

**LIMK-1/2 (phospho Thr508/505) Polyclonal Antibody**

<b>Catalog No :</b>	YP0591
<b>Reactivity :</b>	Human;Mouse;Rat
<b>Applications :</b>	WB;IHC;IF;ELISA
<b>Target :</b>	LIMK-1/2
<b>Fields :</b>	>>Axon guidance;>>Fc gamma R-mediated phagocytosis;>>Regulation of actin cytoskeleton;>>Yersinia infection;>>Human immunodeficiency virus 1 infection
<b>Gene Name :</b>	LIMK1/LIMK2
<b>Protein Name :</b>	LIM domain kinase 1/LIM domain kinase 2
<b>Human Gene Id :</b>	3984/3985
<b>Human Swiss Prot No :</b>	P53667/P53671
<b>Mouse Gene Id :</b>	16885/16886
<b>Rat Gene Id :</b>	29524
<b>Rat Swiss Prot No :</b>	P53669/P53670
<b>Immunogen :</b>	Synthesized phospho-peptide around the phosphorylation site of human LIMK-1/2 (phospho Thr508/505)
<b>Specificity :</b>	Phospho-LIMK-1/2 (T508/505) Polyclonal Antibody detects endogenous levels of LIMK-1/2 protein only when phosphorylated at T508/505.
<b>Formulation :</b>	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
<b>Source :</b>	Polyclonal, Rabbit,IgG
<b>Dilution :</b>	WB 1:500-2000;IHC 1:100-500;IF ICC 1:100-500;ELISA 1:5000-20000
<b>Purification :</b>	The antibody was affinity-purified from rabbit antiserum by affinity-

chromatography using epitope-specific immunogen.

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**Concentration :** 1 mg/ml

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**Storage Stability :** -15°C to -25°C/1 year(Do not lower than -25°C)

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**Observed Band :** 72kD

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**Cell Pathway :** Axon guidance;Fc gamma R-mediated phagocytosis;Regulates Actin and Cytoskeleton;

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**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 hemizyosity is implicated in the impaired visuospatial constructive cog

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**Function :** 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 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

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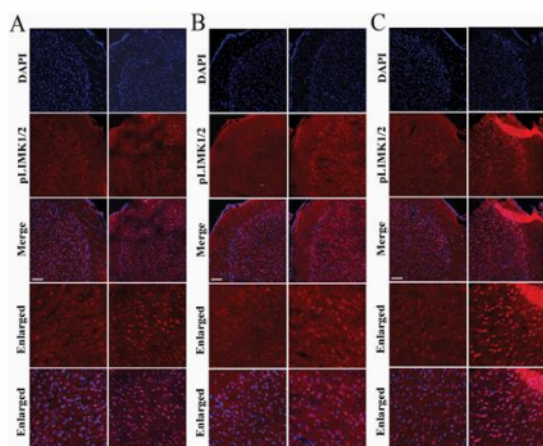
**Subcellular Location :** Cytoplasm . Nucleus . Cytoplasm, cytoskeleton . Cell projection, lamellipodium . Predominantly found in the cytoplasm. Localizes in the lamellipodium in a CDC42BPA, CDC42BPB and FAM89B/LRAP25-dependent manner. .

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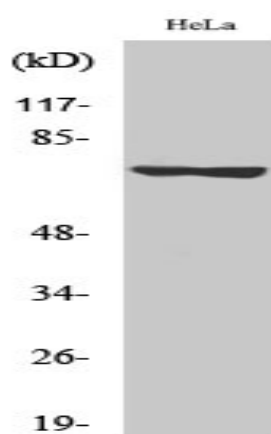
**Expression :** Highest expression in both adult and fetal nervous system. Detected ubiquitously throughout the different regions of adult brain, with highest levels in the cerebral cortex. Expressed to a lesser extent in heart and skeletal muscle.

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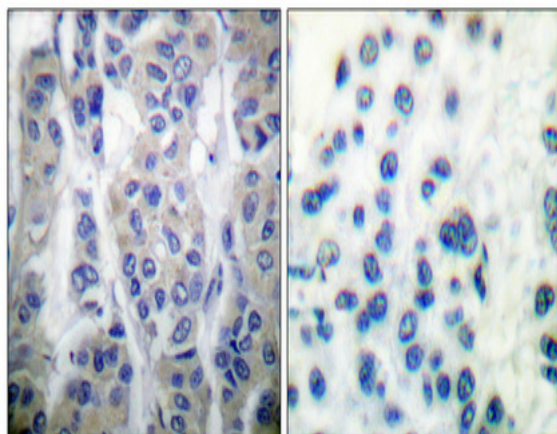
## Products Images



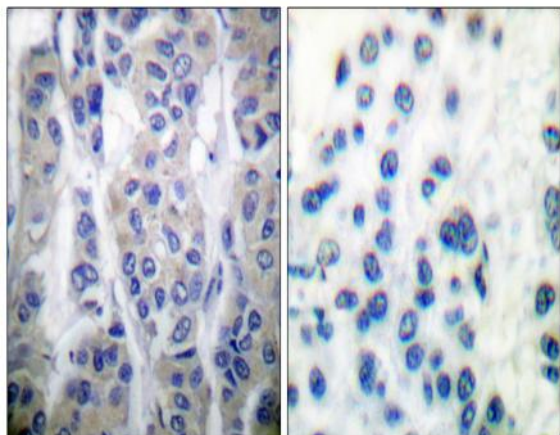
Gao, Ting-Ting, et al. "LIMK1/2 in the mPFC plays a role in chronic stress-induced depressive-like effects in mice." *International Journal of Neuropsychopharmacology* 23.12 (2020): 821-836.



Western Blot analysis of various cells using Phospho-LIMK-1/2 (T508/505) Polyclonal Antibody



Immunohistochemical analysis of paraffin-embedded Human breast cancer. Antibody was diluted at 1:100(4° overnight). High-pressure and temperature Tris-EDTA,pH8.0 was used for antigen retrieval. Negative contrl (right) obtained from antibody was pre-absorbed by immunogen peptide.



Immunohistochemistry analysis of paraffin-embedded human breast cancer, using LIMK1/2 (Phospho-Thr508/505) Antibody. The picture on the right is blocked with the LIMK1/2 (Phospho-Thr508/505) peptide.