SYSY Antibodies

Rudolf-Wissell-Str. 28a
37079 Göttingen, Germany
Phone: +49 551-50556-0
Fax: +49 551-50556-384
E-mail: sales@sysy.com
Web: www.sysy.com

SNAP23

Cat.No. 111 203; 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 (AP staining) **IP**: yes (see remarks) **ICC**: external data (see remarks) **IHC**: external data (see remarks) **IHC-P (FFPE)**: not tested yet
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, rabbit. Other species not tested yet.
Specificity	K.O. validated PubMed: 32051343
Matching control	111-2P
Remarks	**IP**: Cat. no. 111 213 is recommended **ICC**: This antibody has been successfully applied and published for this method by customers (see application-specific references). It has not been validated using our standard protocols. **IHC**: This antibody has been successfully applied and published for this method by customers (see application-specific references). It has not been validated using our standard protocols.

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

Background

SNAP23 (**s**y**n**aptosome-**a**ssociated **p**rotein 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 111 203

SNAP23 depletion enables more SNAP25/calcium channel excitosome formation to increase insulin exocytosis in type 2 diabetes.
Liang T, Qin T, Kang F, Kang Y, Xie L, Zhu D, Dolai S, Greitzer-Antes D, Baker RK, Feng D, Tuduri E, et al.
JCI insight (2020) 53: . . **WB, IP, IHC; KO,KD verified; tested species: human,mouse**

Cholesterol-dependent syntaxin-4 and SNAP-23 clustering regulates caveolar fusion with the endothelial plasma membrane.
Predescu SA, Predescu DN, Shimizu K, Klein IK, Malik AB
The Journal of biological chemistry (2005) 28044: 37130-8. . **WB, ICC**

Identification of soluble N-ethylmaleimide-sensitive factor attachment protein receptor exocytotic machinery in human plasma cells: SNAP-23 is essential for antibody secretion.
Reales E, Mora-López F, Rivas V, García-Poley A, Brieva JA, Campos-Caro A
Journal of immunology (Baltimore, Md. : 1950) (2005) 17510: 6686-93. . **WB, ICC**

Distribution of synaptic vesicle proteins in the mammalian retina identifies obligatory and facultative components of ribbon synapses.
Von Kriegstein K, Schmitz F, Link E, Südhof TC
The European journal of neuroscience (1999) 114: 1335-48. . **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**

The endothelial diapedesis synapse regulates transcellular migration of human T lymphocytes in a CX3CL1- and SNAP23-dependent manner.
Schoppmeyer R, van Steen ACI, Kempers L, Timmerman AL, Nolte MA, Hombrink P, van Buul JD
Cell reports (2022) 383: 110243. . **WB; tested species: human**

SNAP23 is required for constitutive and regulated exocytosis in mouse oocytes.
Mehlmann LM, Uliasz TF, Lowther KM
Biology of reproduction (2019) : . . **WB; KD verified; tested species: mouse**

Role of SNAREs in the Atopic Dermatitis-related Cytokine Secretion and Skin-Nerve Communication.
Meng J, Wang J, Buddenkotte J, Buhl T, Steinhoff M
The Journal of investigative dermatology (2019) : . . **WB; KD verified; tested species: human**

Phosphorylation of syntaxin-3 at Thr 14 negatively regulates exocytosis in RBL-2H3 mast cells.
Tadokoro S, Shibata T, Inoh Y, Amano T, Nakanishi M, Hirashima N, Utsunomiya-Tate N
Cell biology international (2016) 405: 589-96. . **WB; tested species: rat**

Syntaxin 8 regulates platelet dense granule secretion, aggregation, and thrombus stability.
Golebiewska EM, Harper MT, Williams CM, Savage JS, Goggs R, Fischer von Mollard G, Poole AW
The Journal of biological chemistry (2015) 2903: 1536-45. . **WB**

Insulin stimulates syntaxin4 SNARE complex assembly via a novel regulatory mechanism.
Kioumourtzoglou D, Gould GW, Bryant NJ
Molecular and cellular biology (2014) 347: 1271-9. . **ICC**

Access the online factsheet including applicable protocols at https://sysy.com/product/111203 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.