abcam

ab109364

Anti-GABARAP+GABARAPL1+GABARAPL2 antibody [EPR4805]

Anti-GABARAP+GABARAPL1+GABARAPL2 antibody [EPR4805] (ab109364) is a rabbit monoclonal antibody detecting GABARAP+GABARAPL1+GABARAPL2 in **Western Blot, Flow Cytometry (Intra), IHC-P, ICC/IF**. Suitable for **Human, Mouse, Rat**.

- Biophysical QC for unrivalled batch-batch consistency
- Over 60 publications

Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR4805
Purification technique	Affinity purification Protein A
Specificity	This antibody will also recognize related targets GABARAPL1 and GABARAPL2:GABARAPL1: pBLAST 100% immunogen homology AND Abreview 38385 WB data GABARAPL2: pBLAST 93% homology (only 1aa gap of 14aa) AND Abreview 38385 WB data
Concentration	0.148 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Mouse
Dilution info	1/1000 - 1/10000
Notes	-

Species	Rat
Dilution info	1/1000 - 1/10000
Notes	-

Species	Human
Dilution info	1/1000 - 1/10000
Notes	-

Predicted

Species	Silk worm
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/100 - 1/500
Notes	-

Expected

Species	Rat

Dilution info	-
Notes	-

Species	Mouse
Dilution info	1/100 - 1/500
Notes	-

Predicted

Species	Silk worm
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/20
Notes	-

Expected

Species	Mouse
Dilution info	1/20
Notes	-

Species	Rat
Dilution info	1/20
Notes	-

Predicted

Species	Silk worm
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	1/500 - 1/1000
Notes	Antigen retrieval is recommended. Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Not recommended

Species	Mouse, Rat, Silk worm
Dilution info	-
Notes	-

IP

Not recommended

Species	Mouse, Human, Rat, Silk worm
Dilution info	-
Notes	-

Target data

See full target information GABARAP

Function

Ubiquitin-like modifier that plays a role in intracellular transport of GABA(A) receptors and its interaction with the cytoskeleton (PubMed:9892355). Involved in autophagy: while LC3s are involved in elongation of the phagophore membrane, the GABARAP/GATE-16 subfamily is essential for a later stage in autophagosome maturation (PubMed:15169837, PubMed:20562859, PubMed:22948227). Through its interaction with the reticulophagy receptor TEX264, participates in the remodeling of subdomains of the endoplasmic reticulum into autophagosomes upon nutrient stress, which then fuse with lysosomes for endoplasmic reticulum turnover (PubMed:31006538). Also required for the local activation of the CUL3(KBTBD6/7) E3 ubiquitin ligase complex, regulating ubiquitination and degradation of TIAM1, a guanyl-nucleotide exchange factor (GEF) that activates RAC1 and downstream signal transduction (PubMed:25684205). Thereby, regulates different biological processes including the organization of the cytoskeleton, cell migration and proliferation (PubMed:25684205). Involved in apoptosis (PubMed:15977068).

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Stable for 12 months at -20°C

Notes

What is this antibody validated in?
Anti-GABARAP+GABARAPL1+GABARAPL2 antibody [EPR4805] (ab109364) is a rabbit recombinant monoclonal antibody and is validated for use in Western Blot (WB), Flow Cytometry (Intra), Immunohistochemistry (IHC-P), Immunocytochemistry/immunofluorescence (ICC/IF) in Human, Mouse, Rat samples.

What is the molecular weight of GABARAP+GABARAPL1+GABARAPL2?
Anti-GABARAP+GABARAPL1+GABARAPL2 [EPR4805] (ab109364) specifically detects a band for GABARAP+GABARAPL1+GABARAPL2 (UniProt: O95166) at a molecular weight of 14kDa.

Trusted by the scientific community
Anti-GABARAP+GABARAPL1+GABARAPL2 [EPR4805] (ab109364) was first used in a scientific publication in 2011 and has been cited over 60 times in peer-reviewed journals.

Reviewed by scientists
Anti-GABARAP+GABARAPL1+GABARAPL2 [EPR4805] (ab109364) has over 10 independent reviews from customers.

Other related products
We have a range of other formats of antibody clone [EPR4805] also available for your convenience: ab109364, HRP - ab201813, Carrier free - ab225535, Alexa Fluor® 488 - ab319582, Alexa Fluor® 647 - ab319688, Alexa Fluor® 594 - ab319818, Alexa Fluor® 555 - ab319959, Alexa Fluor® 750 - ab320947

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility

- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Trial sizes available!
Test your antibody or perform pre-screening before committing to a larger quantity. Sold in 20µl. Discover our selection of trial-size antibodies.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

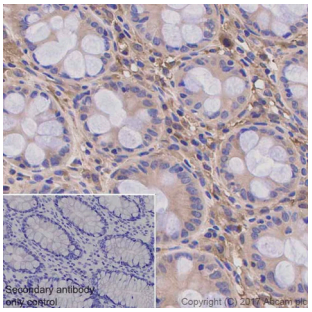
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

11 product images

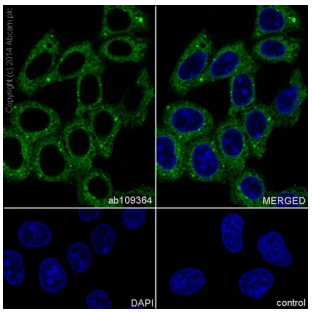


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GABARAP+GABARAPL1+GABARAPL2 antibody [EPR4805] (ab109364)

GABARAP+GABARAPL1+GABARAPL2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-GABARAP+GABARAPL1+GABARAPL2 antibody

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human colon tissue sections labeling GABARAP+GABARAPL1+GABARAPL2 with Purified ab109364 at 1:500 dilution (0.29 µg/ml). Heat mediated antigen retrieval was performed using EDTA Buffer, pH 9.0.

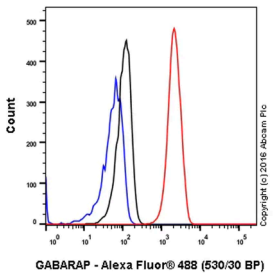
Tissue was counterstained with Hematoxylin. ImmunoHistoProbe one step HRP Polymer (ready to use) secondary antibody was used at 1:0 dilution. PBS instead of the primary antibody was used as the negative control.



Immunocytochemistry/ Immunofluorescence - Anti-GABARAP+GABARAPL1+GABARAPL2 antibody [EPR4805] (ab109364)

GABARAP+GABARAPL1+GABARAPL2 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-GABARAP+GABARAPL1+GABARAPL2 antibody

Immunocytochemistry/Immunofluorescence analysis of HeLa (human cervix adenocarcinoma) labelling GABARAP+GABARAPL1+GABARAPL2 with purified ab109364 at 1/500. Cells were fixed with 4% PFA and permeabilized with 0.1% Triton X-100. An Alexa Fluor® 488-conjugated goat anti-rabbit IgG (1/1000) was used as the secondary antibody (ab150077). Nuclei counterstained with DAPI (blue).

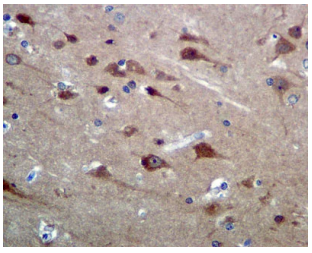


Flow Cytometry (Intracellular) - Anti-GABARAP+GABARAPL1+GABARAPL2 antibody [EPR4805] (ab109364)

GABARAP+GABARAPL1+GABARAPL2 Flow Cytometry (Intracellular) staining using rabbit Anti-GABARAP+GABARAPL1+GABARAPL2 antibody

Unpurified ab109364 staining GABARAP+GABARAPL1+GABARAPL2 in the human cell line HeLa (human cervix adenocarcinoma) by intracellular flow cytometry. Cells were fixed with 4% paraformaldehyde, permeabilized with 90% methanol and the sample was incubated with the primary antibody at a dilution of 1/20. A goat anti rabbit IgG (Alexa Fluorr® 488) at a dilution of 1/2000 was used as the secondary antibody.
Isoytype control: Rabbit monoclonal IgG (Black)

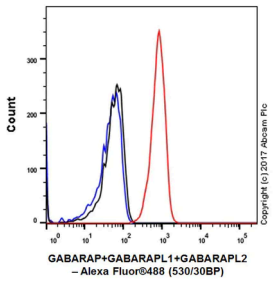
Unlabelled control: Cell without incubation with primary antibody and secondary antibody (Blue)



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GABARAP+GABARAPL1+GABARAPL2 antibody [EPR4805] (ab109364)

GABARAP+GABARAPL1+GABARAPL2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-GABARAP+GABARAPL1+GABARAPL2 antibody

Unpurified ab109364, at 1/500, staining GABARAP+GABARAPL1+GABARAPL2 in Human brain tissue by immunohistochemistry.

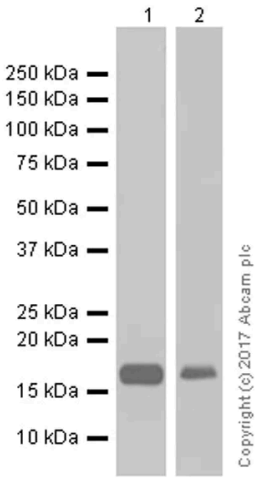


Flow Cytometry (Intracellular) - Anti-GABARAP+GABARAPL1+GABARAPL2 antibody [EPR4805] (ab109364)

GABARAP+GABARAPL1+GABARAPL2 Flow Cytometry (Intracellular) staining using rabbit Anti-GABARAP+GABARAPL1+GABARAPL2 antibody

Intracellular Flow Cytometry analysis of HeLa (Human cervix adenocarcinoma epithelial cell) cells labeling GABARAP+GABARAPL1+GABARAPL2 with purified ab109364 at 1/20 dilution (10 ug/ml) (red). Cells were fixed with 4% Paraformaldehyde and permeabilized with 90% methanol. A Goat anti rabbit IgG (Alexa Fluorr® 488) secondary antibody was used at 1/2000 dilution. Isotype control

- Rabbit monoclonal IgG (Black). Unlabeled control - Cell without incubation with primary antibody and secondary antibody (Blue).



Western blot - Anti-GABARAP+GABARAPL1+GABARAPL2 antibody [EPR4805] (ab109364)

Blocking and diluting buffer: 5% NFDM/TBST
All lanes:
Western blot - Anti-GABARAP+GABARAPL1+GABARAPL2 antibody [EPR4805] (ab109364) at 1/5000 dilution

Lane 1:
Mouse kidney lysates at 20 µg

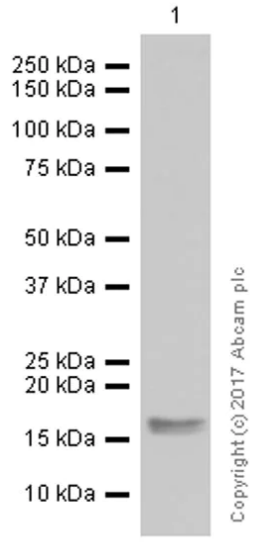
Lane 2:
HepG2 (Human hepatocellular carcinoma epithelial cell) whole cell lysates at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Predicted band size: 14 kDa

Observed band size: 17 kDa



Western blot - Anti-GABARAP+GABARAPL1+GABARAPL2 antibody [EPR4805] (ab109364)

Blocking and diluting buffer: 5% NFDM/TBST
All lanes:
Western blot - Anti-GABARAP+GABARAPL1+GABARAPL2 antibody [EPR4805] (ab109364) at 1/5000 dilution

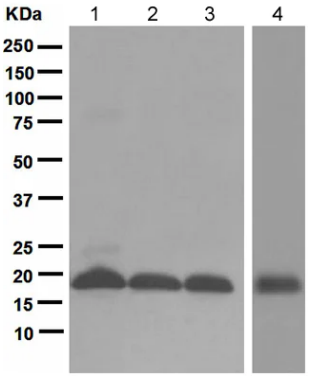
All lanes:
Rat kidney lysates at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Predicted band size: 14 kDa

Observed band size: 17 kDa



Western blot - Anti-GABARAP+GABARAPL1+GABARAPL2 antibody [EPR4805] (ab109364)

All lanes:
Western blot - Anti-GABARAP+GABARAPL1+GABARAPL2 antibody [EPR4805] (ab109364) at 1/1000 dilution

Lane 1:
Fetal kidney lysate at 10 µg

Lane 2:
SH-SY5Y cell lysate at 10 µg

Lane 3:
HepG2 cell lysate at 10 µg

Lane 4:
Fetal brain lysate at 10 µg

Predicted band size: 14 kDa

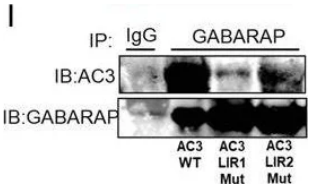


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GABARAP interacts with AC3 via LIRs of AC3 in a ciliary expression⊠dependent manner. A⊠E) WB (A) and densitometric quantification of the expression of GABARAP (B), ATG5 (C), VPS34 (D), and Beclin1(E) in the hypothalami of AC3+/+, AC3−/−, and hAC3 mice (n = 3 mice per group). Actin served as the loading control. F) Representative IF co⊠staining with AC3 and GABARAP antibodies in the VMHs of WT mice. F′) A higher magnification of the boxed region. Scale bars: F) 20 µm; F′) 5 µm. G) Representative images showing the expression levels of GABARAP and AC3 in the VMHs of VMH pIFT88⊠AC3 KD mice and the controls. Scale bars: 20 µm. H) Schematic representation of GABARAP binding LIRs at aa488⊠aa493 and aa958⊠aa963 of AC3. I) Co⊠IP analysis of GABARAP and AC3 (WT), AC3 (LIR1 Mut), or AC3 (LIR2 Mut). LgG served as the negative control. J) Pull⊠down analysis of GABARAP and AC3. K) Co⊠IP analysis of GABARAP and AC3 (WT), AC3 (296 Mut), or AC3 (465 Mut). LgG served as the negative control. L) Schematic representation of AC3 regulating GABARAP. Data represent the mean ± SEM; *p < 0.05 and **p < 0.01; one⊠way ANOVA and Bonferroni pairwise comparisons.

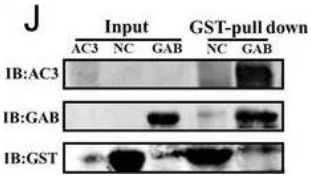


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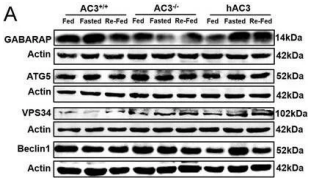


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