



RayBiotech, Inc.

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Certificate of Analysis and Data Sheet PURIFIED HUMAN MYOGLOBIN

Catalog No.
DS-01-0321

Source
Human heart

Description

Myoglobin 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. Since the initial discovery of its structure over 40 years ago, wide-ranging work by many investigators has added importantly to our understanding of its function and regulation. 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. The use of gene targeting and other molecular biological techniques has revealed important new insights into the developmental and environmental regulation of myoglobin and provided additional functions for this hemoprotein such as scavenging nitric oxide and reactive O₂ species.

Human myoglobin, PHP156, is a 17.5 kDa protein which transports oxygen from the sarcolemma to the mitochondria in heart and muscle cells.

Applications

Table Summary of protein applications and working conditions

Options Functions	YES	NO	Not determined	Recommended Work dilution or concentration
ELISA			•	
Western Blotting			•	
Immunoassay	•			

Note: Other applications are not tested yet. Optimal dilutions should be determined by each laboratory for each application.

**The products are furnished for LABORATORY RESEARCH USE ONLY.
Not for diagnostic or therapeutic use.**



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Physical Appearance

Sterile Filtered clear solution.

Formulation

1.0mg/ml purified human myoglobin is supplied in Phosphate buffered saline pH7.5 with 0.09% Sodium Azide (NaN₃).

Stability

Store at 4°C or at -20°C if preferred.

Storage in frost-free freezers is not recommended.

This product should be stored undiluted. Should this product contain a precipitate we recommend microcentrifugation before use. 18 months shelf life from date of dispatch.

Please avoid freeze-thaw cycles.

Purity

Greater than 96.0% as determined by analysis by SDS-PAGE.

Reference

Wittenberg, J. et al. Myoglobin function reassessed. The Journal of Experimental Biology. 2003, 206: 2011- 2020.

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