

**MBP Antibody**  
**Purified Mouse Monoclonal Antibody**  
**Catalog # AO1638a****Specification****MBP Antibody - Product Information**

Application	<b>E, WB, IHC, IF, FC</b>
Primary Accession	<a href="#">P02686</a>
Reactivity	<b>Human</b>
Host	<b>Mouse</b>
Clonality	<b>Monoclonal</b>
Isotype	<b>IgG1</b>
Calculated MW	<b>33kDa KDa</b>

**Description**

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.

**Immunogen**

Purified recombinant fragment of human MBP expressed in E. Coli. <br />

**Formulation**

Ascitic fluid containing 0.03% sodium azide.

**MBP Antibody - Additional Information**

**Gene ID** 4155

**Other Names**

Myelin basic protein, MBP, Myelin A1 protein, Myelin membrane encephalitogenic protein, MBP

**Dilution**

E~~1/10000  
WB~~1/500 - 1/2000  
IHC~~1/200 - 1/1000  
IF~~1/200 - 1/1000  
FC~~1/200 - 1/400

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small

aliquots to prevent freeze-thaw cycles.

### **Precautions**

MBP Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

## **MBP Antibody - Protein Information**

**Name** MBP

### **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.

### **Cellular Location**

Myelin membrane; Peripheral membrane protein; Cytoplasmic side. Note=Cytoplasmic side of myelin

### **Tissue Location**

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.

## **MBP Antibody - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

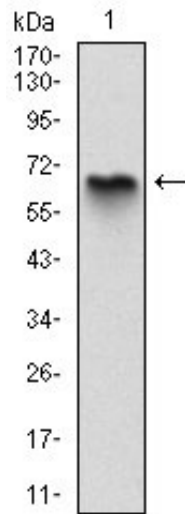
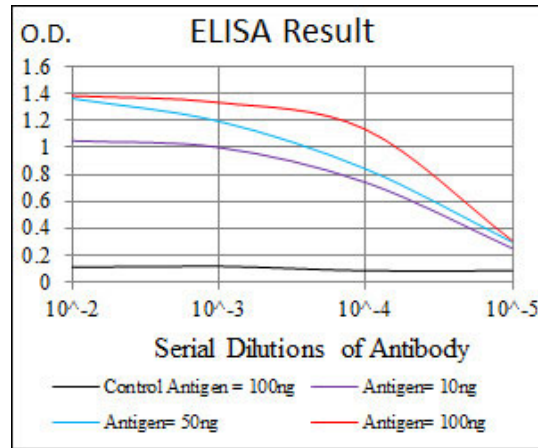


Figure 1: Western blot analysis using MBP mAb against human MBP (AA: 1-197) recombinant protein. (Expected MW is 47 kDa)

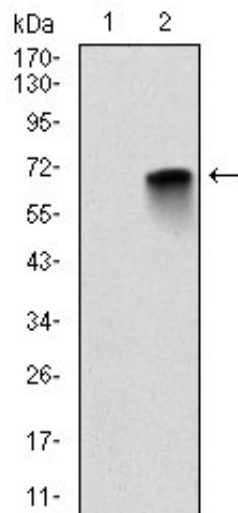


Figure 2: Western blot analysis using MBP mAb against HEK293 (1) and MBP-hlgGfc transfected HEK293 (2) cell lysate.

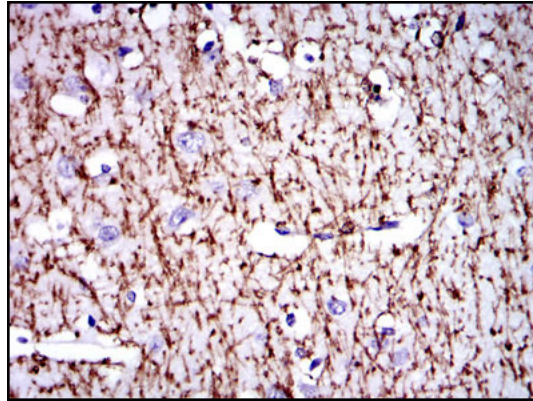


Figure 3: Immunohistochemical analysis of paraffin-embedded brain tissues using MBP mouse mAb with DAB staining.

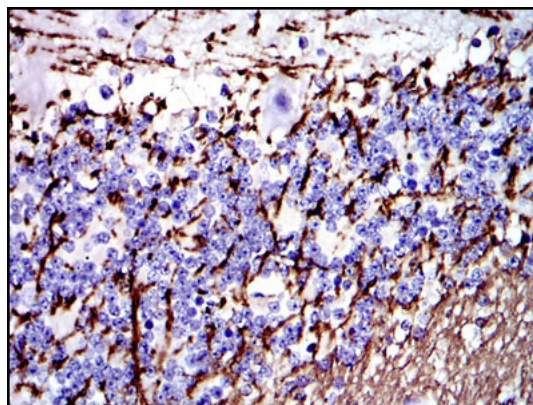


Figure 4: Immunohistochemical analysis of paraffin-embedded cerebellum tissues using MBP mouse mAb with DAB staining.

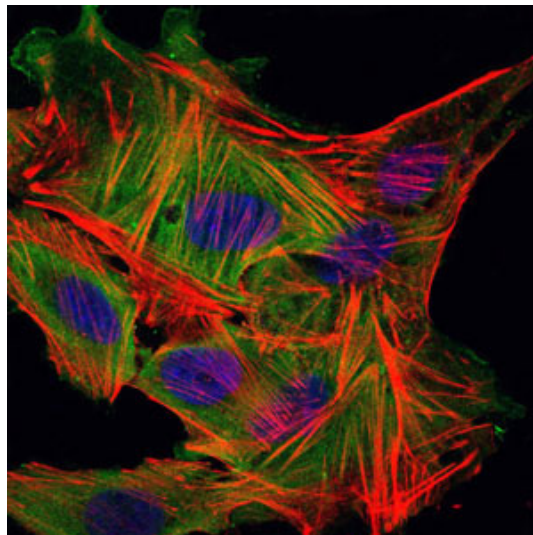


Figure 5: Immunofluorescence analysis of MSCS cells using MBP mouse mAb (green). Blue: DRAQ5 fluorescent DNA dye. Red: Actin filaments have been labeled with Alexa Fluor-555 phalloidin.

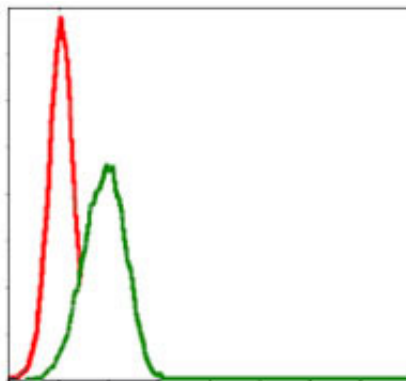


Figure 6: Flow cytometric analysis of HepG2 cells using MBP mouse mAb (green) and negative control (red).

### MBP Antibody - References

1. Cancer Epidemiol Biomarkers Prev. 2009 May;18(5):1651-8.
2. Biochemistry. 2009 Jun 9;48(22):4720-7.