SANTA CRUZ BIOTECHNOLOGY, INC.

Myosin Ib (F-8): sc-393053

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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. Myosin Ib (MYO1B), also designated Myosin I α or MYH-1c, is a motor protein that is involved in cell migration, neurite outgrowth and vesicular transport. In multivesicular endosomes, Myosin Ib has been implicated in protein cargo traffic control.

CHROMOSOMAL LOCATION

Genetic locus: MYO1B (human) mapping to 2q32.3; Myo1b (mouse) mapping to 1 C1.1.

SOURCE

Myosin Ib (F-8) is a mouse monoclonal antibody raised against amino acids 1067-1136 mapping at the C-terminus of Myosin Ib of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Myosin Ib (F-8) is available conjugated to agarose (sc-393053 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-393053 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393053 PE), fluorescein (sc-393053 FITC), Alexa Fluor® 488 (sc-393053 AF488), Alexa Fluor® 546 (sc-393053 AF546), Alexa Fluor® 594 (sc-393053 AF594) or Alexa Fluor® 647 (sc-393053 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393053 AF680) or Alexa Fluor® 790 (sc-393053 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

Myosin Ib (F-8) is recommended for detection of Myosin Ib 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Myosin Ib (F-8) is also recommended for detection of Myosin Ib in additional species, including equine, canine, bovine and porcine.

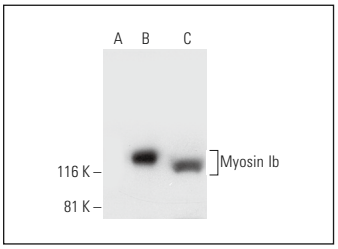
Suitable for use as control antibody for Myosin Ib siRNA (h): sc-44600, Myosin Ib siRNA (m): sc-44601, Myosin Ib shRNA Plasmid (h): sc-44600-SH, Myosin Ib shRNA Plasmid (m): sc-44601-SH, Myosin Ib shRNA (h) Lentiviral Particles: sc-44600-V and Myosin Ib shRNA (m) Lentiviral Particles: sc-44601-V.

Molecular Weight of Myosin Ib: 132 kDa.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Myosin Ib (F-8): sc-393053. Western blot analysis of Myosin Ib expression in non-transfected 293T: sc-117752 (**A**), human Myosin Ib transfected 293T: sc-116536 (**B**) and Jurkat (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Yu, Y., et al. 2018. Arginase-II activates mTORC1 through Myosin 1b in vascular cell senescence and apoptosis. Cell Death Dis. 9: 313.
2. Aslund, A., et al. 2021. Myosin 1c; a novel regulator of glucose uptake in brown adipocytes. Mol. Metab. 53: 101247.
3. Shi, J., et al. 2022. Repurposing oxiconazole against colorectal cancer via PRDX2-mediated autophagy arrest. Int. J. Biol. Sci. 18: 3747-3761.
4. Ma, Z., et al. 2023. Energy stress-induced circZFR enhances oxidative phosphorylation in lung adenocarcinoma via regulating alternative splicing. J. Exp. Clin. Cancer Res. 42: 169.

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 for detailed protocols and support products.