SANTA CRUZ BIOTECHNOLOGY, INC.

VPS4 (H-165): sc-32922

SANTA CRUZ BIOTECHNOLOGY

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 prevacuolar endosomal compartment. In human, two nonallelic 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 VPSs 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 tsg 101/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. tsg 101/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.

CHROMOSOMAL LOCATION

Genetic locus: VPS4A (human) mapping to 16q22.1, VPS4B (human) mapping to 18q21.33; Vps4a (mouse) mapping to 8 D3, Vps4b (mouse) mapping to 1 E2.1.

SOURCE

VPS4 (H-165) is a rabbit polyclonal antibody raised against amino acids 1-165 mapping at the N-terminus of VPS4A 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.

APPLICATIONS

VPS4 (H-165) is recommended for detection of VPS4A and VPS4B 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

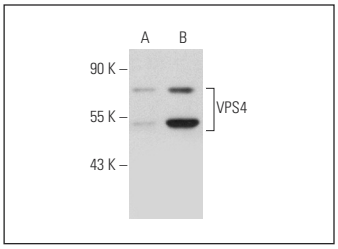
VPS4 (H-165) is also recommended for detection of VPS4A and VPS4B in additional species, including canine, bovine and porcine.

Positive Controls: VPS4A (h): 293T Lysate: sc-115958, HeLa whole cell lysate: sc-2200 or NIH/3T3 whole cell lysate: sc-2210.

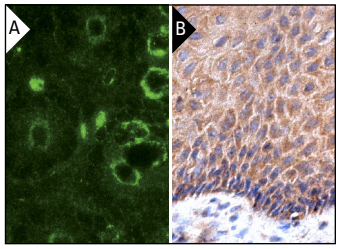
STORAGE

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

DATA



VPS4 (H-165): sc-32922. Western blot analysis of VPS4 expression in non-transfected: sc-117752 (**A**) and human VPS4 transfected: sc-115958 (**B**) 293T whole cell lysates.



VPS4 (H-165): sc-32922. Immunofluorescence staining of normal mouse intestine frozen section showing cytoplasmic and perinuclear staining (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human cervix tissue showing cytoplasmic staining of squamous epithelial cells (**B**).

SELECT PRODUCT CITATIONS

1. Vleck, S.E., et al. 2010. Anti-glycoprotein H antibody impairs the pathogenicity of varicella-zoster virus in skin xenografts in the SCID mouse model. J. Virol. 84: 141-152.
2. Lutz, D., et al. 2013. Generation and nuclear translocation of sumoylated transmembrane fragment of cell adhesion molecule L1. J. Biol. Chem. 287: 17161-17175.
3. Skogberg, G., et al. 2015. Human thymic epithelial primary cells produce exosomes carrying tissue-restricted antigens. Immunol. Cell Biol. 93: 727-734.

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.