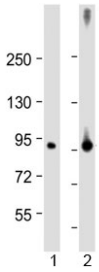
Factor XIIIa Antibody Rabbit Polyclonal / F13A1 (N-Terminal Region) (F54168)

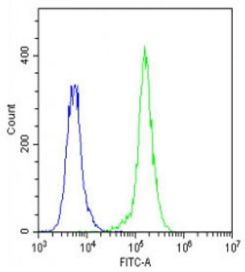
Catalog No.	Formulation	Size
F54168-0.2ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.2 ml
F54168-0.05ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.05 ml

Bulk quote request

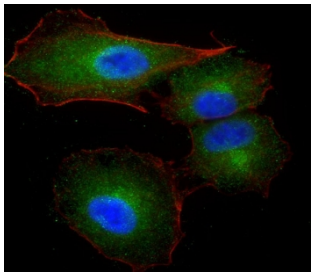
Availability	1-3 business days
Species Reactivity	Human
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Antigen affinity
UniProt	P00488
Applications	Western blot: 1:1000-1:2000 Flow cytometry: 1:25 Immunofluorescence: 1:25
Limitations	This Factor XIIIa antibody is available for research use only.



Western blot testing of human 1) lung and 2) placenta lysate with Factor XIIIa antibody rabbit polyclonal at 1:2000. Predicted molecular weight ~83 kDa.



Flow cytometry testing of fixed human A549 cells with Factor XIIIa antibody; Blue=isotype control, Green= Factor XIIIa antibody.



Immunofluorescent staining of fixed human A549 cells with Factor XIIIa antibody (green), DAPI nuclear stain (blue) and Phalloidin (red).

Description

Factor XIIIa Antibody Rabbit Polyclonal recognizes Factor XIII A chain, a cytoplasmic transglutaminase encoded by the F13A1 gene on chromosome 6p25.1. Factor XIII A chain is expressed in platelets, macrophages, dermal dendritic cells, and selected stromal cell populations. Upon activation by thrombin and calcium, the inactive coagulation factor XIII zymogen is cleaved to generate active Factor XIIIa, which catalyzes covalent cross-linking of fibrin monomers. This enzymatic reaction stabilizes the fibrin clot and increases resistance to fibrinolysis, representing the final step of the coagulation cascade.

Factor XIII A chain belongs to the transglutaminase enzyme family and contains a catalytic core domain responsible for forming epsilon-gamma glutamyl-lysine isopeptide bonds between substrate proteins. In circulation, coagulation factor XIII exists as a heterotetramer composed of two catalytic A subunits and two carrier B subunits. Following thrombin-mediated activation, the B subunits dissociate and the A subunits become enzymatically active. Beyond clot stabilization, Factor XIIIa contributes to extracellular matrix remodeling by cross-linking fibronectin, collagen, and other structural proteins, thereby supporting tissue repair and wound healing processes.

In normal tissues, Factor XIII A chain expression is prominent in dermal dendrocytes of the skin and in tissue macrophages within connective tissues and lymphoid organs. It is also detectable in placenta and bone marrow-derived cells. In fibrohistiocytic lesions, Factor XIIIa antibody staining is commonly applied in research to help characterize dermatofibroma, which typically demonstrates strong cytoplasmic positivity in spindle-shaped dermal cells. In contrast, dermatofibrosarcoma protuberans generally lacks staining, supporting its use in differential assessment. Expression has also been described in inflammatory and reparative conditions involving macrophage activation and stromal remodeling.

Inherited deficiency of Factor XIII is associated with impaired clot stability, delayed wound healing, and bleeding tendency, underscoring the biological importance of F13A1 function. Altered expression patterns have been reported in inflammatory and fibrotic disorders, reflecting its broader role in immune cell biology and extracellular matrix stabilization. Factor XIIIa Antibody Rabbit Polyclonal is suitable for detecting Factor XIII A chain expression in relevant research applications, where staining is typically cytoplasmic in dendritic or macrophage-lineage cells.

Application Notes

The stated application concentrations are suggested starting points. Titration of the Factor XIIIa antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

A portion of amino acids 170-204 from human Factor XIIIa was used as the immunogen for the Factor XIIIa antibody rabbit polyclonal.

Storage

Aliquot the Factor XIIIa antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

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