

**Product Specification Sheet**

**Human Beta-2 Microglobulin (B2M) Protein**

<b>Cat. #</b> B2M16-N-1	Purified Human beta-2 microglobulin (B2M) protein for ELISA/Standards	<b>SIZE:</b> 1 mg
<b>Cat. #</b> B2M17-N-1	Beta 2 Microglobulin (B2M) Partially Pure (40-90%)	<b>SIZE:</b> 1 mg

**Beta-2-microglobulin (B2M)** is found in the serum of normal individuals and in the urine in elevated amounts in patients with Wilson disease, cadmium poisoning, and other conditions leading to renal tubular dysfunction. Like immunoglobulins, prealbumin, and the beta protein found in the amyloid of Alzheimer disease, B2M has a predominantly beta-pleated sheet structure that may adopt the fibrillar configuration of amyloid in certain pathologic states. The protein is a single polypeptide chain of molecular weight 11,600 (human 119 aa, chromosome 15). B2M associates with heavy chain of class I MHC antigens on the cell surface. A transient complex of MHC-heavy chain and B2M is known to be assembled into the TAP molecule involving interaction with a number of chaperones. Binding of the processed peptide releases the class I-B2M complex to the cell surface. Absence of binding leads to degradation in the proteasome. Progressive hepatic iron overload, indistinguishable from that observed in HFE, was found only in mice homozygous for the mutated B2M gene

**Source of Antigen and Antibodies**

**Human B2M protein (cat# B2M16-N)** was purified (>98%) from human urine that has been shown by certified tests to be negative for HbsAg and HIV and HCV. However, all precautions must be taken to avoid contamination.

Purified human B2M protein is formulated in 0.02M NH<sub>4</sub>HCO<sub>3</sub> buffer at 1 mg/ml (100 ug/100 ul; see lot specific concn on the vial). Lyophilized protein should be dissolved in PBS, pH 7.4 at 1 mg/ml or as desired. Store liquid or lyophilized protein at -20oC in suitable size aliquots. Do not freeze and thaw.

**Storage**

**Short-term:** unopened, undiluted vials for less than a week at 4oC.

**Long-term:** at -20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

**Stability:** 6-12 months at -20oC or below.

**Shipping:** 4oC for solutions and room temp for lyophilized items.

**General References:** (1). Gussow D et al (1987) J. Immunol. 139, 3132-3138; Suggs SV et al (1981) PNAS 78, 6613-6617; Cunningham BA et al (1973) Biochemistry 12, 4811-4822; Bjorkman PJ et al (1987) nature 329, 506-512; deSouza M et al (1994) Immunol. Lett. 39, 105-111

\*This product is for in vitro research use only.

**Some New Antibodies from ADI...**

IRP1-2, HFE, Frataxin, Hepsidin, Hephaestin, NRAMPs, USF2, Ferritin, Light and heavy chains, ferritin and B2-M ELISA, Tfr1-2, ceruloplasmin, B2-Micro globulin,

Antibodies to Beta-2 Microglobulin # B2M11-S and mouse mono# B2M12-M

Human Beta-2 micorglobulin ELISA kit # 0020

B2M16, 17-N-1                      100608A

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