

Recombinant Human LR3 Insulin-like Growth factor-1, Media Grade

#R00133

Size: 1 mg/5 mg/20 mg

Stability & Storage

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

- 12 months from date of receipt, 2 to 8 °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.



Warning: This product is intended for scientific research only. It is not to be used for medical or diagnostic procedures in humans or animals, nor as a food, cosmetic, or household product.

Background

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 LR3IGF-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

MFPAMPLSSLFVNGPRTLCGAELVDALQFVCGDRGF

YFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEM
YCAPLKPAKSA

Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤ -20 °C. Further dilutions should be made in appropriate buffered solutions.

Product Specification

Synonyms	LR3 IGF-I
Species	Human
Source	Escherichia coli.
Molecular Weight	Approximately 9.1 kDa, a single non-glycosylated polypeptide chain containing 83 amino acids.
Purity	>98 % by SDS-PAGE analyses, >90 % 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 ED ₅₀ for this effect is 0.3-1.5 ng/ml, corresponding to a specific activity of > 6.7 × 10 ⁵ U/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 × 10⁵ U/mg.

Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Formulation	Lyophilized from a 0.2 μm filtered concentrated solution in 20 mM PB, pH 7.2.
Endotoxin	Less than 0.01 EU/μg of rHuLR3 IGF-1 as determined by LAL method.
