

## Bcl-w (2E4): sc-293236

### BACKGROUND

The Bcl-2 family of proteins is characterized by its ability to modulate cell death (apoptosis) under a broad range of physiological conditions. Bcl-2, A1 and Bcl-x<sub>L</sub> function to inhibit apoptosis while other members of the Bcl-2 family, Bax, Bad, Bak and Bcl-x<sub>S</sub> oppose their death-suppressing effects. Using a PCR-based strategy, an additional protein with life-promoting activity, designated Bcl-w, has been identified. The protein is highly conserved between mouse and human and is encoded by a gene located near the TCR $\alpha$  gene on chromosome 14. Bcl-w is expressed in myeloid cell lines but not in T and B lymphocytes, and can be found in a wide range of tissues. An alternative splicing event in exon 4 results in two transcripts. The first, Bcl-w, encodes a protein of 193 amino acids and the second, Bcl-w/rox, encodes a protein 333 amino acids in length. The "rox" portion of Bcl-w/rox shows a striking 66% amino acid sequence identity with the *Drosophila rox2* protein; however, the Bcl-w/rox transcript may be expressed at very low levels.

### REFERENCES

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2. Craig, R.W. 1995. The Bcl-2 gene family. *Semin. Cancer Biol.* 6: 35-43.
3. Sedlak, T.W., et al. 1995. Multiple Bcl-2 family members demonstrate selective dimerizations with Bax. *Proc. Natl. Acad. Sci. USA* 92: 7834-7838.
4. Brand, S.F., et al. 1995. Novel *Drosophila melanogaster* genes encoding RRM-type RNA-binding proteins identified by a degenerate PCR strategy. *Gene* 154: 187-192.
5. Gibson, L., et al. 1996. Bcl-w, a novel member of the Bcl-2 family, promotes cell survival. *Oncogene* 13: 665-675.
6. Karsan, A., et al. 1996. Cloning of human Bcl-2 homologue: inflammatory cytokines induce human A1 in cultured endothelial cells. *Blood* 87: 3089-3096.
7. Chauhan, D., et al. 2006. A novel Bcl-2/Bcl-x<sub>L</sub>/Bcl-w inhibitor ABT-737 as therapy in multiple myeloma. *Oncogene* 26: 2374-2380.
8. Yao, M., et al. 2007. Estrogen regulates Bcl-w and Bim expression: role in protection against  $\beta$ -Amyloid peptide-induced neuronal death. *J. Neurosci.* 27: 1422-1433.
9. Lin, X., et al. 2007. "Seed" analysis of off-target siRNAs reveals an essential role of Mcl-1 in resistance to the small-molecule Bcl-2/Bcl-x<sub>L</sub> inhibitor ABT-737. *Oncogene* 6: 3972-3979.

### CHROMOSOMAL LOCATION

Genetic locus: BCL2L2 (human) mapping to 14q11.2; Bcl2l2 (mouse) mapping to 14 C3.

### SOURCE

Bcl-w (2E4) is a mouse monoclonal antibody raised against amino acids 1-193 representing full length Bcl-w of human origin.

### PRODUCT

Each vial contains 100  $\mu$ g IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

### APPLICATIONS

Bcl-w (2E4) is recommended for detection of Bcl-w of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Bcl-w siRNA (h): sc-37293, Bcl-w siRNA (m): sc-37294, Bcl-w shRNA Plasmid (h): sc-37293-SH, Bcl-w shRNA Plasmid (m): sc-37294-SH, Bcl-w shRNA (h) Lentiviral Particles: sc-37293-V and Bcl-w shRNA (m) Lentiviral Particles: sc-37294-V.

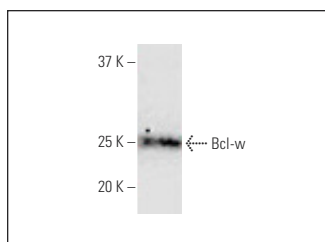
Molecular Weight of Bcl-w: 22 kDa.

Positive Controls: human colon extract: sc-363757.

### RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

### DATA



Bcl-w (2E4): sc-293236. Western blot analysis of Bcl-w expression in human colon tissue extract.

### 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.

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.