SANTA CRUZ BIOTECHNOLOGY, INC.

Rab 9A (6D717): sc-71950

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The Ras-related superfamily of guanine nucleotide binding proteins includes the R-Ras, Rap, Ral/Rec and Rho/Rab subfamilies, all of which are thought to play an important role in either endocytosis or in biosynthetic protein transport. The process of transporting newly synthesized proteins from the endoplasmic reticulum (ER) to various stacks of the Golgi complex, and to secretory vesicles, involves the movement of carrier vesicles and requires Rab protein function. Rab proteins are also an integral part of endocytic pathways. Rab 9A is a 201 amino acid protein that localizes to the cytoplasmic side of the cell membrane, as well as to the membrane of the Golgi apparatus and the ER, and is involved in the transport of proteins between endosomes and the *trans* Golgi network.

REFERENCES

1. Davies, J.P., et al. 1997. Cloning and mapping of human Rab 7 and Rab 9 cDNA sequences and identification of a Rab 9 pseudogene. Genomics 41: 131-134.
2. Díaz, E., et al. 1997. A novel Rab 9 effector required for endosome-to-TGN transport. J. Cell Biol. 138: 283-290.
3. de Leeuw, H.P., et al. 1998. Small GTP-binding proteins in human endothelial cells. Br. J. Haematol. 103: 15-19.
4. Seki, N., et al. 2000. cDNA cloning of a new member of the Ras superfamily, Rab 9-like, on the human chromosome Xq22.1-q22.3 region. J. Hum. Genet. 45: 318-322.
5. Carroll, K.S., et al. 2001. Role of Rab 9 GTPase in facilitating receptor recruitment by TIP47. Science 292: 1373-1376.
6. Barbero, P., et al. 2002. Visualization of Rab 9-mediated vesicle transport from endosomes to the *trans*-Golgi in living cells. J. Cell Biol. 156: 511-518.
7. Walter, M., et al. 2003. Telomerase immortalization upregulates Rab 9 expression and restores LDL cholesterol egress from Niemann-Pick C1 late endosomes. J. Lipid Res. 44: 243-253.
8. Ganley, I.G., et al. 2004. Rab 9 GTPase regulates late endosome size and requires effector interaction for its stability. Mol. Biol. Cell 15: 5420-5430.

CHROMOSOMAL LOCATION

Genetic locus: RAB9A (human) mapping to Xp22.2; Rab9 (mouse) mapping to X F5.

SOURCE

Rab 9A (6D717) is a mouse monoclonal antibody raised against full length Rab 9 of canine 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.

RESEARCH USE

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

APPLICATIONS

Rab 9A (6D717) is recommended for detection of prenylated and non-prenylated Rab 9 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500); non cross-reactive with other Rab family members.

Rab 9A (6D717) is also recommended for detection of prenylated and non-prenylated Rab 9 in additional species, including canine, bovine and feline.

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.

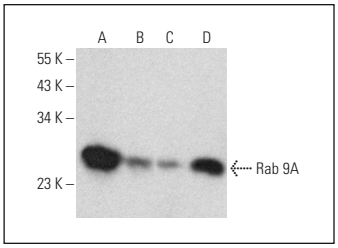
Molecular Weight of Rab 9A: 23 kDa.

Positive Controls: A-10 cell lysate: sc-3806, HeLa whole cell lysate: sc-2200 or K-562 whole cell lysate: sc-2203.

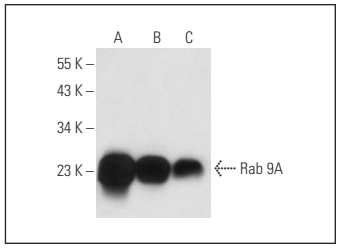
RECOMMENDED SUPPORT REAGENTS

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.

DATA



Rab 9A (6D717): sc-71950. Western blot analysis of Rab 9A expression in HeLa (**A**), Jurkat (**B**), Hep G2 (**C**) and MCF7 (**D**) whole cell lysates.



Rab 9A (6D717): sc-71950. Western blot analysis of Rab 9A expression in HeLa (**A**), K-562 (**B**) and A-10 (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Zhu, X., et al. 2019. Effects of miR-340 overexpression and knockdown on the proliferation and metastasis of NSCLC cell lines. Int. J. Mol. Med. 44: 643-651.

STORAGE

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