

Product number **T022**
Revision number **RN3.0**

Product Name	Human tissue transglutaminase (hTG2, recombinantly produced in insect cells)
Synonym	Tissue-type Transglutaminase, TG2, TGase 2, proteinglutamine-γ-glutamyltransferase
Source	Recombinant produced in insect cells
Quantity	250 µg / 1 mg
Molecular Weight	78 kDa (Val224-allele, Kanchan et al., Biochem. J. 2013, 455:261–72)
Activity	<p>> 1500 U/mg [Activity is determined by measuring the rate of fluorescence enhancement after His₆-rhTG2-catalyzed monodansylcadaverine-incorporation into N,N-dimethylated casein according to Lorand et al., Anal. Biochem. 44 (221-231).</p> <p>1 U is defined as the increase in fluorescence intensity of 1 a.u./min (measured on a Cary eclipse fluorescence spectrophotometer, Varian; λ_{ex} = 332 nm, λ_{em} = 500 nm; band filter = 5 nm; detector strength = 600 V; temperature = 37°C, assay volume = 1 ml)].</p>
Application	His ₆ -rhTG2 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. His ₆ -rhTG2 may also be used for immunoprecipitation.
Appearance	White lyophilized solid.
Reagents	The Transglutaminase is lyophilized from 10 mM Tris-HCl pH 8.1, 150 mM NaCl, 1 mM EDTA, 5 mM DTT. Sample contains maltodextrin. His ₆ -rhTG2 is a Ca ²⁺ -dependent enzyme.
Activation	The Transglutaminase is activated with 10 mM Ca ²⁺
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.
Purity	> 90 % (visually by SDS-PAGE)
Storage	<p>Store at -80°C.</p> <p>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.</p> <p>Store undiluted working aliquots preferably at -80°C (if not possible at ≤ -20°C, see comment above). Avoid repeated freezing and thawing.</p> <p><i>Delivery is possible at ambient temperature</i></p>
Reference(s)	<p>Engstrom et al., Sci. Rep. 2017, 7:77</p> <p>Hardes et al., Anal. Biochem. 2012, 428:73-80</p>
Related products	<p>A033 Monoclonal antibody to human TG2 (Catalytic Domain)</p> <p>F002 Tissue Transglutaminase Assay Kit</p> <p>A102 TG2-Assay Substance, Abz-APE(CAD-DNP)QEA-OH</p> <p>Z006 Z-DON-Val-Pro-Leu-OMe</p>
Release date	03 January 2022
NOTE	INTENDED FOR RESEARCH USE ONLY, NOT FOR USE IN HUMAN, THERAPEUTIC OR DIAGNOSTIC APPLICATIONS.