

Myosin I α (G-14): sc-32717

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.

REFERENCES

- Hasson, T., Gillespie, P.G., Garcia, J.A., MacDonald, R.B., Zhao, Y., Yee, A.G., Mooseker, M.S. and Corey, D.P. 1997. Unconventional myosins in inner-ear sensory epithelia. *J. Cell Biol.* 137: 1287-1307.
- 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.
- Sirotkin, V., Beltzner, C.C., Marchand, J.B. and Pollard, T.D. 2005. Interactions of WASp, Myosin I, and verprolin with Arp2/3 complex during actin patch assembly in fission yeast. *J. Cell Biol.* 170: 637-648.
- LocusLink Report (LocusID: 283446). <http://www.ncbi.nlm.nih.gov/LocusLink/>
- <http://harvester.embl.de/marvester/Q91Z/Q91Z12.htm>

CHROMOSOMAL LOCATION

Genetic locus: MYO1H (human) mapping to 12q24.11; Myo1h (mouse) mapping to 5 F.

SOURCE

Myosin I α (G-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of Myosin I α of mouse origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-32717 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. 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 or our catalog for detailed protocols and support products.

APPLICATIONS

Myosin I α (G-14) is recommended for detection of Myosin I α of mouse and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 I α (G-14) is also recommended for detection of Myosin I α in additional species, including porcine.

Suitable for use as control antibody for Myosin I α siRNA (m): sc-44623, Myosin I α siRNA (h): sc-270057, Myosin I α shRNA Plasmid (m): sc-44623-SH, Myosin I α shRNA Plasmid (h): sc-270057-SH, Myosin I α shRNA (m) Lentiviral Particles: sc-44623-V and Myosin I α shRNA (h) Lentiviral Particles: sc-270057-V.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.