



FREM1 siRNA (h): sc-75059

BACKGROUND

FREM1 (FRAS1 related extracellular matrix 1), also known as QBRICK or C9orf154, is a 2,179 amino acid protein that contains one C-type lectin domain, one Calx- β domain and 12 CSPG repeats. Localized to the basement membrane of embryonic epidermal cells and secreted into extracellular space, FREM1 functions as an extracellular matrix protein that is essential for epidermal adhesion during embryogenesis and may also participate in epidermal differentiation. FREM1 exists as multiple alternatively spliced isoforms and is encoded by a gene which maps to human chromosome 9p22.3. Chromosome 9 contains 145 million base pairs and comprises 4% of the human genome, encoding nearly 900 genes. Hereditary hemorrhagic telangiectasia, which is characterized by harmful vascular defects, and familial dysautonomia, are both associated with chromosome 9. Notably, chromosome 9 encompasses the largest interferon family gene cluster.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: FREM1 (human) mapping to 9p22.3.

PROTOCOLS

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

PRODUCT

FREM1 siRNA (h) 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 FREM1 shRNA Plasmid (h): sc-75059-SH and FREM1 shRNA (h) Lentiviral Particles: sc-75059-V as alternate gene silencing products.

For independent verification of FREM1 (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-75059A, sc-75059B and sc-75059C.

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

FREM1 siRNA (h) is recommended for the inhibition of FREM1 expression in human 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 FREM1 gene expression knockdown using RT-PCR Primer: FREM1 (h)-PR: sc-75059-PR (20 μ l). 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.