

Recombinant Human F13A1 protein, His-tagged

Cat. No. F13A1-1498H Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant Human F13A1 aa. (Gly107~Asn345) fused with N-terminal His tag was produced in E. coli cells.
Species	Human
Source	E.coli
ProteinLength	Gly107~Asn345
Description	This gene encodes the coagulation factor XIII A subunit. Coagulation factor XIII is the last zymogen to become activated in the blood coagulation cascade. Plasma factor XIII is a heterotetramer composed of 2 A subunits and 2 B subunits. The A subunits have catalytic function, and the B subunits do not have enzymatic activity and may serve as plasma carrier molecules. Platelet factor XIII is comprised only of 2 A subunits, which are identical to those of plasma origin. Upon cleavage of the activation peptide by thrombin and in the presence of calcium ion, the plasma factor XIII dissociates its B subunits and yields the same active enzyme, factor XIIIa, as platelet factor XIII. This enzyme acts as a transglutaminase to catalyze the formation of gamma-glutamyl-epsilon-lysine crosslinking between fibrin molecules, thus stabilizing the fibrin clot. It also crosslinks alpha-2-plasmin inhibitor, or fibronectin, to the alpha chains of fibrin. Factor XIII deficiency is classified into two categories: type I deficiency, characterized by the lack of both the A and B subunits; and type II deficiency, characterized by the lack of the A subunit alone. These defects can result in a lifelong bleeding tendency, defective wound healing, and habitual abortion.

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

Form	Freeze-dried powder
Molecular Mass	31kDa as determined by SDS-PAGE reducing conditions.
Endotoxin	<1.0EU per 1g (determined by the LAL method).
Purity	>92%
Characteristic	The isoelectric point is 6.1.
Applications	SDS-PAGE; WB; ELISA; IP; CoIP; Purification; Amine Reactive Labeling.
Stability	The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37°C for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.
Storage	Avoid repeated freeze/thaw cycles. Store at 2-8°C for one month. Aliquot and store at -80°C for 12 months.
Concentration	200g/mL
Storage buffer	20mM Tris, 150mM NaCl, pH8.0, containing 1mM EDTA, 1mM DTT, 0.01% sarcosyl, 5%Trehalose and Proclin300.
Reconstitution	Reconstitute in 20mM Tris, 150mM NaCl (pH8.0) to a concentration of 0.1-1.0mg/mL. Do not vortex.

GENE INFORMATION

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Gene Name	F13A1 coagulation factor XIII A chain [Homo sapiens (human)]
Official Symbol	F13A1
Synonyms	F13A; FSF, A subunit; TGase; bA525O21.1 (coagulation factor XIII, A1 polypeptide); coagulation factor XIII, A polypeptide; coagulation factor XIII, A1 polypeptide; coagulation factor XIIIa; factor XIIIa; fibrin stabilizing factor, A subunit; fibrinolygase; protein-glutamine gamma-glutamyltransferase A chain; transglutaminase A chain; transglutaminase. plasma; coagulation factor XIII A chain
Gene ID	2162
mRNA Refseq	NM_000129.3
Protein Refseq	NP_000120.2
UniProt ID	P00488