

Product number **T070**  
Revision number **RN3.0**

<b>Product Name</b>	Human Factor XIIIa, thrombin-activated (hFXIIIa, active A subunit)
<b>Synonym</b>	Recombinant Fibrin stabilizing factor, protein-glutamine-γ-glutamyltransferase
<b>Source</b>	Recombinantly produced in insect cells. Activated by human Thrombin.
<b>Quantity</b>	50 µg, 200 µg, 1 mg
<b>Purity</b>	> 95% [by SDS-PAGE]
<b>Molecular Weight</b>	79 kDa (monomer); 158 kDa (homodimer)
<b>Description</b>	Recombinant human Factor XIII is a homodimer (A <sub>2</sub> ) composed of two chains held together by non covalent bonds. After activation of the zymogen by Thrombin and Ca <sup>2+</sup> to its active form (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.
<b>Application</b>	hFXIIIa 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.
<b>Appearance</b>	White lyophilized solid.
<b>Reagents</b>	The recombinant activated human Factor XIIIa is lyophilized from 50 mM Tris-HCl pH 8.0. Sample contains sucrose.
<b>Reconstitution</b>	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.
<b>Storage</b>	Store at -80°C.  If storage at -80°C is not possible, storage at ≤ -20°C is recommended. While no formal stability data are available at -20°C, according to our overall experience stability is still given.  Upon reconstitution, store undiluted working aliquots preferably at -80°C (if not possible at ≤ -20°C, see comment above). Storage of diluted aliquots may result in severe activity loss. Avoid repeated freezing and thawing.  <b><i>Delivery at ambient temperature is possible</i></b>
<b>Reference(s)</b>	Chrobok et al., PLoS One. 2018, 13:e0196433; Akbar et al., J. Med. Chem. 2017, 60:7910-27; de Jager, M. et al., Neuropathol. Appl. Neurobiol. 2016, 42, 255; Hamedani et al., Chem. Commun. 2015, 51, 1135-39; Böhm et al., J. Med. Chem. 2014, 57, 10355-65

# Product Data Sheet



Product number **T070**  
Revision number **RN3.0**

---

**Related products**

A101	FXIII-Assay Substance, Abz-NE(CAD-DNP)EQVSPLTLLK-OH
F001	FXIII-Assay Kit
T007	Coagulation factor XIII, purified from human plasma
T027	Human blood coagulation Factor XIII, recombinant
T056	Human alpha thrombin, highly active
T101	1,3,4,5-Tetramethyl-2[(2-oxo-propyl)thio] imidazolium chloride
A016	Polyclonal antibody to human blood coagulation factor XIII (A-subunit)

**Release date** 17 December 2021

**NOTE** INTENDED FOR RESEARCH USE ONLY, NOT FOR USE IN HUMAN, THERAPEUTIC OR DIAGNOSTIC APPLICATIONS.