

Datasheet for ABIN104491

anti-MYL12A antibody (N-Term)

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Overview

Quantity:	100 µg
Target:	MYL12A
Binding Specificity:	N-Term
Reactivity:	Human, Mouse
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This MYL12A antibody is un-conjugated
Application:	Western Blotting (WB), Immunohistochemistry (IHC), ELISA, Immunoprecipitation (IP)

Product Details

Purpose:	Myosin phospho S19/phospho S20 Antibody
Immunogen:	Immunogen: Human Myosin Light Chain phospho peptide corresponding to a region near the amino terminus of the human smooth/non-muscle form of myosin regulatory light chain conjugated to Keyhole Limpet Hemocyanin (KLH). Immunogen Type: Conjugated Peptide
Isotype:	IgG
Cross-Reactivity (Details):	This affinity purified antibody is directed against the regulatory light chain of smooth and non-muscle myosin. The antibody is phosphospecific and detects monophosphorylated and diphosphorylated forms of the protein.
Characteristics:	Synonyms: rabbit anti-Myosin p19/pS20 antibody, Myosin regulatory light chain 12A, Myosin regulatory light chain MRLC3, Myosin regulatory light chain 2 nonsarcomeric, Myosin RLC,

Product Details

MLC-2B, HEL-S-24, Epididymis secretory protein Li 24, MLCB

Purification: affinity purified antibody

Sterility: Sterile filtered

Target Details

Target: MYL12A

Alternative Name: MYL12A ([MYL12A Products](#))

Background: Myosin is the major component of thick muscle filaments, and is a long asymmetric molecule containing a globular head and a long tail. The molecule consists of two heavy chains each ~200,000 daltons, and four light chains each ~16,000 - 21,000 daltons. Activation of smooth and cardiac muscle primarily involves pathways that increase calcium levels and myosin phosphorylation, resulting in contraction. Myosin light chain phosphatase acts to regulate muscle contraction by dephosphorylating activated myosin light chain. This antibody is specific for the phosphorylated form of myosin light chain. The selected peptide sequence used to generate the polyclonal antibody is located near the amino terminal end of the polypeptide corresponding to the smooth/non-muscle form of myosin regulatory light chain found in cardiac myocytes in addition to smooth and non-muscle cells. This sequence differs from that of the sarcomeric/cardiac form of myosin regulatory light chain that has a different sequence around the phosphorylation site. Human and mouse have almost identical sequences. In human the phosphorylation site is pS19, while in mouse the site maps to pS20. Myosin may play a role in disorders such as cardiomyopathies. Anti-Myosin pS19/sP20 Antibody is useful for researcher interested in stem cell and enzyme researcher.

Gene ID: 10627

UniProt: [P19105](#)

Application Details

Application Notes: Immunohistochemistry Dilution: 2.5 µg/mL

Application Note: Rabbit Anti-Myosin pS19/pS20 Antibody was tested by ELISA, immunohistochemistry, and western blotting. Immunoblotting was used to show reactivity with unstimulated and stimulated cardiac myocytes, 3T3 whole cell lysates, and regulatory light chain and smooth muscle phospho recombinant protein. The antibody was also reactive with the phosphorylated form of the immunizing peptide and minimally reactive with the non-phosphorylated form of the immunizing peptide. Although not tested, this antibody is likely

Application Details

functional by immunoprecipitation.
Western Blot Dilution: 1:500 - 1:2,000
Immunoprecipitation Dilution: 1:100
ELISA Dilution: 1:10,000 - 1:30,000
Other: User Optimized

Restrictions: For Research Use only

Handling

Format: Liquid

Concentration: 0.92 mg/mL

Buffer: Buffer: 0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Stabilizer: None
Preservative: 0.01 % (w/v) Sodium Azide

Preservative: Sodium azide

Precaution of Use: This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.

Storage: 4 °C, -20 °C

Storage Comment: Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.

Expiry Date: 12 months

Publications

Product cited in: Harbom, Rudisill, Michel, Litwa, Beenhakker, McConnell: "The effect of rho kinase inhibition on morphological and electrophysiological maturity in iPSC-derived neurons." in: **Cell and tissue research**, Vol. 375, Issue 3, pp. 641-654, (2019) ([PubMed](#)).

Salomon, Gaston, Magescas, Duvauchelle, Canioni, Sengmanivong, Mayeux, Michaux, Campeotto, Lemale, Viala, Poirier, Minc, Schmitz, Brousse, Ladoux, Goulet, Delacour: "Contractile forces at tricellular contacts modulate epithelial organization and monolayer integrity." in: **Nature communications**, Vol. 8, pp. 13998, (2018) ([PubMed](#)).

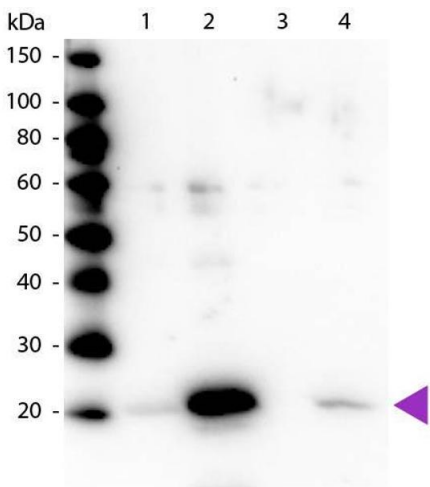
Panousopoulou, Hobbs, Mason, Green, Formstone: "Epiboly generates the epidermal basal monolayer and spreads the nascent mammalian skin to enclose the embryonic body." in: **Journal of cell science**, Vol. 129, Issue 9, pp. 1915-27, (2017) ([PubMed](#)).

Logue, Cartagena-Rivera, Baird, Davidson, Chadwick, Waterman: "Erk regulation of actin capping and bundling by Eps8 promotes cortex tension and leader bleb-based migration." in: **eLife**, Vol. 4, pp. e08314, (2016) ([PubMed](#)).

Newell-Litwa, Badoual, Asmussen, Patel, Whitmore, Horwitz: "ROCK1 and 2 differentially regulate actomyosin organization to drive cell and synaptic polarity." in: **The Journal of cell biology**, Vol. 210, Issue 2, pp. 225-42, (2016) ([PubMed](#)).

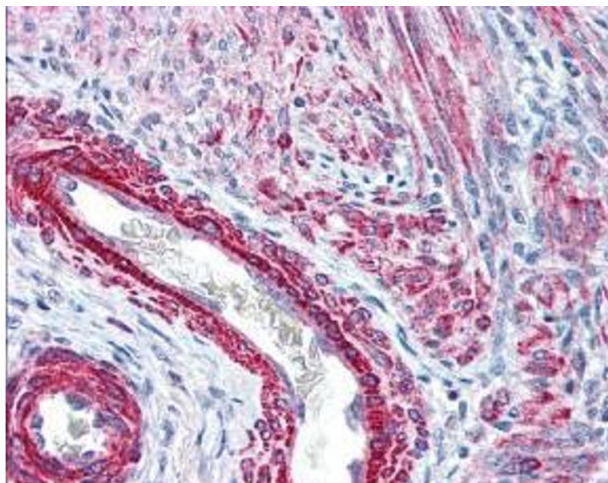
There are more publications referencing this product on: [Product page](#)

Images



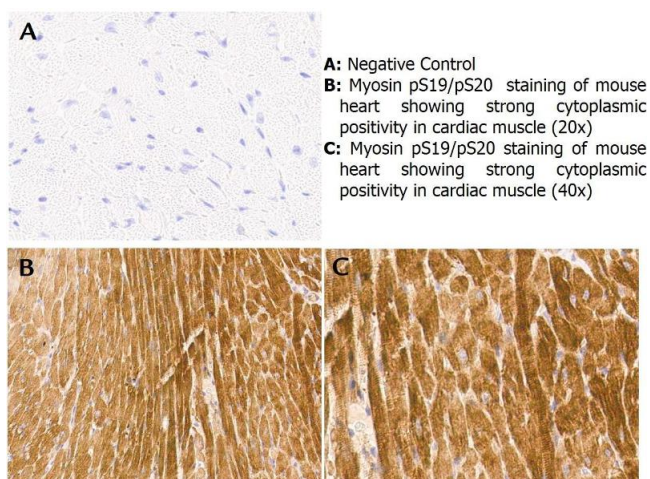
Western Blotting

Image 1. Western blot of Rabbit Anti-Myosin pS19/pS20 primary antibody. Lane 1: Regulatory Light Chain Non-Phospho recombinant protein. Lane 2: Regulatory Light Chain Phospho recombinant protein. Lane 3: Smooth Muscle Non-Phospho recombinant protein. Lane 4: Smooth Muscle Phospho recombinant protein. Load: 50 ng per lane. Primary antibody: Myosin pS19/pS20 primary antibody at 1:1,000 overnight at 4°C. Secondary antibody: Peroxidase rabbit secondary antibody at 1:40,000 for 60 min at RT. Blocking: ABIN925618 for 30 min at RT. Predicted/Observed size: 20 kDa, 20 kDa for Regulatory Light Chain Phospho. Other band(s): None.



Immunohistochemistry

Image 2. affinity purified anti-Monophosphorylated RLC Smooth and Non-Muscle Myosin pS19/20 antibody was used at 2.5 µg/ml to detect signal in a variety of tissues including multi-human, multi-brain and multi-cancer slides. This image shows strong staining of both vascular and myometrial smooth muscle cells of the uterus. Tissue was formalin-fixed and paraffin embedded. The image shows localization of the antibody as the precipitated red signal, with a hematoxylin purple nuclear counterstain. Personal Communication, Tina Roush, LifeSpanBiosciences, Seattle, WA.



Immunohistochemistry

Image 3. Immunohistochemistry with anti-myosin pS19/pS20 antibody showing strong cytoplasmic staining of myocytes in mouse heart muscle 20x and 40x (B & C). Staining was performed on Leica Bond system using the standard protocol. Formalin fixed/paraffin embedded tissue sections were subjected to antigen retrieval and then incubated with rabbit anti-myosin pS19/pS20 antibody at 1:100 dilution for 60 minutes. Biotinylated Anti-rabbit secondary antibody was used to detect primary antibody. The reaction was developed using streptavidin-HRP conjugated compact polymer system and visualized with chromogen substrate, 3'3-diamino-benzidine substrate (DAB). The sections were then counterstained with hematoxylin to detect cell nuclei.

Please check the [product details page](#) for more images. Overall 5 images are available for ABIN104491.