

Product number **T038**
Revision number **RN5.1**

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| Product Name | Rat tissue transglutaminase (rTG2) |
| 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 -rrTG2-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 -rrTG2 is based on clone IRBPp993H102D. It is N-terminally fused to a hexahistidine-tag resulting in the encoded N-terminal amino acid sequence MHHHHHAEELN... His ₆ -rrTG2 is produced in <i>E. coli</i> and purified by ion metal chelating chromatography to more than 95 % purity. |
| Application | His ₆ -rrTG2 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 -rrTG2 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 -rrTG2. |
| Purity | > 95 % (visually by SDS-PAGE) |
| Storage | Store at -20°C in working aliquots. Repeated freezing and thawing is not recommended. <i>Delivery is possible at ambient temperature</i> |
| Reference(s) | Sánchez-Lara et al., Vet Pathol. 2015, 52:513-23 |
| Related products | T002 Human tissue transglutaminase A102 TG2-Assay Substance, Abz-APE(CAD-DNP)QEA-OH F002 Tissue Transglutaminase Assay Kit A033 Monoclonal antibody to tissue transglutaminase (TG2, Core Domain) |
| Release date | 22 January 2024 |
| NOTE | INTENDED FOR RESEARCH USE ONLY, NOT FOR USE IN HUMAN, THERAPEUTIC OR DIAGNOSTIC APPLICATIONS. |