

ZNF507 siRNA (h): sc-97174

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. ZNF507 (zinc finger protein 507) is a 953 amino acid nuclear protein belonging to the Krüppel C₂H₂-type zinc-finger protein family. Containing nine C₂H₂-type zinc fingers, ZNF507 is thought to be involved in transcriptional regulation events. ZNF507 exists as two alternatively spliced isoforms and is encoded by a gene located on human chromosome 19, which consists of around 63 million bases with over 1,400 genes, and makes up over 2% of human genomic DNA.

REFERENCES

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2. Edelstein, L.C. and Collins, T. 2005. The SCAN domain family of zinc finger transcription factors. *Gene* 359: 1-17.
3. Nusbaum, C., et al. 2006. DNA sequence and analysis of human chromosome 8. *Nature* 439: 331-335.
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. Zhong, Z., et al. 2007. Identification of a novel human zinc finger gene, ZNF438, with transcription inhibition activity. *J. Biochem. Mol. Biol.* 40: 517-524.
6. O'Geen, H., et al. 2007. Genome-wide analysis of KAP1 binding suggests autoregulation of KRAB-ZNFs. *PLoS Genet.* 3: e89.

CHROMOSOMAL LOCATION

Genetic locus: ZNF507 (human) mapping to 19q13.11.

PRODUCT

ZNF507 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see ZNF507 shRNA Plasmid (h): sc-97174-SH and ZNF507 shRNA (h) Lentiviral Particles: sc-97174-V as alternate gene silencing products.

For independent verification of ZNF507 (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-97174A, sc-97174B and sc-97174C.

PROTOCOLS

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

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

ZNF507 siRNA (h) is recommended for the inhibition of ZNF507 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 μ M in 66 μ l. 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 ZNF507 gene expression knockdown using RT-PCR Primer: ZNF507 (h)-PR: sc-97174-PR (20 μ l). 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.