

A1 (C-19): sc-6020



The Power to Question

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_L function to inhibit apoptosis while other members of the Bcl-2 family, Bax, Bad, Bak and Bcl-x_S, 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_L 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.
6. Choi, S.S., et al. 1995. A novel Bcl-2 related gene, Bfl-1, is overexpressed in stomach cancer and preferentially expressed in bone marrow. *Oncogene* 11: 1693-1698.
7. Lin, E.Y., et al. 1996. A1, a Bcl-2 family member, prolongs cell survival and permits myeloid differentiation. *Blood* 87: 983-992.

CHROMOSOMAL LOCATION

Genetic locus: BCL2A1 (human) mapping to 15q25.1; Bcl2a1 (mouse) mapping to 9 F3.

SOURCE

A1 (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of A1 of human 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-6020 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.

APPLICATIONS

A1 (C-19) 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).

A1 (C-19) is also recommended for detection of A1 in additional species, including equine, canine, bovine and porcine.

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.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Hinz, M., et al. 2001. Constitutive NFκB maintains high expression of a characteristic gene network, including CD40, CD86, and a set of antiapoptotic genes in Hodgkin/Reed-Sternberg cells. *Blood* 97: 2798-2807.
2. Nieborowska-Skorska, M., et al. 2002. Complementary functions of the anti-apoptotic protein A1 and serine/threonine kinase Pim-1 in the Bcr/Abl-mediated leukemogenesis. *Blood* 99: 4531-4539.
3. Marhaba, R., et al. 2003. CD44v7 interferes with activation-induced cell death by up-regulation of anti-apoptotic gene expression. *J. Leukoc. Biol.* 74: 135-148.
4. Hippe, D., et al. 2009. Toxoplasma gondii infection confers resistance against BimS-induced apoptosis by preventing the activation and mitochondrial targeting of pro-apoptotic Bax. *J. Cell Sci.* 122: 3511-3521.

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 (C-19).