SANTA CRUZ BIOTECHNOLOGY, INC.

NBK (N-19): sc-1710

SANTA CRUZ BIOTECHNOLOGY
The Power to Question

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 hetero-dimerizes 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.

CHROMOSOMAL LOCATION

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

SOURCE

NBK (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus 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-1710 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

NBK (N-19) 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, Raji whole cell lysate: sc-364236 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.

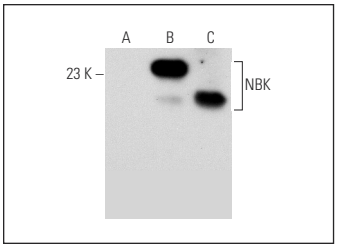
PROTOCOLS

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

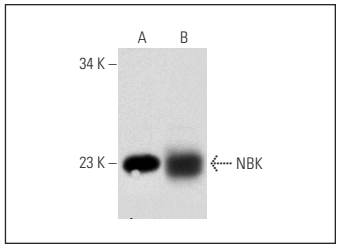
RESEARCH USE

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

DATA



NBK (N-19): sc-1710. Western blot analysis of NBK expression in non-transfected 293T: sc-117752 (**A**), human NBK transfected 293T: sc-129222 (**B**) and BJAB (**C**) whole cell lysates.



NBK (N-19): sc-1710. Western blot analysis of NBK expression in BJAB (**A**) and Raji (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Marshansky, V., et al. 2001. Proteasomes modulate balance among pro-apoptotic and anti-apoptotic Bcl-2 family members and compromise functioning of the electron transport chain in leukemic cells. J. Immunol. 166: 3130-3142.
2. Gillissen, B., et al. 2007. Mcl-1 determines the Bax dependency of Nbk/Bik-induced apoptosis. J. Cell Biol. 179: 701-715.
3. Gómez-Benito, M., et al. 2007. Mechanism of apoptosis induced by IFN-α in human myeloma cells: role of Jak1 and Bim and potentiation by rapamycin. Cell. Signal. 19: 844-854.
4. Fu, Y., et al. 2007. GRP78/BiP inhibits endoplasmic reticulum BIK and protects human breast cancer cells against estrogen starvation-induced apoptosis. Cancer Res. 67: 3734-3740.
5. Lopez-Royuela, N., et al. 2010. Different contribution of BH3-only proteins and caspases to doxorubicin-induced apoptosis in p53-deficient leukemia cells. Biochem. Pharmacol. 79: 1746-1758.
6. Bodet, L., et al. 2010. BH3-only protein Bik is involved in both apoptosis induction and sensitivity to oxidative stress in multiple myeloma. Br. J. Cancer 103: 1808-1814.
7. Zhang, L., et al. 2011. Selective involvement of BH3-only proteins and differential targets of Noxa in diverse apoptotic pathways. Cell Death Differ. 18: 864-873.
8. Touzeau, C., et al. 2011. ABT-737 induces apoptosis in mantle cell lymphoma cells with a Bcl-2high/Mcl-1low profile and synergizes with other antineoplastic agents. Clin. Cancer Res. 17: 5973-5981.