

Bax β (S-18): sc-20288

BACKGROUND

The Bax protein belongs to a growing family of related Bcl-2 proteins which regulate apoptosis by controlling the permeability of the mitochondrial membrane to the apoptogenic protein cytochrome c. Cytochrome c, in turn, activates the proteolytic proteins known as caspases. The Bcl-2 protein family members play both pro-apoptotic and anti-apoptotic roles, and all possess at least one of four conserved motifs known as "Bcl-2 homology domains" (BH1 to BH4). These domains play key roles as binding sites which allow these proteins to form homodimers or heterodimers, thus regulating the apoptotic activity of these proteins. Bax is a 21 kDa cytosolic protein that plays a pro-apoptotic role by binding to the permeability transition pore complex (PTPC) and by binding Bcl-2, a protein which plays an anti-apoptotic role. The ratio between Bax/Bcl-2 heterodimers and Bax/Bax homodimers appears to be pivotal in determining the lifespan of a cell. Bax exhibits numerous splice variants, including alpha, beta, delta, gamma and kappa. Bax-beta is a 218 amino acid, 24 kDa protein. Intron 5 of Bax-beta RNA consists of 630 bp and does not undergo splicing, which accounts for the apparent size increase.

REFERENCES

1. Oltvai, Z., et al. 1993. Bcl-2 heterodimerizes *in vivo* with a conserved homology, Bax, that accelerates programmed cell death. *Cell* 74: 609-619.
2. Meijerink, J., et al. 1995. Bax mutations in cell lines derived from hematological malignancies. *Leukemia* 9: 1828-1832.
3. Adams, J., et al. 1998. The Bcl-2 protein family: arbiters of cell survival. *Science* 281: 1322-1326.
4. Shimizu, S., et al. 1999. Bcl-2 family proteins regulate the release of apoptogenic cytochrome c by the mitochondrial channel VDAC. *Nature* 399: 483-487.
5. Yanase, N., et al. 2000. Cytochrome c release, mitochondrial membrane depolarization, caspase-3 activation, and Bax-alpha cleavage during IFN-alpha-induced apoptosis in Daudi B lymphoma cells. *J. Interferon Cytokine Res.* 20: 1121-1129.
6. Jin, K., et al. 2001. Bax kappa, a novel Bax splice variant from ischemic rat brain lacking an ART domain, promotes neuronal cell death. *J. Neurochem.* 77: 1508-1519.
7. Li, Q., et al. 2001. The role of apoptosis in the pathogenesis of Fuchs endothelial dystrophy of the cornea. *Arch. Ophthalmol.* 119: 1597-1604.

CHROMOSOMAL LOCATION

Genetic locus: BAX (human) mapping to 19q13.33.

SOURCE

Bax β (S-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Bax β of human origin.

STORAGE

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

PRODUCT

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

Blocking peptide available for competition studies, sc-20288 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Bax β (S-18) is recommended for detection of Bax β of 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 Bax β siRNA (h): sc-37289, Bax β shRNA Plasmid (h): sc-37289-SH and Bax β shRNA (h) Lentiviral Particles: sc-37289-V.

Molecular Weight of Bax β : 21 kDa.

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.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

MONOS
Satisfaction
Guaranteed

Try **Bax (B-9): sc-7480**, our highly recommended monoclonal alternative to Bax β (S-18). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **Bax (B-9): sc-7480**.