



Myosin XVI (L-19): sc-84218

BACKGROUND

Myosins are highly conserved, ubiquitously expressed proteins that interact with Actin to generate the force for cellular movements. The human genome encodes over 40 different Myosin genes which are divided into distinct classes, the most notable of which are the conventional Myosins (class II) and the unconventional Myosins (classes I and III through XVIII). Myosin XVI, also known as MYO16 or MYR8, is a 1,858 amino acid protein that localizes to the cytoplasm and contains one IQ domain, two Myosin head-like domains and seven ANK repeats. Existing as an unconventional Myosin, Myosin XVI is involved in intracellular movements related to Actin filaments and is thought to interact specifically with PP1 α and PP1 γ , possibly playing a role in PP1-associated brain development. Multiple isoforms of Myosin XVI exist due to alternative splicing events.

REFERENCES

- Larson, R.E. 1996. Myosin V: a class of unconventional molecular motors. *Braz. J. Med. Biol. Res.* 29: 309-318.
- Soldati, T., Schwarz, E.C. and Geissler, H. 1999. Unconventional Myosins at the crossroad of signal transduction and cytoskeleton remodeling. *Protoplasma.* 209: 28-37.
- Patel, K.G., Liu, C., Cameron, P.L. and Cameron, R.S. 2001. Myr 8, a novel unconventional Myosin expressed during brain development associates with the protein phosphatase catalytic subunits 1 α and 1 γ 1. *J. Neurosci.* 21: 7954-7968.
- Cameron, R.S., Liu, C., Mixon, A.S., Pihkala, J.P., Rahn, R.J. and Cameron, P.L. 2007. Myosin 16b: The COOH-tail region directs localization to the nucleus and overexpression delays S-phase progression. *Cell Motil. Cytoskeleton.* 64: 19-48.
- Redowicz, M.J. 2007. Unconventional Myosins in muscle. *Eur. J. Cell Biol.* 86: 549-558.
- Karcher, R.L., Provance, D.W., Gillespie, P.G. and Mercer, J.A. 2007. Chemical-genetic inhibition of sensitized mutant unconventional Myosins. *Methods Mol. Biol.* 392: 231-240.
- Ikebe, M. 2008. Regulation of the function of mammalian Myosin and its conformational change. *Biochem. Biophys. Res. Commun.* 369: 157-164.
- Sittaramane, V. and Chandrasekhar, A. 2008. Expression of unconventional Myosin genes during neuronal development in zebrafish. *Gene Expr. Patterns.* 8: 161-170.

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.

CHROMOSOMAL LOCATION

Genetic locus: MYO16 (human) mapping to 13q33.3; Myo16 (mouse) mapping to 8 A1.1.

SOURCE

Myosin XVI (L-19) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of Myosin XVI 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.

Blocking peptide available for competition studies, sc-84218 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Myosin XVI (L-19) is recommended for detection of Myosin XVI of mouse, rat 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); non cross-reactive with other Myosin family members.

Suitable for use as control antibody for Myosin XVI siRNA (h): sc-106271, Myosin XVI siRNA (m): sc-149764, Myosin XVI shRNA Plasmid (h): sc-106271-SH, Myosin XVI shRNA Plasmid (m): sc-149764-SH, Myosin XVI shRNA (h) Lentiviral Particles: sc-106271-V and Myosin XVI shRNA (m) Lentiviral Particles: sc-149764-V.

Molecular Weight of Myosin XVI: 210 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) 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.