



## Insulin Like Growth Factor-I Des (1-3), human recombinant (rHuIGF-I des1-3)

<b>Catalog No:</b>	95050
<b>Lot No:</b>	XXXXXX
<b>Source:</b>	<i>E. coli</i>
<b>Synonyms:</b>	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)

### Background

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 (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 50 mM acetic acid buffer.

### Solubility

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

### 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.

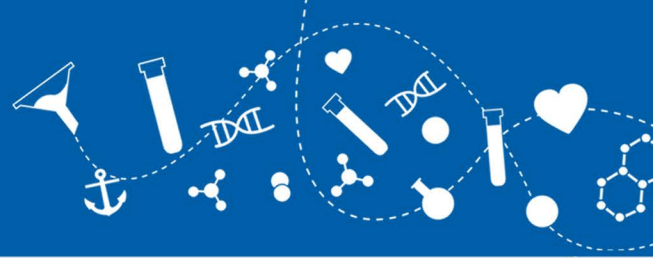
### Purity

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

### 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.

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**Activity**

The ED50, calculated by the dose-dependant proliferation of murine BALB/C 3T3 cells (measured by 3H-thymidine uptake) is <1 ng/ml, corresponding to a specific activity of 1,000,000 units/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 50,000 - 5,000,000 units/mg.

**Usage**

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