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Murine Anti-Factor VIII

Clone 8002

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. Mab HFVIII-8002 (also known as 2-116)¹ recognizes the A1 domain of FVIII, and is suitable for bio-layer interferometry pairing and sandwich ELISA applications.

Description

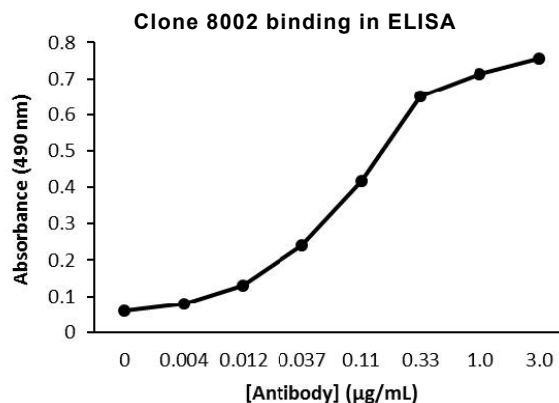
Antibody Source:	mouse monoclonal, IgG _{2a}
Antigen Species Bound:	human, canine ²
Specificity:	FVIII A1 domain
Immunogen:	B-domain deleted recombinant human FVIII

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 ($\epsilon_{0.1\%}$).
Reconstitution:	Reconstitute with deionized water.
Storage:	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 $4^\circ C$.
Country of Origin:	USA
Size Options:	0.1 mg or 0.5 mg

Applications

Working Concentration:	Approximately 1-5 $\mu g/ml$. Researcher should titer antibody in specific assay.
ELISA:	Binds immobilized human FVIII, canine FVIII in plasma ²
Immunoblotting:	Not recommended.
Inhibition:	Does not inhibit in aPTT clotting assay.
Bio-layer Interferometry	Can be used in conjunction with Clone 8001, 8013 and 8020 for detection of FVIII.



References

- [1] 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.
- [2] 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.
- [3] S. Krishnamoorthy, T. Liu, D. Drager, S. Patarroyo-White, E.S. Chhabra, R. Peters, N. Josephson, D. Lillicrap, R.S. Blumberg, G. F. Pierce, H. Jiang. Recombinant factor VIII Fc (rFVIII-Fc) fusion protein reduces immunogenicity and induces tolerance in hemophilia A mice. (2016). *Cell Immunol*. 301:30-39.