

Bcl-2 (YTH10C4): sc-81002

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.
5. Yang, J., et al. 1997. Prevention of apoptosis by Bcl-2: release of cytochrome c from mitochondria blocked. *Science* 275: 1129-1132.
6. Adams, J.M., et al. 1998. The Bcl-2 protein family: arbiters of cell survival. *Science* 281: 1322-1326.
7. Ojala, P.M., et al. 2000. The apoptotic v-cyclin-Cdk6 complex phosphorylates and inactivates Bcl-2. *Nat. Cell Biol.* 2: 819-825.

CHROMOSOMAL LOCATION

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

SOURCE

Bcl-2 (YTH10C4) is a mouse monoclonal antibody raised against a synthetic peptide corresponding to amino acids 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.

STORAGE

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

PROTOCOLS

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

APPLICATIONS

Bcl-2 (YTH10C4) 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.

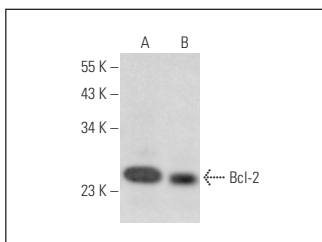
Molecular Weight of Bcl-2: 26 kDa.

Positive Controls: WEHI-231 whole cell lysate: sc-2213, Bcl-2 (m): 293T Lysate: sc-118779 or WR19L cell lysate: sc-3805.

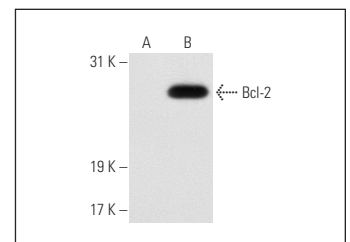
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Bcl-2 (YTH10C4): sc-81002. Western blot analysis of Bcl-2 expression in WR19L (A) and WEHI-231 (B) whole cell lysates.




Bcl-2 (YTH10C4): sc-81002. 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. Hernandez-Breijo, B., et al. 2011. Preclinical evaluation of azathioprine plus buthionine sulfoximine in the treatment of human hepatocarcinoma and colon carcinoma. *World J. Gastroenterol.* 17: 3899-3911.

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.