

## A1 (T-18): sc-6068

### BACKGROUND

The Bcl-2 family of proteins is characterized by its ability to modulate cell death under a broad range of physiological conditions. Bcl-2 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 death-suppressing effects. An additional member of the family, A1 (also designated Bfl-1), dimerizes with both Bcl-2 and Bax and has been identified as a hematopoietic-specific, early inducible gene. While A1 demonstrates life promoting properties similar to those of Bcl-2, its function may be more temporally regulated during myeloid differentiation and dependent on additional growth stimuli to confer its life promoting properties. A1 is abundantly expressed in bone marrow and at low levels in other tissues. There is evidence that a correlation exists between a high expression of the A1 gene product and stomach cancer.

### REFERENCES

1. Korsmeyer, S.J., et al. 1993. Bcl-2/Bax: a rheostat that regulates an anti-oxidant pathway and cell death. *Semin. Cancer Biol.* 4: 327-332.
2. Craig, R.W. 1995. The Bcl-2 gene family. *Semin. Cancer Biol.* 6: 35-43.
3. Yang, E., et al. 1995. Bad, a heterodimeric partner for Bcl-x<sub>L</sub> and Bcl-2, displaces Bax and promotes cell death. *Cell* 80: 285-291.
4. Chittenden, T., et al. 1995. Induction of apoptosis by the Bcl-2 homologue Bak. *Nature* 374: 733-736.
5. Sedlak, T.W., et al. 1995. Multiple Bcl-2 family members demonstrate selective dimerizations with Bax. *Proc. Natl. Acad. Sci. USA* 92: 7834-7838.

### CHROMOSOMAL LOCATION

Genetic locus: BCL2A1 (human) mapping to 15q25.1; Bcl2a1a (mouse) mapping to 9 E3.1.

### SOURCE

A1 (T-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of A1 of mouse origin.

### PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-6068 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### STORAGE

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

### PROTOCOLS

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

### APPLICATIONS

A1 (T-18) is recommended for detection of A1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for A1 siRNA (h): sc-37285, A1 siRNA (m): sc-37286, A1 shRNA Plasmid (h): sc-37285-SH, A1 shRNA Plasmid (m): sc-37286-SH, A1 shRNA (h) Lentiviral Particles: sc-37285-V and A1 shRNA (m) Lentiviral Particles: sc-37286-V.

Molecular Weight of A1: 20 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

### SELECT PRODUCT CITATIONS

1. Bellavia, D., et al. 2000. Constitutive activation of NFκB and T cell leukemia/lymphoma in Notch3 transgenic mice. *EMBO J.* 19: 3337-3348.
2. Nieborowska-Skorska, M., et al. 2002. Complementary functions of the antiapoptotic protein A1 and serine/threonine kinase Pim-1 in the Bcr/Abl-mediated leukemogenesis. *Blood* 99: 4531-4539.
3. Zhang, L., et al. 2004. Estrogen stimulates microglia and brain recovery from hypoxia-ischemia in normoglycemic but not diabetic female mice. *J. Clin. Invest.* 113: 85-95.
4. Katz, E., et al. 2004. Bcl-x<sub>L</sub> antagonism of Bcr-coupled mitochondrial phospholipase A<sub>2</sub> signaling correlates with protection from apoptosis in WEHI-231 B cells. *Blood* 103: 168-176.
5. Mathieu, J., et al. 2005. Retinoid-induced activation of NFκB in APL cells is not essential for granulocytic differentiation, but prolongs the life span of mature cells. *Oncogene* 24: 7145-7155.
6. Kubota, Y., et al. 2007. Mcl-1 depletion in apoptosis elicited by ionizing radiation in peritoneal resident macrophages of C3H mice. *J. Immunol.* 178: 2923-2931.
7. Carrio, R., et al. 2009. Impaired thymopoiesis occurring during the thymic involution of tumor-bearing mice is associated with a downregulation of the antiapoptotic proteins Bcl-x<sub>L</sub> and A1. *Int. J. Mol. Med.* 23: 89-98.
8. Wong, C., et al. 2012. Direct visualization of Bcl-2 family protein interactions using live cell fluorescent protein redistribution assays. *Cell Death Dis.* 3: e288.

### RESEARCH USE

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



Try **A1 (B-3): sc-166943**, our highly recommended monoclonal alternative to A1 (T-18).