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**: 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 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.