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## Product Data Sheet

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Product Name: IGF1 N15 Human  
 Cat. No.: GP20417  
 Batch No.: 1

### Product Data

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped at Room temp.
Synonyms	Somatomedin C; IGF-I; IGFI; IGF1; IGF-IA; Mechano growth factor; MGF.		
Amino Acid Sequence	GPETLCGAEL VDALQFVCGD RGFYFNKPTG YGSSRRAPQ TGIVDECCFR SCDLRRLEMY CAPLKPAKSA.		
Solubility	It is recommended to reconstitute the lyophilized IGF1 N15 in sterile 18M-cm H2O not less than 100µg/ml, which can then be further diluted to other aqueous solutions.		
Formulation	IGF1 N15 protein was lyophilized from a 0.2µm filtered concentrated solution in PBS, pH 7.2.		

### 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).

### Biological Activity

The ED50 as determined by a cell proliferation assay using serum free human MCF-7 cells is less than 2ng/ml, corresponding to a specific activity of  $> 5.0 \times 10^5$  IU/mg.

### Stability

Lyophilized IGF1 N15 although stable at room temperature for 3 weeks, should be stored

**Caution: Product has not been fully validated for medical applications. For research use only.**

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desiccated below  $-18^{\circ}\text{C}$ . Upon reconstitution IGF1 N15 should be stored at  $4^{\circ}\text{C}$  between 2-7 days and for future use below  $-18^{\circ}\text{C}$ . For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

### Background

IGF1 N15 Human Recombinant produced in E.coli is a single, non-glycosylated polypeptide chain containing 70 amino acids and having a molecular mass of 7.74kDa. The N15 is stable isotope labeled. The IGF1 N15 is purified by proprietary chromatographic techniques.

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