

HLA-A*0201 GP100 complex Protein, Human (Biotinylated, HEK293, Avi-His)

Cat. No.:	HY-P72377
Synonyms:	Beta-2-microglobulin; B2M; HLA class I histocompatibility antigen, A alpha chain; HLA-A
Species:	Human
Source:	HEK293
Accession:	P61769 (I21-M119)&P01892 (G25-I308)
Gene ID:	567&3105
Molecular Weight:	55-60 kDa

PROPERTIES

AA Sequence

I Q R T P K I Q V Y	S R H P A E N G K S	N F L N C Y V S G F	H P S D I E V D L L
K N G E R I E K V E	H S D L S F S K D W	S F Y L L Y Y T E F	T P T E K D E Y A C
	K I V K W D R D M &		
R V N H V T L S Q P	G S H S M R Y F F T	S V S R P G R G E P	R F I A V G Y V D D
T Q F V R F D S D A	A S Q R M E P R A P	W I E Q E G P E Y W	D Q E T R N V K A Q
S Q T D R V D L G T	L R G Y Y N Q S E A	G S H T I Q I M Y G	C D V G S D G R F L
R G Y R Q D A Y D G	K D Y I A L N E D L	R S W T A A D M A A	Q I T K R K W E A A
H E A E Q L R A Y L	D G T C V E W L R R	Y L E N G K E T L Q	R T D P P K T H M T
H H P I S D H E A T	L R C W A L G F Y P	A E I T L T W Q R D	G E D Q T Q D T E L
V E T R P A G D G T	F Q K W A A V V V P	S G E E Q R Y T C H	V Q H E G L P K P L
T L R W E L S S Q P	T I P I		

Appearance Lyophilized powder.

Formulation Lyophilized from a 0.2 µm filtered solution of 20 mM PB, 500 mM NaCl, pH 7.4.

Endotoxin Level <1 EU/µg, determined by LAL method.

Reconstitution It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH₂O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).

Storage & Stability Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.

Shipping Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background 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 *M. tuberculosis* 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 *M. tuberculosis* 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.

Caution: Product has not been fully validated for medical applications. For research use only.

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