

# NEEP21 (H-68): sc-135089

## BACKGROUND

NEEP21 (neuron-enriched endosomal 21 kDa protein), also known as brain neuron cytoplasmic protein 1, NSG1 (neuron-specific proteins family member 1), P21 or D4S234E, is a single pass type II membrane protein belonging to the NSG family. It is highly expressed during neuronal maturation but its expression is downregulated in adult tissues. NEEP21 predominantly localizes to Rab 4-positive early endosomes in the somatodendritic neuronal compartment and is essential for proper receptor sorting and recycling in neurons. It associates with GRIP1 and GluR-2 and mediates the surface expression of GluR-2. When this interaction is interrupted, GluR-2 accumulates in early endosomes and leads to changes in evoked synaptic current properties. In addition, NEEP21 forms a complex with the SNARE protein, Syntaxin 13 (also known as Syntaxin 12), and participates in the recycling of transferrin receptors (TFRs) and NTR2 (neurotensin receptor 2).

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: D4S234E (human) mapping to 4p16.3; Nsg1 (mouse) mapping to 5 B3.

## SOURCE

NEEP21 (H-68) is a rabbit polyclonal antibody raised against amino acids 1-68 mapping at the N-terminus of NEEP21 of human origin.

## RESEARCH USE

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

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

NEEP21 (H-68) is recommended for detection of NEEP21 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

NEEP21 (H-68) is also recommended for detection of NEEP21 in additional species, including bovine and avian.

Suitable for use as control antibody for NEEP21 siRNA (h): sc-62671, NEEP21 siRNA (m): sc-62672, NEEP21 shRNA Plasmid (h): sc-62671-SH, NEEP21 shRNA Plasmid (m): sc-62672-SH, NEEP21 shRNA (h) Lentiviral Particles: sc-62671-V and NEEP21 shRNA (m) Lentiviral Particles: sc-62672-V.

Molecular Weight of NEEP21: 21 kDa.

Positive Controls: IMR-32 cell lysate: sc-2409.

## 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<sup>™</sup> compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> 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<sup>™</sup> Mounting Medium: sc-24941.

## 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.


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Try **NEEP21 (H-9): sc-390654** or **NEEP21 (364.1): sc-100329**, our highly recommended monoclonal alternatives to NEEP21 (H-68).