

# Recombinant Human IGF1 protein

**Cat. No.** IGF1-524H    **Lot. No.** (See product label)

## SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b> | Recombinant Human IGF1 protein (67 a.a.) was expressed in Escherichia coli.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Source</b>           | E.coli                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>ProteinLength</b>    | 67                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Description</b>      | IGF-1 belonged to the insulin gene family, is a mitogenic polypeptide growth factor that stimulates the proliferation and survival of various cell types including muscle, bone, and cartilage tissue in vitro. DES(1-3)IGF-1, is a truncated variant of human IGF-1 with the tripeptide Gly-Pro-Glu absent from the N-terminus. It has been isolated from bovine colostrum, human brain and porcine uterus. The DES(1-3)IGF-1 probably results from post-translational cleavage of IGF-1. It has about 10-fold more potent than IGF-1 at stimulating hypertrophy and proliferation of cultured cells, a consequence of much reduced binding to IGF-binding proteins, in turn caused by the absence of the glutamate at position 3. Clinical opportunities for DES(1-3)IGF-1 have not yet been evaluated, but could apply in catabolic states as well as for the treatment of inflammatory bowel diseases. |
| <b>Form</b>             | Lyophilized from a 0.2µm filtered concentrated solution in PBS, pH 7.4.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Bio-activity</b>     | Fully biologically active when compared to standard. The ED50 as determined by a cell proliferation assay using serum free human MCF-7 cells is less than 2 ng/ml, corresponding to a specific activity of > 5.0 ×                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

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

 Email: [info@creative-biomart.com](mailto:info@creative-biomart.com)     Fax: 1-631-938-8127

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

|                       |                                                                                                                                                                                                                                                                                                                                                                                             |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                       | 10 <sup>5</sup> IU/mg.                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Molecular Mass</b> | Approximately 7.4 kDa, a single non-glycosylated polypeptide chain containing 67 amino acids.                                                                                                                                                                                                                                                                                               |
| <b>AA Sequence</b>    | TLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEM<br>YCAPLKPAKSA                                                                                                                                                                                                                                                                                                                     |
| <b>Endotoxin</b>      | Less than 50 EU/mg of rHuDES1-3 IGF-1 as determined by LAL method.                                                                                                                                                                                                                                                                                                                          |
| <b>Purity</b>         | >97% by SDS-PAGE and HPLC analysis.                                                                                                                                                                                                                                                                                                                                                         |
| <b>Storage</b>        | Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 12 months from date of receipt, -20 to -70 centigrade as supplied. 1 month, 2 to 8 centigrade under sterile conditions after reconstitution. 3 months, -20 to -70 centigrade under sterile conditions after reconstitution.                                                                                             |
| <b>Reconstitution</b> | We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤-20 centigrade. Further dilutions should be made in appropriate buffered solutions. |

## GENE INFORMATION

|                        |                                                                                                                                                                  |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>       | IGF1                                                                                                                                                             |
| <b>Official Symbol</b> | IGF1                                                                                                                                                             |
| <b>Synonyms</b>        | IGF1; insulin-like growth factor 1 (somatomedin C); insulin-like growth factor 1; IGF1A; MGF; IGF-IA; IGF-IB; somatomedin-C; mechano growth factor; insulin-like |

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growth factor I; insulin-like growth factor IA; insulin-like growth factor IB; IGF1; IGF-I;

**Gene ID** 3479

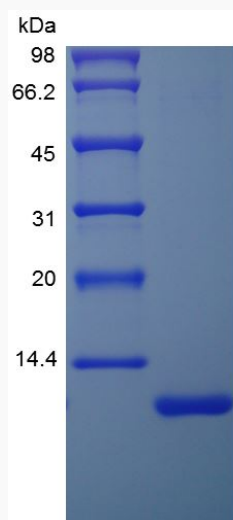
**mRNA Refseq** NM\_000618

**Protein Refseq** NP\_000609

**MIM** 147440

**UniProt ID** P05019

**SDS-PAGE of IGF1-524H**



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