



FACTOR VIII DEFICIENT PLASMA

(Haematologic Technologies, Inc. Catalog #FVIII-CD)

Intended Use

Haematologic Technologies' factor deficient plasmas are for research use or for further manufacture into *in vitro* diagnostic reagents.

Summary of Factor VIII

Human factor VIII (fVIII) is a large plasma glycoprotein and is an essential component in the blood coagulation process. FVIII circulates in plasma as a procofactor in a non-covalent complex with von-Willebrand factor (vWF). The activation of fVIII by thrombin results in dissociation of the fVIII/vWF complex and yields an active cofactor molecule (fVIIIa). fVIIIa is a heterotrimer composed of two NH₂-terminal derived subunits (MW=50,000 and 40,000) and a single COOH-terminal derived subunit (MW=70,000) that remain non-covalently associated in the presence of divalent metal ions. FVIIIa is a cofactor for the serine protease factor IXa (fIXa). FVIIIa and fIXa assemble on a phospholipid surface in a non-covalent, metal ion dependent manner to form the intrinsic factor *tenase* enzyme complex, which is responsible for the rapid conversion of the zymogen factor X to the enzyme factor Xa. Down regulation of the intrinsic factor *tenase* complex is accomplished partially through the inactivation of fVIIIa by activated protein C (aPC). The fundamental importance of fVIII to the overall coagulation process is exemplified in hemophilia-A patients. Hemophilia-A is characterized by a lack of fVIIIa activity that results in a severe bleeding diathesis.

Reagent

Haematologic Technologies' factor VIII deficient plasma is prepared from citrated "coagulation normal" human plasma by a chemical process that depletes the factor VIII activity while retaining the factor VIII antigen. Other coagulation factor values along with fibrinogen, PT, aPTT and turbidity measurements are determined and reported on each lot's Certificate of Analysis.

Assay Ranges			
Fibrinogen	150-575 mg/dL	Factor X	>50%
Factor II	>50%	Factor XI	>50%
Factor V	>50%	Factor XII	>50%
Factor VII	>50%	Turbidity (reported)	A320, A400, A530, A650
Factor VIII	<1%	aPTT	reported
Factor IX	>50%	PT	reported

Storage and Handling

Haematologic Technologies' deficient plasmas have a five (5)-year expiration when stored continuously at -70°C.

This product is of human blood/plasma origin. Although the starting material has been tested and found negative for HIV-1 antigen(s), antibodies to HIV and HCV, and non-reactive for HbsAg, extreme caution should be used when handling this material.

Related Reagents from Haematologic Technologies

- Sheep anti-Human Factor VIII (Cat. #PAHFVIII-S)