SANTA CRUZ BIOTECHNOLOGY, INC.

MYL6 (V-12): sc-109586

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The Power to Question

BACKGROUND

The EF-hand domain is a twelve amino acid loop motif that is commonly found in proteins that participate in calcium-binding events within the cell. EF-hand domains generally exist in a pair that, together, form a stable four-helix bundle that enables the binding of calcium ions. MYL6 (myosin, light chain 6, alkali, smooth muscle and non-muscle), also known as ESMLC, LC17A, LC17B or MLC1SM, is a 151 amino acid protein that contains 3 EF-hand domains and exists as 2 alternatively spliced isoforms, designated smooth muscle (MLC3SM) and non-muscle (MLC3NM). Existing as an alkali light chain component of the hexameric Myosin complex, MYL6 participates in generating the force for cellular movements, thereby playing an important role in overall cellular function. The gene encoding MYL6 maps to human chromosome 12, which encodes over 1,100 genes and comprises approximately 4.5% of the human genome.

REFERENCES

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2. Hailstones, D.L. and Gunning, P.W. 1990. Characterization of human myosin light chains 1SA and 3NM: implications for isoform evolution and function. Mol. Cell. Biol. 10: 1095-1104.
3. Bora, P.S., Bora, N.S., Wu, X., Kaplan, H.J. and Lange, L.G. 1994. Molecular cloning, sequencing, and characterization of smooth muscle myosin alkali light chain from human eye cDNA: homology with myocardial fatty acid ethyl ester synthase-III cDNA. Genomics 19: 186-188.
4. Komiyama, M., Soldati, T., von Arx, P. and Perriard, J.C. 1996. The intracompartmental sorting of myosin alkali light chain isoproteins reflects the sequence of developmental expression as determined by double epitope-tagging competition. J. Cell Sci. 109: 2089-2099.
5. Watanabe, M., Kohri, M., Takaishi, M., Horie, R. and Higashihara, M. 2001. Molecular cloning and sequencing of myosin light chains in human megakaryoblastic leukemia cells. J. Smooth Muscle Res. 37: 25-38.

CHROMOSOMAL LOCATION

Genetic locus: Myl6 (mouse) mapping to 10 D3.

SOURCE

MYL6 (V-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of MYL6 of mouse 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-109586 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

MYL6 (V-12) is recommended for detection of MYL6 of mouse and rat 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).

MYL6 (V-12) is also recommended for detection of MYL6 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for MYL6 siRNA (m): sc-149750, MYL6 shRNA Plasmid (m): sc-149750-SH and MYL6 shRNA (m) Lentiviral Particles: sc-149750-V.

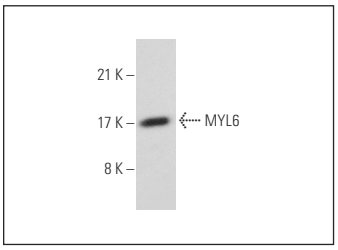
Molecular Weight of MYL6: 17 kDa.

Positive Controls: AMJ2-C8 whole cell lysate: sc-364366.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



MYL6 (V-12): sc-109586. Western blot analysis of MYL6 expression in AMJ2-C8 whole cell lysate.

RESEARCH USE

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

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.