

RayBiotech, Inc.

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Certificate of Analysis and Data Sheet

Recombinant Human Transforming Growth Factor-Beta 3

Catalog No.228-11497

Source
Escherichia Coli.

Synonyms

Transforming Growth Factor-beta3, TGFB3, ARVD, FLJ16571, TGF-beta3.

Introduction

Transforming growth factor betas (TGF Betas) mediate many cell-cell interactions that occur during embryonic development. Three TGF Betas have been identified in mammals. TGF Beta 1, TGF Beta 2 and TGF Beta 3 are each synthesized as precursor proteins that are very similar in that each is cleaved to yield a 112 amino acid polypeptide that remains associated with the latent portion of the molecule. This antibody reacts with the precursor and mature form of TGF Beta 2 and to a lesser extent TGF Beta 3, but does not cross react with TGF Beta 1.

Description

TGF-b3 Human Recombinant produced in E.Coli is a disulfide-linked homodimeric, non-glycosylated, polypeptide chain containing 112 amino acids and having a molecular mass of 25,445 Dalton. The TGF-b 3 is purified by standard chromatographic techniques.

Physical Appearance

Sterile Filtered clear solution.

Formulation

The protein solution (0.25mg/ml) contains 20% Ethanol and 0.12% Acetic acid.

Stability

TGF-beta 3 although stable at room temperature for 3 weeks, should be stored at 4°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).

Purity

Greater than 99.0% as determined by:

- (a) Analysis by RP-HPLC.
- (b) Analysis by SDS-PAGE.



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Amino acid sequence

The sequence of the first five N-terminal amino acids was determined and was found to be Ala-Leu-Asp-Thr-Asn.

Biological Activity

The ED $_{50}$ as determined by the cell toxicity assay using the WHO Standard 98/608 as a direct comparison is < 0.05ng/ml, corresponding to a Specific Activity of 12.5 x 106 $_{IU}$ /mg.

Protein content

Protein quantitation was carried out by two independent methods:

- 1. UV spectroscopy at 280 nm using the absorbency value of 1.718 as the extinction coefficient for a 0.1% (1mg/ml) solution. This value is calculated by the PC GENE computer analysis program of protein sequences (IntelliGenetics).
- 2. Analysis by RP-HPLC, using a calibrated solution of TGF-b 3 as a Reference Standard