

8.4 Role of Respiratory Pigments

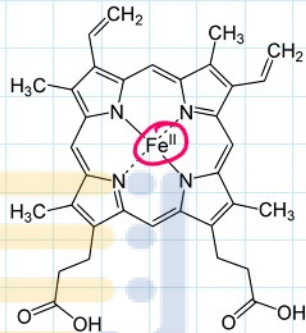
Role of Respiratory Pigments

Transport of gases
Storage of gases.

Hemoglobin

→ **Transporter**

Chemical Structure



RBC / Blood Stream

4 chain

Quaternary

574 Amino Acid

- 4 Oxygen molecule
- 8 Oxygen atoms

Location

Polypeptide Chain

Structure

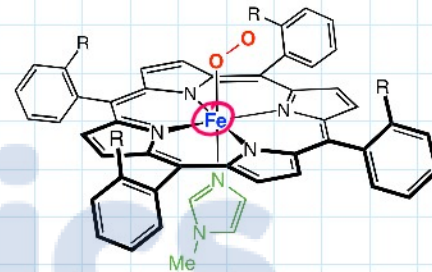
Amino Acids

Oxygen

Myoglobin

Storage

muscle-Hb



Muscle Cell / Sarcoplasm

Single chain

Tertiary

153 Amino Acid

- 1 Oxygen molecule
- 2 Oxygen atoms

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Affinity to Oxygen

↑↑

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Hb A, Hb B, Hb F

Types

Single Type

Lungs $\xrightarrow{O_2}$ Body
Hb

Functions

• Store $O_2 \rightarrow$ muscle

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Other Pigments

Hemocyanin (Blue)

Mollusca

Oxygenated
Blue

Deoxygenated
x

Chlorocoin (Green)

Annelids

Green

x

Hemoerythrin (Pink)

Marine Animals

Violet Pink

x