SANTA CRUZ BIOTECHNOLOGY, INC.

p-Bad (Ser 112): sc-7998

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The Bcl-2 family of proteins is characterized by its ability to modulate cell death (apoptosis) under a broad range of physiologic conditions. Bcl-2 and several related proteins function to inhibit apoptosis while other members of the Bcl-2 family, such as Bax and Bak, enhance cell death under various conditions. For instance, Bcl-x_L represses cell death, while its shorter form, Bcl-x_S, promotes apoptosis. A protein designated Bad exhibits homology to Bcl-2 limited to the BH1 and BH2 domains. Bad functions to dimerize with Bcl-x_L and with Bcl-2, but not with Bax, Bcl-x_S, Mcl-1, A1 or itself. In mammalian cells, Bad binds with greater affinity to Bcl-x_L than to Bcl-2 and reverses the death repressor activity of Bcl-x_L but not Bcl-2. Dimerization of Bad with Bcl-x_L results in displacement of Bax from Bcl-x_L:Bax complexes, thereby causing restoration of Bax-mediated apoptosis.

REFERENCES

1. Nuñez, 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.
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3. Oltvai, Z.N., Milliman, 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.
4. Yin, X.-M., Oltvai, Z.N. and Korsmeyer, S.J. 1994. BH1 and BH2 domains of Bcl-2 are required for inhibition of apoptosis and heterodimerization with Bax. Nature 369: 321-323.
5. Gottschalk, A.R., Boise, L.H., Thompson, C.B. and Quintáns, J. 1994. Identification of immunosuppressant-induced apoptosis in a murine B cell line and its prevention by Bcl-x but not Bcl-2. Proc. Natl. Acad. Sci. USA 91: 7350-7354.
6. Chittenden, T., Harrington, E.A., O'Connor, R., Flemington, C., Lutz, R.J., Evan, G.I. and Guild, B.C. 1995. Induction of apoptosis by the Bcl-2 homologue Bak. Nature 374: 733-736.
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8. Yang, E., Zha, J., Jockel, J., Boise, L.H., Thompson, C.B. and Korsmeyer, S.J. 1995. Bad, a heterodimeric partner for Bcl-x_L and Bcl-2, displaces Bax and promotes cell death. Cell 80: 285-291.

CHROMOSOMAL LOCATION

Genetic locus: BAD (human) mapping to 11q13.1; Bad (mouse) mapping to 19 A.

SOURCE

p-Bad (Ser 112) is available as either goat (sc-7998) or rabbit (sc-7998-R) polyclonal affinity purified antibody raised against a short amino acid sequence containing phosphorylated Ser 112 of Bad 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-7998 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

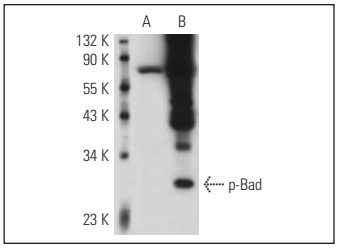
p-Bad (Ser 112) is recommended for detection of Ser 112 phosphorylated Bad of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1–2 µg per 100–500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 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 Bad siRNA (h): sc-29778 and Bad siRNA (m): sc-29779.

Molecular Weight of p-Bad: 25 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or calyculin-treated HeLa whole cell lysate.

DATA



p-Bad (Ser 112)-R: sc-7998-R. Western blot analysis of phosphorylated Bad expression in HeLa (**A**) and calyculin-treated HeLa (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Weber, G. and Menko, A.S. 2005. The canonical intrinsic mitochondrial death pathway has a non-apoptotic role in signaling lens cell differentiation. J. Biol. Chem. 280: 22135-22145.
2. Fukumori, T., et al. 2006. Galectin-3 regulates mitochondrial stability and antiapoptotic function in response to anticancer drug in prostate cancer. Cancer Res. 66: 3114-3119.

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.