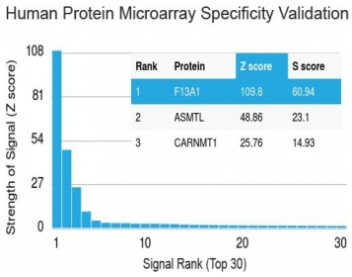
Factor XIIIa Antibody - Protein Microarray Validated [clone F13A1/1683] (V3500)

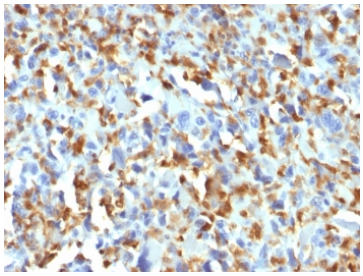
Catalog No.	Formulation	Size
V3500-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V3500-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V3500SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V3500IHC-7ML	Prediluted in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide; *For IHC use only*	7 ml

Bulk quote request

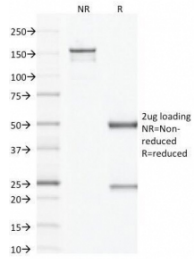
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2b, kappa
Clone Name	F13A1/1683
Purity	Protein G affinity chromatography
UniProt	P00488
Localization	Cytoplasmic, secreted
Applications	Immunohistochemistry (FFPE) : 0.1-0.2ug/ml for 30 min at RT
Limitations	This Factor XIIIa antibody is available for research use only.



Human protein microarray specificity validation of Factor XIIIa Antibody Protein Microarray Validated. Analysis of the HuProt(TM) microarray containing more than 19,000 full-length human proteins was performed using Factor XIIIa antibody protein microarray validated clone F13A1/1683. The antibody demonstrates strongest binding to F13A1 with a Z-score of 109.8 and an S-score of 60.94, clearly separating the intended target from other proteins on the array, including ASMTL and CARMNT1. These results demonstrate the high specificity of clone F13A1/1683 for Factor XIII A chain.
Z- and S-score explanation: The Z-score represents the strength of the signal generated when the antibody, in combination with a fluorescently tagged anti-IgG secondary antibody, binds to a specific protein on the HuProt(TM) array. Z-scores are expressed in standard deviations above the mean signal of all proteins tested. Proteins are ranked in descending order according to Z-score. The S-score represents the difference between sequential Z-scores and reflects the relative specificity of the antibody for its intended target compared to potential off-target interactions.



Immunohistochemistry of Factor XIIIa antibody in human histiocytoma. FFPE human histiocytoma tissue was stained with human tissue array validated Factor XIIIa antibody clone F13A1/1683. Strong cytoplasmic HRP-DAB brown staining is observed in numerous spindle-shaped and histiocytic tumor cells, consistent with known Factor XIII A chain expression in fibrohistiocytic lesions. Surrounding stromal elements show minimal to absent staining. Heat induced epitope retrieval was performed by boiling tissue sections in 10 mM citrate buffer, pH 6, for 10-20 minutes prior to antibody incubation.



SDS-PAGE Analysis of Purified, BSA-Free Factor XIIIa Antibody (clone F13A1/1683). Confirmation of Integrity and Purity of the Antibody.

Description

Factor XIIIa Antibody Protein Microarray Validated clone F13A1/1683 recognizes Factor XIII A chain, the catalytic transglutaminase subunit encoded by the F13A1 gene on chromosome 6p25.1. Factor XIII A chain is a cytoplasmic enzyme expressed in platelets, macrophages, dermal dendritic cells, and selected stromal populations. Upon thrombin and calcium activation, the zymogen form of coagulation factor XIII is cleaved to generate active Factor XIIIa, which stabilizes fibrin clots by catalyzing covalent cross-linking between fibrin monomers. This cross-linking step is essential for clot integrity and resistance to fibrinolysis.

Factor XIII A chain belongs to the transglutaminase family and contains a catalytic core domain that forms 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 proteolytic activation, the B subunits dissociate and the A subunits become enzymatically active. Beyond coagulation, Factor XIIIa participates in extracellular matrix remodeling by cross-linking fibronectin, collagen, and other structural proteins, supporting tissue repair and wound healing.

In normal tissues, Factor XIII A chain expression is prominent in dermal dendrocytes and tissue macrophages. It is also detectable in placenta and bone marrow-derived cells. In research and diagnostic pathology settings, Factor XIIIa antibody staining is frequently used to characterize fibrohistiocytic lesions. Dermatofibroma typically demonstrates strong cytoplasmic staining, whereas dermatofibrosarcoma protuberans generally lacks expression, supporting its value in differential assessment. Expression patterns have also been described in inflammatory and reparative conditions where

macrophage activation is present.

This clone has been validated using a human protein microarray platform containing thousands of full-length human proteins, demonstrating high specificity for the intended F13A1 target with minimal off-target reactivity. Protein microarray validation supports confidence in target selectivity when studying coagulation biology, stromal cell populations, and macrophage-associated processes. Factor XIIIa Antibody protein microarray validated clone F13A1/1683 is suitable for detecting Factor XIII A chain expression in relevant research applications, where staining is typically cytoplasmic in positive dendritic or macrophage-lineage cells.

Application Notes

Titering of the Factor XIIIa antibody may be required for optimal performance.

1. The prediluted format is supplied in a dropper bottle and is optimized for use in IHC. After epitope retrieval step (if required), drip mAb solution onto the tissue section and incubate at RT for 30 min.

Immunogen

A human partial recombinant protein corresponding to amino acids 46-181 was used as the immunogen for the Factor XIIIa antibody-protein microarray validated clone F13A1/1683.

Storage

Store the Factor XIIIa antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

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