

Synaptogyrin-1 (F-4): sc-137224

BACKGROUND

The synaptogyrin family of proteins are integral membrane proteins containing four transmembrane regions. Synaptogyrins are tyrosine-phosphorylated proteins with two neuronal isoforms (Synaptogyrin-1 and -3) and one ubiquitous isoform (Synaptogyrin-2). 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. Synaptogyrin-4 is a 234 amino acid protein encoded by the SYNGR4 gene.

REFERENCES

- Belfort, G.M., 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.
- Belizaire, R., et al. 2004. Characterization of synaptogyrin-3 as a new synaptic vesicle protein. *J. Comp. Neurol.* 470: 266-281.
- Hitchcock, I.S., et al. 2004. Essential components for a glutamatergic synapse between Merkel cell and nerve terminal in rats. *Neurosci. Lett.* 362: 196-199.
- Maslah, E., et al. 2004. Patterns of gene dysregulation in the frontal cortex of patients with HIV encephalitis. *J. Neuroimmunol.* 157: 163-175.
- Belfort, G.M., et al. 2005. Cellugyrin induces biogenesis of synaptic-like microvesicles in PC12 cells. *J. Biol. Chem.* 280: 7262-7272.
- 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: SYNGR1 (human) mapping to 22q13.1; Syng1 (mouse) mapping to 15 E1.

SOURCE

Synaptogyrin-1 (F-4) is a mouse monoclonal antibody raised against amino acids 159-234 mapping at the C-terminus of Synaptogyrin-1 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain 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 for detailed protocols and support products.

APPLICATIONS

Synaptogyrin-1 (F-4) is recommended for detection of Synaptogyrin-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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-1 siRNA (h): sc-45551, Synaptogyrin-1 siRNA (m): sc-45552, Synaptogyrin-1 shRNA Plasmid (h): sc-45551-SH, Synaptogyrin-1 shRNA Plasmid (m): sc-45552-SH, Synaptogyrin-1 shRNA (h) Lentiviral Particles: sc-45551-V and Synaptogyrin-1 shRNA (m) Lentiviral Particles: sc-45552-V.

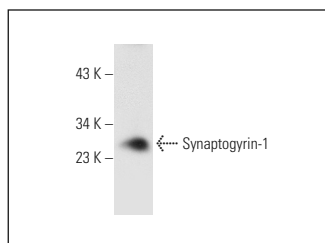
Molecular Weight of Synaptogyrin-1: 26 kDa.

Positive Controls: rat brain extract: sc-2392 or mouse brain extract: sc-2253.

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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Synaptogyrin-1 (F-4): sc-137224. Western blot analysis of Synaptogyrin-1 expression in rat brain tissue extract.

RESEARCH USE

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