SANTA CRUZ BIOTECHNOLOGY, INC.

KANSL1 siRNA (h): sc-93782

BACKGROUND

Histone acetylation is a critical part of gene regulation. Acetylation of lysine residues at the N-terminus of histone proteins affect the affinity between histones and DNA, enhancing gene transcription. KANSL1 (KAT8 regulatory NSL complex subunit 1), also known as KDVS, NSL1, MSL1v1, CENP-36, hMSL1v1 or KIAA1267, is a 1,105 amino acid nuclear protein that is part of the NSL1 complex and the MLL complex. NSL1 complex is involved in acetylation of nucleosomal Histone H4 and plays a role in transcriptional regulation while MLL complex functions as a methyltransferase for Histone H3. Expressed in brain, KANSL1 directly interacts with histone acetyl transferase MOF (also know as KAT8). Mutations in the gene encoding KANSL1 may lead to KANSL1-related intellectual disability syndrome, which is characterized by developmental delay/intellectual disability, neonatal/childhood hypotonia, dysmorphisms, congenital malformations, and behavioral features. KANSL1 exists as two alternatively spliced isoforms.

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CHROMOSOMAL LOCATION

Genetic locus: KANSL1 (human) mapping to 17q21.31.

PRODUCT

KANSL1 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 KANSL1 shRNA Plasmid (h): sc-93782-SH and KANSL1 shRNA (h) Lentiviral Particles: sc-93782-V as alternate gene silencing products.

For independent verification of KANSL1 (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-93782A, sc-93782B and sc-93782C.

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

KANSL1 siRNA (h) is recommended for the inhibition of KANSL1 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 KANSL1 gene expression knockdown using RT-PCR Primer: KANSL1 (h)-PR: sc-93782-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.