Recombinant Protein Technical Manual

Recombinant Human Coagulation Factor XI/F11 Protein (His Tag)(Active)

RPES4737

Product Data:

Product SKU: RPES4737

Size: 20µg

Species: Human

Expression host: HEK293 Cells

Uniprot: NP_000119.1

Protein Information:

Molecular Mass:	69.5 kDa
AP Molecular Mass:	75-80 kDa
Tag:	C-His
Bio-activity:	Measured by its ability to cleave the fluorogenic peptide substrate, t-butyloxycarbonyl-Ile-Glu-Gly-Arg-7-amido-4-methylcoumarin (Boc-IEGR-AMC). The specific activity is >100 pmoles/min/µg. (Activation description: The proenzyme needs to be activated by Thermolysin for an activated form)
Purity:	> 85 % as determined by reducing SDS-PAGE.
Endotoxin:	< 1.0 EU per µg as determined by the LAL method.
Storage:	Lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.
Shipping:	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation:	Lyophilized from sterile PBS, pH 7.4
Reconstitution:	Please refer to the printed manual for detailed information.
Application:	
Synonyms:	coagulation factor 11;coagulation factor XI;FXI

Immunogen Information:

Sequence: Met 1-Val 625

Background:

Factor XI (plasma thromboplastin antecedent) is a plasma glycoprotein, and a zymogen acting as a serine protease which participates in blood coagulation as a catalyst in the conversion of factor IX to factor IXa in the presence of calcium ions. It is an unusual dimeric protease, with structural features that distinguish it from vitamin K-dependent coagulation proteases. The factor XI is synthesized in the liver as a single polypeptide chain with a molecular weight estimated between 125 ~160 kDa and then is processed into a disulfide-bond linked homodimer. FXI is a homodimer, with each subunit containing four apple domains and a protease domain. The apple domains form a disk structure with binding sites for platelets, high molecular weight kininogen, and the substrate factor IX (FIX). FXI is converted to the active protease FXIa by cleavage of the Arg369-Ile370 bond on each subunit. After the activation reaction, Factor XIa is composed of two heavy and two light chains held together by three disulfide bonds. The heavy chains are derived from the amino termini of the zymogen and responsible for the binding of factor XI to high molecular weight kininogen and for the activation of factor IX, while the light chain contains the catalytic portion of the enzyme and is homologous to the trypsin family of serine proteases. FXI deficiency is a disorder characterized by a mild or no bleeding tendency. Severe FXI deficiency is an injury-related bleeding disorder common in Ashkenazi Jews and rare worldwide.