abcam

Product datasheet

Recombinant Human Factor XII protein ab158410

1 Image

Description

Product name	Recombinant Human Factor XII protein
Expression system	Wheat germ
Protein length	Full length protein
Animal free	No
Nature	Recombinant
Species	Human
Sequence	MPAQPAPPKPQPTTRTPPQSQTPGALPAKREQPPSLTRN GPLSCGQRLRK SLSSMTRVVGGLVALRGAHPYIAALYWGHSFCAGSLIAPC WVLTAAHCLQ DRPAPEDLTVVLGQERRNHSCEPCQTLAVRSYRLHEAFS PVSYQHDLALL RLQEDADGSCALLSPYVQPVCLPSGAARPSETTLCQVAG WGHQFEGAEEY ASFLQEAQVPFLSLERCSAPDVHGSSILPGMLCAGFLEG GTDACQGDSGG PLVCEDQAAERRLTLQGIISWGSGCGDRNKPGVYTDVAYY LAWIREHTVS
Amino acids	1 to 300
Tags	GST tag N-Terminus

Specifications

Our **Abpromise guarantee** covers the use of **ab158410** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Applications	ELISA
	Western blot
Form	Liquid
Additional notes	

Preparation and Storage

Stability and Storage

Shipped on dry ice. Upon delivery aliquot and store at -80ºC. Avoid freeze / thaw cycles.

pH: 8.00
Constituents: 0.31% Glutathione, 0.79% Tris HCl

General Info

Function

Factor XII is a serum glycoprotein that participates in the initiation of blood coagulation, fibrinolysis, and the generation of bradykinin and angiotensin. Prekallikrein is cleaved by factor XII to form kallikrein, which then cleaves factor XII first to alpha-factor XIIa and then trypsin cleaves it to beta-factor XIIa. Alpha-factor XIIa activates factor XI to factor XIa.

Involvement in disease

Defects in F12 are the cause of factor XII deficiency (FA12D) [MIM:234000]; also known as Hageman factor deficiency. This trait is an asymptomatic anomaly of in vitro blood coagulation. Its diagnosis is based on finding a low plasma activity of the factor in coagulating assays. It is usually only accidentally discovered through pre-operative blood tests. F12 deficiency is divided into two categories, a cross-reacting material (CRM)-negative group (negative F12 antigen detection) and a CRM-positive group (positive F12 antigen detection).
Defects in F12 are the cause of hereditary angioedema type 3 (HAE3) [MIM:610618]; also known as estrogen-related HAE or hereditary angioneurotic edema with normal C1 inhibitor concentration and function. HAE is characterized by episodic local subcutaneous edema, and submucosal edema involving the upper respiratory and gastrointestinal tracts. HAE3 occurs exclusively in women and is precipitated or worsened by high estrogen levels (e.g., during pregnancy or treatment with oral contraceptives). It differs from HAE types 1 and 2 in that both concentration and function of C1 inhibitor are normal.

Sequence similarities

Belongs to the peptidase S1 family.
Contains 2 EGF-like domains.
Contains 1 fibronectin type-I domain.
Contains 1 fibronectin type-II domain.
Contains 1 kringle domain.
Contains 1 peptidase S1 domain.

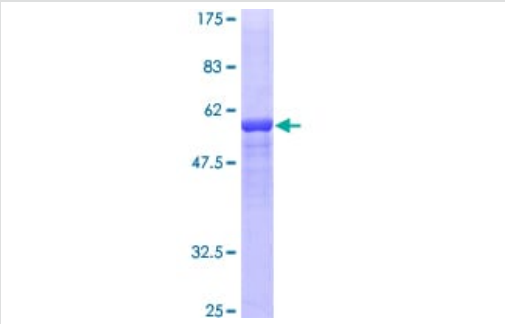
Post-translational modifications

Factor XII is activated by kallikrein in alpha-factor XIIa, which is then further converted by trypsin into beta-factor XIIa. Alpha-factor XIIa is composed of the NH2-terminal heavy chain (Coagulation factor XIIa heavy chain) and the COOH-terminal light chain (Coagulation factor XIIa light chain), connected by a disulfide bond. Beta-factor XIIa is composed of 2 chains linked by a disulfide bond, a light chain (Beta-factor XIIa part 2), corresponding to the COOH-terminal light chain (Coagulation factor XIIa light chain) and a nonapeptide (Beta-factor XIIa part 1).
O- and N-glycosylated. The O-linked polysaccharides were not identified, but are probably the mucin type linked to GalNAc.

Cellular localization

Secreted.

Images



SDS-PAGE - Recombinant Human Factor XII protein (ab158410)

ab158410 on a 12.5% SDS-PAGE stained with Coomassie Blue.

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