SANTA CRUZ BIOTECHNOLOGY, INC.

ZNF396 siRNA (h): sc-76983

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The Power to Question

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. As a member of the Krüppel C_2H_2-type zinc-finger protein family, ZNF396 (zinc finger protein 396), also known as ZSCAN14 (zinc finger and SCAN domain-containing protein 14), is a 335 amino acid nuclear protein that contains one SCAN box domain and three C_2H_2-type zinc fingers. There are three isoforms of ZNF that are produced as a result of alternative splicing events. Both isoform 1 and 2 act as DNA-dependent transcriptional repressors. ZNF396 is strongly expressed in liver, moderately expressed in skeletal muscle and weakly expressed in spleen, kidney, prostate and pancreas.

REFERENCES

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3. Brown, R.S. 2005. Zinc finger proteins: getting a grip on RNA. Curr. Opin. Struct. Biol. 15: 94-98.
4. Hall, T.M. 2005. Multiple modes of RNA recognition by zinc finger proteins. Curr. Opin. Struct. Biol. 15: 367-373.
5. Online Mendelian Inheritance in Man, OMIM™. 2006. Johns Hopkins University, Baltimore, MD. MIM Number: 609600. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
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7. Gamsjaeger, R., Liew, C.K., Loughlin, F.E., Crossley, M. and Mackay, J.P. 2007. Sticky fingers: zinc-fingers as protein-recognition motifs. Trends Biochem. Sci. 32: 63-70.

CHROMOSOMAL LOCATION

Genetic locus: ZNF396 (human) mapping to 18q12.2.

PRODUCT

ZNF396 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 ZNF396 shRNA Plasmid (h): sc-76983-SH and ZNF396 shRNA (h) Lentiviral Particles: sc-76983-V as alternate gene silencing products.

For independent verification of ZNF396 (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-76983A, sc-76983B and sc-76983C.

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

ZNF396 siRNA (h) is recommended for the inhibition of ZNF396 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 ZNF396 gene expression knockdown using RT-PCR Primer: ZNF396 (h)-PR: sc-76983-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Bai, J., Kito, Y., Okubo, H., Nagayama, T. and Takeuchi, T. 2014. Expression of ZNF396 in basal cell carcinoma. Arch. Dermatol. Res. 306: 399-404.

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.