SANTA CRUZ BIOTECHNOLOGY, INC.

FREM3 siRNA (m): sc-75064

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The Power to Question

BACKGROUND

FREM3 (FRAS1-related extracellular matrix protein 3) is a 2,135 amino acid secreted protein that belongs to the Fras1 family. Other members of this family include FRAS1, FREM1 and FREM2. FREM3 contains 3 calx-β domains, which bind calcium with high affinity, and 12 CSPG repeats. Functioning within the basement membrane, FREM3 follows the distribution pattern of Collagen Type VII in skin basement membrane, though it is additionally found in the basement membrane of several internal epithelia where collagen VII is absent. Due to its localization, FREM3 probably plays a role in cell adhesion. The gene encoding FREM3 is located on human chromosome 4q31.21, which encodes nearly 6% of the human genome and has the largest gene deserts (regions of the genome with no protein encoding genes) of all of the human chromosomes.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Frem3 (mouse) mapping to 8 C2.

RESEARCH USE

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

PRODUCT

FREM3 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 FREM3 shRNA Plasmid (m): sc-75064-SH and FREM3 shRNA (m) Lentiviral Particles: sc-75064-V as alternate gene silencing products.

For independent verification of FREM3 (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-75064A, sc-75064B and sc-75064C.

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

FREM3 siRNA (m) is recommended for the inhibition of FREM3 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 FREM3 gene expression knockdown using RT-PCR Primer: FREM3 (m)-PR: sc-75064-PR (20 µl). 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.