SANTA CRUZ BIOTECHNOLOGY, INC.

Bax (2D2): sc-20067

BACKGROUND

The Bcl-2 gene was isolated at the chromosomal breakpoint of t-bearing follicular B cell lymphomas. Bcl-2 blocks cell death following a variety of stimuli and confers a death-sparing effect to certain hematopoietic cell lines following growth factor withdrawal. Bcl-2 is localized to outer mitochondrial membranes and endoplasmic reticulum as well as nuclear membranes. A related protein, designated Bax p21 (for Bcl-associated X protein), has extensive amino acid homology with Bcl-2 and both homodimerizes and forms heterodimers with Bcl-2. Overexpression of Bax accelerates apoptotic death induced by cytokine deprivation in an IL-3 dependent cell line, and Bax also counters the death repressor activity of Bcl-2.

CHROMOSOMAL LOCATION

Genetic locus: BAX (human) mapping to 19q13.33; Bax (mouse) mapping to 7 B4.

SOURCE

Bax (2D2) is a mouse monoclonal antibody raised against a synthetic peptide corresponding to amino acids 3-16 of Bax 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.

Bax (2D2) is available conjugated to agarose (sc-20067 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-20067 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-20067 PE), fluorescein (sc-20067 FITC), Alexa Fluor® 488 (sc-20067 AF488), Alexa Fluor® 546 (sc-20067 AF546), Alexa Fluor® 594 (sc-20067 AF594) or Alexa Fluor® 647 (sc-20067 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-20067 AF680) or Alexa Fluor® 790 (sc-20067 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Bax (2D2) is recommended for detection of Bax 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 Bax siRNA (h): sc-29212, Bax siRNA (m): sc-29213, Bax shRNA Plasmid (h): sc-29212-SH, Bax shRNA Plasmid (m): sc-29213-SH, Bax shRNA (h) Lentiviral Particles: sc-29212-V and Bax shRNA (m) Lentiviral Particles: sc-29213-V.

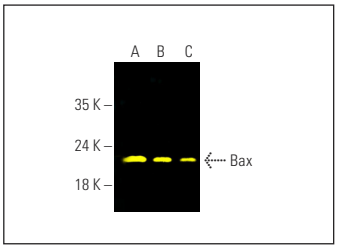
Molecular Weight of Bax: 23 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, Ramos cell lysate: sc-2216 or HT-1080 whole cell lysate: sc-364183.

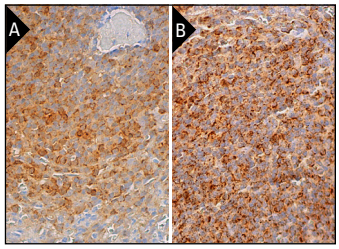
STORAGE

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

DATA



Bax (2D2): sc-20067. Fluorescent western blot analysis of Bax expression in HT-1080 (**A**), MCF7 (**B**) and Ramos (**C**) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgG_1 BP-CFL 488: sc-533661.



Bax (2D2) HRP: sc-20067 HRP. Direct immunoperoxidase staining of formalin fixed, paraffin-embedded human spleen tissue showing cytoplasmic staining of cells in white pulp and cells in red pulp. Blocked with 0.25X UltraCruz® Blocking Reagent: sc-516214 (**A**). Bax (2D2): sc-20067. Immunoperoxidase staining of formalin fixed, paraffin-embedded human spleen tissue showing cytoplasmic staining of cells in white pulp and cells in red pulp (**B**).

SELECT PRODUCT CITATIONS

1. Mitsiades, N., et al. 2003. Molecular sequelae of histone deacetylase inhibition in human malignant B cells. Blood 101: 4055-4062.
2. Brito, A.F., et al. 2016. New approach for treatment of primary liver tumors: the role of quercetin. Nutr. Cancer 68: 250-266.
3. Shehata, A.S., et al. 2017. Effect of mesenchymal stem cells on induced skeletal muscle chemodenervation atrophy in adult male albino rats. Int. J. Biochem. Cell Biol. 85: 135-148.
4. Fu, S., et al. 2018. Effect of sinomenine hydrochloride on radiosensitivity of esophageal squamous cell carcinoma cells. Oncol. Rep. 39: 1601-1608.
5. Clemente-Soto, A.F., et al. 2019. Quercetin induces G_2 phase arrest and apoptosis with the activation of p53 in an E6 expression-independent manner in HPV-positive human cervical cancer-derived cells. Mol. Med. Rep. 19: 2097-2106.
6. Hauseman, Z.J., et al. 2020. Homogeneous oligomers of pro-apoptotic BAX reveal structural determinants of mitochondrial membrane permeabilization. Mol. Cell 79: 68-83.e7.
7. Tsai, K.L., et al. 2021. Dapagliflozin attenuates hypoxia/reoxygenation-caused cardiac dysfunction and oxidative damage through modulation of AMPK. Cell Biosci. 11: 44.
8. Liu, Y., et al. 2022. TRPML1-induced autophagy inhibition triggers mitochondrial mediated apoptosis. Cancer Lett. 541: 215752.
9. Dukel, M. and Fiskin, K. 2023. Combination of PAKs inhibitors IPA-3 and PF-3758309 effectively suppresses colon carcinoma cell growth by perturbing DNA damage response. Int. J. Radiat. Biol. 99: 340-354.

RESEARCH USE

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