

Anti-LIMK1 Picoband Antibody
Catalog # ABO12402**Specification**

Anti-LIMK1 Picoband Antibody - Product Information

Application	WB
Primary Accession	P53667
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized

Description

Rabbit IgG polyclonal antibody for LIM domain kinase 1(LIMK1) detection. Tested with WB in Human;Mouse;Rat.

Reconstitution

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-LIMK1 Picoband Antibody - Additional Information

Gene ID 3984

Other Names

LIM domain kinase 1, LIMK-1, 2.7.11.1, LIMK1, LIMK

Calculated MW

72585 MW KDa

Application Details

Western blot, 0.1-0.5 µg/ml, Human, Mouse, Rat

Subcellular Localization

Cytoplasm. Nucleus. Predominantly found in the cytoplasm.

Tissue Specificity

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.

Protein Name

LIM domain kinase 1

Contents

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na₂HPO₄, 0.05mg Na₃.

Immunogen

A synthetic peptide corresponding to a sequence at the C-terminus of human LIMK1 (599-634aa KLEHWLETLRMHLAGHLPLGPQLEQLDRGFWETYRR), different from the related mouse sequence by three amino acids, and from the related rat sequence by two amino acids.

Purification

Immunogen affinity purified.

Cross Reactivity

No cross reactivity with other proteins

Storage

At -20°C for one year. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for a longer time. Avoid repeated freezing and thawing.

Anti-LIMK1 Picoband 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

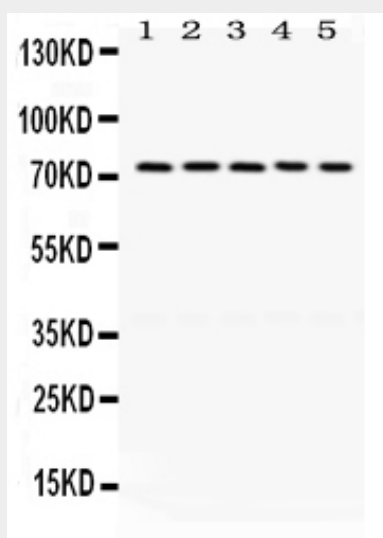
Highest expression in both adult and fetal nervous system. Detected ubiquitously throughout the different regions of adult brain, with highest levels in the cerebral cortex. Expressed to a lesser extent in heart and skeletal muscle

Anti-LIMK1 Picoband 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](#)

Anti-LIMK1 Picoband Antibody - Images



Anti- LIMK1 Picoband antibody, ABO12402, Western blotting
All lanes: Anti LIMK1 (ABO12402) at 0.5ug/ml
Lane 1: Rat Brain Tissue Lysate at 50ug
Lane 2: Mouse Gaster Tissue Lysate at 50ug
Lane 3: HELA Whole Cell Lysate at 40ug
Lane 4: U87 Whole Cell Lysate at 40ug
Lane 5: SKOV Whole Cell Lysate at 40ug
Predicted bind size: 72KD
Observed bind size: 72KD

Anti-LIMK1 Picoband Antibody - Background

LIM domain kinase 1 is an enzyme that in humans is encoded by the LIMK1 gene. There are approximately 40 known eukaryotic LIM proteins, so named for the LIM domains they contain. LIM domains are highly conserved cysteine-rich structures containing 2 zinc fingers. Although zinc fingers usually function by binding to DNA or RNA, the LIM motif probably mediates protein-protein interactions. LIM kinase-1 and LIM kinase-2 belong to a small subfamily with a unique combination of 2 N-terminal LIM motifs, a central PDZ domain, and a C-terminal protein kinase domain. LIMK1 is likely to be a component of an intracellular signaling pathway and may be involved in brain development.