Rab 3 GAP p130 (T-16): sc-243916



The Power to Question

BACKGROUND

Rab3 proteins are involved in regulated exocytosis of neurotransmitters and hormones. Rab 3 GAP p130, also known as Rab3 GTPase-activating protein catalytic subunit, is a 981 amino acid protein that belongs to the Rab3-GAP catalytic subunit family. Rab 3 GAP p130 converts active RAB3-GTP to the inactive form RAB3-GDP, and is required for normal eye and brain development. Defects in Rab 3 GAP p130 are the cause of Warburg micro syndrome 1 (WARBM1). WARBM1 is a severe autosomal recessive disorder characterized by developmental abnormalities of the eye and central nervous system and by microgenitalia. The Rab 3 GAP p130 protein may participate in neurodevelopmental processes such as proliferation, migration and differentiation before synapse formation, and non-synaptic vesicular release of neurotransmitters. Existing as two alternatively spliced isoforms, the Rab 3 GAP p130 gene is conserved in chimpanzee, dog, cow, mouse, chicken, zebrafish and fruit fly, and maps to human chromosome 2q21.3.

REFERENCES

- Fukui, K., Sasaki, T., Imazumi, K., Matsuura, Y., Nakanishi, H. and Takai, Y. 1997. Isolation and characterization of a GTPase activating protein specific for the Rab3 subfamily of small G proteins. J. Biol. Chem. 272: 4655-4658.
- Oishi, H., Sasaki, T., Nagano, F., Ikeda, W., Ohya, T., Wada, M., Ide, N., Nakanishi, H. and Takai, Y. 1998. Localization of the Rab3 small G protein regulators in nerve terminals and their involvement in Ca²⁺-dependent exocytosis. J. Biol. Chem. 273: 34580-34585.
- 3. Online Mendelian Inheritance in Man, OMIM™. 1998. Johns Hopkins University, Baltimore, MD. MIM Number: 602536. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
- 4. Clabecq, A., Henry, J.P. and Darchen, F. 2000. Biochemical characterization of Rab3-GTPase-activating protein reveals a mechanism similar to that of Ras-GAP. J. Biol. Chem. 275: 31786-31791.
- Aligianis, I.A., Johnson, C.A., Gissen, P., Chen, D., Hampshire, D., Hoffmann, K., Maina, E.N., Morgan, N.V., Tee, L., Morton, J., Ainsworth, J.R., Horn, D., Rosser, E., Cole, T.R., Stolte-Dijkstra, I., Fieggen, K., et al. 2005. Mutations of the catalytic subunit of RAB3GAP cause Warburg Micro syndrome. Nat. Genet. 37: 221-223.
- Sakane, A., Manabe, S., Ishizaki, H., Tanaka-Okamoto, M., Kiyokage, E., Toida, K., Yoshida, T., Miyoshi, J., Kamiya, H., Takai, Y. and Sasaki, T. 2006. Rab3 GTPase-activating protein regulates synaptic transmission and plasticity through the inactivation of Rab3. Proc. Natl. Acad. Sci. USA 103: 10029-10034.

CHROMOSOMAL LOCATION

Genetic locus: RAB3GAP1 (human) mapping to 2q21.3.

SOURCE

Rab 3 GAP p130 (T-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Rab 3 GAP p130 of human origin.

PRODUCT

Each vial contains 200 μg IgG in 1.0 ml of PBS with <0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-243916 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Rab 3 GAP p130 (T-16) is recommended for detection of Rab 3 GAP p130 of 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with Rab 3 GAP p150.

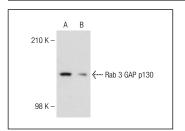
Rab 3 GAP p130 (T-16) is also recommended for detection of Rab 3 GAP p130 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for Rab 3 GAP p130 siRNA (h): sc-94704, Rab 3 GAP p130 shRNA Plasmid (h): sc-94704-SH and Rab 3 GAP p130 shRNA (h) Lentiviral Particles: sc-94704-V.

Molecular Weight of Rab 3 GAP p130 isoforms: 111/8 kDa.

Positive Controls: K-562 nuclear extract: sc-2130 or IMR-32 nuclear extract: sc-2148.

DATA



Rab 3 GAP p130 (T-16): sc-243916. Western blot analysis of Rab 3 GAP p130 expression in K-562 (**A**) and IMR-32 (**B**) nuclear extracts.

STORAGE

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

RESEARCH USE

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



Try Rab 3 GAP p130 (G-3): sc-393540 or Rab 3 GAP p130 (G-5): sc-393745, our highly recommended monoclonal alternatives to Rab 3 GAP p130 (T-16).

Santa Cruz Biotechnology, Inc. 1.800.457.3801 831.457.3801 Fax 831.457.3801 Europe +00800 4573 8000 49 6221 4503 0 www.scbt.com