

LIMK1 (Thr-508), phospho-specific [Conserved site]

Cat. # LP1891

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 (Thr-508) synthetic peptide (coupled to carrier protein) corresponding to amino acids surrounding threonine 508 in human LIMK1. This sequence is conserved in rat and mouse LIMK1, and has high homology to Thr-505 in human LIMK2.

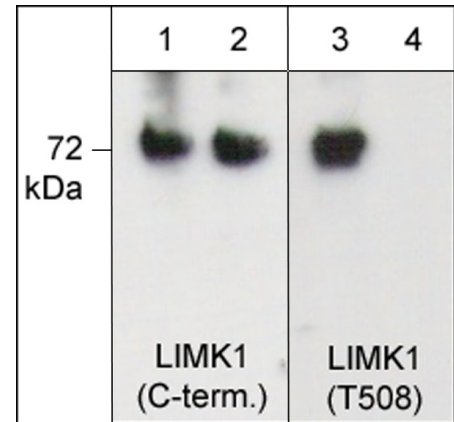
Applications:

WB 1:1,000
ELISA 1:2,000

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
LX1895 phospho-LIMK1 (Thr-508) Peptide
LP2431 LIMK1 (Ser-323), phospho-specific [Conserved site] Rabbit Polyclonal
CP1131 Cofilin 1 (N-terminus) Rabbit Polyclonal
CP1151 Cofilin 1 (Ser-3), phospho-specific Rabbit Polyclonal
SP1711 Slingshot-1L (C-terminal region) Rabbit Polyclonal



Western blot image of activated mouse recombinant LIMK1 untreated (lanes 1 & 3) or treated with lambda phosphatase (lanes 2 & 4). The blots were probed with anti-LIMK1 (C-term.) (lanes 1 & 2) and anti-LIMK1 (Thr-508) (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 affinity purified using LIMK1 (Thr-508) peptide (without carrier). The antibody detects a 72 kDa* protein corresponding to the molecular mass of LIMK1 on SDS-PAGE immunoblots of activated mouse recombinant LIMK1, but does not detect this protein 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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