Immunotag™ MYLK (phospho Tyr464) Polyclonal Antibody

Antibody Specification

Catalog No.	ITP1119
Product Description	Immunotag™ MYLK (phospho Tyr464) Polyclonal Antibody
Size	50 µg, 100 µg
Conjugation	HRP, Biotin, FITC, Alexa Fluor® 350, Alexa Fluor® 405, Alexa Fluor® 488, Alexa Fluor® 555, Alexa Fluor® 594, Alexa Fluor® 647
IMPORTANT NOTE	This product is custom manufactured with a lead time of 3-4 weeks. Once in production, this item cannot be cancelled from an order and is not eligible for return.
Target Protein	MYLK (Tyr464)
Clonality	Polyclonal
Storage/Stability	-20°C/1 year
Application	IHC-p,ELISA
Recommended Dilution	Immunohistochemistry: 1/100 - 1/300. ELISA: 1/10000. Not yet tested in other applications.
Concentration	1 mg/ml
Reactive Species	Human
Host Species	Rabbit
Immunogen	Synthesized phospho-peptide around the phosphorylation site of human MYLK (phospho Tyr464)
Specificity	Phospho-MYLK (Y464) Polyclonal Antibody detects endogenous levels of MYLK protein only when phosphorylated at Y464.
Purification	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen
Form	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Gene Name	MYLK
Accession No.	Q15746 Q6PDN3
Alternate Names	MYLK; MLCK; MLCK1; MYLK1; Myosin light chain kinase; smooth muscle; MLCK; smMLCK; Kinase-related protein; KRP; Telokin

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Description	myosin light chain kinase(MYLK) Homo sapiens This gene, a muscle member of the immunoglobulin gene superfamily, encodes myosin light chain kinase which is a calcium/calmodulin dependent enzyme. This kinase phosphorylates myosin regulatory light chains to facilitate myosin interaction with actin filaments to produce contractile activity. This gene encodes both smooth muscle and nonmuscle isoforms. In addition, using a separate promoter in an intron in the 3' region, it encodes telokin, a small protein identical in sequence to the C-terminus of myosin light chain kinase, that is independently expressed in smooth muscle and functions to stabilize unphosphorylated myosin filaments. A pseudogene is located on the p arm of chromosome 3. Four transcript variants that produce four isoforms of the calcium/calmodulin dependent enzyme have been identified as well as two transcripts that produce two isoforms of telokin. Additional variants have been
Cell Pathway/ Category	Calcium,Vascular smooth muscle contraction,Focal adhesion,Regulates Actin and Cytoskeleton,
Protein Expression	Aorta,Brain,Cervix carcinoma,Colon,Hippocampus,Intestinal epithelium,Liver,Lung,PCR
Subcellular Localization	stress fiber,cytoplasm,cytosol,lamellipodium,cleavage furrow,extracellular exosome,
Protein Function	Additional isoforms seem to exist,catalytic activity:ATP + [myosin light-chain] = ADP + [myosin light-chain] phosphate.,cofactor:Calcium.,cofactor:Magnesium.,enzyme regulation:Isoform 1 is activated by phosphorylation on Tyr-464 and Tyr-471. Isoforms which lack these tyrosine residues are not regulated in this way. All catalytically active isoforms require binding to calcium and calmodulin for activation.,function:Calcium/calmodulin-dependent enzyme implicated in smooth muscle contraction via phosphorylation of myosin light chains (MLC). 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.,online information:Myosin light-chain kinase entry,PTM:MLCK is probably down-regulated by phosphorylation.,similarity:Belongs to the protein kinase superfamily. CAMK Ser/Thr protein kinase family.,similarity:Contains 1 fibronectin type-III domain.,similarity:Contains 1 protein kinase domain.,similarity:Contains 9 Ig-like C2-type (immunoglobulin-like) domains.,subunit:All isoforms including Telokin bind calmodulin.,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.,
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