

Rho B (119): sc-180

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.

CHROMOSOMAL LOCATION

Genetic locus: RHOB (human) mapping to 2p24.1, RHOA (human) mapping to 3p21.31; Rhob (mouse) mapping to 12 A1.1, Rhoa (mouse) mapping to 9 F2.

SOURCE

Rho B (119) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping to an internal region of Rho B 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.

Rho B (119) is available conjugated either phycoerythrin (sc-180 PE, 200 µg/ml), Alexa Fluor[®] 488 (sc-180 AF488, 200 µg/ml) or Alexa Fluor[®] 647 (sc-180 AF647, 200 µg/ml), for IF, IHC(P) and FCM.

In addition, Rho B (119) is available conjugated to Alexa Fluor[®] 405 (sc-180 AF405), 100 µg/2 ml, for IF, IHC(P) and FCM.

Blocking peptide available for competition studies, sc-180 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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APPLICATIONS

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

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

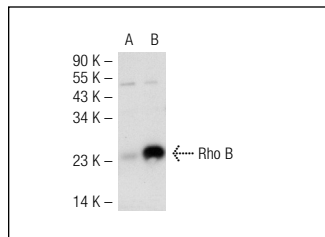
Molecular Weight of Rho B: 25 kDa.

Positive Controls: HeLa + UV irradiated cell lysate: sc-2221, HeLa whole cell lysate: sc-2200 or Rho B (m): 293T Lysate: sc-123117.

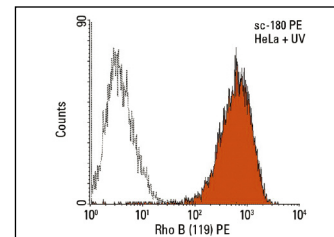
STORAGE

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

DATA



Rho B (119): sc-180. Western blot analysis of Rho B expression in non-transfected: sc-117752 (A) and mouse Rho B transfected: sc-123117 (B) 293T whole cell lysates.



Rho B (119) PE: sc-180 PE. Intracellular FCM analysis of fixed and permeabilized HeLa cells. Black line histogram represents the isotype control, normal rabbit IgG: sc-3871.

SELECT PRODUCT CITATIONS

1. Ministerial Meeting on Population of the Non-Aligned Movement. 1994. Denpasar declaration on population and development. Integration 40: 27-29.
2. Valero, R.A., et al. 2010. Structural determinants allowing endolysosomal sorting and degradation of endosomal GTPases. Traffic 11: 1221-1233.
3. Chen, S., et al. 2010. Dissecting the roles of DR4, DR5 and c-FLIP in the regulation of geranylgeranyltransferase I inhibition-mediated augmentation of TRAIL-induced apoptosis. Mol. Cancer 9: 23.
4. Sabatel, C., et al. 2011. MicroRNA-21 exhibits antiangiogenic function by targeting Rho B expression in endothelial cells. PLoS ONE 6: e16979.
5. Macias-Sanchez, 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.
6. Li, Y.D., et al. 2011. Induction of small G protein Rho B by non-genotoxic stress inhibits apoptosis and activates NFκB. J. Cell. Physiol. 226: 729-738.
7. Vega, F.M., et al. 2011. Rho A and Rho C have distinct roles in migration and invasion by acting through different targets. J. Cell Biol. 193: 655-665.
8. Calvo, F., et al. 2011. RasGRF suppresses Cdc42-mediated tumour cell movement, cytoskeletal dynamics and transformation. Nat. Cell Biol. 13: 819-826.

RESEARCH USE

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

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Try **Rho B (C-5): sc-8048**, our highly recommended monoclonal alternative to Rho B (119). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **Rho B (C-5): sc-8048**.