

SPT6 siRNA (h): sc-93909

BACKGROUND

SPT6 (suppressor of Ty6 homolog), also known as SUPT6H, SPT6H, Tat-CT2 (Tat-cotransactivator 2 protein) or emb-5 in *C. elegans*, is a 1,726 amino acid protein that is highly conserved from yeast to humans. Expressed ubiquitously, SPT6 localizes to the nucleus and contains one SH2 domain and one S1 domain. SPT6 participates in both DRB (5,6-dichloro-1- β -D-ribofuranosylbenzimidazole)-mediated transcriptional inhibition as well as the enhancement of transcriptional elongation by the RNA polymerase II (Pol II). SPT6 interacts with the nuclear proteins SPT4 and SPT5, which comprise the DSIF (DRB-sensitivity-inducing factor) complex that binds RNA polymerase II, and directly regulates elongation. Via its C-terminus, SPT6 can also interact with Histone H3. Due to alternative splicing events, three isoforms exist for SPT6.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: SUPT6H (human) mapping to 17q11.2.

PRODUCT

SPT6 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see SPT6 shRNA Plasmid (h): sc-93909-SH and SPT6 shRNA (h) Lentiviral Particles: sc-93909-V as alternate gene silencing products.

For independent verification of SPT6 (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-93909A, sc-93909B and sc-93909C.

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

SPT6 siRNA (h) is recommended for the inhibition of SPT6 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 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

SPT6 (E-4): sc-393920 is recommended as a control antibody for monitoring of SPT6 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 SPT6 gene expression knockdown using RT-PCR Primer: SPT6 (h)-PR: sc-93909-PR (20 μ 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 for detailed protocols and support products.