SYSY Antibodies

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SAP102

Cat.No. 124 202; 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 **ICC**: not recommended (see remarks) **IHC**: not recommended **IHC-P (FFPE)**: not tested yet
Immunogen	Synthetic peptide corresponding to AA 14 to 26 from rat SAP102 (UniProt Id: Q62936)
Reactivity	Reacts with: human (Q92796), rat (Q62936), mouse (P70175), hamster. No signal: zebrafish. Other species not tested yet.
Specificity	K.O. validated
Matching control	124-2P
Remarks	**ICC**: Cat. no. 124 213 is recommended.

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

Background

SAP 102 (**s**ynapse **a**ssociated **p**rotein of **102** kDa, also called **DLG 3**) belongs to the PSD 95 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. It is involved in NMDA receptor clustering and immobilization. In vitro, all three PDZ domains in SAP 102 bind the cytoplasmic tail of NR2B.

Selected References for 124 202

A network of PDZ-containing proteins regulates T cell polarity and morphology during migration and immunological synapse formation.
Ludford-Menting MJ, Oliaro J, Sacirbegovic F, Cheah ET, Pedersen N, Thomas SJ, Pasam A, Iazzolino R, Dow LE, Waterhouse NJ, Murphy A, et al.
Immunity (2005) 226: 737-48. . **WB, ICC**

Chaperone-mediated autophagy in neuronal dendrites utilizes activity-dependent lysosomal exocytosis for protein disposal.
Grochowska KM, Sperveslage M, Raman R, Failla AV, Głów D, Schulze C, Laprell L, Fehse B, Kreutz MR
Cell reports (2023) 428: 112998. . **ICC; tested species: mouse,rat**

Selectivity, efficacy and toxicity studies of UCCB01-144, a dimeric neuroprotective PSD-95 inhibitor.
Bach A, Clausen BH, Kristensen LK, Andersen MG, Ellman DG, Hansen PBL, Hasseldam H, Heitz M, Özcelik D, Tuck EJ, Kopanitsa MV, et al.
Neuropharmacology (2019) : . . **WB; 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**

Synaptic Ras GTPase activating protein regulates pattern formation in the trigeminal system of mice.
Barnett MW, Watson RF, Vitalis T, Porter K, Komiyama NH, Stoney PN, Gillingwater TH, Grant SG, Kind PC
The Journal of neuroscience : the official journal of the Society for Neuroscience (2006) 265: 1355-65. . **WB**

Changes in NMDA receptor subunits and interacting PSD proteins in dorsolateral prefrontal and anterior cingulate cortex indicate abnormal regional expression in schizophrenia.
Kristiansen LV, Beneyto M, Haroutunian V, Meador-Woodruff JH
Molecular psychiatry (2006) 118: 737-47, 705. . **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

Interaction of the N-methyl-D-aspartate receptor complex with a novel synapse-associated protein, SAP102.
Lau LF et al. J. Biol. Chem. (1996) PubMed:8702950

SAP102, a novel postsynaptic protein that interacts with NMDA receptor complexes in vivo.
Müller BM et al. Neuron (1996) PubMed:8780649

Access the online factsheet including applicable protocols at https://sysy.com/product/124202 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.