SANTA CRUZ BIOTECHNOLOGY, INC.

Vps4 (yN-14): sc-21821

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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. Vps4 is a 48 kDa member of the AAA protein family (ATPases associated with diverse cellular activities) and is required for efficient transport of biosynthetic and endocytic cargo from an endosome to the lysosome-like vacuole of *Saccharomyces cerevisiae*. Vps4, for vacuolar protein sorting protein 4, also known as END13, GRD13 and SKD1 (mouse homolog) exhibits N-ethylmaleimide-sensitive ATPase activity. Vps4 ATPase catalyzes the release (uncoating) of endosomal membrane-associated class E protein complexes required for normal morphology and sorting activity of the endosome. Disruption of the Vps4 gene leads to a recessive vacuolar protein-sorting phenotype. In humans, two non-allelic orthologous proteins of yeast Vps4 (Vps4A and Vps4B) are known and can form heteromeric complexes with each other. Both Vps4 human proteins are class E Vps and are involved in intracellular protein trafficking, similar to Vps4 in yeast.

REFERENCES

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2. Babst, M., Sato, T.K., Banta, L.M. and Emr, S.D. 1997. Endosomal transport function in yeast requires a novel AAA-type ATPase, Vps4p. EMBO J. 16: 1820-1831.
3. Finken-Eigen, M., Rohricht, R.A. and Kohrer, K. 1997. The VPS4 gene is involved in protein transport out of a yeast pre-vacuolar endosome-like compartment. Curr. Genet.. 31: 469-480.
4. Babst, M., Wendland, B., Estepa, E.J. and Emr, S.D. 1998. The Vps4p AAA ATPase regulates membrane association of a Vps protein complex required for normal endosome function. EMBO J. 17: 2982-2993.
5. Bishop, N. and Woodman, P. 2001. TSG101/mammalian Vps23 and mammalian Vps28 interact directly and are recruited to Vps4-induced endosomes. J. Biol. Chem. 276: 11735-11742.
6. Scheuring, S., Rohricht, R.A., Schoning-Burkhardt, B., Beyer, A., Muller, S., Abts, H.F. and Kohrer, K. 2001. Mammalian cells express two Vps4 proteins both of which are involved in intracellular protein trafficking. J. Mol. Biol. 312: 469-480.

SOURCE

Vps4 (yN-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of Vps4 of *Saccharomyces cerevisiae* 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-21821 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Vps4 (yN-14) is recommended for detection of Vps4 of *Saccharomyces cerevisiae* origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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.

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.