

SNAP 23

Cat.No. 111 202; Polyclonal rabbit antibody, 200 µl antiserum (lyophilized)

Data Sheet

Reconstitution/ Storage	200 µl antiserum, lyophilized. For reconstitution add 200 µl H ₂ O, then aliquot and store at -20°C until use.
Applications	WB: 1 : 1000 (AP staining) IP: yes (see remarks) ICC: 1 : 50 IHC: yes IHC-P/FFPE: yes
Immunogen	Synthetic peptide corresponding to AA 196 to 211 from human SNAP23 (UniProt Id: O00161)
Reactivity	Reacts with: human (O00161), rat (O70377), mouse (O09044), hamster, pig, zebrafish. Other species not tested yet.
Specificity	Specific for SNAP 23. (K.O. verified)
matching control	111-2P
Remarks	IP: Antibody 2 (cat. no. 111 213) is recommended.

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

SNAP 23 (synaptosome-associated protein of 23 kDa) is an ubiquitously expressed isoform and functional homologue of SNAP 25. It is resistant to cleavage by BoNT/A and E. The protein is part of the exocytotic fusion complex (v-SNARE) where it assembles with syntaxin 1 and synaptobrevin. SNAP 23 is able to function in regulated exocytosis. Both isoforms may have their own specific binding partners and discrete, albeit mechanistically similar, functional roles within the cell.

Selected References SYSY Antibodies

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. **WB, ICC, IHC; tested species: mouse, rat**

Vesicle associated membrane protein (VAMP)-7 and VAMP-8, but not VAMP-2 or VAMP-3, are required for activation-induced degranulation of mature human mast cells.

Sander LE, Frank SP, Bolat S, Blank U, Galli T, Bigalke H, Bischoff SC, Lorentz A

European journal of immunology (2008) 38(3): 855-63. **WB, IP; tested species: human, rat**

Quantifying exosome secretion from single cells reveals a modulatory role for GPCR signaling.

Verweij FJ, Bebelman MP, Jimenez CR, Garcia-Vallejo JJ, Janssen H, Neeffjes J, Knol JC, de Goeij-de Haas R, Piersma SR, Baglio SR, Verhage M, et al.

The Journal of cell biology (2018) : . **WB, ICC; KD verified; tested species: mouse**

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) 130(7): 1285-1298. **WB, ICC; KD verified; tested species: human**

Selected SNARE proteins are essential for the polarized membrane insertion of igf-1 receptor and the regulation of initial axonal outgrowth in neurons.

Grassi D, Plonka FB, Oksdath M, Guil AN, Sosa LJ, Quiroga S

Cell discovery (2015) 1: 15023. **WB, ICC**

How pig sperm prepares to fertilize: stable acrosome docking to the plasma membrane.

Tsai PS, Garcia-Gil N, van Haeften T, Gadella BM

PLoS one (2010) 5(6): e11204. **WB, IP; tested species: pig**

Phosphorylation of SNAP-23 in activated human platelets.

Polgár J, Lane WS, Chung SH, Hough AK, Reed GL

The Journal of biological chemistry (2003) 278(45): 44369-76. **IP, WB; tested species: human**

SNAP23 is selectively expressed in airway secretory cells and mediates baseline and stimulated mucin secretion.

Ren B, Azzegagh Z, Jaramillo AM, Zhu Y, Pardo-Saganta A, Bagirzadeh R, Flores JR, Han W, Tang YJ, Tu J, Alanis DM, et al.

Bioscience reports (2015) 35(3): . **IHC-P; 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**

Choroid plexus epithelial cells express the adhesion protein P-cadherin at cell-cell contacts and syntaxin-4 in the luminal membrane domain.

Christensen IB, Mogensen EN, Damkier HH, Praetorius J

American journal of physiology. Cell physiology (2018) 314(5): C519-C533. **IHC-P; tested species: mouse**

Platelet-specific deletion of SNAP23 ablates granule secretion, substantially inhibiting arterial and venous thrombosis in mice.

Williams CM, Li Y, Brown E, Poole AW

Blood advances (2018) 2(24): 3627-3636. **WB; KO verified; tested species: mouse**

Immunofluorescence microscopy of SNAP23 in human skeletal muscle reveals colocalization with plasma membrane, lipid droplets, and mitochondria.

Strauss JA, Shaw CS, Bradley H, Wilson OJ, Dorval T, Pilling J, Wagenmakers AJ

Physiological reports (2016) 4(1): . **IHC**

The SNARE protein vti1a functions in dense-core vesicle biogenesis.

Walter AM, Kurps J, de Wit H, Schöning S, Toft-Bertelsen TL, Lauks J, Ziolkiewicz 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**

Calcium-dependent activator protein for secretion 2 interacts with the class II ARF small GTPases and regulates dense-core vesicle trafficking.

Sadakata T, Sekine Y, Oka M, Itakura M, Takahashi M, Furuichi T

The FEBS journal (2012) 279(3): 384-94. **WB; tested species: mouse**

Synaptic vesicle-like lipidome of human cytomegalovirus virions reveals a role for SNARE machinery in virion egress.

Liu ST, Sharon-Friling R, Ivanova P, Milne SB, Myers DS, Rabinowitz JD, Brown HA, Shenk T

Proceedings of the National Academy of Sciences of the United States of America (2011) 108(31): 12869-74. **WB; tested species: human**

Temporal characteristics of vesicular fusion in astrocytes: examination of synaptobrevin 2-laden vesicles at single vesicle resolution.

Malarkey EB, Pappas V

The Journal of physiology (2011) 589(17): 4271-300. **ICC; tested species: rat**