SANTA CRUZ BIOTECHNOLOGY, INC.

ZCSL3 siRNA (m): sc-63238

BACKGROUND

The CSL-type zinc finger-containing proteins (ZCSLs) are homologs of the *S. cerevisiae* diphthamide methyltransferase proteins (DPHs). These enzymes are involved in the synthesis of diphthamide, a protein found on translation elongation factor EF-2 that is the target of bacterial ADP-ribosylating toxins. ZCSL1, ZCSL2 and ZCSL3 (CSL-type zinc finger-containing protein 1, 2 and 3, respectively) are members of the ZCSL family of proteins and each contain one DPH-type zinc finger. ZCSL2, also known as DPH3 or DESR1, is highly expressed in spleen, heart, lung, liver and thymus and is essential in the first step of dipthamide synthesis. Down-regulation of ZCSL2 increases the release of proteoglycans, suggesting a possible role in protein secretion. ZCSL1 and ZCSL3, also known as DPH3B and DPH4, respectively, are additional members of the ZCSL family of dipthamide-synthesizing enzymes.

REFERENCES

1. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 611072. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
2. Liu, S., et al. 2003. Retroviral insertional mutagenesis identifies a small protein required for synthesis of diphthamide, the target of bacterial ADP-ribosylating toxins. Mol. Cell 12: 603-613.
3. Sjölinder, M., et al. 2004. Characterisation of an evolutionary conserved protein interacting with the putative guanine nucleotide exchange factor DelGEF and modulating secretion. Exp. Cell Res. 294: 68-76.
4. Liu, S., et al. 2004. Identification of the proteins required for biosynthesis of diphthamide, the target of bacterial ADP-ribosylating toxins on translation elongation factor 2. Mol. Cell. Biol. 24: 9487-9497.
5. Liu, S., et al. 2006. Dph3, a small protein required for diphthamide biosynthesis, is essential in mouse development. Mol. Cell. Biol. 26: 3835-3841.

CHROMOSOMAL LOCATION

Genetic locus: Dnajc24 (mouse) mapping to 2 E3.

PRODUCT

ZCSL3 siRNA (m) 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 ZCSL3 shRNA Plasmid (m): sc-63238-SH and ZCSL3 shRNA (m) Lentiviral Particles: sc-63238-V as alternate gene silencing products.

For independent verification of ZCSL3 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-63238A, sc-63238B and sc-63238C.

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

ZCSL3 siRNA (m) is recommended for the inhibition of ZCSL3 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 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 ZCSL3 gene expression knockdown using RT-PCR Primer: ZCSL3 (m)-PR: sc-63238-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.