**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 myelinationogenesis 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 is 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**


**CHROMOSOMAL LOCATION**

Genetic locus: MBP (human) mapping to 18q23; Mbp (mouse) mapping to 18 E2-E4.

**SOURCE**

MBP (5E729) is a mouse monoclonal antibody raised against myelin basic protein of human origin.

**PRODUCT**

Each vial contains 100 µg IgG2a in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

**RESEARCH USE**

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

**APPLICATIONS**

MBP (5E729) is recommended for detection of 18.5 kDa isoform of MBP of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation (1–2 µg per 100–500 µg of total protein (1 ml of cell lysate)). Suitable for use as control antibody for MBP siRNA (h): sc-35871.

Molecular Weight of MBP isoforms: 14/17/18.5/21.5 kDa.

**RECOMMENDED SECONDARY REAGENTS**

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

**DATA**

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

**STORAGE**

Store at 4° C. **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

**PROTOCOLS**

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

**REFERENCES**


