abcam

ab179444

Anti-Factor XIIIa antibody [EPR10360]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 50% Tissue culture supernatant, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR10360
Purification technique	Affinity purification Protein A
Concentration	0.1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	1/100 - 1/250
Notes	Perform heat-mediated antigen retrieval before commencing with IHC staining protocol.

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

IP

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	1/1000 - 1/10000
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/50 - 1/100
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/10 - 1/100
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information F13A1

Function	Factor XIII is activated by thrombin and calcium ion to a transglutaminase that catalyzes the formation of gamma-glutamyl-epsilon-lysine cross-links between fibrin chains, thus stabilizing the fibrin clot. Also cross-link alpha-2-plasmin inhibitor, or fibronectin, to the alpha chains of fibrin.

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
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

Notes

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Supplementary info

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

Activity summary	Factor XIIIa also known as Factor 13a Factor XIII or Factor 13 is an enzyme that plays an important role in blood coagulation. Its mass is approximately 83 kDa. This enzyme is part of the transglutaminase family and is predominantly found in plasma and platelets. Factor XIIIa becomes active when thrombin and calcium ions cleave its A subunits converting it from an inactive zymogen known simply as Factor XIII or Factor 13 to its active form. The best assays for Factor XIIIa often measure its transglutaminase activity which facilitates the cross-linking of fibrin stabilizing blood clots.
Biological function summary	Factor XIIIa is important for hemostasis facilitating the final stages of blood clot formation by cross-linking fibrin polymers. This enzyme does not function in isolation; it forms a tetrameric complex with two A subunits and two B subunits. The active form Factor XIIIa catalyzes the formation of covalent bonds between glutamine and lysine residues in fibrin chains. This enhances the mechanical strength and resistance of the clot preventing premature degradation.
Pathways	Factor XIIIa is part of the coagulation pathway specifically involved in the stabilization of fibrin in the final steps of the cascade. It interacts closely with proteins like fibrinogen and thrombin as these proteins are essential in the conversion of Factor XIII to Factor XIIIa and in clot formation. Factor XIIIa also plays a role in the wound healing process by stabilizing the ECM (extracellular matrix) through cross-linking fibrin fibronectin and collagen.
Associated diseases and disorders	Factor XIIIa deficiency can lead to bleeding diathesis a condition characterized by poor clot stability and prolonged bleeding. This deficiency is often congenital and involves reduced levels or activity of Factor XIII. Conversely overactivity or

dysregulation of Factor XIIIa may contribute to thrombotic disorders where abnormal clot formation can lead to conditions like deep vein thrombosis. Clinically understanding Factor XIIIa interactions especially its functional relationships with fibrinogen and thrombin is critical in managing these bleeding and thrombotic disorders.

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

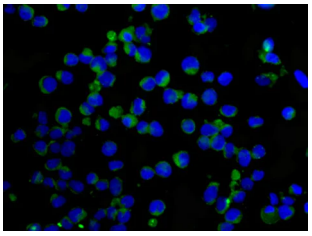
We do not recommend this combination. It is not covered by our product promise.

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.

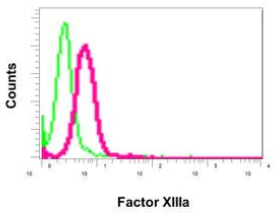
5 product images



Immunocytochemistry/ Immunofluorescence - Anti-Factor XIIIa antibody [EPR10360] (ab179444)

Factor XIIIa Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Factor XIIIa antibody

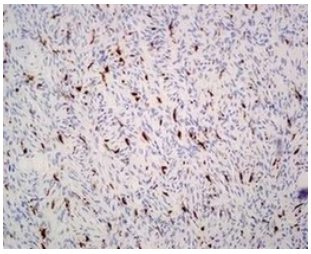
Immunofluorescent analysis of U937 cells labeling Factor XIIIa with ab179444 at 1/50 (green). DAPI nuclear staining (blue).



Flow Cytometry (Intracellular) - Anti-Factor XIIIa antibody [EPR10360] (ab179444)

Factor XIIIa Flow Cytometry (Intracellular) staining using rabbit Anti-Factor XIIIa antibody

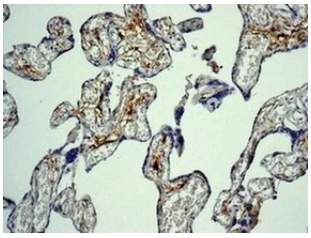
Intracellular flow cytometric analysis of permeabilized U937 cells labeling Factor XIIIawith ab179444 at 1/10 (red) or a rabbit IgG (negative) (green).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Factor XIIIa antibody [EPR10360] (ab179444)

Factor XIIIa Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Factor XIIIa antibody

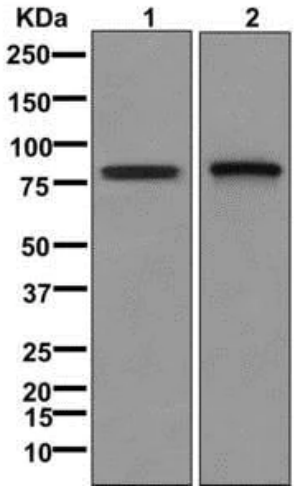
Immunohistochemical analysis of paraffin embedded Human fibrosarcoma tissue labeling Factor XIIIa with ab179444 at 1/100.
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Factor XIIIa antibody [EPR10360] (ab179444)

Factor XIIIa Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Factor XIIIa antibody

Immunohistochemical analysis of paraffin embedded Human placenta tissue labeling Factor XIIIa with ab179444 at 1/100.
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Western blot - Anti-Factor XIIIa antibody [EPR10360] (ab179444)

All lanes:
Western blot - Anti-Factor XIIIa antibody [EPR10360] (ab179444) at 1/1000 dilution

Lane 1:
Human spleen tissue lysate at 10 µg

Lane 2:
Human placenta tissue lysate at 10 µg

Secondary

All lanes:
Goat anti-rabbit HRP conjugated at 1/500 dilution

Developed using the ECL technique.

Predicted band size: 83 kDa

Observed band size: 80 kDa

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