

## SAP102

Cat.No. 124 202; Polyclonal rabbit antibody, 200 µl antiserum (lyophilized)

### Data Sheet

Reconstitution/ Storage	200 µl antiserum, lyophilized. For <b>reconstitution</b> add 200 µl H <sub>2</sub> O, 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	<b>WB:</b> 1 : 1000 (AP staining) <b>IP:</b> yes <b>ICC:</b> not recommended (see remarks) <b>IHC:</b> not recommended <b>IHC-P:</b> 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	<b>ICC:</b> 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** (synapse associated protein 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, Glów 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, Grønberg M, Riedel D, Urlaub H, Schenck S, Brügger B, Ringler P, Müller SA, et al.  
Cell (2006) 1274: 831-46. . **WB**

Immunisolation of two synaptic vesicle pools from synaptosomes: a proteomics analysis.  
Moricano M, Burré J, Corvey C, Karas M, Zimmermann H, Volkandt 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 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.