SANTA CRUZ BIOTECHNOLOGY, INC.

Rab 14 (P-23): sc-133938

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 14, also known as FBP, is a 215 amino acid protein that is lipid-anchored to the cytoplasmic side of the cell membrane. One of several members of the Rab subfamily of small GTPases, Rab 14 is thought to be involved in vesicular trafficking and neurotransmitter release throughout the body and is expressed at high levels in brain, lung, kidney, spleen and thymus.

REFERENCES

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2. Chen, D., Guo, J. and Gahl, W.A. 1997. Rab GTPases expressed in human melanoma cells. Biochim. Biophys. Acta 1355: 1-6.
3. Zhao, H., Ettala, O. and Väänänen, H.K. 2002. Intracellular membrane trafficking pathways in bone-resorbing osteoclasts revealed by cloning and subcellular localization studies of small GTP-binding Rab proteins. Biochem. Biophys. Res. Commun. 293: 1060-1065.
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6. Gou, D., Mishra, A., Weng, T., Su, L., Chintagari, N.R., Wang, Z., Zhang, H., Gao, L., Wang, P., Stricker, H.M. and Liu, L. 2008. Annexin A2 interactions with Rab 14 in alveolar type II cells. J. Biol. Chem. 283: 13156-13164.
7. Fukuda, M., Kanno, E., Ishibashi, K. and Itoh, T. 2008. Large scale screening for novel Rab effectors reveals unexpected broad Rab binding specificity. Mol. Cell Proteomics. 7: 1031-1042.

CHROMOSOMAL LOCATION

Genetic locus: RAB14 (human) mapping to 9q33.2; Rab14 (mouse) mapping to 2 B.

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 or our catalog for detailed protocols and support products.

SOURCE

Rab 14 (P-23) is an affinity purified rabbit polyclonal antibody raised against synthetic Rab 14 peptide of human origin.

PRODUCT

Each vial contains 50 µg IgG in 500 µl PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

APPLICATIONS

Rab 14 (P-23) is recommended for detection of Rab 14 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Rab 14 siRNA (h): sc-76312, Rab 14 siRNA (m): sc-76313, Rab 14 shRNA Plasmid (h): sc-76312-SH, Rab 14 shRNA Plasmid (m): sc-76313-SH, Rab 14 shRNA (h) Lentiviral Particles: sc-76312-V and Rab 14 shRNA (m) Lentiviral Particles: sc-76313-V.

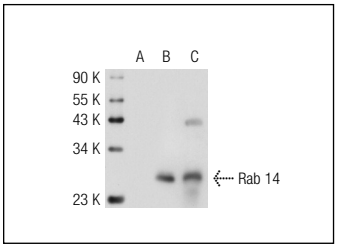
Molecular Weight of Rab 14: 24 kDa.

Positive Controls: Rab 14 (m): 293T Lysate: sc-127427, mouse brain extract: sc-2253 or Hep G2 cell lysate: sc-2227.

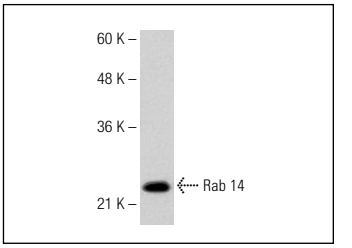
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



Rab 14 (P-23): sc-133938. Western blot analysis of Rab 14 expression in non-transfected: sc-117752 (**A**) and mouse Rab 14 transfected: sc-127428 (**B**) 293T whole cell lysates and mouse brain tissue extract (**C**).



Rab 14 (P-23): sc-133938. Western blot analysis of Rab 14 expression in Hep G2 whole cell lysate.

RESEARCH USE

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