

## ATG5 Antibody

*ATG5: Autophagy protein 5, Autophagy related protein 5, ATG5L, ASP*

**CATALOG NO.:** 4441

### BACKGROUND:

Autophagy, the process of bulk degradation of cellular proteins through an autophagosomic-lysosomal pathway is important for normal growth control and may be defective in tumor cells. It is involved in the preservation of cellular nutrients under starvation conditions as well as the normal turnover of cytosolic components (1,2). This process is negatively regulated by TOR (Target of rapamycin) through phosphorylation of autophagy protein APG1 (3). ATG5, another member of the autophagy protein family, forms a conjugate with ATG12; this conjugate has a ubiquitin-protein ligase (E3)-like activity for protein lipidation in autophagy (4). This conjugate also associates with innate immune response proteins such as RIG-I and VISA (also known as IPS-1), inhibiting type I interferon production and permitting viral replication in host cells (5). Three isoforms of ATG5 are known to exist; this ATG5 antibody will only detect the longest isoform.

### SOURCE:

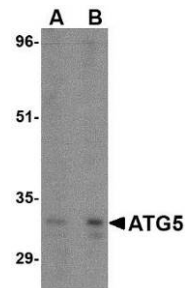
Rabbit polyclonal ATG5 antibody was raised against a 16 amino acid peptide from near the amino terminus of human ATG5 (Genbank accession No. EAW48415).

### APPLICATION:

ATG5 antibody can be used for the detection of ATG5 by Western blot at 1 – 2 µg/ml. (Optimal dilution should be determined by user). Rat spleen tissue lysate can be used as positive control. ATG5 antibody is human, mouse and rat reactive. **This product is for research use only.**

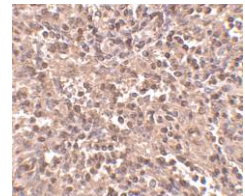
### STORAGE:

ATG5 antibody is supplied as immunoaffinity purified IgG in PBS containing 0.02% sodium azide. Store at 4°C, stable for one year.



Western blot analysis of ATG5 in rat spleen tissue lysate with ATG5 antibody at (A) 1 and (B) 2 µg/ml.

Immunohistochemistry of ATG5 in human spleen tissue with ATG5 antibody at 2.5 µg/ml.



### RELATED PRODUCTS:

Blocking peptide, Catalog No. **4441P**.  
Rat Spleen Tissue Lysate, Catalog No. **1466**.  
APG7 Antibody (CT), Catalog No. **3615**.  
ATG10 Antibody, Catalog No. **4399**.  
ATG12 Antibody (NT), Catalog No. **4421**.  
ATG16 Antibody (NT), Catalog No. **4425**.  
TOR Antibody, Catalog No. **3485**.  
RIG-I Antibody, Catalog No. **3953**.  
VISA Antibody (NT), Catalog No. **4053**.

### REFERENCES:

1. Gozuacik D and Kimchi A. Autophagy as a cell death and tumor suppressor mechanism. *Oncogene*. 2004; 23:2891-906.
2. Kisen GO, Tessitore L, Costelli P, et al. Reduced autophagic activity in primary rat hepatocellular carcinoma and ascites hepatoma cells. *Carcinogenesis* 1993; 14:2501-5.
3. Kamada Y, Funakoshi T, Shintani T, et al. Tor-mediated induction of autophagy via Apg1 protein kinase complex. *J. Cell. Biol.* 2000; 150:1507-13.
4. Hanada T, Noda NN, Satomi Y, et al. The Atg12-Atg5 conjugate has a novel E3-like activity for protein lipidation in autophagy. *J. Biol. Chem.* 2007; 282:37298-302.
5. Jounai N, Takeshita F, Kobiyama K, et al. The Atg5-Atg12 conjugate associates with innate antiviral immune responses. *Proc. Natl. Acad. Sci. USA* 2007; 104:14050-5. (08-01D)