

MYLK Antibody (internal region)
Peptide-affinity purified goat antibody
Catalog # AF2591a**Specification**

MYLK Antibody (internal region) - Product Information

Application	WB, E
Primary Accession	Q15746
Other Accession	NP_444253.3 , NP_444254.3 , NP_444255.3 , NP_444256.3 , 4638
Reactivity	Human
Predicted	Mouse
Host	Goat
Clonality	Polyclonal
Concentration	0.5 mg/ml
Isotype	IgG
Calculated MW	210715

MYLK Antibody (internal region) - Additional Information**Gene ID** 4638**Other Names**

Myosin light chain kinase, smooth muscle, MLCK, smMLCK, 2.7.11.18, Kinase-related protein, KRP, Telokin, Myosin light chain kinase, smooth muscle, deglutamylated form, MYLK, MLCK, MLCK1, MYLK1

Dilution

WB~~1:1000
E~~N/A

Format

0.5 mg/ml in Tris saline, 0.02% sodium azide, pH7.3 with 0.5% bovine serum albumin

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

MYLK Antibody (internal region) is for research use only and not for use in diagnostic or therapeutic procedures.

MYLK Antibody (internal region) - Protein Information**Name** MYLK ([HGNC:7590](#))**Synonyms** MLCK, MLCK1, MYLK1

Function

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.

Cellular Location

Cytoplasm. Cell projection, lamellipodium. Cleavage furrow. Cytoplasm, cytoskeleton, stress fiber. Note=Localized to stress fibers during interphase and to the cleavage furrow during mitosis

Tissue Location

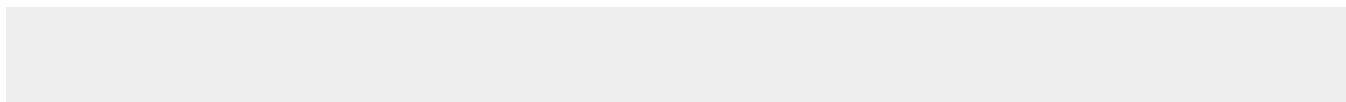
Smooth muscle and non-muscle isozymes are expressed in a wide variety of adult and fetal tissues and in cultured endothelium with qualitative expression appearing to be neither tissue- nor development-specific. Non-muscle isoform 2 is the dominant splice variant expressed in various tissues. Telokin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

MYLK Antibody (internal region) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

MYLK Antibody (internal region) - Images





AF2591a (0.03 µg/ml) staining of Human Colon lysate (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.

MYLK Antibody (internal region) - Background

This antibody is expected to recognise all reported isoforms (NP_444253.3; NP_444254.3 ; NP_444255.3 and NP_444256.3).

MYLK Antibody (internal region) - References

Tumor necrosis factor-induced long myosin light chain kinase transcription is regulated by differentiation-dependent signaling events. Characterization of the human long myosin light chain kinase promoter. Graham WV, Wang F, Clayburgh DR, Cheng JX, Yoon B, Wang Y, Lin A, Turner JR. J Biol Chem. 2006 Sep 8;281(36):26205-15. Epub 2006 Jul 11. PMID: 16835238