abcam

ab79929

Anti-Factor X antibody

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.4 Preservative: 0.02% Sodium azide Constituents: PBS, 50% Glycerol (glycerin, glycerine)
Form	Liquid
Clonality	Polyclonal
Immunogen	Native Full Length Protein corresponding to Human F10. Database link P00742
Purification technique	Affinity purification Protein G
Concentration	0.29 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ELISA

Tested

Species	Human
Dilution info	-
Notes	-

Flow Cyt

Expected

Species	Human
Dilution info	-
Notes	ab171870 - Rabbit polyclonal IgG, is suitable for use as an isotype control with this antibody.

WB

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

IHC-P

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

RIA

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

ICC/IF

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information F10

Function	Factor Xa is a vitamin K-dependent glycoprotein that converts prothrombin to thrombin in the presence of factor Va, calcium and phospholipid during blood clotting (PubMed:22409427, PubMed:39880037). Factor Xa activates pro-inflammatory signaling pathways in a protease-activated receptor (PAR)-dependent manner (PubMed:24041930, PubMed:30568593, PubMed:34831181, PubMed:18202198). Up-regulates expression of protease-activated receptors (PARs) F2R, F2RL1 and F2RL2 in dermal microvascular endothelial cells (PubMed:35738824). Triggers the production of pro-inflammatory cytokines, such as MCP-1/CCL2 and IL6, in cardiac fibroblasts and umbilical vein endothelial cells in PAR-1/F2R-dependent manner (PubMed:30568593, PubMed:34831181). Triggers the production of pro-inflammatory cytokines, such as MCP-1/CCL2, IL6, TNF/TNF, IL-1beta/IL1B, IL8/CXCL8 and IL18, in endothelial cells and atrial tissues (PubMed:24041930, PubMed:35738824, PubMed:9780208). Induces expression of adhesion molecules, such as ICAM1, VCAM1 and SELE, in endothelial cells and atrial tissues (PubMed:24041930, PubMed:35738824, PubMed:9780208). Increases expression of phosphorylated ERK1/2 in dermal microvascular endothelial cells and atrial tissues (PubMed:24041930, PubMed:35738824). Triggers activation of the transcription factor NF-kappa-B in dermal microvascular endothelial cells and atrial tissues (PubMed:24041930, PubMed:35738824). Activates pro-inflammatory and pro-fibrotic responses in dermal fibroblasts and enhances wound healing probably via PAR-2/F2RL1-dependent mechanism (PubMed:18202198). Activates barrier protective signaling responses in endothelial cells in PAR-2/F2RL1-dependent manner; the activity depends on the cleavage of PAR-2/F2RL1 by factor Xa (PubMed:22409427). Up-regulates expression of plasminogen activator inhibitor 1 (SERPINE1) in atrial tissues (PubMed:24041930).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Factor X also known as Stuart-Prower Factor is a critical component in the coagulation cascade. It has a molecular weight of approximately 59 kDa and is expressed mainly in the liver. This serine protease plays an important role in the conversion of prothrombin to thrombin an essential step in blood clot formation. Factor X circulates in the plasma as an inactive zymogen and becomes activated to its enzyme form factor Xa in response to specific physiological signals.
Biological function summary	Factor X contributes significantly to the coagulation process by activating prothrombin into thrombin. It is not part of a larger complex but functions closely with other components of the coagulation cascade to maintain hemostasis. Factor X interacts with calcium ions and phospholipids on the surface of platelets enhancing its enzymatic activity. This activation ensures proper regulation of blood clotting preventing excessive bleeding or uncontrolled clot formation.
Pathways	Factor X is central to both the intrinsic and extrinsic coagulation pathways. It interacts with proteins such as factor VIIa in the extrinsic pathway and factor IXa in the intrinsic pathway both pathways leading to the activation of factor Xa. In turn factor Xa is key in the common pathway which combines inputs from the intrinsic and extrinsic pathways to produce thrombin essential for fibrin clot formation.
Associated diseases and disorders	Factor X is associated with bleeding disorders such as hemophilia and liver disease. Deficiencies or dysfunctions in factor X result in inadequate clot formation leading to prolonged bleeding episodes. Furthermore increased factor X activity as in cases of thrombophilia can raise the risk of abnormal blood clots. Factor X works alongside proteins like factor V with both deficiencies playing roles in hemophilia. Monitoring factor X activity is important in diagnosing and managing these coagulation-related conditions.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

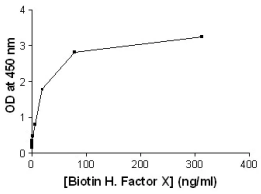
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

1 product image



ELISA - Anti-Factor X antibody (ab79929)

Human Factor X Antibody Assay Performance. Assay was performed using increasing concentrations of biotinylated purified Human Factor X Protein. The antibody sensitivity is at 1 pg/mL.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.