Product Name: MYLK (phospho Tyr464) Rabbit Polyclonal Antibody
Catalog #: APRab05053

Summary

Production Name	MYLK (phospho Tyr464) Rabbit Polyclonal Antibody
Description	Rabbit Polyclonal Antibody
Host	Rabbit
Application	IHC,ELISA
Reactivity	Human,Rat,Mouse

Performance

Conjugation	Unconjugated
Modification	Phospho Antibody
Isotype	IgG
Clonality	Polyclonal
Form	Liquid
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.
Buffer	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% New type preservative N.
Purification	Affinity purification

Immunogen

Gene Name	MYLK
Alternative Names	MYLK; MLCK; MLCK1; MYLK1; Myosin light chain kinase; smooth muscle; MLCK; smMLCK; Kinase-related protein; KRP; Telokin
Gene ID	4638.0
SwissProt ID	Q15746.Synthesized phospho-peptide around the phosphorylation site of human MYLK (phospho Tyr464)

Application

Dilution Ratio	IHC 1:100-1:300 ELISA: 1:10000
Molecular Weight	

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Background

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 beenalternative products: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.,

Research Area

Calcium;Vascular smooth muscle contraction;Focal adhesion;Regulates Actin and Cytoskeleton;

Image Data

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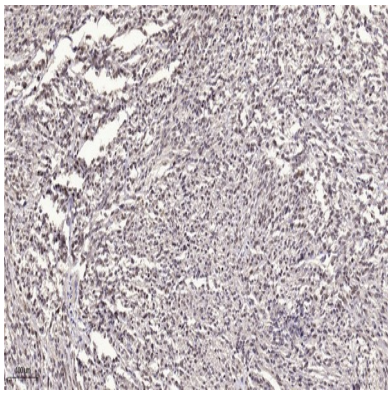

Immunohistochemical analysis of paraffin-embedded human small intestinal carcinoma tissue. 1,primary Antibody was diluted at 1:200（4° overnight）. 2, Sodium citrate pH 6.0 was used for antigen retrieval（>98°C,20min）. 3,Secondary antibody was diluted at 1:200

Note

For research use only.