

Myosin Ib (h): 293T Lysate: sc-116536

BACKGROUND

Actin is a highly conserved protein that is expressed in all eukaryotic cells. Actin filaments can form both stable and labile structures and are crucial components of microvilli and the contractile apparatus of muscle cells. Troponin facilitates interaction between Actin and Myosin by binding to Ca^{2+} . Troponin is made up of at least two subunits, which are divergent in cardiac muscle, fast skeletal muscle and slow skeletal muscle. Myosin is a hexamer of two heavy chains (MHC) and four light chains (MLC) that interact with Actin to generate the force for diverse cellular movements, including cytokinesis, phagocytosis and muscle contraction. Myosin Ib (MYO1B), also designated Myosin I α or MYH-1c, is a motor protein that is involved in cell migration, neurite outgrowth and vesicular transport. In multivesicular endosomes, Myosin Ib has been implicated in protein cargo traffic control.

REFERENCES

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2. Salas-Cortes, L., et al. 2005. Myosin Ib modulates the morphology and the protein transport within multi-vesicular sorting endosomes. *J. Cell Sci.* 118: 4823-4832.
3. de Lanerolle, P., et al. 2005. Actin and Myosin I in the nucleus: what next? *Nat. Struct. Mol. Biol.* 12: 742-746.
4. Takeda, T., et al. 2005. Role of fission yeast Myosin I in organization of sterol-rich membrane domains. *Curr. Biol.* 15: 1331-1336.
5. Clark, R., et al. 2005. Loop 1 of transducer region in mammalian class I Myosin, Myosin Ib, modulates Actin affinity, ATPase activity and nucleotide access. *J. Biol. Chem.* 280: 30935-30942.
6. SWISS-PROT/TrEMBL (O43795). World Wide Web URL: <http://www.expasy.ch/sprot/sprot-top.html>

CHROMOSOMAL LOCATION

Genetic locus: MYO1B (human) mapping to 2q32.3.

PRODUCT

Myosin Ib (h): 293T Lysate represents a lysate of human Myosin Ib transfected 293T cells and is provided as 100 μg protein in 200 μl SDS-PAGE buffer.

APPLICATIONS

Myosin Ib (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive Myosin Ib antibodies. Recommended use: 10-20 μl per lane.

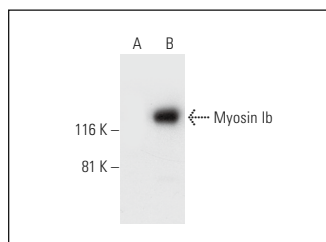
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Myosin Ib (F-8): sc-393053 is recommended as a positive control antibody for Western Blot analysis of enhanced human Myosin Ib expression in Myosin Ib transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



Myosin Ib (F-8): sc-393053. Western blot analysis of Myosin Ib expression in non-transfected: sc-117752 (A) and human Myosin Ib transfected: sc-116536 (B) 293T whole cell lysates.

STORAGE

Store at -20°C . Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

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.