

Rat B2M / Beta-2-microglobulin Protein (His Tag)

Catalog Number: 80423-R08H



Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

B2M

Protein Construction:

A DNA sequence encoding the rat B2M (P07151) (Met 1-Met 119) was expressed, fused with a polyhistidine tag at the C-terminus.

Source: Rat

Expression Host: HEK293 Cells

QC Testing

Purity: > 97 % as determined by SDS-PAGE

Endotoxin:

< 1.0 EU per μ g of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Ile 21

Molecular Mass:

The secreted recombinant rat B2M comprises 110 amino acids and predicts a molecular mass of 13 kDa. The apparent molecular mass of the rat B2M is approximately 15 kDa in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

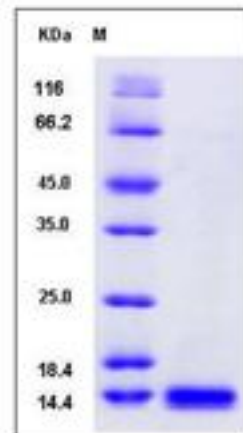
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

B2M, also known as β 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(β 2-Microglobulin) is a low molecular weight protein. It was demonstrated that B2M(β 2-Microglobulin) was localized in the membranes of nucleated cells and was found to be associated with HL-A antigens. B2M(β 2-Microglobulin) is present in free form in various body fluids and as a subunit of histocompatibility antigens on cell surfaces lateral to the α 3 chain. Unlike α 3, β 2 has no transmembrane region. Directly above β 2 lies the α 1 chain, which itself is lateral to the α 2. In the absence of B2M(β 2 microglobulin), very limited amounts of MHC class I (classical and non-classical) molecules can be detected on 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(β 2 microglobulin) can indicate non-progression of HIV.

References

1. Poulik MD, *et al.* (1979) Beta 2-Microglobulin: methods and clinical applications. CRC Crit Rev Clin Lab Sci. 10(3): 225-45.
2. Poulik MD, *et al.* (1975) Beta2-Microglobulins. Contemp Top Mol Immunol. 4: 157-204.
3. Berggard I. (1976) Beta2-Microglobulins: isolation, properties, and distribution. Fed Proc. 35(5): 1167-70.

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