MBP / Myelin Basic Protein (MBP) Human Recombinant Protein

PRODUCT OVERVIEW

Product Name	MBP / Myelin Basic Protein, Recombinant Protein
Full Product Name	Human MBP / Myelin Basic Protein Recombinant Protein
Product Gene Name	MBP recombinant protein
Product Synonym Names	Myelin basic protein; MBP; Myelin A1 protein; Myelin membrane encephalitogenic protein
Host	E Coli
Form/Format	Liquid; 50mM NaH2PO4, 500mM NaCl Buffer with 500mM Imidazole, 10% Glycerol (PH8.0)
Purity/Purification	>95% by SDS-PAGE
Concentration	Reconstitution Dependent (lot specific)
Preparation and Storage	Store at -20 degree C. Avoid repeated freezing and thawing.
OMIM	159430
3D Structure	ModBase 3D Structure for P02686
Species	Human
Tag	His
Subunit	Homodimer. Isoform 3 exists as a homodimer.
Entry Function	The classic group of MBP isoforms (isoform 4-isoform 14) are with PLP the most abundant protein components of the myelin membrane in the CNS. They have a role in both its formation and stabilization. The smaller isoforms might have an important role in remyelination of denuded axons in multiple sclerosis. The non-classic group of MBP isoforms (isoform 1-isoform 3/Golli-MBPs) may preferentially have a role in the early developing brain long before myelination, maybe as components of transcriptional complexes, and may also be involved in signaling pathways in T-cells and neural cells. Differential splicing events combined with optional post-translational modifications give a wide spectrum of isomers, with each of them potentially having a specialized function. Induces T-cell proliferation.
Applications Tested/Suitable for MBP recombinant protein	ELISA (EIA), Western Blot (WB), Antigen Protein (AP), Protein Array
Related Product Information for MBP recombinant protein	MBS2901852 is a recombinant protein targeting MBP. Also known as Human MBP / Myelin Basic Protein Recombinant Protein. Host: E Coli.
Other Notes	Small volumes of MBP 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.

ADDITIONAL DETAILS

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

NCBI GI #	1162922
NCBI GeneID	4155
NCBI Accession #	AAC41944.1
UniProt Primary Accession #	P02686
UniProt Related Accession #	P02686

NCBI Official Full Name	myelin basic protein
NCBI Official Synonym Full Names	myelin basic protein
NCBI Official Symbol	MBP
UniProt Protein Name	Myelin basic protein
UniProt Synonym Protein Names	Myelin A1 protein; Myelin membrane encephalitogenic protein
Protein Family	Myelin basic protein
UniProt Gene Name	MBP
UniProt Synonym Gene Names	MBP
UniProt Entry Name	MBP_HUMAN
NCBI Protein Information	myelin basic protein; Golli-MBP; proline-rich proteoglycan 2
NCBI Summary for MBP	The protein encoded by the classic MBP gene is a major constituent of the myelin sheath of oligodendrocytes and Schwann cells in the nervous system. However, MBP-related transcripts are also present in the bone marrow and the immune system. These mRNAs arise from the long MBP gene (otherwise called "Golli-MBP") that contains 3 additional exons located upstream of the classic MBP exons. Alternative splicing from the Golli and the MBP transcription start sites gives rise to 2 sets of MBP-related transcripts and gene products. The Golli mRNAs contain 3 exons unique to Golli-MBP, spliced in-frame to 1 or more MBP exons. They encode hybrid proteins that have N-terminal Golli aa sequence linked to MBP aa sequence. The second family of transcripts contain only MBP exons and produce the well characterized myelin basic proteins. This complex gene structure is conserved among species suggesting that the MBP transcription unit is an integral part of the Golli transcription unit and that this arrangement is important for the function and/or regulation of these genes. [provided by RefSeq, Jul 2008]
UniProt Comments for MBP	MBP: The classic group of MBP isoforms (isoform 4-isoform 14) are with PLP the most abundant protein components of the myelin membrane in the CNS. They have a role in both its formation and stabilization. The smaller isoforms might have an important role in remyelination of denuded axons in multiple sclerosis. The non-classic group of MBP isoforms (isoform 1-isoform 3/Golli-MBPs) may preferentially have a role in the early developing brain long before myelination, maybe as components of transcriptional complexes, and may also be involved in signaling pathways in T- cells and neural cells. Differential splicing events combined with optional post-translational modifications give a wide spectrum of isomers, with each of them potentially having a specialized function. Induces T-cell proliferation. Homodimer. Isoform 3 exists as a homodimer. MBP isoforms are found in both the central and the peripheral nervous system, whereas Golli-MBP isoforms are expressed in fetal thymus, spleen and spinal cord, as well as in cell lines derived from the immune system. Belongs to the myelin basic protein family. 6 isoforms of the human protein are produced by alternative splicing. Protein type: Cytoskeletal Chromosomal Location of Human Ortholog: 18q23 Cellular Component: internode region of axon; compact myelin; cell soma; plasma membrane; nucleus Molecular Function: protein binding; protease binding; structural constituent of myelin sheath Biological Process: myelination; response to mercury ion; synaptic transmission; central nervous system development; substantia nigra development; response to toxin; negative regulation of axonogenesis; immune response; axon ensheathment; response to progesterone stimulus; aging
Research Articles on MBP	**1.** down-regulated in cord blood by prenatal smoking
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