

MYL (H-75): sc-98928

BACKGROUND

Myosin, the major component of thick muscle filaments, is a long asymmetric molecule containing a globular head and a long tail. Activation of smooth and cardiac/ventricular muscle primarily involves pathways which increase calcium and Myosin phosphorylation, resulting in contraction. In vertebrate striated muscle, Myosin is composed of two heavy chains and four light chains. There are two distinct types of light chains: the phosphorylatable, regulatory or MLC2 type, and the non-phosphorylatable, alkali or MLC1 and MLC3 types. The role of Myosin alkali light chains in vertebrate skeletal muscle is poorly understood, although alkali light chains in smooth muscle may be involved with the active site of Myosin. Several Myosin alkali light chains have been identified and include MYL1, MYL3, MYL4 and MYL6.

REFERENCES

1. Barton, P.J. et al. 1985. The myosin alkali light chain proteins and their genes. *Biochem. J.* 231: 249-261.
2. Seidel, U., et al. 1987. The complete nucleotide sequences of cDNA clones coding for human myosin light chains 1 and 3. *Nucleic Acids Res.* 15: 4989.
3. Cohen-Haguenuer, O., et al. 1988. Assignment of the human fast skeletal muscle myosin alkali light chains gene (MLC1F/MLC3F) to 2q 32.1-2qter. *Hum. Genet.* 78: 65-70.
4. Cohen-Haguenuer, O., et al. 1989. Chromosomal assignment of two myosin alkali light-chain genes encoding the ventricular/slow skeletal muscle isoform and the atrial/fetal muscle isoform (MYL3, MYL4). *Hum. Genet.* 81: 278-282.
5. Davoli, R., et al. 2000. Mapping of 14 expressed sequence tags (ESTs) from porcine skeletal muscle by somatic cell hybrid analysis. *Anim. Genet.* 31: 400-403.
6. Fontanesi, L., et al. 2000. Linkage assignment of the fast skeletal alkali myosin light polypeptide 1 (MYL1) gene to porcine chromosome 15. *Anim. Genet.* 31: 415-416.

SOURCE

MYL (H-75) is a rabbit polyclonal antibody raised against amino acids 121-195 mapping at the C-terminus of MYL3 of human origin.

PRODUCT

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

STORAGE

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

PROTOCOLS

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

APPLICATIONS

MYL (H-75) is recommended for detection of MYL1, MYL3, MYL4 and MYL6 of mouse, rat and 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).

MYL (H-75) is also recommended for detection of MYL1, MYL3, MYL4 and MYL6 in additional species, including equine, canine, bovine, porcine and avian.

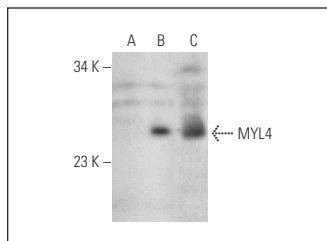
Molecular Weight of MYL1/MYL3/MYL4/MYL6: 21/25/22/17 kDa.

Positive Controls: MYL4 (h): 293T Lysate: sc-114218 or rat skeletal muscle extract: sc-364810.

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



MYL (H-75): sc-98928. Western blot analysis of MYL4 expression in non-transfected: sc-117752 (A) and human MYL4 transfected: sc-114218 (B) 293T whole cell lysates and rat skeletal muscle tissue extract (C).

RESEARCH USE

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

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Try **MYL (F-5): sc-365243**, our highly recommended monoclonal alternative to MYL (H-75).