SANTA CRUZ BIOTECHNOLOGY, INC.

Rab 25 (D-3): sc-166204

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. Increasing data suggests an important role for Rab proteins in either endocytosis or in biosynthetic protein transport. The process of transporting newly synthesized proteins from the endoplasmic reticulum 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 25, also known as CATX-8 or Rab 11C, is a member of the Rab family of proteins that is exclusively expressed in epithelial cells and participates in apical vesicle trafficking. Rab 25 is overexpressed in ovarian and breast cancer cells and has been associated with metastasis and tumor aggressiveness. The forced expression of Rab 25 in ovarian and breast cancer cells increases cell proliferation *in vivo*.

REFERENCES

1. Chavrier, P., et al. 1992. The complexity of the Rab and Rho GTP-binding protein subfamilies revealed by a PCR cloning approach. Gene 112: 261-264.
2. Baldini, G., et al. 1992. Cloning of a Rab 3 isotype predominately expressed in adipocytes. Proc. Natl. Acad. Sci. USA 89: 5049-5052.
3. Chen, Y., et al. 1993. Expression and localization of two low molecular weight GTP-binding proteins, Rab 8 and Rab 10, by epitope tag. Proc. Natl. Acad. Sci. USA 90: 6508-6512.
4. Karniguian, A., et al. 1993. Identification of small GTP-binding Rab proteins in human platelets: thrombin-induced phosphorylation of Rab 3B, Rab 6, and Rab 8 proteins. Proc. Natl. Acad. Sci. USA 90: 7647-7651.
5. Novick, P. and Brennwald, P. 1993. Friends and family: the role of the Rab GTPases in vesicular traffic. Cell 75: 597-601.
6. Feng, Y., et al. 1995. Rab 7: an important regulator of late endocytic membrane traffic. J. Cell Biol. 131: 1435-1452.
7. Soldati, T., et al. 1995. Rab 7 and Rab 9 are recruited onto late endosomes by biochemically distinguishable processes. J. Biol. Chem. 270: 25541-25548.

CHROMOSOMAL LOCATION

Genetic locus: RAB25 (human) mapping to 1q22.

SOURCE

Rab 25 (D-3) is a mouse monoclonal antibody raised against amino acids 163-213 mapping at the C-terminus of Rab 25 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.

STORAGE

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

APPLICATIONS

Rab 25 (D-3) is recommended for detection of Rab 25 of 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Rab 25 siRNA (h): sc-76325, Rab 25 shRNA Plasmid (h): sc-76325-SH and Rab 25 shRNA (h) Lentiviral Particles: sc-76325-V.

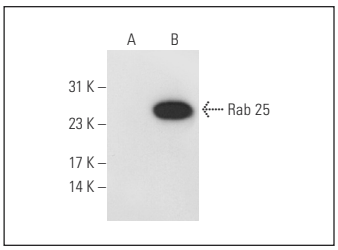
Molecular Weight of Rab 25: 24 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203 or Rab 25 (h): 293T Lysate: sc-114009.

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 25 (D-3): sc-166204. Western blot analysis of Rab 25 expression in non-transfected: sc-117752 (**A**) and human Rab 25 transfected: sc-114009 (**B**) 293T whole cell lysates.

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.