

Myosin Ie (R-60): sc-66984

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 Ca²⁺. 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 Ie (MYO1E) is also designated Myosin Ic. Myosin Ie contains 1,109 amino acids.

REFERENCES

- Whitmer, J.D., Koslovsky, J.S., Bahler, M. and Mercer, J.A. 1996. Chromosomal location of three unconventional Myosin heavy chain genes in the mouse. *Genomics*. 38: 235-237.
- Dumont, R.A., Zhao, Y.D., Holt, J.R., Bahler, M. and Gillespie, P.G. 2002. Myosin I isozymes in neonatal rodent auditory and vestibular epithelia. *J. Assoc. Res. Otolaryngol.* 3: 375-389.
- El Mezgueldi, M., Tang, N., Rosenfeld, S.S. and Ostap, E.M. 2002. The kinetic mechanism of Myo1e (human Myosin Ic). *J. Biol. Chem.* 277: 21514-21521.
- Lindvall, J.M., Blomberg, K.E., Wennborg, A. and Smith, C.I. 2005. Differential expression and molecular characterisation of Lmo7, Myo1e, Sash1 and Mcoln2 genes in Btk-defective B cells. *Cell. Immunol.* 235: 46-55.
- SWISS-PROT/TrEMBL (Q12965). World Wide Web URL: <http://www.expasy.ch/sprot/sprot-top.html>

CHROMOSOMAL LOCATION

Genetic locus: MYO1E (human) mapping to 15q21-q22; Myo1e (mouse) mapping to 9 D.

SOURCE

Myosin Ie (R-60) is a rabbit polyclonal antibody raised against amino acids 961-1020 mapping near the C-terminus of Myosin Ie of rat origin.

PRODUCT

Each vial contains 200 µg 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 Ie (R-60) is recommended for detection of Myosin Ie of mouse, rat and, to a lesser extent, 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 Myosin Ie siRNA (h): sc-44613, Myosin Ie siRNA (m): sc-44614, Myosin Ie shRNA Plasmid (h): sc-44613-SH, Myosin Ie shRNA Plasmid (m): sc-44614-SH, Myosin Ie shRNA (h) Lentiviral Particles: sc-44613-V and Myosin Ie shRNA (m) Lentiviral Particles: sc-44614-V.

Molecular Weight of Myosin Ie: 127 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 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.

RESEARCH USE

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



Try **Myosin Ie (7A5): sc-293354**, our highly recommended monoclonal alternative to Myosin Ie (R-60).