

Rab 14 (D-5): sc-271401

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.

CHROMOSOMAL LOCATION

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

SOURCE

Rab 14 (D-5) is a mouse monoclonal antibody raised against amino acids 161-215 mapping at the C-terminus of Rab 14 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Rab 14 (D-5) is available conjugated to agarose (sc-271401 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271401 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271401 PE), fluorescein (sc-271401 FITC), Alexa Fluor® 488 (sc-271401 AF488), Alexa Fluor® 546 (sc-271401 AF546), Alexa Fluor® 594 (sc-271401 AF594) or Alexa Fluor® 647 (sc-271401 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271401 AF680) or Alexa Fluor® 790 (sc-271401 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Rab 14 (D-5) is recommended for detection of Rab 14 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Rab 14 (D-5) 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.

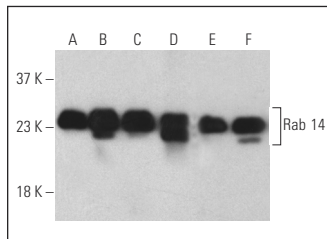
Molecular Weight of Rab 14: 24 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

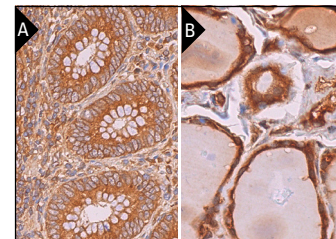
STORAGE

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

DATA



Rab 14 (D-5): sc-271401. Western blot analysis of Rab 14 expression in Hep G2 (A), HeLa (B), Raji (C), NIH/3T3 (E) and LADMAC (F) whole cell lysates and human kidney tissue extract (D). Detection reagent used: m-IgG₁ BP-HRP: sc-525408.



Rab 14 (D-5): sc-271401. Immunoperoxidase staining of formalin fixed, paraffin-embedded human appendix tissue showing cytoplasmic staining of glandular and lymphoid cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human thyroid tissue showing cytoplasmic staining of glandular cells (B).

SELECT PRODUCT CITATIONS

- Kim, M., et al. 2015. MIR144 and MIR451 regulate human erythropoiesis via Rab 14. *Br. J. Haematol.* 168: 583-597.
- Gil-Krzewska, A., et al. 2018. An Actin cytoskeletal barrier inhibits lytic granule release from natural killer cells in patients with Chediak-Higashi syndrome. *J. Allergy Clin. Immunol.* 142: 914-927.e6.
- Capmany, A., et al. 2019. Akt/AS160 signaling pathway inhibition impairs infection by decreasing Rab 14-controlled sphingolipids delivery to chlamydial inclusions. *Front. Microbiol.* 10: 666.
- Zhang, H., et al. 2020. LncRNA CASC15 is upregulated in osteosarcoma plasma exosomes and CASC15 knockdown inhibits osteosarcoma progression by regulating miR-338-3p/Rab 14 axis. *Oncotargets Ther.* 13: 12055-12066.
- Giacometti, J., et al. 2020. Olive Leaf Polyphenols (OLPs) stimulate GLUT4 expression and translocation in the skeletal muscle of diabetic rats. *Int. J. Mol. Sci.* 21: 8981.
- Hoffman, H.K., et al. 2022. Endocytosed HIV-1 envelope glycoprotein traffics to Rab14+ late endosomes and lysosomes to regulate surface levels in T-cell lines. *J. Virol.* 96: e0076722.
- Ferioti, C., et al. 2022. *Klebsiella pneumoniae* hijacks the Toll-IL-1R protein SARM1 in a type I IFN-dependent manner to antagonize host immunity. *Cell Rep.* 40: 111167.
- Angelini, G., et al. 2023. Accurate liquid biopsy for the diagnosis of non-alcoholic steatohepatitis and liver fibrosis. *Gut* 72: 392-403.

RESEARCH USE

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

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