

Rho GDI α (G-10): sc-373723

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 α , also known as ARHGDI α or GDI α 1, is a 204 amino acid member of the Rho GDI family of proteins. Localized to the cytoplasm, Rho GDI α inhibits the dissociation of GDP from Rho proteins, thereby preventing GTP from binding to and subsequently activating Rho proteins. In humans, Rho GDI α can be phosphorylated at Ser 101 by p21-activated kinase (α PAK), an event that inhibits Rho GDI α activity and may result in positive feedback regulation of certain Rho GDI α target proteins.

CHROMOSOMAL LOCATION

Genetic locus: ARHGDI α (human) mapping to 17q25.3; Arhgdia (mouse) mapping to 11 E2.

SOURCE

Rho GDI α (G-10) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 2-29 at the N-terminus of Rho GDI α of human origin.

PRODUCT

Each vial contains 200 μ g IgG $_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-373723 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

Rho GDI α (G-10) is recommended for detection of Rho GDI α of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (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 GDI α (G-10) is also recommended for detection of Rho GDI α in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Rho GDI α siRNA (h): sc-36417, Rho GDI α siRNA (m): sc-36416, Rho GDI α siRNA (r): sc-61880, Rho GDI α shRNA Plasmid (h): sc-36417-SH, Rho GDI α shRNA Plasmid (m): sc-36416-SH, Rho GDI α shRNA Plasmid (r): sc-61880-SH, Rho GDI α shRNA (h) Lentiviral Particles: sc-36417-V, Rho GDI α shRNA (m) Lentiviral Particles: sc-36416-V and Rho GDI α shRNA (r) Lentiviral Particles: sc-61880-V.

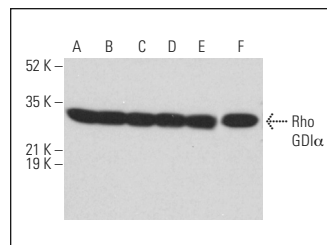
Molecular Weight of Rho GDI α : 30 kDa.

Positive Controls: NAMALWA cell lysate: sc-2234, K-562 whole cell lysate: sc-2203 or Jurkat whole cell lysate: sc-2204.

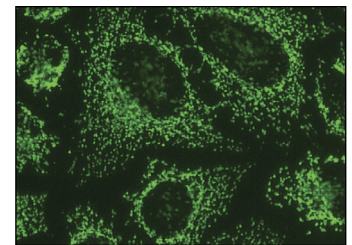
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Rho GDI α (G-10): sc-373723. Western blot analysis of Rho GDI α expression in NAMALWA (A), Jurkat (B), K-562 (C), HL-60 (D), Ramos (E) and BJAB (F) whole cell lysates.



Rho GDI α (G-10): sc-373723. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

- Martinelli, I., et al. 2021. Galanin promotes autophagy and alleviates apoptosis in the hypertrophied heart through FOXO1 pathway. *Redox Biol.* 40: 101866.
- Cohn, O., et al. 2022. Distinct gene programs underpinning disease tolerance and resistance in influenza virus infection. *Cell Syst.* 13: 1002-1015.e9.

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 for detailed protocols and support products.