

Product Specification Sheet

GABA Receptor Associated Protein (GABARAP) Antibodies

Cat. # GABARAP11-P	Rabbit Anti-Human GABARAP control peptide # 1	SIZE: 100 ug
Cat. # GABARAP11-S	Rabbit Anti- Human GABARAP antiserum # 1	SIZE: 100 ul
Cat. # GABARAP11-A	Rabbit Anti- Human GABARAP IgG # 1 (aff pure)	SIZE: 100 ug

GABA (γ -amino butyric acid) is the most abundant neurotransmitter in mammalian brain. GABA exerts its effects through ionotropic ligand-gated GABA_A, GABA_C and GABA_B receptors (**GABA_BRs**). A family of GABA-A receptors subtypes exists, which are generated by alternative splicing of alpha 1-6, beta 1-4, gamma 1-4, delta, epsilon, pie, theta, and rho1-3 to form a heteromeric (pentameric?) protein complexes. Various GABA-A subunits show distinct patterns of temporal and spatial expression that may imply its tissue specific physiological role (1). **GABA A (GAA) receptor** proteins (450-627 aa) are characterized by the presence of a large cytoplasmic domain that may be involved in anchoring the receptor to the cytoskeleton. Most recently, a new cellular protein, termed GABA A receptor associated protein (**GABARAP**), has been shown to interact with gamma 2 subunit of GAA. GABARAP has similarity with light chain-3 microtubule associated protein 1A and 1B. N-terminus of GABARAP also possess a tubulin-binding motif. Therefore, a possible interaction of GAA, GABARAP, and tubulin suggest for the targeting and clustering of GAA. GABARAP is found in brain and most other tissues. GABARAP is 117 aa (~17 kDa) in human, rat, and mouse.

Source of Antigen and Antibodies

Antigen	19-aa peptide from human GABARAP (1); Designation (GABARAP11-P, control peptide) ; epitope location ~ N-terminus
Antibody host/type	Rabbit, Polyclonal unpurified antiserum (Cat # GABARAP11-S); Rabbit, Polyclonal IgG (Cat # GABARAP11-S), purified over antigen-Agarose
Secondary Ab	Cat # 20320, goat anti-rabbit IgG-HRP (AP, biotin, FITC conjugates also available).
Negative Control Ab	Non-immune rabbit IgG (Cat # 20009-1) to be used as -ve control for ELISA, WB, IHC etc.

Form & Storage of Antibodies/Peptide Control

Affinity pure IgG

100 ug/100ul solution lyophilized powder
Supplied in **Buffer:** PBS+0.1% BSA
Reconstitute powder in PBS at 1mg/ml

Control/blocking peptide

100 ug/100 ul solution lyophilized powder
Supplied in Buffer: PBS pH 7.5,
Reconstitute powder in PBS at 1 mg/ml.

Storage

Short-term: unopened, undiluted vials for less than a week at 4°C.

Long-term: at -20°C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at -20°C or below.

Shipping: 4°C for solutions and room temp for powder.

Recommended Usage

Western Blotting: 1-10 μ g/ml; using affinity pure antibody (chemiluminescence technique).

ELISA: 1:100K; using 50-100 ng control peptide/well.

Histochemistry & Immunofluorescence: Not tested; we recommend the use of affinity purified antibody at 2-10 μ g/ml.

Recommended Usage

Western Blotting (1:1K-5K for neat serum and 1-10 ug/ml for affinity pure antibody using ECL technique).

ELISA: Control peptide can be used to coat ELISA plates at 1 ug/ml and detected with antibodies (1:10-50K for neat serum and 0.5-1 ug/ml for affinity pure).

Histochemistry & Immunofluorescence: Not tested. We recommend the use of affinity purified antibody at 2-20 ug/ml in paraformaldehyde fixed sections of tissues.

Specificity & Cross-reactivity

Human GABARAP11-P control peptide is 100% conserved in mouse and rat. It is also homologous with GABARAP from mud sucker (95%), mosquito and drosophila (80%). Antibody cross-reactivity in various species has not been studied. Control peptide, because of its low mol. Wt (<3 kDa), is not suitable for Western. It should be used for ELISA or antibody blocking experiments (use 5-10 ug control peptide per 1 ug of aff pure IgG or 1 ul antiserum) to confirm antibody specificity (see detailed protocol at the web site).

General References: (1) Mehta Ak and Ticku MK et al (1999) Brain Res. Rev. 29, 196-271 (review); Whiting PJ et al (1999) Ann. NY Acad. Sci. 868, 645-653 (review); Siegart W et al (1999) Neurochem. Intl. 34, 379-385 (review); (2) Wang S et al (1999) Nature 397, 69-72.

(2) Citations of ADI's Antibodies (see web site for updated list)

Klebig C 2005 Cancer Res., 65: 394 – 400, IHC, IF, human cells

*This product is for In vitro research use only.

GABARAP11-S-A-P

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