

**Atg5 (D5F5U) Rabbit mAb**

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**For Research Use Only. Not for Use in Diagnostic Procedures.**

<b>Applications:</b> W, W-S, IP	<b>Reactivity:</b> H M R	<b>Sensitivity:</b> Endogenous	<b>MW (kDa):</b> 55	<b>Source/Isotype:</b> Rabbit IgG	<b>UniProt ID:</b> #Q9H1Y0	<b>Entrez-Gene Id:</b> 9474
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**Product Usage Information****Application**

Western Blotting  
Simple Western™  
Immunoprecipitation

**Dilution**

1:1000  
1:50 - 1:250  
1:100

**Storage**

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

**Specificity/Sensitivity**

Atg5 (D5F5U) Rabbit mAb recognizes endogenous levels of total Atg5 protein. This antibody is capable of detecting Atg5 conjugated to Atg12.

**Species predicted to react based on 100% sequence homology**

Monkey, Xenopus, Dog, Pig

**Source / Purification**

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Leu265 of human Atg5 protein.

**Background**

Autophagy is a catabolic process for the autophagosomic-lysosomal degradation of bulk cytoplasmic contents (1,2). Autophagy is generally activated by conditions of nutrient deprivation but has also been associated with a number of physiological processes including development, differentiation, neurodegeneration, infection, and cancer (3). The molecular machinery of autophagy was largely discovered in yeast and referred to as autophagy-related (*Atg*) genes. Formation of the autophagosome involves a ubiquitin-like conjugation system in which Atg12 is covalently bound to Atg5 and targeted to autophagosome vesicles (4-6). This conjugation reaction is mediated by the ubiquitin E1-like enzyme Atg7 and the E2-like enzyme Atg10 (7,8).

**Background References**

1. Reggiori, F. and Klionsky, D.J. (2002) *Eukaryot Cell* 1, 11-21.
2. Codogno, P. and Meijer, A.J. (2005) *Cell Death Differ* 12 Suppl 2, 1509-18.
3. Levine, B. and Yuan, J. (2005) *J Clin Invest* 115, 2679-88.
4. Mizushima, N. et al. (1998) *J Biol Chem* 273, 33889-92.
5. Mizushima, N. et al. (1998) *Nature* 395, 395-8.
6. Suzuki, K. et al. (2001) *EMBO J* 20, 5971-81.
7. Tanida, I. et al. (1999) *Mol Biol Cell* 10, 1367-79.
8. Shintani, T. et al. (1999) *EMBO J* 18, 5234-41.

**Species Reactivity**

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

**Western Blot Buffer**

**IMPORTANT:** For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

**Applications Key**

**W:** Western Blotting **W-S:** Simple Western™ **IP:** Immunoprecipitation

**Cross-Reactivity Key**

**H:** Human **M:** Mouse **R:** Rat

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