



# LIMK-1 Polyclonal Antibody

<b>Catalog No</b>	BYab-14813
<b>Isotype</b>	IgG
<b>Reactivity</b>	Human;Mouse;Rat
<b>Applications</b>	WB;IHC;IF;ELISA
<b>Gene Name</b>	LIMK1
<b>Protein Name</b>	LIM domain kinase 1
<b>Immunogen</b>	The antiserum was produced against synthesized peptide derived from human LIMK1. AA range:471-520
<b>Specificity</b>	LIMK-1 Polyclonal Antibody detects endogenous levels of LIMK-1 protein.
<b>Formulation</b>	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
<b>Source</b>	Polyclonal, Rabbit,IgG
<b>Purification</b>	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
<b>Dilution</b>	Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300. Immunofluorescence: 1/200 - 1/1000. ELISA: 1/20000. Not yet tested in other applications.
<b>Concentration</b>	1 mg/ml
<b>Purity</b>	≥90%
<b>Storage Stability</b>	-20°C/1 year
<b>Synonyms</b>	LIMK1; LIMK; LIM domain kinase 1; LIMK-1
<b>Observed Band</b>	65kD
<b>Cell Pathway</b>	Cytoplasm . Nucleus . Cytoplasm, cytoskeleton . Cell projection, lamellipodium . Predominantly found in the cytoplasm. Localizes in the lamellipodium in a CDC42BPA, CDC42BPB and FAM89B/LRAP25-dependent manner. .
<b>Tissue Specificity</b>	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.
<b>Function</b>	catalytic activity:ATP + a protein = ADP + a phosphoprotein.,disease:Haploinsufficiency of LIMK1 may be the cause of certain cardiovascular and musculo-skeletal abnormalities observed in Williams-Beuren syndrome (WBS), a rare developmental disorder. It is a contiguous gene deletion syndrome involving genes from chromosome band 7q11.23.,function:Protein kinase which regulates actin filament dynamics. Phosphorylates and inactivates the actin binding/depolymerizing factor cofilin, thereby stabilizing the actin

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cytoskeleton. Isoform 3 has a dominant negative effect on actin cytoskeletal changes. May be involved in brain development.,PTM:Autophosphorylated.,PTM:Phosphorylated on serine and/or threonine residues by ROCK1. May be dephosphorylated and inactivated by SSH1.,similarity:Belongs to the protein kinase superfamily. TKL Ser/Thr protein kinase family.,similarity:Contains 1 PDZ (DHR) doma

### Background

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 and a C-terminal protein kinase domain. LIMK1 is a serine/threonine kinase that regulates actin polymerization via phosphorylation and inactivation of the actin binding factor cofilin. This protein is ubiquitously expressed during development and plays a role in many cellular processes associated with cytoskeletal structure. This protein also stimulates axon growth and may play a role in brain development. LIMK1 hemizygosity is implicated in the impaired visuospatial constructive cog

### matters needing attention

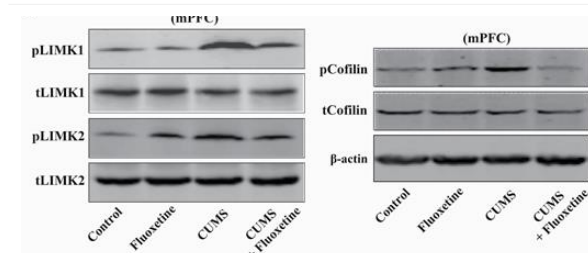
Avoid repeated freezing and thawing!

### Usage suggestions

This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.

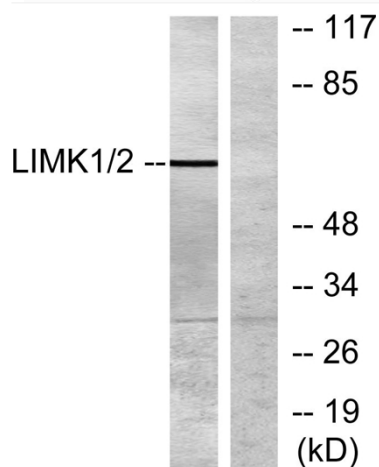


## Products Images



Gao, Ting-Ting, et al. "LIMK1/2 in the mPFC plays a role in chronic stress-induced depressive-like effects in mice." *International Journal of Neuropsychopharmacology* 23.12 (2020): 821-836.

Western blot analysis of lysates from NIH/3T3 cells, treated with UV, using LIMK1 Antibody. The lane on the right is blocked with the synthesized peptide.



Immunohistochemical analysis of paraffin-embedded human tonsil. 1, Antibody was diluted at 1:200(4° overnight). 2, Tris-EDTA,pH9.0 was used for antigen retrieval. 3,Secondary antibody was diluted at 1:200(room temperature, 45min).

