abcam

Product datasheet

Anti-APG5L/ATG5 antibody ab228668

17 References 5 Images

Overview

Product name	Anti-APG5L/ATG5 antibody
Description	Rabbit polyclonal to APG5L/ATG5
Host species	Rabbit
Tested applications	**Suitable for:** WB, IHC-P, ICC/IF
Species reactivity	**Reacts with:** Mouse, Human **Predicted to work with:** Cow, Pig
Immunogen	Recombinant fragment within Human APG5L/ATG5 (internal sequence). The exact sequence is proprietary. Database link: **Q9H1Y0**
Positive control	ICC/IF HeLa cells and thapsigargin- or chloroquine-treated HepG2 cells. IHC-P: Mouse brain tissue. WB: NT2/D1 and PC-3 whole cell lysate; HeLa cell extract.
General notes	The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.00 Preservative: 0.01% Thimerosal (merthiolate) Constituents: 1.21% Tris, 0.75% Glycine, 10% Glycerol (glycerin, glycerine)
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab228668 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		1/500 - 1/3000. Predicted molecular weight: 32 kDa.
IHC-P		1/100 - 1/1000.
ICC/IF		1/100 - 1/1000.

Target

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.

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.

Sequence similarities

Belongs to the ATG5 family.

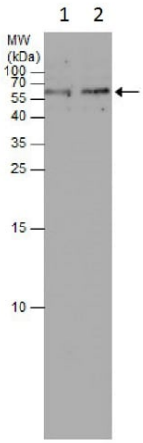
Post-translational modifications

Conjugated to ATG12; which is essential for autophagy, but is not required for association with isolation membrane.
Acetylated by EP300.

Cellular localization

Cytoplasm. Preautophagosomal structure membrane. Colocalizes with nonmuscle actin. The conjugate detaches from the membrane immediately before or after autophagosome formation is completed (By similarity). Localizes also to discrete punctae along the ciliary axoneme and to the base of the ciliary axoneme.

Images



Western blot - Anti-APG5L/ATG5 antibody (ab228668)

All lanes : Anti-APG5L/ATG5 antibody (ab228668) at 1/1000 dilution

Lane 1 : Untreated HeLa (human epithelial cell line from cervix adenocarcinoma) whole cell extracts
Lane 2 : HeLa (human epithelial cell line from cervix adenocarcinoma) treated with 50 µM chloroquine for 24 hours, whole cell extracts

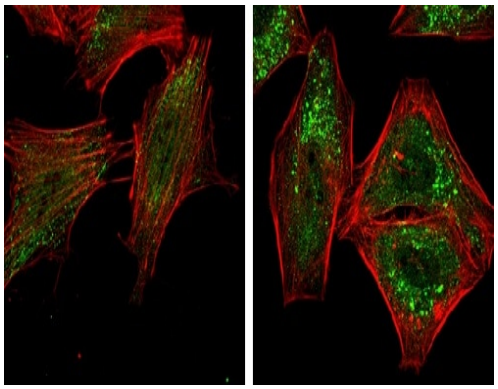
Lysates/proteins at 30 µg per lane.

Secondary
All lanes : HRP-conjugated anti-rabbit IgG

Developed using the ECL technique.

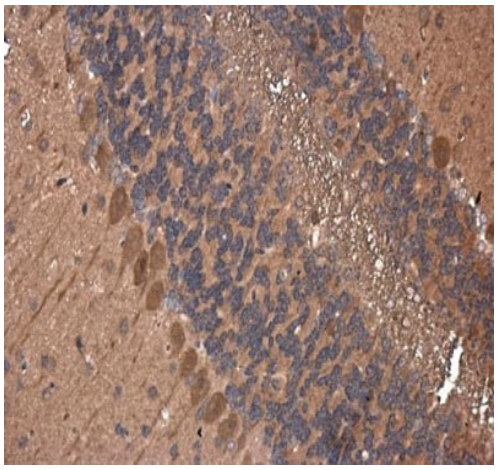
Predicted band size: 32 kDa

15% SDS-PAGE



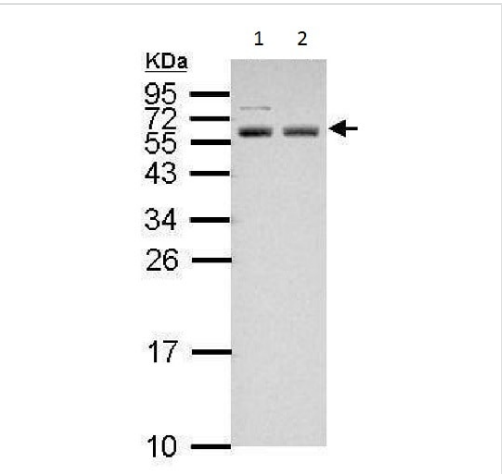
Immunocytochemistry/ Immunofluorescence - Anti-APG5L/ATG5 antibody (ab228668)

HeLa (human epithelial cell line from cervix adenocarcinoma) cells stained for APG5L/ATG5 (green) using ab228668 (1/1000 dilution) in ICC/IF. Cells mock (left panel) and treated with 50 µM chloroquine for 24 hours (right panel) were fixed in 4% paraformaldehyde at RT for 15 minutes. Counterstain: Phalloidin, an F-actin marker (red).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-APG5L/ATG5 antibody (ab228668)

Paraffin-embedded mouse brain tissue stained for APG5L/ATG5 with ab228668 at 1/400 dilution in immunohistochemical analysis.



Western blot - Anti-APG5L/ATG5 antibody (ab228668)

All lanes : Anti-APG5L/ATG5 antibody (ab228668) at 1/1000 dilution

Lane 1 : NT2/D1 (human embryonal carcinoma cell line) whole cell lysate
Lane 2 : PC-3 (human prostate adenocarcinoma cell line) whole cell lysate

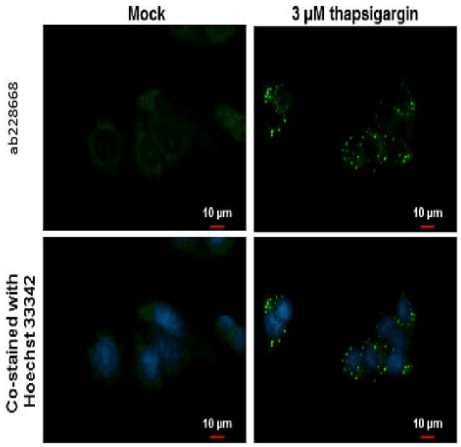
Lysates/proteins at 30 µg per lane.

Secondary
All lanes : HRP-conjugated anti-rabbit IgG

Developed using the ECL technique.

Predicted band size: 32 kDa

12% SDS-PAGE



Immunocytochemistry/ Immunofluorescence - Anti-APG5L/ATG5 antibody (ab228668)

HepG2 (human liver hepatocellular carcinoma cell line) cells stained for APG5L/ATG5 (green) using ab228668 (1/500 dilution) in ICC/IF. Cells were treated with 3 µM thapsigargin 16 hours (right panels) and mock (left panels) and were fixed in ice-cold methanol for 10 minutes, permeabilized with cooled acetone for 2 minutes.

Nuclear counterstain: Hoechst 33342 (blue).

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