

Rho A (119): sc-179



The Power to Question

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 1 (A and B), Rap 2, R-Ras and Ral (A and B), exhibit approximately 50% amino acid homology to Ras. The three mammalian Rho proteins (A, B and C) 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.

SOURCE

Rho A (119) is available as either rabbit (sc-179) or goat (sc-179-G) affinity purified polyclonal antibody raised against a peptide mapping to an internal region of Rho A of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-179 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for ChIP application, sc-179 X, 200 µg/0.1 ml.

Available as PE conjugate for flow cytometry, sc-179 PE, 100 tests.

Available as agarose conjugate for immunoprecipitation, sc-179 AC, 500 µg/0.25 ml agarose in 1 ml.

Available as HRP conjugate for Western blotting, sc-179 HRP, 200 µg/ml.

APPLICATIONS

Rho A (119) is recommended for detection of Rho A p21, Rho C and, to a lesser extent, Rho B of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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), flow cytometry (1 µg per 1 x 10⁶ cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Rho A (119) is also recommended for detection of Rho A p21, Rho C and, to a lesser extent, Rho B in additional species, including equine, canine, bovine, porcine and avian.

Rho A (119) X TransCruz antibody is recommended for ChIP assays.

Molecular Weight of Rho A: 24 kDa.

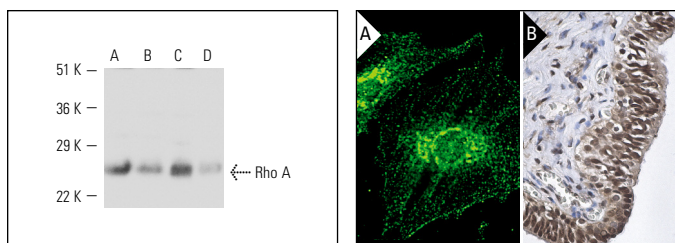
STORAGE

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.

DATA



Rho A (119): sc-179. Western blot analysis of Rho A expression in KNRK (A), PC-12 (B), HL-60 (C) and MCF7 (D) whole cell lysates.

Rho A (119): sc-179. Cytoplasmic immunofluorescence staining of methanol/acetone-fixed rat embryo fibroblasts using fluorescein-labeled goat anti-rabbit IgG secondary antibody (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing nuclear and cytoplasmic staining of cells in seminiferous ducts (B).

SELECT PRODUCT CITATIONS

- Coso, O.A., et al. 1995. The small GTP-binding proteins Rac1 and Cdc42 regulate the activity of the JNK/SAPK signaling pathway. *Cell* 81: 1137-1146.
- Macías-Sánchez, K., et al. 2011. Rho1 and other GTP-binding proteins are associated with vesicles carrying glucose oxidase activity from *Fusarium oxysporum f. sp. lycopersici*. *Antonie Van Leeuwenhoek* 99: 671-680.
- Taiyab, A., et al. 2011. HSP90 modulates actin dynamics: inhibition of HSP90 leads to decreased cell motility and impairs invasion. *Biochim. Biophys. Acta* 1813: 213-221.
- Tsai, C.C., et al. 2011. 7-Chloro-6-piperidin-1-yl-quinoline-5,8-dione (PT-262), a novel ROCK inhibitor blocks cytoskeleton function and cell migration. *Biochem. Pharmacol.* 81: 856-865.
- Jia, Y., et al. 2011. Role of epimorphin in bile duct formation of rat liver epithelial stem-like cells: involvement of small G protein RhoA and C/EBPβ. *J. Cell. Physiol.* 226: 2807-2816.
- Peng, G., et al. 2012. Sustained therapeutic hypercapnia attenuates pulmonary arterial Rho-kinase activity and ameliorates chronic hypoxic pulmonary hypertension in juvenile rats. *Am. J. Physiol. Heart Circ. Physiol.* 302: H2599-H2611.
- Lazarini, M., et al. 2013. ARHGAP21 is a RhoGAP for RhoA and RhoC with a role in proliferation and migration of prostate adenocarcinoma cells. *Biochim. Biophys. Acta* 1832: 365-374.

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