

## Biotinylated Transglutaminase from Human, Proenzyme (Zymogen)

Cat. No. NATE-1735

Lot. No. (See product label)

### Introduction

#### Description

This enzyme belongs to the family of transferases, specifically those transferring phosphorus-containing groups (phosphotransferases) with a phosphate group as acceptor.

#### Applications

The transglutaminase 3 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. Biotinylated transglutaminase 3 may also be used for immunoprecipitation.

#### Synonyms

transglutaminase; EC 2.3.2.13; 80146-85-6; transglutaminase; Factor XIIIa; fibrinolygase; fibrin stabilizing factor; glutaminylpeptide  $\gamma$ -glutamyltransferase; polyamine transglutaminase; tissue transglutaminase; R-glutaminyl-peptide:amine  $\gamma$ -glutamyl transferase; protein-glutamine  $\gamma$ -glutamyltransferase; TG1

### Product Information

#### Species

Human

#### Source

E. coli

#### Appearance

Liquid

#### Form

The transglutaminase is formulated in 10 mM Sodium Phosphate pH 8.0, 15 mM NaCl. Sample contains 50% glycerol. Transglutaminase is a  $\text{Ca}^{2+}$ -dependent enzyme.

#### EC Number

EC 2.3.2.13

#### CAS No.

80146-85-6

#### Molecular Weight

78 kDa

#### Purity

> 95 % (visually by SDS-PAGE)

#### Activity

> 1000 U/mg [Activity is determined by measuring the rate of fluorescence enhancement after transglutaminase-catalyzed monodansylcadaverine-incorporation into N,N-dimethylated casein according to Lorand et al., Anal. Biochem. 44 (221-231)].

#### Activators

10  $\mu\text{l}$  His6-rhTG3 (1  $\mu\text{g}/\mu\text{l}$ ) 35  $\mu\text{l}$  50 mM Tris-HCl pH 8 5  $\mu\text{l}$  Dispase I (Roche) (0.2  $\mu\text{g}/\mu\text{l}$ ) Incubate for 20 min at 30 °C Add 10 mM  $\text{Ca}^{2+}$  to activate transglutaminase3.

#### Unit Definition

1 U is defined as the increase in fluorescence intensity of 1 a.u./min (measured on a Cary eclipse fluorescence spectrophotometer, Varian;  $\lambda_{\text{ex}}$  = 332 nm,  $\lambda_{\text{em}}$  = 500 nm; band filter = 5 nm; detector strength = 600 V; temperature = 37 °C, assay volume = 1 ml).

### Usage and Packaging

#### Package

100  $\mu\text{g}$

**Package**

100 µg

### ***Storage and Shipping Information***

#### ***Storage***

Store at -20 °C in working aliquots. Repeated freezing and thawing is not recommended.