SYSY Antibodies

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Endobrevin (Vamp8)

Cat.No. 104 302; Polyclonal rabbit antibody, 200 µl antiserum (lyophilized)

Data Sheet

Reconstitution/ Storage	200 µl antiserum, lyophilized. For **reconstitution** add 200 µl H_2O, then aliquot and store at -20°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**: 1 : 100 up to 1 : 500 **IHC**: external data (see remarks) **IHC-P (FFPE)**: 1 : 200
Immunogen	Recombinant protein corresponding to AA 1 to 75 from rat Endobrevin (UniProt Id: Q9WUF4)
Reactivity	Reacts with: human (Q9BV40), rat (Q9WUF4), mouse (O70404). Other species not tested yet.
Specificity	K.D. validated PubMed: 28202687
Remarks	**IHC**: This antibody has been successfully applied and published for this method by customers (see application-specific references). It has not been validated using our standard protocols.

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

Background

Endobrevin/VAMP8, a member of the SNARE family of proteins, is a relative of synaptobrevin that is involved in the fusion of early and late endosomes. Endobrevin is expressed in most mammalian cells but appears to be absent from neurons. The protein is predominantly localized to early and late endosomal membranes but is also found on other membranes and organelles involved in endocytic membrane traffic. In the fusion of late endosomes it forms SNARE complexes with syntaxin 7, syntaxin 8 and vti1b.

Selected References for 104 302

A proteomic approach to identify endosomal cargoes controlling cancer invasiveness.
Diaz-Vera J, Palmer S, Hernandez-Fernaud JR, Dornier E, Mitchell LE, Macpherson I, Edwards J, Zanivan S, Norman JC
Journal of cell science (2017) 1304: 697-711. . **WB, IP, ICC, IHC-P**

A role for VAMP8/endobrevin in surface deployment of the water channel aquaporin 2.
Wang CC, Ng CP, Shi H, Liew HC, Guo K, Zeng Q, Hong W
Molecular and cellular biology (2010) 301: 333-43. . **WB, IHC**

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, IHC; KD verified; tested species: mouse**

VAMP8-mediated NOX2 recruitment to endosomes is necessary for antigen release.
Dingjan I, Paardekooper LM, Verboogen DRJ, von Mollard GF, Ter Beest M, van den Bogaart G
European journal of cell biology (2017) 967: 705-714. . **WB, ICC; KD verified; tested species: human**

Oxidized phagosomal NOX2 complex is replenished from lysosomes.
Dingjan I, Linders PT, van den Bekerom L, Baranov MV, Halder P, Ter Beest M, van den Bogaart G
Journal of cell science (2017) 1307: 1285-1298. . **WB, ICC; KD verified; tested species: human**

Leishmania major Promastigotes Evade LC3-Associated Phagocytosis through the Action of GP63.
Matte C, Casgrain PA, Séguin O, Moradin N, Hong WJ, Descoteaux A
PLoS pathogens (2016) 126: e1005690. . **WB, ICC**

Munc13-4 interacts with syntaxin 7 and regulates late endosomal maturation, endosomal signaling, and TLR9-initiated cellular responses.
He J, Johnson JL, Monfregola J, Ramadass M, Pestonjamasp K, Napolitano G, Zhang J, Catz SD
Molecular biology of the cell (2016) 273: 572-87. . **WB, ICC; tested species: mouse**

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**

Vesicle-associated membrane protein-8/endobrevin negatively regulates phagocytosis of bacteria in dendritic cells.
Ho YH, Cai DT, Wang CC, Huang D, Wong SH
Journal of immunology (Baltimore, Md. : 1950) (2008) 1805: 3148-57. . **WB, ICC**

Pancreatic acinar cells express vesicle-associated membrane protein 2- and 8-specific populations of zymogen granules with distinct and overlapping roles in secretion.
Weng N, Thomas DD, Groblewski GE
The Journal of biological chemistry (2007) 28213: 9635-45. . **WB, ICC; tested species: rat**

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**

The trans-SNARE complex VAMP4/Stx6/Stx7/Vti1b is a key regulator of Golgi to late endosome MT1-MMP transport in macrophages.
West ZE, Aitcheson SM, Semmler ABT, Murray RZ
Traffic (Copenhagen, Denmark) (2021) 2211: 368-376. . **WB; KD verified; tested species: mouse**

Access the online factsheet including applicable protocols at https://sysy.com/product/104302 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.