

Product number **T159**
Revision number **RN3.0**

Product Name	Pig (<i>sus scrofa</i>) tissue transglutaminase (sTG2)
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	> 750 U/mg [Activity is determined by measuring the rate of fluorescence enhancement after sTG2-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 = 10 nm; detector strength = 600 V; temperature = 37 °C, assay volume = 1 ml)].
Description	sTG2 is based on the NCBI database sequence XM_003359989. It is N-terminally fused to a hexahistidine-tag resulting in the encoded N-terminal amino acid sequence MHHHHHAEDLIL....sTG2 is produced in <i>E. coli</i> and purified by ion metal chelating chromatography to more than 95 % purity.
Application	sTG2 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. sTG2 may also be used for immunoprecipitation.
Appearance	White lyophilized solid.
Reagents	The enzyme is lyophilized from 10 mM sodium phosphate buffer, 150 mM NaCl, pH 8.0. 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 sTG2.
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>
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	23 November 2022
NOTE	INTENDED FOR RESEARCH USE ONLY, NOT FOR USE IN HUMAN, THERAPEUTIC OR DIAGNOSTIC APPLICATIONS.