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Rab 2A (Q-13): sc-26547



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 2A (Ras-related protein Rab-2A) and Rab 2B (Ras-related protein Rab-2B) are 212 and 216 amino acid proteins, respectively, that belong to the Ras-related GTPase superfamily. While both Rab 2A and Rab 2B are required for protein transport from the ER to the Golgi, Rab 2A is lipid-anchored to the ER-Golgi intermediate compartment membrane while Rab 2B is lipid anchored to the cytoplasmic side of the cell membrane.

REFERENCES

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- 2. Ni, X., et al. 2002. Molecular cloning and characterization of a novel human Rab (Rab 2B) gene. J. Hum. Genet. 47: 548-551.
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- Ali, B.R., et al. 2004. Multiple regions contribute to membrane targeting of Rab GTPases. J. Cell Sci. 117: 6401-6412.
- Itoh, T., et al. 2006. Screening for target Rabs of TBC (Tre-2/Bub2/Cdc16) domain-containing proteins based on their Rab-binding activity. Genes Cells 11: 1023-1037.
- Mountjoy, J.R., et al. 2008. Rab 2A: a major subacrosomal protein of bovine spermatozoa implicated in acrosomal biogenesis. Biol. Reprod. 79: 223-232.
- Chun, D.K., et al. 2008. UNC-108/Rab 2 regulates postendocytic trafficking in *Caenorhabditis elegans*. Mol. Biol. Cell 19: 2682-2695.

CHROMOSOMAL LOCATION

Genetic locus: RAB2 (human) mapping to 8q12.1; Rab2 (mouse) mapping to 4 A1.

SOURCE

Rab 2A (Q-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Rab 2A of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-26547 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Rab 2A (Q-13) is recommended for detection of Rab 2A of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 2A (Q-13) is also recommended for detection of Rab 2A in additional species, including equine and canine.

Suitable for use as control antibody for Rab 2A siRNA (h): sc-41810, Rab 2A siRNA (m): sc-41811, Rab 2A shRNA Plasmid (h): sc-41810-SH, Rab 2A shRNA Plasmid (m): sc-41811-SH, Rab 2A shRNA (h) Lentiviral Particles: sc-41810-V and Rab 2A shRNA (m) Lentiviral Particles: sc-41811-V.

Molecular Weight of Rab 2A: 24 kDa.

Positive Controls: Rab 2A (h): 293T Lysate: sc-117751.

DATA





Rab 2A (0-13): sc-26547. Western blot analysis of Rab 2A expression in non-transfected: sc-117752 (**A**) and human Rab 2 transfected: sc-117751 (**B**) 293T whole cell lysates.

Rab 2A (Q-13): sc-26547. Immunoperoxidase staining of formalin fixed, paraffin-embedded human small intestine tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

 Corbi, D., et al. 2014. Multisite phosphorylation of the Sum1 transcriptional repressor by S-phase kinases controls exit from meiotic prophase in yeast. Mol. Cell. Biol. 34: 2249-2263.

STORAGE

Store at 4° C, **D0 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.

MONOS Satisfation Guaranteed

Try **Rab 2 (A-8): sc-133081** or **Rab 2A (H-5): sc-515612**, our highly recommended monoclonal alternatives to Rab 2A (Q-13).