

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 ₂ O 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: 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**
- 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, Grünwald 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**
- VAMP-7 links granule exocytosis to actin reorganization during platelet activation.
Koseoglu S, Peters CG, Fitch-Tewfik JL, Aisiku O, Danglot L, Galli T, Flaumenhaft R
Blood (2015) 1265: 651-60. . **WB**

Selected General References

- Vesicle-associated membrane protein 7 is expressed in intestinal ER.
Siddiqi SA et al. J. Cell. Sci. (2006) PubMed:16495485
- Identification of SNAREs involved in synaptotagmin VII-regulated lysosomal exocytosis.
Rao SK et al. J. Biol. Chem. (2004) PubMed:14993220
- A dual mechanism controlling the localization and function of exocytic v-SNAREs.
Martinez-Arca S et al. Proc. Natl. Acad. Sci. U.S.A. (2003) PubMed:12853575

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 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 a 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.