

Myosin Ic (C-19): sc-130177

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 Ic (Myo 1c) is also designated Myosin I β . In vestibular hair cells, Myosin Ic may be important for fast adaptation.

REFERENCES

1. Bose, A., et al. 2004. Unconventional myosin Myo 1c promotes membrane fusion in a regulated exocytic pathway. *Mol. Cell. Biol.* 24: 5447-5458.
2. Batters, C., et al. 2004. Myosin 1c is designed for the adaptation response in the inner ear. *EMBO J.* 23: 1433-1440.
3. Gillespie, P.G., et al. 2004. Myosin 1c, the hair cell's adaptation motor. *Annu. Rev. Physiol.* 66:521-66:545.
4. Stauffer, E.A., et al. 2005. Fast adaptation in vestibular hair cells requires Myosin 1c activity. *Neuron* 47: 541-553.
5. Lund, L.M., et al. 2005. Axonal isoforms of Myosin I. *Biochem. Biophys. Res. Commun.* 330: 857-864.
6. Wagner, M.C., et al. 2005. Expression of the unconventional myosin Myo1c alters sodium transport in M1 collecting duct cells. *Am. J. Physiol. Cell. Physiol.* 289: C120-129.

CHROMOSOMAL LOCATION

Genetic locus: MYO1C (human) mapping to 17p13.

SOURCE

Myosin Ic (C-19) is a purified rabbit polyclonal antibody raised against a peptide mapping near the C-terminus of Myosin Ic of human origin.

PRODUCT

Each vial contains 100 μ g IgG 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.

PROTOCOLS

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

APPLICATIONS

Myosin Ic (C-19) is recommended for detection of Myosin Ic 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

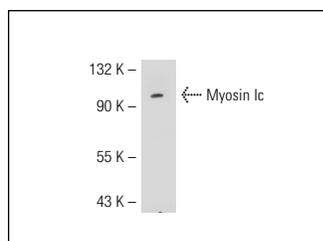
Suitable for use as control antibody for Myosin Ic siRNA (h): sc-44604, Myosin Ic shRNA Plasmid (h): sc-44604-SH and Myosin Ic shRNA (h) Lentiviral Particles: sc-44604-V.

Molecular Weight of Myosin Ic: 118 kDa.

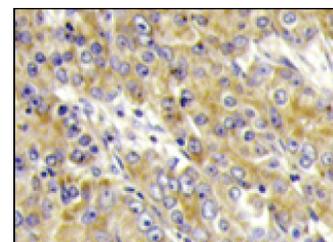
RECOMMENDED SECONDARY REAGENTS

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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



Myosin Ic (C-19): sc-130177. Western blot analysis of Myosin Ic expression in 293T whole cell lysate.



Myosin Ic (C-19): sc-130177. Immunoperoxidase staining of formalin fixed, paraffin-embedded human carcinoma tissue showing cytoplasmic staining.

RESEARCH USE

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