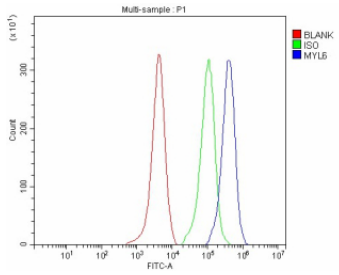
MYL6 Antibody / Myosin light chain 6 (FY13297)

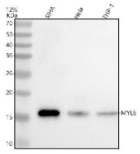
Catalog No.	Formulation	Size
FY13297	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

Availability	1-2 days
Species Reactivity	Human
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	P60660
Applications	Western Blot: 0.25-0.5ug/ml Flow cytometry: 1-3ug/million cells
Limitations	This MYL6 antibody is available for research use only.



Flow Cytometry analysis of human Hela cells using anti-MYL6 antibody. Overlay histogram showing Hela cells stained with (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-MYL6 antibody (1 ug/million cells) for 30 min at 20oC. DyLight 488 conjugated goat anti-rabbit IgG (5-10 ug/million cells) was used as secondary antibody for 30 minutes at 20oC. Isotype control antibody (Green line) was rabbit IgG (1 ug/million cells) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.



Western blot analysis of MYL6 using anti-MYL6 antibody. Lane 1: human SiHa whole cell lysates, Lane 2: human Hela whole cell lysates, Lane 3: human THP-1 whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-MYL6 antibody at 0.5 ug/ml overnight at 4oC, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal was developed using enhanced chemiluminescent. A specific band was detected for MYL6 at approximately 16 kDa. The expected molecular weight of MYL6 is ~16 kDa.

Description

MYL6 antibody detects Myosin light chain 6, a regulatory component of the actin-myosin cytoskeleton that contributes to muscle contraction and cytoskeletal organization. Encoded by the MYL6 gene on chromosome 12q13.3, this protein belongs to the myosin regulatory light chain family and binds to the neck region of myosin heavy chains, stabilizing the lever arm that generates contractile force. MYL6 is expressed in both smooth and non-muscle cells, where it regulates motor activity during cell motility, cytokinesis, and tension maintenance in the actin cytoskeleton.

MYL6 is one of two major isoforms produced by alternative splicing: a smooth muscle form (MYL6) and a non-muscle form (MYL6B). The smooth muscle isoform plays a key role in regulating calcium-sensitive contraction via interaction with myosin light chain kinase (MLCK) and myosin phosphatase, both of which control phosphorylation of the myosin regulatory light chain. The balance between phosphorylated and dephosphorylated MYL6 modulates smooth muscle tone and cell movement. Its structural domains include EF-hand calcium-binding motifs that enable conformational changes during contractile activation.

Beyond its role in muscle contraction, MYL6 contributes to intracellular transport, cytokinetic ring formation, and endothelial barrier regulation. Alterations in myosin light chain phosphorylation have been linked to vascular diseases, asthma, and tumor metastasis. Overexpression or dysregulation of MYL6 has been observed in certain cancers and fibrotic disorders, reflecting its role in actomyosin tension and epithelial-to-mesenchymal transition (EMT). In cardiac tissue, MYL6 interacts with actin-associated proteins to influence sarcomere assembly and stress response signaling.

Immunohistochemical staining using MYL6 antibody shows cytoplasmic localization in smooth muscle fibers, endothelial cells, and myofibroblasts. This antibody is widely used in research involving muscle physiology, cytoskeletal organization, and cellular contractility. MYL6 antibody from NSJ Bioreagents is suitable for studies exploring actin-myosin interactions, calcium signaling, and diseases such as hypertension, cardiomyopathy, and cancer cell invasion.

Application Notes

Optimal dilution of the MYL6 antibody should be determined by the researcher.

Immunogen

A synthetic peptide corresponding to a sequencein the middle region of human MYL6 was used as the immunogen for the MYL6 antibody.

Storage

After reconstitution, the MYL6 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

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