

GABARAP Antibody
Catalog # ASC11660**Specification**

GABARAP Antibody - Product Information

Application	WB, IHC-P, IF, E
Primary Accession	O95166
Other Accession	NP_009209 , 11337
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	Predicted: 13

Application Notes	Observed: 16 KDa GABARAP antibody can be used for detection of GABARAP by Western blot at 1 - 2 µg/mL. Antibody can also be used for immunohistochemistry starting at 5 µg/mL. For immunofluorescence start at 20 µg/mL.
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GABARAP Antibody - Additional InformationGene ID **11337****Target/Specificity**

GABARAP antibody was raised against a 19 amino acid peptide near the amino terminus of human GABARAP.
The immunogen is located within the first 50 amino acids of GABARAP.

Reconstitution & Storage

GABARAP antibody can be stored at 4°C for three months and -20°C, stable for up to one year.

Precautions

GABARAP Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

GABARAP Antibody - Protein InformationName GABARAP ([HGNC:4067](#))

Synonyms FLC3B

Function

Ubiquitin-like modifier that plays a role in intracellular transport of GABA(A) receptors and its interaction with the cytoskeleton (PubMed: <http://www.uniprot.org/citations/9892355> target="_blank">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: <http://www.uniprot.org/citations/15169837> target="_blank">15169837, PubMed: <http://www.uniprot.org/citations/20562859>

target="_blank">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).

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

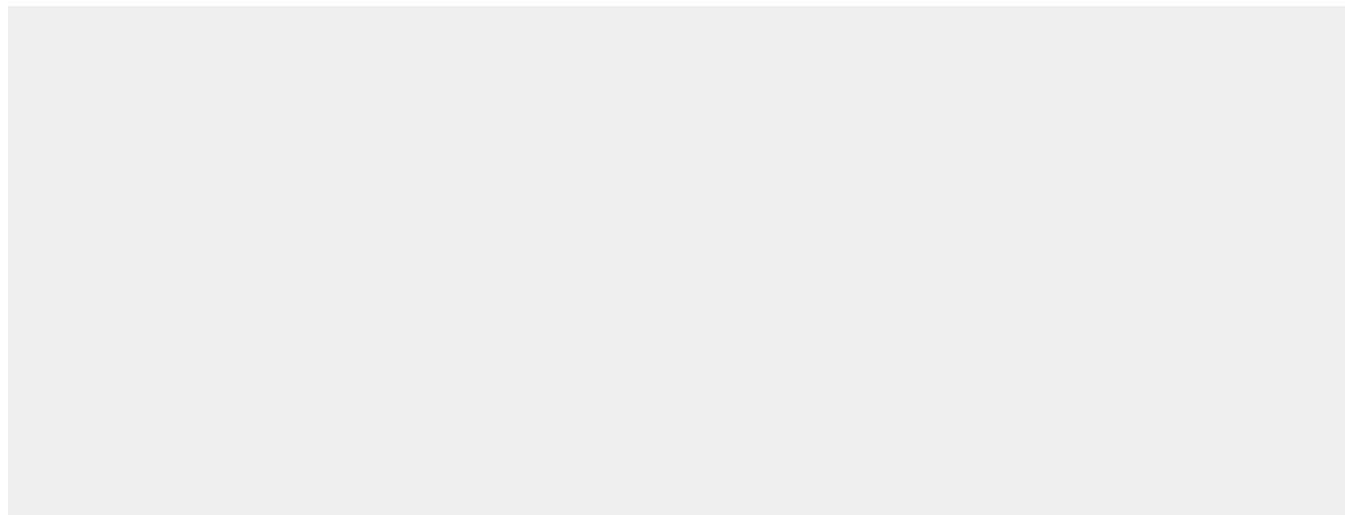
Heart, brain, placenta, liver, skeletal muscle, kidney and pancreas.

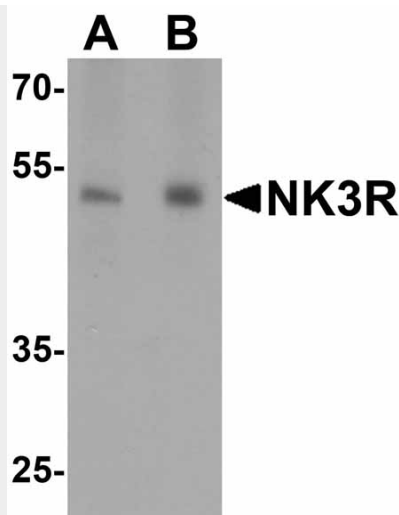
GABARAP Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

GABARAP Antibody - Images





Western blot analysis of NK3R in RAW264.7 cell lysate with NK3R antibody at (A) 0.5 and (B) 1 μ g/mL.

GABARAP Antibody - Background

GABARAP Antibody: Gamma-aminobutyric acid (GABA) is the main inhibitory transmitter by increasing a Cl⁻ conductance that inhibits neuronal firing in the central nervous system. It has been shown to activate both ionotropic (GABAA) and metabotropic (GABAB) receptors as well as a third class of receptors called GABAC. GABARAP (GABAA receptor-associated protein) links GABAA receptors to the cytoskeleton and may play a role in intracellular transport of GABAA receptors and its interaction with the cytoskeleton. GABARAP belongs to the MAP1 or ATG8 like family and recent studies show that MAPK15/ERK8 is acting through interaction with ATG8 family proteins to regulate autophagy.

GABARAP Antibody - References

- Cherubini E, Gaiarsa JL, and Ben-Ari Y. GABA: an excitatory transmitter in early postnatal life. *Trends Neurosci.* 1991; 14:515-19.
- Dirkx R Jr, Thomas A, Li L, et al. Targeting of the 67 kDa isoform of glutamic acid decarboxylase to intracellular organelles is mediated by its interaction with the NH₂-terminal region of the 65 kDa isoform of glutamic acid decarboxylase. *J. Biol. Chem.* 1995; 270:2241-6.
- Wang H, Bedford FK, Brandon NJ, et al. GABA(A)-receptor-associated protein links GABAA receptors and the cytoskeleton. *Nature* 1999; 397:69-72.
- Colecchia D, Strambi A, Sanzone S, et al. MAPK15/ERK8 stimulates autophagy by interacting with LC3 and GABARAP proteins. *Autophagy* 2012 Sep 4;8(12).