

Synaptotagmin IV (T-15): sc-27624

BACKGROUND

Synaptotagmins are a large gene family of synaptic vesicle integral membrane proteins that function as regulators of both exocytosis and endocytosis and are involved in neurotransmitter secretion from small secretory vesicles. The human synaptotagmin IV gene, which is located on chromosome 18q12.3, encodes a 425 amino acid protein that is specifically 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. The human synaptotagmin III gene, which maps to chromosome 19q, is also expressed in many regions of the nervous system, but is absent in non-neural tissues. Human synaptotagmin VII, which maps to chromosome 11q12-q13.1, encodes a 289 amino acid protein. Unlike synaptotagmin III or IV, synaptotagmin VII is widely expressed in non-neuronal tissues.

REFERENCES

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- 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.
- LocusLink Report (LocusID: 6860). <http://www.ncbi.nlm.nih.gov/>

CHROMOSOMAL LOCATION

Genetic locus: SYT4 (human) mapping to 18q12.3.

SOURCE

Synaptotagmin IV (T-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Synaptotagmin IV 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-27624 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

Synaptotagmin IV (T-15) is recommended for detection of Synaptotagmin IV of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

Suitable for use as control antibody for Synaptotagmin IV siRNA (h): sc-41316, Synaptotagmin IV shRNA Plasmid (h): sc-41316-SH and Synaptotagmin IV shRNA (h) Lentiviral Particles: sc-41316-V.

Molecular Weight of Synaptotagmin IV: 41-44 kDa

Positive Controls: SK-N-MC cell lysate: sc-2237, SK-N-SH cell lysate: sc-2410 or SK-N-MC + forskolin cell lysate: sc-2288

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

STORAGE

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

PROTOCOLS

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



Try **Synaptotagmin IV (H-4): sc-271936** or **Synaptotagmin IV (28-N): sc-101302**, our highly recommended monoclonal alternatives to Synaptotagmin IV (T-15).