SANTA CRUZ BIOTECHNOLOGY, INC.

Cdc42 (B-9): sc-390210

The Power to Question

BACKGROUND

A variety of growth factor signaling molecules have been shown to regulate *C. elegans* development, including members of the EGF, FGF and TGFβ superfamilies. 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.

CHROMOSOMAL LOCATION

Genetic locus: CDC42 (human) mapping to 1p36.12.

SOURCE

Cdc42 (B-9) is a mouse monoclonal antibody raised against a peptide mapping near the C-terminus of Cdc42 of *C. elegans* origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Cdc42 (B-9) is available conjugated to agarose (sc-390210 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390210 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390210 PE), fluorescein (sc-390210 FITC), Alexa Fluor® 488 (sc-390210 AF488), Alexa Fluor® 546 (sc-390210 AF546), Alexa Fluor® 594 (sc-390210 AF594) or Alexa Fluor® 647 (sc-390210 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390210 AF680) or Alexa Fluor® 790 (sc-390210 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-390210 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

Cdc42 (B-9) is recommended for detection of Cdc42 of human and *Caenorhabditis elegans* origin by Western Blotting (starting dilution 1:100, 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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

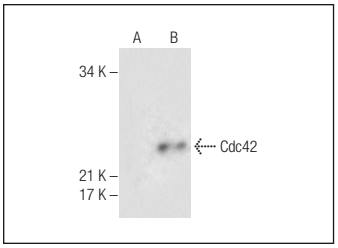
Molecular Weight of Cdc42: 25 kDa.

Positive Controls: Cdc42 (h): 293T Lysate: sc-110467 or *C. elegans* whole cell lysate.

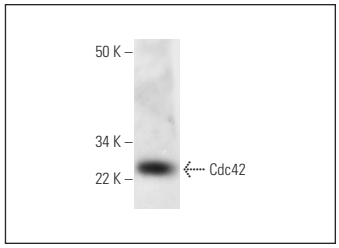
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Cdc42 (B-9): sc-390210. Western blot analysis of Cdc42 expression in non-transfected: sc-117752 (**A**) and human Cdc42 transfected: sc-110467 (**B**) 293T whole cell lysates.



Cdc42 (B-9): sc-390210. Western blot analysis of Cdc42 expression in *C. elegans* whole cell lysate.

SELECT PRODUCT CITATIONS

1. Du, D.S., et al. 2016. Effects of Cdc42 on the proliferation and invasion of gastric cancer cells. Mol. Med. Rep. 13: 550-554.
2. Royer-Pokora, B., et al. 2020. Comprehensive biology and genetics compendium of Wilms tumor cell lines with different WT1 mutations. Cancers 13: 60.
3. Reyes, R.V., et al. 2022. The E3 ubiquitin ligase CRL5 regulates dentate gyrus morphogenesis, adult neurogenesis, and animal behavior. Front. Neurosci. 16: 908719.

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.

PROTOCOLS

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