

## Rho 7 (C-19): sc-1945

### BACKGROUND

The Ras p21 family of guanine nucleotide proteins has been widely studied in view of its apparent role in signal transduction pathways and high frequency of mutations in human malignancies. It is now clear, however, that the Ras proteins (H-, K- and N-Ras p21) are members of a much larger superfamily of related proteins. Six members of this family, Rap 1A, Rap 1B, Rap 2, R-Ras, Ral A and Ral B, exhibit approximately 50% amino acid homology to Ras. The five mammalian Rho proteins (Rho A, B, C, 7 and 8) are approximately 30% homologous to Ras and are expressed in a wide range of cell types. Both Ras p21 and Rho p21, as well as other members of the Ras superfamily, contain a carboxy-terminal CAAX sequence (C, cysteine; A, aliphatic amino acid; X, any amino acid) which in the case of Ras has been shown to be essential for correct localization and function.

### REFERENCES

1. Madaule, P. and Axel, R. 1985. A novel Ras-related gene family. *Cell* 41: 31-40.
2. Barbacid, M. 1987. Ras genes. *Annu. Rev. Biochem.* 56: 779-827.
3. Yeremian, P., et al. 1987. Nucleotide sequence of human Rho cDNA clone 12. *Nucleic Acids Res.* 15: 189.
4. Chardin, P. 1988. The Ras superfamily proteins. *Biochimie* 70: 865-868.
5. Olofsson, B., et al. 1988. Expression of the Ras-related Ral A Rho 12 and Rab genes in adult mouse tissues. *Oncogene* 3: 231-234.
6. Morris, J.D.M., et al. 1989. Scrape-loading of Swiss 3T3 cells with Ras protein rapidly activates protein kinase C in the absence of phosphoinositide hydrolysis. *Oncogene* 4: 27-31.
7. Garrett, M.D., et al. 1989. Identification of distinct cytoplasmic targets for Ras/R-Ras and Rho regulatory proteins. *J. Biol. Chem.* 264: 10-13.
8. Adamson, P., et al. 1992. Posttranslational modifications of p21 Rho proteins. *J. Biol. Chem.* 267: 20043-20048.

### CHROMOSOMAL LOCATION

Genetic locus: RND2 (human) mapping to 17q21.31; Rnd2 (mouse) mapping to 11 D.

### SOURCE

Rho 7 (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Rho 7 of human origin.

### PRODUCT

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

Blocking peptide available for competition studies, sc-1945 P, (100 µg 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

Rho 7 (C-19) is recommended for detection of Rho 7 of mouse, rat and human 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).

Suitable for use as control antibody for Rho 7 siRNA (h): sc-41879, Rho 7 siRNA (m): sc-41880, Rho 7 shRNA Plasmid (h): sc-41879-SH, Rho 7 shRNA Plasmid (m): sc-41880-SH, Rho 7 shRNA (h) Lentiviral Particles: sc-41879-V and Rho 7 shRNA (m) Lentiviral Particles: sc-41880-V.

### 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. Vayssiere, B., et al. 2000. Interaction of the Grb7 adapter protein with Rnd1, a new member of the Rho family. *FEBS Lett.* 467: 91-96.
2. Jiang, W.G., et al. 2003. Prognostic value of Rho GTPases and Rho guanine nucleotide dissociation inhibitors in human breast cancers. *Clin. Cancer Res.* 9: 6432-6440.
3. Armentano, M., et al. 2006. COUP-TFI is required for the formation of commissural projections in the forebrain by regulating axonal growth. *Development* 133: 4151-4162.
4. Lartey, J., et al. 2006. Expression of RND proteins in human myometrium. *Biol. Reprod.* 75: 452-461.

### RESEARCH USE

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

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.