

Myosin X (H-300): sc-30177

BACKGROUND

Myosins are molecular motors that move along filamentous Actin and influence cellular movements such as phagocytosis. There are seven classes of Myosins in vertebrates, including Myosin-II and six unconventional Myosin classes, -I, -V, -VI, -VII, -IX and -X. Myosin X (Myo10 or M10) contains three IQ motifs, a Myosin tail homology 4 (MyTH4) domain, a FERM (band 4.1/Ezrin/Radixin/Moesin) domain, three Pleckstrin homology domains (which mediate phosphatidylinositol phospholipid signaling) and three PEST sites (which may allow cleavage of the Myosin tail). Myosin X binds F-Actin in an ATP-sensitive manner and can influence normal phagocytosis through PI-3 kinase-dependent pathways. Myosin X in cultured cells localizes to the edges of lamellipodia, membrane ruffles and the tips of filopodial Actin bundles. The human Myosin X gene maps to chromosome 5p15.1 and encodes a 2,058 amino acid protein.

REFERENCES

- Hasson, T., et al. 1996. Mapping of unconventional Myosins in mouse and human. *Genomics* 36: 431-439.
- Berg, J.S., et al. 2000. Myosin X, a novel Myosin with Pleckstrin homology domains, associates with regions of dynamic Actin. *J. Cell Sci.* 113: 3439-3451.
- Homma, K., et al. 2001. Motor function and regulation of Myosin X. *J. Biol. Chem.* 276: 34348-34354.
- Chavrier, P. 2002. May the force be with you: Myosin X in phagocytosis. *Nat. Cell Biol.* 4: E169-E171.
- Berg, J.S., et al. 2002. Myosin X is an unconventional Myosin that undergoes intrafilopodial motility. *Nat. Cell Biol.* 4: 246-250.
- Cox, D., et al. 2002. Myosin X is a downstream effector of PI(3)K during phagocytosis. *Nat. Cell Biol.* 4: 469-477.
- LocusLink Report (LocusID: 4651). <http://www.ncbi.nlm.nih.gov/LocusLink/>

CHROMOSOMAL LOCATION

Genetic locus: MYO10 (human) mapping to 5p15.1; Myo10 (mouse) mapping to 15 B1.

SOURCE

Myosin X (H-300) is a rabbit polyclonal antibody raised against amino acids 1759-2058 mapping at the C-terminus of Myosin X of human 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.

RESEARCH USE

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

APPLICATIONS

Myosin X (H-300) is recommended for detection of Myosin X of mouse, rat and 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), immunohistochemistry (including paraffin-embedded sections) (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 X siRNA (h): sc-43241, Myosin X siRNA (m): sc-43242, Myosin X shRNA Plasmid (h): sc-43241-SH, Myosin X shRNA Plasmid (m): sc-43242-SH, Myosin X shRNA (h) Lentiviral Particles: sc-43241-V and Myosin X shRNA (m) Lentiviral Particles: sc-43242-V.

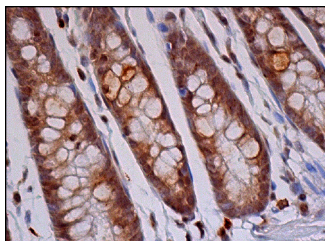
Molecular Weight of Myosin X: 240 kDa.

Positive Controls: KNRK whole cell lysate: sc-2214.

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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



Myosin X (H-300): sc-30177. Immunoperoxidase staining of formalin fixed, paraffin-embedded human rectum tissue showing cytoplasmic staining of glandular cells.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.