

# Med22 siRNA (h): sc-92912

## BACKGROUND

Med22 is a subunit of the RNA polymerase II (Pol II) transcriptional mediator complex. The mediator complex is a coactivator involved in the regulated transcription of Pol II-dependent genes. Functioning as a bridge to convey information from gene-specific regulatory proteins to the basal Pol II transcription machinery, the mediator complex is recruited to promoter regions by directly interacting with regulatory proteins. The mediator complex also serves as a scaffold for the assembly of a functional pre-initiation complex with Pol II and other general transcription factors. Med22 (Mediator complex subunit 22), also known as SURF5 (Surfeit locus protein 5), is a ubiquitously expressed 200 amino acid nuclear protein that is one of several components of the mediator complex. There are two isoforms of Med22 that are produced as a result of alternative splicing events.

## REFERENCES

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2. Garson, K., Duhig, T. and Fried, M. 1996. Tissue-specific processing of the Surf-5 and Surf-4 mRNAs. *Gene Expr.* 6: 209-218.
3. Duhig, T., Ruhrberg, C., Mor, O. and Fried, M. 1998. The human Surfeit locus. *Genomics* 52: 72-78.
4. Angiolillo, A., Russo, G., Porcellini, A., Smaldone, S., D'Alessandro, F. and Pietropaolo, C. 2002. The human homologue of the mouse Surf5 gene encodes multiple alternatively spliced transcripts. *Gene* 284: 169-178.
5. Martinez, E. 2002. Multi-protein complexes in eukaryotic gene transcription. *Plant Mol. Biol.* 50: 925-947.
6. Esnault, C., Ghavi-Helm, Y., Brun, S., Soutourina, J., Van Berkum, N., Boschiero, C., Holstege, F. and Werner, M. 2008. Mediator-dependent recruitment of TFIIF modules in preinitiation complex. *Mol. Cell* 31: 337-346.
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## CHROMOSOMAL LOCATION

Genetic locus: MED22 (human) mapping to 9q34.2.

## PRODUCT

Med22 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Med22 shRNA Plasmid (h): sc-92912-SH and Med22 shRNA (h) Lentiviral Particles: sc-92912-V as alternate gene silencing products.

For independent verification of Med22 (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-92912A and sc-92912B.

## 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  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

Med22 siRNA (h) is recommended for the inhibition of Med22 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  $\mu$ M in 66  $\mu$ 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

Med22 (D-10): sc-393738 is recommended as a control antibody for monitoring of Med22 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 $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  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 $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  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 Med22 gene expression knockdown using RT-PCR Primer: Med22 (h)-PR: sc-92912-PR (20  $\mu$ 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](http://www.scbt.com) for detailed protocols and support products.