

Description	Precipitating polyclonal rabbit antiserum to human coagulation factor X	
Product code	RAHu/FX	
Biological origin	Rabbit	
Physical form	Delipidated, heat inactivated, lyophilized, stable whole serum.	
Preservative	No preservative added	
Immunogen	<p>Plasma Factor X is a relatively stable glycoprotein with alpha-1 mobility in electrophoresis. It has a molecular weight of 56,000, consists of a heavy chain and a light chain, and is essential for normal clotting and haemostasis. FX can be activated by both the intrinsic and the extrinsic pathways. It is converted to Fxa by FIXa and FVIII in the presence of calcium ions and phospholipid (intrinsic pathway), by tissue factor and FVIIIa (extrinsic pathway), or by direct platelet action. After coagulation, FX antigen is present in serum. Fxa is activated by combining irreversibly with antithrombin III, with heparin acting as cofactor.</p> <p>Normal adult plasma contains an average of 0.5 to 1 mgFX per 100 ml. Increased adult levels are seen during normal pregnancy and with the use of oral contraceptives. Deficiency of FX may be congenital or acquired and may result in a haemorrhagic disorder. Several types of congenital deficiencies are known: reduced FX activity and low antigen levels (Stuart), or with synthesis of abnormal molecules (Prower); abnormal molecular variants may have a selective deficiency in response to one or several activators. Acquired FX deficiency results mostly from vitamin K deficiency. During oral anticoagulant therapy FX deficiency usually develops as part of a combined deficiency with FII, FVI and FIX and with the appearance of inactive factors which lack calcium binding sites. FX deficiency may also occur in primary but probably not in secondary amyloidosis.</p> <p>For immunization FX is obtained in highly purified form from pooled fresh plasma. Freund's complete adjuvant is used in the first step of the immunization procedure.</p>	
Adsorption	Immunoaffinity adsorbed using insolubilized antigens as required, to eliminate antibodies reacting with other human serum proteins. The use of insolubilized adsorption antigens prevents the presence of excess adsorbent protein or immune complexes in the antiserum.	
Identity & Specificity	The defined antibody reactivity is restricted to Factor X as tested at the level of sensitivity of immuno-precipitation techniques. A single precipitin line is obtained in bidimensional electrophoresis, immunoelectrophoresis and double radial immunodiffusion (Ouchterlony) which shows a reaction of full identity with the purified immunogen.	
Cross-reactivity	The antiserum does not cross-react with any other human plasma proteins as tested in gel-diffusion techniques. Inter-species cross-reactivity is a normal feature of antibodies to plasma proteins, since homologous proteins of different species frequently share antigenic determinants. Cross-reactivity of this antiserum has not been tested in detail.	
Protein concentration	Total protein and IgG concentrations in the antiserum are comparable to those of pooled normal rabbit serum. No foreign proteins added.	
Intended use	In precipitating techniques as electroimmunodiffusion, immunoelectrophoresis and single and double radial immunodiffusion (Mancini, Ouchterlony). To prepare an adsorbent for immunoaffinity purification of FIX. If used in more sensitive test procedures or as catching or detection antibody in solid phase immunoassays specificity controls should always be included. Plasma samples and all assay components must contain EDTA to stabilize the proteins.	
Directions for use	In immunoelectrophoresis in agarose-plates use 2 µl human plasma or equivalent against 120 µl antiserum. In double radial immunodiffusion use a rosette arrangement with 10 µl antiserum in 3 mm diameter center well and 2 µl plasma samples (neat and serially diluted) in 2 mm diameter peripheral wells. The antiserum concentration required in the gel is normally between 1 and 2%. In immunologic determinations of FVII, plasma samples and all assay components must contain EDTA to stabilize the proteins	
Packing	Vial with 1 ml lyophilized antiserum.	
Storage / shelf life	Lyophilized at +4°C	at least 10 years
	reconstituted at or below -20°C	3-5 years
	reconstituted at +4°C	7 days
Handling	The lyophilized antiserum is shipped at ambient temperature and may be stored at +4°C; prolonged storage at or below -20°C. Reconstitute the lyophilized antiserum by adding 1 ml sterile distilled water. Dilutions may be prepared by adding phosphate buffered saline (PBS, pH 7.2). Repeated thawing and freezing should be avoided. If a slight precipitation occurs upon storage, this should be removed by centrifugation. It will not affect the performance of the antiserum.	
	Diluted antiserum should be stored at +4°C, not refrozen, and preferably used the same day.	
Caution	This antiserum should be handled by qualified persons only and appropriate precautions should be taken in its handling and disposal, and of all associated materials. For <i>in vitro</i> research purposes only.	

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