



**FabGennix Inc.**  
INTERNATIONAL

# New Item New Item

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## Antibodies to Diagnostic proteins (Myoglobin)

### Anti-Human Myoglobin antibodies (Catalog # Mygb-101AP and P-Mygb and PC-Mygb)

Myoglobin (Mygb) is a cytoplasmic hemoprotein that is restricted to cardiomyocytes and oxidative skeletal muscle fibers and functions as a facilitator of oxygen transport, storage of oxygen and a scavenger of nitric oxide or reactive oxygen species. Mygb and hemoglobin are the iron containing proteins that carry oxygen in the body. The heme group present in neuroglobin, Mygb, Hemoglobin, cytochrome b and many other heme containing proteins consist of a complex protoporphyrin ring bound with iron in the ferrous state. Myoglobin measurement is used in many clinical diagnoses and has become an important tool in prognosis and diagnosis of several diseases. Mygb is (M(r) 18,000) and fatty acid-binding protein (M(r) 15,000), are low molecular mass cytoplasmic proteins that are considered useful biochemical markers for early detection or exclusion of acute myocardial infarction, and also for early estimation of infarct size. As each of these proteins shows renal clearance, the influence of renal function on the estimation of infarct size from their plasma concentration curves can be drawn (1). Myoglobin plasma levels correlates with muscle wasting in patients with cancer-related cachexia. Myoglobin expression is increased in muscles in the presence of testosterone by aerobic exercises (1).

Hemoglobin and Mygb are among the most extensively studied proteins along with nitrite one of the most studied signal transducing small molecules. During the last decade, multiple physiological studies have surprisingly revealed that nitrite represents a biological reservoir of NO by R-type catalysis in the oxygen carrying process of hemoglobin and Mygb that can regulate hypoxic vasodilation, cellular respiration, and signaling (2). Carbon monoxide poisoning let to elevated levels of CO in blood, but its diffusion to other tissue and the tissue contents are difficult to measure and assess. Multi-compartment models for CO diffusion to muscle and other sub-compartments can be achieved by measuring CO contents in Myoglobin (3). Myoglobin is protoporphyrin containing iron-binding glycoprotein with an approximate molecular weight of 19kDa (154 amino acids). The protein has a porphyrin binding domains housing one Fe(3+) ion.

FabGennix International Inc. has produced affinity purified antibodies to human Myoglobin protein. These antibodies are generated in rabbit using purified human myoglobin as antigen. The Myoglobin antibodies were then affinity purified using immobilized antigenic proteins and pre-adsorbed on an immobilized hemoglobin matrix to remove the cross-reacting hemoglobin antibodies. Limited quantities of blocking protein is also available (please inquire). FabGennix, Inc., will couple Myoglobin antibodies to various Fluorophores (FITC, Rhodamine, Cy3, Cy5) or to secondary enzymes (Alkaline phosphatase, Horseradish peroxidase) at a nominal cost. FabGennix will also provide Western blot positive controls for Myoglobin in ready-to use buffer for blotting and quantitation experiments.

R = rat; M = mouse; H = human; C = chicken; monk = monkey ; \* not all variants are labeled equally

**Immunogen:** Affinity purified human Myoglobin protein

**Concentration:** Mygb-101AP = 0.55-0.73mg/ml of antibody stabilization buffer

**Applications:** Antibody Mygb-101AP is ideal for western blotting, immunoprecipitation, and IHC applications. The dilutions for this antibody is for reference only, investigators are expected to determine the optimal conditions for a specific assay. Other applications have not been tested.

**Suggested Dilutions:** Western blotting: > 1:1000; Immunoprecipitation & i.p pull-down assays: 1> 1:250, IHC 1:250, confocal, n.d

**Reactivity:** Myoglobin antibodies label strongly a 19kDa Myoglobin protein in PC-Mygb samples.

**Protocols:** Standard protocol for various applications (Western blot; immunoprecipitation and immunohistochemistry) of this antibody is provided with the product specification sheet, however, FabGennix Inc. strongly recommends investigators to optimize conditions for use of this antibody in their laboratories.

**Notes:** Now Western blots can easily be stripped and recycle using our specially formulated StripOBuffer (Cat # FGI-1989). This stripping buffer does not require heating or have any pungent smell. The membranes (Nitrocellulose, Immobilon, supported nitrocellulose etc.) can be stripped and re-probed up to 10 times with any loss in enhanced chemiluminescence's signal.

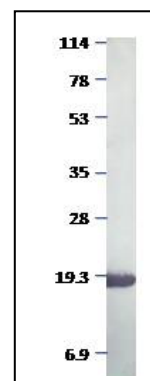
### References:

1. Mänttari S, Anttila K, Järvilehto M.J Testosterone stimulates myoglobin expression in different muscles of the mouse. *Comp Physiol [B]*. 2008 Jun 12.
2. Gladwin MT, Kim-Shapiro DB. The functional nitrite reductase activity of the heme-globins. *Blood*. 2008 Jul 2. [Epub]
3. Bruce EN, Bruce MC, Erupaka K Prediction of the rate of uptake of carbon monoxide from blood by extravascular tissues. *Respir Physiol Neurobiol*. 2008 Apr 30;161(2):142-59. Epub 2008 Jan 31.

\* For users who may require large amounts of Mygb-101AP, please enquire about bulk material discounts.

This Product is for Research Use Only and is NOT intended for use in humans or clinical diagnosis.

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