

# Neurabin-II (17): sc-136407

## BACKGROUND

Neurabin-II, also called spinophilin, interacts with Actin and PP-1 in dendritic spines of the central nervous system. The gene encoding human Neurabin-II maps to chromosome 17q21-q22. The structural characteristics of Neurabin-II include one F-Actin binding domain at the N-terminal region, a predicted coiled-coil structure at the C-terminal, one PDZ domain at the middle region, and a domain known to interact with transmembrane proteins. Neurabin-II bundles Actin filaments *in vitro*. *In vivo*, spinophilin localizes to the cortical sites of Actin filaments and to the sites of active membrane remodelling. Neurabin-II also forms a complex with the catalytic subunit of PP1 and modulates PP1 enzymatic activity *in vitro*. Neurabin-II localizes to the head of dendritic spines and aids in the ability of PP-1 to regulate the activity of  $\alpha$ -amino-3-hydroxy-5-methyl-4-isoxazolepropionic acid (AMPA) and N-methyl-D-aspartate (NMDA) receptors. In this manner, Neurabin-II modulates both glutamatergic synaptic transmission and dendritic morphology. Synergistic interactions between spinophilin and human tumor suppressor ARF suggest a role for Neurabin-II in cell growth.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: Ppp1r9b (mouse) mapping to 11 D.

## SOURCE

Neurabin-II (17) is a mouse monoclonal antibody raised against amino acids 238-348 of Neurabin-II of rat origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

Neurabin-II (17) is recommended for detection of Neurabin-II of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for Neurabin-II siRNA (m): sc-149924, Neurabin-II shRNA Plasmid (m): sc-149924-SH and Neurabin-II shRNA (m) Lentiviral Particles: sc-149924-V.

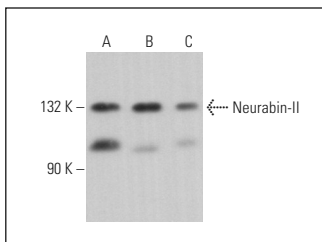
Molecular Weight of Neurabin-II: 140 kDa.

Positive Controls: rat brain extract: sc-2392, C6 whole cell lysate: sc-364373 or KNRK whole cell lysate: sc-2214.

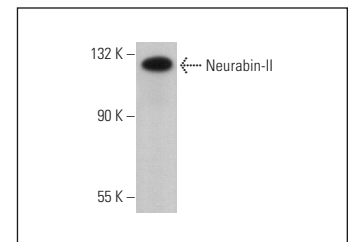
## RECOMMENDED SUPPORT REAGENTS

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™ 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).

## DATA



Neurabin-II (17): sc-136407. Western blot analysis of Neurabin-II expression in C6 (A) and KNRK (B) whole cell lysates and rat cerebellum tissue extract (C).



Neurabin-II (17): sc-136407. Western blot analysis of Neurabin-II expression in rat brain tissue extract.

## 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. Not for resale.

## PROTOCOLS

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