



[Go to Product page](#)

Datasheet for ABIN968654

anti-LIM Domain Kinase 1 antibody (AA 232-333)

2 Images

3 Publications

Overview

Quantity:	50 µg
Target:	LIM Domain Kinase 1 (LIMK1)
Binding Specificity:	AA 232-333
Reactivity:	Human, Mouse, Rat
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This LIM Domain Kinase 1 antibody is un-conjugated
Application:	Western Blotting (WB), Immunofluorescence (IF)

Product Details

Immunogen:	Human LIMK1 aa. 232-333
Clone:	42-LIMK1
Isotype:	IgG1
Cross-Reactivity:	Rat (Rattus), Mouse (Murine)
Characteristics:	<ol style="list-style-type: none">1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.2. Please refer to us for technical protocols.3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
Purification:	The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity

Product Details

chromatography.

Target Details

Target: LIM Domain Kinase 1 (LIMK1)

Alternative Name: LIMK1 ([LIMK1 Products](#))

Background: Two LIM motif-containing protein kinases (LIMK) have been identified, LIMK1 and LIMK2. These kinases contain two N-terminal LIM domains, a central PDZ domain, and a C-terminal Ser/Thr kinase domain. LIMK1 is highly expressed in brain, heart, and skeletal muscle, while LIMK2 exhibits the highest expression in placenta, liver, lung, kidney, and pancreas. LIMK1 is localized to the actin cytoskeleton and phosphorylates the actin binding/depolymerizing factor, cofilin. During Rho-induced neurite retraction, activation of ROCK leads to LIMK1 activation via phosphorylation at Thr508. In COS-7 cells, disruption of the second LIM domain or the PDZ domain increases LIMK1-induced aggregation of the actin cytoskeleton. In addition, a 32 kDa splice variant that contains only the N-terminus (dLIMK1) suppresses LIMK1 activity by interaction with the C-terminal kinase domain. In humans, deletion of LIMK1 has been implicated in Williams syndrome, a disorder that produces a distinct cognitive profile and vascular disease. Thus, LIMK1, and its splice variant dLIMK1, are thought to have important roles in the regulation of the actin cytoskeleton in a wide variety of tissues.

Molecular Weight: 72 kDa

Pathways: [Caspase Cascade in Apoptosis](#), [Regulation of Cell Size](#), [CXCR4-mediated Signaling Events](#)

Application Details

Comment: Related Products: ABIN968546, ABIN967389

Restrictions: For Research Use only

Handling

Format: Liquid

Concentration: 250 µg/mL

Buffer: Aqueous buffered solution containing BSA, glycerol, and ≤0.09 % sodium azide.

Preservative: Sodium azide

Precaution of Use: This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which

Handling

should be handled by trained staff only.

Storage: -20 °C

Storage Comment: Store undiluted at -20°C.

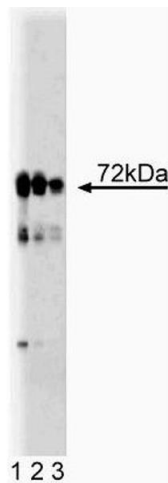
Publications

Product cited in: Ohashi, Nagata, Maekawa, Ishizaki, Narumiya, Mizuno: "Rho-associated kinase ROCK activates LIM-kinase 1 by phosphorylation at threonine 508 within the activation loop." in: **The Journal of biological chemistry**, Vol. 275, Issue 5, pp. 3577-82, (2000) ([PubMed](#)).

Edwards, Gill: "Structural features of LIM kinase that control effects on the actin cytoskeleton." in: **The Journal of biological chemistry**, Vol. 274, Issue 16, pp. 11352-61, (1999) ([PubMed](#)).

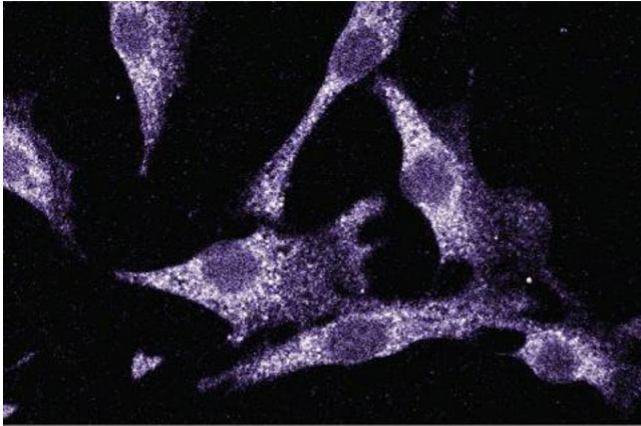
Frangiskakis, Ewart, Morris, Mervis, Bertrand, Robinson, Klein, Ensing, Everett, Green, Pröschel, Gutowski, Noble, Atkinson, Odelberg, Keating: "LIM-kinase1 hemizyosity implicated in impaired visuospatial constructive cognition." in: **Cell**, Vol. 86, Issue 1, pp. 59-69, (1996) ([PubMed](#)).

Images



Western Blotting

Image 1. Western blot analysis of LIMK1 on rat cerebellum lysate. Lane 1: 1:250, lane 2: 1:500, lane 3: 1:1000 dilution of anti-LIMK1.



Immunofluorescence

Image 2. Immunofluorescent staining of NIH-3T3 cells.