

DEK siRNA (m): sc-44982

BACKGROUND

The mammalian nuclear phosphoprotein DEK is implicated in multiple cellular processes, including transcriptional regulation, mRNA processing, and chromatin remodeling, and is associated with a number of clinical autoimmune and neoplastic conditions. DEK, an abundant chromatin-associated protein, changes the topology of DNA in chromatin *in vitro*. Although first identified in a fusion with the CAN/Nup214 nucleoporin protein in a specific subtype of acute myelogenous leukemia, DEK is also an autoantigen in patients with pauciarticular onset juvenile rheumatoid arthritis. Furthermore, the last 65 amino acids of DEK can partially reverse the mutation-prone phenotype of cells from patients with ataxia-telangiectasia. The human DEK gene maps to chromosome 6p22.3.

REFERENCES

1. Fu, G.K., et al. 1997. DEK, an autoantigen involved in a chromosomal translocation in acute myelogenous leukemia, binds to the HIV-2 enhancer. *Proc. Natl. Acad. Sci. USA* 94: 1811-1815.
2. McGarvey, T., et al. 2000. The acute myeloid leukemia-associated protein, DEK, forms a splicing-dependent interaction with exon-product complexes. *J. Cell Biol.* 150: 309-320.
3. Kappes, F., et al. 2001. Subcellular localization of the human proto-oncogene protein DEK. *J. Biol. Chem.* 276: 26317-26323.
4. Sitwala, K.V., et al. 2002. YY1 and NF-Y binding sites regulate the transcriptional activity of the DEK and DEK-CAN promoter. *Oncogene* 21: 8862-8870.
5. Waldmann, T., et al. 2002. The ubiquitous chromatin protein DEK alters the structure of DNA by introducing positive supercoils. *J. Biol. Chem.* 277: 24988-24994.

CHROMOSOMAL LOCATION

Genetic locus: DEK (mouse) mapping to 13 A5.

PRODUCT

DEK siRNA (m) 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 DEK shRNA Plasmid (m): sc-44982-SH and DEK shRNA (m) Lentiviral Particles: sc-44982-V as alternate gene silencing products.

For independent verification of DEK (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-44982A, sc-44982B and sc-44982C.

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.

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

DEK siRNA (m) is recommended for the inhibition of DEK expression in mouse 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

DEK (2): sc-136222 is recommended as a control antibody for monitoring of DEK 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 DEK gene expression knockdown using RT-PCR Primer: DEK (m)-PR: sc-44982-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.