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# Recombinant Human Beta-2-Microglobulin (B2M)

Catalog No.	Size	Species	Protein Accession No.
230-00021	10, 50 µg	Human	AAH32589

### Synonyms

Beta-2-microglobulin, beta-2-microglobin, beta chain of MHC class I molecules.

### Description

**β2 microglobulin (B2M)** is an essential component of MHC class I molecules, which are expressed on all nucleated cells. β2 microglobulin associates not only with the alpha-chain of MHC-I molecules, but also with class I-like molecules (i.e. CD1 and Qa). B2M can be used in assessing renal function, particularly in kidney-transplant recipients or acts a potential prognostic marker in human immunodeficiency virus (HIV) infection.

### Preparation

The human *B2M* gene encoding the mature B2M polypeptide Ile<sub>21</sub>-Met<sub>119</sub> was cloned and expressed in *Escherichia coli*. The recombinant protein has an N-terminal 6×histidine tag and was purified by immobilized metal ion affinity chromatography (IMAC).

### Source

Recombinant histidine-tagged protein, purified from *E. coli*.

### Predicted Molecular Mass

~13.5 kDa with the 6×histidine tag.

### Formulation

Recombinant B2M is lyophilized from a 0.2 µm filtered 20 mM Tris-HCl (pH 8.5) solution with the protein concentration of 275 µg/mL.

### Stability & Storage

- Lyophilized product is stable at room temperature for 3 weeks, it is recommended to be stored desiccated below -20°C in a manual defrost freezer.
- **Reconstitution:** briefly spin the vial prior to opening to bring the contents to the bottom. It is recommended to reconstitute the lyophilized product with sterile PBS.
- Upon reconstituted, the protein should be stored at 4°C for one week. For long term storage, it is recommended to add a carrier protein (0.1% HSA or BSA) and store at -20 or -80°C. **Please avoid repeated freeze-thaw cycles.**

### Purity

>95%, determined by SDS-PAGE and stained with Coomassie blue.

### References

1. Cunningham BA, et al. (1973). The complete amino acid sequence of beta 2-microglobulin. *Biochemistry* 12 (24): 4811–22.
2. Suggs SV, et al. (1981). Use of synthetic oligonucleotides as hybridization probes: isolation of cloned cDNA sequences for human beta 2-microglobulin. *Proc. Natl. Acad. Sci. U.S.A.* 78 (11): 6613–7.
3. Güssow D, et al. (1987) The human beta 2-microglobulin gene. Primary structure and definition of the transcriptional unit. *J. Immunol.* 139 (9): 3132–8.
4. Yang HS, et al. (2009) Identification of beta2-microglobulin as a potential target for ovarian cancer. *Cancer Biol Ther.* 8(24):2323-8.

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