

## Technical Data Sheet

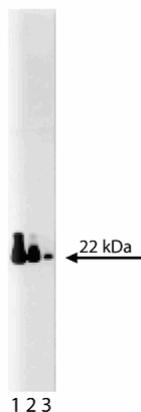
## Purified Mouse Anti-CDC42

## Product Information

|                         |  |
|-------------------------|--|
| <b>Material Number:</b> | <b>610928</b>  |
| <b>Size:</b>            | 50 µg  |
| <b>Concentration:</b>   | 250 µg/ml  |
| <b>Clone:</b>           | 44/CDC42   |
| <b>Immunogen:</b>       | Human CDC42 aa. 1-191  |
| <b>Isotype:</b>         | Mouse IgG1   |
| <b>Reactivity:</b>      | QC Testing: Rat<br>Tested in Development: Dog, Human, Mouse                  |
| <b>Target MW:</b>       | 22 kDa   |
| <b>Storage Buffer:</b>  | Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide. |

## Description

Rho family members are small GTP binding proteins that serve as molecular switches for a number of biological processes. They cycle between active GTP-bound and inactive GDP-bound states. CDC42 is a Rho family protein that was identified in membranes of human platelets and placenta. It is the homologue of CDC42Sc, which regulates initiation of bud-site assembly in *Saccharomyces cerevisiae*. CDC42 regulates the function of the mammalian actin cytoskeleton, allowing for efficient cytokinesis and cell morphogenesis. CDC42 and Rac1, a Ras-related GTPase, activate MEKK1, a JNK kinase kinase, which leads to the activation of several downstream components of the MAP kinase cascade leading to activation of PAK65, a CDC42- and Rac-binding protein. PAK65 interacts with CDC42/Rac1, mediates their interaction with MEKK1, and enhances MEKK1 catalytic activity. Chronic activation of CDC42 has been shown to induce malignant cellular transformation. Due to sequence homology among various small GTPase family members, potential cross-reactivity could be observed with this antibody. BD Pharmingen has not performed such cross-reactivity testing.



**Western blot analysis of CDC42 on rat brain lysate.** Lane 1: 1:250, lane 2: 1:500, lane 3: 1:1000 dilution of anti-CDC42 antibody.

## Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography. Store undiluted at -20°C.

## Application Notes

## Application

|                    |                  |
|--------------------|------------------|
| Western blot       | Routinely Tested |
| Immunofluorescence | Not Recommended  |

## Recommended Assay Procedure:

Western blot: Please refer to [http://www.bdbiosciences.com/pharmingen/protocols/Western\\_Blotting.shtml](http://www.bdbiosciences.com/pharmingen/protocols/Western_Blotting.shtml).

## BD Biosciences

[bdbiosciences.com](http://bdbiosciences.com)

|               |              |               |              |              |                         |
|---------------|--------------|---------------|--------------|--------------|-------------------------|
| United States | Canada       | Europe        | Japan        | Asia Pacific | Latin America/Caribbean |
| 877.232.8995  | 888.259.0187 | 32.53.720.550 | 0120.8555.90 | 65.6861.0633 | 55.11.5185.9995         |

For country-specific contact information, visit [bdbiosciences.com/how\\_to\\_order/](http://bdbiosciences.com/how_to_order/)

*Conditions: The information disclosed herein is not to be construed as a recommendation to use the above product in violation of any patents. BD Biosciences will not be held responsible for patent infringement or other violations that may occur with the use of our products. Purchase does not include or carry any right to resell or transfer this product either as a stand-alone product or as a component of another product. Any use of this product other than the permitted use without the express written authorization of Becton Dickinson and Company is strictly prohibited.*

*For Research Use Only. Not for use in diagnostic or therapeutic procedures. Not for resale.*

BD, BD Logo and all other trademarks are the property of Becton, Dickinson and Company. ©2008 BD



## Suggested Companion Products

| <u>Catalog Number</u> | <u>Name</u>            | <u>Size</u> | <u>Clone</u> |
|-----------------------|------------------------|-------------|--------------|
| 554002                | HRP Goat Anti-Mouse Ig | 1.0 ml      | (none)       |
| 611463                | Rat Cerebrum Lysate    | 500 µg      | (none)       |

## Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to [www.bdbiosciences.com/pharming/en/protocols](http://www.bdbiosciences.com/pharming/en/protocols) for technical protocols.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

## References

- Brandt D, Gimona M, Hillmann M, Haller H, Mischak H. Protein kinase C induces actin reorganization via a Src- and Rho-dependent pathway. *J Biol Chem.* 2002; 277(23):20903-20910.(Clone-specific: Western blot)
- Habas R, Dawid IB, He X. Coactivation of Rac and Rho by Wnt/Frizzled signaling is required for vertebrate gastrulation. *Genes Dev.* 2003; 17(2):295-309. (Clone-specific: Immunoprecipitation, Western blot)
- Munemitsu S, Innis MA, Clark R, McCormick F, Ullrich A, Polakis P. Molecular cloning and expression of a G25K cDNA, the human homolog of the yeast cell cycle gene CDC42. *Mol Cell Biol.* 1990; 10(11):5977-5982.(Biology)
- Shinjo K, Koland JG, Hart MJ, et al. Molecular cloning of the gene for the human placental GTP-binding protein Gp (G25K): identification of this GTP-binding protein as the human homolog of the yeast cell-division-cycle protein CDC42. *Proc Natl Acad Sci U S A.* 1990; 87(24):9853-9857.(Biology)
- Zugasti O, Rul W, Roux P, et al. Raf-MEK-Erk cascade in anoikis is controlled by Rac1 and Cdc42 via Akt. *Mol Cell Biol.* 2001; 21(19):6706-6717.(Clone-specific: Western blot)