Synaptic Systems

Rudolf-Wissell-Str. 28
37079 Göttingen, Germany
Phone: +49 551-50556-0
Fax: +49 551-50556-384
E-mail: sales@sysy.com
Web: www.sysy.com

SNAP 25

Cat.No. 111 002; 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.
Applications	**WB**: 1 : 10000 (AP staining) **IP**: yes **ICC**: 1 : 500 **IHC**: 1 : 200 **IHC-P/FFPE**: 1 : 500 **ELISA**: yes (see remarks)
Immunogen	Synthetic peptide corresponding to AA 192 to 206 from human SNAP25 (UniProt Id: P60880)
Reactivity	Reacts with: human (P60880), rat (P60881), mouse (P60879), hamster, chicken, goldfish, zebrafish. Other species not tested yet.
Specificity	Specific for SNAP 25.
matching control	111-0P
Remarks	Recognizes the Botulinum neurotoxin A cleavage product with reduced affinity.Does not detect the neurotoxin E cleavage product.Recognizes splice variants SNAP 25A and B. **ELISA**: Suitable as detector antibody for sandwich-ELISA with cat. no. 111 111 as capture antibody (protocol for sandwich-ELISA).

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

SNAP 25 (**syn**aptosome-**a**ssociated **p**rotein of **25** kDa) is a highly conserved protein anchored to the cytosolic face of membranes via palmitoyl side chains in the middle of the molecule. SNAP 25 is the target of Botulinum neurotoxin A and E which cleave off 9 and 26 amino acids, respectively, from the C-terminus.

SNAP 25 is part of the exocytotic fusion complex (v-SNARE) of neurons where it assembles with syntaxin 1 and synaptobrevin. It is abundantly localized on the neuronal plasmalemma and on recycling vesicles including synaptic vesicles. It is also expressed in neuroendocrine cells. There are two splice-variants, SNAP 25A and 25B.

Selected References SYSY Antibodies

An ancient duplication of exon 5 in the Snap25 gene is required for complex neuronal development/function.
Johansson JU, Ericsson J, Janson J, Beraki S, Stanić D, Mandic SA, Wikström MA, Hökfelt T, Ogren SO, Rozell B, Berggren PO, et al.
PLoS genetics (2008) 4(11): e1000278. **WB, IHC; tested species: mouse**

Neuronal and glial differentiation during lizard (Gallotia galloti) visual system ontogeny.
Romero-Alemán MM, Monzón-Mayor M, Santos E, Lang DM, Yanes C
The Journal of comparative neurology (2012) 520(10): 2163-84. **WB, IHC**

Reduced SNAP-25 increases PSD-95 mobility and impairs spine morphogenesis.
Fossati G, Morini R, Corradini I, Antonucci F, Trepte P, Edry E, Sharma V, Papale A, Pozzi D, Defilippi P, Meier JC, et al.
Cell death and differentiation (2015) 22(9): 1425-36. **ICC**

Synapsin-dependent reserve pool of synaptic vesicles supports replenishment of the readily releasable pool under intense synaptic transmission.
Vasileva M, Horstmann H, Geumann C, Gitler D, Kuner T
The European journal of neuroscience (2012) 36(8): 3005-20. **ELISA**

Newly produced synaptic vesicle proteins are preferentially used in synaptic transmission.
Truckenbrodt S, Viplav A, Jähne S, Vogts A, Denker A, Wildhagen H, Fornasiero EF, Rizzoli SO
The EMBO journal (2018) : . **ICC; tested species: rat**

SNARE Complex-associated Proteins in the Lateral Amygdala of Macaca mullatta Following Long-term Ethanol Drinking.
Alexander NJ, Rau AR, Jimenez VA, Daunais JB, Grant KA, McCool BA
Alcoholism, clinical and experimental research (2018) : . **WB; tested species: monkey**

Dopamine Secretion Is Mediated by Sparse Active Zone-like Release Sites.
Liu C, Kershberg L, Wang J, Schneeberger S, Kaeser PS
Cell (2018) 172(4): 706-718.e15. **WB; tested species: mouse**

Glyoxal as an alternative fixative to formaldehyde in immunostaining and super-resolution microscopy.
Richter KN, Revelo NH, Seitz KJ, Helm MS, Sarkar D, Saleeb RS, D'Este E, Eberle J, Wagner E, Vogl C, Lazaro DF, et al.
The EMBO journal (2018) 37(1): 139-159. **ICC; tested species: mouse**

Preserving Insulin Secretion in Diabetes by Inhibiting VDAC1 Overexpression and Surface Translocation in β Cells.
Zhang E, Mohammed Al-Amily I, Mohammed S, Luan C, Asplund O, Ahmed M, Ye Y, Ben-Hail D, Soni A, Vishnu N, Bompada P, et al.
Cell metabolism (2018) : . **IHC; tested species: human**

Ethanol Mediated Inhibition of Synaptic Vesicle Recycling at Amygdala Glutamate Synapses Is Dependent upon Munc13-2.
Gioia DA, Alexander N, McCool BA
Frontiers in neuroscience (2017) 11: 424. **WB; tested species: mouse**

Functional mapping of brain synapses by the enriching activity-marker SynaptoZip.
Ferro M, Lamanna J, Ripamonti M, Racchetti G, Arena A, Spadini S, Montesano G, Cortese R, Zimarino V, Malgaroli A
Nature communications (2017) 8(1): 1229. **ICC; tested species: rat**

Differential Expression of Munc13-2 Produces Unique Synaptic Phenotypes in the Basolateral Amygdala of C57BL/6J and DBA/2J Mice.
Gioia DA, Alexander NJ, McCool BA
The Journal of neuroscience : the official journal of the Society for Neuroscience (2016) 36(43): 10964-10977. **WB**

Microtubule-associated protein 1B (MAP1B)-deficient neurons show structural presynaptic deficiencies in vitro and altered presynaptic physiology.
Bodaleo FJ, Montenegro-Venegas C, Henríquez DR, Court FA, Gonzalez-Billault C
Scientific reports (2016) 6: 30069. **WB**

A new probe for super-resolution imaging of membranes elucidates trafficking pathways.
Revelo NH, Kamin D, Truckenbrodt S, Wong AB, Reuter-Jessen K, Reisinger E, Moser T, Rizzoli SO
The Journal of cell biology (2014) 205(4): 591-606. **ICC**

The SNARE protein vti1a functions in dense-core vesicle biogenesis.
Walter AM, Kurps J, de Wit H, Schöning S, Toft-Bertelsen TL, Lauks J, Ziomkiewicz I, Weiss AN, Schulz A, Fischer von Mollard G, Verhage M, et al.
The EMBO journal (2014) 33(15): 1681-97. **WB; tested species: mouse**

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) 344(6187): 1023-8. **IHC; tested species: mouse**

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) 8(7): e68312. **IHC**