SYSY Antibodies

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PSD93

Cat.No. 124 102; 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 , but special protocol (see Valtschanoff et al. 2000) **ICC**: not recommended (see remarks) **IHC**: not tested yet **IHC-P (FFPE)**: not tested yet
Immunogen	Synthetic peptide corresponding to AA 22 to 37 from rat PSD93 (UniProt Id: Q63622)
Reactivity	Reacts with: human (Q15700), rat (Q63622), mouse (Q91XM9), hamster. No signal: zebrafish. Other species not tested yet.
Specificity	K.O. validated
Matching control	124-1P
Remarks	**ICC**: The affinity purified antibody (cat. no. 124 103) is recommended.

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

Background

PSD93 (**p**ost**s**ynaptic **d**ensity protein of **93** kDa, also called **chapsin 110** and **DLG 2**) belongs to the PSD95 family containing a modular structure with three PDZ-, one SH3- and a guanylate kinase-like domain. It is a component of postsynaptic densities in central synapses.
PSD93 is expressed in discrete neuronal populations as well as in specific non-neuronal cells. It exhibits complex molecular diversity attributable to tissue-specific alternative splicing. PSD93, like PSD95, binds to NMDA receptors and to the neuronal nitric oxide synthase (NOS).
PSD93 and PSD95 can heteromultimerize with each other and are recruited into the same NMDA receptor and K+ channel clusters. PSD93, however, is unique among PSD95 family members in its expression in Purkinje neuron cell bodies and dendrites.

Selected References for 124 102

SAP97 concentrates at the postsynaptic density in cerebral cortex.
Valtschanoff JG, Burette A, Davare MA, Leonard AS, Hell JW, Weinberg RJ
The European journal of neuroscience (2000) 1210: 3605-14. . **WB, IP**

Adult medial habenula neurons require GDNF receptor GFRα1 for synaptic stability and function.
Fernández-Suárez D, Krapacher FA, Pietrajtis K, Andersson A, Kisiswa L, Carrier-Ruiz A, Diana MA, Ibáñez CF
PLoS biology (2021) 1911: e3001350. . **IHC; tested species: mouse**

Altered postsynaptic-density-levels of caldendrin in the para-chloroamphetamine-induced serotonin syndrome but not in the rat ketamine model of psychosis.
Smalla KH, Sahin J, Putzke J, Tischmeyer W, Gundelfinger ED, Kreutz MR
Neurochemical research (2009) 348: 1405-9. . **WB**

The molecular chaperone Hsc70 interacts with the vesicular monoamine transporter-2.
Requena DF, Parra LA, Baust TB, Quiroz M, Leak RK, Garcia-Olivares J, Torres GE
Journal of neurochemistry (2009) 1102: 581-94. . **WB**

Molecular anatomy of a trafficking organelle.
Takamori S, Holt M, Stenius K, Lemke EA, Grønborg M, Riedel D, Urlaub H, Schenck S, Brügger B, Ringler P, Müller SA, et al.
Cell (2006) 1274: 831-46. . **WB**

Immunoisolation of two synaptic vesicle pools from synaptosomes: a proteomics analysis.
Morciano M, Burré J, Corvey C, Karas M, Zimmermann H, Volknandt W
Journal of neurochemistry (2005) 956: 1732-45. . **WB**

Selected General References

SAP family proteins.
Fujita A et al. Biochem. Biophys. Res. Commun. (2000) PubMed:10694467

Molecular organization of excitatory chemical synapses in the mammalian brain.
Gundelfinger ED et al. Naturwissenschaften (2000) PubMed:11198190

Cloning and characterization of postsynaptic density 93, a nitric oxide synthase interacting protein.
Brenman JE et al. J. Neurosci. (1996) PubMed:8922396

Heteromultimerization and NMDA receptor-clustering activity of Chapsyn-110, a member of the PSD-95 family of proteins.
Kim E et al. Neuron (1996) PubMed:8755482

Access the online factsheet including applicable protocols at https://sysy.com/product/124102 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.