SANTA CRUZ BIOTECHNOLOGY, INC.

NELL1 (N-15): sc-240728

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The Power to Question

BACKGROUND

NELL1 (NEL-like 1), also known as NRP1 or IDH3GL (NAD+-dependent isocitrate dehydrogenase 3 γ-like), is an 810 amino acid secreted protein that contains one TSP N-terminal domain, 5 VWFC domains and 6 EGF-like domains. Expressed in craniofacial anomalies, NELL1 exists as a homotrimer that interacts with PKC β and is involved in the regulation of cell growth and differentiation. Human NELL1 shares 50% amino acid identity with its chicken counterpart, suggesting that NELL1 may have a conserved role between species. The gene encoding NELL1 maps to human chromosome 11, which houses over 1,400 genes and comprises nearly 4% of the human genome. Jervell and Lange-Nielsen syndrome, Jacobsen syndrome, Niemann-Pick disease, hereditary angioedema and Smith-Lemli-Opitz syndrome are associated with defects in genes that maps to chromosome 11.

REFERENCES

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3. Luce, M.J., et al. 1999. The neuronal EGF-related genes NELL1 and NELL2 are expressed in hemopoietic cells and developmentally regulated in the B lineage. Gene 231: 121-126.
4. Ting, K., et al. 1999. Human NELL-1 expressed in unilateral coronal synostosis. J. Bone Miner. Res. 14: 80-89.
5. Maeda, K., et al. 2001. Brain specific human genes, NELL1 and NELL2, are predominantly expressed in neuroblastoma and other embryonal neuroepithelial tumors. Neurol. Med. Chir. 41: 582-588; discussion 589.
6. Okamoto, K., et al. 2003. Identification of NAD+-dependent isocitrate dehydrogenase 3 γ-like (IDH3GL) gene and its genetic polymorphisms. Gene 323: 141-148.
7. Jin, Z., et al. 2007. Hypermethylation of the NEL-like 1 gene is a common and early event and is associated with poor prognosis in early-stage esophageal adenocarcinoma. Oncogene 26: 6332-6340.
8. Franke, A., et al. 2007. Systematic association mapping identifies NELL1 as a novel IBD disease gene. PLoS ONE 2: e691.
9. Bokui, N., et al. 2008. Involvement of MAPK signaling molecules and RUNX2 in the NELL1-induced osteoblastic differentiation. FEBS Lett. 582: 365-371.

CHROMOSOMAL LOCATION

Genetic locus: NELL1 (human) mapping to 11p15.1; Nell1 (mouse) mapping to 7 B5.

SOURCE

NELL1 (N-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of NELL1 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-240728 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

NELL1 (N-15) is recommended for detection of NELL1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with NELL2.

NELL1 (N-15) is also recommended for detection of NELL1 in additional species, including bovine and avian.

Suitable for use as control antibody for NELL1 siRNA (h): sc-96693, NELL1 siRNA (m): sc-149910, NELL1 shRNA Plasmid (h): sc-96693-SH, NELL1 shRNA Plasmid (m): sc-149910-SH, NELL1 shRNA (h) Lentiviral Particles: sc-96693-V and NELL1 shRNA (m) Lentiviral Particles: sc-149910-V.

Molecular Weight of NELL1: 90 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ 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.

RESEARCH USE

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

PROTOCOLS

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