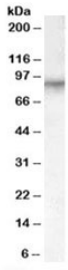
Factor XIIIa Antibody Goat Polyclonal (R34270)

Catalog No.	Formulation	Size
R34270-100UG	0.5 mg/ml in 1X TBS, pH7.3, with 0.5% BSA (US sourced) and 0.02% sodium azide	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Predicted Reactivity	Mouse
Format	Antigen affinity purified
Host	Goat
Clonality	Polyclonal (goat origin)
Isotype	Goat Ig
Purity	Antigen affinity
Gene ID	2162
Applications	Western Blot : 0.05-0.2ug/ml ELISA (peptide) LOD : 1:32000
Limitations	This Factor XIIIa antibody is available for research use only.



Western blot testing of human placenta lysate with Factor XIIIa antibody goat polyclonal at 0.1ug/ml. Predicted molecular weight: ~83 kDa.

Description

Factor XIIIa Antibody Goat 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 populations. Upon activation by thrombin and calcium, the inactive coagulation factor XIII zymogen is proteolytically cleaved to generate active Factor XIIIa, which catalyzes covalent cross-linking of fibrin monomers. This cross-linking reaction stabilizes fibrin clots and provides resistance to fibrinolysis, representing the final enzymatic step of

the coagulation cascade.

Factor XIII A chain belongs to the transglutaminase enzyme family and contains a catalytic core domain that mediates formation of epsilon-gamma glutamyl-lysine isopeptide bonds between substrate proteins. In plasma, coagulation factor XIII circulates 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 hemostasis, Factor XIIIa contributes to extracellular matrix stabilization through cross-linking of fibronectin, collagen, and other structural proteins, supporting wound healing and tissue remodeling.

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 used to characterize dermatofibroma, which typically shows strong cytoplasmic positivity in spindle-shaped dermal cells, while dermatofibrosarcoma protuberans generally lacks staining. Expression patterns have also been observed in inflammatory and reparative conditions where macrophage activation is present.

Inherited deficiency of Factor XIII results in impaired clot stability, delayed wound healing, and bleeding diathesis, underscoring the biologic importance of F13A1 function. Altered expression has been described in inflammatory and fibrotic disorders, reflecting its broader role in immune cell biology and extracellular matrix cross-linking. Factor XIIIa Antibody goat 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

Optimal dilution of the Factor XIIIa antibody should be determined by the researcher.

Immunogen

Amino acids HRKLIASMSSDSLRH were used as the immunogen for this Factor XIIIa antibody.

Storage

Aliquot and store the Factor XIIIa antibody at -20oC.