SANTA CRUZ BIOTECHNOLOGY, INC.

Ly-GDI (E-3): sc-271042

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 GDIα, Ly-GDI (also known as Rho GDIβ and previously known as GDI/D4) and Rho GDIγ. 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.

CHROMOSOMAL LOCATION

Genetic locus: ARHGDIB (human) mapping to 12p12.3; Arhgdib (mouse) mapping to 6 G1.

SOURCE

Ly-GDI (E-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 165-197 near the C-terminus of Ly-GDI of human origin.

PRODUCT

Each vial contains 200 µg 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-166074 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

Ly-GDI (E-3) is recommended for detection of Ly-GDI 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).

Suitable for use as control antibody for Ly-GDI siRNA (h): sc-35826, Ly-GDI siRNA (m): sc-35827, Ly-GDI shRNA Plasmid (h): sc-35826-SH, Ly-GDI shRNA Plasmid (m): sc-35827-SH, Ly-GDI shRNA (h) Lentiviral Particles: sc-35826-V and Ly-GDI shRNA (m) Lentiviral Particles: sc-35827-V.

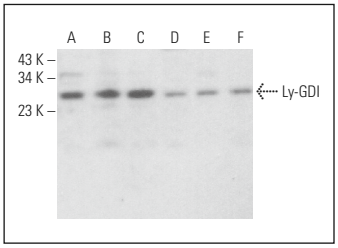
Molecular Weight of Ly-GDI: 27 kDa.

Positive Controls: BJAB whole cell lysate: sc-2207, Jurkat whole cell lysate: sc-2204 or U-937 cell lysate: sc-2239.

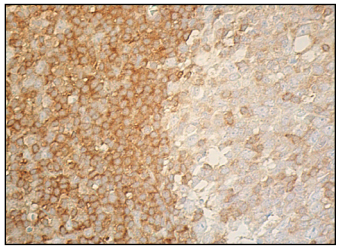
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Ly-GDI (E-3): sc-271042. Western blot analysis of Ly-GDI expression in K-562 (**A**), HEL 92.1.7 (**B**), HL-60 (**C**), c4 (**D**), BW5147 (**E**) and WEHI-231 (**F**) whole cell lysates.



Ly-GDI/RhoGDI2/ARHGDIB (E-3): sc-271042. Immunoperoxidase staining of formalin fixed, paraffin-embedded human tonsil tissue showing cytoplasmic and membrane staining of cells in germinal center and cells in non-germinal center. Blocked with 0.25X UltraCruz® Blocking Reagent: sc-516214. Detected with m-IgG Fc BP-B: sc-533652 and ImmunoCruz® ABC Kit: sc-516216.

SELECT PRODUCT CITATIONS

1. Liu, W., et al. 2019. RhoGDI2 positively regulates the Rho GTPases activation in response to the β2 outside-in signaling in T cells adhesion and migration on ICAM-1. J. Leukoc. Biol. 106: 431-446.
2. Luo, J., et al. 2020. Rho GDP-dissociation inhibitor 2 inhibits C-X-C chemokine receptor type 4-mediated acute lymphoblastic leukemia cell migration. Front. Oncol. 10: 1512.

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.

CONJUGATES

See **Ly-GDI (G-12): sc-376473** for Ly-GDI antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.