

Rab 14 (E-19): sc-69235

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

1. Olkkonen, V.M., et al. 1993. Molecular cloning and subcellular localization of three GTP-binding proteins of the Rab subfamily. *J. Cell Sci.* 106: 1249-1261.
2. Chen, D., et al. 1997. Rab GTPases expressed in human melanoma cells. *Biochim. Biophys. Acta* 1355: 1-6.
3. Zhao, H., et al. 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.
4. Junutula, J.R., et al. 2004. Rab14 is involved in membrane trafficking between the Golgi complex and endosomes. *Mol. Biol. Cell* 15: 2218-2229.
5. Echard, A. 2008. Membrane traffic and polarization of lipid domains during cytokinesis. *Biochem. Soc. Trans.* 36: 395-399.
6. Gou, D., et al. 2008. Annexin A2 interactions with Rab 14 in alveolar type II cells. *J. Biol. Chem.* 283: 13156-13164.
7. Fukuda, M., et al. 2008. Large scale screening for novel Rab effectors reveals unexpected broad Rab binding specificity. *Mol. Cell Proteomics* 7: 1031-1042.
8. Kitt, K.N., et al. 2008. Rab 14 regulates apical targeting in polarized epithelial cells. *Traffic* 9: 1218-1231.

CHROMOSOMAL LOCATION

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

SOURCE

Rab 14 (E-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Rab 14 of human origin.

STORAGE

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

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-69235 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Rab 14 (E-19) 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), 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).

Rab 14 (E-19) is also recommended for detection of Rab 14 in additional species, including equine, canine, bovine, porcine and avian.

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: LADMAC whole cell lysate: sc-364189, 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 donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

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

PROTOCOLS

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



Try **Rab 14 (D-5): sc-271401**, our highly recommended monoclonal alternative to Rab 14 (E-19).