SANTA CRUZ BIOTECHNOLOGY, INC.

MBP (26): sc-58542

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Myelin basic protein (MBP) is the major extrinsic membrane protein of central nervous system myelin. MBP phosphorylation at Threonine 125 is a complex regulatory process that modulates the contribution of MBP to the stability of the myelin sheath. Mitogen-activated protein kinases modulate MBP phosphorylation during myelinogenesis and in the demyelinating disease multiple sclerosis. MBP phosphorylation is regulated by high-frequency stimulation but not low-frequency stimulation of the alveus, the myelinated output fibers of the hippocampus. It has been proposed that during periods of increased neuronal activity, calcium activates axonal nitric oxide synthase, which generates the intercellular messengers nitric oxide and superoxide and regulates the phosphorylation state of MBP by MAPK.

REFERENCES

1. Fraser, P.E., et al. 1985. Structure and function of the proline-rich region of myelin basic protein. Biochemistry 24: 4593-4598.
2. Potter, N.T., et al. 1986. Identification of an antigenic determinant within the phylogenetically conserved triprolyl region of myelin basic protein. J. Immunol. 136: 516-520.
3. Persaud, R., et al. 1988. The glycosylation of human myelin basic protein at Threonines 95 and 98 occurs sequentially. Biochim. Biophys. Acta 966: 357-361.
4. Yon, M., et al. 1996. Identification of a mitogen-activated protein kinase site in human myelin basic protein *in situ*. J. Neuroimmunol. 65: 55-59.
5. Atkins, C.M., et al. 1999. Regulation of myelin basic protein phosphorylation by mitogen-activated protein kinase during increased action potential firing in the hippocampus. J. Neurochem. 73: 1090-1097.

CHROMOSOMAL LOCATION

Genetic locus: MBP (human) mapping to 18q23; Mbp (mouse) mapping to 18 E3.

SOURCE

MBP (26) is a mouse monoclonal antibody raised against full length MBP of human origin.

PRODUCT

Each vial contains 1.0 ml culture supernatant containing IgG_1 with < 0.1% sodium azide.

STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

APPLICATIONS

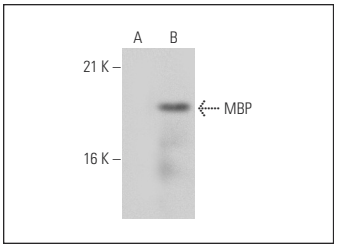
MBP (26) is recommended for detection of MBP of mouse, rat and human origin by Western Blotting (starting dilution to be determined by researcher, dilution range 1:10-1:200), immunoprecipitation [10-20 µl per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution to be determined by researcher, dilution range 1:10-1:200) and solid phase ELISA (starting dilution to be determined by researcher, dilution range 1:10-1:200).

Suitable for use as control antibody for MBP siRNA (h): sc-35871, MBP siRNA (m): sc-35872, MBP shRNA Plasmid (h): sc-35871-SH, MBP shRNA Plasmid (m): sc-35872-SH, MBP shRNA (h) Lentiviral Particles: sc-35871-V and MBP shRNA (m) Lentiviral Particles: sc-35872-V.

Molecular Weight of MBP isoforms: 14-22 kDa.

Positive Controls: MBP (m): 293T Lysate: sc-121552.

DATA



MBP (26): sc-58542. Western blot analysis of MBP expression in non-transfected: sc-117752 (**A**) and mouse MBP transfected: sc-121552 (**B**) 293T whole cell lysates.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

CONJUGATES

See **MBP (F-6): sc-271524** for MBP antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647.