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

Synaptoporin (p38-2)

Cat.No. 102 002; Polyclonal rabbit antibody, 200 µl antiserum (lyophilized)

Data Sheet

Reconstitution/ Storage	200 µl antiserum, 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**: 1 : 1000 (AP staining) **IP**: yes **ICC**: 1 : 100 up to 1 : 1000 **IHC**: 1 : 500 **IHC-P**: 1 : 500
Immunogen	Synthetic peptide corresponding to AA 250 to 263 from rat Synaptoporin (UniProt Id: P22831)
Reactivity	Reacts with: rat (P22831), mouse (Q8BGN8), hamster, human (Q8TBG9). Other species not tested yet.
Specificity	K.O. validated PubMed: 31090538
Matching control	102-1P

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

Background

Synaptoporin, also known as **synaptophysin 2** and **p38-2**, is highly homologous to synaptophysin 1 but encoded by a different gene. Like synaptopysin 1, synaptoporin contains four transmembrane regions and a short cytoplasmic tail. Unlike synaptophysin 1, it is not glycosylated.
The distributions of synaptophysin 1 and synaptoporin are different. Synaptophysin 1 is more uniformly expressed whereas synaptoporin is particularly enriched in mossy fiber synapses in the hippocampus. It is thus an excellent marker for subsets of synapses.

Selected References for 102 002

Synapse type-specific proteomic dissection identifies IgSF8 as a hippocampal CA3 microcircuit organizer.
Apóstolo N, Smukowski SN, Vanderlinden J, Condomitti G, Rybakin V, Ten Bos J, Trobiani L, Portegies S, Vennekens KM, Gounko NV, Comoletti D, et al.
Nature communications (2020) 111: 5171. . **WB, ICC, IHC; tested species: mouse**

Aβ-induced mitochondrial dysfunction in neural progenitors controls KDM5A to influence neuronal differentiation.
Kim DK, Jeong H, Bae J, Cha MY, Kang M, Shin D, Ha S, Hyeon SJ, Kim H, Suh K, Choi MS, et al.
Experimental & molecular medicine (2022) : . . **WB, IHC; tested species: mouse**

Lowering Synaptogyrin-3 expression rescues Tau-induced memory defects and synaptic loss in the presence of microglial activation.
Largo-Barrientos P, Apóstolo N, Creemers E, Callaerts-Vegh Z, Swerts J, Davies C, McInnes J, Wierda K, De Strooper B, Spires-Jones T, de Wit J, et al.
Neuron (2021) : . . **ICC, IHC; tested species: mouse**

Epac2 Mediates cAMP-Dependent Potentiation of Neurotransmission in the Hippocampus.
Fernandes HB, Riordan S, Nomura T, Remmers CL, Kraniotis S, Marshall JJ, Kukreja L, Vassar R, Contractor A
The Journal of neuroscience : the official journal of the Society for Neuroscience (2015) 3516: 6544-53. . **WB, IHC**

B-ephrin reverse signaling is required for NMDA-independent long-term potentiation of mossy fibers in the hippocampus.
Armstrong JN, Saganich MJ, Xu NJ, Henkemeyer M, Heinemann SF, Contractor A
The Journal of neuroscience : the official journal of the Society for Neuroscience (2006) 2613: 3474-81. . **WB, IHC**

Serum response factor controls neuronal circuit assembly in the hippocampus.
Knöll B, Kretz O, Fiedler C, Alberti S, Schütz G, Frotscher M, Nordheim A
Nature neuroscience (2006) 92: 195-204. . **EM; tested species: mouse**

KLF7 orchestrates hippocampal development through neurogenesis and Draxin-mediated neuronal migration.
Liu Y, Hong W, Zhou Y, Zhang A, Gong P, Qi G, Song X, Wang Z, Shi X, Qi C, Qin S, et al.
Development (Cambridge, England) (2025) 15220: . . **IHC; tested species: mouse**

Septin 3 regulates memory and L-LTP-dependent extension of endoplasmic reticulum into spines.
Ageta-Ishihara N, Fukazawa Y, Arima-Yoshida F, Okuno H, Ishii Y, Takao K, Konno K, Fujishima K, Ageta H, Hioki H, Tsuchida K, et al.
Cell reports (2025) : 115352. . **IHC; tested species: mouse**

Human stem cell-derived GABAergic interneuron development reveals early emergence of subtype diversity and gradual electrochemical maturation.
Bershteyn M, Zhou H, Fuentealba L, Chen C, Subramanyam G, Cherkowsky D, Sevilla ES, Hampel P, Salvatierra J, Sezan M, Maury Y, et al.
Neuron (2025) : . . **IHC; tested species: mouse**

Gαo1 and Gαo1/Gαo2 deletion differentially affect hippocampal mossy fiber tract anatomy and neuronal morphogenesis.
Höltje M, Wolkowicz A, Brunk I, Baron J, Ahnert-Hilger G
Journal of neurochemistry (2024) : . . **IHC; tested species: mouse**

Structure and topography of the synaptic V-ATPase-synaptophysin complex.
Wang C, Jiang W, Leitz J, Yang K, Esquivies L, Wang X, Shen X, Held RG, Adams DJ, Basta T, Hampton L, et al.
Nature (2024) 6318022: 899-904. . **WB; tested species: mouse**

Access the online factsheet including applicable protocols at https://sysy.com/product/102002 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.