

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
YGSSRRAPQTGIVDECCFR 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 although 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 drugs, 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 through a serum factor, termed 'sulfation factor,' which later became known as 'somatomedin' (Daghighadai 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:

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.pdf>Application: 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.full>3.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.pdfseq

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