Datasheet for ABIN104491

anti-Myosin antibody (pSer19, pSer20)

5 Images | 9 Publications

Go to Product page

Overview

Quantity:	100 µg
Target:	Myosin
Binding Specificity:	pSer19, pSer20
Reactivity:	Human
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This Myosin antibody is un-conjugated
Application:	Western Blotting (WB), ELISA, Immunohistochemistry (IHC), Immunoprecipitation (IP)

Product Details

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).
Isotype:	IgG
Characteristics:	Concentration Definition: by UV absorbance at 280 nm

Target Details

Target:	Myosin
Abstract:	Myosin 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

Target Details

	~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. Synonyms: Myosin regulatory light chain 12A Alternative name(s): Myosin regulatory light chain MRLC3 Myosin regulatory light chain 2, nonsarcomeric Myosin RLC MLC-2B
Gene ID:	10627
UniProt:	P19105

Application Details

Application Notes:	This phospho specific polyclonal antibody was tested by ELISA, immunohistochemistry and immunoblotting. Immunoblotting was used to show reactivity with unstimulated and stimulated cardiac myocytes. 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 functional by immunoprecipitation.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Concentration:	0.92 mg/mL
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	Sodium azide
Precaution of Use:	This product contains sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.

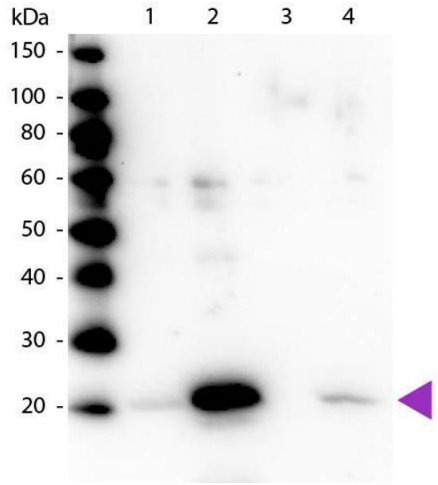
Handling

Storage:	-20 °C

Publications

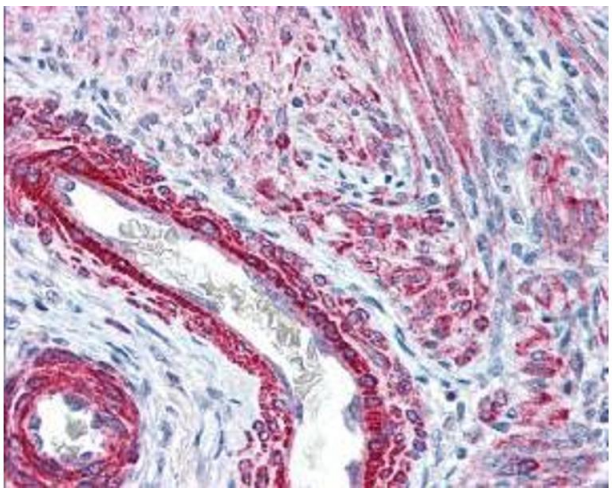
Product cited in:	Treise, Huber, Klein-Rodewald, Heinemeyer, Grassmann, Basler, Adler, Rathkolb, Helming, Andres, Klaften, Landbrecht, Wieland, Strom, McCoy, Macpherson, Wolf, Groettrup, Ollert, Neff, Gailus-Durner et al.: "Defective immuno- and thymoproteasome assembly causes severe immunodeficiency. ..." in: **Scientific reports**, Vol. 8, Issue 1, pp. 5975, (2018) (PubMed). There are more publications referencing this product on: Product page

Images



Western Blotting

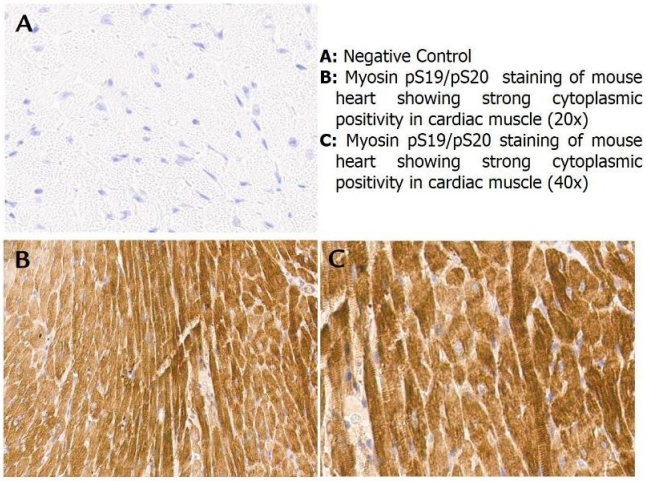
Image 1. Western blot of Rabbit Anti-Myosin pS19/pS20 primary antibody. Lane 1: Regulatory Light Chain Non-Phospho recombinant protein. Lane 2: Regulatory Light Chain Phospho recombinant protein. Lane 3: Smooth Muscle Non-Phospho recombinant protein. Lane 4: Smooth Muscle Phospho recombinant protein. 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.