Anti-Apg3 Antibody

ER1802-71

Product Type:	Rabbit polyclonal IgG, primary antibodies
Species reactivity:	Human, Mouse
Applications:	WB, IHC-P
Molecular Wt:	Predicted band size: 36 kDa

Description: Atg3 (autophagy-related protein 3), also known as APG3-like, hAPG3 or PC3-96, is an E2-like enzyme that localizes to the cytoplasm and is expressed in a variety of tissues with predominant levels found in kidney, placenta, liver, heart and skeletal muscle. Atg3 catalyzes the formation of the Atg8-phosphatidylethanolamine (Atg8-PE) conjugate, a reaction that is essential for autophagy (a cellular process that allows for the degradation of organelles and bulk cellular proteins). The process of forming the Atg8-PE conjugate begins with the removal of the C-terminal arginine residue of Atg8 by Atg4, a cysteine protease. The, now exposed, glycine residue is then activated by Atg7 and is then transferred to Atg3 for the final conjugation to PE. This last step can be accelerated by the presence of the Atg12-Atg5 conjugate which functions similarly to an E3 enzyme.

Immunogen: Recombinant protein within human Apg3 aa 40-270.

Positive control: HL-60 cell lysates, human tonsil tissue, human thyroid gland tissue, human colon cancer tissue, human small intestine tissue.

Subcellular location: Cytoplasm.

Database links: SwissProt: Q9NT62 Human

Recommended Dilutions:

WB	1:500
IHC-P	1:50-1:200

Storage Buffer: 1*PBS (pH7.4), 0.2% BSA, 50% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Shipped at 4℃. Store at +4℃ short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20℃ long term.

Purity: Immunogen affinity purified.

Images

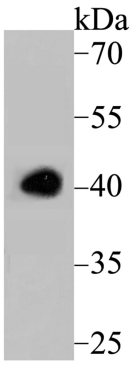

Fig1: Western blot analysis of Apg3 on HL-60 cell lysate using anti-Apg3 antibody at 1/500 dilution.

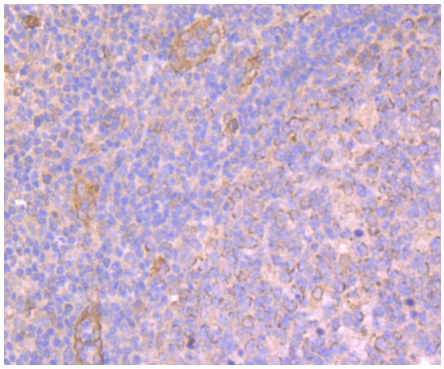

Fig2: Immunohistochemical analysis of paraffin-embedded human tonsil tissue using anti-Apg3 antibody. Counter stained with hematoxylin.

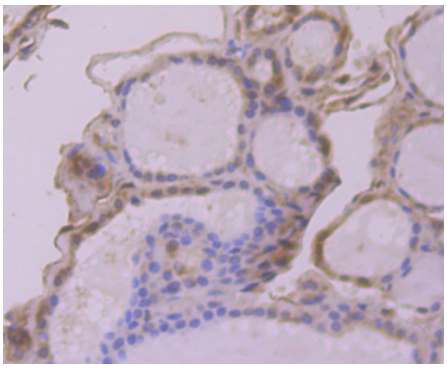

Fig3: Immunohistochemical analysis of paraffin-embedded human thyroid gland tissue using anti-Apg3 antibody. Counter stained with hematoxylin.

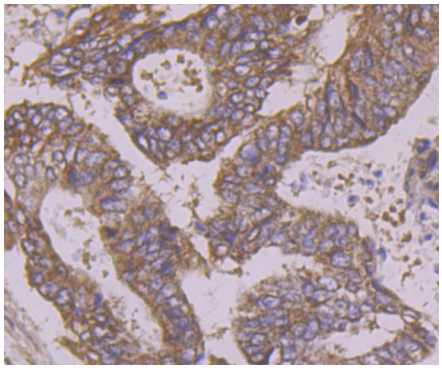

Fig4: Immunohistochemical analysis of paraffin-embedded human colon cancer tissue using anti-Apg3 antibody. Counter stained with hematoxylin.

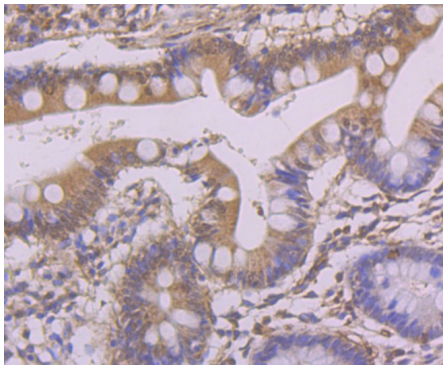

Fig5: Immunohistochemical analysis of paraffin-embedded human small intestine tissue using anti-Apg3 antibody. Counter stained with hematoxylin.

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. Tanida I et al. Human Apg3p/Aut1p homologue is an authentic E2 enzyme for multiple substrates, GATE-16, GABARAP, and MAP-LC3, and facilitates the conjugation of hApg12p to hApg5p. J Biol Chem 277:13739-13744 (2002).
2. Tanida I et al. Mammalian Apg12p, but not the Apg12p.Apg5p conjugate, facilitates LC3 processing. Biochem Biophys Res Commun 296:1164-1170 (2002).