SANTA CRUZ BIOTECHNOLOGY, INC.

SETD3 siRNA (h): sc-92438

BACKGROUND

SETD3 (SET domain containing 3) is a 594 amino acid protein that belongs to the SETD3 family. Containing one SET domain and localizing to nucleus, SETD3 is a histone methyltransferase that methylates "Lys-36" of histone H3. Overexpression of the setd3 protein in zebrafish decreases cell viability and activates caspase-3, indicating possible roles in apoptotic cell death and cell cycle regulation. In zebrafish the setd3 protein is composed of 17 α-helices and eight β-sheets in the secondary structures. Existing as three alternatively spliced isoforms, the SETD3 gene is conserved in chimpanzee, canine, bovine, mouse, rat, chicken, zebrafish, fruit fly, *C. elegans, N. crassa* and *A. thaliana,* and maps to human chromosome 14q32.2. Chromosome 14 contains about 700 genes and 106 million base pairs and makes up about 3.5% of human cellular DNA.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: SETD3 (human) mapping to 14q32.2.

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.

PRODUCT

SETD3 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 SETD3 shRNA Plasmid (h): sc-92438-SH and SETD3 shRNA (h) Lentiviral Particles: sc-92438-V as alternate gene silencing products.

For independent verification of SETD3 (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-92438A, sc-92438B and sc-92438C.

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

SETD3 siRNA (h) is recommended for the inhibition of SETD3 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 SETD3 gene expression knockdown using RT-PCR Primer: SETD3 (h)-PR: sc-92438-PR (20 µl, 507 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.