

## SNAP23

Cat.No. 111 202; 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 (see remarks) <b>ICC:</b> 1 : 50 <b>IHC:</b> yes <b>IHC-P:</b> yes
Immunogen	Synthetic peptide corresponding to AA 196 to 211 from human SNAP23 (UniProt Id: O00161)
Reactivity	Reacts with: human (O00161), rat (O70377), mouse (O09044), hamster, pig, zebrafish. Other species not tested yet.
Specificity	K.O. validated PubMed: <a href="https://pubmed.ncbi.nlm.nih.gov/30573565/">30573565</a>
Matching control	111-2P
Remarks	<b>IP:</b> Cat. no. 111 213 is recommended

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

## Background

**SNAP23** (synaptosome-associated protein of 23 kDa) is an ubiquitously expressed isoform and functional homologue of SNAP25. It is resistant to cleavage by BoNT/A and E. The protein is part of the exocytotic fusion complex (v-SNARE) where it assembles with syntaxin1 and synaptobrevin. SNAP23 is able to function in regulated exocytosis. Both isoforms may have their own specific binding partners and discrete, albeit mechanistically similar, functional roles within the cell.

### Selected References for 111 202

- Composition of isolated synaptic boutons reveals the amounts of vesicle trafficking proteins. Wilhelm BG, Mandad S, Truckenbrodt S, Kröhnert K, Schäfer C, Rammner B, Koo SJ, Claßen GA, Krauss M, Haucke V, Urlaub H, et al. *Science* (New York, N.Y.) (2014) 3446187: 1023-8. . **WB, ICC, IHC; tested species: mouse, rat**
- Vesicle associated membrane protein (VAMP)-7 and VAMP-8, but not VAMP-2 or VAMP-3, are required for activation-induced degranulation of mature human mast cells. Sander LE, Frank SP, Bolat S, Blank U, Galli T, Bigalke H, Bischoff SC, Lorentz A *European journal of immunology* (2008) 383: 855-63. . **WB, IP; tested species: human, rat**
- Pancreas-specific SNAP23 depletion prevents pancreatitis by attenuating pathological basolateral exocytosis and formation of trypsin-activating autolysosomes. Dolai S, Takahashi T, Qin T, Liang T, Xie L, Kang F, Miao YF, Xie H, Kang Y, Manuel J, Winter E, et al. *Autophagy* (2020) : 1-14. . **WB, ICC; KD verified; tested species: human**
- Invasion by activated macrophages requires delivery of nascent MT1-MMP through late endosomes/lysosomes to the cell surface. Röhl J, West ZE, Rudolph M, Zaharia A, Van Lonkhuizen D, Hickey DK, Semmler ABT, Murray RZ *Traffic* (Copenhagen, Denmark) (2019) : . . **WB, ICC; tested species: mouse**
- Quantifying exosome secretion from single cells reveals a modulatory role for GPCR signaling. Verweij FJ, Bebelman MP, Jimenez CR, Garcia-Vallejo JJ, Janssen H, Neeffjes J, Knol JC, de Goeij-de Haas R, Piersma SR, Baglio SR, Verhage M, et al. *The Journal of cell biology* (2018) : . . **WB, ICC; KD verified; tested species: mouse**
- Oxidized phagosomal NOX2 complex is replenished from lysosomes. Dingjan I, Linders PT, van den Bekerom L, Baranov MV, Halder P, Ter Beest M, van den Bogaart G *Journal of cell science* (2017) 1307: 1285-1298. . **WB, ICC; KD verified; tested species: human**
- Selected SNARE proteins are essential for the polarized membrane insertion of igf-1 receptor and the regulation of initial axonal outgrowth in neurons. Grassi D, Plonka FB, Oksdath M, Guil AN, Sosa LJ, Quiroga S *Cell discovery* (2015) 1: 15023. . **WB, ICC**
- How pig sperm prepares to fertilize: stable acrosome docking to the plasma membrane. Tsai PS, Garcia-Gil N, van Haeften T, Gadella BM *PloS one* (2010) 56: e11204. . **WB, IP; tested species: pig**
- Phosphorylation of SNAP-23 in activated human platelets. Polgár J, Lane WS, Chung SH, Houg AK, Reed GL *The Journal of biological chemistry* (2003) 27845: 44369-76. . **IP, WB; tested species: human**
- SNAP23 is selectively expressed in airway secretory cells and mediates baseline and stimulated mucin secretion. Ren B, Azzegagh Z, Jaramillo AM, Zhu Y, Pardo-Saganta A, Bagirzadeh R, Flores JR, Han W, Tang YJ, Tu J, Alanis DM, et al. *Bioscience reports* (2015) 353: . . **IHC-P; tested species: mouse**
- Suggestion of creatine as a new neurotransmitter by approaches ranging from chemical analysis and biochemistry to electrophysiology. Bian X, Zhu J, Jia X, Liang W, Yu S, Li Z, Zhang W, Rao Y *eLife* (2023) 12: . . **WB; tested species: mouse**

Access the online factsheet including applicable protocols at <https://sysy.com/product/111202> 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.