Plasmin (Human)
1.00 mg

Ref#: HPLAS
Lot#: xxxxxx
Exp. Date: xxxx-xx

Store at -10°C to -20°C

For Research Use Only
Not for Use in Diagnostic Procedures
For *in vitro* use only

Description:	Plasmin
Format:	Frozen in 50mM Hepes/ 50 mM sodium acetate/ 50% glycerol/ pH 8.5
Host:	Human
Storage:	Store between -10°C and -20°C
Volume:	1 vial containing 0.962 mL
Total Protein:	1.00 mg
Concentration:	1.04 mg/mL by Absorbance; Extinction Coefficient $E^{1\%}_{280}$ = 17.0
Activity:	228.00 nkat/mg
Molecular weight:	83000 daltons

Plasminogen is synthesized in the liver and circulates in plasma at a concentration of ~200 µg/mL (~2.3 µM). Plasminogen is a single-chain glycoprotein of ~88 kDa that consists of a catalytic domain followed by five kringle structures. Within these kringle structures are four low-affinity lysine binding sites and one high-affinity lysine binding site. It is through these lysine binding sites that plasminogen binds to fibrin and to α2-Antiplasmin. Native Plasminogen (Glu-Plasminogen) exists in two variants that differ in their extent of glycosylation, and each variant has up to six isoelectric forms with respect to sialic acid content, for a total of 12 molecular forms.

Activation of Glu-Plasminogen by the Plasminogen activators Urokinase (UPA), or tissue Plasminogen Activator (tPA) occurs by cleavage after residue Arg560 to produce the two-chain active serine protease Plasmin. In a positive feedback reaction, the Plasmin generated cleaves an ~8 kDa peptide from Glu-Plasminogen, producing lys77-Plasminogen which has a higher affinity for Fibrin and when bound is a preferred substrate for Plasminogen activators such as Urokinase. Additional activators of Plasminogen include Kallikrein and activated Factor XII. The primary inhibitor of Plasmin in plasma is α2-Antiplasmin. Other physiological inhibitors of Plasmin include α2-Macroglobulin and Antithrombin

Plasmin is a two-chain serine protease linked by 2 disulfide bonds. Among other roles, plasmin is responsible for the lysis of the fibrin clot, thus producing fibrin degradation products (FDP's).

The Human Plasmin was activated from homogeneous Glu-Plasminogen using Urokinase at a 500:1 molar ratio. Urokinase was not removed after activation. Complete activation was observed using the chromogenic substrate S-2251.

The above protein was purified from Human plasma that was tested and found negative by FDA accepted methods for Anti-HIV 1/2, Anti-HTLV I & II, HBsAg, Anti-HCV, Syphilis, HBC Ab, HIV-1 p24 Ag or HIV-1 RNA, HCV RNA and HBV RNA. Donors are screened for CJD (Creutzfeld-Jakob Disease).