

Purified anti-ATG5 Antibody

Catalog# / Size	847401 / 25 µg 847402 / 100 µg
Clone	177.19
Regulatory Status	RUO
Other Names	Autophagy protein 5
Isotype	Mouse IgG1, κ
Description	Autophagy protein 5 (ATG5) is involved in autophagic vesicle formation. ATG5 forms a complex with autophagy protein 12 (ATG12), which has E3 ubiquitin ligase activity, and is associated with autophagosome vesicle formation. ATG5 detaches from membranes immediately before or after autophagosome formation. ATG5 is also involved in mitochondrial quality control after oxidative damage, the innate anti-viral immune response, and apoptosis.

Product Details

Verified Reactivity	Human, Mouse, Rat, Drosophila
Antibody Type	Monoclonal
Host Species	Mouse
Immunogen	ATG5 peptide conjugated to KLH.
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
Preparation	The antibody was purified by affinity chromatography.
Concentration	0.5 mg/ml
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C.
Application	WB - Quality tested ICC, IHC-P - Verified Direct ELISA - Reported in the literature, not verified in house
Recommended Usage	Each lot of this antibody is quality control tested by Western blotting . For Western blotting, the suggested use of this reagent is 0.1 - 1.0 µg/mL in human, mouse, and rat and 1.0 - 10 µg/mL in Drosophila. For immunocytochemistry, a concentration range of 0.1 - 1.0 µg/mL is recommended in human, mouse, rat and 1.0 - 5.0 µg/mL in Drosophila. For immunohistochemical staining on formalin-fixed paraffin-embedded tissue sections, the suggested use of this reagent is 2.0 - 10 µg per mL. It is recommended that the reagent be titrated for optimal performance for each application.
Application Notes	Reactivity to Drosophila was only verified with the purified format.
RRID	AB_2734618 (BioLegend Cat. No. 847401) AB_2629668 (BioLegend Cat. No. 847402)

Antigen Details

Structure	Human ATG5 is a 275 amino acid protein with a molecular mass of 32 kD.
Distribution	Tissue distribution: Ubiquitous. Cellular distribution: Vacuole, lysosome, and to a lesser extent mitochondria.
Function	ATG5 is involved in many cellular processes including autophagic vesicle formation, mitochondrial quality control after oxidative damage, innate anti-viral immune response, and apoptosis.

Interaction	ATG12, LC3B, ATG16, TECPR1, Autophagy-linked FYVE protein.
Biology Area	Cell Biology, Neurodegeneration, Neuroscience, Neuroscience Cell Markers, Protein Trafficking and Clearance
Molecular Family	Autophagosome Markers
Antigen References	<ol style="list-style-type: none"> 1. Uchiyama Y, <i>et al.</i> 2008. <i>Histochem. Cell Biol.</i> 129:407. PubMed 2. Wu H, <i>et al.</i> 2014. <i>Int. J. Biol. Sci.</i> 10:1072. PubMed 3. Subramani S, Malhotra V. 2013. <i>EMBO Rep.</i> 14(2):143. PubMed
Gene ID	9474

Related Protocols

[Immunocytochemistry Staining Protocol](#)

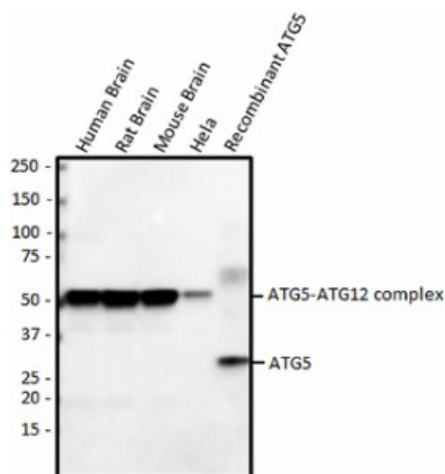
[Western Blotting Protocol](#)

[Immunohistochemistry Protocol for Paraffin-Embedded Sections](#)

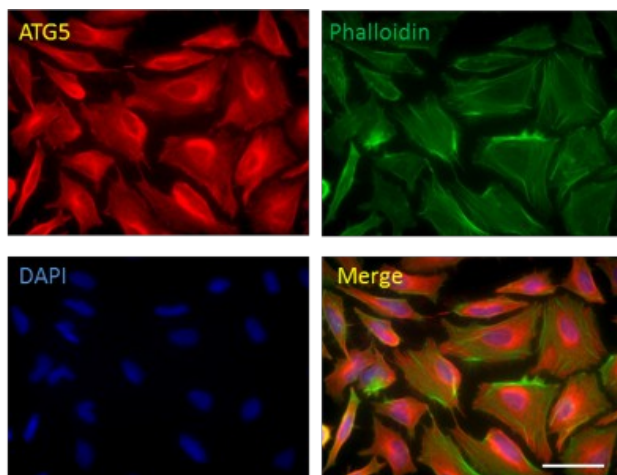
Other Formats

Purified anti-ATG5, Alexa Fluor® 594 anti-ATG5, Alexa Fluor® 488 anti-ATG5, Alexa Fluor® 647 anti-ATG5, Spark YG™ 570 anti-ATG5

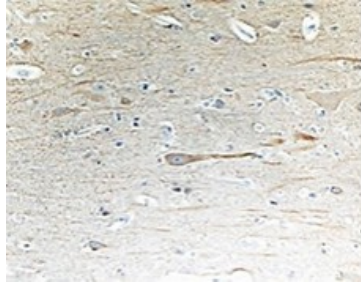
Product Data



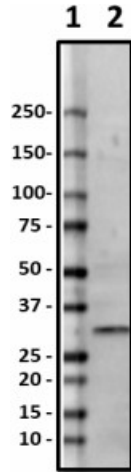
Western blot of anti-ATG5 antibody (clone 177.19). The blot was incubated with the primary antibody at 0.2 µg/ml overnight at 4°C, followed by the incubation with horseradish peroxidase labeled goat anti-mouse secondary antibody (cat# 405306). Enhanced chemiluminescence was used as the detection system. Lysates: 10 µg. Recombinant human ATG5: 5 ng.



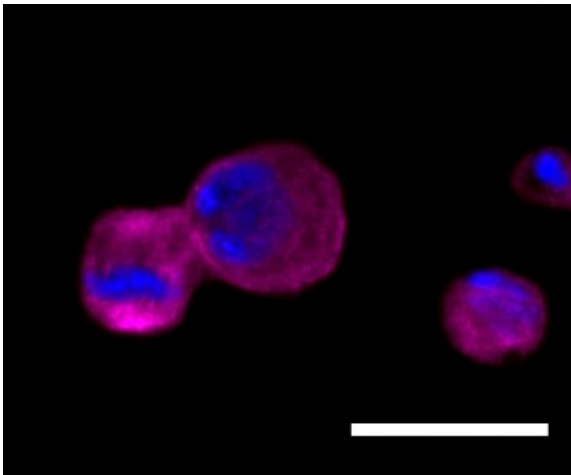
ICC staining of anti-ATG5 antibody (clone 177.19) on HeLa cells. The cells were fixed with 4% PFA, permeabilized with 0.1% Triton X-100, and blocked with 2% normal goat serum and 0.02% BSA. The cells were then stained with 0.5 µg/ml of the primary antibody overnight at 4°C, followed by incubation with Alexa Fluor® 594 goat anti-Mouse IgG (Cat. No. 405326) for one hour at room temperature. Cells were counterstained with Phalloidin™ Green 488 (Cat. No. 424201) and DAPI to visualize actin filaments and nuclei, respectively. The images were captured with a 60X objective. Scale bar: 50 µm.



IHC staining of anti-ATG5 antibody (clone 177.19) on formalin-fixed paraffin-embedded normal human brain tissue. Following antigen retrieval using sodium citrate, the tissue was incubated with the primary antibody for 60 minutes at room temperature at 10 µg/ml. BioLegend's Ultra-Streptavidin (USA) HRP Detection Kit was used for detection.



Western blot of purified anti-ATG5 antibody (clone 177.19). Lane 1: Molecular weight marker; Lane 2: 20 µg of *Drosophila* head lysate. The blot was incubated with 5 µg/mL of the primary antibody overnight at 4°C, followed by incubation with HRP-labeled goat anti-mouse IgG (Cat. No. 436302). Enhanced chemiluminescence was used as the detection system.



ICC staining of purified anti-ATG5 antibody (clone 177.19) on *Drosophila* S2 cells. The cells were fixed with 4% PFA, permeabilized with a buffer containing 0.1% Triton X-100 and 0.25% BSA, and blocked with 2% normal goat serum and 0.02% BSA. The cells were then incubated with 1 µg/mL of the primary antibody overnight at 4°C, followed by incubation with 2.5 µg/mL of Alexa Fluor® 647 goat anti-mouse IgG (Cat. No. 405322) for one hour at room temperature. Nuclei were counterstained with DAPI. The image was captured with a 60X objective. Scale bar: 20 µm

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