

Myoglobin Protein (Active)

Catalog# BNP1023

Lot # Check on the product label

Size 100 µg

Description

Purified human Myoglobin protein.

Synonyms Myoglobin, MB, PVALB

Source Human heart tissue

Formulation Liquid

Concentration 1 mg/ml

Purity >90% by SDS-PAGE

Application

ELISA

Chemiluminescence Immunoassay, CLIA

RIA (Radioimmunoassay)

WB

IHC

Other applications have not been tested.

Storage buffer

Each vial contains 0.05 M sodium phosphate (pH 7.5) and 30% glycerol with 0.1% NaN₃.

Storage & Expiration

Ship at 4°C. Upon receipt, aliquot and store at -20°C or -80°C for long term.

Avoid repeated freeze and thaw cycles.

Background

Myoglobin, MB is an iron- and oxygen-binding protein found in the muscle tissue of vertebrates in general and in almost all mammals. It is a cytoplasmic hemoprotein, expressed solely in cardiac myocytes and oxidative

skeletal muscle fibers, that reversibly binds O₂ by its heme residue, a porphyrin ring:iron ion complex. MB is a single-chain globular protein of 153 or 154 amino acids, containing a heme prosthetic group in the center around which the remaining apoprotein folds. Myoglobin is released from damaged muscle tissue (rhabdomyolysis), which has very high concentrations of myoglobin. The released myoglobin is filtered by the kidneys but is toxic to the renal tubular epithelium and so may cause acute renal failure. It is a sensitive marker for muscle injury, making it a potential marker for heart attack in patients with chest pain. However, elevated myoglobin has low specificity for acute myocardial infarction (AMI) and thus CK-MB, cTnT, ECG, and clinical signs should be taken into account to make the diagnosis.

Reference

1. Hendgen-Cotta UB, Kelm M, Rassaf T (February 2010). "A highlight of myoglobin diversity: the nitrite reductase activity during myocardial ischemia-reperfusion". Nitric Oxide 22 (2): 75–82.
2. Ordway GA, Garry DJ (September 2004). "Myoglobin: an essential hemoprotein in striated muscle". J. Exp. Biol. 207 (Pt 20): 3441–6.
3. Naka T, Jones D, Baldwin I, Fealy N, Bates S, Goehl H, Morgera S, Neumayer HH, Bellomo R (April 2005). "Myoglobin clearance by super high-flux hemofiltration in a case of severe rhabdomyolysis: a case report". Crit Care 9 (2): R90–5.

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