Murine Anti-Factor VIII

Clone GMA-012

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, factor VIII circulates in an inactive form bound to von Willebrand factor. Following activation by factor Xa or thrombin, factor VIIIa can function as co-factor 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-012 (also known as R8B12) recognizes the discontinuous epitope of residues 497-510 and 584-593 in the A2 domain of FVIII,\(^1\) and is suitable for purification of FVIII,\(^2\) ELISA, sandwich ELISA\(^3\), Western blotting, and bio-layer interferometry applications.

Applications

<table>
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<tr>
<th>Working Concentration:</th>
<th>Approximately 1-5 µg/ml. Researcher should titer antibody in specific assay.</th>
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<tr>
<td>ELISA:</td>
<td>Binds immobilized human and rhesus FVIII.</td>
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<td>Immunoblotting:</td>
<td>Western blot detects A2 domain of human FVIII under reduced conditions.</td>
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<td>Inhibition:</td>
<td>Not inhibitory in Bethesda assay.(^5)</td>
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<td>Affinity Constant (apparent (K_D)):</td>
<td>(K_D = 2\ \text{nM}, \left( k_{\text{off}} = 7 \times 10^{-4} \ \text{sec}^{-1} \right)) by bio-layer interferometry.</td>
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Description

Antibody Source: mouse monoclonal, IgG\(_1\)

Antigen Species Bound: human, rhesus

Specificity: FVIII A2 domain, (residues 497-510, 584-593)\(^1\)

Immunogen: human FVIII heavy chain\(^4\)

Formulation and Storage

Purity: IgG purified by protein G affinity chromatography from serum free cell culture supernatant.

Product Formulation: Lyophilized from a \(\geq 1 \text{ mg/ml}\) solution in \(20 \text{ mM NaH}_2\text{PO}_4, 0.15 \text{ M NaCl, 1.0\% (w/v) mannitol, pH 7.4.}\)

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: Aliquot and store at \(-20^\circ\) C for prolonged periods. Avoid freeze-thaw cycles. Alternatively, add 0.02\% (w/v) sodium azide and store at \(4^\circ\) C.

Country of origin: USA

Size Options: 0.1 mg or 0.5 mg

References


