

APG5 (FL-275): sc-33210

BACKGROUND

In yeast, autophagy is an essential process for survival during nutrient starvation and cell differentiation. The process of autophagy is characterized as a non-selective degradation of cytoplasmic proteins into membrane structures called autophagosomes, and it is dependent on several proteins, including the autophagy proteins Apg5 and Apg7. Yeast Apg7 and the human homolog, APG7, share similarities with the ubiquitin-activating enzyme E1 in *Saccharomyces cerevisiae*, and are likewise responsible for enzymatically activating the autophagy conjugation system. Apg5 and the human homolog, APG5 (also designated apoptosis specific protein or APS), function as substrates for the autophagy protein APG12. These proteins are covalently bonded together to form APG12/APG5 conjugates, which are required for the progression of autophagy.

CHROMOSOMAL LOCATION

Genetic locus: ATG5 (human) mapping to 6q21; Atg5 (mouse) mapping to 10 B2.

SOURCE

APG5 (FL-275) is a rabbit polyclonal antibody raised against amino acids 1-275 representing full length APG5 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.

STORAGE

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

APPLICATIONS

APG5 (FL-275) is recommended for detection of APG5 long and short isoforms of human origin and APG5 of mouse and rat 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

APG5 (FL-275) is also recommended for detection of APG5 long and short isoforms in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for APG5 siRNA (h): sc-41445, APG5 siRNA (m): sc-41446, APG5 shRNA Plasmid (h): sc-41445-SH, APG5 shRNA Plasmid (m): sc-41446-SH, APG5 shRNA (h) Lentiviral Particles: sc-41445-V and APG5 shRNA (m) Lentiviral Particles: sc-41446-V.

Molecular Weight of human APG5 long/short isoforms: 32/23 kDa.

Molecular Weight of mouse/rat APG5: 32 kDa.

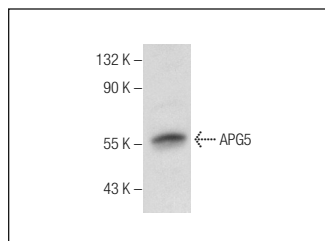
Molecular Weight of conjugate APG5-APG12: 50 kDa.

Positive Controls: SH-SY5Y cell lysate: sc-3812.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



APG5 (FL-275): sc-33210. Western blot analysis of APG5 expression in SH-SY5Y whole cell lysate.

SELECT PRODUCT CITATIONS

1. Ait-Goughoulte, M., et al. 2008. Hepatitis C virus genotype 1a growth and induction of autophagy. *J. Virol.* 82: 2241-2249.
2. Ganesan, A.K., et al. 2008. Genome-wide siRNA-based functional genomics of pigmentation identifies novel genes and pathways that impact melanogenesis in human cells. *PLoS Genet.* 4: e1000298.
3. Ulasov, I.V., et al. 2009. Combination of adenoviral virotherapy and temozolomide chemotherapy eradicates malignant glioma through autophagic and apoptotic cell death *in vivo*. *Br. J. Cancer* 100: 1154-1164.
4. Xie, R., et al. 2011. Microtubule-associated protein 1S (MAP1S) bridges autophagic components with microtubules and mitochondria to affect autophagosomal biogenesis and degradation. *J. Biol. Chem.* 286: 10367-10377.
5. Feldman, D.E., et al. 2013. The TBC1D15 oncoprotein controls stem cell self-renewal through destabilization of the Numb-p53 complex. *PLoS ONE* 8: e57312.

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.