

Syntaxin2

Cat.No. 110 022; Polyclonal rabbit antibody, 200 µl antiserum (lyophilized)

Data Sheet

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|-------------------------|---|
| Reconstitution/ Storage | 200 µl antiserum, lyophilized. For reconstitution add 200 µl H ₂ O, 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: 1 : 100 IHC: yes IHC-P: yes |
| 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 |

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 our antibodies and control proteins / peptides are shipped lyophilized (vacuum freeze-dried) and are stable in this form 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. **They must not be stored in the freezer when still lyophilized!** Temperatures below zero may cause loss of performance.
- **Fluorescence-labeled antibodies** should be reconstituted immediately upon receipt. Long term storage (several months) may lead to aggregation.
- **Control peptides** should be kept at -20°C before reconstitution.

Long Term Storage after Reconstitution (General Considerations)

- The storage freezer must not be of the frost-free variety ("no-frost freezer"). This cycle between freezing and thawing (to reduce frost-build-up), which is exactly what should be avoided. For the same reason, antibody vials should be placed in an area of the freezer that has minimal temperature fluctuations, for instance towards the back rather than on a door shelf.
- Aliquot the antibody and store frozen (-20°C to -80°C). Avoid very small aliquots (below 20 µl) and use the smallest storage vial or tube possible. The smaller the aliquot, the more the stock concentration is affected by evaporation and adsorption of the antibody to the surface of the storage vial or tube. Adsorption of the antibody to the surface leads to a substantial loss of activity.
- The addition of glycerol to a final concentration of 50% lowers the freezing point of your stock and keeps your antibody at -20°C in liquid state. This efficiently avoids freeze and thaw cycles.

Product Specific Hints for Storage

Control proteins / peptides

- Store at -20°C to -80°C.

Monoclonal Antibodies

- **Ascites** and **hybridoma supernatant** should be stored at -20°C up to -80°C. **Prolonged storage at 4°C is not recommended!** Unlike serum, ascites may contain proteases that will degrade the antibodies.
- **Purified IgG** should be stored at -20°C up to -80°C. Adding a carrier protein like BSA will increase long term stability. Many of our antibodies already contain carrier proteins. Please refer to the data-sheet for detailed information.

Polyclonal Antibodies

- **Crude antisera:** With anti-microbials added, they may be stored at 4°C. However, frozen storage (-20°C up to -80°C) is preferable.
- **Affinity purified antibodies:** Less robust than antisera. Storage at -20°C up to -80°C is recommended. Adding a carrier protein like BSA will increase long term stability. Most of our antibodies already contain carrier proteins. Please refer to the data-sheet for detailed information.

Fluorescence-labeled Antibodies

- Store as a liquid with 1 : 1 (v/v) glycerol at -20°C. Protect these antibodies from light exposure.

Avoid repeated freeze-thaw cycles for all antibodies!

FAQ - How should I reconstitute my antibody?

Reconstitution

- All our purified antibodies are lyophilized from PBS. To reconstitute the antibody in PBS, add the amount of deionized water given in the respective datasheet. If higher volumes are preferred, add water as mentioned above and then the desired amount of PBS and a stabilizing carrier protein (e.g. BSA) to a final concentration of 2%. Some of our antibodies already contain albumin. Take this into account when adding more carrier protein. For complete reconstitution, carefully remove the lid. After adding water, briefly vortex the solution. You can spin down the liquid by placing the vial into a 50 ml centrifugation tube filled with paper.
- If desired, add small amounts of azide or thimerosal to prevent microbial growth. This is especially recommended if you want to keep an aliquot a 4°C.
- After reconstitution of fluorescence-labeled antibodies, add 1 : 1 (v/v) glycerol to a final concentration of 50%. This lowers the freezing point of your stock and keeps your antibody in liquid state at -20°C.
- Glycerol may also be added to unlabeled primary antibodies. It is a suitable way to avoid freeze-thaw cycles.
- Please refer to our **tips and hints for subsequent storage** of reconstituted antibodies and control peptides and proteins.