

Synaptotagmin VI (A-25): sc-135675

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

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- 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.
- Xi, D., Chin, H. and Gainer, H. 1999. Analysis of Synaptotagmin I-IV messenger RNA expression and developmental regulation in the rat hypothalamus and pituitary. *Neuroscience* 88: 425-435.
- 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.

CHROMOSOMAL LOCATION

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

SOURCE

Synaptotagmin VI (A-25) is a rabbit polyclonal antibody raised against recombinant Synaptotagmin VI protein of human origin.

PRODUCT

Each vial contains IgG in 100 µl of PBS with < 0.1% sodium azide and 0.1% gelatin.

PROTOCOLS

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

APPLICATIONS

Synaptotagmin VI (A-25) is recommended for detection of Synaptotagmin VI of mouse, rat and human origin by Western Blotting (starting dilution to be determined by researcher, dilution range 1:100-1:5000), immunoprecipitation [1-2 µl per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution to be determined by researcher, dilution range 1:50-1:2500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution to be determined by researcher, dilution range 1:50-1:2500).

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.

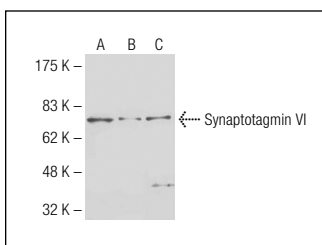
Molecular Weight (predicted) of Synaptotagmin VI isoforms 1/2: 57/48 kDa.

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

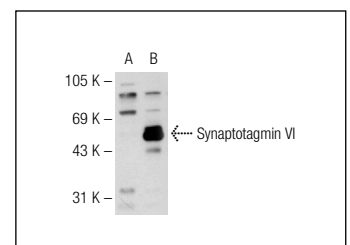
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



Synaptotagmin VI (A-25): sc-135675. Western blot analysis of Synaptotagmin VI expression in SH-SY5Y (A) whole cell lysate and mouse liver (B) and rat liver (C) tissue extracts.



Synaptotagmin VI (A-25): sc-135675. Western blot analysis of Synaptotagmin VI expression in non-transfected: sc-117752 (A) and human Synaptotagmin VI transfected: sc-115895 (B) 293T whole cell lysates.

STORAGE

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

RESEARCH USE

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