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Product Information

Anti-B2M antibody, Mouse monoclonal
Clone 92A, purified from hybridoma cell culture

Product Number **SAB4200785**

Product Description

Anti-B2M antibody, Mouse monoclonal (mouse IgG2a isotype) is derived from the 92A hybridoma, produced by the fusion of mouse myeloma cells and splenocytes from a mouse immunized with human recombinant B2M (β_2-Microglobulin) protein (GeneID: 567). The isotype is determined by ELISA using Mouse Monoclonal Antibody Isotyping Reagents (Product Number ISO2). The antibody is purified from culture supernatant of hybridoma cells.

Anti-B2M antibody, Mouse monoclonal recognizes human B2M. The antibody is recommended to use in various immunological techniques, including immunoblot (~15 kDa), ELISA, and immuno-precipitation.

B2M is the light chain of the major histocompatibility class (MHC) I molecule expressed on the cell surface of all nucleated cells, including lymphocytes, thymocytes, monocytes, granulocytes, platelets, endothelial cells, and epithelial cells and is absent in erythrocytes.[1] B2M is filtered during glomerular filtrations and re-absorbed and catabolized by proximal renal tubules. While under normal conditions the B2M is undetectable in urine, its increased urinary excretion has been observed to be an early marker of tubular injury in a number of settings, including nephrotoxicant exposure,[2] cardiac surgery,[3] and renal transplantation,[4] preceding rises in serum creatinine by as many as 4−5 days.[5] B2M may also serve as an early biomarker for AKI (Acute Kidney Injury).[6]

B2M plays a vital role in cell survival, proliferation and metastasis in various types of cancer. Its levels are also linked with multiple myeloma (MM) and non-Hodgkin's lymphoma (NHL). NHL patients showing higher levels of B2M have a poor disease prognosis and a higher mortality risk.[7-8]

The protein has a predominantly β-pleated sheet structure that can form amyloid fibrils in some pathological conditions. In patient subjected to long-term hemodialysis, B2M is responsible for systemic amyloidosis.[9] The levels of this protein are also altered in the cerebrospinal fluid of patients with neurological diseases, such as leptomeningeal metastasis, purulent meningitis, viral meningitis or encephalitis and neuroborreliosis.[10]

Over-expression of serum B2M is observed in hepatitis C virus (HCV) related chronic liver diseases and thus acts as a potential marker for the HCV disease progression towards cirrhosis and carcinoma.[11]

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody Concentration: ~1.0 mg/mL

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards 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. 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

Immunoblotting: a working concentration of 0.1–0.2 μg/mL is recommended using β_2-Microglobulin from human urine.

Immunoprecipitation: a working concentration of 2.5–5 μg/test is recommended using lysate of human HeLa cell line.

Indirect ELISA: a working concentration of 0.2–0.4 μg/mL is recommended using 1 μg/mL of β_2–Microglobulin from human urine for coating.

Note: In order to obtain best results in different techniques and preparations, it is recommended to determine optimal working concentration by titration test.

References

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