Product Data Sheet

Product number **T255**
Revision number RN2.1

Product Name	Microbial transglutaminase with C-terminal His_6-Tag
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-carboxyamide groups 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 *E. coli*. No material of animal origin is used within production process. Gene derived from *Streptomyces mobaraensis.*
Quantity	25 U
Molecular weight	39 kDa (activated MTG with N-terminal sequence: FRAPDSDDR...)
Specific Activity	≥ 30.0 U/mg [One unit will catalyse the formation of 1 µmole of hydroxamate per min from Z-Gln-Gly-OH and hydroxylamine at pH 6.0 at 37°C, Grossowicz *et al.* (1950)]
Protein concentration	Protein concentration is determined by A280 (ε = 74,830 $L \cdot mol^{-1} \cdot cm^{-1}$).
Reagents	The purified transglutaminase is lyophilized from 50 mM HEPES pH 7.4.
Appearance	White lyophilized solid.
Reconstitution	Add the volume of H_2O 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.
Stability	T255 shows no activity loss when stored at -80°C and according to our experience also at -20°C. T255 is not susceptible to freeze-thawing shown for five freeze-thaw-cycles.
Application	Labeling, immobilisation, conjugation and modification of proteins.
Storage	Store at -80°C. If storage at -80°C is not possible, storage at ≤ -20°C is recommended. Upon reconstitution, store undiluted working aliquots preferably at -80°C (if not possible at -20°C, see comment above). ***Delivery is possible at ambient temperature***
Related products	T001 Microbial (bacterial) transglutaminase Z009 ZediXclusive Microbial Transglutaminase Assay Kit A145 Polyclonal Antibody to microbial Transglutaminase A020 Polyclonal antibody to bacterial protransglutaminase (pro-BTG, pro-MTG) A143 Monoclonal ab to microbial Transglutaminase (clone XM67) C001 Z-Gln-Gly-OH C002 Z-Gln-Gly-CAD-DNS
Release date	05 March 2024
NOTE	INTENDED FOR RESEARCH USE ONLY, NOT FOR USE IN HUMAN, THERAPEUTIC OR DIAGNOSTIC APPLICATIONS.