SYSY Antibodies

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Snapin

Cat.No. 148 002; 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**: external data(AP staining) (see remarks) **IP**: yes **ICC**: 1 : 500 **IHC**: 1 : 500 **IHC-P (FFPE)**: 1 : 500
Immunogen	Recombinant protein corresponding to AA 1 to 136 from rat Snapin (UniProt Id: P60192)
Reactivity	Reacts with: human (O95295), rat (P60192), mouse (Q9Z266), rabbit. No signal: zebrafish. Other species not tested yet.
Specificity	K.O. validated PubMed: 20946101
Matching control	148-0P
Remarks	Since snapin is present in very low concentrations long exposure time is recommended. **WB**: 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. Cat. no. 148 102 is recommended for Western blotting.

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

Background

Snapin, also referred to as **Snapap**, was initially identified as a SNAP 25 interacting protein which enhances the binding of synaptotagmin 1 to SNAREs in a phosphorylation dependent manner. Later an ubiquitous expression pattern in neuronal and non-neuronal cells and interaction with SNAP 23 was described. The protein contains heptad repeats typical for coiled coils in its C-terminal part. The role of this protein in SNARE mediated fusion is still under discussion.

Selected References for 148 002

Snapin, positive regulator of stimulation- induced Ca²⁺ release through RyR, is necessary for HIV-1 replication in T cells.
Kinoshita SM, Kogure A, Taguchi S, Nolan GP
PloS one (2013) 810: e75297. . **WB, IP, ICC; tested species: human**

The SNARE-associated component SNAPIN binds PUMILIO2 and NANOS1 proteins in human male germ cells.
Ginter-Matuszewska B, Spik A, Rembiszewska A, Koyias C, Kupryjanczyk J, Jaruzelska J
Molecular human reproduction (2009) 153: 173-9. . **WB, IHC-P; tested species: human,mouse**

Targeting of the GTPase Irgm1 to the phagosomal membrane via PtdIns(3,4)P(2) and PtdIns(3,4,5)P(3) promotes immunity to mycobacteria.
Tiwari S, Choi HP, Matsuzawa T, Pypaert M, MacMicking JD
Nature immunology (2009) 108: 907-17. . **DOTBLOT, ICC; tested species: mouse**

LRRK2 phosphorylates Snapin and inhibits interaction of Snapin with SNAP-25.
Yun HJ, Park J, Ho DH, Kim H, Kim CH, Oh H, Ga I, Seo H, Chang S, Son I, Seol W, et al.
Experimental & molecular medicine (2013) 45: e36. . **IP, WB; tested species: mouse**

Snapin interacts with the Exo70 subunit of the exocyst and modulates GLUT4 trafficking.
Bao Y, Lopez JA, James DE, Hunziker W
The Journal of biological chemistry (2008) 2831: 324-31. . **WB, ICC**

The UT-A1 urea transporter interacts with snapin, a SNARE-associated protein.
Mistry AC, Mallick R, Fröhlich O, Klein JD, Rehm A, Chen G, Sands JM
The Journal of biological chemistry (2007) 28241: 30097-106. . **WB, ICC; tested species: rabbit**

A novel role for snapin in dendrite patterning: interaction with cypin.
Chen M, Lucas KG, Akum BF, Balasingam G, Stawicki TM, Provost JM, Riefler GM, Jörnsten RJ, Firestein BL
Molecular biology of the cell (2005) 1611: 5103-14. . **ICC, WB; tested species: rat**

Mice deficient in transmembrane prostatic acid phosphatase display increased GABAergic transmission and neurological alterations.
Nousiainen HO, Quintero IB, Myöhänen TT, Voikar V, Mijatovic J, Segerstråle M, Herrala AM, Kulesskaya N, Pulkka AE, Kivinummi T, Abo-Ramadan U, et al.
PloS one (2014) 95: e97851. . **IHC; tested species: mouse**

Rab39 and its effector UACA regulate basolateral exosome release from polarized epithelial cells.
Matsui T, Sakamaki Y, Nakashima S, Fukuda M
Cell reports (2022) 399: 110875. . **WB; tested species: human**

A Ragulator-BORC interaction controls lysosome positioning in response to amino acid availability.
Pu J, Keren-Kaplan T, Bonifacino JS
The Journal of cell biology (2017) 21612: 4183-4197. . **WB; tested species: human**

Dysbindin-associated proteome in the p2 synaptosome fraction of mouse brain.
Han MH, Hu Z, Chen CY, Chen Y, Gucek M, Li Z, Markey SP
Journal of proteome research (2014) 1311: 4567-80. . **WB; tested species: mouse**

Snapin deficiency is associated with developmental defects of the central nervous system.
Zhou B, Zhu YB, Lin L, Cai Q, Sheng ZH
Bioscience reports (2011) 312: 151-8. . **WB; KO verified; tested species: mouse**

Access the online factsheet including applicable protocols at https://sysy.com/product/148002 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.