



## Murine Anti-Factor VIII

### Clone GMA-8016

Factor VIII (FVIII) is a heterodimer consisting of a heavy chain (ranging in mass from 90 to 200 kDa) bound via metal ions to a light chain (80 kDa). In plasma, FVIII circulates in an inactive form bound to von Willebrand factor. Following activation by factor Xa or thrombin, factor VIIIa can function as cofactor for the enzyme factor IXa in the activation of factor X in the presence of phospholipid and  $Ca^{2+}$ . Absent or defective FVIII is the cause of the X-linked recessive bleeding disorder hemophilia A. GMA-8016 (also known as 4C7)<sup>1</sup> recognizes the A2 domain of FVIII, and is suitable for immunopurification,<sup>2</sup> ELISA, and bio-layer interferometry pairing experiments.

#### Description

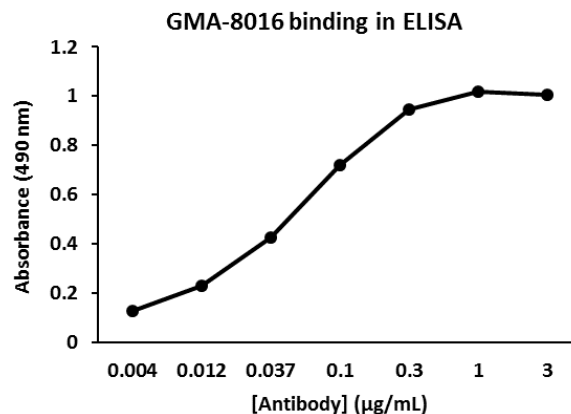
<b>Antibody Source:</b>	mouse monoclonal, IgG <sub>2a</sub>
<b>Antigen Species Bound:</b>	human
<b>Specificity:</b>	FVIII A2 domain
<b>Immunogen:</b>	B-domain deleted recombinant human FVIII

#### Formulation and Storage

<b>Purity:</b>	Purified by protein G affinity chromatography from serum-free cell culture supernatant.
<b>Product Formulation:</b>	Lyophilized from a $\geq 1$ mg/ml solution in 20 mM $NaH_2PO_4$ 0.15 M NaCl, 1.0% (w/v) mannitol, pH 7.4. Concentration determined by absorbance measurement at 280 nm and using an extinction coefficient of 1.4 ( $\epsilon_{0.1\%}$ ).
<b>Reconstitution:</b>	Reconstitute with deionized water.
<b>Storage:</b>	Store lyophilized or reconstituted and aliquoted material at $-20^\circ C$ for prolonged periods. Avoid freeze-thaw cycles. Alternatively, add 0.02% (w/v) sodium azide to reconstituted solution and store at $4^\circ C$ .
<b>Country of Origin:</b>	USA
<b>Size Options:</b>	0.1 mg or 0.5 mg

#### Applications

<b>Working Concentration:</b>	Approximately 1-5 $\mu g/ml$ . Researcher should titer antibody in specific assay.
<b>ELISA:</b>	Binds immobilized human FVIII.
<b>Immunoblotting:</b>	Not recommended.
<b>Inhibition:</b>	Not inhibitory in aPTT clotting assay. <sup>1</sup>
<b>Bio-layer Interferometry:</b>	Can be used in conjunction with GMA-012, -8015, and -8021 for detection of FVIII.



#### References

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- [4] J.A. Dumont, T. Liu, S.C. Low, X.Zhang, G. Kamphaus, P. Sakorafas, C. Fraley, D. Drager, T. Reidy, J. McCue, H.W.G.Franck, E.P. Merricks, T.C. Nichols, A. J. Bitoni, G. F. Pierce, H. Jiang. Prolonged activity of a recombinant factor VIII-Fc fusion protein in hemophilia A mice and dogs (2012). *Blood*. 119(13):3024-3030.
- [5] Y. Buyue, T. Liu, J.D. Kulman, G.G. Toby, G.D. Kamphaus, S. Patarroyo-White, Q. Lu, T.J. Reidy, B. Mei, H. Jiang, G.F. Pierce, J.M. Sommer, R.T. Peters. A Single Chain Variant of Factor VIII Fc Fusion Protein Retains Normal In Vivo Efficacy but Exhibits Altered In Vitro Activity (2014). *PLoS ONE*. 9(11):e113600.