

Human Macroglobulin alpha 2

Human Macroglobulin alpha 2, natural

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

PLEASE NOTE: ALWAYS CENTRIFUGE VIAL BEFORE OPENING

Size	Order #	Lot #	Expiry Date
200 µg	4072.959.200		
1 mg	4072.959.199		
10 mg	4072.959.109		

Please enquire for bulk quantities and other vial sizes

Description

Human Macroglobulin alpha 2 (A2M) is a tetrameric glycoprotein, derived from human plasma with a molecular mass of 725 kDa. Macroglobulin alpha 2 is a serine proteases inhibitor, inhibiting coagulation by inactivating thrombin and Kallikrein, it also inhibits fibrinolysis by inactivating plasmin and is involved in transport. Macroglobulin alpha 2 is a large plasma protein, which is produced by the liver, it's composed of 4 identical subunits bound together by -S-S- bonds. Macroglobulin alpha 2 is able to inactivate many kinds of proteinases (including serine-, cysteine-, aspartic- and metalloproteinases). Macroglobulin alpha 2 (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. Macroglobulin alpha 2 (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 Macroglobulin alpha 2 (A2M) 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, Macroglobulin alpha 2 (A2M) is retained in the bloodstream.

Human Virus Test

Serum from each donor has been tested and found negative for antibodies to HIV-1, HIV-2, HCV and HBV.

- **Source** Human Plasma
- **Purity** ≥ 95 % (SDS-PAGE)
- **Stabilizer** Glycine
- **Buffer** Potassium Phosphate (5mM), pH 6.5*
- **Physical state** Sterile filtered, lyophilized

Reconstitution

We recommend a quick spin followed by reconstitution in water to a concentration of at least 100 µg/ml. Do not vortex. This solution can be stored at 2-8°C for up to 1 week or in working aliquots at -20°C to -80°C. Working aliquots should be at the highest practical concentration. For long term storage we recommend to add at least 0.1% HSA (order number: 2835.955.xyz or 2835.958.xyz) or BSA.

Stability

The lyophilized protein is stable at room temperature for up to 1 month and at least until the lot specific expiry date if kept below -18°C. Reconstituted Macroglobulin alpha 2 should be stored in working aliquots at -20°C to -80°C if possible with carrier protein. **Please avoid repeated freeze-thaw cycles.**

Usage: For research use only. Not for use in diagnostic or therapeutic procedures. Not for human use.

*The Buffer may vary depending on the Lot #. Please contact our technical support if you have specific requirements.

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