Datasheet for ABIN1449623

anti-MAP1LC3A antibody (N-Term, pSer12)

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Overview

Quantity:	0.4 mL
Target:	MAP1LC3A
Binding Specificity:	AA 1-30, N-Term, pSer12
Reactivity:	Human
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This MAP1LC3A antibody is un-conjugated
Application:	Western Blotting (WB), Dot Blot (DB), Enzyme Immunoassay (EIA)

Product Details

Immunogen:	KLH conjugated synthetic phosphopeptide between 1-30 amino acids surrounding Ser12 of Human LC3
Isotype:	Ig Fraction
Cross-Reactivity (Details):	Species reactivity (expected):Mouse, Rat, Bovine. Species reactivity (tested):Human.
Purification:	Protein A Affinity Chromatography. Then, the antibody fraction is peptide affinity purified in a 2-step procedure with peptides. The antibody is eluted with high and low pH buffers and neutralized immediately, followed by dialysis against PBS

Target Details

Target:	MAP1LC3A

Target Details

Alternative Name:	LC3 (MAP1LC3A Products)
Background:	MAP1A and MAP1B are microtubule-associated proteins which mediate the physical interactions between microtubules and components of the cytoskeleton. These proteins are involved in formation of autophagosomal vacuoles (autophagosomes). MAP1A and MAP1B each consist of a heavy chain subunit and multiple light chain subunits. MAP1LC3a is one of the light chain subunits and can associate with either MAP1A or MAP1B. The precursor molecule is cleaved by APG4B/ATG4B to form the cytosolic form, LC3-I. This is activated by APG7L/ATG7, transferred to ATG3 and conjugated to phospholipid to form the membrane-bound form, LC3-II. Macroautophagy is the major inducible pathway for the general turnover of cytoplasmic constituents in eukaryotic cells, it is also responsible for the degradation of active cytoplasmic enzymes and organelles during nutrient starvation. Macroautophagy involves the formation of double-membrane bound autophagosomes which enclose the cytoplasmic constituent targeted for degradation in a membrane bound structure, which then fuse with the lysosome (or vacuole) releasing a single-membrane bound autophagic bodies which are then degraded within the lysosome (or vacuole).Synonyms: Autophagy-related protein LC3 A, Autophagy-related ubiquitin-like modifier LC3 A, LC3A, MAP1 light chain 3-like protein 1, MAP1A / 1B light chain 3 A, MAP1A/1B light chain 3 A, MAP1A/MAP1B LC3 A, MAP1LC3A, Microtubule-associated protein 1 light chain 3 alpha, Microtubule-associated proteins 1A/1B light chain 3A
Molecular Weight:	14272 Da
NCBI Accession:	NM_032514
Pathways:	Autophagy

Application Details

Application Notes:	Optimal working dilution should be determined by the investigator.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	PBS, 0.09 % (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.

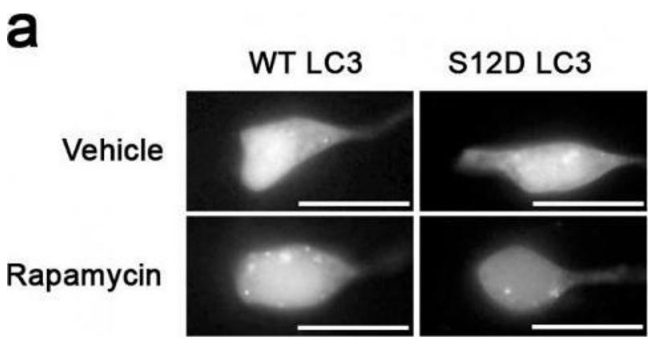
Handling

Handling Advice:	Avoid repeated freezing and thawing.
Storage:	4 °C/-20 °C
Storage Comment:	Store undiluted at 2-8 °C for one month or (in aliquots) at -20 °C for longer.

Publications

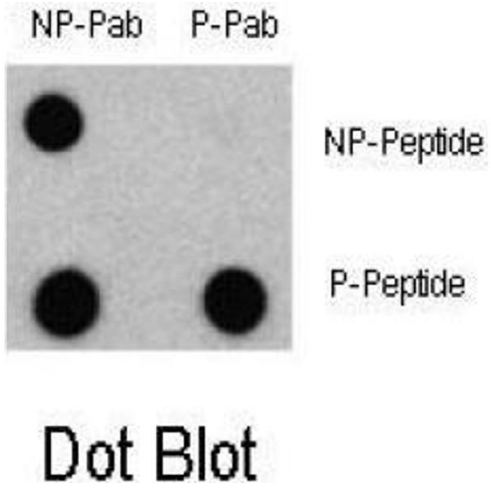
Product cited in:	Su, Chao, Huang, Weng, Jeng, Lai: "Rab5 and class III phosphoinositide 3-kinase Vps34 are involved in hepatitis C virus NS4B-induced autophagy." in: **Journal of virology**, Vol. 85, Issue 20, pp. 10561-71, (2011) (PubMed).

Images



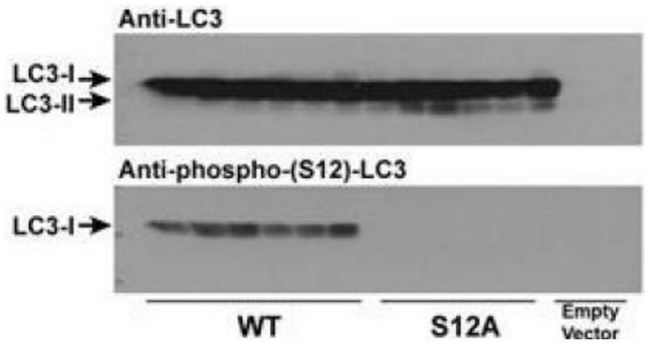
Western Blotting

Image 1. Something like SH-SY5Y cells expressing GFP-LC3-WT or-S12D treated with rapamycin or vehicle for 1h.



Dot Blot

Image 2. Dot blot analysis of Phospho-LC3 (APG8a) - Ser12 Antibody and Non phospho-LC3 (APG8a) Antibody on nitrocellulose membrane. 50ng of Phospho-peptide or Non Phospho-peptide per dot were adsorbed. Antibody working concentrations are 0.5 µg/ml.



Western Blotting

Image 3. Immunoblots of phosphorylated LC3 (phospho-LC3) in CHO cell culture. LC3 and LC3 S12A mutant vectors were transfected into CHO cells. The cell lysates were separated with SDS-PAGE and blotted with anti-phospho-LC3 S12 antibody. LC3 = microtubule-associated protein light chain-3; S12A = replacement of the amino acid position 12 serine of LC3 with alanine. WT = wildtype LC3-transfected cell lysates; S12A = LC3 S12A mutant-transfected cell lysates; Empty vector = vector with no LC3 gene. Molecular size: LC3-I = 16kDa, and LC3-II = 14 kDa

Please check the product details page for more images. Overall 5 images are available for ABIN1449623.