SYSY Antibodies

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Syntaxin2

Cat.No. 110 022; 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 (AP staining) **IP**: yes **ICC**: external data (see remarks) **IHC**: external data (see remarks) **IHC-P (FFPE)**: not tested yet
Immunogen	Recombinant protein corresponding to AA 1 to 265 from rat Syntaxin2 (UniProt Id: P50279)
Reactivity	Reacts with: human (P32856), rat (P50279), mouse (Q00262), hamster, pig, zebrafish. Other species not tested yet.
Matching control	110-2P
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**: This antibody has been successfully used and published for this application by customers (see application-specific references). It is not compatible with our standard protocols.

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

Background

Syntaxin 2, also referred to as **Epimorphin**, a member of the SNARE family of proteins, is related to syntaxin 1. Like syntaxin 4 it is predominantly localized to the plasma membrane of a wide variety of cells.
Similar to syntaxins 1, 3 and 4, it appears to be involved in the fusion of transport vesicles with the plasma membrane.

Selected References for 110 022

SNARE expression and localization in renal epithelial cells suggest mechanism for variability of trafficking phenotypes.
Li X, Low SH, Miura M, Weimbs T
American journal of physiology. Renal physiology (2002) 2835: F1111-22. . **WB, IHC; tested species: rat**

Legionella pneumophila promotes functional interactions between plasma membrane syntaxins and Sec22b.
Arasaki K, Roy CR
Traffic (Copenhagen, Denmark) (2010) 115: 587-600. . **WB, ICC; tested species: human**

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**

Pancreatic acinar cells express vesicle-associated membrane protein 2- and 8-specific populations of zymogen granules with distinct and overlapping roles in secretion.
Weng N, Thomas DD, Groblewski GE
The Journal of biological chemistry (2007) 28213: 9635-45. . **WB, ICC; tested species: rat**

A molecular basis underlying differences in the toxicity of botulinum serotypes A and E.
Bajohrs M, Rickman C, Binz T, Davletov B
EMBO reports (2004) 511: 1090-5. . **ICC, WB; tested species: rat**

Knockout of Syntaxin-4 in 3T3-L1 adipocytes reveals new insight into GLUT4 trafficking and adiponectin secretion.
Black HL, Livingstone R, Mastick CC, Al Tobi M, Taylor H, Geiser A, Stirrat L, Kioumourtzoglou D, Petrie JR, Boyle JG, Bryant NJ, et al.
Journal of cell science (2021) : . . **WB; tested species: mouse**

Cardiac SNARE Expression in Health and Disease.
Bowman PRT, Smith GL, Gould GW
Frontiers in endocrinology (2019) 10: 881. . **WB; tested species: mouse**

Identification of a Botulinum Neurotoxin-like Toxin in a Commensal Strain of Enterococcus faecium.
Zhang S, Lebreton F, Mansfield MJ, Miyashita SI, Zhang J, Schwartzman JA, Tao L, Masuyer G, Martínez-Carranza M, Stenmark P, Gilmore MS, et al.
Cell host & microbe (2018) 232: 169-176.e6. . **WB; tested species: mouse**

Developmentally dynamic colocalization patterns of DSCAM with adhesion and synaptic proteins in the mouse retina.
de Andrade GB, Kunzelman L, Merrill MM, Fuerst PG
Molecular vision (2014) 20: 1422-33. . **IHC**

Novel cell types, neurosecretory cells, and body plan of the early-diverging metazoan Trichoplax adhaerens.
Smith CL, Varoqueaux F, Kittelmann M, Azzam RN, Cooper B, Winters CA, Eitel M, Fasshauer D, Reese TS
Current biology : CB (2014) 2414: 1565-1572. . **ICC**

Tumor protein D52 controls trafficking of an apical endolysosomal secretory pathway in pancreatic acinar cells.
Messenger SW, Thomas DD, Falkowski MA, Byrne JA, Gorelick FS, Groblewski GE
American journal of physiology. Gastrointestinal and liver physiology (2013) 3056: G439-52. . **WB; tested species: rat**

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; tested species: mouse**

Access the online factsheet including applicable protocols at https://sysy.com/product/110022 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.