

Med30 siRNA (m): sc-149355

BACKGROUND

Med30 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. The mediator complex functions as a bridge to convey information from gene-specific regulatory proteins to the basal Pol II transcription machinery, and 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. Found in the nucleus, Med30 is expressed in brain, heart, kidney, liver, lung, pancreas, placenta and skeletal muscle.

REFERENCES

1. Casamassimi, A., et al. 2007. Mediator complexes and eukaryotic transcription regulation: an overview. *Biochimie* 89: 1439-1446.
2. Kim, B., et al. 2007. The transcription elongation factor TFIIS is a component of RNA polymerase II preinitiation complexes. *Proc. Natl. Acad. Sci. USA* 104: 16068-16073.
3. Bourbon, H.M. 2008. Comparative genomics supports a deep evolutionary origin for the large, four-module transcriptional mediator complex. *Nucleic Acids Res.* 36: 3993-4008.
4. Bjornsdottir, G., et al. 2008. Minimal components of the RNA polymerase II transcription apparatus determine the consensus TATA box. *Nucleic Acids Res.* 36: 2906-2916.
5. Tóth-Petróczy, A., et al. 2008. Malleable machines in transcription regulation: the mediator complex. *PLoS Comput. Biol.* 4: e1000243.
6. Willis, I.M., et al. 2008. Genetic interactions of MAF1 identify a role for Med20 in transcriptional repression of ribosomal protein genes. *PLoS Genet.* 4: e1000112.
7. Knesel, M.T., et al. 2009. The human CDK8 subcomplex is a histone kinase that requires Med12 for activity and can function independently of mediator. *Mol. Cell. Biol.* 29: 650-661.

CHROMOSOMAL LOCATION

Genetic locus: Med30 (mouse) mapping to 15 C.

PRODUCT

Med30 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 Med30 shRNA Plasmid (m): sc-149355-SH and Med30 shRNA (m) Lentiviral Particles: sc-149355-V as alternate gene silencing products.

For independent verification of Med30 (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-149355A, sc-149355B and sc-149355C.

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

Med30 siRNA (m) is recommended for the inhibition of Med30 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

Med30 (C-6): sc-393289 is recommended as a control antibody for monitoring of Med30 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 Med30 gene expression knockdown using RT-PCR Primer: Med30 (m)-PR: sc-149355-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.