

# neuroigin 3 (C-3): sc-137052

## 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, neuroigin 2 and neuroigin 3. Neuroigins are expressed in excitatory neuronal synaptic clefts. Neuroigins play a role in the formation and remodeling of CNS synapses by binding to  $\beta$ -neurexins, a family of neuronal cell surface proteins. Neurexin 1 $\beta$  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.

## CHROMOSOMAL LOCATION

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

## SOURCE

neuroigin 3 (C-3) is a mouse monoclonal antibody raised against amino acids 649-703 mapping within an extracellular domain of neuroigin 3 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

neuroigin 3 (C-3) is available conjugated to agarose (sc-137052 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-137052 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-137052 PE), fluorescein (sc-137052 FITC), Alexa Fluor<sup>®</sup> 488 (sc-137052 AF488), Alexa Fluor<sup>®</sup> 546 (sc-137052 AF546), Alexa Fluor<sup>®</sup> 594 (sc-137052 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-137052 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-137052 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-137052 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

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

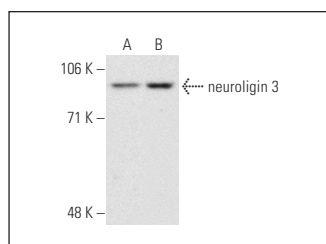
Molecular Weight of neuroigin 3: 88 kDa.

Positive Controls: BC<sub>3</sub>H1 cell lysate: sc-2299, SK-N-MC cell lysate: sc-2237 or H4 cell lysate: sc-2408.

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> 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-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## DATA



neuroigin 3 (C-3): sc-137052. Western blot analysis of neuroigin 3 expression in SK-N-MC (A) and H4 (B) whole cell lysates.

## SELECT PRODUCT CITATIONS

1. Qiu, S., et al. 2014. MET receptor tyrosine kinase controls dendritic complexity, spine morphogenesis, and glutamatergic synapse maturation in the hippocampus. *J. Neurosci.* 34: 16166-16179.
2. Liu, R., et al. 2018. Glioblastoma recurrence correlates with NLGN3 levels. *Cancer Med.* 7: 2848-2859.
3. Qin, X., et al. 2021. Peri-tumoral brain edema associated with glioblastoma correlates with tumor recurrence. *J. Cancer* 12: 2073-2082.

## STORAGE

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

## 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.

Alexa Fluor<sup>®</sup> is a trademark of Molecular Probes, Inc., Oregon, USA