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 H2O, then aliquot and store at -20°C until use.

Applications

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<table>
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<tbody>
<tr>
<td>WB</td>
<td>1 : 1000 (AP staining)</td>
</tr>
<tr>
<td>IP</td>
<td>not tested yet</td>
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<tr>
<td>ICC</td>
<td>not tested yet</td>
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<tr>
<td>IHC</td>
<td>1 : 1000 up to 1 : 10000</td>
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<tr>
<td>IHC-P/FFPE</td>
<td>1 : 200</td>
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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.

Selected References SYSY Antibodies

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

C-terminal complexin sequence is selectively required for clamping and priming but not for Ca2+ triggering of synaptic exocytosis.
Kaeser-Woo YJ, Yang X, Sudhof TC

Neonatal Hypoxia-Ischemia Causes Functional Circuit Changes in Subplate Neurons.
Sheikh A, Meng X, Liu J, Mikhailova A, Kao JPY, McQuillen PS, Kanold PO

Unbiased Quantification of Subplate Neuron Loss Following Neonatal Hypoxia-Ischemia in a Rat Model.
Mikhailova A, Sunkara N, McQuillen PS

Transient Hypoxemia Chronically Disrupts Maturation of Preterm Fetal Ovine Subplate Neuron Arborization and Activity.

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

Allelic specificity of Ube3a expression in the mouse brain during postnatal development.
Judson MC, Sosa-Pagan JO, Del Cid WA, Han JE, Philpot BD

Extracortical origin of some murine subplate cell populations.
Pedraza M, Hoerder-Suabedissen A, Albert-Maestro MA, Molnár Z, De Carlos JA

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

Changing microcircuits in the subplate of the developing cortex.
Viswanathan S, Bandopadhyay S, Kao JP, Kanold PO

Early-onset, slow progression of cone photoreceptor dysfunction and degeneration in CNG channel subunit CNGB3 deficiency.
Xu J, Morris L, Fliesler SJ, Sherry DM, Ding QX

Selected General References

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

Complexins: cytosolic proteins that regulate SNAP receptor function.
McMahon HT, Missler M, Li C, Sudhof TC

Synaptic vesicles and exocytosis.
Jahn R, Sudhof TC