



Product Information

ANTI-BAX

Developed in Rabbit, IgG Fraction of Antiserum

Product Number **B3428**

Product Description

Anti-Bax is developed in rabbit using a synthetic peptide GGPTSSEQIMKTGALLLQGF-K corresponding to the N-terminal region of Bax of human origin (Bax α , amino acids 11-30 with C-terminally added lysine), conjugated to KLH as immunogen. This sequence is identical in human Bax β and highly conserved in rat and mouse Bax α (single amino acid substitution) and human Bax δ . Whole antiserum is fractionated and then further purified by ion-exchange chromatography to provide the IgG fraction of antiserum that is essentially free of other rabbit serum proteins.

Anti-Bax recognizes Bax (23kD) by immunoblotting. Staining of the Bax band in immunoblotting is specifically inhibited with Bax immunizing peptide (Bax α , human, amino acids 11-30 with C-terminally added lysine).

Bax (also termed bcl-2-associated protein x) belongs to the Bcl-2 family of proteins which function as regulators of apoptosis.¹ The prototypic regulator of mammalian cell death is the protooncogene *bcl-2* which blocks apoptosis. Other members of this family that function as inhibitors of apoptosis include Bcl-x_L, Mcl-1 and A1. Several other Bcl-2 family members function to promote apoptosis e.g. Bax, Bcl-x_S, Bak, Bad, Bik and Bid. The *bax* gene encodes a 21 kD protein (Bax α , membrane isoform) and three cytosolic forms Bax β (24 kD), Bax γ (5 kD) and Bax δ (16kD) generated by alternative splicing. Bax contains highly conserved Bcl-2 homology 1, 2 and 3 (BH1, BH2 and BH3) domains required for dimerization.²⁻⁴ Bax can form homodimers and is also able to form heterodimers with Bcl-2 and Bcl-x_L, and when overexpressed it promotes apoptosis, countering the anti-apoptotic action of Bcl-2. Bax acts on mitochondria to induce cell death. It binds to the mitochondrial permeability transition pore complex (PTPC), and when expressed in cells, it induces mitochondrial dysfunction and the release of cytochrome C, leading to activation of caspases.^{5,6} Bax deficient mice

displays thymocytes and B cell hyper-plasia, and male germ cell death.⁷ Low expression or deletion of Bax in human leukemia cells and breast cancer cells indicate a function of Bax as a tumor suppressor⁸.

Reagents

The product is provided as IgG fraction of antiserum in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide (see MSDS)* as a preservative.

Precautions and Disclaimer

* Due to the sodium azide content a material safety data sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazardous and safe handling practices.

Storage/Stability

For continuous use, store at 2-8°C for up to one month. For extended storage freeze in working aliquots. Repeated freezing and thawing is not recommended. Storage in "frost-free" freezers is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use.

Product Profile

A minimum working dilution of 1:2,000 is determined by immunoblotting using a whole cell extract of the human breast adenocarcinoma MCF7 cell line.

Note: In order to obtain best results and assay sensitivity in different techniques and preparations we recommend determining optimal working dilutions by titration test.

References

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7. Knudson, C.M. et al., Science 270, 96 (1995).
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