

Bcl-2 (5K140): sc-70411

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.
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.

CHROMOSOMAL LOCATION

Genetic locus: Bcl2 (mouse) mapping to 1 E2.1.

SOURCE

Bcl-2 (5K140) is a mouse monoclonal antibody raised against a synthetic peptide corresponding to aa 61-76 of mouse Bcl-2.

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 (5K140) is recommended for detection of Bcl-2 of mouse and rat 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for Bcl-2 siRNA (m): sc-29215, Bcl-2 shRNA Plasmid (m): sc-29215-SH and Bcl-2 shRNA (m) Lentiviral Particles: sc-29215-V.

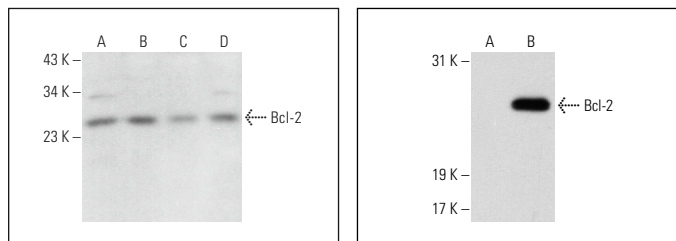
Molecular Weight of Bcl-2: 26 kDa.

Positive Controls: Bcl-2 (m): 293T Lysate: sc-118779, WEHI-231 whole cell lysate: sc-2213 or PC-12 cell lysate: sc-2250.

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 (5K140): sc-70411. Western blot analysis of Bcl-2 expression in WEHI-231 (A), PC-12 (B), A-10 (C) and TK-1 (D) whole cell lysates.

Bcl-2 (5K140): sc-70411. Western blot analysis of Bcl-2 expression in non-transfected: sc-117752 (A) and mouse Bcl-2 transfected: sc-118779 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Li, T., et al. 2011. Microcystin-LR (MCLR) induces a compensation of PP2A activity mediated by $\alpha 4$ protein in HEK293 cells. *Int. J. Biol. Sci.* 7: 740-752.
2. D'Orsi, B., et al. 2015. Bax regulates neuronal Ca²⁺ homeostasis. *J. Neurosci.* 35: 1706-1722.
3. D'Orsi, B., et al. 2016. Bok is not pro-apoptotic but suppresses poly ADP-ribose polymerase-dependent cell death pathways and protects against excitotoxic and seizure-induced neuronal injury. *J. Neurosci.* 36: 4564-4578.
4. Xue, Y., et al. 2018. Downregulation of frizzled-7 induces the apoptosis of hepatocellular carcinoma cells through inhibition of NF κ B. *Oncol. Lett.* 15: 7693-7701.
5. Yu, H., et al. 2019. Protective roles of isoastilbin against Alzheimer's disease via Nrf2-mediated antioxidation and anti-apoptosis. *Int. J. Mol. Med.* 43: 1406-1416.
6. Shen, L., et al. 2019. Downregulation of UBE2T can enhance the radiosensitivity of osteosarcoma *in vitro* and *in vivo*. *Epigenomics* 11: 1283-1305.
7. Wu, Y., et al. 2021. Role of autophagy and oxidative stress to astrocytes in fenpropatrin-induced Parkinson-like damage. *Neurochem. Int.* 145: 105000.
8. Zhang, J., et al. 2022. Hypoxia-inducible factor expression is related to apoptosis and cartilage degradation in temporomandibular joint osteoarthritis. *BMC Musculoskelet. Disord.* 23: 583.

RESEARCH USE

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



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