

Synaptotagmin IX (N-13): sc-131081

BACKGROUND

Synaptotagmins are a large 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. Synaptotagmin IX, also known as SYT9 (Synaptotagmin-9), is a 491 amino acid protein that localizes to the membrane. Like other Synaptotagmin proteins, Synaptotagmin IX is involved in the calcium-dependent exocytosis of secretory vesicles and is thought to act as a calcium sensor during vesicular trafficking. Synaptotagmin IX contains two C2 domains through which it can bind three calcium ions per subunit. It has been suggested that Synaptotagmin IX is required for the Ca⁺⁺-dependent release of norepinephrine.

REFERENCES

1. Perin, M.S. 1996. Mirror image motifs mediate the interaction of the COOH terminus of multiple synaptotagmins with the neurexins and calmodulin. *Biochemistry* 35: 13808-13816.
2. Mizutani, A., et al. 2000. SYNCRIP, a cytoplasmic counterpart of heterogeneous nuclear ribonucleoprotein R, interacts with ubiquitous synaptotagmin isoforms. *J. Biol. Chem.* 275: 9823-9831.
3. Dubois, T., et al. 2002. Identification of casein kinase I α interacting protein partners. *FEBS Lett.* 517: 167-171.
4. Fukuda, M., et al. 2002. Synaptotagmin IX regulates Ca⁺-dependent secretion in PC-12 cells. *J. Biol. Chem.* 277: 4601-4604.
5. Zhang, X., et al. 2002. Ca⁺-dependent synaptotagmin binding to SNAP 25 is essential for Ca⁺-triggered exocytosis. *Neuron* 34: 599-611.
6. Haberman, Y., et al. 2003. Synaptotagmin IX, a possible linker between the perinuclear endocytic recycling compartment and the microtubules. *J. Cell Sci.* 116: 4307-4318.
7. Morenilla-Palao, C., et al. 2004. Regulated exocytosis contributes to protein kinase C potentiation of vanilloid receptor activity. *J. Biol. Chem.* 279: 25665-25672.

CHROMOSOMAL LOCATION

Genetic locus: SYT9 (human) mapping to 11p15.4; Syt9 (mouse) mapping to 7 E3.

SOURCE

Synaptotagmin IX (N-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Synaptotagmin IX of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-131081 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Synaptotagmin IX (N-13) is recommended for detection of Synaptotagmin IX of mouse, rat and 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); non cross-reactive with other Synaptotagmin family members.

Synaptotagmin IX (N-13) is also recommended for detection of Synaptotagmin IX in additional species, including bovine and porcine.

Suitable for use as control antibody for Synaptotagmin IX siRNA (h): sc-96623, Synaptotagmin IX siRNA (m): sc-153974, Synaptotagmin IX shRNA Plasmid (h): sc-96623-SH, Synaptotagmin IX shRNA Plasmid (m): sc-153974-SH, Synaptotagmin IX shRNA (h) Lentiviral Particles: sc-96623-V and Synaptotagmin IX shRNA (m) Lentiviral Particles: sc-153974-V.

Molecular Weight of Synaptotagmin IX: 70 kDa.

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.

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.


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Try **Synaptotagmin IX (E-11): sc-398592**, our highly recommended monoclonal alternative to Synaptotagmin IX (N-13).