



## Apg7 (yC-20): sc-8965

### 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

Apg7 (yC-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Apg7 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-8965 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](http://www.scbt.com) or our catalog for detailed protocols and support products.

### APPLICATIONS

Apg7 (yC-20) is recommended for detection of Apg7 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).

Molecular Weight of Apg7: 71 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.