Datasheet for ABIN95223

anti-LC3B antibody

2 Images

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Overview

Quantity:	500 µg
Target:	LC3B (MAP1LC3B)
Reactivity:	Saccharomyces cerevisiae
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This LC3B antibody is un-conjugated
Application:	Western Blotting (WB), ELISA, Immunohistochemistry (IHC), Immunoprecipitation (IP)

Product Details

Purpose:	Apg8 Antibody
Immunogen:	Immunogen: Rabbit Anti-Apg8 antibody was prepared from rabbit serum after repeated immunizations with recombinant yeast Apg8 protein. Immunogen Type: Recombinant Protein
Isotype:	IgG
Cross-Reactivity (Details):	Assay by immunoelectrophoresis resulted in a single precipitin arc against anti-Rabbit Serum.
Characteristics:	Synonyms: rabbit anti-APG8 Antibody, APG-8, APG 8, ATG-8, ATG 8, Rabbit Anti-ATG8 Antibody, Autophagy-related protein 8, Autophagy-related ubiquitin-like modifier ATG8, Cytoplasm to vacuole targeting protein 5, AUT7, CVT5, YBL078C, YBL0732
Purification:	Anti-Apg8 antibody, also known as Atg8, is an IgG fraction antibody purified from monospecific antiserum by a multi-step process which includes delipidation, salt fractionation and ion exchange chromatography followed by extensive dialysis against the buffer stated above.

Target Details

Target:	LC3B (MAP1LC3B)
Alternative Name:	ATG8 (MAP1LC3B Products)
Background:	Background: Anti-Atg8 antibody is an Ubiquitin-like protein (UBL) antibody. UBL proteins and antibodies fall into two classes: the first class, ubiquitin-like modifiers (UBLs) function as modifiers in a manner analogous to that of ubiquitin. Examples of UBLs are SUMO, Rub1 (also called Nedd8), Apg8 and Apg12. Proteins of the second class include parkin, RAD23 and DSK2, are designated ubiquitin-domain proteins (UDPs). These proteins contain domains that are related to ubiquitin but are otherwise unrelated to each other. In contrast to UBLs, UDPs are not conjugated to other proteins. Apg8 is required for autophagy (intracellular bulk protein degradation) in yeast. Starved yeast cells take up their own cytoplasm into vacuoles through autophagic bodies. Autophagic bodies form a double-membraned structure called the autophagosome, which subsequently fuses with the vacuole/lysosome. This process similar in mammals. Two sets of genes, APG and AUT, have been identified with this process, and are responsible for two ubiquitin-like systems Apg12 and Apg8, respectively. Apg12 is synthesized in its mature form and seems to have one target, Apg5. Almost all Apg12 Molecules are conjugated with Apg5. Aut2/Apg4 processes the Apg8/Aut7 system at its carboxy-terminal region. Apg8 exists in two forms, one is membrane bound through a phospholipid. Lipidation/activation of Apg8 is mediated by Apg7 and transferred to Apg3 and finally forms a conjugate with phosphatidyl-ethanolamine (PE). Apg4 cleaves Apg8-PE, releasing Apg8 from membrane. Morphological studies show that Apg8 localizes on the membrane of intermediate structures of the autophagosome, this transient association seems to be essential for formation of the autophagosome. Both Apg12 and Apg8 are highly conserved, with apparent homologues in the worm, mammals and plants. In higher eukaryotes, Apg8 consists of a multigene family. Anti-ATG8 Antibody is useful for researcher interested in autophagy, Cell Biology, Microbiology and Signal Transduction research.
Gene ID:	852200, 6319393
UniProt:	P38182
Pathways:	Autophagy

Application Details

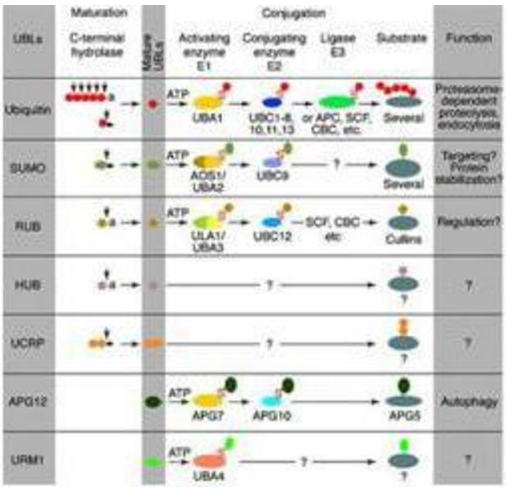
Application Notes:	Immunohistochemistry Dilution: User Optimized Application Note: Anti-Apg8 purified polyclonal antibody reacts with yeast APG8 by western blot and ELISA. This antibody using the specified conditions may recognize other prominent

Application Details

	intrinsic bands (UBLs or their conjugates). Other intrinsic bands are readily detectable in yeast lysates at lower antibody dilutions. For immunoblotting a 14 kDa band corresponding to yeast Apg8 is detected. Most yeast cell lysates can be used as a positive control without induction or stimulation. Although not tested, this antibody is likely functional in immunohistochemistry and immunoprecipitation. Western Blot Dilution: 1:4,000 - 1:8,000 Immunoprecipitation Dilution: User Optimized ELISA Dilution: 1:20,000 - 1:100,000 Other: User Optimized
Restrictions:	For Research Use only

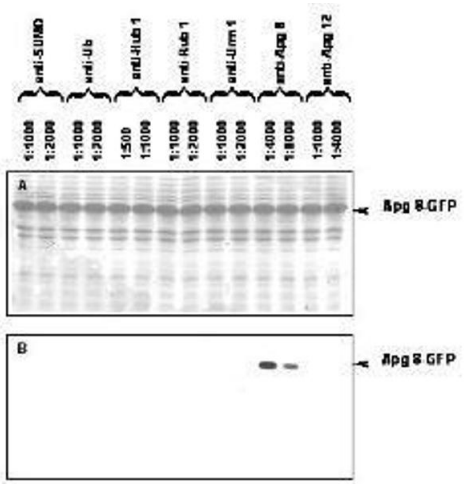
Handling

Format:	Lyophilized
Reconstitution:	Reconstitution Volume: 100 µL Reconstitution Buffer: Restore with deionized water (or equivalent)
Concentration:	5.0 mg/mL
Buffer:	Buffer: 0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2 Stabilizer: None Preservative: 0.01 % (w/v) Sodium Azide
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	4 °C,-20 °C
Storage Comment:	Store antibody at 4° C prior to restoration. For extended storage aliquot contents and freeze at -20° C or below. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiry Date:	12 months



Western Blotting

Image 1. Conjugation pathways for ubiquitin and ubiquitin-like modifiers (UBLs). Most modifiers mature by proteolytic processing from inactive precursors (a



Western Blotting

Image 2. Western blot of APG8 fusion protein. Anti-APG8 antibody generated by immunization with recombinant yeast APG8 was tested by western blot with other anti-UBL antibodies against E.coli lysates expressing the APG8-GFP fusion protein. All UBLs possess limited homology to Ubiquitin and to each other, therefore it is important to know the degree of reactivity of each antibody against each UBL. Panel A shows total protein staining using ponceau. Panel B shows specific reaction with APG8 using a 1:4,000 and 1:8,000 dilution of IgG fraction of Rabbit-anti-APG8 (Yeast) followed by reaction with a 1:15,000 dilution of HRP Goat-a-Rabbit IgG MX (code # 611-103-122). All primary antibodies were diluted in TTBS buffer supplemented with 5% non-fat milk and incubated with the membranes overnight at 4° C. E.coli lysate proteins were separated by SDS-PAGE using a 15% gel. Similar experiments (data not shown), where other UBL fusion proteins were separated and probed with this antibody showed no reactivity of anti-APG8 with other UBLs. This data indicates that anti-APG8 is highly specific and does not cross react with other UBLs. A chemiluminescence system was used for signal detection (Roche). Other detection systems will yield similar results. Data contributed by M. Malakhov, www.lifesensors.com, personal communication.