SANTA CRUZ BIOTECHNOLOGY, INC.

ZKSCAN4 siRNA (h): sc-95430

BACKGROUND

Zinc-finger proteins contain DNA-binding domains and have a wide variety of functions, most of which encompass some form of transcriptional activation or repression. ZKSCAN4 (Zinc finger protein with KRAB and SCAN domains 4), also known as ZNF307, is a 545 amino acid protein belonging to the Krüppel C2H2-type zinc-finger protein family. Localized to the nucleus, ZKSCAN4 is expressed in placenta, lung, kidney, brain and heart, as well as in embryonic (17-week) liver, brain, heart, small intestine and skeletal muscle. ZKSCAN4 functions as a transcription repressor and has been shown to suppress both p53 and p21 transcription. Overexpression of ZKSCAN4 results in the upregulation of p300 and MDM2 genes, suggesting that ZKSCAN4 suppresses the p53-p21 pathway by activating p300 and MDM2 expression, which then leads to the degradation of p53. Phosphorylation on Ser165 of human ZKSCAN4 occurs upon DNA damage, most likely by Atm or ATR.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: ZKSCAN4 (human) mapping to 6p22.1.

PROTOCOLS

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

PRODUCT

ZKSCAN4 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 ZKSCAN4 shRNA Plasmid (h): sc-95430-SH and ZKSCAN4 shRNA (h) Lentiviral Particles: sc-95430-V as alternate gene silencing products.

For independent verification of ZKSCAN4 (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-95430A, sc-95430B and sc-95430C.

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

ZKSCAN4 siRNA (h) is recommended for the inhibition of ZKSCAN4 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 ZKSCAN4 gene expression knockdown using RT-PCR Primer: ZKSCAN4 (h)-PR: sc-95430-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.