

## Sheep anti-human Factor VIII

Peroxidase Conjugated IgG

0.2 mg

**Product #:** SAF8C-HRP

**Lot #:** XXXX

**Expiry date:** XXXX

Store at -10 to -20°C

For Research Use Only.

Not for use in diagnostic procedures.

### Description of Factor VIII (FVIII)

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 FVIII is stabilized by association with von Willebrand Factor to form a FVIII-vWF complex required for the normal survival of FVIII *in vivo* ( $t_{1/2}$  of 8-12 hours).

FVIII is a pro-cofactor that is activated through limited proteolysis by thrombin. In this process FVIIIa 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, FVIIIa 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 FVIII. The severity of the deficiency generally correlates with the severity of the disease. Some Hemophiliacs (~10%) produce a FVIII protein that is partially or totally inactive. The production of neutralizing antibodies to FVIII also occurs in 5-20% of Hemophiliacs<sup>1-3</sup>.

### 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*, 3<sup>rd</sup> 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 XXXX ml of IgG conjugated to horseradish peroxidase (HRP) through carbohydrate groups. Total protein is 0.2 mg.

**Format:**

IgG-HRP conjugate as a clear, slightly red-brown liquid.

**Host Animal:**

Sheep

**Immunogen:**

Human FVIII (FVIII:C) purified from concentrate.

**Concentration:**

IgG-HRP concentration is XXXX mg/ml, determined by absorbance using an extinction coefficient ( $E_{1\%}^{1\text{cm}}$ ) of 14.

**Buffer:**

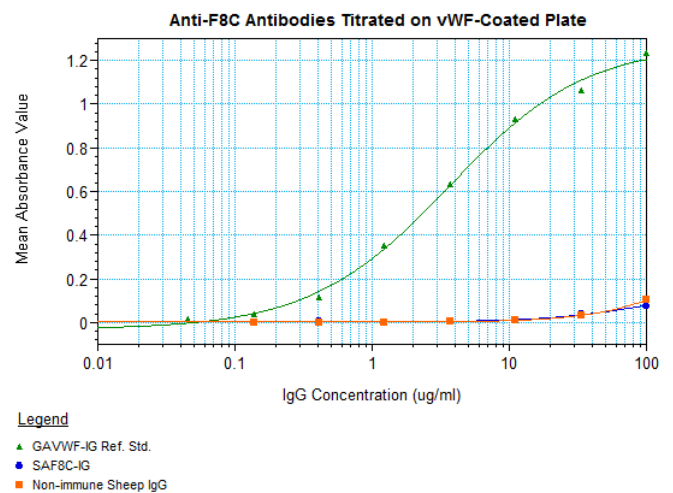
A buffered stabilizer solution containing 50% (v/v) glycerol.

**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. Avoid exposure to sodium azide as this is an inhibitor of peroxidase activity.

**Specificity:**

Prior to conjugation, this antibody was specific for FVIII as demonstrated by immunoelectrophoresis and ELISA. When titrated on vWF-coated plates, the unconjugated SAF8C-IG does not demonstrate any reactivity above the non-immune sheep negative control.



**Applications:**

Suitable as a source of peroxidase-labeled antibodies to FVIII.

**Rz Ratio (Reinheitszahl,  $A_{403}/A_{280}$ ):**

XXXX as determined spectrophotometrically.

**Related Products:**

Cat #: **SAF8C-IG** Sheep anti-human Factor VIII, whole IgG from serum  
Cat #: **SAF8C-AP** Sheep anti-human Factor VIII, affinity-purified IgG  
Cat #: **F8C-EIA** Paired antibodies for Factor VIII ELISA, 4 x 96 wells  
Cat #: **FVIII-DP** Human plasma deficient in Factor VIII, immune depleted

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