SANTA CRUZ BIOTECHNOLOGY, INC.

# CLPTM1L siRNA (m): sc-142402

## BACKGROUND

Clefts of the oral-facial region usually occur in early fetal development and can affect the lip, the soft palate and the hard palate. Cleft lip (with or without cleft palate) is a genetically complex birth defect that occurs in approximately one in every 750-1,000 live births. This is one of the most common birth defects and is multifactorial, with both genetic and environmental causes. Cleft lip- and palate-associated transmembrane protein 1 (CLPTM1) belongs to a family of cleft lip and palate transmembrane proteins. This family also contains cisplatin resistance-related protein (CRR9), which is involved in CDDP-induced apoptosis. CLPTM1L (cleft lip and palate transmembrane protein 1-like protein), also known as CRR9p (cisplatin resistance-related protein 9) is a 538 amino acid multi-pass membrane protein that belongs to the CLPTM1 family and, when overexpressed, enhances cisplatin-mediated apoptosis. CLPTM1L exists as two alternatively spliced isoforms encoded by a gene that maps to human chromosome 5p15.33.

## REFERENCES


1. Juriloff, D.M., et al. 1995. The major locus for multifactorial nonsyndromic cleft lip maps to mouse chromosome 11. Mamm. Genome 6: 63-69.
2. Yoshiura, K., et al. 1998. Characterization of a novel gene disrupted by a balanced chromosomal translocation t(2;19)(q11.2;q13.3) in a family with cleft lip and palate. Genomics 54: 231-240.
3. Yamamoto, K., et al. 2001. A novel gene, CRR9, which was upregulated in CDDP-resistant ovarian tumor cell line, was associated with apoptosis. Biochem. Biophys. Res. Commun. 280: 1148-1154.
4. Murray, J.C. 2002. Gene/environment causes of cleft lip and/or palate. Clin. Genet. 61: 248-256.
5. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 604783. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/


## CHROMOSOMAL LOCATION

Genetic locus: Clptm1l (mouse) mapping to 13 C1.

## PRODUCT

CLPTM1L 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 CLPTM1L shRNA Plasmid (m): sc-142402-SH and CLPTM1L shRNA (m) Lentiviral Particles: sc-142402-V as alternate gene silencing products.

For independent verification of CLPTM1L (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-142402A, sc-142402B and sc-142402C.

## 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

CLPTM1L siRNA (m) is recommended for the inhibition of CLPTM1L 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 CLPTM1L gene expression knockdown using RT-PCR Primer: CLPTM1L (m)-PR: sc-142402-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.