

Cdc42 (R-12): sc-34314

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.

REFERENCES

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2. Hall, A. 1990. The cellular functions of small GTP-binding proteins. *Science* 249: 635-640.
3. Bourne, H.R., et al. 1990. The GTPase superfamily: a conserved switch for diverse cell functions. *Nature* 348: 125-132.
4. Adams, A.E.M., et al. 1990. CDC42 and CDC43, two additional genes involved in budding and the establishment of cell polarity in the yeast *Saccharomyces cerevisiae*. *J. Cell Biol.* 111: 131-142.
5. Johnson, D.I. and Pringle, J.R. 1990. Molecular characterization of CDC42, a *Saccharomyces cerevisiae* gene involved in the development of cell polarity. *J. Cell Biol.* 111: 143-152.
6. Munemitsu, S., et al. 1990. Molecular cloning and expression of a G25K cDNA, the human homolog of the yeast cell cycle gene Cdc42. *Mol. Cell. Biol.* 10: 5977-5982.

CHROMOSOMAL LOCATION

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

SOURCE

Cdc42 (R-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Cdc42 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.

Blocking peptide available for competition studies, sc-34314 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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.

APPLICATIONS

Cdc42 (R-12) is recommended for detection of Cdc42 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

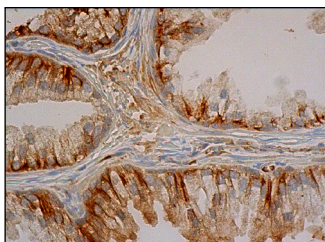
Cdc42 (R-12) is also recommended for detection of Cdc42 in additional species, including bovine.

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 HeLa whole cell lysate: sc-2200.

DATA



Cdc42 (R-12): sc-34314. Immunoperoxidase staining of formalin fixed, paraffin-embedded human prostate tissue showing cytoplasmic and membrane staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Alford, L.M., et al. 2009. Cell polarity emerges at first cleavage in sea urchin embryos. *Dev. Biol.* 330: 12-20.

PROTOCOLS

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



Try **Cdc42 (B-8): sc-8401** or **Cdc42 (B-9): sc-390210**, our highly recommended monoclonal alternatives to Cdc42 (R-12). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **Cdc42 (B-8): sc-8401**.