SANTA CRUZ BIOTECHNOLOGY, INC.

LIMK-2 (H-78): sc-5577

SANTA CRUZ BIOTECHNOLOGY

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.

REFERENCES

1. 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.
2. 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: LIMK2 (human) mapping to 22q12.2; Limk2 (mouse) mapping to 11 A1.

SOURCE

LIMK-2 (H-78) is a rabbit polyclonal antibody raised against amino acids 561-638 mapping at the C-terminus of LIMK-2 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-2 (H-78) is recommended for detection of LIMK-2 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

LIMK-2 (H-78) is also recommended for detection of LIMK-2 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for LIMK-2 siRNA (h): sc-35812, LIMK-2 siRNA (m): sc-35813, LIMK-2 shRNA Plasmid (h): sc-35812-SH, LIMK-2 shRNA Plasmid (m): sc-35813-SH, LIMK-2 shRNA (h) Lentiviral Particles: sc-35812-V and LIMK-2 shRNA (m) Lentiviral Particles: sc-35813-V.

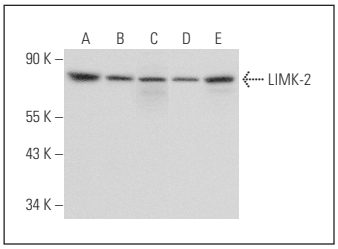
Molecular Weight of LIMK-2: 65 kDa.

Positive Controls: JAR cell lysate: sc-2276, Hep G2 cell lysate: sc-2227 or JEG-3 whole cell lysate: sc-364255.

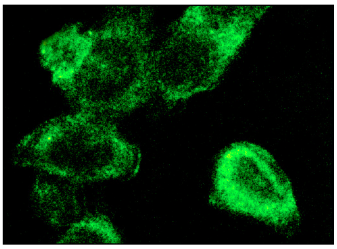
STORAGE

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

DATA



LIMK-2 (H-78): sc-5577. Western blot analysis of LIMK-2 expression in NIH/3T3 (**A**), JEG-3 (**B**), JAR (**C**), HUV-EC-C (**D**) and Hep G2 (**E**) whole cell lysates.



LIMK-2 (H-78): sc-5577. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Roovers, K., et al. 2003. Nuclear translocation of LIM kinase mediates rho-rho kinase regulation of cyclin D1 expression. Development 5: 273-284.
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. Croft, D.R., et al. 2006. The Rho GTPase effector ROCK regulates cyclin A, cyclin D1, and $p27^{Kip1}$ levels by distinct mechanisms. Mol. Cell. Biol. 26: 4612-4627.
4. Garvalov, B.K., et al. 2007. Cdc42 regulates Cofilin during the establishment of neuronal polarity. J. Neurosci. 27: 13117-13129.
5. Croft, D.R., et al. 2010. p53-mediated transcriptional regulation and activation of the actin cytoskeleton regulatory RhoC to LIMK2 signaling pathway promotes cell survival. Cell Res. 21: 666-682.
6. Matsumoto, N., et al. 2010. Pivotal role of actin depolymerization in the regulation of cochlear outer hair cell motility. Biophys. J. 99: 2067-2076.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.