SANTA CRUZ BIOTECHNOLOGY, INC.

Rho GDIα (C-2): sc-374579

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 GDIα, also known as ARHGDIA or GDIA1, is a 204 amino acid member of the Rho GDI family of proteins. Localized to the cytoplasm, Rho GDIα inhibits the dissociation of GDP from Rho proteins, thereby preventing GTP from binding to and subsequently activating Rho proteins. In humans, Rho GDIα can be phosphorylated at Ser 101 by p21-activated kinase (αPAK), an event that inhibits Rho GDIα activity and may result in positive feedback regulation of certain Rho GDIα target proteins.

CHROMOSOMAL LOCATION

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

SOURCE

Rho GDIα (C-2) is a mouse monoclonal antibody raised against a peptide mapping at the C-terminus of Rho GDIα of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 lambda light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

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

APPLICATIONS

Rho GDIα (C-2) is recommended for detection of Rho GDIα of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Rho GDIα (C-2) is also recommended for detection of Rho GDIα in additional species, including equine, canine, bovine and porcine.

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

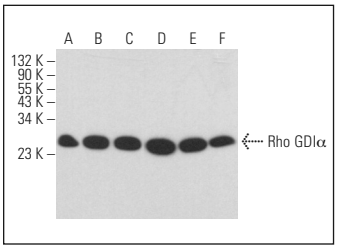
Molecular Weight of Rho GDIα: 30 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, MCF7 whole cell lysate: sc-2206 or Jurkat whole cell lysate: sc-2204.

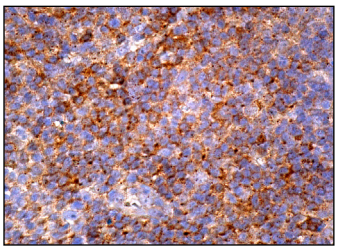
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGλ BP-HRP: sc-516132 or m-IgGλ BP-HRP (Cruz Marker): sc-516132-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-IgGλ BP-FITC: sc-516185 or m-IgGλ BP-PE: sc-516186 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGλ BP-HRP: sc-516132 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Rho GDIα (C-2): sc-374579. Western blot analysis of Rho GDIα expression in MCF7 (**A**), K-562 (**B**), Jurkat (**C**), EOC 20 (**D**) and Neuro-2A (**E**) whole cell lysates and rat brain tissue extract (**F**).



Rho GDIα (C-2): sc-374579. Immunoperoxidase staining of formalin fixed, paraffin-embedded human tonsil tissue showing cytoplasmic staining of cells in germinal and non-germinal centers.

SELECT PRODUCT CITATIONS

1. Polavaram, N.S., et al. 2021. Tumor- and osteoclast-derived NRP2 in prostate cancer bone metastases. Bone Res. 9: 24.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.