SYSY Antibodies

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SCAMP1

Cat.No. 121 002; 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**: 1 : 1000 (AP staining) **IP**: yes **ICC**: 1 : 500 **IHC**: 1 : 1000 up to 1 : 5000 **IHC-P**: not tested yet
Immunogen	Synthetic peptide corresponding to AA 2 to 15 from rat SCAMP1 (UniProt Id: P56603)
Reactivity	Reacts with: human (O15126), rat (P56603), mouse (Q8K021), hamster. Other species not tested yet.
Matching control	121-0P

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

Background

SCAMPs (**s**ecretory **c**arrier **m**embrane **p**roteins) are general markers of membranes that function in cell surface recycling such as secretory vesicles, pancreatic granules, etc. They have four conserved transmembrane regions (TMRs) suggesting a "core" function in membrane traffic.
Five isoforms (SCAMP 1-5) have been described. SCAMP 1-3 contain NPF repeats that interact with EH-domain proteins which are involved in the budding of transport vesicles from the plasma membrane or the Golgi complex. SCAMP 4 and SCAMP 5 lack the NPF repeats.
SCAMP 1-4 are ubiquitously expressed whereas SCAMP 5 is expressed exclusively in brain during late development.

Selected References for 121 002

Composition of isolated synaptic boutons reveals the amounts of vesicle trafficking proteins.
Wilhelm BG, Mandad S, Truckenbrodt S, Kröhnert K, Schäfer C, Rammner B, Koo SJ, Claßen GA, Krauss M, Haucke V, Urlaub H, et al.
Science (New York, N.Y.) (2014) 3446187: 1023-8. . **ICC, IHC, WB; tested species: mouse,rat**

SCAMP5 plays a critical role in synaptic vesicle endocytosis during high neuronal activity.
Zhao H, Kim Y, Park J, Park D, Lee SE, Chang I, Chang S
The Journal of neuroscience : the official journal of the Society for Neuroscience (2014) 3430: 10085-95. . **WB; tested species: rat**

Evidence for glutamate as a neuroglial transmitter within sensory ganglia.
Kung LH, Gong K, Adedoyin M, Ng J, Bhargava A, Ohara PT, Jasmin L
PloS one (2013) 87: e68312. . **IHC**

The proteome of the presynaptic active zone: from docked synaptic vesicles to adhesion molecules and maxi-channels.
Morciano M, Beckhaus T, Karas M, Zimmermann H, Volknandt W
Journal of neurochemistry (2009) 1083: 662-75. . **WB**

Molecular anatomy of a trafficking organelle.
Takamori S, Holt M, Stenius K, Lemke EA, Grønborg M, Riedel D, Urlaub H, Schenck S, Brügger B, Ringler P, Müller SA, et al.
Cell (2006) 1274: 831-46. . **WB**

Loss of the zymogen granule protein syncollin affects pancreatic protein synthesis and transport but not secretion.
Antonin W, Wagner M, Riedel D, Brose N, Jahn R
Molecular and cellular biology (2002) 225: 1545-54. . **WB**

SNARE proteins are highly enriched in lipid rafts in PC12 cells: implications for the spatial control of exocytosis.
Chamberlain LH, Burgoyne RD, Gould GW
Proceedings of the National Academy of Sciences of the United States of America (2001) 9810: 5619-24. . **WB**

The R-SNARE endobrevin/VAMP-8 mediates homotypic fusion of early endosomes and late endosomes.
Antonin W, Holroyd C, Tikkanen R, Höning S, Jahn R
Molecular biology of the cell (2000) 1110: 3289-98. . **WB**

Distribution of synaptic vesicle proteins in the mammalian retina identifies obligatory and facultative components of ribbon synapses.
Von Kriegstein K, Schmitz F, Link E, Südhof TC
The European journal of neuroscience (1999) 114: 1335-48. . **IHC**

Selected General References

Novel SCAMPs lacking NPF repeats: ubiquitous and synaptic vesicle-specific forms implicate SCAMPs in multiple membrane-trafficking functions.
Fernández-Chacón R et al. J. Neurosci. (2000) PubMed:11050114

Access the online factsheet including applicable protocols at https://sysy.com/product/121002 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.