SANTA CRUZ BIOTECHNOLOGY, INC.

p-Cofilin 1 (mSer 3)-R: sc-21867-R

SANTA CRUZ BIOTECHNOLOGY
The Power to Question

BACKGROUND

LIM-kinase 1 (LIMK-1) is a serine/threonine kinase containing LIM and PDZ domains. LIMK-1 phosphorylates Cofilin on Ser 3 both *in vitro* and *in vivo*. Cofilin is an actin-depolymerizing factor and regulates actin cytoskeletal reorganization. Phosphorylation of Cofilin on Ser 3 is known to block these activities. Phosphorylation of ADF/Cofilin proteins by LIMK-1 or other enzymes will tend to stabilize actin filaments by inhibiting the ability of these proteins to sever and depolymerize older actin filaments that have hydrolyzed their bound ATP and dissociated the phosphate. The rapid turnover of actin filaments and the tertiary meshwork formation are regulated by a variety of actin-binding proteins. Cofilin, therefore, is a terminal effector of signaling cascades that evokes actin cytoskeletal rearrangement.

CHROMOSOMAL LOCATION

Genetic locus: CFL1 (human) mapping to 11q13.1; Cfl1 (mouse) mapping to 19 A.

SOURCE

p-Cofilin 1 (mSer 3)-R is an affinity purified rabbit polyclonal antibody raised against a short amino acid sequence containing Ser 3 phosphorylated Cofilin 1 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-21867 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

p-Cofilin 1 (mSer 3)-R is recommended for detection of Ser 3 phosphorylated Cofilin 1 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for Cofilin 1 siRNA (h): sc-35078, Cofilin 1 siRNA (m): sc-35079, Cofilin 1 shRNA Plasmid (h): sc-35078-SH, Cofilin 1 shRNA Plasmid (m): sc-35079-SH, Cofilin 1 shRNA (h) Lentiviral Particles: sc-35078-V and Cofilin 1 shRNA (m) Lentiviral Particles: sc-35079-V.

Molecular Weight of p-Cofilin: 19-21 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, Cofilin 1 (h2): 293T Lysate: sc-171540 or Jurkat whole cell lysate: sc-2204.

STORAGE

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

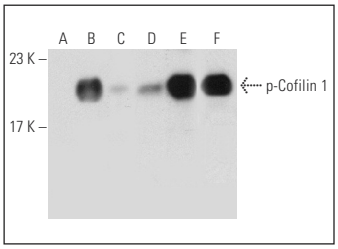
PROTOCOLS

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

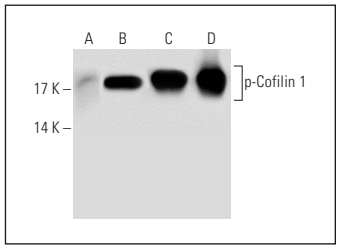
RESEARCH USE

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

DATA



Western blot analysis of Cofilin 1 phosphorylation in non-transfected: sc-117752 (**A**,**D**), untreated human Cofilin 1 transfected: sc-112308 (**B**,**E**) and lambda protein phosphatase (sc-200312A) treated human Cofilin 1 transfected: sc-112308 (**C**,**F**) 293T whole cell lysates. Antibodies tested include p-Cofilin 1 (mSer 3)-R: sc-21867-R (**A**,**B**,**C**) and Cofilin (FL-166): sc-33779 (**D**,**E**,**F**).



p-Cofilin 1 (mSer 3)-R: sc-21867-R. Western blot analysis of Cofilin 1 phosphorylation in non-transfected 293T: sc-117752 (**A**), human Cofilin 1 transfected 293T: sc-171540 (**B**), Jurkat (**C**) and K-562 (**D**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Lee-Hoeflich, S.T., et al. 2004. Activation of LIMK-1 by binding to the BMP receptor, BMPR-II, regulates BMP-dependent dendritogenesis. EMBO J. 23: 4792-4801.
2. Lee-Hoeflich, S.T., et al. 2004. Activation of LIMK1 by binding to the BMP receptor, BMPRII, regulates BMP-dependent dendritogenesis. EMBO J. 23: 4792-4801.
3. Vergara, D., et al. 2011. Resveratrol inhibits the epidermal growth factor-induced epithelial mesenchymal transition in MCF-7 cells. Cancer Lett. 310: 1-8.
4. Blasco, R.B., et al. 2011. c-Raf, but not B-Raf, is essential for development of K-Ras oncogene-driven non-small cell lung carcinoma. Cancer Cell 19: 652-663.
5. Vergara, D., et al. 2011. Lapatinib/Paclitaxel polyelectrolyte nanocapsules for overcoming multidrug resistance in ovarian cancer. Nanomedicine 8: 891-899.
6. Vergara, D., et al. 2012. Resveratrol downregulates Akt/GSK and ERK signalling pathways in OVCAR-3 ovarian cancer cells. Mol. Biosyst. 8: 1078-1087.
7. Garland, P., et al. 2012. Soluble axoplasm enriched from injured CNS axons reveals the early modulation of the actin cytoskeleton. PLoS ONE 7: e47552.