

Active Recombinant Human Insulin-like Growth Factor 1

Cat. No. IGF1-658H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	IGF1 Des(1-3) Human Recombinant produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 67 amino acids (aa 4-70) and having a molecular mass of 7372 Dalton. IGF-1 Des1-3 is purified by proprietary chromatographic techniques.
Species	Human
Source	Human
ProteinLength	4-70 a.a.
Description	The somatomedins, or insulin-like growth factors (IGFs), comprise a family of peptides that play important roles in mammalian growth and development. IGF1 mediates many of the growth-promoting effects of growth hormone (GH; MIM 139250). Early studies showed that growth hormone did not directly stimulate the incorporation of sulfate into cartilage, but rather acted through a serum factor, termed "sulfation factor," which later became known as "somatomedin". Three main somatomedins have been characterized: somatomedin C (IGF1), somatomedin A (IGF2; MIM 147470), and somatomedin B (MIM 193190).
Form	The protein was lyophilized after extensive dialysis against 50mM acetic acid buffer.
Purity	Greater than 95.0% as determined by(a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.
Bio-activity	The ED50, calculated by the dose-dependant proliferation of murine BALB\ C 3T3

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

cells (measured by 3H-thymidine uptake) is < 1.0 ng/ml, corresponding to a specific activity of 1x10⁶ U/mg. For most in-vitro applications, IGF1 des1-3 exerts its biological activity in the concentration range of 0.2-20 ng/ml.

Physical Appearance Sterile Filtered White lyophilized (freeze-dried) powder.

Solubility It is recommended to reconstitute the lyophilized IGF1 Des(1-3) in 100mM Acetic acid not less than 100µg/ml, which can then be further diluted to other aqueous solutions.

Amino acid sequence The sequence of the first five N-terminal amino acids was determined and was found to be Thr-Leu-Cys-Gly-Ala.

Storage Lyophilized IGF1 des(1-3) although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution IGF1 des-1-3 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). Please prevent freeze-thaw cycles.

GENE INFORMATION

Gene Name IGF1 insulin-like growth factor 1 (somatomedin C) [Homo sapiens]

Official Symbol IGF1

Synonyms IBP1; IGF-I; IGF-IA; IGF1; MGF; Somatomedin-C; Mechano growth factor; insulin-like growth factor 1; insulin-like growth factor 1 (somatomedin C); somatomedin C; IGF1B_HUMAN; Insulin-like growth factor IB [Precursor]; IGF-IB.

Gene ID 3479

mRNA Refseq NM_000618

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Protein Refseq	NP_000609
MIM	608747
UniProt ID	P01343
Chromosome Location	12q23.2
Pathway	Focal adhesion; Glioma; Long-term depression; Melanoma; Prostate cancer; mTOR signaling pathway; Hemostasis
Function	Growth factor activity; Hormone activity; Hormone activity; Insulin receptor binding; Insulin-like growth factor receptor binding; Protein binding
PDB rendering based on 1bqt.	