

MYH7B (K-16): sc-85773

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 interact 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 that generate the motor function of Myosin. Myosin heavy chains were initially isolated from 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. MYH7B (myosin, heavy chain 7B, cardiac muscle, β) is a 1,941 amino acid member of the MYH family that contains one IQ domain and one myosin head-like domain, and is involved in muscle contraction.

REFERENCES

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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.
6. Jullian, E.H., et al. 1995. Characterization of a human perinatal myosin heavy-chain transcript. *Eur. J. Biochem.* 230: 1001-1006.
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8. Weiss, A., et al. 1996. The mammalian myosin heavy chain gene family. *Annu. Rev. Cell Dev. Biol.* 12: 417-439.
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CHROMOSOMAL LOCATION

Genetic locus: MYH7B (human) mapping to 20q11.22.

SOURCE

MYH7B (K-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of MYH7B of human origin.

STORAGE

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

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-85773 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

MYH7B (K-16) is recommended for detection of MYH7B of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

MYH7B (K-16) is also recommended for detection of MYH7B in additional species, including porcine.

Suitable for use as control antibody for MYH7B siRNA (h): sc-75848, MYH7B shRNA Plasmid (h): sc-75848-SH and MYH7B shRNA (h) Lentiviral Particles: sc-75848-V.

Molecular Weight of MYH7B: 221 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

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

PROTOCOLS

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



Try **MYH (B-5): sc-376157** or **MYH (TH81): sc-101334**, our highly recommended monoclonal alternatives to MYH7B (K-16). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **MYH (B-5): sc-376157**.