SANTA CRUZ BIOTECHNOLOGY, INC.

Synaptotagmin VII (C-17): sc-15420



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.

CHROMOSOMAL LOCATION

Genetic locus: SYT7 (human) mapping to 11q12.2; Syt7 (mouse) mapping to 19 A.

SOURCE

Synaptotagmin VII (C-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Synaptotagmin VII of human origin.

PRODUCT

Each vial contains 200 μg lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-15420 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Synaptotagmin VII (C-17) is recommended for detection of Synaptotagmin VII of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Synaptotagmin VII (C-17) is also recommended for detection of synaptotagmin VII in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Synaptotagmin VII siRNA (h): sc-41320, Synaptotagmin VII siRNA (m): sc-41321, Synaptotagmin VII shRNA Plasmid (h): sc-41320-SH, Synaptotagmin VII shRNA Plasmid (m): sc-41321-SH, Synaptotagmin VII shRNA (h) Lentiviral Particles: sc-41320-V and Synaptotagmin VII shRNA (m) Lentiviral Particles: sc-41321-V.

Molecular Weight of Synaptotagmin VII: 65 kDa.

Positive Controls: SK-N-SH cell lysate: sc-2410, human uterus extract: sc-363784 or ACHN whole cell lysate: sc-364365.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



Synaptotagmin VII (C-17): sc-15420. Western blot analysis of Synaptotagmin VII expression in SK-N-SH (**A**), T98G (**B**) and ACHN (**C**) whole cell Ivsates and human uterus tissue extract (**D**).

SELECT PRODUCT CITATIONS

- Tang, V.W. 2006. Proteomic and bioinformatic analysis of epithelial tight junction reveals an unexpected cluster of synaptic molecules. Biol. Direct. 1: 37.
- Moore, J.M., et al. 2006. Stable gene silencing of Synaptotagmin I in rat PC12 cells inhibits Ca²⁺-evoked release of catecholamine. Am. J. Physiol., Cell Physiol. 291: C270-C281.
- Calvo-Gallardo, E., et al. 2015. Depressed excitability and ion currents linked to slow exocytotic fusion pore in chromaffin cells of the SOD1G93A mouse model of amyotrophic lateral sclerosis. Am. J. Physiol., Cell Physiol. 308: C1-C19.

RESEARCH USE

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

PROTOCOLS

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



Try **Synaptotagmin VII (4H4): sc-293343**, our highly recommended monoclonal alternative to Synaptotagmin VII (C-17).