



Sheep anti-human Fibrin Fragment E (Fn-E)

Whole IgG from antiserum

10 mg

Product #: SAFNE-IG

Lot #: XXXX

Expiry date: XXXX

Store at -10 to -20°C

For Research Use Only.

Not for use in diagnostic procedures.

Description of Fibrinogen (Fg)

Fibrinogen is an abundant plasma protein (5-10 μ M) produced in the liver. The intact protein has a molecular weight of 340 kDa and is composed of 3 pairs of disulphide-bound polypeptide chains named $\text{A}\alpha$, $\text{B}\beta$ and γ . 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, $\text{A}\alpha$ 1-16) followed by Fibrinopeptide B (FPB, $\text{B}\beta$ 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 α , β and γ , 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 γ chains and, to a lesser extent, α chains of the fibrin molecules. Proteolysis of fibrinogen by plasmin initially liberates C-terminal residues from the $\text{A}\alpha$ chain to produce fragment X (intact D-E-D, which is still clottable). Fragment X is further degraded to non-clottable fragments Y (D-E) and D. Fragment Y can be digested into its constituent D and E fragments. Digestion of non-crosslinked fibrin with plasmin is very similar to the digestion of fibrinogen, which results in production of fragments D and E. Degradation of crosslinked fibrin by plasmin results in fragment DD (D-Dimer consisting of the D domains of 2 fibrin molecules crosslinked via the γ chains), fragment E (central E domain) as well as DDE in which fragment E is non-covalently associated with DD. For human crosslinked fibrin, the relative weights of the cleavage fragments produced are: 184 kDa for fragment DD, 92 kDa for D, 50 kDa for E, 1.54 kDa for FPA and 1.57 kDa for FPB¹⁻³.

REFERENCES and REVIEWS

1. Hantgan RR, Francis CW, Marder VJ; Fibrinogen Structure and Physiology; in Hemostasis and Thrombosis, 3rd Edition, eds. RW Colman, J Hirsh, VJ Marder and EW Salzman, pp 277-300, J.B. Lippincott Co., Philadelphia PA, USA, 1994.
2. Shafer JA, Higgins DL; Human Fibrinogen; CRC Critical Reviews in Clinical Laboratory Sciences 26, pp 1-41, 1988.
3. Binnie CG, Lord ST; The Fibrinogen Sequences that Interact with Thrombin; Blood 81, pp 3186-3192, 1993.

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 fibrin fragment E purified from plasma lysate of cross-linked fibrin clot.

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 fibrin fragment E as demonstrated by immunoelectrophoresis and ELISA.

Applications:

Suitable as a source of antibodies to human fibrin fragment E.

Neutralizing activity:

Not determined.

Species Cross Reactivity: (immunodiffusion vs. citrated plasma)

Not determined.