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

PSD95

Cat.No. 124 003; Polyclonal rabbit 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 up to 1 : 2000 (AP staining) **IP**: not tested yet **ICC**: 1 : 500 **IHC**: external data (see remarks) **IHC-P (FFPE)**: not tested yet **IHC-Fr**: external data (see remarks)
Immunogen	Synthetic peptide corresponding to AA 18 to 32 from rat PSD95 (UniProt Id: P31016)
Reactivity	Reacts with: rat (P31016), mouse (Q62108), zebrafish. Other species not tested yet.
Specificity	K.O. validated
Matching control	124-0P
Remarks	**IHC**: This antibody has been successfully applied and published for this method by customers (see application-specific references). It has not been validated using our standard protocol. **IHC-Fr**: This antibody has been successfully applied and published for this method by customers (see application-specific references). 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

PSD95 (**p**ost**s**ynaptic **d**ensity protein **95** kDa, also called **SAP 90**: **s**ynapse **a**ssociated **p**rotein of **90** kDa and **DLG 4**) is a component of postsynaptic densities in central synapses. It contains three PDZ domains. The first and second PDZ domain localizes NMDA receptors and K^+ channels to synapses, the third binds to neuroligins which are neuronal cell adhesion molecules that interact with β-neurexins and form intercellular junctions. Thus different PDZ domains of PSD95 might be specialized for distinct functions. Read more: PSD95-antibody

Selected References for 124 003

Functional Neuroligin-2-MDGA1 interactions differentially regulate synaptic GABAARs and cytosolic gephyrin aggregation.
Zeppillo T, Ali H, Ravichandran S, Ritter TC, Wenger S, López-Murcia FJ, Gideons E, Signorelli J, Schmeisser MJ, Wiltfang J, Rhee J, et al.
Communications biology (2024) 71: 1157. . **IHC_FR; tested species: mouse**

Visual Cortex Engagement in Retinitis Pigmentosa.
Pietra G, Bonifacino T, Talamonti D, Bonanno G, Sale A, Galli L, Baroncelli L
International journal of molecular sciences (2021) 2217: . . **WB; tested species: mouse**

Vascularized human cortical organoids (vOrganoids) model cortical development in vivo.
Shi Y, Sun L, Wang M, Liu J, Zhong S, Li R, Li P, Guo L, Fang A, Chen R, Ge WP, et al.
PLoS biology (2020) 185: e3000705. . **IHC; tested species: mouse**

Kibra Modulates Learning and Memory via Binding to Dendrin.
Ji Z, Li H, Yang Z, Huang X, Ke X, Ma S, Lin Z, Lu Y, Zhang M
Cell reports (2019) 268: 2064-2077.e7. . **ICC; tested species: mouse**

Cerebral organoid exosomes reversed behavioral deficits by repressing NLRP3-mediated neuroinflammation in stress models.
Duan Y, Zhou S, Zeng D, Shi S, Chen A, Du F, Wu Y, Wang J, Yu S, Zhang J
iScience (2026) 293: 115069. . **WB; tested species: mouse**

HBEGF/EGFR pathway activation by hUC-MSCs improves cognitive outcomes in anti-NMDAR encephalitis.
Lin J, Zhang B, Xu H, Zhong X, Li X, Song Y, Wang X, Peng Y, Wu H, Chen H, Jiang J, et al.
Molecular therapy : the journal of the American Society of Gene Therapy (2025) : . . **IHC; tested species: mouse**

Chromogranin A promotes the pathological conversion of α-synuclein at the synapse in Parkinson's disease.
Liu Y, Kong W, Zhu F, Jiang J, Li C, Han J, Ai P, Li C, Wang Y, Liu Y, Zhou L, et al.
Cell reports (2025) 4411: 116562. . **ICC; tested species: mouse**

Age-related deficits in neuronal physiology and cognitive function are recapitulated in young mice overexpressing the L-type calcium channel, CaV 1.3.
Moore SJ, Cazares VA, Temme SJ, Murphy GG
Aging cell (2023) 223: e13781. . **ICC; tested species: mouse**

Age-Dependent Regulation of Dendritic Spine Density and Protein Expression in Mir324 KO Mice.
Parkins EV, Burwinkel JM, Ranatunga R, Yaser S, Hu YC, Tiwari D, Gross C
Journal of molecular neuroscience : MN (2023) 739-10: 818-830. . **IHC; tested species: mouse**

The first synapse in vision in the aging mouse retina.
Gierke K, Lux UT, Regus-Leidig H, Brandstätter JH
Frontiers in cellular neuroscience (2023) 17: 1291054. . **IHC; tested species: mouse**

The Different Molecular Code in Generation of Dopaminergic Neurons from Astrocytes and Mesenchymal Stem Cells.
Wang N, Ji X, Wu Y, Zhou S, Peng H, Wang J, Yu S, Zhang J
International journal of molecular sciences (2021) 2222: . . **WB; tested species: rat**

Selected General References

Proteins of the postsynaptic density.
Banker G et al. J Cell Biol (1974) PubMed:4419608

Access the online factsheet including applicable protocols at https://sysy.com/product/124003 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.