SANTA CRUZ BIOTECHNOLOGY, INC.

Myotrophin (C-14): sc-46415

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Myotrophin (V-1 protein) is a ubiquitously expressed cytoplasmic protein that can translocate to the nucleus during sustained NFκB 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 (TNFα) or interleukin-1β. Highest levels of Myotrophin are detected in brain and lowest levels in skeletal muscle.

REFERENCES

1. Horita, A. and Carino, M.A. 1990. Centrally administered vasopressin antagonizes pentobarbital-induced narcosis and depression of hippocampal cholinergic activity. Peptides 11: 1021-1025.
2. 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.
3. Sil, P., et al.1993. Myotrophin in human cardiomyopathic heart. Circ. Res. 73: 98-108.
4. Mukherjee, D.P., et al. 1993. Myotrophin induces early response genes and enhances cardiac gene expression. Hypertension 21: 142-148.
5. Sivasubramanian, N., et al. 1996. Cardiac myotrophin exhibits rel/NFκB interacting activity *in vitro*. J. Biol. Chem. 271: 2812-2816.

CHROMOSOMAL LOCATION

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

SOURCE

Myotrophin (C-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Myotrophin of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-46415 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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.

APPLICATIONS

Myotrophin (C-14) 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), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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).

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.

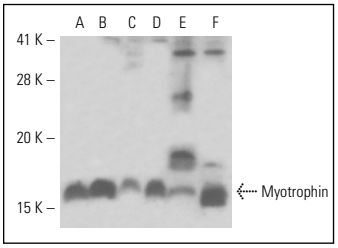
Molecular Weight of Myotrophin: 12 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

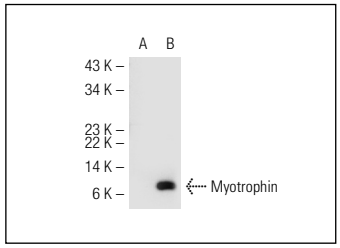
RECOMMENDED SECONDARY REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



Myotrophin (C-14): sc-46415. Western blot analysis of Myotrophin expression in HeLa (**A**), A-10 (**B**), MCF7 (**C**) and BT-20 (**D**) whole cell lysates and rat heart (**E**) and mouse heart (**F**) tissue extracts.



Myotrophin (C-14): sc-46415. Western blot analysis of Myotrophin expression in non-transfected: sc-117752 (**A**) and human Myotrophin transfected: sc-114795 (**B**) 293T whole cell lysates.

PROTOCOLS

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