

Code No. 18977

Anti-Synaptotagmin IV Rabbit IgG Affinity PurifyVolume : 100 µg

Introduction : Synaptotagmin family proteins consist of a single N-terminal transmembrane domain and C-terminal tandem C2 domains (C2A and C2B), which have the ability to bind Ca²⁺ and phospholipid, and 15 synaptotagmin isoforms have been reported in the mouse and humans to date. The best-characterized isoform, synaptotagmin I, is essential for synaptic vesicle exocytosis and endocytosis.

It has been reported that i) synaptotagmin IV expression is regulated by neural activity and that it is thought to be involved in synaptic plasticity, ii) that synaptotagmin IV is present on dense-core vesicles in NGF-differentiated PC12 cells and may control their exocytosis, and iii) that synaptotagmin IV regulates glutamate release by astrocytes.

Antigen : Recombinant Synaptotagmin IV C2A domain**Purification** : Affinity purified with antigen**Form** : Lyophilized product from 1 % BSA in PBS containing 0.05 % NaN₃**How to use** : 1.0 mL deionized water will be added to the product (the conc. comes up 100 µg /mL)**Stability** : Lyophilized product, 5 years at 2 – 8 °C
: Solution, 2 years at –20 °C**Application** : This antibody can be used for immuno-cytochemistry. The optimal concentration is about 5 µg/mL, however, the concentration should be optimized by each laboratory.
: This antibody can be used for western blotting in concentration of 1 - 5 µg /mL.
: This antibody can be used for immuno-precipitation in concentration of 5 - 10 µg /test.**Specificity** : Cross-reacts with mouse and rat Synaptotagmin IV.**Reference** : 1. Ibata, K., Fukuda, M., Hamada, T., Kabayama, H., Mikoshiba, K. Synaptotagmin IV is present at the Golgi and distal parts of neurites. *J. Neurochem.* 74:518-526 (2000).
2. Fukuda, M., Kanno, E., Ogata, Y., Saegusa, C., Kim, T., Loh, P.Y., Yamamoto, A. Nerve growth factor-dependent sorting of synaptotagmin IV protein to mature dense-core vesicles that undergo calcium-dependent exocytosis in PC12 cells. *J. Biol. Chem.* 278:3220-3226 (2003).
3. Zhang, Q., Fukuda, M., Van Bockstaele, E., Pascual, O., Haydon, P.G. Synaptotagmin IV regulates glial glutamate release. *Proc. Natl. Acad. Sci. USA* 101:9441-9446 (2004).

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