

Cdc42 (cN-17): sc-9279

BACKGROUND

A variety of growth factor signaling molecules have been shown to regulate *C. elegans* development, including members of the EGF, FGF and TGF β super-families. These factors bind to specific receptors and transduce extracellular signals to the nucleus. Receptor tyrosine kinase/Ras pathways also play a critical role in cell signaling and are responsible for proper vulval development. SUR-5 shares sequence homology with mammalian acetyl coenzyme A synthetases. A member of the kinase suppressor of Ras family, KSR-1 shares sequence homology with the Raf family protein kinases and is capable of binding to MEK. MPK-1, also known as SUR-1, is most closely related to mammalian MAP kinases (ERKs). The *C. elegans* homolog of the p21 Ras-related Cdc42 is designated CDC42ce.

REFERENCES

1. Carpenter, G. 1993. EGF: new tricks for an old growth factor. *Curr. Opin. Cell Biol.* 5: 261-264.
2. Chen, W., Lim, H.H. and Lim, L. 1993. The CDC42 homologue from *Caenorhabditis elegans*. Complementation of yeast mutation. *J. Biol. Chem.* 268: 13280-13285.
3. Wu, Y. and Han, M. 1994. Suppression of activated LET-60 RAS protein defines a role of *Caenorhabditis elegans* SUR-1 MAP kinase in vulval differentiation. *Genes Dev.* 8: 147-159.
4. Sternberg, P.W., Lesa, G., Lee, J., Katz, W.S., Yoon, C., Clandinin, T.R., Huang, L.S., Chamberlin, H.M. and Jongeward, G. 1995. LET-23-mediated signal transduction during *Caenorhabditis elegans* development. *Mol. Reprod. Dev.* 42: 523-528.
5. Kayne, P.S. and Sternberg, P.W. 1995. Ras pathways in *Caenorhabditis elegans*. *Curr. Opin. Genet. Dev.* 5: 38-43.
6. Gu, T., Orita, S. and Han, M. 1998. *Caenorhabditis elegans* SUR-5, a novel but conserved protein, negatively regulates LET-60 RAS activity during vulval induction. *Mol. Cell. Biol.* 18: 4556-4564.
7. Stewart, S., Sundaram, M., Zhang, Y., Lee, J., Han, M. and Guan, K.L. 1999. Kinase suppressor of Ras forms a multiprotein signaling complex and modulates MEK localization. *Mol. Cell. Biol.* 19: 5523-5534.

SOURCE

Cdc42 (cN-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Cdc42 of *Caenorhabditis elegans* origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-9279 P, (100 μ g 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.

APPLICATIONS

Cdc42 (cN-17) is recommended for detection of Cdc42 of *Caenorhabditis elegans* 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of Cdc42: 25 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Soede, R., Roos, E., Wijnands, Y., Kamp, M. and Zeelenberg, I. 2001. Stromal cell-derived factor-1-induced LFA-1 activation during *in vivo* migration of T cell hybridoma cells requires G α /11, RhoA, and Myosin, as well as G α and Cdc42. *J. Immunol.* 166: 4293-4301.
2. Zhang, S.O., Kuo, D.H. and Weisblat, D.A. 2009. Grandparental stem cells in leech segmentation: differences in CDC42 expression are correlated with an alternating pattern of blast cell fates. *Dev. Biol.* 336: 112-121.

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.

MONOS
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Try **Cdc42 (B-9): sc-390210**, our highly recommended monoclonal alternative to Cdc42 (cN-17).