

GTSF1L siRNA (m): sc-145837

BACKGROUND

GTSF1L (gametocyte specific factor 1-like), also known as FAM112A, is a 148 amino acid protein that exists as two alternatively spliced isoforms. Belonging to the evolutionarily-conserved UPF0224 (FAM112) family, GTSF1L contains one CHHC-type zinc finger, which may have contributed to the architectural and functional diversity observed in the CHHC zinc finger containing proteins. GTSF1L's CHHC zinc finger does not show sequence similarity to any known or previously characterized zinc finger domain. Necessary for metal ion binding, GTSF1L is up-regulated in CD133⁺ cells. GTSF1L is located on chromosome 20, which consists of approximately 63 million bases and 600 genes. Chromosome 20 contains a region with numerous genes expressed in the epididymis which are thought to be important for seminal production and may be potential targets for male contraception.

REFERENCES

1. Parakh, K.A. and Kannan, K. 1993. Demonstration of a ubiquitin binding site on murine haemopoietic progenitor cells: implication of ubiquitin in homing and adhesion. *Br. J. Haematol.* 84: 212-218.
2. Norgate, M., Southon, A., Zou, S., Zhan, M., Sun, Y., Batterham, P. and Camakaris, J. 2007. Copper homeostasis gene discovery in *Drosophila melanogaster*. *Biometals* 20: 683-697.
3. Yoshimura, T., Miyazaki, T., Toyoda, S., Miyazaki, S., Tashiro, F., Yamato, E. and Miyazaki, J. 2007. Gene expression pattern of Cue110: a member of the uncharacterized UPF0224 gene family preferentially expressed in germ cells. *Gene Expr. Patterns* 8: 27-35.
4. Andreeva, A. and Tidow, H. 2008. A novel CHHC Zn-finger domain found in spliceosomal proteins and tRNA modifying enzymes. *Bioinformatics* 24: 2277-2280.
5. Yoshimura, T., Toyoda, S., Kuramochi-Miyagawa, S., Miyazaki, T., Miyazaki, S., Tashiro, F., Yamato, E., Nakano, T. and Miyazaki, J. 2009. Gtsf1/Cue110, a gene encoding a protein with two copies of a CHHC Zn-finger motif, is involved in spermatogenesis and retrotransposon suppression in murine testes. *Dev. Biol.* 335: 216-227.
6. van der Heijden, G.W., Castañeda, J. and Bortvin, A. 2010. Bodies of evidence-compartmentalization of the piRNA pathway in mouse fetal prospermatogonia. *Curr. Opin. Cell Biol.* 2: 752-757.
7. SWISS-PROT/TrEMBL (Q9H1H1). World Wide Web URL: <http://www.uniprot.org/uniprot/Q9H1H1>

CHROMOSOMAL LOCATION

Genetic locus: Gtsf1l (mouse) mapping to 2 H2.

PRODUCT

GTSF1L siRNA (m) 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see GTSF1L shRNA Plasmid (m): sc-145837-SH and GTSF1L shRNA (m) Lentiviral Particles: sc-145837-V as alternate gene silencing 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

GTSF1L siRNA (m) is recommended for the inhibition of GTSF1L expression in mouse 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 GTSF1L gene expression knockdown using RT-PCR Primer: GTSF1L (m)-PR: sc-145837-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.

PROTOCOLS

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