

# Rho GDI $\alpha$ (A-20): sc-360

## 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 GDIA1, 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; Arhgdia (mouse) mapping to 11 E2.

## SOURCE

Rho GDI $\alpha$  (A-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the N-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-360 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-360 PE, 100 tests; and as Alexa Fluor<sup>®</sup> 405 (sc-371 AF405), Alexa Fluor<sup>®</sup> 488 (sc-371 AF488) or Alexa Fluor<sup>®</sup> 647 (sc-371 AF647) conjugates for flow cytometry or immunofluorescence; 100  $\mu$ g/2 ml.

## APPLICATIONS

Rho GDI $\alpha$  (A-20) is recommended for detection of Rho GDI $\alpha$  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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500), flow cytometry (1  $\mu$ g per 1 x 10<sup>6</sup> cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Rho GDI $\alpha$  (A-20) is also recommended for detection of Rho GDI $\alpha$  in additional species, including equine, canine, bovine, porcine and avian.

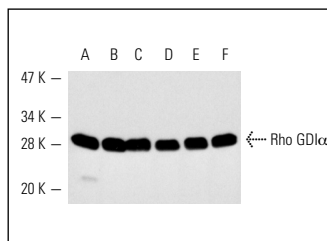
Molecular Weight of Rho GDI $\alpha$ : 30 kDa.

Positive Controls: PC-12 cell lysate: sc-2250, HL-60 whole cell lysate: sc-2209 or SK-BR-3 cell lysate: sc-2218.

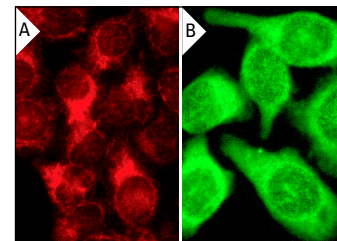
## STORAGE

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

## DATA



Rho GDI $\alpha$  (A-20): sc-360. Western blot analysis of Rho GDI $\alpha$  expression in KNRK (A), PC-12 (B), HL-60 (C), HeLa (D), SK-BR-3 (E) and MCF7 (F) whole cell lysates.



Rho GDI $\alpha$  (A-20): sc-360. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic staining (B).

## SELECT PRODUCT CITATIONS

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- Yakovlev, V.A., et al. 2010. Proteomic analysis of radiation-induced changes in rat lung: Modulation by the superoxide dismutase mimetic MnTE-2-PyP<sup>5+</sup>. *Int. J. Radiat. Oncol. Biol. Phys.* 78: 547-554.
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- Khan, O.M., et al. 2011. Geranylgeranyltransferase type I (GGTase-I) deficiency hyperactivates macrophages and induces erosive arthritis in mice. *J. Clin. Invest.* 121: 628-639.
- Luo, Y., et al. 2012. Recognition of CD146 as an ERM-binding protein offers novel mechanisms for melanoma cell migration. *Oncogene* 31: 306-321.

## RESEARCH USE

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

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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 $\alpha$  (A-20).