

## Complexin 1/2

Cat.No. 122 002; Polyclonal rabbit antibody, 200 µl antiserum (lyophilized)

### Data Sheet

Reconstitution/ Storage	200 µl antiserum, lyophilized. For reconstitution add 200 µl H <sub>2</sub> O, then aliquot and store at -20°C until use.
Applications	<b>WB:</b> 1 : 1000 up to 1 : 10000 (AP staining) <b>IP:</b> yes <b>ICC:</b> 1 : 1000 <b>IHC:</b> yes <b>IHC-P/FFPE:</b> 1 : 200
Immunogen	Synthetic peptide corresponding to AA 122 to 134 from human Complexin2 (UniProt Id: Q6PUV4)
Reactivity	Reacts with: human (O14810, Q6PUV4), rat (P63041, P84087), mouse (P63040, P84086), cow, electric ray, rabbit. Other species not tested yet.
Specificity	Recognizes complexin 1 and 2. (K.O. verified)
matching control	122-OP

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

**Complexins** are enriched in neurons where they colocalize with syntaxin 1 and SNAP 25. In addition, complexin **2**, also referred to as **synaphin 1**, is expressed ubiquitously at low levels. Complexins bind weakly to syntaxin 1 alone and not at all to synaptobrevin and SNAP 25, but strongly to the SNAP receptor-core complex composed of these three molecules. They compete with α-SNAP for binding to the core complex but not with other interacting molecules, suggesting that complexins regulate the sequential interactions of α-SNAP and synaptotagmins with the SNAP receptor during exocytosis. In retinal ribbon synapses complexin 3 and complexin 4 functionally replace complexin **1 (synaphin 2)** and 2. They have similar biochemical binding properties and are farnesylated at their C-terminus.

### Selected References SYSY Antibodies

Composition of isolated synaptic boutons reveals the amounts of vesicle trafficking proteins.  
Wilhelm BG, Mandat 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. **ICC, IHC; tested species: mouse, rat**

Complexin 2 modulates vesicle-associated membrane protein (VAMP) 2-regulated zymogen granule exocytosis in pancreatic acini.

Falkowski MA, Thomas DD, Groblewski GE  
The Journal of biological chemistry (2010) 285(46): 35558-66. **WB, ICC**

miR-135a Regulates Synaptic Transmission and Anxiety-Like Behavior in Amygdala.  
Mannironi C, Biundo A, Rajendran S, De Vito F, Saba L, Caioli S, Zona C, Ciotti T, Caristi S, Perlas E, Del Vecchio G, et al.  
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Complexin stabilizes newly primed synaptic vesicles and prevents their premature fusion at the mouse calyx of held synapse.  
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Disabling the Gβγ-SNARE interaction disrupts GPCR-mediated presynaptic inhibition, leading to physiological and behavioral phenotypes.  
Zurawski Z, Thompson Gray AD, Brady LJ, Page B, Church E, Harris NA, Dohn MR, Yim YY, Hyde K, Mortlock DP, Jones CK, et al.  
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Alexander NJ, Rau AR, Jimenez VA, Daunais JB, Grant KA, McCool BA  
Alcoholism, clinical and experimental research (2018) : . **WB; tested species: monkey**

Synaptotagmin-1 and -7 Are Redundantly Essential for Maintaining the Capacity of the Readily-Releasable Pool of Synaptic Vesicles.

Bacaj T, Wu D, Burré J, Malenka RC, Liu X, Südhof TC  
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Synaptic function of nicastrin in hippocampal neurons.

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Complexin facilitates exocytosis and synchronizes vesicle release in two secretory model systems.

Lin MY, Rohan JG, Cai H, Reim K, Ko CP, Chow RH  
The Journal of physiology (2013) 591(10): 2463-73. **IHC**

CSPa knockout causes neurodegeneration by impairing SNAP-25 function.

Sharma M, Burré J, Bronk P, Zhang Y, Xu W, Südhof TC  
The EMBO journal (2012) 31(4): 829-41. **WB; tested species: mouse**

Cellular distribution and subcellular localization of molecular components of vesicular transmitter release in horizontal cells of rabbit retina.

Hirano AA, Brandstätter JH, Brecha NC  
The Journal of comparative neurology (2005) 488(1): 70-81. **IHC; tested species: rabbit**

Complexins regulate a late step in Ca<sup>2+</sup>-dependent neurotransmitter release.

Reim K, Mansour M, Varoqueaux F, McMahon HT, Südhof TC, Brose N, Rosenmund C  
Cell (2001) 104(1): 71-81. **WB; KO verified; tested species: mouse**

### Selected General References

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Complexins: cytosolic proteins that regulate SNAP receptor function.

McMahon HT, Missler M, Li C, Südhof TC  
Cell (1995) 83(1): 111-9.

Synaptic vesicles and exocytosis.

Jahn R, Südhof TC  
Annual review of neuroscience (1994) 17: 219-46.