

LIMK1 Antibody
Rabbit mAb
Catalog # AP92026

Specification

LIMK1 Antibody - Product Information

Application	WB
Primary Accession	P53667
Reactivity	Rat
Clonality	Monoclonal
Other Names	
LIM kinase; LIMK 1; LIMK;	
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	72585 Da

LIMK1 Antibody - Additional Information

Dilution	WB~~1:1000
Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human LIM Kinase 1
Description	Protein kinase which regulates actin filament dynamics. Phosphorylates and inactivates the actin binding/depolymerizing factor cofilin, thereby stabilizing the actin cytoskeleton. Stimulates axonal outgrowth and may be involved in brain development. Isoform 3 has a dominant negative effect on actin cytoskeletal changes.
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

LIMK1 Antibody - Protein Information

Name LIMK1

Synonyms LIMK

Function

Serine/threonine-protein kinase that plays an essential role in the regulation of actin filament dynamics. Acts downstream of several Rho family GTPase signal transduction pathways (PubMed:10436159, PubMed:11832213),

PubMed: 12807904, PubMed: 15660133, PubMed: 16230460, PubMed: 18028908, PubMed: 22328514, PubMed: 23633677). Activated by upstream kinases including ROCK1, PAK1 and PAK4, which phosphorylate LIMK1 on a threonine residue located in its activation loop (PubMed: 10436159). LIMK1 subsequently phosphorylates and inactivates the actin binding/depolymerizing factors cofilin-1/CFL1, cofilin-2/CFL2 and destrin/DSTN, thereby preventing the cleavage of filamentous actin (F-actin), and stabilizing the actin cytoskeleton (PubMed: 11832213, PubMed: 15660133, PubMed: 16230460, PubMed: 23633677). In this way LIMK1 regulates several actin-dependent biological processes including cell motility, cell cycle progression, and differentiation (PubMed: 11832213, PubMed: 15660133, PubMed: 16230460, PubMed: 23633677). Phosphorylates TPPP on serine residues, thereby promoting microtubule disassembly (PubMed: 18028908). Stimulates axonal outgrowth and may be involved in brain development (PubMed: 18028908).

Cellular Location

Cytoplasm. Nucleus. Cytoplasm, cytoskeleton. Cell projection, lamellipodium {ECO:0000250|UniProtKB:P53668} Note=Predominantly found in the cytoplasm. Localizes in the lamellipodium in a CDC42BPA, CDC42BPB and FAM89B/LRAP25-dependent manner. {ECO:0000250|UniProtKB:P53668}

Tissue Location

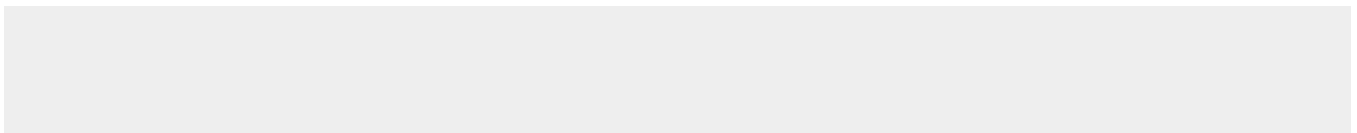
Highest expression in both adult and fetal nervous system. Detected ubiquitously throughout the different regions of adult brain, with highest levels in the cerebral cortex. Expressed to a lesser extent in heart and skeletal muscle

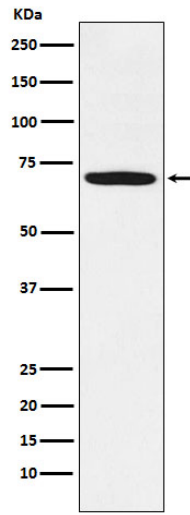
LIMK1 Antibody - Protocols

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](#)

LIMK1 Antibody - Images





Western blot analysis of LIM Kinase 1 expression in U-87MG cell lysate.