SANTA CRUZ BIOTECHNOLOGY, INC.

CSHL1 siRNA (h): sc-105246

BACKGROUND

CSHL1 (chorionic somatomammotropin hormone-like 1), also known as CSL, CS-5, CSHP1 or hCS-L, is a 199 amino acid secreted protein that belongs to the somatotropin/prolactin family of hormones and is encoded by a gene that maps to a growth hormone locus on chromosome 17. There are five genes located on the chromosome 17 growth hormone locus, all of which share very high sequence identity, but are expressed in different tissues throughout the body. CSHL1 is expressed exclusively in placental villi and is thought to function as a novel gestational hormone that may be required to compensate for the absence of other proteins during gestation. Multiple isoforms of CSHL1 exist due to alternative splicing events.

REFERENCES

1. Hirt, H., et al. 1987. The human growth hormone gene locus: structure, evolution, and allelic variations. DNA 6: 59-70.
2. Chen, E.Y., et al. 1989. The human growth hormone locus: nucleotide sequence, biology, and evolution. Genomics 4: 479-497.
3. MacLeod, J.N., et al. 1992. Developmental control and alternative splicing of the placentally expressed transcripts from the human growth hormone gene cluster. J. Biol. Chem. 267: 14219-14226.
4. Misra-Press, A., et al. 1994. Complex alternative splicing partially inactivates the human chorionic somatomammotropin-like (hCS-L) gene. J. Biol. Chem. 269: 23220-23229.
5. Su, Y., et al. 2000. The human growth hormone gene cluster locus control region supports position-independent pituitary- and placenta-specific expression in the transgenic mouse. J. Biol. Chem. 275: 7902-7909.
6. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 603515. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
7. Sedman, L., et al. 2008. Complex signatures of locus-specific selective pressures and gene conversion on human growth hormone/chorionic somatomammotropin genes. Hum. Mutat. 29: 1181-1193.

CHROMOSOMAL LOCATION

Genetic locus: CSHL1 (human) mapping to 17q23.3.

PRODUCT

CSHL1 siRNA (h) is a target-specific 19-25 nt siRNA 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 CSHL1 shRNA Plasmid (h): sc-105246-SH and CSHL1 shRNA (h) Lentiviral Particles: sc-105246-V as alternate gene silencing products.

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

CSHL1 siRNA (h) is recommended for the inhibition of CSHL1 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 CSHL1 gene expression knockdown using RT-PCR Primer: CSHL1 (h)-PR: sc-105246-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.