

Complexin 3

Cat.No. 122 302; 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 : 1000 up to 1 : 10000 IHC-P/FFPE: 1 : 200
Immunogen	Recombinant protein corresponding to AA 1 to 158 from mouse Complexin3 (UniProt Id: Q8R1B5)
Reactivity	Reacts with: rat (D4ABY0), mouse (Q8R1B5). Other species not tested yet.
Specificity	Specific for complexin 3, 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.

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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**

C-terminal complexin sequence is selectively required for clamping and priming but not for Ca²⁺ triggering of synaptic exocytosis.
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The Journal of neuroscience : the official journal of the Society for Neuroscience (2012) 32(8): 2877-85. **WB, ICC; tested species: rat**

Neonatal Hypoxia-Ischemia Causes Functional Circuit Changes in Subplate Neurons.
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Cerebral cortex (New York, N.Y. : 1991) (2018) : . **IHC; tested species: mouse**

Unbiased Quantification of Subplate Neuron Loss following Neonatal Hypoxia-Ischemia in a Rat Model.
 Mikhailova A, Sunkara N, McQuillen PS
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Transient Hypoxemia Chronically Disrupts Maturation of Preterm Fetal Ovine Subplate Neuron Arborization and Activity.
 McClendon E, Shaver DC, Degener-O'Brien K, Gong X, Nguyen T, Hoerder-Suabedissen A, Molnár Z, Mohr C, Richardson BD, Rossi DJ, Back SA, et al.
The Journal of neuroscience : the official journal of the Society for Neuroscience (2017) 37(49): 11912-11929. **IHC; tested species: mouse**

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**

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 Judson MC, Sosa-Pagan JO, Del Cid WA, Han JE, Philpot BD
The Journal of comparative neurology (2014) 522(8): 1874-96. **IHC; tested species: mouse**

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Calcium channel-dependent molecular maturation of photoreceptor synapses.
 Zabouri N, Haverkamp S
PloS one (2013) 8(5): e63853. **IHC**

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 Viswanathan S, Bandyopadhyay S, Kao JP, Kanold PO
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 Xu J, Morris L, Fliesler SJ, Sherry DM, Ding XQ
Investigative ophthalmology & visual science (2011) 52(6): 3557-66. **IHC; tested species: mouse**

Complexins facilitate neurotransmitter release at excitatory and inhibitory synapses in mammalian central nervous system.
 Xue M, Stradomska A, Chen H, Brose N, Zhang W, Rosenmund C, Reim K
Proceedings of the National Academy of Sciences of the United States of America (2008) 105(22): 7875-80. **WB; KO verified; tested species: mouse**

Selected General References

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

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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.

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