

Skeletal Muscle Myosin (F59): sc-32732

BACKGROUND

Myosin is a highly conserved, ubiquitously expressed protein that interacts with Actin to generate the force for cellular movements. Conventional myosins are hexameric proteins consisting of two heavy chain subunits, a pair of non-phosphorylatable light chain subunits and a pair of phosphorylatable light chain subunits. Three general classes of myosin have been cloned: smooth muscle myosins, striated muscle myosins and non-muscle myosins. Contractile activity in smooth muscle is regulated by the calcium/calmodulin-dependent phosphorylation of myosin light chain by myosin light chain kinase. Myosin heavy chains are encoded by the MYH gene family and have Actin-activated ATPase activity which generates the motor function of myosin. Myosin heavy chains, which were initially isolated from a human fetal skeletal muscle, are the major determinant in the speed of contraction of skeletal muscle. Various isoforms of myosin heavy chain are differentially expressed depending on the functional activity of the muscle.

SOURCE

Skeletal Muscle Myosin (F59) is a mouse monoclonal antibody raised against myosin purified from pectoralis muscle of adult white Leghorn chicken origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Skeletal Muscle Myosin (F59) is available conjugated to agarose (sc-32732 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-32732 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-32732 PE), fluorescein (sc-32732 FITC), Alexa Fluor[®] 488 (sc-32732 AF488), Alexa Fluor[®] 546 (sc-32732 AF546), Alexa Fluor[®] 594 (sc-32732 AF594) or Alexa Fluor[®] 647 (sc-32732 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-32732 AF680) or Alexa Fluor[®] 790 (sc-32732 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

Skeletal Muscle Myosin (F59) is recommended for detection of fast fiber-specific skeletal muscle myosin heavy chain of mouse, rat, human and avian 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) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Molecular Weight of Skeletal Muscle Myosin: 200 kDa.

Positive Controls: rat skeletal muscle extract: sc-364810, human skeletal muscle extract: sc-363776 or rat heart extract: sc-2393.

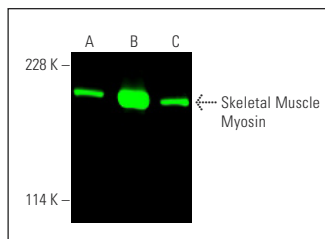
STORAGE

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

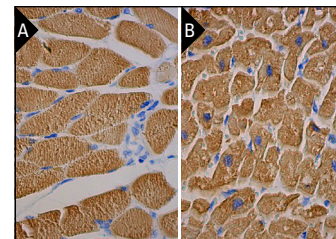
RESEARCH USE

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

DATA



Skeletal Muscle Myosin (F59): sc-32732. Near-infrared western blot analysis of Skeletal Muscle Myosin expression in rat heart (A), human skeletal muscle (B) and rat skeletal muscle (C) tissue extracts. Blocked with UltraCruz[®] Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 680: sc-516180.



Skeletal Muscle Myosin (F59): sc-32732. Immunoperoxidase staining of formalin fixed, paraffin-embedded human skeletal muscle (A) and human heart muscle (B) tissue showing cytoplasmic staining of myocytes.

SELECT PRODUCT CITATIONS

- Luo, S., et al. 2008. HSP 90β regulates rapsyn turnover and subsequent AChR cluster formation and maintenance. *Neuron* 60: 97-110.
- Park, J.Y., et al. 2014. A single mutation in the acetylcholine receptor δ-subunit causes distinct effects in two types of neuromuscular synapses. *J. Neurosci.* 34: 10211-10218.
- Codenotti, S., et al. 2015. Melatonin decreases cell proliferation, impairs myogenic differentiation and triggers apoptotic cell death in rhabdomyosarcoma cell lines. *Oncol. Rep.* 34: 279-287.
- Morena, D., et al. 2016. Hepatocyte growth factor-mediated satellite cells niche perturbation promotes development of distinct sarcoma subtypes. *Elife* 5: e12116.
- Noshadi, I., et al. 2017. *In vitro* and *in vivo* analysis of visible light crosslinkable gelatin methacryloyl (GelMA) hydrogels. *Biomater. Sci.* 5: 2093-2105.
- Wang, H., et al. 2018. MiR-22 regulates C2C12 myoblast proliferation and differentiation by targeting TGFBR1. *Eur. J. Cell Biol.* 97: 257-268.
- Codenotti, S., et al. 2019. Caveolin-1 enhances metastasis formation in a human model of embryonal rhabdomyosarcoma through Erk signaling cooperation. *Cancer Lett.* 449: 135-144.
- Cooper, L.M., et al. 2020. Fam83d modulates MAP kinase and Akt signaling and is induced during neurogenic skeletal muscle atrophy. *Cell. Signal.* 70: 109576.
- Costa, R., et al. 2021. Morphological study of TNPO3 and SRSF1 interaction during myogenesis by combining confocal, structured illumination and electron microscopy analysis. *Mol. Cell. Biochem.* 476: 1797-1811.

PROTOCOLS

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