

## GABA transporter 3

Cat.No. 274 304; Polyclonal Guinea pig antibody, 100 µl antiserum (lyophilized)

### Data Sheet

Reconstitution/ Storage	100 µl antiserum, lyophilized. For reconstitution add 100 µl H <sub>2</sub> O, then aliquot and store at -20°C until use.
Applications	<b>WB:</b> 1 : 1000 (AP staining) (see remarks) <b>IP:</b> yes <b>ICC:</b> 1 : 500 <b>IHC:</b> 1 : 500 <b>IHC-P/FFPE:</b> 1 : 500
Immunogen	Synthetic peptide corresponding to AA 612 to 627 from mouse GABA transporter3 (UniProt Id: P31650)
Reactivity	Reacts with: rat (P31647), mouse (P31649). Other species not tested yet.
Specificity matching control	Specific for GAT&nbsp;3. 274-3P
Remarks	<b>WB:</b> GAT 3 aggregates after boiling, making it necessary to run SDS-PAGE with non-boiled samples.

**TO BE USED IN VITRO / FOR RESEARCH ONLY  
NOT TOXIC, NOT HAZARDOUS, NOT INFECTIOUS, NOT CONTAGIOUS**

γ-aminobutyric acid (GABA) is a major inhibitory neurotransmitter. After the release of GABA from synaptic vesicles into the synaptic cleft during neurotransmission, **GABA transporters** (GATs) remove extracellular GABA by reuptake into the presynaptic terminal.

Three GABA transporters are described so far of which only GAT 1 and GAT 3 are expressed in the brain.

### Selected References SY SY Antibodies

Astrocytes detect and upregulate transmission at inhibitory synapses of somatostatin interneurons onto pyramidal cells. Matos M, Bosson A, Riebe I, Reynell C, Vallée J, Laplante I, Panatier A, Robitaille R, Lacaille JC. *Nature communications* (2018) 9(1): 4254. **IHC; tested species: mouse**

Olig2-Lineage Astrocytes: A Distinct Subtype of Astrocytes That Differs from GFAP Astrocytes. Tatsumi K, Isonishi A, Yamasaki M, Kawabe Y, Morita-Takemura S, Nakahara K, Terada Y, Shinjo T, Okuda H, Tanaka T, Wanaka A, et al. *Frontiers in neuroanatomy* (2018) 12: 8. **IHC; tested species: mouse**

### Selected General References

Substrate-mediated regulation of gamma-aminobutyric acid transporter 1 in rat brain. Hu J, Quick MW. *Neuropharmacology* (2008) 54(2): 309-18.

Regulation of a gamma-aminobutyric acid transporter by reciprocal tyrosine and serine phosphorylation. Quick MW, Hu J, Wang D, Zhang HY. *The Journal of biological chemistry* (2004) 279(16): 15961-7.

Functional regulation of gamma-aminobutyric acid transporters by direct tyrosine phosphorylation. Law RM, Stafford A, Quick MW. *The Journal of biological chemistry* (2000) 275(31): 23986-91.

Protein kinase C regulates the interaction between a GABA transporter and syntaxin 1A. Beckman ML, Bernstein EM, Quick MW. *The Journal of neuroscience : the official journal of the Society for Neuroscience* (1998) 18(16): 6103-12.

Production of specific antibodies against GABA transporter subtypes (GAT1, GAT2, GAT3) and their application to immunocytochemistry. Ikegaki N, Saito N, Hashima M, Tanaka C. *Brain research. Molecular brain research* (1994) 26(1-2): 47-54.

Structure, function and brain localization of neurotransmitter transporters. Jursky F, Tamura S, Tamura A, Mandiyan S, Nelson H, Nelson N. *The Journal of experimental biology* (1994) 196: 283-95.