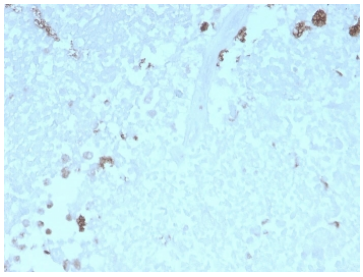
Recombinant ATG5 Antibody [clone rATG5/2553] (V8241)

Catalog No.	Formulation	Size
V8241-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V8241-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V8241SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

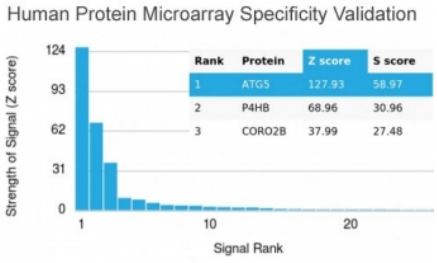
Recombinant MOUSE MONOCLONAL

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Recombinant Mouse Monoclonal
Isotype	Mouse IgG1, kappa
Clone Name	rATG5/2553
Purity	Protein G affinity chromatography
UniProt	Q9H1Y0
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml
Limitations	This recombinant ATG5 antibody is available for research use only.



IHC staining of FFPE human uterus with recombinant ATG5 antibody. HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 10-20 min and allow to cool before testing.



Analysis of HuProt(TM) microarray containing more than 19,000 full-length human proteins using recombinant ATG5 antibody (clone rATG5/2553). These results demonstrate the foremost specificity of the rATG5/2553 mAb.
Z- and S- score: The Z-score represents the strength of a signal that an antibody (in combination with a fluorescently-tagged anti-IgG secondary Ab) produces when binding to a particular protein on the HuProt(TM) array. Z-scores are described in units of standard deviations (SD's) above the mean value of all signals generated on that array. If the targets on the HuProt(TM) are arranged in descending order of the Z-score, the S-score is the difference (also in units of SD's) between the Z-scores. The S-score therefore represents the relative target specificity of an Ab to its intended target.

Description

Recombinant ATG5 antibody detects autophagy-related protein 5, encoded by the ATG5 gene. ATG5 is a ubiquitin-like protein essential for autophagosome formation, where it conjugates with ATG12 and associates with ATG16L1 to form a complex that drives membrane elongation. Because of its indispensable role in autophagy, Recombinant ATG5 antibody is a core reagent in cell biology, cancer research, and neurodegeneration studies.

ATG5 is synthesized as a cytoplasmic protein and undergoes covalent conjugation to ATG12 through the activity of E1- and E2-like enzymes. The ATG12-ATG5 conjugate, together with ATG16L1, localizes to phagophore membranes, where it facilitates lipidation of LC3, enabling expansion and closure of the autophagosome. This process ensures proper sequestration of cytoplasmic cargo for lysosomal degradation, maintaining cellular homeostasis under stress.

The Recombinant ATG5 antibody clone rATG5/2553 provides consistent and specific detection. Recombinant technology guarantees lot-to-lot uniformity, reducing variability in long-term projects. Clone rATG5/2553 has been referenced in peer-reviewed publications examining autophagy in cancer, infection, and neurodegeneration. Its reliability supports use in Western blotting, immunohistochemistry, and immunoprecipitation, where accurate measurement of ATG5 expression and localization is essential.

Research using clone rATG5/2553 has clarified how autophagy defects contribute to disease. In cancer, ATG5 has context-dependent roles, sometimes supporting tumor survival under metabolic stress and other times acting as a tumor suppressor by promoting cell death. In neurodegenerative disease, impaired ATG5 function is linked to accumulation of toxic protein aggregates and neuronal loss. Studies have also demonstrated its involvement in immunity, where autophagy influences pathogen clearance and antigen presentation.

NSJ Bioreagents provides this Recombinant ATG5 antibody to support autophagy research, cancer biology, and neurodegeneration studies. Alternate names include ATG5 antibody, autophagy protein 5 antibody, apoptosis-related protein antibody, ATG12-conjugating protein antibody, and autophagosome formation protein antibody.

Application Notes

Optimal dilution of the recombinant ATG5 antibody should be determined by the researcher.

Immunogen

A recombinant human partial protein (amino acids 1-119) was used as the immunogen for the ATG5 antibody.

Storage

Store the recombinant ATG5 antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).