



## Product Datasheet

<b>Product Name</b>	Beta-2 Microglobulin Human
<b>Cata No</b>	CB501165
<b>Source</b>	<i>Human urine from patients with tubular proteinuria</i>
<b>Synonyms</b>	Beta-2-microglobulin, B2M.

### 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 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.

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.

### Purity

Greater than 98.0%.

### Formulation

Lyophilized from 0.02M  $\text{NH}_4\text{HCO}_3$ .

### Reconstitution

It is recommended to reconstitute the lyophilized HuB<sub>2</sub>M 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.

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