SYSY Antibodies

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PSD95

Cat.No. N3783; Recombinant rabbit antibody, 100 µg recombinant IgG (lyophilized)

Data Sheet

Reconstitution/ Storage	100 µg purified antibody lyophilized from PBS. Reconstitute with 100 µL 50% glycerol and store at -20°C or below. For detailed information, see back of the data sheet.
Applications	**WB**: 1 : 1000 **IP**: not tested yet **ICC**: 1 : 500 (see remarks) **IHC**: 1 : 200 up to 1 : 500 (see remarks) **IHC-P**: 1 : 200 **ExM**: external data (see remarks)
Clone	1B2
Subtype	IgG1
Immunogen	Recombinant protein corresponding to AA 68 to 251 from mouse PSD95 (UniProt Id: Q62108)
Reactivity	Reacts with: mouse (Q62108), rat (P31016), human (P78352). Other species not tested yet.
Specificity	K.O. validated
Matching control	124-01P
Remarks	This antibody is a chimeric construct consisting of the anti-PSD 95 single-domain antibody 1B2 genetically fused to rabbit IgG1 Fc domain. It can be used in combination with standard anti-rabbit secondary reagents binding the IgG Fc-domain. **ICC**: We recommend the PSD95 FluoTags N3702 for best results. **IHC**: We recommend the PSD95 FluoTags N3702 for best results. **ExM**: This antibody has been successfully used for the epitope-preserving magnified analysis of the proteome (eMAP) expansion microscopy method (Park et al. 2021. PMID: 34767453). Variance from the standard protocol: Clearing after gel-embedding: overnight at 37°C followed by 10 minutes at 88°C.

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

Background

PSD 95 (**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 PSD 95 might be specialized for distinct functions.

Selected References for N3783

Simple and Highly Efficient Detection of PSD95 Using a Nanobody and Its Recombinant Heavy-Chain Antibody Derivatives.
Kilisch M, Gere-Becker M, Wüstefeld L, Bonnas C, Crauel A, Mechmershausen M, Martens H, Götzke H, Opazo F, Frey S
International journal of molecular sciences (2023) 248: . . **WB, ICC, IHC-P; tested species: mouse,rat**

A Screen of Plant-Based Natural Products Revealed That Quercetin Prevents Pyroglutamylated Amyloid-β (Aβ3(pE)-42) Uptake in Astrocytes As Well As Resulting Astrogliosis and Synaptic Dysfunction.
Arndt H, Bachurski M, Yuanxiang P, Franke K, Wessjohann LA, Kreutz MR, Grochowska KM
Molecular neurobiology (2024) : . . **ICC; tested species: rat**

Selected General References

SAP family proteins.
Fujita A et al. PubMed:10694467

Molecular organization of excitatory chemical synapses in the mammalian brain.
Gundelfinger ED et al. PubMed:11198190

Binding of neuroligins to PSD-95.
Irie M et al. PubMed:9278515

Mechanisms determining the time course of secretion in neuroendocrine cells.
Chow RH et al. PubMed:8789951

Domain interaction between NMDA receptor subunits and the postsynaptic density protein PSD-95.
Kornau HC et al. PubMed:7569905

Access the online factsheet including applicable protocols at https://sysy.com/product/N3783 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.