



## Long R3 Insulin Like Growth Factor-1, human recombinant (rHuLong-R3-IGF-1)

**Catalog No:** 97534  
**Lot No:** XXXXX  
**Source:** *E. coli*  
**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

### Background

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.

### Description

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. Human recombinant 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 9.1 kDa.

### Physical Appearance

Sterile filtered white lyophilized (freeze-dried) powder.

### Formulation

Lyophilized from a 0.2 µm filtered concentrated solution in 20 mM PB, pH 7.2.

### Solubility

It is recommended to reconstitute the lyophilized LR3 IGF1 in sterile 18 MΩ-cm H<sub>2</sub>O at a concentration of 100 µg/ml, which can then be further diluted to other aqueous solutions.

### 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 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 97.0% as determined by SDS-PAGE.

### Amino Acid Sequence

MFPAMPLSSL FVNGPRTLCLG AELVDALQFV CGDRGFYFNK PTGYGSSSRR APQTGIVDECC FRSCDLRRLE MYCAPLKP  
SA

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#### **Activity**

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

#### **Usage**

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