Recombinant Human LR3 Insulin-like Growth Factor-1 (rHuLR3 IGF-1)

Catalog Number: 305-03

Description:

IGF-1 belonged to the insulin gene family, is a mitogenic polypeptide growth factor that stimulate the proliferation and survival of various cell types including muscle, bone, and cartilage tissue in vitro. It 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. The LR3 IGF-1 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.

AA Sequence:

MFPAMPLSSL FVNGPRTLCG AELVDALQFV CGDRGFYFNK PTGYGSSSRR APQTGIVDEC CFRSCDLRRL EMYCAPLKPA KSA

Quantity: 100μg/1mg/10mg

Source: E. coli.

Molecular Weight:

Approximately 9.1 kDa, a single non-glycosylated polypeptide chain containing 83 amino acids.

Purity:

Greater than 98 % by SDS-PAGE analyses.

Greater than 95 % by RP-HPLC analyses.

Biological Activity:

Assay 1: Fully biologically active when compared to standard. Measured in a serum-free cell proliferation assay using human MCF-7 cells. The ED50 for this effect is 0.3-1.5 ng/ml, corresponding to a specific activity of > 6.7×10^5IU/mg.

Assay 2: Fully biologically active when compared to standard. The ED50 as determined by the stimulation of protein synthesis using rat L6 myoblasts is less than 10 ng/ml, corresponding to a specific activity of > 1.0×10^5 IU/mg.

Physical Appearance:

Sterile Filtered White lyophilized (freeze-dried) powder.

Formulation: Lyophilized from a 0.2 μm filtered concentrated solution in PBS, pH 7.0.

Endotoxin: Less than 50 EU/mg of rHuLR3 IGF-1 as determined by LAL method.

Stability & Storage:

Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 months from date of receipt, -20 to -70°C as supplied.
- 1 month, 2 to 8°C under sterile conditions after reconstitution.
- 3 months, -20 to -70°C under sterile conditions after reconstitution.

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