

**\*\*REPRESENTATIVE DATASHEET\*\*****Sheep anti-canine Factor VIII  
Peroxidase Conjugated IgG  
0.2 mg**

**Product #:** SAC8C-HRP  
**Lot #:** XXXX  
**Expiry date:** XXXX

Store at -10 to -20°C

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For Research Use Only.

Not for use in diagnostic procedures.

**Description of Factor VIII (FVIII)**

Factor VIII is a large glycoprotein (320 kDa) synthesized in the liver. The majority of Factor VIII is cleaved during expression, resulting in a mixture of partially cleaved forms ranging in size from 200-280 kDa. The FVIII is stabilized in circulation through non-covalent association with von Willebrand Factor. The concentration of FVIII in normal human plasma is typically 200 ng/mL. In canine plasma, the FVIII activity is 5-7 fold higher relative to human plasma. 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.

Hemophilia A is a congenital bleeding disorder resulting from an X-chromosome-linked deficiency of FVIII, occurring with a frequency of 1 in 4000 males. The defect can be caused by any one of hundreds of reported mutations but are most commonly due to inversions within intron 22 of the FVIII gene. Hemophilia A has also been reported in a variety of species including dog and mouse, with a clinical phenotype very similar to human. The genetic defect in one case of canine Hemophilia-A has been shown to also be due to a gene inversion similar to the human defect, possibly indicating a common instability of the FVIII gene in humans and dogs<sup>1-4</sup>.

**References:**

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. Lozier JN, Dutra A. et al: The Chapel Hill hemophilia dog colony exhibits a factor VIII gene inversion. *PNAS*. 99, pg 12991-96, 2002.
4. Gallo-Penn AM, Shirley PS. et al: Systemic delivery of an adeno-viral viral vector encoding canine factor VIII results in short term phenotypic correction, inhibitor development and liver toxicity in hemophilic dogs. *Blood*. 97, pg 107-113, 2001.

**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:**

Recombinant canine FVIII (cFVIII).

**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 canine FVIII as demonstrated by immunoelectrophoresis and ELISA.

**Applications:**

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

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

XXXX as determined spectrophotometrically.

**Related Products:**

Cat #:	<b>SAC8C-IG</b>	Sheep anti-canine Factor VIII, whole IgG from serum
Cat #:	<b>CFVIII-EIA</b>	Paired antibodies for canine Factor VIII ELISA, 4 x 96 wells
Cat #:	<b>SAF8C-IG</b>	Sheep anti-human Factor VIII, whole IgG from serum
Cat #:	<b>SAF8C-AP</b>	Sheep anti-human Factor VIII, affinity-purified IgG
Cat #:	<b>SAF8C-HRP</b>	Sheep anti-human Factor VIII, whole IgG-peroxidase
Cat #:	<b>F8C-EIA</b>	Paired antibodies for Factor VIII ELISA, 4 x 96 wells
Cat #:	<b>FVIII-DP</b>	Human plasma deficient in Factor VIII, immune depleted
Cat #:	<b>FVIII-AG</b>	VisuLize Factor VIII Antigen Kit, for IVD use

Visit our site ([www.affinitybiologicals.com](http://www.affinitybiologicals.com)) for details.

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