

Product number **T040**
Revision number **RN5.1**

Product Name	Mouse tissue transglutaminase (mTG2)
Synonym	Tissue-type Transglutaminase, TG2, TGase 2, proteinglutamine- γ -glutamyltransferase
Source	Recombinantly produced in <i>E. coli</i>
Quantity	250 μ g / 1 mg
Molecular Weight	78 kDa
Activity	> 2000 U/mg [Activity is determined by measuring the rate of fluorescence enhancement after His ₆ -rmTG2-catalyzed monodansylcadaverine-incorporation into N,N-dimethylated casein according to Lorand et al., Anal. Biochem. 44 (221-231)]. 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)].
Description	His ₆ -rmTG2 is based on clone IRAKp961C066Q. It is N-terminally fused to a hexahistidine-tag resulting in the encoded N-terminal amino acid sequence MHHHHHAEELL... His ₆ -rmTG2 is produced in <i>E. coli</i> and purified by ion metal chelating chromatography to > 95 % purity.
Application	His ₆ -rmTG2 catalyzes acyl transfer reactions from glutamin 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 -rmTG2 may also be used for immunoprecipitation.
Appearance	White lyophilized solid.
Reagents	The Transglutaminase is lyophilized from 50 mM sodium phosphate buffer , 150 mM NaCl, pH 8. Sample contains maltodextrin.
Reconstitution	Add the volume of H ₂ O the protein is lyophilized from (see Certificate of Analysis) to the vial of lyophilized powder. Rotate vial gently until solid dissolves. After reconstitution the solution should be stored frozen in working aliquots. Keep cooled on ice for short term storage.
Activation	Add 10 mM Ca ²⁺ to activate His ₆ -rmTG2.
Purity	> 95 % (visually by SDS-PAGE)
Storage	Store at -20°C in working aliquots. Repeated freezing and thawing is not recommended. Delivery is possible at ambient temperature
Reference(s)	Chrobok et al., PLoS One. 2018, 13:e0196433; Shinde et al., J. Mol. Cell Cardiol. 2018, 117:36-48; Schaertl et al., J. Biomol. Screen. 2010, 15:478-87; Schulze-Krebs et al., Brain Res. 2015, 1631:22-33
Related products	T002 Human tissue transglutaminase A102 TG2-Assay Substance, Abz-APE(CAD-DNP)QEA-OH F002 Tissue Transglutaminase Assay Kit A014 Polyclonal antibody to human tissue transglutaminase (TG2)
Release date	22 January 2024
NOTE	INTENDED FOR RESEARCH USE ONLY, NOT FOR USE IN HUMAN, THERAPEUTIC OR DIAGNOSTIC APPLICATIONS.