Creative Enzymes®

Transglutaminase from guinea pig liver, Recombinant

Cat. No. NATE-1247

Lot. No. (See product label)

Introduction

Description	Transglutaminase from guinea pig liver consists of a single polypeptide chain of 691 amino acid residues. It has six potential glycosylation sites (Asn-X-Ser or Asn-X-Thr), but it is not glycosylated. The molecular mass is approximately 76.6 kDa. It is calcium dependent and has several calcium binding sites. The enzyme is inhibited by iodoacetamide and N-ethylmaleimide in the presence of calcium. It catalyzes the incorporation of small molecular weight amines into γ-glutamine sites of proteins. In the absence of small molecular weight amines, it catalyzes the cross linking of proteins that results in the formation of γ-glutamyl-ε-lysine side chain peptides. Liver transglutaminase is a nonzymogenic enzyme.
Applications	Transglutaminase has been used in a study to improve quantifiable assays to fully characterize the role of transglutaminase in diseases such as Huntington's disease and Alzheimer's disease. Transglutaminase has also been used in a study to develop a nonradioactive dot blot assay for transglutaminase activity.
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

Product Information

Species	Guinea pig liver
Source	Sf9 cells
Form	Lyophilized powder from 5.0 mM Tris, pH 7.5, 0.5 mM DTE and 1 mM CaCl2
CAS No.	80146-85-6
Activity	> 1.5 units/mg
Buffer	Resuspend powder in 50 mM Tris, pH 7.6
Unit Definition	One unit will catalyze the formation of 1.0 µmole of hydroxamate per minute from Nα-Z-Gln-Gly and hydroxylamine at pH 6.0 at 37 °C. (L-Glutamic acid γ-monohydroxamate is the standard.)

Storage and Shipping Information

Storage	at -20°C