

MYL9 (D-15): sc-34487

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. Myosin light chain 9, which is encoded by MYL9, is one of the numerous regulatory myosin light chains. Regulatory myosin light chains, also known as MLCs, regulate contraction in smooth muscle and non-muscle cells via phosphorylation by myosin light chain kinase (MLCK). Phosphorylation of regulatory myosin light chains is catalyzed by MLCK in the presence of calcium and calmodulin and it increases the Actin-activated myosin ATPase activity, thereby regulating the contractile activity. Myosin light chain is also located in striated skeletal muscle, where its function remains undefined.

CHROMOSOMAL LOCATION

Genetic locus: MYL9 (human) mapping to 20q11.23; Myl9 (mouse) mapping to 2 H1.

SOURCE

MYL9 (D-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of myosin regulatory light chain 9 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.

Blocking peptide available for competition studies, sc-515648 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

MYL9 (D-15) is recommended for detection of myosin regulatory light chain 9, smooth muscle isoform of mouse, rat and 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

MYL9 (D-15) is also recommended for detection of myosin regulatory light chain 9, smooth muscle isoform in additional species, including equine, canine, bovine, porcine and avian.

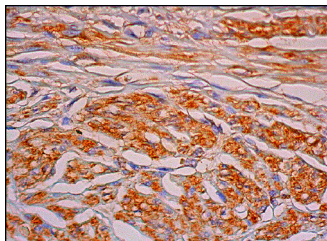
Suitable for use as control antibody for MYL9 siRNA (h): sc-35939, MYL9 siRNA (m): sc-35940, MYL9 shRNA Plasmid (h): sc-35939-SH, MYL9 shRNA Plasmid (m): sc-35940-SH, MYL9 shRNA (h) Lentiviral Particles: sc-35939-V and MYL9 shRNA (m) Lentiviral Particles: sc-35940-V.

Molecular Weight of MYL9: 20 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. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



MYL9 (D-15): sc-34487. Immunoperoxidase staining of formalin fixed, paraffin-embedded human smooth muscle tissue showing cytoplasmic staining of smooth muscle cells.

SELECT PRODUCT CITATIONS

- O'Brien, M., et al. 2013. Decreased myometrial p160 ROCK-1 expression in obese women at term pregnancy. *Reprod. Biol. Endocrinol.* 11: 79.
- Kunit, T., et al. 2014. Inhibition of smooth muscle force generation by focal adhesion kinase inhibitors in the hyperplastic human prostate. *Am. J. Physiol. Renal Physiol.* 307: F823-F832.

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.

PROTOCOLS

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



Try **MRCL3/MRLC2/MYL9 (E-4): sc-28329** or **MRCL3/MRLC2/MYL9 (D-9): sc-48414**, our highly recommended monoclonal alternatives to MYL9 (D-15). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **MRCL3/MRLC2/MYL9 (E-4): sc-28329**.