

# Murine Anti-Factor IX

## Clone GMA-184

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-184 binds to FIX and FIXa in ELISA assays, and detects FIX and the light chain of FIXa by Western blot. In addition, bound GMA-184 detects FIX by bio-layer interferometry.

### Description

**Antibody Source:** Mouse monoclonal, IgG<sub>2a</sub>

**Antigen Species Bound:** Human

**Specificity:** Light chain of FIX/FIXa

**Immunogen:** Human FIX

### Formulation and Storage

**Purity:** Purified by protein G affinity chromatography from serum-free cell culture supernatant.

**Product Formulation:** 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 ( $\epsilon_{0.1\%}$ ).

**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  $\mu$ g/ml. Researcher should titer antibody in specific assay.

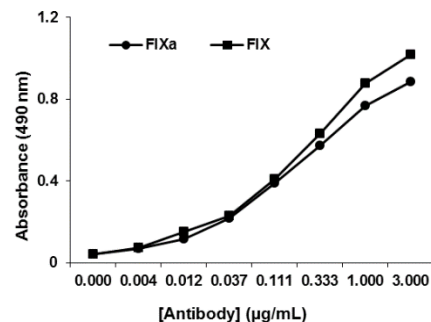
**ELISA:** Binds immobilized Human FIX/IXa.

**Immunoblotting:** Western blot detects Human FIX and light chain of FIXa under reduced conditions.

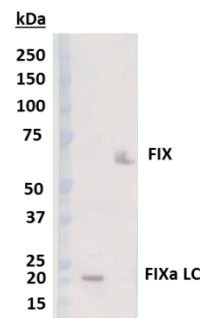
**Inhibition:** Does not prolong plasma clot time in APTT clotting assay.

**Affinity Constant (apparent KD):** K<sub>D</sub> = 40 nM ( $k_{dis} = 8.3 \times 10^{-3} \text{ sec}^{-1}$ ) by bio-layer interferometry

GMA-184 binding in ELISA



Western blot



### References

[1] B. Cooley, G. J. Broze, Jr, D. M. Mann, F-C Lin, L. G. Pedersen, D. W. Stafford. Dysfunctional endogenous FIX impairs prophylaxis in a mouse hemophilia B model. (2019). *Blood*. 133 (22): 2445–2451.