# Recombinant Human Beta-2-Microglobulin/B2M Protein (E.coli, His Tag)



Catalog Number:PKSH033260

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

Description		
Synonyms	Beta-2-Microglobulin;B2M;β2-Microglobulin	
Species	Human	
Expression Host	E.coli	
Sequence	Ile21-Met 119	
Accession	P61769	
Calculated Molecular Weight	14.0 kDa	
Observed molecular weight	14 kDa	
Tag	N-His	
Properties		
Purity	> 95 % as determined by reducing SDS-PAGE.	
Endotoxin	< 1.0 EU per $\mu$ g of the protein as determined by the LAL method.	
Storage	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.	
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.	
Formulation	Lyophilized from a 0.2 µm filtered solution of 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.	
Reconstitution	Please refer to the printed manual for detailed information.	
Data		

kDa	MK	R
120 90		
60		
40	Name of Street	
30	Collect Au	•
20	-	
14		-

> 95 % as determined by reducing SDS-PAGE.

### Background

 $\beta$ -2-Microglobulin (B2M) is a secreted protein with 1 Ig-like C1-type (immunoglobulin-like) domain which belongs to the beta-2-microglobulin family. B2M component of major histocompatibility complex (MHC) class I molecules; involved in the presentation of peptide antigens to the immune system. Polymers of beta 2-microglobulin can be found in tissues from patients on long-term hemodialysis. B2M is a protein found on the surface of many cells and plentiful on the surface of white blood cells. Serum B2M concentration is increased in renal diseases; various malignant diseases and some inflammatory and autoimmune disorders. B2M may adopt the fibrillar configuration of amyloid in certain pathologic states. The capacity to assemble into amyloid fibrils is concentration dependent. B2M has been shown as a marker for monitoring inflammatory disease activity and it appears likely to have a destructive role in amyloidosis-related arthritis.

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B2M might be involved in the OA (osteoarthritis) pathogenesis. Defects in B2M are the cause of hypercatabolic hypoproteinemia. Affected individuals show marked reduction in serum concentrations of immunoglobulin and albumin; probably due to rapid degradation. B2M could be a potential therapeutic target in ovarian cancer.

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