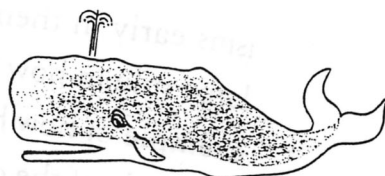


**Figure 7-4**  
Model of myoglobin at high resolution. Only the  $\alpha$  carbon atoms are shown. The heme group is shown in red, and two key histidine residues in green. [After R.E. Dickerson. In *The Proteins*, vol. 2, 2nd ed., H. Neurath, ed. (Academic Press, 1964), p. 634.]



A sperm whale.

Val-Leu-Ser-Glu-Gly-Glu-Trp-Gln-Leu-Val- 10  
NA1 NA2 A1 A2 A3 A4 A5 A6 A7 A8

Leu-His-Val-Trp-Ala-Lys-Val-Glu-Ala-Asp- 20  
A9 A10 A11 A12 A13 A14 A15 A16 AB1 B1

Val-Ala-Gly-His-Gly-Gln-Asp-Ile-Leu-Ile- 30  
B2 B3 B4 B5 B6 B7 B8 B9 B10 B11

Arg-Leu-Phe-Lys-Ser-His-Pro-Glu-Thr-Leu- 40  
B12 B13 B14 B15 B16 C1 C2 C3 C4 C5

Glu-Lys-Phe-Asp-Arg-Phe-Lys-His-Leu-Lys- 50  
C6 C7 CD1 CD2 CD3 CD4 CD5 CD6 CD7 CD8

Thr-Glu-Ala-Glu-Met-Lys-Ala-Ser-Glu-Asp- 60  
D1 D2 D3 D4 D5 D6 D7 E1 E2 E3

Leu-Lys-Lys-His-Gly-Val-Thr-Val-Leu-Thr- 70  
E4 E5 E6 E7 E8 E9 E10 E11 E12 E13

Ala-Leu-Gly-Ala-Ile-Leu-Lys-Lys-Lys-Gly- 80  
E14 E15 E16 E17 E18 E19 E20 EF1 EF2 EF3

His-His-Glu-Ala-Glu-Leu-Lys-Pro-Leu-Ala- 90  
EF4 EF5 EF6 EF7 EF8 F1 F2 F3 F4 F5

Gln-Ser-His-Ala-Thr-Lys-His-Lys-Ile-Pro- 100  
F6 F7 F8 F9 FG1 FG2 FG3 FG4 FG5 G1

Ile-Lys-Tyr-Leu-Glu-Phe-Ile-Ser-Glu-Ala- 110  
G2 G3 G4 G5 G6 G7 G8 G9 G10 G11

Ile-Ile-His-Val-Leu-His-Ser-Arg-His-Pro- 120  
G12 G13 G14 G15 G16 G17 G18 G19 GH1 GH2

Gly-Asp-Phe-Gly-Ala-Asp-Ala-Gln-Gly-Ala- 130  
GH3 GH4 GH5 GH6 H1 H2 H3 H4 H5 H6

Met-Asn-Lys-Ala-Leu-Glu-Leu-Phe-Arg-Lys- 140  
H7 H8 H9 H10 H11 H12 H13 H14 H15 H16

Asp-Ile-Ala-Ala-Lys-Tyr-Lys-Glu-Leu-Gly- 150  
H17 H18 H19 H20 H21 H22 H23 H24 HC1 HC2

Tyr-Gln-Gly 153  
HC3 HC4 HC5

**Figure 7-5**  
Amino acid sequence of sperm whale myoglobin. The label below each residue in the sequence refers to its position in an  $\alpha$ -helical region or a nonhelical region. For example, B4 is the fourth residue in the B helix; EF7 is the seventh residue in the nonhelical region between the E and F helices. [After A.E. Edmundson. *Nature* 205(1965):883; H.C. Watson. *Prog. Stereochem.* 4(1969):299-333.]