

Rabbit LIMK1/2 Polyclonal Antibody | anti-LIMK1 antibody

Phospho-LIMK1/2 (Thr508/505) Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA321650	Rabbit	Human, Mouse, Rat	ELISA, Immunocytochemistry, Immunofluorescence, Immunohistochemistry, Western Blot

PRODUCT SYNONYMS

LIMK1/2; Polyclonal Antibody; Phospho-LIMK1/2 (Thr508/505) Antibody; EC 2.7.11.1; LIM domain kinase 1; LIM motif-containing protein kinase; LIMK; LIMK-1; limk1; LIMK1_HUMAN; anti-LIMK1 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	IgG
Specificity	Phospho-LIMK1/2 (Thr508/505) antibody detects endogenous levels of LIMK1/2 only when phosphorylated at Threonine 508/505
Purity/Purification	From purified rabbit serum by affinity purification via sequential chromatography on phospho- and non-phospho-peptide affinity columns.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	613
Applicable Applications for anti-LIMK1 antibody	ELISA, ICC (Immunocytochemistry), IF (Immunofluorescence), IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human LIMK1/2 around the phosphorylation site of Threonine 508/505
Subcellular Location	Cytoplasm. Cell Projection > Growth Cone.
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.
Predicted Cross Reactivity	Pig, Bovine, Horse, Sheep, Rabbit, Dog, Chicken, Xenopus
Similarity	Pig (100%), Bovine (100%), Horse (100%), Sheep (100%), Rabbit (100%), Dog (100%), Chicken (100%), Xenopus (100%)
Conjugation	Unconjugated
Epitope	Phospho Thr508, Phospho Thr505
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.



WB (Western Blot)

Western blot analysis of Phospho-LIMK1/2 (Thr508/505) expression in various lysates



WB (Western Blot)

Western blot analysis of LIMK1/2 phosphorylation expression in HeLa whole cell lysates, The lane on the left is treated with the antigen-specific peptide.



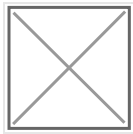
IHC (Immunohistochemisry)

AAA321650 at 1/200 staining Mouse spleen tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The tissue was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.



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IF (Immunofluorescence)

AAA321650 staining NIH-3T3 by IF/ICC. The sample were fixed with PFA and permeabilized in 0.1% Triton X-100, then blocked in 10% serum for 45 minutes at 25 degree C. The primary antibody was diluted at 1/200 and incubated with the sample for 1 hour at 37 degree C. An Alexa Fluor 594 conjugated goat anti-rabbit IgG (H+L) Ab, diluted at 1/600, was used as the secondary antibody.

ADDITIONAL INFORMATION

Related Product Information for anti-LIMK1 antibody	<p>Description: 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 likely to be a component of an intracellular signaling pathway and may be involved in brain development. LIMK1 hemizygosity is implicated in the impaired visuospatial constructive cognition of Williams syndrome. Two splice variant have been identified.</p> <p>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. Activated by upstream kinases including ROCK1, PAK1 and PAK4, which phosphorylate LIMK1 on a threonine residue located in its activation loop. 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. In this way LIMK1 regulates several actin-dependent biological processes including cell motility, cell cycle progression, and differentiation. Phosphorylates TPPP on serine residues, thereby promoting microtubule disassembly. Stimulates axonal outgrowth and may be involved in brain development. Isoform 3 has a dominant negative effect on actin cytoskeletal changes. Required for atypical chemokine receptor ACKR2-induced phosphorylation of cofilin (CFL1).</p> <p>Subunit Structure: Interacts (via LIM domain) with the cytoplasmic domain of NRG1. Interacts with NISCH. Interacts with RLIM and RNF6 (By similarity). Self-associates to form homodimers (PubMed:10196227). Interacts with HSP90AA1; this interaction promotes LIMK1 dimerization and subsequent transphosphorylation (PubMed:16641196). Interacts with CDKN1C (PubMed:14530263). Interacts with SSH1 (PubMed:15660133). Interacts with ROCK1 (PubMed:10436159, PubMed:10652353). Interacts (via LIM zinc-binding domains) with FAM89B/LRAP25 (via LRR repeat). Forms a tripartite complex with CDC42BPA, CDC42BPB and FAM89B/LRAP25 (By similarity).</p> <p>Post-translational Modifications: Autophosphorylated (By similarity). Phosphorylated on Thr-508 by ROCK1 and PAK1, resulting in activation. Phosphorylated by PAK4 which increases the ability of LIMK1 to phosphorylate cofilin. Phosphorylated at Ser-323 by MAPKAPK2 during activation of VEGFA-induced signaling, which results in activation of LIMK1 and promotion of actin reorganization, cell migration, and tubule formation of endothelial cells. Dephosphorylated and inactivated by SSH1. Phosphorylated by CDC42BP. Ubiquitinated. 'Lys-48'-linked polyubiquitination by RNF6 leads to proteasomal degradation through the 26S proteasome, modulating LIMK1 levels in the growth cone and its effect on axonal outgrowth. Also polyubiquitinated by RLIM (By similarity).</p> <p>Similarity: Belongs to the protein kinase superfamily. TKL Ser/Thr protein kinase family.</p>
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NCBI AND UNIPROT INFORMATION

NCBI GI #	324715046
NCBI GeneID	3984
NCBI Accession #	NP_001191355.1
NCBI GenBank Nucleotide #	NM_001204426.1
UniProt Accession #	P53667; O15283; Q15820; Q15821; Q75MU3; Q9Y5Q1; B7Z6I8; D3DXF4; D3DXF5
Molecular Weight	Observed: 72 kDa Predicted: 73 kDa
NCBI Official Full Name	LIM domain kinase 1 isoform 2
NCBI Official Synonym Full Names	LIM domain kinase 1
NCBI Official Symbol	LIMK1
NCBI Official Synonym Symbols	LIMK; LIMK-1
NCBI Protein Information	LIM domain kinase 1
UniProt Protein Name	LIM domain kinase 1
UniProt Gene Name	LIMK1
UniProt Synonym Gene Names	LIMK; LIMK-1

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/limk1-2-antibody-immunocytochemistry-immunofluorescence-immunohistochemistry-western-blot-elisa/321650>