

## Murine Anti-Factor IX

### Clone GMA-134

Factor IX (FIX) is a vitamin K-dependent zymogen that plays an essential role in the coagulation cascade leading to thrombus formation. In the presence of calcium, activated Factor IX (FIXa) complexes with Factor VIIIa on phospholipid surfaces to create the tenase complex, which converts Factor X to its activated form. A polymorphism is found in plasma-derived FIX within the activation peptide. The amino acid at position 148 exists as either a threonine or an alanine. GMA-134 binds to FIX with threonine at the 148 position and detects FIX (148T) in ELISA and Western blot formats with no detectable binding to FIX (148A). In addition, bound GMA-134 captures FIX (148T) by bio-layer interferometry.

### Description

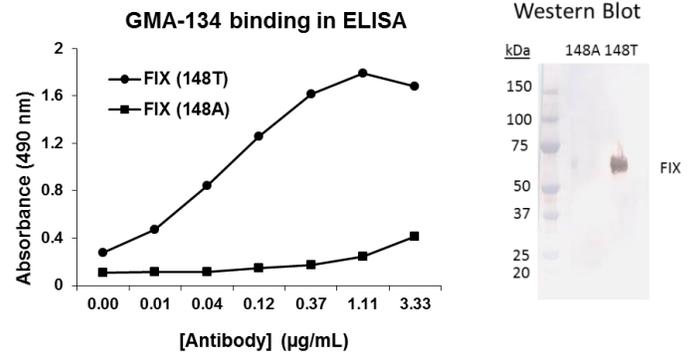
<b>Antibody Source:</b>	Mouse monoclonal, IgG <sub>2a</sub>
<b>Antigen Species Bound:</b>	Human
<b>Specificity:</b>	Human FIX (148T)
<b>Immunogen:</b>	Human FIX peptide (Ac-SKLTRAETVFPDVDYC-amide) conjugated to KLH.

### 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 <sub>2</sub> PO <sub>4</sub> 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°C for prolonged periods. Avoid freeze-thaw cycles. Alternatively, add 0.02% (w/v) sodium azide to reconstituted solution and store at 4°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 FIX (148T).
<b>Immunoblotting:</b>	Western blotting detects Human FIX (148T) under reduced conditions.
<b>Inhibition:</b>	Not determined.
<b>Affinity Constant (apparent K<sub>D</sub>):</b>	K <sub>D</sub> = 4 nM, (k <sub>dis</sub> = 7 x 10 <sup>-3</sup> sec <sup>-1</sup> ) by bio-layer interferometry.



### References

[1] R.A. McGraw, L.M. Davis, C.M. Noyes, R.L. Lundblad, H.R. Roberts, J.B. Graham, D.W. Stafford. Evidence for a prevalent dimorphism in the activation peptide of human coagulation factor IX. (1985). *Proc. Natl. Acad. Sci. USA.* 82(9):2847-2851.