



NBK siRNA (m): sc-45934

BACKGROUND

The Bcl-2 gene was isolated at the chromosomal breakpoint of t-bearing follicular B cell lymphomas. Bcl-2 blocks cell death following a variety of stimuli and confers a death-sparing effect to certain hematopoietic cell lines following growth factor withdrawal. Bcl-2 appears to function in several sub-cellular locations yet lacks any known motifs that would provide insight into its mechanism of action. A protein designated Bax p21 (for Bcl-associated X protein) has extensive amino acid homology with Bcl-2 and both heterodimerizes and homodimerizes with Bcl-2. Overexpression of Bax accelerates apoptotic death. Natural born killer (NBK), also known as Bik, is a protein that is functionally related to Bax, although the two proteins share very little sequence homology. NBK does not contain the conserved Bcl-2 homology domains (BH domains) characteristic of the Bcl-2 family. It does, however, share nine amino acids with Bax in a region designated BH3, which may be the critical determinant for the NBK death-promoting activities.

REFERENCES

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3. Hockenbery, D.M., et al. 1991. Bcl-2 protein is topographically restricted in tissues characterized by apoptotic cell death. *Proc. Natl. Acad. Sci. USA* 88: 6961-6965.
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6. Boyd, J.M., et al. 1995. Bik, a novel death-inducing protein, shares a distinct sequence motif with Bcl-2 family proteins and interacts with viral and cellular survival-promoting proteins. *Oncogene* 11: 1921-1928.
7. Oppermann, M., et al. 2005. Caspase-independent induction of apoptosis in human melanoma cells by the proapoptotic Bcl-2-related protein Nbk/Bik. *Oncogene* 24: 7369-7380.
8. Garcia, N., et al. 2005. A molecular analysis by gene expression profiling reveals Bik/NBK overexpression in sporadic breast tumor samples of Mexican females. *BMC Cancer* 5: 93.
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CHROMOSOMAL LOCATION

Genetic locus: Bik (mouse) mapping to 15 E1.

PROTOCOLS

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

PRODUCT

NBK 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 NBK shRNA Plasmid (m): sc-45934-SH and NBK shRNA (m) Lentiviral Particles: sc-45934-V as alternate gene silencing products.

For independent verification of NBK (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-45934A, sc-45934B and sc-45934C.

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

NBK siRNA (m) is recommended for the inhibition of NBK 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor NBK gene expression knockdown using RT-PCR Primer: NBK (m)-PR: sc-45934-PR (20 μ l, 418 bp). 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.