

**ATG12 Antibody**  
**Purified Mouse Monoclonal Antibody (Mab)**  
**Catalog # AM1816a**

**Specification**

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**ATG12 Antibody - Product Information**

Application	<b>WB,E</b>
Primary Accession	<a href="#">O94817</a>
Reactivity	<b>Human</b>
Host	<b>Mouse</b>
Clonality	<b>Monoclonal</b>
Isotype	<b>IgG2b, Igk</b>

**ATG12 Antibody - Additional Information**

**Gene ID** 9140

**Other Names**

Ubiquitin-like protein ATG12, Autophagy-related protein 12, APG12-like, ATG12, APG12, APG12L

**Target/Specificity**

APG12L recombinant protein is used to produce this monoclonal antibody.

**Dilution**

WB~~1:4000

**Format**

Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, followed by dialysis against PBS.

**Storage**

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

ATG12 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**ATG12 Antibody - Protein Information**

**Name** ATG12 ([HGNC:588](#))

**Synonyms** APG12, APG12L

**Function** Ubiquitin-like protein involved in autophagy vesicles formation. Conjugation with ATG5 through a ubiquitin-like conjugating system involving also ATG7 as an E1-like activating enzyme and ATG10 as an E2-like conjugating enzyme, is essential for its function. The ATG12-ATG5 conjugate acts as an E3-like enzyme which is required for lipidation of ATG8 family proteins and their association to the vesicle membranes. As part of the ATG8 conjugation system with ATG5

and ATG16L1, required for recruitment of LRRK2 to stressed lysosomes and induction of LRRK2 kinase activity in response to lysosomal stress (By similarity).

#### Cellular Location

Cytoplasm. Preautophagosomal structure membrane; Peripheral membrane protein. Note=TECPR1 recruits the ATG12- ATG5 conjugate to the autolysosomal membrane

#### Tissue Location

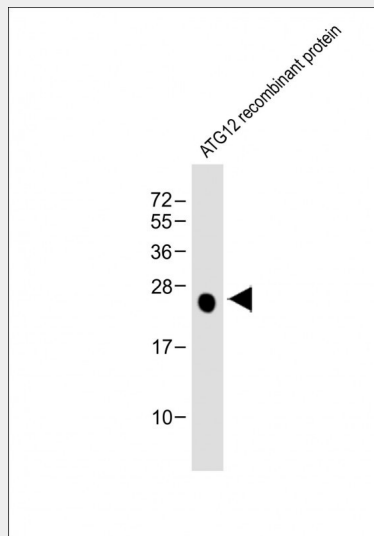
Ubiquitous..

### 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



Anti-APG12 at 1:4000 dilution + ATG12 recombinant protein Lysates/proteins at 20ng per lane. Secondary Goat Anti-mouse IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 26 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

### ATG12 Antibody - Background

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 (Mizushima et al., 1998 [PubMed 9852036]).

### ATG12 Antibody - References

Control of basal autophagy by calpain1 mediated cleavage of ATG5. Xia HG, et al. Autophagy, 2010 Jan. PMID 19901552.

Frameshift mutations of autophagy-related genes ATG2B, ATG5, ATG9B and ATG12 in gastric and colorectal cancers with microsatellite instability. Kang MR, et al. J Pathol, 2009 Apr. PMID 19197948.

Regulation of autophagy by the p300 acetyltransferase. Lee IH, et al. J Biol Chem, 2009 Mar 6. PMID 19124466.

Mitochondrial DNA deletions and chloramphenicol treatment stimulate the autophagic transcript ATG12. Prigione A, et al. Autophagy, 2007 Jul-Aug. PMID 17457038.

Large-scale mapping of human protein-protein interactions by mass spectrometry. Ewing RM, et al. Mol Syst Biol, 2007. PMID 17353931.

**ATG12 Antibody - Citations**

- [Activation of autophagy in mesenchymal stem cells provides tumor stromal support.](#)