

Atg5 Antibody

✓ 100 µl
(10 western blots)

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This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W, IP Endogenous	H, Mk	55 kDa	Rabbit**

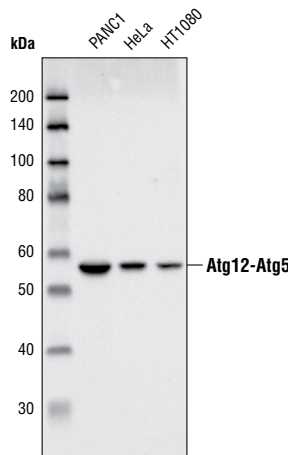
Background: Autophagy is a catabolic process for the autophagosomal-lysosomal degradation of bulk cytoplasmic contents (1,2). Autophagy is generally activated by conditions of nutrient deprivation but has also been associated with a number of physiological processes including development, differentiation, neurodegenerative diseases, 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 autophagosomal vesicles (4-6). This conjugation reaction is mediated by the ubiquitin-E1-like enzyme Atg7 and the E2-like enzyme Atg10 (7,8).

Specificity/Sensitivity: Atg5 Antibody detects endogenous levels of total Atg5. The observed band represents the Atg12-Atg5 conjugated form, but the antibody likely reacts with free Atg5 as well.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy-terminus of Atg5. Antibodies were purified by peptide affinity chromatography.

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.



Western blot analysis of extracts from PANC1, HeLa and HT1080 cell lines using Atg5 Antibody.

Entrez-Gene ID # 9474
Swiss-Prot Acc. # Q9H1Y0

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

*Species cross-reactivity is determined by western blot.

**Anti-rabbit secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:

Western blotting 1:1000
Immunoprecipitation 1:50

For application specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

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