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Certificate of Analysis and Data Sheet

Human Beta 2 Microglobulin

Catalog No.
228-10086

Source:
Human urine from patients with tubular proteinuria

Synonyms:
Beta-2-microglobulin, B2M.

Introduction:
β2 microglobulin is an 11 kDa protein associated with the outer membrane of many cells including lymphocytes. It is the small subunit of the MHC class I molecule. Association with beta 2-microglobulin is generally required for the transport of class I heavy chains from the endoplasmic reticulum to the cell surface. β2 microglobulin associates with class I-like molecules such as CD1 and Qa as well as with the alpha chain of MHC class I molecules. Very limited amounts of MHC class I molecules can be found on the surface in the absence of β2 microglobulin. CD8 T cells cannot develop in the absence of MHC class I.
Beta 2-microglobulin is present in small amounts in serum, csf, and urine of normal people, and to a much greater degree in the urine and plasma of patients with tubular proteinaemia, renal failure, or kidney transplants. Human Beta 2 microglobulin levels can rise either because its rate of synthesis has increased (e.g. in AIDS, malignant monoclonal plasma cell dyscrasia, solid tumors and autoimmune disease) or because of impaired renal filtration (e.g. due to renal insufficiency, graft rejection or nephrotoxicity induced by post-transplantation immunosuppressive therapy). Beta-2 microglobulin levels might also be elevated in multiple myeloma and lymphoma cases. Dialysis-related amyloidosis develops after a long-term hemodialysis, it can aggregate into amyloid fibers that deposit in joint spaces.

Description:
Human Beta-2 Microglobulin produced in Human urine from patients with tubular proteinuria having a molecular mass of 12KDa and pI of 5.6.

Physical Appearance:
Sterile Filtered White lyophilized (freeze-dried) powder.

Formulation:
Lyophilized from 0.02M NH_4HCO_3.

The products are furnished for LABORATORY RESEARCH USE ONLY.
Not for diagnostic or therapeutic use.

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Solubility:

It is recommended to reconstitute the lyophilized HuB_2M in phosphate buffer pH > 7.0 containing 0.15M NaCl.

Stability:

Human B2M although stable at room temperature for 3 weeks, should be stored between 2-8°C.

Purity:

Greater than 98.0%.

Human Virus Test:

Starting material tested and found negative for HIV I & II antibodies, Hepatitis B surface antigen, and Hepatitis C antibodies. Finished product tested and found negative for HIV antigen P24.

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