SYSY Antibodies

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SNAP25

Cat.No. 111 004; Polyclonal Guinea pig antibody, 100 µl antiserum (lyophilized)

Data Sheet

Reconstitution/ Storage	100 µl antiserum, lyophilized. For **reconstitution** add 100 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 up to 1 : 5000 (AP staining) **IP**: yes **ICC**: not tested yet **IHC**: not tested yet **IHC-P (FFPE)**: not tested yet
Immunogen	Synthetic peptide corresponding to AA 192 to 206 from human SNAP25 (UniProt Id: P60880)
Reactivity	Reacts with: human (P60880), rat (P60881), mouse (P60879), hamster, chicken, goldfish, zebrafish. Other species not tested yet.
Matching control	111-0P

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

Background

SNAP25 (**sy**naptosome-**a**ssociated **p**rotein of **25** kD) is a highly conserved protein anchored to the cytosolic face of membranes via palmitoyl side chains in the middle of the molecule. SNAP25 is the target of Botulinum neurotoxins A and E which cleave off 9 and 26 amino acids, respectively, from the C-terminus.
SNAP25 is part of the exocytotic fusion complex (v-SNARE) of neurons where it assembles with syntaxin1 and synaptobrevin. It is abundantly localized on the neuronal plasmalemma and on recycling vesicles including synaptic vesicles. It is also expressed in neuroendocrine cells. There are two splice-variants, SNAP25A and 25B.

Selected References for 111 004

Presynaptic accumulation of APP-CTFβ may contribute to synaptic dysfunction in Alzheimer's disease.
Kapadia A, Schuhmann F, Daskin E, Walter J, Lindahl I, Rahmani N, Morrema THJ, Rozemuller AJM, Boon BDC, Pezeshkian W, Hafner AS, et al.
The EMBO journal (2026) : . . **WB, ELISA; tested species: rat**

Protocol for single-molecule analysis of synaptic protein complex-mediated vesicle recruitment.
Kapadia A, Hafner AS
STAR protocols (2025) 64: 104249. . **ICC; tested species: rat**

Temporal and protein-specific S-palmitoylation supports synaptic and neural network plasticity.
Pytyś A, Ijaz R, Buszka A, Miłek J, Figiel I, Wardaszka-Pianka P, Roszkowska M, Mierzwa N, Wojtas A, Kerstein E, Serwa R, et al.
Cellular and molecular life sciences : CMLS (2025) 821: 355. . **WB; tested species: rat**

Selected General References

Mechanisms of synaptic vesicle exocytosis.
Lin RC et al. Annu. Rev. Cell Dev. Biol. (2000) PubMed:11031229

Regional and developmental brain expression patterns of SNAP25 splice variants.
Prescott GR et al. BMC Neurosci (2011) PubMed:21526988

Membrane fusion and exocytosis.
Jahn R et al. Annu. Rev. Biochem. (1999) PubMed:10872468

A structural change occurs upon binding of syntaxin to SNAP-25.
Fasshauer D et al. J. Biol. Chem. (1997) PubMed:9020186

The synaptic vesicle cycle: a cascade of protein-protein interactions.
Südhof TC et al. Nature (1995) PubMed:7791897

Genetic and electrophysiological studies of Drosophila syntaxin-1A demonstrate its role in nonneuronal secretion and neurotransmission.
Schulze KL et al. Cell (1995) PubMed:7834751

Synaptic vesicles and exocytosis.
Jahn R et al. Annu. Rev. Neurosci. (1994) PubMed:8210174

Botulinum neurotoxin A selectively cleaves the synaptic protein SNAP-25.
Blasi J et al. Nature (1993) PubMed:8103915

Access the online factsheet including applicable protocols at https://sysy.com/product/111004 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.