SYSY Antibodies

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VAMP7

Cat.No. 232 011; Monoclonal mouse antibody, 100 µg purified IgG (lyophilized)

Data Sheet

Reconstitution/ Storage	100 µg purified IgG, lyophilized. Albumin and azide were added for stabilization. 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. 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 : 1000 (AP staining) **IP**: yes **ICC**: not tested yet **IHC**: not tested yet **IHC-P (FFPE)**: not tested yet
Clone	158.2
Subtype	IgG2a (κ light chain)
Immunogen	Recombinant protein corresponding to AA 119 to 188 from mouse VAMP7 (UniProt Id: P70280)
Reactivity	Reacts with: rat (Q9JHW5), mouse (P70280), human (P51809), chicken. No signal: zebrafish. Other species not tested yet.
Specificity	K.O. validated PubMed: 30271964

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

Background

VAMP 7, also referred to as Ti-VAMP and SybL 1, is a member of the SNARE family of proteins and a relative of synaptobrevin. It is involved in membrane fusion events that mediate neurite outgrowth in developing neurons, in endosome to lysosome transport and in other cellular trafficking mechanisms. VAMP 7 is ubiquitously expressed in different tissues.
It is a member of the syntaxin 4-SNAP 23-VAMP 7- and the syntaxin 7-syntaxin 8-Vti1b-VAMP 7-SNARE complex.

Selected References for 232 011

Comparative study of commercially available and homemade anti-VAMP7 antibodies using CRISPR/Cas9-depleted HeLa cells and VAMP7 knockout mice.
Verraes A, Cholley B, Galli T, Nola S
F1000Research (2018) 7: 1649. . **WB; KO verified; tested species: mouse**

Tetanus neurotoxin-insensitive vesicle-associated membrane protein localizes to a presynaptic membrane compartment in selected terminal subsets of the rat brain.
Muzerelle A, Alberts P, Martinez-Arca S, Jeannequin O, Lafaye P, Mazié JC, Galli T, Gaspar P
Neuroscience (2003) 1221: 59-75. . **WB, IHC**

Vesicle-associated membrane protein 7-mediated eosinophil degranulation promotes allergic airway inflammation in mice.
Willetts L, Felix LC, Jacobsen EA, Puttagunta L, Condjella RM, Zellner KR, Ochkur SI, Kim JD, Luo H, Lee NA, Lee JJ, et al.
Communications biology (2018) 1: 83. . **WB, ICC; KO verified; tested species: human**

Lysosomal exocytosis releases pathogenic α-synuclein species from neurons in synucleinopathy models.
Xie YX, Naseri NN, Fels J, Kharel P, Na Y, Lane D, Burré J, Sharma M
Nature communications (2022) 131: 4918. . **IP; tested species: mouse**

Host SNARE Proteins Mediate Lysosome and PVM Fusion to Support Plasmodium Liver Infection.
Atchou K, Kramer N, Bindschedler A, Schmuckli-Maurer J, Caldelari R, Heussler VT
Cells (2026) 157: . . **WB; KO verified; tested species: human**

Properties of Hippocampal Mossy Fibre Synapses in VAMP7 KO Mice.
Llinares BGI, Danglot L, Galli T, Mulle C
The European journal of neuroscience (2025) 614: e70016. . **IHC; tested species: mouse**

A new role of RAB21 and VARP in autophagy and autophagic exocytosis of ATP.
Carolina Barbosa M, Reta P, Nola S, Aguilera MO, Galli T, Colombo MI, Marcelo Fader C
Autophagy reports (2025) 41: 2501365. . **WB; KO verified; tested species: human**

BLTP3A is associated with membranes of the late endocytic pathway and is an effector of CASM.
Hanna MG, Rodriguez Cruz HO, Fujise K, Wu Y, Xu CS, Pang S, Li Z, Monetti M, De Camilli P
The EMBO journal (2025) 4421: 6168-6195. . **ICC; tested species: human**

An actin cytoskeletal barrier inhibits lytic granule release from natural killer cells in patients with Chediak-Higashi syndrome.
Gil-Krzewska A, Saeed MB, Oszmiana A, Fischer ER, Lagrue K, Gahl WA, Introne WJ, Coligan JE, Davis DM, Krzewski K
The Journal of allergy and clinical immunology (2017) : . . **ICC; tested species: human**

Human autoantibodies to amphiphysin induce defective presynaptic vesicle dynamics and composition.
Werner C, Pauli M, Doose S, Weishaupt A, Haselmann H, Grünewald B, Sauer M, Heckmann M, Toyka KV, Asan E, Sommer C, et al.
Brain : a journal of neurology (2016) 139Pt 2: 365-79. . **ICC; tested species: rat**

Cyclic Nucleotide Control of Microtubule Dynamics for Axon Guidance.
Akiyama H, Fukuda T, Tojima T, Nikolaev VO, Kamiguchi H
The Journal of neuroscience : the official journal of the Society for Neuroscience (2016) 3620: 5636-49. . **WB; KD verified; tested species: chicken**

Access the online factsheet including applicable protocols at https://sysy.com/product/232011 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.