

# Rho G (A-20): sc-26483

## 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., Chardin, P., Madaule, P. and Tavitian, A. 1987. Nucleotide sequence of human rho cDNA clone 12. *Nucl. Acids Res.* 15: 189.
4. Chardin, P. 1988. The ras superfamily proteins. *Biochimie* 70: 865-868.
5. Olofsson, B., Chardin, P., Toudrot, N., Zahraoni, A. and Tavitian, A. 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., Price, P., Lloyd, A.C., Self, A.J., Marshall, C.J. and Hall, A. 1989. Scrape-loading of Swiss 3T3 cells with ras protein rapidly activates protein kinase C in the absence of phospholipase hydrolysis. *Oncogene* 4: 27-31.
7. Garrett, M.D., Self, A.J., Van Oers, C. and Hall, A. 1989. Identification of distinct cytoplasmic targets for ras/R-ras and rho regulatory proteins. *J. Biol. Chem.* 264: 10-13.
8. Adamson, P., Marshall, C.J., Hall, A. and Tilbrook, P.A. 1992. Post-translational modifications of p21rho proteins. *J. Biol. Chem.* 267: 20033-20038.

## CHROMOSOMAL LOCATIONS

Genetic locus: RHOG (human) mapping to 11p15.4; Rhog (mouse) mapping to 7 E3.

## SOURCE

Rho G (A-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Rho G 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-26483 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Rho G (A-20) is recommended for detection of Rho G of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and 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).

Rho G (A-20) is also recommended for detection of Rho G in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Rho G siRNA (h): sc-41889, Rho G siRNA (m): sc-41890, Rho G shRNA Plasmid (h): sc-41889-SH, Rho G shRNA Plasmid (m): sc-41890-SH, Rho G shRNA (h) Lentiviral Particles: sc-41889-V and Rho G shRNA (m) Lentiviral Particles: sc-41890-V.

Molecular Weight of Rho G: 21 kDa.

Positive Controls: MDA-MB-231 cell lysate: sc-2232, MCF7 whole cell lysate: sc-2206 or RAT2 whole cell lysate: sc-364198.

## 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.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **Rho G (1F3 B3 E5): sc-80015**, our highly recommended monoclonal alternative to Rho G (A-20).