abcam

Product datasheet

Human FVIII ELISA kit (total FVIII antigen) ab272771

1 References 2 Images

Overview

Product name	Human FVIII ELISA kit (total FVIII antigen)
Detection method	Colorimetric
Sample type	EDTA Plasma, Cit plasma
Assay type	Quantitative
Range	0.002 IU/ml - 0.84 IU/ml
Assay duration	Multiple steps standard assay
Species reactivity	**Reacts with:** Human
Product overview	The sensitive quantitative measurement of total human Factor VIII antigen in plasma samples is easily performed with Human FVIII ELISA kit (total FVIII antigen) (ab272771). The average normal plasma level of Factor VIII is defined as 1.0 IU/ml and the normal range is 0.4-1.8 IU/ml. Hemophilia A patients are classified by the following Factor VIII levels: 0.05 - 0.25 IU/ml = mild 0.01 - 0.05 IU/ml = moderate less than 0.01 IU/ml = severe The assay measures total human Factor VIII in the 0.0016-0.84 IU/ml range. Samples giving human Factor VIII levels above 0.84 IU/ml should be diluted in blocking buffer before use. 1:8 and 1:16 dilutions for normal plasma, or 1:4 and 1:8 dilutions for Hemophiliac plasma, are suggested for best results. Human Factor VIII will bind to the affinity purified capture antibody coated on the microtiter plate. After appropriate washing steps, biotin labeled anti-human Factor VIII primary antibody binds to the captured protein. Excess primary antibody is washed away, and bound antibody is reacted with peroxidase conjugated streptavidin. Following an additional washing step, TMB substrate is used for color development at 450nm. A standard calibration curve is prepared along with the samples to be measured using dilutions of human plasma. Color development is proportional to

the concentration of Factor VIII in the samples. All reagents and standards are provided in these ELISA kits.

The Factor VIII level in the human plasma standard provided is calibrated against a secondary standard that is referenced to the WHO or ISTH International Standard.

Platform Microplate

Properties

Storage instructions Store at +4°C. Please refer to protocols.

Components	1 x 96 tests
10X Wash Buffer	1 x 50ml
Anti-Human FVIII Primary Antibody Lyophilized Vial	1 vial
ELISA Plate	1 unit
Human FVIII Standard Lyophilized Vial	1 vial
Streptavidin-HRP Secondary Reagent	1 vial
TMB Substrate	1 x 10ml

Function Factor VIII, along with calcium and phospholipid, acts as a cofactor for factor IXa when it converts factor X to the activated form, factor Xa.

Involvement in disease Defects in F8 are the cause of hemophilia A (HEMA) [MIM:306700]. A disorder of blood coagulation characterized by a permanent tendency to hemorrhage. About 50% of patients have severe hemophilia resulting in frequent spontaneous bleeding into joints, muscles and internal organs. Less severe forms are characterized by bleeding after trauma or surgery. Note=Of particular interest for the understanding of the function of F8 is the category of CRM (cross-reacting material) positive patients (approximately 5%) that have considerable amount of F8 in their plasma (at least 30% of normal), but the protein is non-functional; i.e., the F8 activity is much less than the plasma protein level. CRM-reduced is another category of patients in which the F8C antigen and activity are reduced to approximately the same level. Most mutations are CRM negative, and probably affect the folding and stability of the protein.

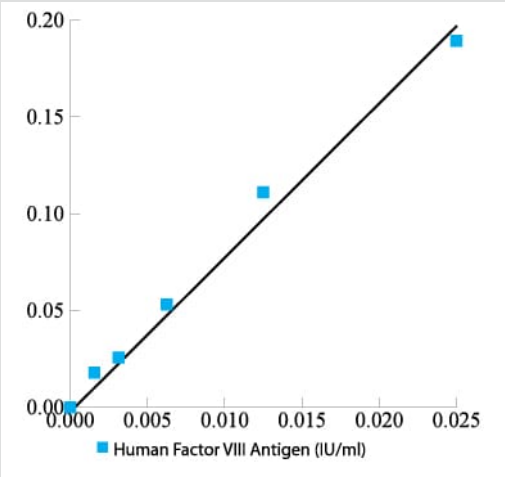
Sequence similarities Belongs to the multicopper oxidase family.
Contains 3 F5/8 type A domains.
Contains 2 F5/8 type C domains.
Contains 6 plastocyanin-like domains.

Domain Domain F5/8 type C 2 is responsible for phospholipid-binding and essential for factor VIII activity.

Post-translational modifications Sulfation on Tyr-1699 is essential for binding vWF.

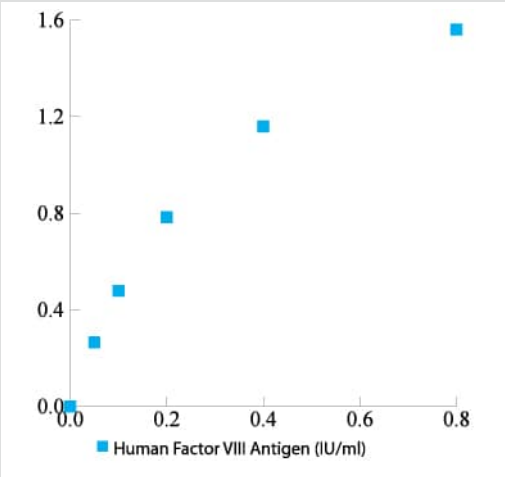
Cellular localization Secreted > extracellular space.

Images



A typical standard curve. Example only.

Example data



A typical standard curve. Example only.

Example Data

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