



Synaptogyrin-4 (M-120): sc-68938

BACKGROUND

The synaptogyrin family of proteins are integral membrane proteins containing four transmembrane regions. Synaptogyrins are tyrosine-phosphorylated proteins with two neuronal (Synaptogyrins 1 and 3) and one ubiquitous (Synaptogyrin-2) isoform. Synaptophysin and synaptogyrin represent the major constituents of synaptic vesicles. Synaptogyrin-1 is associated with presynaptic vesicles in neuronal cells. Synaptogyrin-2, also known as Cellugyrin has a tyrosine phosphorylated C-terminal cytoplasmic tail, and is involved in the regulation of membrane traffic in non-neuronal cells. Synaptogyrin-3 is expressed mainly in brain and placenta. The SYNGR4 gene encodes for the 234 amino acid protein Synaptogyrin-4.

REFERENCES

- Belfort, G.M. and Kandror, K.V. 2003. Cellugyrin and synaptogyrin facilitate targeting of synaptophysin to a ubiquitous synaptic vesicle-sized compartment in PC-12 cells. *J. Biol. Chem.* 278: 47971-47978.
- Belizaire, R., Komanduri, C., Wooten, K., Chen, M., Thaller, C. and Janz, R. 2004. Characterization of synaptogyrin 3 as a new synaptic vesicle protein. *J. Comp. Neurol.* 470: 266-281.
- Hitchcock, I.S., Genever, P.G. and Cahusac, P.M. 2004. Essential components for a glutamatergic synapse between Merkel cell and nerve terminal in rats. *Neurosci. Lett.* 362: 196-199.
- Maslah, E., Roberts, E.S., Langford, D., Everall, I., Crews, L., Adame, A., Rockenstein, E. and Fox, H.S. 2004. Patterns of gene dysregulation in the frontal cortex of patients with HIV encephalitis. *J. Neuroimmunol.* 157: 163-175.
- Belfort, G.M., Bakirtzi, K. and Kandror, K.V. 2005. Cellugyrin induces biogenesis of synaptic-like microvesicles in PC-12 cells. *J. Biol. Chem.* 280: 7262-7272.
- Witkovsky, P., Arango-Gonzalez, B., Haycock, J.W. and Kohler, K. 2005. Rat retinal dopaminergic neurons: differential maturation of somatodendritic and axonal compartments. *J. Comp. Neurol.* 481: 352-362.

CHROMOSOMAL LOCATION

Genetic locus: Syng4 (mouse) mapping to 7 B4.

SOURCE

Synaptogyrin-4 (M-120) is a rabbit polyclonal antibody raised against amino acids 1-120 mapping at the N-terminus of Synaptogyrin-4 of mouse origin.

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.

PRODUCT

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

APPLICATIONS

Synaptogyrin-4 (M-120) is recommended for detection of Synaptogyrin-4 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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).

Suitable for use as control antibody for Synaptogyrin-4 siRNA (m): sc-45558, Synaptogyrin-4 shRNA Plasmid (m): sc-45558-SH and Synaptogyrin-4 shRNA (m) Lentiviral Particles: sc-45558-V.

Molecular Weight of Synaptogyrin-4: 26 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

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