SYSY Antibodies

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

Parvalbumin

Cat.No. 195 006; Polyclonal chicken antibody, 200 µl antibody (lyophilized)

Data Sheet

Reconstitution/ Storage	200 µl antibody, lyophilized. For **reconstitution** add 200 µl H_2O, then aliquot and store at -20°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**: not tested yet (see remarks) **IP**: yes **ICC**: not tested yet **IHC**: 1 : 500 **IHC-P**: 1 : 200
Immunogen	Full-length recombinant rat Parvalbumin (UniProt Id: P02625)
Reactivity	Reacts with: rat (P02625), mouse (P32848). Other species not tested yet.
Matching control	195-0P
Remarks	**WB**: Due to the small size of this protein, we recommend 12% BIS-TRIS gels with a MES based running buffer. The rabbit polyclonal antiserum (cat. no. 195 002) is recommended for westernblotting.

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

Background

Parvalbumin is a small, acidic calcium binding protein and belongs to the family of EF hand proteins. The protein is found in skeletal muscle and the brain of vertebrates where it locates to a specific population of GABAergic interneurons. This subset of neurons may contribute to maintaining the balance between excitation and inhibition in the cortex and the hippocampus.

For more information on protein expression pattern, please refer to the overview image in our SYSY Antibodies ATLAS.

Selected References for 195 006

Brevican, Neurocan, Tenascin-C, and Tenascin-R Act as Important Regulators of the Interplay Between Perineuronal Nets, Synaptic Integrity, Inhibitory Interneurons, and Otx2.
Mueller-Buehl C, Reinhard J, Roll L, Bader V, Winklhofer KF, Faissner A
Frontiers in cell and developmental biology (2022) 10: 886527. . **WB, IHC; tested species: mouse**

The antipsychotic drugs olanzapine and haloperidol modify network connectivity and spontaneous activity of neural networks in vitro.
Dzyubenko E, Juckel G, Faissner A
Scientific reports (2017) 71: 11609. . **ICC; tested species: mouse**

Selectively vulnerable deep cortical layer 5/6 fast-spiking interneurons in Alzheimer's disease models in vivo.
Papanikolaou A, Graykowski D, Lee BI, Yang M, Ellingford R, Zünkler J, Bond SA, Rowland JM, Rajani RM, Harris SS, Sharp DJ, et al.
Neuron (2025) : . . **IHC; tested species: mouse**

Regulation of PV interneuron plasticity by neuropeptide-encoding genes.
Selten M, Bernard C, Mukherjee D, Hamid F, Hanusz-Godoy A, Oozeer F, Zimmer C, Marín O
Nature (2025) : . . **IHC; tested species: mouse**

Partial microglial depletion through inhibition of colony-stimulating factor 1 receptor improves synaptic plasticity and cognitive performance in aged mice.
Strackeljan L, Baidoe-Ansah D, Mirzapourdelavar H, Jia S, Kaushik R, Cangalaya C, Dityatev A
Experimental neurology (2025) 387: 115186. . **IHC; tested species: mouse**

Cadherins orchestrate specific patterns of perisomatic inhibition onto distinct pyramidal cell populations.
Jézéquel J, Condomitti G, Kroon T, Hamid F, Sanalidou S, Garcés T, Maeso P, Balia M, Hu Z, Sahara S, Rico B, et al.
Nature communications (2025) 161: 4481. . **IHC; tested species: mouse**

Creation of a novel CRISPR-generated allele to express HA epitope-tagged C1QL1 and improved methods for its detection at synapses.
Cheung HW, Schouw AD, Altunay ZM, Maddox JW, Kresic LC, McAllister BC, Caro K, Alam S, Huang A, Pijewski RS, Lee A, et al.
FEBS letters (2024) : . . **IHC; tested species: mouse**

Focal clusters of peri-synaptic matrix contribute to activity-dependent plasticity and memory in mice.
Chelini G, Mirzapourdelavar H, Durning P, Baidoe-Ansah D, Sethi MK, O'Donovan SM, Klengel T, Balasco L, Berciu C, Boyer-Boiteau A, McCullumsmith R, et al.
Cell reports (2024) 435: 114112. . **ICC; tested species: mouse**

Calretinin-Expressing Synapses Show Improved Synaptic Efficacy with Reduced Asynchronous Release during High-Rate Activity.
Zhang C, Wang M, Lin S, Xie R
The Journal of neuroscience : the official journal of the Society for Neuroscience (2022) 4213: 2729-2742. . **IHC; tested species: mouse**

Anoctamin 2-chloride channels reduce simple spike activity and mediate inhibition at elevated calcium concentration in cerebellar Purkinje cells.
Auer F, Franco Taveras E, Klein U, Kesenheimer C, Fleischhauer D, Möhrlen F, Frings S
PloS one (2021) 163: e0247801. . **IHC; tested species: mouse**

Access the online factsheet including applicable protocols at https://sysy.com/product/195006 or scan the QR-code.

FAQ - How should I store my antibody?

Shipping Conditions

- All our antibodies and control proteins / peptides are shipped lyophilized (vacuum freeze-dried) and are stable in this form 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. **They must not be stored in the freezer when still lyophilized!** Temperatures below zero may cause loss of performance.
- **Fluorescence-labeled antibodies** should be reconstituted immediately upon receipt. Long term storage (several months) may lead to aggregation.
- **Control peptides** should be kept at -20°C before reconstitution.

Long Term Storage after Reconstitution (General Considerations)

- The storage freezer must not be of the frost-free variety ("no-frost freezer"). This cycle between freezing and thawing (to reduce frost-build-up), which is exactly what should be avoided. For the same reason, antibody vials should be placed in an area of the freezer that has minimal temperature fluctuations, for instance towards the back rather than on a door shelf.
- Aliquot the antibody and store frozen (-20°C to -80°C). Avoid very small aliquots (below 20 µl) and use the smallest storage vial or tube possible. The smaller the aliquot, the more the stock concentration is affected by evaporation and adsorption of the antibody to the surface of the storage vial or tube. Adsorption of the antibody to the surface leads to a substantial loss of activity.
- The addition of glycerol to a final concentration of 50% lowers the freezing point of your stock and keeps your antibody at -20°C in liquid state. This efficiently avoids freeze and thaw cycles.

Product Specific Hints for Storage

Control proteins / peptides

- Store at -20°C to -80°C.

Monoclonal Antibodies

- **Ascites** and **hybridoma supernatant** should be stored at -20°C up to -80°C. **Prolonged storage at 4°C is not recommended!** Unlike serum, ascites may contain proteases that will degrade the antibodies.
- **Purified IgG** should be stored at -20°C up to -80°C. Adding a carrier protein like BSA will increase long term stability. Many of our antibodies already contain carrier proteins. Please refer to the data-sheet for detailed information.

Polyclonal Antibodies

- **Crude antisera**: With anti-microbials added, they may be stored at 4°C. However, frozen storage (-20°C up to -80°C) is preferable.
- **Affinity purified antibodies**: Less robust than antisera. Storage at -20°C up to -80°C is recommended. Adding a carrier protein like BSA will increase long term stability. Most of our antibodies already contain carrier proteins. Please refer to the data-sheet for detailed information.

Fluorescence-labeled Antibodies

- Store as a liquid with 1 : 1 (v/v) glycerol at -20°C. Protect these antibodies from light exposure.

Avoid repeated freeze-thaw cycles for all antibodies!

FAQ - How should I reconstitute my antibody?

Reconstitution

- All our purified antibodies are lyophilized from PBS. To reconstitute the antibody in PBS, add the amount of deionized water given in the respective datasheet. If higher volumes are preferred, add water as mentioned above and then the desired amount of PBS and a stabilizing carrier protein (e.g. BSA) to a final concentration of 2%. Some of our antibodies already contain albumin. Take this into account when adding more carrier protein.
  For complete reconstitution, carefully remove the lid. After adding water, briefly vortex the solution. You can spin down the liquid by placing the vial into a 50 ml centrifugation tube filled with paper.
- If desired, add small amounts of azide or thimerosal to prevent microbial growth. This is especially recommended if you want to keep an aliquot a 4°C.
- After reconstitution of fluorescence-labeled antibodies, add 1 : 1 (v/v) glycerol to a final concentration of 50%. This lowers the freezing point of your stock and keeps your antibody in liquid state at -20°C.
- Glycerol may also be added to unlabeled primary antibodies. It is a suitable way to avoid freeze-thaw cycles.
- Please refer to our **tips and hints for subsequent storage** of reconstituted antibodies and control peptides and proteins.