

ATG12 Antibody

Catalog # ASM10496

Specification

ATG12 Antibody - Product Information

Application **ICC/IF, WB**
Primary Accession [O94817](#)
Other Accession [NP_001264712.1](#)
Host **Rabbit**
Reactivity **Human**
Clonality **Polyclonal**
Description
Rabbit Anti-Human ATG12 Polyclonal

Target/Specificity

Predicted molecular weight at ~15.1kDa.
Observed molecular weights at ~48-55kDa based on ATG12-ATG5 heterodimer.

Other Names

APG12-like Antibody, APG12 Antibody, ATG12_Human Antibody, HAPG12 Antibody, FBR93 Antibody

Immunogen

Synthetic peptide from the N-terminal of human ATG12

Purification

Peptide Affinity Purified

Storage **-20°C**

Storage Buffer

PBS, 50% glycerol, 0.09% sodium azide

Shipping **Blue Ice or 4°C**
Temperature

Certificate of Analysis

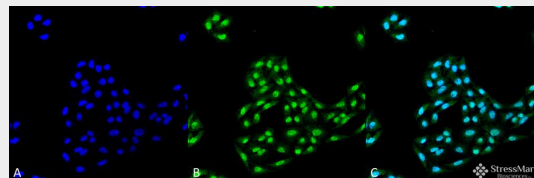
A 1:1000 dilution of SPC-607 was sufficient for detection of ATG12 on HeLa cell lysates using Goat anti-rabbit IgG:HRP as the secondary antibody.

Cellular Localization

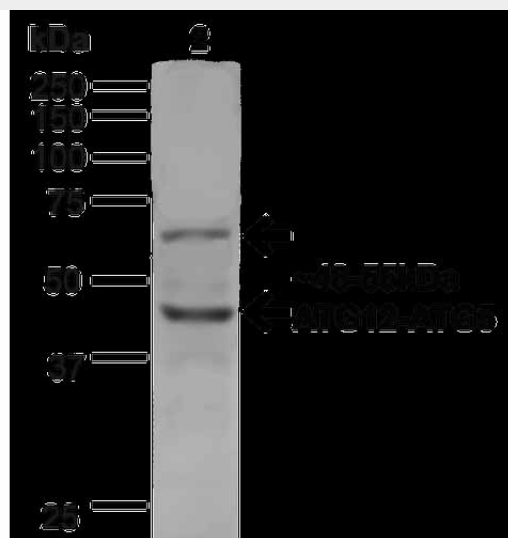
Cytoplasm

ATG12 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.



Immunocytochemistry/Immunofluorescence analysis using Rabbit Anti-ATG12 Polyclonal Antibody (ASM10496). Tissue: Cervical Cancer cell line (HeLa). Species: Human. Fixation: 4% Formaldehyde for 15 min at RT. Primary Antibody: Rabbit Anti-ATG12 Polyclonal Antibody (ASM10496) at 1:100 for 60 min at RT. Secondary Antibody: Goat Anti-Rabbit ATTO 488 at 1:100 for 60 min at RT. Counterstain: DAPI (blue) nuclear stain at 1:5000 for 5 min RT. Localization: Nucleus, Cytoplasm. Magnification: 40X. (A) DAPI (blue) nuclear stain (B) Phalloidin Texas Red F-Actin stain (C) ATG12 Antibody (D) Composite.



Western blot analysis of Human HeLa cell lysates showing detection of ~48 and 55kDa ATG12 protein using Rabbit Anti-ATG12 Polyclonal Antibody (ASM10496). Lane 1: MW Ladder. Lane 2: Human HeLa (20 µg). Load: 20 µg. Block: 5% milk + TBST for 1 hour at RT. Primary Antibody: Rabbit Anti-ATG12 Polyclonal Antibody (ASM10496) at 1:1000

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

for 1 hour at RT. Secondary Antibody: Goat Anti-Rabbit: HRP at 1:2000 for 1 hour at RT. Color Development: TMB solution for 12 min at RT. Predicted/Observed Size: ~48 and 55kDa.

ATG12 Antibody - Background

ATG12 (autophagy-related protein 12), also known as APG12, is a 140 amino acid protein that is ubiquitously expressed and belongs to the ATG12 family of proteins. ATG12 is a homolog of the yeast protein APG12 that participates in autophagy. Autophagy is a membrane trafficking mechanism that delivers cytoplasmic cargo to the vacuole/lysosome for degradation and recycling. In yeast, autophagy requires a protein conjugation system consisting of APG12 covalently bound at the carboxy terminal glycine to lysine 149 of APG5. Similarly in humans, ATG12 is essential for autophagy and localizes to the cytoplasm where it is covalently bound to APG5, a conjugation reaction that requires APG7, ATG10 and ATP (1-3). The ATG12-APG5 conjugate functions as an important regulator of the autophagic process and is required for the change in membrane morphology and development of autophagosomes. Due to alternative splicing events, two ATG12 isoforms exist.

ATG12 Antibody - References

1. Mizushima N., Sugita H., Yoshimori T., Ohsumi Y. (1999) J Biol Chem. 273(51): 33889-33892.
2. Mizushima N., et al. (1998) Nature. 395: 395-398.
3. Suzuki K., et al. (2001) EMBO J. 20: 5971-5981.