SYSY Antibodies

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GABABR2

Cat.No. 322 205; Polyclonal Guinea pig antibody, 50 µg specific antibody (lyophilized)

Data Sheet

Reconstitution/ Storage	50 µg specific antibody, lyophilized. Affinity purified with the immunogen. Albumin and azide were added for stabilization. For **reconstitution** add 50 µl H_2O to get a 1mg/ml solution in PBS. Then aliquot and store at -20°C to -80°C until use. Antibodies should be stored at +4°C when still lyophilized. Do not freeze! For detailed information, see back of the data sheet.
Applications	**WB**: 1 : 1000 (AP staining) **IP**: yes **ICC**: 1 : 500 **IHC**: external data (see remarks) **IHC-P (FFPE)**: not tested yet
Immunogen	Synthetic peptide corresponding to AA 917 to 940 from rat GABABR2 (UniProt Id: O88871)
Reactivity	Reacts with: rat (O88871), mouse (Q80T41). Other species not tested yet.
Specificity	K.O. validated PubMed: 26691831
Remarks	**IHC**: This antibody has been successfully applied for this method by our customers using mild fixation (2% PFA at pH 6) according to Lorincz and Nusser 2010 (see gallery). It has not been validated using our standard protocol.

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

Background

Metabotropic **g**-**a**mino**b**utyric **a**cid type **B r**eceptors (**GABABR**s) are involved in the modulation of synaptic transmission and activity of cerebellar and thalamic neurons.
In contrast to the ionotrophic GABA-A receptors they are linked to G-proteins underlying the slow inhibitory postsynaptic potentials.
GABABR 1 and **GABABR 2** have been shown to form heterodimers.

Selected References for 322 205

Modular composition and dynamics of native GABAB receptors identified by high-resolution proteomics.
Schwenk J, Pérez-Garci E, Schneider A, Kollewe A, Gauthier-Kemper A, Fritzius T, Raveh A, Dinamarca MC, Hanuschkin A, Bildl W, Klingauf J, et al.
Nature neuroscience (2016) 192: 233-42. . **WB, IP; KO verified; tested species: mouse**

Synaptotagmin-11 facilitates assembly of a presynaptic signaling complex in post-Golgi cargo vesicles.
Trovò L, Kouvaros S, Schwenk J, Fernandez-Fernandez D, Fritzius T, Rem PD, Früh S, Gassmann M, Fakler B, Bischofberger J, Bettler B, et al.
EMBO reports (2024) : . . **WB, ICC; tested species: mouse,human**

Functional signatures of de novo GABBR1 and GABBR2 variants associated with neurodevelopmental disorders.
Stawarski M, Bielopolski N, Roitman I, Fridman K, Wald-Altman S, Eitel M, Hui B, Vulto-van Silfhout A, Stegmann APA, Chirita-Emandi A, Eason J, et al.
NPJ genomic medicine (2026) 111: . . **ICC; tested species: human**

Normalization of network activity in an epilepsy model with a constitutively active GABBR2 variant.
Stawarski M, Ulrich D, Reinartz S, Schwenk J, Chen LY, Fernandez-Fernandez D, Frycz BA, Tafti M, Jeon Y, Lee H, Seong JK, et al.
Brain : a journal of neurology (2026) 1496: 2166-2183. . **ICC; tested species: human**

Selected General References

Distinct localization of GABA(B) receptors relative to synaptic sites in the rat cerebellum and ventrobasal thalamus.
Kulik A et al. Eur. J. Neurosci. (2002) PubMed:11849296

Heteromeric assembly of GABA(B)R1 and GABA(B)R2 receptor subunits inhibits Ca(2+) current in sympathetic neurons.
Filippov AK et al. J. Neurosci. (2000) PubMed:10751439

Access the online factsheet including applicable protocols at https://sysy.com/product/322205 or scan the QR-code.

FAQ - How should I store my antibody?

Shipping Conditions

- All SYSY antibodies and control proteins/peptides are shipped lyophilized (vacuum freeze-dried). In this form, they remain stable without loss of quality at ambient temperatures for several weeks.

Storage of Sealed Vials after Delivery

- **Unlabeled** and **biotin-labeled antibodies** and **control proteins** should be stored at **4°C** before reconstitution. **Do not freeze lyophilized antibodies**. Temperatures below 0°C may impair performance.
- **Fluorescence-labeled antibodies** should be reconstituted immediately upon receipt. Long-term storage of lyophilized fluorophore-conjugates may cause aggregation.
- **Control peptides** should be stored at -20°C before reconstitution.

Long Term Storage after Reconstitution (General Considerations)

- **Do not use frost-free ("no-frost") freezers.** These units periodically warm to remove ice buildup, causing freeze–thaw cycles that can damage antibodies.
- Store vials in areas with minimal temperature fluctuation - preferably toward the back of the freezer, not on the door.
- Aliquot reconstituted antibodies and store at –20°C to –80°C.
- Avoid very small aliquots (<20 µL), as evaporation and adsorption to tube surfaces can reduce antibody concentration and activity.
- Use the smallest practical storage vial to minimize surface area.
- Adding glycerol to a final concentration of 50% prevents freezing at -20°C, allowing storage in liquid form and effectively avoiding freeze–thaw cycles.

Product Specific Hints for Storage

Control proteins / peptides

- Store at -20°C to -80°C

Monoclonal Antibodies

- **Ascites and hybridoma supernatant:** Store at -20°C to -80°C
  Prolonged storage at 4°C is not recommended, as proteases present in ascites may degrade antibodies.
- **Purified IgG:** Store at -20°C to -80°C
  Adding a carrier protein (e.g., BSA) enhances long-term stability.
  Many SYSY antibodies already contain carrier proteins - refer to the respective datasheet for details.

Polyclonal Antibodies

- **Crude antisera:** Can be stored at 4°C with antimicrobials added, but -20°C to -80°C is preferred
- **Affinity-purified antibodies:** Less stable than antisera; store at -20°C to -80°C
  Adding a carrier protein such as BSA improves long-term stability.
  Most SYSY antibodies already contain carrier proteins - refer to the respective datasheet for details.

Fluorescence-labeled Antibodies

- Store as a liquid with 1:1 (v/v) glycerol at -20°C, and protect from light exposure

Avoid repeated freeze-thaw cycles for all antibodies!

FAQ - How should I reconstitute my antibody?

Reconstitution

- All purified SYSY antibodies are lyophilized from PBS. To reconstitute the antibody in PBS, add the volume of deionized water specified in the corresponding datasheet. If a larger final volume is desired, first add the recommended amount of water, then adjust with PBS and, if needed, add a stabilizing carrier protein (e.g., BSA) to a final concentration of 2%. Some SYSY antibodies already contain albumin; please take this into account before adding additional carrier protein.

For complete reconstitution, carefully remove the vial cap. After adding water, briefly vortex the solution. To collect the liquid at the bottom of the vial, place the vial inside a 50 ml centrifuge tube padded with paper and centrifuge briefly.

- If desired, small amounts of azide or thimerosal may be added to prevent microbial growth. This is particularly recommended when storing an aliquot at 4°C.
- After reconstitution of fluorescence-labeled antibodies, add glycerol 1:1 (v/v) to achieve a final concentration of 50%. This prevents freezing at –20°C and keeps the antibody in liquid form, effectively avoiding freeze–thaw cycles.
- Glycerol may also be added to unlabeled primary antibodies as a general measure to prevent freeze–thaw damage.
- For further guidance, please refer to our **storage tips** and recommendations for reconstituted antibodies, control peptides, and control proteins.