

Human blood coagulation Factor XIII-A2

Product No. ADG424

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 84 kDa (monomer)
168 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 human Factor XIII is lyophilized from 20 mM Tris-HCl pH 7.5, 150 mM NaCl, 1 mM EDTA, 1 mM DTT. Sample contains maltodextrin.

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. 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.
2. Coagulation factor XIIIa substrates in human plasma: identification and incorporation into the clot. Nikolajsen CL et al. J Biol Chem. 2014 Mar 7;289(10):6526-34.
3. Differences in the inhibition of coagulation factor XIII-A from animal species revealed by Michael Acceptor- and thioimidazol based blockers. Heil A et al. Thromb Res. 2013 May;131(5):e214-22.
4. A profiling platform for the characterization of transglutaminase 2 (TG2) inhibitors. Schaertl S et al. J Biomol Screen. 2010 Jun;15(5):478-87.

Hinweis/Note:

Der Packungsbeileger dient nur als erste Information. Der relevante Packungsbeileger liegt der Ware bei.

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

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