

Myoglobin
Catalog # PVGS1474**Specification**

Myoglobin - Product Information

Primary Accession [P02144](#)
Species
Human

Sequence
Met1-Gly154, expressed with additional N-terminal sequence (MHHHHHHDDDDK)

Purity
> 95% as analyzed by SDS-PAGE

Endotoxin Level
< 0.2 EU/ µg of protein by gel clotting method

Expression System
E. coli

Formulation **Supplied as a 0.22 µm filtered solution in 20 mM Tris-HCl, 1 mM DTT, 100 mM NaCl, 20% glycerol, pH 8.0.**

Storage & Stability
Upon receiving, this product remains stable for up to 6 months at -20°C or below and 1-2 weeks at 4°C. For long term storage, aliquot and store at -70°C or below. Avoid repeated freeze-thaw cycles.

Myoglobin - Additional Information

Gene ID 4151

Other Names
Myoglobin, Nitrite reductase MB, 1.7.-.-, Pseudoperoxidase MB, 1.11.1.-, MB (HGNC:6915)

Target Background
Myoglobin, a member of the globin family of proteins, is a cytosolic oxygen-binding protein that regulates the storage and diffusion of oxygen within myocytes. The largest expression of myoglobin is in skeletal and cardiac muscle. Myoglobin exhibits various functions in relation to the muscular oxygen supply, such as oxygen storage, facilitated diffusion, and myoglobin-mediated oxidative phosphorylation. Myoglobin is the primary oxygen-carrying pigment of muscle tissues. High concentrations of myoglobin in muscle cells allow organisms to hold their breath for a longer period of time. Diving mammals such as whales and seals have muscles with a particularly high abundance of myoglobin. Myoglobin is found in Type I, Type II A and Type II B muscle; however several studies indicate myoglobin is not found in smooth muscle.

Myoglobin - Protein Information

Name MB ([HGNC:6915](#))

Function

Monomeric heme protein which primary function is to store oxygen and facilitate its diffusion within muscle tissues. Reversibly binds oxygen through a pentacoordinated heme iron and enables its timely and efficient release as needed during periods of heightened demand (PubMed:30918256, PubMed:34679218). Depending on the oxidative conditions of tissues and cells, and in addition to its ability to bind oxygen, it also has a nitrite reductase activity whereby it regulates the production of bioactive nitric oxide (PubMed:32891753). Under stress conditions, like hypoxia and anoxia, it also protects cells against reactive oxygen species thanks to its pseudoperoxidase activity (PubMed:34679218).

Cellular Location

Cytoplasm, sarcoplasm

Myoglobin - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Myoglobin - Images