**Synaptotagmin 4**

Cat.No. 105 043; Polyclonal rabbit antibody, 50 µg specific antibody (lyophilized)

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### Data Sheet

**Reconstitution/Storage**

50 µg specific antibody, lyophilized. Affinity purified with the immunogen. Albumin was added for stabilization. For reconstitution add 50 µl H2O to get a 1mg/ml solution in PBS. Then aliquot and store at -20°C until use.

**Applications**

- **WB**: 1 : 100 up to 1 : 1000 (AP staining)
- **IP**: yes
- **ICC**: not recommended (see remarks)
- **IHC**: not recommended
- **IHC-P/FFPE**: not tested yet

**Immunogen**

Recombinant protein corresponding to AA 40 to 151 from rat Synaptotagmin4 (UniProt Id: P50232)

**Reactivity**

Reacts with: rat (P50232), mouse (P40749). Other species not tested yet.

**Specificity**

Specific for synaptotagmin 4. (K.O. verified)

**matching control**

105-4P

**Remarks**

- **ICC**: not recommended
- **IHC**: Antibody 2 (cat. no. 105 143) is recommended for these applications.

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**Selected References SYSYS Antibodies**

**Synaptotagmin 4**

- **WB, ICC; tested species: pig**


**Loss of synaptotagmin IV results in a reduction in synaptic vesicles and a distortion of the Golgi structure in cultured hippocampal neurons.**


**Synaptotagmin IV modulates synaptic function and long-term potentiation by regulating BDNF release.**


**Synaptotagmin IV: a multifunctional regulator of peptidecive nerve terminals.**


**NOT TOXIC, NOT HAZARDOUS, NOT INFECTIOUS, NOT CONTAGIOUS**

**Selected General References**

**Altered hippocampal short-term plasticity and associative memory in synaptotagmin IV (-/-) mice.**


**Structural basis for the evolutionary inactivation of Ca2+ binding to synaptotagmin 4.**


**Reduced anxiety and depression-like behavior in synaptotagmin IV (-/-) mice.**


**Synaptotagmin IV regulates gial glutamate release.**


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**Up to now at least 17 synaptotagmins have been identified. Synaptotagmin 4 is composed of a vesicular, a transmembrane and two C2 domains. Only the C2B domain is able to bind calcium. In the C2A domain one of the calcium binding aspartates has been substituted for serine leading to a loss of its binding capabilities.**

The localization of synaptotagmin 4 is still under discussion. A localization to synaptic vesicles (SVs) has been postulated but more recent studies suggest that it is present in the Golgi compartment, in vesicular, a transmembrane and two C2 domains. Only the C2B domain is able to bind calcium. In the C2A domain one of the calcium binding aspartates has been substituted for serine leading to a loss of its binding capabilities. **TO BE USED IN VITRO / FOR RESEARCH ONLY**

Selected References SYSYS Antibodies

Involvement of complexin 2 in docking, locking and unlocking of different SNARE complexes during sperm capacitation and induced acrosomal exocytosis. Tsai PS, Brewe IA, van Maaren J, Gadella BM. PloS one (2012) 7(3): e32603. **WB, ICC; tested species: pig**

**TO BE USED IN VITRO / FOR RESEARCH ONLY**