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GABARAP Antibody

Mouse Monoclonal Antibody (Mab)
Catalog # AM2025b

Product Information

Application	WB, E
Primary Accession	O95166
Other Accession	P60517, Q8MK68, Q9DCD6, Q9GJW7, NP_009209.1
Reactivity	Human, Mouse
Predicted	Rat, Rabbit, Bovine, Canine, Chicken
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1
Clone Names	424CT5.1.6
Calculated MW	13918

Additional Information

Gene ID	11337
Other Names	Gamma-aminobutyric acid receptor-associated protein, GABA(A) receptor-associated protein, MM46, GABARAP, FLC3B
Target/Specificity	Purified His-tagged GABARAP protein(Fragment) was used to produced this monoclonal antibody.
Dilution	WB~~1:100~250 E~~Use at an assay dependent concentration.
Format	Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	GABARAP Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

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.

Background

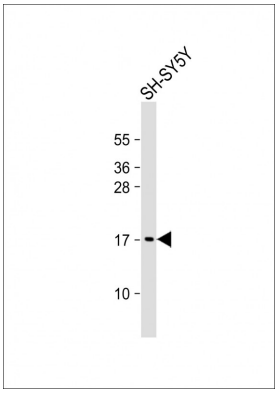
Gamma-aminobutyric acid A receptors [GABA(A) receptors] are ligand-gated chloride channels that mediate inhibitory neurotransmission. This gene encodes GABA(A) receptor-associated protein, which is highly positively charged in its N-terminus and shares sequence similarity with light chain-3 of microtubule-associated proteins 1A and 1B. This protein clusters neurotransmitter receptors by mediating interaction with the cytoskeleton.

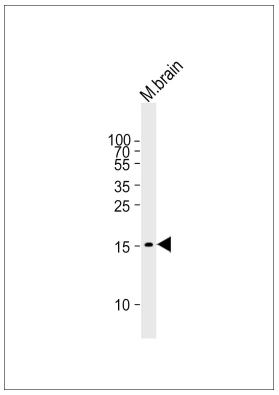
References

Garcia-Martin, E., et al. J. Neurol. (2010) In press :
Komoike, Y., et al. J. Hum. Genet. 55(3):155-162(2010)
Thielmann, Y., et al. Proteins 77(3):637-646(2009)
Schwarten, M., et al. Autophagy 5(5):690-698(2009)
Kirkin, V., et al. Mol. Cell 33(4):505-516(2009)

Images

Anti- at 1:1000 dilution + SH-SY5Y whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-mouse IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 14 kDa Blocking/Dilution buffer: 5% NFDM/TBST.





Anti-GABARAP Antibody at 1:1000 dilution + mouse brain lysate Secondary Goat Anti-mouse IgG, (H+L),Peroxidase conjugated at 1/10000 dilution. Predicted band size : 13918 Da Blocking/Dilution buffer: 5% NFDM/TBST.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.