

MYEF2 (T-13): sc-131986

BACKGROUND

Myelin basic protein (MBP) binds to negatively charged lipids on the cytosolic surface of oligodendrocyte membranes and is responsible for adhesion of these surfaces in multilayered myelin sheaths. As a member of a larger family of proteins with many forms and posttranslational modifications, MBP appears to have several other functions as a result of these modifications, including participating in the transmission of extracellular signals, as well as cell signaling. These modifications of MBP are dynamic during normal central nervous system (CNS) development and during myelin degeneration in multiple sclerosis (MS). Regulation of the human MBP gene occurs at the MB1 regulatory motif located between nucleotides -14 to -50. The MB1 element contains binding sites for both the activator protein MEF-1/Pur α and the repressor protein MYEF2. MYEF2 is a nuclear protein whose expression is developmentally regulated in mouse brain with peak expression occurring at post-natal day 7. Four isoforms of MYEF2 exist due to alternative splicing events.

REFERENCES

- Gossett, L.A., et al. 1989. A new myocyte-specific enhancer-binding factor that recognizes a conserved element associated with multiple muscle-specific genes. *Mol. Cell. Biol.* 9: 5022-5033.
- Haas, S., et al. 1995. Identification of a sequence-specific single-stranded DNA binding protein that suppresses transcription of the mouse myelin basic protein gene. *J. Biol. Chem.* 270: 12503-12510.
- Muralidharan, V., et al. 1997. Evidence for inhibition of MyEF-2 binding to MBP promoter by MEF-1/Pur α . *J. Cell. Biochem.* 66: 524-531.
- Harauz, G., et al. 2004. Myelin basic protein-diverse conformational states of an intrinsically unstructured protein and its roles in myelin assembly and multiple sclerosis. *Micron* 35: 503-542.
- Boggs, J.M. 2006. Myelin basic protein: a multifunctional protein. *Cell. Mol. Life Sci.* 63: 1945-1961.
- Musse, A.A. and Harauz, G. 2007. Molecular "negativity" may underlie multiple sclerosis: role of the myelin basic protein family in the pathogenesis of MS. *Int. Rev. Neurobiol.* 79: 149-172.
- Harauz, G. and Musse, A.A. 2007. A tale of two citrullines—structural and functional aspects of myelin basic protein deimination in health and disease. *Neurochem. Res.* 32: 137-158.

CHROMOSOMAL LOCATION

Genetic locus: MYEF2 (human) mapping to 15q21.1.

SOURCE

MYEF2 (T-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of MYEF2 isoforms 1 and 2 of human origin.

STORAGE

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

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-131986 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

MYEF2 (T-13) is recommended for detection of MYEF2 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with MYEF2 isoforms 3 or 4.

MYEF2 (T-13) is also recommended for detection of MYEF2 in additional species, including canine.

Suitable for use as control antibody for MYEF2 siRNA (h): sc-89969, MYEF2 shRNA Plasmid (h): sc-89969-SH and MYEF2 shRNA (h) Lentiviral Particles: sc-89969-V.

Molecular Weight of MYEF2: 64 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

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

PROTOCOLS

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