

Rho GD1 γ (E-1): sc-393690

BACKGROUND

The Ras superfamily of small GTP-binding proteins are critical mediators of diverse cell signaling pathways, including those leading to 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. The Rho GDI subfamily is composed of Rho GDI α , Ly-GDI (also known as Rho GDI β and previously known as GDI/D4) and Rho GD1 γ . The Rho GDI proteins interact with and have varying affinities for several Ras-like GTP binding proteins, including Rho A, Rho B, Rac and Cdc42. Ly-GDI is expressed only in hematopoietic cells, predominantly in B and T lymphocyte cell lines.

REFERENCES

1. Trahey, M. and McCormick, F. 1987. A cytoplasmic protein stimulates normal N-ras p21 GTPase, but does not affect oncogenic mutants. *Science* 238: 542-545.
2. Bourne, H.R., et al. 1990. The GTPase superfamily: a conserved switch for diverse cell functions. *Nature* 348: 125-132.
3. Hall, A. 1990. The cellular functions of small GTP-binding proteins. *Science* 249: 635-640.
4. Garrett, M.D., et al. 1991. Purification and N-terminal sequence of the p21^{rho} GTPase-activating protein, rho GAP. *Biochem. J.* 276: 833-836.

CHROMOSOMAL LOCATION

Genetic locus: ARHGDIG (human) mapping to 16p13.3; Arhgdig (mouse) mapping to 17 A3.3.

SOURCE

Rho GD1 γ (E-1) is a mouse monoclonal antibody raised against amino acids 1-95 mapping at the N-terminus of Rho GD1 γ of mouse origin.

PRODUCT

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

Rho GD1 γ (E-1) is available conjugated to agarose (sc-393690 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393690 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393690 PE), fluorescein (sc-393690 FITC), Alexa Fluor[®] 488 (sc-393690 AF488), Alexa Fluor[®] 546 (sc-393690 AF546), Alexa Fluor[®] 594 (sc-393690 AF594) or Alexa Fluor[®] 647 (sc-393690 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-393690 AF680) or Alexa Fluor[®] 790 (sc-393690 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

Rho GD1 γ (E-1) is recommended for detection of Rho GD1 γ 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).

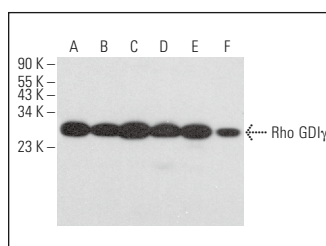
Suitable for use as control antibody for Rho GD1 γ siRNA (h): sc-41877, Rho GD1 γ siRNA (m): sc-41878, Rho GD1 γ shRNA Plasmid (h): sc-41877-SH, Rho GD1 γ shRNA Plasmid (m): sc-41878-SH, Rho GD1 γ shRNA (h) Lentiviral Particles: sc-41877-V and Rho GD1 γ shRNA (m) Lentiviral Particles: sc-41878-V.

Positive Controls: HL-60 whole cell lysate: sc-2209, NIH/3T3 whole cell lysate: sc-2210 or Jurkat whole cell lysate: sc-2204.

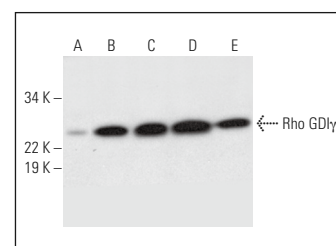
RECOMMENDED SUPPORT REAGENTS

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 GD1 γ (E-1): sc-393690. Western blot analysis of Rho GD1 γ expression in ALL-SIL (A), C6 (B), IMR-32 (C), Neuro-2A (D), EOC 20 (E) and MOLT-4 (F) whole cell lysates.



Rho GD1 γ (E-1): sc-393690. Western blot analysis of Rho GD1 γ expression in mouse brain tissue extract (A) and NIH/3T3 (B), Jurkat (C), HL-60 (D) and HeLa (E) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Gleason, N. and Kowluru, A. 2024. Hyperglycemic stress induces expression, degradation, and nuclear association of Rho GDP dissociation inhibitor 2 (RhoGDI β) in pancreatic β -cells. *Cells* 13: 272.

RESEARCH USE

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

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