SANTA CRUZ BIOTECHNOLOGY, INC.

FHL-5 siRNA (m): sc-140839

BACKGROUND

The four-and-a-half-LIM domain (FHL) proteins include FHL-1 (SLIM1), FHL-2 (SLIM3), FHL-3 (SLIM2), FHL-4 and FHL-5. The signature "half-domain", a single zinc finger domain located in the N-terminal region, differentiates FHLs from other LIM-only proteins, which have numbers of zinc fingers. Specific combinations of FHL proteins elicit selective activation of both CREB and CREM. FHL-5, also known as ACT (activator of CREM in Testis), is a testis-specific protein that interacts with CREM (a transcription factor required for spermatid differentiation) via its third LIM domain and can stimulate CREM activity independently of phosphorylation. This suggests that FHL-5 may participate in the regulation of spermatogenesis by acting as a transcriptional coactivator of CREM. During spermatid elongation, FHL-5 is translocated from the nucleus to the cytoplasm by the kinesin motor protein KIF17 thus silencing CREM activity.

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CHROMOSOMAL LOCATION

Genetic locus: Fhl5 (mouse) mapping to 4 A3.

PRODUCT

FHL-5 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 FHL-5 shRNA Plasmid (m): sc-140839-SH and FHL-5 shRNA (m) Lentiviral Particles: sc-140839-V as alternate gene silencing products.

For independent verification of FHL-5 (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-140839A, sc-140839B and sc-140839C.

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

FHL-5 siRNA (m) is recommended for the inhibition of FHL-5 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 FHL-5 gene expression knockdown using RT-PCR Primer: FHL-5 (m)-PR: sc-140839-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.