

Rabbit MYLK Polyclonal Antibody | anti-MYLK antibody

MYLK Antibody

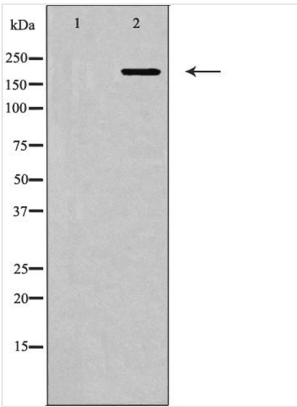
CATALOG # AAA321967	HOST Rabbit	REACTIVITY Human, Mouse, Rat	APPLICATIONS ELISA, Western Blot
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PRODUCT SYNONYMS

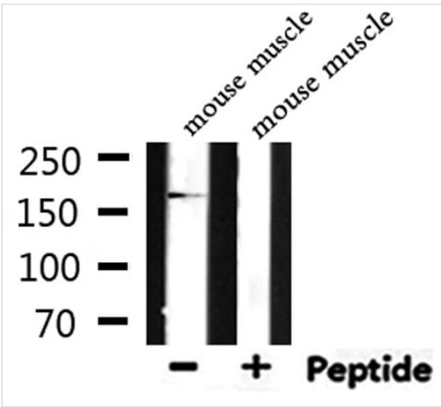
MYLK; Polyclonal Antibody; MYLK Antibody; deglutamylated form; DKFZp686I10125; EC 2.7.11.18; FLJ12216; Kinase related protein; Kinase-related protein; KRP; MLCK; MLCK1; MLCK108; MLCK210; MSTP083; MYLK_HUMAN; MYLK1; Myosin light chain kinase; Myosin light polypeptide kinase; OTTHUMP00000180642; OTTHUMP00000180643; smMLCK; smooth muscle; Smooth muscle myosin light chain kinase; Telokin; anti-MYLK antibody

PRODUCT SPECIFICATIONS

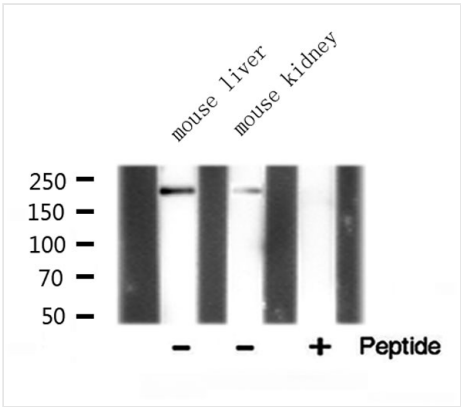
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	IgG
Specificity	MYLK antibody detects endogenous levels of total MYLK
Purity/Purification	The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	1738
Applicable Applications for anti-MYLK antibody	ELISA, WB (Western Blot)
Immunogen	A synthesized peptide derived from human MYLK
Subcellular Location	Cytoskeleton
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).
Predicted Cross Reactivity	Bovine, Sheep, Rabbit, Dog, Chicken
Similarity	Bovine (100%), Sheep (93%), Rabbit (100%), Dog (100%), Chicken (100%)
Conjugation	Unconjugated
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.



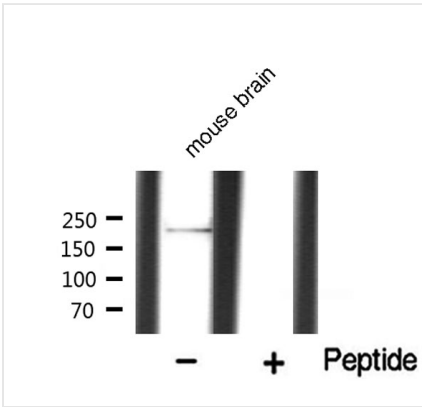
WB (Western Blot)
Western blot analysis of MYLK expression in HepG2 cells. The lane on the left is treated with the antigen-specific peptide.



WB (Western Blot)
Western blot analysis of extracts from mouse muscle, using MYLK Antibody.



WB (Western Blot)
Western blot analysis of MYLK expression in various lysates



WB (Western Blot)
Western blot analysis of MYLK expression in mouse brain

ADDITIONAL INFORMATION

Related Product Information for anti-MYLK antibody	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 Ca2+ 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. Subunit Structure: All isoforms including Telokin bind calmodulin. Interacts with SVIL (By similarity). Interacts with CTTN; this interaction is reduced during thrombin-induced endothelial cell (EC) contraction but is promoted by the barrier-protective agonist sphingosine 1-phosphate (S1P) within lamellipodia. A complex made of ABL1, CTTN and MYLK regulates cortical actin-based cytoskeletal rearrangement critical to sphingosine 1-phosphate (S1P)-mediated endothelial cell (EC) barrier enhancement. Binds to NAA10/ARD1 and PTK2B/PYK2. Post-translational Modifications: Can probably be down-regulated by phosphorylation. Tyrosine phosphorylation by ABL1 increases kinase activity, reverses MLCK-mediated inhibition of Arp2/3-mediated actin polymerization, and enhances CTTN-binding. Phosphorylation by SRC at Tyr-464 and Tyr-471 promotes CTTN binding. 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 (By similarity). Acetylated at Lys-608 by NAA10/ARD1 via a calcium-dependent signaling; this acetylation represses kinase activity and reduces tumor cell migration. Similarity: Belongs to the protein kinase superfamily. CAMK Ser/Thr protein kinase family.
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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	Observed: 211 kDa Predicted: 211 kDa
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

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.

AAA Biotech | Tel: +1 (619) 604-9440 | Fax: +1 (619) 604-9441 | contact@aaabiotech.com
Online datasheet: <https://www.aaabiotech.com/polyclonal/mylk-antibody-western-blot-elisa/321967>