

Myoglobin Antibody

Purified Mouse Monoclonal Antibody Catalog # AO1074a

Product Information

Application WB, IHC, E **Primary Accession** P02144 Reactivity Human Host Mouse Clonality Monoclonal **Clone Names** 5A2G8 Isotype IgG1 **Calculated MW** 17184

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.

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.

Protein Information

Name MB (<u>HGNC:6915</u>)

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

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.

Images

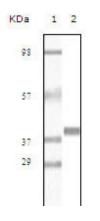


Figure 1: Western blot analysis using Myoglobin mouse mAb against truncated Myoglobin recombinant protein(AA: 2-154).

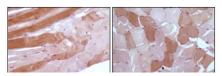


Figure 2: Immunohistochemical analysis of paraffin-embedded human skeletal muscle tissue showing cytoplasmic localization using anti-Myoglobin antibody with DAB staining.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.