

## Syntaxin16

Cat.No. 110 162; Polyclonal rabbit antibody, 200 µl antiserum (lyophilized)

### Data Sheet

Reconstitution/ Storage	200 µl antiserum, lyophilized. For <b>reconstitution</b> add 200 µl H <sub>2</sub> 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	<b>WB:</b> 1 : 1000 up to 1 : 5000 (AP staining) <b>IP:</b> not recommended <b>ICC:</b> 1 : 100 up to 1 : 500 <b>IHC:</b> yes <b>IHC_P:</b> 1 : 2000
Immunogen	Recombinant protein corresponding to AA 1 to 302 from rat Syntaxin16 (UniProt Id: A0A0G2K528)
Reactivity	Reacts with: human (O14662), rat (A0A0G2K528), mouse (Q8BVI5), hamster, rabbit. Other species not tested yet.
Specificity	Recognizes all four isoforms syntaxin 16a, b, c, d.
Matching control	110-16P

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

## Background

**Syntaxin 16**, a member of the SNARE family of proteins, localizes to the Golgi stack. It has been shown to be involved in trans-Golgi network trafficking and to interact with VAMP 3, VAMP 4 and VAMP 8.

Four splice variants (syntaxin 16a, b, c, d) have been described, which may have different roles in intracellular trafficking. The splice variant c is the shortest and localizes to the cytoplasm.

## Selected References for 110 162

Composition of isolated synaptic boutons reveals the amounts of vesicle trafficking proteins.  
Wilhelm BG, Mandad S, Truckenbrodt S, Kröhnert K, Schäfer C, Rammner B, Koo SJ, Claßen GA, Krauss M, Haucke V, Urlaub H, et al.  
Science (New York, N.Y.) (2014) 3446187: 1023-8. . **WB, ICC, IHC; tested species: mouse, rat**

Syntaxin 16 regulates lumen formation during epithelial morphogenesis.  
Jung JJ, Inamdar SM, Tiwari A, Ye D, Lin F, Choudhury A  
PloS one (2013) 84: e61857. . **WB, ICC; KD verified; tested species: rabbit**

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

EHD2 regulates plasma membrane integrity and downstream insulin receptor signalling events.  
Neuhaus M, Fryklund C, Taylor H, Borreguero-Muñoz A, Kopietz F, Ardalani H, Rogova O, Stirrat L, Bremner SK, Spégel P, Bryant NJ, et al.  
Molecular biology of the cell (2023) : mbcE23030078. . **WB; tested species: mouse**

Phosphorylation of the N-terminus of Syntaxin-16 controls interaction with mVps45 and GLUT4 trafficking in adipocytes.  
Bremner SK, Berends R, Kaupisch A, Roccisana J, Sutherland C, Bryant NJ, Gould GW  
PeerJ (2023) 11: e15630. . **WB; tested species: human, rat**

Diabetes is accompanied by changes in the levels of proteins involved in endosomal GLUT4 trafficking in obese human skeletal muscle.  
Livingstone R, Bryant NJ, Boyle JG, Petrie JR, Gould GW  
Endocrinology, diabetes & metabolism (2022) 55: e361. . **WB; tested species: human**

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

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

Newly produced synaptic vesicle proteins are preferentially used in synaptic transmission.  
Truckenbrodt S, Viplav A, Jähne S, Vogts A, Denker A, Wildhagen H, Fornasiero EF, Rizzoli SO  
The EMBO journal (2018) : . . **ICC; tested species: rat**

Glyoxal as an alternative fixative to formaldehyde in immunostaining and super-resolution microscopy.  
Richter KN, Revelo NH, Seitz KJ, Helm MS, Sarkar D, Saleeb RS, D'Este E, Eberle J, Wagner E, Vogl C, Lazaro DF, et al.  
The EMBO journal (2018) 371: 139-159. . **ICC; tested species: mouse**

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**

Access the online factsheet including applicable protocols  
at <https://sysy.com/product/110162> 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 at 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.