SANTA CRUZ BIOTECHNOLOGY, INC.

KLF14 siRNA (m): sc-146497

BACKGROUND

Krüppel-like factors (KLFs) comprise a family of evolutionarily conserved zinc finger-containing transcription factors with diverse regulatory functions in cell growth, proliferation, differentiation and embryogenesis. Individual members of the Sp1-like/KLF family can function either as activators or repressors, depending on which promoter they bind and which coregulators they interact with. KLF14 (Krüppel-like factor 14), also known as BTEB5 (basic transcription element-binding protein 5), is a 323 amino acid protein that localizes to the nucleus and contains three C_2H_2-type zinc fingers, suggesting a role in transcriptional regulation. The gene encoding KLF14 maps to human chromosome 7, which houses over 1,000 genes and comprises nearly 5% of the human ge-nome. Defects in some of the genes localized to chromosome 7 have been linked to osteogenesis imperfecta, Williams-Beuren syndrome, Pendred syndrome, lissencephaly, citrullinemia and Shwachman-Diamond syndrome.

REFERENCES

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3. Kaczynski, J., et al. 2003. Sp1- and Krüppel-like transcription factors. Genome Biol. 4: 206.
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CHROMOSOMAL LOCATION

Genetic locus: Klf14 (mouse) mapping to 6 A3.3.

PRODUCT

KLF14 siRNA (m) is a target-specific 19-25 nt siRNA 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 KLF14 shRNA Plasmid (m): sc-146497-SH and KLF14 shRNA (m) Lentiviral Particles: sc-146497-V as alternate gene silencing products.

For independent verification of KLF14 (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-146497A, sc-146497B and sc-146497C.

RESEARCH USE

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

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

KLF14 siRNA (m) is recommended for the inhibition of KLF14 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 KLF14 gene expression knockdown using RT-PCR Primer: KLF14 (m)-PR: sc-146497-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.