

# Anti-LIMK1/2 Antibody

Rabbit polyclonal antibody to LIMK1/2 Catalog # AP60022

### **Product Information**

| Application       | WB, IP                             |
|-------------------|------------------------------------|
| Primary Accession | <u>P53667</u>                      |
| Other Accession   | <u>P53668</u>                      |
| Reactivity        | Human, Mouse, Rat, Chicken, Bovine |
| Host              | Rabbit                             |
| Clonality         | Polyclonal                         |
| Calculated MW     | 72585                              |

## **Additional Information**

| Gene ID            | 3984   |
|--------------------|--|
| Other Names        | LIMK; LIM domain kinase 1; LIMK-1  |
| Target/Specificity | KLH-conjugated synthetic peptide encompassing a sequence within the C-term region of human LIMK1/2. The exact sequence is proprietary. |
| Dilution           | WB~~WB (1/500 - 1/1000), IP (1/10 - 1/100) IP~~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  |

#### **Protein Information**

| Name     | LIMK1  |
|----------|--|
| Synonyms | LIMK   |
| Function | Serine/threonine-protein kinase that plays an essential role in the regulation<br>of actin filament dynamics. Acts downstream of several Rho family GTPase<br>signal transduction pathways (PubMed: <u>10436159</u> , PubMed: <u>11832213</u> ,<br>PubMed: <u>12807904</u> , PubMed: <u>15660133</u> , PubMed: <u>16230460</u> ,<br>PubMed: <u>18028908</u> , PubMed: <u>22328514</u> , PubMed: <u>23633677</u> ). Activated by<br>upstream kinases including ROCK1, PAK1 and PAK4, which phosphorylate<br>LIMK1 on a threonine residue located in its activation loop<br>(PubMed: <u>10436159</u> ). LIMK1 subsequently phosphorylates and inactivates the<br>actin binding/depolymerizing factors cofilin-1/CFL1, cofilin-2/CFL2 and<br>destrin/DSTN, thereby preventing the cleavage of filamentous actin (F-actin),<br>and stabilizing the actin cytoskeleton (PubMed: <u>11832213</u> , PubMed: <u>15660133</u> ,<br>PubMed: <u>16230460</u> , PubMed: <u>23633677</u> ). In this way LIMK1 regulates several |

|                   | actin-dependent biological processes including cell motility, cell cycle<br>progression, and differentiation (PubMed: <u>11832213</u> , PubMed: <u>15660133</u> ,<br>PubMed: <u>16230460</u> , PubMed: <u>23633677</u> ). Phosphorylates TPPP on serine<br>residues, thereby promoting microtubule disassembly (PubMed: <u>18028908</u> ).<br>Stimulates axonal outgrowth and may be involved in brain development<br>(PubMed: <u>18028908</u> ). |
|-------------------|---|
| Cellular Location | Cytoplasm. Nucleus. Cytoplasm, cytoskeleton. Cell projection, lamellipodium<br>{ECO:0000250 UniProtKB:P53668} Note=Predominantly found in the<br>cytoplasm. Localizes in the lamellipodium in a CDC42BPA, CDC42BPB and<br>FAM89B/LRAP25-dependent manner. {ECO:0000250 UniProtKB:P53668}  |
| Tissue Location   | Highest expression in both adult and fetal nervous system. Detected<br>ubiquitously throughout the different regions of adult brain, with highest<br>levels in the cerebral cortex. Expressed to a lesser extent in heart and skeletal<br>muscle  |

## Background

KLH-conjugated synthetic peptide encompassing a sequence within the C-term region of human LIMK1/2. The exact sequence is proprietary.

#### Images



Western blot analysis of LIMK1/2 expression in Hela (A), DLD (B) whole cell lysates.

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