Creative Enzymes®

Biotinylated Transglutaminase from Human, Recombinant

Cat. No. NATE-1725

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 human transglutaminase is a homodimer (a2) composed of two chains held together by non covalent bonds. After activation of the zymogen by Thrombin and Ca2+ to its active form (a*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; fibrinoligase; 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 Insect cells

Appearance Liquid

Form The transglutaminase is formulated in 10 mM Sodium Phosphate pH 8.0, 15 mM NaCl. Sample contains 50% glycerol. hFXIII is a Ca2+-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 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; λex = 332 nm, λem = 500 nm; band filter = 5 nm; detector strength = 600 V; temperature = 37°C, assay volume = 1 ml)].

Usage and Packaging

Package 50 µg

Storage and Shipping Information

Storage Store working aliquots at ≤ - 20°C. Avoid repeated freezing and thawing.