

Myosin Ig (H-60): sc-66987

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. MYO1G, the gene encoding for the Myosin Ig protein, maps to chromosome 7p13.

REFERENCES

1. Bárány, M. 1967. ATPase activity of Myosin correlated with speed of muscle shortening. *J. Gen. Physiol.* 50: 197-218.
2. Billeter, R., et al. 1980. Myosin types in human skeletal muscle fibers. *Histochemistry* 65: 249-259.
3. Whalen, R.G., et al. 1980. Contractile protein isozymes in muscle development: identification of an embryonic form of Myosin heavy chain. *Proc. Natl. Acad. Sci. USA* 76: 5197-5201.
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.
7. Pierce, R.A., et al. 2001. The HA-2 minor histocompatibility antigen is derived from a diallelic gene encoding a novel human class I Myosin protein. *J. Immunol.* 167: 3223-3230.
8. Dumont, R.A., et al. 2002. Myosin I isozymes in neonatal rodent auditory and vestibular epithelia. *J. Assoc. Res. Otolaryngol.* 3: 375-389.
9. Wilke, M., et al. 2002. Allele specific PCR for the minor histocompatibility antigen HA-2. *Tissue Antigens* 59: 304-307.

CHROMOSOMAL LOCATION

Genetic locus: MYO1G (human) mapping to 7p13; Myo1g (mouse) mapping to 11 A1.

SOURCE

Myosin Ig (H-60) is a rabbit polyclonal antibody raised against amino acids 731-790 mapping within an internal region of Myosin Ig 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.

STORAGE

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

APPLICATIONS

Myosin Ig (H-60) is recommended for detection of Myosin Ig of mouse, rat and 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 Ig (H-60) is also recommended for detection of Myosin Ig in additional species, including canine and porcine.

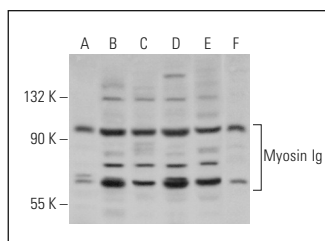
Suitable for use as control antibody for Myosin Ig siRNA (h): sc-44621, Myosin Ig siRNA (m): sc-44622, Myosin Ig shRNA Plasmid (h): sc-44621-SH, Myosin Ig shRNA Plasmid (m): sc-44622-SH, Myosin Ig shRNA (h) Lentiviral Particles: sc-44621-V and Myosin Ig shRNA (m) Lentiviral Particles: sc-44622-V.

Positive Controls: Jurkat whole cell lysate: sc-2204, NIH/3T3 whole cell lysate: sc-2210 or PC-12 cell lysate: sc-2250.

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 Ig (H-60): sc-66987. Western blot analysis of Myosin Ig expression in RAW 264.7 (A), NIH/3T3 (B), HEK293 (C), SP2/O (D), Jurkat (E) and PC-12 (F) whole cell lysates.

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.