SYSY Antibodies

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Syntaxin5

Cat.No. 110 053; 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**: 1 : 100 up to 1 : 500 **IHC**: 1 : 200 **IHC-P (FFPE)**: not tested yet
Immunogen	Recombinant protein corresponding to AA 1 to 279 from mouse Syntaxin5 (UniProt Id: Q8K1E0)
Reactivity	Reacts with: human (Q13190), rat (Q08851), mouse (Q8K1E0), hamster, monkey. Other species not tested yet.
Specificity	K.D. validated PubMed: 31356625
Matching control	110-5P
Remarks	This antibody detects the 35 kDa and 42 kDa variants of syntaxin 5.

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

Background

Syntaxin 5, a member of the SNARE family of proteins, is functionally related to the yeast protein Sed5p. Two syntaxin 5 isoforms (35 and 42 kDa) have been described which are generated from the same mRNA by alternative translation initiation. The longer 42 kDa variant contains an N-terminal extension carrying a putative type II ER-retrieval signal.
Syntaxin 5 forms a SNARE complex with membrin, GOSR 1, rbet1 and rsec22. A more detailed analysis revealed two subcomplexes within this complex. One contains syntaxin 5 (mainly the shorter 35 kDa variant) and GOSR 1 whereas the other is composed of syntaxin 5 (35 and 42 kDa variant), membrin, rsec22 and rbet1.
Recently syntaxin 5 has been shown to be involved in the processing and accumulation of β-APP in neuronal cells.

Selected References for 110 053

Activity of the SNARE Protein SNAP29 at the Endoplasmic Reticulum and Golgi Apparatus.
Morelli E, Speranza EA, Pellegrino E, Beznoussenko GV, Carminati F, Garré M, Mironov AA, Onorati M, Vaccari T
Frontiers in cell and developmental biology (2021) 9: 637565. . **WB, IP, ICC; KD verified; tested species: human**

SNARE proteins mediate fusion between cytosolic lipid droplets and are implicated in insulin sensitivity.
Boström P, Andersson L, Rutberg M, Perman J, Lidberg U, Johansson BR, Fernandez-Rodriguez J, Ericson J, Nilsson T, Borén J, Olofsson SO, et al.
Nature cell biology (2007) 911: 1286-93. . **WB, EM**

Regulation of Cx36 trafficking through the early secretory pathway by COPII cargo receptors and Grasp55.
Tetenborg S, Ariakia F, Martinez-Soler E, Shihabeddin E, Lazart IC, Miller AC, O'Brien J
Cellular and molecular life sciences : CMLS (2024) 811: 431. . **WB, ICC; KD verified; tested species: human**

Sec22b regulates phagosome maturation by promoting ORP8-mediated lipid exchange at endoplasmic reticulum-phagosome contact sites.
Criado Santos N, Bouvet S, Cruz Cobo M, Mandavit M, Bermont F, Castelbou C, Mansour F, Azam M, Giordano F, Nunes-Hasler P
Communications biology (2023) 61: 1008. . **WB, ICC; KD verified; 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, ICC; tested species: human**

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**

S-acylation of NLRP3 provides a nigericin sensitive gating mechanism that controls access to the Golgi.
Williams DM, Peden AA
eLife (2024) 13: . . **ICC; tested species: human**

Intrinsically disordered region-mediated condensation of IFN-inducible SCOTIN/SHISA-5 inhibits ER-to-Golgi vesicle transport.
Kim N, Kim TH, Kim C, Lee JE, Kang MG, Shin S, Jung M, Kim JS, Mun JY, Rhee HW, Park SY, et al.
Developmental cell (2023) 5819: 1950-1966.e8. . **ICC; tested species: human**

Sec22b is a critical and nonredundant regulator of plasma cell maintenance.
Bonaud A, Gargowitsch L, Gilbert SM, Rajan E, Canales-Herrerias P, Stockholm D, Rahman NF, Collins MO, Taskiran H, Hill DL, Alloatti A, et al.
Proceedings of the National Academy of Sciences of the United States of America (2023) 1202: e2213056120. . **WB; tested species: mouse**

Access the online factsheet including applicable protocols at https://sysy.com/product/110053 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.