

Myotrophin (H-16): sc-46417

BACKGROUND

Myotrophin (V-1 protein) is a ubiquitously expressed cytoplasmic protein that can translocate to the nucleus during sustained NF κ B activation. The gene encoding for this protein localizes to chromosome 7q33. Myotrophin may be involved in cerebellar morphogenesis and contains an acetylated N-terminus and 2.5 internal 33-amino acid ankyrin repeats. It is important in the differentiation of cerebellar neurons, particularly of granule cells. The 117-amino acid protein has been associated with, and able to induce, cardiac hypertrophy. Myotrophin increases protooncogene, ANF and β -Myosin heavy chain transcript levels. Myotrophin is upregulated when myocytes undergo cyclic stretch or are treated with tumor necrosis factor- α (TNF- α) or interleukin-1 β . Highest levels of myotrophin is detected in brain, and lowest levels in skeletal muscle.

REFERENCES

- Horita, A. and Carino, M.A. 1990. Centrally administered vasopressin antagonizes pentobarbital-induced narcosis and depression of hippocampal cholinergic activity. *Peptides* 11: 1021-1025.
- Sen, S., et al. 1990. Myotrophin: purification of a novel peptide from spontaneously hypertensive rat heart that influences myocardial growth. *J. Biol. Chem.* 265: 16635-16643.
- Sil, P., et al. 1993. Myotrophin in human cardiomyopathic heart. *Circ. Res.* 73: 98-108.
- Mukherjee, D.P., et al. 1993. Myotrophin induces early response genes and enhances cardiac gene expression. *Hypertension* 21: 142-148.
- Sivasubramanian, N., et al. 1996. Cardiac myotrophin exhibits rel/NF κ B interacting activity *in vitro*. *J. Biol. Chem.* 271: 2812-2816.
- Anderson, K.M., et al. 1999. cDNA sequence and characterization of the gene that encodes human myotrophin/V-1 protein, a mediator of cardiac hypertrophy. *J. Mol. Cell Cardiol.* 31: 705-719.
- Gupta, S. and Sen, S. 2002. Myotrophin- κ B DNA interaction in the initiation process of cardiac hypertrophy. *Biochim. Biophys. Acta* 1589: 247-260.

CHROMOSOMAL LOCATION

Genetic locus: MTPN (human) mapping to 7q33; Mtpn (mouse) mapping to 6 B1.

SOURCE

Myotrophin (H-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Myotrophin of human origin.

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-46417 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Myotrophin (H-16) is recommended for detection of Myotrophin of mouse, rat and 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Myotrophin (H-16) is also recommended for detection of Myotrophin in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Myotrophin siRNA (h): sc-45700, Myotrophin siRNA (m): sc-45701, Myotrophin shRNA Plasmid (h): sc-45700-SH, Myotrophin shRNA Plasmid (m): sc-45701-SH, Myotrophin shRNA (h) Lentiviral Particles: sc-45700-V and Myotrophin shRNA (m) Lentiviral Particles: sc-45701-V.

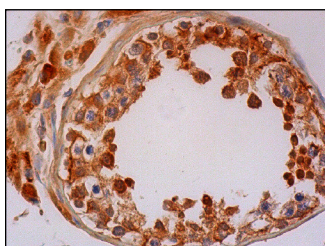
Molecular Weight of Myotrophin: 12 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, A-10 cell lysate: sc-3806 or MCF7 whole cell lysate: sc-2206.

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. 3) Immunohistochemistry: use ImmunoCruz[™]: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



Myotrophin (H-16): sc46417. Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing cytoplasmic and nuclear staining of cells in seminiferous ducts and Leydig cells.

STORAGE

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

RESEARCH USE

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