

## 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  $\gamma$ -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  $\gamma$ -glutamyl- $\epsilon$ -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; glutaminylopeptide  $\gamma$ -glutamyltransferase; polyamine transglutaminase; tissue transglutaminase; R-glutaminylopeptide:amine  $\gamma$ -glutamyl transferase; protein-glutamine  $\gamma$ -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 CaCl<sub>2</sub>

**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  $\mu$ mole of hydroxamate per minute from N $\alpha$ -Z-Gln-Gly and hydroxylamine at pH 6.0 at 37 °C. (L-Glutamic acid  $\gamma$ -monohydroxamate is the standard.)

### Storage and Shipping Information

**Storage** at -20°C