

NEEP21 (m): 293T Lysate: sc-121993

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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3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 607645. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
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5. Steiner, P., et al. 2005. Interactions between NEEP21, GRIP1 and GluR-2 regulate sorting and recycling of the glutamate receptor subunit GluR-2. *EMBO J.* 24: 2873-2884.
6. Alberi, S., et al. 2005. The endosomal protein NEEP21 regulates AMPA receptor-mediated synaptic transmission and plasticity in the hippocampus. *Mol. Cell. Neurosci.* 29: 313-319.
7. Wang, Y. and Tang, B.L. 2006. SNAREs in neurons—beyond synaptic vesicle exocytosis (Review). *Mol. Membr. Biol.* 23: 377-384.
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STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: Nsg1 (mouse) mapping to 5 B3.

PRODUCT

NEEP21 (m): 293T Lysate represents a lysate of mouse NEEP21 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

NEEP21 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive NEEP21 antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

RESEARCH USE

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