

Bcl-x_L (7B2.5): sc-56021

BACKGROUND

The Bcl-2 gene was isolated at the chromosomal breakpoint of t(14;18) 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. A second protein, designated Bcl-associated X protein (Bax) p21, has extensive amino acid homology with Bcl-2 and both homodimerizes and heterodimerizes 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. Bcl-x, one of several additional proteins with sequence homology to Bcl-2, is expressed as Bcl-x_L, a 233 amino acid protein with 43% sequence identity with Bcl-2 that suppresses cell death, and Bcl-x_S, a shorter variant that is 178 amino acids in length and lacks a 63 amino acid region (amino acids 126-188) found in Bcl-x_L and which functions as a dominant inhibitor of Bcl-2. A further apoptosis-inducing protein, Bad, dimerizes both with Bcl-x_L and to a lesser extent with Bcl-2, thus displacing Bax and inducing apoptosis.

CHROMOSOMAL LOCATION

Genetic locus: BCL2L1 (human) mapping to 20q11.21; Bcl2l1 (mouse) mapping to 2 H1.

SOURCE

Bcl-x_L (7B2.5) is a mouse monoclonal antibody raised against full length Bcl-x_L of human origin.

PRODUCT

Each vial contains 50 µg IgG₃ in 0.5 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Bcl-x_L (7B2.5) is recommended for detection of Bcl-x_L 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), flow cytometry (1 µg per 1 x 10⁶ cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Bcl-x_L siRNA (h): sc-43630, Bcl-x_L siRNA (m): sc-44802, Bcl-x_L siRNA (r): sc-270538, Bcl-x_L shRNA Plasmid (h): sc-43630-SH, Bcl-x_L shRNA Plasmid (m): sc-44802-SH, Bcl-x_L shRNA Plasmid (r): sc-270538-SH, Bcl-x_L shRNA (h) Lentiviral Particles: sc-43630-V, Bcl-x_L shRNA (m) Lentiviral Particles: sc-44802-V and Bcl-x_L shRNA (r) Lentiviral Particles: sc-270538-V.

Molecular Weight of Bcl-x_L: 30 kDa.

Positive Controls: BJAB whole cell lysate: sc-2207, SW480 cell lysate: sc-2219 or C6 whole cell lysate: sc-364373.

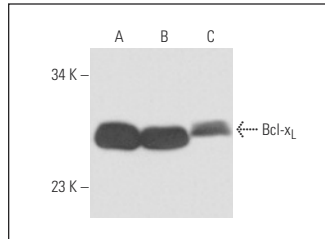
STORAGE

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-x_L (7B2.5): sc-56021. Western blot analysis of Bcl-x_L expression in BJAB (A), SW480 (B) and C6 (C) whole cell lysates.

SELECT PRODUCT CITATIONS

- Chiu, C.C., et al. 2009. Effects of cardiotoxin III on NFκB function, proliferation, and apoptosis in human breast MCF-7 cancer cells. *Oncol. Res.* 17: 311-321.
- Liu, X.H., et al. 2010. Iodine induces apoptosis via regulating MAPKs-related p53, p21, and Bcl-x_L in thyroid cancer cells. *Mol. Cell. Endocrinol.* 320: 128-135.
- Pujals, A., et al. 2011. Treatment with a BH3 mimetic overcomes the resistance of latency III EBV⁺ cells to p53-mediated apoptosis. *Cell Death Dis.* 2:e184.
- Wang, W., et al. 2014. Interleukin 17A promotes pneumococcal clearance by recruiting neutrophils and inducing apoptosis through a p38 mitogen-activated protein kinase-dependent mechanism in acute otitis media. *Infect. Immun.* 82: 2368-2377.
- Söderholm, S., et al. 2016. Phosphoproteomics to characterize host response during Influenza A Virus infection of human macrophages. *Mol. Cell. Proteomics* 15: 3203-3219.
- Castrogiovanni, C., et al. 2018. Serine 392 phosphorylation modulates p53 mitochondrial translocation and transcription-independent apoptosis. *Cell Death Differ.* 25: 190-203.
- Yang, C., et al. 2019. Study of the cytological features of bone marrow mesenchymal stem cells from patients with neuromyelitis optica. *Int. J. Mol. Med.* 43: 1395-1405.
- Piya, S., et al. 2019. BETP degradation simultaneously targets acute myelogenous leukemia stem cells and the microenvironment. *J. Clin. Invest.* 129: 1878-1894.



See **Bcl-x_L (H-5): sc-8392** for Bcl-x_L antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.