SANTA CRUZ BIOTECHNOLOGY, INC.

ZNF133 siRNA (h): sc-76968

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. ZNF133 (zinc-finger protein 133), also known as ZNF150 (zinc-finger protein 150), is a 654 amino acid transcriptional regulator that is expressed in heart, brain, placenta, lung, liver, skeletal muscle, kidney and pancreas. The KRAB domain derived from ZNF133 is suggested to be a potent transcriptional repression domain and its repression activity may be enhanced by PIAS 1 (protein inhibitor of activated Stat protein 1).

REFERENCES

1. Vissing, H., et al. 1995. Repression of transcriptional activity by heterologous KRAB domains present in zinc-finger proteins. FEBS Lett. 369: 153-157.
2. Tommerup, N., et al. 1995. Isolation and fine mapping of 16 novel human zinc finger-encoding cDNAs identify putative candidate genes for developmental and malignant disorders. Genomics 27: 259-264.
3. Online Mendelian Inheritance in Man, OMIM™. 1999. Johns Hopkins University, Baltimore, MD. MIM Number: 604075. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
4. Heiskanen, M.A., et al. 2000. Detection of gene amplification by genomic hybridization to cDNA microarrays. Cancer Res. 60: 799-802.
5. Ehringer, M.A., et al. 2002. Human alcoholism studies of genes identified through mouse quantitative trait locus analysis. Addict. Biol. 7: 365-371.
6. Ehringer, M.A., et al. 2002. Fine mapping of polymorphic alcohol-related quantitative trait loci candidate genes using interval-specific congenic recombinant mice. Alcohol. Clin. Exp. Res. 26: 1603-1608.
7. Andersen, K., et al. 2003. Interferon-γ suppresses S100A4 transcription independently of apoptosis or cell cycle arrest. Br. J. Cancer 88: 1995-2001.

CHROMOSOMAL LOCATION

Genetic locus: (human) mapping to 20p11.23.

PRODUCT

ZNF133 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 ZNF133 shRNA Plasmid (h): sc-76968-SH and ZNF133 shRNA (h) Lentiviral Particles: sc-76968-V as alternate gene silencing products.

For independent verification of ZNF133 (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-76968A, sc-76968B and sc-76968C.

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 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

ZNF133 siRNA (h) is recommended for the inhibition of ZNF133 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.

GENE EXPRESSION MONITORING

ZNF133 (9V2): sc-130414 is recommended as a control antibody for monitoring of ZNF133 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor ZNF133 gene expression knockdown using RT-PCR Primer: ZNF133 (h)-PR: sc-76968-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.