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MBP Antibody (Ascites)

Mouse Monoclonal Antibody (Mab)
Catalog # AM2005a

Product Information

Application	WB, IF, E
Primary Accession	P02686
Other Accession	NP_001020261.1, NP_001020252.1
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	IgM
Clone Names	408CT17.4.3
Calculated MW	33117

Additional Information

Gene ID	4155
Other Names	Myelin basic protein, MBP, Myelin A1 protein, Myelin membrane encephalitogenic protein, MBP
Target/Specificity	Purified His-tagged MBP protein(Fragment) was used to produced this monoclonal antibody.
Dilution	WB~~1:5000~16000 IF~~1:10~50 E~~Use at an assay dependent concentration.
Format	Mouse monoclonal antibody supplied in crude ascites with 0.09% (W/V) sodium azide.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	MBP Antibody (Ascites) is for research use only and not for use in diagnostic or therapeutic procedures.

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.

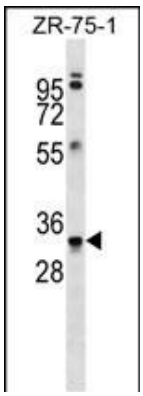
Background

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 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].

References

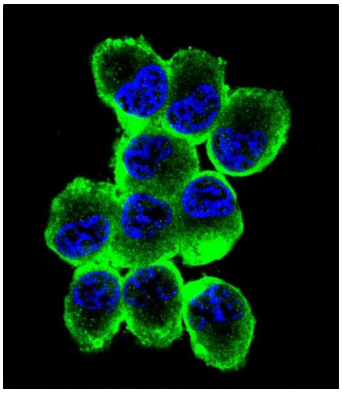
Walsh, C.M., et al. Biochem. J. 430(3):453-460(2010) Han, S., et al. Hum. Immunol. 71(7):727-730(2010) Martins-de-Souza, D., et al. J Psychiatr Res (2010) In press : Rajaraman, P., et al. Cancer Epidemiol. Biomarkers Prev. 19(5):1356-1361(2010) Pan, H., et al. Sichuan Da Xue Xue Bao Yi Xue Ban 40(5):775-779(2009)

Images



MBP Antibody (Ascites)(Cat. #AM2005a) western blot analysis in ZR-75-1 cell line lysates (35µg/lane).This demonstrates the MBP antibody detected the MBP protein (arrow).

Confocal immunofluorescent analysis of MBP Antibody (Ascites)(Cat#AM2005a) with NCI-H460 cell followed by Alexa Fluor® 488-conjugated goat anti-mouse IgG (green).DAPI was used to stain the cell nuclear (blue).



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