



# Recombinant Human Coagulation factor XIII B chain (F13B)

<b>Product Code</b>	CSB-EP007922HU
<b>Storage</b>	Store at -20°C, for extended storage, conserve at -20°C or -80°C.
<b>Uniprot No.</b>	P05160
<b>Product Type</b>	Recombinant Protein
<b>Immunogen Species</b>	Homo sapiens (Human)
<b>Purity</b>	>85% (SDS-PAGE)
<b>Sequence</b>	EEKPCGFPHV ENGRIAQYYY TFKSFYFPMS IDKLSFFCL AGYTTESGRQ EEQTTCTTEG WSPEPRCFKK CTKPDLSNGY ISDVKLLYKI QENMRYGCAS GYKTTGGKDE EVVQCLSDGW SSQPTCRKEH ETCLAPELYN GNYSTTQKTF KVKDKVQYEC ATGYTAGGK KTEEVECLTY GWSLTPKCTK LKCSSLR LIE NGYFHPVKQT YEEGDVVQFF CHENYYLSGS DLIQCYNFGW YPESPVCEGR RNRCPPLP INSKIQTHST TYRHGEIVHI ECELNFEIHG SAEIRCEDGK WTEPPKCI EG QEKVACEEPP FIENGAANLH SKIYYNGDKV TYACKSGYLL HGSNEITCNR GKWTL PPECV ENNENCKHPP VVMNGAVADG ILASYATGSS VEYRCNEY YL LRGSKISRCE QGKWSSPPVC LEPCTVNVDY MNRNNIEMKW KYGKVLHGD LIDFVCKQGY DLSPLTPLSE LSVQCNRGEV KYPLCTRKES KGMCTSPPLI KHGVIISSTV DTYENGSSVE YRCFDHFFLE GSREAYCLDG MWTTPPLCLE PCTLSFTEME KNNLLLKWDF DNRPHILHGE YIEFICRGDT YPAELYITGS ILRMQCDRGQ LKYPRCIPRQ STLSYQEPLR T
<b>Source</b>	E.coli
<b>Target Names</b>	F13B
<b>Protein Names</b>	Recommended name: Coagulation factor XIII B chain Alternative name(s): Fibrin-stabilizing factor B subunit Protein-glutamine gamma-glutamyltransferase B chain Transglutaminase B chain
<b>Expression Region</b>	21-661
<b>Notes</b>	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
<b>Tag Info</b>	Tag type will be determined during the manufacturing process.
<b>Protein Length</b>	Full Length of Mature Protein
<b>Target Details</b>	This gene encodes coagulation factor XIII B 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 a plasma carrier molecules. Platelet factor XIII is comprised only of 2 A subunits, which are identical to those of plasma origin. Upon activation by the 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. 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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**Reconstitution**

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL. We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.

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**Shelf Life**

The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.