

Rabbit Myosin light chain kinase Monoclonal Antibody | anti-MYLK antibody

Anti-Myosin light chain kinase Rabbit Monoclonal Antibody

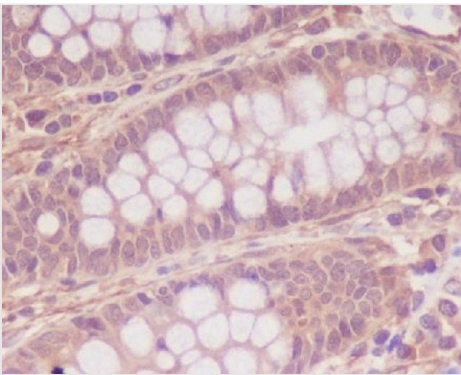
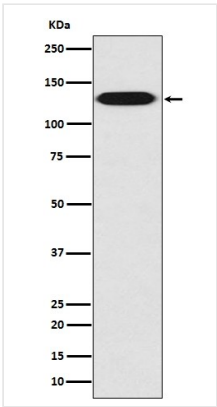
CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA47074	Rabbit	Human, Mouse, Rat	Western Blot, Immunocytochemistry, Immunohistochemistry, Immunofluorescence, Flow Cytometry, Functional Assay

PRODUCT SYNONYMS

Myosin light chain kinase; Monoclonal Antibody; Anti-Myosin light chain kinase Rabbit Monoclonal Antibody; smooth muscle; MLCK; smMLCK; 2.7.11.18; Kinase-related protein; KRP; Telokin; deglutamylated form; MYLK; MLCK1; MYLK1; anti-MYLK antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Monoclonal
Purity/Purification	Affinity-chromatography
Form/Format	Liquid
Sequence Length	991
Applicable Applications for anti-MYLK antibody	WB (Western Blot), ICC (Immunocytochemistry), IHC (Immunohistochemistry), IF (Immunofluorescence), FCM/FACS (Flow Cytometry)
Immunogen	A synthesized peptide derived from human Myosin light chain kinase
Subcellular Localization	Cytoplasm. Cell projection, lamellipodium. Cleavage furrow. Cytoplasm, cytoskeleton. Localized to stress fibers during interphase and to the cleavage furrow during mitosis.
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. Accumulates in well differentiated enterocytes of the intestinal epithelium in response to tumor necrosis factor (TNF).
Contents	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Preparation and Storage	Store at -20 degree C for one year. After reconstitution, at 4 degree C for one month. It can also be aliquotted and stored frozen at -20 degree C for a longer time. Avoid repeated freezing and thawing.



IHC (Immunohistochemistry)
Immunohistochemical analysis of paraffin-embedded human colon, using Myosin light chain kinase Antibody(AAA47074)MYLK was detected in paraffin-embedded tissue section. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-MYLK Antibody (AAA47074)overnight at 4 degree C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) with DAB as the chromogen.

WB (Western Blot)
Western blot analysis of myosin light chain kinase expression in HUVEC cell lysate (AAA47074).Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA 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-MYLK monoclonal antibody overnight at 4 degree C, 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 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit with Tanon 5200 system. A specific band was detected for MYLK

ADDITIONAL INFORMATION

Related Product Information for anti-MYLK antibody	Calcium/calmodulin-dependent myosin light chain kinase implicated in smooth muscle contraction via phosphorylation of myosin light chains (MLC). Also regulates actin-myosin interaction through a non-kinase activity. Phosphorylates PTK2B/PYK2 and myosin light-chains. Involved in the inflammatory response (e.g. apoptosis, vascular permeability, leukocyte diapedesis), cell motility and morphology, airway hyperreactivity and other activities relevant to asthma. Required for tonic airway smooth muscle contraction that is necessary for physiological and asthmatic airway resistance. Necessary for gastrointestinal motility. Implicated in the regulation of endothelial as well as vascular permeability, probably via the regulation of cytoskeletal rearrangements. 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. Plays a role in the regulation of epithelial cell survival. Required for epithelial wound healing, especially during actomyosin ring contraction during purse-string wound closure. Mediates RhoA-dependent membrane blebbing. Triggers TRPC5 channel activity in a calcium-dependent signaling, by inducing its subcellular localization at the plasma membrane. Promotes cell migration (including tumor cells) and tumor metastasis. PTK2B/PYK2 activation by phosphorylation mediates ITGB2 activation and is thus essential to trigger neutrophil transmigration during acute lung injury (ALI). May regulate optic nerve head astrocyte migration. Probably involved in mitotic cytoskeletal regulation. Regulates tight junction probably by modulating ZO-1 exchange in the perijunctional actomyosin ring. Mediates burn-induced microvascular barrier injury; triggers endothelial contraction in the development of microvascular hyperpermeability by phosphorylating MLC. Essential for intestinal barrier dysfunction. Mediates Giardia spp.-mediated reduced epithelial barrier function during giardiasis intestinal infection via reorganization of cytoskeletal F-actin and tight junctional ZO-1. Necessary for hypotonicity-induced Ca(2+) entry and subsequent activation of volume-sensitive organic osmolyte/anion channels (VSOAC) in cervical cancer cells. Responsible for high proliferative ability of breast cancer cells through anti-apoptosis.
Product Categories/Family for anti-MYLK antibody	Signal Transduction; Cytoskeleton/ECM; Cytoskeleton; Motor Proteins; myosin; Signal Transduction; Protein Phosphorylation; SER/THR Kinases; Other Kinases; Cardiovascular; Heart; contractility; contractile proteins; myosins

NCBI AND UNIPROT INFORMATION

NCBI GI #	1008806537
NCBI GeneID	4638
NCBI Accession #	NP_001308238.1

NCBI GenBank Nucleotide #	NM_001321309.1
UniProt Accession #	Q15746 ; O95796 ; O95797 ; O95798 ; O95799 ; Q14844 ; Q16794 ; Q17S15 ; Q3ZCP9 ; Q5MY99 ; B4DUE3 ; D3DN97
Molecular Weight	210715 MW
NCBI Official Full Name	myosin light chain kinase, smooth muscle isoform 9
NCBI Official Synonym Full Names	myosin light chain kinase
NCBI Official Symbol	MYLK
NCBI Official Synonym Symbols	KRP; AAT7; MLCK; MLCK1; MYLK1; smMLCK; MLCK108; MLCK210; MSTP083
NCBI Protein Information	myosin light chain kinase, smooth muscle
UniProt Protein Name	Myosin light chain kinase, smooth muscle
UniProt Gene Name	MYLK
UniProt Synonym Gene Names	MLCK; MLCK1; MYLK1; MLCK; smMLCK; KRP

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/monoclonal/myosin-light-chain-kinase-antibody-western-blot-immunocytochemistry-immunohistochemistry-immunofluorescence-flow-cytometry-elisa/47074>