

**Anti-LIMK1 Antibody**  
**Rabbit polyclonal antibody to LIMK1**  
**Catalog # AP59606****Specification**

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**Anti-LIMK1 Antibody - Product Information**

Application	WB, IF/IC
Primary Accession	<a href="#">P53667</a>
Other Accession	<a href="#">P53668</a>
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	72585

**Anti-LIMK1 Antibody - Additional Information****Gene ID** 3984**Other Names**

LIMK; LIM domain kinase 1; LIMK-1

**Target/Specificity**

Recognizes endogenous levels of LIMK1 protein.

**Dilution**

WB~~WB (1/500 - 1/1000), IF/IC (1/100 - 1/500)

IF/IC~~N/A

**Format**

Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.09% (W/V) sodium azide.

**Storage**

Store at -20 °C. Stable for 12 months from date of receipt

**Anti-LIMK1 Antibody - Protein Information****Name** LIMK1**Synonyms** LIMK**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  
(PubMed: <a href="http://www.uniprot.org/citations/10436159" target="\_blank">10436159</a>,  
PubMed: <a href="http://www.uniprot.org/citations/11832213" target="\_blank">11832213</a>,  
PubMed: <a href="http://www.uniprot.org/citations/12807904" target="\_blank">12807904</a>,  
PubMed: <a href="http://www.uniprot.org/citations/15660133" target="\_blank">15660133</a>,

PubMed:<a href="http://www.uniprot.org/citations/16230460" target="\_blank">16230460</a>, PubMed:<a href="http://www.uniprot.org/citations/18028908" target="\_blank">18028908</a>, PubMed:<a href="http://www.uniprot.org/citations/22328514" target="\_blank">22328514</a>, PubMed:<a href="http://www.uniprot.org/citations/23633677" target="\_blank">23633677</a>). Activated by upstream kinases including ROCK1, PAK1 and PAK4, which phosphorylate LIMK1 on a threonine residue located in its activation loop (PubMed:<a href="http://www.uniprot.org/citations/10436159" target="\_blank">10436159</a>). 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 (PubMed:<a href="http://www.uniprot.org/citations/11832213" target="\_blank">11832213</a>, PubMed:<a href="http://www.uniprot.org/citations/15660133" target="\_blank">15660133</a>, PubMed:<a href="http://www.uniprot.org/citations/16230460" target="\_blank">16230460</a>, PubMed:<a href="http://www.uniprot.org/citations/23633677" target="\_blank">23633677</a>). In this way LIMK1 regulates several actin-dependent biological processes including cell motility, cell cycle progression, and differentiation (PubMed:<a href="http://www.uniprot.org/citations/11832213" target="\_blank">11832213</a>, PubMed:<a href="http://www.uniprot.org/citations/15660133" target="\_blank">15660133</a>, PubMed:<a href="http://www.uniprot.org/citations/16230460" target="\_blank">16230460</a>, PubMed:<a href="http://www.uniprot.org/citations/23633677" target="\_blank">23633677</a>). Phosphorylates TPPP on serine residues, thereby promoting microtubule disassembly (PubMed:<a href="http://www.uniprot.org/citations/18028908" target="\_blank">18028908</a>). Stimulates axonal outgrowth and may be involved in brain development (PubMed:<a href="http://www.uniprot.org/citations/18028908" target="\_blank">18028908</a>).

#### Cellular Location

Cytoplasm. Nucleus. Cytoplasm, cytoskeleton. Cell projection, lamellipodium {ECO:0000250|UniProtKB:P53668} Note=Predominantly found in the cytoplasm. Localizes in the lamellipodium in a CDC42BPA, CDC42BPB and FAM89B/LRAP25-dependent manner. {ECO:0000250|UniProtKB:P53668}

#### Tissue Location

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

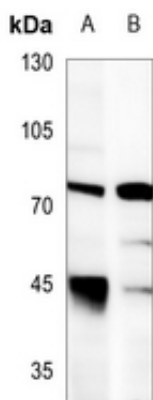
#### Anti-LIMK1 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

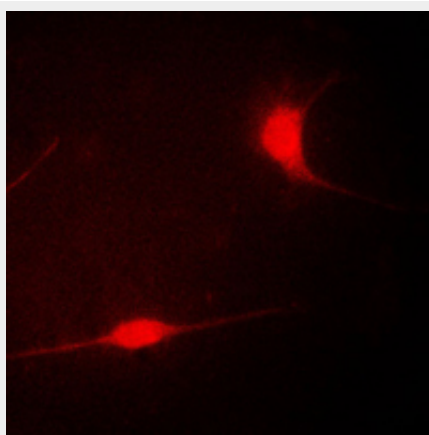
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

#### Anti-LIMK1 Antibody - Images





Western blot analysis of LIMK1 expression in U87MG (A), HEK293T (B) whole cell lysates.



Immunofluorescent analysis of LIMK1 staining in COLO205 cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a humidified chamber. Cells were washed with PBST and incubated with a DyLight 594-conjugated secondary antibody (red) in PBS at room temperature in the dark.

#### **Anti-LIMK1 Antibody - Background**

KLH-conjugated synthetic peptide encompassing a sequence within the center region of human LIMK1. The exact sequence is proprietary.