

Recombinant Human Long Arg3 Insulin-like Growth Factor-I

Cat. No. IGF-08H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human Long-R ³ -IGF-I produced in <i>E. coli</i> is a single, non-glycosylated, polypeptide chain containing 83 amino acids and having a molecular mass of 9.111 kDa.
Species	Human
Source	E.coli
Description	Human Long Arg ³ Insulin-like Growth Factor-I (Long-R ³ -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 R ³), 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-R ³ -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-R ³ -IGF-I to IGF binding proteins which normally inhibit the biological actions of IGFs.
Purity	>95% by SDS-PAGE and RP-HPLC.
Formulation	Lyophilized after extensive dialysis against acetic acid buffer.
Specific Activity	The ED ₅₀ , calculated by the dose-dependant proliferation of murine BALB/C 3T3 cells is less than 1.0 ng/ml, corresponding to a specific activity of 1.0 x 10 ⁶ IU/mg. For most in-vitro applications, Long-R ³ -IGF-I exerts its biological activity in the

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	concentration range of 0.2-20 ng/ml.
Endotoxin	Less than 0.1ng/g (1IEU/g) of Long-R ³ -IGF-I.
Reconstitution	It is recommended to reconstitute the lyophilized Long-R ³ -IGF-I in 500mM acetic acid not less than 100g/ml, which can then be further diluted to other aqueous solutions.
Storage	Lyophilized Long-R ³ -IGF-I although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution Long-R ³ -IGF-I 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). Aliquot to avoid repeated freeze-thaw cycles.

GENE INFORMATION

Gene Name	IGF1
Synonyms	IBP1; IGF-IA; IGF-IB; IGF-I; MGF; Somatomedin-C; Insulin-like growth factor IA precursor; Insulin-like growth factor IB precursor; Mechano growth factor; insulin-like growth factor 1; IGF1; insulin-like growth factor 1 (somatomedin C)
Gene ID	3479
mRNA Refseq	NM_000618.3
Protein Refseq	NP_000609.1
MIM	147440
UniProt ID	P01343; P05019

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Chromosome Location	12q22-q23
Pathway	Focal adhesion, Glioma, Long-term depression, Melanoma, Prostate cancer, mTOR signaling pathway
Function	Growth factor activity, Hormone activity, Insulin-like growth factor receptor binding, Prothoracicotropic hormone activity

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