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Product datasheet for TA328861

Slc6a5 Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	IHC, WB
Recommended Dilution:	WB: 1:200-1:2000; IHC: 1:100-1:3000
Reactivity:	Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	Peptide CVIGDHPKIQIKNS, corresponding to amino acid residues 333-346 of rat Glycine Transporter 2. 2nd extracellular loop.
Formulation:	Lyophilized. Concentration before lyophilization ~0.8mg/ml (lot dependent, please refer to CoA along with shipment for actual concentration). Buffer before lyophilization: Phosphate buffered saline (PBS), pH 7.4, 1% BSA, 0.05% NaN3.
Reconstitution Method:	Add 50 ul double distilled water (DDW) to the lyophilized powder.
Purification:	Affinity purified on immobilized antigen.
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Gene Name:	solute carrier family 6 member 5
Database Link:	NP_976079 Entrez Gene 104245 MouseEntrez Gene 171148 Rat P58295

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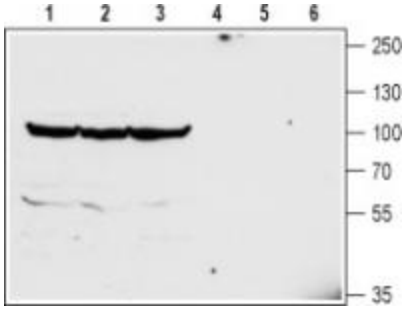
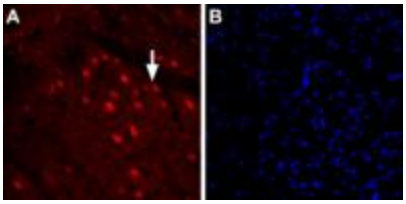
Background: Apart from its obvious biochemical functions, glycine is also an important inhibitory neurotransmitter. Following depolarization, glycine is released from synaptic vesicles, binds to glycine receptors (GlyRs) on postsynaptic membranes thereby causing hyperpolarization of postsynaptic neurons due to the massive influx of Cl ions. Glycine is then taken up from the synaptic cleft via the glycine transporters GlyT1 and GlyT2 . GlyT1 and GlyT2 belong to the SLC6, Na+/Cl dependent transporter family, of which members include transporters for GABA, serotonin, dopamine and norepinephrine. Like all SLC6 members, GlyT1 and GlyT2 have 12 transmembrane domains and intracellular N- and C-terminals. Both can be found in different splice variants. SLC6 transporters undergo post-translational modifications. For instance, GlyT1 and GlyT2 are glycosylated, which is important for their membrane trafficking. Phosphorylation of these two transporters also takes place in a PKC-dependent manner, which may lead to down regulation of both transporters. Pharmacologically, GlyT1 and GlyT2 can be differentiated by applying sarcosine which inhibits GlyT1 but not GlyT2 . GlyT1 and GlyT2 are broadly expressed in the nervous system; GlyT1 is concentrated in glial cells, while GlyT2 is present in glycenergic neurons in the spinal cord, brainstem and cerebellum. GlyT1 can also be detected in the pancreas, uterus, stomach, spleen, liver and retina. GlyT1 has become a target for the treatment of schizophrenia, although a defect of the protein is not directly associated with the disorder. Inhibiting GlyT1 should lead to the increase in glutamatergic pathways, thereby decreasing psychotic effects in schizophrenic individuals. GlyT2 has been associated with hyperekplexia, a motor disorder characterized by neonatal hypertonia and startle reflex.

Synonyms: GlyT-2; GLYT2; NET1

Product images:



Western blot analysis of mouse brain (lanes 1 and 4), rat brain (lanes 2 and 5) and rat cerebellum (lanes 3 and 6) lysates: 1-3. Anti-Glycine Transporter 2 (GlyT2) (extracellular) antibody, (1:200). 4-6. Anti-Glycine Transporter 2 (GlyT2) (extracellular) antibody, preincubated with the control peptide antigen.



Expression of Glycine Transporter 2 (GlyT2) in mouse brain stem. Immunohistochemical staining of immersion-fixed, free floating mouse brain frozen sections using Anti-Glycine Transporter 2 (GlyT2) (extracellular) antibody, (1:200). A. GlyT2 (red) is expressed in neurons (arrow). B. Dapi staining of cell nuclei (blue) is used as a general cellular marker.