SANTA CRUZ BIOTECHNOLOGY, INC.

Myosin IXa (E-18): sc-165062

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 IXa, also known as unconventional myosin-9a or MYR7, is a 2,548 amino acid single-pass membrane protein that may be involved in intracellular movements. Existing as five alternatively spliced isoforms, Myosin IXa is expressed in placenta and testis and is found at lower levels in a variety of other tissues. Myosin IXa contains five IQ domains, two myosin head-like domains, one Ras-associating domain, two phorbol-ester/DAG-type zinc fingers and a single Rho-GAP domain. The gene encoding Myosin IXa maps to human chromosome 15q23.

REFERENCES

1. Bement, W.M., et al. 1994. Identification and overlapping expression of multiple unconventional myosin genes in vertebrate cell types. Proc. Natl. Acad. Sci. USA 91: 6549-6553.
2. Goodson, H.V. 1994. Molecular evolution of the myosin superfamily: application of phylogenetic techniques to cell biological questions. Soc. Gen. Physiol. Ser. 49: 141-157.
3. Chieregatti, E., et al. 1998. Myr 7 is a novel myosin IX-RhoGAP expressed in rat brain. J. Cell Sci. 111: 3597-3608.
4. Gorman, S.W., et al. 1999. The cloning and developmental expression of unconventional myosin IXA (MYO9A) a gene in the Bardet-Biedl syndrome (BBS4) region at chromosome 15q22-q23. Genomics 59: 150-160.
5. Thompson, R.F., et al. 2002. Myosin superfamily evolutionary history. Anat. Rec. 268: 276-289.
6. Hiller, M., et al. 2005. Non-EST based prediction of exon skipping and intron retention events using Pfam information. Nucleic Acids Res. 33: 5611-5621.
7. Bond, L.M., et al. 2011. Myosin motor proteins are involved in the final stages of the secretory pathways. Biochem. Soc. Trans. 39: 1115-1119.
8. Dalal, J.S., et al. 2011. Mouse class III myosins: kinase activity and phosphorylation sites. J. Neurochem. 119: 772-784.

CHROMOSOMAL LOCATION

Genetic locus: MYO9A (human) mapping to 15q23; Myo9a (mouse) mapping to 9 B.

SOURCE

Myosin IXa (E-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Myosin IXa of human origin.

STORAGE

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

PRODUCT

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

Blocking peptide available for competition studies, sc-165062 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Myosin IXa (E-18) is recommended for detection of Myosin IXa 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 Myosin IXb.

Myosin IXa (E-18) is also recommended for detection of Myosin IXa in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Myosin IXa siRNA (h): sc-90199, Myosin IXa siRNA (m): sc-149760, Myosin IXa shRNA Plasmid (h): sc-90199-SH, Myosin IXa shRNA Plasmid (m): sc-149760-SH, Myosin IXa shRNA (h) Lentiviral Particles: sc-90199-V and Myosin IXa shRNA (m) Lentiviral Particles: sc-149760-V.

Molecular Weight of Myosin IXa isofomrs: 293/290/85/300/265 kDa.

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.

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.