

B2M/Beta-2 microglobulin Protein, Human (HEK293, His, solution)

Cat. No.:	HY-P74404
Synonyms:	Beta-2-microglobulin; B2M
Species:	Human
Source:	HEK293
Accession:	P61769 (I21-M119)
Gene ID:	567
Molecular Weight:	Approximately 13.5 kDa

PROPERTIES

Appearance	Solution.
Formulation	Supplied as a 0.2 µm filtered solution of PBS, pH 7.4.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	N/A.
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice

DESCRIPTION

Background	<p>B2M, or Beta-2-microglobulin, functions as a critical component of the class I major histocompatibility complex (MHC), playing a central role in presenting peptide antigens to the immune system. Notably, exogenously applied <i>M. tuberculosis</i> EsxA or EsxA-EsxB binds B2M and reduces its export to the cell surface, potentially leading to defects in class I antigen presentation. B2M exists as a heterodimer, composed of an alpha chain and a beta chain, with the latter serving as the beta-chain of major histocompatibility complex class I molecules. Polymers of B2M have been observed in tissues of patients on long-term hemodialysis. B2M, in its isolated form, interacts with <i>M. tuberculosis</i> EsxA and an EsxA-EsxB complex, forming a tripartite complex detectable in the host endoplasmic reticulum. The stability of the B2M-EsxA complex extends across a broad pH range and in the presence of high salt concentrations. Additionally, B2M forms heterotrimers with HLA-E, HLA-G, and HLA-F, along with a self- or foreign peptide, contributing to the diverse functions of the major histocompatibility complex. Furthermore, B2M engages in a heterotrimeric complex with MR1, playing a role in antigen presentation associated with metabolite antigens.</p>
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Caution: Product has not been fully validated for medical applications. For research use only.

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