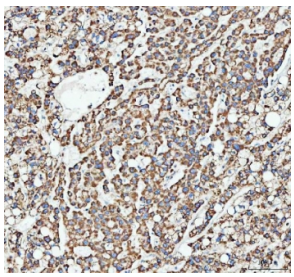
# ATG7 Antibody / Autophagy Related Protein 7 Antibody (RQ8481)

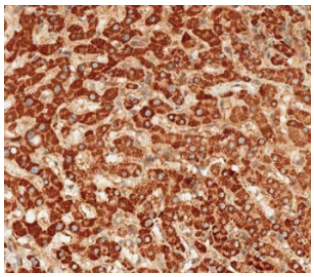
| Catalog No. | Formulation | Size |
|---|---|---|
| RQ8481 | 0.5mg/ml if reconstituted with 0.2ml sterile DI water | 100 ug |

**Bulk quote request**

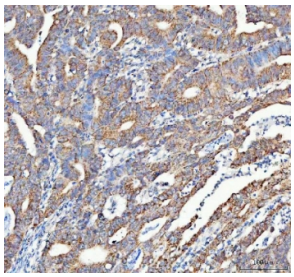
| | |
|---|---|
| **Species Reactivity** | Human |
| **Format** | Antigen affinity purified |
| **Host** | Rabbit |
| **Clonality** | Polyclonal (rabbit origin) |
| **Isotype** | Rabbit IgG |
| **Purity** | Antigen affinity purified |
| **Buffer** | Lyophilized from 1X PBS with 2% Trehalose |
| **UniProt** | O95352 |
| **Applications** | Western blot: 0.5-1ug/ml<br>Immunohistochemistry (FFPE): 2-5ug/ml<br>Immunofluorescence: 5ug/ml<br>Flow cytometry: 1-3ug/million cells<br>ELISA: 0.1-0.5ug/ml |
| **Limitations** | This ATG7 Antibody / Autophagy Related Protein 7 Antibody is available for research use only. |



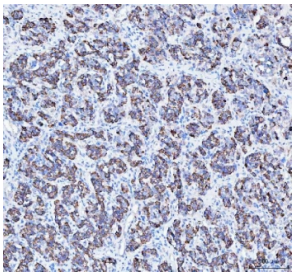
ATG7 Antibody Human Liver Cancer IHC. Immunohistochemistry was performed on FFPE human liver cancer tissue using ATG7 Antibody. Heat-induced epitope retrieval was carried out by boiling tissue sections in pH 8 EDTA buffer for 20 minutes followed by cooling prior to incubation with the primary antibody. Bound antibody was visualized using an HRP-conjugated secondary antibody and DAB chromogen. Strong cytoplasmic staining is observed throughout the liver carcinoma cells, while the surrounding stromal tissue exhibits comparatively low background staining. These results demonstrate that this Autophagy Related Protein 7 Antibody is suitable for immunohistochemical detection of ATG7 in formalin-fixed, paraffin-embedded human liver cancer tissue.



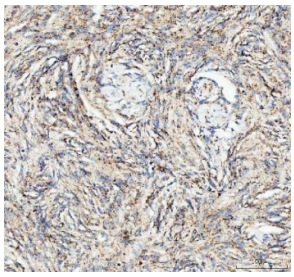
ATG7 Antibody Human Ovarian Serous Adenocarcinoma IHC. Immunohistochemistry was performed on FFPE human ovarian serous adenocarcinoma tissue using ATG7 Antibody. Heat-induced epitope retrieval was carried out by boiling tissue sections in pH 8 EDTA buffer for 20 minutes followed by cooling prior to incubation with the primary antibody. Bound antibody was visualized using an HRP-conjugated secondary antibody and DAB chromogen. Moderate to strong cytoplasmic staining is observed throughout the ovarian serous adenocarcinoma cells, while the surrounding stromal tissue exhibits comparatively low background staining. These results demonstrate that this Autophagy Related Protein 7 Antibody is suitable for immunohistochemical detection of ATG7 in formalin-fixed, paraffin-embedded human ovarian serous adenocarcinoma tissue.



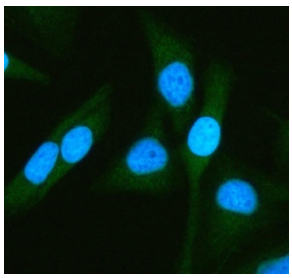
ATG7 Antibody Human Colorectal Adenocarcinoma IHC. Immunohistochemistry was performed on FFPE human colorectal adenocarcinoma tissue using ATG7 Antibody. Heat-induced epitope retrieval was carried out by boiling tissue sections in pH 8 EDTA buffer for 20 minutes followed by cooling prior to incubation with the primary antibody. Bound antibody was visualized using an HRP-conjugated secondary antibody and DAB chromogen. Moderate cytoplasmic staining is observed throughout the colorectal adenocarcinoma cells, while the surrounding stromal tissue exhibits comparatively low background staining. These results demonstrate that this Autophagy Related Protein 7 Antibody is suitable for immunohistochemical detection of ATG7 in formalin-fixed, paraffin-embedded human colorectal adenocarcinoma tissue.



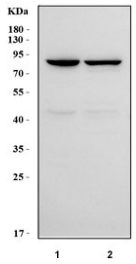
ATG7 Antibody Human Lung Adenocarcinoma IHC. Immunohistochemistry was performed on FFPE human lung adenocarcinoma tissue using ATG7 Antibody. Heat-induced epitope retrieval was carried out by boiling tissue sections in pH 8 EDTA buffer for 20 minutes followed by cooling prior to incubation with the primary antibody. Bound antibody was visualized using an HRP-conjugated secondary antibody and DAB chromogen. Moderate to strong cytoplasmic staining is observed throughout the lung adenocarcinoma cells, while the surrounding stromal tissue exhibits comparatively low background staining. These results demonstrate that this Autophagy Related Protein 7 Antibody is suitable for immunohistochemical detection of ATG7 in formalin-fixed, paraffin-embedded human lung adenocarcinoma tissue.



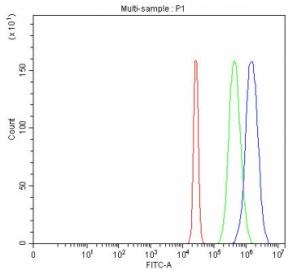
ATG7 Antibody Human Meningioma IHC. Immunohistochemistry was performed on FFPE human meningioma tissue using ATG7 Antibody. Heat-induced epitope retrieval was carried out by boiling tissue sections in pH 8 EDTA buffer for 20 minutes followed by cooling prior to incubation with the primary antibody. Bound antibody was visualized using an HRP-conjugated secondary antibody and DAB chromogen. Moderate cytoplasmic staining is observed throughout the meningioma cells, while the surrounding stromal tissue exhibits comparatively low background staining. These results demonstrate that this Autophagy Related Protein 7 Antibody is suitable for immunohistochemical detection of ATG7 in formalin-fixed, paraffin-embedded human meningioma tissue.



ATG7 Antibody HeLa Cell IF. Immunofluorescence staining was performed on FFPE human HeLa cells using ATG7 Antibody. Heat-induced epitope retrieval was carried out by steaming tissue sections in pH 6 citrate buffer for 20 minutes prior to incubation with the primary antibody. Bound antibody was detected with a Fluoro488-conjugated secondary antibody (green), and nuclei were counterstained with DAPI (blue). Diffuse cytoplasmic staining is observed throughout the HeLa cells with minimal nuclear signal, consistent with the expected intracellular localization of ATG7. These results demonstrate that this Autophagy Related Protein 7 Antibody is suitable for immunofluorescent detection of ATG7 in FFPE human cells.




ATG7 Antibody Human Cancer Cell WB. Western blot analysis was performed using ATG7 Antibody on human HepG2 (lane 1) and PC-3 (lane 2) cell lysates. A specific immunoreactive band is detected at approximately 70-80 kDa in both cell lines, consistent with the expected molecular weight of ATG7. Comparable protein expression is observed in both human cancer cell lysates with minimal background staining. These results demonstrate that this Autophagy Related Protein 7 Antibody is suitable for Western blot detection of ATG7 in human cell lysates.




ATG7 Antibody HepG2 Cell FACS. Flow cytometric analysis was performed on fixed and permeabilized human HepG2 cells using ATG7 Antibody at 1 ug/10^6 cells following blocking with normal goat serum. The red histogram represents unstained cells, the green histogram represents the isotype control, and the blue histogram represents cells stained with the ATG7 antibody. A clear rightward shift of the ATG7-stained population relative to both control populations demonstrates specific intracellular antibody binding and confirms ATG7 expression in HepG2 cells. These results demonstrate that this Autophagy Related Protein 7 Antibody is suitable for flow cytometric detection of ATG7.

## Description

ATG7 Antibody recognizes Autophagy Related Protein 7, an essential component of the cellular autophagy machinery encoded by the ATG7 gene. ATG7 functions as an E1-like activating enzyme within two ubiquitin-like conjugation pathways that drive autophagosome formation, making it indispensable for the initiation and progression of macroautophagy. Through activation of ATG12 and ATG8 family proteins, including LC3, ATG7 coordinates critical steps required for autophagic membrane expansion and maturation. As a result, ATG7 Antibody is widely used to investigate autophagy, intracellular protein turnover, and cellular responses to metabolic and environmental stress. NSJ Bioreagents provides this antibody to support reliable detection of Autophagy Related Protein 7 in research applications.

Autophagy is a conserved lysosome-dependent degradation pathway that maintains cellular homeostasis by recycling damaged proteins, protein aggregates, and dysfunctional organelles. ATG7 occupies a central position within this pathway by initiating conjugation reactions required for autophagosome biogenesis. Loss of ATG7 activity disrupts autophagic flux and contributes to impaired protein quality control, defective organelle clearance, and altered cellular metabolism. Consequently, researchers frequently use ATG7 Antibody to evaluate autophagy induction, monitor pathway regulation, and investigate mechanisms governing intracellular degradation and stress adaptation.

Altered ATG7 expression or activity has been associated with numerous biological processes and disease models, including cancer, neurodegeneration, liver disease, immunity, aging, infection, and metabolic disorders. Because autophagy influences both cell survival and cell death depending on biological context, Autophagy Related Protein 7 continues to be investigated as an important regulator of tissue homeostasis and disease progression. Studies commonly examine ATG7 together with LC3, Beclin 1, SQSTM1/p62, ATG5, and other autophagy-associated proteins to obtain a more complete understanding of autophagic activity and pathway regulation.

ATG7 Antibody supports studies of Autophagy Related Protein 7 by enabling analysis of protein expression and cellular localization in experimental systems. Investigation of ATG7 contributes to a better understanding of autophagy, intracellular quality control, stress responses, and the molecular mechanisms that regulate cellular homeostasis.

To learn more about this target, explore our ATG7 Antibody / Autophagy Related E1 Enzyme Antibody page featuring additional information and antibodies for detecting ATG7.

## Application Notes

Optimal dilution of the ATG7 Antibody / Autophagy Related Protein 7 Antibody should be determined by the researcher.

## Immunogen

An E.coli-derived human recombinant protein (amino acids D71-K645) was used as the immunogen for the ATG7 antibody.

## Storage

After reconstitution, the ATG7 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

## Alternate Names

Autophagy Related Protein 7 antibody, Autophagy Related E1 Enzyme antibody, APG7 antibody, Ubiquitin Like Modifier Activating Enzyme ATG7 antibody, ATG7 E1 Enzyme antibody, Autophagy Activating Enzyme antibody


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