



# Full wwPDB X-ray Structure Validation Report ⓘ

Jun 21, 2022 – 12:04 AM JST

PDB ID : 7DRI  
Title : Structure of SspE\_CTD\_41658  
Authors : Haiyan, G.; Jinchuan, Z.; Chen, S.; Wang, L.; Wu, G.  
Deposited on : 2020-12-28  
Resolution : 2.72 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](mailto:validation@mail.wwpdb.org)

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at <http://www.wwpdb.org/validation/2017/FAQs#types>.

---

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

MolProbity : 4.02b-467  
Xtriage (Phenix) : 1.13  
EDS : 2.29  
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) : 2.29

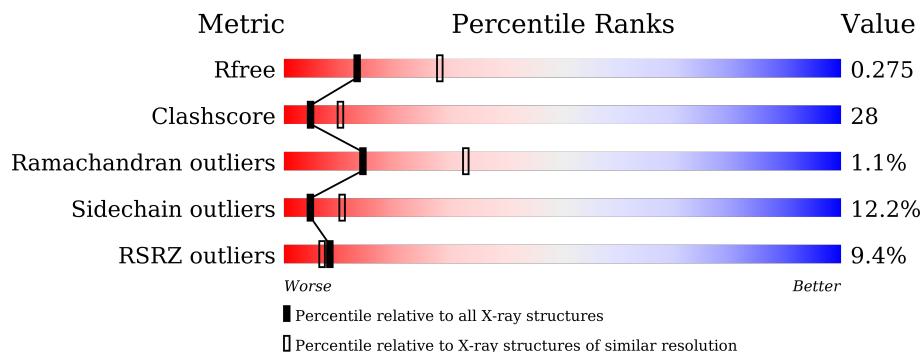
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

*X-RAY DIFFRACTION*

The reported resolution of this entry is 2.72 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	3359 (2.74-2.70)
Clashscore	141614	3686 (2.74-2.70)
Ramachandran outliers	138981	3622 (2.74-2.70)
Sidechain outliers	138945	3623 (2.74-2.70)
RSRZ outliers	127900	3276 (2.74-2.70)

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

Mol	Chain	Length	Quality of chain
1	A	493	 7% 62% 27% 6%
1	B	493	 10% 62% 27% 6% 5%
1	C	493	 8% 61% 26% 7% 5%
1	D	493	 11% 60% 29% 6% 5%

## 2 Entry composition

There is only 1 type of molecule in this entry. The entry contains 14108 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 DUF1524 domain.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	471	Total 3564	C 2246	N 625	O 684	S 9	0	0	0
1	B	466	Total 3530	C 2226	N 620	O 675	S 9	0	0	0
1	C	468	Total 3524	C 2222	N 619	O 675	S 8	0	0	0
1	D	467	Total 3490	C 2200	N 609	O 672	S 9	0	0	0





## 4 Data and refinement statistics

Property	Value	Source
Space group	C 2 2 21	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	108.75Å 278.92Å 182.26Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	35.97 – 2.72 35.95 – 2.72	Depositor EDS
% Data completeness (in resolution range)	99.3 (35.97-2.72) 99.3 (35.95-2.72)	Depositor EDS
$R_{merge}$	0.12	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	2.61 (at 2.72Å)	Xtrriage
Refinement program	REFMAC 5.8.0267	Depositor
R, $R_{free}$	0.268 , 0.272 0.263 , 0.275	Depositor DCC
$R_{free}$ test set	3734 reflections (5.04%)	wwPDB-VP
Wilson B-factor (Å <sup>2</sup> )	67.4	Xtrriage
Anisotropy	0.743	Xtrriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.31 , 57.6	EDS
L-test for twinning <sup>2</sup>	$\langle  L  \rangle = 0.49$ , $\langle L^2 \rangle = 0.32$	Xtrriage
Estimated twinning fraction	No twinning to report.	Xtrriage
$F_o, F_c$ correlation	0.92	EDS
Total number of atoms	14108	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	81.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.47% of the height of the origin peak. No significant pseudotranslation is detected.*

<sup>1</sup>Intensities estimated from amplitudes.

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

## 5 Model quality i

### 5.1 Standard geometry i

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	0.56	3/3640 (0.1%)	0.74	2/4955 (0.0%)
1	B	0.54	6/3605 (0.2%)	0.66	3/4906 (0.1%)
1	C	0.58	4/3598 (0.1%)	0.69	3/4900 (0.1%)
1	D	0.55	6/3561 (0.2%)	0.67	2/4850 (0.0%)
All	All	0.56	19/14404 (0.1%)	0.69	10/19611 (0.1%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	0	1
1	C	0	2
All	All	0	3

All (19) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	B	355	TYR	C-O	-6.32	1.11	1.23
1	A	555	TRP	CD2-CE2	6.17	1.48	1.41
1	A	521	TRP	CD2-CE2	5.80	1.48	1.41
1	D	791	SER	CB-OG	-5.69	1.34	1.42
1	B	521	TRP	CD2-CE2	5.59	1.48	1.41
1	A	702	TRP	CD2-CE2	5.58	1.48	1.41
1	D	555	TRP	CD2-CE2	5.49	1.48	1.41
1	C	669	TRP	CD2-CE2	5.45	1.47	1.41
1	C	521	TRP	CD2-CE2	5.43	1.47	1.41
1	C	702	TRP	CD2-CE2	5.39	1.47	1.41
1	C	555	TRP	CD2-CE2	5.35	1.47	1.41
1	B	555	TRP	CD2-CE2	5.28	1.47	1.41
1	D	521	TRP	CD2-CE2	5.28	1.47	1.41
1	D	702	TRP	CD2-CE2	5.22	1.47	1.41

*Continued on next page...*

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	B	702	TRP	CD2-CE2	5.17	1.47	1.41
1	D	669	TRP	CD2-CE2	5.16	1.47	1.41
1	D	443	TRP	CD2-CE2	5.07	1.47	1.41
1	B	443	TRP	CD2-CE2	5.05	1.47	1.41
1	B	669	TRP	CD2-CE2	5.04	1.47	1.41

All (10) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	792	ASP	C-N-CD	-17.50	82.09	120.60
1	C	793	PRO	N-CA-CB	7.54	112.35	103.30
1	A	565	PRO	N-CA-CB	6.70	111.34	103.30
1	B	565	PRO	N-CA-CB	6.39	110.97	103.30
1	D	565	PRO	N-CA-CB	6.07	110.59	103.30
1	C	565	PRO	N-CA-CB	5.95	110.44	103.30
1	C	353	GLN	N-CA-C	5.85	126.81	111.00
1	B	397	GLY	N-CA-C	-5.43	99.51	113.10
1	D	335	PRO	N-CA-CB	5.39	109.77	103.30
1	B	793	PRO	N-CA-CB	5.12	109.44	103.30

There are no chirality outliers.

All (3) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	540	ALA	Peptide
1	C	540	ALA	Peptide
1	C	789	SER	Peptide

## 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	3564	0	3439	212	0
1	B	3530	0	3420	162	1
1	C	3524	0	3394	201	0
1	D	3490	0	3341	202	0
All	All	14108	0	13594	773	1



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 28.

All (773) 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:A:790:SER:CB	1:A:794:VAL:CB	1.83	1.53
1:A:340:GLU:HA	1:A:343:LEU:CD1	1.45	1.43
1:A:790:SER:CB	1:A:794:VAL:HB	0.94	1.42
1:C:795:VAL:HG23	1:C:796:LYS:CB	1.45	1.42
1:C:795:VAL:HG23	1:C:796:LYS:CA	1.54	1.37
1:C:795:VAL:CG2	1:C:796:LYS:HA	1.63	1.29
1:A:541:GLY:HA2	1:A:542:ALA:CB	1.50	1.27
1:C:354:ASP:O	1:C:357:ASP:HA	1.29	1.27
1:A:792:ASP:CB	1:A:793:PRO:HD3	1.50	1.26
1:A:340:GLU:O	1:A:344:PRO:HD2	1.38	1.24
1:D:572:LEU:O	1:D:572:LEU:HD12	1.38	1.22
1:A:541:GLY:CA	1:A:542:ALA:HB3	1.70	1.22
1:A:792:ASP:HB2	1:A:793:PRO:CD	1.68	1.22
1:D:399:LYS:HD2	1:D:399:LYS:O	1.41	1.20
1:A:339:PHE:HE1	1:A:364:MET:CE	1.53	1.20
1:C:541:GLY:HA2	1:C:542:ALA:CB	1.66	1.20
1:C:354:ASP:O	1:C:356:GLN:HA	1.40	1.19
1:A:334:GLU:HB2	1:A:335:PRO:CD	1.72	1.19
1:A:339:PHE:CE1	1:A:364:MET:CE	2.27	1.17
1:D:537:ALA:O	1:D:541:GLY:CA	1.92	1.16
1:C:396:THR:HG23	1:C:410:TYR:OH	1.43	1.16
1:C:795:VAL:CB	1:C:796:LYS:HA	1.73	1.15
1:D:400:LEU:HD12	1:D:410:TYR:HD2	1.13	1.12
1:A:354:ASP:CB	1:A:355:TYR:HA	1.80	1.11
1:C:396:THR:CG2	1:C:410:TYR:OH	1.97	1.11
1:A:345:ARG:HG3	1:A:345:ARG:HH11	1.04	1.10
1:C:506:GLU:OE2	1:C:567:VAL:HG23	1.49	1.10
1:A:345:ARG:HH11	1:A:345:ARG:CG	1.66	1.09
1:A:405:PRO:O	1:A:409:VAL:HG23	1.53	1.09
1:A:339:PHE:CE1	1:A:364:MET:HE3	1.86	1.08
1:A:391:PHE:HE2	1:A:411:MET:HE1	1.14	1.07
1:A:340:GLU:HA	1:A:343:LEU:HD12	1.36	1.07
1:C:544:SER:OG	1:C:546:THR:O	1.70	1.07
1:B:353:GLN:N	1:B:354:ASP:HA	1.65	1.07
1:A:354:ASP:CB	1:A:355:TYR:CA	2.32	1.06
1:C:541:GLY:CA	1:C:542:ALA:HB3	1.83	1.06
1:D:791:SER:HA	1:D:794:VAL:CG2	1.86	1.05

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:339:PHE:HE1	1:A:364:MET:HE3	1.17	1.05
1:A:340:GLU:CA	1:A:343:LEU:CD1	2.34	1.04
1:C:795:VAL:CG2	1:C:796:LYS:CA	2.27	1.04
1:A:392:ALA:O	1:A:396:THR:O	1.74	1.04
1:A:340:GLU:HA	1:A:343:LEU:HD13	1.34	1.04
1:C:355:TYR:CB	1:C:358:SER:N	2.20	1.04
1:A:396:THR:OG1	1:A:398:GLU:HG3	1.56	1.04
1:A:334:GLU:CB	1:A:335:PRO:HD2	1.89	1.02
1:D:789:SER:CB	1:D:792:ASP:O	2.08	1.02
1:A:792:ASP:HB2	1:A:793:PRO:HD3	1.07	1.01
1:A:350:GLU:OE2	1:A:353:GLN:N	1.94	1.00
1:B:410:TYR:O	1:B:414:THR:HG22	1.61	1.00
1:C:795:VAL:CG2	1:C:796:LYS:CB	2.39	1.00
1:D:537:ALA:O	1:D:541:GLY:HA2	1.58	1.00
1:D:789:SER:HB3	1:D:792:ASP:CB	1.92	0.99
1:C:795:VAL:HB	1:C:796:LYS:HA	1.43	0.99
1:C:632:LEU:HD13	1:C:769:VAL:HG21	1.45	0.98
1:D:791:SER:HA	1:D:794:VAL:HG21	1.42	0.98
1:C:548:ILE:HG13	1:C:571:ALA:HB1	1.42	0.98
1:B:435:THR:HG22	1:B:485:VAL:HG11	1.43	0.97
1:D:435:THR:HG22	1:D:485:VAL:HG11	1.44	0.97
1:A:340:GLU:CA	1:A:343:LEU:HD12	1.92	0.97
1:A:509:LYS:HD3	1:A:569:ALA:HB2	1.43	0.97
1:C:435:THR:HG22	1:C:485:VAL:HG11	1.45	0.97
1:B:393:LEU:N	1:B:398:GLU:CB	2.28	0.97
1:A:435:THR:HG22	1:A:485:VAL:HG11	1.44	0.96
1:C:430:ARG:HH12	1:C:493:HIS:HD2	1.13	0.96
1:A:567:VAL:HG13	1:A:571:ALA:HB3	1.46	0.96
1:D:738:LEU:HA	1:D:741:MET:CE	1.96	0.96
1:A:537:ALA:O	1:A:541:GLY:CA	2.13	0.96
1:A:716:THR:OG1	1:A:719:ASP:OD1	1.84	0.96
1:B:352:ILE:HG23	1:B:354:ASP:N	1.81	0.96
1:A:334:GLU:HB2	1:A:335:PRO:HD2	0.96	0.95
1:A:391:PHE:CE2	1:A:411:MET:HE1	2.01	0.95
1:A:405:PRO:O	1:A:409:VAL:CG2	2.15	0.94
1:D:790:SER:O	1:D:791:SER:HB2	1.66	0.94
1:B:359:ASP:HA	1:B:362:GLU:OE2	1.67	0.94
1:B:544:SER:OG	1:B:546:THR:O	1.83	0.94
1:B:430:ARG:HH12	1:B:493:HIS:HD2	1.12	0.94
1:D:430:ARG:HH12	1:D:493:HIS:HD2	1.11	0.93
1:B:353:GLN:N	1:B:354:ASP:CA	2.31	0.93

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:506:GLU:OE2	1:C:567:VAL:CG2	2.16	0.93
1:D:396:THR:HG1	1:D:410:TYR:HH	1.06	0.92
1:D:400:LEU:HD12	1:D:410:TYR:CD2	2.04	0.92
1:B:352:ILE:HG23	1:B:354:ASP:CA	1.99	0.92
1:A:354:ASP:CB	1:A:355:TYR:C	2.38	0.92
1:C:794:VAL:O	1:C:795:VAL:HG22	1.70	0.92
1:C:391:PHE:CE2	1:C:395:GLU:OE1	2.22	0.92
1:A:345:ARG:HG3	1:A:345:ARG:NH1	1.78	0.92
1:C:354:ASP:C	1:C:356:GLN:HA	1.89	0.92
1:C:537:ALA:O	1:C:541:GLY:CA	2.17	0.91
1:C:399:LYS:O	1:C:399:LYS:HG3	1.66	0.91
1:A:790:SER:CB	1:A:794:VAL:CG2	2.47	0.91
1:B:353:GLN:CB	1:B:354:ASP:C	2.39	0.91
1:D:352:ILE:N	1:D:353:GLN:CB	2.32	0.91
1:D:548:ILE:HG13	1:D:571:ALA:HB1	1.52	0.90
1:A:430:ARG:HH12	1:A:493:HIS:HD2	1.13	0.90
1:D:392:ALA:O	1:D:396:THR:O	1.90	0.90
1:C:799:ASP:O	1:C:800:VAL:HG23	1.72	0.89
1:D:572:LEU:HD12	1:D:572:LEU:C	1.90	0.89
1:B:359:ASP:HA	1:B:362:GLU:CD	1.93	0.89
1:B:430:ARG:HH12	1:B:493:HIS:CD2	1.90	0.89
1:A:544:SER:OG	1:A:546:THR:O	1.91	0.88
1:D:399:LYS:HD2	1:D:399:LYS:C	1.93	0.88
1:B:336:LEU:HG	1:B:340:GLU:HG3	1.55	0.88
1:D:544:SER:OG	1:D:546:THR:O	1.93	0.87
1:D:537:ALA:O	1:D:541:GLY:HA3	1.72	0.87
1:D:391:PHE:O	1:D:395:GLU:HG2	1.73	0.87
1:C:347:VAL:O	1:C:351:LYS:HA	1.72	0.86
1:A:525:ARG:HH22	1:A:588:GLY:H	1.23	0.86
1:C:391:PHE:CZ	1:C:395:GLU:OE1	2.28	0.86
1:C:410:TYR:O	1:C:414:THR:HG22	1.75	0.86
1:A:339:PHE:O	1:A:343:LEU:HD12	1.73	0.86
1:A:334:GLU:CB	1:A:335:PRO:CD	2.45	0.85
1:A:391:PHE:CZ	1:A:395:GLU:OE2	2.30	0.85
1:D:789:SER:HB2	1:D:792:ASP:N	1.90	0.85
1:C:354:ASP:O	1:C:357:ASP:CA	2.21	0.85
1:A:537:ALA:O	1:A:541:GLY:HA3	1.74	0.85
1:A:548:ILE:HG13	1:A:571:ALA:HB1	1.56	0.85
1:B:541:GLY:O	1:B:542:ALA:HB3	1.77	0.84
1:B:392:ALA:O	1:B:396:THR:O	1.96	0.84
1:C:541:GLY:HA2	1:C:542:ALA:HB3	0.87	0.84

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:525:ARG:HH22	1:B:588:GLY:H	1.24	0.84
1:B:406:ASP:O	1:B:409:VAL:HG23	1.78	0.84
1:C:430:ARG:HH12	1:C:493:HIS:CD2	1.96	0.83
1:D:540:ALA:O	1:D:550:PRO:HB3	1.79	0.83
1:A:537:ALA:O	1:A:541:GLY:N	2.11	0.83
1:D:430:ARG:HH12	1:D:493:HIS:CD2	1.96	0.83
1:C:591:ASN:HD21	1:C:795:VAL:HG21	1.44	0.82
1:D:794:VAL:HG23	1:D:794:VAL:O	1.80	0.82
1:D:738:LEU:HA	1:D:741:MET:HE2	1.60	0.81
1:A:430:ARG:HH12	1:A:493:HIS:CD2	1.97	0.81
1:C:348:MET:O	1:C:351:LYS:CB	2.28	0.81
1:B:700:ARG:NH2	1:B:704:GLU:OE2	2.14	0.81
1:D:391:PHE:O	1:D:395:GLU:CG	2.29	0.81
1:D:392:ALA:CB	1:D:410:TYR:HE2	1.94	0.81
1:A:792:ASP:HB2	1:A:793:PRO:HD2	1.64	0.80
1:C:354:ASP:O	1:C:356:GLN:CA	2.27	0.80
1:A:790:SER:HA	1:A:791:SER:C	2.02	0.80
1:D:791:SER:HA	1:D:794:VAL:HG22	1.64	0.80
1:C:525:ARG:HH22	1:C:588:GLY:H	1.30	0.79
1:D:525:ARG:NH2	1:D:588:GLY:H	1.81	0.79
1:A:395:GLU:HG2	1:A:553:ARG:NH2	1.97	0.79
1:B:541:GLY:O	1:B:542:ALA:CB	2.31	0.79
1:D:525:ARG:HH22	1:D:588:GLY:H	1.29	0.79
1:C:794:VAL:O	1:C:795:VAL:CG2	2.31	0.78
1:A:343:LEU:HA	1:A:346:VAL:HG12	1.65	0.78
1:C:672:GLU:HG3	1:C:760:PRO:HG2	1.64	0.78
1:C:347:VAL:O	1:C:351:LYS:CA	2.32	0.78
1:A:525:ARG:NH2	1:A:588:GLY:H	1.80	0.78
1:C:399:LYS:O	1:C:399:LYS:CG	2.30	0.78
1:A:350:GLU:CA	1:A:350:GLU:OE1	2.31	0.77
1:C:525:ARG:NH2	1:C:588:GLY:H	1.82	0.77
1:D:392:ALA:HB1	1:D:410:TYR:HE2	1.48	0.77
1:C:521:TRP:CE3	1:C:531:ILE:HG12	2.18	0.77
1:B:525:ARG:NH2	1:B:588:GLY:H	1.83	0.77
1:D:521:TRP:CE3	1:D:531:ILE:HG12	2.19	0.77
1:D:789:SER:CB	1:D:792:ASP:CB	2.63	0.77
1:D:570:GLU:HG2	1:D:574:LYS:HE2	1.67	0.77
1:A:521:TRP:CE3	1:A:531:ILE:HG12	2.20	0.77
1:B:631:GLY:HA3	1:B:762:PHE:HZ	1.50	0.77
1:C:355:TYR:CB	1:C:358:SER:CA	2.63	0.76
1:B:356:GLN:O	1:B:358:SER:N	2.18	0.76

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:391:PHE:CE2	1:A:411:MET:CE	2.68	0.76
1:B:353:GLN:H	1:B:354:ASP:HA	1.46	0.76
1:A:346:VAL:HA	1:A:415:PHE:HE2	1.51	0.76
1:B:352:ILE:HD13	1:B:354:ASP:CB	2.16	0.76
1:B:521:TRP:CE3	1:B:531:ILE:HG12	2.20	0.76
1:D:789:SER:O	1:D:792:ASP:CB	2.34	0.76
1:B:353:GLN:CB	1:B:355:TYR:N	2.49	0.76
1:C:738:LEU:HA	1:C:741:MET:HE2	1.69	0.75
1:A:343:LEU:HA	1:A:346:VAL:CG1	2.16	0.75
1:A:355:TYR:O	1:A:358:SER:CB	2.35	0.75
1:C:350:GLU:N	1:C:351:LYS:HA	2.00	0.75
1:C:537:ALA:O	1:C:541:GLY:HA3	1.87	0.75
1:B:388:LEU:HG	1:B:411:MET:HE2	1.68	0.75
1:C:355:TYR:CB	1:C:358:SER:CB	2.65	0.74
1:C:799:ASP:O	1:C:800:VAL:CG2	2.35	0.74
1:A:430:ARG:NH1	1:A:493:HIS:HD2	1.86	0.74
1:A:722:SER:O	1:A:726:SER:HB2	1.87	0.74
1:C:701:PRO:HB2	1:C:703:THR:HG22	1.69	0.74
1:A:672:GLU:HG3	1:A:760:PRO:HG2	1.69	0.74
1:D:701:PRO:HB2	1:D:703:THR:HG22	1.68	0.74
1:A:396:THR:OG1	1:A:398:GLU:CG	2.34	0.74
1:B:700:ARG:NE	1:B:704:GLU:OE1	2.20	0.73
1:B:406:ASP:O	1:B:409:VAL:CG2	2.36	0.73
1:A:509:LYS:CD	1:A:569:ALA:HB2	2.18	0.73
1:C:567:VAL:O	1:C:571:ALA:HB3	1.89	0.73
1:C:790:SER:CB	1:C:794:VAL:HA	2.18	0.73
1:A:701:PRO:HB2	1:A:703:THR:HG22	1.70	0.73
1:B:339:PHE:CE1	1:B:364:MET:CE	2.72	0.73
1:A:391:PHE:HE2	1:A:411:MET:CE	1.96	0.73
1:A:486:ARG:HH21	1:A:553:ARG:HA	1.53	0.73
1:C:799:ASP:C	1:C:800:VAL:HG23	2.07	0.72
1:C:548:ILE:HG13	1:C:571:ALA:CB	2.17	0.72
1:D:410:TYR:O	1:D:414:THR:HG22	1.89	0.72
1:A:350:GLU:OE1	1:A:350:GLU:C	2.27	0.72
1:D:339:PHE:CE1	1:D:364:MET:CE	2.73	0.72
1:A:792:ASP:CB	1:A:793:PRO:CD	2.34	0.72
1:B:486:ARG:HH21	1:B:553:ARG:HA	1.53	0.72
1:C:631:GLY:C	1:C:632:LEU:HD23	2.09	0.72
1:D:385:ARG:NH1	1:D:402:LYS:HG2	2.04	0.72
1:C:541:GLY:CA	1:C:542:ALA:CB	2.50	0.72
1:A:706:LYS:HE3	1:A:752:GLY:O	1.89	0.71

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:672:GLU:HG3	1:B:760:PRO:HG2	1.70	0.71
1:A:386:ASP:O	1:A:389:VAL:HG12	1.90	0.71
1:B:631:GLY:HA3	1:B:762:PHE:CZ	2.24	0.71
1:A:350:GLU:OE1	1:A:350:GLU:HA	1.90	0.71
1:C:722:SER:O	1:C:726:SER:HB2	1.91	0.71
1:D:672:GLU:HG3	1:D:760:PRO:HG2	1.70	0.71
1:B:352:ILE:HG23	1:B:354:ASP:CB	2.19	0.71
1:A:385:ARG:NH1	1:A:402:LYS:HG2	2.05	0.71
1:C:347:VAL:HG13	1:C:351:LYS:O	1.91	0.71
1:C:486:ARG:HH21	1:C:553:ARG:HA	1.56	0.71
1:A:339:PHE:HE1	1:A:364:MET:HE1	1.53	0.71
1:C:354:ASP:C	1:C:356:GLN:CA	2.59	0.71
1:C:385:ARG:NH1	1:C:402:LYS:HG2	2.05	0.71
1:A:339:PHE:CE1	1:A:364:MET:HE2	2.25	0.70
1:D:789:SER:HB2	1:D:792:ASP:O	1.90	0.70
1:A:339:PHE:O	1:A:343:LEU:CD1	2.40	0.70
1:B:386:ASP:O	1:B:389:VAL:HG12	1.92	0.70
1:A:631:GLY:HA3	1:A:762:PHE:HZ	1.56	0.70
1:C:355:TYR:CB	1:C:358:SER:H	2.01	0.70
1:C:797:VAL:CG1	1:C:798:ASP:N	2.55	0.70
1:B:392:ALA:C	1:B:398:GLU:CB	2.59	0.70
1:B:789:SER:OG	1:B:794:VAL:HG23	1.92	0.70
1:C:386:ASP:O	1:C:389:VAL:HG12	1.90	0.69
1:D:343:LEU:O	1:D:346:VAL:HG12	1.92	0.69
1:D:410:TYR:O	1:D:410:TYR:HD1	1.75	0.69
1:D:386:ASP:O	1:D:389:VAL:HG12	1.92	0.69
1:B:567:VAL:O	1:B:571:ALA:HB3	1.91	0.69
1:D:430:ARG:NH1	1:D:493:HIS:HD2	1.87	0.69
1:D:486:ARG:HH21	1:D:553:ARG:HA	1.57	0.69
1:A:541:GLY:HA2	1:A:542:ALA:HB3	0.73	0.69
1:A:567:VAL:HG13	1:A:571:ALA:CB	2.23	0.69
1:B:385:ARG:NH1	1:B:402:LYS:HG2	2.07	0.68
1:B:542:ALA:C	1:B:543:ASP:OD1	2.31	0.68
1:D:400:LEU:CD1	1:D:410:TYR:HD2	2.00	0.68
1:A:430:ARG:NH1	1:A:493:HIS:CD2	2.61	0.68
1:C:430:ARG:NH1	1:C:493:HIS:CD2	2.61	0.68
1:B:430:ARG:NH1	1:B:493:HIS:CD2	2.61	0.68
1:C:430:ARG:NH1	1:C:493:HIS:HD2	1.87	0.68
1:C:799:ASP:O	1:C:800:VAL:CB	2.41	0.68
1:D:350:GLU:CB	1:D:351:LYS:HA	2.24	0.68
1:D:392:ALA:CB	1:D:410:TYR:CE2	2.76	0.68

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:632:LEU:HG	1:B:769:VAL:HG21	1.75	0.68
1:D:789:SER:HB3	1:D:792:ASP:O	1.90	0.68
1:A:339:PHE:CZ	1:A:364:MET:HE3	2.30	0.67
1:A:790:SER:CB	1:A:794:VAL:CA	2.71	0.67
1:D:361:HIS:O	1:D:365:LYS:N	2.27	0.67
1:C:632:LEU:CD1	1:C:769:VAL:HG21	2.22	0.67
1:A:340:GLU:HA	1:A:343:LEU:HD11	1.67	0.67
1:C:334:GLU:H	1:C:334:GLU:CD	1.97	0.67
1:A:354:ASP:CB	1:A:358:SER:H	2.08	0.67
1:C:388:LEU:HG	1:C:411:MET:CE	2.25	0.67
1:B:400:LEU:HD23	1:B:401:SER:O	1.94	0.66
1:A:354:ASP:CB	1:A:358:SER:N	2.59	0.66
1:D:405:PRO:O	1:D:409:VAL:CG2	2.43	0.66
1:D:621:HIS:CE1	1:D:642:SER:HB3	2.30	0.66
1:C:354:ASP:C	1:C:356:GLN:CB	2.63	0.66
1:C:797:VAL:HG13	1:C:798:ASP:N	2.10	0.66
1:A:400:LEU:HD23	1:A:401:SER:O	1.95	0.66
1:B:343:LEU:O	1:B:346:VAL:HG12	1.96	0.66
1:B:632:LEU:HD13	1:B:632:LEU:N	2.11	0.65
1:A:334:GLU:CA	1:A:334:GLU:OE1	2.42	0.65
1:A:631:GLY:HA3	1:A:762:PHE:CZ	2.31	0.65
1:D:430:ARG:NH1	1:D:493:HIS:CD2	2.62	0.65
1:A:343:LEU:CA	1:A:346:VAL:HG12	2.27	0.65
1:C:400:LEU:HD23	1:C:401:SER:O	1.97	0.65
1:C:405:PRO:HA	1:C:408:ARG:HG3	1.77	0.65
1:D:540:ALA:HB3	1:D:541:GLY:HA2	1.78	0.65
1:B:548:ILE:HG13	1:B:571:ALA:HB1	1.79	0.65
1:A:400:LEU:HD12	1:A:410:TYR:CG	2.32	0.64
1:D:359:ASP:O	1:D:362:GLU:N	2.29	0.64
1:D:405:PRO:O	1:D:409:VAL:HG22	1.97	0.64
1:A:706:LYS:CE	1:A:752:GLY:O	2.45	0.64
1:C:568:ASP:OD1	1:C:569:ALA:N	2.29	0.64
1:A:541:GLY:CA	1:A:542:ALA:CB	2.40	0.64
1:C:336:LEU:HG	1:C:340:GLU:HG3	1.79	0.64
1:D:391:PHE:CD2	1:D:395:GLU:OE2	2.27	0.64
1:D:400:LEU:HD23	1:D:401:SER:O	1.97	0.64
1:C:393:LEU:HA	1:C:397:GLY:HA2	1.80	0.64
1:D:789:SER:HB2	1:D:792:ASP:H	1.63	0.63
1:A:356:GLN:CB	1:B:359:ASP:OD2	2.45	0.63
1:B:339:PHE:HE1	1:B:364:MET:CE	2.11	0.63
1:D:487:PHE:CE2	1:D:568:ASP:HB3	2.32	0.63

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:722:SER:O	1:D:726:SER:HB2	1.98	0.63
1:A:345:ARG:CG	1:A:345:ARG:NH1	2.37	0.63
1:A:355:TYR:O	1:A:358:SER:N	2.29	0.63
1:C:410:TYR:HA	1:C:413:ASP:HB2	1.79	0.63
1:A:621:HIS:CE1	1:A:642:SER:HB3	2.33	0.63
1:C:790:SER:O	1:C:794:VAL:N	2.32	0.63
1:C:797:VAL:CG1	1:C:798:ASP:O	2.47	0.63
1:A:593:ALA:HB3	1:A:794:VAL:HG21	1.81	0.62
1:D:570:GLU:CG	1:D:574:LYS:HE2	2.29	0.62
1:A:542:ALA:C	1:A:543:ASP:OD1	2.37	0.62
1:B:790:SER:O	1:B:792:ASP:N	2.32	0.62
1:B:570:GLU:CB	1:B:574:LYS:HE2	2.29	0.62
1:D:410:TYR:CE1	1:D:414:THR:HG21	2.35	0.62
1:D:632:LEU:HD13	1:D:769:VAL:HG21	1.80	0.62
1:B:749:ARG:HH11	1:B:749:ARG:HB3	1.64	0.62
1:C:396:THR:HG21	1:C:410:TYR:CE1	2.34	0.62
1:A:339:PHE:CZ	1:A:364:MET:CE	2.81	0.62
1:A:343:LEU:O	1:A:346:VAL:CG1	2.48	0.62
1:D:592:LEU:HD23	1:D:788:ASP:HB2	1.81	0.62
1:A:340:GLU:O	1:A:344:PRO:CD	2.31	0.62
1:C:537:ALA:O	1:C:541:GLY:N	2.33	0.61
1:D:567:VAL:HG12	1:D:568:ASP:N	2.14	0.61
1:A:334:GLU:OE1	1:A:334:GLU:N	2.33	0.61
1:C:347:VAL:O	1:C:351:LYS:C	2.39	0.61
1:A:521:TRP:CH2	1:A:529:GLY:O	2.53	0.61
1:B:521:TRP:CH2	1:B:529:GLY:O	2.53	0.61
1:C:749:ARG:HH11	1:C:749:ARG:HB3	1.64	0.61
1:A:794:VAL:HG13	1:A:794:VAL:O	2.00	0.61
1:C:663:GLN:HE21	1:C:681:HIS:HE1	1.49	0.61
1:D:462:THR:HG21	1:D:508:GLU:OE2	2.01	0.61
1:A:539:MET:SD	1:A:551:LEU:HD22	2.40	0.61
1:C:395:GLU:HG2	1:C:553:ARG:HH22	1.66	0.60
1:C:396:THR:CG2	1:C:410:TYR:CZ	2.84	0.60
1:C:521:TRP:CH2	1:C:529:GLY:O	2.53	0.60
1:A:343:LEU:O	1:A:346:VAL:HG12	2.01	0.60
1:C:550:PRO:HD3	1:C:555:TRP:CH2	2.36	0.60
1:D:339:PHE:HE1	1:D:364:MET:CE	2.14	0.60
1:C:521:TRP:HH2	1:C:529:GLY:O	1.85	0.60
1:B:407:GLN:O	1:B:409:VAL:O	2.19	0.59
1:C:355:TYR:N	1:C:356:GLN:CA	2.65	0.59
1:B:391:PHE:O	1:B:395:GLU:HG2	2.02	0.59

*Continued on next page...*



*Continued from previous page...*

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:539:MET:SD	1:C:551:LEU:HD22	2.41	0.59
1:D:572:LEU:CD1	1:D:576:LEU:HD22	2.32	0.59
1:A:558:PRO:O	1:A:559:ASP:HB3	2.02	0.59
1:D:521:TRP:HH2	1:D:529:GLY:O	1.85	0.59
1:D:794:VAL:CG2	1:D:794:VAL:O	2.50	0.59
1:A:354:ASP:CB	1:A:355:TYR:O	2.50	0.59
1:D:521:TRP:CH2	1:D:529:GLY:O	2.54	0.59
1:D:558:PRO:O	1:D:559:ASP:HB3	2.03	0.59
1:A:749:ARG:HH11	1:A:749:ARG:HB3	1.67	0.59
1:B:722:SER:O	1:B:726:SER:HB2	2.03	0.59
1:D:406:ASP:C	1:D:409:VAL:HG23	2.22	0.59
1:D:789:SER:CB	1:D:792:ASP:CA	2.80	0.59
1:C:395:GLU:HG2	1:C:553:ARG:NH2	2.16	0.59
1:B:462:THR:HG21	1:B:508:GLU:OE2	2.02	0.59
1:B:500:ARG:O	1:B:504:VAL:HG23	2.02	0.59
1:B:521:TRP:HH2	1:B:529:GLY:O	1.84	0.59
1:A:410:TYR:CD1	1:A:410:TYR:C	2.77	0.59
1:C:462:THR:HG21	1:C:508:GLU:OE2	2.02	0.59
1:D:500:ARG:O	1:D:504:VAL:HG23	2.03	0.58
1:C:342:PHE:CZ	1:C:346:VAL:HG23	2.38	0.58
1:C:405:PRO:O	1:C:409:VAL:HG23	2.03	0.58
1:C:789:SER:O	1:C:792:ASP:N	2.35	0.58
1:D:789:SER:HB2	1:D:792:ASP:CA	2.33	0.58
1:D:548:ILE:HG13	1:D:571:ALA:CB	2.27	0.58
1:D:663:GLN:HE21	1:D:681:HIS:HE1	1.51	0.58
1:D:789:SER:C	1:D:792:ASP:H	2.07	0.58
1:A:395:GLU:HG2	1:A:553:ARG:HH21	1.69	0.58
1:A:508:GLU:HA	1:A:511:ILE:HG22	1.85	0.58
1:D:539:MET:SD	1:D:551:LEU:HD22	2.44	0.58
1:C:405:PRO:O	1:C:409:VAL:CG2	2.52	0.58
1:B:558:PRO:O	1:B:559:ASP:HB3	2.03	0.58
1:C:558:PRO:O	1:C:559:ASP:HB3	2.02	0.58
1:A:391:PHE:CE1	1:A:395:GLU:OE2	2.56	0.58
1:A:521:TRP:HH2	1:A:529:GLY:O	1.85	0.58
1:B:393:LEU:CA	1:B:398:GLU:CB	2.81	0.58
1:B:508:GLU:HA	1:B:511:ILE:HG22	1.86	0.58
1:A:545:LEU:HD13	1:A:545:LEU:N	2.18	0.57
1:A:508:GLU:O	1:A:511:ILE:HG22	2.04	0.57
1:D:749:ARG:HB3	1:D:749:ARG:HH11	1.69	0.57
1:D:762:PHE:HD2	1:D:763:MET:CE	2.17	0.57
1:C:500:ARG:O	1:C:504:VAL:HG23	2.04	0.57

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:443:TRP:O	1:A:451:ARG:NH1	2.33	0.57
1:A:462:THR:HG21	1:A:508:GLU:OE2	2.03	0.57
1:B:410:TYR:HA	1:B:413:ASP:HB2	1.87	0.57
1:D:391:PHE:O	1:D:395:GLU:HG3	2.05	0.57
1:D:443:TRP:O	1:D:451:ARG:NH1	2.36	0.57
1:D:791:SER:CA	1:D:794:VAL:HG22	2.33	0.57
1:B:663:GLN:HE21	1:B:681:HIS:HE1	1.51	0.57
1:B:795:VAL:HG22	1:B:797:VAL:HG23	1.86	0.57
1:D:570:GLU:HB3	1:D:574:LYS:HE2	1.87	0.57
1:B:508:GLU:O	1:B:511:ILE:HG22	2.03	0.57
1:A:791:SER:O	1:A:792:ASP:C	2.42	0.57
1:C:591:ASN:HD21	1:C:795:VAL:CG2	2.17	0.57
1:D:791:SER:C	1:D:794:VAL:HG13	2.25	0.57
1:C:443:TRP:O	1:C:451:ARG:NH1	2.36	0.57
1:D:704:GLU:HG2	1:D:729:PHE:CE2	2.39	0.57
1:B:428:TYR:HD1	1:B:429:LEU:HD12	1.70	0.57
1:D:508:GLU:O	1:D:511:ILE:HG22	2.04	0.56
1:B:355:TYR:CB	1:B:361:HIS:CE1	2.89	0.56
1:C:388:LEU:HG	1:C:411:MET:HE2	1.86	0.56
1:C:428:TYR:HD1	1:C:429:LEU:HD12	1.70	0.56
1:C:508:GLU:HA	1:C:511:ILE:HG22	1.87	0.56
1:C:545:LEU:N	1:C:545:LEU:HD13	2.20	0.56
1:C:568:ASP:HA	1:C:572:LEU:H	1.70	0.56
1:D:572:LEU:HD11	1:D:576:LEU:HD22	1.86	0.56
1:B:762:PHE:HD2	1:B:763:MET:CE	2.18	0.56
1:D:508:GLU:HA	1:D:511:ILE:HG22	1.88	0.56
1:A:431:HIS:O	1:A:435:THR:HG23	2.06	0.56
1:A:539:MET:SD	1:A:551:LEU:CD2	2.94	0.56
1:D:358:SER:O	1:D:361:HIS:CB	2.54	0.56
1:A:340:GLU:C	1:A:343:LEU:HD12	2.25	0.56
1:B:339:PHE:CE1	1:B:364:MET:HE3	2.40	0.56
1:C:790:SER:HA	1:C:793:PRO:C	2.26	0.56
1:C:797:VAL:HG13	1:C:798:ASP:O	2.06	0.56
1:D:799:ASP:OD1	1:D:799:ASP:N	2.31	0.56
1:D:545:LEU:HD13	1:D:545:LEU:N	2.21	0.55
1:C:395:GLU:HG3	1:C:431:HIS:HD2	1.70	0.55
1:C:508:GLU:O	1:C:511:ILE:HG22	2.06	0.55
1:A:663:GLN:HE21	1:A:681:HIS:HE1	1.53	0.55
1:A:447:ASN:O	1:A:447:ASN:ND2	2.37	0.55
1:B:443:TRP:O	1:B:451:ARG:NH1	2.35	0.55
1:C:631:GLY:O	1:C:632:LEU:HD23	2.07	0.55

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:670:ASP:OD2	1:C:672:GLU:HB2	2.06	0.55
1:D:670:ASP:OD2	1:D:672:GLU:HB2	2.07	0.55
1:B:670:ASP:OD2	1:B:672:GLU:HB2	2.07	0.55
1:B:447:ASN:O	1:B:447:ASN:ND2	2.38	0.54
1:D:789:SER:OG	1:D:792:ASP:O	2.25	0.54
1:C:621:HIS:CE1	1:C:642:SER:HB3	2.42	0.54
1:B:388:LEU:HG	1:B:411:MET:CE	2.37	0.54
1:C:799:ASP:O	1:C:800:VAL:HB	2.05	0.54
1:D:428:TYR:HD1	1:D:429:LEU:HD12	1.73	0.54
1:B:539:MET:SD	1:B:551:LEU:HD22	2.47	0.54
1:B:545:LEU:HD13	1:B:545:LEU:N	2.21	0.54
1:D:613:ARG:HB2	1:D:657:ILE:HD11	1.90	0.54
1:A:500:ARG:O	1:A:504:VAL:HG23	2.07	0.54
1:C:407:GLN:O	1:C:409:VAL:O	2.26	0.54
1:D:351:LYS:N	1:D:353:GLN:CB	2.71	0.54
1:A:550:PRO:HD3	1:A:555:TRP:CH2	2.43	0.54
1:B:340:GLU:O	1:B:344:PRO:HD2	2.08	0.54
1:A:346:VAL:HA	1:A:415:PHE:CE2	2.38	0.54
1:A:377:GLY:O	1:A:381:GLN:HG2	2.08	0.54
1:C:388:LEU:HG	1:C:411:MET:HE3	1.89	0.54
1:D:352:ILE:HA	1:D:353:GLN:C	2.28	0.54
1:D:399:LYS:C	1:D:399:LYS:CD	2.74	0.54
1:D:789:SER:CB	1:D:792:ASP:C	2.75	0.54
1:A:670:ASP:OD2	1:A:672:GLU:HB2	2.08	0.54
1:C:342:PHE:CE2	1:C:346:VAL:HG23	2.44	0.53
1:C:762:PHE:HD2	1:C:763:MET:CE	2.21	0.53
1:D:340:GLU:O	1:D:344:PRO:HD2	2.08	0.53
1:C:431:HIS:O	1:C:435:THR:HG23	2.08	0.53
1:C:447:ASN:O	1:C:447:ASN:ND2	2.41	0.53
1:B:431:HIS:O	1:B:435:THR:HG23	2.08	0.53
1:D:431:HIS:O	1:D:435:THR:HG23	2.07	0.53
1:A:352:ILE:O	1:D:637:LYS:HG2	2.09	0.53
1:B:570:GLU:O	1:B:574:LYS:N	2.37	0.53
1:B:550:PRO:HD3	1:B:555:TRP:CH2	2.44	0.53
1:A:509:LYS:NZ	1:A:569:ALA:HB1	2.24	0.53
1:C:395:GLU:HG3	1:C:431:HIS:CD2	2.43	0.53
1:D:550:PRO:HD3	1:D:555:TRP:CH2	2.43	0.53
1:A:762:PHE:HD2	1:A:763:MET:CE	2.20	0.53
1:B:339:PHE:HE1	1:B:364:MET:HE3	1.74	0.53
1:C:568:ASP:OD1	1:C:569:ALA:HA	2.09	0.53
1:D:447:ASN:ND2	1:D:447:ASN:O	2.39	0.53

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:789:SER:HB2	1:B:792:ASP:O	2.09	0.53
1:B:377:GLY:O	1:B:381:GLN:HG2	2.09	0.53
1:B:524:THR:CG2	1:B:525:ARG:NH1	2.72	0.53
1:B:341:THR:HG21	1:B:408:ARG:HD3	1.91	0.52
1:D:406:ASP:O	1:D:409:VAL:HG23	2.09	0.52
1:A:428:TYR:HD1	1:A:429:LEU:HD12	1.73	0.52
1:B:352:ILE:C	1:B:354:ASP:HA	2.26	0.52
1:C:568:ASP:OD1	1:C:569:ALA:CA	2.57	0.52
1:A:509:LYS:CE	1:A:569:ALA:CB	2.87	0.52
1:A:486:ARG:NH2	1:A:553:ARG:HA	2.24	0.52
1:C:790:SER:CA	1:C:794:VAL:HA	2.40	0.52
1:A:672:GLU:HA	1:A:672:GLU:OE1	2.09	0.52
1:D:509:LYS:HD3	1:D:569:ALA:HA	1.90	0.52
1:A:593:ALA:CB	1:A:794:VAL:HG21	2.40	0.52
1:C:568:ASP:CG	1:C:569:ALA:N	2.63	0.52
1:C:428:TYR:HD1	1:C:429:LEU:CD1	2.22	0.51
1:C:486:ARG:NH2	1:C:553:ARG:HA	2.25	0.51
1:D:399:LYS:O	1:D:399:LYS:CD	2.35	0.51
1:A:621:HIS:HE1	1:A:642:SER:HB3	1.75	0.51
1:C:381:GLN:O	1:C:385:ARG:HG2	2.11	0.51
1:B:713:GLY:O	1:B:749:ARG:HD2	2.09	0.51
1:D:789:SER:CB	1:D:792:ASP:N	2.70	0.51
1:A:360:ALA:CB	1:A:429:LEU:HD23	2.41	0.51
1:B:428:TYR:CD1	1:B:429:LEU:HD12	2.45	0.51
1:C:347:VAL:O	1:C:351:LYS:O	2.29	0.51
1:C:794:VAL:C	1:C:795:VAL:HG22	2.29	0.51
1:D:342:PHE:CD1	1:D:411:MET:HB3	2.45	0.51
1:C:428:TYR:CD1	1:C:429:LEU:HD12	2.44	0.51
1:C:713:GLY:O	1:C:749:ARG:HD2	2.11	0.51
1:D:392:ALA:HB2	1:D:410:TYR:CE2	2.45	0.51
1:A:391:PHE:CZ	1:A:395:GLU:CD	2.85	0.51
1:A:393:LEU:HD22	1:A:536:ARG:HG2	1.93	0.51
1:A:605:TYR:HB2	1:A:686:LEU:HD11	1.93	0.51
1:C:613:ARG:HB2	1:C:657:ILE:HD11	1.93	0.51
1:A:713:GLY:O	1:A:749:ARG:HD2	2.11	0.51
1:A:791:SER:O	1:A:793:PRO:N	2.44	0.51
1:B:791:SER:N	1:B:794:VAL:HB	2.26	0.51
1:C:443:TRP:O	1:C:473:ASN:ND2	2.44	0.51
1:C:524:THR:CG2	1:C:525:ARG:NH1	2.74	0.51
1:D:720:ALA:HB2	1:D:742:SER:OG	2.11	0.51
1:A:428:TYR:HD1	1:A:429:LEU:CD1	2.24	0.51

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:521:TRP:CZ3	1:A:525:ARG:HD3	2.46	0.51
1:B:356:GLN:O	1:B:361:HIS:HB2	2.11	0.51
1:D:377:GLY:O	1:D:381:GLN:HG2	2.11	0.51
1:D:539:MET:SD	1:D:551:LEU:CD2	2.99	0.51
1:D:410:TYR:HE1	1:D:414:THR:HG21	1.74	0.51
1:D:789:SER:HB3	1:D:792:ASP:CA	2.40	0.50
1:A:343:LEU:C	1:A:346:VAL:HG12	2.32	0.50
1:A:354:ASP:CB	1:A:358:SER:CB	2.90	0.50
1:C:355:TYR:N	1:C:356:GLN:HA	2.16	0.50
1:C:364:MET:O	1:C:368:GLN:N	2.31	0.50
1:D:400:LEU:CD1	1:D:410:TYR:CD2	2.85	0.50
1:A:350:GLU:OE2	1:A:353:GLN:CA	2.60	0.50
1:A:334:GLU:OE1	1:A:334:GLU:C	2.49	0.50
1:D:428:TYR:CD1	1:D:429:LEU:HD12	2.47	0.50
1:D:672:GLU:HA	1:D:672:GLU:OE1	2.11	0.50
1:D:713:GLY:O	1:D:749:ARG:HD2	2.11	0.50
1:B:539:MET:SD	1:B:551:LEU:CD2	2.99	0.50
1:C:410:TYR:CA	1:C:413:ASP:HB2	2.41	0.50
1:A:428:TYR:CD1	1:A:429:LEU:HD12	2.47	0.50
1:C:377:GLY:O	1:C:381:GLN:HG2	2.12	0.50
1:B:352:ILE:CG2	1:B:354:ASP:N	2.67	0.50
1:B:672:GLU:OE1	1:B:672:GLU:HA	2.12	0.50
1:B:393:LEU:HD23	1:B:398:GLU:CB	2.41	0.50
1:D:388:LEU:HG	1:D:411:MET:HE2	1.93	0.50
1:D:789:SER:HB2	1:D:794:VAL:CG1	2.41	0.50
1:C:632:LEU:HD23	1:C:632:LEU:N	2.22	0.50
1:D:795:VAL:HB	1:D:797:VAL:HG23	1.94	0.50
1:B:352:ILE:O	1:B:352:ILE:HG22	2.11	0.49
1:D:524:THR:CG2	1:D:525:ARG:NH1	2.75	0.49
1:D:791:SER:CA	1:D:794:VAL:CG2	2.75	0.49
1:A:613:ARG:HB2	1:A:657:ILE:HD11	1.94	0.49
1:B:668:GLY:HA3	1:B:701:PRO:HB3	1.94	0.49
1:C:340:GLU:O	1:C:344:PRO:HD2	2.11	0.49
1:C:672:GLU:HA	1:C:672:GLU:OE1	2.11	0.49
1:D:428:TYR:HD1	1:D:429:LEU:CD1	2.25	0.49
1:C:521:TRP:CZ3	1:C:525:ARG:HD3	2.48	0.49
1:D:486:ARG:NH2	1:D:553:ARG:HA	2.25	0.49
1:A:794:VAL:O	1:A:794:VAL:CG1	2.59	0.49
1:B:356:GLN:C	1:B:358:SER:N	2.60	0.49
1:B:359:ASP:O	1:B:360:ALA:C	2.49	0.49
1:B:575:GLU:OE2	1:B:579:ARG:NE	2.45	0.49

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:521:TRP:CZ3	1:D:525:ARG:HD3	2.48	0.49
1:C:355:TYR:N	1:C:356:GLN:CB	2.76	0.49
1:B:621:HIS:HB2	1:B:644:PHE:HB2	1.94	0.49
1:C:539:MET:SD	1:C:551:LEU:CD2	3.01	0.49
1:A:524:THR:CG2	1:A:525:ARG:NH1	2.74	0.49
1:A:381:GLN:O	1:A:385:ARG:HG2	2.13	0.49
1:B:430:ARG:NH1	1:B:493:HIS:HD2	1.92	0.49
1:C:797:VAL:HG13	1:C:798:ASP:H	1.78	0.49
1:D:800:VAL:CG1	1:D:800:VAL:O	2.59	0.49
1:B:356:GLN:O	1:B:358:SER:O	2.31	0.49
1:C:787:SER:HB3	1:C:789:SER:OG	2.13	0.48
1:A:337:THR:O	1:A:341:THR:HG23	2.12	0.48
1:B:359:ASP:OD1	1:B:362:GLU:OE2	2.31	0.48
1:B:393:LEU:HA	1:B:398:GLU:CB	2.43	0.48
1:A:334:GLU:OE1	1:A:334:GLU:O	2.31	0.48
1:A:395:GLU:HG2	1:A:553:ARG:HH22	1.75	0.48
1:B:428:TYR:HD1	1:B:429:LEU:CD1	2.25	0.48
1:C:739:ALA:O	1:C:742:SER:HB2	2.13	0.48
1:A:525:ARG:HH22	1:A:588:GLY:N	2.02	0.48
1:D:339:PHE:CE1	1:D:364:MET:HE3	2.48	0.48
1:D:628:ASP:O	1:D:630:PRO:HD3	2.14	0.48
1:B:381:GLN:O	1:B:385:ARG:HG2	2.13	0.48
1:B:521:TRP:CZ3	1:B:525:ARG:HD3	2.49	0.48
1:D:393:LEU:CA	1:D:396:THR:O	2.62	0.48
1:A:343:LEU:HB2	1:A:344:PRO:CD	2.44	0.48
1:A:509:LYS:CE	1:A:569:ALA:HB2	2.44	0.48
1:A:775:TYR:O	1:A:779:LYS:HB2	2.13	0.48
1:D:339:PHE:CZ	1:D:364:MET:CE	2.96	0.48
1:B:393:LEU:HD22	1:B:536:ARG:HG2	1.96	0.48
1:C:537:ALA:O	1:C:541:GLY:HA2	2.06	0.48
1:D:339:PHE:CZ	1:D:343:LEU:HD11	2.49	0.48
1:D:352:ILE:H	1:D:353:GLN:CB	2.20	0.48
1:B:673:PHE:HE1	1:B:763:MET:HG3	1.78	0.48
1:D:443:TRP:O	1:D:473:ASN:ND2	2.47	0.48
1:B:486:ARG:NH2	1:B:553:ARG:HA	2.25	0.47
1:B:359:ASP:HA	1:B:362:GLU:OE1	2.14	0.47
1:C:396:THR:CG2	1:C:410:TYR:CE1	2.97	0.47
1:A:339:PHE:C	1:A:343:LEU:HD12	2.33	0.47
1:D:359:ASP:O	1:D:362:GLU:CB	2.63	0.47
1:D:393:LEU:HA	1:D:396:THR:O	2.13	0.47
1:D:789:SER:HB2	1:D:792:ASP:C	2.34	0.47

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:347:VAL:HG23	1:A:361:HIS:NE2	2.29	0.47
1:B:605:TYR:HB2	1:B:686:LEU:HD11	1.96	0.47
1:D:525:ARG:HH22	1:D:588:GLY:N	2.05	0.47
1:A:719:ASP:OD1	1:A:719:ASP:N	2.45	0.47
1:C:524:THR:HG21	1:C:589:VAL:HG21	1.95	0.47
1:C:738:LEU:HD23	1:C:741:MET:HE1	1.96	0.47
1:A:340:GLU:H	1:A:340:GLU:HG2	1.42	0.47
1:A:396:THR:OG1	1:A:398:GLU:OE2	2.31	0.47
1:A:448:ASN:HB2	1:C:743:ARG:HB2	1.97	0.47
1:A:668:GLY:HA3	1:A:701:PRO:HB3	1.96	0.47
1:B:339:PHE:CZ	1:B:343:LEU:HD11	2.50	0.47
1:B:524:THR:HG22	1:B:525:ARG:NH1	2.29	0.47
1:C:409:VAL:O	1:C:410:TYR:HB3	2.14	0.47
1:D:381:GLN:O	1:D:385:ARG:HG2	2.14	0.47
1:D:605:TYR:HB2	1:D:686:LEU:HD11	1.95	0.47
1:D:790:SER:O	1:D:791:SER:CB	2.44	0.47
1:C:530:ASN:OD1	1:C:530:ASN:O	2.32	0.47
1:C:567:VAL:O	1:C:567:VAL:HG13	2.14	0.47
1:C:575:GLU:OE2	1:C:579:ARG:NE	2.47	0.47
1:D:569:ALA:O	1:D:570:GLU:HG3	2.15	0.47
1:A:399:LYS:O	1:A:399:LYS:HG2	2.14	0.47
1:D:524:THR:HG21	1:D:589:VAL:HG21	1.96	0.47
1:D:416:GLU:O	1:D:418:HIS:N	2.48	0.47
1:D:738:LEU:HD23	1:D:741:MET:HE1	1.96	0.47
1:B:775:TYR:O	1:B:779:LYS:HB2	2.14	0.46
1:A:651:ASP:OD1	1:A:653:THR:HG23	2.14	0.46
1:A:396:THR:O	1:A:398:GLU:N	2.47	0.46
1:B:337:THR:HG22	1:B:381:GLN:NE2	2.30	0.46
1:C:673:PHE:HE1	1:C:763:MET:HG3	1.81	0.46
1:D:572:LEU:HD11	1:D:576:LEU:HD13	1.96	0.46
1:B:487:PHE:CE2	1:B:568:ASP:CB	2.99	0.46
1:C:749:ARG:HH11	1:C:749:ARG:CB	2.27	0.46
1:D:352:ILE:CA	1:D:353:GLN:CB	2.92	0.46
1:B:443:TRP:O	1:B:473:ASN:ND2	2.49	0.46
1:C:775:TYR:CE1	1:C:779:LYS:HE2	2.50	0.46
1:D:570:GLU:CB	1:D:574:LYS:HE2	2.45	0.46
1:D:575:GLU:OE2	1:D:579:ARG:NE	2.46	0.46
1:A:334:GLU:CD	1:A:334:GLU:H	2.17	0.46
1:A:343:LEU:O	1:A:346:VAL:HG13	2.16	0.46
1:C:396:THR:HG23	1:C:410:TYR:CZ	2.41	0.46
1:D:393:LEU:HD22	1:D:536:ARG:HG2	1.98	0.46

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:668:GLY:HA3	1:D:701:PRO:HB3	1.98	0.46
1:B:743:ARG:HB2	1:D:448:ASN:HB2	1.98	0.46
1:C:775:TYR:O	1:C:779:LYS:HB2	2.16	0.46
1:D:398:GLU:O	1:D:399:LYS:HB3	2.16	0.46
1:D:410:TYR:CD1	1:D:410:TYR:C	2.88	0.46
1:D:775:TYR:O	1:D:779:LYS:HB2	2.15	0.46
1:B:409:VAL:O	1:B:410:TYR:HB3	2.16	0.46
1:C:567:VAL:HG22	1:C:569:ALA:H	1.80	0.46
1:D:548:ILE:HD13	1:D:548:ILE:HA	1.76	0.46
1:A:530:ASN:OD1	1:A:530:ASN:O	2.34	0.46
1:A:576:LEU:HB3	1:A:782:LEU:HD11	1.97	0.46
1:B:388:LEU:O	1:B:391:PHE:HB3	2.16	0.46
1:D:568:ASP:OD1	1:D:569:ALA:N	2.49	0.46
1:B:392:ALA:CB	1:B:398:GLU:CB	2.93	0.46
1:A:749:ARG:HH11	1:A:749:ARG:CG	2.29	0.45
1:C:524:THR:HG22	1:C:525:ARG:NH1	2.31	0.45
1:C:749:ARG:HH11	1:C:749:ARG:CG	2.29	0.45
1:D:568:ASP:HA	1:D:572:LEU:H	1.81	0.45
1:A:338:ALA:HB3	1:A:388:LEU:CD2	2.47	0.45
1:A:386:ASP:O	1:A:390:THR:HG23	2.16	0.45
1:A:443:TRP:O	1:A:473:ASN:ND2	2.49	0.45
1:A:447:ASN:ND2	1:A:447:ASN:C	2.68	0.45
1:B:703:THR:CG2	1:B:704:GLU:N	2.80	0.45
1:C:621:HIS:HE1	1:C:642:SER:HB3	1.82	0.45
1:B:395:GLU:HB3	1:B:553:ARG:HH22	1.81	0.45
1:D:487:PHE:CZ	1:D:568:ASP:HB3	2.51	0.45
1:B:548:ILE:HD13	1:B:548:ILE:HA	1.76	0.45
1:D:530:ASN:OD1	1:D:530:ASN:O	2.34	0.45
1:C:396:THR:HG22	1:C:410:TYR:OH	2.08	0.45
1:D:447:ASN:ND2	1:D:447:ASN:C	2.70	0.45
1:D:567:VAL:CG1	1:D:568:ASP:N	2.79	0.45
1:D:749:ARG:HH11	1:D:749:ARG:CG	2.29	0.45
1:A:430:ARG:HG2	1:A:433:ARG:NH1	2.32	0.45
1:D:351:LYS:C	1:D:353:GLN:CB	2.84	0.45
1:A:396:THR:HG1	1:A:398:GLU:CD	2.20	0.45
1:A:524:THR:HG22	1:A:525:ARG:NH1	2.31	0.45
1:A:749:ARG:HH11	1:A:749:ARG:CB	2.30	0.45
1:C:339:PHE:CZ	1:C:343:LEU:HD11	2.52	0.45
1:C:447:ASN:ND2	1:C:447:ASN:C	2.70	0.45
1:B:509:LYS:HD3	1:B:569:ALA:HA	1.98	0.45
1:A:388:LEU:O	1:A:391:PHE:HB3	2.15	0.44

*Continued on next page...*



*Continued from previous page...*

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:539:MET:HA	1:C:551:LEU:HB3	1.99	0.44
1:C:702:TRP:HH2	1:C:754:ARG:O	2.00	0.44
1:D:351:LYS:H	1:D:353:GLN:CB	2.30	0.44
1:A:345:ARG:HH11	1:A:345:ARG:HG2	1.71	0.44
1:B:447:ASN:ND2	1:B:447:ASN:C	2.69	0.44
1:B:749:ARG:HH11	1:B:749:ARG:CG	2.31	0.44
1:A:509:LYS:NZ	1:A:569:ALA:CB	2.80	0.44
1:B:447:ASN:C	1:B:447:ASN:HD22	2.17	0.44
1:B:788:ASP:C	1:B:790:SER:N	2.68	0.44
1:B:391:PHE:HD2	1:B:411:MET:HE1	1.80	0.44
1:B:396:THR:O	1:B:397:GLY:C	2.56	0.44
1:C:743:ARG:HG2	1:C:745:LEU:HG	1.99	0.44
1:D:673:PHE:HE1	1:D:763:MET:HG3	1.83	0.44
1:B:345:ARG:HE	1:B:412:ARG:HG3	1.81	0.44
1:A:775:TYR:CE1	1:A:779:LYS:HE2	2.53	0.44
1:B:701:PRO:HB2	1:B:703:THR:HG22	2.00	0.44
1:B:749:ARG:HH11	1:B:749:ARG:CB	2.28	0.44
1:A:486:ARG:HA	1:A:486:ARG:HD2	1.84	0.43
1:B:353:GLN:CA	1:B:354:ASP:C	2.86	0.43
1:B:651:ASP:OD1	1:B:653:THR:HG23	2.17	0.43
1:A:509:LYS:CE	1:A:569:ALA:HB1	2.48	0.43
1:A:575:GLU:OE2	1:A:579:ARG:NE	2.51	0.43
1:B:524:THR:HG22	1:B:525:ARG:HH11	1.83	0.43
1:B:530:ASN:OD1	1:B:530:ASN:O	2.35	0.43
1:D:388:LEU:O	1:D:391:PHE:HB3	2.18	0.43
1:D:430:ARG:HG2	1:D:433:ARG:NH1	2.33	0.43
1:D:339:PHE:HE1	1:D:364:MET:HE1	1.84	0.43
1:B:353:GLN:CB	1:B:354:ASP:O	2.66	0.43
1:C:790:SER:HA	1:C:794:VAL:HA	2.00	0.43
1:A:739:ALA:O	1:A:742:SER:HB3	2.19	0.43
1:C:356:GLN:HA	1:C:357:ASP:HA	1.80	0.43
1:C:388:LEU:O	1:C:391:PHE:HB3	2.19	0.43
1:C:795:VAL:HB	1:C:796:LYS:CA	2.30	0.43
1:D:738:LEU:HA	1:D:741:MET:HE1	1.95	0.43
1:A:395:GLU:CG	1:A:553:ARG:HH22	2.31	0.43
1:B:355:TYR:CB	1:B:361:HIS:ND1	2.82	0.43
1:A:421:SER:O	1:A:425:ARG:NH1	2.52	0.43
1:A:792:ASP:OD1	1:A:792:ASP:N	2.50	0.43
1:B:524:THR:HG21	1:B:589:VAL:HG21	2.01	0.43
1:D:410:TYR:HD1	1:D:410:TYR:C	2.19	0.43
1:A:339:PHE:CE1	1:A:364:MET:HE1	2.35	0.43

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:409:VAL:O	1:A:410:TYR:C	2.55	0.43
1:B:542:ALA:O	1:B:543:ASP:OD1	2.36	0.43
1:C:365:LYS:O	1:C:369:GLY:N	2.47	0.43
1:D:537:ALA:O	1:D:541:GLY:C	2.55	0.43
1:D:789:SER:O	1:D:792:ASP:N	2.49	0.43
1:C:430:ARG:HG2	1:C:433:ARG:NH1	2.34	0.43
1:D:621:HIS:HB2	1:D:644:PHE:HB2	2.00	0.43
1:D:651:ASP:OD1	1:D:653:THR:HG23	2.18	0.43
1:A:673:PHE:HE1	1:A:763:MET:HG3	1.83	0.43
1:B:421:SER:O	1:B:425:ARG:NH1	2.52	0.43
1:C:525:ARG:HH22	1:C:588:GLY:N	2.07	0.43
1:C:524:THR:HG22	1:C:525:ARG:HH11	1.83	0.42
1:D:447:ASN:C	1:D:447:ASN:HD22	2.18	0.42
1:D:749:ARG:HH11	1:D:749:ARG:CB	2.31	0.42
1:D:525:ARG:NH2	1:D:587:GLY:HA2	2.33	0.42
1:B:486:ARG:HA	1:B:486:ARG:HD2	1.85	0.42
1:B:545:LEU:HD12	1:B:545:LEU:HA	1.66	0.42
1:A:684:GLY:O	1:A:766:ARG:HD3	2.19	0.42
1:C:396:THR:HG21	1:C:410:TYR:HE1	1.79	0.42
1:D:524:THR:HG22	1:D:525:ARG:NH1	2.34	0.42
1:B:339:PHE:CZ	1:B:364:MET:CE	3.02	0.42
1:C:548:ILE:HD13	1:C:548:ILE:HA	1.81	0.42
1:D:421:SER:O	1:D:425:ARG:NH1	2.52	0.42
1:D:621:HIS:HE1	1:D:642:SER:HB3	1.76	0.42
1:A:558:PRO:O	1:A:559:ASP:CB	2.67	0.42
1:B:392:ALA:HA	1:B:410:TYR:OH	2.20	0.42
1:C:342:PHE:CE2	1:C:346:VAL:CG2	3.02	0.42
1:C:787:SER:C	1:C:789:SER:H	2.20	0.42
1:D:567:VAL:HG12	1:D:568:ASP:H	1.83	0.42
1:A:395:GLU:OE1	1:A:428:TYR:CE2	2.72	0.42
1:A:800:VAL:O	1:A:801:GLU:CB	2.68	0.42
1:B:410:TYR:CA	1:B:413:ASP:HB2	2.50	0.42
1:B:700:ARG:HH21	1:B:704:GLU:CD	2.21	0.42
1:C:348:MET:C	1:C:351:LYS:CB	2.88	0.42
1:A:396:THR:HG1	1:A:398:GLU:CG	2.32	0.42
1:B:613:ARG:HB2	1:B:657:ILE:HD11	2.00	0.42
1:B:632:LEU:N	1:B:632:LEU:CD1	2.78	0.42
1:A:548:ILE:HD13	1:A:548:ILE:HA	1.78	0.42
1:D:342:PHE:HD1	1:D:411:MET:HB3	1.84	0.42
1:D:393:LEU:C	1:D:396:THR:O	2.57	0.42
1:A:524:THR:HG21	1:A:589:VAL:HG21	2.02	0.41

*Continued on next page...*

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:558:PRO:O	1:B:559:ASP:CB	2.68	0.41
1:C:605:TYR:HB2	1:C:686:LEU:HD11	2.01	0.41
1:D:416:GLU:C	1:D:418:HIS:N	2.74	0.41
1:B:391:PHE:O	1:B:395:GLU:CG	2.68	0.41
1:C:345:ARG:HE	1:C:412:ARG:HG3	1.85	0.41
1:D:792:ASP:N	1:D:794:VAL:HG13	2.34	0.41
1:C:428:TYR:CD1	1:C:429:LEU:CD1	3.03	0.41
1:C:486:ARG:HA	1:C:486:ARG:HD2	1.84	0.41
1:C:334:GLU:HA	1:C:335:PRO:HD2	1.85	0.41
1:C:734:THR:OG1	1:C:737:ASP:HB2	2.21	0.41
1:C:487:PHE:CE2	1:C:568:ASP:HB3	2.55	0.41
1:B:703:THR:HG23	1:B:704:GLU:N	2.35	0.41
1:B:762:PHE:CD2	1:B:763:MET:CE	3.03	0.41
1:C:421:SER:O	1:C:425:ARG:NH1	2.54	0.41
1:C:567:VAL:O	1:C:567:VAL:CG1	2.69	0.41
1:D:395:GLU:HG2	1:D:395:GLU:H	1.54	0.41
1:A:360:ALA:HB1	1:A:429:LEU:HD23	2.03	0.41
1:B:548:ILE:HG13	1:B:571:ALA:CB	2.49	0.41
1:C:396:THR:CG2	1:C:410:TYR:HH	2.23	0.41
1:C:684:GLY:O	1:C:766:ARG:HD3	2.21	0.41
1:A:524:THR:HG22	1:A:525:ARG:HH11	1.85	0.41
1:B:360:ALA:CB	1:B:429:LEU:HD23	2.50	0.41
1:C:509:LYS:HD3	1:C:569:ALA:HA	2.02	0.41
1:D:800:VAL:O	1:D:800:VAL:HG12	2.20	0.41
1:A:570:GLU:O	1:A:574:LYS:HD2	2.21	0.41
1:C:404:LEU:O	1:C:408:ARG:HG2	2.21	0.41
1:D:734:THR:OG1	1:D:737:ASP:HB2	2.21	0.41
1:B:343:LEU:HA	1:B:346:VAL:HG12	2.03	0.41
1:B:352:ILE:CD1	1:B:354:ASP:CB	2.93	0.41
1:B:415:PHE:CE1	1:B:425:ARG:HB2	2.55	0.41
1:D:347:VAL:HA	1:D:350:GLU:HB2	2.03	0.41
1:D:350:GLU:HB3	1:D:351:LYS:HA	2.01	0.41
1:D:359:ASP:C	1:D:362:GLU:H	2.21	0.40
1:C:790:SER:O	1:C:791:SER:C	2.55	0.40
1:D:702:TRP:HH2	1:D:754:ARG:O	2.04	0.40
1:A:334:GLU:N	1:A:334:GLU:CD	2.74	0.40
1:A:350:GLU:OE1	1:A:351:LYS:N	2.54	0.40
1:B:684:GLY:O	1:B:766:ARG:HD3	2.21	0.40
1:C:337:THR:HG22	1:C:381:GLN:NE2	2.36	0.40

All (1) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:378:ASP:OD2	1:B:792:ASP:CA[8_554]	2.10	0.10

### 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	469/493 (95%)	439 (94%)	26 (6%)	4 (1%)	17	38
1	B	464/493 (94%)	434 (94%)	22 (5%)	8 (2%)	9	21
1	C	466/493 (94%)	438 (94%)	22 (5%)	6 (1%)	12	28
1	D	463/493 (94%)	437 (94%)	23 (5%)	3 (1%)	25	48
All	All	1862/1972 (94%)	1748 (94%)	93 (5%)	21 (1%)	14	32

All (21) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	559	ASP
1	A	793	PRO
1	B	559	ASP
1	B	793	PRO
1	C	559	ASP
1	C	565	PRO
1	C	793	PRO
1	D	559	ASP
1	D	793	PRO
1	B	790	SER
1	B	791	SER
1	C	542	ALA
1	A	542	ALA
1	B	542	ALA
1	B	565	PRO
1	C	335	PRO
1	A	565	PRO

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type
1	B	789	SER
1	B	796	LYS
1	C	795	VAL
1	D	417	ARG

### 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	355/392 (91%)	307 (86%)	48 (14%)	4 8
1	B	353/392 (90%)	316 (90%)	37 (10%)	7 15
1	C	348/392 (89%)	307 (88%)	41 (12%)	5 11
1	D	342/392 (87%)	298 (87%)	44 (13%)	4 9
All	All	1398/1568 (89%)	1228 (88%)	170 (12%)	5 10

All (170) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	334	GLU
1	A	336	LEU
1	A	337	THR
1	A	340	GLU
1	A	345	ARG
1	A	347	VAL
1	A	350	GLU
1	A	359	ASP
1	A	373	ARG
1	A	388	LEU
1	A	396	THR
1	A	404	LEU
1	A	407	GLN
1	A	409	VAL
1	A	411	MET
1	A	412	ARG
1	A	413	ASP

*Continued on next page...*

*Continued from previous page...*

<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	A	415	PHE
1	A	419	LYS
1	A	447	ASN
1	A	449	SER
1	A	462	THR
1	A	466	LYS
1	A	495	ASP
1	A	498	GLU
1	A	521	TRP
1	A	524	THR
1	A	533	SER
1	A	543	ASP
1	A	544	SER
1	A	545	LEU
1	A	548	ILE
1	A	551	LEU
1	A	561	THR
1	A	576	LEU
1	A	586	LYS
1	A	653	THR
1	A	658	GLU
1	A	669	TRP
1	A	719	ASP
1	A	727	SER
1	A	737	ASP
1	A	742	SER
1	A	749	ARG
1	A	792	ASP
1	A	794	VAL
1	A	795	VAL
1	A	800	VAL
1	B	340	GLU
1	B	347	VAL
1	B	352	ILE
1	B	373	ARG
1	B	388	LEU
1	B	395	GLU
1	B	399	LYS
1	B	404	LEU
1	B	407	GLN
1	B	413	ASP
1	B	419	LYS

*Continued on next page...*

*Continued from previous page...*

<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	B	429	LEU
1	B	447	ASN
1	B	449	SER
1	B	462	THR
1	B	495	ASP
1	B	498	GLU
1	B	521	TRP
1	B	524	THR
1	B	533	SER
1	B	543	ASP
1	B	544	SER
1	B	545	LEU
1	B	548	ILE
1	B	551	LEU
1	B	561	THR
1	B	572	LEU
1	B	576	LEU
1	B	586	LYS
1	B	632	LEU
1	B	653	THR
1	B	658	GLU
1	B	669	TRP
1	B	727	SER
1	B	737	ASP
1	B	749	ARG
1	B	755	GLU
1	C	336	LEU
1	C	340	GLU
1	C	346	VAL
1	C	347	VAL
1	C	364	MET
1	C	373	ARG
1	C	388	LEU
1	C	396	THR
1	C	404	LEU
1	C	407	GLN
1	C	408	ARG
1	C	409	VAL
1	C	411	MET
1	C	412	ARG
1	C	413	ASP
1	C	419	LYS

*Continued on next page...*

*Continued from previous page...*

<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	C	430	ARG
1	C	447	ASN
1	C	449	SER
1	C	462	THR
1	C	495	ASP
1	C	498	GLU
1	C	521	TRP
1	C	524	THR
1	C	533	SER
1	C	544	SER
1	C	545	LEU
1	C	548	ILE
1	C	561	THR
1	C	576	LEU
1	C	586	LYS
1	C	632	LEU
1	C	658	GLU
1	C	669	TRP
1	C	727	SER
1	C	737	ASP
1	C	742	SER
1	C	749	ARG
1	C	755	GLU
1	C	794	VAL
1	C	799	ASP
1	D	337	THR
1	D	340	GLU
1	D	373	ARG
1	D	388	LEU
1	D	395	GLU
1	D	399	LYS
1	D	404	LEU
1	D	407	GLN
1	D	409	VAL
1	D	410	TYR
1	D	413	ASP
1	D	429	LEU
1	D	447	ASN
1	D	449	SER
1	D	462	THR
1	D	466	LYS
1	D	495	ASP

*Continued on next page...*



*Continued from previous page...*

<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	D	498	GLU
1	D	521	TRP
1	D	524	THR
1	D	533	SER
1	D	543	ASP
1	D	544	SER
1	D	545	LEU
1	D	548	ILE
1	D	551	LEU
1	D	561	THR
1	D	572	LEU
1	D	576	LEU
1	D	586	LYS
1	D	642	SER
1	D	653	THR
1	D	658	GLU
1	D	669	TRP
1	D	727	SER
1	D	737	ASP
1	D	749	ARG
1	D	755	GLU
1	D	777	ARG
1	D	787	SER
1	D	791	SER
1	D	795	VAL
1	D	799	ASP
1	D	800	VAL

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (22) such sidechains are listed below:

<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	A	381	GLN
1	A	447	ASN
1	A	448	ASN
1	A	493	HIS
1	A	534	GLN
1	A	681	HIS
1	B	447	ASN
1	B	493	HIS
1	B	534	GLN
1	B	681	HIS
1	C	431	HIS

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type
1	C	447	ASN
1	C	493	HIS
1	C	534	GLN
1	C	654	HIS
1	C	681	HIS
1	C	747	HIS
1	D	447	ASN
1	D	493	HIS
1	D	534	GLN
1	D	681	HIS
1	D	747	HIS

### 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](#)

There are no ligands in this entry.

### 5.7 Other polymers [i](#)

There are no such residues in this entry.

### 5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

## 6 Fit of model and data

### 6.1 Protein, DNA and RNA chains

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
1	A	471/493 (95%)	0.44	35 (7%) 14 13	43, 69, 108, 160	0
1	B	466/493 (94%)	0.61	47 (10%) 7 5	58, 81, 129, 154	0
1	C	468/493 (94%)	0.71	41 (8%) 10 8	51, 76, 126, 158	0
1	D	467/493 (94%)	0.59	53 (11%) 5 4	53, 80, 130, 172	0
All	All	1872/1972 (94%)	0.59	176 (9%) 8 7	43, 77, 125, 172	0

All (176) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	C	556	ALA	8.9
1	A	795	VAL	8.6
1	D	348	MET	8.2
1	C	668	GLY	8.1
1	A	558	PRO	8.1
1	B	560	ALA	7.5
1	B	563	PRO	7.3
1	D	563	PRO	7.3
1	C	357	ASP	7.2
1	A	570	GLU	6.7
1	D	420	ASP	6.3
1	C	563	PRO	6.2
1	C	791	SER	6.0
1	D	407	GLN	5.8
1	A	352	ILE	5.7
1	B	558	PRO	5.5
1	A	792	ASP	5.3
1	D	793	PRO	5.3
1	D	402	LYS	5.3
1	A	563	PRO	5.3
1	D	557	GLU	5.3

*Continued on next page...*

*Continued from previous page...*

<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	A	332	THR	5.2
1	B	797	VAL	5.2
1	A	559	ASP	5.1
1	D	404	LEU	5.1
1	D	798	ASP	5.1
1	B	793	PRO	5.1
1	C	354	ASP	5.1
1	D	556	ALA	4.9
1	A	416	GLU	4.9
1	D	358	SER	4.8
1	D	561	THR	4.8
1	A	790	SER	4.8
1	D	790	SER	4.8
1	D	555	TRP	4.6
1	C	402	LYS	4.5
1	D	421	SER	4.4
1	B	790	SER	4.4
1	B	798	ASP	4.3
1	A	561	THR	4.3
1	D	375	ALA	4.3
1	D	403	ARG	4.3
1	B	561	THR	4.3
1	A	331	THR	4.2
1	C	420	ASP	4.2
1	A	333	GLY	4.2
1	D	560	ALA	4.2
1	C	584	LYS	4.2
1	C	667	SER	4.2
1	B	420	ASP	4.1
1	A	560	ALA	4.1
1	D	406	ASP	4.0
1	B	493	HIS	4.0
1	A	793	PRO	4.0
1	D	424	ASP	3.9
1	D	570	GLU	3.9
1	C	794	VAL	3.9
1	A	797	VAL	3.8
1	B	789	SER	3.8
1	B	727	SER	3.8
1	B	376	VAL	3.7
1	A	541	GLY	3.7
1	C	800	VAL	3.5

*Continued on next page...*

*Continued from previous page...*

<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	B	498	GLU	3.5
1	C	792	ASP	3.5
1	B	728	GLY	3.5
1	C	416	GLU	3.4
1	D	333	GLY	3.4
1	C	403	ARG	3.4
1	C	344	PRO	3.4
1	A	789	SER	3.4
1	C	353	GLN	3.3
1	B	362	GLU	3.3
1	C	797	VAL	3.2
1	D	792	ASP	3.2
1	C	545	LEU	3.2
1	A	801	GLU	3.1
1	D	797	VAL	3.1
1	D	801	GLU	3.1
1	A	794	VAL	3.1
1	B	351	LYS	3.1
1	A	556	ALA	3.0
1	B	336	LEU	3.0
1	B	415	PHE	3.0
1	B	418	HIS	3.0
1	C	379	ARG	3.0
1	C	587	GLY	3.0
1	A	791	SER	3.0
1	D	381	GLN	2.9
1	C	348	MET	2.9
1	D	380	LEU	2.9
1	D	357	ASP	2.9
1	B	730	THR	2.9
1	A	798	ASP	2.9
1	C	333	GLY	2.9
1	C	586	LYS	2.9
1	C	793	PRO	2.9
1	A	564	ASP	2.9
1	B	795	VAL	2.8
1	C	334	GLU	2.8
1	D	558	PRO	2.8
1	B	406	ASP	2.8
1	C	498	GLU	2.8
1	C	336	LEU	2.8
1	D	559	ASP	2.8

*Continued on next page...*

*Continued from previous page...*

<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	C	550	PRO	2.7
1	A	395	GLU	2.7
1	B	363	TYR	2.7
1	A	498	GLU	2.7
1	B	799	ASP	2.7
1	D	554	GLN	2.6
1	B	794	VAL	2.6
1	C	546	THR	2.6
1	D	493	HIS	2.6
1	D	408	ARG	2.6
1	D	789	SER	2.6
1	D	791	SER	2.6
1	D	401	SER	2.6
1	C	447	ASN	2.6
1	B	791	SER	2.6
1	B	517	PHE	2.5
1	A	800	VAL	2.5
1	B	535	TYR	2.5
1	B	722	SER	2.5
1	A	555	TRP	2.5
1	D	376	VAL	2.5
1	B	345	ARG	2.5
1	D	385	ARG	2.5
1	B	416	GLU	2.5
1	D	566	ASP	2.5
1	D	669	TRP	2.4
1	A	726	SER	2.4
1	C	404	LEU	2.4
1	D	584	LYS	2.4
1	C	413	ASP	2.4
1	B	419	LYS	2.4
1	B	430	ARG	2.4
1	B	413	ASP	2.4
1	B	559	ASP	2.4
1	D	344	PRO	2.4
1	A	351	LYS	2.4
1	C	399	LYS	2.3
1	D	374	PHE	2.3
1	C	429	LEU	2.3
1	B	725	ASN	2.3
1	D	337	THR	2.3
1	D	349	ALA	2.3

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type	RSRZ
1	B	405	PRO	2.3
1	A	353	GLN	2.3
1	D	800	VAL	2.3
1	D	734	THR	2.2
1	B	792	ASP	2.2
1	D	339	PHE	2.2
1	A	725	ASN	2.2
1	B	702	TRP	2.2
1	D	429	LEU	2.2
1	B	499	ALA	2.2
1	D	425	ARG	2.2
1	C	585	GLY	2.2
1	C	391	PHE	2.2
1	D	352	ILE	2.2
1	D	428	TYR	2.1
1	C	493	HIS	2.1
1	C	654	HIS	2.1
1	A	547	GLY	2.1
1	D	799	ASP	2.1
1	B	480	ALA	2.1
1	B	395	GLU	2.1
1	A	557	GLU	2.1
1	C	355	TYR	2.1
1	C	561	THR	2.1
1	B	554	GLN	2.1
1	B	401	SER	2.1
1	B	555	TRP	2.1
1	B	703	THR	2.0
1	A	569	ALA	2.0

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

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

## 6.3 Carbohydrates [i](#)

There are no monosaccharides in this entry.

## 6.4 Ligands [i](#)

There are no ligands in this entry.

## 6.5 Other polymers [i](#)

There are no such residues in this entry.