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GABARAP Antibody

Rabbit mAb
Catalog # AP91484

Product Information

Application	WB, IHC, IF, FC, ICC, IHF
Primary Accession	O95166
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Other Names	GABARAP; GABARAPL1; GABARAPL2;
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	13918

Additional Information

Dilution	WB 1:500~1:2000 IHC 1:100~1:500 ICC/IF 1:50~1:200 FC 1:50
Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human GABARAP
Description	GABARAP is cleaved at its carboxyl terminus, which leads to conjugation by either of the phospholipids phosphatidylethanolamine or phosphatidylserine. This processing converts GABARAP from a type I to a type II membrane bound form involved in autophagosome biogenesis. Processing of GABARAP involves cleavage by Atg4 family members followed by conjugation by the E1 and E2 like enzymes Atg7 and Atg3.
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

Protein Information

Name	GABARAP {ECO:0000303|PubMed:34597140, ECO:0000312|HGNC:HGNC:4067}
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, PubMed:34597140). 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). Participates in selective ER-phagy through interaction with UBAC2, promoting recruitment of UBAC2-associated ER fragments to autophagosomes (PubMed:39284914). In

addition to autophagy, also regulates lysosome biogenesis via interaction with FNIP1 (or FNIP2): interaction sequesters the FLCN-FNIP complex and prevents non-canonical mTORC1 signaling cascade activation, leading to activation of transcription factors TFEB and TFE3 (PubMed:39423796, PubMed:34597140). 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).

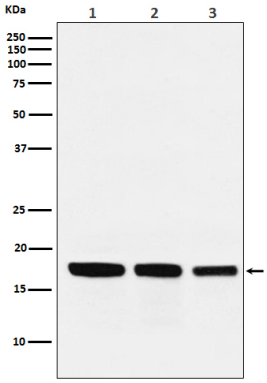
Cellular Location

Cytoplasmic vesicle, autophagosome membrane. Endomembrane system {ECO:0000250|UniProtKB:P60517}. Cytoplasm, cytoskeleton {ECO:0000250|UniProtKB:P60517}. Golgi apparatus membrane {ECO:0000250|UniProtKB:P60517}. Cytoplasmic vesicle {ECO:0000250|UniProtKB:P60517}. Note=Largely associated with intracellular membrane structures including the Golgi apparatus and postsynaptic cisternae. Colocalizes with microtubules (By similarity) Also localizes to discrete punctae along the ciliary axoneme (By similarity). {ECO:0000250|UniProtKB:P60517, ECO:0000250|UniProtKB:Q9DCD6}

Tissue Location

Heart, brain, placenta, liver, skeletal muscle, kidney and pancreas.

Images



Western blot analysis of GABARAP expression in (1) HepG2 cell lysate; (2) Mouse kidney lysate; (3) Rat heart lysate.

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