

Syntaxin5

Cat.No. 110-5P; control protein, 100 µg protein (lyophilized)

Data Sheet

Reconstitution/ Storage	100 µg protein, lyophilized. For reconstitution add 100 µl H ₂ O to get a 1mg/ml solution in TBS. Then aliquot and store at -20°C to -80°C until use. Control proteins should be stored at +4°C when still lyophilized. Do not freeze! For detailed information, see back of the data sheet.
Immunogen	Recombinant protein corresponding to AA 1 to 279 from mouse Syntaxin5 (UniProt Id: Q8K1E0)
Recommended dilution	Optimal concentrations should be determined by the end-user.
Matching antibodies	110 053, 110 053BT
Remarks	This control protein consists of the recombinant protein (aa 1-279) that has been used for immunization. It has been tested in preadsorption experiments and blocks efficiently and specifically the corresponding signal in Western blots. The amount of protein needed for efficient blocking depends on the titer and on the affinity of the antibody to the antigen.

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 General References

- Syntaxin 5 interacts specifically with presenilin holoproteins and affects processing of betaAPP in neuronal cells.
Suga K, Saito A, Tomiyama T, Mori H, Akagawa K
Journal of neurochemistry (2005) 942: 425-39. .
- Participation of the syntaxin 5/Ykt6/GS28/GS15 SNARE complex in transport from the early/recycling endosome to the trans-Golgi network.
Tai G, Lu L, Wang TL, Tang BL, Goud B, Johannes L, Hong W
Molecular biology of the cell (2004) 159: 4011-22. .
- rsly1 binding to syntaxin 5 is required for endoplasmic reticulum-to-Golgi transport but does not promote SNARE motif accessibility.
Williams AL, Ehm S, Jacobson NC, Xu D, Hay JC
Molecular biology of the cell (2004) 151: 162-75. .
- GS15 forms a SNARE complex with syntaxin 5, GS28, and Ykt6 and is implicated in traffic in the early cisternae of the Golgi apparatus.
Xu Y, Martin S, James DE, Hong W
Molecular biology of the cell (2002) 1310: 3493-507. .
- Ykt6 forms a SNARE complex with syntaxin 5, GS28, and Bet1 and participates in a late stage in endoplasmic reticulum-Golgi transport.
Zhang T, Hong W
The Journal of biological chemistry (2001) 27629: 27480-7. .
- Syntaxin 5 is a common component of the NSF- and p97-mediated reassembly pathways of Golgi cisternae from mitotic Golgi fragments in vitro.
Rabouille C, Kondo H, Newman R, Hui N, Freemont P, Warren G
Cell (1998) 925: 603-10. .
- Role of vesicle-associated syntaxin 5 in the assembly of pre-Golgi intermediates.
Rowe T, Dascher C, Bannykh S, Plutner H, Balch WE
Science (New York, N.Y.) (1998) 2795351: 696-700. .
- An isoform of the Golgi t-SNARE, syntaxin 5, with an endoplasmic reticulum retrieval signal.
Hui N, Nakamura N, Sönnichsen B, Shima DT, Nilsson T, Warren G
Molecular biology of the cell (1997) 89: 1777-87. .
- Cloning and identification of human syntaxin 5 as a synaptobrevin/VAMP binding protein.
Ravichandran V, Roche PA
Journal of molecular neuroscience : MN (1997) 82: 159-61. .

Access the online factsheet including applicable protocols at <https://sysy.com/product/110-5P> 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.