

DATASHEET

Version 2016-08-02

Long-R³-IGF-I (Receptor Grade), Human**Cat. No.:** Z02188-10**Size:** 10 µg**Synonyms:** Human Long Arg³ Insulin-like Growth Factor-I (Long-R³-IGF-I) (Receptor Grade)**Description:**

Human Long Arg³ Insulin-like Growth Factor-I (Long R3 IGF-I) is an 83 amino acid analog of human IGF-I comprising the complete human IGF-I sequence with the substitution of an Arg for the Glu at position 3 (hence R³), and a 13 amino acid extension peptide at the N-terminus. Scientists have engineered this analog with the express purpose of increasing biological activity. Human Long-R³-IGF-I is significantly more potent than human IGF-I in vitro. The enhanced potency is due to the markedly decreased binding of human Long-R³-IGF-I to IGF binding proteins which normally inhibit the biological actions of IGFs.

Recombinant human Long Arg³ Insulin-like Growth Factor-I (Long R3 IGF-I), produced in *E. coli*, is a single, non-glycosylated, polypeptide chain containing 83 amino acids and having a molecular mass of 9,111 Da.

Source: *E. coli***Species:** Human

Biological Activity: The ED₅₀ of recombinant human Long R3 IGF-I, calculated by the dose-dependant proliferation of murine BALBC 3T3 cells, is less than 1.0 ng/ml, corresponding

to a specific activity of 1.0×10⁶ IU/mg. For most *in vitro* applications, the protein exerts its biological activity in the concentration range of 0.2-20 ng/ml.

Molecular Weight: 9,111 Da

Formulation: The protein was lyophilized after extensive dialysis against 300mM NaAc buffer.

Reconstitution: It is recommended that the lyophilized GenScript Long-R³-IGF-I be reconstituted in 500 mM acetic acid not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

Purity: The purity of GenScript Recombinant Human Long-R³-IGF-I is greater than 95% as determined by the following methods:

(a) RP-HPLC analysis

(b) Reducing and non-reducing SDS-PAGE silver-stained gel analysis

Endotoxin Level: The endotoxin level of GenScript Recombinant Human Long-R3-IGF-I is below 0.1 ng/µg (1 IEU/µg) of Long-R³-IGF-I.

Storage: Lyophilized recombinant recombinant human Long R3 IGF-I remains stable at room temperature for three weeks, but it is best stored desiccated below -18°C. Upon reconstitution recombinant human recombinant human Long R3 IGF-I should be stored at 4°C for up to seven days. For long term storage it is recommended that a carrier protein (0.1% HSA or BSA) be added. Avoid repeated freeze-thaw cycles.

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