

# LIMK-1 (C-10): sc-28370



The Power to Question

## 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.

## CHROMOSOMAL LOCATION

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

## SOURCE

LIMK-1 (C-10) is a mouse monoclonal antibody raised against amino acids 136-219 of LIMK-1 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

LIMK-1 (C-10) is available conjugated to agarose (sc-28370 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-28370 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-28370 PE), fluorescein (sc-28370 FITC), Alexa Fluor® 488 (sc-28370 AF488), Alexa Fluor® 546 (sc-28370 AF546), Alexa Fluor® 594 (sc-28370 AF594) or Alexa Fluor® 647 (sc-28370 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-28370 AF680) or Alexa Fluor® 790 (sc-28370 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

LIMK-1 (C-10) 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.

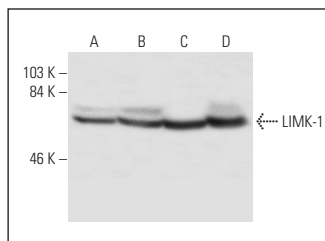
Molecular Weight of LIMK-1: 72 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, NRK whole cell lysate: sc-364197 or RIN-m5F whole cell lysate: sc-364792.

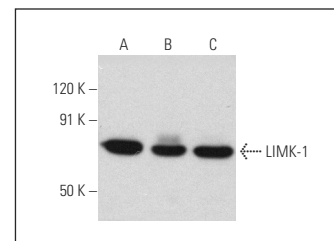
## STORAGE

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

## DATA



LIMK-1 (C-10): sc-28370. Western blot analysis of LIMK-1 expression in HeLa (A), A-431 (B), NIH/3T3 (C) and PC-12 (D) whole cell lysates.



LIMK-1 (C-10): sc-28370. Western blot analysis of LIMK-1 expression in C3H/10T1/2 (A), NRK (B) and RIN-m5F (C) whole cell lysates.

## SELECT PRODUCT CITATIONS

- Song, X., et al. 2006. Initiation of cofilin activity in response to EGF is uncoupled from cofilin phosphorylation and dephosphorylation in carcinoma cells. *J. Cell Sci.* 119: 2871-2881.
- Zoudilova, M., et al. 2007.  $\beta$ -Arrestin-dependent regulation of the cofilin pathway downstream of protease-activated receptor-2. *J. Biol. Chem.* 282: 20634-20646.
- Guo, H., et al. 2011. Downregulation of p57 accelerates the growth and invasion of hepatocellular carcinoma. *Carcinogenesis* 32: 1897-1904.
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- Zhang, M., et al. 2020. Dasatinib inhibits lung cancer cell growth and patient derived tumor growth in mice by targeting LIMK1. *Front. Cell Dev. Biol.* 8: 556532.
- Wang, X., et al. 2021. Alantolactone suppresses the metastatic phenotype and induces the apoptosis of glioblastoma cells by targeting LIMK kinase activity and activating the cofilin/G-Actin signaling cascade. *Int. J. Mol. Med.* 47: 68.
- Zhang, M., et al. 2021. Targeting LIMK1 with luteolin inhibits the growth of lung cancer *in vitro* and *in vivo*. *J. Cell. Mol. Med.* 25: 5560-5571.

## RESEARCH USE

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