



NBK (h2): 293T Lysate: sc-129222

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 subcellular 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.
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.
9. Sturm, I., et al. 2006. Loss of the tissue-specific proapoptotic BH3-only protein NBK/Bik is a unifying feature of renal cell carcinoma. *Cell Death Differ.* 13: 619-627.

CHROMOSOMAL LOCATION

Genetic locus: BIK (human) mapping to 22q13.2.

PRODUCT

NBK (h2): 293T Lysate represents a lysate of human NBK transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

NBK (h2): 293T Lysate is suitable as a Western Blotting positive control for human reactive NBK antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. 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 for detailed protocols and support products.