

## Recombinant Human Beta-2-Microglobulin

Cat. No. B2M-1905H Lot. No. (See product label)

### SPECIFICATION

<b>Product Overview</b>	Recombinant Human $\beta$ 2 Microglobulin protein was expressed in <i>insect cells</i> . The expressed protein was purified by a combination of ion-exchange and gel-filtration methods.
<b>Species</b>	Human
<b>Source</b>	Insect Cells
<b>Description</b>	<p>The major histocompatibility complex (MHC) gene locus encodes a group of highly polymorphic, cell surface proteins that play a broad role in the immune response to protein antigens. MHC molecules function by binding and presenting small antigenic protein fragments to antigen-specific receptors expressed by T cells (TCR). Class I MHC molecules consist of two separate polypeptide chains. The class I <math>\alpha</math> chain is an MHC encoded, transmembrane polypeptide containing three extracellular domains: <math>\alpha</math>1, <math>\alpha</math>2 and <math>\alpha</math>3. The second chain consists of a non-MHC encoded, 12 kDa polypeptide called <math>\beta</math>2 microglobulin (<math>\beta</math>2M). Since <math>\beta</math>2M does not contain a transmembrane domain, it associates with the <math>\alpha</math> chain through non-covalent interaction. This association is important for the stability of the MHC class I structure, its peptide-loading and its ability to present peptide antigen to CD8+ T cells. <math>\beta</math>2M is relatively invariant within each species. For example, human <math>\beta</math>2M is reported to have high affinity for human and mouse MHC class I heavy chains.</p>
<b>Amino Acid Sequence</b>	The sequence of the first five N-terminal amino acids was determined and was found to be Lys-Ala-Met-His-Val.

 Tel: 1-631-559-9269 1-516-512-3133

 Email: [info@creative-biomart.com](mailto:info@creative-biomart.com)  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

<b>Concentration</b>	0.5 mg/ml.
<b>Storage Buffer</b>	Aqueous buffered solution containing ≤0.09% sodium azide.
<b>Preparation And Storage</b>	Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.
<b>GENE INFORMATION</b>	
<b>Gene Name</b>	B2M beta-2-microglobulin [ <a href="#">Homo sapiens</a> ]
<b>Synonyms</b>	B2M; beta-2-microglobulin; Beta-2 microglob ulin form pl 5.3; beta-2-microglobin; beta chain of MHC class I molecules
<b>Gene ID</b>	<a href="#">567</a>
<b>mRNA Refseq</b>	<a href="#">NM_004048</a>
<b>Protein Refseq</b>	<a href="#">NP_004039</a>
<b>MIM</b>	<a href="#">109700</a>
<b>UniProt ID</b>	<a href="#">P61769</a>
<b>Chromosome Location</b>	15q21-q22.2
<b>Pathway</b>	Antigen processing and presentation; HIV Infection; Signaling in Immune system
<b>Function</b>	protein binding

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