

Description	Precipitating polyclonal goat antiserum to human coagulation Factor XII	
Product code	GAHu/FXII	
Biological origin	Goat	
Physical form	Delipidated, heat inactivated, lyophilized, stable whole serum.	
Preservative	No preservative added.	
Immunogen	<p>Factor XII (Hageman factor) is a single chain glycoprotein (MW 80,000). It is a serine protease zymogen. FXII is converted to an active enzyme by damage to vascular endothelium. In vitro activation is caused by glass or kaolin. Surface binding promotes activation by kallikrein. FXIIa activates prekallikrein and FXI. Kallikrein activates more FXII. Fragments of FXIIa activate FVII to FVIIa, and plasminogen to plasmin. The complement system is also activated by FXIIa. A link between fibrin clot and the subendothelium is formed by FXIIa cross-linking with fibrin, alpha-2 plasmin inhibitor, fibronectin and Van Willebrand factor. Purified plasma FXII is used as immunogen.</p> <p>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 FXII, FXIIa and complexes of FXIIa with other proteins. In immunoelectrophoresis, bi-dimensional electrophoresis and radial immunodiffusion (Ouchterlony) against normal plasma, a single precipitin line is obtained which shows a reaction of identity with precipitated purified Factor XII. No reaction is obtained with FXII-depleted plasma.	
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, however in immunoelectrophoresis a reaction with Rhesus monkey plasma has been found.	
Protein concentration	Total protein concentration in the antiserum is about 50 mg/ml, the IgG concentration about 10 mg/ml. No foreign proteins added.	
Antibody titre	Precipitin titre not less than 1:32 as measured against appropriate antigens in precipitin-block titration.	
Intended use	<p>This antiserum is primarily intended for the measurement of Factor XII in human plasma using the EID-method (Laurell): a specially purified agarose (Agarose Nordic Nr. 4) solution containing between 1 and 2% antiserum is poured onto a glass plate and allowed to gel. Plasma containing FXII is incorporated into a series of wells and electrophoresis is performed. Rockets due to antigen/antibody reaction are measured. The height of the rocket is directly proportional to the FXII concentration in the plasma. The concentration of FXII in normal adult plasma is about 40 µg/ml. Newborn infants have moderately lower levels. Plasma level fall moderately during pregnancy. Congenital and acquired deficiencies are known. Homozygotes have a thrombotic tendency. They usually have reduced FXII antigen and FXII coagulant activity but rare cases have normal FXII antigen levels. Acquired reduction in antigen level and clotting activity have been described in disseminated intravascular coagulopathy, in cirrhosis, but not in chronic active hepatitis and in nephrosis. A marked increase of the plasma level may occur due to oestrogen action during oral contraception. Circulating antibodies against FXII have rarely been observed but are associated with a bleeding tendency.</p>	
Directions for use	The antiserum concentration required in the gel is normally between 1 and 2%.	
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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