SANTA CRUZ BIOTECHNOLOGY, INC.

Synaptotagmin VI (E-20): sc-69617

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.
2. Li, C., et al. 1995. Ca^{2+}-dependent and -independent activities of neural and non-neural synaptotagmins. Nature 375: 594-599.
3. Kishore, B.K., et al. 1998 Expression of Synaptotagmin VIII in rat kidney. 1998. Expres-sion of Synaptotagmin VIII in rat kidney. Am. J. Physiol. 275: 131-142.
4. Xi, D., et al. 1999. Analysis of Synaptotagmin I-IV messenger RNA expression and developmental regulation in the rat hypothalamus and pituitary. Neuroscience 88: 425-435.

CHROMOSOMAL LOCATION

Genetic locus: SYT6 (human) mapping to 1p13.2; Syt6 (mouse) mapping to 3 F2.2.

SOURCE

Synaptotagmin VI (E-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a cytoplasmic domain of Synaptotagmin VI of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-69617 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

Synaptotagmin VI (E-20) is recommended for detection of Synaptotagmin VI 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 VI (E-20) is also recommended for detection of Synaptotagmin VI in additional species, including equine and porcine.

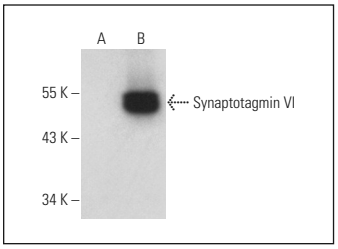
Suitable for use as control antibody for Synaptotagmin VI siRNA (h): sc-76618, Synaptotagmin VI siRNA (m): sc-76619, Synaptotagmin VI shRNA Plasmid (h): sc-76618-SH, Synaptotagmin VI shRNA Plasmid (m): sc-76619-SH, Synaptotagmin VI shRNA (h) Lentiviral Particles: sc-76618-V and Synaptotagmin VI shRNA (m) Lentiviral Particles: sc-76619-V.

Molecular Weight (predicted) of Synaptotagmin VI isoforms 1/2: 57/48 kDa.

Molecular Weight (observed) of Synaptotagmin VI: 74 kDa.

Positive Controls: SH-SY5Y cell lysate: sc-3812, mouse liver extract: sc-2256 or Synaptotagmin VI (h): 293T Lysate: sc-115895.

DATA



Synaptotagmin VI (E-20): sc-69617. Western blot analysis of Synaptotagmin VI expression in non-transfected: sc-117752 (**A**) and Synaptotagmin VI transfected: sc-115895 (**B**) 293T whole cell lysates.

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.