

IKK α siRNA (h): sc-29365

BACKGROUND

The transcription factor NF κ B is retained in the cytoplasm in an inactive form by the inhibitory protein I κ B. Activation of NF κ B requires that I κ B be phosphorylated on specific serine residues, which results in targeted degradation of I κ B. I κ B kinase α (IKK α), previously designated CHUK, interacts with I κ B- α and specifically phosphorylates I κ B- α on Ser 32 and 36, the sites that trigger its degradation. IKK α appears to be critical for NF κ B activation in response to proinflammatory cytokines. Phosphorylation of I κ B by IKK α is stimulated by the NF κ B inducing kinase (NIK), which itself is a central regulator for NF κ B activation in response to TNF and IL-1. The functional IKK complex contains three subunits, IKK α , IKK β and IKK γ (also designated NEMO), and each appear to make essential contributions to I κ B phosphorylation.

CHROMOSOMAL LOCATION

Genetic locus: CHUK (human) mapping to 10q24.31.

PRODUCT

IKK α siRNA (h) is a target-specific 19-25 nt siRNA 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 IKK α shRNA Plasmid (h): sc-29365-SH and IKK α shRNA (h) Lentiviral Particles: sc-29365-V as alternate gene silencing 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

IKK α siRNA (h) is recommended for the inhibition of IKK α 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.

PROTOCOLS

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

GENE EXPRESSION MONITORING

IKK α (B-8): sc-7606 is recommended as a control antibody for monitoring of IKK α 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).

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor IKK α gene expression knockdown using RT-PCR Primer: IKK α (h)-PR: sc-29365-PR (20 μ l, 424 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

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- Labrousse-Arias, D., et al. 2017. VHL promotes immune response against renal cell carcinoma via NF κ B-dependent regulation of VCAM-1. *J. Cell Biol.* 216: 835-847.
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- Hossain, F., et al. 2018. Notch signaling regulates mitochondrial metabolism and NF κ B activity in triple-negative breast cancer cells via IKK α -dependent non-canonical pathways. *Front. Oncol.* 8: 575.

RESEARCH USE

For research use only, not for use in diagnostic procedures.