

LIMK-1 (H-84): sc-5576

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.

CHROMOSOMAL LOCATION

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

SOURCE

LIMK-1 (H-84) is a rabbit polyclonal 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 in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

LIMK-1 (H-84) is recommended for detection of LIMK-1 of mouse, rat and 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

LIMK-1 (H-84) is also recommended for detection of LIMK-1 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.

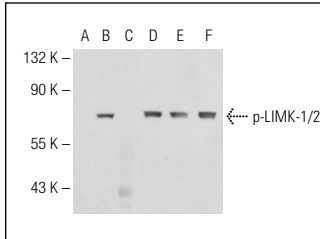
Molecular Weight of LIMK-1: 72 kDa.

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

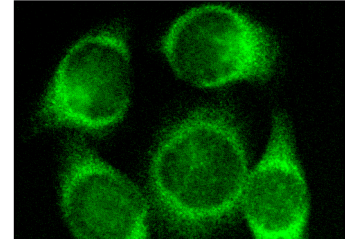
STORAGE

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

DATA



Western blot analysis of LIMK-1/2 phosphorylation in untreated (A, D), PMA treated (B, E) and PMA and lambda protein phosphatase treated (C, F) THP-1 whole cell lysates. Antibodies tested include p-LIMK-1/2 (Thr 508/505)-R: sc-28409-R (A, B, C) and LIMK-1 (H-84): sc-5576 (D, E, F).



LIMK-1 (H-84): sc-5576. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic staining.

SELECT PRODUCT CITATIONS

- Shabahang, S., et al. 2002. Identification of the LIM kinase-1 as a ceramide-regulated gene in renal mesangial cells. *Biochem. Biophys. Res. Commun.* 298: 408-413.
- Roovers, K., et al. 2003. Nuclear translocation of LIM kinase mediates Rho-Rho kinase regulation of cyclin D1 expression. *Development* 5: 273-284.
- Yokoo, T., et al. 2003. p57Kip2 regulates actin dynamics by binding and translocating LIM-kinase 1 to the nucleus. *J. Biol. Chem.* 278: 52919-52923.
- 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.
- Tamma, G., et al. 2007. Hypotonicity induces aquaporin-2 internalization and cytosol-to-membrane translocation of ICl_{in} in renal cells. *Endocrinology* 148: 1118-1130.
- Gorosito, S.V., et al. 2008. Estrogen receptor α is expressed on the cell-surface of embryonic hypothalamic neurons. *Neuroscience* 154: 1173-1177.

RESEARCH USE

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


 MONOS
Satisfaction
Guaranteed

Try **LIMK-1 (H-12): sc-515585** or **LIMK-1 (C-10): sc-28370**, our highly recommended monoclonal alternatives to LIMK-1 (H-84).