

## Syntaxin1

Cat.No. 110 011C3; Monoclonal mouse antibody, 100 µg purified IgG (lyophilized)

### Data Sheet

Reconstitution/ Storage	100 µg purified IgG, lyophilized, fluorescence-labeled with Oyster 550. Albumin was added for stabilization. For <b>reconstitution</b> add 100 µl H <sub>2</sub> O to get a 1mg/ml solution in PBS. Either add 1:1 (v/v) glycerol, then aliquot and store at -20°C until use, or store aliquots at -80°C without additives. Reconstitute immediately upon receipt! Avoid bright light when working with the antibody to minimize photo bleaching of the fluorescent dye. The mounting agent Aquatex® (Merck Chemicals) is not compatible with Oyster dyes! For detailed information, see back of the data sheet.
Applications	<b>WB:</b> N/A <b>IP:</b> N/A <b>ICC:</b> 1 : 200 up to 1 : 1000 <b>IHC:</b> 1 : 200 <b>IHC-P (FFPE):</b> not tested yet
Label	Oyster 550
Clone	78.2
Subtype	IgG1 (κ light chain)
Immunogen	Recombinant protein corresponding to cytoplasmic-domain without membrane anchor of rat Syntaxin 1A. (UniProt Id: P32851)
Reactivity	Reacts with: human (Q16623, P61266), rat (P32851, P61265), mouse (O35526, P61264), mammals, chicken, zebrafish, leech. Other species not tested yet.
Specificity	Syntaxin 1A and B with preference for syntaxin 1B.
Matching control	110-1P

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

## Background

**Syntaxin 1**, also known as **p35**, is a small integral membrane protein that is abundantly expressed in neurons and neuroendocrine cells. It was initially discovered as HPC-1. Syntaxin 1 is an essential component of the exocytotic fusion machine and interacts with several other proteins important for synaptic function, including its partners in the fusion complex synaptobrevin, SNAP 25, α-SNAP, synaptotagmin 1, Munc 18/n-Sec1 and Ca<sup>2+</sup>-channels.

Syntaxin 1 is localized primarily to the neuronal plasmalemma and is concentrated in synapses where pools of the protein are also present on recycling organelles including synaptic vesicles. It is the main target of one of the Botulinum neurotoxins BoNT/C1 which, however, cannot cleave the protein when complexed with its partner proteins in the fusion complex.

## Selected References for 110 011C3

Lysosomal dysfunction disrupts presynaptic maintenance and restoration of presynaptic function prevents neurodegeneration in lysosomal storage diseases.

Sambri I, D'Alessio R, Ezhova Y, Giuliano T, Sorrentino NC, Cacace V, De Risi M, Cataldi M, Annunziato L, De Leonibus E, Fraldi A, et al.

EMBO molecular medicine (2017) 91: 112-132. . **ICC; tested species: mouse**

## Selected General References

Mechanisms of synaptic vesicle exocytosis.

Lin RC et al. Annu. Rev. Cell Dev. Biol. (2000) PubMed:11031229

Phosphorylated syntaxin 1 is localized to discrete domains along a subset of axons.

Foletti DL et al. J. Neurosci. (2000) PubMed:10844023

Membrane fusion and exocytosis.

Jahn R et al. Annu. Rev. Biochem. (1999) PubMed:10872468

The synaptic vesicle cycle: a cascade of protein-protein interactions.

Südhof TC et al. Nature (1995) PubMed:7791897

Synaptic vesicles and exocytosis.

Jahn R et al. Annu. Rev. Neurosci. (1994) PubMed:8210174

Syntaxin: a synaptic protein implicated in docking of synaptic vesicles at presynaptic active zones.

Bennett MK et al. Science (1992) PubMed:1321498

Cloning and sequence analysis of cDNA for a neuronal cell membrane antigen, HPC-1.

Inoue A et al. J. Biol. Chem. (1992) PubMed:1587842

Epimorphin: a mesenchymal protein essential for epithelial morphogenesis.

Hirai Y et al. Cell (1992) PubMed:1581962

A marker of early amacrine cell development in rat retina.

Barnstable CJ et al. Brain Res. (1985) PubMed:3896407

Access the online factsheet including applicable protocols at <https://sysy.com/product/110011C3> 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.