
Anti Rac 1

Cat #: HM1300
Rabbit polyclonal IgG
0.2 µg/µl, store at 4 °C

For research use only

BACKGROUND

The Ras p21 family of guanine nucleotide proteins play an important role in signal transduction pathway. They regulate a diverse array of cellular events, including the control of cell growth, cytoskeletal reorganization, and the activation of protein kinases. Rac 1 and Rac 2 are GTPases which belong to the Ras superfamily. They are 92% identical and share GTP binding and GTP hydrolysis motifs with other members of the Ras superfamily. Rac 1 is expressed in a large number of different cell types while Rac 2 is primarily expressed only in myeloid cells.

SPECIFICITY

This antibody specifically reacts with Rac 1 of human, mouse and rat origin.

The antibody can be used in Western blotting, immunoprecipitation and immunohistochemistry.

IMMUNOGEN

A synthetic peptide derived from N-terminus of human Rac 1 protein.

STORAGE

This antibody is stable for 12 months when stored at 2-8° C.

REFERENCES

1. Didsbury, J., Weber, R.F., Bokoch, G.M., Evans, T., and Snyderman, R. 1989. *Rac*, a novel *ras*-related family of proteins that are botulinum toxin substrates. *J. Biol. Chem.* 264: 16378-16382.
2. Hall, A. 1990. The cellular functions of small GTP-binding proteins. *Science* 249: 636-640.
3. Ballester, R.M., Marchuk, D., Boguski, M., Saulino, A., Letcher, R., Wigler, M., and Collins, F. 1990. The NF1 locus encodes a protein functionally related to mammalian GAP and yeast *IRA* proteins. *Cell* 63: 851-859.
4. Diekmann, D., Brill, S., Garrett, M.D., Totty, N., Hsuan, J., Monfries, C., Hall, C., Lim, L., and Hall, A. 1991. *Bcr* encodes a GTPase-activating protein for p21rac. *Nature* 351: 400-402.
5. Knaus, U.G., Heyworth, P.G., Evans, T., Curnutte, J.T., and Bokoch, G.M. 1991. Regulation of phagocyte oxygen radical production by the GTP-binding protein Rac2. *Science* 254: 1512-1515.
6. Worthylake, D.K., Rossman, K.L. and Sondek, J. (2000) Crystal structure of Rac1 in complex with the guanine nucleotide exchange region of Tiam1. *Nature* 408, 682-688.
7. Eden, S., Rohatgi, R., Podtelejnikov, A.V., Mann, M. and Kirschner, M.W. (2002) Mechanism of regulation of WAVE1-induced actin nucleation by Rac1 and Nck. *Nature* 418, 790-793.
8. Katoh, H. and Negishi, M. (2003) RhoG activates Rac1 by direct interaction with the Dock180-binding protein Elmo. *Nature* 424, 461-464.
9. van Hennik, P.B., ten Klooster, J.P., Halstead, J.R., Voermans, C., Anthony, E.C., Divecha, N. and Hordijk, P.L. (2003) The C-terminal domain of Rac1 contains two motifs that control targeting and signaling specificity. *J. Biol. Chem.* 278, 39166-39175.
10. Esufali, S. and Bapat, B. (2004) Cross-talk between Rac1 GTPase and dysregulated Wnt signaling pathway leads to cellular redistribution of beta-catenin and TCF/LEF-mediated transcriptional activation. *Oncogene* 23, 8260-8271.

PRODUCTS FROM HYPROMATRIX, INC.**A. AntibodyArray™s:**

1. Signal Transduction AntibodyArray™
Catalog Number HM3000
2. Apoptosis AntibodyArray™
Catalog Number HM4000
3. Cell Cycle AntibodyArray™
Catalog Number HM5000

B. Staining AntibodyArray™s

1. Staining AntibodyArray™ I
Catalog Number HM8100
2. AntibodyArray Staining Apparatus
Catalog Number HM8000

C. Antibodies**1. HRP-conjugated antibodies**

- anti-phosphotyrosine
Catalog Number HM2040
- anti-phosphoserine
Catalog Number HM2070
- anti-phosphothreonine
Catalog Number HM2090

and more...

2. Primary antibodies

Hypromatrix offers a variety of high quality antibodies. For a complete list of antibodies and their specificities, please visit our web site at www.hypromatrix.com.

CONTACT

Hypromatrix, Inc.
100 Barber Avenue
Worcester, MA 01606
USA

Tel: 508-856-7900
Fax: 508-302-0748
Email: contact@hypromatrix.com
Web: www.hypromatrix.com