

CLPTM1 siRNA (m): sc-60416

BACKGROUND

Clefts of the oral-facial region usually occur in early fetal development and can affect the lip, the soft palate (the soft tissue in the back of the mouth) and the hard palate (the roof of the mouth). 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. The CLPTM1 protein shows strong homology to two *Caenorhabditis elegans* genes.

REFERENCES

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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.
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7. Turhani, D., et al. 2005. Mutation analysis of CLPTM1 and PVRL1 genes in patients with non-syndromic clefts of lip, alveolus and palate. *J. Craniomaxillofac. Surg.* 33: 301-306.

CHROMOSOMAL LOCATION

Genetic locus: Clptm1 (mouse) mapping to 7 A3.

PRODUCT

CLPTM1 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see CLPTM1 shRNA Plasmid (m): sc-60416-SH and CLPTM1 shRNA (m) Lentiviral Particles: sc-60416-V as alternate gene silencing products.

For independent verification of CLPTM1 (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-60416A, sc-60416B and sc-60416C.

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

CLPTM1 siRNA (m) is recommended for the inhibition of CLPTM1 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.

GENE EXPRESSION MONITORING

CLPTM1 (G-7): sc-374619 is recommended as a control antibody for monitoring of CLPTM1 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor CLPTM1 gene expression knockdown using RT-PCR Primer: CLPTM1 (m)-PR: sc-60416-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.