



Catalog Number:	MO22189	Host:	Mouse
Product Type:	Mouse Monoclonal IgG	Species Reactivity:	Human, Rat, Mouse, Cow, Horse and Pig
Immunogen Sequence:	Purified myelin basic protein isolated from bovine brain, epitope is in peptide TPPPSQGKG, amino acids 125-133 of the human 21.5kDa sequence	Format:	Purified liquid antibody in 50% PBS, 50% glycerol plus 5mM of Sodium Azide. Concentration: 1mg/ml.
Applications:	Immunofluorescent: 1:1,000 Immunocytochemistry: 1:1,000 Immunohistochemistry: 1:1,000 Western Blot: 1:5,000-10,000		

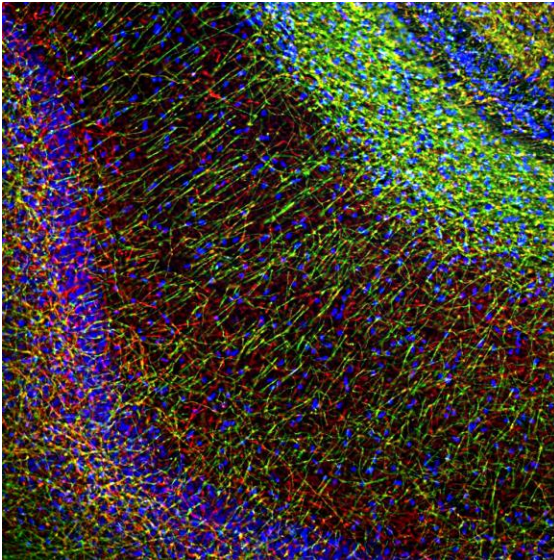
Dilutions listed as a recommendation. Optimal dilution should be determined by investigator.

Storage: Antibody can also be aliquotted and stored frozen at -20° C in a manual defrost freezer for six months without detectable loss of activity. The antibody can be stored at 2° - 8° C for 1 month without detectable loss of activity. Avoid repeated freeze-thaw cycles.

Application Notes

Description/Data:

Myelin Basic Protein (MBP) is one of the major proteins of the myelin sheath surrounding axons in the nervous system. Since it is of relatively low molecular weight and high abundance the protein sequence was determined from purified protein over 30 years ago. The protein is made by oligodendrocytes in the central and nervous system, so antibodies to MBP are good markers of this cell type. In the peripheral nervous system MBP is expressed by myelinating Schwann cells so this



antibody can be used to identify these cells in culture or sectioned materials. In the central nervous system four different forms of the protein made by alternate transcription from a single gene, the protein products having molecular weights of 21.5, 20.5, 18.5, and 17.2kDa in humans. The single gene of rodents also produces 4 different proteins but the splicing mechanism is different producing four forms of slightly different sizes, 21.5, 18.5, 17 and 14kDa. Some interest has focused on MBP as a potentially significant auto-antigen involved in mouse models of multiple sclerosis and in human patients. Detection of MBP released into blood and CSF has some potential as a surrogate biomarker of demyelination and axonal loss in MS and other relevant damage and disease states.

Image: Immunofluorescent analysis of rat hippocampal section stained with mouse mAb to myelin basic protein (MBP), MO22189, dilution 1:5,000 in green, and costained with rabbit pAb to neurofilament NF-H dilution 1:2,000, in red. The MBP antibody stains oligodendrocyte cell bodies and the myelin sheathes around axons, while the NF-H antibody labels the axons themselves.

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