Glycine receptor

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

Data Sheet

Reconstitution/Storage
100 µg purified IgG, lyophilized. Albumin and azide were added for stabilization. For reconstitution add 100 µl H2O 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/FPEP: 1 : 100 up to 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)

Epitope
Epitope: 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 antigen retrieval with methanol/acetic acid 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 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.
Janzén D, Schaefer N, Delio C, Schindelin H, Villmann C


Disturbed neuronal ER-Golgi sorting of unassembled glycine receptors suggests altered subcellular processing is a cause of human hyperekplexia.

Single expressed glycine receptor domains reconstitute functional ion channels without subunit-specific desensitization behavior.

Phosphorylation of gephyrin in zebrafish Mauthner cells governs glycine receptor clustering and behavioral desensitization to sound.

A subcortical inhibitory signal for behavioral arrest in the thalamus.
Iryna L, Galyna M, Galyna S

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

Sound. Phosphorylation of gephyrin in zebrafish Mauthner cells governs glycine receptor clustering and behavioral desensitization to sound.
Ogino K, Yamada K, Nishiooka T, Oda Y, Kaibuchi K, Hirata H

Variable colocalisation of GABAα receptor subunits and glycine receptors on neurons in the human hypoglossal nucleus.
Waldvogel HJ, Biggins FM, Singh A, Arasaratnam CJ, Faull RLM

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

Loss of Neuroligin3 specifically downregulates retinal GABAα2 receptors without abolishing direction selectivity.

Disruption of a Structurally Important Extracellular Element in the Glycine Receptor Leads to Decreased Synaptic Integration and Signaling Resulting in Severe Startle Disease.


WB, IHC; tested species: human

WB, IHC; tested species: chicken

WB, IHC; tested species: zebrafish

WB, IHC; tested species: mouse

WB; tested species: mouse

WB, IHC; tested species: human

WB, IHC; tested species: human

WB, ICC; tested species: human

WB; tested species: mouse

WB; tested species: mouse

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WB; tested species: mouse