

Factor VIIIa Activity Assay Kit (Fluorometric) ab204696

1 References 2 Images

Overview

Product name	Factor VIIIa Activity Assay Kit (Fluorometric)
Detection method	Fluorescent
Sample type	Serum, Plasma, Purified protein
Assay type	Enzyme activity
Sensitivity	1 ng/well
Product overview	Factor VIIIa Activity Assay Kit (Fluorometric) (ab204696) is based on the ability of FVIIIa to generate FXa. The generated FXa proteolytically cleaves a synthetic substrate and releases a fluorophore, AMC, which can be easily quantified by fluorescence microplate reader.

Notes	<p>The assay is simple, rapid and can detect activity as low as 1 ng of FVIIIa in a variety of samples.</p> <p>This product is manufactured by BioVision, an Abcam company and was previously called K358 Factor VIIIa Activity Assay Kit (Fluorometric). K358-100 is the same size as the 100 test size of ab204696.</p> <p>The coagulation Factor VIII (anti-hemophilic factor, AHF) is a vital blood-clotting protein. Factor VIII circulates in the bloodstream as an inactive protein, bound to a large multimeric glycoprotein called von Willebrand factor (VWF). Upon an injury to the blood vessel, VWF dissociates from FVIII and releases the active form of FVIII (FVIIIa). In the presence of calcium ions and negatively charged membrane phospholipids, activated factor VIII (FVIIIa) then binds to the activated Factor IX (FIXa) and proteolytically activates factor X (FX) to factor Xa (FXa).</p>
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Platform	Microplate reader
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Properties

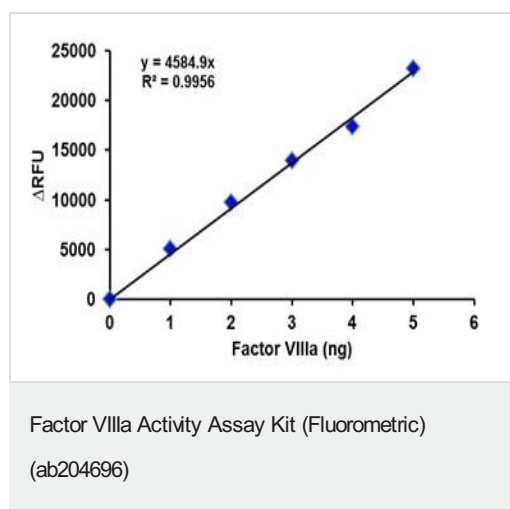
Storage instructions	Store at -20°C. Please refer to protocols.
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Components	100 tests
Assay Buffer XLIV	1 x 15ml
Enzyme Mix XXII	1 vial
Enzyme Mix XXIII	1 vial

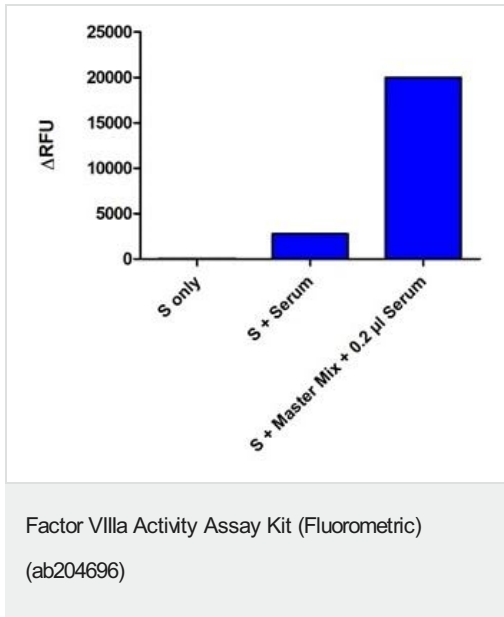
Components	100 tests
FVIIIa Enzyme Standard	1 x 2.6µg
FXa Substrate	1 x 200µl
Phospholipid Mixture	1 x 600µl

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



Typical Factor VIIIa Standard Curve using Factor VIIIa Activity Assay Kit (Fluorometric) (ab204696).



Factor VIIIa activity was measured in serum samples in the presence and absence of the master mix. S: Substrate.

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