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 receptor

Cat.No. 146 011; Monoclonal mouse antibody, 100 µg purified IgG (lyophilized)

Data Sheet

Reconstitution/ Storage	100 µg purified IgG, lyophilized. Azide was added before lyophilization. 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 : 500 up to 1 : 1000 (AP staining) **IP**: yes **ICC**: yes **IHC**: 1 : 250 (see remarks) **IHC-P/FFPE**: 1 : 500 **ELISA**: yes **FLOWCYTOMETRY**: yes
Clone	mAb4a
Subtype	IgG1 (κ light chain)
Immunogen	Recombinant protein corresponding to AA 1 to 457 from rat Glycine receptor α1 (UniProt Id: P07727)
Epitop	Epitop: AA 96 to 105 from rat Glycine receptor α1 (UniProt Id: P07727)
Reactivity	Reacts with: human (P23415, P23416, P48167), rat (P07727, P22771, P20781), mouse (Q64018, Q7TNC8, P48168), pig, zebrafish. Other species not tested yet.
Specificity	Specific for all glycine receptor subunits.
Remarks	**IHC**: Tissue sections require additional methanol/acetic acid treatment prior to antibody incubation. For details see Dumoulin A, Triller A & Dieudonné S (2001). recommended protocol

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

The inhibitory **glycine receptor** (GlyR) is a member of the ligand-gated ion channel superfamily of neurotransmitter receptors. It is an oligomeric protein composed of homologous subunits (α 1-4 and β) with four transmembrane segments (M1-M4) each.
It shows a widespread expression profile in brain. Several isoforms and splice variants with distinct pharmacology have been discovered so far.

Selected References SYSY Antibodies

Distribution of the glycine receptor β-subunit in the mouse CNS as revealed by a novel monoclonal antibody.
Weltzien F, Puller C, O'Sullivan GA, Paarmann I, Betz H
The Journal of comparative neurology (2012) 520(17): 3962-81. **WB, ICC, IHC**

Neuronal cotransport of glycine receptor and the scaffold protein gephyrin.
Maas C, Tagnaouti N, Loebrich S, Behrend B, Lappe-Siefke C, Kneussel M
The Journal of cell biology (2006) 172(3): 441-51. **WB, IP, ICC**

Disturbed neuronal ER-Golgi sorting of unassembled glycine receptors suggests altered subcellular processing is a cause of human hyperekplexia.
Schaefer N, Kluck CJ, Price KL, Meiselbach H, Vornberger N, Schwarzinger S, Hartmann S, Langlhofer G, Schulz S, Schlegel N, Brockmann K, et al.
The Journal of neuroscience : the official journal of the Society for Neuroscience (2015) 35(1): 422-37. **ICC, WB**

Slowly emerging glycinergic transmission enhances inhibition in the sound localization pathway of the avian auditory system.
Fischl MJ, Weimann SR, Kearse MG, Burger RM
Journal of neurophysiology (2014) 111(3): 565-72. **WB, IHC; tested species: chicken**

Age-related changes of glycine receptor at the rat hippocampus: from the embryo to the adult.
Aroeira RI, Ribeiro JA, Sebastião AM, Valente CA
Journal of neurochemistry (2011) 118(3): 339-53. **WB, IHC; tested species: rat**

Variable colocalisation of GABAA receptor subunits and glycine receptors on neurons in the human hypoglossal nucleus.
Waldvogel HJ, Biggins FM, Singh A, Arasaratnam CJ, Faull RLM
Journal of chemical neuroanatomy (2019) 97: 99-111. **IHC; tested species: human**

Glycine receptors are involved in hippocampal neuronal damage caused by oxygen-glucose deficiency.
Iryna L, Galyna M, Galyna S
Cell biology international (2018) : . **IHC; tested species: rat**

Autism-associated neuroligin-4 mutation selectively impairs glycinergic synaptic transmission in mouse brainstem synapses.
Zhang B, Gokce O, Hale WD, Brose N, Südhof TC
The Journal of experimental medicine (2018) : . **IHC; tested species: mouse**

Loss of Neuroligin3 specifically downregulates retinal GABAAα2 receptors without abolishing direction selectivity.
Hoon M, Krishnamoorthy V, Gollisch T, Falkenburger B, Varoqueaux F
PloS one (2017) 12(7): e0181011. **IHC; tested species: mouse**

Alpha subunit-dependent glycine receptor clustering and regulation of synaptic receptor numbers.
Patrizio A, Renner M, Pizzarelli R, Triller A, Specht CG
Scientific reports (2017) 7(1): 10899. **ICC; tested species: rat**

Disruption of a Structurally Important Extracellular Element in the Glycine Receptor Leads to Decreased Synaptic Integration and Signaling Resulting in Severe Startle Disease.
Schaefer N, Berger A, van Brederode J, Zheng F, Zhang Y, Leacock S, Littau L, Jablonka S, Malhotra S, Topf M, Winter F, et al.
The Journal of neuroscience : the official journal of the Society for Neuroscience (2017) 37(33): 7948-7961. **WB; tested species: mouse**

The GlyR Extracellular β8-β9 Loop - A Functional Determinant of Agonist Potency.
Janzen D, Schaefer N, Delto C, Schindelin H, Villmann C
Frontiers in molecular neuroscience (2017) 10: 322. **WB; tested species: human**

Proteomic analysis of glycine receptor β subunit (GlyRβ)-interacting proteins: evidence for syndapin I regulating synaptic glycine receptors.
Del Pino I, Koch D, Schemm R, Qualmann B, Betz H, Paarmann I
The Journal of biological chemistry (2014) 289(16): 11396-409. **ICC; tested species: rat**

Differential GABAergic and glycinergic inputs of inhibitory interneurons and Purkinje cells to principal cells of the cerebellar nuclei.
Husson Z, Rousseau CV, Broll I, Zeilhofer HU, Dieudonné S
The Journal of neuroscience : the official journal of the Society for Neuroscience (2014) 34(28): 9418-31. **IHC; tested species: mouse**

Developmentally dynamic colocalization patterns of DSCAM with adhesion and synaptic proteins in the mouse retina.
de Andrade GB, Kunzelman L, Merrill MM, Fuerst PG
Molecular vision (2014) 20: 1422-33. **IHC**

Differential subcellular targeting of glutamate receptor subtypes during homeostatic synaptic plasticity.
Soares C, Lee KF, Nassrallah W, Béïque JC
The Journal of neuroscience : the official journal of the Society for Neuroscience (2013) 33(33): 13547-59. **WB; tested species: mouse**