# MolProbity Ramachandran analysis

1air_.B99990002.pdb, model 1



General case



Isoleucine and valine



Pre-proline



Glycine



*Trans* proline



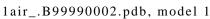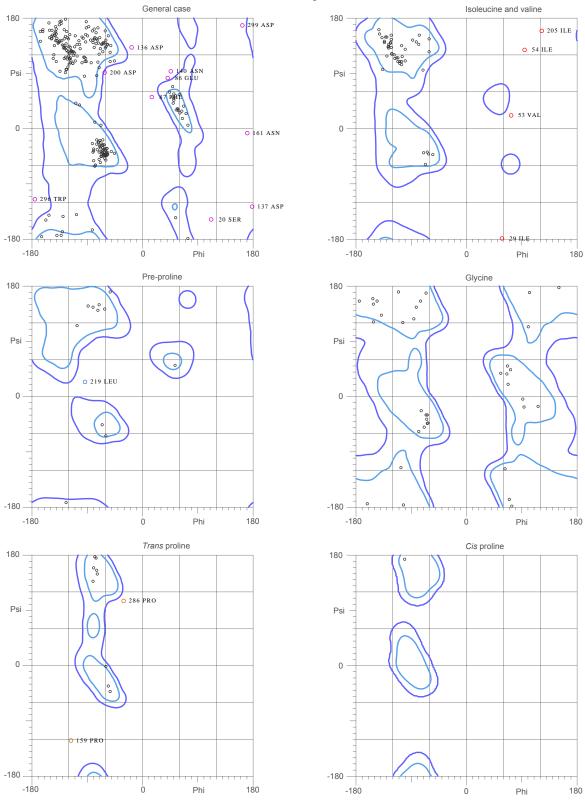*Cis* proline

89.4% (313/350) of all residues were in favored (98%) regions.
95.1% (333/350) of all residues were in allowed (>99.8%) regions.

There were 17 outliers (phi, psi):
    20 SER (113.0, -148.8)
    29 ILE (58.7, -179.6)
    53 VAL (73.8, 23.0)
    54 ILE (95.4, 129.8)
    86 GLU (41.9, 83.8)
    87 PHE (15.9, 52.8)
    136 ASP (-18.2, 133.6)
    137 ASP (179.7, -127.1)
    140 ASN (46.5, 94.2)
    159 PRO (-117.2, -122.3)
    161 ASN (171.4, -8.0)
    200 ASP (-62.5, 92.0)
    205 ILE (123.7, 160.4)
    219 LEU (-94.0, 24.2)
    286 PRO (-31.2, 106.4)
    296 TRP (-176.3, -115.6)
    299 ASP (163.1, 169.3)

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