SANTA CRUZ BIOTECHNOLOGY, INC.

Bcl-2 (C-2): sc-7382

SANTA CRUZ®
BIOTECHNOLOGY

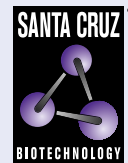*The Power to Question*

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.

CHROMOSOMAL LOCATION

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

SOURCE

Bcl-2 (C-2) is a mouse monoclonal antibody raised against amino acids 1-205 of 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.

Bcl-2 (C-2) is available conjugated to agarose (sc-7382 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-7382 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-7382 PE), fluorescein (sc-7382 FITC), Alexa Fluor® 488 (sc-7382 AF488), Alexa Fluor® 546 (sc-7382 AF546), Alexa Fluor® 594 (sc-7382 AF594) or Alexa Fluor® 647 (sc-7382 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-7382 AF680) or Alexa Fluor® 790 (sc-7382 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

In addition, Bcl-2 (C-2) is available conjugated to biotin (sc-7382 B), 200 µg/ml, for WB, IHC(P) and ELISA; and to either TRITC (sc-7382 TRITC, 200 µg/ml) or Alexa Fluor® 405 (sc-7382 AF405, 200 µg/ml), 100 tests in 2 ml, for IF, IHC(P) and FCM.

APPLICATIONS

Bcl-2 (C-2) 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 10^6 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.
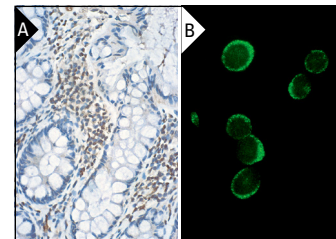
Molecular Weight of Bcl-2: 26 kDa.

STORAGE

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

DATA
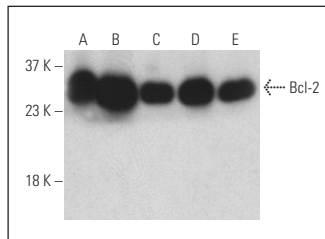
Bcl-2 (C-2): sc-7382. Western blot analysis of Bcl-2 expression in Raji (**A**), THP-1 (**B**), CCRF-CEM (**C**), SUP-T1 (**D**) and Jurkat (**E**) whole cell lysates. Detection reagent used: m-IgG$_1$ BP-HRP: sc-525408.

Bcl-2 (C-2): sc-7382. Immunoperoxidase staining of formalin-fixed, paraffin-embedded normal human colon tissue showing cytoplasmic staining of lymphoid cells (**A**). Immunofluorescence staining of methanol-fixed HL-60 cells showing cytoplasmic localization (**B**).

SELECT PRODUCT CITATIONS

1. Chau, Y.P., et al. 1998. Involvement of hydrogen peroxide in topoisomerase inhibitor β-lapachone-induced apoptosis and differentiation in human leukemia cells. Free Radic. Biol. Med. 24: 660-670.

2. Iyoda, T., et al. 2016. Coadministration of the FNIII14 peptide synergistically augments the anti-cancer activity of chemotherapeutic drugs by activating pro-apoptotic bim. PLoS ONE 11: e0162525.

3. Rivero-Segura, N.A., et al. 2017. Prolactin-induced neuroprotection against glutamate excitotoxicity is mediated by the reduction of [Ca^{2+}]i overload and NFκB activation. PLoS ONE 12: e0176910.

4. Grundy, M., et al. 2018. Early changes in rpS6 phosphorylation and BH3 profiling predict response to chemotherapy in AML cells. PLoS ONE 13: e0196805.

5. Maiti, P., et al. 2019. Combination treatment of berberine and solid lipid curcumin particles increased cell death and inhibited PI3K/Akt/mTOR pathway of human cultured glioblastoma cells more effectively than did individual treatments. PLoS ONE 14: e0225660.

6. Li, Y., et al. 2020. The function of a heterozygous p53 mutation in a Li-Fraumeni syndrome patient. PLoS ONE 15: e0234262.

7. Chen, Y.J., et al. 2021. A two-herb formula inhibits hyperproliferation of rheumatoid arthritis fibroblast-like synoviocytes. Sci. Rep. 11: 3850.

8. Zeng, C., et al. 2022. JNK initiates Beclin-1 dependent autophagic cell death against Akt activation. Exp. Cell Res. 414: 113105.

9. Paul, M., et al. 2023. *Trans*-differentiation of trophoblast stem cells: implications in placental biology. Life Sci. Alliance 6: e202201583.

RESEARCH USE

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

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