



Apg12 (yC-16): sc-8967

BACKGROUND

Autophagy, an intracellular degradation system, is a process in which cytoplasmic components are enclosed in autophagosomes and delivered to lysosomes. Autophagy in yeast requires a protein conjugation system consisting of Apg12 covalently bound at the carboxy terminal glycine to lysine 149 of Apg5. Apg7 is a protein-activating enzyme that is similar to E1 family ubiquitin-activating enzymes. Apg7 is required for the Apg12-Apg5 conjugation to occur and is essential for normal cytoplasm-to-vacuole targeting, autophagy and peroxisome degradation pathways.

REFERENCES

1. Scott, S.V., Hefner-Gravink, A., Morano, K.A., Noda, T., Ohsumi, Y. and Klionsky, D.J. 1996. Cytoplasm-to-vacuole targeting and autophagy employ the same machinery to deliver proteins to the yeast vacuole. *Proc. Natl. Acad. Sci. USA* 93: 12304-12308.
2. Noda, T. and Ohsumi, Y. 1998. Tor, a phosphatidylinositol kinase homologue, controls autophagy in yeast. *J. Biol. Chem.* 273: 3963-3966.
3. Mizushima, N., Noda, T., Yoshimori, T., Tanaka, Y., Ishii, T., George, M.D., Klionsky, D.J., Ohsumi, M. and Ohsumi, Y. 1998. A protein conjugation system essential for autophagy. *Nature* 395: 395-398.
4. Tanida, I., Mizushima, N., Kiyooka, M., Ohsumi, M., Ueno, T., Ohsumi, Y. and Kominami, E. 1999. Apg7p/Cvt2p: A novel protein-activating enzyme essential for autophagy. *Mol. Biol. Cell* 10: 1367-1379.
5. Mizushima, N., Noda, T. and Ohsumi, Y. 1999. Apg16p is required for the function of the Apg12p-Apg5p conjugate in the yeast autophagy pathway. *EMBO J.* 18: 3888-3896.

SOURCE

Apg12 (yC-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Apg12 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-8967 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.

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.

APPLICATIONS

Apg12 (yC-16) is recommended for detection of Apg12 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.