SYSY Antibodies

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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 **reconstitution** add 100 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 (AP staining) **IP**: yes (see remarks) **ICC**: 1 : 100 up to 1 : 500 **IHC**: external data (see remarks) **IHC-P (FFPE)**: not tested yet **IHC-G**: 1 : 500 (see remarks) **ExM**: external data (see remarks) **Clarity**: external data (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	**IP**: Denaturing IP-protocol is recommended. Protein-protein interactions may be affected. **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 protocols. **IHC-G**: 9% glyoxal fixation is recommended. **ExM**: This antibody has been successfully applied and published for this method by customers (see application-specific references). **Clarity**: This antibody has been successfully applied and published for this method by customers (see application-specific references).

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 124 011

Distribution of SNAP25, VAMP1 and VAMP2 in mature and developing deep cerebellar nuclei after estrogen administration.
Manca P, Mameli O, Caria MA, Torrejón-Escribano B, Blasi J
Neuroscience (2014) 266: 102-15. . **IHC, WB**

Allosteric modulation of NMDA receptors prevents the antibody effects of patients with anti-NMDAR encephalitis.
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**

Human cerebral organoids model tumor initiation and infiltration in an autologous astrocyte-supported setting.
Schickel E, Bender T, Kaysan L, Hufgard S, Mayer M, Grosshans DR, Thielemann C, Schroeder IS
iScience (2025) 289: 113334. . **ICC, IHC; tested species: human**

eSylites: Synthetic Probes for Visualization and Topographic Mapping of Single Excitatory Synapses.
Huhn C, Ho SY, Schulte C, Khayenko V, Hemmen K, Peulen TO, Wiessler AL, Bothe S, Bej A, Talucci I, Schönemann L, et al.
Journal of the American Chemical Society (2025) 14718: 15261-15280. . **IHC, ICC; 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
Molecular metabolism (2023) : 101713. . **WB, IHC; tested species: mouse**

Defective lipid signalling caused by mutations in PIK3C2B underlies focal epilepsy.
Gozzelino L, Kochlamazashvili G, Baldassari S, Mackintosh AI, Licchetta L, Iovino E, Liu YC, Bennett CA, Bennett MF, Damiano JA, Zsurka G, et al.
Brain : a journal of neurology (2022) 1457: 2313-2331. . **WB, IHC; tested species: mouse**

Regulation of Neural Circuit Development by Cadherin-11 Provides Implications for Autism.
Frei JA, Niescier RF, Bridi MS, Durens M, Nestor JE, Kilander MBC, Yuan X, Dykxhoorn DM, Nestor MW, Huang S, Blatt GJ, et al.
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.
The Journal of neuroscience : the official journal of the Society for Neuroscience (2025) 4523: . . **IHC-P; tested species: mouse**

Mapping proteomic composition of excitatory postsynaptic sites in the cerebellar cortex.
Robinson K, Delhaye M, Craig AM
Frontiers in molecular neuroscience (2024) 17: 1381534. . **EXM; tested species: mouse**

Spatial proteomics in neurons at single-protein resolution.
Unterauer EM, Shetab Boushehri S, Jevdokimenko K, Masullo LA, Ganji M, Sograte-Idrissi S, Kowalewski R, Strauss S, Reinhardt SCM, Perovic A, Marr C, et al.
Cell (2024) 1877: 1785-1800.e16. . **DNA_PAINT; tested species: rat**

Computerized EEG in the comparison of oxyprothepin and fluphenazine decanoat.
Misurec J, Náhunek K, Svestka J, Cesková E
Activitas nervosa superior (1979) 213: 140. . **CLARITY; tested species: human**

Access the online factsheet including applicable protocols at https://sysy.com/product/124011 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.