Synaptic Systems

Rudolf-Wissell-Str. 28
37079 Göttingen, Germany
Phone: +49 551-50556-0
Fax: +49 551-50556-384
E-mail: sales@sysy.com
Web: www.sysy.com

Glycine transporter 2

Cat.No. 272 011; Monoclonal mouse antibody, 100 µg purified IgG (lyophilized)

Data Sheet

Reconstitution/ Storage	100 µg purified IgG, lyophilized. For reconstitution add 100 µl H_2O to get a 1mg/ml solution in PBS. Then aliquot and store at -20°C until use.
Applications	**WB**: 1 : 1000 (AP staining) (see remarks) **IP**: not tested yet **ICC**: not tested yet **IHC**: 1 : 250 **IHC-P/FFPE**: not tested yet
Clone	117F12
Subtype	IgG2b (κ light chain)
Immunogen	Recombinant protein corresponding to AA 1 to 229 from rat Glycine transporter2 (UniProt Id: P58295)
Epitop	Epitop: AA 1 to 229 from rat Glycine transporter2 (UniProt Id: P58295)
Reactivity	Reacts with: mouse (Q761V0), rat (P58295). Other species not tested yet.
Specificity	Specific for glycine transporter 2.
matching control	272-0P
Remarks	**WB**: 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

Glycine is the major inhibitory neurotransmitter in the spinal cord and brainstem. Two differentially expressed **gly**cine **t**ransporters, **GLYT 1** and **GLYT 2**, regulate the extracellular concentration of this neuroactive amino acid in the synaptic cleft.
GLYT 1 is expressed in both neurons as well as in glia with high expression levels in the main olfactory bulb, cerebellum, brainstem and spinal cord and low expression in other brain regions. It has been hypothesized to regulate glycine levels in NMDA receptor-mediated neurotransmission.
GLYT 2 shows an axonal localization and is mainly expressed in spinal cord, brain-stem and cerebellum.

Selected General References

Loss of Glycine Transporter 1 Causes a Subtype of Glycine Encephalopathy with Arthrogryposis and Mildly Elevated Cerebrospinal Fluid Glycine.
Kurolap A, Armbruster A, Hershkovitz T, Hauf K, Mory A, Paperna T, Hannappel E, Tal G, Nijem Y, Sella E, Mahajnah M, et al.
American journal of human genetics (2016) 99(5): 1172-1180.

Molecular mechanisms of glycine transporter GlyT2 mutations in startle disease.
James VM, Gill JL, Topf M, Harvey RJ
Biological chemistry (2012) 393(4): 283-9.

Gene knockout of glycine transporter 1: characterization of the behavioral phenotype.
Tsai G, Ralph-Williams RJ, Martina M, Bergeron R, Berger-Sweeney J, Dunham KS, Jiang Z, Caine SB, Coyle JT
Proceedings of the National Academy of Sciences of the United States of America (2004) 101(22): 8485-90.

Inactivation of the glycine transporter 1 gene discloses vital role of glial glycine uptake in glycinergic inhibition.
Gomeza J, Hülsmann S, Ohno K, Eulenburg V, Szöke K, Richter D, Betz H
Neuron (2003) 40(4): 785-96.

Calcium- and syntaxin 1-mediated trafficking of the neuronal glycine transporter GLYT2.
Geerlings A, Núñez E, López-Corcuera B, Aragón C
The Journal of biological chemistry (2001) 276(20): 17584-90.

The role of N-glycosylation in transport to the plasma membrane and sorting of the neuronal glycine transporter GLYT2.
Martínez-Maza R, Poyatos I, López-Corcuera B, N úñez E, Giménez C, Zafra F, Aragón C
The Journal of biological chemistry (2001) 276(3): 2168-73.

Glycine transporters are differentially expressed among CNS cells.
Zafra F, Aragón C, Olivares L, Danbolt NC, Giménez C, Storm-Mathisen J
The Journal of neuroscience : the official journal of the Society for Neuroscience (1995) 15(5 Pt 2): 3952-69.

Gene structure and glial expression of the glycine transporter GlyT1 in embryonic and adult rodents.
Adams RH, Sato K, Shimada S, Tohyama M, Püschel AW, Betz H
The Journal of neuroscience : the official journal of the Society for Neuroscience (1995) 15(3 Pt 2): 2524-32.

Localization of glycine neurotransmitter transporter (GLYT2) reveals correlation with the distribution of glycine receptor.
Jursky F, Nelson N
Journal of neurochemistry (1995) 64(3): 1026-33.