SANTA CRUZ BIOTECHNOLOGY, INC.

ZNF10 siRNA (h): sc-95814

BACKGROUND

Zinc-finger proteins contain DNA-binding domains and have a wide variety of functions, most of which encompass some form of transcriptional activation or repression. The majority of zinc-finger proteins contain a Krüppel-type DNA binding domain and a KRAB domain, which is thought to interact with KAP1, thereby recruiting histone modifying proteins. ZNF10 (zinc-finger protein 10), also known as KOX1, is a 573 amino acid protein that localizes to the nucleus and contains one KRAB domain and 11 CHH2-type zinc-fingers. One of several members of the Krüppel C_2H_2-type zinc-finger protein family, ZNF10 exists as multiple alternatively spliced isoforms and is thought to play a role in transcriptional regulation. The gene encoding ZNF10 maps to human chromosome 12, which houses over 1,100 genes and comprises approximately 4.5% of the human genome.

REFERENCES

1. Thiesen, H.J. 1990. Multiple genes encoding zinc-finger domains are expressed in human T cells. New Biol. 2: 363-374.
2. Huebner, K., Druck, T., Croce, C.M. and Thiesen, H.J. 1991. Twenty-seven nonoverlapping zinc-finger cDNAs from human T cells map to nine different chromosomes with apparent clustering. Am. J. Hum. Genet. 48: 726-740.
3. Rousseau-Merck, M.F., Hillion, J., Jonveaux, P., Couillin, P., Seite, P., Thiesen, H.J. and Berger, R. 1993. Chromosomal localization of 9 KOX zinc-finger genes: physical linkages suggest clustering of KOX genes on chromosomes 12, 16, and 19. Hum. Genet. 92: 583-587.
4. Moosmann, P., Georgiev, O., Le Douarin, B., Bourquin, J.P. and Schaffner, W. 1996. Transcriptional repression by RING finger protein TIF1β that interacts with the KRAB repressor domain of KOX1. Nucleic Acids Res. 24: 4859-4867.
5. Moosmann, P., Georgiev, O., Thiesen, H.J., Hagmann, M. and Schaffner, W. 1997. Silencing of RNA polymerases II and III-dependent transcription by the KRAB protein domain of KOX1, a Krüppel-type zinc-finger factor. Biol. Chem. 378: 669-677.
6. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 194538. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: ZNF10 (human) mapping to 12q24.33.

PRODUCT

ZNF10 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 ZNF10 shRNA Plasmid (h): sc-95814-SH and ZNF10 shRNA (h) Lentiviral Particles: sc-95814-V as alternate gene silencing products.

For independent verification of ZNF10 (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-95814A, sc-95814B and sc-95814C.

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

ZNF10 siRNA (h) is recommended for the inhibition of ZNF10 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 ZNF10 gene expression knockdown using RT-PCR Primer: ZNF10 (h)-PR: sc-95814-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.