Myoglobin/Mb (MB) Human Recombinant Protein

PRODUCT OVERVIEW

Product Name	Myoglobin/MB, Recombinant Protein
Full Product Name	Recombinant Human Myoglobin/MB Protein (C-His)
Product Gene Name	MB recombinant protein
Product Synonym Names	MB; MGC13548; Myoglobin; PVALB
Sequence	Met1-Gly15 4
Host	E Coli
Form/Format	Supplied as a 0.2 mum filtered solution of 20mM Tris-HCl, 200mM NaCl, 1mM DTT, 20% glycerol, pH8.0.
Purity/Purification	>95% as determined by reducing SDS-PAGE.
Preparation and Storage	Store at < -20 degree C, stable for 6 months. Please minimize freeze-thaw cycles.
Molecular Weight	Molecular Mass: 18kDa Actual Protein Molecular Mass: 18kDa
OMIM	160000
3D Structure	ModBase 3D Structure for P02144
Species	Human
Endotoxin	< 1.0 EU per mug as determined by the LAL method.
Fusion Tag	C-His
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Related Product Information for MB recombinant protein	Protein Construction: Recombinant Human Myoglobin is produced by our E Coli expression system and the target gene encoding Met1-Gly154 is expressed with a 6His tag at the C-terminus. Background: Myoglobin is a 17KDa cytoplasmic oxygen-binding protein encoded by the MB gene and expressed in myocytes of the heart and skeletal muscle. Its name derives from its structural and functional similarity to hemoglobin, the oxygen binding protein found in red blood cells. Functions of myoglobin include oxygen storage and transport, as well as scavenging of NO and reactive oxygen species. Myoglobin also serves as a sensitive marker for muscle injury resulting from cardiac infarction. Myoglobin was the first protein to have its three-dimensional structure determined by X-ray crystallography.
Other Notes	Small volumes of MB recombinant protein vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for MB purchase	MBS2557195 is a recombinant protein targeting MB. Also known as Recombinant Human Myoglobin/MB Protein (C-His). Host: E Coli.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for MB. It may not necessarily be applicable to this product.

NCBI GI #	4885477
NCBI GeneID	4151
NCBI Accession #	NP_005359.1

UniProt Primary Accession #	P02144
UniProt Related Accession #	P02144
GenBank Nucleotide #	NP_005359.1
NCBI Official Full Name	myoglobin
NCBI Official Synonym Full Names	myoglobin
NCBI Official Symbol	MB
NCBI Official Synonym Symbols	PVALB; myoglobgin
UniProt Protein Name	Myoglobin
Protein Family	Myoglobin
UniProt Gene Name	MB
UniProt Entry Name	MYG_HUMAN
NCBI Protein Information	myoglobin
NCBI Summary for MB	This gene encodes a member of the globin superfamily and is expressed in skeletal and cardiac muscles. The encoded protein is a haemoprotein contributing to intracellular oxygen storage and transcellular facilitated diffusion of oxygen. At least three alternatively spliced transcript variants encoding the same protein have been reported. [provided by RefSeq, Jul 2008]
UniProt Comments for MB	MB: Serves as a reserve supply of oxygen and facilitates the movement of oxygen within muscles. Belongs to the globin family. Protein type: Carrier Chromosomal Location of Human Ortholog: 22q13.1 Molecular Function: iron ion binding; heme binding; oxygen binding; oxygen transporter activity Biological Process: slow-twitch skeletal muscle fiber contraction; response to hydrogen peroxide; oxygen transport; heart development; response to hormone stimulus; response to hypoxia; brown fat cell differentiation; enucleate erythrocyte differentiation
Research Articles on MB	**1.** Study identifies a recurrent c.292C>T (p.His98Tyr) substitution in MB in fourteen members of six European families suffering from an autosomal dominant progressive myopathy with highly characteristic sarcoplasmic inclusions in skeletal and cardiac muscle. Myoglobinopathy manifests in adulthood with proximal and axial weakness that progresses to involve distal muscles and causes respiratory and cardiac failure.
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Product Note	Select online data sheet information is drawn from bioinformatics databases, occasionally resulting in ambiguous or non-relevant product information. It is the responsibility of the customer to review, verify, and evaluate the information to make sure it matches their requirements before purchasing the kit. Our ELISA Kit assays are dynamic research tools and sometimes they may be updated and improved. If the format of this assay is important to you then please request the current manual or contact our technical support team with a presales inquiry before placing an order. We will confirm the current details of the assay. We cannot guarantee the sample manual posted online is the most current manual, it is intended to serve as an example only. Please refer to the instructions For Use provided with the assay kit for precise details.

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