

LR³-IGF-I (Media Grade), Human

Version 2014-12-15

Cat. No.: Z03090-1**Synonyms:** LR³ Insulin-like Growth Factor-I (LR³-IGF-I) (Media Grade), human; LR³-IGF-I;**Size:** 1 mg**Source:** *E. coli***Purity:** The purity of GenScript Recombinant Human LR³-IGF-I is greater than 85% 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 LR³-IGF-I is below 0.1 ng/μg (1 IEU/μg) of LR³-IGF-I.**Specific Activity:** The ED₅₀ of GenScript LR³-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, GenScript LR³-IGF-I exerts its biological activity in the concentration range of 0.2-20 ng/ml.**Formulation:** LR³-IGF-I was lyophilized after extensive dialysis against 300mM NaAc buffer.**Reconstitution:** It is recommended that the lyophilized GenScript LR³-IGF-I be reconstituted in 500 mM acetic acid not

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less than 100 μg/ml, which can then be further diluted to other aqueous solutions.

Storage: Although GenScript lyophilized LR³-IGF-I remain stable at room temperature for three weeks, it is best stored desiccated below -18°C. After reconstitution, GenScript LR³-IGF-I may be stored at 4°C for up to seven days and below -18°C for longer periods. For long-term storage, it is recommended that a carrier protein (0.1% HSA or BSA) be added. Please avoid freeze-thaw cycles.

Description:

Human LR³ Insulin-like Growth Factor-I (LR³-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 LR³-IGF-I is significantly more potent than human IGF-I *in vitro*. The enhanced potency is due to the markedly decreased binding of human LR³-IGF-I to IGF binding proteins which normally inhibit the biological actions of IGFs.

GenScript **LR³ Insulin-like Growth Factor-I (LR³-IGF-I) (Media Grade), human**, produced in *E. coli*, is a single, non-glycosylated, polypeptide chain containing 83 amino acids and having a molecular mass of 9,111 Da.

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