



Bax (1-171): sc-4239 WB

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 is localized to outer mitochondrial membranes and endoplasmic reticulum as well as nuclear membranes. A related protein, designated Bax p21 (for Bcl-associated X protein), has extensive amino acid homology with Bcl-2 and both homodimerizes and forms heterodimers with Bcl-2. Overexpression of Bax accelerates apoptotic death induced by cytokine deprivation in an IL-3 dependent cell line, and Bax also counters the death repressor activity of Bcl-2.

REFERENCES

1. Bakhshi, A., Jensen, J.P., Goldman, P., Wright, J.J., McBride, O.W., Epstein, A.L. and Korsmeyer, S.J. 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. Vaux, D.L., Cory, S. and Adams, J.M. 1988. Bcl-2 promotes the survival of haemopoietic cells and cooperates with c-Myc to immortalize pre-B cells. *Nature* 335: 440-442.
3. Chen-Levy, Z., Nourse, J. and Cleary, M.L. 1989. The Bcl-2 candidate proto-oncogene product is a 24 kDa integral-membrane protein highly expressed in lymphoid cell lines and lymphomas carrying the t(14;18). *Mol. Cell. Biol.* 9: 701-710.
4. Nunez, G., London, L., Hockenbery, D., Alexander, M. and McKearn, J.P. 1990. Deregulated Bcl-2 gene expression selectively prolongs survival of growth factor-deprived hemopoietic cell lines. *J. Immunol.* 144: 3602-3610.
5. Hockenbery, D.M., Zutter, M., Hickey, W., Nahm, M. and Korsmeyer, S.J. 1991. Bcl-2 protein is topographically restricted in tissues characterized by apoptotic cell death. *Proc. Natl. Acad. Sci. USA* 88: 6961-6965.
6. Jacobson, M.D., Burne, J.F., King, M.P., Miyashita, T., Reed, J.C. and Raff, M.C. 1993. Bcl-2 blocks apoptosis in cells lacking mitochondrial DNA. *Nature* 361: 365-369.
7. Oltvai, Z.N., Millman, C.L. and Korsmeyer, S.J. 1993. Bcl-2 heterodimerizes *in vivo* with a conserved homolog, Bax, that accelerates programmed cell death. *Cell* 74: 609-619.
8. Nagata, S. 1997. Apoptosis by death factor. *Cell* 88: 355-365.

CHROMOSOMAL LOCATION

Genetic locus: BAX (human) mapping to 19q13.33; Bax (mouse) mapping to 7 B5.

SOURCE

Bax (1-171) is expressed in *E. coli* as a 47 kDa polyhistidine tagged fusion protein corresponding to amino acids 1-171 representing all but the C-terminal 21 amino acid residues of Bax of mouse origin.

RESEARCH USE

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

PRODUCT

Bax (1-171) is purified from bacterial lysates (> 98%) by Ni²⁺ affinity chromatography; supplied as 10 µg in 0.1 ml SDS-PAGE loading buffer.

APPLICATIONS

Bax (1-171) is suitable as a Western blotting control for sc-493, sc-526, sc-1716, sc-6236 and sc-7480.

Molecular Weight of Bax: 23 kDa.

SELECT PRODUCT CITATIONS

1. Jee, S.H., Shen, S.C., Tseng, C.R., Chiu H.C. and Kuo, M.L. 1998. Curcumin induces a p53-dependent apoptosis in human basal cell carcinoma cells. *J. Invest. Dermatol.* 111: 656-661.
2. Sakai, T., Takaya, S., Fukuda, A., Harada, O. and Kobayashi, M. 2003. Evaluation of warm ischemia-reperfusion injury using heat shock protein in the rat liver. *Transpl. Int.* 16: 88-99.
3. Wu, H., Li, X., Feng, M., Yao, L., Deng, Z., Zao, G., Zhou, Y., Chen, S. and Du, Z. 2018. Downregulation of RNF138 inhibits cellular proliferation, migration, invasion and EMT in glioma cells via suppression of the Erk signaling pathway. *Oncol. Rep.* 40: 3285-3296.
4. Li, B., Zhang, X., Zhang, C., Shen, Q., Sun, G. and Sun, X. 2018. Single-walled carbon nanohorn aggregates promotes mitochondrial dysfunction-induced apoptosis in hepatoblastoma cells by targeting SIRT3. *Int. J. Oncol.* 53: 1129-1137.
5. Zhang, B., Zhang, X., Zhang, C., Shen, Q., Sun, G. and Sun, X. 2019. Notoginsenoside R1 Protects db/db mice against diabetic nephropathy via upregulation of Nrf2-mediated HO-1 expression. *Molecules* 24: 247.
6. Yang, L., Gao, Z., Lei, L., Lv, Q., Zhao, Q., Li, L., Cao, X. and Fu, W. 2019. Lycium barbarum polysaccharide enhances development of previously-cryopreserved murine two-cell embryos via restoration of mitochondrial function and down-regulated generation of reactive oxygen species. *J. Reprod. Dev.* 65: 163-170.
7. Ren, Z., He, M., Shen, T., Wang, K., Meng, Q., Chen, X., Zhou, L., Han, Y., Ji, C., Liu, S. and Fu, Q. 2020. MiR-421 promotes the development of osteosarcoma by regulating MCP1P1 expression. *Cancer Biol. Ther.* 21: 231-240.

STORAGE

Store at -20° C. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

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