

B2M

Native Human beta 2-Microglobulin

Catalog No.	CRB111A	Quantity:	200 µg
	CRB111B		1.0 mg
	CRB111C		5 mg

Alternate Names: beta chain of MHC class I molecules, beta-2-microglobin, B2M, BMG

Description: Beta 2 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. Beta 2 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 Beta 2 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 proteinuria, 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.

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

Gene ID: 567

Source: Human urine from patients with tubular proteinuria

Formulation: Sterile filtered and then lyophilized from 0.02 M NH₄HCO₃.

Purity: >98.0%.

Reconstitution: **Centrifuge vial prior to opening.** Reconstitute the lyophilized protein in phosphate buffer pH >7.0 containing 0.15 M NaCl.

Storage & Stability: Lyophilized Human B2M although stable at room temperature for 3 weeks, should be stored between 2-4°C.

Certification: 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.

NOT FOR HUMAN USE. FOR RESEARCH ONLY. NOT FOR DIAGNOSTIC OR THERAPEUTIC USE.