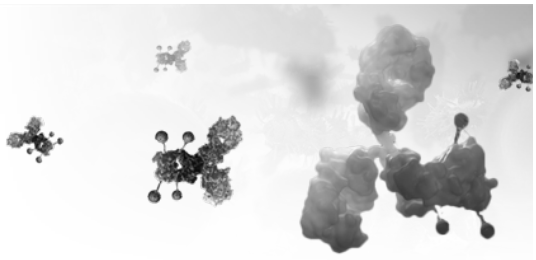

Sheep anti Human Fibrinogen gamma prime polyclonal antibody (CABT-L398)

This product is for research use only and is not intended for diagnostic use.

PRODUCT INFORMATION

Specificity	This antibody is specific for γ`-containing forms of fibrinogen (as demonstrated by immunoelectrophoresis and immunoblotting.
Target	Fibrinogen gamma prime
Immunogen	A synthetic peptide containing the sequence unique to the γ` chain (VRPEHPAETEYDSLYPEDDL) conjugated to keyhole limpet hemocyanin carrier.
Isotype	IgG
Source/Host	Sheep
Species Reactivity	Human
Conjugate	Unconjugated
Applications	IEP, IB
Format	Liquid
Concentration	5 mg/ml
Size	5 mg
Buffer	10 mM HEPES, pH 7.4, 150 mM NaCl, 50% (v/v) glycerol.
Preservative	None
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.

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BACKGROUND

Introduction

Human fibrinogen is a 340 kDa plasma protein produced in the liver. Plasma concentrations are typically 1.7-3.5 g/L (5-10 μM). The intact fibrinogen molecule consists of two identical subunits, each consisting of three non-identical polypeptide chains denoted as Aα, Bβ and γ. The letters A and B in the Aα and Bβ chains designate, respectively, fibrinopeptide A (FpA, residues 1-16), and fibrinopeptide B (FpB, residues 1-14), which are cleaved by thrombin upon conversion of fibrinogen to fibrin. The fibrin monomers polymerize in a half-overlap fashion to form insoluble fibrin fibrils. The polymerised fibrin is subsequently stabilized by 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 Aα chain to produce fragment X (intact D-E-D, which is still clottable). Fragment X is further degraded to nonclottable fragments Y (D-E) and D. Fragment Y can be digested into its constituent D and E fragments. Proteolysis 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 noncovalently associated with DD. The molecular weights of the cleavage fragments produced from human crosslinked fibrin are: 184 kDa for fragment DD, 92 kDa for D, 50 kDa for E, 1.54 kDa for FpA and 1.57 kDa for FpB. Most of the fibrinogen in the circulation consists of 2 copies of each chain (Aα2, Bβ2, γA2), but in normal plasma approximately 10% of the fibrinogen molecules contain one γA chain and one variant γ chain (termed γ`), in which the c-terminal AGDV residues are replaced with the amino acid sequence VRPEHPAETEYDSLYPEDDL. This variant fibrinogen is commonly referred to as fibrinogen gamma prime (γA/γ`) but has also been called fibrinogen 2 or peak 2 fibrinogen because it elutes separately from fibrinogen 1 (γA2) by ion exchange chromatography. Residues 414-427 of the γ` chain of fibrin gamma prime (contain a high-affinity binding site for exosite II of thrombin, which allows the active site of bound thrombin to remain available to interact with substrates while demonstrating resistance to heparin mediated inhibition by antithrombin.

Keywords

FGG;fibrinogen gamma chain;fibrinogen, gamma polypeptide;

GENE INFORMATION

Entrez Gene ID

2266

UniProt ID

P02679

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