Revision 1

Store at -20C

#11876

GABARAP Antibody

Cell Signaling TECHNOLOGY®

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H M R	Endogenous	14,16	Rabbit	#O95166	11337

Product Usage Information

Application	Dilution
Western Blotting	1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.

Specificity/Sensitivity

GABARAP Antibody recognizes endogenous levels of total GABARAP protein. This antibody does not cross-react with other GABARAP family members; an unknown background band is detected at 70 kDa.

Species predicted to react based on 100% sequence homology

Monkey

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Arg40 of human GABARAP protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background

$GABA_A$ receptor associated protein (GABARAP) is an Atg8 family protein with a key role in autophagy, which was originally discovered as a protein associated with the $GABA_A$ receptor regulating receptor trafficking to the plasma membrane (1). Proteins in this family, including microtubule-associated protein light chain 3 (LC3) and GATE-16 (GABARAPL2), become incorporated into the autophagosomal membranes following autophagic stimuli such as starvation (2). Like the other family members, GABARAP is cleaved at its carboxyl terminus, which leads to conjugation by either of the phospholipids phosphatidylethanolamine or phosphatidylserine (3,4). 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 (5,6) followed by conjugation by the E1 and E2 like enzymes Atg7 and Atg3 (7,8). GABARAPL1/GEC1, a protein that is highly related to GABARAP, was identified as an estrogen inducible gene, and is also associated with autophagosomes (9-11).

Background References

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5. Tanida, I. et al. (2004) *J Biol Chem* 279, 36268-76.
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9. Chakrama, F.Z. et al. (2010) *Autophagy* 6, 495-505.
10. Pellerin, I. et al. (1993) *Mol Cell Endocrinol* 90, R17-21.
11. Vernier-Magnin, S. et al. (2001) *Biochem Biophys Res Commun* 284, 118-25.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat

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