Alpha 2-antiplasmin (or α2-antiplasmin or plasmin inhibitor) is a serine protease inhibitor (serpin) responsible for inactivating plasmin, an important enzyme that participates in fibrinolysis and degradation of various other proteins. This protein is encoded by the SERPINF2 gene. Very few cases (<20) of A2AP deficiency have been described. As plasmin degrades blood clots, impaired inhibition of plasmin leads to a bleeding tendency, which was severe in the cases reported. In liver cirrhosis, there is decreased production of alpha 2-antiplasmin, leading to decreased inactivation of plasmin and an increase in fibrinolysis. This is associated with an increased risk of bleeding in liver disease. Alpha 2-antiplasmin has been shown to interact with: Neutrophil elastase and Plasmin

Alpha-2-AP efficiently inhibits the plasminogen-activator-induced lysis of fibrin clots. Found in plasma at about 70 ug per ml. Alpha-antiplasmin-deficiency is a rare coagulation disorder which allows unrestrained fibrinolytic activity. Individuals with this condition may receive therapeutic A2AP prior to surgery to prevent postoperative hemorrhaging.

Source of protein

Human Alpha-2-AP is purified from plasma

(>99%, ~70 Kda, single arc corresponding to A2-AP in IEP Vs anti-normal human serum). All human derived material has been tested negative for HIV, HCV, and HbsAg. Nevertheless, all precautions should be taken and samples be treated apotentially hazardous.

It is supplied lyophilized in a buffer (Lyophilized from 20 mM Bis-Tris, pH 6.4, with 200 mM NaCl). Reconstitute lyophilized protein in water at >100 µg/ml.

The powder should be stored in the freezer (−20 °C). If properly stored, these products have a shelf life of one year.

Specific Activity

5 IU/mg.

Recommended usage

- As antigens for ELISA, western
- Western blot control

References:

Tone M (1987) J. Biochem. 102, 1033-1041;
Wiman B (1979) JBC 254, 9291-9217.

For in vitro research use only