SYSY Antibodies

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Syntaxin3

Cat.No. 110 033; 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 **ICC**: external data (see remarks) **IHC**: 1 : 2500 (see remarks) **IHC-P (FFPE)**: 1 : 200
Immunogen	Recombinant protein corresponding to AA 1 to 260 from rat Syntaxin3 (UniProt Id: Q08849)
Reactivity	Reacts with: human (Q13277), rat (Q08849), mouse (Q64704), hamster, zebrafish. Other species not tested yet.
Matching control	110-3P
Remarks	**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**: For optimal results in retina tissue, follow the retina protocol. Validation in other tissue is pending.

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

Background

Syntaxin 3, a member of the SNARE family of proteins, is related to syntaxin 1. While often co-expressed with syntaxins 2 and 4 within the same cell type, its membrane localization is usually different, for instance in epithelial cells or in the exocrine pancreas.
Like syntaxins 1, 2 and 4 it appears to be involved in the fusion of transport vesicles with the plasma membrane.

Selected References for 110 033

Aberrant function and structure of retinal ribbon synapses in the absence of complexin 3 and complexin 4.
Reim K, Regus-Leidig H, Ammermüller J, El-Kordi A, Radyushkin K, Ehrenreich H, Brandstätter JH, Brose N
Journal of cell science (2009) 122Pt 9: 1352-61. . **WB, IHC; tested species: mouse**

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, ICC; tested species: human,mouse**

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, IP; tested species: human**

Plasma membrane flipping of Syntaxin-2 regulates its inhibitory action on insulin granule exocytosis.
Kang F, Xie L, Qin T, Miao Y, Kang Y, Takahashi T, Liang T, Xie H, Gaisano HY
Nature communications (2022) 131: 6512. . **IP, WB; tested species: human,mouse**

Impaired biogenesis of renin granules in juxtaglomerular cells of Vps33a (D251E) mutant mice.
Wang H, Hao Z, Li W
Journal of cell science (2025) 13818: . . **WB; tested species: mouse**

Light-dependent regulation of neurotransmitter release from rod photoreceptor ribbon synapses involves an interplay of Complexin 4 and Transducin with the SNARE complex.
Lux UT, Meyer J, Jahn O, Davison A, Babai N, Gießl A, Wartenberg A, Sticht H, Brose N, Reim K, Brandstätter JH, et al.
Frontiers in molecular neuroscience (2024) 17: 1308466. . **WB; tested species: mouse**

The first synapse in vision in the aging mouse retina.
Gierke K, Lux UT, Regus-Leidig H, Brandstätter JH
Frontiers in cellular neuroscience (2023) 17: 1291054. . **IHC; tested species: mouse**

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**

Melanophilin Accelerates Insulin Granule Fusion Without Predocking to the Plasma Membrane.
Wang H, Mizuno K, Takahashi N, Kobayashi E, Shirakawa J, Terauchi Y, Kasai H, Okunishi K, Izumi T
Diabetes (2020) : . . **WB; tested species: mouse**

A trap mutant reveals the physiological client spectrum of TRC40.
Coy-Vergara J, Rivera-Monroy J, Urlaub H, Lenz C, Schwappach B
Journal of cell science (2019) 13213: . . **WB; 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 Lonkhuyzen D, Hickey DK, Semmler ABT, Murray RZ
Traffic (Copenhagen, Denmark) (2019) : . . **WB; tested species: mouse**

Access the online factsheet including applicable protocols at https://sysy.com/product/110033 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.