Murine Anti-bovine Factor X

Clone GMA-560

Bovine Factor X (Mr 55,000) is a vitamin K-dependent plasma protein zymogen that plays a central role as the substrate for both the intrinsic (factor VIIa, tissue factor) and extrinsic (factor IXa, factor VIIIa) pathways. In the presence of cofactor factor Va, phospholipid, and Ca^{2+}, activated factor X cleaves two peptide bonds in prothrombin to form thrombin. GMA-560 (also known as α-BFX-2b) binds bovine FX and factor Xa in solid-phase ELISA and Western blot. GMA-560 is partially calcium dependent, inhibits FX activity in human, bovine, porcine, rabbit and canine plasma, inhibits conversion of prothrombin to thrombin, and prevents inactivation of FXa by antithrombin III[1]. It can be used in purification of factor X from plasma[2,3] and blocks FXa-thrombomodulin interaction[4].

Description

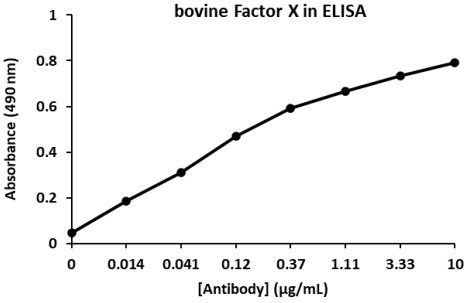
Antibody Source:	mouse monoclonal, IgG_1
Antigen Species Bound:	human, bovine, canine, rabbit, sheep, porcine[1]
Specificity:	factor X/Xa heavy chain
Immunogen:	bovine factor X

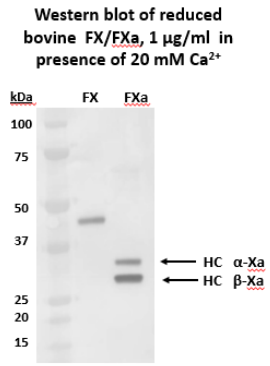
Formulation and Storage

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 bovine and human factor X and Xa in presence of calcium.
Immunoblotting:	Binds bovine factor X and factor Xa heavy chain under reduced and non-reduced conditions in presence of calcium.





References

[1] W.R. Church, T.L. Messier, M.M. Tucker, K. Mann. An inhibitory monoclonal antibody to factor X that blocks prothrombin activation but not prothrombinase enzyme assembly. (1988). *Blood*. 72:1911-1921.

[2] W.R. Church, K. Mann. A simple purification of human factor X using a high affinity monoclonal antibody immunoadsorbant. (1985). *Thromb Res.* 38(4):417-424.

[3] R. Jenny, W. Church, B. Odegaard, R. Litwiller, K. Mann. Purification of six human vitamin K-dependent proteins in a single chromatographic step using immunoaffinity columns. (1986). *Prep Biochem.* 16(3):227-245.

[4] P.E. Haley, M.F. Doyle, K.G. Mann. The Activation of Bovine Protein C by Factor Xa.(1989). *J Biol Chem.* 264(27):16303-16310.

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