

## Rabbit antibody to ATG5: IgG

<b>Catalogue No.:</b>	R-138-500
<b>Description:</b>	<p>FUNCTION: Required for autophagy. Conjugates to ATG12 and associates with isolation membrane to form cup-shaped isolation membrane and autophagosome. The conjugate detaches from the membrane immediately before or after autophagosome formation is completed. FUNCTION: May play an important role in the apoptotic process, possibly within the modified cytoskeleton. Its expression is a relatively late event in the apoptotic process, occurring downstream of caspase activity. SUBCELLULAR LOCATION: Cytoplasm. Colocalizes with nonmuscle actin. ALTERNATIVE PRODUCTS: 2 named isoforms produced by alternative splicing. TISSUE SPECIFICITY: Ubiquitous. The mRNA is present at similar levels in viable and apoptotic cells, whereas the protein is dramatically highly expressed in apoptotic cells. INDUCTION: By apoptotic stimuli. PTM: Conjugated to ATG12; which is essential for autophagy, but is not required for association with isolation membrane. SIMILARITY: Belongs to the ATG5 family.</p>
<b>Batch No.:</b>	See product label
<b>Unit size:</b>	500 ug
<b>Antigen:</b>	A synthetic peptide corresponding to the C-terminal of human ATG-5L. No immunogenic carrier protein was conjugated to the immunogen. Instead, Adjuvins B (see the Adjuvants in biosensis' product list) has been used to orchestrate/boost the immune response.
<b>Other Names:</b>	Autophagy protein 5; APG5-like; APG 5; APG5; Apoptosis-specific protein; ATG5; APG5L; ASP
<b>Accession:</b>	ATG5_HUMAN
<b>Produced in:</b>	Rabbit
<b>Purity:</b>	Protein G purified IgG
<b>Applications:</b>	Flow Cytometry (2 ug/10 <sup>6</sup> cells), IHC, immunofluorescence, WB. Use a dilution of 1:200 to 1:1000 for these applications. Biosensis recommends optimal dilutions/concentrations should be determined by the end user.
<b>Specificity:</b>	IHC and wb confirmed the specificity for ATG5.
<b>Cross-reactivity:</b>	Human, not yet tested in other species.
<b>Form:</b>	Lyophilised
<b>Reconstitution:</b>	Reconstitute in 500 uL of sterile water. Centrifuge to remove any insoluble material.
<b>Storage:</b>	After reconstitution keep aliquots at -20C for a higher stability, and at 2-8C with an appropriate antibacterial agent. Glycerol (1:1) may be added for an additional stability. Avoid repetitive freeze/thaw cycles.
<b>Expiry Date:</b>	Six months after purchase
<b>Specific References:</b>	<p>Villanueva-Paz M. et al. (2016) Amitriptyline induces mitophagy that precedes apoptosis in human HepG2 cells. <i>Genes Cancer</i>. 2016;7(7-8):260-277</p> <p>Garrido-Maraver J. et al (2012) Screening of effective pharmacological treatments for MELAS syndrome using yeasts, fibroblasts and cybrids models of the disease <i>Br J Pharmacol</i>. 2012 Jul 2.</p>

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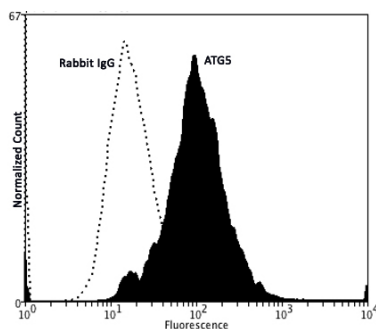
De la Mata M. et al (2012) Recovery of MERRF fibroblasts and cybrids pathophysiology by Coenzyme Q10

Neurotherapeutics. 2012 Apr;9(2):446-63.

Cotán D. et al. (2011) Secondary coenzyme Q10 deficiency triggers mitochondria degradation by mitophagy in MELAS fibroblasts FASEB J. 2011

### References:

1. Mizushima, N et al. (2003) Int J Biochem Cell Biol. 35(5), 553-61
2. Baehrecke EH. Nat Rev Mol Cell Biol. 6(6):505-10. (2005)
3. Lum JJ, et al. Nat Rev Mol Cell Biol. 6(6):439-48. (2005)
4. Greenberg JT. Dev Cell. 8(6):799-801. (2005)



Fixing and Permeabilization of cells: Absolute methanol (10 minutes in ice) and 0.1% Tween-20 in PBS, Blocking: 15% Horse serum, Primary antibody: Rabbit Polyclonal antibody to ATG5 (cat # R-138-500, 2 ug per  $\sim 10^6$  cells) for 30 minutes at room temperature, Secondary antibody: Donkey anti-rabbit PE labeled secondary antibody (1:100 fold dilution) with incubation for 20 minutes in dark at room temperature. Normal Rabbit Polyclonal IgG was used as negative control under same conditions (black dashed). Flow cytometry data and results were generated using Orflo Moxiflow<sup>TM</sup> instrument and protocols. The data demonstrates specific staining of ATG5 expressed in human neuroblastoma SH-SY5Y cell line using cat # R-138-500.

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