

# Synaptotagmin VIII (P-13): sc-240939

## 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. The Synaptotagmin family of proteins share a common domain structure that consists of a transmembrane domain and a cytoplasmic region composed of two C2 domains. Synaptotagmin VIII, also known as SYT8, is a 401 amino acid single-pass type III membrane protein belonging to the Synaptotagmin family. Containing two C2 domains, Synaptotagmin VIII exists as a homodimer or homooligomer. Synaptotagmin VIII exists as two alternatively spliced isoforms, isoform 1 and isoform 4. Synaptotagmin VIII isoform 4 is thought to participate in the trafficking and exocytosis of secretory vesicles in non-neuronal tissues.

## REFERENCES

- Hilbush, B.S., et al. 1994. A third Synaptotagmin gene, Syt3, in the mouse. *Proc. Natl. Acad. Sci. USA* 91: 8195-8199.
- Li, C., et al. 1995. Ca<sup>2+</sup>-dependent and -independent activities of neural and non-neural synaptotagmins. *Nature* 375: 594-599.
- Kishore, B.K., et al. 1998 Expression of synaptotagmin VIII in rat kidney. *Am. J. Physiol.* 275: F131-F142.
- 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.
- Ferguson, G.D., et al. 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.
- Online Mendelian Inheritance in Man, OMIM<sup>™</sup>. 2003. Johns Hopkins University, Baltimore, MD. MIM Number: 607719. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Xu, Z., et al. 2011. Mapping of INS promoter interactions reveals its role in long-range regulation of SYT8 transcription. *Nat. Struct. Mol. Biol.* 18: 372-378.

## CHROMOSOMAL LOCATION

Genetic locus: SYT8 (human) mapping to 11p15.5.

## SOURCE

Synaptotagmin VIII (P-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an N-terminal extracellular domain of Synaptotagmin VIII 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-240939 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Synaptotagmin VIII (P-13) is recommended for detection of Synaptotagmin VIII 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); non cross-reactive with other Synaptotagmin family members.

Suitable for use as control antibody for Synaptotagmin VIII siRNA (h): sc-96830, Synaptotagmin VIII shRNA Plasmid (h): sc-96830-SH and Synaptotagmin VIII shRNA (h) Lentiviral Particles: sc-96830-V.

Molecular Weight of Synaptotagmin VIII isoforms: 44/18 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<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> 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<sup>™</sup> 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](http://www.scbt.com) or our catalog for detailed protocols and support products.