

# LETM2 siRNA (m): sc-146713

## BACKGROUND

LETM2 (leucine zipper-EF-hand containing transmembrane protein 2) is a 491 amino acid protein that is localized to the mitochondrial membrane and contains one LETM1 domain. Despite its name, LETM2, which is preferentially expressed in sperm and testis, does not contain any EF-hand domains. There are four isoforms of LETM2 that are produced as a result of alternative splicing events. A homolog of LETM2, LETM1 is thought to be involved in maintaining normal mitochondrial function and overall cell viability. Deletions in the gene encoding LETM1 are associated with Wolf-Hirschhorn syndrome (WHS), a congenital syndrome characterized by a number of abnormalities, including mental retardation, seizures, heart defects, fused teeth, hearing loss, a webbed neck and renal abnormalities. The LETM2 gene is located on chromosome 8, which is made up of nearly 146 million bases and encodes about 800 genes.

## REFERENCES

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- Dimmer, K.S., et al. 2008. LETM1, deleted in Wolf-Hirschhorn syndrome is required for normal mitochondrial morphology and cellular viability. *Hum. Mol. Genet.* 17: 201-214.
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## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.

## CHROMOSOMAL LOCATION

Genetic locus: Letm2 (mouse) mapping to 8 A2.

## PRODUCT

LETM2 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  $\mu\text{M}$  solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see LETM2 shRNA Plasmid (m): sc-146713-SH and LETM2 shRNA (m) Lentiviral Particles: sc-146713-V as alternate gene silencing products.

## STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at  $-20^{\circ}\text{C}$  with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at  $-20^{\circ}\text{C}$ , avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330  $\mu\text{l}$  of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu\text{l}$  of RNase-free water makes a 10  $\mu\text{M}$  solution in a 10  $\mu\text{M}$  Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

LETM2 siRNA (m) is recommended for the inhibition of LETM2 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  $\mu\text{M}$  in 66  $\mu\text{l}$ . 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 LETM2 gene expression knockdown using RT-PCR Primer: LETM2 (m)-PR: sc-146713-PR (20  $\mu\text{l}$ ). Annealing temperature for the primers should be  $55-60^{\circ}\text{C}$  and the extension temperature should be  $68-72^{\circ}\text{C}$ .

## RESEARCH USE

For research use only, not for use in diagnostic procedures.