

# Synaptogyrin-3 (G-8): sc-514162

## 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, 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.
2. Belizaire, R., et al. 2004. Characterization of Synaptogyrin-3 as a new synaptic vesicle protein. *J. Comp. Neurol.* 470: 266-281.
3. 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.
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, G.M., 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: SYNGR3 (human) mapping to 16p13.3; Syng3 (mouse) mapping to 17 A3.3.

## SOURCE

Synaptogyrin-3 (G-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 50-67 near the N-terminus of Synaptogyrin-3 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-514162 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## APPLICATIONS

Synaptogyrin-3 (G-8) is recommended for detection of Synaptogyrin-3 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-3 siRNA (h): sc-45555, Synaptogyrin-3 siRNA (m): sc-45556, Synaptogyrin-3 shRNA Plasmid (h): sc-45555-SH, Synaptogyrin-3 shRNA Plasmid (m): sc-45556-SH, Synaptogyrin-3 shRNA (h) Lentiviral Particles: sc-45555-V and Synaptogyrin-3 shRNA (m) Lentiviral Particles: sc-45556-V.

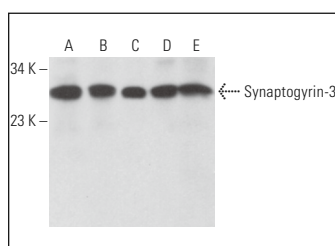
Molecular Weight of Synaptogyrin-3: 25 kDa.

Positive Controls: rat brain extract: sc-2392, Synaptogyrin-3 (m): 293T Lysate: sc-123863 or mouse brain extract: sc-2253.

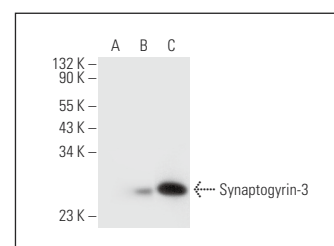
## RECOMMENDED SUPPORT REAGENTS

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-3 (G-8): sc-514162. Western blot analysis of Synaptogyrin-3 expression in mouse brain (A), human cerebral cortex (B), rat brain (C), rat hippocampus (D) and rat hypothalamus (E) tissue extracts.



Synaptogyrin-3 (G-8): sc-514162. Western blot analysis of Synaptogyrin-3 expression in non-transfected: sc-117752 (A) and mouse Synaptogyrin-3 transfected: sc-123863 (B) 293T whole cell lysates and mouse brain tissue extract (C).

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.