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

Synaptotagmin 2 lumenal domain

Cat.No. 105 224; Polyclonal Guinea pig antibody, 100 µl antiserum (lyophilized)

Data Sheet

Reconstitution/ Storage	100 µl antiserum, lyophilized. For reconstitution add 100 µl H_2O, then aliquot and store at -20°C until use.
Applications	**WB**: 1 : 1000 (AP staining) **IP**: not tested yet **ICC**: 1 : 500 **IHC**: not recommended **IHC-P/FFPE**: not tested yet
Immunogen	Synthetic peptide corresponding to AA 1 to 11 from mouse Synaptotagmin2 (UniProt Id: P46097)
Reactivity	Reacts with: mouse (P46097), rat (P29101). Other species not tested yet.
Specificity	specific Synaptotagmin 2

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

Synaptotagmin 2 is an integral membrane glycoprotein of neuronal synaptic vesicles. It is very similar to synaptotagmin 1 but shows a partly complementary expression pattern in the CNS.
Synaptotagmin 2 lacks a CAMK II/PKC phosphorylation site which is present in synaptotagmin 1.
Recently synaptotagmin 2 has been shown to be an alternative Ca^{2+} sensor for fast secretion.

Selected General References

Synaptotagmin-2 is essential for survival and contributes to Ca2+ triggering of neurotransmitter release in central and neuromuscular synapses.
Pang ZP, Melicoff E, Padgett D, Liu Y, Teich AF, Dickey BF, Lin W, Adachi R, Südhof TC
The Journal of neuroscience : the official journal of the Society for Neuroscience (2006) 26(52): 13493-504.

Genetic analysis of synaptotagmin 2 in spontaneous and Ca2+-triggered neurotransmitter release.
Pang ZP, Sun J, Rizo J, Maximov A, Südhof TC
The EMBO journal (2006) 25(10): 2039-50.

WNK1 phosphorylates synaptotagmin 2 and modulates its membrane binding.
Lee BH, Min X, Heise CJ, Xu BE, Chen S, Shu H, Luby-Phelps K, Goldsmith EJ, Cobb MH
Molecular cell (2004) 15(5): 741-51.

Synaptotagmin II could confer Ca(2+) sensitivity to phagocytosis in human neutrophils.
Lindmark IM, Karlsson A, Serrander L, Francois P, Lew D, Rasmusson B, Stendahl O, Nüsse O
Biochimica et biophysica acta (2002) 1590(1-3): 159-66.

Amino acid residues before the hydrophobic region which are critical for membrane translocation of the N-terminal domain of synaptotagmin II.
Kida Y, Sakaguchi M, Fukuda M, Mikoshiba K, Mihara K
FEBS letters (2001) 507(3): 341-5.

Synaptotagmin II negatively regulates Ca2+-triggered exocytosis of lysosomes in mast cells.
Baram D, Adachi R, Medalia O, Tuvim M, Dickey BF, Mekori YA, Sagi-Eisenberg R
The Journal of experimental medicine (1999) 189(10): 1649-58.

Synaptotagmin II. A novel differentially distributed form of synaptotagmin.
Geppert M, Archer BT, Südhof TC
The Journal of biological chemistry (1991) 266(21): 13548-52.