

Recombinant Human Myoglobin, Heme free, T7-tagged

Cat. No. MB-165H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human Myo heme free produced in <i>E. Coli</i> is a non-glycosylated polypeptide chain. The protein has a molecular mass of 11.67kDa. The rHuMyo heme free contains N-terminal T7 tag and purified by proprietary chromatographic techniques.
Species	Human
Source	E.coli
Description	Myoglobin is a single-chain globular protein of 153 amino acids, containing a heme (iron-containing porphyrin) prosthetic group in the center around which the remaining apoprotein folds. It has eight alpha helices and a hydrophobic core. It has a molecular weight of 16,700 daltons, and is the primary oxygen-carrying pigment of muscle tissues. Unlike the blood-borne hemoglobin, to which it is structurally related, this protein does not exhibit cooperative binding of oxygen, since positive cooperativity is a property of multimeric/oligomeric proteins only. Instead, the binding of oxygen by myoglobin is unaffected by the oxygen pressure in the surrounding tissue. Myoglobin is often cited as having an "instant binding tenacity" to oxygen given its hyperbolic oxygen dissociation curve. High concentrations of myoglobin in muscle cells allow organisms to hold their breaths longer. In 1958, John Kendrew and associates successfully determined the structure of myoglobin by high-resolution X-ray crystallography.
Physical Appearance	Sterile Filtered solution.

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

Formulation	The sterile solution (3.32mg/ml) contains phosphate-buffered saline (pH 8.0) and 50Mm phosphate-borate.
Purity	Greater than 95.0% as determined by: (a) Analysis by RP-HPLC. (b) Anion-exchange FPLC. (c) Analysis by reducing and non-reducing SDS-PAGE Silver Stained.
Dimers And Aggregates	Less than 1% as determined by silver stained SDS-PAGE gel analysis.
Endotoxin	Less than 0.1 ng/g (IEU/g) of rHuMyo.
Stability	rMyo heme free although stable at 15°C for 2 weeks, should be stored at 4°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please do not freeze.

GENE INFORMATION

Gene Name	MB myoglobin [Homo sapiens]
Synonyms	MB; myoglobin; PVALB; MGC13548; OTTHUMP00000197922
Gene ID	4151
mRNA Refseq	NM_005368
Protein Refseq	NP_005359
MIM	160000
UniProt ID	P02144

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Chromosome Location	22q13.1
Function	heme binding; metal ion binding; oxygen binding; oxygen transporter activity

Model of helical domains in myoglobin.

