SANTA CRUZ BIOTECHNOLOGY, INC.

Synaptotagmin I (m): 293T Lysate: sc-123866

BACKGROUND

Synaptotagmins are a large gene family of synaptic vesicle type III integral membrane proteins that function as regulators of both exocytosis and endocytosis and are involved in neurotransmitter secretion from small secretory vesicles. Calcium binds to Synaptotagmin I which triggers neurotransmitter release at the synapse. Synaptotagmin II is phosphorylated by WNK1 in a process that regulates calcium-dependent interactions. Synaptotagmin III is involved in calcium-dependent exocytosis of secretory vesicles in endocrine cells and neurons. Synaptotagmin IV is expressed in neuronal tissues, and has the highest mRNA levels in the hippocampus. The proximity of the Synaptotagmin IV gene to markers of several psychiatric disorders suggest an involvement of Synaptotagmin IV in human disease. Synaptotagmin V is a dense-core vesicle-specific protein that regulates a specific type of calcium-regulated secretion. Synaptotagmin VI interacts with adaptor protein-2 in a calcium-independent manner. Synaptotagmin VII is widely expressed in non-neuronal tissues.

REFERENCES

1. Hilbush, B.S. and Morgan, J.I. 1994. A third synaptotagmin gene, Syt3, in the mouse. Proc. Natl. Acad. Sci. USA 91: 8195-8199.
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3. Kishore, B.K., Wade, J.B., Schorr, K., Inoue, T., Mandon, B. and Knepper, M.A. 1998. Expression of Synaptotagmin VIII in rat kidney. Am. J. Physiol. 275: 131-142.
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5. Ferguson, G.D., Chen, X.N., Korenberg, J.R. and Herschman, H.R. 2000. The human Synaptotagmin IV gene defines an evolutionary break point between syntenic mouse and human chromosome regions but retains ligand inducibility and tissue specificity. J. Biol. Chem. 275: 36920-3696.
6. LocusLink Report (LocusID: 6859). http://www.ncbi.nlm.nih.gov/LocusLink/

CHROMOSOMAL LOCATION

Genetic locus: syt1 (mouse) mapping to 10 D1.

PRODUCT

Synaptotagmin I (m): 293T Lysate represents a lysate of mouse Synaptotagmin I transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

Synaptotagmin I (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive Synaptotagmin I antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.