Murine Anti-Factor VIII

Clone GMA-8004

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-8004 recognizes the A1 domain of FVIII and is suitable for ELISA, bio-layer interferometry pairing, and surface plasmon resonance studies.[1]

Description

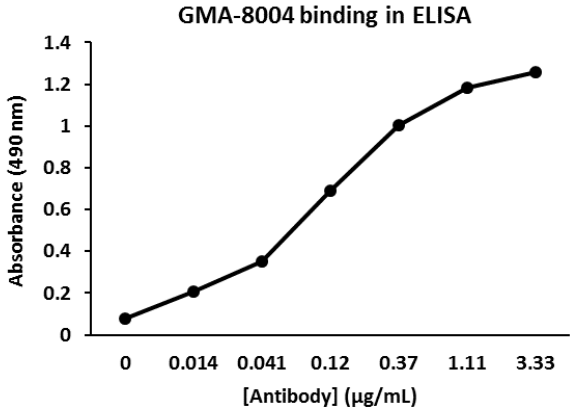
Antibody Source:	mouse monoclonal, IgG_{2a}
Antigen Species Bound:	human (does not bind porcine)
Specificity:	FVIII A1 domain
Immunogen:	B-domain deleted recombinant human FVIII

Formulation and Storage

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

Working Concentration:	Approximately 1-5 µg/ml. Researcher should titer antibody in specific assay.
ELISA:	Binds immobilized human FVIII.
Immunoblotting:	Not recommended.
Inhibition:	Not inhibitory in aPTT clotting assay.
Bio-layer Interferometry:	Can be used in conjunction with GMA-8001 -8013, and -8020 for detection of FVIII.



References

[1] K.B. Lewis, R.J. Hughes, M.S. Epstein, N.C. Josephson, C.L. Kempton, C.M. Kessler, N.S. Key, T.E. Howard, R. Kruse-Jarres, J.M. Lusher, C.E. Walsh, R.G. Watts, R.A. Ettinger, K.P. Pratt, PATH (Personalized Alternative Therapies for Haemophilia) Study Investigators. Phenotypes of allo- and autoimmune antibody responses to FVIII characterized by surface plasmon resonance. (2013). *PLoS One.* 8(5):e61120.

[2] M.A. Zimmermann, J. Oldenburg, C.R. Muller, S. Rost. Expression studies of mutant factor VIII alleles with premature termination codons with regard to inhibitor formation. (2014). *Haemophilia.* 20(3):e215-e221.

[3] 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.

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