SANTA CRUZ BIOTECHNOLOGY, INC.

RFX6 siRNA (h): sc-95649

BACKGROUND

EP and EP-like sites are regulatory enhancer elements found in the promoters of several viral and mammalian genes which, in humans, include the MIF-1 binding site (MIE) of the c-Myc gene, the X box of MHC class II promoters and a binding site in the PCNA (proliferating cell nuclear antigen) promoter. The EP-like sites present in the X box of MHC class II promoters are distinctly nonpalindromic sequences that contain only a single EP-homologous half-site. The EP-like element is bound by a ubiquitous nuclear protein complex that consists of homo- and heterodimers involving the RFX1, RFX2, RFX3, RFX4, RFX5 and RFX6 proteins. The RFX proteins represent an essential class II transcription factor family that share several conserved regions, including a centrally located DNA-binding domain (DBD) and a C-terminal D region that facilitates dimerization. RFX6, also known as RFXDC1, is a 928 amino acid nuclear protein that, via interactions with other RFX proteins, can bind DNA and is thought to activate the transcription of target genes. RFX6 is specifically expressed in pancreas, small intestine and colon. Mutations in the gene encoding RFX6 is the cause of the Mitchell-Riley syndrome (MIRIS), which is characterized by neonatal diabetes, duodenal and jejunal atresia, a hypoplastic or annular pancreas and absent gallbladder.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: RFX6 (human) mapping to 6q22.1.

PRODUCT

RFX6 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 RFX6 shRNA Plasmid (h): sc-95649-SH and RFX6 shRNA (h) Lentiviral Particles: sc-95649-V as alternate gene silencing products.

For independent verification of RFX6 (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-95649A, sc-95649B and sc-95649C.

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

RFX6 siRNA (h) is recommended for the inhibition of RFX6 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 RFX6 gene expression knockdown using RT-PCR Primer: RFX6 (h)-PR: sc-95649-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.