

# Rho GDI $\alpha$ (K-21): sc-359

## BACKGROUND

Members of the Ras superfamily of small GTP-binding proteins are critical mediators of diverse cell signaling pathways, including those leading to cell proliferation, cytoskeletal organization and secretion. The counter-conversion of the active GTP-bound form of these proteins to their inactive GDP-bound form is influenced by two types of regulatory proteins: those that alter the intrinsic GTPase activity of the GTP-binding proteins and those that alter the rate of GDP/GTP exchange. Guanine nucleotide-releasing factors (GRFs) increase the GDP dissociation rate, while GDP-dissociation inhibitors (GDIs) decrease the dissociation rate. Rho GDI $\alpha$ , also known as ARHGDI $\alpha$  or GDI $\alpha$ 1, is a 204 amino acid member of the Rho GDI family of proteins. Localized to the cytoplasm, Rho GDI $\alpha$  inhibits the dissociation of GDP from Rho proteins, thereby preventing GTP from binding to and subsequently activating Rho proteins. In humans, Rho GDI $\alpha$  can be phosphorylated at Ser 101 by p21-activated kinase ( $\alpha$ PAK), an event that inhibits Rho GDI $\alpha$  activity and may result in positive feedback regulation of certain Rho GDI $\alpha$  target proteins.

## CHROMOSOMAL LOCATION

Genetic locus: ARHGDI $\alpha$  (human) mapping to 17q25.3, ARHGDI $\beta$  (human) mapping to 12p12.3; Arhgdia (mouse) mapping to 11 E2, Arhgdib (mouse) mapping to 6 G1.

## SOURCE

Rho GDI $\alpha$  (K-21) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of Rho GDI $\alpha$  of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-359 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as phycoerythrin conjugate for flow cytometry, sc-359 PE, 100 tests.

## APPLICATIONS

Rho GDI $\alpha$  (K-21) is recommended for detection of Rho GDI $\alpha$  and, to a lesser extent, Ly-GDI of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1  $\mu$ g per 1 x 10<sup>6</sup> cells).

Rho GDI $\alpha$  (K-21) is also recommended for detection of Rho GDI $\alpha$  and, to a lesser extent, Ly-GDI in additional species, including equine, canine, bovine, porcine and avian.

Molecular Weight of Rho GDI $\alpha$ : 30 kDa.

Positive Controls: Rho GDI $\alpha$  (h2): 293 Lysate: sc-112194.

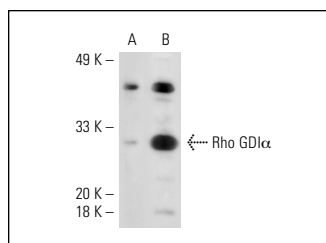
## STORAGE

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

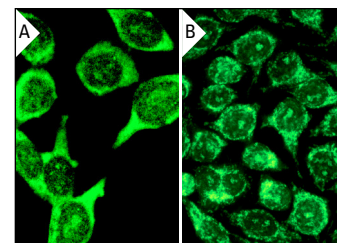
## RESEARCH USE

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

## DATA



Rho GDI $\alpha$  (K-21): sc-359. Western blot analysis of Rho GDI $\alpha$  expression in non-transfected: sc-110760 (A) and human Rho GDI $\alpha$  transfected: sc-112194 (B) 293 whole cell lysates.



Rho GDI $\alpha$  (K-21): sc-359. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization using indirect FITC (A) and direct Alexa Fluor 488 (B) staining.

## SELECT PRODUCT CITATIONS

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4. Moretti, S., et al. 2008. Semaphorin3A signaling controls Fas (CD95)-mediated apoptosis by promoting Fas translocation into lipid rafts. *Blood* 111: 2290-2299.
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Try **Rho GDI $\alpha$  (G-2): sc-373724** or **Rho GDI $\alpha$  (B-10): sc-13120**, our highly recommended monoclonal alternatives to Rho GDI $\alpha$  (K-21).