SANTA CRUZ BIOTECHNOLOGY, INC.

Rab 1B (G-20): sc-599

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: RAB1B (human) mapping to 11q13.2; Rab1b (mouse) mapping to 19 A.

SOURCE

Rab 1B (G-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within the C-terminus of Rab 1B of rat origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for ChIP application, sc-599 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-599 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Rab 1B (G-20) is recommended for detection of Rab 1B of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

Rab 1B (G-20) is also recommended for detection of Rab 1B in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Rab 1B siRNA (h): sc-37155, Rab 1B siRNA (m): sc-37156, Rab 1B shRNA Plasmid (h): sc-37155-SH, Rab 1B shRNA Plasmid (m): sc-37156-SH, Rab 1B shRNA (h) Lentiviral Particles: sc-37155-V and Rab 1B shRNA (m) Lentiviral Particles: sc-37156-V.

Rab 1B (G-20) X TransCruz antibody is recommended for ChIP assays.

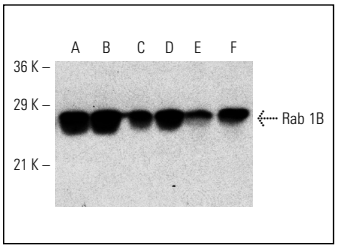
Molecular Weight of Rab 1B: 22 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, HeLa whole cell lysate: sc-2200 or mouse liver extract: sc-2256.

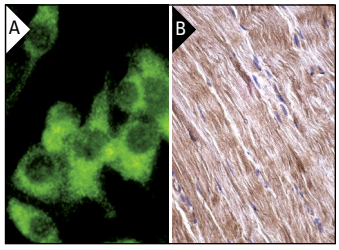
STORAGE

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

DATA



Rab 1B (G-20): sc-599. Western blot analysis of Rab 1B expression in NIH/3T3 (**A**), NRK (**B**), CHO (**C**) and HeLa (**D**) whole cell lysates and rat liver (**E**) and mouse liver (**F**) tissue extracts.



Rab 1B (G-20): sc-599. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing cytoplasmic localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human skeletal muscle tissue showing cytoplasmic staining of myocyte cells (**B**).

SELECT PRODUCT CITATIONS

1. Metivier, R., et al. 2003. Estrogen receptor-α directs ordered, cyclical, and combinatorial recruitment of cofactors on a natural target promoter. Cell 115: 751-763.
2. Peraire, J., et al. 2007. HIV-1-infected long-term non-progressors have milder mitochondrial impairment and lower mitochondrially-driven apoptosis in peripheral blood mononuclear cells than typical progressors. Curr. HIV Res. 5: 467-473.
3. Zhang, X., et al. 2009. Rab1 GTPase and dimerization in the cell surface expression of angiotensin II type 2 receptor. J. Pharmacol. Exp. Ther. 330: 109-117.
4. McGivern, D.R., et al. 2009. Impaired replication of hepatitis C virus containing mutations in a conserved NS5B retinoblastoma protein-binding motif. J. Virol. 83: 7422-7433.
5. Ciccosanti, F., et al. 2010. Proteomic analysis identifies prohibitin down-regulation as a crucial event in the mitochondrial damage observed in HIV-infected patients. Antivir. Ther. 15: 377-390.
6. Zenner, H.L., et al. 2011. Analysis of Rab GTPase-activating proteins indicates that Rab1a/b and Rab43 are important for herpes simplex virus 1 secondary envelopment. J. Virol. 85: 8012-8021.

RESEARCH USE

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