SYSY Antibodies

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Syntaxin6

Cat.No. 110 062; Polyclonal rabbit antibody, 200 µl antiserum (lyophilized)

Data Sheet

Reconstitution/ Storage	200 µl antiserum, lyophilized. For **reconstitution** add 200 µl H_2O, 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	**WB**: 1 : 1000 up to 1 : 10000 (AP staining) **IP**: yes **ICC**: 1 : 500 **IHC**: not tested yet **IHC-P (FFPE)**: not tested yet
Immunogen	Recombinant protein corresponding to AA 1 to 235 from human Syntaxin6 (UniProt Id: O43752)
Reactivity	Reacts with: human (O43752), rat (Q63635), mouse (Q9JKK1), hamster, chicken. Other species not tested yet.

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

Background

Syntaxin 6, a member of the SNARE family of proteins, localizes to the trans-Golgi network and endosomal structures. It is widely expressed with relatively higher expression in brain, lung and kidney.
In contrast to other SNARE proteins it has a broad variety of interaction partners depending on the cell type examined. It is therefore suggested that syntaxin 6 is involved in multiple membrane-trafficking events, e.g. the transport from the early endosome to the trans-Golgi network.
Syntaxin 6 has been identified as a Qc SNARE due to its close homolgy to the C-terminal SNARE domain of SNAP 25.

Selected References for 110 062

A novel syntaxin 6-interacting protein, SHIP164, regulates syntaxin 6-dependent sorting from early endosomes.
Otto GP, Razi M, Morvan J, Stenner F, Tooze SA
Traffic (Copenhagen, Denmark) (2010) 115: 688-705. . **IP, WB, ICC; tested species: human**

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, ICC; tested species: human**

SNAREs define targeting specificity of trafficking vesicles by combinatorial interaction with tethering factors.
Koike S, Jahn R
Nature communications (2019) 101: 1608. . **WB, ICC; tested species: human**

Probing and manipulating intracellular membrane traffic by microinjection of artificial vesicles.
Koike S, Jahn R
Proceedings of the National Academy of Sciences of the United States of America (2017) 11446: E9883-E9892. . **WB, ICC; tested species: human**

Dynamic GLUT4 sorting through a syntaxin-6 compartment in muscle cells is derailed by insulin resistance-causing ceramide.
Foley KP, Klip A
Biology open (2014) 35: 314-25. . **WB, ICC**

Dual roles of the mammalian GARP complex in tethering and SNARE complex assembly at the trans-golgi network.
Pérez-Victoria FJ, Bonifacino JS
Molecular and cellular biology (2009) 2919: 5251-63. . **WB, ICC**

Trans-Golgi network syntaxin 10 functions distinctly from syntaxins 6 and 16.
Wang Y, Tai G, Lu L, Johannes L, Hong W, Tang BL
Molecular membrane biology () 224: 313-25. . **WB, ICC**

Proteomic analysis reveals the composition of glutamatergic organelles of auditory inner hair cell.
Cepeda AP, Ninov M, Neef J, Parfentev I, Kusch K, Reisinger E, Jahn R, Moser T, Urlaub H
Molecular & cellular proteomics : MCP (2023) : 100704. . **IHC; tested species: mouse**

Endoplasmic reticulum stress impedes regulated secretion by governing key exocytotic and granulogenic molecular switches.
Mukherjee M, Mukherjee C, Ghosh V, Jain A, Sadhukhan S, Dagar S, Sahu BS
Journal of cell science (2024) 1376: . . **WB; tested species: rat**

VPS13B is localized at the interface between Golgi cisternae and is a functional partner of FAM177A1.
Ugur B, Schueder F, Shin J, Hanna MG, Wu Y, Leonzino M, Su M, McAdow AR, Wilson C, Postlethwait J, Solnica-Krezel L, et al.
The Journal of cell biology (2024) 22312: . . **WB; tested species: human**

VPS13B is localized at the cis-trans Golgi complex interface and is a functional partner of FAM177A1.
Ugur B, Schueder F, Shin J, Hanna MG, Wu Y, Leonzino M, Su M, McAdow AR, Wilson C, Postlethwait J, Solnica-Krezel L, et al.
bioRxiv : the preprint server for biology (2023) : . . **WB; tested species: zebrafish**

Access the online factsheet including applicable protocols at https://sysy.com/product/110062 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.