



# Myelin Basic Protein(MBP) (ABT90R) Rabbit mAb (Ready to Use)

<b>Catalog No</b>	YP-Ab-18719
<b>Isotype</b>	IgG
<b>Reactivity</b>	Human,Mouse,Rat
<b>Applications</b>	IHC
<b>Gene Name</b>	MBP
<b>Protein Name</b>	Myelin basic protein (MBP) (Myelin A1 protein) (Myelin membrane encephalitogenic protein)
<b>Immunogen</b>	Synthesized peptide derived from human Myelin Basic Protein(MBP) AA range:150-250
<b>Specificity</b>	This antibody detects endogenous levels of MBPHL at Human/Mouse/Rat
<b>Formulation</b>	The prediluted ready-to-use antibody is diluted in phosphate buffer saline containing stabilizing protein and 0.05% Proclin 300
<b>Source</b>	
<b>Purification</b>	Recombinant Expression and Affinity purified
<b>Dilution</b>	WB 1:500-2000
<b>Concentration</b>	1 mg/ml
<b>Purity</b>	≥90%
<b>Storage Stability</b>	-20°C/1 year
<b>Synonyms</b>	GDB ; Golli MBP ; Golli MBP ; myelin basic protein ; Hemopoietic MBP ; HMBPR ; HUGO ; MBP ; MBP_CAVPO ; MBP_HUMAN ; MGC99675 ; MLD ; Myelin A1 protein ; Myelin A1 Protein, basic ; Myelin basic protein ; Myelin Deficient ; Myelin membrane encephalitogenic protein ; OTTHUMP00000163776 ; OTTHUMP00000174387 ; OTTHUMP00000174388 ; SHI ; Shiverer ; SP
<b>Observed Band</b>	
<b>Cell Pathway</b>	Cytoplasmic
<b>Tissue Specificity</b>	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.
<b>Function</b>	Alternative products:Additional isoforms seem to exist,developmental stage:Expression begins abruptly in 14-16 week old fetuses. Even smaller isoforms seem to be produced during embryogenesis; some of these persisting in the adult. Expression of isoform MBP2 is more evident at 16 weeks and its relative proportion declines thereafter.,Disease:The reduction in the surface charge of citrullinated and/or methylated MBP could result in a weakened attachment to the myelin membrane. This mechanism could be operative in demyelinating diseases



such as chronic multiple sclerosis (MS), and fulminating MS (Marburg disease).,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.,online information:Myelin basic protein entry,PTM:Arg-241 was found to be 6% monomethylated and 60% symmetrically dimethylated.,PTM:Several charge isomers of MBP; C1 (the most cationic, least modified, and most abundant form), C2, C3, C4, C5, C6, C7, C8-A and C8-B (the least cationic form); are produced as a result of optional PTM, such as phosphorylation, deamidation of glutamine or asparagine, arginine citrullination and methylation. C8-A and C8-B contain each two mass isoforms termed C8-A(H), C8-A(L), C8-B(H) and C8-B(L), (H) standing for higher and (L) for lower molecular weight. C3, C4 and C5 are phosphoC4 and C5 are phosphorylated. The ratio of methylated arginine residues decreases during aging, making the protein more cationic.,PTM:The N-terminal alanine is acetylated (isoform 3, isoform 4, isoform 5 and isoform 6).,sequence Caution:Contaminating sequence. The C-terminus contains a Histidine tag.,similarity:Belongs to the myelin basic protein family.,subcellular location:Cytoplasmic side of myelin.,subunit:Homodimer; isoform 3 exists as a homodimer.,tissue specificity: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.,

#### Background

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

#### matters needing attention

Avoid repeated freezing and thawing!

#### Usage suggestions

This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.

### Products Images

Validated] NG2/CSPG4 Rabbit pAb (A3592) at 1:1000 dilution.

1:1000 dilution.

dilution.