

SUV420H1 siRNA (h): sc-96776

BACKGROUND

SUV420H1 (suppressor of variegation 4-20 homolog 1), also known as CGI85 or KMT5B, is an 885 amino acid protein that is associated with pericentric heterochromatin in the nucleus. One of several members of the histone-lysine methyltransferase family, SUV420H1 functions as a histone methyltransferase that trimethylates the Lys 20 residue of Histone H4, thereby tagging H4 for transcriptional repression. Characteristic of most histone methyltransferases, SUV420H1 contains one SET domain through which it confers its enzymatic activity. The co-localization of SUV420H1 with pericentric heterochromatin allows the methyltransferase to play a key role in the establishment of constitutive heterochromatin, further implicating SUV420H1 as a regulator of transcriptional events. Expression of SUV420H1 is strongly downregulated in breast cancer cells, suggesting a role for SUV420H1 in tumor suppression. Three isoforms of SUV420H1 are expressed due to alternative splicing events.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: SUV420H1 (human) mapping to 11q13.2.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

PRODUCT

SUV420H1 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 SUV420H1 shRNA Plasmid (h): sc-96776-SH and SUV420H1 shRNA (h) Lentiviral Particles: sc-96776-V as alternate gene silencing products.

For independent verification of SUV420H1 (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-96776A, sc-96776B and sc-96776C.

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

SUV420H1 siRNA (h) is recommended for the inhibition of SUV420H1 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor SUV420H1 gene expression knockdown using RT-PCR Primer: SUV420H1 (h)-PR: sc-96776-PR (20 μ l, 535 bp). 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.