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

Myobrevin (Vamp5)

Cat.No. 176 003; Polyclonal rabbit antibody, 50 µg specific antibody (lyophilized)

Data Sheet

Reconstitution/ Storage	50 µg specific antibody, lyophilized. Affinity purified with the immunogen. Albumin was 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 : 1000 up to 1 : 5000 (AP staining) **IP**: not tested yet **ICC**: 1 : 1000 **IHC**: 1 : 500 (see remarks) **IHC-P (FFPE)**: 1 : 200
Immunogen	Recombinant protein corresponding to AA 1 to 70 from mouse Myobrevin (UniProt Id: Q9Z2P8)
Reactivity	Reacts with: mouse (Q9Z2P8). No signal: rat. Other species not tested yet.
Specificity	K.O. validated PubMed: 29330887
Matching control	176-0P
Remarks	**IHC**: Antigen retrieval with citrate buffer pH 6 is tolerated.

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

Background

Myobrevin, also known as **VAMP 5** belongs to the family of **v**esicle-**a**ssociated **m**embrane **p**roteins and has a theoretical molecular weight of 11.4 kDa. Like other VAMP isoforms it is composed of an N-terminal cytoplasmic region and a C-terminal transmembrane domain.
Vamp 5 is preferentially expressed in skeletal muscle and heart tissue and is upregulated during the differentiation of C2C12 cells into myotubes.

Selected References for 176 003

The localization of VAMP5 in skeletal and cardiac muscle.
Takahashi M, Tajika Y, Khairani AF, Ueno H, Murakami T, Yorifuji H
Histochemistry and cell biology (2013) 1394: 573-82. . **WB, IHC**

Vesicular transport system in myotubes: ultrastructural study and signposting with vesicle-associated membrane proteins.
Tajika Y, Takahashi M, Khairani AF, Ueno H, Murakami T, Yorifuji H
Histochemistry and cell biology (2014) 1414: 441-54. . **WB, ICC; tested species: mouse**

Loss of VAMP5 in mice results in duplication of the ureter and insufficient expansion of the lung.
Ikezawa M, Tajika Y, Ueno H, Murakami T, Inoue N, Yorifuji H
Developmental dynamics : an official publication of the American Association of Anatomists (2018) : . . **WB, IHC; KO verified; tested species: mouse**

Picalm coordinates clathrin-mediated endocytosis and actin remodeling during myogenesis.
Gaugel J, Haacke N, Kuropka B, Jähnert M, Rominger J, Jonas W, Speckmann T, Rausch N, Kleinert M, Weigert C, Garcia-Carrizo F, et al.
Molecular metabolism (2026) 107: 102351. . **WB; tested species: mouse**

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. . **WB; tested species: mouse**

SNAP23 deficiency causes severe brain dysplasia through the loss of radial glial cell polarity.
Kunii M, Noguchi Y, Yoshimura SI, Kanda S, Iwano T, Avriyanti E, Atik N, Sato T, Sato K, Ogawa M, Harada A, et al.
The Journal of cell biology (2021) 2201: . . **ICC; KD verified; tested species: mouse**

Characterisation of GLUT4 trafficking in HeLa cells: comparable kinetics and orthologous trafficking mechanisms to 3T3-L1 adipocytes.
Morris S, Geoghegan ND, Sadler JBA, Koester AM, Black HL, Laub M, Miller L, Heffernan L, Simpson JC, Mastick CC, Cooper J, et al.
PeerJ (2020) 8: e8751. . **WB; tested species: mouse**

Cardiac SNARE Expression in Health and Disease.
Bowman PRT, Smith GL, Gould GW
Frontiers in endocrinology (2019) 10: 881. . **WB; tested species: mouse**

Characterization of VAMP isoforms in 3T3-L1 adipocytes: implications for GLUT4 trafficking.
Sadler JB, Bryant NJ, Gould GW
Molecular biology of the cell (2015) 263: 530-6. . **WB**

Effects of contraction on localization of GLUT4 and v-SNARE isoforms in rat skeletal muscle.
Rose AJ, Jeppesen J, Kiens B, Richter EA
American journal of physiology. Regulatory, integrative and comparative physiology (2009) 2975: R1228-37. . **WB**

Selected General References

VAMP5 and VAMP8 are most likely not involved in primary open-angle glaucoma.
Brinkman JF et al. Mol. Vis. (2005) PubMed:16110299

Access the online factsheet including applicable protocols at https://sysy.com/product/176003 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.