

****REPRESENTATIVE DATASHEET****
Sheep anti-canine Factor VIII

Whole IgG from Antiserum

5 mg

Product #: SAC8C-IG

Lot #: XXXX

Expiry date: XXXX

Store at -10 to -20°C

 1348 Sandhill Drive, Ancaster, Ontario, Canada L9G 4V5
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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 dogs¹⁻⁴.

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, 3rd 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.

Product Specifications
Description:

Vial containing XXXX ml of whole IgG representing approximately 1 ml of antiserum. Total protein is 5 mg.

Format:

Whole IgG, clear liquid.

Host Animal:

Sheep

Immunogen:

Recombinant canine FVIII (cFVIII).

Concentration:

 IgG concentration is XXXX mg/ml, determined by absorbance using an extinction coefficient ($E_{1\%}^{1\text{cm}}$) of 13.4.

Buffer:

10 mM HEPES, pH 7.4, 150 mM NaCl, 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.

Specificity:

This antibody is specific for cFVIII as demonstrated by immunoelectrophoresis and ELISA.

Applications:

Suitable as a source of antibodies to canine Factor VIII.

Species Cross Reactivity: (immunodiffusion vs. citrated plasma)

Human:	XXXX	Mouse:	XXXX	Rat:	XXXX
Rabbit:	XXXX	Pig:	XXXX	Dog:	XXXX

Related Products:

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

 Visit our site (www.affinitybiologicals.com) for details.

Limited Warranty: This product is warranted to perform in accordance with its labeling and literature. Affinity Biologicals Inc. disclaims any implied warranty of merchantability or fitness for any other purposes, and in no event will Affinity Biologicals Inc. be liable for any consequential damages arising out of aforesaid express warranty.

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