

SCML1 siRNA (h): sc-90913

BACKGROUND

Putative polycomb group (PcG) proteins assemble into multimeric protein complexes, which are involved in maintaining the transcriptional repressive state of genes over successive cell generations. SCML1 (sex comb on midleg-like 1 (*Drosophila*)), is a 329 amino acid PcG protein belonging to the SCM family. Localizing to nucleus, SCML1 plays a role in testis development, spermatogenesis and embryonal development. While ubiquitously expressed, SCML1 is found at highest levels in adult skeletal muscle, heart and fetal liver. SCML1 contains one SAM (sterile α motif) domain and is encoded by a gene that spans 18 kb, contains 6 exons, maps to human chromosome Xp22.13, and is transcribed from telomere to centromere. Three SCML1 isoforms exist as a result of alternative splicing events.

REFERENCES

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2. Montini, E., Buchner, G., Spalluto, C., Andolfi, G., Caruso, A., den Dunnen, J.T., Trump, D., Rocchi, M., Ballabio, A. and Franco, B. 1999. Identification of SCML2, a second human gene homologous to the *Drosophila* sex comb on midleg (Scm): A new gene cluster on Xp22. *Genomics* 58: 65-72.
3. Online Mendelian Inheritance in Man, OMIM[™]. 2000. Johns Hopkins University, Baltimore, MD. MIM Number: 300227. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
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CHROMOSOMAL LOCATION

Genetic locus: SCML1 (human) mapping to Xp22.13.

PRODUCT

SCML1 siRNA (h) 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 SCML1 shRNA Plasmid (h): sc-90913-SH and SCML1 shRNA (h) Lentiviral Particles: sc-90913-V as alternate gene silencing products.

For independent verification of SCML1 (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-90913A, sc-90913B and sc-90913C.

RESEARCH USE

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

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

SCML1 siRNA (h) is recommended for the inhibition of SCML1 expression in human 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

SCML1 (8-RY28): sc-135622 is recommended as a control antibody for monitoring of SCML1 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 SCML1 gene expression knockdown using RT-PCR Primer: SCML1 (h)-PR: sc-90913-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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