SANTA CRUZ BIOTECHNOLOGY, INC.

Med31 siRNA (h): sc-93999

BACKGROUND

Med31 (mediator of RNA polymerase II transcription subunit 31), also known as Soh1 or CGI-125, is a 131 amino acid protein that belongs to the mediator complex subunit 31 family. Mediator proteins serve as connectors between transcriptional activators and basal transcription machinery. Med31 is an evolutionary conserved coregulator of RNA polymerase II transcription and is a stable component of the Mediator complex. It is involved in forming a scaffold with other regulatory proteins for the assembly of a functional preinitiation complex with RNA polymerase II and general transcription factors. Med31 is required for normal levels of gene conversion during meiosis and contributes in the coordination of cellular processes by regulating the expression of larger sets of genes.

REFERENCES

1. Linder, T. and Gustafsson, C.M. 2004. The Soh1/MED31 protein is an ancient component of *Schizosaccharomyces pombe* and *Saccharomyces cerevisiae* mediator. J. Biol. Chem. 279: 49455-49459.
2. Guglielmi, B., van Berkum, N.L., Klapholz, B., Bijma, T., Boube, M., Boschiero, C., Bourbon, H.M., Holstege, F.C. and Werner, M. 2004. A high resolution protein interaction map of the yeast Mediator complex. Nucleic Acids Res. 32: 5379-5391.
3. van de Peppel, J., Kettelarij, N., van Bakel, H., Kockelkorn, T.T., van Leenen, D. and Holstege, F.C. 2005. Mediator expression profiling epistasis reveals a signal transduction pathway with antagonistic submodules and highly specific downstream targets. Mol. Cell 19: 511-522.
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5. Miklos, I., Szilagyi, Z., Watt, S., Zilahi, E., Batta, G., Antunovics, Z., Enczi, K., Bähler, J. and Sipiczki, M. 2008. Genomic expression patterns in cell separation mutants of *Schizosaccharomyces pombe* defective in the genes sep10^{+} and sep15^{+} coding for the Mediator subunits Med31 and Med8. Mol. Genet. Genomics 279: 225-238.
6. SWISS-PROT/TrEMBL (Q9Y3C7). World Wide Web URL: http://www.expasy.ch/sprot/sprot-top.html

CHROMOSOMAL LOCATION

Genetic locus: MED31 (human) mapping to 17p13.1.

PRODUCT

Med31 siRNA (h) is a pool of 2 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 Med31 shRNA Plasmid (h): sc-93999-SH and Med31 shRNA (h) Lentiviral Particles: sc-93999-V as alternate gene silencing products.

For independent verification of Med31 (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-93999A and sc-93999B.

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

Med31 siRNA (h) is recommended for the inhibition of Med31 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 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.

GENE EXPRESSION MONITORING

Med31 (3-9D): sc-101189 is recommended as a control antibody for monitoring of Med31 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-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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 DSC1 gene expression knockdown using RT-PCR Primer: DSC1 (m)-PR: sc-43108-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.

PROTOCOLS

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