SANTA CRUZ BIOTECHNOLOGY, INC.

KLF17 siRNA (m): sc-105600

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 co-regulators they interact with. KLF17 (Krüppel-like factor 17), whose alternative names include ZNF393 (zinc finger protein 393) or zfp393, is a 389 amino acid nuclear protein belonging to the Sp1 C_2H_2-type zinc-finger protein family. Expressed in testis and ovary, KLF17 may function as a germ cell-specific transcription factor involved in oocyte development and spermatid differentiation. Containing three C_2H_2-type zinc fingers which bind G/C-rich sites, KLF17 activates transcription from CACCC-box elements.

REFERENCES

1. Black, A.R., et al. 2001. Sp1 and Krüppel-like factor family of transcription factors in cell growth regulation and cancer. J. Cell. Physiol. 188: 143-160.
2. Yan, W., et al. 2002. Identification of Zfp393, a germ cell-specific gene encoding a novel zinc finger protein. Mech. Dev. 118: 233-239.
3. Kaczynski, J., et al. 2003. Sp1- and Krüppel-like transcription factors. Genome Biol. 4: 206.
4. Kimura, K., et al. 2006. Diversification of transcriptional modulation: large-scale identification and characterization of putative alternative promoters of human genes. Genome Res. 16: 55-65.
5. van Vliet, J., et al. 2006. Human KLF17 is a new member of the Sp/KLF family of transcription factors. Genomics 87: 474-482.
6. Online Mendelian Inheritance in Man, OMIM™. 2006. Johns Hopkins University, Baltimore, MD. MIM Number: 609602. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
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CHROMOSOMAL LOCATION

Genetic locus: Klf17 (mouse) mapping to 4 D2.1.

PRODUCT

KLF17 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 KLF17 shRNA Plasmid (m): sc-105600-SH and KLF17 shRNA (m) Lentiviral Particles: sc-105600-V as alternate gene silencing products.

For independent verification of KLF17 (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-105600A, sc-105600B and sc-105600C.

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

KLF17 siRNA (m) is recommended for the inhibition of KLF17 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 KLF17 gene expression knockdown using RT-PCR Primer: KLF17 (m)-PR: sc-105600-PR (20 µl, 527 bp). 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.