

Recombinant Human Insulin-Like Growth Factor 1 (somatomedin C), HQ-tagged

Cat. No. IGF1-691H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant humanIGF1 contains 70 amino acids and a 13 amino acid Histidine-based tag. It has a predicted molecular mass of 9.3 kDa and migrates with an apparent molecular mass of 12 kDa in SDS-PAGE.
Species	Human
Source	Hordeum Vulgare
Description	IGF-1 also known as somatomedin C is a protein that in humans is encoded by the IGF1 gene. IGF-1 has also been referred to as a "sulfation factor" and its effects were termed "nonsuppressible insulin-like activity" (NSILA) in the 1970s. IGF-1 is a hormone similar in molecular structure to insulin. It plays an important role in childhood growth and continues to have anabolic effects in adults. A synthetic analog of IGF-1, mecasermin is used for the treatment of growth failure.
Form	Lyophilized from a 0.2 µm sterile filtered solution in 50 mM MES, pH 6.5 + 100 mM NaCl.
Molecular Weight	12 kDa
Purity	>98% as determined by SDS-PAGE analysis. Purified product carries no pyrogenic or pro-inflammatory contaminants, as assayed with monocyte activation test using Human 10-plex Cytokine Assay measuring IL-6, TNF-alpha and IL-1 beta induction.

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Endotoxin Level	<0.005 ng/ug of IGF1
Biological Activity	Bioactivity is assayed by measuring the dose dependent effect of human IGF1 on proliferation of FDC-P1 cells, mouse progenitor cells of granulocytes, monocytes and macrophages. The ED50 for this effect is 10.0 ng/ml.
Specific Activity	1x105U/mg
Reconstitution	Centrifuge vial prior to opening. Add sterile distilled water to the vial to fully solubilize the protein to a concentration not less than 100 ug/ml.
Storage	Store lyophilized protein at -20°C and reconstituted protein in working aliquots at -20°C with a carrier protein (0.1% HSA or BSA) as a stabilizer for long term storage. Please note that the addition of any carrier protein into this product may produce unwanted endotoxin. This depends upon the particular application employed. Avoid repeated freeze-thaw cycles.
Official Symbol	IGF1

GENE INFORMATION

Gene Name	IGF1 insulin-like growth factor1 (somatomedin C) [Homo sapiens]
Synonyms	IGF1; insulin-like growth factor 1 (somatomedin C); insulin-like growth factor 1; MGF; IGF-IA; IGF-IB; somatomedin-C; OTTHUMP00000195080; OTTHUMP00000195081; OTTHUMP00000195082; OTTHUMP00000195083; OTTHUMP00000195084; mechano growth factor; insulin-like growth factor I; insulin-like growth factor IA; insulin-like growth factor IB
Gene ID	3479

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mRNA Refseq	NM_000618
Protein Refseq	NP_000609
MIM	147440
UniProt ID	P05019
Chromosome Location	12q23
Pathway	Adipogenesis;Aldosterone-regulated sodium reabsorption; Apoptosis; Diabetes pathways; Dilatedcardiomyopathy; Endochondral Ossification; Focal Adhesion; Glioma;Hemostasis; Id Signaling Pathway; Oocyte meiosis; Pathways in cancer;Platelet activation; Prostate cancer; Synthesis
Function	growthfactor activity; hormone activity; insulin receptor binding; insulin-likegrowth factor receptor binding; integrin binding; protein binding
PDBrendering based on 1bqt.	

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