

Transglutaminase 2 from Rat, Recombinant

Cat. No. NATE-1731

Lot. No. (See product label)

Introduction

Description

Transglutaminase 2 is based on clone IRBPp993H102D. It is N-terminally fused to a hexahistidine-tag resulting in the encoded N-terminal amino acid sequence MHHHHHHAEEELNL. Transglutaminase 2 is produced in *E. coli* and purified by ion metal chelating chromatography to more than 95 % purity.

Applications

The transglutaminase 2 catalyzes acyl transfer reactions from glutamine 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. The transglutaminase 2 may also be used for immunoprecipitation.

Synonyms

transglutaminase; EC 2.3.2.13; 80146-85-6; transglutaminase; Factor XIIIa; fibrinolygase; fibrin stabilizing factor; glutamylpeptide γ -glutamyltransferase; polyamine transglutaminase; tissue transglutaminase; R-glutamyl-peptide:amine γ -glutamyl transferase; protein-glutamine γ -glutamyltransferase; TG1

Product Information

Species

Rat

Source

E. coli

Appearance

White lyophilized solid.

Form

The transglutaminase is lyophilized from 50 mM NaH₂PO₄, 150 mM NaCl, pH 8. Sample contains maltodextrin.

EC Number

EC 2.3.2.13

CAS No.

80146-85-6

Molecular Weight

77 kDa

Purity

> 95 % (visually by SDS-PAGE)

Activity

> 750 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 (271-231).

Activators

Add 10 mM Ca²⁺ to activate transglutaminase.

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; λ_{ex} = 332 nm, λ_{em} = 500 nm; band filter = 5 nm; detector strength = 600 V; temperature = 37°C, assay volume = 1 ml).

Usage and Packaging

Package

250 µg; 1mg

Reconstitution

Add the volume of H₂O the protein is lyophilized from to the vial of lyophilized

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Add the volume of H₂O the protein is lyophilized from 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.

Storage and Shipping Information

Storage

Store working aliquots at $\leq -20^{\circ}\text{C}$. Avoid repeated freezing and thawing. Delivery is possible at ambient temperature.