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# Recombinant Human LR3 Insulin-like Growth factor-1 (rHu LR3IGF-1) Media Grade

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| **Catalog No.** | AM001 | **Quantity:** | 1 mg |
| | AM010 | | 10 mg |

**Description:** Human LR3 insulin-like Growth Factor-I (LR3IGF-I) is an 83 amino acid analog of IGF-I comprising the complete human IGF-I sequence with the substitution of an Arginine for the Glutamine at position 3, plus a 13 amino acid extension peptide at the N-terminus. Human LR3IGF-I is more potent than native IGF-I in vitro and in vivo. This increased potency is due to reduced binding of LR3IGF-I to most of the IGF binding proteins which modify the biological actions of IGF-I.

Higher biological potency has several advantages over recombinant insulin. Supplementation of cell cultures with LR3IGF-I at a much lower concentration results in equivalent or better productivity than supplementation with standard concentrations of insulin. LR3IGF-I is better able to stimulate the type I IGF receptor and thus induce a higher level of activation of intracellular signalling molecules which are responsible for promoting cell survival by inhibition of apoptosis.Human LR3IGF-I binds to the type 1 IGF receptor with similar affinity to wild type IGF-I. 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.

**N-terminal Sequence:** 18 residues confirmed.

**Source:** *E. coli*

**Molecular Weight:** 9111 Da

**Formulation:** Lyophilized from 0.1M acetic acid. Sealed under nitrogen at a slight vacuum.

**Purity:** >95% by SDS-PAGE analyses.
Three peaks with main peak being > 50% of total area
(Other species are microheterogeneous forms which have biological activity)

**Endotoxin Level:** < 0.1 EU/μg

**Biological Activity:** $ED_{50}$ < 350 ng/ml, by proliferation of CHO cells.

**Reconstitution:** See Protocol 1000, Handling of IGF-I, IGF-II and IGF analogs

**Storage & Stability:** Stored as supplied for up to 1 year at 2-8°C

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