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Myoglobin Antibody
Purified Mouse Monoclonal Antibody
Catalog # AO1074a

Specification

Myoglobin Antibody - Product Information

Application	**WB, IHC, E**
Primary Accession	P02144
Reactivity	**Human**
Host	**Mouse**
Clonality	**Monoclonal**
Isotype	**IgG1**

Description
Myoglobin (MB), with 154-amino acid protein (about 17kDa), is a member of the globin superfamily and expression of myoglobin is highest in skeletal and cardiac muscle. Functionally, myoglobin is well accepted as an O2-storage protein in muscle, capable of releasing O2 during periods of hypoxia or anoxia. Myoglobin is also thought to buffer intracellular O2 concentration when muscle activity increases and to facilitate intracellular O2 diffusion by providing a parallel path that augments simple diffusion of dissolved O2. Furthermore, myoglobin is used together with cTnI or cTnT in clinical practise for better specificity in AMI diagnosis.

Immunogen
Purified recombinant fragment of Myoglobin expressed in E. Coli.

Formulation
Purified antibody in PBS containing 0.03% sodium azide.

Myoglobin Antibody - Additional Information

Gene ID 4151

Other Names
Myoglobin, MB

Dilution
WB~~1/500 - 1/2000
IHC~~1/200 - 1/1000
E~~N/A

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
Myoglobin Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Myoglobin Antibody - 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 Antibody - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Myoglobin Antibody - Images

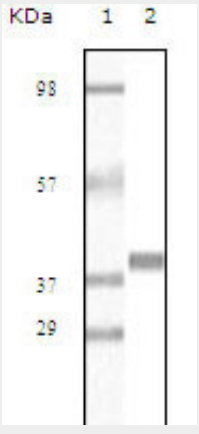

Figure 1: Western blot analysis using Myoglobin mouse mAb against truncated Myoglobin recombinant protein(AA: 2-154).

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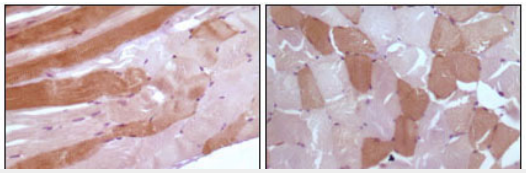

Figure 2: Immunohistochemical analysis of paraffin-embedded human skeletal muscle tissue showing cytoplasmic localization using anti-Myoglobin antibody with DAB staining.

Myoglobin Antibody - References

1. George A. Ordway, Daniel J. Garry. J. Exp. Biol., Sep 2004; 207: 3441-3446. 2. Ulrich Floel, Tim Laussmann, Axel Goecke. Circ. Res., Apr 2005; 96: e68 - e75.