

neuroigin 3 (H-55): sc-50395

BACKGROUND

Neuroigins are a family of plasma membrane proteins that possess an N-terminal hydrophobic domain, a large esterase homology domain, a single transmembrane region, a short cytoplasmic domain and an EF-hand binding domain. Members of the neuroigin family include neuroigin 1, 2 and 3. Neuroigins, which are expressed in excitatory neuronal synaptic clefts, play a role in the formation and remodeling of CNS synapses by binding to β -neurexins, a family of neuronal cell surface proteins. Neurexin 1 β binds to the EF-hand domain of neuroigin 1 and requires calcium ion. Neuroigins also bind to PSD-95, which may recruit ion channels and neurotransmitter receptors to the synapses.

REFERENCES

1. Ichtchenko, K., et al. 1996. Structures, alternative splicing, and neurexin binding of multiple neuroigins. *J. Biol. Chem.* 271: 2676-2682.
2. Nguyen, T. and Sudhof, T.C. 1997. Binding properties of neuroigin 1 and neurexin 1 β reveal fuction as heterophilic cell adhesion molecules. *J. Biol. Chem.* 272: 26032-26039.
3. Irie, M., et al. 1997. Binding of neuroigin to PSD-95. *Science* 277: 1511-1515.
4. Song, J.Y., et al. 1999. Neuroigin 1 is a postsynaptic cell-adhesion molecule of excitatory synapses. *Proc. Natl. Acad. Sci. USA* 96: 1100-1105.
5. Tsigelny, I., et al. 2000. Common EF-hand motifs in cholinesterases and neuroigins suggest a role for Ca²⁺ binding in cell surface associations. *Protein Sci.* 9: 180-185.
6. Philibert R.A., et al. 2000. The structure and expression of the human neuroigin 3 gene. *Gene* 246: 303-310.

CHROMOSOMAL LOCATION

Genetic locus: NLGN3 (human) mapping to Xq13.1; Nlgn3 (mouse) mapping to X D.

SOURCE

neuroigin 3 (H-55) is a rabbit polyclonal antibody raised against amino acids 649-703 mapping within an extracellular domain of neuroigin 3 of human origin.

PRODUCT

Each vial contains 200 μ g 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

neuroigin 3 (H-55) is recommended for detection of neuroigin 3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

neuroigin 3 (H-55) is also recommended for detection of neuroigin 3 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for neuroigin 3 siRNA (h): sc-42087, neuroigin 3 siRNA (m): sc-42088, neuroigin 3 shRNA Plasmid (h): sc-42087-SH, neuroigin 3 shRNA Plasmid (m): sc-42088-SH, neuroigin 3 shRNA (h) Lentiviral Particles: sc-42087-V and neuroigin 3 shRNA (m) Lentiviral Particles: sc-42088-V.

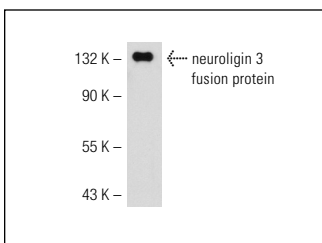
Molecular Weight of neuroigin 3: 88 kDa.

Positive Controls: BC₃H1 cell lysate: sc-2299.

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.

DATA



neuroigin 3 (H-55): sc-50395. Western blot analysis of human recombinant neuroigin 3 fusion protein.

RESEARCH USE

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

MONOS
Satisfaction
Guaranteed

Try **neuroigin 3 (C-3): sc-137052** or **neuroigin 3 (G-2): sc-271880**, our highly recommended monoclonal alternatives to neuroigin 3 (H-55).