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Synaptotagmin I Antibody
Peptide-affinity purified goat antibody
Catalog # AF2057a

Specification

Synaptotagmin I Antibody - Product Information

Application	**WB, IHC, E**
Primary Accession	P21579
Other Accession	NP_005630, 6857, 20979 (mouse), 25716 (rat)
Reactivity	**Human**
Predicted	**Mouse, Rat, Dog**
Host	**Goat**
Clonality	**Polyclonal**
Concentration	**0.5mg/ml**
Isotype	**IgG**
Calculated MW	**47573**

Synaptotagmin I Antibody - Additional Information

Gene ID 6857

Other Names
Synaptotagmin-1, Synaptotagmin I, SytI, p65, SYT1, SVP65, SYT

Dilution
WB~~1:1000
IHC~~1:100~500
E~~N/A

Format
0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
Synaptotagmin I Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Synaptotagmin I Antibody - Protein Information

Name SYT1 (HGNC:11509)

Synonyms SVP65, SYT

Function
Calcium sensor that participates in triggering neurotransmitter release at the synapse (By similarity). May have a regulatory role in the membrane interactions during trafficking of synaptic vesicles at the active zone of the synapse (By similarity). It binds acidic phospholipids with a specificity that requires the presence of both an acidic head group and a diacyl backbone. A Ca(2+)- dependent interaction between synaptotagmin and putative receptors for activated protein kinase C has also been reported. It can bind to at least three additional proteins in a Ca(2+)-independent manner; these are neurexins, syntaxin and AP2. Plays a role in dendrite formation by melanocytes (PubMed:23999003).

Cellular Location
Cytoplasmic vesicle, secretory vesicle membrane {ECO:0000250|UniProtKB:P21707}; Single-pass membrane protein. Cytoplasmic vesicle, secretory vesicle, synaptic vesicle membrane {ECO:0000250|UniProtKB:P21707}; Single-pass membrane protein {ECO:0000250|UniProtKB:P21707}. Cytoplasmic vesicle, secretory vesicle, chromaffin granule membrane {ECO:0000250|UniProtKB:P21707}; Single-pass membrane protein {ECO:0000250|UniProtKB:P21707}. Cytoplasm {ECO:0000250|UniProtKB:P21707}

Tissue Location
Expressed in melanocytes (PubMed:23999003).

Synaptotagmin I Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Synaptotagmin I Antibody - Images

AF2057a (1µg/ml) staining of Human Hippocampus lysate (35µg protein in RIPA buffer). Primary

incubation was 1 hour. Detected by chemiluminescence.

Synaptotagmin I Antibody - Background

The synaptotagmins are integral membrane proteins of synaptic vesicles thought to serve as Ca(2+) sensors in the process of vesicular trafficking and exocytosis. Calcium binding to synaptotagmin-1 participates in triggering neurotransmitter release at the synapse (Fernandez-Chacon et al., 2001 [PubMed 11242035]).

Synaptotagmin I Antibody - References

Personalized smoking cessation: interactions between nicotine dose, dependence and quit-success genotype score. Rose JE, et al. Mol Med, 2010 Jul-Aug. PMID 20379614.
A meta-analysis of genome-wide data from five European isolates reveals an association of COL22A1, SYT1, and GABRR2 with serum creatinine level. Pattaro C, et al. BMC Med Genet, 2010 Mar 11. PMID 20222955.
Cyclic AMP-mediated endocytosis of intestinal epithelial NHE3 requires binding to synaptotagmin 1. Musch MW, et al. Am J Physiol Gastrointest Liver Physiol, 2010 Feb. PMID 19926819.
NMR characterization of copper and lipid interactions of the C2B domain of synaptotagmin I-relevance to the non-classical secretion of the human acidic fibroblast growth factor (hFGF-1). Kathir KM, et al. Biochim Biophys Acta, 2010 Feb. PMID 19835837.
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