SANTA CRUZ BIOTECHNOLOGY, INC.

ZNF498 siRNA (h): sc-89567

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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. As a member of the Krüppel C_2H_2-type zinc-finger protein family, ZNF498 (zinc finger protein 498), also known as Zinc finger and SCAN domain-containing protein 25 (ZSCAN25), is a 544 amino acid protein. Localized to the nucleus, ZNF498 contains seven C_2H_2-type zinc fingers and one SCAN box domain. Due to the presence of these domains, ZNF498 is believed to be involved in transcriptional regulation. ZNF498 exists as four isoforms produced by alternative splicing.

REFERENCES

1. Payre, F. and Vincent, A. 1988. Finger proteins and DNA-specific recognition: distinct patterns of conserved amino acids suggest different evolutionary modes. FEBS Lett. 234: 245-250.
2. Berg, J.M. 1988. Proposed structure for the zinc-binding domains from transcription factor IIIA and related proteins. Proc. Natl. Acad. Sci. USA 85: 99-102.
3. Thiesen, H.J. 1990. Multiple genes encoding zinc finger domains are expressed in human T cells. New Biol. 2: 363-374.
4. Rosenfeld, R. and Margalit, H. 1993. Zinc fingers: conserved properties that can distinguish between spurious and actual DNA-binding motifs. J. Biomol. Struct. Dyn. 11: 557-570.
5. Trettel, F., Mantuano, E., Calabresi, V., Veneziano, L., Olsen, A.S., Georgescu, A., Gordon, L., Sabbadini, G., Frontali, M. and Jodice, C. 2000. A fine physical map of the CACNA1A gene region on 19p13.1-p13.2 chromosome. Gene 241: 45-50.
6. Laity, J.H., Lee, B.M. and Wright, P.E. 2001. Zinc finger proteins: new insights into structural and functional diversity. Curr. Opin. Struct. Biol. 11: 39-46.
7. Moodie, S.J., Norman, P.J., King, A.L., Fraser, J.S., Curtis, D., Ellis, H.J., Vaughan, R.W. and Ciclitira, P.J. 2002. Analysis of candidate genes on chromosome 19 in coeliac disease: an association study of the KIR and LILR gene clusters. Eur. J. Immunogenet. 29: 287-291.
8. Leem, S.H., Kouprina, N., Grimwood, J., Kim, J.H., Mullokandov, M., Yoon, Y.H., Chae, J.Y., Morgan, J., Lucas, S., Richardson, P., Detter, C., Glavina, T., Rubin, E., Barrett, J.C. and Larionov, V. 2004. Closing the gaps on human chromosome 19 revealed genes with a high density of repetitive tandemly arrayed elements. Genome Res. 14: 239-246.
9. Thompson, E.E., Kuttab-Boulos, H., Yang, L., Roe, B.A. and Di Rienzo, A. 2006. Sequence diversity and haplotype structure at the human CYP3A cluster. Pharmacogenomics J. 6: 105-114.

CHROMOSOMAL LOCATION

Genetic locus: ZSCAN25 (human) mapping to 7q22.1.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

PRODUCT

ZNF498 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 ZNF498 shRNA Plasmid (h): sc-89567-SH and ZNF498 shRNA (h) Lentiviral Particles: sc-89567-V as alternate gene silencing products.

For independent verification of ZNF498 (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-89567A, sc-89567B and sc-89567C.

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

ZNF498 siRNA (h) is recommended for the inhibition of ZNF498 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 ZNF498 gene expression knockdown using RT-PCR Primer: ZNF498 (h)-PR: sc-89567-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.