SANTA CRUZ BIOTECHNOLOGY, INC.

Med30 siRNA (h): sc-77529

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.

CHROMOSOMAL LOCATION

Genetic locus: MED30 (human) mapping to 8q24.11.

PRODUCT

Med30 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Med30 shRNA Plasmid (h): sc-77529-SH and Med30 shRNA (h) Lentiviral Particles: sc-77529-V as alternate gene silencing products.

For independent verification of Med30 (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-77529A, sc-77529B and sc-77529C.

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

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

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-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 Med30 gene expression knockdown using RT-PCR Primer: Med30 (h)-PR: sc-77529-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Syring, I., et al. 2017. The contrasting role of the mediator subunit Med30 in the progression of bladder cancer. Anticancer Res. 37: 6685-6695.
2. Syring, I., et al. 2018. The knockdown of the mediator complex subunit Med30 suppresses the proliferation and migration of renal cell carcinoma cells. Ann. Diagn. Pathol. 34: 18-26.

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.