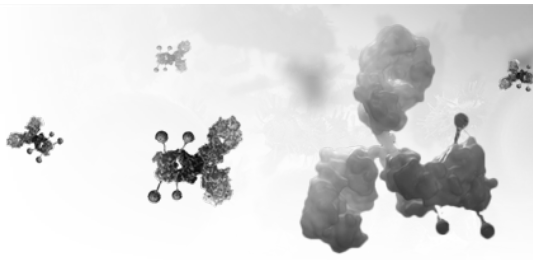

Sheep anti Human Factor XIII polyclonal antibody [HRP] (CABT-L465)

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

PRODUCT INFORMATION

Specificity	Prior to conjugation, this antibody was specific for Factor XIII as demonstrated by immunoelectrophoresis and ELISA.
Target	Factor XIII
Immunogen	Human Factor XIII (A2B2) purified from plasma.
Isotype	IgG
Source/Host	Sheep
Species Reactivity	Human
Conjugate	HRP
Applications	IEP, ELISA
Format	Liquid
Size	200 µg
Buffer	A buffered stabilizer solution containing 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. Avoid exposure to sodium azide as this is an inhibitor of peroxidase activity.

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BACKGROUND

Introduction	Factor XIII (F.XIII, fibrin stabilizing factor) is the proenzyme form of a transamidase that is essential for normal haemostasis and fibrinolysis, wound healing, female fertility and foetal development. Extracellular F.XIII consists of A subunits (83 kDa each) which contain the enzyme moiety, and B subunits (76 kDa each) which act as a carrier protein for the A subunit in circulation. Both subunits are produced under separate genetic control. In plasma, F.XIII exists as a non-covalent tetrameric complex (320 kDa) of two A-subunits and two B-subunits (A2B2). The concentration of F.XIII tetramer in plasma is ~25 µg/ml (~80 nM). An intracellular form of F.XIII is found in platelets, megakaryocytes and monocytes. This form of F.XIII presents as a dimer of two A-subunits only and has a molecular weight of 160 kDa. The importance of these intracellular stores is demonstrated by the observation that platelets can contribute up to half of the F.XIII activity in platelet rich plasma. The activation of F.XIII involves several steps. Thrombin cleaves after Arg37 of each A-subunit in the A2B2 tetramer, releasing a 4.5 kDa activation peptide. Additional conformational changes induced by the binding of calcium, and by dissociation of the B-subunits from the A-subunit dimer are required to obtain full enzyme activity. F.XIIIa is a cysteine protease that catalyses the formation of γ-glutamyl-ε-lysyl bonds between the γ and α chains of polymerised fibrin molecules. Other proteins found crosslinked into fibrin clots by F.XIIIa include fibrinogen, α2 Antiplasmin, fibronectin, vitronectin and von Willebrand factor.
Keywords	F13B;coagulation factor XIII, B polypeptide;FXIIIB;coagulation factor XIII B chain;TGase;transglutaminase B chain;fibrin-stabilizing factor B subunit;protein-glutamine gamma-glutamyltransferase B chain;F13A1;coagulation factor XIII, A1 polypeptide;F13A;coagulation factor XIII A chain;TGase;factor XIIIa;fibrinoligase;FSF, A subunit;coagulation factor XIIIa;transglutaminase A chain

GENE INFORMATION

Entrez Gene ID	2165; 2162
UniProt ID	P05160; P00488

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