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AP33075SU-N Polyclonal Antibody to Coagulation factor XIIIa (F13A1) - Serum

Alternate names: Coagulation factor XIII A chain, F13A, Protein-glutamine gamma-glutamyltransferase A chain, Transglutaminase A chain

Quantity: 1 ml

Concentration: Total protein and IgG concentrations in the antiserum are comparable to those of pooled normal rabbit serum. No foreign proteins added.

Background: Plasma FXIII is an active transglutaminase until it is activated (FXIIIa). It consists of two A subunits joined as a dimer, connected to two B subunits (A2B2). Each A subunit has a molecular weight of 75,000 and each B subunit of 80,000, making an aggregate molecular weight of the whole molecule of 320,000. Normal plasma contains about 20mg/ml. Platelet FXIII consists of only A subunits synthesized in the megakaryocytes. It accounts for about 50% of the total blood FXIII activity with a linear relationship between FXIII level and platelet counts. RAHu/FXIII-A reacts with both plasma and platelet FXIII. Antiserum raised against the B subunit (RAHu/FXIII-S) reacts exclusively with native and activated FXIIIa in plasma. FXIIIa results from activation of FXIII by thrombin after the release of fibrinopeptides A from fibrinogen.

Uniprot ID: P00488

NCBI: NP_000120.2

GeneID: 2162

Host: Rabbit

Immunogen: Highly purified FXIII-A.
Freund's complete adjuvant is used in the first step of the immunization procedure.

Format: **State:** Delipidated, heat inactivated, lyophilized, stable whole serum
Preservatives: None
Reconstitution: Restore 1 ml sterile distilled water.

Applications: **Immunoprecipitation.**
Can be used in precipitating techniques as electroimmunodiffusion, immunoelectrophoresis and single and double radial immunodiffusion (Mancini, Ouchterlony). To prepare an adsorbent for immunoaffinity purification of FXIII. If used in more sensitive test procedures or as catching or detection antibody in solid phase immunoassays specificity controls should always be include. Increase in plasma FXIII has been observed in type IV hyperlipoproteinaemia and in combined hyperlipodaemia. Congenital and acquired FXIII deficiencies have also been reported. In some cases of myeloma, inhibition of FXIII activity by the paraproteins may occur.
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. In electroimmunodiffusion the amount of antiserum required in the agarose gel is usually between 1 and 2% depending on the test arrangement.
Precipitin Titre: not less than 1:32 when tested against appropriate concentrations of

the antigen in agar-block immunodiffusion titration. The titre is further assayed by quantitative precipitin analysis incubating serial dilutions of the antiserum with normal plasma and measuring the residual antigen. The amount of Factor XIII precipitated by 1 ml antiserum is about 10 U.
Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Specificity:

The defined antibody reactivity is restricted to Factor XIII and FXIIIa in plasma and to platelet FXIII. As tested at the level of sensitivity of immunoprecipitation techniques a single precipitin line is obtained in bidimensional electrophoresis, immunoelectrophoresis and double radial immunodiffusion (Ouchterlony) which shows a reaction of full identity with A subunits of FXIII. No reaction is obtained with FXIII-depleted plasma and with B subunits.
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.
Species: Human.
Other species not tested.

Add. Information:

Adsorption: Immunoaffinity adsorbed using insolubilized antigens as required, to eliminate antibodies reacting with other plasma proteins. The use of insolubilized adsorption antigens prevents the presence of excess adsorbent protein or immune complexes in the antiserum.

Storage:

Store lyophilized at 2-8°C for 6 months or at -20°C long term.
After reconstitution store the antibody undiluted at 2-8°C for one month or (in aliquots) at -20°C long term.
Avoid repeated freezing and thawing.
Shelf life: one year from despatch.