SYSY Antibodies

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Syntaxin12/13

Cat.No. 110 133; Polyclonal rabbit antibody, 50 µg specific antibody (lyophilized)

Data Sheet

Reconstitution/ Storage	50 µg specific antibody, lyophilized. Affinity purified with the immunogen. Albumin and azide were added for stabilization. For **reconstitution** add 50 µl H_2O to get a 1mg/ml solution in PBS. Then aliquot and store at -20°C to -80°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 : 100 up to 1 : 1000 (AP staining) **IP**: not tested yet **ICC**: 1 : 100 up to 1 : 500 **IHC**: not tested yet **IHC-P (FFPE)**: 1 : 200
Immunogen	Recombinant protein corresponding to AA 1 to 250 from rat Syntaxin12/13 (UniProt Id: G3V7P1)
Reactivity	Reacts with: human (Q86Y82), rat (G3V7P1), mouse (Q9ER00), hamster, chicken. Other species not tested yet.
Matching control	110-13P

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

Background

Syntaxin 12/13 are orthologues of the same gene whose product is a member of the SNARE family of proteins. It is related to syntaxins 1-4 but is localized predominantly to early endosomes of a wide variety of cells. Syntaxin 12/13 appears to be involved in the recycling of membrane receptors such as the transferrin receptors where it mediates the fusion of endosomal membranes.

Selected References for 110 133

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**

Multispectral imaging reveals the tissue distribution of tetraspanins in human lymphoid organs.
de Winde CM, Zuidscherwoude M, Vasaturo A, van der Schaaf A, Figdor CG, van Spriel AB
Histochemistry and cell biology (2015) 1442: 133-46. . **ICC**

Transmembrane and ubiquitin-like domain-containing protein 1 (Tmub1/HOPS) facilitates surface expression of GluR2-containing AMPA receptors.
Yang H, Takagi H, Konishi Y, Ageta H, Ikegami K, Yao I, Sato S, Hatanaka K, Inokuchi K, Seog DH, Setou M, et al.
PloS one (2008) 37: e2809. . **WB; tested species: mouse,rat**

Alzheimer's vulnerable brain region relies on a distinct retromer core dedicated to endosomal recycling.
Simoes S, Guo J, Buitrago L, Qureshi YH, Feng X, Kothiya M, Cortes E, Patel V, Kannan S, Kim YH, Chang KT, et al.
Cell reports (2021) 3713: 110182. . **ICC; tested species: mouse**

A trap mutant reveals the physiological client spectrum of TRC40.
Coy-Vergara J, Rivera-Monroy J, Urlaub H, Lenz C, Schwappach B
Journal of cell science (2019) 13213: . . **WB; tested species: human**

Degradation of dendritic cargos requires Rab7-dependent transport to somatic lysosomes.
Yap CC, Digilio L, McMahon LP, Garcia ADR, Winckler B
The Journal of cell biology (2018) : . . **WB; tested species: rat**

GRASP1 Regulates Synaptic Plasticity and Learning through Endosomal Recycling of AMPA Receptors.
Chiu SL, Diering GH, Ye B, Takamiya K, Chen CM, Jiang Y, Niranjan T, Schwartz CE, Wang T, Huganir RL
Neuron (2017) 936: 1405-1419.e8. . **WB; tested species: rat**

Multi-protein assemblies underlie the mesoscale organization of the plasma membrane.
Saka SK, Honigmann A, Eggeling C, Hell SW, Lang T, Rizzoli SO
Nature communications (2014) 5: 4509. . **ICC; tested species: rat**

Selected General References

A SNARE complex mediating fusion of late endosomes defines conserved properties of SNARE structure and function.
Antonin W et al. EMBO J. (2000) PubMed:11101518

Membrane fusion and exocytosis.
Jahn R et al. Annu. Rev. Biochem. (1999) PubMed:10872468

Seven novel mammalian SNARE proteins localize to distinct membrane compartments.
Advani RJ et al. J. Biol. Chem. (1998) PubMed:9553086

Syntaxin 13 mediates cycling of plasma membrane proteins via tubulovesicular recycling endosomes.
Prekeris R et al. J. Cell Biol. (1998) PubMed:9817754

Access the online factsheet including applicable protocols at https://sysy.com/product/110133 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.