

MYH10 (A-3): sc-376942

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. Myosin is a hexamer of two heavy chains (abbreviated as MYH or MHC) and four light chains (MLC) that interacts with Actin to generate the force for diverse cellular movements, including cytokinesis, phagocytosis and muscle contraction. MYH10 is also designated Myosin IIb, Myosin-10, NMMHC-IIb, nonmuscle myosin heavy chain IIb or cellular myosin heavy chain, type B. MYH10 is involved in cell shape, cytokinesis and specialized functions such as capping and secretion. It is expressed in leukocytes and in glomeruli in the kidney.

CHROMOSOMAL LOCATION

Genetic locus: MYH10 (human) mapping to 17p13.1; Myh10 (mouse) mapping to 11 B3.

SOURCE

MYH10 (A-3) is a mouse monoclonal antibody raised against amino acids 851-896 mapping within an internal region of myosin heavy chain 10 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

MYH10 (A-3) is available conjugated to agarose (sc-376942 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376942 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376942 PE), fluorescein (sc-376942 FITC), Alexa Fluor® 488 (sc-376942 AF488), Alexa Fluor® 546 (sc-376942 AF546), Alexa Fluor® 594 (sc-376942 AF594) or Alexa Fluor® 647 (sc-376942 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376942 AF680) or Alexa Fluor® 790 (sc-376942 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

MYH10 (A-3) is recommended for detection of myosin heavy chain 10 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

MYH10 (A-3) is also recommended for detection of myosin heavy chain 10 in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for MYH10 siRNA (h): sc-61122, MYH10 siRNA (m): sc-61123, MYH10 shRNA Plasmid (h): sc-61122-SH, MYH10 shRNA Plasmid (m): sc-61123-SH, MYH10 shRNA (h) Lentiviral Particles: sc-61122-V and MYH10 shRNA (m) Lentiviral Particles: sc-61123-V.

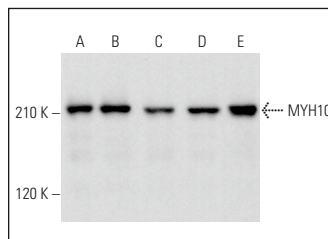
Molecular Weight of MYH10: 200 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, A-673 cell lysate: sc-2414 or Neuro-2A whole cell lysate: sc-364185.

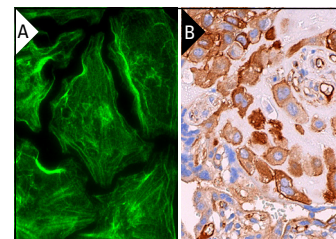
STORAGE

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

DATA



MYH10 (A-3): sc-376942. Western blot analysis of MYH10 expression in NIH/3T3 (A), Neuro-2A (B), Sol8 (C), L6 (D) and A-673 (E) whole cell lysates.



MYH10 (A-3): sc-376942. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoskeletal localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing cytoplasmic and membrane staining of decidual cells (B).

SELECT PRODUCT CITATIONS

- Wang, L., et al. 2013. Identification of an FHL1 protein complex containing γ -Actin and non-muscle myosin IIB by analysis of protein-protein interactions. *PLoS ONE* 8: e79551.
- Gutzman, J.H., et al. 2015. Non-muscle myosin IIA and IIB differentially regulate cell shape changes during zebrafish brain morphogenesis. *Dev. Biol.* 397: 103-115.
- Paakkola, T., et al. 2018. Biallelic mutations in human NHLRC2 enhance myofibroblast differentiation in FINCA disease. *Hum. Mol. Genet.* 27: 4288-4302.
- Kawasaki, M., et al. 2021. Neutrophil degranulation interconnects over-represented biological processes in atrial fibrillation. *Sci. Rep.* 11: 2972.
- Kislev, N., et al. 2022. MYH10 governs adipocyte function and adipogenesis through its interaction with GLUT4. *Int. J. Mol. Sci.* 23: 2367.
- Morris, T., et al. 2022. Synaptopodin stress fiber and contractomere at the epithelial junction. *J. Cell Biol.* 221: e202011162.
- Vickery, J.M., et al. 2023. Synaptopodin is necessary for *Shigella flexneri* intercellular spread. *bioRxiv*. E-published.

RESEARCH USE

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

PROTOCOLS

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

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA