# VPS29 (N-15): sc-69121



The Power to Overtin

### **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. VPS29 (vacuolar protein sorting 29 homolog), also known as DC7, DC15 or PEP11, is a 182 amino acid peripheral membrane protein that localizes to both the cytoplasm and to the endosomal membrane and exists as a component of a large multimeric retromer complex. VPS29 is expressed at high levels in heart, lung, placenta, spleen, peripheral blood leukocytes, thymus, colon skeletal muscle, kidney and brain, where it plays an important role in retrograde transport of proteins from endosomes to the *trans*-Golgi network. Multiple isoforms of VPS29 exist due to alternative splicing events.

## **REFERENCES**

- Damen, E., Krieger, E., Nielsen, J.E., Eygensteyn, J. and van Leeuwen, J.E. 2006. The human Vps29 retromer component is a metallo-phosphoesterase for a cation-independent mannose 6-phosphate receptor substrate peptide. Biochem. J. 398: 399-409.
- 2. Shimada, T., Koumoto, Y., Li, L., Yamazaki, M., Kondo, M., Nishimura, M. and Hara-Nishimura, I. 2006. AtVPS29, a putative component of a retromer complex, is required for the efficient sorting of seed storage proteins. Plant Cell Physiol. 47: 1187-1194.
- 3. Verges, M., Sebastián, I. and Mostov, K.E. 2007. Phosphoinositide 3-kinase regulates the role of retromer in transcytosis of the polymeric immunoglobulin receptor. Exp. Cell Res. 313: 707-718.
- Wassmer, T., Attar, N., Bujny, M.V., Oakley, J., Traer, C.J. and Cullen, P.J. 2007. A loss-of-function screen reveals SNX5 and SNX6 as potential components of the mammalian retromer. J. Cell Sci. 120: 45-54.
- Rojas, R., Kametaka, S., Haft, C.R. and Bonifacino, J.S. 2007. Interchangeable but essential functions of SNX1 and SNX2 in the association of retromer with endosomes and the trafficking of mannose 6-phosphate receptors. Mol. Cell. Biol. 27: 1112-1124.
- Hierro, A., Rojas, A.L., Rojas, R., Murthy, N., Effantin, G., Kajava, A.V., Steven, A.C., Bonifacino, J.S. and Hurley, J.H. 2007. Functional architecture of the retromer cargo-recognition complex. Nature 449: 1063-1067.
- Fuji, K., Shimada, T., Takahashi, H., Tamura, K., Koumoto, Y., Utsumi, S., Nishizawa, K., Maruyama, N. and Hara-Nishimura, I. 2007. *Arabidopsis* vacuolar sorting mutants (green fluorescent seed) can be identified efficiently by secretion of vacuole-targeted green fluorescent protein in their seeds. Plant Cell 19: 597-609.

# **CHROMOSOMAL LOCATION**

Genetic locus: VPS29 (human) mapping to 12q24.11; Vps29 (mouse) mapping to 5 F.

#### **SOURCE**

VPS29 (N-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of VPS29 of human origin.

#### **PRODUCT**

Each vial contains 200  $\mu g$  lgG in 1.0 ml of PBS with <0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-69121 P, (100 μg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### **APPLICATIONS**

VPS29 (N-15) is recommended for detection of VPS29 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).

VPS29 (N-15) is also recommended for detection of VPS29 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for VPS29 siRNA (h): sc-76903, VPS29 siRNA (m): sc-76904, VPS29 shRNA Plasmid (h): sc-76903-SH, VPS29 shRNA Plasmid (m): sc-76904-SH, VPS29 shRNA (h) Lentiviral Particles: sc-76903-V and VPS29 shRNA (m) Lentiviral Particles: sc-76904-V.

Molecular Weight of VPS29: 20 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.



Try **VPS29 (D-1):** sc-398874, our highly recommended monoclonal alternative to VPS29 (N-15).

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