

Qa-1b&B2M&Qdm (AMAPRTLLL) Monomer Protein, Mouse, MHC (His & Avi)

General Information

Synonyms:	Qa-1b;Qdm;MHC;H2-T23
Protein Construction:	His23-Pro296(Qa-1b), Ile21-Met119(B2M) and AMAPRTLLL peptide
Species:	Mouse
Expression Host:	HEK293 Cells
Accession:	P06339(Q1-1b)&P01887(B2M)&AMAPRTLLL
Molecular Weight:	The protein has a predicted MW of 50.60 kDa. Due to glycosylation, the protein migrates to 55-65 kDa based on Tris-Bis PAGE result.

QC Testing

Biological Activity:	Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 95% as determined by Tris-Bis PAGE; > 95% as determined by HPLC
Endotoxin:	< 1.0 EU/µg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 µm filter, containing PBS (pH 7.4). Typically, 8% trehalose is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 µg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

Stability & Storage:

Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Qa-1b binds a peptide (AMAPRTLLL), referred to as Qdm (for Qa-1 determinant modifier), derived from the signal sequence of murine class Ia molecules. This peptide binds with high affinity and accounts for almost all of the peptides associated with this molecule. Human histocompatibility leukocyte antigen (HLA)-E, a homologue of Qa-1b, binds similar peptides derived from human class Ia molecules and interacts with CD94/NKG2 receptors on natural killer cells.

Reference

Kurepa Z, Hasemann CA, Forman J. Qa-1b binds conserved class I leader peptides derived from several mammalian species. J Exp Med. 1998 Sep 7;188(5):973-8. doi: 10.1084/jem.188.5.973. PMID: 9730898; PMCID: PMC2213384.

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