

Complexin 1/2

Cat.No. 122 102; 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 up to 1 : 20000 (AP staining) IP: yes (see remarks) ICC: 1 : 200 up to 1 : 500 IHC: yes IHC-P/FFPE: 1 : 200
Immunogen	Synthetic peptide corresponding to AA 45 to 81 from mouse Complexin2 (UniProt Id: P84086)
Reactivity	Reacts with: human (O14810, Q6PUV4), rat (P63041, P84087), mouse (P63040, P84086), Guinea pig, cow, zebrafish, rabbit. Other species not tested yet.
Specificity	Recognizes complexin 1 and 2.
Remarks	IP: Co-immunoprecipitates the SNARE complex. Immunogen is located inside the mapped binding domain of complexin 2 to the SNARE complex (aa 41 - 91).

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

Involvement of complexin 2 in docking, locking and unlocking of different SNARE complexes during sperm capacitation and induced acrosomal exocytosis.

Tsai PS, Brewis IA, van Maaren J, Gadella BM

PLoS one (2012) 7(3): e32603. **WB, ICC; tested species: mouse, pig**

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**

Immunocytochemical evidence for SNARE protein-dependent transmitter release from guinea pig horizontal cells.

Lee H, Brecha NC

The European journal of neuroscience (2010) 31(8): 1388-401. **IHC**

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**

Complexins regulate a late step in Ca²⁺-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

The synaptic vesicle cycle: a cascade of protein-protein interactions.

Südhof TC

Nature (1995) 375(6533): 645-53.

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.