SANTA CRUZ BIOTECHNOLOGY, INC.

VPS4B (N-12): sc-21464

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The Power to Question

BACKGROUND

Class E vacuolar protein sorting (vps) proteins are necessary for appropriate sorting of receptors in the yeast endocytic pathway. The yeast Vps4p is a member of the AAA protein family (ATPases associated with diverse cellular activities) and plays an important role in transporting proteins out of a pre-vacuolar endosomal compartment. In human, two non-allelic orthologous proteins (VPS4A and VPS4B) of yeast Vps4p are known and can form heteromeric complexes with each other. Both VPS4 (also known as SKD1 in mouse) proteins are class E VPS and are involved in intracellular protein trafficking, similar to Vps4p in yeast. A human CHMP1 protein, which is implicated in multivesicular body formation, physically interacts with VPS4. HIV-1 uses cellular machinery to bud from infected cells and requires VPS4 and TSG101/VPS23 for this budding process. Dominant negative mutant of VPS4 inhibit vacuolar protein sorting and also arrest HIV-1 and MLV budding. Thus, retroviruses normally use the VPS pathway to form multivesicular bodies during the budding process.

REFERENCES

1. Bishop, N., et al. 2001. TSG101/mammalian VPS23 and mammalian VPS28 interact directly and are recruited to VPS4-induced endosomes. J. Biol. Chem. 276: 11735-11742.
2. Scheuring, S., et al. 2001. Mammalian cells express two VPS4 proteins both of which are involved in intracellular protein trafficking. J. Mol. Biol. 312: 469-480.
3. Howard, T.L., et al. 2001. CHMP1 functions as a member of a newly defined family of vesicle trafficking proteins. J. Cell Sci. 114: 2395-2404.
4. Perez, O.D., et al. 2001. Resistance is futile: assimilation of cellular machinery by HIV-1. Immunity 15: 687-690.
5. Garrus, J.E., et al. 2001. Tsg101 and the vacuolar protein sorting pathway are essential for HIV-1 budding. Cell 107: 55-65.

CHROMOSOMAL LOCATION

Genetic locus: VPS4B (human) mapping to 18q21.33; Vps4b (mouse) mapping to 1 E2.1.

SOURCE

VPS4B (N-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of VPS4B 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-21464 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

VPS4B (N-12) is recommended for detection of VPS4B 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).

VPS4B (N-12) is also recommended for detection of VPS4B in additional species, including equine, bovine, porcine and avian.

Suitable for use as control antibody for VPS4B siRNA (h): sc-41098, VPS4B siRNA (m): sc-41099, VPS4B shRNA Plasmid (h): sc-41098-SH, VPS4B shRNA Plasmid (m): sc-41099-SH, VPS4B shRNA (h) Lentiviral Particles: sc-41098-V and VPS4B shRNA (m) Lentiviral Particles: sc-41099-V.

Molecular Weight of VPS4B: 49 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

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.

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.

MONOS Satisfaction Guaranteed

Try **VPS4B (A-11): sc-377162**, our highly recommended monoclonal alternative to VPS4B (N-12).