

Product number **T001**
Revision number **RN3.4**

Product Name	Recombinant microbial (bacterial) transglutaminase		
Synonyms	EC 2.3.2.13; Protein-glutamine- γ -glutamyltransferase		
Background info	Transglutaminases are a family of enzymes that catalyze the posttranslational modification of proteins by inserting an isopeptide bond within or between polypeptide chains. These enzymes catalyze the acyl transfer reaction between the γ -carboxyamides of peptide-bound glutamine residues and a variety of primary amines, particularly the ϵ -amino group of lysine. The resulting crosslink is of great significance, since it is highly stable and also resistant to mechanical and proteolytic degradation.		
Source	Recombinantly produced in <i>E. coli</i> . No material of animal origin is used within production process. Gene derived from <i>Streptomyces mobaraensis</i> .		
Quantity	1x 25 U = 25 U	10x 25 U = 250 U 1x 250 U = 250 U	20x 25 U = 500 U 1x 500 U = 500 U
Molecular weight	38,333 Da (Dispase-activated MTG with N-terminal sequence: FRAPDSDDR...)		
Specific Activity	> 25 U/mg [One unit will catalyse the formation of 1 μ mole of hydroxamate per min from Z-Gln-Gly-OH and hydroxylamine at pH 6.0 at 37°C, Grossowicz <i>et al.</i> (1950)]		
Reagents	The purified transglutaminase is lyophilized from 50 mM NaOAc pH 5.0 + 0.3 M NaCl.		
Appearance	White lyophilized solid.		
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. Reconstituted MTG solution might be turbid. However, MTG activity is not affected. In this case, centrifuge the solution and collect the supernatant. After reconstitution, the solution should be stored frozen in working aliquots.		
Application	Labeling, immobilisation, conjugation and modification of proteins.		
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	Z009 ZediXclusive Microbial Transglutaminase Assay Kit A019 Polyclonal antibody to bacterial (microbial) transglutaminase A020 Polyclonal antibody to bacterial protransglutaminase (pro-BTG, pro-MTG) A024 Monoclonal Antibody to bacterial (microbial) Transglutaminase C001 Monoclonal Antibody to bacterial (microbial) Transglutaminase C002 Z-Gln-Gly-CAD-DNS		
References	Grossowicz <i>et al.</i> , J. Biol. Chem. 1950, 187, 111-25 Ando <i>et al.</i> , Agric. Biol. Chem. 1989, 53, 2613-17 Pasternack <i>et al.</i> , Eur. J. Biochem. 1998, 257, 570-6 Pfleiderer <i>et al.</i> , Microbiol. Res. 2005, 160, 265-71 Jeger <i>et al.</i> , Angew. Chem. Int. Ed. Engl. 2010, 49, 9995-7 Kaufmann <i>et al.</i> , Food Addit. Contam. Part. A 2012, 29, 1364-73 Dennler <i>et al.</i> , Bioconjugate Chem. 2014, 25, 569-78 Dennler <i>et al.</i> , Chembiochem. 2015, 16:861-7		
Release date	01 October 2015		
NOTE	INTENDED FOR RESEARCH USE ONLY, NOT FOR USE IN HUMAN, THERAPEUTIC OR DIAGNOSTIC APPLICATIONS.		