

# LIMK-1 (E-7): sc-48346

## 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 PC12 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.

## REFERENCES

- Okano, I., et al. 1995. Identification and characterization of a novel family of serine/threonine kinases containing two N-terminal LIM motifs. *J. Biol. Chem.* 270: 31321-31330.
- Nunoue, K., et al. 1995. LIMK-1 and LIMK-2, two members of a LIM motif-containing protein kinase family. *Oncogene* 11: 701-710.
- Higuchi, O., et al. 1997. Inhibition of activated Ras-induced neuronal differentiation of PC12 cells by the LIM domain of LIM-kinase 1. *Oncogene* 14: 1819-1825.

## CHROMOSOMAL LOCATION

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

## SOURCE

LIMK-1 (E-7) is a mouse monoclonal antibody raised against amino acids 136-219 mapping near the N-terminus of LIMK-1 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

LIMK-1 (E-7) is recommended for detection of LIMK-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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.

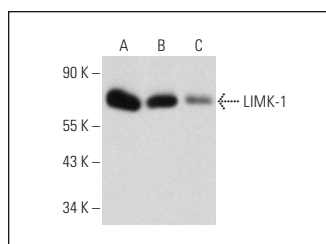
Molecular Weight of LIMK-1: 72 kDa.

Positive Controls: U-87 MG cell lysate: sc-2411, Ramos cell lysate: sc-2216 or LIMK-1 (h): 293T Lysate: sc-129011.

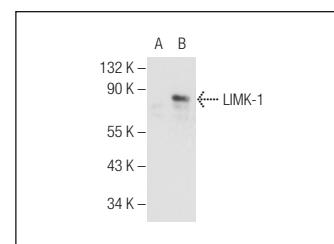
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



LIMK-1 (E-7): sc-48346. Western blot analysis of LIMK-1 expression in U-87 MG (A), Ramos (B) and NRK (C) whole cell lysates.



LIMK-1 (E-7): sc-48346. Western blot analysis of LIMK-1 expression in non-transfected: sc-117752 (A) and human LIMK-1 transfected: sc-129011 (B) 293T whole cell lysates.

## SELECT PRODUCT CITATIONS

- Vergara, D., et al. 2015. Cytoskeletal alterations and biomechanical properties of parkin-mutant human primary fibroblasts. *Cell Biochem. Biophys.* 7: 1395-1404.
- Yang, J.Z., et al. 2018. LIM kinase 1 serves an important role in the multidrug resistance of osteosarcoma cells. *Oncol. Lett.* 15: 250-256.
- Wang, J., et al. 2018. β-element enhances GAP-43 expression and neurite outgrowth by inhibiting RhoA kinase activation in rats with spinal cord injury. *Neuroscience* 383: 12-21.

## 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.

## PROTOCOLS

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