

Transglutaminase 1 from Human keratinocyte, Recombinant

Cat. No. NATE-1723

Lot. No. (See product label)

Introduction

Description

Transglutaminase is based on the TGM1-allele from I.M.A.G.E.-clone IRAKp961M1628 isolated from human skin squamous cell carcinoma. It is N-terminally fused to a hexahistidine-tag resulting in the encoded N-terminal amino acid sequence MHHHHHMDGPR. Transglutaminase is purified by IMAC to more than 90 % purity.

Applications

This product 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. This enzyme may also be used for immunoprecipitation.

Synonyms

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

Product Information

Species

Human

Source

E. coli

Appearance

White lyophilized solid.

Form

The transglutaminase is lyophilized from 50 mM Tris-HCl pH 8.0, 10 mM Glutathion.

EC Number

EC 2.3.2.13

CAS No.

80146-85-6

Molecular Weight

90 kDa

Purity

> 90 % (visually by SDS-PAGE)

Activity

> 2,500 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

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

150 μ g

Reconstitution

Add the volume of water specified in the certificate of analysis under aliquotation to

Reconstitution

Add the volume of water specified in the certificate of analysis under aliquotation to the vial of lyophilized powder. Rotate vial gently until solid dissolves. After reconstitution the solution should be cooled on ice for short term storage.

Storage and Shipping Information

Storage

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