SANTA CRUZ BIOTECHNOLOGY, INC.

Synaptogyrin-4 (H-120): sc-68937

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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

1. Belfort, GM. et al. 2003. Cellugyrin and synaptogyrin facilitate targeting of synaptophysin to a ubiquitous synaptic vesicle-sized compartment in PC12 cells. J. Biol. Chem. 278: 47971-47978.
2. Belizaire, R. et al. 2004. Characterization of synaptogyrin 3 as a new synaptic vesicle protein. J. Comp. Neurol. 470: 266-281.
3. Hitchcock, IS. et al. 2004. Essential components for a glutamatergic synapse between Merkel cell and nerve terminal in rats. Neurosci. Lett. 362: 196-199.
4. Masliah, E. et al. 2004. Patterns of gene dysregulation in the frontal cortex of patients with HIV encephalitis. J. Neuroimmunol. 157: 163-175.
5. Belfort, GM. et al. 2005. Cellugyrin induces biogenesis of synaptic-like microvesicles in PC12 cells. J. Biol. Chem. 280: 7262-7272.
6. Witkovsky, P. et al. 2005. Rat retinal dopaminergic neurons: differential maturation of somatodendritic and axonal compartments. J. Comp. Neurol. 481: 352-362.

CHROMOSOMAL LOCATION

Genetic locus: SYNGR4 (human) mapping to 19q13.32.

SOURCE

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

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.

APPLICATIONS

Synaptogyrin-4 (H-120) is recommended for detection of Synaptogyrin-4 of human 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 (h): sc-45557, Synaptogyrin-4 shRNA Plasmid (h): sc-45557-SH and Synaptogyrin-4 shRNA (h) Lentiviral Particles: sc-45557-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.