

Myosin If (H-44): sc-66985

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 interacts with actin to generate the force for diverse cellular movements, including cytokinesis, phagocytosis and muscle contraction. Myosin If (MYO1F), also designated Myosin-IE, is considered an unconventional Myosin and is expressed in the cochlea. The MYO1F gene encoding for the 1,098 amino acid protein maps to chromosome 19p13.2.

REFERENCES

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4. Barton, P.J., et al. 1985. The myosin alkali light chain proteins and their genes. *Biochem. J.* 231: 249-261.
5. Warrick, H.M., et al. 1988. Myosin structure and function in cell motility. *Annu. Rev. Cell Biol.* 3: 379-421.
6. Hodge, T., et al. 2000. A myosin family tree. *J. Cell Sci.* 113: 3353-3354.
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8. Krugmann, S., et al. 2002. Identification of ARAP3, a novel PI3K effector regulating both Arf and Rho GTPases, by selective capture on phosphoinositide affinity matrices. *Mol. Cell* 9: 95-108.
9. Dumont, R.A., et al. 2002. Myosin I isozymes in neonatal rodent auditory and vestibular epithelia. *J. Assoc. Res. Otolaryngol.* 3: 375-389.

CHROMOSOMAL LOCATION

Genetic locus: MYO1F (human) mapping to 19p13.2.

SOURCE

Myosin If (H-44) is a rabbit polyclonal antibody raised against amino acids 637-680 mapping within an internal region of Myosin If 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.

RESEARCH USE

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

APPLICATIONS

Myosin If (H-44) is recommended for detection of Myosin If of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

Myosin If (H-44) is also recommended for detection of Myosin If in additional species, including bovine and equine.

Suitable for use as control antibody for Myosin If siRNA (h): sc-44617, Myosin If shRNA Plasmid (h): sc-44617-SH and Myosin If shRNA (h) Lentiviral Particles: sc-44617-V.

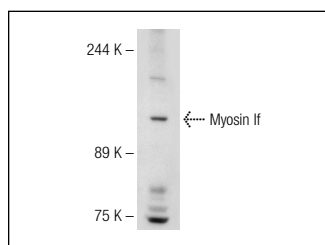
Molecular Weight of Myosin If: 125 kDa.

Positive Controls: A-673 cell lysate: sc-2414.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Myosin If (H-44): sc-66985. Western blot analysis of Myosin If expression in A-673 whole cell lysate.

STORAGE

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

PROTOCOLS

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