

Recombinant Human IGF1 protein

Cat. No. IGF1-06H Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant Human IGF1 protein (70 a.a.) was expressed in Escherichia coli.
Species	Human
Source	E.coli
ProteinLength	70
Description	<p>The insulin-like growth factors (IGFs) belonged to the insulin gene family, are mitogenic polypeptide growth factors that stimulate the proliferation and survival of various cell types including muscle, bone, and cartilage tissue in vitro. The IGFs are similar by structure and function to insulin, but have a much higher growth-promoting activity than insulin. IGF-1 is produced primarily by the liver as an endocrine hormone as well as in target tissues in a paracrine/autocrine fashion. The production of IGF-1 is stimulated by growth hormone (GH) and can be retarded by undernutrition, growth hormone insensitivity, lack of growth hormone receptors, or failures of the downstream signaling pathway post GH receptor including SHP2 and STAT5B.</p> <p>Recombinant human IGF-1 are globular proteins containing 70 amino acids and 3 intra-molecular disulfide bonds. Mature human IGF-1 shares 94 % and 96 % a.a. sequence identity with mouse and rat IGF-1, respectively, and exhibits cross-species activity.</p>
Form	Lyophilized from a 0.2µm filtered concentrated solution in PBS, pH 7.0.
Bio-activity	Fully biologically active when compared to standard. The ED50 as determined by a

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	cell proliferation assay using serum free human MCF-7 cells is less than 2 ng/ml, corresponding to a specific activity of $> 5.0 \times 10^5$ IU/mg.
Molecular Mass	Approximately 7.6 kDa, a single non-glycosylated polypeptide chain containing 70 amino acids.
AA Sequence	GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRR LEMYCAPLKPAKSA
Endotoxin	Less than 0.01 EU/ μ g of rHuIGF-1 as determined by LAL method.
Purity	>97% by SDS-PAGE and HPLC analysis.
Storage	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.
Reconstitution	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

Gene Name	IGF1
Official Symbol	IGF1
Synonyms	IGF1; insulin-like growth factor 1 (somatomedin C); insulin-like growth factor 1;

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IGF1A; MGF; IGF-IA; IGF-IB; somatomedin-C; mechano growth factor; insulin-like growth factor I; insulin-like growth factor IA; insulin-like growth factor IB; IGFI; IGF-I;

Gene ID

3479

mRNA Refseq

NM_000618

Protein Refseq

NP_000609

MIM

147440

UniProt ID

P05019

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