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ProductInformation

ANTI-BCL-X
Developed in Rabbit, Affinity Isolated Antibody

Product Number **B9304**

Product Description

Anti-Bcl-x is developed in rabbit using a synthetic peptide SQSNRELVVDFLSYKLSQK corresponding to the N-terminal of human Bcl-$x_{S/L}$ (amino acids 2-20), conjugated to BSA as immunogen. This sequence is identical in several Bcl-x isoforms (e.g. Bcl-x_L, Bcl-x_S, Bcl-xα, β and γ) and conserved among various species (e.g. human, rat, mouse, pig and chicken). Anti- Bcl-x is affinity-purified using the immunogenic peptide immobilized on agarose.

Anti-Bcl-x recognizes human Bcl-x_L and Bclx_S (26 and 30 kDa). Applications include the detection and localization of Bcl-x by immunoblotting and immunohistochemistry. Staining of Bcl-x in immunoblotting is specifically inhibited with Bcl-x immunizing peptide (Bcl-$x_{S/L}$, human, amino acids 2-20).

Bcl-x belongs to the Bcl-2 family of proteins that are involved in regulating apoptosis.[1] At least 15 Bcl-2 family members have been identified in mammalian cells. Pro-survival members of the Bcl-2 family, which include Bcl-x_L, Bcl-w, Mcl-1 and A1, can inhibit apoptosis in response to a wide variety of cytotoxic insults, whereas the pro-apoptotic family members (e.g. Bax, Bak, Bad, Bik and Bid) in general antagonize the function of the pro-survival family members. The *bcl-x* gene encodes two distinct proteins as a result of alternative splicing, a long form (Bcl-x_L, 233 amino acids, apparent MW 29-30 kDa) and a short form (Bcl-x_s, apparent MW 21-26 kDa) which lacks 63 amino acids.[2] Additional Bcl-x isoforms (Bcl-x α, β and γ) have also been described. Bcl-x_L is similar in size and structure to Bcl-2. Similarly to Bcl-2, Bcl-x_L can inhibit cell death upon growth factor removal, when transfected in an IL-3 dependent cell line. The Bcl-x_s gene product inhibits the ability of bcl-2 to enhance cell survival in the absence of growth factors. Bcl-x_L is the more abundantly expressed Bcl-x. It is expressed in a wide variety of cell types, in embryonic and adult tissues, with the highest levels observed in the lymphoid system and in central nervous system (CNS).[3-6] Bcl-x immunoreactivity is typically present in the cytosol, or localized to the periphery of mitochondria.[4,7] Bcl-x_L has the ability to form ion channels in biological membranes, suggesting that it may maintain cell survival by regulating the permeability of intracellular membranes.[8] Bcl-x_L may bind Apaf-1 preventing it from activating caspase 9.[9] Like Bcl-2, Bcl-x activity is regulated by specific phosphorylation of a 60-amino acid regulatory loop region.[10] Bcl-x_L has been shown to regulate cell response to oxidative stress, cellular resistance to DNA damage-induced apoptosis by chemotherapeutic agents and ionizing radiation, and to play a key role in the development of the CNS and tissue homeostasis.[5,6,11,12]

Reagents

Anti-Bcl-x supplied as an affinity isolated antibody in 10 mM phosphate buffered saline, pH 7.4, containing 1% bovine serum albumin and 15 mM sodium azide.

Precautions and Disclaimer

Due to the sodium azide content a material safety 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. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

A minimum working dilution of 1:2,000 is determined by immunoblotting using a whole extract of the Burkitt lymphoma Raji cell line.

A minimum working dilution of 1:1,000 is determined by immunohistochemistry using formalin-fixed, paraffin-embedded sections of human colon adenocarcinoma.

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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