



PhosphoSolutions®
Antibodies that work™

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Tel: (888) 442-7100

Anti-GABA Transporter (GAT) 1

Catalog Number: 880-GAT1

Size: 100 µl

Product Description: Affinity purified rabbit polyclonal antibody

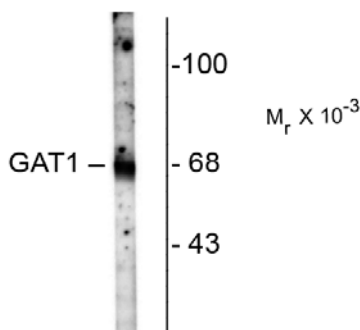
Applications: **WB:** 1:1000 **IHC:** 1:100-1:200

Antigen: Peptide corresponding to amino acid residues from the C-terminal region of rat GAT-1.

Species reactivity: The antibody has been directly tested for reactivity in Western blots with rat tissue. It is anticipated that the antibody will also react with mouse tissue based on the fact that this species has 100% homology with the amino acid sequence used as antigen.

Biological Significance: *Gamma*-aminobutyric acid (GABA) is the primary inhibitory neurotransmitter in the central nervous system, causing a hyperpolarization of the membrane through the opening of a Cl⁻ channel associated with the GABA_A receptor (GABA_A-R) subtype. GABA plasma membrane transporters (GATs) influence synaptic neurotransmission by high-affinity uptake and release of GABA. To date, four distinct GABA transporters have been identified: GAT-1, GAT-2, GAT-3, and BGT-1. GAT-1, the most abundant of the transporters, is found predominantly in neurons, but also in some specialized glia (Minelli et al., 1995). GAT-1 is thought to play a key role in epileptogenesis (Zhao et al. 2003).

Anti-GAT1



Western blot of rat hippocampal homogenate showing specific immunolabeling of the ~67k GAT-1 protein.

Purification Method: Prepared from rabbit serum by affinity purification.

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WB = Western Blot **IF** = Immunofluorescence **IHC** = Immunohistochemistry **IP** = Immunoprecipitation

Packaging: 100 µl in 10 mM HEPES (pH 7.5), 150 mM NaCl, 100 µg BSA per ml and 50% glycerol. Adequate amount of material to conduct 10-mini Western Blots.

Storage and Stability. For long term storage -20°C is recommended. Stable at -20°C for at least 1 year.

Shipment: Domestic - Blue Ice; International - Blue Ice or Dry Ice.

Antibody Specificity: Specific for the ~67k GAT-1 protein. Immunolabeling is blocked by the peptide used as antigen.

Quality Control Tests: Western blots performed on each lot.

References:

Minelli A, Brecha NC, Karschin C, DeBiasi S, Conti F (1995) GAT-1, a high-affinity GABA plasma membrana transporter, is localizad to neurons and astroglia int he cerebral cortex. *J. Neurosci.* 15(11):7734-7746.

Zhao WJ, Ma YH, Fei J, Mei ZT, Guo LH (2003) Increase in drug-induced seizure susceptibility of transgenic mice overexpressing GABA transporter 1. *Acta Pharmacol. Sin.* 24(10):991-5.

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