SANTA CRUZ BIOTECHNOLOGY, INC.

Synaptoporin (h2): 293T Lysate: sc-178007

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

1. 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.
2. 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.
3. 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.
4. 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.

PRODUCT

Synaptoporin (h2): 293T Lysate represents a lysate of human Synaptoporin transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

RESEARCH USE

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

APPLICATIONS

Synaptoporin (h2): 293T Lysate is suitable as a Western Blotting positive control for human reactive Synaptoporin antibodies. Recommended use: 10-20 µl per lane.

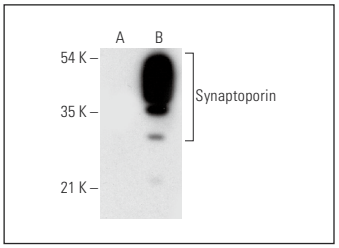
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Synaptoporin (F-1): sc-398921 is recommended as a positive control antibody for Western Blot analysis of enhanced human Synaptoporin expression in Synaptoporin transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

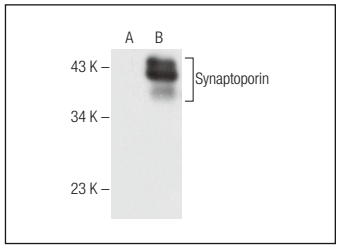
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



Synaptoporin (F-1): sc-398921. Western blot analysis of Synaptoporin expression in non-transfected: sc-117752 (**A**) and human Synaptoporin transfected: sc-178007 (**B**) 293T whole cell lysates.



Synaptoporin (C-9): sc-376761. Western blot analysis of Synaptoporin expression in non-transfected: sc-117752 (**A**) and human Synaptoporin transfected: sc-178007 (**B**) 293T whole cell lysates.

PROTOCOLS

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