Primary sequence

Human hemoglobin beta-subunit (FASTA format)

>gi|4504349|ref|NP_000509.1| beta globin [Homo sapiens]
MVHLTPPEEKSAVTALWGKVNDEVGEALGRLLVY
PWTQRFFESFGDLSTPDAVMGNPKVKAHGKKVLG
AFSDGLAHLDNKGTFATLSELHCDKLHVDPENFRL
LGNVLVCVLAHFFGKEFTPPVQAAYQKVAGVAN
ALAHKYH
Secondary Structure → Tertiary Structure

Tertiary Structure → Quaternary Structure

ht-ADH from *B. stearothermophilus* is a homotetramer
Hemoglobin and Myoglobin Quaternary Structure

Hb $\alpha_2\beta_2$-heterotetramer

Mb – single subunit (tertiary structure only)

Click picture to right for Hb dynamics movie

Classes of Globular Protein Folds

1) Anti-parallel $\alpha$-helix

2) Parallel $\beta$-sheet $\beta-\alpha-\beta$ motif

3) Anti-parallel $\beta$-sheet

4) Metal / disulfide rich