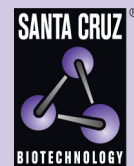


Cdc42 (P1): sc-87



The Power to Question

BACKGROUND

The superfamily of GTP-binding proteins, for which the Ras proteins are prototypes, has been implicated in regulation of diverse biological activities involving various aspects of cell growth and division. One mammalian member of the family, Cdc42, has an amino acid sequence that is similar to those of various members of the Ras superfamily proteins, including N-, K- and H-Ras, Rho proteins and the Rac proteins. On the basis of *in vitro* phosphorylation studies, it has been suggested that human Cdc42 may function in the signaling pathway of the EGF receptor or related growth factor receptor protein kinases. The Dbl oncogene has been shown to specifically catalyze dissociation of GDP from human Cdc42.

CHROMOSOMAL LOCATION

Genetic locus: CDC42 (human) mapping to 1p36.12; Cdc42 (mouse) mapping to 4 D3.

SOURCE

Cdc42 (P1) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of Cdc42 of human origin.

PRODUCT

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

Cdc42 (P1) is available conjugated to agarose (sc-87 AC), 500 µg/0.25 ml agarose in 1 ml, for IP.

Blocking peptide available for competition studies, sc-87 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Cdc42 (P1) is recommended for detection of Cdc42 of mouse, rat, and human origin and to a lesser extent, Rac1 of 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Cdc42 (P1) is also recommended for detection of Cdc42 and Rac1 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Cdc42 siRNA (h): sc-29256, Cdc42 siRNA (m): sc-29257, Cdc42 shRNA Plasmid (h): sc-29256-SH, Cdc42 shRNA Plasmid (m): sc-29257-SH, Cdc42 shRNA (h) Lentiviral Particles: sc-29256-V and Cdc42 shRNA (m) Lentiviral Particles: sc-29257-V.

Molecular Weight of Cdc42: 25 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, 3611-RF whole cell lysate: sc-2215 or NIH/3T3 whole cell lysate: sc-2210.

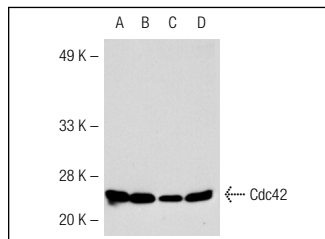
RESEARCH USE

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

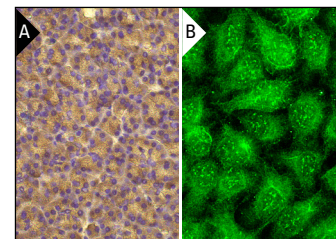
STORAGE

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

DATA



Cdc42 (P1): sc-87. Western blot analysis of Cdc42 expression in Jurkat (A), 3611-RF (B), HeLa (C) and NIH/3T3 (D) whole cell lysates.



Cdc42 (P1): sc-87. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of glandular cells (A). Immunofluorescence staining of methanol-fixed HeLa cells showing membrane and cell projection localization (B).

SELECT PRODUCT CITATIONS

- Kowluru, A., et al. 1996. Glucose- and GTP-dependent stimulation of the carboxyl methylation of Cdc42 in rodent and human pancreatic islets and pure β cells. Evidence for an essential role of GTP-binding proteins in nutrient-induced Insulin secretion. *J. Clin. Invest.* 98: 540-555.
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- Calvo, F., et al. 2011. RasGRF suppresses Cdc42-mediated tumour cell movement, cytoskeletal dynamics and transformation. *Nat. Cell Biol.* 13: 819-826.
- Mendoza-Naranjo, A., et al. 2012. Fibrillar amyloid- β 1-42 modifies actin organization affecting the cofilin phosphorylation state: a role for Rac1/cdc42 effector proteins and the slingshot phosphatase. *J. Alzheimers Dis.* 29: 63-77.
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- Hong, I.K., et al. 2012. Tetraspanin CD151 stimulates adhesion-dependent activation of Ras, Rac, and Cdc42 by facilitating molecular association between β 1 integrins and small GTPases. *J. Biol. Chem.* 287: 32027-32039.



Try **Cdc42 (B-8): sc-8401** or **Cdc42 (B-9): sc-390210**, our highly recommended monoclonal alternatives to Cdc42 (P1). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **Cdc42 (B-8): sc-8401**.