SANTA CRUZ BIOTECHNOLOGY, INC.

NBK (FL-160): sc-10770

BACKGROUND

The Bcl-2 gene was isolated at the chromosomal breakpoint of τ-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 (i.e., Bcl-associated X protein) has extensive amino acid homology with Bcl-2 and both homodimerizes and heterodimerizes 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.

CHROMOSOMAL LOCATION

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

SOURCE

NBK (FL-160) is a rabbit polyclonal antibody raised against amino acids 1-160 representing full length NBK (natural born killer) 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.

APPLICATIONS

NBK (FL-160) is recommended for detection of NBK of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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 shRNA Plasmid (h): sc-36016-SH and NBK shRNA (h) Lentiviral Particles: sc-36016-V.

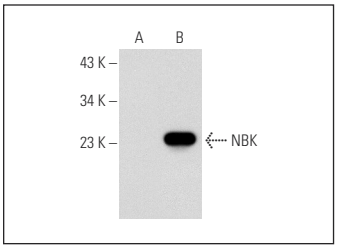
Molecular Weight of NBK: 20 kDa.

Positive Controls: NBK (h2): 293T Lysate: sc-129222, HL-60 whole cell lysate: sc-2209 or BJAB whole cell lysate: sc-2207.

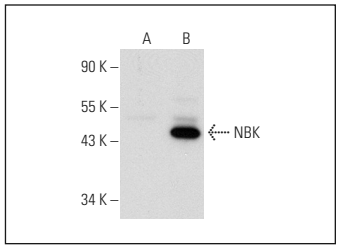
STORAGE

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

DATA



NBK (FL-160): sc-10770. Western blot analysis of NBK expression in non-transfected: sc-117752 (**A**) and human NBK transfected: sc-129222 (**B**) 293T whole cell lysates.



NBK (FL-160): sc-10770. Western blot analysis of NBK expression in non-transfected: sc-117752 (**A**) and human NBK transfected: sc-129223 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Sugiyama, T., et al. 2002. Activation of mitochondrial voltage-dependent anion channel by apro-apoptotic BH3-only protein Bim. Oncogene 21: 4944-4956.
2. Vijayalingam, S., et al. 2009. Down-regulation of multiple cell survival proteins in head and neck cancer cells by an apoptogenic mutant of adenovirus type 5. Virology 392: 62-72.
3. Blatt, N.B., et al. 2009. Bz-423 superoxide signals B cell apoptosis via 4cl-1, Bak, and Bax. Biochem. Pharmacol. 78: 966-973.
4. Sosa Seda, I.M., et al. 2010. Noxa mediates hepatic stellate cell apoptosis by proteasome inhibition. Hepatol. Res. 40: 701-710.
5. Hadji, A., et al. 2010. Caspase-3 triggers a TPCK-sensitive protease pathway leading to degradation of the BH3-only protein puma. Apoptosis 15: 1529-1539.
6. Zang, Y., et al. 2012. Carfilzomib and ONX 0912 inhibit cell survival and tumor growth of head and neck cancer and their activities are enhanced by suppression of Mcl-1 or autophagy. Clin. Cancer Res. 18: 5639-5649.
7. Jiao, S., et al. 2014. BikDDA, a mutant of Bik with longer half-life expression protein, can be a novel therapeutic gene for triple-negative breast cancer. PLoS ONE 9: e92172.

RESEARCH USE

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