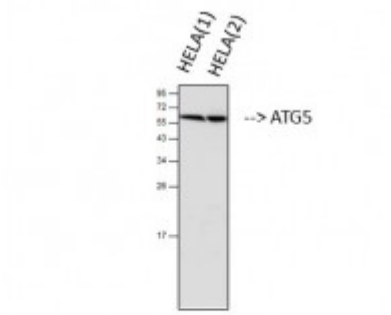
Anti-ATG5 antibody



Western Blot (WB) analysis of HELA cells using Anti-ATG5 antibody from two batches. (STJ98903)

Description	ATG5 is a protein encoded by the ATG5 gene which is approximately 32,4 kDa. ATG5 is localised to the cytoplasm. It is involved in the autophagy pathway, longevity regulating pathway, the innate immune system and pink/parkin mediated mitophagy. It functions as an E1-like activating enzyme, in combination with autophagy protein 12, in a ubiquitin-like conjugating system. It is involved in multiple cellular processes such as mitochondrial quality control after oxidative damage, lymphocyte development and proliferation, MHC II antigen presentation, adipocyte differentiation, and apoptosis. ATG5 is expressed ubiquitously in human tissues and mutations in the ATG5 gene may result in Bardet-Biedl syndrome. STJ98903 was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen. This primary antibody detects endogenous ATG5 protein.

Model	STJ98903
Host	Mouse
Reactivity	Human, Mouse, Rat
Applications	ELISA, WB
Immunogen	Recombinant peptide derived from ATG5.
Gene ID	9474
Gene Symbol	ATG5
Dilution range	WB 1:500-2000ELISA 1:10000-20000
Specificity	The antibody detects endogenous ATG5 protein.
Tissue Specificity	Ubiquitous. The mRNA is present at similar levels in viable and apoptotic

	cells, whereas the protein is dramatically highly expressed in apoptotic cells.
Purification	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Note	For Research Use Only (RUO).
Protein Name	Autophagy protein 5 APG5-like Apoptosis-specific protein
Molecular Weight	55kDa
Clonality	Monoclonal
Conjugation	Unconjugated
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Concentration	1 mg/ml
Storage Instruction	Store at -20°C, and avoid repeat freeze-thaw cycles.
Database Links	HGNC:589OMIM:604261
Alternative Names	Autophagy protein 5 APG5-like Apoptosis-specific protein
Function	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. The ATG12-ATG5 conjugate also negatively regulates the innate antiviral immune response by blocking the type I IFN production pathway through direct association with RARRES3 and MAVS. Also plays a role in translation or delivery of incoming viral RNA to the translation apparatus. 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.; May play an important role in the apoptotic process, possibly within the modified cytoskeleton. Its expression is a relatively late event in the apoptotic process, occurring downstream of caspase activity. Plays a crucial role in IFN-gamma-induced autophagic cell death by interacting with FADD.
Cellular Localization	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 . Localizes also to discrete punctae along the ciliary axoneme and to the base of the ciliary axoneme.
Post-translational Modifications	Conjugated to ATG12; which is essential for autophagy, but is not required for association with isolation membrane.; Acetylated by EP300.