# Murine Anti-Factor VIII

## Clone GMA-8009

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-8009 (also known as 1D4)[1] recognizes the A2 domain of FVIII and inhibits FVIII activation by thrombin or factor Xa. It is suitable for immunohistochemistry and FACS[2], ELISA and bio-layer interferometry pairing experiments.

## Description

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| **Antibody Source:** | mouse monoclonal, IgG2a |
| **Antigen Species Bound:** | human |
| **Specificity:** | FVIII A2 domain (residues Glu604-Arg740)[1] |
| **Immunogen:** | B-domain deleted recombinant human FVIII |

## Formulation and Storage

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| **Purity:** | Purified by protein G affinity chromatography from serum-free cell culture supernatant. |
| **Product Formulation:** | Lyophilized from a ≥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 ($\varepsilon_{0.1\%}$). |
| **Reconstitution:** | Reconstitute with deionized water. |
| **Storage:** | Store lyophilized or reconstituted and aliquoted material at -20° C for prolonged periods. Avoid freeze-thaw cycles. Alternatively, add 0.02% (w/v) sodium azide to reconstituted solution and store at 4° C. |
| **Country of Origin:** | USA |
| **Size Options:** | 0.1 mg or 0.5 mg |

## Applications

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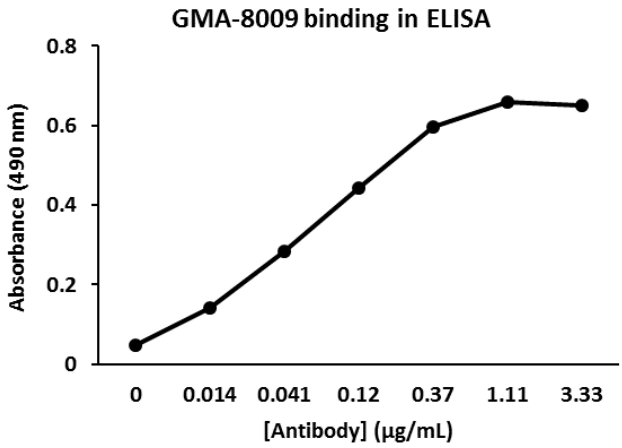
| **Working Concentration:** | Approximately 1-5 µg/ml. Researcher should titer antibody in specific assay. |
| **ELISA:** | Binds immobilized human FVIII. |
| **Immunoblotting:** | Not recommended. |
| **Inhibition:** | Inhibitory in aPTT clotting assay.[1] |
| **Bio-layer Interferometry:** | Can be used in conjunction with GMA-8003, -8011, and -8013 for detection of FVIII. |




## References


[1] R.C. Markovitz, J.F. Healey, E.T. Parker, S.L. Meeks, P. Lollar. The diversity of the immune response to the A2 domain of human factor VIII. (2013). *Blood.* 121(14):2785-2795.

[2] A. van der Flier, Z. Liu, S. Tan, K. Chen, D. Drager, T. Liu, S. Patarroyo-White, H. Jiang, D.R. Light FcRn rescues recombinant factor VIII Fc fusion protein from a VWF independent FVIII clearance pathway in mouse hepatocytes. (2015). *PLOS One.* 10(4):e0124930.

[3] R.J. Summers, S.L. Meeks, J.F. Healey, H.C. Brown, E.T. Parker, C.L. Kempton, C.B. Doering, P. Lollar. Factor VIII A3 domain substitution N1922S results in hemophilia A due to domain-specific misfolding and hyposecretion of functional protein. (2011). *Blood*. 117(11):3190-3198.





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