

Bcl-2 (SPM117): sc-56018

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

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.

CHROMOSOMAL LOCATION

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

SOURCE

Bcl-2 (SPM117) is a mouse monoclonal antibody raised against a synthetic peptide corresponding to amino acids 41-54 of Bcl-2 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Bcl-2 (SPM117) 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 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10⁶ cells).

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.

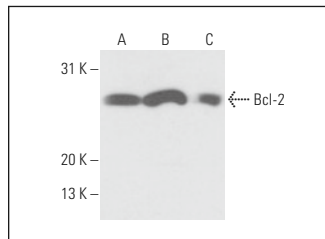
Molecular Weight of Bcl-2: 26 kDa.

Positive Controls: Bcl-2 (h): 293T Lysate: sc-176463, U-937 cell lysate: sc-2239 or HL-60 whole cell lysate: sc-2209.

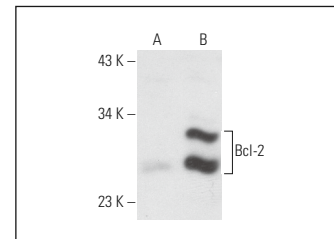
STORAGE

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

DATA



Bcl-2 (SPM117): sc-56018. Western blot analysis of Bcl-2 expression in U-937 (A), HL-60 (B) and Jurkat (C) whole cell lysates.



Bcl-2 (SPM117): sc-56018. Western blot analysis of Bcl-2 expression in non-transfected: sc-117752 (A) and human Bcl-2 transfected: sc-176463 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Wald, D.N., et al. 2008. Identification of 6-benzylthioinosine as a myeloid leukemia differentiation-inducing compound. *Cancer Res.* 68: 4369-4376.
2. Liang, Y.J., et al. 2009. Aromatase inhibitor letrozole in synergy with curcumin in the inhibition of xenografted endometrial carcinoma growth. *Int. J. Gynecol. Cancer* 19: 1248-1252.
3. Shrivastava, S., et al. 2012. Hepatitis C virus upregulates Beclin1 for induction of autophagy and activates mTOR signaling. *J. Virol.* 86: 8705-8712.
4. Johnson, J.L. and de Mejia, E.G. 2013. Flavonoid apigenin modified gene expression associated with inflammation and cancer and induced apoptosis in human pancreatic cancer cells through inhibition of GSK-3β/NFκB signaling cascade. *Mol. Nutr. Food Res.* 57: 2112-2127.
5. Qiao, Z., et al. 2015. Effect of thalidomide in combination with gemcitabine on human pancreatic carcinoma SW-1990 cell lines *in vitro* and *in vivo*. *Oncol. Lett.* 9: 2353-2360.
6. Johnson, J.L., et al. 2015. Luteolin and gemcitabine protect against pancreatic cancer in an orthotopic mouse model. *Pancreas* 44: 144-151.
7. Momenabadi, S., et al. 2022. Pre-ischemic oxytocin treatment alleviated neuronal injury via suppressing NFκB, MMP-9, and apoptosis regulator proteins in a mice model of stroke. *Cell J.* 24: 337-345.
8. Yang, S., et al. 2024. Disulfiram downregulates ferredoxin 1 to maintain copper homeostasis and inhibit inflammation in cerebral ischemia/reperfusion injury. *Sci. Rep.* 14: 15175.
9. Aksak Karamese, S., et al. 2025. Investigation of the anti-inflammatory, anti-oxidant and anti-apoptotic activity of 18β-glycyrrhetic acid on the model of LPS-induced lung injury in rats. *Mol. Immunol.* 181: 93-101.

RESEARCH USE

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