Recombinant Human Long R3 Insulin-like Growth Factor-1 (rhLR3IGF-1)
Catalog Number: 105-03

Description	Insulin-like growth factor-1 (IGF-1) is the principal hormonal mediator of statural growth. Under normal circumstances, growth hormone (GH) binds to its receptor in the liver, and other tissues, and stimulates the synthesis/secretion of IGF-1. In target tissues, the Type 1 IGF receptor, which is homologous to the insulin receptor, is activated by IGF-1, leading to intracellular signaling which stimulates multiple processes leading to statural growth. The metabolic actions of IGF-1 are in part directed at stimulating the uptake of glucose, fatty acids, and amino acids so that metabolism supports growing tissues. The LR3 is a long-term analog of human IGF-1, specifically designed and manufactured for mammalian cell culture to support large-scale manufacturing of recombinant biopharmaceuticals.
Synonyms	R3IGF1, LONG IGF1
AA Sequence	MFPAMPLSSL FVNGPRTLCG AELVDALQFV CGDRGFYFNK PTGYGSSSRR APQTGIVDEC CFRSCDLRRL EMYCAPLKPA KSA
Source	*Escherichia coli*
Molecular Weight	Approximately 9.1 kDa, a single non-glycosylated polypeptide chain containing 83 amino acids.
Purity	>95% by SDS-PAGE and HPLC analyses.
Biological Activity	Fully biologically active. The ED_{50} is < 10ng/ml, as determined by the stimulation of protein synthesis in L6 myoblasts.
Physical Appearance	White lyophilized powder.
Formulation	Lyophilized from a 0.2μm filtered concentrated (1mg/ml) solution in 20mM PB, pH 7.2, 4% mannitol.
Endotoxin	< 1EU/μg of growth factor as determined by LAL method.
Reconstitution	Reconstitute in sterile distilled water containing 0.1% BSA to a concentration of 0.1-1.0 mg/mL.
Storage	Store at -20°C after receiving. Upon reconstitution, store at 2-8°C for up to one week. For maximal stability, aliquot and store at -20°C. Avoid repeated freeze/ thaw cycles.
Usage	This product is for research use only. It is not approved for use in humans, animals, or *in vitro* diagnostic procedures.