	1:D:91:LEU:HD23	1.72	0.70
1:E:138:PHE:HB3	1:E:139:PHE:CE2	2.27	0.70
1:F:94:ARG:HA	1:F:114:PHE:CE2	2.25	0.70
1:E:42:PHE:C	1:E:43:GLN:HG3	2.12	0.70
1:E:55:THR:HG21	1:F:40:ARG:CG	2.22	0.70
1:B:77:LEU:HD23	1:B:130:ILE:HG12	1.74	0.70
1:C:25:PHE:CB	2:C:501:2CS:CL17	2.77	0.70
1:D:42:PHE:CE2	1:F:112:TYR:HA	2.27	0.70
1:E:113:ILE:HG13	2:E:506:2CS:H20	1.74	0.70

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:94:ARG:HA	1:F:114:PHE:HZ	1.51	0.70
1:B:86:ALA:HB2	1:B:121:PHE:HE2	1.56	0.70
1:E:134:TYR:O	1:E:138:PHE:HB2	1.92	0.70
1:A:10:VAL:HG21	1:C:133:TYR:CD2	2.27	0.69
1:C:107:GLN:OE1	1:C:110:PRO:HG2	1.92	0.69
1:A:125:MET:O	1:A:128:ALA:HB3	1.92	0.69
1:C:101:TYR:HE1	1:C:110:PRO:HA	1.55	0.69
1:D:108:SER:HB2	1:E:40:ARG:CZ	2.22	0.69
1:A:119:ILE:HD12	2:A:503:2CS:H252	1.75	0.69
1:B:124:LEU:HA	1:B:127:VAL:CG1	2.22	0.69
1:C:77:LEU:O	1:C:129:GLY:HA3	1.92	0.69
1:B:46:GLY:CA	1:B:50:PHE:HD2	2.06	0.69
1:C:11:LEU:H	1:C:80:GLN:NE2	1.91	0.69
1:F:2:ASP:O	1:F:6:VAL:HG23	1.92	0.69
1:B:34:SER:O	1:B:39:GLY:HA3	1.92	0.69
1:D:101:TYR:CD1	1:D:109:THR:HG22	2.26	0.69
1:F:133:TYR:HD2	1:F:134:TYR:CD1	2.11	0.69
1:E:95:GLN:OE1	1:E:95:GLN:HA	1.92	0.69
1:D:30:VAL:HG11	1:F:112:TYR:CE2	2.27	0.69
1:D:120:LEU:CD1	1:D:124:LEU:HD21	2.21	0.69
2:E:505:2CS:H102	2:E:505:2CS:C6	2.17	0.69
1:F:48:LEU:O	1:F:52:ARG:HB2	1.91	0.69
1:F:52:ARG:HG3	1:F:52:ARG:NH1	2.06	0.69
1:F:123:PHE:HD1	1:F:124:LEU:HD12	1.58	0.69
1:A:95:GLN:O	1:A:99:VAL:HB	1.92	0.69
1:D:9:VAL:HG23	1:D:12:LEU:HD12	1.75	0.69
1:E:18:ILE:HG21	1:E:91:LEU:HD23	1.74	0.69
1:C:137:PHE:CE2	1:C:138:PHE:HE1	2.10	0.68
1:D:120:LEU:HA	2:E:505:2CS:H393	1.75	0.68
1:A:131:PHE:CZ	1:A:135:LEU:HD11	2.27	0.68
1:B:106:THR:HG22	1:B:107:GLN:H	1.57	0.68
1:D:133:TYR:HA	1:D:136:ILE:CD1	2.22	0.68
1:E:71:LEU:O	1:E:71:LEU:HD22	1.93	0.68
1:A:76:LEU:HD13	1:A:76:LEU:N	2.08	0.68
1:C:11:LEU:HD13	1:C:11:LEU:N	2.08	0.68
1:C:70:VAL:CG2	1:C:122:LEU:HB3	2.22	0.68
1:C:100:GLY:C	1:C:109:THR:HG21	2.13	0.68
1:C:53:VAL:HG23	1:C:102:LEU:HD13	1.76	0.68
1:D:77:LEU:O	1:D:129:GLY:HA3	1.94	0.68
1:D:116:LYS:HE3	2:E:505:2CS:C23	2.23	0.68
1:F:83:ALA:HB2	1:F:125:MET:CE	2.24	0.68

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:116:LYS:CA	1:F:119:ILE:HD11	2.18	0.68
1:A:43:GLN:HA	1:C:44:ARG:HE	1.58	0.68
1:D:116:LYS:HA	1:D:116:LYS:HE2	1.74	0.68
1:A:72:TRP:O	1:A:76:LEU:HD22	1.93	0.68
1:B:12:LEU:HA	1:B:15:VAL:CG1	2.23	0.68
1:B:124:LEU:HD12	1:B:127:VAL:HG11	1.76	0.68
1:A:79:SER:HB3	1:A:82:PRO:HG3	1.74	0.68
1:D:44:ARG:HD3	1:F:55:THR:OG1	1.94	0.68
1:E:73:SER:O	1:E:77:LEU:HB2	1.92	0.68
1:D:97:TYR:CE1	1:D:111:GLY:HA2	2.29	0.68
1:E:11:LEU:N	1:E:11:LEU:HD22	2.09	0.68
2:A:503:2CS:H412	2:A:503:2CS:C7	2.24	0.68
1:B:109:THR:O	1:B:111:GLY:N	2.25	0.68
1:D:74:ALA:O	1:D:125:MET:HE3	1.92	0.68
1:F:133:TYR:CD2	1:F:134:TYR:CD1	2.81	0.68
1:A:64:TYR:N	1:A:65:PRO:HD2	2.09	0.67
1:B:113:ILE:HG13	1:B:116:LYS:HD2	1.74	0.67
1:D:17:LEU:HD23	1:D:17:LEU:N	2.09	0.67
1:E:132:ASN:ND2	1:E:136:ILE:HD11	2.09	0.67
1:A:43:GLN:OE1	1:C:44:ARG:HG3	1.94	0.67
1:D:53:VAL:CG2	1:D:102:LEU:HD21	2.14	0.67
2:E:506:2CS:H102	2:E:506:2CS:C3	2.23	0.67
1:F:18:ILE:HG22	1:F:19:SER:N	2.09	0.67
2:D:504:2CS:H22	1:F:119:ILE:HG13	1.75	0.67
1:B:107:GLN:HG2	1:C:40:ARG:NH1	2.10	0.67
1:A:112:TYR:CE1	1:B:30:VAL:HG11	2.29	0.67
1:C:81:VAL:HG12	1:C:82:PRO:N	2.08	0.67
1:D:44:ARG:NH1	1:F:51:GLU:O	2.28	0.67
1:E:90:TYR:HA	1:E:118:ILE:HD12	1.77	0.67
1:D:113:ILE:HG12	1:D:114:PHE:N	2.10	0.67
1:D:136:ILE:O	1:D:140:GLY:HA3	1.95	0.67
1:D:121:PHE:HA	1:D:124:LEU:HD22	1.76	0.67
1:A:14:ILE:HG22	1:A:15:VAL:N	2.08	0.67
1:B:40:ARG:NH1	1:B:40:ARG:HB3	2.10	0.67
1:E:25:PHE:CB	2:E:505:2CS:CL17	2.76	0.67
1:A:18:ILE:HG22	1:A:91:LEU:CD2	2.25	0.67
1:E:83:ALA:HA	1:E:125:MET:CE	2.25	0.67
1:F:14:ILE:HG22	1:F:15:VAL:N	2.09	0.67
1:F:55:THR:HG22	1:F:101:TYR:CE2	2.28	0.67
1:F:119:ILE:HD13	1:F:119:ILE:N	2.10	0.67
1:B:5:THR:HA	1:B:8:ASN:HD21	1.60	0.66

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:8:ASN:HD22	1:B:8:ASN:H	0.75	0.66
1:B:66:THR:CG2	1:C:23:ASN:HD22	2.09	0.66
1:B:73:SER:O	1:B:77:LEU:HB2	1.95	0.66
1:B:83:ALA:HB2	1:B:125:MET:HE3	1.76	0.66
1:C:47:THR:O	1:C:51:GLU:HB2	1.94	0.66
2:C:501:2CS:H61	2:C:501:2CS:H14	1.75	0.66
2:C:501:2CS:H61	2:C:501:2CS:H102	1.77	0.66
1:E:10:VAL:O	1:E:14:ILE:HD12	1.94	0.66
1:D:74:ALA:CB	1:D:125:MET:HE2	2.20	0.66
1:A:42:PHE:HE1	1:C:101:TYR:OH	1.78	0.66
1:B:76:LEU:HB3	1:C:1:MET:HE3	1.78	0.66
1:C:123:PHE:CD1	1:C:124:LEU:HD13	2.30	0.66
1:D:108:SER:HA	1:E:40:ARG:HG3	1.76	0.66
1:D:120:LEU:O	1:D:124:LEU:HD22	1.96	0.66
1:B:12:LEU:HB2	1:B:72:TRP:CH2	2.30	0.66
1:B:141:SER:OG	1:B:142:ASP:N	2.27	0.66
1:F:88:LEU:CD1	1:F:89:MET:HG2	2.25	0.66
1:F:105:ARG:HG3	1:F:105:ARG:NH1	2.02	0.66
1:B:23:ASN:OD1	1:B:94:ARG:NH2	2.29	0.66
1:B:99:VAL:HG12	1:B:100:GLY:N	2.10	0.66
1:B:114:PHE:O	1:B:116:LYS:N	2.27	0.66
1:D:14:ILE:HG22	1:D:15:VAL:N	2.11	0.66
1:F:56:ALA:HB2	1:F:101:TYR:CD2	2.30	0.66
1:F:133:TYR:HA	1:F:136:ILE:HD11	1.75	0.66
1:E:90:TYR:CA	1:E:118:ILE:HD12	2.26	0.66
1:D:48:LEU:N	1:D:48:LEU:HD13	2.10	0.66
1:D:74:ALA:HB1	1:D:125:MET:HB2	1.77	0.66
1:D:116:LYS:HA	1:D:116:LYS:NZ	2.11	0.66
2:D:504:2CS:S37	1:F:120:LEU:HD23	2.36	0.66
1:F:52:ARG:NH2	1:F:105:ARG:HD2	2.10	0.66
2:A:503:2CS:C32	1:B:27:ALA:HB2	2.26	0.65
1:B:47:THR:O	1:B:49:ALA:N	2.29	0.65
1:D:44:ARG:NH1	1:F:51:GLU:HG2	2.10	0.65
1:F:123:PHE:HD1	1:F:124:LEU:CD1	2.08	0.65
1:F:71:LEU:HD22	1:F:71:LEU:O	1.96	0.65
1:A:30:VAL:CG2	1:A:53:VAL:HG12	2.26	0.65
1:A:51:GLU:OE2	1:B:44:ARG:NE	2.30	0.65
1:B:89:MET:HA	1:B:89:MET:HE3	1.78	0.65
1:D:124:LEU:CA	1:D:127:VAL:HG12	2.25	0.65
1:E:125:MET:O	1:E:128:ALA:HB3	1.96	0.65
1:F:23:ASN:OD1	1:F:94:ARG:NH2	2.29	0.65

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:62:ASP:OD1	1:F:62:ASP:N	2.28	0.65
1:C:18:ILE:HG21	1:C:91:LEU:HD23	1.78	0.65
1:C:21:VAL:HG22	2:C:501:2CS:H411	1.78	0.65
1:E:90:TYR:HB2	1:E:118:ILE:HG21	1.78	0.65
1:F:35:ARG:NH1	1:F:38:ASN:OD1	2.28	0.65
1:C:120:LEU:O	1:C:120:LEU:HD22	1.95	0.65
1:F:119:ILE:HD13	1:F:119:ILE:H	1.60	0.65
1:A:104:GLU:O	1:A:106:THR:N	2.28	0.65
1:B:52:ARG:NH1	1:B:108:SER:OG	2.29	0.65
1:B:110:PRO:HB2	1:C:35:ARG:HH12	1.60	0.65
1:B:142:ASP:O	1:B:144:GLU:N	2.29	0.65
1:D:56:ALA:HA	1:D:101:TYR:CD2	2.31	0.65
1:A:94:ARG:HG2	1:A:114:PHE:CZ	2.31	0.65
1:C:132:ASN:OD1	1:C:136:ILE:HD11	1.97	0.65
1:D:101:TYR:HD1	1:D:109:THR:CG2	2.09	0.65
1:E:31:GLU:OE2	1:E:35:ARG:NH1	2.29	0.65
1:F:5:THR:O	1:F:9:VAL:HG12	1.97	0.65
1:A:124:LEU:HD12	1:A:127:VAL:HG11	1.78	0.65
1:C:95:GLN:NE2	1:C:95:GLN:HA	2.09	0.65
1:D:101:TYR:HA	1:D:109:THR:CG2	2.19	0.65
1:F:85:PHE:O	1:F:88:LEU:HB3	1.96	0.65
1:F:133:TYR:HA	1:F:136:ILE:HD12	1.79	0.65
1:E:11:LEU:HB2	1:E:80:GLN:NE2	2.12	0.65
1:F:40:ARG:O	1:F:40:ARG:HG3	1.96	0.65
1:F:80:GLN:HG2	1:F:80:GLN:O	1.95	0.65
1:F:86:ALA:O	1:F:118:ILE:HD13	1.97	0.65
1:A:24:GLY:C	2:A:502:2CS:H14	2.17	0.64
1:C:64:TYR:N	1:C:65:PRO:HD2	2.12	0.64
1:D:83:ALA:HB2	1:D:125:MET:HE3	1.79	0.64
1:F:77:LEU:O	1:F:129:GLY:HA3	1.96	0.64
1:F:124:LEU:HA	1:F:127:VAL:CG1	2.27	0.64
1:C:85:PHE:O	1:C:88:LEU:HB3	1.97	0.64
1:B:74:ALA:O	1:B:125:MET:HE3	1.98	0.64
1:E:81:VAL:HG13	1:E:82:PRO:CD	2.18	0.64
1:C:35:ARG:HA	1:C:35:ARG:NE	2.12	0.64
1:C:122:LEU:HD12	1:C:125:MET:CE	2.27	0.64
1:A:12:LEU:HB2	1:A:72:TRP:CZ3	2.33	0.64
1:E:101:TYR:OH	1:F:40:ARG:NE	2.26	0.64
1:A:88:LEU:O	1:A:88:LEU:HD22	1.97	0.64
1:D:72:TRP:O	1:D:76:LEU:HD22	1.96	0.64
1:C:2:ASP:O	1:C:6:VAL:HG23	1.98	0.64

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:79:SER:HB3	1:D:82:PRO:HG3	1.79	0.64
1:A:62:ASP:OD1	1:A:62:ASP:N	2.29	0.64
1:D:112:TYR:CE2	1:E:30:VAL:HG11	2.33	0.64
1:D:143:PHE:N	1:D:143:PHE:HD1	1.95	0.64
1:E:53:VAL:CG2	1:E:102:LEU:HD23	2.27	0.64
1:A:64:TYR:CE1	1:A:68:LEU:HD22	2.32	0.64
1:D:62:ASP:OD1	1:D:62:ASP:N	2.29	0.64
1:F:81:VAL:HG22	1:F:82:PRO:N	2.11	0.64
1:B:77:LEU:HD23	1:B:130:ILE:CG1	2.28	0.63
1:C:104:GLU:O	1:C:105:ARG:HG3	1.97	0.63
1:A:86:ALA:HB3	1:A:122:LEU:CD1	2.28	0.63
2:A:503:2CS:H12A	2:A:503:2CS:C10	2.27	0.63
1:C:74:ALA:HB1	1:C:125:MET:CE	2.28	0.63
1:C:143:PHE:O	1:C:145:ASN:N	2.29	0.63
1:D:27:ALA:HB2	2:D:504:2CS:C33	2.28	0.63
1:E:66:THR:HG22	1:F:20:VAL:HG23	1.78	0.63
1:A:52:ARG:HH22	1:B:41:SER:HB3	1.63	0.63
1:A:74:ALA:HB2	1:A:122:LEU:O	1.98	0.63
1:B:119:ILE:CG1	2:C:501:2CS:H22	2.27	0.63
1:E:138:PHE:HD2	1:E:139:PHE:CZ	2.17	0.63
1:A:14:ILE:O	1:A:18:ILE:HD12	1.98	0.63
1:D:85:PHE:O	1:D:88:LEU:HB3	1.99	0.63
1:A:135:LEU:N	1:A:135:LEU:HD23	2.14	0.63
1:A:77:LEU:O	1:A:129:GLY:HA3	1.99	0.63
1:B:42:PHE:HE1	1:B:50:PHE:HZ	1.47	0.63
1:E:90:TYR:CE1	1:E:94:ARG:HG3	2.34	0.63
1:B:137:PHE:CE2	1:B:138:PHE:HE1	2.17	0.63
1:D:6:VAL:O	1:D:10:VAL:HG23	1.99	0.63
1:D:56:ALA:CA	1:D:101:TYR:HD2	2.11	0.63
1:A:127:VAL:O	1:A:130:ILE:HG22	1.99	0.63
1:B:40:ARG:CB	1:B:40:ARG:HH11	2.12	0.63
1:B:142:ASP:OD2	1:F:117:ARG:NH1	2.30	0.63
1:A:10:VAL:O	1:A:14:ILE:HD12	1.99	0.62
1:D:86:ALA:O	1:D:118:ILE:HD13	1.99	0.62
2:E:505:2CS:C18	2:E:505:2CS:H12	2.29	0.62
1:F:42:PHE:O	1:F:43:GLN:HB3	1.97	0.62
1:B:123:PHE:HD1	1:B:124:LEU:CD1	2.11	0.62
1:C:21:VAL:HG22	2:C:501:2CS:H401	1.81	0.62
1:C:113:ILE:HG22	1:C:114:PHE:N	2.13	0.62
1:D:18:ILE:HG21	1:D:91:LEU:HD23	1.81	0.62
1:D:116:LYS:HZ1	2:E:505:2CS:C22	2.12	0.62

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:25:PHE:HB2	2:A:502:2CS:H15	1.80	0.62
1:D:56:ALA:CB	1:D:101:TYR:HD2	2.12	0.62
1:E:76:LEU:HD13	1:E:76:LEU:N	2.13	0.62
1:B:133:TYR:CD1	1:B:134:TYR:HD1	2.17	0.62
1:C:124:LEU:HA	1:C:127:VAL:CG1	2.30	0.62
1:D:143:PHE:N	1:D:143:PHE:CD1	2.67	0.62
1:E:116:LYS:HA	1:E:119:ILE:CD1	2.26	0.62
2:A:503:2CS:H401	1:B:21:VAL:HG23	1.81	0.62
1:C:139:PHE:N	1:C:139:PHE:HD1	1.97	0.62
1:D:14:ILE:HD12	1:F:130:ILE:HD11	1.82	0.62
1:E:74:ALA:HB2	1:E:122:LEU:O	1.99	0.62
1:E:79:SER:OG	1:E:82:PRO:HG2	1.99	0.62
1:C:22:GLN:O	1:C:25:PHE:HB3	1.99	0.62
2:D:504:2CS:H393	2:D:504:2CS:C7	2.16	0.62
1:F:43:GLN:O	1:F:45:THR:HG23	2.00	0.62
1:B:72:TRP:O	1:B:76:LEU:HD22	1.99	0.62
1:D:95:GLN:OE1	1:D:95:GLN:HA	1.98	0.62
1:D:22:GLN:HE22	1:D:94:ARG:HB3	1.64	0.62
1:D:109:THR:N	1:E:40:ARG:NH1	2.37	0.62
1:B:74:ALA:HB2	1:B:122:LEU:O	2.00	0.61
1:D:48:LEU:HD22	1:D:48:LEU:N	2.10	0.61
1:E:64:TYR:N	1:E:65:PRO:HD2	2.15	0.61
1:D:11:LEU:HD23	1:D:80:GLN:NE2	2.15	0.61
1:D:99:VAL:HG12	1:D:100:GLY:N	2.14	0.61
2:E:506:2CS:C16	1:F:25:PHE:HB2	2.30	0.61
1:F:72:TRP:O	1:F:76:LEU:HD22	1.99	0.61
1:F:107:GLN:O	1:F:108:SER:HB2	1.99	0.61
1:A:130:ILE:HD11	1:B:10:VAL:HG13	1.82	0.61
1:B:77:LEU:O	1:B:129:GLY:HA3	1.98	0.61
1:C:55:THR:CG2	1:C:101:TYR:HE2	2.11	0.61
1:E:116:LYS:HG2	2:E:506:2CS:C21	2.30	0.61
1:A:79:SER:OG	1:A:82:PRO:HD3	2.00	0.61
1:A:86:ALA:HB3	1:A:122:LEU:HD11	1.80	0.61
1:B:105:ARG:HH11	1:B:105:ARG:CG	2.13	0.61
1:D:105:ARG:O	1:D:107:GLN:HG3	2.00	0.61
1:A:4:GLU:O	1:A:8:ASN:ND2	2.34	0.61
1:B:133:TYR:HD1	1:B:134:TYR:CD1	2.18	0.61
1:C:2:ASP:OD1	1:C:2:ASP:N	2.29	0.61
1:D:79:SER:O	1:D:82:PRO:HD2	2.00	0.61
1:E:133:TYR:HA	1:E:136:ILE:HD12	1.81	0.61
1:A:44:ARG:NE	1:C:51:GLU:OE2	2.31	0.61

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:503:2CS:H411	1:B:21:VAL:CG2	2.30	0.61
1:C:74:ALA:HB2	1:C:122:LEU:O	2.00	0.61
2:C:501:2CS:H12	2:C:501:2CS:C18	2.29	0.61
1:E:37:GLN:HE22	1:E:47:THR:HG22	1.64	0.61
1:E:104:GLU:C	1:E:106:THR:H	2.03	0.61
1:E:116:LYS:CA	1:E:119:ILE:HD11	2.27	0.61
1:A:58:GLN:HG3	1:A:58:GLN:O	2.01	0.61
1:E:19:SER:HB3	1:E:91:LEU:HD21	1.83	0.61
1:E:138:PHE:HB3	1:E:139:PHE:CD2	2.36	0.61
1:E:11:LEU:HD23	1:E:80:GLN:CD	2.19	0.61
1:F:53:VAL:HG23	1:F:102:LEU:CD1	2.29	0.61
1:B:124:LEU:CA	1:B:127:VAL:HG12	2.29	0.61
1:D:20:VAL:HG22	1:F:66:THR:HG22	1.83	0.61
1:E:14:ILE:HG22	1:E:15:VAL:N	2.14	0.61
1:A:63:ALA:C	1:A:65:PRO:HD2	2.22	0.61
1:C:25:PHE:HE1	1:C:29:LYS:HD3	1.66	0.61
1:E:42:PHE:N	1:E:42:PHE:HD1	1.98	0.61
1:F:64:TYR:CE1	1:F:68:LEU:HD22	2.35	0.61
1:A:66:THR:CG2	1:B:23:ASN:HD22	2.10	0.60
1:B:110:PRO:O	1:C:35:ARG:NH1	2.34	0.60
1:D:90:TYR:HB2	1:D:118:ILE:HG21	1.83	0.60
1:E:15:VAL:O	1:E:18:ILE:HB	2.01	0.60
1:F:74:ALA:HB2	1:F:122:LEU:O	2.00	0.60
1:F:88:LEU:HD13	1:F:89:MET:HG2	1.83	0.60
1:D:73:SER:HB2	1:D:126:SER:HB3	1.83	0.60
1:A:62:ASP:HB2	2:A:503:2CS:C34	2.32	0.60
1:B:145:ASN:H	1:B:145:ASN:ND2	1.99	0.60
1:C:79:SER:O	1:C:82:PRO:HD2	2.01	0.60
1:A:52:ARG:NH2	1:B:41:SER:HB3	2.17	0.60
1:A:79:SER:HB3	1:A:82:PRO:CG	2.31	0.60
1:B:113:ILE:HD13	1:B:113:ILE:O	2.01	0.60
1:C:56:ALA:HB2	1:C:101:TYR:HD2	1.66	0.60
1:C:79:SER:HB3	1:C:82:PRO:CG	2.31	0.60
1:D:113:ILE:HG23	1:D:114:PHE:H	1.65	0.60
1:E:5:THR:CA	1:E:8:ASN:HD21	2.13	0.60
1:A:124:LEU:HD13	1:A:124:LEU:N	2.15	0.60
1:B:14:ILE:HG22	1:B:15:VAL:N	2.17	0.60
1:B:40:ARG:HB3	1:B:40:ARG:HH11	1.66	0.60
1:C:139:PHE:N	1:C:139:PHE:CD1	2.66	0.60
1:D:38:ASN:HB3	1:D:40:ARG:HE	1.66	0.60
1:D:116:LYS:HA	1:D:116:LYS:HZ3	1.65	0.60

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:10:VAL:HG13	1:A:14:ILE:HD12	1.84	0.60
1:A:30:VAL:HG23	1:A:53:VAL:HG12	1.83	0.60
1:A:33:GLU:HB3	1:A:50:PHE:CB	2.30	0.60
1:E:4:GLU:OE1	1:E:5:THR:HG23	2.01	0.60
1:E:18:ILE:HG22	1:E:19:SER:N	2.16	0.60
1:E:123:PHE:CD1	1:E:124:LEU:HD13	2.31	0.60
1:E:130:ILE:CD1	1:F:14:ILE:HD12	2.30	0.60
1:F:94:ARG:HG2	1:F:114:PHE:CZ	2.36	0.60
1:F:143:PHE:HD1	1:F:144:GLU:H	1.50	0.60
1:B:43:GLN:O	1:B:50:PHE:HE2	1.84	0.60
1:B:142:ASP:OD2	1:F:117:ARG:HD3	2.01	0.60
1:D:139:PHE:N	1:D:139:PHE:CD1	2.69	0.60
1:F:64:TYR:N	1:F:65:PRO:HD2	2.16	0.60
1:A:42:PHE:CD1	1:C:112:TYR:HE1	2.19	0.60
1:A:81:VAL:N	1:A:82:PRO:HD2	2.16	0.60
1:B:79:SER:HB2	1:B:82:PRO:HD3	1.84	0.60
1:F:73:SER:O	1:F:77:LEU:HB2	2.01	0.60
1:A:31:GLU:OE2	1:C:113:ILE:HD11	2.00	0.59
1:A:137:PHE:CE2	1:A:138:PHE:CD1	2.90	0.59
1:B:11:LEU:H	1:B:80:GLN:NE2	1.99	0.59
1:A:27:ALA:HB2	2:A:502:2CS:C32	2.31	0.59
1:E:77:LEU:O	1:E:129:GLY:HA3	2.02	0.59
1:B:28:HIS:HD2	1:B:29:LYS:HD3	1.67	0.59
1:E:37:GLN:NE2	1:E:47:THR:HG22	2.17	0.59
1:E:45:THR:HG22	1:F:43:GLN:HG3	1.83	0.59
1:F:74:ALA:O	1:F:83:ALA:HB2	2.02	0.59
2:A:502:2CS:H72	2:A:502:2CS:C11	2.32	0.59
1:D:62:ASP:HB3	1:E:61:VAL:HG11	1.83	0.59
1:B:60:CYS:SG	1:B:94:ARG:HD2	2.43	0.59
1:C:101:TYR:CE1	1:C:110:PRO:HA	2.37	0.59
1:D:116:LYS:NZ	1:D:116:LYS:CA	2.66	0.59
1:A:33:GLU:OE2	1:A:37:GLN:NE2	2.36	0.59
1:D:124:LEU:HD13	1:D:124:LEU:N	2.16	0.59
1:A:11:LEU:H	1:A:80:GLN:NE2	2.00	0.59
1:A:23:ASN:HB3	1:C:66:THR:HG21	1.84	0.59
2:A:502:2CS:C40	1:C:120:LEU:HA	2.28	0.59
1:B:105:ARG:HH11	1:B:106:THR:H	1.50	0.59
1:E:11:LEU:CD2	1:E:80:GLN:HE22	2.16	0.59
1:A:5:THR:CA	1:A:8:ASN:HD21	2.16	0.59
1:B:28:HIS:CD2	1:B:29:LYS:HD3	2.37	0.59
1:D:43:GLN:O	1:D:50:PHE:HZ	1.86	0.59

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:5:THR:HA	1:E:8:ASN:ND2	2.13	0.59
1:F:85:PHE:CE1	1:F:89:MET:HG3	2.37	0.59
1:A:113:ILE:CD1	1:B:31:GLU:HG2	2.19	0.59
1:A:123:PHE:HD1	1:A:124:LEU:CD1	2.16	0.59
1:B:11:LEU:HD13	1:B:11:LEU:N	2.18	0.59
1:D:11:LEU:H	1:D:80:GLN:HE21	1.51	0.59
1:E:70:VAL:HA	1:E:73:SER:OG	2.03	0.59
1:E:101:TYR:CD1	1:E:110:PRO:HG2	2.38	0.59
1:A:43:GLN:HA	1:C:44:ARG:NE	2.17	0.58
1:A:110:PRO:HB2	1:B:35:ARG:HH22	1.65	0.58
1:B:77:LEU:O	1:B:78:CYS:HB2	2.01	0.58
1:C:37:GLN:HG3	1:C:47:THR:OG1	2.02	0.58
1:E:44:ARG:HB2	1:E:44:ARG:NH1	2.02	0.58
1:D:33:GLU:HB3	1:D:50:PHE:HB2	1.85	0.58
1:D:116:LYS:HA	1:D:119:ILE:HD11	1.85	0.58
2:A:503:2CS:H71	2:A:503:2CS:C39	2.30	0.58
1:B:66:THR:HG21	1:C:23:ASN:HB3	1.86	0.58
1:B:90:TYR:HB2	1:B:118:ILE:HG21	1.83	0.58
1:E:25:PHE:HA	2:E:505:2CS:C16	2.33	0.58
1:F:56:ALA:HA	1:F:101:TYR:HD2	1.67	0.58
1:F:113:ILE:O	1:F:114:PHE:HB2	2.04	0.58
1:A:83:ALA:HA	1:A:125:MET:CE	2.33	0.58
1:D:4:GLU:OE1	1:D:5:THR:HG23	2.02	0.58
1:F:131:PHE:CD1	1:F:132:ASN:N	2.72	0.58
1:A:94:ARG:HA	1:A:114:PHE:CE2	2.38	0.58
1:D:137:PHE:CD2	1:D:138:PHE:HE1	2.22	0.58
2:D:504:2CS:H22	1:F:119:ILE:HG12	1.85	0.58
1:C:125:MET:O	1:C:128:ALA:HB3	2.03	0.58
1:F:87:GLY:O	1:F:91:LEU:HD22	2.03	0.58
1:A:79:SER:O	1:A:82:PRO:HD2	2.04	0.58
1:B:79:SER:O	1:B:82:PRO:HD2	2.03	0.58
1:B:122:LEU:HD12	1:B:125:MET:CE	2.34	0.58
1:D:81:VAL:N	1:D:82:PRO:HD2	2.18	0.58
1:C:10:VAL:HG12	1:C:11:LEU:CD1	2.28	0.58
1:D:18:ILE:HG22	1:D:91:LEU:CD2	2.33	0.58
1:D:111:GLY:C	1:D:113:ILE:H	2.07	0.58
1:E:123:PHE:HD1	1:E:124:LEU:CD1	2.15	0.58
1:D:58:GLN:HG3	1:D:58:GLN:O	2.04	0.58
1:E:25:PHE:CD2	1:E:26:PHE:HD1	2.16	0.58
1:E:48:LEU:O	1:E:48:LEU:HD13	2.04	0.58
1:E:58:GLN:HG3	1:E:58:GLN:O	2.04	0.58

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:104:GLU:HG3	1:E:104:GLU:O	2.03	0.58
1:F:14:ILE:O	1:F:18:ILE:HD13	2.04	0.58
1:F:43:GLN:O	1:F:45:THR:N	2.37	0.58
1:B:80:GLN:O	1:B:80:GLN:HG2	2.02	0.57
1:C:120:LEU:HD22	1:C:120:LEU:C	2.24	0.57
1:E:11:LEU:HD23	1:E:80:GLN:NE2	2.19	0.57
1:F:21:VAL:HG12	1:F:22:GLN:N	2.19	0.57
1:E:124:LEU:CD1	1:E:127:VAL:HG11	2.19	0.57
1:A:110:PRO:HB3	1:B:35:ARG:HH22	1.69	0.57
1:B:42:PHE:HE1	1:B:50:PHE:CZ	2.21	0.57
1:B:48:LEU:O	1:B:52:ARG:HD3	2.04	0.57
1:C:12:LEU:O	1:C:16:THR:HB	2.05	0.57
1:E:19:SER:HA	1:E:22:GLN:HG2	1.86	0.57
1:E:23:ASN:OD1	1:E:94:ARG:NH2	2.37	0.57
1:F:81:VAL:HG22	1:F:82:PRO:CD	2.34	0.57
1:A:135:LEU:O	1:A:139:PHE:N	2.25	0.57
2:A:502:2CS:H62	2:A:502:2CS:H102	1.86	0.57
1:D:111:GLY:O	1:D:113:ILE:N	2.34	0.57
1:E:42:PHE:N	1:E:42:PHE:CD1	2.70	0.57
1:E:126:SER:O	1:E:130:ILE:HB	2.05	0.57
1:B:11:LEU:HD22	1:B:80:GLN:NE2	2.19	0.57
1:B:118:ILE:HG22	1:B:119:ILE:N	2.18	0.57
1:D:22:GLN:HE22	1:D:94:ARG:CB	2.16	0.57
1:D:31:GLU:HA	1:D:31:GLU:OE1	2.03	0.57
1:A:14:ILE:HD12	1:C:130:ILE:HD11	1.87	0.57
1:B:3:GLN:HA	1:B:6:VAL:HG23	1.87	0.57
1:D:123:PHE:HD1	1:D:124:LEU:CD1	2.17	0.57
1:B:52:ARG:HG3	1:B:52:ARG:HH11	1.70	0.57
1:C:82:PRO:CD	1:C:83:ALA:H	2.18	0.57
1:D:17:LEU:CD1	1:F:126:SER:HB3	2.28	0.57
1:D:141:SER:C	1:D:143:PHE:H	2.08	0.57
1:F:15:VAL:CG1	1:F:71:LEU:HD11	2.35	0.57
1:C:120:LEU:HD13	1:C:121:PHE:N	2.19	0.57
1:F:132:ASN:O	1:F:136:ILE:HG13	2.05	0.57
1:A:65:PRO:HG2	1:A:66:THR:H	1.69	0.57
2:A:502:2CS:C12	2:A:502:2CS:H72	2.35	0.57
1:D:30:VAL:HG22	1:D:53:VAL:HG13	1.85	0.57
1:D:41:SER:OG	1:F:105:ARG:HB3	2.04	0.57
2:E:506:2CS:C33	1:F:27:ALA:HB2	2.34	0.57
1:F:113:ILE:HG21	1:F:116:LYS:HD2	1.87	0.57
1:A:111:GLY:H	1:B:35:ARG:HH12	1.53	0.57

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:40:ARG:O	1:D:41:SER:HB2	2.05	0.57
1:C:135:LEU:O	1:C:139:PHE:N	2.37	0.56
1:D:116:LYS:HE3	2:E:505:2CS:C21	2.35	0.56
1:F:120:LEU:C	1:F:120:LEU:HD13	2.25	0.56
1:A:11:LEU:N	1:A:11:LEU:CD1	2.68	0.56
1:B:35:ARG:O	1:B:37:GLN:N	2.38	0.56
1:C:122:LEU:HD12	1:C:125:MET:HE1	1.86	0.56
1:C:124:LEU:HD12	1:C:127:VAL:HG11	1.86	0.56
1:E:20:VAL:HG12	1:E:21:VAL:N	2.20	0.56
1:A:19:SER:HB3	1:A:91:LEU:HD11	1.87	0.56
1:A:22:GLN:HG3	1:A:23:ASN:N	2.21	0.56
1:A:123:PHE:HD1	1:A:124:LEU:HD13	1.69	0.56
1:B:1:MET:HG2	1:B:6:VAL:CG1	2.30	0.56
1:B:81:VAL:HG22	1:B:82:PRO:N	2.20	0.56
1:C:18:ILE:HG22	1:C:91:LEU:CD2	2.34	0.56
1:C:64:TYR:CE1	1:C:68:LEU:HD22	2.41	0.56
1:E:119:ILE:HD11	2:E:506:2CS:C22	2.34	0.56
1:F:123:PHE:CD1	1:F:124:LEU:HD12	2.40	0.56
1:B:95:GLN:OE1	1:B:95:GLN:HA	2.05	0.56
1:C:70:VAL:HG23	1:C:122:LEU:CB	2.33	0.56
1:E:52:ARG:HH11	1:E:52:ARG:HG3	1.69	0.56
1:E:83:ALA:HA	1:E:125:MET:HE1	1.86	0.56
1:F:11:LEU:HD22	1:F:80:GLN:NE2	2.21	0.56
1:F:120:LEU:O	1:F:124:LEU:HD13	2.06	0.56
1:A:70:VAL:HA	1:A:73:SER:OG	2.04	0.56
2:A:502:2CS:H102	2:A:502:2CS:C6	2.36	0.56
1:B:31:GLU:OE1	1:B:31:GLU:HA	2.04	0.56
1:B:145:ASN:HB2	1:B:147:ILE:HD11	1.87	0.56
1:C:124:LEU:CA	1:C:127:VAL:HG12	2.34	0.56
2:D:504:2CS:H392	1:F:120:LEU:HD23	1.88	0.56
1:E:37:GLN:HE22	1:E:47:THR:HG21	1.69	0.56
1:F:15:VAL:HG11	1:F:71:LEU:HD11	1.87	0.56
1:B:109:THR:C	1:B:111:GLY:H	2.09	0.56
1:C:120:LEU:C	1:C:120:LEU:HD13	2.26	0.56
1:F:26:PHE:HB3	1:F:57:ASN:ND2	2.21	0.56
1:B:66:THR:HG23	1:C:23:ASN:HD22	1.70	0.56
1:B:89:MET:CB	1:B:118:ILE:HD11	2.20	0.56
1:B:120:LEU:HD13	1:B:120:LEU:C	2.25	0.56
1:E:74:ALA:HB1	1:E:125:MET:HB2	1.87	0.56
1:A:2:ASP:OD1	1:A:2:ASP:N	2.37	0.56
1:B:89:MET:O	1:B:93:VAL:HG23	2.06	0.56

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:83:ALA:HB2	1:B:125:MET:CE	2.36	0.56
1:D:56:ALA:HB2	1:D:101:TYR:CD2	2.40	0.56
1:A:94:ARG:HA	1:A:114:PHE:HE2	1.71	0.56
1:D:41:SER:OG	1:F:110:PRO:HD2	2.05	0.56
1:D:42:PHE:N	1:D:42:PHE:CD1	2.74	0.56
1:D:88:LEU:C	1:D:88:LEU:HD13	2.26	0.56
1:E:11:LEU:O	1:E:15:VAL:HG12	2.06	0.56
1:C:35:ARG:HE	1:C:35:ARG:CA	2.18	0.55
1:D:26:PHE:O	1:D:30:VAL:HG23	2.06	0.55
1:D:48:LEU:H	1:D:48:LEU:CD2	2.14	0.55
1:D:103:GLY:O	1:D:104:GLU:HB2	2.06	0.55
1:D:144:GLU:C	1:D:146:TYR:H	2.09	0.55
1:E:22:GLN:HG3	1:E:23:ASN:N	2.21	0.55
1:A:19:SER:CB	1:A:91:LEU:HD11	2.36	0.55
1:A:42:PHE:CD1	1:A:42:PHE:N	2.74	0.55
1:C:52:ARG:HB3	1:C:102:LEU:HB2	1.87	0.55
1:C:26:PHE:HB3	1:C:57:ASN:HD22	1.72	0.55
1:D:18:ILE:HG22	1:D:19:SER:N	2.21	0.55
1:A:43:GLN:NE2	1:C:55:THR:N	2.54	0.55
1:B:12:LEU:HB2	1:B:72:TRP:CZ3	2.42	0.55
1:F:25:PHE:CE1	1:F:29:LYS:HG2	2.41	0.55
1:F:119:ILE:H	1:F:119:ILE:CD1	2.20	0.55
1:A:43:GLN:CA	1:C:44:ARG:HE	2.19	0.55
1:A:94:ARG:HG2	1:A:114:PHE:CE2	2.41	0.55
1:C:15:VAL:O	1:C:18:ILE:HB	2.07	0.55
2:D:504:2CS:C7	2:D:504:2CS:H412	2.37	0.55
1:E:48:LEU:CD1	1:E:52:ARG:HD3	2.33	0.55
1:A:126:SER:O	1:A:130:ILE:HB	2.06	0.55
1:B:3:GLN:HA	1:B:6:VAL:CG2	2.36	0.55
1:B:44:ARG:NE	1:C:44:ARG:HH12	2.04	0.55
1:C:37:GLN:HE21	1:C:47:THR:HG21	1.71	0.55
1:F:79:SER:OG	1:F:82:PRO:HG2	2.05	0.55
1:A:131:PHE:HE2	1:A:135:LEU:HD21	1.72	0.55
1:A:11:LEU:HD22	1:A:80:GLN:CG	2.37	0.55
1:A:70:VAL:HG23	1:A:122:LEU:HD23	1.89	0.55
1:D:120:LEU:O	1:D:120:LEU:HD22	2.07	0.55
1:E:30:VAL:HG23	1:E:53:VAL:HG12	1.85	0.55
1:E:39:GLY:O	1:E:41:SER:N	2.32	0.55
1:A:123:PHE:O	1:A:127:VAL:HG12	2.07	0.55
1:B:38:ASN:C	1:B:40:ARG:H	2.08	0.55
1:D:81:VAL:HG23	1:D:82:PRO:HD3	1.89	0.55

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:109:THR:HG22	1:E:109:THR:O	2.06	0.55
1:F:12:LEU:HD11	1:F:75:GLY:HA3	1.88	0.55
1:F:143:PHE:CD1	1:F:144:GLU:N	2.66	0.55
2:A:503:2CS:H102	2:A:503:2CS:C1	2.35	0.55
1:B:74:ALA:CB	1:B:125:MET:HE2	2.35	0.55
1:D:3:GLN:OE1	1:F:136:ILE:HD12	2.07	0.55
1:D:90:TYR:CA	1:D:118:ILE:HD12	2.37	0.55
1:A:83:ALA:HA	1:A:125:MET:HE3	1.87	0.54
1:A:113:ILE:HG23	2:A:503:2CS:H20	1.88	0.54
1:B:116:LYS:CA	1:B:119:ILE:HD11	2.32	0.54
1:D:126:SER:O	1:D:130:ILE:HB	2.07	0.54
1:D:141:SER:O	1:D:143:PHE:N	2.38	0.54
1:E:53:VAL:HG22	1:E:102:LEU:HD23	1.86	0.54
1:F:77:LEU:O	1:F:78:CYS:HB2	2.07	0.54
1:E:83:ALA:HA	1:E:125:MET:HE3	1.87	0.54
1:E:88:LEU:HD13	1:E:88:LEU:C	2.26	0.54
1:F:72:TRP:O	1:F:75:GLY:N	2.36	0.54
1:A:102:LEU:HG	1:A:103:GLY:N	2.22	0.54
1:A:137:PHE:CE2	1:A:138:PHE:HD1	2.25	0.54
1:D:82:PRO:HG2	1:D:83:ALA:H	1.71	0.54
1:F:95:GLN:O	1:F:99:VAL:HB	2.07	0.54
1:B:28:HIS:CD2	1:B:29:LYS:HZ2	2.26	0.54
1:B:114:PHE:N	1:B:114:PHE:CD1	2.75	0.54
1:C:138:PHE:HB3	1:C:139:PHE:CD1	2.43	0.54
1:D:45:THR:HG22	1:D:46:GLY:N	2.22	0.54
1:E:92:PHE:O	1:E:96:LYS:HD2	2.08	0.54
1:E:114:PHE:N	1:E:114:PHE:CD1	2.75	0.54
1:F:52:ARG:HH11	1:F:52:ARG:CG	2.17	0.54
1:F:56:ALA:HA	1:F:101:TYR:CD2	2.43	0.54
1:F:83:ALA:CA	1:F:125:MET:HE2	2.36	0.54
1:A:75:GLY:C	1:A:76:LEU:HD13	2.28	0.54
1:A:138:PHE:HB3	1:A:139:PHE:CD1	2.43	0.54
1:B:130:ILE:HD12	1:C:14:ILE:HD12	1.88	0.54
1:E:43:GLN:O	1:E:45:THR:N	2.35	0.54
1:F:11:LEU:HD23	1:F:80:GLN:CD	2.28	0.54
1:A:82:PRO:HG2	1:A:83:ALA:H	1.72	0.54
1:B:52:ARG:HH11	1:B:52:ARG:CG	2.20	0.54
1:F:39:GLY:C	1:F:41:SER:H	2.10	0.54
1:B:57:ASN:OD1	1:B:58:GLN:NE2	2.41	0.54
1:B:59:ASN:HB3	1:B:97:TYR:OH	2.07	0.54
1:C:47:THR:HG22	1:C:48:LEU:H	1.69	0.54

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:80:GLN:HG2	1:C:80:GLN:O	2.07	0.54
1:E:56:ALA:HB2	1:E:101:TYR:HD2	1.73	0.54
1:A:5:THR:HA	1:A:8:ASN:ND2	2.21	0.54
1:F:137:PHE:CE2	1:F:138:PHE:CE1	2.95	0.54
1:A:30:VAL:HG23	1:A:53:VAL:CG1	2.38	0.54
1:B:22:GLN:O	1:B:25:PHE:HB3	2.07	0.54
1:B:72:TRP:O	1:B:75:GLY:N	2.34	0.54
1:E:28:HIS:HD2	1:E:29:LYS:HZ2	1.55	0.54
1:E:77:LEU:O	1:E:78:CYS:HB2	2.06	0.54
1:F:75:GLY:C	1:F:76:LEU:HD13	2.28	0.54
1:F:83:ALA:HA	1:F:125:MET:HE2	1.89	0.54
1:F:138:PHE:O	1:F:139:PHE:HD1	1.90	0.54
1:A:19:SER:HB3	1:A:91:LEU:HD21	1.89	0.54
1:B:131:PHE:CD1	1:B:132:ASN:N	2.76	0.54
1:C:65:PRO:HG2	1:C:66:THR:H	1.73	0.54
1:D:115:GLY:O	1:D:119:ILE:HD13	2.08	0.54
1:D:131:PHE:CG	1:D:132:ASN:N	2.76	0.54
1:D:132:ASN:O	1:D:136:ILE:HG13	2.08	0.54
1:A:64:TYR:CE1	1:A:68:LEU:CD2	2.91	0.53
1:A:86:ALA:HB2	1:A:121:PHE:CE2	2.42	0.53
2:A:503:2CS:H411	1:B:21:VAL:HG22	1.89	0.53
1:B:124:LEU:HD13	1:B:124:LEU:N	2.22	0.53
1:C:15:VAL:HG11	1:C:71:LEU:HD11	1.89	0.53
1:E:25:PHE:CE2	1:E:98:PHE:HE2	2.26	0.53
1:E:57:ASN:C	1:E:59:ASN:H	2.11	0.53
1:F:140:GLY:C	1:F:142:ASP:H	2.09	0.53
1:A:63:ALA:HB1	1:A:90:TYR:OH	2.08	0.53
1:B:145:ASN:ND2	1:B:145:ASN:N	2.55	0.53
1:B:147:ILE:HG22	1:B:147:ILE:O	2.07	0.53
1:D:64:TYR:N	1:D:65:PRO:HD2	2.23	0.53
1:D:94:ARG:HG2	1:D:114:PHE:CE1	2.42	0.53
1:E:44:ARG:HH11	1:E:44:ARG:CG	2.20	0.53
1:E:120:LEU:HB2	2:E:506:2CS:S37	2.49	0.53
1:F:37:GLN:HG3	1:F:47:THR:OG1	2.07	0.53
1:F:76:LEU:HD22	1:F:76:LEU:N	2.24	0.53
1:A:120:LEU:HD13	1:A:120:LEU:C	2.28	0.53
1:A:131:PHE:CE2	1:A:135:LEU:HD11	2.42	0.53
1:C:58:GLN:HG3	1:C:58:GLN:O	2.08	0.53
1:A:124:LEU:CA	1:A:127:VAL:HG12	2.33	0.53
1:D:77:LEU:O	1:D:78:CYS:HB2	2.09	0.53
1:D:145:ASN:O	1:D:147:ILE:N	2.40	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:30:VAL:CG2	1:B:53:VAL:HG12	2.39	0.53
1:F:56:ALA:CA	1:F:101:TYR:HD2	2.22	0.53
1:F:76:LEU:HD13	1:F:76:LEU:N	2.23	0.53
1:B:94:ARG:HG2	1:B:114:PHE:HE2	1.73	0.53
1:B:142:ASP:O	1:B:143:PHE:HD1	1.91	0.53
1:C:47:THR:CG2	1:C:48:LEU:N	2.71	0.53
1:D:21:VAL:HG22	2:D:504:2CS:H411	1.88	0.53
1:D:23:ASN:OD1	1:D:94:ARG:NH2	2.41	0.53
1:D:81:VAL:N	1:D:82:PRO:CD	2.71	0.53
2:E:506:2CS:H71	2:E:506:2CS:C38	2.39	0.53
1:A:33:GLU:O	1:A:37:GLN:HG2	2.08	0.53
1:B:97:TYR:HD1	1:B:109:THR:HG21	1.74	0.53
1:B:108:SER:OG	1:C:41:SER:HB3	2.07	0.53
1:F:10:VAL:HG12	1:F:11:LEU:HD13	1.91	0.53
1:F:137:PHE:CE2	1:F:138:PHE:HE1	2.26	0.53
1:A:104:GLU:C	1:A:106:THR:H	2.09	0.53
1:B:137:PHE:CD2	1:B:138:PHE:CE1	2.97	0.53
1:F:143:PHE:O	1:F:144:GLU:HG2	2.09	0.53
1:B:131:PHE:CG	1:B:132:ASN:N	2.77	0.53
1:D:37:GLN:O	1:D:38:ASN:HB2	2.08	0.53
1:E:89:MET:O	1:E:93:VAL:HG23	2.09	0.53
1:B:104:GLU:O	1:B:105:ARG:HB2	2.08	0.52
1:B:121:PHE:HB2	1:F:139:PHE:CD2	2.44	0.52
2:C:501:2CS:H102	2:C:501:2CS:C2	2.40	0.52
1:D:144:GLU:OE1	1:D:144:GLU:HA	2.09	0.52
1:F:67:PHE:CD2	1:F:68:LEU:N	2.77	0.52
1:F:126:SER:O	1:F:130:ILE:HB	2.09	0.52
1:A:40:ARG:CD	1:C:110:PRO:HG3	2.30	0.52
1:A:72:TRP:O	1:A:75:GLY:N	2.36	0.52
1:C:13:ALA:O	1:C:17:LEU:HD22	2.09	0.52
2:C:501:2CS:H102	2:C:501:2CS:C6	2.40	0.52
1:D:116:LYS:NZ	2:E:505:2CS:C22	2.72	0.52
1:B:137:PHE:CE2	1:B:138:PHE:CE1	2.98	0.52
1:C:31:GLU:OE1	1:C:31:GLU:HA	2.09	0.52
1:C:82:PRO:HD2	1:C:83:ALA:H	1.74	0.52
1:A:31:GLU:OE2	1:A:35:ARG:NH2	2.42	0.52
1:A:57:ASN:C	1:A:59:ASN:H	2.13	0.52
1:B:62:ASP:HB3	1:C:61:VAL:HG21	1.90	0.52
1:C:37:GLN:O	1:C:39:GLY:N	2.43	0.52
1:C:52:ARG:O	1:C:55:THR:HG22	2.09	0.52
1:C:131:PHE:CG	1:C:132:ASN:N	2.77	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1:MET:CE	1:F:76:LEU:HB3	2.39	0.52
1:D:26:PHE:CD1	1:D:98:PHE:CD2	2.97	0.52
1:D:27:ALA:HB2	2:D:504:2CS:C31	2.40	0.52
1:D:113:ILE:HG12	1:D:114:PHE:H	1.72	0.52
1:D:130:ILE:HD11	1:E:10:VAL:HG13	1.90	0.52
1:F:90:TYR:HB2	1:F:118:ILE:HG21	1.90	0.52
1:D:44:ARG:HB3	1:E:44:ARG:HH21	1.73	0.52
1:E:124:LEU:C	1:E:127:VAL:HG12	2.30	0.52
1:F:56:ALA:CB	1:F:101:TYR:HD2	2.22	0.52
1:F:135:LEU:N	1:F:135:LEU:HD23	2.24	0.52
1:A:62:ASP:HB2	2:A:503:2CS:H34	1.91	0.52
1:B:119:ILE:HD13	1:B:119:ILE:H	1.74	0.52
1:B:133:TYR:HA	1:B:136:ILE:HD12	1.90	0.52
1:C:122:LEU:HD12	1:C:125:MET:HE2	1.91	0.52
1:D:82:PRO:CG	1:D:83:ALA:H	2.22	0.52
1:D:100:GLY:O	1:D:109:THR:HG21	2.10	0.52
1:D:63:ALA:HB1	1:D:90:TYR:OH	2.09	0.52
1:D:100:GLY:C	1:D:109:THR:HG21	2.30	0.52
1:F:11:LEU:HD13	1:F:11:LEU:N	2.25	0.52
1:A:81:VAL:N	1:A:82:PRO:CD	2.73	0.52
1:B:52:ARG:HH12	1:C:41:SER:HB3	1.73	0.52
1:C:8:ASN:HA	1:C:80:GLN:OE1	2.10	0.52
1:D:35:ARG:HH21	1:D:39:GLY:HA2	1.75	0.52
1:D:85:PHE:O	1:D:88:LEU:N	2.43	0.52
1:E:109:THR:HG21	1:F:38:ASN:OD1	2.09	0.52
1:F:57:ASN:C	1:F:59:ASN:H	2.12	0.52
1:F:88:LEU:HD13	1:F:89:MET:CA	2.39	0.52
1:B:124:LEU:HD12	1:B:127:VAL:CG1	2.38	0.52
1:C:137:PHE:CD2	1:C:138:PHE:CE1	2.97	0.52
1:D:70:VAL:O	1:D:74:ALA:HB3	2.10	0.52
1:E:37:GLN:CD	1:E:47:THR:HG22	2.29	0.52
1:E:64:TYR:HE1	1:E:68:LEU:HD11	1.74	0.52
1:A:14:ILE:HD11	1:C:130:ILE:HD12	1.91	0.52
1:A:119:ILE:HD12	2:A:503:2CS:C25	2.39	0.52
1:C:33:GLU:HB3	1:C:50:PHE:CD1	2.45	0.52
1:D:74:ALA:HB2	1:D:122:LEU:O	2.09	0.51
1:D:80:GLN:O	1:D:80:GLN:HG2	2.09	0.51
1:F:46:GLY:O	1:F:47:THR:O	2.28	0.51
1:F:85:PHE:HE1	1:F:89:MET:HG3	1.75	0.51
1:F:112:TYR:O	1:F:113:ILE:O	2.28	0.51
1:A:5:THR:O	1:A:9:VAL:HG12	2.10	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:147:ILE:O	1:C:147:ILE:HG22	2.10	0.51
1:D:89:MET:CB	1:D:118:ILE:HD11	2.32	0.51
1:A:43:GLN:HA	1:C:44:ARG:CZ	2.40	0.51
2:A:503:2CS:H14	2:A:503:2CS:C8	2.40	0.51
1:C:48:LEU:O	1:C:52:ARG:HB2	2.11	0.51
1:C:107:GLN:O	1:C:108:SER:HB3	2.11	0.51
1:D:120:LEU:HD22	1:D:120:LEU:C	2.30	0.51
2:D:504:2CS:H71	2:D:504:2CS:C38	2.40	0.51
1:E:102:LEU:HD13	1:E:102:LEU:C	2.31	0.51
1:F:88:LEU:HD13	1:F:88:LEU:C	2.31	0.51
1:A:17:LEU:O	1:A:20:VAL:HG12	2.10	0.51
1:A:18:ILE:HG21	1:A:91:LEU:HD23	1.91	0.51
1:B:125:MET:O	1:B:128:ALA:HB3	2.11	0.51
1:E:96:LYS:HD2	1:E:96:LYS:N	2.25	0.51
1:E:139:PHE:CD2	1:E:139:PHE:N	2.76	0.51
1:B:139:PHE:CE2	1:F:120:LEU:HD12	2.45	0.51
1:C:55:THR:O	1:C:59:ASN:OD1	2.28	0.51
1:F:44:ARG:O	1:F:44:ARG:HD3	2.09	0.51
1:A:71:LEU:C	1:A:71:LEU:HD13	2.31	0.51
1:A:82:PRO:CG	1:A:83:ALA:H	2.23	0.51
1:B:74:ALA:O	1:B:78:CYS:O	2.28	0.51
1:B:119:ILE:N	1:B:119:ILE:HD13	2.25	0.51
1:E:13:ALA:O	1:E:17:LEU:HD23	2.11	0.51
1:E:25:PHE:CD1	2:E:505:2CS:CL17	3.01	0.51
1:A:42:PHE:CD1	1:C:112:TYR:CE1	2.99	0.51
1:C:15:VAL:CG1	1:C:71:LEU:HD11	2.40	0.51
1:C:22:GLN:HG3	1:C:23:ASN:N	2.25	0.51
1:F:56:ALA:CB	1:F:101:TYR:CD2	2.93	0.51
1:C:143:PHE:CE2	1:C:145:ASN:ND2	2.78	0.51
1:E:113:ILE:HD11	1:F:27:ALA:O	2.10	0.51
1:F:14:ILE:CG2	1:F:15:VAL:N	2.74	0.51
1:F:88:LEU:HD22	1:F:88:LEU:C	2.30	0.51
1:B:28:HIS:CD2	1:B:29:LYS:NZ	2.79	0.51
1:C:33:GLU:HG3	1:C:50:PHE:HA	1.92	0.51
1:E:112:TYR:CE2	1:F:30:VAL:HG11	2.45	0.51
1:E:120:LEU:O	1:E:123:PHE:HB3	2.10	0.51
1:F:23:ASN:CG	1:F:94:ARG:HH22	2.14	0.51
1:F:25:PHE:HE1	1:F:29:LYS:HG2	1.75	0.51
1:A:131:PHE:O	1:A:134:TYR:HB2	2.11	0.51
1:C:138:PHE:C	1:C:139:PHE:HD1	2.15	0.51
1:D:45:THR:HB	1:F:44:ARG:HG3	1.93	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:79:SER:O	1:E:82:PRO:HD2	2.11	0.51
1:A:25:PHE:N	2:A:502:2CS:H14	2.26	0.50
1:B:74:ALA:O	1:B:83:ALA:HB2	2.11	0.50
1:C:74:ALA:O	1:C:78:CYS:O	2.29	0.50
1:D:22:GLN:NE2	1:D:94:ARG:HB3	2.25	0.50
1:D:116:LYS:CE	1:D:116:LYS:CA	2.87	0.50
1:D:123:PHE:CG	2:E:505:2CS:H411	2.46	0.50
1:D:137:PHE:CD2	1:D:138:PHE:CE1	2.98	0.50
1:E:120:LEU:HA	2:E:506:2CS:C39	2.36	0.50
2:A:502:2CS:H12	2:A:502:2CS:C6	2.25	0.50
1:C:71:LEU:O	1:C:71:LEU:HD22	2.12	0.50
1:C:77:LEU:N	1:C:77:LEU:CD1	2.74	0.50
1:D:57:ASN:C	1:D:59:ASN:H	2.14	0.50
1:E:8:ASN:C	1:E:9:VAL:HG12	2.32	0.50
1:F:108:SER:C	1:F:109:THR:HG22	2.31	0.50
1:A:11:LEU:HD13	1:A:11:LEU:H	1.77	0.50
1:A:120:LEU:HD23	2:A:503:2CS:H392	1.93	0.50
1:D:14:ILE:CG2	1:D:15:VAL:N	2.74	0.50
1:E:74:ALA:O	1:E:78:CYS:O	2.30	0.50
1:A:74:ALA:O	1:A:83:ALA:HB2	2.11	0.50
1:B:57:ASN:C	1:B:59:ASN:H	2.14	0.50
1:C:63:ALA:HB1	1:C:90:TYR:OH	2.11	0.50
1:D:40:ARG:HA	1:F:105:ARG:HH12	1.74	0.50
1:D:62:ASP:HB2	2:E:505:2CS:C33	2.41	0.50
1:E:11:LEU:H	1:E:11:LEU:HD22	1.77	0.50
1:A:30:VAL:HG22	1:A:53:VAL:HG12	1.92	0.50
1:A:112:TYR:OH	1:B:57:ASN:ND2	2.44	0.50
1:B:15:VAL:O	1:B:18:ILE:HB	2.11	0.50
1:E:11:LEU:CD2	1:E:80:GLN:NE2	2.74	0.50
1:E:22:GLN:OE1	1:E:94:ARG:NE	2.45	0.50
1:F:26:PHE:HB3	1:F:57:ASN:HD22	1.76	0.50
1:A:26:PHE:CE1	1:A:98:PHE:CD2	2.99	0.50
1:A:110:PRO:O	1:A:111:GLY:O	2.29	0.50
1:A:116:LYS:NZ	2:A:503:2CS:C1	2.75	0.50
1:B:12:LEU:HD23	1:B:84:ALA:HB2	1.94	0.50
1:B:30:VAL:HG23	1:B:53:VAL:CG1	2.42	0.50
1:C:73:SER:OG	1:C:126:SER:HB3	2.12	0.50
1:E:63:ALA:HB1	1:E:90:TYR:OH	2.11	0.50
1:A:85:PHE:O	1:A:88:LEU:HB3	2.11	0.50
1:B:55:THR:HG22	1:B:56:ALA:N	2.26	0.50
1:C:33:GLU:HB3	1:C:50:PHE:HD1	1.77	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:74:ALA:O	1:D:78:CYS:O	2.29	0.50
1:D:116:LYS:HE3	2:E:505:2CS:C22	2.42	0.50
1:E:85:PHE:O	1:E:88:LEU:N	2.45	0.50
1:F:74:ALA:O	1:F:78:CYS:O	2.28	0.50
1:F:113:ILE:HG22	1:F:114:PHE:N	2.20	0.50
1:D:118:ILE:HG22	1:D:119:ILE:N	2.26	0.50
1:A:40:ARG:HD2	1:C:52:ARG:HH22	1.77	0.50
1:B:46:GLY:N	1:B:50:PHE:CD2	2.77	0.50
1:E:33:GLU:HB3	1:E:50:PHE:HB2	1.92	0.50
1:E:138:PHE:CD2	1:E:139:PHE:CZ	2.98	0.50
1:F:26:PHE:CD1	1:F:98:PHE:CD2	3.00	0.50
1:F:63:ALA:HB1	1:F:90:TYR:OH	2.12	0.50
1:A:102:LEU:CG	1:A:103:GLY:N	2.74	0.49
1:B:32:HIS:O	1:B:36:THR:HG23	2.12	0.49
1:B:110:PRO:HB3	1:C:40:ARG:O	2.12	0.49
1:D:11:LEU:HB3	1:D:84:ALA:CB	2.42	0.49
1:D:11:LEU:N	1:D:11:LEU:CD2	2.75	0.49
1:E:102:LEU:HD22	1:E:102:LEU:C	2.32	0.49
1:F:37:GLN:OE1	1:F:37:GLN:HA	2.11	0.49
1:A:120:LEU:HD13	1:A:124:LEU:CD2	2.42	0.49
1:B:30:VAL:HG22	1:B:53:VAL:HG12	1.93	0.49
1:B:46:GLY:N	1:B:50:PHE:HD2	2.10	0.49
1:B:81:VAL:CG2	1:B:82:PRO:N	2.75	0.49
1:B:139:PHE:CG	1:F:121:PHE:HB2	2.46	0.49
1:C:30:VAL:HG23	1:C:53:VAL:HG13	1.93	0.49
1:E:90:TYR:N	1:E:118:ILE:CD1	2.75	0.49
1:E:114:PHE:N	1:E:114:PHE:HD1	2.10	0.49
1:F:147:ILE:HG23	1:F:147:ILE:O	2.12	0.49
1:A:17:LEU:HD12	1:C:123:PHE:CD2	2.47	0.49
1:B:45:THR:HG23	1:B:45:THR:O	2.12	0.49
1:A:43:GLN:CA	1:C:44:ARG:HH21	2.19	0.49
1:A:62:ASP:HB3	1:B:61:VAL:HG21	1.94	0.49
1:A:132:ASN:O	1:A:136:ILE:HG13	2.12	0.49
1:A:138:PHE:HB3	1:A:139:PHE:CE1	2.47	0.49
1:B:11:LEU:N	1:B:11:LEU:CD1	2.76	0.49
1:B:46:GLY:C	1:B:47:THR:HG23	2.33	0.49
1:B:107:GLN:O	1:B:110:PRO:HD3	2.12	0.49
1:E:28:HIS:HD2	1:E:29:LYS:HZ1	1.56	0.49
1:F:83:ALA:HB2	1:F:125:MET:HE1	1.94	0.49
1:A:123:PHE:CD1	1:A:124:LEU:CD1	2.96	0.49
1:B:105:ARG:NH1	1:B:105:ARG:CG	2.75	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:25:PHE:HA	2:A:502:2CS:C14	2.43	0.49
1:A:42:PHE:CD2	1:A:50:PHE:CZ	2.95	0.49
1:A:85:PHE:O	1:A:88:LEU:N	2.42	0.49
1:B:11:LEU:HD22	1:B:80:GLN:OE1	2.12	0.49
1:B:113:ILE:HG13	1:B:116:LYS:CD	2.42	0.49
1:D:11:LEU:N	1:D:11:LEU:HD22	2.28	0.49
1:D:83:ALA:HB2	1:D:125:MET:CE	2.41	0.49
1:F:55:THR:HG21	1:F:101:TYR:OH	2.11	0.49
1:B:88:LEU:C	1:B:88:LEU:HD13	2.33	0.49
1:C:79:SER:HB3	1:C:82:PRO:HG3	1.93	0.49
1:C:137:PHE:CD2	1:C:138:PHE:HE1	2.30	0.49
1:B:120:LEU:HD13	1:B:124:LEU:HD22	1.93	0.49
1:A:37:GLN:OE1	1:A:47:THR:HG21	2.12	0.49
1:B:88:LEU:HD22	1:B:88:LEU:C	2.32	0.49
1:C:30:VAL:HA	1:C:53:VAL:HG11	1.95	0.49
1:D:26:PHE:CD1	1:D:98:PHE:CE2	3.01	0.49
1:D:42:PHE:CE2	1:F:112:TYR:CA	2.94	0.49
1:E:109:THR:HG22	1:F:35:ARG:NH1	2.27	0.49
1:A:110:PRO:HA	1:B:42:PHE:HB2	1.95	0.48
1:A:123:PHE:CD1	1:A:124:LEU:HD13	2.47	0.48
1:B:35:ARG:C	1:B:37:GLN:H	2.15	0.48
1:B:46:GLY:HA3	1:B:50:PHE:CD2	2.33	0.48
1:B:66:THR:HG23	1:C:23:ASN:ND2	2.28	0.48
1:C:71:LEU:HB3	1:C:72:TRP:HD1	1.78	0.48
1:E:74:ALA:O	1:E:83:ALA:HB2	2.13	0.48
1:E:123:PHE:CG	2:E:506:2CS:H391	2.48	0.48
1:A:83:ALA:N	1:A:125:MET:HE1	2.28	0.48
1:B:48:LEU:HD12	1:B:48:LEU:C	2.33	0.48
1:B:79:SER:OG	1:B:82:PRO:HG3	2.13	0.48
1:D:89:MET:O	1:D:92:PHE:HB2	2.12	0.48
1:D:110:PRO:HB3	1:E:35:ARG:HH22	1.78	0.48
1:F:11:LEU:CD2	1:F:80:GLN:NE2	2.76	0.48
1:F:19:SER:O	1:F:23:ASN:OD1	2.31	0.48
1:B:86:ALA:CB	1:B:121:PHE:HE2	2.23	0.48
1:B:89:MET:O	1:B:92:PHE:HB2	2.14	0.48
1:C:30:VAL:CG2	1:C:53:VAL:HG12	2.43	0.48
1:D:134:TYR:OH	1:E:10:VAL:HG11	2.13	0.48
1:F:56:ALA:CA	1:F:101:TYR:CD2	2.96	0.48
1:A:42:PHE:HD2	1:A:50:PHE:CE1	2.31	0.48
1:C:4:GLU:CD	1:C:5:THR:HG22	2.34	0.48
1:D:20:VAL:HG22	1:F:66:THR:CG2	2.42	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:138:PHE:N	1:D:138:PHE:CD1	2.80	0.48
1:E:60:CYS:HA	1:E:114:PHE:HZ	1.78	0.48
1:E:124:LEU:HD12	1:E:124:LEU:HA	1.74	0.48
1:F:99:VAL:HG12	1:F:100:GLY:N	2.28	0.48
1:F:130:ILE:HG22	1:F:131:PHE:N	2.29	0.48
1:A:43:GLN:HB2	1:C:51:GLU:OE1	2.13	0.48
1:A:139:PHE:N	1:A:139:PHE:CD1	2.78	0.48
1:B:86:ALA:HB2	1:B:121:PHE:CE2	2.43	0.48
1:B:94:ARG:HG2	1:B:114:PHE:CE2	2.47	0.48
1:C:55:THR:CG2	1:C:101:TYR:CE2	2.94	0.48
1:C:142:ASP:O	1:C:143:PHE:HB2	2.13	0.48
1:D:42:PHE:CD1	1:F:101:TYR:CZ	3.02	0.48
1:E:132:ASN:O	1:E:136:ILE:HD12	2.13	0.48
1:A:86:ALA:HB2	1:A:121:PHE:HE2	1.78	0.48
1:B:137:PHE:CZ	1:B:138:PHE:HE1	2.32	0.48
1:F:18:ILE:CG2	1:F:19:SER:N	2.77	0.48
1:A:5:THR:O	1:A:8:ASN:ND2	2.47	0.48
1:A:51:GLU:O	1:A:55:THR:OG1	2.24	0.48
1:F:134:TYR:O	1:F:138:PHE:HB2	2.12	0.48
1:A:64:TYR:N	1:A:65:PRO:CD	2.74	0.48
2:A:503:2CS:H412	2:A:503:2CS:C8	2.44	0.48
1:D:88:LEU:HD22	1:D:88:LEU:C	2.33	0.48
1:D:112:TYR:HB2	1:E:42:PHE:CE2	2.49	0.48
1:D:133:TYR:CD2	1:E:6:VAL:HG12	2.49	0.48
1:B:65:PRO:HG2	1:B:66:THR:H	1.78	0.48
1:D:112:TYR:CD2	1:E:30:VAL:HG11	2.49	0.48
1:D:116:LYS:CE	2:E:505:2CS:C23	2.90	0.48
1:D:123:PHE:CD1	2:E:505:2CS:C41	2.97	0.48
1:E:120:LEU:C	1:E:120:LEU:HD13	2.34	0.48
1:F:147:ILE:HD12	1:F:147:ILE:HA	1.65	0.48
1:A:137:PHE:CD2	1:A:138:PHE:HD1	2.31	0.47
1:B:42:PHE:CE1	1:B:50:PHE:HZ	2.28	0.47
1:B:46:GLY:O	1:B:47:THR:HG23	2.14	0.47
1:B:48:LEU:CD1	1:B:52:ARG:HD3	2.38	0.47
1:B:138:PHE:C	1:B:140:GLY:H	2.14	0.47
2:C:501:2CS:H61	2:C:501:2CS:C10	2.44	0.47
1:F:94:ARG:CG	1:F:114:PHE:CZ	2.98	0.47
1:A:34:SER:CB	1:A:42:PHE:HE2	2.27	0.47
1:A:42:PHE:CE1	1:C:112:TYR:HE1	2.30	0.47
1:A:103:GLY:O	1:A:104:GLU:OE2	2.32	0.47
1:A:121:PHE:C	1:A:121:PHE:CD1	2.87	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:503:2CS:H411	1:B:21:VAL:HG23	1.95	0.47
1:B:76:LEU:C	1:B:78:CYS:H	2.17	0.47
1:B:97:TYR:CD1	1:B:109:THR:HG21	2.49	0.47
1:E:70:VAL:HA	1:E:73:SER:HG	1.79	0.47
1:A:110:PRO:HG3	1:B:41:SER:N	2.30	0.47
1:B:5:THR:O	1:B:8:ASN:ND2	2.47	0.47
1:B:139:PHE:N	1:B:139:PHE:CD1	2.77	0.47
1:D:1:MET:HE2	1:F:76:LEU:HB3	1.96	0.47
1:D:90:TYR:HA	1:D:93:VAL:HG23	1.95	0.47
1:D:141:SER:O	1:D:142:ASP:OD1	2.31	0.47
1:C:47:THR:CG2	1:C:48:LEU:H	2.27	0.47
1:D:116:LYS:NZ	2:E:505:2CS:C21	2.76	0.47
1:E:44:ARG:HH12	1:F:43:GLN:CB	2.13	0.47
1:E:64:TYR:CE1	1:E:68:LEU:CD1	2.97	0.47
1:A:133:TYR:CE1	1:A:134:TYR:CD1	3.03	0.47
1:B:145:ASN:H	1:B:145:ASN:HD22	1.62	0.47
1:C:81:VAL:CG1	1:C:82:PRO:N	2.75	0.47
1:C:117:ARG:CG	1:C:118:ILE:N	2.77	0.47
1:F:85:PHE:CD1	1:F:85:PHE:C	2.87	0.47
1:A:9:VAL:CA	1:A:80:GLN:NE2	2.77	0.47
1:A:17:LEU:CD1	1:C:123:PHE:CD2	2.97	0.47
1:A:124:LEU:O	1:A:128:ALA:HB2	2.15	0.47
1:D:101:TYR:N	1:D:109:THR:HG21	2.29	0.47
1:E:11:LEU:HD22	1:E:80:GLN:HE22	1.79	0.47
1:E:25:PHE:CE2	1:E:98:PHE:CE2	3.03	0.47
1:E:86:ALA:CB	1:E:121:PHE:CE2	2.96	0.47
1:A:112:TYR:CE1	1:B:30:VAL:CG1	2.96	0.47
1:A:131:PHE:O	1:A:134:TYR:N	2.48	0.47
1:A:136:ILE:HG13	1:A:136:ILE:H	1.54	0.47
1:B:18:ILE:HG22	1:B:19:SER:N	2.29	0.47
1:B:25:PHE:CE1	1:B:29:LYS:HG2	2.49	0.47
1:B:99:VAL:CG1	1:B:100:GLY:N	2.77	0.47
1:C:74:ALA:O	1:C:83:ALA:HB2	2.15	0.47
1:C:83:ALA:CA	1:C:125:MET:HE1	2.37	0.47
1:C:101:TYR:O	1:C:102:LEU:CB	2.61	0.47
1:D:35:ARG:NH2	1:D:41:SER:O	2.47	0.47
1:D:45:THR:CG2	1:D:46:GLY:N	2.78	0.47
1:E:25:PHE:HD1	2:E:505:2CS:CL17	2.35	0.47
1:E:64:TYR:CE1	1:E:68:LEU:CD2	2.97	0.47
1:F:81:VAL:HG13	1:F:82:PRO:CD	2.22	0.47
1:A:43:GLN:HE21	1:C:55:THR:N	2.12	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:133:TYR:CD1	1:B:134:TYR:CD1	2.99	0.47
1:B:139:PHE:CE2	1:F:120:LEU:CD1	2.97	0.47
1:D:136:ILE:HA	1:D:140:GLY:CA	2.45	0.47
1:E:76:LEU:C	1:E:78:CYS:H	2.18	0.47
1:E:120:LEU:O	1:E:120:LEU:HD22	2.15	0.47
1:F:15:VAL:CG1	1:F:16:THR:N	2.78	0.47
1:F:116:LYS:O	1:F:120:LEU:HB2	2.15	0.47
1:A:74:ALA:CB	1:A:125:MET:HB2	2.43	0.47
1:A:109:THR:HA	1:A:110:PRO:HD2	1.77	0.47
2:A:502:2CS:C12	2:A:502:2CS:H11	2.45	0.47
1:B:12:LEU:HA	1:B:15:VAL:HG12	1.97	0.47
1:C:63:ALA:C	1:C:65:PRO:HD2	2.34	0.47
1:C:72:TRP:N	1:C:72:TRP:CD1	2.82	0.47
1:D:26:PHE:CE1	1:D:98:PHE:CD2	3.02	0.47
1:D:74:ALA:O	1:D:83:ALA:HB2	2.15	0.47
1:E:18:ILE:HG22	1:E:91:LEU:CD2	2.39	0.47
1:F:33:GLU:HB3	1:F:50:PHE:HA	1.97	0.47
1:F:99:VAL:CG1	1:F:100:GLY:N	2.77	0.47
1:F:101:TYR:CD1	1:F:110:PRO:CG	2.97	0.47
1:A:8:ASN:ND2	1:A:8:ASN:N	2.29	0.47
1:A:40:ARG:HD3	1:C:110:PRO:CG	2.31	0.47
1:A:126:SER:HB2	1:B:17:LEU:HD21	1.96	0.47
1:A:133:TYR:HE1	1:A:134:TYR:CD1	2.33	0.47
1:B:132:ASN:ND2	1:B:136:ILE:HD11	2.24	0.47
1:C:131:PHE:HE2	1:C:135:LEU:HD11	1.79	0.47
1:A:133:TYR:HE1	1:A:134:TYR:CE1	2.34	0.46
1:B:77:LEU:CD2	1:B:130:ILE:HG12	2.44	0.46
1:B:79:SER:HB2	1:B:82:PRO:CD	2.45	0.46
1:D:112:TYR:CD2	1:E:30:VAL:CG1	2.98	0.46
1:E:99:VAL:HG12	1:E:100:GLY:N	2.29	0.46
1:F:125:MET:O	1:F:128:ALA:HB3	2.15	0.46
1:A:73:SER:OG	1:A:126:SER:HB3	2.14	0.46
1:A:99:VAL:CG1	1:A:100:GLY:N	2.78	0.46
1:A:120:LEU:HD23	2:A:503:2CS:S37	2.55	0.46
2:A:502:2CS:C11	2:A:502:2CS:C7	2.93	0.46
1:B:39:GLY:O	1:B:42:PHE:N	2.45	0.46
1:D:10:VAL:HG12	1:D:11:LEU:HD22	1.97	0.46
1:D:14:ILE:C	1:D:18:ILE:HD12	2.34	0.46
1:D:19:SER:HB3	1:D:91:LEU:HD21	1.98	0.46
1:E:25:PHE:HE2	1:E:98:PHE:CE2	2.33	0.46
1:E:77:LEU:HD13	1:E:77:LEU:N	2.30	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:109:THR:CG2	1:F:35:ARG:NH1	2.79	0.46
1:A:23:ASN:CB	1:C:66:THR:HG21	2.46	0.46
1:A:111:GLY:N	1:B:35:ARG:HH12	2.13	0.46
1:C:146:TYR:CD1	1:C:146:TYR:N	2.78	0.46
1:D:120:LEU:HD23	2:E:505:2CS:H412	1.97	0.46
1:E:70:VAL:HB	1:E:122:LEU:HB3	1.97	0.46
2:A:503:2CS:H412	2:A:503:2CS:H14	1.97	0.46
1:B:66:THR:HG21	1:C:23:ASN:CB	2.44	0.46
1:B:145:ASN:HB2	1:B:147:ILE:CD1	2.45	0.46
1:A:22:GLN:OE1	1:A:94:ARG:NE	2.43	0.46
1:A:116:LYS:HE3	2:A:503:2CS:C1	2.46	0.46
1:B:68:LEU:HD12	1:B:68:LEU:HA	1.54	0.46
1:C:72:TRP:O	1:C:75:GLY:N	2.39	0.46
1:E:52:ARG:HG3	1:E:52:ARG:NH1	2.31	0.46
1:F:31:GLU:O	1:F:35:ARG:HG2	2.16	0.46
1:A:18:ILE:O	1:A:21:VAL:HG12	2.16	0.46
1:A:66:THR:HG23	1:B:23:ASN:ND2	2.16	0.46
1:A:124:LEU:HD12	1:A:127:VAL:CG1	2.44	0.46
2:A:503:2CS:CL17	1:B:25:PHE:CB	2.86	0.46
1:B:105:ARG:NH1	1:B:106:THR:N	2.59	0.46
1:B:145:ASN:O	1:B:147:ILE:N	2.45	0.46
1:C:79:SER:HB3	1:C:82:PRO:CD	2.45	0.46
1:C:88:LEU:HD13	1:C:88:LEU:C	2.36	0.46
1:C:122:LEU:HD12	1:C:122:LEU:HA	1.80	0.46
1:D:119:ILE:HG12	1:D:120:LEU:N	2.30	0.46
2:D:504:2CS:C1	1:F:116:LYS:HE3	2.42	0.46
1:A:133:TYR:CD1	1:A:134:TYR:N	2.84	0.46
1:B:120:LEU:O	1:B:124:LEU:HD22	2.16	0.46
1:C:44:ARG:O	1:C:44:ARG:HG2	2.15	0.46
1:D:40:ARG:HA	1:F:105:ARG:NH1	2.31	0.46
1:E:94:ARG:HD2	1:E:114:PHE:CE2	2.51	0.46
1:B:102:LEU:O	1:B:102:LEU:HD22	2.15	0.46
1:C:5:THR:O	1:C:9:VAL:HG12	2.16	0.46
1:D:90:TYR:N	1:D:118:ILE:CD1	2.79	0.46
1:E:119:ILE:HG12	1:E:120:LEU:N	2.30	0.46
1:A:19:SER:HA	1:A:22:GLN:HG2	1.96	0.46
1:A:82:PRO:CG	1:A:83:ALA:N	2.78	0.46
1:A:131:PHE:HZ	1:A:135:LEU:HD11	1.78	0.46
1:A:138:PHE:C	1:A:139:PHE:CD1	2.89	0.46
2:A:502:2CS:H252	1:C:119:ILE:CD1	2.35	0.46
1:B:10:VAL:O	1:B:14:ILE:HG13	2.16	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:123:PHE:CE2	1:C:21:VAL:HG23	2.50	0.46
1:C:37:GLN:OE1	1:C:37:GLN:N	2.49	0.46
1:C:71:LEU:HD13	1:C:72:TRP:NE1	2.31	0.46
1:C:97:TYR:HE1	1:C:111:GLY:O	1.99	0.46
1:F:127:VAL:HG22	1:F:127:VAL:O	2.15	0.46
1:F:131:PHE:CG	1:F:132:ASN:N	2.84	0.46
1:A:74:ALA:O	1:A:78:CYS:O	2.33	0.46
1:A:130:ILE:CG2	1:A:131:PHE:N	2.79	0.46
1:B:46:GLY:O	1:B:47:THR:OG1	2.28	0.46
1:B:51:GLU:O	1:B:55:THR:HB	2.16	0.46
1:C:81:VAL:N	1:C:82:PRO:CD	2.79	0.46
1:C:130:ILE:HG22	1:C:131:PHE:N	2.31	0.46
1:D:56:ALA:CA	1:D:101:TYR:CD2	2.94	0.46
1:D:62:ASP:HB2	2:E:505:2CS:H33	1.97	0.46
1:D:82:PRO:HG2	1:D:83:ALA:N	2.32	0.46
2:D:504:2CS:H20	2:D:504:2CS:C26	2.45	0.46
1:E:26:PHE:CD1	1:E:26:PHE:N	2.84	0.46
1:F:21:VAL:CG1	1:F:22:GLN:N	2.79	0.46
1:B:52:ARG:CZ	1:B:103:GLY:HA2	2.46	0.45
1:B:135:LEU:HD22	1:B:135:LEU:HA	1.62	0.45
1:C:64:TYR:N	1:C:65:PRO:CD	2.79	0.45
1:D:11:LEU:CB	1:D:80:GLN:NE2	2.74	0.45
1:E:89:MET:O	1:E:92:PHE:HB2	2.17	0.45
1:E:114:PHE:O	1:E:116:LYS:N	2.49	0.45
1:F:123:PHE:O	1:F:127:VAL:HG12	2.16	0.45
2:A:503:2CS:C8	2:A:503:2CS:C14	2.92	0.45
1:B:33:GLU:HB3	1:B:50:PHE:HA	1.98	0.45
1:C:46:GLY:O	1:C:47:THR:OG1	2.27	0.45
1:D:102:LEU:O	1:D:104:GLU:N	2.49	0.45
1:E:25:PHE:CE1	1:E:29:LYS:HD3	2.51	0.45
1:E:109:THR:HG23	1:F:40:ARG:HH22	1.75	0.45
1:C:15:VAL:CG1	1:C:16:THR:N	2.79	0.45
1:C:37:GLN:HE21	1:C:47:THR:CB	2.29	0.45
1:C:57:ASN:C	1:C:59:ASN:H	2.19	0.45
1:C:71:LEU:HD13	1:C:72:TRP:CD1	2.51	0.45
2:D:504:2CS:H412	2:D:504:2CS:C8	2.47	0.45
1:E:47:THR:O	1:E:51:GLU:HB2	2.16	0.45
1:A:42:PHE:HB3	1:A:50:PHE:CZ	2.40	0.45
1:B:112:TYR:CD2	1:C:30:VAL:CG1	2.97	0.45
1:D:30:VAL:CG1	1:F:112:TYR:CD2	2.99	0.45
1:D:44:ARG:NH1	1:F:51:GLU:CG	2.78	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:53:VAL:HG12	1:D:54:TYR:N	2.32	0.45
1:E:25:PHE:HE2	1:E:98:PHE:HE2	1.65	0.45
1:E:25:PHE:N	2:E:505:2CS:C13	2.80	0.45
1:E:97:TYR:CD2	1:E:114:PHE:CE2	2.97	0.45
1:F:15:VAL:HG12	1:F:16:THR:N	2.32	0.45
1:B:5:THR:O	1:B:9:VAL:HG12	2.16	0.45
1:C:26:PHE:HB3	1:C:57:ASN:ND2	2.32	0.45
1:D:82:PRO:CG	1:D:83:ALA:N	2.78	0.45
1:E:27:ALA:HB2	2:E:505:2CS:C31	2.47	0.45
1:E:119:ILE:HD13	1:E:119:ILE:H	1.82	0.45
1:E:131:PHE:O	1:E:134:TYR:N	2.50	0.45
1:F:9:VAL:CA	1:F:80:GLN:NE2	2.79	0.45
1:F:25:PHE:CD1	1:F:25:PHE:C	2.90	0.45
1:F:48:LEU:HD22	1:F:48:LEU:HA	1.53	0.45
1:F:50:PHE:C	1:F:50:PHE:CD2	2.89	0.45
1:F:61:VAL:HG13	1:F:61:VAL:O	2.16	0.45
1:A:24:GLY:O	2:A:502:2CS:H101	2.17	0.45
1:A:59:ASN:HB3	1:A:112:TYR:HB2	1.97	0.45
1:A:86:ALA:CB	1:A:122:LEU:CD1	2.94	0.45
1:B:5:THR:CA	1:B:8:ASN:HD21	2.28	0.45
1:D:42:PHE:N	1:D:42:PHE:HD1	2.13	0.45
1:D:137:PHE:C	1:D:138:PHE:HD1	2.20	0.45
1:E:120:LEU:HD22	1:E:124:LEU:HD22	1.99	0.45
1:A:26:PHE:CD1	1:A:98:PHE:CE2	3.05	0.45
1:A:106:THR:O	1:A:108:SER:N	2.49	0.45
1:C:89:MET:O	1:C:93:VAL:HG23	2.16	0.45
1:C:117:ARG:HB2	1:C:117:ARG:NH1	2.32	0.45
1:C:131:PHE:CE2	1:C:135:LEU:HD11	2.52	0.45
1:D:42:PHE:CE2	1:F:112:TYR:N	2.85	0.45
1:D:108:SER:O	1:D:109:THR:HB	2.17	0.45
1:E:28:HIS:CD2	1:E:29:LYS:HZ1	2.35	0.45
1:F:47:THR:HB	1:F:50:PHE:H	1.82	0.45
1:A:40:ARG:HD2	1:C:52:ARG:NH2	2.31	0.45
1:B:12:LEU:H	1:B:12:LEU:HG	1.62	0.45
1:C:109:THR:N	1:C:110:PRO:CD	2.79	0.45
1:D:123:PHE:CD2	1:E:17:LEU:CD1	3.00	0.45
1:F:11:LEU:HD22	1:F:11:LEU:H	1.82	0.45
1:F:89:MET:HB2	1:F:118:ILE:HD11	1.97	0.45
1:B:81:VAL:N	1:B:82:PRO:CD	2.80	0.45
1:B:121:PHE:HA	1:F:139:PHE:HE2	1.82	0.45
1:C:9:VAL:HG23	1:C:12:LEU:HD12	1.99	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:14:ILE:HD12	1:F:130:ILE:CD1	2.44	0.45
1:D:50:PHE:CD2	1:D:50:PHE:C	2.90	0.45
1:D:135:LEU:HD22	1:D:135:LEU:HA	1.82	0.45
1:F:35:ARG:HA	1:F:38:ASN:ND2	2.32	0.45
1:A:14:ILE:CG2	1:A:15:VAL:N	2.76	0.45
1:A:15:VAL:CG1	1:A:16:THR:N	2.79	0.45
1:A:66:THR:HG21	1:B:23:ASN:CB	2.47	0.45
1:B:139:PHE:CD2	1:F:121:PHE:CB	2.96	0.45
1:B:139:PHE:HZ	1:F:120:LEU:HD12	1.73	0.45
1:C:11:LEU:HD22	1:C:80:GLN:HE22	1.81	0.45
1:E:52:ARG:NH2	1:E:108:SER:OG	2.48	0.45
1:A:25:PHE:O	1:A:28:HIS:HB3	2.17	0.44
1:A:131:PHE:CE2	1:A:135:LEU:HD21	2.52	0.44
1:B:33:GLU:HB3	1:B:50:PHE:HB2	2.00	0.44
1:B:74:ALA:CB	1:B:125:MET:HB2	2.42	0.44
1:D:71:LEU:HD13	1:D:72:TRP:NE1	2.31	0.44
1:D:116:LYS:CE	2:E:505:2CS:C22	2.95	0.44
1:E:90:TYR:CE1	1:E:94:ARG:CG	2.99	0.44
1:B:28:HIS:NE2	1:B:29:LYS:NZ	2.61	0.44
1:D:77:LEU:N	1:D:77:LEU:CD1	2.80	0.44
1:D:133:TYR:CD2	1:E:6:VAL:CG1	3.00	0.44
1:F:31:GLU:OE1	1:F:31:GLU:HA	2.16	0.44
1:A:20:VAL:HG12	1:A:21:VAL:N	2.32	0.44
1:A:82:PRO:HG2	1:A:83:ALA:N	2.32	0.44
1:B:58:GLN:O	1:B:62:ASP:OD2	2.35	0.44
1:B:76:LEU:HB3	1:C:1:MET:HE2	1.97	0.44
1:B:77:LEU:N	1:B:77:LEU:CD1	2.80	0.44
1:D:110:PRO:HG3	1:E:40:ARG:HD2	1.98	0.44
1:D:116:LYS:O	1:D:119:ILE:HG12	2.18	0.44
1:F:67:PHE:CD1	1:F:90:TYR:CD1	3.05	0.44
1:F:77:LEU:N	1:F:77:LEU:CD1	2.80	0.44
1:B:144:GLU:CB	1:B:146:TYR:CE1	2.95	0.44
1:C:33:GLU:O	1:C:37:GLN:HB2	2.17	0.44
1:C:35:ARG:NE	1:C:35:ARG:CA	2.79	0.44
1:F:39:GLY:O	1:F:41:SER:N	2.50	0.44
1:F:68:LEU:O	1:F:72:TRP:HD1	2.00	0.44
1:F:74:ALA:HB1	1:F:125:MET:HE3	1.99	0.44
1:A:9:VAL:N	1:A:80:GLN:NE2	2.65	0.44
1:C:52:ARG:HB3	1:C:102:LEU:CB	2.48	0.44
1:C:77:LEU:O	1:C:78:CYS:CB	2.66	0.44
1:C:131:PHE:O	1:C:134:TYR:N	2.49	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:102:LEU:HD13	1:E:103:GLY:N	2.33	0.44
1:E:135:LEU:N	1:E:135:LEU:CD2	2.75	0.44
1:F:77:LEU:N	1:F:77:LEU:HD12	2.31	0.44
1:D:15:VAL:O	1:D:18:ILE:HB	2.17	0.44
2:D:504:2CS:H12A	1:F:116:LYS:CE	2.45	0.44
1:F:33:GLU:HB3	1:F:50:PHE:CB	2.41	0.44
1:F:81:VAL:CB	1:F:82:PRO:HD3	2.47	0.44
1:F:101:TYR:HD1	1:F:110:PRO:HG3	1.83	0.44
1:B:54:TYR:O	1:B:58:GLN:HB2	2.18	0.44
1:D:85:PHE:CZ	1:D:89:MET:SD	3.11	0.44
1:E:70:VAL:O	1:E:74:ALA:HB3	2.17	0.44
1:F:12:LEU:CD1	1:F:72:TRP:CE3	2.98	0.44
1:F:130:ILE:CG2	1:F:131:PHE:N	2.78	0.44
1:B:18:ILE:O	1:B:21:VAL:HG12	2.17	0.44
1:B:20:VAL:HG12	1:B:21:VAL:N	2.33	0.44
1:B:81:VAL:N	1:B:82:PRO:HD2	2.33	0.44
1:B:130:ILE:HD11	1:C:13:ALA:HB3	1.99	0.44
2:C:501:2CS:H61	2:C:501:2CS:C11	2.48	0.44
1:E:120:LEU:HA	2:E:506:2CS:S37	2.58	0.44
1:A:130:ILE:O	1:A:130:ILE:HD13	2.18	0.44
1:C:37:GLN:HE21	1:C:47:THR:CG2	2.31	0.44
1:D:14:ILE:HG23	1:D:18:ILE:CD1	2.48	0.44
1:E:11:LEU:HB3	1:E:84:ALA:CB	2.48	0.44
1:F:53:VAL:HG23	1:F:102:LEU:CG	2.48	0.44
1:F:136:ILE:HG13	1:F:136:ILE:H	1.45	0.44
2:A:502:2CS:H11	2:A:502:2CS:C13	2.48	0.43
1:E:31:GLU:OE2	1:E:42:PHE:HZ	2.01	0.43
1:E:72:TRP:O	1:E:75:GLY:N	2.44	0.43
1:E:101:TYR:CE1	1:E:110:PRO:CD	2.98	0.43
1:F:34:SER:O	1:F:38:ASN:HA	2.18	0.43
1:C:56:ALA:HB2	1:C:101:TYR:CD2	2.50	0.43
1:C:85:PHE:O	1:C:88:LEU:N	2.50	0.43
1:C:112:TYR:C	1:C:113:ILE:HG13	2.36	0.43
1:C:124:LEU:O	1:C:128:ALA:HB2	2.18	0.43
1:D:119:ILE:HG12	1:D:120:LEU:H	1.83	0.43
1:D:142:ASP:O	1:D:144:GLU:N	2.51	0.43
1:E:56:ALA:HB2	1:E:101:TYR:HB3	2.00	0.43
1:F:85:PHE:O	1:F:88:LEU:N	2.47	0.43
1:A:66:THR:HG21	1:B:23:ASN:HB3	2.00	0.43
1:C:79:SER:CB	1:C:82:PRO:HD3	2.49	0.43
1:E:120:LEU:C	1:E:120:LEU:HD22	2.38	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:134:TYR:HD1	1:E:134:TYR:HA	1.63	0.43
1:A:94:ARG:HG2	1:A:114:PHE:HZ	1.77	0.43
1:B:107:GLN:HB3	1:B:110:PRO:HG3	1.99	0.43
1:B:138:PHE:N	1:B:138:PHE:CD1	2.86	0.43
1:C:102:LEU:HG	1:C:103:GLY:N	2.33	0.43
1:C:126:SER:O	1:C:130:ILE:HB	2.19	0.43
1:D:30:VAL:CG1	1:F:112:TYR:CE2	2.98	0.43
1:D:39:GLY:HA3	1:F:109:THR:HG21	2.00	0.43
1:D:79:SER:CB	1:D:82:PRO:HG3	2.46	0.43
1:E:33:GLU:HB3	1:E:50:PHE:CB	2.49	0.43
1:E:79:SER:HB2	1:E:82:PRO:HD3	2.00	0.43
2:E:506:2CS:C31	1:F:27:ALA:HB2	2.48	0.43
1:A:76:LEU:C	1:A:78:CYS:H	2.22	0.43
1:B:86:ALA:CB	1:B:121:PHE:CE2	3.02	0.43
1:C:47:THR:HG22	1:C:49:ALA:N	2.07	0.43
1:D:40:ARG:CA	1:F:105:ARG:HH12	2.31	0.43
1:D:130:ILE:HD13	1:D:130:ILE:HA	1.71	0.43
1:F:76:LEU:C	1:F:78:CYS:H	2.22	0.43
1:A:20:VAL:CG1	1:A:21:VAL:N	2.79	0.43
1:A:138:PHE:C	1:A:139:PHE:HD1	2.22	0.43
2:A:503:2CS:H412	2:A:503:2CS:C14	2.48	0.43
1:B:5:THR:HA	1:B:8:ASN:ND2	2.29	0.43
1:B:118:ILE:CG2	1:B:119:ILE:N	2.81	0.43
1:C:11:LEU:H	1:C:80:GLN:HE21	1.62	0.43
1:D:76:LEU:C	1:D:78:CYS:H	2.22	0.43
1:E:83:ALA:CA	1:E:125:MET:HE3	2.48	0.43
1:E:88:LEU:O	1:E:88:LEU:HD22	2.19	0.43
1:E:97:TYR:HD2	1:E:114:PHE:CD2	2.34	0.43
1:E:112:TYR:CD2	1:F:30:VAL:CG1	2.95	0.43
1:F:9:VAL:CA	1:F:80:GLN:HE21	2.31	0.43
1:A:10:VAL:HG13	1:A:14:ILE:CD1	2.48	0.43
1:B:29:LYS:HD2	1:B:29:LYS:HA	1.50	0.43
1:B:145:ASN:O	1:B:147:ILE:HD12	2.19	0.43
1:C:36:THR:C	1:C:38:ASN:H	2.21	0.43
1:D:116:LYS:CE	2:E:505:2CS:C21	2.97	0.43
1:E:10:VAL:HG13	1:E:14:ILE:HD12	2.00	0.43
1:F:74:ALA:CB	1:F:125:MET:HB2	2.44	0.43
1:F:143:PHE:O	1:F:144:GLU:O	2.36	0.43
2:A:503:2CS:C11	2:A:503:2CS:C3	2.97	0.43
1:B:124:LEU:HA	1:B:124:LEU:HD12	1.46	0.43
1:C:119:ILE:H	1:C:119:ILE:HG12	1.54	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:120:LEU:CD1	1:C:124:LEU:CD2	2.97	0.43
1:D:142:ASP:C	1:D:144:GLU:N	2.72	0.43
1:E:43:GLN:C	1:E:45:THR:H	2.21	0.43
1:E:101:TYR:CE1	1:E:110:PRO:HG2	2.54	0.43
1:F:15:VAL:O	1:F:18:ILE:HB	2.18	0.43
1:F:116:LYS:HA	1:F:119:ILE:CD1	2.26	0.43
1:B:56:ALA:HB2	1:B:101:TYR:HB3	2.01	0.43
1:C:120:LEU:HD21	1:C:124:LEU:HD21	1.99	0.43
1:D:23:ASN:C	2:D:504:2CS:H31	2.39	0.43
1:E:31:GLU:O	1:E:35:ARG:HD2	2.18	0.43
1:E:75:GLY:C	1:E:76:LEU:HD13	2.39	0.43
1:F:89:MET:O	1:F:93:VAL:HG23	2.19	0.43
1:A:42:PHE:C	1:A:43:GLN:HG2	2.39	0.43
1:A:71:LEU:HD13	1:A:71:LEU:O	2.19	0.43
1:B:15:VAL:HG13	1:B:16:THR:N	2.34	0.43
1:D:42:PHE:O	1:D:43:GLN:HG3	2.19	0.43
1:D:113:ILE:CG1	1:D:114:PHE:N	2.77	0.43
1:D:142:ASP:C	1:D:144:GLU:H	2.23	0.43
1:E:48:LEU:HD13	1:E:52:ARG:CD	2.42	0.43
1:E:83:ALA:CA	1:E:125:MET:CE	2.94	0.43
1:B:63:ALA:HB1	1:B:90:TYR:OH	2.19	0.42
1:B:137:PHE:O	1:B:137:PHE:CD1	2.72	0.42
1:D:22:GLN:O	1:D:25:PHE:HB3	2.19	0.42
1:D:90:TYR:N	1:D:118:ILE:HD12	2.33	0.42
1:E:48:LEU:HD22	1:E:48:LEU:HA	1.81	0.42
1:F:74:ALA:O	1:F:125:MET:HE3	2.19	0.42
1:A:40:ARG:HH21	1:C:107:GLN:CG	2.24	0.42
1:A:57:ASN:O	1:A:61:VAL:HG23	2.19	0.42
1:B:12:LEU:HA	1:B:15:VAL:HG11	1.99	0.42
2:D:504:2CS:C8	2:D:504:2CS:C14	2.94	0.42
1:E:62:ASP:N	1:E:62:ASP:OD1	2.50	0.42
1:E:120:LEU:HD21	1:E:124:LEU:HD21	2.00	0.42
1:A:64:TYR:CD1	1:A:68:LEU:HD22	2.54	0.42
1:B:99:VAL:O	1:B:102:LEU:HB2	2.19	0.42
1:C:94:ARG:CG	1:C:114:PHE:CE1	2.91	0.42
1:D:125:MET:O	1:D:128:ALA:HB3	2.19	0.42
1:F:113:ILE:H	1:F:113:ILE:HG13	1.40	0.42
1:A:70:VAL:O	1:A:74:ALA:HB3	2.19	0.42
2:A:502:2CS:C12	2:A:502:2CS:C6	2.93	0.42
1:B:40:ARG:O	1:B:41:SER:HB2	2.18	0.42
1:C:124:LEU:HA	1:C:124:LEU:HD12	1.68	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:56:ALA:CB	1:D:101:TYR:CD2	2.94	0.42
1:D:122:LEU:HD12	1:D:122:LEU:HA	1.76	0.42
1:E:44:ARG:NH1	1:E:44:ARG:CG	2.79	0.42
1:E:88:LEU:HD13	1:E:88:LEU:O	2.19	0.42
1:E:128:ALA:O	1:E:131:PHE:CD1	2.73	0.42
1:E:135:LEU:O	1:E:139:PHE:N	2.42	0.42
1:F:102:LEU:HD23	1:F:102:LEU:HA	1.71	0.42
1:C:4:GLU:OE2	1:C:5:THR:HG22	2.19	0.42
1:C:11:LEU:HB3	1:C:84:ALA:CB	2.50	0.42
1:C:26:PHE:N	1:C:26:PHE:CD1	2.88	0.42
1:C:94:ARG:CG	1:C:114:PHE:HE1	2.21	0.42
1:F:113:ILE:CG2	1:F:116:LYS:CG	2.97	0.42
1:A:29:LYS:HD2	1:A:29:LYS:HA	1.42	0.42
1:B:95:GLN:O	1:B:99:VAL:HB	2.20	0.42
1:D:123:PHE:CD1	1:D:124:LEU:CD1	2.99	0.42
1:E:120:LEU:HD22	1:E:124:LEU:CD2	2.49	0.42
1:F:124:LEU:CA	1:F:127:VAL:HG12	2.43	0.42
1:B:52:ARG:NH1	1:B:52:ARG:CG	2.78	0.42
1:C:25:PHE:HA	2:C:501:2CS:CL17	2.56	0.42
1:C:27:ALA:HB2	2:C:501:2CS:C32	2.50	0.42
1:D:42:PHE:CZ	1:F:111:GLY:C	2.92	0.42
1:B:50:PHE:O	1:B:50:PHE:CD1	2.73	0.42
1:C:90:TYR:HB2	1:C:118:ILE:HG21	2.02	0.42
1:D:82:PRO:CD	1:D:83:ALA:H	2.32	0.42
2:D:504:2CS:H392	1:F:120:LEU:CD2	2.49	0.42
1:E:68:LEU:HD12	1:E:68:LEU:HA	1.78	0.42
1:A:19:SER:O	1:A:23:ASN:OD1	2.37	0.42
1:B:1:MET:HG3	1:B:6:VAL:HG22	2.01	0.42
1:B:138:PHE:C	1:B:140:GLY:N	2.73	0.42
1:D:5:THR:O	1:D:9:VAL:HG12	2.20	0.42
1:D:72:TRP:N	1:D:72:TRP:CD1	2.87	0.42
1:E:131:PHE:CG	1:E:132:ASN:N	2.88	0.42
1:A:17:LEU:HD12	1:C:123:PHE:CE2	2.55	0.42
1:A:43:GLN:NE2	1:C:55:THR:CA	2.83	0.42
1:A:77:LEU:O	1:A:78:CYS:HB2	2.20	0.42
1:A:99:VAL:HG12	1:A:100:GLY:N	2.35	0.42
1:B:95:GLN:HB3	1:B:96:LYS:HD2	2.02	0.42
1:B:120:LEU:HD13	1:B:121:PHE:N	2.35	0.42
1:D:30:VAL:HG22	1:D:53:VAL:CG1	2.50	0.42
1:E:9:VAL:CA	1:E:80:GLN:NE2	2.83	0.42
1:E:22:GLN:HE21	1:E:22:GLN:HB2	1.63	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:25:PHE:CA	2:E:505:2CS:C13	2.98	0.42
1:F:67:PHE:CE1	1:F:90:TYR:CD1	3.07	0.42
1:F:83:ALA:HA	1:F:122:LEU:HD11	2.02	0.42
1:B:83:ALA:CB	1:B:125:MET:CE	2.98	0.41
1:B:142:ASP:C	1:B:144:GLU:N	2.73	0.41
1:D:76:LEU:HD13	1:D:76:LEU:N	2.34	0.41
1:D:85:PHE:CD1	1:D:85:PHE:C	2.93	0.41
2:D:504:2CS:H72	2:D:504:2CS:C11	2.50	0.41
1:E:25:PHE:HA	2:E:505:2CS:C13	2.49	0.41
1:E:44:ARG:H	1:E:44:ARG:HG2	1.54	0.41
1:A:25:PHE:CA	2:A:502:2CS:C14	2.98	0.41
1:A:43:GLN:O	1:C:44:ARG:NE	2.53	0.41
1:D:121:PHE:CD2	1:D:121:PHE:C	2.93	0.41
1:D:139:PHE:N	1:D:139:PHE:HD1	2.17	0.41
1:E:5:THR:O	1:E:8:ASN:ND2	2.53	0.41
1:E:77:LEU:N	1:E:77:LEU:CD1	2.84	0.41
1:E:90:TYR:CD1	1:E:90:TYR:C	2.93	0.41
1:B:33:GLU:HB3	1:B:50:PHE:CB	2.50	0.41
1:B:107:GLN:CG	1:C:40:ARG:NH1	2.82	0.41
1:B:116:LYS:O	1:B:119:ILE:HD13	2.20	0.41
1:C:64:TYR:CD1	1:C:68:LEU:HD22	2.56	0.41
1:D:16:THR:HG22	1:D:17:LEU:HD23	2.02	0.41
1:D:86:ALA:HB3	1:D:122:LEU:HD11	2.02	0.41
1:D:121:PHE:HA	1:D:124:LEU:CD2	2.46	0.41
1:E:50:PHE:O	1:E:50:PHE:CD1	2.73	0.41
1:E:64:TYR:N	1:E:65:PRO:CD	2.83	0.41
1:F:10:VAL:O	1:F:14:ILE:HD12	2.19	0.41
1:F:89:MET:O	1:F:92:PHE:HB2	2.20	0.41
1:F:133:TYR:CE2	1:F:134:TYR:CD1	3.08	0.41
1:A:131:PHE:CZ	1:A:135:LEU:CD1	2.98	0.41
1:C:25:PHE:CA	2:C:501:2CS:CL17	3.05	0.41
1:C:83:ALA:HB2	1:C:125:MET:HE3	2.03	0.41
1:D:40:ARG:HB3	1:F:105:ARG:HH12	1.85	0.41
2:D:504:2CS:H27	1:F:63:ALA:HB2	2.01	0.41
1:E:124:LEU:O	1:E:127:VAL:HG12	2.20	0.41
1:F:94:ARG:HD2	1:F:114:PHE:CZ	2.56	0.41
1:A:120:LEU:CD1	1:A:124:LEU:CD2	2.99	0.41
1:B:26:PHE:N	1:B:26:PHE:CD1	2.89	0.41
1:C:5:THR:OG1	1:C:6:VAL:N	2.52	0.41
1:C:17:LEU:O	1:C:20:VAL:HG12	2.20	0.41
1:C:130:ILE:CG2	1:C:131:PHE:N	2.83	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:27:ALA:CB	2:D:504:2CS:C31	2.98	0.41
1:D:120:LEU:CD2	2:E:505:2CS:H412	2.50	0.41
1:D:135:LEU:O	1:D:139:PHE:N	2.53	0.41
1:E:119:ILE:HD13	1:E:119:ILE:N	2.36	0.41
1:F:96:LYS:N	1:F:96:LYS:CD	2.77	0.41
1:A:14:ILE:CD1	1:C:130:ILE:CD1	2.99	0.41
1:A:89:MET:CB	1:A:118:ILE:HD11	2.51	0.41
2:A:502:2CS:C6	2:A:502:2CS:C10	2.99	0.41
1:B:38:ASN:C	1:B:40:ARG:N	2.72	0.41
1:B:77:LEU:HD23	1:B:130:ILE:HG13	2.01	0.41
1:C:25:PHE:CD1	1:C:25:PHE:C	2.92	0.41
1:C:26:PHE:N	1:C:26:PHE:HD1	2.19	0.41
1:C:46:GLY:O	1:C:47:THR:CB	2.67	0.41
1:C:71:LEU:CD1	1:C:72:TRP:NE1	2.84	0.41
1:D:35:ARG:NH2	1:D:39:GLY:HA2	2.35	0.41
1:D:71:LEU:HD22	1:D:71:LEU:O	2.21	0.41
1:D:71:LEU:HB3	1:D:72:TRP:HD1	1.85	0.41
1:D:144:GLU:OE1	1:D:146:TYR:HD2	2.04	0.41
1:E:116:LYS:CG	2:E:506:2CS:C21	2.97	0.41
1:A:11:LEU:HD23	1:A:80:GLN:O	2.21	0.41
1:A:12:LEU:H	1:A:12:LEU:HG	1.62	0.41
1:A:116:LYS:NZ	2:A:503:2CS:H13A	2.35	0.41
1:A:120:LEU:O	1:A:123:PHE:HB3	2.20	0.41
1:C:82:PRO:CD	1:C:83:ALA:N	2.83	0.41
1:D:3:GLN:NE2	1:F:137:PHE:HB2	2.35	0.41
1:D:41:SER:HA	1:F:109:THR:OG1	2.21	0.41
1:D:64:TYR:N	1:D:65:PRO:CD	2.84	0.41
1:D:120:LEU:HD11	1:D:124:LEU:HD21	2.01	0.41
1:B:102:LEU:HD22	1:B:102:LEU:C	2.41	0.41
1:B:113:ILE:HG12	1:B:114:PHE:N	2.35	0.41
1:B:137:PHE:CD1	1:B:137:PHE:C	2.94	0.41
1:B:141:SER:O	1:B:142:ASP:C	2.58	0.41
1:C:91:LEU:HA	1:C:91:LEU:HD12	1.87	0.41
1:D:123:PHE:CD2	1:E:17:LEU:HD12	2.56	0.41
1:D:124:LEU:N	1:D:124:LEU:CD1	2.80	0.41
1:A:3:GLN:O	1:A:3:GLN:HG3	2.21	0.41
1:A:83:ALA:CA	1:A:125:MET:CE	2.98	0.41
1:A:100:GLY:C	1:A:102:LEU:H	2.24	0.41
1:A:118:ILE:O	1:A:121:PHE:HB3	2.21	0.41
1:B:105:ARG:HA	1:B:105:ARG:HD2	1.30	0.41
1:B:121:PHE:CB	1:F:139:PHE:CE2	2.96	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:41:SER:HB2	1:C:42:PHE:H	1.57	0.41
1:C:64:TYR:CE1	1:C:68:LEU:CD2	3.04	0.41
1:D:30:VAL:HA	1:D:53:VAL:HG11	2.02	0.41
1:D:44:ARG:HE	1:D:44:ARG:N	2.19	0.41
1:D:55:THR:HG22	1:D:101:TYR:CE2	2.55	0.41
1:D:57:ASN:O	1:D:59:ASN:N	2.54	0.41
1:D:66:THR:HG21	1:E:23:ASN:HB3	2.02	0.41
1:D:74:ALA:CB	1:D:125:MET:HB2	2.50	0.41
1:D:100:GLY:C	1:D:102:LEU:H	2.23	0.41
1:D:123:PHE:HD1	1:D:124:LEU:HD13	1.84	0.41
1:E:26:PHE:HD1	1:E:26:PHE:N	2.18	0.41
1:E:31:GLU:OE1	1:E:31:GLU:HA	2.20	0.41
1:F:57:ASN:O	1:F:59:ASN:N	2.52	0.41
1:A:43:GLN:HE22	1:C:54:TYR:C	2.25	0.41
1:B:59:ASN:HD22	1:B:101:TYR:HE2	1.68	0.41
1:B:76:LEU:HD22	1:B:76:LEU:N	2.36	0.41
1:B:83:ALA:HA	1:B:122:LEU:HD11	2.03	0.41
1:C:143:PHE:HD1	1:C:143:PHE:HA	1.79	0.41
1:D:141:SER:C	1:D:143:PHE:N	2.75	0.41
1:E:12:LEU:HA	1:E:15:VAL:CG1	2.51	0.41
1:E:20:VAL:CG1	1:E:21:VAL:N	2.79	0.41
1:A:14:ILE:HD12	1:C:130:ILE:CD1	2.51	0.40
1:A:57:ASN:O	1:A:59:ASN:N	2.54	0.40
1:A:89:MET:HB3	1:A:118:ILE:HD11	2.02	0.40
1:A:94:ARG:HD3	1:A:114:PHE:HZ	1.86	0.40
1:A:101:TYR:HH	1:B:42:PHE:HB3	1.81	0.40
1:B:116:LYS:HG3	2:C:501:2CS:C20	2.50	0.40
1:C:29:LYS:HD2	1:C:29:LYS:HA	1.87	0.40
1:C:77:LEU:N	1:C:77:LEU:HD13	2.36	0.40
1:C:99:VAL:HG12	1:C:100:GLY:N	2.37	0.40
1:D:3:GLN:HE22	1:F:137:PHE:HB2	1.86	0.40
1:E:90:TYR:CD1	1:E:94:ARG:HG3	2.56	0.40
1:E:98:PHE:O	1:E:98:PHE:CG	2.74	0.40
1:E:131:PHE:O	1:E:134:TYR:HB2	2.21	0.40
1:A:11:LEU:H	1:A:11:LEU:CD1	2.31	0.40
1:B:83:ALA:CB	1:B:125:MET:HE1	2.51	0.40
1:B:139:PHE:CZ	1:F:120:LEU:CD1	2.96	0.40
1:D:71:LEU:HD13	1:D:72:TRP:HE1	1.85	0.40
1:E:116:LYS:HG3	2:E:506:2CS:C23	2.51	0.40
1:E:120:LEU:CD2	1:E:124:LEU:HD21	2.51	0.40
1:E:124:LEU:HD13	1:E:124:LEU:N	2.36	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:124:LEU:O	1:E:128:ALA:HB2	2.21	0.40
1:F:26:PHE:CE1	1:F:98:PHE:CD2	3.09	0.40
1:A:97:TYR:CD1	1:A:97:TYR:C	2.94	0.40
1:D:14:ILE:CD1	1:F:130:ILE:CD1	2.99	0.40
1:D:56:ALA:HB2	1:D:101:TYR:HB3	2.03	0.40
1:E:79:SER:HB2	1:E:82:PRO:CD	2.52	0.40
1:F:12:LEU:HD23	1:F:84:ALA:HB2	2.03	0.40
1:F:35:ARG:HA	1:F:35:ARG:HD2	1.60	0.40
1:B:119:ILE:H	1:B:119:ILE:CD1	2.34	0.40
1:B:123:PHE:CD1	1:B:124:LEU:CD1	2.99	0.40
1:C:131:PHE:CD2	1:C:131:PHE:C	2.92	0.40
1:D:33:GLU:OE2	1:D:49:ALA:HB1	2.21	0.40
2:D:504:2CS:C27	1:F:63:ALA:HB2	2.51	0.40
2:D:504:2CS:H34	1:F:62:ASP:HB2	2.03	0.40
1:A:34:SER:HB3	1:A:42:PHE:HE2	1.86	0.40
1:B:8:ASN:N	1:B:8:ASN:ND2	2.29	0.40
1:B:35:ARG:C	1:B:37:GLN:N	2.74	0.40
1:B:116:LYS:HA	1:B:119:ILE:CD1	2.36	0.40
1:C:26:PHE:HD1	1:C:26:PHE:H	1.70	0.40
1:C:79:SER:CB	1:C:82:PRO:CD	2.99	0.40
1:E:2:ASP:OD1	1:E:2:ASP:N	2.43	0.40
1:E:48:LEU:CD1	1:E:52:ARG:CD	2.99	0.40
1:E:76:LEU:HB3	1:F:1:MET:HG3	2.02	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	137/161 (85%)	108 (79%)	19 (14%)	10 (7%)	1 16
1	B	146/161 (91%)	104 (71%)	23 (16%)	19 (13%)	0 5

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
1	C	147/161 (91%)	112 (76%)	17 (12%)	18 (12%)	0 5
1	D	145/161 (90%)	104 (72%)	27 (19%)	14 (10%)	0 11
1	E	138/161 (86%)	103 (75%)	23 (17%)	12 (9%)	1 13
1	F	147/161 (91%)	108 (74%)	24 (16%)	15 (10%)	0 9
All	All	860/966 (89%)	639 (74%)	133 (16%)	88 (10%)	0 9

All (88) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	38	ASN
1	A	79	SER
1	A	111	GLY
1	B	36	THR
1	B	41	SER
1	B	45	THR
1	B	47	THR
1	B	48	LEU
1	B	79	SER
1	B	106	THR
1	B	143	PHE
1	C	38	ASN
1	C	47	THR
1	C	79	SER
1	C	108	SER
1	C	113	ILE
1	C	144	GLU
1	D	79	SER
1	D	104	GLU
1	D	113	ILE
1	D	114	PHE
1	E	79	SER
1	F	40	ARG
1	F	41	SER
1	F	44	ARG
1	F	47	THR
1	F	79	SER
1	F	108	SER
1	F	113	ILE
1	F	114	PHE
1	F	144	GLU
1	A	104	GLU

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	107	GLN
1	B	105	ARG
1	B	108	SER
1	B	115	GLY
1	B	142	ASP
1	C	42	PHE
1	C	78	CYS
1	C	102	LEU
1	C	114	PHE
1	C	143	PHE
1	D	103	GLY
1	D	112	TYR
1	D	146	TYR
1	E	9	VAL
1	E	44	ARG
1	E	111	GLY
1	E	115	GLY
1	A	45	THR
1	A	58	GLN
1	A	78	CYS
1	B	58	GLN
1	B	78	CYS
1	B	146	TYR
1	C	58	GLN
1	C	69	ALA
1	D	9	VAL
1	D	41	SER
1	D	58	GLN
1	D	69	ALA
1	D	78	CYS
1	D	143	PHE
1	E	69	ALA
1	E	78	CYS
1	E	112	TYR
1	F	43	GLN
1	F	58	GLN
1	F	78	CYS
1	F	148	ALA
1	A	9	VAL
1	B	69	ALA
1	B	141	SER
1	C	9	VAL

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	C	41	SER
1	C	110	PRO
1	E	40	ARG
1	E	58	GLN
1	E	113	ILE
1	F	69	ALA
1	A	69	ALA
1	B	110	PRO
1	E	104	GLU
1	F	9	VAL
1	C	46	GLY
1	D	109	THR
1	B	9	VAL
1	C	147	ILE

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	117/137 (85%)	59 (50%)	58 (50%)	0	0
1	B	124/137 (90%)	68 (55%)	56 (45%)	0	0
1	C	125/137 (91%)	63 (50%)	62 (50%)	0	0
1	D	124/137 (90%)	68 (55%)	56 (45%)	0	0
1	E	117/137 (85%)	60 (51%)	57 (49%)	0	0
1	F	125/137 (91%)	65 (52%)	60 (48%)	0	0
All	All	732/822 (89%)	383 (52%)	349 (48%)	0	0

All (349) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	1	MET
1	A	2	ASP
1	A	4	GLU
1	A	6	VAL

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	8	ASN
1	A	9	VAL
1	A	11	LEU
1	A	12	LEU
1	A	14	ILE
1	A	15	VAL
1	A	18	ILE
1	A	20	VAL
1	A	21	VAL
1	A	22	GLN
1	A	25	PHE
1	A	29	LYS
1	A	30	VAL
1	A	32	HIS
1	A	33	GLU
1	A	35	ARG
1	A	37	GLN
1	A	38	ASN
1	A	42	PHE
1	A	45	THR
1	A	48	LEU
1	A	52	ARG
1	A	62	ASP
1	A	64	TYR
1	A	66	THR
1	A	67	PHE
1	A	68	LEU
1	A	76	LEU
1	A	81	VAL
1	A	88	LEU
1	A	89	MET
1	A	91	LEU
1	A	94	ARG
1	A	95	GLN
1	A	96	LYS
1	A	99	VAL
1	A	101	TYR
1	A	102	LEU
1	A	104	GLU
1	A	105	ARG
1	A	107	GLN
1	A	112	TYR

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	116	LYS
1	A	118	ILE
1	A	119	ILE
1	A	121	PHE
1	A	122	LEU
1	A	124	LEU
1	A	126	SER
1	A	130	ILE
1	A	131	PHE
1	A	132	ASN
1	A	133	TYR
1	A	138	PHE
1	B	2	ASP
1	B	4	GLU
1	B	6	VAL
1	B	8	ASN
1	B	9	VAL
1	B	11	LEU
1	B	12	LEU
1	B	17	LEU
1	B	18	ILE
1	B	20	VAL
1	B	21	VAL
1	B	22	GLN
1	B	29	LYS
1	B	30	VAL
1	B	31	GLU
1	B	32	HIS
1	B	35	ARG
1	B	37	GLN
1	B	38	ASN
1	B	40	ARG
1	B	41	SER
1	B	44	ARG
1	B	52	ARG
1	B	55	THR
1	B	57	ASN
1	B	58	GLN
1	B	62	ASP
1	B	66	THR
1	B	68	LEU
1	B	71	LEU

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	B	88	LEU
1	B	91	LEU
1	B	94	ARG
1	B	95	GLN
1	B	96	LYS
1	B	101	TYR
1	B	102	LEU
1	B	105	ARG
1	B	106	THR
1	B	107	GLN
1	B	109	THR
1	B	113	ILE
1	B	114	PHE
1	B	116	LYS
1	B	118	ILE
1	B	119	ILE
1	B	122	LEU
1	B	124	LEU
1	B	130	ILE
1	B	131	PHE
1	B	132	ASN
1	B	135	LEU
1	B	143	PHE
1	B	144	GLU
1	B	145	ASN
1	B	146	TYR
1	C	1	MET
1	C	2	ASP
1	C	4	GLU
1	C	5	THR
1	C	6	VAL
1	C	8	ASN
1	C	10	VAL
1	C	11	LEU
1	C	14	ILE
1	C	15	VAL
1	C	16	THR
1	C	17	LEU
1	C	20	VAL
1	C	21	VAL
1	C	22	GLN
1	C	30	VAL

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	C	32	HIS
1	C	33	GLU
1	C	34	SER
1	C	35	ARG
1	C	37	GLN
1	C	40	ARG
1	C	41	SER
1	C	45	THR
1	C	48	LEU
1	C	52	ARG
1	C	53	VAL
1	C	55	THR
1	C	64	TYR
1	C	66	THR
1	C	67	PHE
1	C	68	LEU
1	C	71	LEU
1	C	76	LEU
1	C	77	LEU
1	C	78	CYS
1	C	81	VAL
1	C	91	LEU
1	C	94	ARG
1	C	95	GLN
1	C	96	LYS
1	C	97	TYR
1	C	99	VAL
1	C	102	LEU
1	C	104	GLU
1	C	105	ARG
1	C	106	THR
1	C	107	GLN
1	C	116	LYS
1	C	117	ARG
1	C	119	ILE
1	C	120	LEU
1	C	122	LEU
1	C	124	LEU
1	C	126	SER
1	C	130	ILE
1	C	131	PHE
1	C	132	ASN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	C	133	TYR
1	C	139	PHE
1	C	143	PHE
1	C	146	TYR
1	D	1	MET
1	D	2	ASP
1	D	8	ASN
1	D	14	ILE
1	D	15	VAL
1	D	17	LEU
1	D	18	ILE
1	D	20	VAL
1	D	21	VAL
1	D	25	PHE
1	D	29	LYS
1	D	32	HIS
1	D	35	ARG
1	D	42	PHE
1	D	44	ARG
1	D	48	LEU
1	D	50	PHE
1	D	51	GLU
1	D	52	ARG
1	D	55	THR
1	D	62	ASP
1	D	66	THR
1	D	68	LEU
1	D	71	LEU
1	D	73	SER
1	D	76	LEU
1	D	79	SER
1	D	88	LEU
1	D	91	LEU
1	D	93	VAL
1	D	94	ARG
1	D	95	GLN
1	D	96	LYS
1	D	99	VAL
1	D	101	TYR
1	D	105	ARG
1	D	106	THR
1	D	107	GLN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	D	112	TYR
1	D	114	PHE
1	D	116	LYS
1	D	118	ILE
1	D	119	ILE
1	D	122	LEU
1	D	124	LEU
1	D	126	SER
1	D	130	ILE
1	D	131	PHE
1	D	132	ASN
1	D	133	TYR
1	D	135	LEU
1	D	136	ILE
1	D	141	SER
1	D	142	ASP
1	D	143	PHE
1	D	146	TYR
1	E	1	MET
1	E	2	ASP
1	E	3	GLN
1	E	4	GLU
1	E	8	ASN
1	E	9	VAL
1	E	14	ILE
1	E	17	LEU
1	E	18	ILE
1	E	20	VAL
1	E	21	VAL
1	E	22	GLN
1	E	29	LYS
1	E	32	HIS
1	E	33	GLU
1	E	34	SER
1	E	35	ARG
1	E	37	GLN
1	E	40	ARG
1	E	42	PHE
1	E	43	GLN
1	E	44	ARG
1	E	47	THR
1	E	48	LEU

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	E	51	GLU
1	E	52	ARG
1	E	62	ASP
1	E	64	TYR
1	E	66	THR
1	E	71	LEU
1	E	76	LEU
1	E	77	LEU
1	E	81	VAL
1	E	93	VAL
1	E	95	GLN
1	E	96	LYS
1	E	101	TYR
1	E	104	GLU
1	E	105	ARG
1	E	107	GLN
1	E	112	TYR
1	E	114	PHE
1	E	116	LYS
1	E	119	ILE
1	E	121	PHE
1	E	122	LEU
1	E	124	LEU
1	E	126	SER
1	E	130	ILE
1	E	131	PHE
1	E	132	ASN
1	E	133	TYR
1	E	134	TYR
1	E	135	LEU
1	E	137	PHE
1	E	138	PHE
1	E	139	PHE
1	F	1	MET
1	F	2	ASP
1	F	4	GLU
1	F	8	ASN
1	F	9	VAL
1	F	11	LEU
1	F	14	ILE
1	F	15	VAL
1	F	17	LEU

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	F	20	VAL
1	F	21	VAL
1	F	22	GLN
1	F	25	PHE
1	F	29	LYS
1	F	33	GLU
1	F	35	ARG
1	F	40	ARG
1	F	41	SER
1	F	42	PHE
1	F	43	GLN
1	F	44	ARG
1	F	47	THR
1	F	48	LEU
1	F	50	PHE
1	F	52	ARG
1	F	53	VAL
1	F	62	ASP
1	F	64	TYR
1	F	66	THR
1	F	67	PHE
1	F	68	LEU
1	F	71	LEU
1	F	76	LEU
1	F	81	VAL
1	F	88	LEU
1	F	89	MET
1	F	91	LEU
1	F	94	ARG
1	F	95	GLN
1	F	96	LYS
1	F	99	VAL
1	F	102	LEU
1	F	105	ARG
1	F	106	THR
1	F	109	THR
1	F	113	ILE
1	F	114	PHE
1	F	118	ILE
1	F	119	ILE
1	F	122	LEU
1	F	130	ILE

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	F	131	PHE
1	F	132	ASN
1	F	133	TYR
1	F	135	LEU
1	F	136	ILE
1	F	137	PHE
1	F	143	PHE
1	F	145	ASN
1	F	147	ILE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (26) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	8	ASN
1	A	28	HIS
1	A	43	GLN
1	A	57	ASN
1	A	80	GLN
1	B	8	ASN
1	B	80	GLN
1	B	107	GLN
1	B	132	ASN
1	B	145	ASN
1	C	23	ASN
1	C	28	HIS
1	C	57	ASN
1	C	58	GLN
1	C	80	GLN
1	D	22	GLN
1	D	28	HIS
1	D	38	ASN
1	D	58	GLN
1	D	80	GLN
1	E	8	ASN
1	E	28	HIS
1	E	80	GLN
1	E	132	ASN
1	F	57	ASN
1	F	80	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 monosaccharides in this entry.

5.6 Ligand geometry (i)

6 ligands are modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
2	2CS	D	504	-	40,45,45	2.03	17 (42%)	55,67,67	2.44	23 (41%)
2	2CS	A	502	-	40,45,45	2.04	14 (35%)	55,67,67	2.14	24 (43%)
2	2CS	A	503	-	40,45,45	2.19	18 (45%)	55,67,67	2.53	27 (49%)
2	2CS	C	501	-	40,45,45	2.09	10 (25%)	55,67,67	2.62	24 (43%)
2	2CS	E	505	-	40,45,45	2.43	18 (45%)	55,67,67	2.53	26 (47%)
2	2CS	E	506	-	40,45,45	2.18	21 (52%)	55,67,67	2.12	20 (36%)

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	2CS	D	504	-	-	12/17/25/25	0/5/5/5
2	2CS	A	502	-	-	9/17/25/25	0/5/5/5

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	2CS	A	503	-	-	12/17/25/25	0/5/5/5
2	2CS	C	501	-	-	11/17/25/25	0/5/5/5
2	2CS	E	505	-	-	11/17/25/25	0/5/5/5
2	2CS	E	506	-	-	9/17/25/25	0/5/5/5

All (98) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	E	505	2CS	O24-C23	-5.94	1.23	1.37
2	A	502	2CS	O24-C23	-5.59	1.24	1.37
2	C	501	2CS	C10-N9	-5.40	1.38	1.48
2	E	506	2CS	C22-C23	5.01	1.46	1.37
2	A	503	2CS	O24-C23	-4.82	1.26	1.37
2	E	505	2CS	C2-C3	-4.74	1.43	1.50
2	C	501	2CS	O24-C23	-4.62	1.27	1.37
2	C	501	2CS	C22-C23	4.53	1.45	1.37
2	A	503	2CS	C22-C23	4.53	1.45	1.37
2	E	505	2CS	C22-C23	4.39	1.44	1.37
2	E	505	2CS	C10-N9	-4.25	1.40	1.48
2	D	504	2CS	O24-C23	-4.22	1.27	1.37
2	E	506	2CS	C36-S37	-4.18	1.73	1.78
2	C	501	2CS	C16-CL17	-3.98	1.65	1.74
2	D	504	2CS	C22-C23	3.88	1.44	1.37
2	E	505	2CS	O24-C25	-3.85	1.30	1.43
2	C	501	2CS	C10-C11	-3.84	1.42	1.51
2	A	502	2CS	C16-CL17	-3.74	1.66	1.74
2	A	503	2CS	C10-N9	-3.68	1.41	1.48
2	E	505	2CS	C33-C34	3.66	1.45	1.36
2	E	505	2CS	C16-CL17	-3.66	1.66	1.74
2	A	502	2CS	C2-C3	-3.60	1.45	1.50
2	A	502	2CS	C36-S37	-3.50	1.74	1.78
2	D	504	2CS	C29-C30	3.47	1.47	1.42
2	E	505	2CS	C30-N35	-3.42	1.32	1.37
2	A	503	2CS	C26-N35	3.38	1.38	1.32
2	A	503	2CS	C10-C11	-3.35	1.43	1.51
2	E	506	2CS	C13-C16	3.35	1.44	1.38
2	D	504	2CS	C32-C31	3.35	1.44	1.36
2	E	506	2CS	O24-C23	-3.30	1.30	1.37
2	A	502	2CS	C22-C23	3.29	1.42	1.37
2	A	503	2CS	C2-C3	-3.14	1.45	1.50
2	E	505	2CS	C10-C11	-3.14	1.43	1.51

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	A	503	2CS	C29-C30	3.13	1.47	1.42
2	A	502	2CS	O24-C25	-3.13	1.33	1.43
2	D	504	2CS	C2-C3	-3.13	1.45	1.50
2	D	504	2CS	C26-N35	3.11	1.38	1.32
2	E	506	2CS	C20-C23	3.10	1.44	1.38
2	C	501	2CS	C32-C31	3.04	1.43	1.36
2	E	506	2CS	C29-C30	2.99	1.46	1.42
2	E	505	2CS	C7-C8	-2.95	1.45	1.50
2	D	504	2CS	C10-C11	-2.94	1.44	1.51
2	E	505	2CS	C25-C26	-2.93	1.43	1.50
2	E	506	2CS	C33-C34	2.91	1.43	1.36
2	A	503	2CS	O24-C25	-2.91	1.33	1.43
2	D	504	2CS	C16-CL17	-2.90	1.68	1.74
2	A	503	2CS	C16-CL17	-2.89	1.68	1.74
2	E	506	2CS	C2-C3	-2.87	1.46	1.50
2	E	505	2CS	C29-C30	2.84	1.46	1.42
2	A	503	2CS	C33-C34	2.83	1.43	1.36
2	E	506	2CS	C10-N9	-2.83	1.43	1.48
2	C	501	2CS	C33-C34	2.78	1.43	1.36
2	A	502	2CS	C10-C11	-2.78	1.44	1.51
2	D	504	2CS	C10-N9	-2.77	1.43	1.48
2	D	504	2CS	C33-C34	2.75	1.43	1.36
2	A	503	2CS	C28-C27	2.72	1.42	1.36
2	A	502	2CS	C30-N35	-2.68	1.33	1.37
2	A	503	2CS	C8-C36	-2.65	1.35	1.39
2	C	501	2CS	C26-N35	2.62	1.37	1.32
2	A	503	2CS	C32-C31	2.61	1.42	1.36
2	A	502	2CS	C32-C31	2.61	1.42	1.36
2	A	502	2CS	C25-C26	-2.61	1.43	1.50
2	A	502	2CS	C33-C34	2.59	1.42	1.36
2	C	501	2CS	O24-C25	-2.59	1.35	1.43
2	A	503	2CS	C15-C16	2.55	1.42	1.38
2	E	506	2CS	C13-C12	2.53	1.43	1.38
2	C	501	2CS	C28-C27	2.48	1.41	1.36
2	D	504	2CS	O24-C25	-2.47	1.35	1.43
2	E	506	2CS	C19-C20	2.47	1.41	1.36
2	D	504	2CS	C38-S37	-2.45	1.82	1.85
2	D	504	2CS	C13-C16	2.41	1.42	1.38
2	E	505	2CS	C13-C16	2.40	1.42	1.38
2	E	505	2CS	C36-S37	-2.39	1.75	1.78
2	E	506	2CS	C32-C31	2.38	1.42	1.36
2	A	502	2CS	C15-C16	2.34	1.42	1.38

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	E	506	2CS	C15-C16	2.33	1.42	1.38
2	D	504	2CS	C15-C16	2.33	1.42	1.38
2	E	506	2CS	C33-C32	2.31	1.44	1.38
2	A	503	2CS	C7-C2	-2.30	1.53	1.56
2	D	504	2CS	C33-C32	2.30	1.44	1.38
2	E	506	2CS	C12-C11	2.25	1.43	1.38
2	E	506	2CS	C28-C27	2.25	1.41	1.36
2	E	506	2CS	C10-C11	-2.24	1.46	1.51
2	A	502	2CS	C13-C16	2.24	1.42	1.38
2	A	503	2CS	C7-C8	-2.22	1.46	1.50
2	E	505	2CS	C33-C32	2.21	1.43	1.38
2	E	506	2CS	C26-N35	2.21	1.36	1.32
2	E	505	2CS	C7-C2	-2.21	1.53	1.56
2	E	506	2CS	O24-C25	-2.20	1.36	1.43
2	A	502	2CS	C10-N9	-2.18	1.44	1.48
2	E	506	2CS	C30-N35	-2.14	1.34	1.37
2	A	503	2CS	C33-C32	2.12	1.43	1.38
2	E	505	2CS	C28-C27	2.11	1.41	1.36
2	D	504	2CS	C28-C27	2.07	1.41	1.36
2	A	503	2CS	C13-C16	2.04	1.41	1.38
2	E	506	2CS	C16-CL17	-2.03	1.70	1.74
2	D	504	2CS	C8-C36	-2.02	1.36	1.39
2	E	505	2CS	C27-C26	2.01	1.43	1.38

All (144) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	A	503	2CS	C8-C36-S37	-8.35	117.42	126.77
2	C	501	2CS	C11-C10-N9	-7.23	101.39	112.63
2	E	505	2CS	C31-C30-C29	7.11	126.52	119.04
2	E	505	2CS	C11-C10-N9	-6.64	102.31	112.63
2	D	504	2CS	C7-C8-C36	-6.41	119.40	130.34
2	A	503	2CS	C7-C8-C36	-6.14	119.87	130.34
2	C	501	2CS	C15-C16-CL17	-5.63	110.56	119.35
2	C	501	2CS	C14-C11-C12	5.52	126.84	118.17
2	D	504	2CS	C8-C36-S37	-5.41	120.72	126.77
2	D	504	2CS	C11-C10-N9	-5.38	104.27	112.63
2	D	504	2CS	C25-O24-C23	5.25	130.63	117.65
2	E	506	2CS	C7-C8-C36	-5.18	121.50	130.34
2	D	504	2CS	C14-C11-C12	4.99	126.00	118.17
2	A	503	2CS	C14-C11-C12	4.87	125.82	118.17
2	C	501	2CS	C12-C13-C16	-4.83	114.15	119.24

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	E	506	2CS	C25-O24-C23	4.65	129.13	117.65
2	E	506	2CS	C31-C30-C29	4.65	123.93	119.04
2	A	502	2CS	C14-C11-C12	4.54	125.30	118.17
2	C	501	2CS	C15-C16-C13	4.44	127.00	121.24
2	C	501	2CS	C25-O24-C23	4.33	128.34	117.65
2	E	505	2CS	C14-C11-C12	4.17	124.72	118.17
2	A	502	2CS	C15-C16-C13	4.15	126.62	121.24
2	C	501	2CS	C10-C11-C14	-4.14	112.54	120.40
2	D	504	2CS	O24-C25-C26	4.12	120.50	109.42
2	A	502	2CS	C7-C8-C36	-4.05	123.44	130.34
2	E	505	2CS	C19-C18-C21	4.04	126.44	120.94
2	A	502	2CS	C6-C2-C3	-4.02	99.51	109.45
2	C	501	2CS	C15-C14-C11	-3.80	115.80	121.03
2	E	506	2CS	C32-C31-C30	-3.75	114.68	120.08
2	E	505	2CS	C15-C16-C13	3.74	126.08	121.24
2	A	503	2CS	C31-C30-C29	3.71	122.94	119.04
2	D	504	2CS	C15-C16-C13	3.70	126.04	121.24
2	E	505	2CS	C12-C13-C16	-3.68	115.36	119.24
2	E	506	2CS	C14-C11-C12	3.68	123.95	118.17
2	E	506	2CS	C11-C10-N9	3.66	118.31	112.63
2	C	501	2CS	C19-C18-C21	3.66	125.92	120.94
2	A	503	2CS	C25-O24-C23	3.63	126.61	117.65
2	E	505	2CS	C29-C30-N35	-3.62	116.87	122.26
2	A	503	2CS	C23-C22-C21	-3.55	115.33	120.05
2	E	505	2CS	C39-C38-C41	-3.55	100.11	110.33
2	E	506	2CS	C10-C11-C14	-3.53	113.70	120.40
2	D	504	2CS	C25-C26-C27	-3.51	113.24	121.81
2	C	501	2CS	C38-S37-C36	-3.49	98.27	104.81
2	C	501	2CS	C8-C36-S37	-3.43	122.93	126.77
2	D	504	2CS	C10-C11-C14	-3.41	113.92	120.40
2	A	502	2CS	C31-C30-C29	3.41	122.62	119.04
2	C	501	2CS	O24-C25-C26	3.39	118.55	109.42
2	A	503	2CS	O24-C25-C26	3.39	118.54	109.42
2	A	503	2CS	C32-C31-C30	-3.37	115.23	120.08
2	E	505	2CS	C40-C38-S37	3.35	121.09	108.29
2	E	505	2CS	C32-C31-C30	-3.34	115.28	120.08
2	E	505	2CS	C7-C8-C36	-3.30	124.71	130.34
2	E	505	2CS	C15-C16-CL17	-3.30	114.20	119.35
2	E	505	2CS	C28-C29-C30	3.27	123.07	118.45
2	A	503	2CS	C19-C18-C21	3.22	125.32	120.94
2	A	502	2CS	C12-C13-C16	-3.21	115.85	119.24
2	C	501	2CS	C8-N9-C18	3.19	112.98	106.63

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	A	502	2CS	C20-C23-C22	3.14	125.02	120.81
2	A	502	2CS	C23-C22-C21	-3.09	115.94	120.05
2	A	503	2CS	C36-C21-C18	-3.08	105.81	114.39
2	C	501	2CS	C25-C26-C27	-3.01	114.46	121.81
2	D	504	2CS	C13-C12-C11	-3.00	116.90	121.03
2	A	503	2CS	C13-C12-C11	-2.98	116.92	121.03
2	E	505	2CS	C32-C33-C34	2.96	124.59	120.44
2	E	506	2CS	C33-C34-C29	-2.94	115.85	120.44
2	A	503	2CS	C6-C2-C1	-2.94	99.25	107.28
2	E	506	2CS	C23-C22-C21	-2.93	116.15	120.05
2	C	501	2CS	C7-C8-C36	-2.88	125.42	130.34
2	A	503	2CS	C29-C30-N35	-2.88	117.98	122.26
2	A	502	2CS	C39-C38-C41	-2.86	102.10	110.33
2	E	506	2CS	C29-C30-N35	-2.72	118.21	122.26
2	A	502	2CS	O24-C25-C26	2.72	116.74	109.42
2	E	505	2CS	C23-C22-C21	-2.72	116.44	120.05
2	E	505	2CS	C15-C14-C11	-2.71	117.29	121.03
2	E	505	2CS	C25-O24-C23	2.71	124.34	117.65
2	A	502	2CS	C41-C38-S37	2.71	118.63	108.29
2	E	506	2CS	O24-C25-C26	2.68	116.65	109.42
2	D	504	2CS	C12-C13-C16	-2.67	116.42	119.24
2	A	503	2CS	C40-C38-C39	-2.67	102.64	110.33
2	A	502	2CS	C14-C15-C16	-2.66	116.44	119.24
2	D	504	2CS	C32-C31-C30	-2.64	116.28	120.08
2	A	503	2CS	C15-C14-C11	-2.64	117.40	121.03
2	A	502	2CS	C15-C14-C11	-2.63	117.41	121.03
2	A	503	2CS	C10-C11-C12	-2.63	115.41	120.40
2	A	502	2CS	C25-O24-C23	2.62	124.12	117.65
2	E	505	2CS	C27-C28-C29	-2.62	116.77	120.82
2	E	505	2CS	C28-C27-C26	-2.62	116.03	119.18
2	C	501	2CS	C22-C21-C18	-2.61	116.53	119.65
2	A	502	2CS	C32-C31-C30	-2.59	116.35	120.08
2	E	505	2CS	C20-C23-C22	2.57	124.26	120.81
2	D	504	2CS	C28-C29-C34	-2.55	117.23	123.19
2	D	504	2CS	C34-C29-C30	2.52	122.01	118.45
2	A	502	2CS	C29-C30-N35	-2.47	118.58	122.26
2	A	503	2CS	C33-C34-C29	-2.46	116.59	120.44
2	D	504	2CS	C33-C34-C29	-2.46	116.60	120.44
2	E	506	2CS	C19-C18-C21	2.45	124.27	120.94
2	C	501	2CS	C40-C38-S37	2.43	117.59	108.29
2	C	501	2CS	C40-C38-C39	-2.43	103.32	110.33
2	A	503	2CS	C15-C16-C13	2.41	124.37	121.24

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	D	504	2CS	C15-C14-C11	-2.38	117.76	121.03
2	E	506	2CS	C36-C21-C18	-2.37	107.79	114.39
2	E	506	2CS	C20-C19-C18	-2.36	116.08	119.70
2	A	502	2CS	C13-C16-CL17	-2.35	115.68	119.35
2	A	503	2CS	C6-C2-C3	2.35	115.25	109.45
2	C	501	2CS	C36-C21-C18	-2.33	107.89	114.39
2	C	501	2CS	C13-C12-C11	-2.32	117.84	121.03
2	C	501	2CS	C26-N35-C30	2.31	121.89	118.00
2	C	501	2CS	C29-C30-N35	-2.31	118.83	122.26
2	D	504	2CS	C19-C18-C21	2.26	124.02	120.94
2	E	505	2CS	C33-C34-C29	-2.26	116.91	120.44
2	A	503	2CS	C41-C38-S37	2.26	116.91	108.29
2	A	502	2CS	C38-S37-C36	-2.25	100.60	104.81
2	A	502	2CS	C1-C2-C3	2.24	114.98	109.45
2	D	504	2CS	C14-C15-C16	-2.24	116.88	119.24
2	E	506	2CS	C28-C29-C30	2.22	121.59	118.45
2	A	503	2CS	C20-C23-C22	2.20	123.77	120.81
2	E	506	2CS	C13-C12-C11	-2.20	118.00	121.03
2	D	504	2CS	C39-C38-C41	-2.20	103.98	110.33
2	A	503	2CS	C20-C19-C18	-2.20	116.32	119.70
2	D	504	2CS	C29-C30-N35	-2.20	118.99	122.26
2	A	502	2CS	C19-C18-C21	2.19	123.92	120.94
2	E	506	2CS	C28-C29-C34	-2.19	118.08	123.19
2	A	503	2CS	C11-C10-N9	-2.17	109.26	112.63
2	E	506	2CS	C40-C38-S37	2.17	116.57	108.29
2	E	506	2CS	C15-C14-C11	-2.16	118.06	121.03
2	A	503	2CS	C26-N35-C30	2.15	121.62	118.00
2	E	505	2CS	O24-C25-C26	2.15	115.20	109.42
2	A	502	2CS	C28-C29-C30	2.13	121.46	118.45
2	A	503	2CS	C39-C38-C41	-2.11	104.25	110.33
2	A	502	2CS	C10-C11-C12	-2.10	116.40	120.40
2	A	503	2CS	C25-C26-C27	-2.10	116.67	121.81
2	E	506	2CS	C41-C38-S37	2.10	116.32	108.29
2	E	505	2CS	C20-C19-C18	-2.09	116.48	119.70
2	E	505	2CS	C27-C26-N35	2.08	125.98	123.12
2	A	502	2CS	C36-C21-C18	-2.08	108.60	114.39
2	D	504	2CS	C36-C21-C18	-2.07	108.61	114.39
2	A	503	2CS	C13-C16-CL17	-2.07	116.12	119.35
2	D	504	2CS	O24-C23-C22	-2.06	116.99	123.96
2	E	505	2CS	C22-C21-C18	-2.06	117.18	119.65
2	E	505	2CS	C36-C21-C18	-2.05	108.68	114.39
2	C	501	2CS	C34-C29-C30	2.05	121.34	118.45

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	A	502	2CS	C25-C26-C27	-2.04	116.81	121.81
2	C	501	2CS	C20-C23-C22	2.01	123.51	120.81
2	D	504	2CS	C41-C38-S37	2.00	115.93	108.29

There are no chirality outliers.

All (64) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	A	502	2CS	C11-C10-N9-C8
2	A	503	2CS	C1-C2-C7-C8
2	A	503	2CS	C3-C2-C7-C8
2	A	503	2CS	C6-C2-C7-C8
2	A	503	2CS	C2-C7-C8-N9
2	C	501	2CS	C1-C2-C7-C8
2	C	501	2CS	C3-C2-C7-C8
2	C	501	2CS	C6-C2-C7-C8
2	C	501	2CS	C2-C7-C8-N9
2	D	504	2CS	C1-C2-C7-C8
2	D	504	2CS	C3-C2-C7-C8
2	D	504	2CS	C6-C2-C7-C8
2	E	505	2CS	C1-C2-C7-C8
2	E	505	2CS	C3-C2-C7-C8
2	E	505	2CS	C6-C2-C7-C8
2	E	505	2CS	C2-C7-C8-N9
2	E	506	2CS	C2-C7-C8-N9
2	C	501	2CS	C39-C38-S37-C36
2	C	501	2CS	C40-C38-S37-C36
2	D	504	2CS	C39-C38-S37-C36
2	A	503	2CS	C22-C23-O24-C25
2	A	503	2CS	C20-C23-O24-C25
2	E	505	2CS	C22-C23-O24-C25
2	E	506	2CS	C20-C23-O24-C25
2	E	506	2CS	C22-C23-O24-C25
2	E	505	2CS	C20-C23-O24-C25
2	A	502	2CS	C22-C23-O24-C25
2	A	502	2CS	C20-C23-O24-C25
2	A	502	2CS	C41-C38-S37-C36
2	A	503	2CS	C41-C38-S37-C36
2	A	503	2CS	C39-C38-S37-C36
2	A	503	2CS	C40-C38-S37-C36
2	C	501	2CS	C41-C38-S37-C36
2	D	504	2CS	C41-C38-S37-C36

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms
2	D	504	2CS	C40-C38-S37-C36
2	D	504	2CS	C26-C25-O24-C23
2	E	506	2CS	C41-C38-S37-C36
2	A	502	2CS	C39-C38-S37-C36
2	A	502	2CS	C40-C38-S37-C36
2	E	506	2CS	C40-C38-S37-C36
2	A	503	2CS	N9-C10-C11-C14
2	E	506	2CS	C39-C38-S37-C36
2	A	503	2CS	N9-C10-C11-C12
2	E	506	2CS	C8-C36-S37-C38
2	C	501	2CS	N9-C10-C11-C12
2	C	501	2CS	N9-C10-C11-C14
2	E	506	2CS	N9-C10-C11-C14
2	D	504	2CS	C11-C10-N9-C8
2	E	505	2CS	N9-C10-C11-C14
2	E	506	2CS	N9-C10-C11-C12
2	E	505	2CS	N9-C10-C11-C12
2	E	505	2CS	C39-C38-S37-C36
2	E	505	2CS	C40-C38-S37-C36
2	D	504	2CS	N9-C10-C11-C12
2	D	504	2CS	N9-C10-C11-C14
2	A	502	2CS	C6-C2-C7-C8
2	C	501	2CS	O24-C25-C26-N35
2	D	504	2CS	O24-C25-C26-N35
2	C	501	2CS	O24-C25-C26-C27
2	D	504	2CS	O24-C25-C26-C27
2	A	502	2CS	C2-C7-C8-N9
2	A	502	2CS	C11-C10-N9-C18
2	E	505	2CS	C26-C25-O24-C23
2	A	503	2CS	O24-C25-C26-C27

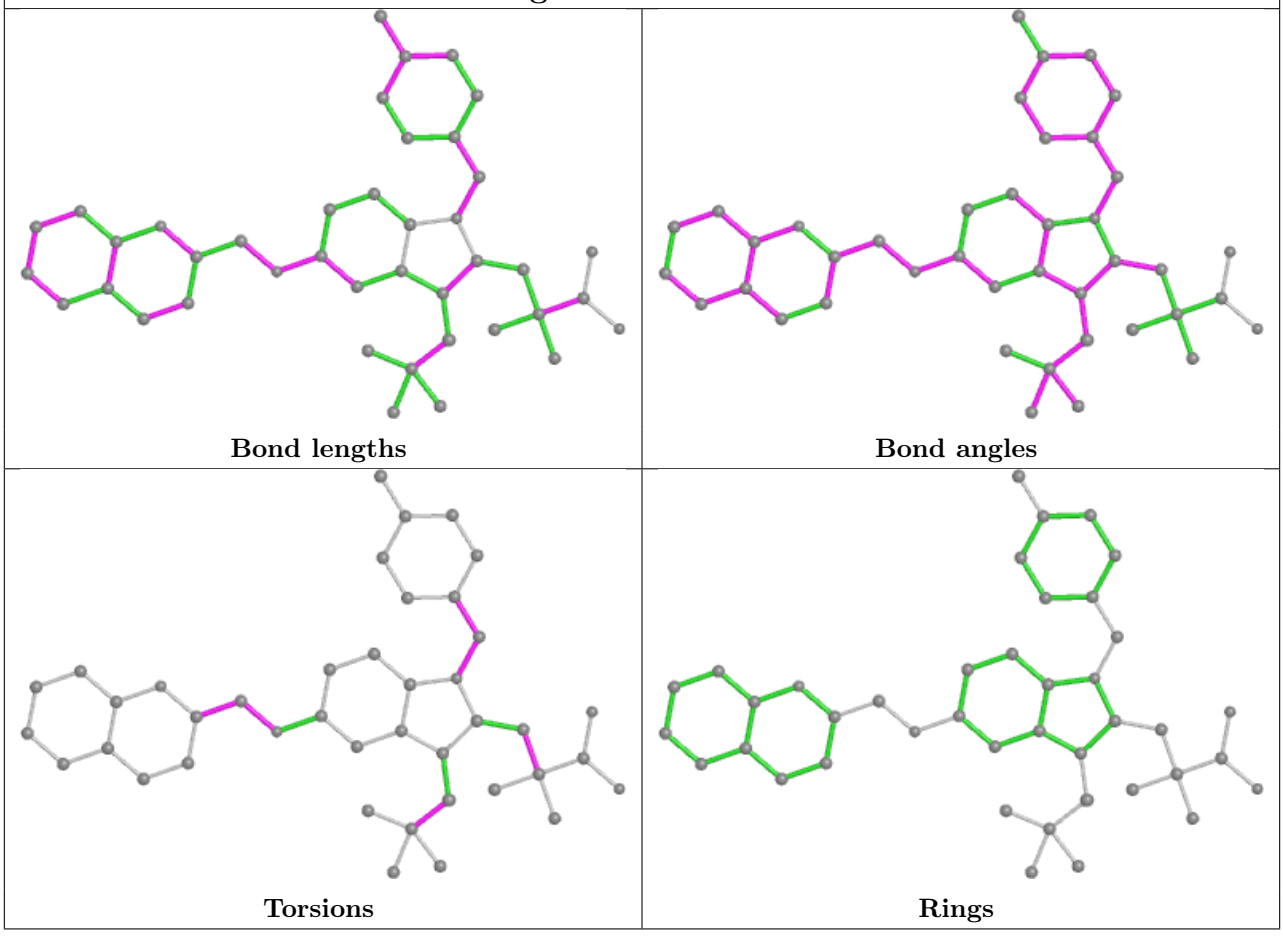
There are no ring outliers.

6 monomers are involved in 174 short contacts:

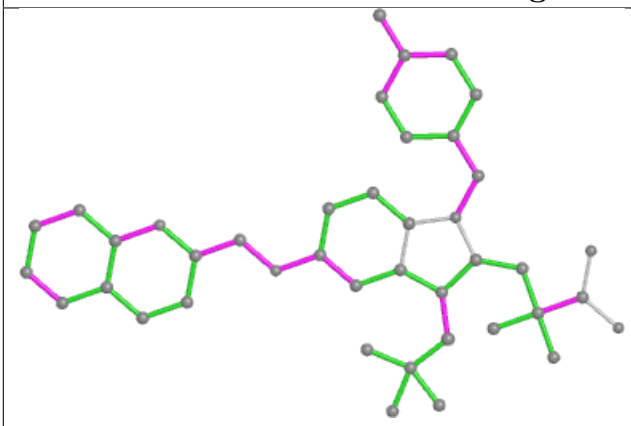
Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	D	504	2CS	29	0
2	A	502	2CS	24	0
2	A	503	2CS	34	0
2	C	501	2CS	21	0
2	E	505	2CS	38	0
2	E	506	2CS	28	0

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 then 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.

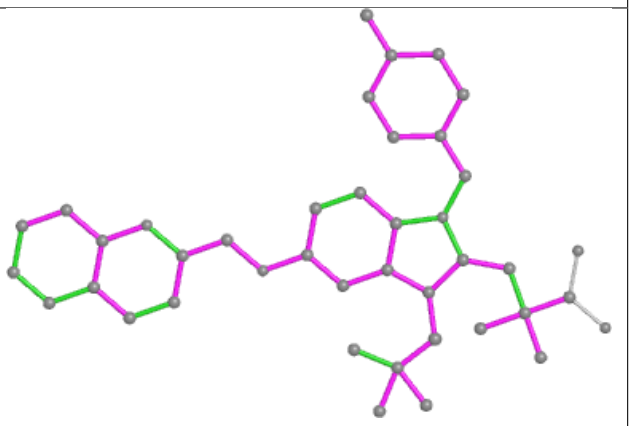
Ligand 2CS D 504



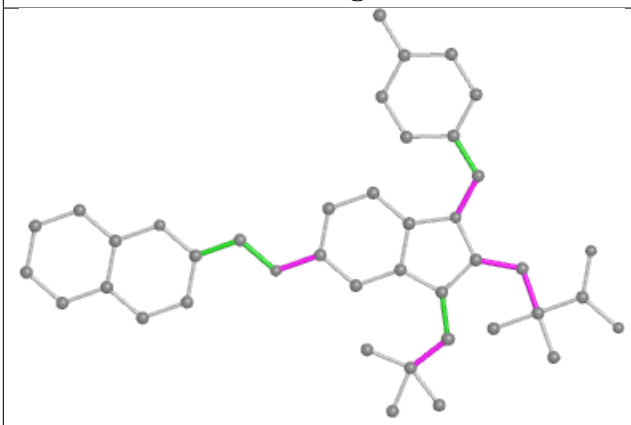
Ligand 2CS A 502



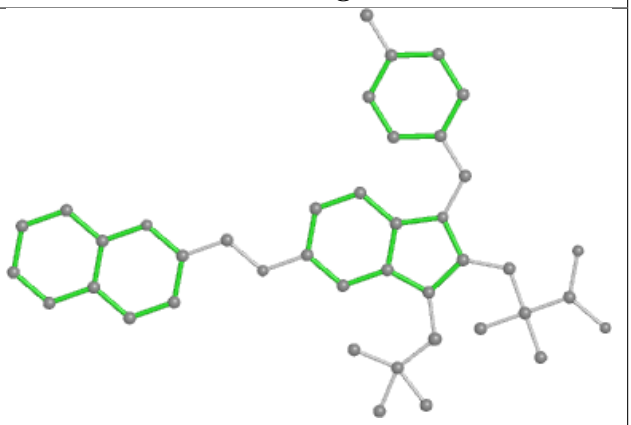
Bond lengths



Bond angles

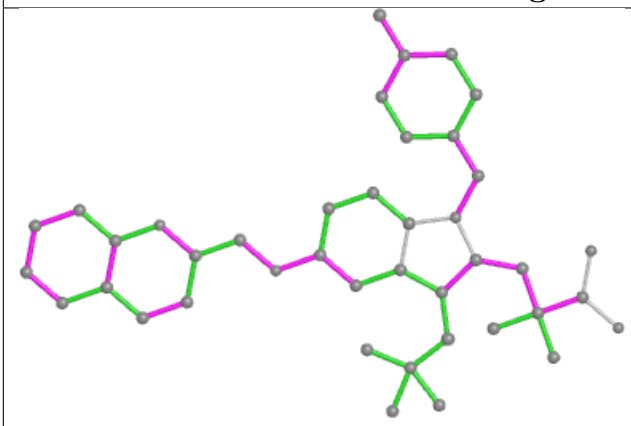


Torsions

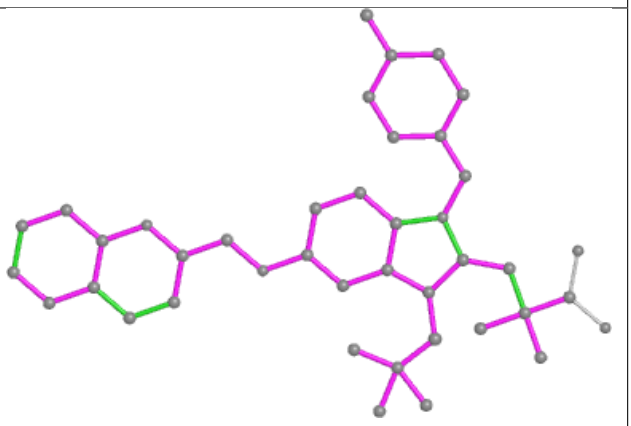


Rings

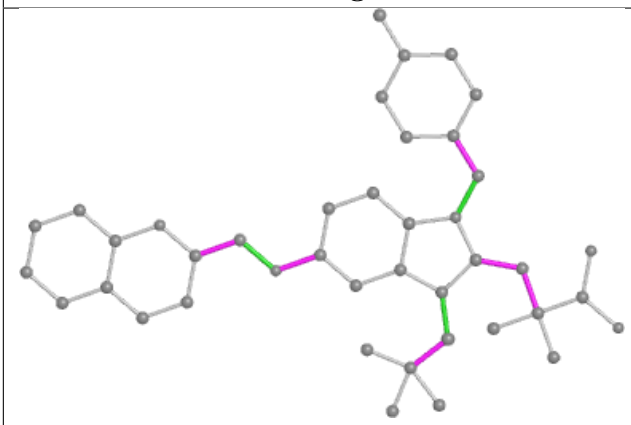
Ligand 2CS A 503



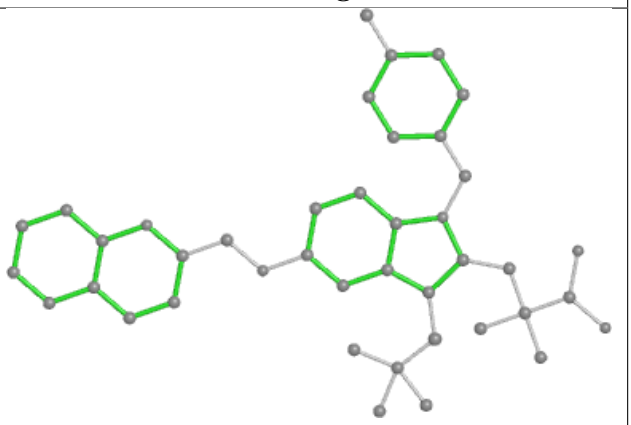
Bond lengths



Bond angles

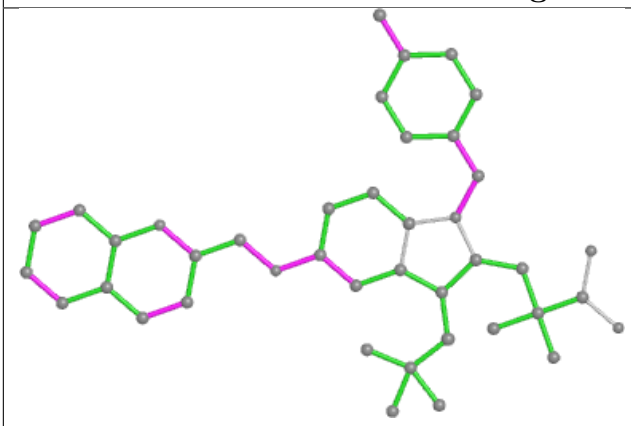


Torsions

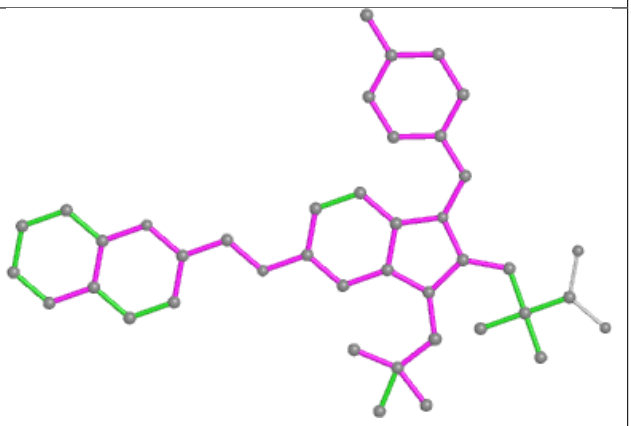


Rings

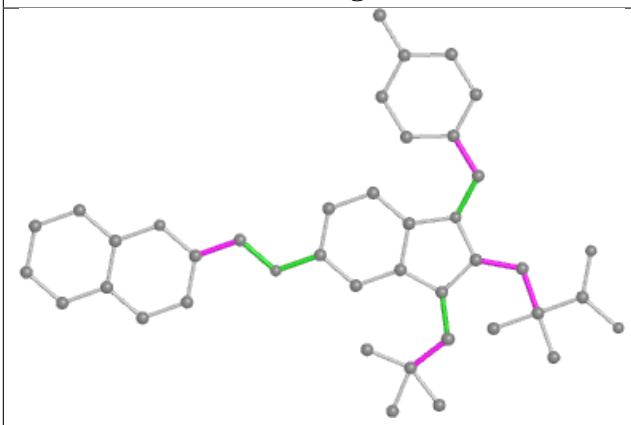
Ligand 2CS C 501



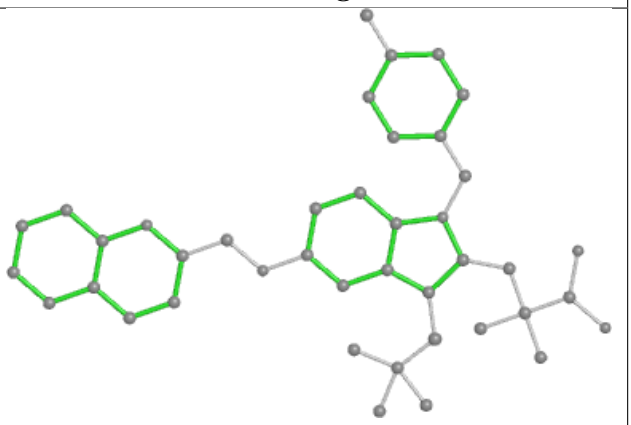
Bond lengths



Bond angles

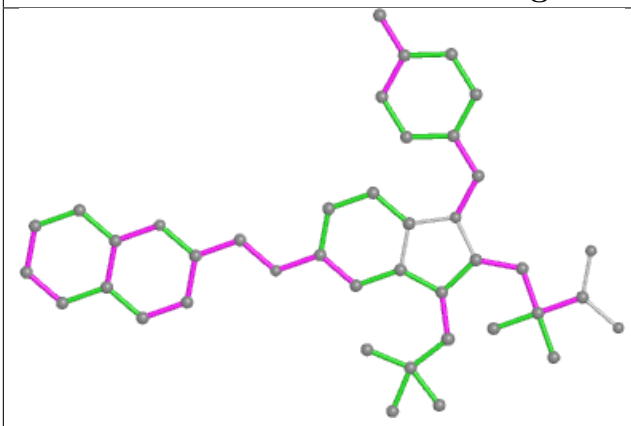


Torsions

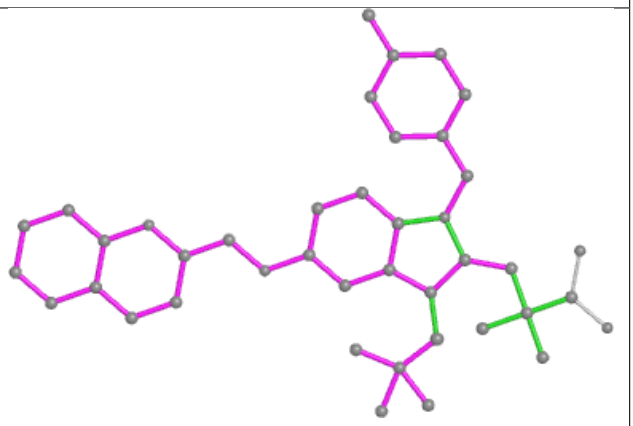


Rings

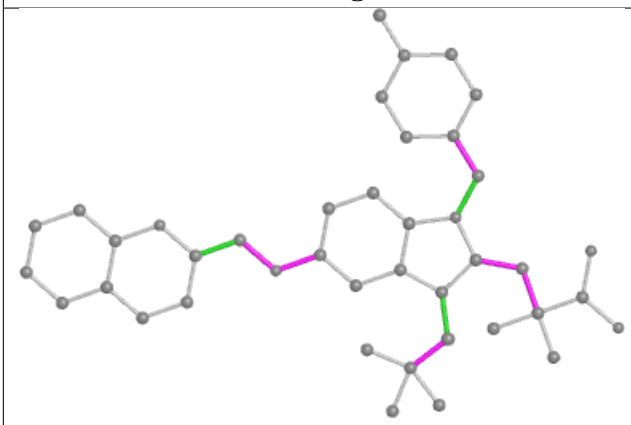
Ligand 2CS E 505



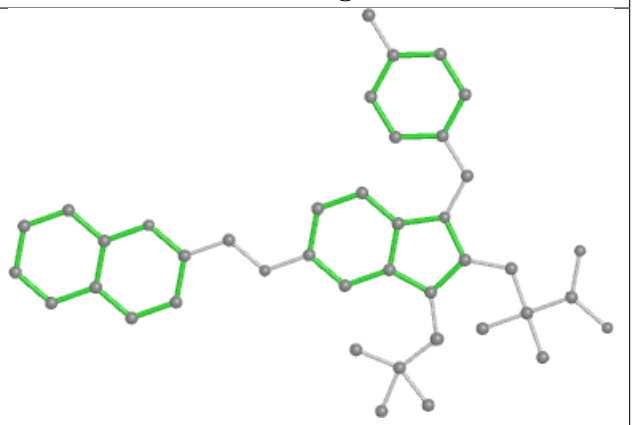
Bond lengths



Bond angles

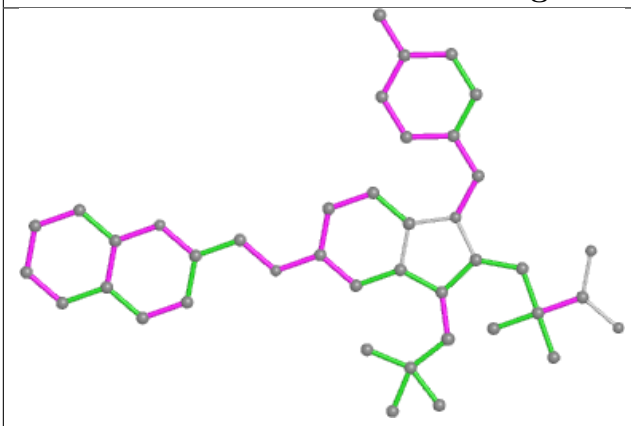


Torsions

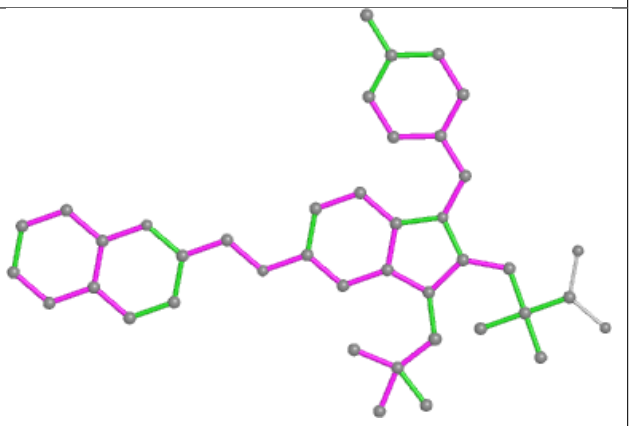


Rings

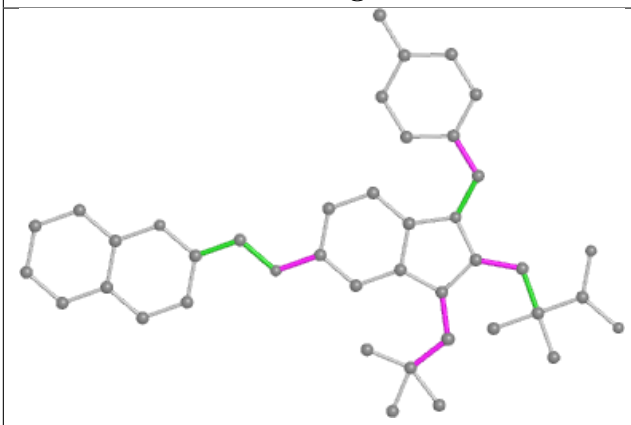
Ligand 2CS E 506



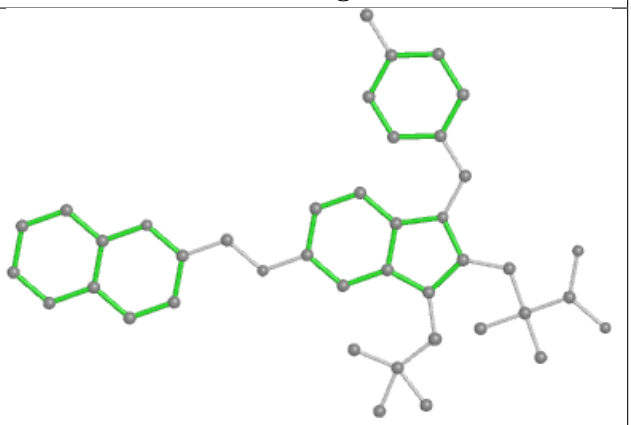
Bond lengths



Bond angles



Torsions



Rings

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

Unable to reproduce the depositors R factor - this section is therefore empty.

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

Unable to reproduce the depositors R factor - this section is therefore empty.

6.3 Carbohydrates

Unable to reproduce the depositors R factor - this section is therefore empty.

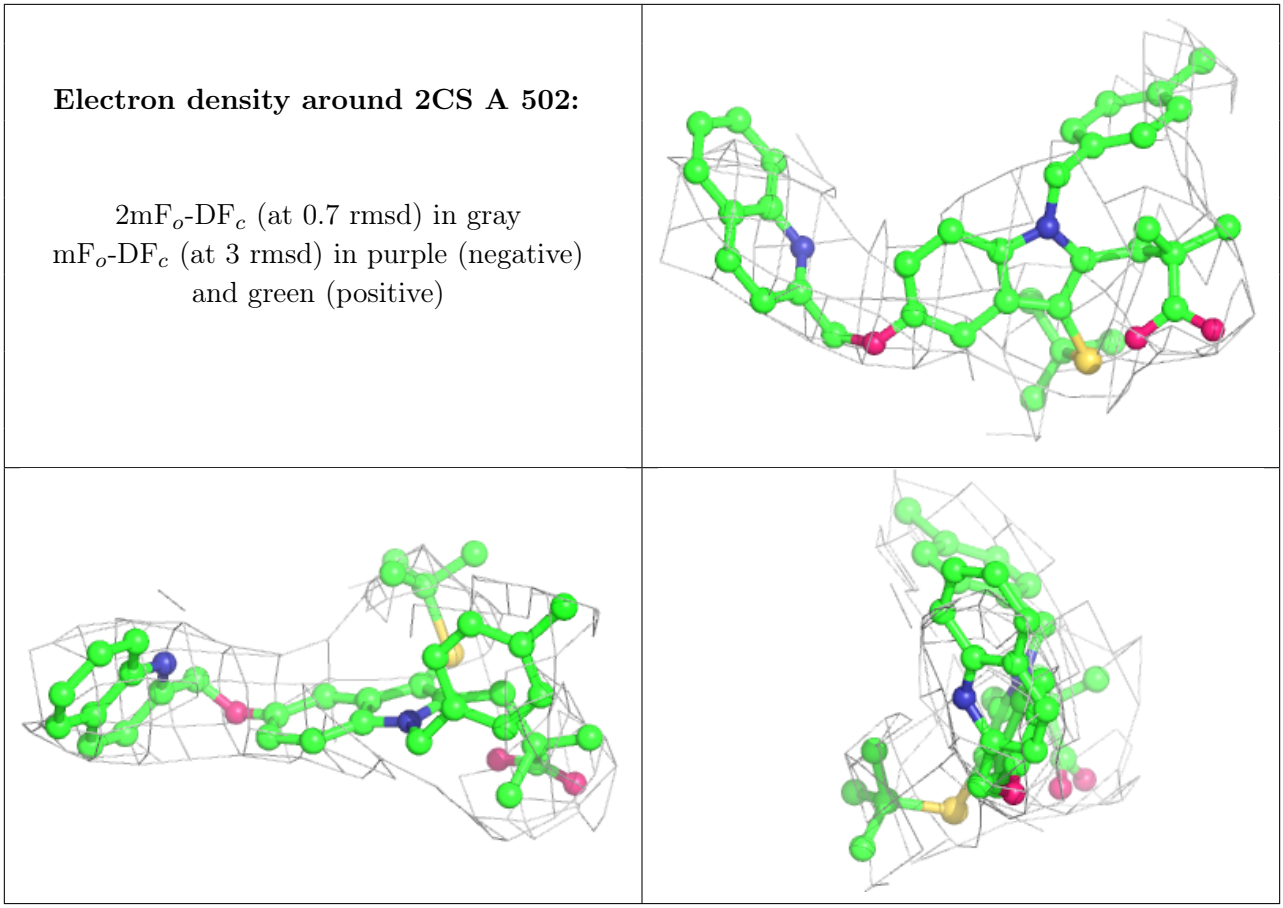
6.4 Ligands

Unable to reproduce the depositors R factor - this section is therefore empty.

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.

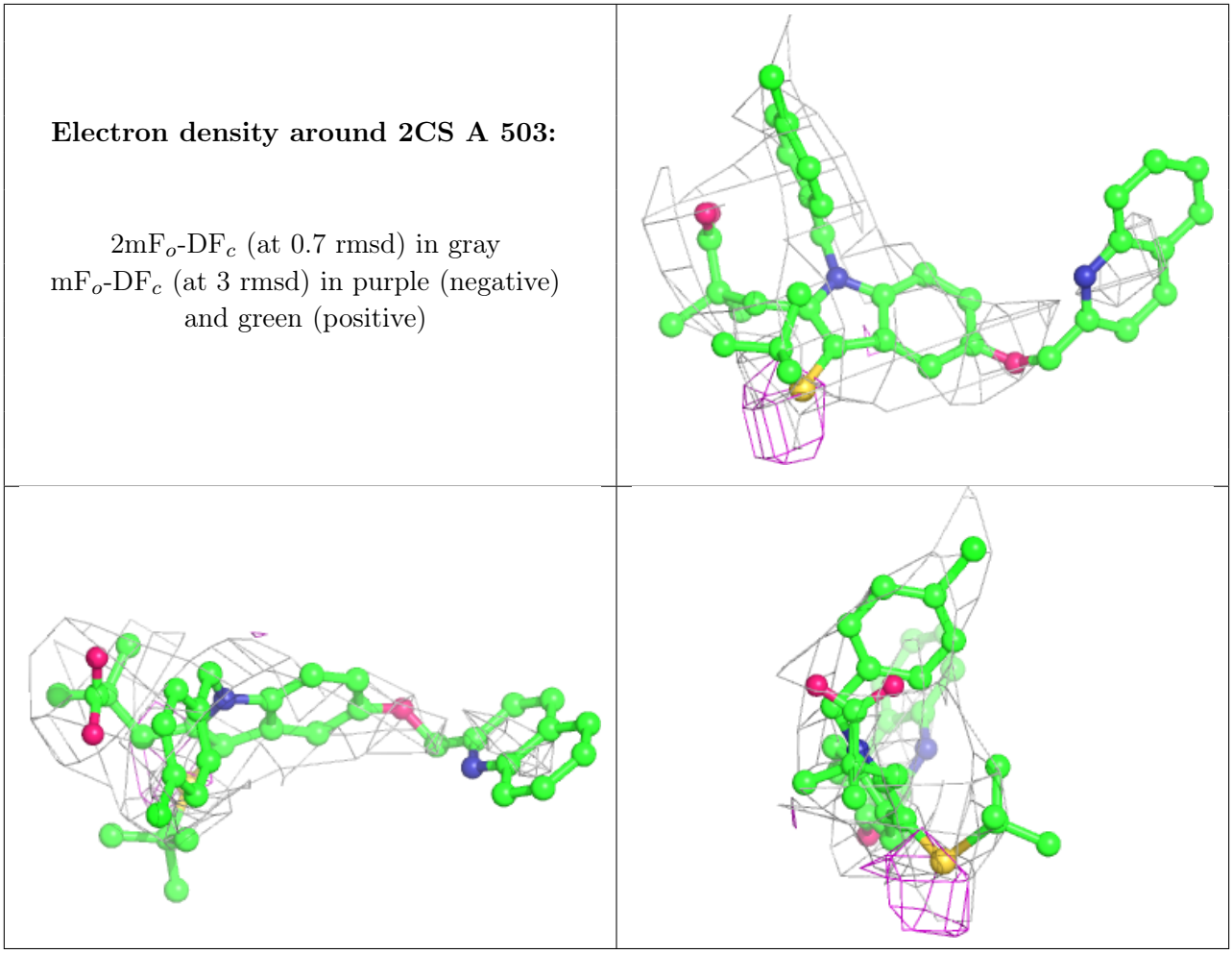
Electron density around 2CS A 502:

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



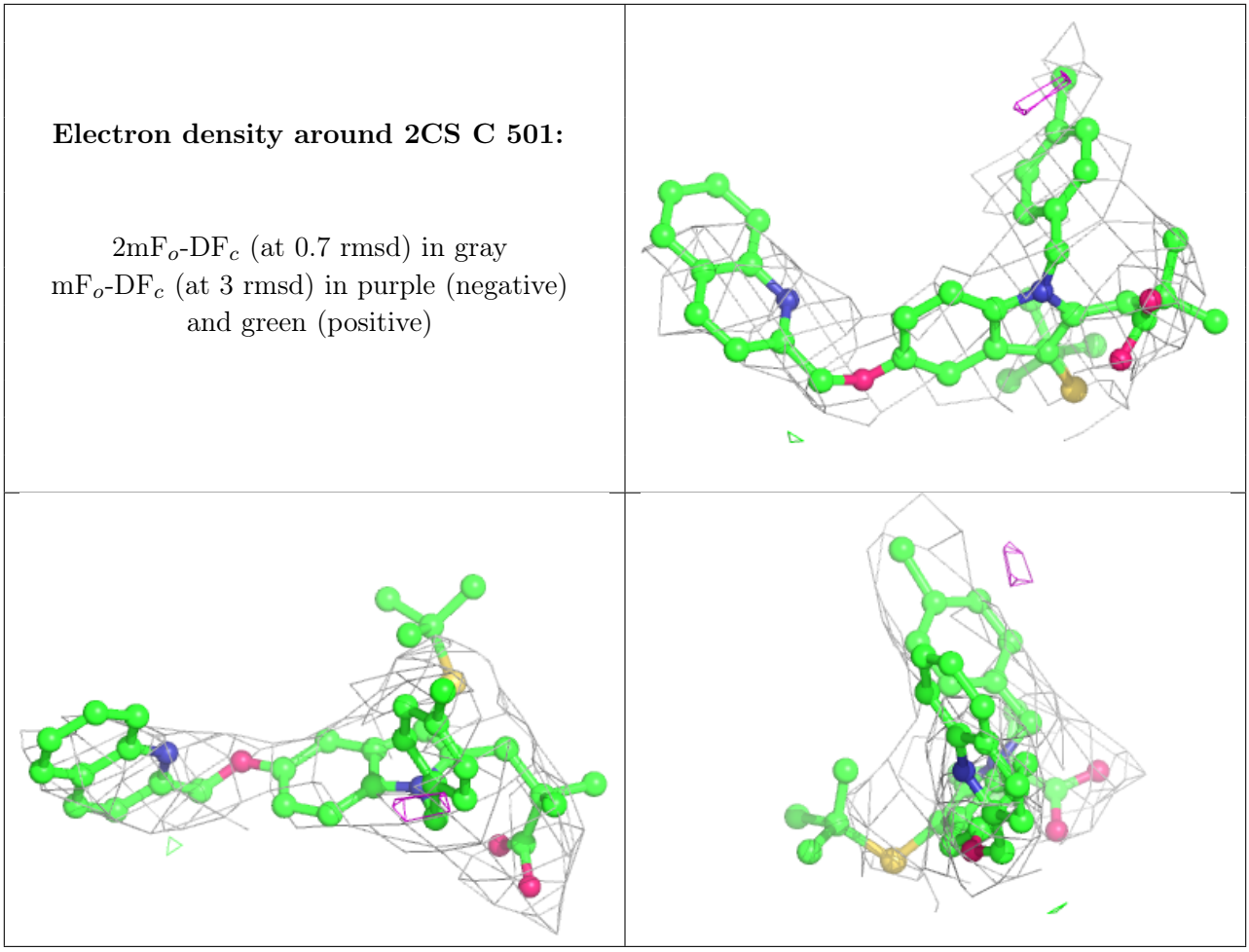
Electron density around 2CS A 503:

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



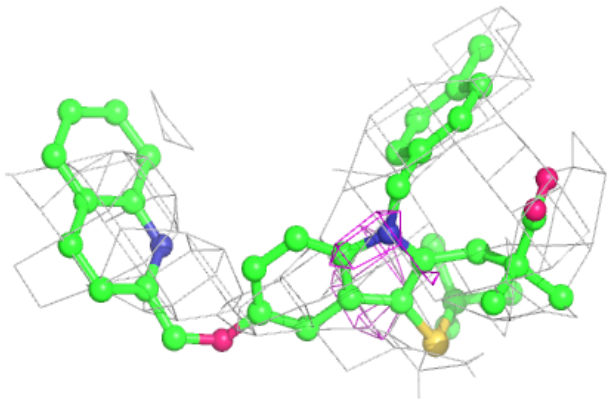
Electron density around 2CS C 501:

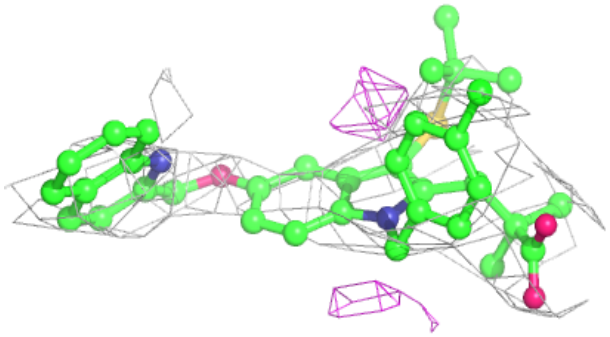
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

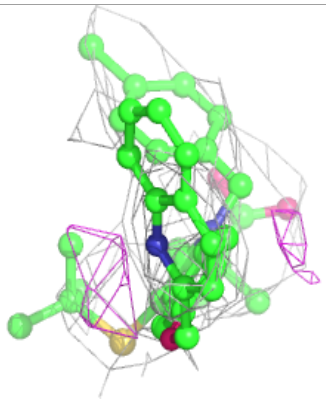


Electron density around 2CS D 504:

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

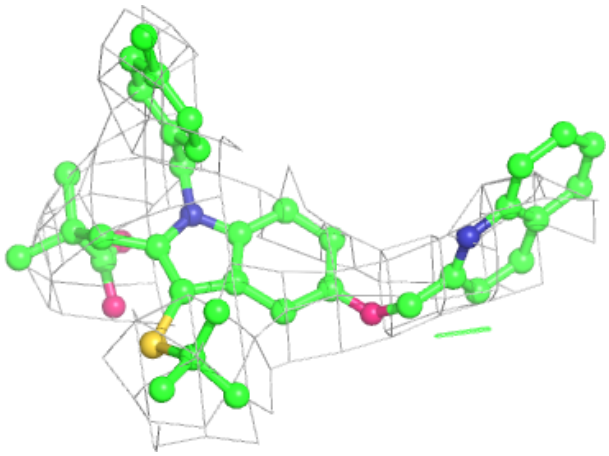


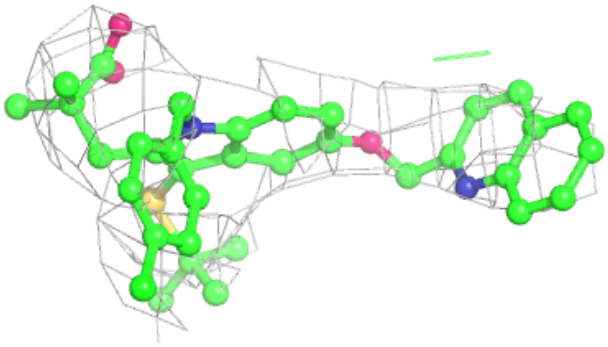


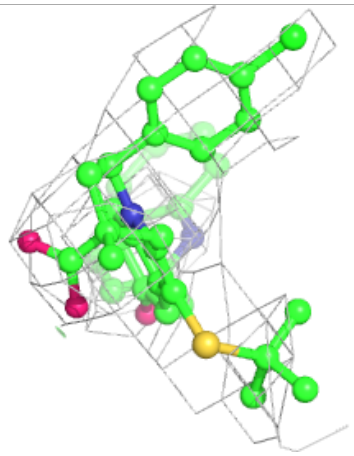


Electron density around 2CS E 505:

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

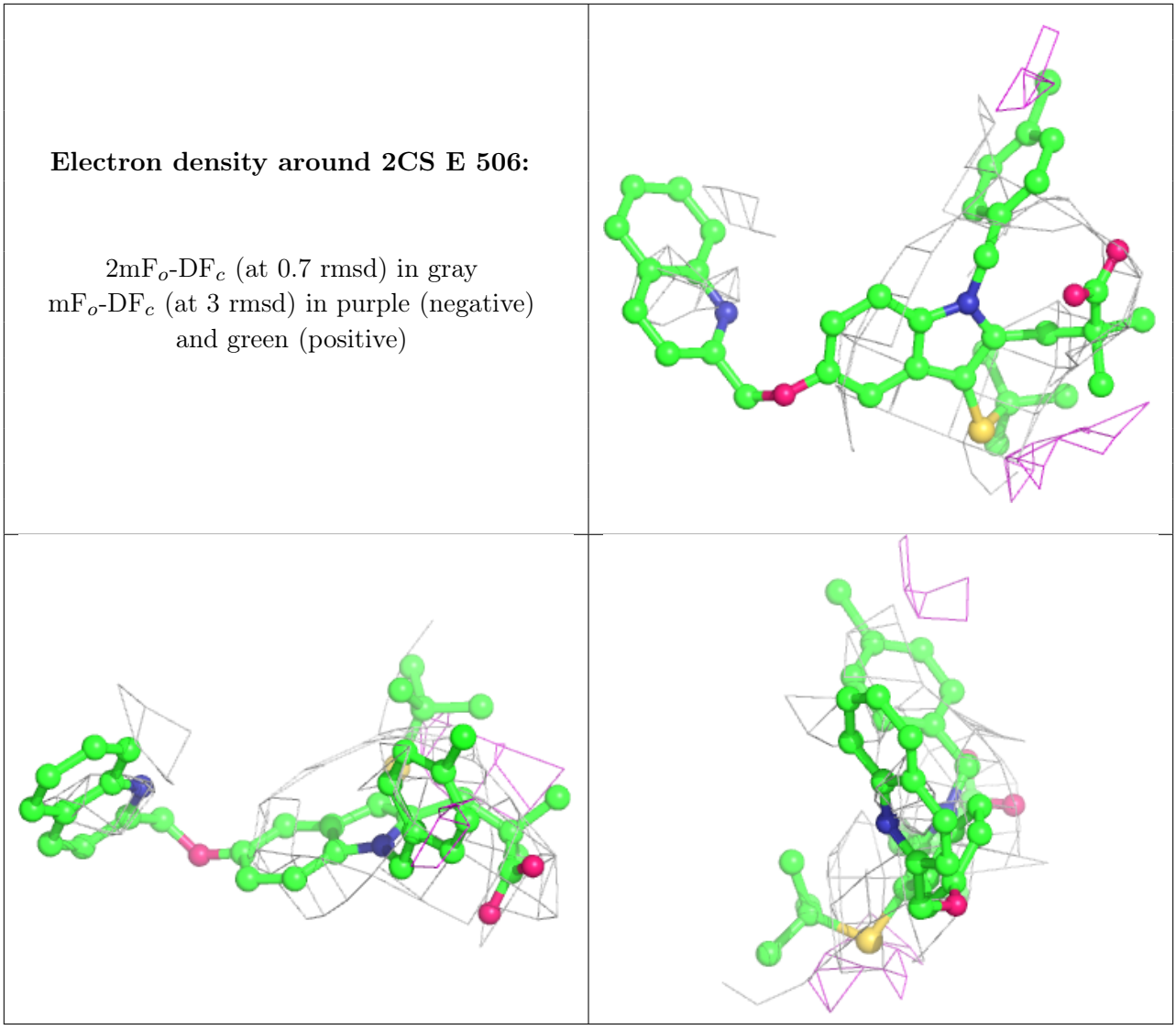






Electron density around 2CS E 506:

$2mF_o$-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)

Unable to reproduce the depositors R factor - this section is therefore empty.