

Product number **T035**  
Revision number **RN4.0**

<b>Product Name</b>	Human keratinocyte transglutaminase (TG1)
<b>Synonym</b>	TG1, TGase 1, keratinocyte protein-glutamine- $\gamma$ -glutamyltransferase
<b>Source</b>	Recombinant, produced in Insect cells
<b>Quantity</b>	150 $\mu$ g
<b>Molecular Weight</b>	90 kDa
<b>Activity</b>	> 5,000 U/mg [Activity is determined by measuring the rate of fluorescence enhancement after His <sub>6</sub> -rhTG1-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.
<b>Molar extinction coefficient</b>	Experimentally determined (protein concentration derived using Bradford assay): 184,709 M <sup>-1</sup> cm <sup>-1</sup> (50 mM Tris-HCl pH 8.0, 10 mM glutathione) 155,227 M <sup>-1</sup> cm <sup>-1</sup> (50 mM Tris-HCl pH 8.0; [Formulation of TG1, Cat. No. T155])  Calculated using Protparam (Gasteiner et al., The Proteomics Protocols Handbook, Humana Press(2005), pp. 571-607: 122,730 M <sup>-1</sup> cm <sup>-1</sup> (assuming all Cys residues are reduced)
<b>Description</b>	His <sub>6</sub> -rhTG1 is based on the TGM1-allele from I.M.A.G.E.-clone IRAKp961M1628 isolated from human skin squamous cell carcinoma. It is N-terminally fused to a hexahistidine-tag resulting in the encoded N-terminal amino acid sequence MHHHHHHMDGPR... His <sub>6</sub> -rhTG1 is purified by IMAC to more than 90 % purity.
<b>Application</b>	His <sub>6</sub> -rhTG1 catalyzes acyl transfer reactions from glutamin residues in proteins or peptides to primary amines, e. g. the formation of $\epsilon$ -( $\gamma$ -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 <sub>6</sub> -rhTG1 may also be used for immunoprecipitation.
<b>Purity</b>	> 90% (visually by SDS-PAGE)
<b>Activation</b>	Add 10 mM Ca <sup>2+</sup> to activate His <sub>6</sub> -rhTG1.
<b>Appearance</b>	White lyophilized solid.
<b>Reconstitution</b>	Add the volume of H <sub>2</sub> 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.
<b>Storage</b>	Store at $\leq$ -20 °C. Store working aliquots at $\leq$ - 20°C. Avoid repeated freezing and thawing.  <b><i>Delivery at ambient temperature is possible</i></b>
<b>Related products</b>	T009 Human keratinocyte transglutaminase (TG1, recombinantly produced in E. coli) T101 1,3,4,5-Tetramethyl-2[(2-oxo-propyl)thio] imidazolium chloride T036 Transglutaminase Assay Kit, fluorescent, Casein, Dansylcadaverine A018 Polyclonal antibody to human keratinocyte transglutaminase A029 FITC-labelled polyclonal antibody to human TG1
<b>Release date</b>	22 June 2026

# Product Data Sheet



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