

**ATG12 Antibody**  
Catalog # ASM10496**Specification**

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**ATG12 Antibody - Product Information**

Application	<b>WB</b>
Primary Accession	<a href="#">O94817</a>
Other Accession	<a href="#">NP_001264712.1</a>
Host	<b>Rabbit</b>
Reactivity	<b>Human</b>
Clonality	<b>Polyclonal</b>

**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 Temperature **Blue Ice or 4°C****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

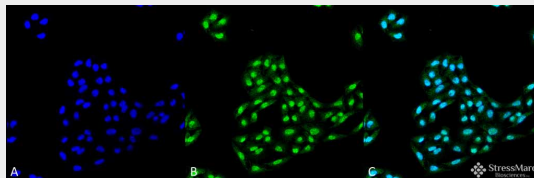
**ATG12 Antibody - Protocols**

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

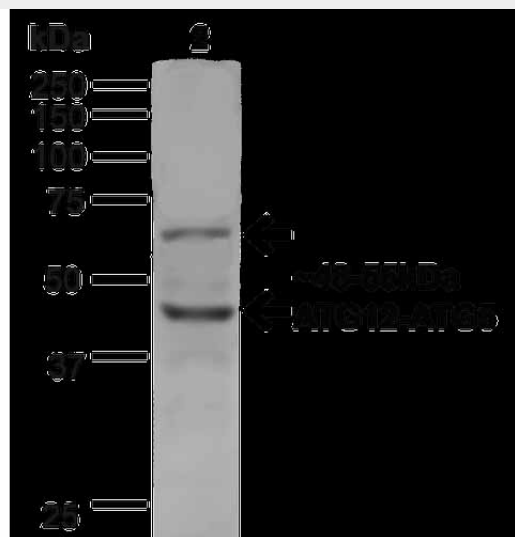
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)

- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### ATG12 Antibody - Images



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 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.