

Synaptotagmin 2 cytoplasmic domain

Cat.No. 105-12P; control peptide, 100 µg peptide (lyophilized)

Data Sheet

Reconstitution/Storage	100 µg peptide, lyophilized. For reconstitution add 100 µl H ₂ O to get a 1mg/ml solution in PBS. Then aliquot and store at -20°C until use. Control peptides should also be stored at -20°C when still lyophilized!
Immunogen	Synthetic peptide corresponding to AA 406 to 422 from rat Synaptotagmin2 (UniProt Id: P29101)
Recommended dilution	Optimal concentrations should be determined by the end-user.
matching antibodies	105 123
Remarks	This control peptide consists of the synthetic peptide (aa 406-422 in rat synaptotagmin 2) that has been used for immunization. It has been tested in preadsorption experiments and blocks efficiently and specifically the corresponding signal in Western blots. The amount of peptide needed for efficient blocking depends on the titer and on the affinity of the antibody to the antigen.

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 Ca²⁺ 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 Ca²⁺ sensitivity to phagocytosis in human neutrophils.

Lindmark IM, Karlsson A, Serrander L, Francois P, Lew D, Rasmuson 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.