

MYL5 (N-14): sc-47209

BACKGROUND

Myosin interacts with actin to generate the force for diverse cellular movements, including cytokinesis, phagocytosis and muscle contraction. Myosin is a hexamer of 2 heavy chains (MHC) and 4 light chains (MLC), two of which are nonphosphorylatable alkali light chains and the other two are phosphorylatable regulatory light chains. Myosin regulatory light chain 5, also known as Myosin LC2, is encoded by the MYL5 gene and expressed in fetal muscle as well as adult retina, cerebellum and basal ganglia. Removal of light chains from Myosin reduces the velocity of actin filaments. Reconstitution of Myosin with regulatory light chain 5 or alkali light chain increases filament velocity to intermediate rates, and readdition of both classes of light chains fully restores the original sliding velocity.

REFERENCES

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4. Roulet, A., Burgat, J.M. and Cardinaud, R. 1993. The proteolytic susceptibility of specific sites in myosin light chains is modulated by the filament conformation. *Eur. J. Biochem.* 216: 89-101.
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CHROMOSOMAL LOCATION

Genetic locus: MYL5 (human) mapping to 4p16.3.

SOURCE

MYL5 (N-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of myosin regulatory light chain 5 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 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-47209 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

MYL5 (N-14) is recommended for detection of myosin regulatory light chain 5 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), 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).

MYL5 (N-14) is also recommended for detection of myosin regulatory light chain 5 in additional species, including porcine.

Suitable for use as control antibody for MYL5 siRNA (h): sc-61126, MYL5 shRNA Plasmid (h): sc-61126-SH and MYL5 shRNA (h) Lentiviral Particles: sc-61126-V.

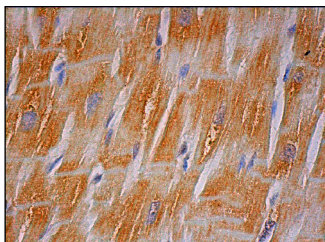
Molecular Weight of MYL5: 18 kDa.

Positive Controls: Y79 cell lysate: sc-2240.

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



MYL5 (N-14): sc-47209. Immunoperoxidase staining of formalin fixed, paraffin-embedded human heart muscle tissue showing cytoplasmic staining of myocytes.

RESEARCH USE

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