

# Fibrinogen Peak 2 (Human)

## 10 mg



Ref#: HFGP2  
Lot#: xxxxxx  
Exp. Date: xxxx-xx

Store at +2 to +8°C

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

<b>Description:</b>	Fibrinogen Peak 1 (Human)
<b>Format:</b>	Lyophilized in 20 mM Tris-HCl / 0.15M NaCl / pH 7.4
<b>Host:</b>	Human
<b>Storage:</b>	Store between +2 and +8°C After reconstitution aliquot and freeze at ≤-60°C
<b>Volume:</b>	1 vial containing 3.937 mL
<b>Total Protein:</b>	10 mg
<b>Concentration:</b>	2.54 mg/mL before lyophilisation by Absorbance; Extinction Coefficient $E_{280}^{1\%} = 15.1$
<b>Activity:</b>	100% Clottable
<b>Molecular weight:</b>	342,000 daltons

Fibrinogen is an abundant plasma protein (5-10  $\mu$ M) synthesized in the liver. The intact protein has a molecular weight of about 340 kDa and is composed of 3 pairs of disulphide-bound polypeptide chains named  $\alpha$ ,  $\beta$  and  $\gamma$ . Fibrinogen is a triglobular protein consisting of a central E domain and terminal D domains. Proteolysis by thrombin results in release of Fibrinopeptide A (FPA,  $\alpha$ 1-16) followed by Fibrinopeptide B (FPB,  $\beta$ 1-14) and the fibrin monomers that result polymerize in a half-overlap fashion to form insoluble fibrin fibrils. The chains of fibrin are referred to as  $\alpha$ ,  $\beta$  and  $\gamma$ , due to the removal of FPA and FPB. The polymerised fibrin is subsequently stabilized by the transglutaminase activated Factor XIII that forms amide linkages between  $\gamma$  chains and, to a lesser extent,  $\alpha$  chains of the fibrin molecules. Proteolysis of fibrinogen by plasmin initially liberates C-terminal residues from the  $\alpha$  chain to produce fragment X (intact D-E-D, which is still clottable).

Peak 2 fibrinogen accounts for about 15% of the total plasma Fibrinogen and contains one gammaA and one gamma chain per molecule. Peak 2 contains measurable amounts of Factor XIII activity because the XIII B subunits bind to gamma chains and bring catalytic A subunits along with them. Peak 2 serves as a 'carrier' for Factor XIII in blood.

We recommend hydrating the protein with warmed sterile water or buffer to the original volume. The hydration should take place in 37°C water bath to ensure all protein solubilizes. After hydration aliquot into a useful (one time use) size and freeze at ≤-60°C.

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).