SYSY Antibodies

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SNAP47

Cat.No. 111 403; Polyclonal rabbit antibody, 50 µg specific antibody (lyophilized)

Data Sheet

Reconstitution/ Storage	50 µg specific antibody, lyophilized. Affinity purified with the immunogen. Albumin and azide were added for stabilization. For **reconstitution** add 50 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 up to 1 : 5000 (AP staining) **IP**: yes **ICC**: 1 : 500 **IHC**: external data (see remarks) **IHC-P (FFPE)**: not tested yet
Immunogen	Recombinant protein corresponding to AA 1 to 419 from rat SNAP47 (UniProt Id: Q6P6S0)
Reactivity	Reacts with: rat (Q6P6S0), mouse (Q8R570). No signal: zebrafish. Other species not tested yet.
Specificity	K.D. validated PubMed: 33567284
Remarks	**IHC**: This antibody has been successfully applied for this method by our customers using mild fixation (4% PFA and 15% picric acid) according to Kirizs et al. 2014 (see gallery). It has not been validated using our standard protocol.

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

Background

The membrane bound protein **SNAP47** is abundantly expressed in different tissues. The highest protein levels have been observed in brain. Like its closest relative SNAP29 it lacks a membrane anchor and the mechanism which mediates the membrane localization is still under investigation. SNAP47 co-purifies with synaptic vesicles but shows a staining pattern different from typical synaptic vesicle markers like synapsin or synaptophysin.
SNAP47 may be localized to a vesicle-pool which has not been confined to a special organelle but accumulates in the periphery of the trans-Golgi-network.

Selected References for 111 403

TRIM67 regulates exocytic mode and neuronal morphogenesis via SNAP47.
Urbina FL, Menon S, Goldfarb D, Edwards R, Ben Major M, Brennwald P, Gupton SL
Cell reports (2021) 346: 108743. . **WB, IP, ICC; KD verified; tested species: mouse**

Oriented cell divisions induce basal progenitors and regulate neural expansion across tissues and species.
Boulan B, Lacomme M, Benadjal A, Krueger M, Currie K, La Torre A, Chédotal A, Cayouette M
Science advances (2026) 126: eadz6827. . **ICC, IHC; KD verified; tested species: mouse**

SNAP-47 mediates somatic oxytocin dynamics in hypothalamic neurons.
Aznar-Escolano B, Royo M, Madrigal MP, Portalés Montes A, Villanueva J, Gutiérrez LM, Jurado S
Communications biology (2026) 91: 137. . **ICC, IHC; tested species: mouse**

SNAP-25 gene family members differentially support secretory vesicle fusion.
Arora S, Saarloos I, Kooistra R, van de Bospoort R, Verhage M, Toonen RF
Journal of cell science (2017) 13011: 1877-1889. . **WB, ICC**

Identification of SNAP-47, a novel Qbc-SNARE with ubiquitous expression.
Holt M, Varoqueaux F, Wiederhold K, Takamori S, Urlaub H, Fasshauer D, Jahn R
The Journal of biological chemistry (2006) 28125: 17076-83. . **WB, ICC**

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**

Neuronal SNAP-23 is critical for synaptic plasticity and spatial memory independently of NMDA receptor regulation.
Huang M, Bin NR, Rai J, Ma K, Chow CH, Eide S, Harada H, Xiao J, Feng D, Sun HS, Feng ZP, et al.
iScience (2023) 265: 106664. . **IHC; tested species: mouse**

Lysosomal exocytosis releases pathogenic α-synuclein species from neurons in synucleinopathy models.
Xie YX, Naseri NN, Fels J, Kharel P, Na Y, Lane D, Burré J, Sharma M
Nature communications (2022) 131: 4918. . **WB; tested species: mouse**

SNAP23 is essential for platelet and mast cell development and required in connective tissue mast cells for anaphylaxis.
Cardenas RA, Gonzalez R, Sanchez E, Ramos MA, Cardenas EI, Rodarte AI, Alcazar-Felix RJ, Isaza A, Burns AR, Heidelberger R, Adachi R, et al.
The Journal of biological chemistry (2021) 296: 100268. . **WB; tested species: mouse**

SNAP-25 isoforms differentially regulate synaptic transmission and long-term synaptic plasticity at central synapses.
Irfan M, Gopaul KR, Miry O, Hökfelt T, Stanton PK, Bark C
Scientific reports (2019) 91: 6403. . **WB; tested species: mouse**

Cardiac SNARE Expression in Health and Disease.
Bowman PRT, Smith GL, Gould GW
Frontiers in endocrinology (2019) 10: 881. . **WB; tested species: mouse**

Access the online factsheet including applicable protocols at https://sysy.com/product/111403 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.