

# GABARAP (N-14): sc-9189

## BACKGROUND

In the central nervous system GABA functions as the main inhibitory transmitter by increasing a Cl<sup>-</sup> conductance that inhibits neuronal firing. GABA has been shown to activate both ionotropic (GABA<sub>A</sub>) and metabotropic (GABA<sub>B</sub>) receptors as well as a third class of receptors called GABA<sub>C</sub>. In addition to GABA receptors, several proteins have been identified as regulators of GABA function, including GAD65, GAD67, GABA transporters and GABARAP (GABA<sub>A</sub> receptor-associated protein). GABARAP associates with GABA<sub>A</sub> Ry2 to link GABA<sub>A</sub> receptors to the cytoskeleton. The GABARAP protein sequence is similar to light chain-3 of microtubule-associated proteins (MAPs), suggesting that it may be a type of MAP or a component of a MAP complex.

## REFERENCES

1. Cherubini, E., et al. 1991. GABA: an excitatory transmitter in early postnatal life. *Trends Neurosci.* 14: 515-519.
2. Dirx, R., Jr., et al. 1995. Targeting of the 67 kDa isoform of glutamic acid decarboxylase to intracellular organelles is mediated by its interaction with the NH<sub>2</sub>-terminal region of the 65 kDa isoform of glutamic acid decarboxylase. *Biol. Chem.* 270: 2241-2246.
3. Borden, L.A. 1996. GABA transporter heterogeneity: pharmacology and cellular localization. *Neurochem. Int.* 29: 335-356.
4. Lukasiewicz, P.D. 1996. GABA<sub>C</sub> receptors in the vertebrate retina. *Mol. Neurobiol.* 12: 181-194.
5. Kaupmann, K., et al. 1998. Human  $\gamma$ -aminobutyric acid type B receptors are differentially expressed and regulate inwardly rectifying K<sup>+</sup> channels. *Proc. Natl. Acad. Sci. USA* 95: 14991-14996.
6. Wang, H., et al. 1999. GABA<sub>A</sub>-receptor-associated protein links GABA<sub>A</sub> receptors and the cytoskeleton. *Nature* 397: 69-72.

## CHROMOSOMAL LOCATION

Genetic locus: GABARAP (human) mapping to 17p13.1; Gabarap (mouse) mapping to 11 B3.

## SOURCE

GABARAP (N-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of GABARAP of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-9189 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## APPLICATIONS

GABARAP (N-14) is recommended for detection of GABARAP of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

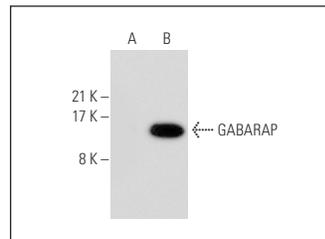
GABARAP (N-14) is also recommended for detection of GABARAP in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for GABARAP siRNA (h): sc-41956, GABARAP siRNA (m): sc-41957, GABARAP shRNA Plasmid (h): sc-41956-SH, GABARAP shRNA Plasmid (m): sc-41957-SH, GABARAP shRNA (h) Lentiviral Particles: sc-41956-V and GABARAP shRNA (m) Lentiviral Particles: sc-41957-V.

Molecular Weight of GABARAP: 14 kDa.

Positive Controls: GABARAP (m): 293T Lysate: sc-125364.

## DATA



GABARAP (N-14): sc-9189. Western blot analysis of GABARAP expression in non-transfected: sc-117750 (A) and mouse GABARAP transfected: sc-125364 (B) whole cell lysates.



GABARAP (N-14): sc-9189. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic and apical membrane staining of cells in tubules.

## SELECT PRODUCT CITATIONS

1. Mansuy, V., et al. 2004. GEC1, a protein related to GABARAP, interacts with tubulin and GABA<sub>A</sub> receptor. *Biochem. Biophys. Res. Commun.* 325: 639-648.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

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Try **GABARAP (E-8): sc-377300** our highly recommended monoclonal alternative to GABARAP (N-14).