

Human blood coagulation Factor XIIIa, thrombin-activated

Product No. ADG423

Description

Human Factor XIII was recombinantly produced in insect cells. Factor XIII is a homodimer (α_2) composed of two chains held together by non-covalent bonds. After activation of the zymogen by Thrombin and Ca^{2+} to its active form (α_2^* , Factor XIIIa), Factor XIIIa catalyzes the formation of covalent bridges (ϵ -(γ -glutamyl) lysine bonds) between fibrin units to increase the elasticity of the clot network. The resulting cross-linked fibrin is insoluble and resistant to lysis.

Synonym

Recombinant Fibrin stabilizing factor, protein-glutamine- γ -glutamyltransferase

Purity > 95% [by SDS-PAGE]

Molecular Weight 79 kDa (monomer)
158 kDa (homodimer)

Application

The FXIIIa catalyzes acyl transfer reactions from glutamine residues in proteins or peptides to primary amines, e. g. the formation of ϵ -(γ -glutamyl) lysine bonds between proteins by transferring the acyl group of a peptide-bound glutamine residue to the primary amino group of a peptide-bound lysine residue.

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Presentation

200 μg of the recombinant activated human Factor XIIIa is lyophilized from 50 mM Tris-HCl pH 8.0, 300 mM NaCl, 1 mM CHAPS, 3 mM Ca^{2+} . Sample contains sucrose.

Reconstitution

Add the volume of water specified in the certificate of analysis under aliquotation to the vial of lyophilized powder. Rotate vial gently until solid dissolves. After reconstitution the solution should be stored frozen in working aliquots. For short term storage keep cooled on ice.

Storage

Store at $-20\text{ }^\circ\text{C}$ in working aliquots. Repeated freezing and thawing is not recommended.

Delivery at ambient temperature is possible

References

1. The blood clotting Factor XIIIa forms unique complexes with amyloid-beta ($\text{A}\beta$) and colocalizes with deposited $\text{A}\beta$ in cerebral amyloid angiopathy. de Jager M et al. Neuropathol Appl Neurobiol. 2016 Apr;42(3):255-72.
2. Novel insights into structure and function of factor XIIIa-inhibitor tridegin. Böhm M et al. J Med Chem. 2014 Dec 26;57(24):10355-65.

Hinweis/Note:

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The datasheet is for information purposes only. The current datasheet will be enclosed with product shipment.

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