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SANTA CRUZ BIOTECHNOLOGY, INC.

NOTO siRNA (m): sc-150036

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

NOTO (notochord homeobox) is a 251 amino acid nuclear protein containing one homeobox DNA-binding domain. NOTO is considered a transcription regulator that acts downstream of both HNF-3β and T during notochord development. NOTO is required for node morphogensis and for cilia formation in the posterior notochord (PNC). Essential for the expression of various components important for axonemal assembly and function, NOTO plays an important role in regulating axial versus paraxial cell fate. NOTO is encoded by a gene located on human chromosome 2p13.2. Chromosome 2 houses over 1,400 genes and comprises nearly 8% of the human genome. Harlequin icthyosis, a rare and morbid skin deformity, is associated with mutations in the ABCA12 gene, while the lipid metabolic disorder sitosterolemia is associated with defects in the ABCG5 and ABCG8 genes. Additionally, an extremely rare recessive genetic disorder, Alström syndrome, is caused by mutations in the ALMS1 gene, which maps to chromosome 2.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Noto (mouse) mapping to 6 C3.

PROTOCOLS

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

PRODUCT

NOTO 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 NOTO shRNA Plasmid (m): sc-150036-SH and NOTO shRNA (m) Lentiviral Particles: sc-150036-V as alternate gene silencing products.

For independent verification of NOTO (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-150036A, sc-150036B and sc-150036C.

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

NOTO siRNA (m) is recommended for the inhibition of NOTO 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 NOTO gene expression knockdown using RT-PCR Primer: NOTO (m)-PR: sc-150036-PR (20 µl, 595 bp). 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.