SANTA CRUZ BIOTECHNOLOGY, INC.

ZNF202 siRNA (h): sc-96682

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. ZNF202 (zinc finger protein 202), also known as ZKSCAN10, is a 648 amino acid protein that contains eight C_2H_2-type zinc fingers, one KRAB domain and one SCAN box domain. Localized to the nucleus and expressed at high levels in the testis, ZNF202 belongs to the Krüppel C_2H_2-type zinc-finger protein family and functions as a transcriptional repressor of genes that are involved in lipid metabolism. ZNF202 regulates the expression of several classes of proteins, including lipoprotein particles, transporters involved in lipid homeostasis, enzymes involved in lipid processing and a wide variety of proteins that are associated with energy metabolism. Defects in the gene encoding ZNF202 are associated with high cholesterol and may be involved in the pathogenesis of lung, ovarian and breast cancer. Two isoforms of ZNF202, designated α and β, exist due to alternative splicing events.

REFERENCES

1. Monaco, C., et al. 1998. Molecular cloning and characterization of ZNF202: a new gene at 11q23.3 encoding testis-specific zinc finger proteins. Genomics 52: 358-362.
2. Wagner, S., et al. 2000. A broad role for the zinc finger protein ZNF202 in human lipid metabolism. J. Biol. Chem. 275: 15685-15690.
3. Porsch-Ozcurumez, M., et al. 2001. The zinc finger protein 202 (ZNF202) is a transcriptional repressor of ATP binding cassette transporter A1 (ABCA1) and ABCG1 gene expression and a modulator of cellular lipid efflux. J. Biol. Chem. 276: 12427-12433.
4. Xing, W. and Sairam, M.R. 2002. Cross talk of two Krüpple transcription factors regulates expression of the ovine FSH receptor gene. Biochem. Biophys. Res. Commun. 295: 1096-1101.
5. Langmann, T., et al. 2003. ZNF202 is inversely regulated with its target genes ABCA1 and apoE during macrophage differentiation and foam cell formation. J. Lipid Res. 44: 968-977.

CHROMOSOMAL LOCATION

Genetic locus: ZNF202 (human) mapping to 11q24.1.

PRODUCT

ZNF202 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 ZNF202 shRNA Plasmid (h): sc-96682-SH and ZNF202 shRNA (h) Lentiviral Particles: sc-96682-V as alternate gene silencing products.

For independent verification of ZNF202 (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-96682A, sc-96682B and sc-96682C.

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

ZNF202 siRNA (h) is recommended for the inhibition of ZNF202 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

ZNF202 (GG-7): sc-101074 is recommended as a control antibody for monitoring of ZNF202 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 ZNF202 gene expression knockdown using RT-PCR Primer: ZNF202 (h)-PR: sc-96682-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.