

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 ₂ O 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: 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 Kirizis 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) 34(6): 108743. . **WB, IP, ICC; KD verified; 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) 130(11): 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) 281(25): 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) 187(7): 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) 26(5): 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) 13(1): 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(1): 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) 9(1): 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**
- Proteomic screening of glutamatergic mouse brain synaptosomes isolated by fluorescence activated sorting. Biesemann C, Grønborg M, Luquet E, Wichert SP, Bernard V, Bungers SR, Cooper B, Varoqueaux F, Li L, Byrne JA, Urlaub H, et al. *The EMBO journal* (2014) 33(2): 157-70. . **WB; tested species: mouse**
- The SNARE protein vti1a functions in dense-core vesicle biogenesis. Walter AM, Kurps J, de Wit H, Schöning S, Toft-Bertelsen TL, Lauks J, Ziomkiewicz I, Weiss AN, Schulz A, Fischer von Mollard G, Verhage M, et al. *The EMBO journal* (2014) 33(15): 1681-97. . **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 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 a 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.