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ProductInformation

MONOCLONAL ANTI-Bcl-10
CLONE 151
Purified Mouse Immunoglobulin

Product Number **B7806**

Product Description

Monoclonal Anti-Bcl-10 (mouse IgG1 isotype) is derived from the 151 hybridoma produced by the fusion of mouse myeloma cells and splenocytes from BALB/c mouse immunized with a recombinant human Bcl-10.[1] The isotype is determined using Sigma ImmunoType™ Kit (Product Code ISO-1) and by a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents (Product Code ISO-2).

Monoclonal Anti-Bcl-10 reacts specifically with human[1, 2] Bcl-10. The epitope recognized by the antibody resides within amino acids 122-168 of human Bcl-10 molecule.[1] The product is useful in ELISA,[1] immunoblotting,[1, 2] and immunohistochemistry (formalin-fixed, paraffin-embedded tissue, following a heat retrieval).[1] In immunoblotting, the protein migrates to approximately 32 kDa with a weaker band at approximately 20 kDa.[2] A band at 37 kDa has also been reported.[1]

Bcl-10, also designated as CIPER, mE10, cE10, CARMEN, and CLAP, is an N-terminal CARD (Caspase Recruitment Domain) containing protein.[3-8] It is a cellular homologue of the equine herpesvirus-2 protein E-10 (vCLAP). Bcl-10 was implicated in the regulation of apoptosis by interacting with caspase 9, enhancing procaspase 9 processing, and triggering its activation when overexpressed in the cell.[5, 9] Bcl-10 cellular overexpression induces JNK, p38, and NF-κB activation. Deregulation of Bcl-10 expression was also demonstrated to be involved in cellular oncogenesis.[3, 7]

In mice, Bcl-10 plays an important role in the immune system functioning and in the development of the central nervous system while its roles in the *in vivo* execution of cell death and oncogenesis are not clear.[10] Mucosa-associated lymphoid tissue (MALT) B lymphomas with the t(1;14)(p22;q32) are associated with overexpression and constitutive activity of Bcl-10. Such tumors contain a variety of mutations, most of which result in truncations either in the CARD domain or carboxy-terminal to it. Bcl-10 mutations are also found in cases of follicular lymphoma and diffuse large B cell lymphoma.[2] Mutations of the Bcl-10 gene do not appear to play a major role in the pathogenesis of human solid neoplasms or leukemias. In normal tissues, Bcl-10 is detectable in lymphoid organs and in the cytoplasm of mammary gland cells. On the other hand, both nuclear and cytoplasmic expression are detected in MALT lymphomas especially those with the translocation t(1;14)(p22;q32).[1] Bcl-10 protein was reported to bind itself, TRAF1, TRAF2, TRAF5, and CARD9.[6, 9,11] Overexpressed Bcl-10 protein was shown to be arranged in cytoplasmic filaments in cultured cells and reported to be essential for recruitment of several signal transducer molecules such as TRADD and RIP.[12]

Monoclonal antibody reacting specifically with Bcl-10 is a useful tool to study the role of Bcl-10 in the regulation of signal transduction, apoptosis, and oncogenesis pathways.

Reagent

Monoclonal anti-Bcl-10 is supplied as an approximately 2 mg/ml solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide.

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 prolonged storage, freeze in working aliquots at –20 °C. Repeated freezing and thawing is not recommended. Storage in “frost-free” freezers is also 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 working concentration of 1-2 µg/ml is determined by immunoblotting, using a whole extract of cultured human lymphoma Raji cells.

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

References

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