SANTA CRUZ BIOTECHNOLOGY, INC.

Rab 9 (G-5): sc-74482

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The Ras-related superfamily of guanine nucleotide binding proteins, which includes the R-Ras, Rap, Ral/Rec and Rho/Rab subfamilies exhibit 30-60% homology with Ras p21. Accumulating data suggests an important role for Rab proteins, either in endocytosis or in biosynthetic protein transport. The transport of newly synthesized proteins from the endoplasmic reticulum to various stacks of the Golgi complex and to secretory vesicles involves at each stage the movement of carrier vesicles, a process that appears to involve Rab protein function. The possibility that Rab proteins might also direct the exocytosis from secretory vesicles to the plasma membrane is supported by the observation that in yeast, the SEC4 protein, which is 40% homologous to Rab proteins, is associated with secretory vesicles. At least eight members of the Rab subfamily have been identified, each of which is found at a particular stage of a membrane transport pathway.

CHROMOSOMAL LOCATION

Genetic locus: RAB9A/RAB9B (human) mapping to Xp22.2; Rab9 (mouse) mapping to X F5, Rab9b (mouse) mapping to X F1.

SOURCE

Rab 9 (G-5) is a mouse monoclonal antibody raised against amino acids 1-201 representing full length Rab 9A 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.

Rab 9 (G-5) is available conjugated to agarose (sc-74482 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-74482 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-74482 PE), fluorescein (sc-74482 FITC), Alexa Fluor® 488 (sc-74482 AF488), Alexa Fluor® 546 (sc-74482 AF546), Alexa Fluor® 594 (sc-74482 AF594) or Alexa Fluor® 647 (sc-74482 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-74482 AF680) or Alexa Fluor® 790 (sc-74482 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Rab 9 (G-5) is recommended for detection of Rab 9A and 9B 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); partially cross reactive with other Rab family members.

Suitable for use as control antibody for Rab 9 siRNA (h): sc-44065, Rab 9 shRNA Plasmid (h): sc-44065-SH and Rab 9 shRNA (h) Lentiviral Particles: sc-44065-V.

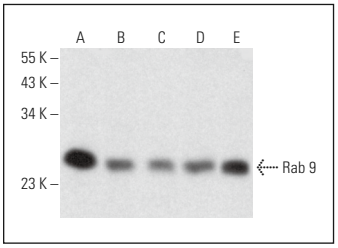
Molecular Weight of Rab 9: 23 kDa.

Positive Controls: A-10 cell lysate: sc-3806, Jurkat whole cell lysate: sc-2204 or WEHI-231 whole cell lysate: sc-2213.

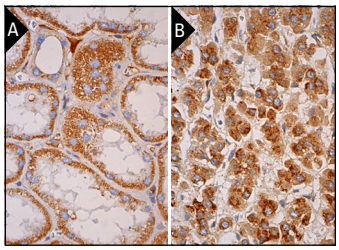
STORAGE

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

DATA



Rab 9 (G-5): sc-74482. Western blot analysis of Rab 9 expression in A-10 (**A**), Jurkat (**B**), Hep G2 (**C**), WEHI-231 (**D**) and NRK (**E**) whole cell lysates.



Rab 9 (G-5): sc-74482. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic staining of cells in tubules (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human adrenal gland tissue showing cytoplasmic staining of glandular cells (**B**).

SELECT PRODUCT CITATIONS

1. Schroer, A.B., et al. 2019. A role for regulator of G protein signaling-12 (RGS12) in the balance between myoblast proliferation and differentiation. PLoS ONE 14: e0216167.
2. Grossmann, D., et al. 2019. Mutations in RHOT1 disrupt endoplasmic reticulum-mitochondria contact sites interfering with calcium homeostasis and mitochondrial dynamics in Parkinson's disease. Antioxid. Redox Signal. 31: 1213-1234.
3. Berenguer-Escuder, C., et al. 2019. Variants in Miro1 cause alterations of ER-mitochondria contact sites in fibroblasts from Parkinson's disease patients. J. Clin. Med. 8: 2226..
4. Romano, R., et al. 2020. Alteration of the late endocytic pathway in Charcot-Marie-Tooth type 2B disease. Cell. Mol. Life Sci. 78: 351-372.
5. Berenguer-Escuder, C., et al. 2020. Impaired mitochondrial-endoplasmic reticulum interaction and mitophagy in Miro1-mutant neurons in Parkinson's disease. Hum. Mol. Genet. 29: 1353-1364.

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.