CREATIVE BIOMART®
Assay Kit

Factor XIIIa Colorimetric Activity Assay Kit

Product Information

Cat.No. Kit-2096

Product Overview

Factor XIIIa activity assay kit utilizes the transglutaminase activity of factor XIIIa to cross link an amine-containing substrate to glutamine-containing substrate resulting in the loss of ammonia which can be quantitatively measured by a colorimetric assay. The kit is easy-to-use and can detect Factor XIIIa (as low as 0.1 Loewy U) from plasma and purified protein samples.

Size

100 assays

Description

Factor XIII or fibrin stabilizing factor (EC 2.3.2.13) is an enzyme involved in the blood coagulation system that crosslinks fibrin. Factor XIII is a transglutaminase that circulates in the plasma as a heterotetramer of two catalytic "A" subunits and two carrier "B" subunits. Factor XIII is activated by thrombin in the presence of calcium which leads to the release of the activation peptide, followed by the dissociation of carrier subunits. The activated Factor XIII (XIIIa) acts on fibrin (Factor Ia) to form γ-glutamyl-Ɛ-lysyl amide cross links between fibrin molecules leading to the formation of an insoluble clot. The deficiency of Factor XIII affects fibrin clot stability and bleeding disorders.

Applications

Measurement of FXIIIa activity in plasma and purified/crude enzyme preparations.

Storage

Store kit at -20°C, protected from light. Briefly centrifuge small vials at low speed prior to opening. Read the entire protocol before performing the experiment. High concentrations of ammonia in the samples or buffers will interfere with the performance of the kit. Avoid exposing the entire kit or reagents to ammonia or ammonia producing reagents.FXIIIa Assay Buffer: Bring to room temperature before use. Store at 4°C or -20°C.FXIIIa Activation, Reaction and Detection Buffers: Thaw on ice before use. Store at -20°C. If needed, aliquot into smaller volumes for storage at -20°C. Avoid repeated freeze/thaw. Use within two months.FXIIIa Probe: Aliquot and store at -20°C. Thaw

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on ice before use. Avoid repeated freeze/thaw. Use within two months.Human Factor XIIIa: Store at -20°C. Thaw on ice before use. Avoid repeated freeze/thaw. Use within two months.FXIIIa Inhibitor: Reconstitute in 1 ml of ddH2O to obtain 100 mM Iodoacetamide. Aliquot and store at -20°C. Thaw on ice before use.

Kit Components

FXIIIa Assay Buffer 2.5 ml NM K522-100-1FXIIIa Activation Buffer (4X): 2.5 mlFXIIIa Reaction Buffer (4X): 2.5 mlFXIIIa Detection Buffer (2X): 5 mlFXIIIa Probe: 0.2 mlHuman Factor XIIIa (0.5 Loewy U/µl): 20 µlNH4Cl Standard (10 mM): 100 µlFXIIIa Inhibitor (Iodoacetamide): 1 Vial

Detection method Colorimetric (Absorbance 340 nm)

Compatible Sample Types

• Adherent and suspension cell lysates• Animal tissues such as rat liver • Purified enzyme

Features & Benefits

• Simple, rapid & convenient assay to measure Factor XIIIa• Includes Positive Control and Inhibitor (Iodoacetamide)

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