Insulin Like Growth Factor-I Des (1-3), human recombinant (rHuIGF-I des1-3)

Catalog No: 95050
Lot No: XXXXX
Source: *E. coli*
Synonyms: Somatomedin C, IGF-I, IGFI, IGF1, IGF-IA, Mechano growth factor, MGF, Des(1-3), Des1-3, Des 1-3, Des (1-3), IGF-1 (4-70)

Background

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' (Daughaday 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).

Description

IGF-I Des(1-3) human recombinant produced in *E. coli* is a single, non-glycosylated, polypeptide chain containing 67 amino acids (4-70) and having a molecular mass of 7372 Dalton. IGF-1 Des1-3 is purified by proprietary chromatographic techniques.

Physical Appearance

Sterile filtered white lyophilized (freeze-dried) powder.

Formulation

The protein was lyophilized after extensive dialysis against 50 mM acetic acid buffer.

Solubility

It is recommended to reconstitute the lyophilized IGF-I Des(1-3) in 100 mM acetic acid not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

Stability

Lyophilized IGF-I des(1-3), although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution IGF1 des-1-3 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.

Purity

Greater than 95.0% as determined by (a) Analysis by RP-HPLC, (b) Analysis by SDS-PAGE.

Amino Acid Sequence

The sequence of the first five N-terminal amino acids was determined and was found to be Thr-Leu-Cys-Gly-Ala.

Activity

The ED50, calculated by the dose-dependant proliferation of murine BALB\C 3T3 cells (measured by 3H-thymidine uptake) is <1 ng/ml, corresponding to a specific activity of 1,000,000 units/mg. For most in-vitro applications, IGF-I des1-3 exerts its biological activity in the concentration range of 0.2 - 20 ng/ml, corresponding to a specific activity of 50,000 - 5,000,000 units/mg.

Usage

This product is offered by Biomol for research purposes only. Not for diagnostic purposes or human use. It may not be resold or used to manufacture commercial products without written approval of Biomol GmbH.