

IGF1

Recombinant Human LONG[®]R³ IGF-I (Lyophilized)

Catalog No.	CRH060	Quantity:	5 mg
Alternate Names:	IGF-IA, IGFI, IGF1		
Description:	<p>LONG[®]R³ IGF-I is an analog of IGF-1 that was developed for use in mammalian serum-free cell culture to promote cell growth, survival, and recombinant protein expression. When supplemented in serum-free medium, it promotes cell proliferation, increases cell survival, and enhances productivity through better proliferative and anti-apoptotic signaling. It has an increased half-life in vitro and in vivo and a low affinity for IGF binding proteins (IGFBP) that make it ideal for both research and large-scale culturing. The protein was created by substituting an arginine (R) for glutamic acid (E) at amino acid 3 and extending the N-terminal end of the peptide by 13 amino acids (MFPAMPLSSLFVN). All cell types that have a growth response to insulin in cell culture have the potential to respond to LONG[®]R³ IGF-I.</p> <p>Recombinant Human LONG[®]R³ IGF-I is a single, non-glycosylated polypeptide chain containing 83 amino acids.</p>		
Gene ID:	3479		
Source:	<i>E. coli</i>		
Molecular Weight:	~9.1 kDa as determined by mass spectrometry (9108-9112 Da)		
Formulation:	Lyophilized from 0.1 M acetic acid. Supplied under dry N ₂ at slight vacuum (-25kPa).		
Purity:	>95% single band between 6,000 and 14,400 Da by SDS-PAGE. Conforms to reference standard by retention time and chromatographic profile by RP-HPLC analysis.		
Endotoxin Level:	<0.1 EU/μg as determined by LAL assay		
Biological Activity:	Fully biologically active when compared to standard. The ED ₅₀ as determined by the stimulation of protein synthesis in L6 myoblasts is <10 ng/ml.		
Amino Acid Sequence:	MFPAMPLSSL FVNGPRTL CG AELVDALQFV CGDRGFYFNK PTGYGSSSRR APQTGIVDEC CFRSCDLRRL EMYCAPLKPA KSA		
Reconstitution:	Remove the metal cap from the glass vial and introduce an air-filled syringe through the septum to equalize pressure. Add sufficient 100 mM acetic acid solution to achieve a concentration of 1 mg/ml. Keep the stock solution at ≥1 mg/ml. Mix the solution thoroughly to ensure the protein is completely dissolved. Do not dissolve in water, PBS, or cell culture medium.		



Applications Notes: Re-suspended LONG[®]R³ IGF-I or media containing LONG[®]R³ IGF-I may be filtered through a low protein binding membrane such as Polyvinylidene Difluoride (PVDF) or Polyethersulfone (PES) with a pore size of 0.22 µm. Where applicable, add reconstituted LONG[®]R³ IGF-I as far down the media product process as possible, preferably directly to the fermentation tank.

Storage & Stability: The lyophilized protein is stable for 5 years when stored properly at 2-8°C. Reconstituted protein may be stored re-capped in the original container at 2-8°C, or aliquoted into smaller sizes for single use. Aliquots should be stored in LoBind eppendorf tubes at 2-8°C to prevent protein adsorption and are stable for 12 months.

Certification: LONG[®]R³ IGF-I is manufactured in an ISO 9001 certified facility based on EU GMP. No animal-derived substances are used either in the raw materials or the direct manufacture of this product. Thus, it is not derived from specified risk material as defined in Commission Decision 2000/418/EC (as amended).

NOT FOR HUMAN USE. FOR RESEARCH ONLY. NOT FOR DIAGNOSTIC OR THERAPEUTIC USE.

