Recombinant Protein Technical Manual

Recombinant Human F13a/Factor XIIIa Protein (His Tag)

RPES3410

Product Data:

Product SKU: RPES3410

Size: 10µg

Species: Human

Expression host: Human Cells

Uniprot: P00488

Protein Information:

Molecular Mass: 80.3 kDa

AP Molecular Mass: 80-90 kDa

Tag: C-His

Bio-activity:

Purity: > 95% as determined by reducing SDS-PAGE.

Endotoxin: < 1.0 EU per µg as determined by the LAL method.

Storage: Store at < -20°C, stable for 6 months. Please minimize freeze-thaw cycles.

Shipping: This product is provided as liquid. It is shipped at frozen temperature with blue ice. Upon receipt, store it immediately at<-20°C.

Formulation: Supplied as a 0.2 µm filtered solution of 50 mM NaCl,5% Sucrose, 1% Tween 20 (v/v),0.3% Histidine (w/v),pH8.0.

Reconstitution: Please refer to the printed manual for detailed information.

Application:

Synonyms: Coagulation Factor XIII A Chain; Coagulation Factor XIIIa; Protein-Glutamine Gamma-Glutamyltransferase A Chain; Transglutaminase A Chain; F13A1; F13A

Immunogen Information:

Sequence: Gly39-Met732

Background:

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 composed of just 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. 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.