

# LIMK-1 (C-18): sc-8387

## BACKGROUND

Proteins containing LIM motifs are typically involved in cell fate determination and growth control. A family of proteins designated LIM kinases, including LIMK-1 and LIMK-2, has been identified. LIMK-1 has been shown to regulate the stabilization of F-Actin structures and Cofilin activity, indicating that LIMK-1 plays a role in a signaling pathway involved in the regulation of cell motility and morphogenesis. LIMK-1 inhibits neuronal differentiation of PC-12 cells, and is thought to act by interfering with events downstream of MAPK activation. Expression patterns of LIMK-1 and LIMK-2 suggest that these proteins may have different functions during development. A truncated form of LIMK-2 has been identified in adult testis that is thought to arise from an alternative initiation exon.

## CHROMOSOMAL LOCATION

Genetic locus: LIMK1 (human) mapping to 7q11.23; Limk1 (mouse) mapping to 5 G2.

## SOURCE

LIMK-1 (C-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of LIMK-1 of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-8387 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

LIMK-1 (C-18) is recommended for detection of LIMK-1 long and short forms of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

LIMK-1 (C-18) is also recommended for detection of LIMK-1 long and short forms in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for LIMK-1 siRNA (h): sc-35810, LIMK-1 siRNA (m): sc-35811, LIMK-1 shRNA Plasmid (h): sc-35810-SH, LIMK-1 shRNA Plasmid (m): sc-35811-SH, LIMK-1 shRNA (h) Lentiviral Particles: sc-35810-V and LIMK-1 shRNA (m) Lentiviral Particles: sc-35811-V.

Molecular Weight of LIMK-1: 72 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, A-431 whole cell lysate: sc-2201 or HeLa whole cell lysate: sc-2200.

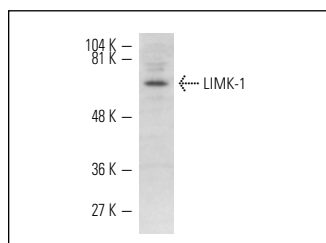
## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

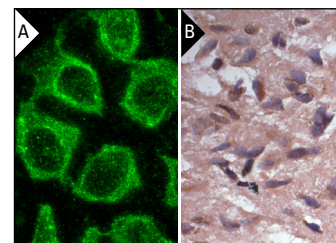
## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## DATA



LIMK-1 (C-18): sc-8387. Western blot analysis of LIMK-1 expression in NIH/3T3 whole cell lysate.



LIMK-1 (C-18): sc-8387. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin-fixed, paraffin-embedded human brain tissue showing cytoplasmic staining (B).

## SELECT PRODUCT CITATIONS

1. Papakonstanti, E., et al. 2002. Association of PI-3 kinase with Pak1 leads to actin phosphorylation and cytoskeletal reorganization. *Mol. Cell. Biol.* 13: 2946-2962.
2. Vardouli, L., et al. 2005. LIM-kinase 2 and cofilin phosphorylation mediate actin cytoskeleton reorganization induced by transforming growth factor. *J. Biol. Chem.* 280: 11448-11457.
3. Mendoza-Naranjo, A., et al. 2007. Aβ1-42 stimulates actin polymerization in hippocampal neurons through Rac 1 and Cdc42 Rho GTPases. *J. Cell Sci.* 120: 279-288.
4. Montenegro-Venegas, C., et al. 2010. MAP1B regulates axonal development by modulating Rho-GTPase Rac1 activity. *Mol. Biol. Cell* 21: 3518-3528.
5. Matsumoto, N., et al. 2010. Pivotal role of actin depolymerization in the regulation of cochlear outer hair cell motility. *Biophys. J.* 99: 2067-2076.
6. Mendoza-Naranjo, A., et al. 2012. Fibrillar amyloid-β1-42 modifies actin organization affecting the cofilin phosphorylation state: a role for Rac1/cdc42 effector proteins and the slingshot phosphatase. *J. Alzheimers Dis.* 29: 63-77.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

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Try **LIMK-1 (H-12): sc-515585** or **LIMK-1 (C-10): sc-28370**, our highly recommended monoclonal alternatives to LIMK-1 (C-18).