

## Murine Anti-Factor IX

### Clone GMA-162

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. Absent or defective FIX is the cause of the X-linked recessive bleeding disorder hemophilia B. GMA-162 (16E11) binds to Factor IXa but not FIX, as detected by Western blot and ELISA<sup>1</sup>. It can be used in a sandwich ELISA with GMA-164 to detect free Factor IXa and Factor IX in complex with antithrombin<sup>1</sup>.

#### Description

<b>Antibody Source:</b>	mouse monoclonal, IgG <sub>1</sub>
<b>Antigen Species Bound:</b>	human
<b>Specificity:</b>	Factor IXa heavy chain
<b>Immunogen:</b>	Human Factor IXa peptide (VVGGEDAKPGQFPWQC) conjugated to KLH.

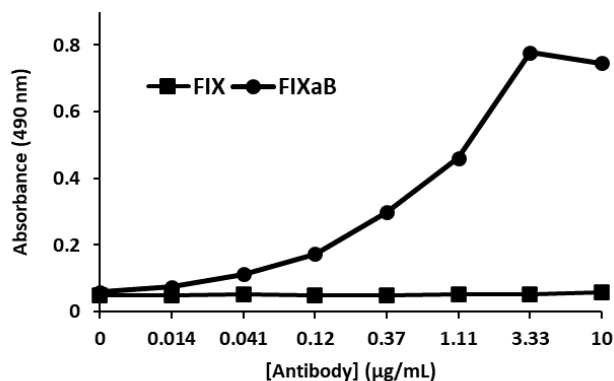
#### Formulation and Storage

<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

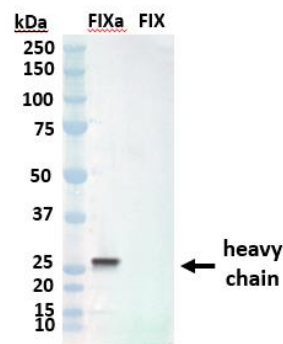
#### Applications

<b>Working Concentration:</b>	Approximately 1-5 $\mu$ g/ml. Researcher should titer antibody in specific assay.
<b>ELISA:</b>	Binds immobilized human FIXa
<b>Immunoblotting:</b>	Western blot detects heavy chain of human FIXa under reduced conditions.

GMA-162 binding FIXaB in ELISA



Western blot of reduced FIX/FIXa, 0.5 $\mu$ g/ml GMA-162



#### References

1] T.M. Misenheimer, M.R. Lasarev, K.T. Kumfer, J.P. Sheehan, B.S. Schwartz. A novel factor IXa-specific enzyme-linked immunosorbent assay detects factor IXa in human plasma. (2023). *RPTH*