SANTA CRUZ BIOTECHNOLOGY, INC.

Imp4 siRNA (m): sc-146227

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The Power to Question

BACKGROUND

Imp4, also known as U3 small nucleolar ribonucleoprotein protein Imp4 or BXDC4, is a 291 amino acid protein that contains one Brix domain. Localized in the nucleus, Imp4 exists as a component of a heterotrimeric complex containing Imp3, Imp4 and MPP10. Imp4 also exists as a component of the 60-80S U3 small nucleolar ribonucleoprotein and plays a key role in early cleavages during pre-18S ribosomal RNA processing. The gene encoding Imp4 maps to human chromosome 2q21.1 which, as the second largest human chromosome, makes up approximately 8% of the human genome and contains 237 million bases encoding over 1,400 genes. A number of genetic diseases are linked to genes on chromosome 2 including Harlequin icthyosis, Alström syndrome and the lipid metabolic disorder sitosteroiemia.

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CHROMOSOMAL LOCATION

Genetic locus: Imp4 (mouse) mapping to 1 B.

PRODUCT

Imp4 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 Imp4 shRNA Plasmid (m): sc-146227-SH and Imp4 shRNA (m) Lentiviral Particles: sc-146227-V as alternate gene silencing products.

For independent verification of Imp4 (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-146227A, sc-146227B and sc-146227C.

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

Imp4 siRNA (m) is recommended for the inhibition of Imp4 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 Imp4 gene expression knockdown using RT-PCR Primer: Imp4 (m)-PR: sc-146227-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.

PROTOCOLS

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