

VPS41 (C-18): sc-79354

BACKGROUND

Vacuolar sorting proteins (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. VPS41 (vacuolar protein sorting 41), also known as HVPS41, is an 854 amino acid protein that contains one clathrin repeat and one RING-type zinc finger. Existing as two alternatively spliced isoforms, designated short and long, VPS41 is required for proper vacuolar assembly and vacuolar traffic, playing a role in the formation and fusion of transport vesicles from the Golgi. The gene encoding VPS41 maps to human chromosome 7, which houses over 1,000 genes and comprises nearly 5% of the human genome. Defects in some of the genes localized to chromosome 7 have been linked to osteogenesis imperfecta, Williams-Beuren syndrome, Pendred syndrome, lissencephaly, citrullinemia and Shwachman-Diamond syndrome.

REFERENCES

1. Radisky, D.C., et al. 1997. Characterization of VPS41, a gene required for vacuolar trafficking and high-affinity iron transport in yeast. *Proc. Natl. Acad. Sci. USA* 94: 5662-5666.
2. Rehling, P., et al. 1999. Formation of AP-3 transport intermediates requires Vps41 function. *Nat. Cell Biol.* 1: 346-353.
3. McVey Ward, D., et al. 2001. hVPS41 is expressed in multiple isoforms and can associate with vesicles through a RING-H2 finger motif. *Exp. Cell Res.* 267: 126-134.
4. Online Mendelian Inheritance in Man, OMIM™. 2001. Johns Hopkins University, Baltimore, MD. MIM Number: 605485. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Takeda, K., et al. 2008. The vacuolar V1/V0-ATPase is involved in the release of the HOPS subunit Vps41 from vacuoles, vacuole fragmentation and fusion. *FEBS Lett.* 582: 1558-1563.
6. Brett, C.L., et al. 2008. Efficient termination of vacuolar Rab GTPase signaling requires coordinated action by a GAP and a protein kinase. *J. Cell Biol.* 182: 1141-1151.

CHROMOSOMAL LOCATION

Genetic locus: VPS41 (human) mapping to 7p14.1; Vps41 (mouse) mapping to 13 A2.

SOURCE

VPS41 (C-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of VPS41 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-79354 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

VPS41 (C-18) is recommended for detection of VPS41 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).

VPS41 (C-18) is also recommended for detection of VPS41 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for VPS41 siRNA (h): sc-76907, VPS41 siRNA (m): sc-76908, VPS41 shRNA Plasmid (h): sc-76907-SH, VPS41 shRNA Plasmid (m): sc-76908-SH, VPS41 shRNA (h) Lentiviral Particles: sc-76907-V and VPS41 shRNA (m) Lentiviral Particles: sc-76908-V.

Molecular Weight of VPS41: 99 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.

PROTOCOLS

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


 MONOS
Satisfaction
Guaranteed

Try **VPS41 (D-12): sc-377118** or **VPS41 (E-10): sc-377271**, our highly recommended monoclonal alternatives to VPS41 (C-18).