

NELL2 (AT13E7): sc-517415

BACKGROUND

NELL2 (neural epidermal growth factor-like 2), also known as NEL-related protein 2 (NRP2), is a secreted glycoprotein with one N-terminal TSP-like domain, five VWFC (von Willebrand factor C) domains and six EGF-like repeats that participate in calcium binding. NELL2 exists as a homotrimer associated with the endoplasmic reticulum (ER) and is specifically expressed in neurons playing a role in calcium-dependent intracellular events. NELL2 may act as a trophic factor in addition to its role as a signaling molecule implicated in the regulation of cell growth and differentiation. Due to alternative splicing, an additional NELL2 isoform exists that is identical to full length NELL2 except that it lacks the signal peptide that directs secretion. The additional isoform is therefore retained in the cytosol and functions as a non-secreted cytoplasmic protein that interacts with PKC β .

REFERENCES

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6. Nelson, B.R., et al. 2004. NELL2 promotes motor and sensory neuron differentiation and stimulates mitogenesis in DRG *in vivo*. *Dev. Biol.* 270: 322-335.
7. Matsuyama, S., et al. 2004. Enhanced long-term potentiation *in vivo* in dentate gyrus of NELL2-deficient mice. *Neuroreport* 15: 417-420.
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CHROMOSOMAL LOCATION

Genetic locus: NELL2 (human) mapping to 12q12; Nell2 (mouse) mapping to 15 E3.

SOURCE

NELL2 (AT13E7) is a mouse monoclonal antibody raised against a recombinant protein corresponding to amino acids 30-258 of NELL2 of human origin.

PRODUCT

Each vial contains 100 μ g IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

NELL2 (AT13E7) is recommended for detection of NELL2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for NELL2 siRNA (h): sc-62673, NELL2 siRNA (m): sc-62674, NELL2 shRNA Plasmid (h): sc-62673-SH, NELL2 shRNA Plasmid (m): sc-62674-SH, NELL2 shRNA (h) Lentiviral Particles: sc-62673-V and NELL2 shRNA (m) Lentiviral Particles: sc-62674-V.

Molecular Weight of NELL2 secreted monomer: 130 kDa.

Molecular Weight of NELL2 cytoplasmic monomer: 90 kDa.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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.

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 for detailed protocols and support products.