# Recombinant Human F13A1 protein, His-tagged

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

## SPECIFICATION

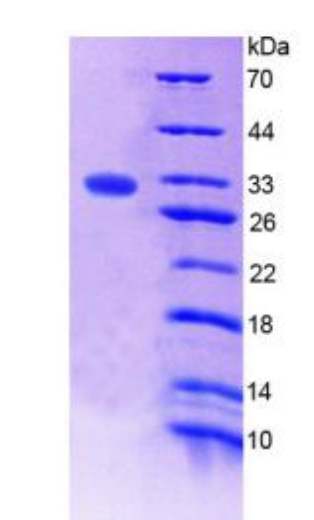
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| **Product Overview** | Recombinant Human F13A1 aa. (Gly107~Asn345) fused with N-terminal His tag was produced in E. coli cells. |
| **Species** | Human |
| **Source** | E.coli |
| **ProteinLength** | Gly107~Asn345 |
| **Description** | This gene 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. |

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| **Form** | Freeze-dried powder |
| **Molecular Mass** | 31kDa as determined by SDS-PAGE reducing conditions. |
| **Endotoxin** | <1.0EU per 1μg (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** | 200μg/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; fibrinoligase; 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 |
| **SDS-PAGE** |  |



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