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## Product Data Sheet

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Product Name: LR3 IGF1 Human  
 Cat. No.: GP20416  
 Batch No.: 1

### Product Data

Purity >98% Source Escherichia Coli.

Physical Appearance solid Shipping Condition Shipped at Room temp.

Synonyms R3 IGF1; R3 IGF-1; R3IGF1; R3IGF-1; LONG IGF1; LONG IGF-1; LONG R3 IGF1; LONG R3IGF1; LONG R3 IGF-1; LONG R3IGF-1.

Amino Acid Sequence MFPAMPLSSLFVNGPRTLCGAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIV  
 DECCFRSCDLRRLEMYCAPLKPAKSA.

Solubility It is recommended to reconstitute the lyophilized LR3 IGF1 in sterile 18M-cm H2O at a concentration of 100µg/ml, which can then be further diluted to other aqueous solutions.

Formulation Lyophilized from a 0.2µm filtered concentrated solution in 1xPBS.

### Introduction

IGF-1 (Insulin-like growth factor-1) is a major hormonal mediator of statural growth. Under regular circumstances, GH (growth hormone) binds to its receptor in the liver, and other tissues, and stimulates the synthesis/secretion of IGF-1. In target tissues, the Type 1 IGF receptor, that is homologous to the insulin receptor, is activated by IGF-1, leading to intracellular signaling which stimulates multiple processes leading to statural growth. IGF-1 metabolic actions are partly directed at stimulating the uptake of glucose, fatty acids, and amino acids so that metabolism supports growing tissues.

### Biological Activity

The ED50 as determined by the stimulation of protein synthesis in L6 myoblasts is less than 10ng/ml, corresponding to a specific activity of 100,000units/mg.

### Stability

Lyophilized LR3 IGF1 although stable at room temperature for 3 weeks, should be stored desiccated below -18°C . Upon reconstitution the LR3 IGF1 should be stored at 4°C

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

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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

The LR3 is a long-term analog of human IGF-1, specifically designed and manufactured for mammalian cell culture to support large-scale manufacturing of recombinant biopharmaceuticals. Recombinant Human LR3 Insulin Like Growth Factor-1 produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 83 amino acids and having a molecular mass of 9.1kDa.

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