

Complexin 4

Cat.No. 122 402; 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: not tested yet ICC: not tested yet IHC: 1 : 4000 up to 1 : 40000 IHC-P/FFPE: 1 : 200
Immunogen	Recombinant protein corresponding to AA 1 to 160 from mouse Complexin4 (UniProt Id: Q80WM3)
Reactivity	Reacts with: rat (D3ZM85), mouse (Q80WM3). Other species not tested yet.
Specificity	Specific for complexin 4, no cross reaction to other complexins. (K.O. verified)

**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 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 and 2. They have similar biochemical binding properties and are farnesylated at their C-terminus.

Selected References SY SY Antibodies

Enrichment and differential targeting of complexins 3 and 4 in ribbon-containing sensory neurons during zebrafish development.

Zanazzi G, Matthews G
Neural development (2010) 5: 24. **IHC, WB, ICC; tested species: zebrafish**

Structurally and functionally unique complexins at retinal ribbon synapses.

Reim K, Wegmeyer H, Brandstätter JH, Xue M, Rosenmund C, Dresbach T, Hofmann K, Brose N
The Journal of cell biology (2005) 169(4): 669-80. **WB, IHC**

Complexin stabilizes newly primed synaptic vesicles and prevents their premature fusion at the mouse calyx of held synapse.

Chang S, Reim K, Pedersen M, Neher E, Brose N, Taschenberger H

The Journal of neuroscience : the official journal of the Society for Neuroscience (2015) 35(21): 8272-90. **WB**

Calcium channel-dependent molecular maturation of photoreceptor synapses.

Zabouri N, Haverkamp S
PloS one (2013) 8(5): e63853. **IHC**

The absence of Complexin 3 and Complexin 4 differentially impacts the ON and OFF pathways in mouse retina.

Landgraf I, Mühlhans J, Dedek K, Reim K, Brandstätter JH, Ammermüller J
The European journal of neuroscience (2012) 36(4): 2470-81. **IHC**

Promiscuous interaction of SNAP-25 with all plasma membrane syntaxins in a neuroendocrine cell.

Bajohrs M, Darios F, Peak-Chew SY, Davletov B
The Biochemical journal (2005) 392(Pt 2): 283-9. **WB**

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.