

LIMK Phospho-Regulation

Antibody Sampler Kit

Catalog # LK6380

Kit Summary:

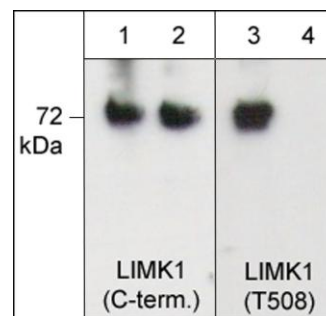
The LIMK phospho-regulation antibody sampler kit can be used to monitor the level of phosphorylated LIMK1 relative to total LIMK1 expression. In addition, the kit provides peptides for antibody blocking experiments.

Background:

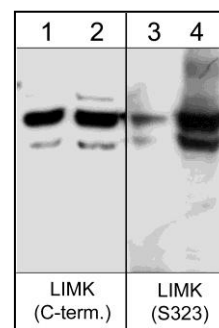
LIM kinases (LIMK1 and LIMK2) are serine/threonine kinases that have two zinc finger motifs, known as LIM motifs, in their amino-terminal regulatory domains. LIM kinases are involved in actin cytoskeletal regulation downstream of Rho-family GTPases, PAKs, and ROCK. PAK1 and ROCK phosphorylate LIMK1 or 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.



Western blot 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-terminus) (lanes 1 & 2; LP1831) or anti-LIMK1 (Thr-508) (lanes 3 & 4; LP1891).



Western blot 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).

Kit Components:

Catalog#	Description	Host	Size	Applications	Species Reactivity	MW (kDa)
LP1831	LIMK1 (C-terminus)	Rabbit pAb	50 µl	WB, E	H, R, M	72
LP1891	LIMK1 (Thr-508), phospho-specific	Rabbit pAb	50 µl	WB, E	H, R, M	72
LP2431	LIMK1 (Ser-323), phospho-specific	Rabbit pAb	50 µl	WB, E	H, R, M	72
LX1835	LIMK1 (C-terminus)	Peptide	50 µg	AB, E		
LX1895	Phospho-LIMK1 (Thr-508)	Peptide	50 µg	AB, E		
LX2435	Phospho-LIMK1 (Ser-323)	Peptide	50 µg	AB, E		

Applications: WB = western blot, E = ELISA, AB = antibody blocking

Species: H = Human, R = Rat, M = Mouse,

Buffers and Storage:

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

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