Myotrophin (E-2): sc-166673

**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 proto-oncogene, 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**

4. Mukherjee, D.P., et al. 1993. Myotrophin induces early response genes 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 proto-oncogene, 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.

**CHROMOSOMAL LOCATION**

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

**SOURCE**

Myotrophin (E-2) is a mouse monoclonal antibody raised against amino acids 1-118 representing full length Myotrophin of human origin.

**PRODUCT**

Each vial contains 200 µg IgGκ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

**STORAGE**

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

**APPLICATIONS**

Myotrophin (E-2) is recommended for detection of Myotrophin of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Myotrophin (E-2) is also recommended for detection of Myotrophin in additional species, including equine, canine, bovine and porcine.

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 (m) 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, BT-20 cell lysate: sc-2223 or Myotrophin (h): 293T Lysate: sc-114795.

**RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-51624 and Western Blotting Luminal Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Hard-set Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

**DATA**

**RESEARCH USE**

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

**PROTOCOLS**

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