SANTA CRUZ BIOTECHNOLOGY, INC.

Bcl-2 (100/D5): sc-56015



BACKGROUND

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 an anti-apoptotic, membrane-associated 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

- Kerr, J.F., et al. 1972. Apoptosis: a basic biological phenomenon with wide-ranging implications in tissue kinetics. Br. J. Cancer 26: 239-257.
- Hockenbery, D., et al. 1990. Bcl-2 is an inner mitochondrial membrane protein that blocks programmed cell death. Nature 348: 334-336.

CHROMOSOMAL LOCATION

Genetic locus: Bcl-2 (human) mapping to 18q21.33; Bcl-2 (mouse) mapping to 1 E2.1.

SOURCE

Bcl-2 (100/D5) is a mouse monoclonal antibody raised against amino acids 41-54 of Bcl-2 of human origin.

PRODUCT

Each vial contains 200 $\mu g\, lg G_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Bcl-2 (100/D5) is recommended for detection of Bcl-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

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 Bcl-2: 26 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209, Jurkat whole cell lysate: sc-2204 or Bcl-2 (h): 293T Lysate: sc-176463.

RESEARCH USE

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

STORAGE

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

DATA





Bcl-2 (100/D5): sc-56015. Western blot analysis of Bcl-2 expression in non-transfected 2931: sc-117752 (**A**), human Bcl-2 transfected 2931: sc-176463 (**B**) and HL-60 (**C**) whole cell lysates.

Bcl-2 (100/D5): sc-56015. Immunoperoxidase staining of formalin fixed, paraffin-embedded human spleen tissue showing cytoplasmic staining of cells in white pulp and cells in red pulp.

SELECT PRODUCT CITATIONS

- 1. Tsangaris, G.T., et al. 2002. Evaluation of cadmium-induced transcriptome alterations by three color cDNA labeling microarray analysis on a T-cell line. Toxicology 178: 135-160.
- He, M., et al. 2017. miR-486 suppresses the development of osteosarcoma by regulating PKC-8 pathway. Int. J. Oncol. 50: 1590-1600.
- 3. Huang, M., et al. 2018. Brd4 regulates the expression of essential autophagy genes and Keap1 in AML cells. Oncotarget 9: 11665-11676.
- Li, Z., et al. 2019. MiR-129-5p inhibits liver cancer growth by targeting calcium calmodulin-dependent protein kinase IV (CAMK4). Cell Death Dis. 10: 789.
- Zhao, S., et al. 2020. Evodiamine inhibits proliferation and promotes apoptosis of hepatocellular carcinoma cells via the Hippo-Yes-associated protein signaling pathway. Life Sci. 251: 117424.
- Hu, H. and Jian, X. 2021. The protective mechanism of action of plantamajoside on a rat model of acute spinal cord injury. Exp. Ther. Med. 21: 378.
- 7. Nassan, M.A., et al. 2022. Investigation of the anticancer effect of α -aminophosphonates and arylidine derivatives of 3-acetyl-1-aminoquinolin-2(1H)-one on the DMBA model of breast cancer in albino rats with in silico prediction of their thymidylate synthase inhibitory effect. Molecules 27: 756.
- Mut-Salud, N., et al. 2023. Discovery of a synthetic taiwaniaquinoid with potent *in vitro* and *in vivo* antitumor activity against breast cancer cells. Biomed. Pharmacother. 168: 115791.



See BcI-2 (C-2): sc-7382 for BcI-2 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor[®] 488, 546, 594, 647, 680 and 790.