
Product Data Sheet

Product Name: A2M Human
 Cat. No.: GP22670
 Batch No.: 1

Product Data

Purity	>98%	Source	Human Plasma.
Physical Appearance	solid	Shipping Condition	Shipped at Room temp.
Synonyms	Alpha-2-macroglobulin; Alpha-2-M; A2M; CPAMD5; FWP007; S863-7; alpha 2M; DKFZp779B086.		
Solubility	It is recommended to reconstitute the lyophilized A2M in sterile 18MΩ-cm H ₂ O.		
Formulation	Lyophilized from a concentrated solution containing 5mM potassium phosphate buffer, pH 6.5 and 1:1 ratio (w/w) of Glycine.		

Introduction

Alpha-2 Macroglobulin is a serine proteases inhibitor, which inhibits coagulation by inactivating thrombin and Kallikrein, it inhibits fibrinolysis by inactivating plasmin and involved in transport. Alpha-2-Macroglobulin is a large plasma protein, which is produced by the liver, it's composed of 4 identical subunits bound together by -S-S- bonds. A2M is able to inactivate many kinds of proteinases (including serine-, cysteine-, aspartic- and metalloproteinases). A2M has a 35 amino acid "bait" region in its structure. Proteinases bind and cleave the "bait" region become bound to A2M. Macrophage receptors recognize the proteinase-A2M complex and clear it from the system. A2M binds to and removes MMP-2 and MMP-9 (active forms of the gelatinase) from the circulation using scavenger receptors on the phagocytes. The levels of Alpha-2-macroglobulin are increased in nephrotic syndrome which is a condition where the kidneys start to leak out some of the smaller blood proteins. Due to its large size, A2-macroglobulin is retained in the bloodstream. Increased production of all proteins causes A2-macroglobulin concentration to increase. Chronic renal failure might lead to amyloid by alpha-2-macroglobulin. A2M is raised in cirrhosis, pregnancy and diabetes.

Stability

Lyophilized A2M protein although stable at room temperature for 3 weeks, should be

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stored desiccated below -18°C . Upon reconstitution and filter sterilization A2M can be stored at 4°C for up to 4 weeks. For long term storage and more diluted solutions it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

Background

Human Alpha-2 Macroglobulin is a tetrameric glycoprotein, produced in Human plasma and having a molecular mass of 725 kDa.

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