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Certificate of Analysis and Data Sheet Recombinant Rat Insulin Like Growth Factor-1

Catalog No.
228-10832

Source:
Escherichia Coli.

Synonyms:

Somatomedin C, IGF-I, IGFIA, IGF1.

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' (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:

Insulin-Like Growth Factor I Rat Recombinant produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 70 amino acids and having a molecular mass of 7687 Dalton. IGF-I is purified by proprietary chromatographic techniques.

Source:

Escherichia Coli.

Physical Appearance:

Sterile Filtered White lyophilized (freeze-dried) powder.

Formulation:

The protein was lyophilized with no additives.

Solubility:

It is recommended to reconstitute the lyophilized IGF1 in sterile 18MΩ-cm H₂O not less than 100µg/ml, which can then be further diluted to other aqueous solutions.

**The products are furnished for LABORATORY RESEARCH USE ONLY.
Not for diagnostic or therapeutic use.**



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Stability:

Lyophilized IGF-1 although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution IGFI 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 98.0% as determined by:

- (a) Analysis by RP-HPLC.
- (b) Analysis by SDS-PAGE.

Biological Activity:

The ED₅₀ was calculated 2 methods:

1. Stimulation of protein synthesis in rat L6 myoblasts ED₅₀ was found to be < 30 ng/ml.
2. Type 1 IGF receptor binding assay ED₅₀ was found to be <10 ng/ml.

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