Store at -20°C

#11876

GABARAP Antibody

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Entrez-Gene ID #11337
UniProt ID #O95166

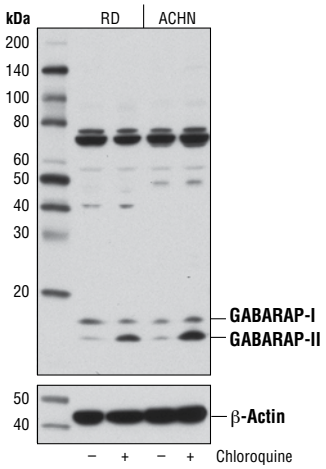
For Research Use Only. Not For Use In Diagnostic Procedures.

Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W Endogenous	H, M, R, (Mk)	14,16 kDa	Rabbit**

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, 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).

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.

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.



Western blot analysis of extracts from RD and ACHN cells, untreated (-) or chloroquine-treated (50 µM, overnight; +), using GABARAP Antibody (upper) or β-Actin (D6A8) Rabbit mAb #8457 (lower).

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.*

***Species cross-reactivity is determined by western blot.**

****Anti-rabbit secondary antibodies must be used to detect this antibody.**

Recommended Antibody Dilutions:

Western blotting	1:1000

For product specific protocols and a complete listing of recommended companion products please see the product web page at www.cellsignal.com

Background References:

(1) Wang, H. et al. (1999) *Nature* 397, 69-72.
(2) Shpilka, T. et al. (2011) *Genome Biol* 12, 226.
(3) Kabeya, Y. et al. (2004) *J Cell Sci* 117, 2805-12.
(4) Sou, Y.S. et al. (2006) *J Biol Chem* 281, 3017-24.
(5) Tanida, I. et al. (2004) *J Biol Chem* 279, 36268-76.
(6) Hemelaar, J. et al. (2003) *J Biol Chem* 278, 51841-50.
(7) Tanida, I. et al. (2001) *J Biol Chem* 276, 1701-6.
(8) Tanida, I. et al. (2002) *J Biol Chem* 277, 13739-44.
(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.

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

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