

Rab 45 (SJ-12): sc-81925

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 45, also known as RASEF (RAS and EF-hand domain containing protein), is a member of the Rab family of proteins that contains two EF-hand domains, a coiled-coil motif and one C-terminal Rab domain. Localizing to the perinuclear region of the cytoplasm, Rab 45 can form a homodimer and binds both GDP and GTP. Rab 45 expression is downregulated in cutaneous melanoma cells, suggesting a possible role for Rab 45 as a tumor suppressor.

REFERENCES

1. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 611344. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
2. Sweetser, D.A., et al. 2005. Delineation of the minimal commonly deleted segment and identification of candidate tumor-suppressor genes in del(9q) acute myeloid leukemia. *Genes Chromosomes Cancer* 44: 279-291.
3. Jönsson, G., et al. 2005. Mapping of a novel ocular and cutaneous malignant melanoma susceptibility locus to chromosome 9q21.32. *J. Natl. Cancer Inst.* 97: 1377-1382.
4. Kokkinakis, D.M., et al. 2006. Mitotic arrest, apoptosis, and sensitization to chemotherapy of melanomas by methionine deprivation stress. *Mol. Cancer Res.* 4: 575-589.

CHROMOSOMAL LOCATION

Genetic locus: RASEF (human) mapping to 9q21.32; Rasef (mouse) mapping to 4 C3.

SOURCE

Rab 45 (SJ-12) is a mouse monoclonal antibody raised against recombinant Rab 45 of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2b} 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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

APPLICATIONS

Rab 45 (SJ-12) is recommended for detection of Rab 45 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).

Suitable for use as control antibody for Rab 45 siRNA (h): sc-92603, Rab 45 siRNA (m): sc-152649, Rab 45 shRNA Plasmid (h): sc-92603-SH, Rab 45 shRNA Plasmid (m): sc-152649-SH, Rab 45 shRNA (h) Lentiviral Particles: sc-92603-V and Rab 45 shRNA (m) Lentiviral Particles: sc-152649-V.

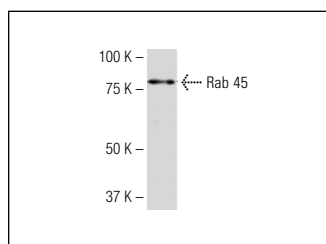
Molecular Weight of Rab 45: 83 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203.

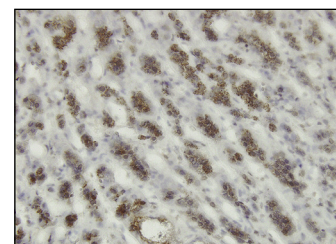
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Rab 45 (SJ-12): sc-81925. Western blot analysis of Rab 45 expression in K-562 whole cell lysate.



Rab 45 (SJ-12): sc-81925. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human adrenal gland tissue showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Nakamura, S., et al. 2011. Small GTPase RAB45-mediated p38 activation in apoptosis of chronic myeloid leukemia progenitor cells. *Carcinogenesis* 32: 1758-1772.
2. Pankow, S., et al. 2015. ΔF508 CFTR interactome remodelling promotes rescue of cystic fibrosis. *Nature* 528: 510-516.

RESEARCH USE

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