Product Data Sheet

Product number **T027**
Revision number RN3.2

Product Name	Human blood coagulation Factor XIII-A_2, recombinant (hFXIII, A subunit, recombinantly produced in insect cells)
Synonym	Recombinant Fibrin stabilizing factor, protein-glutamine-γ-glutamyltransferase
Source	Recombinantly produced in insect cells
Quantity	200 µg / 1 mg
Purity	> 95% [by SDS-PAGE]
Molecular Weight	84 kDa (monomer); 168 kDa (homodimer)
Description	Recombinant human Factor XIII is a homodimer (A_2) composed by two chains held together by non-covalent bonds. It is N-terminally fused to a hexahistidine-tag. After activation of the zymogen by Thrombin and Ca^{2+} 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.
Application	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.
Appearance	White lyophilized solid.
Reagents	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 undiluted working aliquots. For short term storage keep cooled on ice.
Storage	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. ***Delivery at ambient temperature is possible***
Reference(s)	Böhm et al,. J. Med. Chem. 2014, 57:10355-65; Nikolajsen et al., J. Biol. Chem. 2014, 289:6526-34; Heil et al., Thromb. Res. 2013, 131, e214–e22; Schaertl et al., J. Biomol. Screen. 2010, 15:478-87
Related products	A101 FXIII-Assay Substance, Abz-NE(CAD-DNP)EQVSPLTLLK-OH F001 FXIII-Assay Kit T007 Coagulation factor XIII, purified from human plasma 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	15 September 2022
NOTE	INTENDED FOR RESEARCH USE ONLY, NOT FOR USE IN HUMAN, THERAPEUTIC OR DIAGNOSTIC APPLICATIONS.