

# Synaptogyrin-1 (H-76): sc-68934

## 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. The protein 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., 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.
- Masliyah, 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 (H-76) is a rabbit polyclonal antibody raised against amino acids 159-234 mapping at the C-terminus of Synaptogyrin-1 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](http://www.scbt.com) or our catalog for detailed protocols and support products.

## APPLICATIONS

Synaptogyrin-1 (H-76) is recommended for detection of Synaptogyrin-1 of mouse, rat and 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

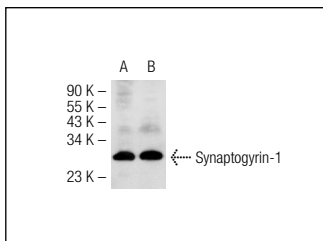
Synaptogyrin-1 (H-76) is also recommended for detection of Synaptogyrin-1 in additional species, including canine and porcine.

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.

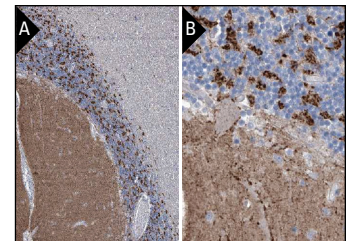
Molecular Weight of Synaptogyrin-1: 26 kDa.

Positive Controls: rat brain extract: sc-2392, HeLa whole cell lysate: sc-2200 or mouse brain extract: sc-2253.

## DATA



Synaptogyrin-1 (H-76): sc-68934. Western blot analysis of Synaptogyrin-1 expression in mouse brain (A) and rat brain (B) tissue extracts.



Synaptogyrin-1 (H-76): sc-68934. Immunoperoxidase staining of formalin fixed, paraffin-embedded human cerebellum showing cytoplasmic staining of cells in molecular layer and a subset of Purkinje cells at low (A) and high (B) magnification. Kindly provided by The Swedish Human Protein Atlas (HPA) program.

## RESEARCH USE

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



Try **Synaptogyrin-1 (A-6): sc-393456** or **Synaptogyrin-1 (F-4): sc-137224**, our highly recommended monoclonal alternatives to Synaptogyrin-1 (H-76).