abcam

Product datasheet

Anti-Myosin light chain kinase/MLCK antibody ab55475

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Overview

Product name	Anti-Myosin light chain kinase/MLCK antibody
Description	Mouse monoclonal to Myosin light chain kinase/MLCK
Host species	Mouse
Tested applications	**Suitable for:** WB
Species reactivity	**Reacts with:** Recombinant fragment **Predicted to work with:** Human
Immunogen	Recombinant fragment: CTQCLQHPWL MKDTKNMEAK KLSKDRMKKY MARRKWQKTG NAVRAIGRLS SMAMISGLSG RKSSTGSPTS PLNAEKLESE EDVSQAFLEA VAEEKPHVKP , corresponding to amino acids 1710-1809 of Human Myosin light chain kinase Run BLAST with ExPASy Run BLAST with NCBI

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.
Storage buffer	Preservative: None PBS, pH 7.2
Purity	Protein G purified
Clonality	Monoclonal
Isotype	IgG1
Light chain type	kappa

Applications

The Abpromise guarantee	Our **Abpromise guarantee** covers the use of ab55475 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB	★★★☆☆ (3)	Use a concentration of 1 - 5 µg/ml. This antibody has only been tested in WB against the recombinant fragment used as immunogen. We have no data on the detection of endogenous protein.

Target

Function

Calcium/calmodulin-dependent enzyme implicated in smooth muscle contraction via phosphorylation of myosin light chains (MLC). Also regulates actin-myosin interaction through a non-kinase activty (By similarity). Implicated in the regulation of endothelial as well as vascular permeability. In the nervous system it has been shown to control the growth initiation of astrocytic processes in culture and to participate in transmitter release at synapses formed between cultured sympathetic ganglion cells. Critical participant in signaling sequences that result in fibroblast apoptosis.

Tissue specificity

Smooth muscle and non-muscle isozymes are expressed in a wide variety of adult and fetal tissues and in cultured endothelium with qualitative expression appearing to be neither tissue- nor development-specific. Non-muscle isoform 2 is the dominant splice variant expressed in various tissues. Telokin has been found in a wide variety of adult and fetal tissues.

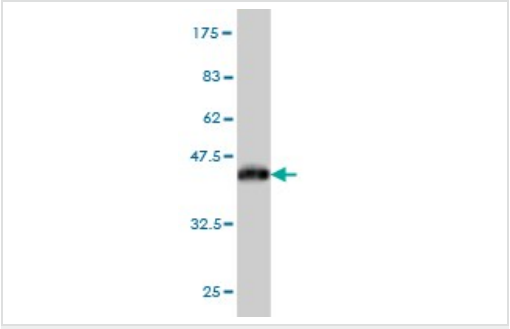
Sequence similarities

Belongs to the protein kinase superfamily. CAMK Ser/Thr protein kinase family.
Contains 1 fibronectin type-III domain.
Contains 9 Ig-like C2-type (immunoglobulin-like) domains.
Contains 1 protein kinase domain.

Post-translational modifications

MLCK is probably down-regulated by phosphorylation.
The C-terminus is deglutamylated by AGTPBP1/ CCP1, AGBL1/CCP4 and AGBL4/CCP6, leading to the formation of Myosin light chain kinase, smooth muscle, deglutamylated form. The consequences of C-terminal deglutamylation are unknown.

Images



Western blot - Anti-Myosin light chain kinase antibody (ab55475)

Western blot against tagged recombinant protein immunogen using ab55475 Myosin light chain kinase antibody at 1ug/ml. Predicted band size of immunogen is 37 kDa

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