

## PSD95 PDZ domain

Cat.No. 124 011; Monoclonal mouse antibody, 100 µg purified IgG (lyophilized)

### Data Sheet

Reconstitution/ Storage	100 µg purified IgG, lyophilized. Albumin and azide were added for stabilization. For <b>reconstitution</b> add 100 µl H <sub>2</sub> O 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	<b>WB:</b> 1 : 1000 (AP staining) <b>IP:</b> yes (see remarks) <b>ICC:</b> 1 : 100 up to 1 : 500 <b>IHC:</b> 1 : 250 (see remarks) <b>IHC-P:</b> not tested yet <b>IHC-G:</b> 1 : 500 (see remarks) <b>ExM:</b> 1 : 250 (see remarks) <b>Clarity:</b> 1 : 100 (see remarks)
Clone	108E10
Subtype	IgG1 (κ light chain)
Immunogen	Recombinant protein corresponding to PDZ-domain of mouse PSD95 (UniProt Id: Q62108)
Reactivity	Reacts with: rat (P31016), mouse (Q62108), chicken, human (P78352). Other species not tested yet.
Specificity	K.O. validated
Matching control	124-01P
Remarks	<b>IP:</b> For most effective IP, use the denaturing IP-protocol. Consider that protein-protein interactions may be affected. <b>IHC:</b> For optimal results, glyoxal fixation (IHC-G) or mild PFA fixation (immersion fixation with 4% PFA for 15 min) according to <a href="#">Klotz et al. 2019</a> is recommended. <b>IHC-G:</b> Fixation with 9% glyoxal, 8% acetic acid, in ddH <sub>2</sub> O, pH 4.2-4.4, according to <a href="#">Konno et al. 2023</a> is recommended. <b>ExM:</b> This antibody has been successfully used for the magnified analysis of the proteome (MAP) expansion microscopy method ( <a href="#">MAP: Ku et al. 2016. Nature Biotechnology 34:973-981</a> ). <b>Clarity:</b> This antibody has been successfully used for CLARITY application in human brain (Woelfle et al., 2023; <a href="#">PMID: 37221592</a> ).

### Background

**PSD 95** (postsynaptic density protein 95 kDa, also called **SAP 90**: synapse associated protein 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<sup>+</sup> 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 124 011

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Mannara F, Radosevic M, Planagumà J, Soto D, Aguilar E, García-Serra A, Maudes E, Pedreño M, Paul S, Doherty J, Quirk M, et al.  
Brain : a journal of neurology (2020) : . . **ICC, IHC; tested species: mouse**
- Orexin induces the production of an endocannabinoid-derived lysophosphatidic acid eliciting hypothalamic synaptic loss in obesity.  
Fernández-Rilo AC, Forte N, Palomba L, Tunisi L, Piscitelli F, Imperatore R, Di Costanzo A, Di Marzo V, Cristino L  
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eNeuro () 84: . . **WB, ICC; tested species: mouse**
- The Role of Neprilysin and Insulin-Degrading Enzyme in the Etiology of Sporadic Alzheimer's Disease.  
Morito T, Hashimoto S, Takamura R, Watamura N, Kakiya N, Fujioka R, Mihara N, Sekiguchi M, Watanabe-Iwata K, Kamano N, Qi M, et al.  
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Cell (2024) 1877: 1785-1800.e16. . **DNA\_PAINT; tested species: rat**
- Mapping proteomic composition of excitatory postsynaptic sites in the cerebellar cortex.  
Robinson K, Delhay M, Craig AM  
Frontiers in molecular neuroscience (2024) 17: 1381534. . **ExM; tested species: mouse**
- Computerized EEG in the comparison of oxypethrin and fluphenazine decanoate.  
Misurec J, Náhunek K, Svestka J, Cesková E  
Activitas nervosa superior (1979) 213: 140. . **CLARITY; tested species: human**
- Activation of GluN2D-containing NMDA receptors promotes development of axons and axon-carrying dendrites of cortical interneurons.  
Köhler I, Rennau LM, Hoffmann L, Demianchuk E, Kaczmarek M, Sobierajski E, Riedel C, Wahle P  
Cerebral cortex (New York, N.Y. : 1991) (2025) 356: . . **WB; tested species: rat**
- Expression of synaptic proteins and development of dendritic spines in fetal and postnatal neocortex of the pig, the European wild boar *Sus scrofa*.  
Sobierajski E, Czubay K, Schmidt MR, Wiedenski S, Rettschlag S, Beemelmans C, Beemelmans C, Wahle P  
Brain structure & function (2025) 2302: 38. . **WB; tested species: pig**

Access the online factsheet including applicable protocols at <https://sysy.com/product/124011> or scan the QR-code.



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

## 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 at 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.