SANTA CRUZ BIOTECHNOLOGY, INC.

Bcl-2 (8C8): sc-65392

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 (8C8) is a mouse monoclonal antibody raised against Bcl-2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Bcl-2 (8C8) 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)] and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Bcl-2 (8C8) is also recommended for detection of Bcl-2 in additional species, including porcine and monkey.

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: SUP-T1 whole cell lysate: sc-364796, U-698-M whole cell lysate: sc-364799 or Jurkat whole cell lysate: sc-2204.

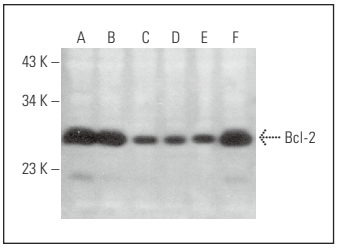
STORAGE

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

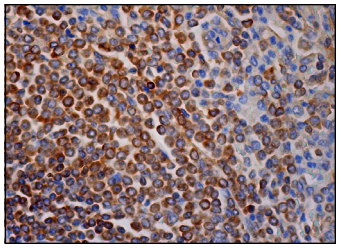
RESEARCH USE

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

DATA



Bcl-2 (8C8): sc-65392. Western blot analysis of Bcl-2 expression in SUP-T1 (**A**), U-698-M (**B**), MDA-MB-435S (**C**), HEK293 (**D**), HeLa (**E**) and Jurkat (**F**) whole cell lysates.



Bcl-2 (8C8): sc-65392. 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. Xu, J., et al. 2004. Morphine aggravates the apoptosis of simian immunodeficiency virus infected CEM x174 cells in the prolonged culture *in vitro*. Int. Immunopharmacol. 4: 1805-1816.
2. Mahon, F.X., et al. 2008. Evidence that resistance to nilotinib may be due to Bcr-Abl, Pgp, or Src kinase overexpression. Cancer Res. 68: 9809-9816.
3. Chang, W.H., et al. 2011. Amiloride modulates alternative splicing in leukemic cells and resensitizes Bcr-AblT315I mutant cells to imatinib. Cancer Res. 71: 383-392.
4. Onen, O., et al. 2012. Surface modification on acoustic wave biosensors for enhanced specificity. Sensors 12: 12317-12328.
5. Sousa, M.M., et al. 2013. An inverse switch in DNA base excision and strand break repair contributes to melphalan resistance in multiple cells. PLoS ONE 8: e55493.
6. Jin, H., et al. 2017. EGR2 is a gonadotropin-induced survival factor that controls the expression of IER3 in ovarian granulosa cells. Biochem. Biophys. Res. Commun. 482: 877-882.
7. Suh, D.S., et al. 2018. LRIG2 is a growth suppressor of Hec-1A and Ishikawa endometrial adenocarcinoma cells by regulating PI3K/AKT- and EGFR-mediated apoptosis and cell-cycle. Oncogenesis 7: 3.
8. Wandee, J., et al. 2019. Metformin sensitizes cholangiocarcinoma cell to cisplatin-induced cytotoxicity through oxidative stress mediated mitochondrial pathway. Life Sci. 217: 155-163.
9. Yoon, C., et al. 2021. PIK3R3, part of the regulatory domain of PI3K, is upregulated in sarcoma stem-like cells and promotes invasion, migration, and chemotherapy resistance. Cell Death Dis. 12: 749.

CONJUGATES

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.