



DAN siRNA (m): sc-72321

BACKGROUND

The DAN (differential screening-selected gene aberrative in neuroblastoma) protein family contains antagonists of bone morphogenetic protein (BMP) signaling that are expressed in the neural crest. All family members are secreted proteins that act as BMP antagonists in embryonic explants and are expressed in the proximal airway epithelium of the lung during embryonic development. This family includes the head-inducing factor Cerberus, the dorsalizing factor gremlin and the tumor suppressor DAN. DAN, also known as zinc finger protein DAN, NO3, DAND1 or neuroblastoma suppressor of tumorigenicity 1 (NBL1), is a secreted protein containing one C-terminal cysteine knot-like (CTCK) domain. It is produced in small neurons of the dorsal root ganglion and its expression is activated by MATH-1. In addition to antagonizing BMP signaling, DAN also antagonizes the action of TGF β . DAN is a possible tumor suppressor for human neuroblastoma; defects may result in or contribute to its progression. DAN may also be a neuromodulator in inflammatory pain.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Nbl1 (mouse) mapping to 4 D3.

RESEARCH USE

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

PRODUCT

DAN 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see DAN shRNA Plasmid (m): sc-72321-SH and DAN shRNA (m) Lentiviral Particles: sc-72321-V as alternate gene silencing products.

For independent verification of DAN (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-72321A, sc-72321B and sc-72321C.

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

DAN siRNA (m) is recommended for the inhibition of DAN 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 μ M in 66 μ l. 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 DAN gene expression knockdown using RT-PCR Primer: DAN (m)-PR: sc-72321-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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