

# Anti-ATG5/Apg5 Rabbit Monoclonal Antibody

Catalog # ABO13434

## Product Information

---

|                          |                                                                                                                                      |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| <b>Application</b>       | WB, IHC, IF, ICC, IP                                                                                                                 |
| <b>Primary Accession</b> | <a href="#">Q9H1Y0</a>                                                                                                               |
| <b>Host</b>              | Rabbit                                                                                                                               |
| <b>Isotype</b>           | Rabbit IgG                                                                                                                           |
| <b>Reactivity</b>        | Rat, Human, Mouse                                                                                                                    |
| <b>Clonality</b>         | Monoclonal                                                                                                                           |
| <b>Format</b>            | Liquid                                                                                                                               |
| <b>Description</b>       | Anti-ATG5/Apg5 Rabbit Monoclonal Antibody . Tested in WB, IHC, ICC/IF, IP applications. This antibody reacts with Human, Mouse, Rat. |

## Additional Information

---

|                                 |                                                                                                                                                                                                                                                                                                                                                  |
|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene ID</b>                  | 9474                                                                                                                                                                                                                                                                                                                                             |
| <b>Other Names</b>              | Autophagy protein 5, APG5-like, Apoptosis-specific protein, ATG5 ( <a href="#">HGNC:589</a> ), APG5L, ASP                                                                                                                                                                                                                                        |
| <b>Calculated MW</b>            | 32447                                                                                                                                                                                                                                                                                                                                            |
| <b>Application Details</b>      | WB 1:1000-1:2000<br>IHC 1:50-1:200<br>ICC/IF 1:50-1:200<br>IP 1:50                                                                                                                                                                                                                                                                               |
| <b>Subcellular Localization</b> | Cytoplasm. Preautophagosomal structure membrane; Peripheral membrane protein. Colocalizes with nonmuscle actin. The conjugate detaches from the membrane immediately before or after autophagosome formation is completed (By similarity). Localizes also to discrete punctae along the ciliary axoneme and to the base of the ciliary axoneme.. |
| <b>Tissue Specificity</b>       | Ubiquitous. The mRNA is present at similar levels in viable and apoptotic cells, whereas the protein is dramatically highly expressed in apoptotic cells.                                                                                                                                                                                        |
| <b>Source</b>                   | Eukaryota                                                                                                                                                                                                                                                                                                                                        |
| <b>Contents</b>                 | Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.                                                                                                                                                                                                                              |
| <b>Clone Names</b>              | Clone: GCD-1                                                                                                                                                                                                                                                                                                                                     |
| <b>Immunogen</b>                | A synthesized peptide derived from human ATG5                                                                                                                                                                                                                                                                                                    |
| <b>Purification</b>             | Affinity-chromatography                                                                                                                                                                                                                                                                                                                          |
| <b>Storage</b>                  | Store at -20°C for one year. For short term storage and frequent use, store at                                                                                                                                                                                                                                                                   |

4°C for up to one month. Avoid repeated freeze-thaw cycles.

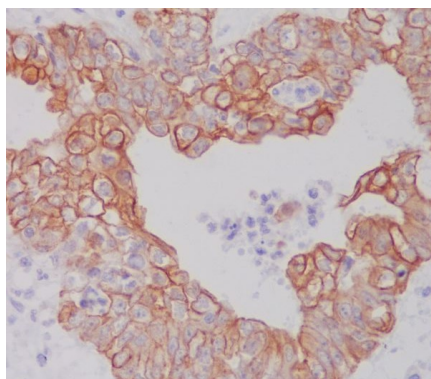
## Protein Information

---

|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Name</b>              | ATG5 ( <a href="#">HGNC:589</a> )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Synonyms</b>          | APG5L, ASP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Function</b>          | Involved in autophagic vesicle formation. Conjugation with ATG12, through a ubiquitin-like conjugating system involving 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. Involved in mitochondrial quality control after oxidative damage, and in subsequent cellular longevity. Plays a critical role in multiple aspects of lymphocyte development and is essential for both B and T lymphocyte survival and proliferation. Required for optimal processing and presentation of antigens for MHC II. Involved in the maintenance of axon morphology and membrane structures, as well as in normal adipocyte differentiation. Promotes primary ciliogenesis through removal of OFD1 from centriolar satellites and degradation of IFT20 via the autophagic pathway. As part of the ATG8 conjugation system with ATG12 and ATG16L1, required for recruitment of LRRK2 to stressed lysosomes and induction of LRRK2 kinase activity in response to lysosomal stress (By similarity). |
| <b>Cellular Location</b> | Cytoplasm. Preautophagosomal structure membrane; Peripheral membrane protein. Note=Colocalizes with nonmuscle actin. The conjugate detaches from the membrane immediately before or after autophagosome formation is completed (By similarity). Also localizes to discrete punctae along the ciliary axoneme and to the base of the ciliary axoneme. Under starved conditions, the ATG12-ATG5-ATG16L1 complex is translocated to phagophores driven by RAB33B (PubMed:32960676). {ECO:0000250, ECO:0000269 PubMed:32960676}                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Tissue Location</b>   | Ubiquitous. The mRNA is present at similar levels in viable and apoptotic cells, whereas the protein is dramatically highly expressed in apoptotic cells                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

## Images

---



Immunohistochemical analysis of paraffin-embedded human ovarian cancer, using ATG5 Antibody.

Immunofluorescent analysis of Raji cells, using ATG5 Antibody.

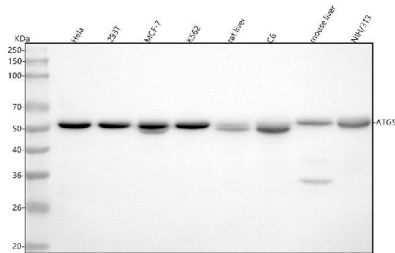
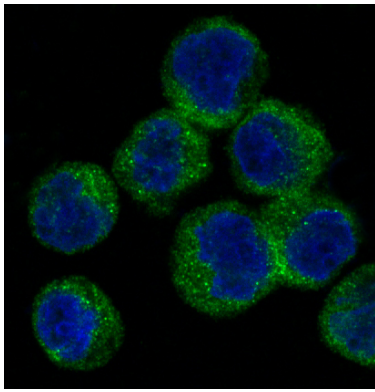


Figure 1. Western blot analysis of ATG5/Apg5 using anti-ATG5/Apg5 antibody (M00240).

Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.

Lane 1: human Hela whole cell lysates,  
 Lane 2: human 293T whole cell lysates,  
 Lane 3: human MCF-7 whole cell lysates,  
 Lane 4: human K562 whole cell lysates,  
 Lane 5: rat liver tissue lysates,  
 Lane 6: rat C6 whole cell lysates,  
 Lane 7: mouse liver tissue lysates,  
 Lane 8: mouse NIH/3T3 whole cell lysates.

After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-ATG5/Apg5 antigen affinity purified monoclonal antibody (Catalog # M00240) at 1:1000 overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for ATG5/Apg5 at approximately 55 kDa. The expected band size for ATG5/Apg5 is at 32 kDa.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.