

MYH15 (C-8): sc-515748



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. 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 heavy chains, encoded by the MYH gene family, contain Actin-activated ATPase activity which generates the motor function of Myosin. Myosin heavy chains were initially isolated from a human fetal skeletal muscle and are the major determinant in the speed of contraction of skeletal muscle. Various isoforms of Myosin heavy chains are differentially expressed depending on the functional activity of the muscle. MYH15 (Myosin, heavy chain 15), is a 1,946 amino acid cytoplasmic protein that contains an N-terminal myosin head-like domain and one IQ domain. Involved in muscle contractions, the gene encoding MYH15 maps to human chromosome 3, which houses over 1,100 genes, including a chemokine receptor (CKR) gene cluster and a variety of human cancer-related gene loci.

REFERENCES

1. Nagai, R., et al. 1989. Vertebrate smooth muscle myosin heavy chains (MHCs) exist as two isoforms with molecular masses of 204 and 200 kDa (MHC204 and MHC200) that are generated from a single gene by alternative splicing of mRNA. *J. Biol. Chem.* 264: 9734-9737.
2. Karsch-Mizrachi, I., et al. 1990. Generation of a full-length human perinatal myosin heavy-chain-encoding cDNA. *Gene* 89: 289-294.
3. Bober, E., et al. 1990. Identification of three developmentally controlled isoforms of human myosin heavy chains. *Eur. J. Biochem.* 189: 55-65.
4. Yoon, S.J., et al. 1992. Organization of the human skeletal myosin heavy chain gene cluster. *Proc. Natl. Acad. Sci. USA* 89: 12078-12082.

CHROMOSOMAL LOCATION

Genetic locus: MYH15 (human) mapping to 3q13.13; Myh15 (mouse) mapping to 16 B5.

SOURCE

MYH15 (C-8) is a mouse monoclonal antibody raised against amino acids 1068-1136 mapping within an internal region of MYH15 of human 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.

MYH15 (C-8) is available conjugated to agarose (sc-515748 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515748 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515748 PE), fluorescein (sc-515748 FITC), Alexa Fluor® 488 (sc-515748 AF488), Alexa Fluor® 546 (sc-515748 AF546), Alexa Fluor® 594 (sc-515748 AF594) or Alexa Fluor® 647 (sc-515748 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515748 AF680) or Alexa Fluor® 790 (sc-515748 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

MYH15 (C-8) is recommended for detection of MYH15 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).

Suitable for use as control antibody for MYH15 siRNA (h): sc-78356, MYH15 siRNA (m): sc-149740, MYH15 shRNA Plasmid (h): sc-78356-SH, MYH15 shRNA Plasmid (m): sc-149740-SH, MYH15 shRNA (h) Lentiviral Particles: sc-78356-V and MYH15 shRNA (m) Lentiviral Particles: sc-149740-V.

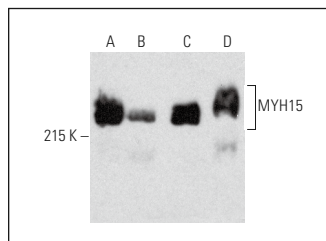
Molecular Weight of MYH15: 225 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, HeLa whole cell lysate: sc-2200 or human smooth muscle extract: sc-363778.

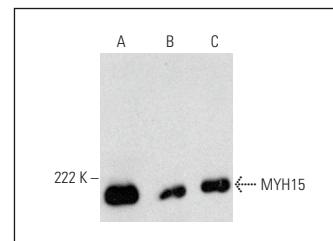
RECOMMENDED SUPPORT REAGENTS

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



MYH15 (C-8): sc-515748. Western blot analysis of MYH15 expression in TK-1 (A), Sol8 (B), L8 (C) and C6 (D) whole cell lysates.



MYH15 (C-8): sc-515748. Western blot analysis of MYH15 expression in Jurkat (A) and HeLa (B) whole cell lysates and human smooth muscle tissue extract (C).

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.

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