VPS13D (C-17): sc-104753

SANTA CRUZ
BIOTECHNOLOGY

The Power to Question

BACKGROUND

The vacuolar protein sorting (VPS) pathway regulates protein sorting and vesicle-mediated intracellular transport. VPSs are required for proper trafficking of endocytic and biosynthetic proteins to the vacuole and play an important role in the budding process of cells. In *Saccharomyces cerevisiae*, mutations in VPS genes result in secretion of proteins normally localized to the vacuole. VPS13C (vacuolar protein sorting 13 homolog C) is a 3,753 amino acid protein that belongs to the VPS family and is expressed in a variety of tissues. VPS13C shares significant similarities with yeast homolog and other VPS13 proteins of human origin. VPS13C exists as four alternatively spliced isoforms and is encoded by a gene located on human chromosome 15, which houses over 700 genes and comprises nearly 3% of the human genome. Angelman syndrome, Prader-Willi syndrome, Tay-Sachs disease and Marfan syndrome are all associated with defects in chromosome 15-localized genes.

REFERENCES

1. Burd C.G., et al. 1996. A yeast protein related to a mammalian Ras-binding protein, Vps9p, is required for localization of vacuolar proteins. Mol. Cell. Biol. 16: 2369-2377.

2. Rampoldi, L., et al. 2001. A conserved sorting-associated protein is mutant in chorea-acanthocytosis. Nat. Genet. 28: 119-120.

3. Garrus, J.E., et al. 2001. Tsg101 and the vacuolar protein sorting pathway are essential for HIV-1 budding. Cell 107: 55-65.

4. Slagsvold, T. and Stenmark, H. 2004. The structure of an endosomal protein sorter. Dev. Cell 7: 457-458.

5. Velayos-Baeza, A., et al. 2004. Analysis of the human VPS13 gene family. Genomics 84: 536-549.

6. Online Mendelian Inheritance in Man, OMIM™. 2004. Johns Hopkins University, Baltimore, MD. MIM Number: 608879. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

7. Mizuno, E., et al. 2007. Brain-specific transcript variants of 5' and 3' ends of mouse VPS13A and VPS13C. Biochem. Biophys. Res. Commun. 353: 902-907.

CHROMOSOMAL LOCATION

Genetic locus: VPS13D (human) mapping to 1p36.22; Vps13d (mouse) mapping to 4 E1.

SOURCE

VPS13D (C-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of VPS13D 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-104753 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

VPS13D (C-17) is recommended for detection of VPS13D 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).

Suitable for use as control antibody for VPS13D siRNA (h): sc-88079, VPS13D siRNA (m): sc-106695, VPS13D shRNA Plasmid (h): sc-88079-SH, VPS13D shRNA Plasmid (m): sc-106695-SH, VPS13D shRNA (h) Lentiviral Particles: sc-88079-V and VPS13D shRNA (m) Lentiviral Particles: sc-106695-V.

Molecular Weight of VPS13D: 492 kDa.

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.

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.