

Transglutaminase from Mouse, Recombinant

Cat. No. NATE-1727

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

Recombinant mouse transglutaminase is a homodimer (α_2) composed of two chains held together by non covalent bonds. After activation of the zymogen by Thrombin and Ca^{2+} to its active form (α^*_2 , Factor XIIIa), Factor XIIIa catalyzes the formation of covalent bridges (ϵ -(γ -glutamyl) lysine bonds) between fibrin units to increase the elasticity of the clot network. The resulting cross-linked fibrin is insoluble and resistant to lysis.

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

Mouse

Source

Insect cells

Appearance

Liquid

Form

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

EC Number

EC 2.3.2.13

CAS No.

80146-85-6

Molecular Weight

83 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 (221-231)].

Activators

Add Thrombin and 10 mM Ca^{2+} 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

50 μ g

Package

50 µg

Storage and Shipping Information

Storage

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