SANTA CRUZ BIOTECHNOLOGY, INC.

TCFL5 siRNA (h): sc-76637

BACKGROUND

Transcription factors containing basic helix-loop-helix (bHLH) motifs are responsible for the regulation of neurogenesis, cardiogenesis, myogenesis, differentiation and cell proliferation. TCFL5 [transcription factor-like 5 (basic helix-loop-helix)], also known as cha transcription factor, HPV-16 E2-binding protein 1, CHA, FigIb, E2BP-1 or MGC46135, is a 500 amino acid protein belonging to the basic helix-loop-helix (bHLH) family. TCFL5 localizes to the nucleus and may function as a transcription factor during early spermatogenesis. TCFL5 is known to form a complex with upstream stimulatory factor (USF)-1, thereby negatively regulating USF-dependent transcription. Six isoforms of TCFL5 exist due to alternative splicing; isoform 2 is pancreas specific and isoform 3 is testis specific showing expression in primary spermatocytes at the pachytene stage. Antibodies against TCFL5 have been identified in patients with Chagas' disease, which is caused by *Trypanosoma cruzi* infection.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: TCFL5 (human) mapping to 20q13.3.

PRODUCT

TCFL5 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see TCFL5 shRNA Plasmid (h): sc-76637-SH and TCFL5 shRNA (h) Lentiviral Particles: sc-76637-V as alternate gene silencing products.

For independent verification of TCFL5 (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-76637A, sc-76637B and sc-76637C.

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

TCFL5 siRNA (h) is recommended for the inhibition of TCFL5 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 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 TCFL5 gene expression knockdown using RT-PCR Primer: TCFL5 (h)-PR: sc-76637-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.