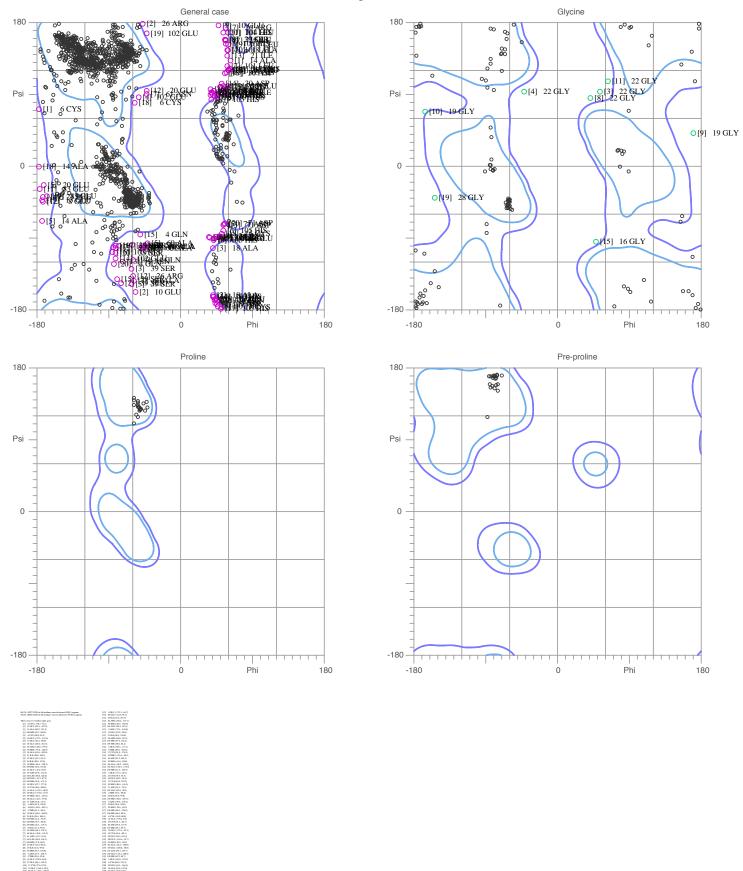
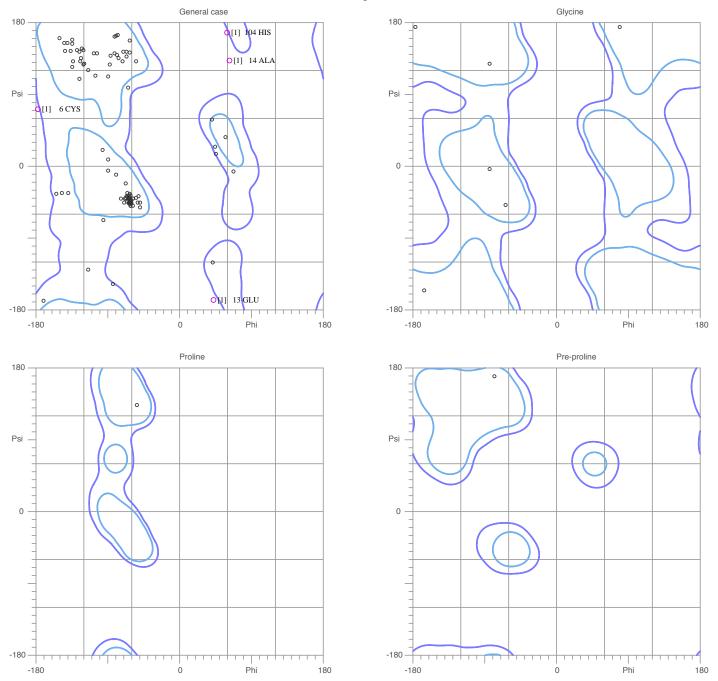
2KHD\_NMR.pdb, all models



2KHD\_NMR.pdb, model 1

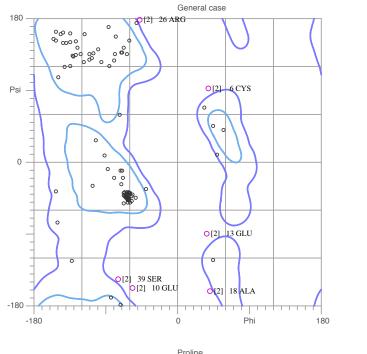


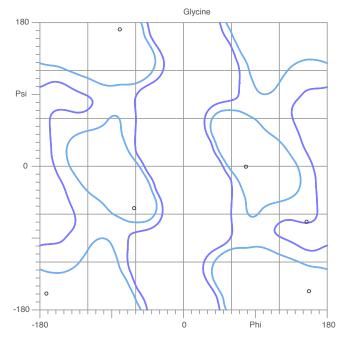
84.9% (90/106) of all residues were in favored (98%) regions. 96.2% (102/106) of all residues were in allowed (>99.8%) regions.

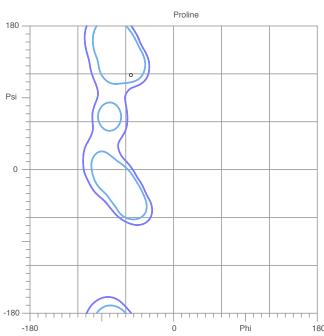
There were 4 outliers (phi, psi):

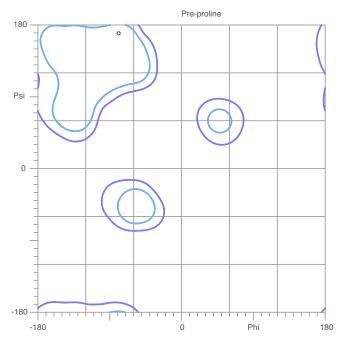
- [1] 6 CYS (-178.7, 72.1)
- [1] 13 GLU (42.4, -167.9)
- [1] 14 ALA (62.2, 133.3)
- [1] 104 HIS (59.7, 168.9)

2KHD\_NMR.pdb, model 2









 $84.9\%\ (90/106)$  of all residues were in favored (98%) regions.  $94.3\%\ (100/106)$  of all residues were in allowed (>99.8%) regions.

There were 6 outliers (phi, psi):

[2] 6 CYS (38.8, 93.9)

[2] 10 GLU (-57.2, -157.6)

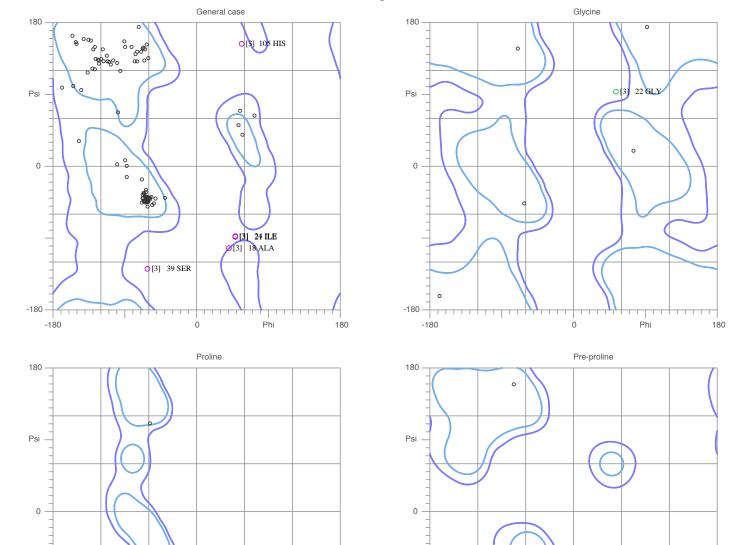
[2] 13 GLU (36.4, -89.0)

[2] 18 ALA (40.8, -161.5)

[2] 26 ARG (-48.6, 179.2)

[2] 39 SER (-75.8, -146.9)

2KHD\_NMR.pdb, model 3



 $88.7\%\ (94/106)$  of all residues were in favored (98%) regions.  $94.3\%\ (100/106)$  of all residues were in allowed (>99.8%) regions.

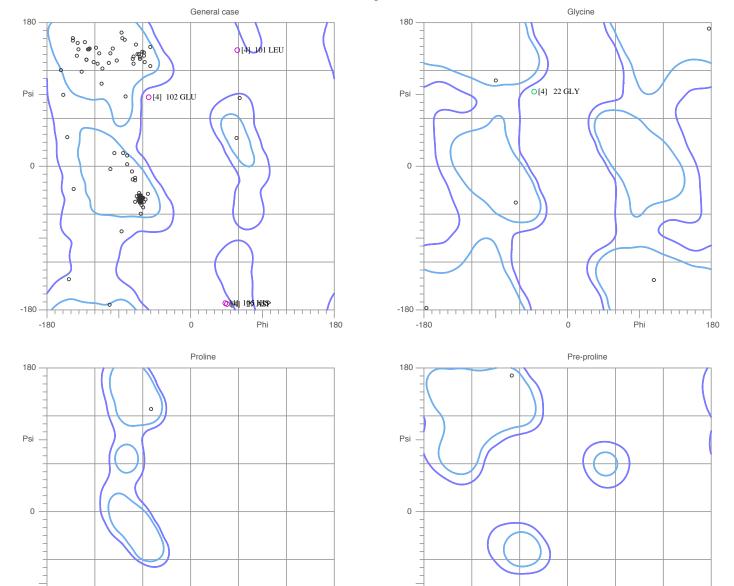
There were 6 outliers (phi, psi):

-180

[3] 18 ALA (41.0, -102.0)

- [3] 21 ILE (48.8, -88.3)
- [3] 22 GLY (53.1, 94.3)
- [3] 24 ILE (48.9, -87.6)
- [3] 39 SER (-62.6, -128.3)
- [3] 105 HIS (56.6, 155.0)

2KHD\_NMR.pdb, model 4



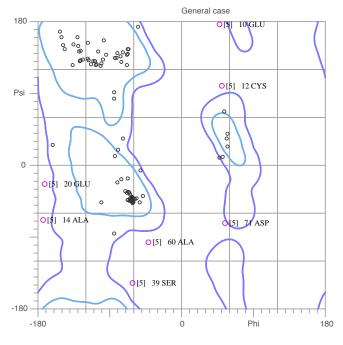
 $88.7\%\ (94/106)$  of all residues were in favored (98%) regions.  $95.3\%\ (101/106)$  of all residues were in allowed (>99.8%) regions.

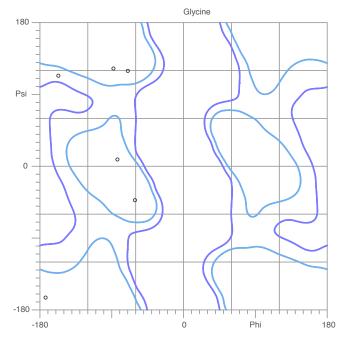
There were 5 outliers (phi, psi):

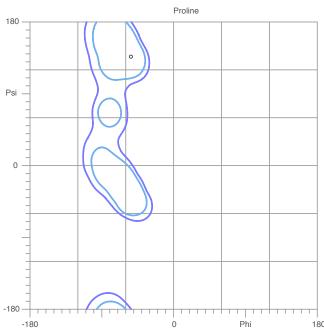
-180

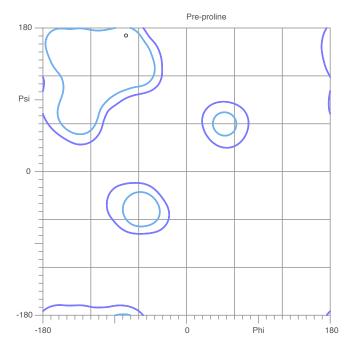
- [4] 22 GLY (-42.2, 94.5)
- [4] 29 ASP (45.0, -172.4)
- [4] 101 LEU (58.8, 146.6)
- [4] 102 GLU (-53.1, 87.3)
- [4] 105 HIS (43.9, -171.2)

2KHD\_NMR.pdb, model 5









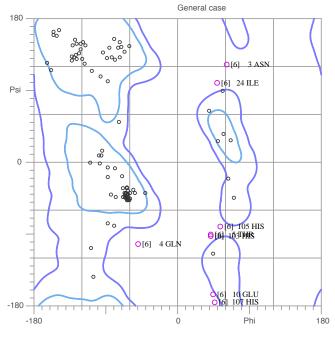
84.0% (89/106) of all residues were in favored (98%) regions. 93.4% (99/106) of all residues were in allowed (>99.8%) regions.

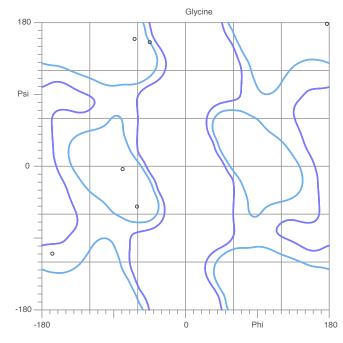
There were 7 outliers (phi, psi):

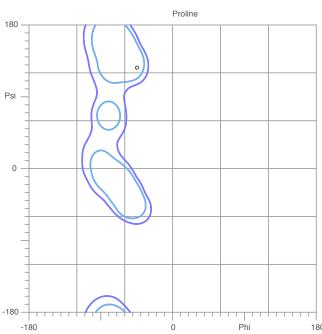
[5] 10 GLU (47.7, 177.9)

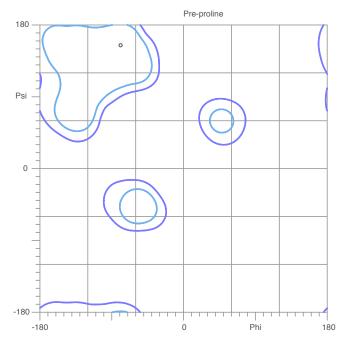
- [5] 12 CYS (50.4, 100.8)
- [5] 14 ALA (-174.3, -68.2)
- [5] 20 GLU (-172.0, -23.7)
- [5] 39 SER (-62.6, -147.6)
- [5] 60 ALA (-42.3, -97.0)
- [5] 71 ASP (54.8, -72.5)

2KHD\_NMR.pdb, model 6









81.1% (86/106) of all residues were in favored (98%) regions. 92.5% (98/106) of all residues were in allowed (>99.8%) regions.

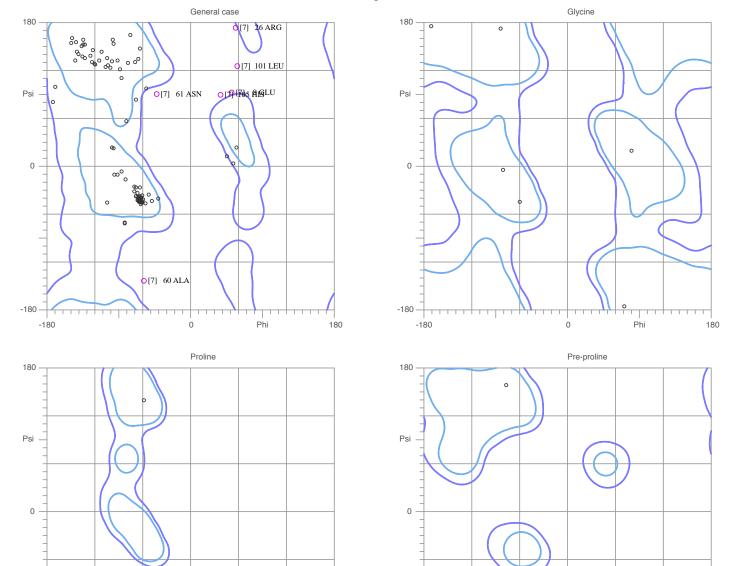
There were 8 outliers (phi, psi):

- [6] 3 ASN (61.8, 124.0)
- [6] 4 GLN (-50.9, -102.1)

- [6] 5 THR (41.4, -90.2)
- [6] 10 GLU (44.6, -166.0)
- [6] 24 ILE (49.4, 100.4)
- [6] 103 HIS (41.4, -92.6)
- [6] 105 HIS (53.7, -80.6)
- [6] 107 HIS (46.3, -175.7)

Lovell, Davis, et al. Proteins 50:437 (2003)

2KHD\_NMR.pdb, model 7



86.8% (92/106) of all residues were in favored (98%) regions. 94.3% (100/106) of all residues were in allowed (>99.8%) regions.

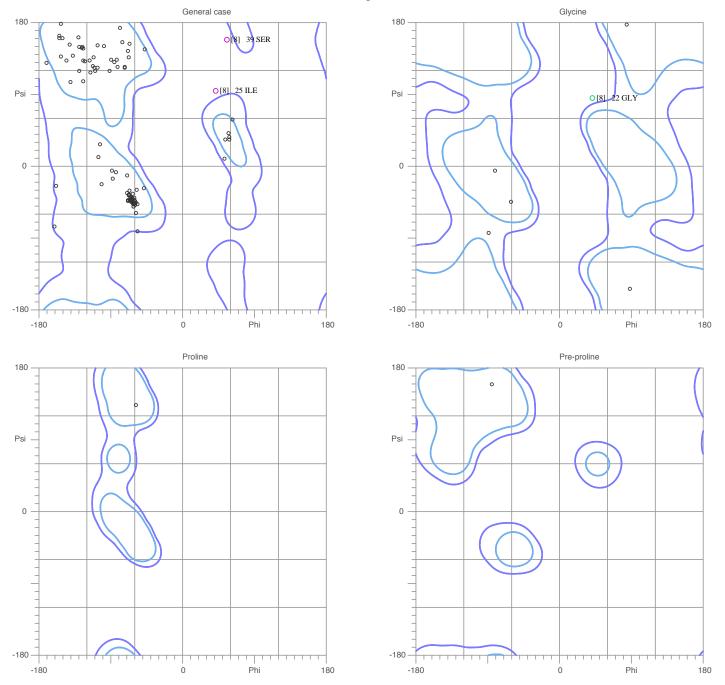
There were 6 outliers (phi, psi):

[7] 8 GLU (51.4, 93.3)

-180

- [7] 26 ARG (56.1, 174.5)
- [7] 60 ALA (-59.8, -143.3)
- [7] 61 ASN (-43.7, 91.6)
- [7] 101 LEU (58.4, 126.1)
- [7] 105 HIS (37.8, 90.3)

2KHD\_NMR.pdb, model 8

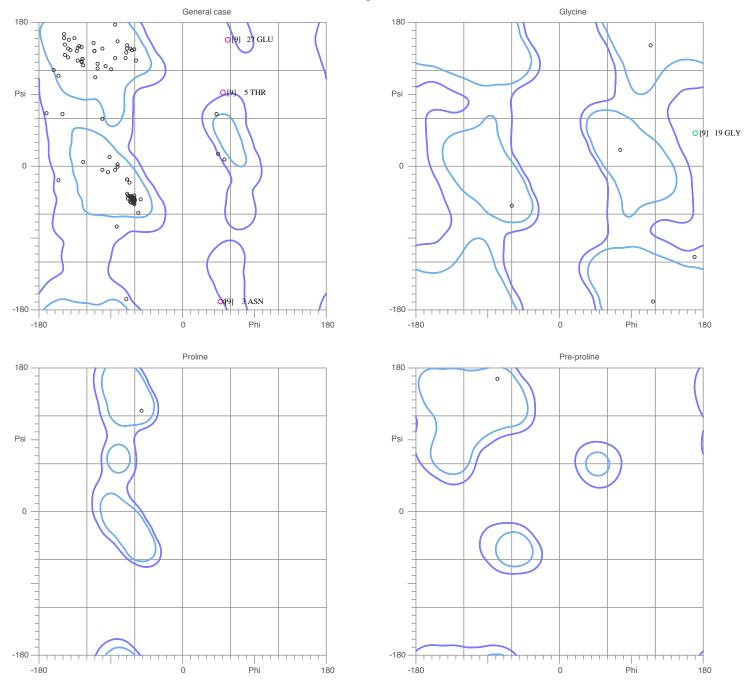


90.6% (96/106) of all residues were in favored (98%) regions. 97.2% (103/106) of all residues were in allowed (>99.8%) regions.

There were 3 outliers (phi, psi):

- [8] 22 GLY (41.6, 86.4)
- [8] 25 ILE (41.6, 95.0)
- [8] 39 SER (55.7, 159.8)

2KHD\_NMR.pdb, model 9

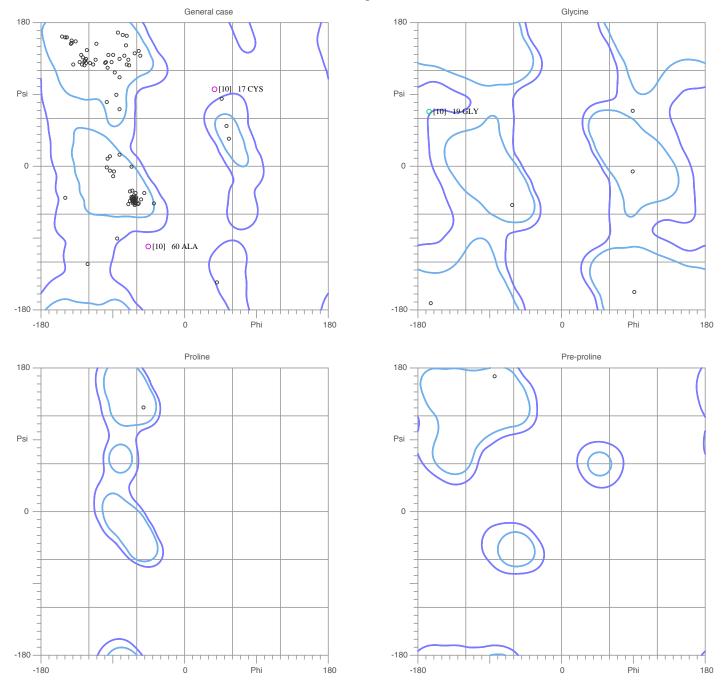


85.8% (91/106) of all residues were in favored (98%) regions. 96.2% (102/106) of all residues were in allowed (>99.8%) regions.

There were 4 outliers (phi, psi):

- [9] 3 ASN (47.9, -169.7)
- [9] 5 THR (50.1, 93.0)
- [9] 19 GLY (170.9, 43.0)
- [9] 27 GLU (56.1, 159.5)

2KHD\_NMR.pdb, model 10

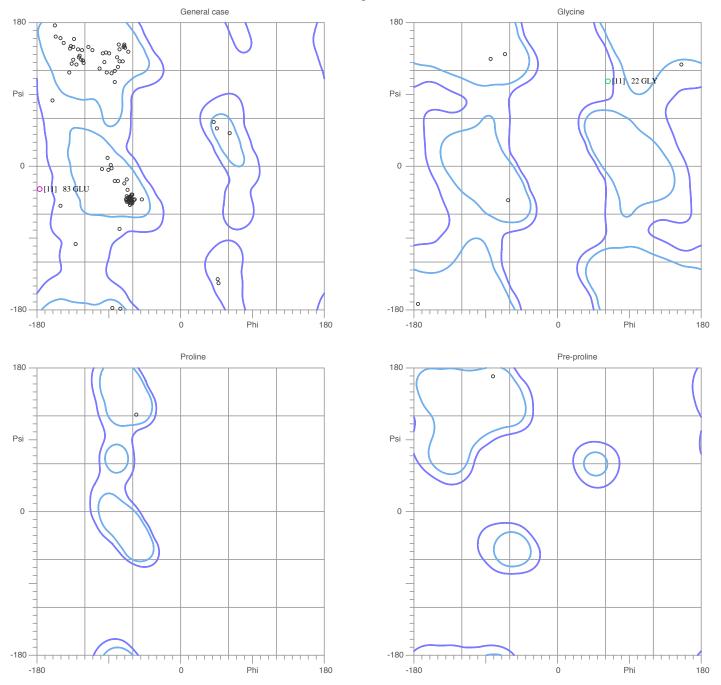


91.5% (97/106) of all residues were in favored (98%) regions. 97.2% (103/106) of all residues were in allowed (>99.8%) regions.

There were 3 outliers (phi, psi):

- [10] 17 CYS (37.5, 97.0)
- [10] 19 GLY (-166.3, 69.9)
- [10] 60 ALA (-46.5, -100.0)

2KHD\_NMR.pdb, model 11

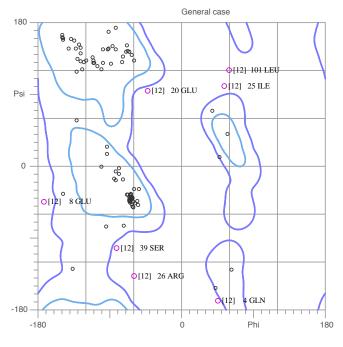


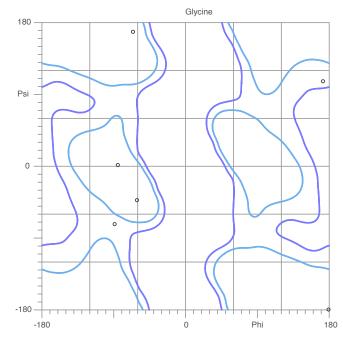
91.5% (97/106) of all residues were in favored (98%) regions. 98.1% (104/106) of all residues were in allowed (>99.8%) regions.

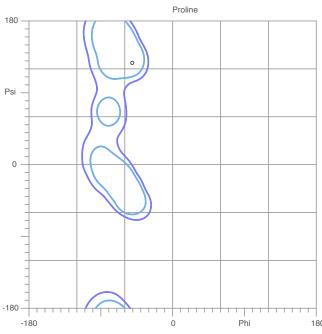
There were 2 outliers (phi, psi):

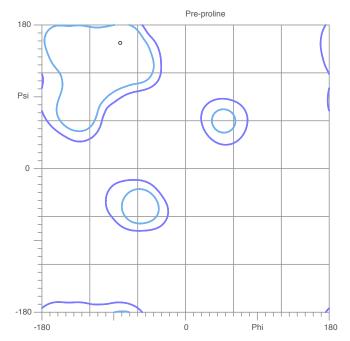
- [11] 22 GLY (63.7, 107.3)
- [11] 83 GLU (-177.3, -28.9)

2KHD\_NMR.pdb, model 12







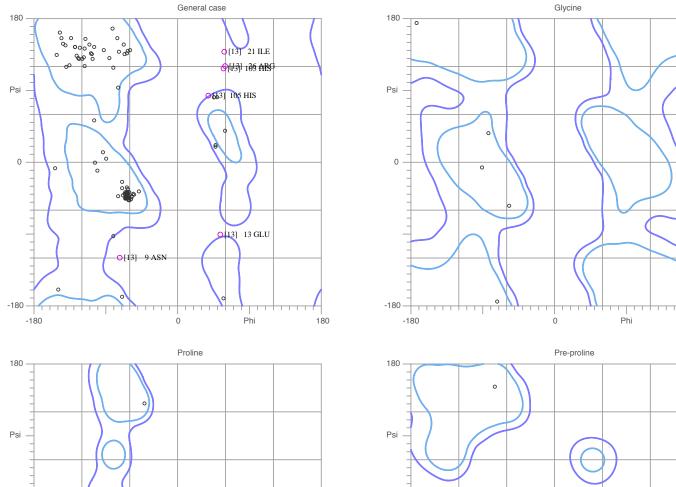


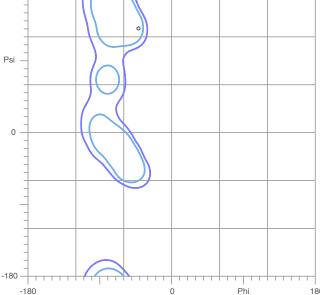
83.0% (88/106) of all residues were in favored (98%) regions. 93.4% (99/106) of all residues were in allowed (>99.8%) regions.

There were 7 outliers (phi, psi): [12] 4 GLN (45.6, -168.4)

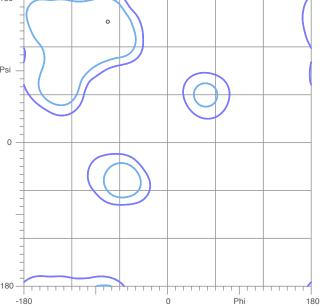
- [12] 8 GLU (-173.3, -44.7)
- [12] 20 GLU (-43.6, 95.1)
- [12] 25 ILE (53.4, 101.7)
- [12] 26 ARG (-60.2, -137.1)
- [12] 39 SER (-82.7, -102.9)
- [12] 101 LEU (59.5, 121.4)

2KHD\_NMR.pdb, model 13





General case



84.0% (89/106) of all residues were in favored (98%) regions. 94.3% (100/106) of all residues were in allowed (>99.8%) regions.

There were 6 outliers (phi, psi): [13] 9 ASN (-73.1, -119.6)

[13] 13 GLU (53.9, -90.4)

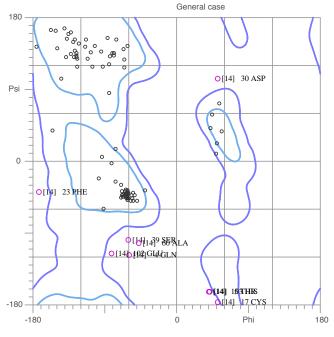
[13] 21 ILE (58.3, 139.8)

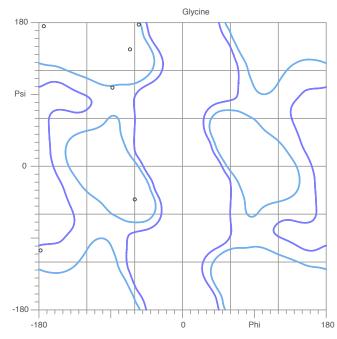
[13] 26 ARG (59.8, 121.2)

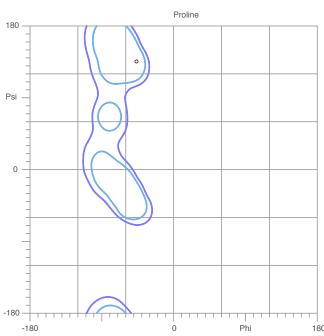
[13] 103 HIS (57.5, 118.2)

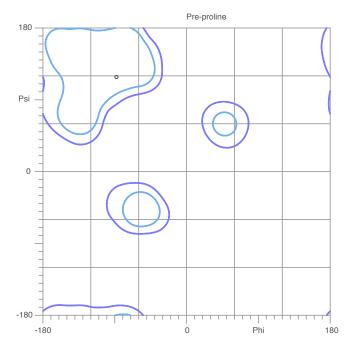
[13] 105 HIS (38.6, 84.4)

2KHD\_NMR.pdb, model 14









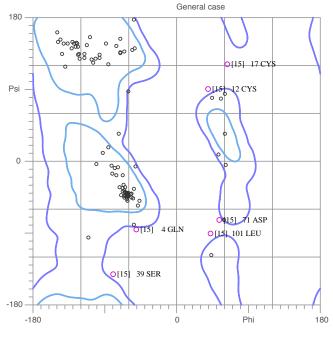
84.0% (89/106) of all residues were in favored (98%) regions. 91.5% (97/106) of all residues were in allowed (>99.8%) regions.

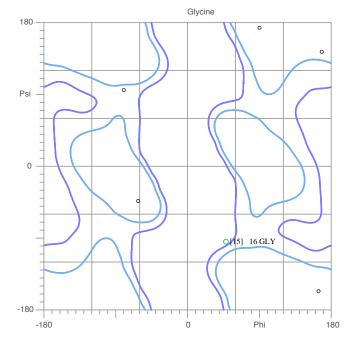
There were 9 outliers (phi, psi):

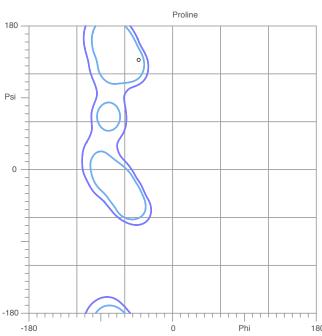
- [14] 4 GLN (-60.1, -117.1)
- [14] 5 THR (40.5, -163.6)

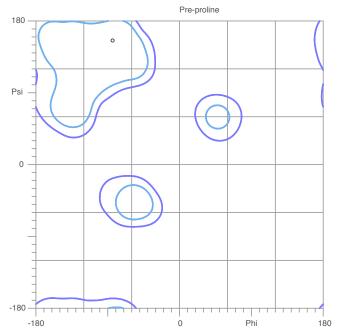
- [14] 17 CYS (51.0, -176.2)
- [14] 23 PHE (-173.6, -38.3)
- [14] 30 ASP (51.2, 104.3)
- [14] 39 SER (-61.4, -99.0)
- [14] 60 ALA (-48.2, -103.0)
- [14] 102 GLU (-82.5, -115.5)
- [14] 103 HIS (41.2, -163.5)

2KHD\_NMR.pdb, model 15









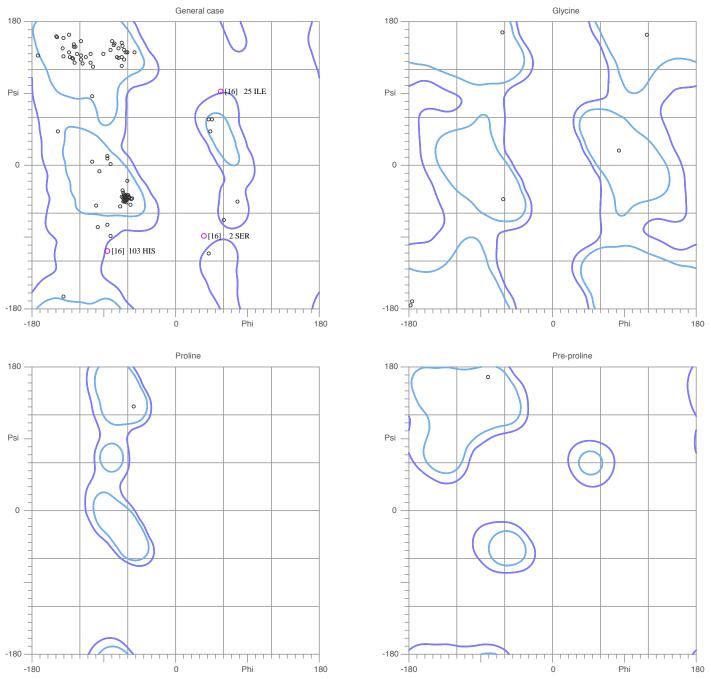
80.2% (85/106) of all residues were in favored (98%) regions. 93.4% (99/106) of all residues were in allowed (>99.8%) regions.

There were 7 outliers (phi, psi):

[15] 4 GLN (-51.3, -85.1)

- [15] 12 CYS (39.3, 91.5)
- [15] 16 GLY (48.2, -94.3)
- [15] 17 CYS (63.9, 122.2)
- [15] 39 SER (-80.4, -141.5)
- [15] 71 ASP (53.4, -73.4)
- [15] 101 LEU (42.6, -90.1)

2KHD\_NMR.pdb, model 16

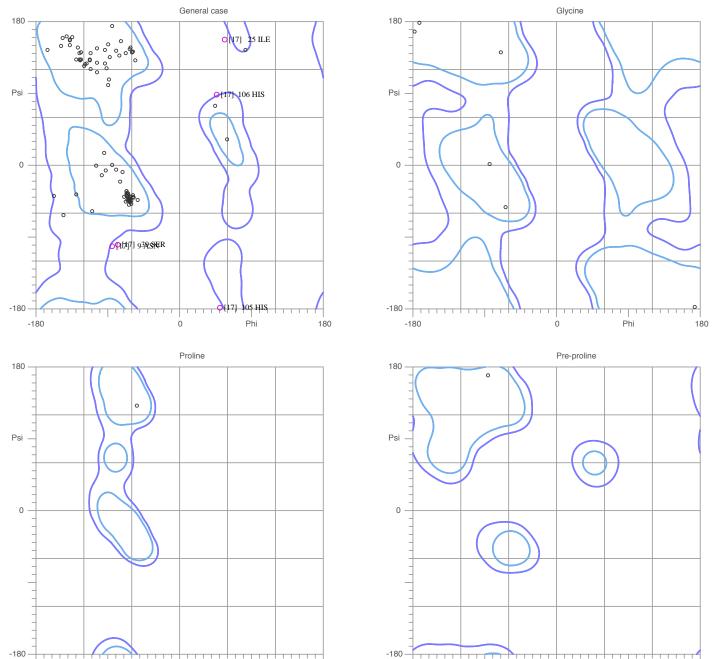


88.7% (94/106) of all residues were in favored (98%) regions. 97.2% (103/106) of all residues were in allowed (>99.8%) regions.

There were 3 outliers (phi, psi):

- [16] 2 SER (35.2, -88.8)
- [16] 25 ILE (56.9, 93.8)
- [16] 103 HIS (-86.0, -107.5)

2KHD\_NMR.pdb, model 17



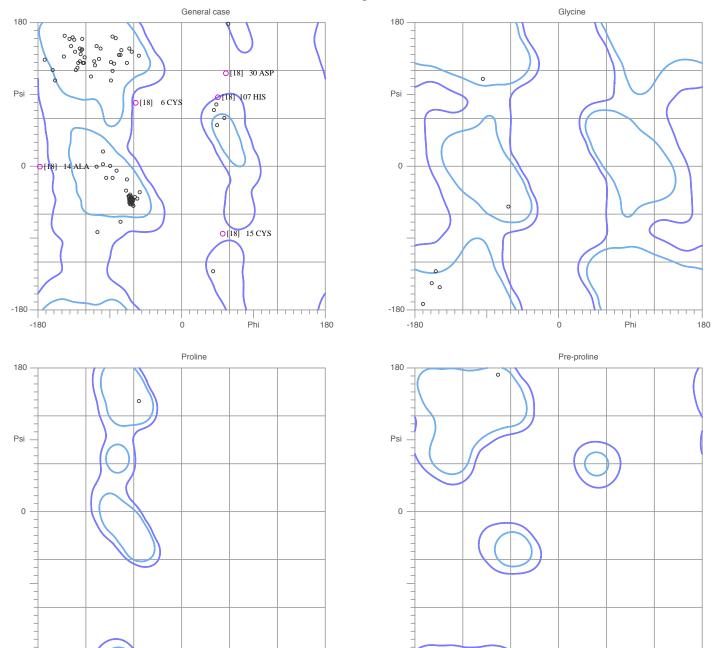
90.6% (96/106) of all residues were in favored (98%) regions. 95.3% (101/106) of all residues were in allowed (>99.8%) regions.

There were 5 outliers (phi, psi):

-180

- [17] 9 ASN (-85.5, -101.3)
- [17] 25 ILE (56.4, 158.1)
- [17] 39 SER (-78.5, -99.3)
- [17] 105 HIS (50.5, -178.9)
- [17] 106 HIS (46.6, 89.9)

2KHD\_NMR.pdb, model 18



85.8% (91/106) of all residues were in favored (98%) regions. 95.3% (101/106) of all residues were in allowed (>99.8%) regions.

There were 5 outliers (phi, psi):

-180

[18] 6 CYS (-58.9, 80.8)

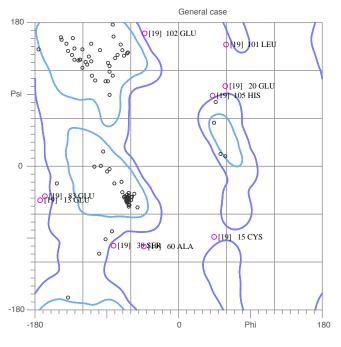
[18] 14 ALA (-178.4, 0.0)

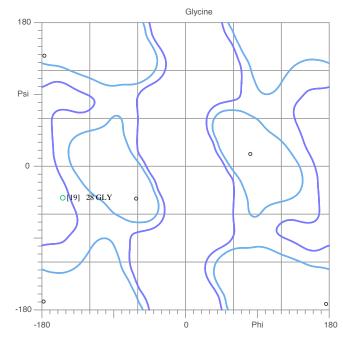
[18] 15 CYS (51.1, -84.7)

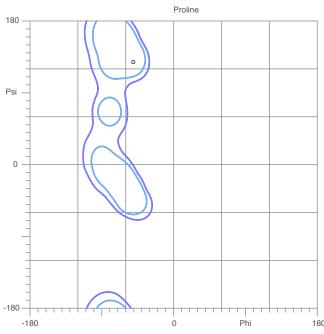
[18] 30 ASP (55.8, 117.9)

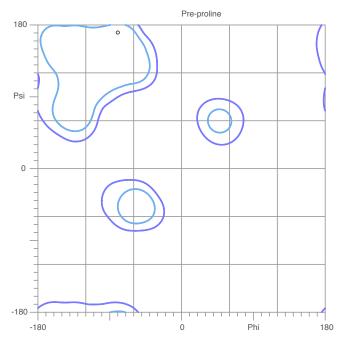
[18] 107 HIS (45.1, 87.5)

2KHD\_NMR.pdb, model 19









83.0% (88/106) of all residues were in favored (98%) regions. 90.6% (96/106) of all residues were in allowed (>99.8%) regions.

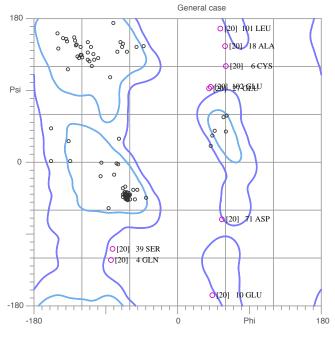
There were 10 outliers (phi, psi):

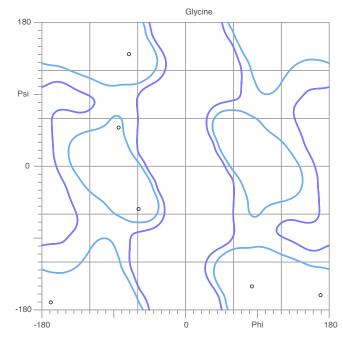
- [19] 13 GLU (-174.1, -42.2)
- [19] 15 CYS (44.6, -88.1)
- [19] 20 GLU (58.3, 101.5)

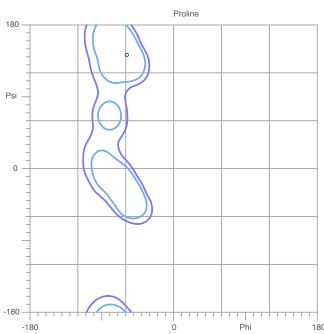
- [19] 28 GLY (-154.6, -39.7)
- [19] 39 SER (-82.2, -99.4)
- [19] 60 ALA (-44.4, -100.0)
- [19] 83 GLU (-168.8, -38.0)
- [19] 101 LEU (59.3, 153.7)
- [19] 102 GLU (-43.2, 168.0)
- [19] 105 HIS (42.2, 89.7)

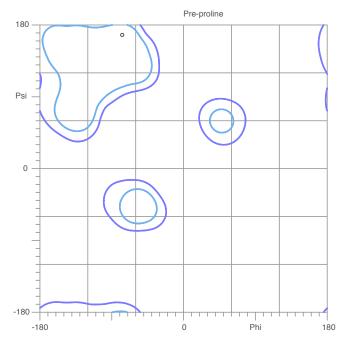
http://kinemage.biochem.duke.edu

2KHD\_NMR.pdb, model 20









85.8% (91/106) of all residues were in favored (98%) regions. 91.5% (97/106) of all residues were in allowed (>99.8%) regions.

There were 9 outliers (phi, psi):

- [20] 4 GLN (-84.0, -122.5)
- [20] 6 CYS (60.9, 121.5)

- [20] 10 GLU (43.1, -166.5)
- [20] 18 ALA (59.6, 147.0)
- [20] 27 GLU (40.0, 93.5)
- [20] 39 SER (-82.4, -108.9)
- [20] 71 ASP (55.6, -71.7)
- [20] 101 LEU (53.7, 168.3)
- [20] 102 GLU (41.5, 95.1)