

Insulin Like Growth Factor-I Recombinant Protein | IGF-I recombinant protein

Human Insulin Like Growth Factor-I Recombinant

CATALOG #	HOST
AAA76064	E Coli (Host protein expression may be lot-specific and can be subject to change during production, including bulk orders)

PRODUCT SYNONYMS

Insulin Like Growth Factor-I; Human Insulin Like Growth Factor-I Recombinant; igf-1; insulin like; igf1; igf-i; IGF-I recombinant protein

PRODUCT SPECIFICATIONS

Host	E Coli (Host protein expression may be lot-specific and can be subject to change during production, including bulk orders)
Purity/Purification	>95%, as determined by SDS-PAGE and HPLC
Form/Format	Recombinant Human IGF1 was lyophilized from a 0.2 um filtered PBS solution, pH 7.4.
Sequence	MGKISSLPTQ LFKCCFCDFL KVKMHTMSSS HLFYLALCLL TFTSSATAGP ETLCGAELVD ALQFVCGDRG FYFNKPTGYG SSSRRAPQTG IVDECCFRSC DLRRLEMYCA PLKPAKSARS VRAQRHTDMP KTQKEVHLKN ASRGSAGNKN YRM
Sequence Length	153
Domain	Insulin
Host Note	Optimized DNA sequence encoding Human Insulin Growth Factor -1mature chain was expressed in Escherichia Coli.
Endotoxin	Endotoxin content was assayed using a LAL gel clot method. Endotoxin level was found to be less than 0.1 ng/ug (1EU/ug).
Reconstitution	A quick spin of the vial followed by reconstitution in distilled water to a concentration not less than 0.1 mg/mL. This solution can then be diluted into other buffers.
Molecular Weight Note	Native Human Insulin Growth Factor-1 is generated by the proteolytic removal of the signal peptide and propeptide, the molecule has a calculated molecular mass of approximately 8 kDa. Recombinant Human IGF-1 is a disulfide-linked monomeric protein consisting of 71 amino acid residue subunits. IGF-1 migrates as an approximately 8 kDa protein under non-reducing and reducing conditions in SDS-PAGE.
Preparation and Storage	The lyophilized protein is stable for at least 2 years from date of receipt at -20 degree C. Upon reconstitution, this cytokine can be stored in working aliquots at 2 degree - 8 degree C for one month, or at -20 degree C for six months, with a carrier protein without detectable loss of activity. Avoid repeated freeze/thaw cycles.

ADDITIONAL INFORMATION

Related Product Information for IGF-I recombinant protein	Insulin-like growth factor I, also known as somatomedin C, is the dominant effector of growth hormone and is structurally homologous to proinsulin. Human IGF-I is synthesized as two precursor isoforms with N- and alternate C- terminal propeptides (1). These isoforms are differentially expressed by various tissues (1). The 7.6 kDa mature IGF-I is identical between isoforms and is generated by proteolytic removal of the N- and C- terminal regions. Mature human IGF-I shares 94% and 96% aa sequence identity with mouse and rat IGF-I, respectively (2), and exhibits cross-species activity. It shares 64% aa sequence identity with mature human IGF-II. Circulating IGF-I is produced by hepatocytes, while local IGF-I is produced by many other tissues in which it has paracrine effects.
Product Categories/Family for IGF-I recombinant protein	Cytokines

References	• statement by the growth hormone research society on the gh/IGF-I axis in extending health span .J Gerontol A Biol Sci Med Sci, Oct 2009; 64A: 1039 - 1044. • partial primary deficiency of insulin-like growth factor (igf) -i activity associated with igf1 mutation demonstrates its critical role in growth and brain development .J. Clin. Endocrinol. Metab., Sep 2009; 10.1210/jc.2009-0452. • myostatin inhibits IGF-I induced myotube hypertrophy through akt .Am J Physiol Cell Physiol, Sep 2009; 10.1152/ajpcell.00043.2009. • the insulin-like growth factor (igf) -i e-peptides modulate cell entry of the mature IGF-I protein .Mol. Biol. Cell, Sep 2009; 20: 3810 - 3817. • elevated levels of insulin-like growth factor (igf) -i in serum rescue the severe growth retardation of IGF-I null mice . Endocrinology, Sep 2009; 150: 4395 - 4403.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	11024682
NCBI GeneID	3479
NCBI Accession #	NP_000609.1
NCBI GenBank Nucleotide #	NM_000618.3
UniProt Accession #	P01343; Q14620; B2RWM7; P05019; Q13429; Q59GC5; Q5U743; Q6LD41; Q9NP10
Molecular Weight	21,841 Da
NCBI Official Full Name	insulin-like growth factor 1 isoform 4 preproprotein
UniProt Protein Name	Insulin-like growth factor I
UniProt Gene Name	IGF1
UniProt Synonym Gene Names	IBP1; IGF-I; MGF
UniProt Entry Name	IGF1_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.