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**: yes **IHC-P**: 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

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 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.