SANTA CRUZ BIOTECHNOLOGY, INC.

TSHZ2 siRNA (h): sc-76763

BACKGROUND

The homeobox DNA-binding domain is a 60 amino acid motif that is conserved among many species and functions to bind DNA via a helix-turn-helix structure, thereby playing a role in transcriptional regulation and the control of gene expression. TSHZ2 (teashirt homolog 2), also known as ZNF218 (zinc finger protein 218) and OVC10-2 (ovarian cancer-related protein 10-2), is a 1,034 amino acid nuclear protein that contains one homeobox DNA-binding domain, as well as five C_2H_2-type zinc fingers. In *Drosophilia,* teashirt genes function as region-specific homeotic genes that specify trunk identity during embryogenesis and these genes seem to conserve the same function in mice. The gene encoding TSHZ2 maps to human chromosome 20, which comprises approximately 2% of the human genome and contains nearly 63 million bases that encode over 600 genes.

REFERENCES

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3. Manfroid, I., et al. 2004. Three putative murine Teashirt orthologues specify trunk structures in *Drosophila* in the same way as the *Drosophila* teashirt gene. Development 131: 1065-1073.
4. Su, H.Y., et al. 2004. A novel gene homologous to teashirt is differentially expressed in neonatal mouse skin during development of hair follicles. Mol. Biotechnol. 28: 9-20.
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8. Santos, J.S., et al. 2010. Phylogeny of the teashirt-related zinc finger (tshz) gene family and analysis of the developmental expression of tshz2 and tshz3b in the zebrafish. Dev. Dyn. 239: 1010-1018.
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CHROMOSOMAL LOCATION

Genetic locus: TSHZ2 (human) mapping to 20q13.2.

PROTOCOLS

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

PRODUCT

TSHZ2 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 TSHZ2 shRNA Plasmid (h): sc-76763-SH and TSHZ2 shRNA (h) Lentiviral Particles: sc-76763-V as alternate gene silencing products.

For independent verification of TSHZ2 (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-76763A, sc-76763B and sc-76763C.

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

TSHZ2 siRNA (h) is recommended for the inhibition of TSHZ2 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 TSHZ2 gene expression knockdown using RT-PCR Primer: TSHZ2 (h)-PR: sc-76763-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.