

# LIMK1 (Ser-323), phospho-specific [Conserved site]

Cat. # LP2431

Host Rabbit Polyclonal

Size 100 µl

## **Background:**

LIM kinases (LIMK1 and LIMK2) are serine/threonine kinases that have two zinc finger motifs, known as LIM motifs, in their amino-terminal regulatory domains. LIM kinases are involved in actin cytoskeletal regulation downstream of Rho-family GTPases, PAKs, and ROCK. PAK1 and ROCK phosphorylate LIMK1 or LIMK2 at the conserved Thr-508 or Thr-505 residues in the activation loop, increasing LIMK activity. In addition, VEGF-induced stress fiber formation has been linked to p38-mediated activation of LIMK through MK-2 phosphorylation of Ser-323. Activated LIM kinases inhibit the actin depolymerization activity of cofilin by phosphorylation at the amino-terminal Ser-3 residue of cofilin. In addition, LIMKs may have a function in the nucleus. It has been shown that the nuclear localization of LIMKs can mediate suppression of Rac/Cdc42-mediated cyclin D1 expression. This effect of LIMKs was independent of cofilin phosphorylation and the regulation of actin dynamics.

## **References**

- Okano, I. et al. (1995) J. Biol. Chem. 270:31321.  
Edwards, D. C. et al. (1999) Nat. Cell Biol. 1:253.  
Kobayashi, M. et al. (2006) EMBOJ 25:713.

## **Immunogen:**

LIMK1 (Ser-323) synthetic peptide (coupled to carrier protein) corresponding to amino acids surrounding serine 323 in human LIMK1. This sequence is conserved in rat and mouse LIMK1, and has high homology to Ser-314 in human LIMK2.

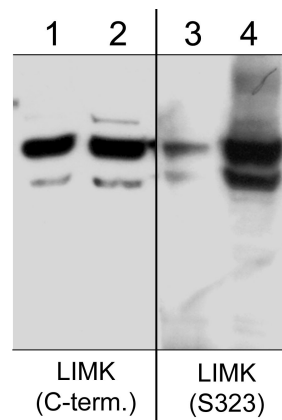
## **Applications:**

WB 1:1000  
ELISA 1:2000

End user should determine optimal dilution for their particular applications and experiments. Western blot membranes were incubated with diluted antibody in 5% non-fat milk, PBS, 0.04% Tween20 for 1 hour at room temperature.

## **Related Products:**

- LP1831 LIMK1 (C-terminus) Rabbit Polyclonal  
LP1891 LIMK1 (Thr-508), phospho-specific [Conserved site] Rabbit Polyclonal  
LX2435 phospho-LIMK1 (Ser-323) Peptide  
LX2445 unphosphorylated LIMK1 (Ser-323) Peptide



Western blot image of human A431 cells untreated (lanes 1 & 3) or treated (lanes 2 & 4) with calyculin A (100 nM for 30 min). The blots were probed with anti-LIMK1 (C-terminus) (lanes 1 & 2) or anti-LIMK1 (Ser-323) (lanes 3 & 4).

## **Buffer and Storage:**

Rabbit polyclonal, affinity-purified antibody is supplied in 100 µl phosphate-buffered saline, 50% glycerol, 1 mg/ml BSA, and 0.05% sodium azide. Store at -20°C. Do not aliquot. Stable for 1 year.

## **Specificity:**

This antibody was cross-adsorbed to unphosphorylated LIMK1 (Ser-323) peptide then affinity purified using LIMK1 (Ser-323) peptide (without carrier). The antibody detects a protein with the same mobility as anti-LIMK1 (C-terminus, LP1831) in human A431 cells treated with calyculin A. This band is weak in control cells and is not detected after lambda phosphatase treatment.

\*All molecular weights (MW) are confirmed by comparison to Bio-Rad Rainbow Markers and to western blot mobilities of known proteins with similar MW.

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