SANTA CRUZ BIOTECHNOLOGY, INC.

p-Bcl-2 (74.Ser 70): sc-135757

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Apoptosis defines a set of cascades which, when initiated, programs the cell to undergo lethal changes such as membrane blebbing, mitochondrial break down and DNA fragmentation. Bcl-2 is one among many key regulators of apoptosis which are essential for proper development, tissue homeostasis and protection against foreign pathogens. Human Bcl-2 is a membrane-associated, anti-apoptotic oncoprotein that can promote cell survival through protein-protein interactions with other Bcl-2 related family members, such as the death suppressors Bcl-x_L, Mcl-1, Bcl-w and A1, or the death agonists Bax, Bak, Bik, Bad and BID. The anti-apoptotic function of Bcl-2 can also be regulated through proteolytic processing and phosphorylation. Bcl-2 may promote cell survival by interfering with the activation of the cytochrome c/Apaf-1 pathway through stabilization of the mitochondrial membrane. Mutations in the Bcl-2 gene can contribute to cancers where normal physiological cell death mechanisms are compromised by deregulation of the anti-apoptotic influence of Bcl-2.

REFERENCES

1. Kerr, J.F., et al. 1972. Apoptosis: a basic biological phenomenon with wide-ranging implications in tissue kinetics. Br. J. Cancer 26: 239-257.
2. Hockenbery, D., et al. 1990. Bcl-2 is an inner mitochondrial membrane protein that blocks programmed cell death. Nature 348: 334-336.
3. Alnemri, E.S., et al. 1992. Overexpressed full-length human Bcl-2 extends the survival of baculovirus-infected Sf9 insect cells. Proc. Natl. Acad. Sci. USA 89: 7295-7299.
4. Reed, J.C. 1994. Bcl-2 and the regulation of programmed cell death. J. Cell Biol. 124: 1-6.
5. Haldar, S., et al. 1995. Inactivation of Bcl-2 by phosphorylation. Proc. Natl. Acad. Sci. USA 92: 4507-4511.
6. Yang, J., et al. 1997. Prevention of apoptosis by Bcl-2: release of cytochrome c from mitochondria blocked. Science 275: 1129-1132.
7. Adams, J.M. and Cory, S. 1998. The Bcl-2 protein family: arbiters of cell survival. Science 281: 1322-1326.

CHROMOSOMAL LOCATION

Genetic locus: BCL2 (human) mapping to 18q21.33, Bcl2 (mouse) mapping to 1 E2.1.

SOURCE

p-Bcl-2 (74.Ser 70) is a rabbit monoclonal antibody raised against a short amino acid sequence containing Ser 70 phosphorylated Bcl-2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

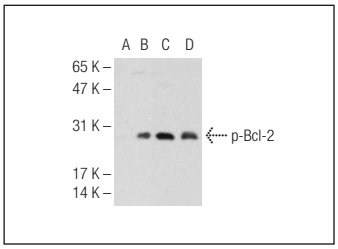
p-Bcl-2 (74.Ser 70) is recommended for detection of Ser 70 phosphorylated Bcl-2 of mouse, rat and human by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunohistochemistry (including paraffin-embedded sections) (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 Bcl-2 siRNA (h): sc-29214, Bcl-2 siRNA (m): sc-29215, Bcl-2 shRNA Plasmid (h): sc-29214-SH, Bcl-2 shRNA Plasmid (m): sc-29215-SH, Bcl-2 shRNA (h) Lentiviral Particles: sc-29214-V and Bcl-2 shRNA (m) Lentiviral Particles: sc-29215-V.

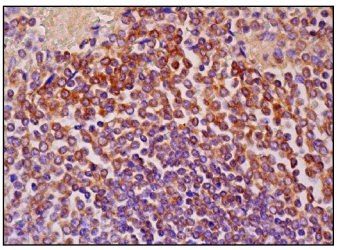
Molecular Weight of p-Bcl-2: 26 kDa.

Positive Controls: paclitaxel treated Jurkat whole cell lysate.

DATA



Western blot analysis of Bcl-2 phosphorylation in untreated (**A**,**C**), and paclitaxel treated (**B**,**D**) Jurkat whole cell lysates. Antibodies tested include p-Bcl-2 (74.Ser 70): sc-135757 (**A**,**B**) and Bcl-2 (C-2): sc-7382 (**C**,**D**).



p-Bcl-2 (74.Ser 70): sc-135757. Immunoperoxidase staining of formalin fixed, paraffin-embedded human spleen tissue showing cytoplasmic staining of cells in white pulp.

SELECT PRODUCT CITATIONS

1. Song, T., et al. 2013. S1 kills MCF-7/ADR cells more than MCF-7 cells: A protective mechanism of endoplasmic reticulum stress. Biomed. Pharmacother. 67: 731-736.
2. Acikgoz, E., et al. 2015. Enhanced G_2/M arrest, caspase related apoptosis and reduced E-Cadherin dependent intercellular adhesion by trabectedin in prostate cancer stem cells. PLoS ONE 10: e0141090.

RESEARCH USE

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

PROTOCOLS

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