

Recombinant Human LR3 IGF-1 (Media Grade)

Information

Gene ID	
Accession #	
Alternate Names	LR3 IGF-I
Source	<i>Escherichia coli</i> .
M.Wt	Approximately 9.1 kDa, a single non-glycosylated polypeptide chain containing 83 amino acids.
AA Sequence	MFPAMPLSSL FVNGPRTL CG AELVDALQFV CGDRGFYFNK PTGYGSSSR APQTGIVDEC CFRSCDLRRL EMYCAPLKPA KSA
Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Stability & Storage	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <p>-Refer to lot specific COA for the Use by Date when stored at 2 to 8 °C as supplied.</p> <p>- 1 month, 2 to 8 °C under sterile conditions after reconstitution.</p> <p>- 3 months, -20 to -70 °C under sterile conditions after reconstitution.</p>
Formulation	Lyophilized from a 0.2 µm filtered concentrated solution in 20 mM PB, pH 7.2.
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.
Biological Activity	<p>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 × 10⁵ U/mg.</p> <p>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.</p>
Shipping Condition	Gel pack.
Handling	Centrifuge the vial prior to opening.
Usage	For Research Use Only! Not to be used in humans.

Components and Storage

Components	1 mg	5 mg	20 mg
Recombinant Human LR3 IGF-1 (Media Grade)	1 mg	5 mg	20 mg

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Quality Control

Purity	>98 % by SDS-PAGE analyses. >90 % by RP-HPLC analyses.
Endotoxin	Less than 0.01 EU/μg of rHuLR3 IGF-1 as determined by LAL method.

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 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.

Reference

1. Conlon MA, Tomas FM, Owens PC, et al. 1995. J Endocrinol, 146: 247-53.
2. Dunaiski V, Dunshea FR, Walton PE, et al. 1997. J Endocrinol, 155: 559-65.
3. Garnaut SM, Howarth GS, Read LC. 2002. Growth Factors, 20: 17-25.
4. Xi G, Kamanga-Sollo E, Pampusch MS, et al. 2004. J Cell Physiol, 200: 387-94.
5. Hadsell DL, Parlow AF, Torres D, et al. 2008. J Endocrinol, 198: 61-70.

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