

p-LIMK-2 (Thr 505): sc-293103

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. LIMK-2 is phosphorylated on multiple amino acid residues, including threonine 505.

REFERENCES

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- 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.
- Mori, T., et al. 1997. Comparison of tissue distribution of two novel serine/threonine kinase genes containing the LIM motif (LIMK-1 and LIMK-2) in the developing rat. *Brain Res. Mol. Brain Res.* 45: 247-254.
- Takahashi, H., et al. 1998. A novel transcript encoding truncated LIM kinase 2 is specifically expressed in male germ cells undergoing meiosis. *Biochem. Biophys. Res. Commun.* 249: 138-145.
- Yang, N., et al. 1998. Cofilin phosphorylation by LIM-kinase 1 and its role in Rac-mediated actin reorganization. *Nature* 393: 809-812.
- Sarmiere, P.D., et al. 2002. Head, neck, and spines: a role for LIMK-1 in the hippocampus. *Neuron* 35: 3-5.
- Meng, Y., et al. 2002. Abnormal spine morphology and enhanced LTP in LIMK-1 knockout mice. *Neuron* 35: 121-133.

CHROMOSOMAL LOCATION

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

SOURCE

p-LIMK-2 (Thr 505) is a rabbit polyclonal antibody raised against a short amino acid sequence containing Thr 505 phosphorylated LIMK-1/2 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

p-LIMK-2 (Thr 505) is recommended for detection of Thr 505 phosphorylated 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

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.

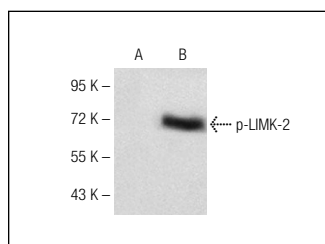
Molecular Weight of p-LIMK-2: 65 kDa.

Positive Controls: HeLa + PMA cell lysate: sc-2258.

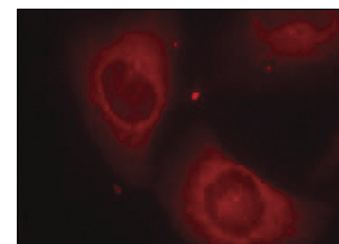
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent), Western Blotting Luminol Reagent: sc-2048 and Lambda Phosphatase: sc-200312A. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



p-LIMK-2 (Thr 505): sc-293103. Western blot analysis of LIMK-2 phosphorylation expression in untreated (A) and PMA treated (B) HeLa whole cell lysates.



p-LIMK-2 (Thr 505): sc-293103. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

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.