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Murine Anti-Factor IX

Clone 102

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. Defect or deficiencies in FIX lead to the X-linked recessive bleeding disorder hemophilia B. Mab HFIX-102 (previously known as Clone 002) binds to FIX and detects the heavy chain of FIXa in both ELISA and Western blot format, and bound Mab HFIX-102 captures FIX by bio-layer interferometry.

Description

Antibody Source:	mouse monoclonal, IgG_1
Antigen Species Bound:	human, porcine
Specificity:	heavy chain of FIX/FIXa
Immunogen:	human FIX

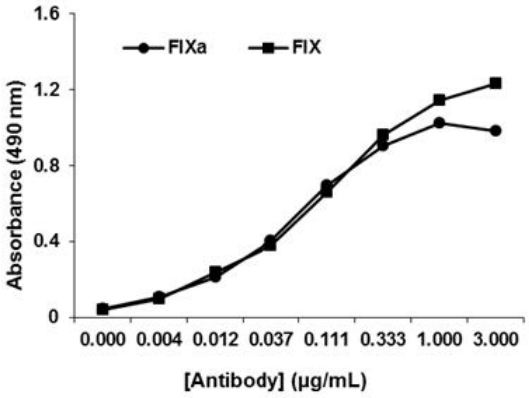
Formulation and Storage

Purity:	Purified by protein G affinity chromatography from serum-free cell culture supernatant.
Product Formulation:	Lyophilized from a ≥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 ($\varepsilon_{0.1\%}$).
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

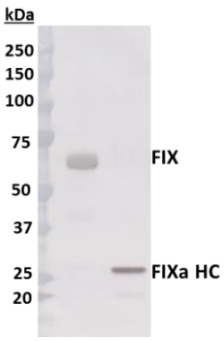
Applications

Working Concentration:	Approximately 1-5 µg/ml. Researcher should titer antibody in specific assay.
ELISA:	Binds immobilized human and porcine FIX and human IXa.
Immunoblotting:	Binds human FIX and heavy chain of human FIXa under reduced conditions.
Inhibition:	Prolongs plasma clot time in aPTT clotting assay.
Affinity Constant (apparent K_D):	K_D=6 nM (k_{dis}=4.6 x 10^{-3} sec^{-1}) by bio-layer interferometry

Clone 102 binding in ELISA



Western blot



References

[1] B. J. Samelson-Jones, J. D. Finn, L. A. George, R. M. Camire, V. R. Arruda. Hyperactivity of factor IX Padua (R338L) depends on factor VIIIa cofactor activity. (2019). *JCI Insight.* 4(14):1-14.