SANTA CRUZ BIOTECHNOLOGY, INC.

# Cdc42 siRNA (m): sc-29257

SANTA CRUZ BIOTECHNOLOGY

*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.

## REFERENCES


1. Evans, T., et al. 1986. Purification of the major GTP-binding proteins from human placental membranes. J. Biol. Chem. 261: 7052-7059.
2. Hall, A. 1990. The cellular functions of small GTP-binding proteins. Science 249: 635-640.
3. Adams, A.E., 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.
4. Johnson, D.I., et al. 1990. Molecular characterization of Cdc42, a *Saccharomyces cerevisiae* gene involved in the development of cell polarity. J. Cell Biol. 111: 143-152.
5. 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 (mouse) mapping to 4 D3.

## PRODUCT

Cdc42 siRNA (m) is a target-specific 19-25 nt siRNA designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Cdc42 shRNA Plasmid (m): sc-29257-SH and Cdc42 shRNA (m) Lentiviral Particles: sc-29257-V as alternate gene silencing products.

## STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## RESEARCH USE

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

## APPLICATIONS

Cdc42 siRNA (m) is recommended for the inhibition of Cdc42 expression in mouse cells.

## SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 µM in 66 µl. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

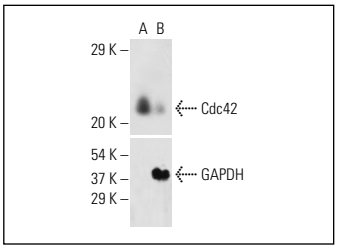
## GENE EXPRESSION MONITORING

Cdc42 (B-8): sc-8401 is recommended as a control antibody for monitoring of Cdc42 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Cdc42 gene expression knockdown using RT-PCR Primer: Cdc42 (m)-PR: sc-29257-PR (20 µl, 372 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

## DATA




Cdc42 siRNA (m): sc-29257. Western blot analysis of Cdc42 expression in non-transfected control (**A**) and Cdc42 siRNA transfected (**B**) NIH/3T3 cells. Blot probed with Cdc42 (P1): sc-87. GAPDH (FL-335): sc-25778 used as specificity and loading control.

## SELECT PRODUCT CITATIONS


1. Bikkavilli, R.K., et al. 2008. $G_{\alpha o}$ mediates WNT-JNK signaling through dishevelled 1 and 3, RhoA family members, and MEKK 1 and 4 in mammalian cells. J. Cell Sci. 121: 234-245.


## PROTOCOLS

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