

# Rho C (C-10): sc-393090

## 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 six 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., et al. 1987. Nucleotide 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., et al. 1988. Expression of the Ras-related Ral A Rho 12 and Rab genes in adult mouse tissues. *Oncogene* 3: 231-234.

## CHROMOSOMAL LOCATION

Genetic locus: RHOC (human) mapping to 1p13.2; Rhoc (mouse) mapping to 3 F2.2.

## SOURCE

Rho C (C-10) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 158-189 at the C-terminus of Rho C of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Rho C (C-10) is available conjugated to agarose (sc-393090 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393090 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393090 PE), fluorescein (sc-393090 FITC), Alexa Fluor® 488 (sc-393090 AF488), Alexa Fluor® 546 (sc-393090 AF546), Alexa Fluor® 594 (sc-393090 AF594) or Alexa Fluor® 647 (sc-393090 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393090 AF680) or Alexa Fluor® 790 (sc-393090 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-393090 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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## APPLICATIONS

Rho C (C-10) is recommended for detection of Rho C of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

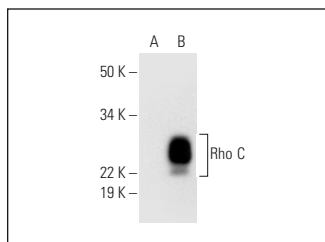
Rho C (C-10) is also recommended for detection of Rho C in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Rho C siRNA (h): sc-41887, Rho C siRNA (m): sc-41888, Rho C shRNA Plasmid (h): sc-41887-SH, Rho C shRNA Plasmid (m): sc-41888-SH, Rho C shRNA (h) Lentiviral Particles: sc-41887-V and Rho C shRNA (m) Lentiviral Particles: sc-41888-V.

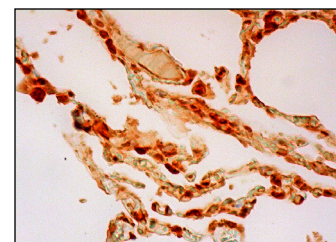
Molecular Weight of Rho C: 24 kDa.

Positive Controls: Rho C (m): 293T Lysate: sc-123119.

## DATA



Rho C (C-10): sc-393090. Western blot analysis of Rho C expression in non-transfected: sc-117752 (A) and mouse Rho C transfected: sc-123119 (B) 293T whole cell lysates.



Rho C (C-10): sc-393090. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lung tissue showing cytoplasmic and nuclear staining of pneumocytes and macrophages.

## SELECT PRODUCT CITATIONS

1. Zaoui, K., et al. 2019. Ran promotes membrane targeting and stabilization of Rho A to orchestrate ovarian cancer cell invasion. *Nat. Commun.* 10: 2666.
2. Wu, Z., et al. 2020. RNF180 mediates STAT3 activity by regulating the expression of Rho C via the proteasomal pathway in gastric cancer cells. *Cell Death Dis.* 11: 881.

## 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) for detailed protocols and support products.