



RayBiotech, Inc.

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Certificate of Analysis and Data Sheet Recombinant Human Tissue Transglutaminase

Catalog No.
228-11502

Source:
Escherichia Coli.

Synonyms

Protein-glutamine gamma-glutamyltransferase 2, EC 2.3.2.13, Tissue transglutaminase, TGase C, TGC, TG(C), Transglutaminase-2, TGase-H, TG2, TGM2.

Introduction:

Celiac disease is an enteropathy that is characterized by intestinal lesions of variable severity. Tissue-type transglutaminase (tTG) is believed to be the predominant autoantigen for celiac disease and the corresponding autoantibodies show higher sensitivity and specificity than anti-gliadin antibodies. Highly pure recombinant human tTG is now available to replace the traditionally used tTG fraction from guinea pig.

Tissue-type transglutaminase antigens have been specifically modified for improved handling: exchange of an active site amino acid eliminates the protein cross-linking activity of the enzyme, while maintaining the native three-dimensional structure and the enzyme's secondary GTPase activity. This engineering assures reproducible properties of the antigen preparations through the absence of variable and ill-defined covalent aggregates of tTG antigen and host cell proteins.

Description:

Tissue Transglutaminase Human Recombinant produced in E.coli is a non-glycosylated, polypeptide chain having a molecular mass of 78,018 Dalton. tTG is expressed with a -6xHis tag and purified by proprietary chromatographic techniques. By point mutation of the active center the catalytic transglutaminase activity has been eliminated, resulting in increased stability during storage and coating.

Formulation:

TGM2 is supplied in 16mM HEPES buffer pH-8.0, 400mM NaCl, and 20% glycerol.

Immunological functions

1. Binds IgA & IgG-type human auto-antibodies.
2. Standard ELISA test (checker-board analysis of positive/negative sera panels, immuno-dot test).

Applications

Western-Blot with monoclonal anti-hexa-His-tag antibody.

**The products are furnished for LABORATORY RESEARCH USE ONLY.
Not for diagnostic or therapeutic use.**



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Coating concentration

0.6-1.4 $\mu\text{g/ml}$ (depending on the type of ELISA plate and coating buffer).
Suitable for biotinylation and iodination.

Storage Conditions

Store at 4°C if entire vial will be used within 2-4 weeks.
Store, frozen at -20°C for longer periods of time.
Avoid multiple freeze-thaw cycles.

Purity

Greater than 95% as determined by SDS-PAGE.

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