Enzyme Research Laboratories
Global Coag

Sheep Anti-human Factor VIII:C Affinity-Purified IgG 0.5 mg

Catalogue: SAF8C-AP
Lot: SAMPLE
Expiry date: **/****
Store at -10 to -20°C.

For Research Use Only.
~ Not for use in diagnostic procedures.

Description of Factor VIII (F.VIII)

Factor VIII (formerly referred to as antihemophilic globulin and Factor VIII:C) is a large glycoprotein (320 kDa) that circulates in plasma at approximately 200 ng/ml. Synthesized in the liver, the majority of Factor VIII is cleaved during expression, resulting in a heterogeneous mixture of partially cleaved forms of F.VIII ranging in size from 200-280 kDa. The F.VIII is stabilized by association with von Willebrand Factor to form a F.VIII-vWF complex required for the normal survival of F.VIII *in vivo* (t1/2 of 8-12 hours).

F.VIII is a pro-cofactor that is activated through limited proteolysis by thrombin. In this process F.VIIIa dissociates from vWF to combine with activated Factor IX, calcium and a phospholipid surface where it is an essential cofactor in the assembly of the Factor X activator complex. Once dissociated from vWF, F.VIIIa is susceptible to inactivation by activated Protein C and by non-enzymatic decay.

Hemophilia A is a congenital bleeding disorder resulting from an X-chromosome-linked deficiency of F.VIII. The severity of the deficiency generally correlates with the severity of the disease. Some Hemophiliacs (~10%) produce a F.VIII protein that is partially or totally inactive. The production of neutralizing antibodies to F.VIII also occurs in 5-20% of Hemophiliacs [1-3].

References and Reviews

1. Lollar P, Fay PJ, Fass DN; Factor VIII and Factor VIIIa. Methods in Enzymology, 222, pg 122, 1993.
2. Hoyer, LW, Wyshock EG, Colman RW, in Hemostasis and Thrombosis, 3rd Edition, eds. RW Colman, J Hirsh, VJ Marder and EW Salzman, pp. 109-133, J.B. Lippincott Co., Philadelphia, 1994.
3. Pittman DD, Kaufman RJ. Structure-Function Relationships of Factor VIII Elucidated through Recombinant DNA Technology. Thromb. Haemostas. 61:161-165, 1989.

Product Specifications

Description:
Vial containing 0.250 ml of IgG purified by affinity-chromatography on immoblilized F.VIII. Total protein is 0.5 mg.

Format:
Affinity-Purified IgG, clear liquid.

Host Animal:
Sheep

Immunogen:
Human F.VIII (F.VIII:C) purified from concentrate.

Concentration:
APIgG concentration is 2.00 mg/ml, determined by absorbance using an extinction coefficient ($E^{1\%}_{280}$) of 13.4.

Buffer:
10 mM HEPES, 0.15 M NaCl, 50% (v/v) glycerol, pH 7.4.

Storage:
Store between -10 and -20°C. Product will become viscous but will not freeze. Avoid storage in frost-free freezers. Keep vial tightly capped. Allow product to warm to room temperature and gently mix before use.

Specificity:
This antibody is specific for F.VIII as demonstrated by immunoelectrophoresis and ELISA.

Applications:
Suitable as a source of antibodies to Factor VIII.

Neutralizing activity:
2444 Bethesda Units/mL IgG against normal plasma (Kasper CK *et al*, Thromb Diath Haemorrh **34**:869, 1975). One Bethesda unit/ml is defined as the amount of inhibitor that resulted in 50% residual F.VIII activity after 2 hours at 37°C.

Species Cross Reactivity:
Not determined.

Related Products

SAF8C-IG	Sheep Anti-Human FVIII, whole IgG from serum
SAF8C-HRP	Sheep Anti-Human Factor VIII, whole IgG-per
F8C-EIA	Paired antibodies for FVIII ELISA, 4 x 96 wells
FVIII-DP	Human plasma deficient in F. VIII, immune depleted

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