DATASHEET

Recombinant Human Des1-3 Insulin-like Growth factor-1

CAT. NO. ARP6626

KEY FEATURES

Target	Des1-3 Insulin-like Growth factor-1	Source/Expression System	E.coli
Reactivity	Human	Aapplication	SDS-PAGE
Abbreviation	rHuDes1-3IGF1	Synonyms	Somatomedin C, IGF-I, IGF-IA, Mechano growth factor, MGF

BACKGROUND

The insulin-like growth factors (IGFs) belonged to the insulin gene family, are mitogenic polypeptide growth factors that stimulate the proliferation and survival of various cell types including muscle, bone, and cartilage tissue in vitro. The IGFs are similar by structure and function to insulin, but have a much higher growth-promoting activity than insulin. IGF-1 is produced primarily by the liver as an endocrine hormone as well as in target tissues in a paracrine/autocrine fashion. Mature human IGF-1 shares 94% and 96% aa sequence identity with mouse and rat IGF-1, respectively, and exhibits cross-species activity. Des1-3IGF-1, is a truncated variant of human IGF-1 with the tripeptide Gly-Pro-Glu absent from the N-terminus. The des1-3IGF-1 probably results from post-translational cleavage of IGF-1. It has about 10-fold more potent than IGF-1 at stimulating hypertrophy and proliferation of cultured cells, a consequence of much reduced binding to IGF-binding proteins, in turn caused by the absence of the glutamate at position 3. Recombinant human des1-3IGF-1 is a non-glycosylated polypeptide chain containing 67 amino acids..

PRODUCT OVERVIEW

Molecular Weight	Approximately 7.4 kDa, a non-glycosylated polypeptide chain containing 67 amino acids.
Accession	P05019 Thr49-Ala118
A.A. Sequence	TLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAKSA
Purity	＞98% by SDS-PAGE or HPLC.
Biological Activity	Fully biologically active when compared to standard. The ED50 as determined by a cell proliferation assay using serum free human MCF-7 cells is less than 2 ng/ml, corresponding to a specific activity of ≥ 5.0×10^5 IU/mg.
Formulation	Lyophilized from a 0.2 μm filtered concentrated solution in 20 mM PBS, pH 7.0.
Appearance	Sterile filtered White lyophilized (freeze-dried) powder.
Endotoxin	< 0.01 EU/μg of rHuDes1-3IGF1 protein as determined by LAL method.
Reconstitution	Before use this product, please read the direction below carefully. This vial must be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in a 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.

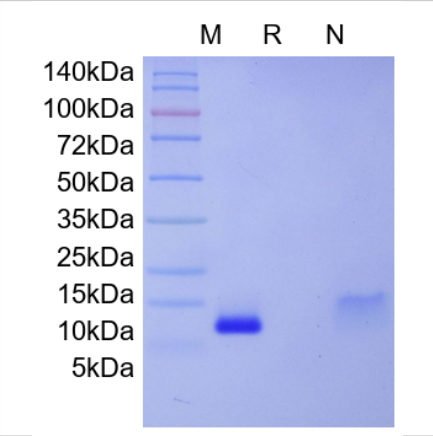
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STORAGE

For long term storage, the product should be stored ≤ -20°C. Please avoid repeated freeze-thaw cycles after reconstitution. 36 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.

NOTE

For Research Use Only. Not for diagnostic, therapeutics, prophylactic or in vivo use.