

****REPRESENTATIVE DATASHEET****
Sheep anti-human α_2 Antiplasmin (α_2 AP)

Whole IgG from antiserum

10 mg

Product #: SA2AP-IG

Lot #: XXXX

Expiry date: XXXX

 Store at -10 to -20°C

 1348 Sandhill Drive. Ancaster, Ontario, Canada L9G 4V5
 905-304-9896 • 800-903-6020 • fax 905-304-9897

For Research Use Only.

Not for use in diagnostic procedures.

Description of α_2 Antiplasmin (α_2 AP)

α_2 Antiplasmin (α_2 AP), also known as α_2 Plasmin Inhibitor (α_2 PI), is a member of the SERPIN family of proteinase inhibitors and the primary inhibitor of the enzyme plasmin in blood. It is produced in the liver and circulates in plasma at $\sim 70 \mu\text{g/ml}$ ($\sim 1 \mu\text{M}$). α_2 AP is a single chain molecule with a mass of 67 kDa as determined by SDS-PAGE. The primary target enzyme for α_2 AP is plasmin, but α_2 AP also acts as secondary or “backup” inhibitor of activated F.XI, activated Protein C and trypsin. Inhibition of these enzymes by α_2 AP occurs through proteolytic cleavage after Arg³⁶⁴ with subsequent rapid formation of a stable, inactive 1:1 enzyme- α_2 AP complex. α_2 AP also acts to regulate fibrinolysis by binding to the lysine binding sites on plasminogen thus competitively inhibiting plasminogen binding to fibrin. About 30% of α_2 AP present in plasma is partially degraded and lacks a peptide in the carboxyl region that contains the plasminogen-binding site. This form of α_2 AP (~ 65 kDa) has a reduced rate of plasmin inhibition and has been referred to as the “slow form” of α_2 AP. During fibrin formation, a portion of circulating α_2 AP is cross-linked to the α -chain of fibrin by activated factor XIII, and this linking of plasmin inhibitor to the plasmin substrate provides an additional measure of protection to the fibrin clot from proteolysis by plasmin¹⁻⁴.

REFERENCES and REVIEWS

1. Aoki N, Suni Y, Miura O, Hirokawa S; Human α_2 Plasmin Inhibitor; *Methods in Enzymology*, **223**, pp 185-197, 1993.
2. Shieh BH, Travis J; The Reactive Site of Human α_2 -Plasmin Inhibitor ; *JBC* **262**, pp 6055-6059, 1987.
3. Moroi M, Aoki N; Isolation and Characterization of α_2 -Plasmin Inhibitor from Human Plasma; *JBC* **251**, pp 5956-5965, 1976.
4. Harpel PC; Blood Proteolytic Enzyme Inhibitors: Their Role in Modulating Blood Coagulation and Fibrinolytic Enzyme Pathways; in *Hemostasis and Thrombosis*, eds. RW Colman, J Hirsh, VJ Marder and EW Salzman, pp. 738-747, J.B. Lippincott Co., Philadelphia PA, USA, 1982.

Product Specifications
Description:

Vial containing XXXX ml of whole IgG, representing approximately 1 ml of antiserum. Total protein is 10 mg.

Format:

Whole IgG, clear liquid.

Host Animal:

Sheep

Immunogen:

 Human α_2 antiplasmin purified from plasma.

Concentration:

 IgG concentration is XXXX mg/ml, determined by absorbance using an extinction coefficient ($E^{1\%}_{280}$) of 13.4.

Buffer:

10 mM HEPES, pH 7.4, 150 mM NaCl, 50% (v/v) glycerol.

Storage:

Store between -10 and -20°C . Product will become viscous but will not freeze. Avoid storage in frost-free freezers. Keep vial tightly capped. Allow product to warm to room temperature and gently mix before use.

Specificity:

 This antibody is specific for α_2 AP as demonstrated by immunoelectrophoresis and ELISA.

Applications:

 Suitable as a source of antibodies to human α_2 antiplasmin.

Neutralizing activity:

Not determined.

Species Cross Reactivity: (immunodiffusion vs. citrated plasma)

Human:	XXXX	Mouse:	XXXX	Rat:	XXXX
Rabbit:	XXXX	Pig:	XXXX	Dog:	XXXX

Related Products:

Cat #:	GA2AP-IG	Goat anti-human α_2 AP, whole IgG from antiserum
Cat #:	GA2AP-AP	Goat anti-human α_2 AP, affinity purified IgG
Cat #:	GA2AP-HP	Goat anti-human α_2 AP, APiGG-peroxidase conjugate
Cat #:	SA2AP-AP	Sheep anti-human α_2 AP, affinity purified IgG
Cat #:	A2AP-DP	Plasma deficient in α_2 AP, immune-depleted
Cat #:	A2AP-LDP	Lyophilized Plasma deficient in α_2 AP, immune-depleted

 Visit our site (www.affinitybiologicals.com) for details.

Limited Warranty: This product is warranted to perform in accordance with its labeling and literature. Affinity Biologicals Inc. disclaims any implied warranty of merchantability or fitness for any other purposes, and in no event will Affinity Biologicals Inc. be liable for any consequential damages arising out of aforesaid express warranty.

Manufactured in Canada by:
AFFINITY BIOLOGICALS INC.
 1348 Sandhill Drive
 Ancaster ON CANADA L9G 4V5
 Tel: (905) 304-9896
 (800) 903-6020
 Fax: (905) 304-9897
info@affinitybiologicals.com