Revision 4

Store at -20C

#26632

GABARAPL1 (D5R9Y) XP® Rabbit mAb

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, IF-IC, FC-FP	H M R	Endogenous	14, 16	Rabbit IgG	#Q9H0R8	23710

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunofluorescence (Immunocytochemistry)	1:200
Flow Cytometry (Fixed/Permeabilized)	1:100

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. Do not aliquot the antibody.

For a carrier free (BSA and azide free) version of this product see product #37737.

Specificity/Sensitivity

GABARAPL1 (D5R9Y) XP® Rabbit mAb recognizes endogenous levels of total GABARAPL1 protein. This antibody does not cross react with other GABARAP family members.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the amino terminus of human GABARAPL1 protein.

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).
Gamma-aminobutyric acid receptor-associated protein-like 1 (GABARAPL1) appears to be more highly expressed in the CNS as compared to other family members (12-14). Expression of GABARAPL1 is associated with prognosis of some cancers, including hepatocellular and breast cancer (15,16). Inhibition of GABARAPL1 expression in breast cancer cells attenuates autophagic flux, results in metabolic changes, and leads to cancer promoting activities (17).

Background References

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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 **IF-IC:** Immunofluorescence (Immunocytochemistry) **FC-FP:** Flow Cytometry (Fixed/Permeabilized)

Cross-Reactivity Key

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

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Limited Uses