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IGF1 Human

Description: Insulin-Like Growth Factor-I Human Recombinant produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 70 amino acids and having a molecular mass of 7.7kDa. IGF-I is purified by proprietary chromatographic techniques.

Synonyms: Somatomedin C, IGF-I, IGFI, IGF1, IGF-IA, Mechano growth factor, MGF.

Source: Escherichia Coli.

Physical Appearance: Sterile Filtered White lyophilized (freeze-dried) powder.

Amino Acid Sequence:GPETLCGAEL VDALQFVCGD RGFYFNKPTG YGSSSRRAPQTGIVDECCFR SCDLRRLEMY CAPLKPAKSA.

Purity: Greater than 98.0% as determined by:(a) Analysis by RP-HPLC(b) Analysis by SDS-PAGE.

Formulation:
The protein was lyophilized without any additives.

Stability:
Lyophilized Insulin-Like Growth Factor-1 althoμgh stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution IGF1 should be stored at 4°C between 2-7 days and for future use below -18°C.For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).Please prevent freeze-thaw cycles.

Usage:
NeoBiolab's products are furnished for LABORATORY RESEARCH USE ONLY. The product may not be used as drμgs, agricultural or pesticidal products, food additives or household chemicals.

Solubility:
It is recommended to reconstitute the lyophilized IGF-1 in sterile 18M-cm H2O not less than 100μg/ml, which can then be further diluted to other aqueous solutions.

Introduction:
The somatomedins, or insulin-like growth factors (IGFs), comprise a family of peptides that play important roles in mammalian growth and development. IGF1 mediates many of the growth-promoting effects of growth hormone (GH; MIM 139250). Early studies showed that growth hormone did not directly stimulate the incorporation of sulfate into cartilage, but rather acted throμgh a serum factor, termed 'sulfation factor,' which later became known as 'somatomedin' (Daμghaday et al., 1972). Three main somatomedins have been characterized: somatomedin C (IGF1), somatomedin A (IGF2; MIM 147470), and somatomedin B (MIM 193190) (Rotwein, 1986; Rosenfeld, 2003).

Biological Activity:
The activity as determined by the dose-dependent proliferation of mouse FDC-P1 is less than 1.0 ng/ml, corresponding to a specific activity of 1x106 units/mg.

References:

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1.Title:Oestrogen-induced androgen insufficiency results in a reduction of proliferation and differentiation of spermatogonia in the zebrafish testis. Publication: Journal of Endocrinology (2009) 202, 287297. Link: http://joe.endocrinology-journals.org/content/202/2/287.full.pdfApplication: support spermatogenesis in an androgen-independent manner (Leal et al. 2006)2.Title:Suppression of Anoikis by SKP2 Amplification and Overexpression Promotes Metastasis of Esophageal Squamous Cell Carcinoma .Publication:doi: 10.1158/1541-7786.MCR-08-0092 Mol Cancer Res January 2009 7; 12 Link:http://mcr.aacrjournals.org/content/7/1/12.full3.Title:MECHANISMS OF BIOMATERIAL MEDIATED FIBROTIC RESPONSES AND STRATEGIES TO IMPROVE TISSUE REACTIONS TO BIOMATERIAL IMPLANTS.Publication:THE UNIVERSITY OF TEXAS AT ARLINGTONMay 2010Link:http://dspace.uta.edu/bitstream/handle/10106/4918/Thevenot_uta_2502D_10646.pdfsequence=1

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