

## A2M Human

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

**Catalog #:** PRPS-558

**Synonyms:** Alpha-2-macroglobulin, Alpha-2-M, A2M, CPAMD5, FWP007, S863-7, alpha 2M, DKFZp779B086.

For research use only.

**Source:** Human Plasma.

**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. Do not freeze!

**Usage:**

NeoBiolab's products are furnished for LABORATORY RESEARCH USE ONLY. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.

**Solubility:**

It is recommended to reconstitute the lyophilized A2M in sterile 18M-cm H<sub>2</sub>O.

**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 insulin transport. Alpha-2-Macroglobulin is a large plasma protein, which is produced by the liver, its 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.

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