

NBK (E-20): sc-30552

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

1. Bakhshi, A., et al. 1985. Cloning the chromosomal breakpoint of t(14;18) human lymphomas: clustering around JH on chromosome 14 and near a transcriptional unit on 18. *Cell* 41: 899-906.
2. Nunez, G., et al. 1990. Deregulated Bcl-2 gene expression selectively prolongs survival of growth factor-deprived hemopoietic cell lines. *J. Immunol.* 144: 3602-3610.
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.
4. Jacobson, M.D., et al. 1993. Bcl-2 blocks apoptosis in cells lacking mitochondrial DNA. *Nature* 361: 365-369.
5. Oltvai, Z.N., et al. 1993. Bcl-2 heterodimerizes *in vivo* with a conserved homolog, Bax, that accelerates programmed cell death. *Cell* 74: 609-619.
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.

CHROMOSOMAL LOCATION

Genetic locus: BIK (human) mapping to 22q13.2; Bik (mouse) mapping to 15 E1.

SOURCE

NBK (E-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of NBK of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-30552 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

NBK (E-20) is recommended for detection of NBK of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for NBK siRNA (h): sc-36016, NBK siRNA (m): sc-45934, NBK shRNA Plasmid (h): sc-36016-SH, NBK shRNA Plasmid (m): sc-45934-SH, NBK shRNA (h) Lentiviral Particles: sc-36016-V and NBK shRNA (m) Lentiviral Particles: sc-45934-V.

Molecular Weight of NBK: 20 kDa.

Positive Controls: Ramos cell lysate: sc-2216, HL-60 whole cell lysate: sc-2209 or BJAB whole cell lysate: sc-2207.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Kfir, S., et al. 2007. Staurosporine sensitizes T lymphoma cells to glucocorticoid-induced apoptosis: role of Nur77 and Bcl-2. *Cell Cycle* 6: 3086-3096.
2. Ban, K. and Kozar, R.A. 2010. Glutamine protects against apoptosis via downregulation of Sp3 in intestinal epithelial cells. *Am. J. Physiol. Gastrointest. Liver Physiol.* 299: G1344-G1353.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

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

PROTOCOLS

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



Try **NBK (H-1): sc-365625**, our highly recommended monoclonal alternative to NBK (E-20).