

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; fibrinolygase; fibrin stabilizing factor; glutamylpeptide γ -glutamyltransferase; polyamine transglutaminase; tissue transglutaminase; R-glutamyl-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 μ mole of hydroxamate per minute from N α -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