

# Ly-GDI (E-10): sc-365663

## 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 $\alpha$ , Ly-GDI (also known as Rho GDI $\beta$  and previously known as GDI/D4) and Rho GDI $\gamma$ . 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<sup>rho</sup> GTPase-activating protein, rho GAP. *Biochem. J.* 276: 833-836.

## CHROMOSOMAL LOCATION

Genetic locus: ARHGDI $\beta$  (human) mapping to 12p12.3.

## SOURCE

Ly-GDI (E-10) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 45-74 within an internal region of Ly-GDI of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG $\kappa$  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-365663 P, (100  $\mu$ g 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.

## RESEARCH USE

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

## APPLICATIONS

Ly-GDI (E-10) is recommended for detection of Ly-GDI of human origin by Western Blotting (starting dilution 1:100, 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) 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 shRNA Plasmid (h): sc-35826-SH and Ly-GDI shRNA (h) Lentiviral Particles: sc-35826-V.

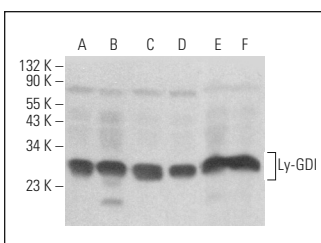
Molecular Weight of Ly-GDI: 27 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, NAMALWA cell lysate: sc-2234 or Ramos cell lysate: sc-2216.

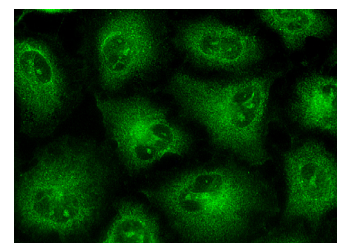
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  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 $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  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



Ly-GDI (E-10): sc-365663. Western blot analysis of Ly-GDI expression in K-562 (A), Jurkat (B), HL-60 (C), Ramos (D), BJAB (E) and NAMALWA (F) whole cell lysates.



Ly-GDI (E-10): sc-365663. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

## SELECT PRODUCT CITATIONS

1. de León-Bautista, M.P., et al. 2016. Immunological and functional characterization of RhoGDI3 and its molecular targets RhoG and RhoB in human pancreatic cancerous and normal cells. *PLoS ONE* 11: e0166370.

## 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.