

Bcl-2 (7): sc-130308

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.

SOURCE

Bcl-2 (7) is a mouse monoclonal antibody raised against recombinant Bcl-2 of human origin.

PRODUCT

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

APPLICATIONS

Bcl-2 (7) is recommended for detection of Bcl-2 of 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 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 shRNA Plasmid (h): sc-29214-SH and Bcl-2 shRNA (h) Lentiviral Particles: sc-29214-V.

Molecular Weight of Bcl-2: 26 kDa.

Positive Controls: U-937 cell lysate: sc-2239, HL-60 whole cell lysate: sc-2209 or Jurkat whole cell lysate: sc-2204.

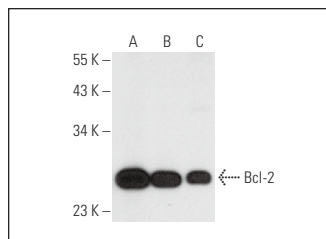
STORAGE

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

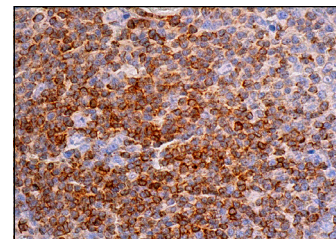
RESEARCH USE

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

DATA



Bcl-2 (7): sc-130308. Western blot analysis of Bcl-2 expression in HL-60 (A), U-937 (B) and Jurkat (C) whole cell lysates.



Bcl-2 (7): sc-130308. 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. Kalra, R.S., et al. 2013. Enhanced levels of double-strand DNA break repair proteins protect ovarian cancer cells against genotoxic stress-induced apoptosis. *J. Ovarian Res.* 6: 66.
2. Wang, C.L., et al. 2014. Ubiquitin-specific protease 2a stabilizes MDM4 and facilitates the p53-mediated intrinsic apoptotic pathway in glioblastoma. *Carcinogenesis* 35: 1500-1509.
3. Olaya-C, M., et al. 2015. Immunohistochemical protein expression profiling of growth- and apoptotic-related factors in relation to umbilical cord length. *Early Hum. Dev.* 91: 291-297.
4. Li, Y., et al. 2016. IL-7 receptor mutations and steroid resistance in pediatric T cell acute lymphoblastic leukemia: a genome sequencing study. *PLoS Med.* 13: e1002200.
5. Al Wafai, R., et al. 2017. Chemosensitivity of MCF7 cells to eugenol: release of cytochrome-c and lactate dehydrogenase. *Sci. Rep.* 7: 43730.
6. Lu, W., et al. 2018. Fordin: a novel type I ribosome inactivating protein from *Vernicia fordii* modulates multiple signaling cascades leading to anti-invasive and pro-apoptotic effects in cancer cells *in vitro*. *Int. J. Oncol.* 53: 1027-1042.
7. Tan, T., et al. 2021. 2,5-dimethyl celecoxib induces apoptosis and autophagy via activation of ROS/JNK axis in nasopharyngeal carcinoma cells. *Aging* 13: 21483-21496.
8. Canté-Barrett, K., et al. 2022. MEF2C opposes Notch in lymphoid lineage decision and drives leukemia in the thymus. *JCI Insight* 7: e150363.
9. He, C., et al. 2023. Crosstalk of renal cell carcinoma cells and tumor-associated macrophages aggravates tumor progression by modulating muscleblind-like protein 2/B-cell lymphoma 2/beclin 1-mediated autophagy. *Cytotherapy* 25: 298-309.

PROTOCOLS

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