

Rabenosyn-5 (C-19): sc-82729

BACKGROUND

Zinc-finger proteins contain DNA-binding domains and have a wide variety of functions, most of which encompass some form of transcriptional activation or repression. Rabenosyn-5, also known as ZFYVE20 (zinc finger, FYVE domain containing 20), is a 784 amino acid cell membrane protein that contains a C₂H₂-type zinc finger, a FYVE-type zinc finger and a ubiquitin-interacting motif (UIM repeat). The FYVE domain is a cysteine-rich domain of about 70 amino acids. Its primary role is to target signal-transducing proteins to cell membranes through binding to the membrane lipid PIP3 (phosphatidylinositol-3-phosphate) with high specificity. Considered an effector protein, Rabenosyn-5 is required for endosome fusion either homotypically or with clathrin coated vesicles and is involved in the lysosomal trafficking of cathepsin D from the Golgi to lysosomes. Rabenosyn-5 promotes the recycling of transferrin directly from early endosomes to the plasma membrane and binds phospholipid vesicles containing PIP3.

REFERENCES

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- Naslavsky, N., et al. 2004. Rabenosyn-5 and EHD1 interact and sequentially regulate protein recycling to the plasma membrane. *Mol. Biol. Cell* 15: 2410-2422.
- Eathiraj, S., et al. 2005. Structural basis of family-wide Rab GTPase recognition by Rabenosyn-5. *Nature* 436: 415-419.
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- Gengyo-Ando, K., et al. 2007. The SM protein VPS-45 is required for Rab 5-dependent endocytic transport in *Caenorhabditis elegans*. *EMBO Rep.* 8: 152-157.
- Fichtman, B., et al. 2008. EHDS are serine phosphoproteins: EHD1 phosphorylation is enhanced by serum stimulation. *Cell. Mol. Biol. Lett.* 13: 632-648.
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CHROMOSOMAL LOCATION

Genetic locus: ZFYVE20 (human) mapping to 3p25.1; Zfyve20 (mouse) mapping to 6 D1.

SOURCE

Rabenosyn-5 (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Rabenosyn-5 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.

Blocking peptide available for competition studies, sc-82729 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Rabenosyn-5 (C-19) is recommended for detection of Rabenosyn-5 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).

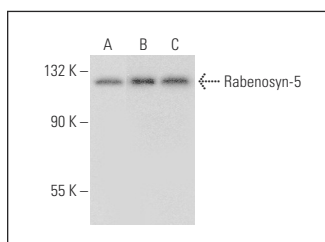
Rabenosyn-5 (C-19) is also recommended for detection of Rabenosyn-5 in additional species, including equine, canine and porcine.

Suitable for use as control antibody for Rabenosyn-5 siRNA (h): sc-76333, Rabenosyn-5 siRNA (m): sc-76334, Rabenosyn-5 shRNA Plasmid (h): sc-76333-SH, Rabenosyn-5 shRNA Plasmid (m): sc-76334-SH, Rabenosyn-5 shRNA (h) Lentiviral Particles: sc-76333-V and Rabenosyn-5 shRNA (m) Lentiviral Particles: sc-76334-V.

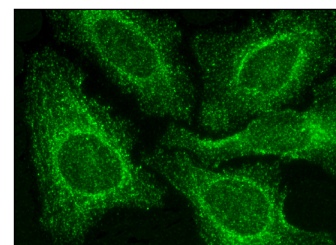
Molecular Weight of Rabenosyn-5: 120 kDa.

Positive Controls: HUV-EC-C whole cell lysate: sc-364180, A549 cell lysate: sc-2413 or HeLa whole cell lysate: sc-2200.

DATA



Rabenosyn-5 (C-19): sc-82729. Western blot analysis of Rabenosyn-5 expression in HUV-EC-C (A), HeLa (B) and A549 (C) whole cell lysates.



Rabenosyn-5 (C-19): sc-82729. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic vesicles localization.

STORAGE

Store at 4° C, **DO 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.

PROTOCOLS

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