

Rab GDI β (P-24): sc-133939

BACKGROUND

Rab proteins, a family of Ras-related small GTP-binding proteins, play a key role in regulating intracellular vesicle trafficking. Rab GDP dissociation inhibitor (Rab GDI or GDI2) forms a soluble complex with Rab proteins and thereby prevents the exchange of GDP for GTP. In mammals, there exist two major isoforms, Rab GDI α , also known as XAP-4, and Rab GDI β . While the mammalian Rab GDI β genes are ubiquitously expressed, the Rab GDI α genes are predominantly brain-specific. Since it is expressed predominantly in neural and sensory tissues, Rab GDI α may serve a specific function in neural signal transmission. The gene sequences for the Rab GDI proteins are extremely conserved in evolution, with substantial homology preserved across three eukaryotic kingdoms.

REFERENCES

1. Nishimura, N., Nakamura, H., Takai, Y. and Sano, K. 1994. Molecular cloning and characterization of two Rab GDI species from rat brain: brain-specific and ubiquitous types. *J. Biol. Chem.* 269: 14191-14198.
2. Shisheva, A., Buxton, J. and Czech, M.P. 1994. Differential intracellular localizations of GDP dissociation inhibitor isoforms. Insulin-dependent redistribution of GDP dissociation inhibitor 2 in 3T3-L1 adipocytes. *J. Biol. Chem.* 269: 23865-23868.
3. Nishimura, N., Goji, J., Nakamura, H., Orita, S., Takai, Y. and Sano, K. 1995. Cloning of a brain-type isoform of human Rab GDI and its expression in human neuroblastoma cell lines and tumor specimens. *Cancer Res.* 55: 5445-5450.
4. Araki, K., Nakanishi, H., Hirano, H., Kato, M., Sasaki, T. and Takai, Y. 1995. Purification and characterization of Rab GDI β from rat brain. *Biochem. Biophys. Res. Commun.* 211: 296-305.
5. Bachner, D., Sedlacek, Z., Korn, B., Hameister, H. and Poustka, A. 1995. Expression patterns of two human genes coding for different Rab GDP-dissociation inhibitors (GDIs), extremely conserved proteins involved in cellular transport. *Hum. Mol. Genet.* 4: 701-708.
6. Sedlacek, Z., Munstermann, E., Mincheva, A., Lichter, P. and Poustka, A. 1998. The human Rab GDI β gene with long retroposon-rich introns maps to 10p15 and its pseudogene to 7p11-p13. *Mamm. Genome* 9: 78-80.

CHROMOSOMAL LOCATION

Genetic locus: GDI2 (human) mapping to 10p15.1.

SOURCE

Rab GDI β (P-24) is an affinity purified rabbit polyclonal antibody raised against synthetic Rab GDI β peptide of human origin.

PRODUCT

Each vial contains 50 μ g IgG in 500 μ l PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

RESEARCH USE

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

APPLICATIONS

Rab GDI β (P-24) is recommended for detection of Rab GDI β of human and canine origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Rab GDI β siRNA (h): sc-106475, Rab GDI β shRNA Plasmid (h): sc-106475-SH and Rab GDI β shRNA (h) Lentiviral Particles: sc-106475-V.

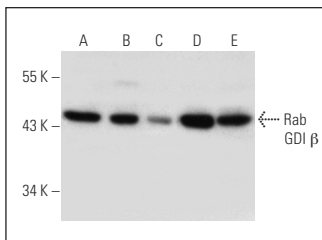
Molecular Weight of Rab GDI β : 50 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, MCF7 whole cell lysate: sc-2206 or HeLa whole cell lysate: sc-2200.

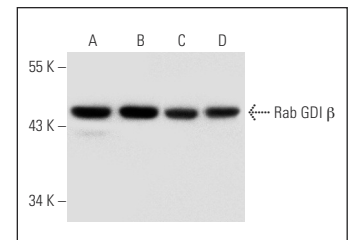
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



Rab GDI β (P-24): sc-133939. Western blot analysis of Rab GDI β expression in U-937 (A), A549 (B), NIH/3T3 (C) and SK-BR-3 (D) whole cell lysates and human liver tissue extract (E).



Rab GDI β (P-24): sc-133939. Western blot analysis of Rab GDI β expression in Hep G2 (A), MCF7 (B), HeLa (C) and A-431 (D) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Zhang, B., Zhang, T., Wang, G., Wang, G., Chi, W., Jiang, Q. and Zhang, C. 2015. GSK3 β -Dzip1-Rab8 cascade regulates ciliogenesis after mitosis. *PLoS Biol.* 13: e1002129.

STORAGE

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



Try **Rab GDI α (E-5): sc-374649**, our highly recommended monoclonal alternative to Rab GDI β (P-24).