

NKAP siRNA (m): sc-149988

BACKGROUND

NFκB, a pleiotropic transcription factor, is present in almost all cell types and is involved in many biological processes including inflammation, immunity, differentiation, cell growth, tumorigenesis and apoptosis. NFκB is a homo- or heterodimeric complex formed by the Rel-like domain-containing proteins RELA/p65, RELB, NFκB1/p105, NFκB1/p50, REL and NFκB2/p52. This complex is controlled by various mechanisms of post-translational modification and subcellular compartmentalization as well as by interactions with other cofactors or corepressors. NKAP (NFκB-activating protein) is a 415 amino acid nuclear protein that regulates TNF and IL1-induced NFκB activation. As component of a DNA-binding complex, NKAP also functions as a transcriptional repressor that acts on NOTCH target genes. Loss of NKAP blocks the development of αβ T-cells, suggesting that it is required for their maturation through repression of NOTCH genes.

REFERENCES

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3. Chen, D., Li, Z., Yang, Q., Zhang, J., Zhai, Z. and Shu, H.B. 2003. Identification of a nuclear protein that promotes NFκB activation. *Biochem. Biophys. Res. Commun.* 310: 720-724.
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5. Borggreffe, T. and Oswald, F. 2009. The Notch signaling pathway: transcriptional regulation at Notch target genes. *Cell. Mol. Life Sci.* 66: 1631-1646.
6. Pajeroski, A.G., Nguyen, C., Aghajanian, H., Shapiro, M.J. and Shapiro, V.S. 2009. NKAP is a transcriptional repressor of Notch signaling and is required for T cell development. *Immunity* 30: 696-707.
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CHROMOSOMAL LOCATION

Genetic locus: Nkap (mouse) mapping to X A3.3.

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

NKAP 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 μM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see NKAP shRNA Plasmid (m): sc-149988-SH and NKAP shRNA (m) Lentiviral Particles: sc-149988-V as alternate gene silencing products.

For independent verification of NKAP (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-149988A, sc-149988B and sc-149988C.

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

NKAP siRNA (m) is recommended for the inhibition of NKAP 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 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 NKAP gene expression knockdown using RT-PCR Primer: NKAP (m)-PR: sc-149988-PR (20 μl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.