



GroPep® Bioreagents

Human LR³ IGF-I (Media Grade)

Description

Human LR³ insulin-like Growth Factor-I (LR³IGF-I) is an 83 amino acid analogue 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 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. Human LR³IGF-I binds to the type 1 IGF receptor with similar affinity to wild type IGF-I.

LR³IGF-I was developed by GroPep specifically for supplementation of mammalian cell culture to support the survival and proliferation of cells. It is engineered to have a higher biological potency than native IGF-I or IGF-II and 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.

Media grade LR³IGF-I is a high quality product for use in commercial cell culture.

It can also be used as a research reagent at an economical cost to enable studies where higher quantities of peptide are required.

References

Francis GL *et al* (1992) Journal of Molecular Endocrinology **8**, 213-223

Yandell C *et al* (2004) Bioprocess International **2**, 56-64

Source:

Produced in *E.coli*.

Molecular Weight:

9110.6 ± 2 Daltons

Purity:

≥ 95 % (by SDS gel electrophoresis)

HPLC analysis:

Three peaks with main peak being > 50% of total area
(Other species are micro heterogeneous forms which have biological activity)

N-terminal sequence:

Analysis of 18 residues

Biological Activity:

Proliferation of Chinese Hamster Ovary (CHO) cells
(EC₅₀ ≤ 10 ng/ml)

Endotoxin:

≤ 0.1 EU/μg

Appearance:

White powder freeze-dried from 0.1M acetic acid and stored under nitrogen at a slight vacuum.

Storage/Stability:

At least 2 years at 2-8°C (as a freeze dried product).

Reconstitution:

Handling of GroPep IGF-I, IGF-II and IGF analogues

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Product Codes

Human LR³IGF-I (MG)	1 mg	AM001
	10 mg	AM010
	50 mg	AM050

Related Products:

Human LR³IGF-I (Receptor grade)
Human [Arg³] IGF-I (Media Grade)
Human LR³IGF-I ELISA
Human IGF-I (Media Grade)

****NOT FOR USE IN HUMANS****

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