

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

Catalog No: YP0591

Reactivity: Human; Mouse; Rat

Applications: WB;IHC;IF;ELISA

Target: LIMK-1/2

Fields: >>Axon guidance;>>Fc gamma R-mediated phagocytosis;>>Regulation of actin

cytoskeleton;>>Yersinia infection;>>Human immunodeficiency virus 1 infection

Gene Name: LIMK1/LIMK2

Protein Name: LIM domain kinase 1/LIM domain kinase 2

P53667/P53671

Human Gene Id: 3984/3985

Human Swiss Prot

No:

Mouse Gene ld: 16885/16886

Rat Gene ld: 29524

Rat Swiss Prot No: P53669/P53670

Immunogen: Synthesized phospho-peptide around the phosphorylation site of human

LIMK-1/2 (phospho Thr508/505)

Specificity: Phospho-LIMK-1/2 (T508/505) Polyclonal Antibody detects endogenous levels

of LIMK-1/2 protein only when phosphorylated at T508/505.

Formulation: Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.

Source: Polyclonal, Rabbit, lgG

Dilution: WB 1:500-2000;IHC 1:100-500;IF ICC 1:100-500;ELISA 1:5000-20000

Purification: The antibody was affinity-purified from rabbit antiserum by affinity-

1/4



chromatography using epitope-specific immunogen.

Concentration: 1 mg/ml

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

Observed Band: 72kD

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

Cytoskeleton;

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

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

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. .

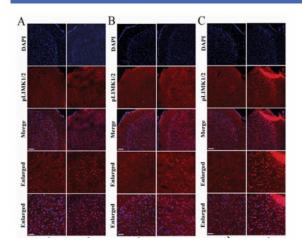
Expression: Highest expression in both adult and fetal nervous system. Detected ubiquitously

throughout the different regions of adult brain, with highest levels in the cerebral

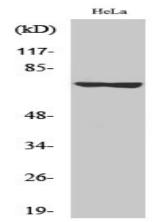
cortex. Expressed to a lesser extent in heart and skeletal muscle.



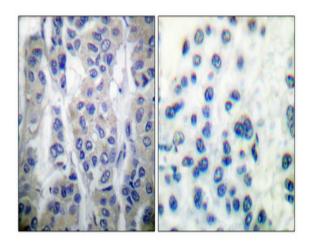
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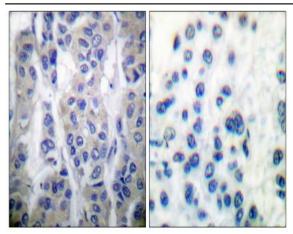
Gao, Ting-Ting, et al. "LIMK1/2 in the mPFC plays a role in chronic stress-induced depressive-like effects in mice." International Journal of Neuropsychopharmacology 23.12 (2020): 821-836.



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. Negetive contrl (right) obtaned from antibody was preabsorbed 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.