

# Recombinant Human Beta-2-Microglobulin/B2M Protein (HEK293 Cells, His Tag)



Catalog Number:PKSH030949

**Note:** Centrifuge before opening to ensure complete recovery of vial contents.

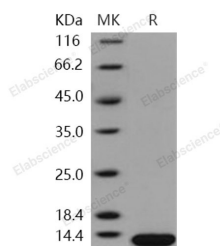
## Description

<b>Synonyms</b>	Beta-2-Microglobulin;B2M; $\beta$ 2-Microglobulin
<b>Species</b>	Human
<b>Expression Host</b>	HEK293 Cells
<b>Sequence</b>	Met 1-Met 119
<b>Accession</b>	NP_004039.1
<b>Calculated Molecular Weight</b>	13.5 kDa
<b>Observed molecular weight</b>	13.5 kDa
<b>Tag</b>	C-His

## Properties

<b>Purity</b>	> 97 % as determined by reducing SDS-PAGE.
<b>Endotoxin</b>	< 1.0 EU per $\mu$ g of the protein as determined by the LAL method.
<b>Storage</b>	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.
<b>Shipping</b>	This product is provided as lyophilized powder which is shipped with ice packs.
<b>Formulation</b>	Lyophilized from sterile PBS, pH 7.4 Normally 5 % - 8 % trehalose, mannitol and 0.01 % Tween80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
<b>Reconstitution</b>	Please refer to the printed manual for detailed information.

## Data



> 97 % as determined by reducing SDS-PAGE.

## Background

B2M, also known as  $\beta$ 2-Microglobulin or CDABP0092, is a component of MHC class I molecules found expression in all nucleated cells (excludes red blood cells). The major function of MHC class I molecules is to display fragments of proteins from within the cell to T-cells and cells containing foreign proteins will be attacked. B2M( $\beta$ 2-Microglobulin) is a low molecular weight protein. It was demonstrated that B2M( $\beta$ 2-Microglobulin) was localized in the membranes of nucleated cells and was found to be associated with HL-A antigens. B2M( $\beta$ 2-Microglobulin) is present in free form in various body fluids and as a subunit of histocompatibility antigens on cell surfaces lateral to the  $\alpha$ 3 chain. Unlike  $\alpha$ 3,  $\beta$ 2 has no transmembrane region. Directly above  $\beta$ 2 lies the  $\alpha$ 1 chain, which itself is lateral to the  $\alpha$ 2. In the absence of B2M( $\beta$ 2 microglobulin), very limited amounts of MHC class I (classical and non-classical) molecules can be detected on

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the surface. In the absence of MHC class I, CD8 T cells, a subset of T cells involved in the development of acquired immunity cannot develop. Low levels of B2M( $\beta$ 2 microglobulin) can indicate non-progression of HIV.

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