Anti-ATG12 Antibody

R1404-1

Product Type:	Rabbit polyclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IF-Cell, IHC-P, FC
Molecular Wt:	Predicted band size: 15 kDa

Description: Autophagy-related protein 12 is a protein that in humans is encoded by the ATG12 gene. Autophagy is a process of bulk protein degradation in which cytoplasmic components, including organelles, are enclosed in double-membrane structures called autophagosomes and delivered to lysosomes or vacuoles for degradation. ATG12 is the human homolog of a yeast protein involved in autophagy. Autophagy requires the covalent attachment of the protein Atg12 to ATG5 through a ubiquitin-like conjugation system. The Atg12-Atg5 conjugate then promotes the conjugation of ATG8 to the lipid phosphatidylethanolamine. Atg12 was found to be involved in apoptosis. This protein promotes apoptosis through an interaction with anti-apoptotic members of the Bcl-2 family.

Immunogen: Synthetic peptide within human ATG12 aa 96-138.

Positive control: Rat kidney, HCT116

Subcellular location: Cytoplasm

Database links: SwissProt: O94817 Human

Recommended Dilutions:

WB	1:500-1:1,000
IF-Cell	1:200

Storage Buffer: 1*PBS (pH7.4), 0.2% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Store at +4℃ after thawing. Aliquot store at -20℃ or -80℃. Avoid repeated freeze / thaw cycles.

Purity: Immunogen affinity purified.

Images

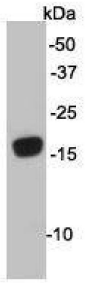

Fig1: Western blot analysis on rat kidney lysates using anti-ATG12 rabbit polyclonal antibodies.

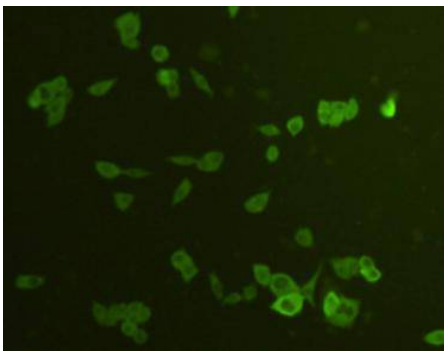

Fig2: ICC staining ATG12 in HCT116 cells (green). Cells were fixed in paraformaldehyde, permeabilised with 0.25% Triton X100/PBS.

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

Background References

1. "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." Tanida I., Tanida-Miyake E., Komatsu M., Ueno T., Kominami E. J. Biol. Chem. 277:13739-13744(2002)
2. "A mammalian autophagosome maturation mechanism mediated by TECPR1 and the Atg12-Atg5 conjugate." Chen D., Fan W., Lu Y., Ding X., Chen S., Zhong Q. Mol. Cell 45:629-641(2012)
3. "Structure of the human ATG12-ATG5 conjugate required for LC3 lipidation in autophagy." Otomo C., Metlagel Z., Takaesu G., Otomo T. Nat. Struct. Mol. Biol. 20:59-66(2013)