Synaptoporin (H-60): sc-99075



The Power to Overtion

BACKGROUND

Synaptic vesicle recycling involves numerous proteins that contribute to the formation and trafficking of the SNARE complexes throughout the cell. Synaptoporin, also designated synaptophysin 2, is an integral membrane protein of small synaptic vesicles that belongs to the synaptophysin/synaptobrevin family. Synaptoporin is highly homologus to synaptophysin 1 and both Synaptoporin and synaptophysin 1 contain four transmembrane domains and a short cytoplasmic tail. The Synaptoporin protein also contains one MARVEL domain, a membrane-associating domain found in lipid-associating proteins, and displays calcium-binding activity which may be localized to its cytoplasmic tail. Syntaphilin, synaptophysin and Synaptoporin regulate the formation of the vesicles by competing with components of the SNARE complexes to respectively inhibit either the assembly or the secretion of the synaptic vesicles.

REFERENCES

- Leube, R.E., Kaiser, P., Seiter, A., Zimbelmann, R., Franke, W.W., Rehm, H., Knaus, P., Prior, P., Betz, H. and Reinke, H. 1988. Synaptophysin: molecular organization and mRNA expression as determined from cloned cDNA. EMBO J. 6: 3261-3268.
- Singec, I., Knoth, R., Ditter, M., Hagemeyer, C.E., Rosenbrock, H., Frotscher, M. and Volk, B. 2002. Synaptic vesicle protein Synaptoporin is differently expressed by subpopulations of mouse hippocampal neurons. J. Comp. Neurol. 452: 139-153.
- Jinno, S. and Kosaka, T. 2003. Heterogeneous expression of the cholecystokinin-like immunoreactivity in the mouse hippocampus, with special reference to the dorsoventral difference. Neuroscience 122: 869-884.
- Dai, J., Ji, C., Gu, S., Wu, Q., Wang, L., Xu, J., Zeng, L., Ye, X., Yin, G., Xie, Y. and Mao, Y. 2003. Cloning and sequence analysis of the human cDNA encoding the Synaptoporin δ, a highly conservative synaptic vesicle protein. Mol. Biol. Rep. 30: 185-191.
- 5. Voigt, C., Metzdorf, R. and Gahr, M. 2004. Differential expression pattern and steroid hormone sensitivity of SNAP-25 and Synaptoporin mRNA in the telencephalic song control nucleus HVC of the zebra finch. J. Comp. Neurol. 475: 83-94.

CHROMOSOMAL LOCATION

Genetic locus: SYNPR (human) mapping to 3p14.2; Synpr (mouse) mapping to 14 A1.

SOURCE

Synaptoporin (H-60) is a rabbit polyclonal antibody raised against amino acids 199-258 mapping near the C-terminus of Synaptoporin of human origin.

PRODUCT

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

RESEARCH USE

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

APPLICATIONS

Synaptoporin (H-60) is recommended for detection of Synaptoporin of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

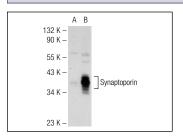
Synaptoporin (H-60) is also recommended for detection of Synaptoporin in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Synaptoporin siRNA (h): sc-61626, Synaptoporin siRNA (m): sc-61627, Synaptoporin shRNA Plasmid (h): sc-61626-SH, Synaptoporin shRNA Plasmid (m): sc-61627-SH, Synaptoporin shRNA (h) Lentiviral Particles: sc-61626-V and Synaptoporin shRNA (m) Lentiviral Particles: sc-61627-V.

Molecular Weight of Synaptoporin: 37 kDa.

Positive Controls: Synaptoporin (h): 293T Lysate: sc-178007 or rat brain extract: sc-2392.

DATA



Synaptoporin (H-60): sc-99075. Western blot analysis of Synaptoporin expression in non-transfected: sc-117752 (A) and human Synaptoporin transfected: sc-178007 (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.

PROTOCOLS

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



Try **Synaptoporin (C-9):** sc-376761 or **Synaptoporin (F-1):** sc-398921, our highly recommended monoclonal alternatives to Synaptoporin (H-60).

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