SYSY Antibodies

Rudolf-Wissell-Str. 28a
37079 Göttingen, Germany
Phone: +49 551-50556-0
Fax: +49 551-50556-384
E-mail: sales@sysy.com
Web: www.sysy.com

# Synaptotagmin7

**Cat.No. 105 711; Monoclonal mouse antibody, 100 µg purified IgG (lyophilized)**

## Data Sheet

| | |
|---|---|
| Reconstitution/ Storage | 100 µg purified IgG, lyophilized. Albumin and azide were added for stabilization.<br>For **reconstitution** add 100 µl $H_2O$ to get a 1mg/ml solution in PBS. Then aliquot and store at -20°C to -80°C until use.<br>Antibodies should be stored at +4°C when still lyophilized. Do not freeze!<br>For detailed information, see back of the data sheet. |
| Applications | **WB**: not recommended (see remarks)<br>**IP**: not tested yet<br>**ICC**: 1 : 500 up to 1 : 1000<br>**IHC**: 1 : 500 up to 1 : 1000<br>**IHC-P (FFPE)**: not recommended |
| Clone | SY-208D9 |
| Subtype | IgG2a (κ light chain) |
| Immunogen | Recombinant protein comprising the cytoplasmic domain of rat Synaptotagmin7 (UniProt Id: Q62747) |
| Reactivity | Reacts with: rat (Q62747), mouse (Q9R0N7).<br>Other species not tested yet. |
| Matching control | 105-71P |
| Remarks | **WB**: Cat. no. 105 173 is recommended for this application. |

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

## Background

**Synaptotagmin7** is a proposed regulator of $Ca^{2+}$ dependent exocytosis like neurotransmitter release. It occurs in several splicing variants which are expressed in a developmentally regulated pattern in brain. The distinct roles for the alternative splicing isoforms have not yet been determined. Synaptotagmin7 shows $Ca^{2+}$ dependent oligomerization via its own C2 domains leading to the formation of large linear structures which reside at the fusion site of vesicles and plasma membrane. These oligomers may be involved in the modulation of $Ca^{2+}$ dependent exocytosis by opening or dilating fusion pores.

For more information on protein expression pattern, please refer to the overview image in our SYSY Antibodies ATLAS.

## Selected General References

Alternative splicing isoforms of synaptotagmin VII in the mouse, rat and human.
Fukuda M et al. Biochem. J. (2002) PubMed:12071850

The calcium-binding loops of the tandem C2 domains of synaptotagmin VII cooperatively mediate calcium-dependent oligomerization.
Fukuda M et al. J. Biol. Chem. (2002) PubMed:12034723

Synaptotagmin VII as a plasma membrane Ca(2+) sensor in exocytosis.
Sugita S et al. Neuron (2001) PubMed:11395007

Mechanism of the calcium-dependent multimerization of synaptotagmin VII mediated by its first and second C2 domains.
Fukuda M et al. J. Biol. Chem. (2001) PubMed:11373279

The Exocytosis-regulatory protein synaptotagmin VII mediates cell invasion by Trypanosoma cruzi.
Caler EV et al. J. Exp. Med. (2001) PubMed:11342594

Distinct self-oligomerization activities of synaptotagmin family. Unique calcium-dependent oligomerization properties of synaptotagmin VII.
Fukuda M et al. J. Biol. Chem. (2000) PubMed:10871604

Access the online factsheet including applicable protocols at https://sysy.com/product/105711 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.