



Product Datasheet

Product Name	Macroglobulin Alpha-2 Human
Cata No	CB501163
Source	<i>Human Plasma</i>
Synonyms	Alpha-2-macroglobulin, Alpha-2-M, A2M, CPAMD5, FWP007, S863-7, alpha 2M, DKFZp779B086.

Description

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 insulin 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). α 2M has a 35 amino acid "bait" region in its structure. Proteinases bind and cleave the "bait" region become bound to α 2M. Macrophage receptors recognize the proteinase- α 2M 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, α 2-macroglobulin is retained in the bloodstream.

Increased production of all proteins causes α 2-macroglobulin concentration to increase. Chronic renal failure might lead to amyloid by alpha-2-macroglobulin. A2M is raised in cirrhosis, pregnancy and diabetes.

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

Physical Appearance

Sterile Filtered White lyophilized (freeze-dried) powder.

Purity

Greater than 96.0%.

Formulation

Lyophilized from 0.02M TRIS, 0.15M NaCl and 0.1M Sucrose, pH 8.0.

Stability

Human Alpha-2 Macroglobulin although stable at room temperature for 3 weeks, should be stored between 2-8°C.

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