

Rab 14 (H-55): sc-98610

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. Rab 14 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.

CHROMOSOMAL LOCATION

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

SOURCE

Rab 14 (H-55) is a rabbit polyclonal antibody raised against amino acids 161-215 mapping at the C-terminus of Rab 14 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.

RESEARCH USE

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

APPLICATIONS

Rab 14 (H-55) 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)], 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).

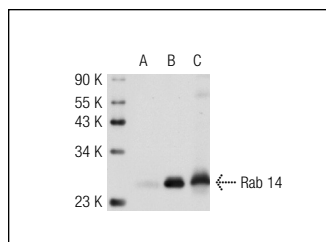
Rab 14 (H-55) is also recommended for detection of Rab 14 in additional species, including equine, canine, bovine, porcine and avian.

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.

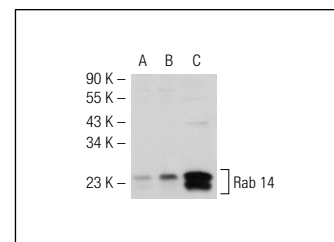
Molecular Weight of Rab 14: 24 kDa.

Positive Controls: Rab 14 (m): 293T Lysate: sc-127427 or mouse brain tissue extract.

DATA



Rab 14 (H-55): sc-98610. 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 (H-55): sc-98610. Western blot analysis of Rab 14 expression in non-transfected 293T: sc-117752 (A), mouse Rab 14 transfected 293T: sc-127427 (B) and LADMAC (C) whole cell lysates.

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.



Try **Rab 14 (D-5): sc-271401**, our highly recommended monoclonal alternative to Rab 14 (H-55).