SANTA CRUZ BIOTECHNOLOGY, INC.

NPDC-1 siRNA (m): sc-75952

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The Power to Question

BACKGROUND

NPDC-1 (neural proliferation differentiation and control-1) is expressed in neurons once they have stopped dividing and begun to differentiate. NPDC-1 is transported from the Golgi apparatus via vesicles before becoming internalized by endosomes at the cell membrane. NPDC-1 interacts with Cdk2, D-type cyclins and the transcription factor E2F1. This interaction can lead to an increased replication time and might have implications in final neural differentiation and apoptosis. NPDC-1 has been shown to co-localize with synaptic vesicle proteins: synaptophysin, synaptobrevin 2 and Rab3 GEP (Rab3 GTP/GDP exchange protein). One function of NPDC-1 is to regulate retinoic acid-mediated events by directly interacting with retinoid receptors. The amino acid sequence of NPDC-1 is highly conserved between mouse, rat and human.

REFERENCES

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3. Dupont, E., Sansal, I., Evrard, C. and Rouget, P. 1998. Developmental pattern of expression of NPDC-1 and its interaction with E2F-1 suggest a role in the control of proliferation and differentiation of neural cells. J. Neurosci. Res. 51: 257-267.
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PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: Npdc1 (mouse) mapping to 2 A3.

PRODUCT

NPDC-1 siRNA (m) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see NPDC-1 shRNA Plasmid (m): sc-75952-SH and NPDC-1 shRNA (m) Lentiviral Particles: sc-75952-V as alternate gene silencing products.

For independent verification of NPDC-1 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-75952A, sc-75952B and sc-75952C.

STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

NPDC-1 siRNA (m) is recommended for the inhibition of NPDC-1 expression in mouse cells.

SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 µM in 66 µl. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor NPDC-1 gene expression knockdown using RT-PCR Primer: NPDC-1 (m)-PR: sc-75952-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

RESEARCH USE

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