

MYH15 (E-15): sc-103055

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.
5. Cheney, R.E., et al. 1993. Phylogenetic analysis of the myosin superfamily. *Cell Motil. Cytoskelet.* 24: 215-223.

CHROMOSOMAL LOCATION

Genetic locus: MYH15 (human) mapping to 3q13.13.

SOURCE

MYH15 (E-15) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the C-terminus of myosin heavy chain 15 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-103055 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

MYH15 (E-15) is recommended for detection of myosin heavy chain 15 of 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) 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 shRNA Plasmid (h): sc-78356-SH and MYH15 shRNA (h) Lentiviral Particles: sc-78356-V.

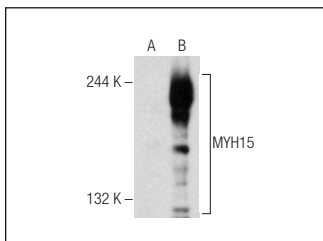
Molecular Weight of MYH15: 225 kDa.

Positive Controls: MYH15 (h): 293T Lysate: sc-372336 or human breast tissue extract.

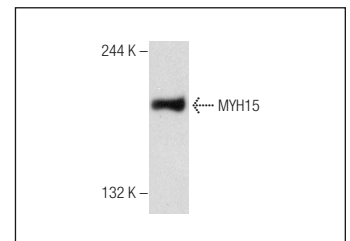
RECOMMENDED SECONDARY REAGENTS

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.

DATA



MYH15 (E-15): sc-103055. Western blot analysis of MYH15 expression in non-transfected: sc-117752 (A) and human MYH15 transfected: sc-372336 (B) 293T whole cell lysates.



MYH15 (E-15): sc-103055. Western blot analysis of MYH15 expression in human breast tissue extract.

RESEARCH USE

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

MONOS
Satisfaction
Guaranteed

Try **MYH15 (C-8): sc-515748**, our highly recommended monoclonal alternative to MYH15 (E-15).