SANTA CRUZ BIOTECHNOLOGY, INC.

neuroligin 1 (H-45): sc-50393

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BIOTECHNOLOGY

The Power to Question

BACKGROUND

Neuroligins 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 neuroligin family include Neuroligin 1, Neuroligin 2 and Neuroligin 3. Neuroligins are expressed in excitatory neuronal synaptic clefts. Neuroligins play a role in the formation and remodeling of CNS synapses by binding to β-neurexins, a family of neuronal cell surface proteins. Neurexin 1β binds to the EF-hand domain of Neuroligin 1 and requires calcium ion. Neuroligins also bind to PSD-95, which may recruit ion channels and neurotransmitter receptors to the synapses.

CHROMOSOMAL LOCATION

Genetic locus: NLGN1 (human) mapping to 3q26.31; Nlgn1 (mouse) mapping to 3 A3.

SOURCE

neuroligin 1 (H-45) is a rabbit polyclonal antibody raised against amino acids 645-689 mapping within an extracellular domain of neuroligin 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.

APPLICATIONS

neuroligin 1 (H-45) is recommended for detection of neuroligin 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).

neuroligin 1 (H-45) is also recommended for detection of neuroligin 1 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for neuroligin 1 siRNA (h): sc-42083, neuroligin 1 siRNA (m): sc-42084, neuroligin 1 siRNA (r): sc-156002, neuroligin 1 shRNA Plasmid (h): sc-42083-SH, neuroligin 1 shRNA Plasmid (m): sc-42084-SH, neuroligin 1 shRNA Plasmid (r): sc-156002-SH, neuroligin 1 shRNA (h) Lentiviral Particles: sc-42083-V, neuroligin 1 shRNA (m) Lentiviral Particles: sc-42084-V and neuroligin 1 shRNA (r) Lentiviral Particles: sc-156002-V.
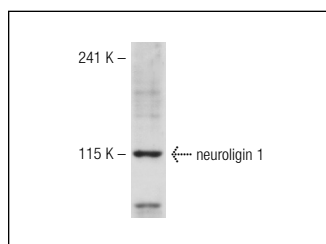
Molecular Weight of neuroligin 1: 101 kDa.

Positive Controls: rat cerebellum extract: sc-2398 or HeLa whole cell lysate: sc-2200.
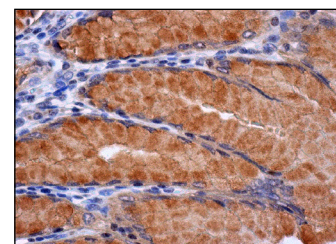
RECOMMENDED SECONDARY REAGENTS

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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA

neuroligin 1 (H-45): sc-50393. Western blot analysis of neuroligin 1 expression in HeLa whole cell lysate.

neuroligin 1 (H-45): sc-50393. Immunoperoxidase staining of formalin fixed, paraffin-embedded human upper stomach tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Zhang, Q., et al. 2013. Expression of neurexin and neuroligin in the enteric nervous system and their down-regulated expression levels in Hirschsprung disease. Mol. Biol. Rep. 40: 2969-2975.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.