

Active Native Guinea pig liver Transglutaminase

Cat. No. Transglutaminase-88G **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Native Transglutaminase was purified from guinea pig liver. CAS#: 80146-85-6
Species	Guinea pig
Source	Guinea pig liver
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. Liver transglutaminase is a nonzymogenic enzyme.
Form	lyophilized powder. Lyophilized powder containing Tris and dithioerythritol.
Bio-activity	≥ 1.5 units/mg
Unit Definition	One unit will catalyze the formation of 1.0 μ mole of hydroxamate per min from Na-Z-Gln-Gly and hydroxylamine at pH 6.0 at 37 °C. (L-Glutamic acid γ -monohydroxamate is the standard.)
Applications	This product has been used to demonstrate that tissue transglutaminase (tTG) selectively deamidates gluten peptides, which results in strongly enhanced T cell-stimulatory activity. It has also been used to assess immune responses to A-gliadin

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peptides. Furthermore, it has been used to demonstrate that tTG selectively modifies gliadin peptides that are recognized by gut-derived T cells in celiac disease. 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.

Storage

Store at -20°C.

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