SANTA CRUZ BIOTECHNOLOGY, INC.

Rho C (37): sc-130339

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, G, 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. Yeramian, P., Chardin, P., Madaule, P. and Tavitian, A. 1987. Nucelotide sequence of human Rho cDNA clone 12. Nucleic Acids Res. 15: 189.
3. Barbacid, M. 1987. Ras genes. Annu. Rev. Biochem. 56: 779-827.
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 phospholinositide 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 p21 Rho proteins. J. Biol. Chem. 267: 20043-20048.

CHROMOSOMAL LOCATION

Genetic locus: RHOC (human) mapping to 1p13.2.

SOURCE

Rho C (37) is a mouse monoclonal antibody raised against recombinant Rho C of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

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

APPLICATIONS

Rho C (37) is recommended for detection of Rho C of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

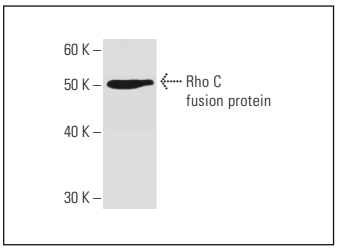
Suitable for use as control antibody for Rho C siRNA (h): sc-41887, Rho C shRNA Plasmid (h): sc-41887-SH and Rho C shRNA (h) Lentiviral Particles: sc-41887-V.

Molecular Weight of Rho C: 24 kDa.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



Rho C (37): sc-130339. Western blot analysis of human recombinant Rho C fusion protein.

SELECT PRODUCT CITATIONS

1. Howe, G.A. and Addison, C.L. 2012. RhoB controls endothelial cell morphogenesis in part via negative regulation of RhoA. Vasc. Cell 4: 1.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

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

CONJUGATES

See **Rho C (C-10): sc-393090** for Rho C antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.