SANTA CRUZ BIOTECHNOLOGY, INC.

CTDSP1 siRNA (h): sc-94748

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The Power to Question

BACKGROUND

The repetitive C-terminal domain (CTD) of the largest RNA polymerase II (RNAP) subunit plays a critical role in the regulation of gene expression. Each cycle of transcription is suggested to be associated with the reversible phosphorylation of the repetitive CTD of the largest RNAP II subunit. Therefore, the dephosphorylation of RNAP II by CTD phosphatase is critical in the transcription cycle. CTDSP1 (carboxy-terminal domain RNA polymerase II polypeptide A small phosphatase 1), also known as SCP1 or NLIIF (nuclear LIM interactor-interacting factor 3), is a 261 amino acid nuclear protein that is ubiquitously expressed, with highest expression in spleen, lung and placenta. CTDSP1 contains a FCP1 homology domain and interacts with CLIM-2 (carboxy-terminal LIM domain protein 2).

REFERENCES

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4. Lin, P.S., et al. 2002. CTD phosphatase: role in RNA polymerase II cycling and the regulation of transcript elongation. Prog. Nucleic Acid Res. Mol. Biol. 72: 333-365.
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8. Yeo, M., et al. 2005. Small CTD phosphatases function in silencing neuronal gene expression. Science 307: 596-600.
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CHROMOSOMAL LOCATION

Genetic locus: CTDSP1 (human) mapping to 2q35.

PRODUCT

CTDSP1 siRNA (h) is a target-specific 19-25 nt siRNA 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 CTDSP1 shRNA Plasmid (h): sc-94748-SH and CTDSP1 shRNA (h) Lentiviral Particles: sc-94748-V as alternate gene silencing products.

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

CTDSP1 siRNA (h) is recommended for the inhibition of CTDSP1 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor CTDSP1 gene expression knockdown using RT-PCR Primer: CTDSP1 (h)-PR: sc-94748-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.