



## RayBiotech, Inc.

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### Certificate of Analysis and Data Sheet

#### Recombinant Human Insulin-like Growth Factor-1 (IGF-I), Des (1-3)

**Catalog No.**  
228-10835

**Source**  
*E.Coli*

#### Synonyms

Somatomedin C, IGF-I, IGFI, IGF1, IGF-IA, Mechano growth factor, MGF, Des (1-3), Des1-3, Des 1-3, Des (1-3), IGF-1 (4-70).

#### Introduction

The somatomedins, or insulin-like growth factors (IGFs), comprise a family of peptides that play important roles in mammalian growth and development. IGF1 mediates many of the growth-promoting effects of growth hormone (GH; MIM 139250). Early studies showed that growth hormone did not directly stimulate the incorporation of sulfate into cartilage, but rather acted through a serum factor, termed "sulfation factor", which later became known as "somatomedin" (Daughaday et al., 1972). Three main somatomedins have been characterized: somatomedin C (IGF1), somatomedin A (IGF2; MIM 147470), and somatomedin B (MIM 193190) (Rotwein, 1986; Rosenfeld, 2003).

#### Description

IGF-I Des(1-3) Human Recombinant produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 67 amino acids (aa 4-70) and having a molecular mass of 7372 Dalton. IGF-1 Des1-3 is purified by proprietary chromatographic techniques.

#### Physical Appearance

Sterile Filtered White lyophilized (freeze-dried) powder.

#### Formulation

The protein was lyophilized after extensive dialysis against 50mM acetic acid buffer.

#### Solubility

It is recommended to reconstitute the lyophilized IGF-I Des(1-3) in 100mM Acetic acid not less than 100µg/ml, which can then be further diluted to other aqueous solutions.

#### Purity

Greater than 95.0% as determined by: (a) Analysis by RP-HPLC. (c) Analysis by SDS-PAGE.

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



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### ***Stability***

Lyophilized IGF-I des (1-3) although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution IGF1 des-1-3 should be stored at 4°C between 2-7 days and for future use below -18°C.

For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).

**Please prevent freeze-thaw cycles.**

### ***Amino acid sequence***

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

### ***Biological Activity***

The ED50, calculated by the dose-dependant proliferation of murine BALB\3T3 cells (measured by 3H-thymidine uptake) is < 1ng/ml, corresponding to a specific activity of 1MIU/mg. For most in-vitro applications, IGF-I des1-3 exerts its biological activity in the concentration range of 0.2-20 ng/ml corresponding to a specific activity of 50,000IU-5MIU/mg.

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