Human Coagulation Factor X Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF1063

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Coagulation Factor X in direct ELISAs and Western blots.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	*S. frugiperda* insect cell line *Sf* 21-derived recombinant human Coagulation Factor X Leu24-Lys488 Accession # P00742
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

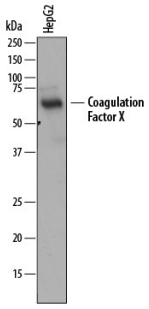
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	2 µg/mL	See Below
Immunoprecipitation	25 µg/mL	Conditioned cell culture medium spiked with Recombinant Human Coagulation Factor X (Catalog # 1063-SE), see our available Western blot detection antibodies.

DATA

Western Blot



Detection of Human Coagulation Factor X by Western Blot. Western blot shows lysates of HepG2 human hepatocellular carcinoma cell line. PVDF membrane was probed with 2 µg/mL of Goat Anti-Human Coagulation Factor X Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1063) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF017). A specific band was detected for Coagulation Factor X at approximately 60 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Factor X (Coagulation factor X; also Stuart factor) is a 74-76 kDa glycoprotein member of the peptidase S1 family of molecules. It is secreted by hepatocytes, and plays a key role in the coagulation cascade. Normally, Factor X circulates as a zymogen (or inactive form). Upon disruption of the vasculature, Factor X, and the circulating zymogen Factor V interact, and form what's called the prothrombinase complex on negatively-charged membrane phospholipids of platelets and endothelial cells. This complex converts prothrombin (Factor II) into thrombin, and thus initiates clot formation. Factor X (as a zymogen) is a disulfide-linked heterodimer. Its two chains are the result of intracellular processing of a 74-76 kDa single chain precursor. This creates a 55-57 kDa C-terminal heavy chain, and a 17-18 kDa N-terminal light chain. Prothrombinase complex formation results in the cleavage of the heavy chain, leading to the generation of a 45-46 kDa, prothrombin-cleaving active chain, and a soluble 10 kDa activation fragment. Cleavage is not the result of Factor V activity, but that of either Tissue Factor or Factor IXa, and the activities of there two enzymes are tightly regulated by the carbohydrates bound to the 10 kDa activation fragment. Mature human Factor X is synthesized as a 488 amino acid (aa) preproprecursor that contains a 31 aa signal sequence, a 9 aa prosegment (aa 32-40), a 139 aa light chain (aa 41-179), and a 306 aa heavy chain (aa 183-488). The light chain possesses a Gla domain that binds to Factor V (aa 41-85) plus two EGF-like motifs (aa 86-165), while the heavy chain contains the activation peptide sequence (aa 183-234) followed by a large peptidase S1 domain (aa 235-467). Over aa 24-488, human Factor X shares 77% aa sequence identity with mouse Factor X.

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