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Certificate of Analysis and Data Sheet

Leptin Bovine Recombinant

Catalog No.
IP-1-502P

Source:
E.coli

Introduction

A 16-kDa peptide hormone secreted from white adipocytes and implicated in the regulation of food intake and energy balance. Leptin provides the key afferent signal from fat cells in the feedback system that controls body fat stores.

Description

Leptin Bovine Recombinant produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 146 amino acids and having a molecular mass of 16 kDa.

The Leptin is purified by proprietary chromatographic techniques.

Physical Appearance

Sterile Filtered White lyophilized (freeze-dried) powder.

Formulation

The protein was lyophilized from a concentrated (1mg/ml) solution with 0.0045mM NaHCO₃.

Solubility

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

Stability

Lyophilized Leptin although stable at room temperature for 3 weeks, should be stored desiccated below -18⁰C. Upon reconstitution Leptin should be stored at 4⁰C between 2-7 days and for future use below -18⁰C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).

Please avoid freeze-thaw cycles.

Purity

Greater than 95.0% as determined by:

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

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



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Biological Activity

Biological active as evidenced by inducing proliferation of BAF/3 cells stably transfected with the long form of human leptin receptor.

Protein content

Protein quantitation was carried out by two independent methods:

1. UV spectroscopy at 280 nm using the absorbency value of 0.19 as the extinction coefficient for a 0.1% (1mg/ml) solution. This value is calculated by the PC GENE computer analysis program of protein sequences (IntelliGenetics).
2. Analysis by RP-HPLC, using calibrated solution of Leptin Bovine as a Reference Standard.

References

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2. Time course and determinants of leptin decline during weight loss in obese boys and girls. *Int J Pediatr Obes* 2007;2(1):2-10
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5. Leptin regulates striatal regions and human eating behavior. *Science* 2007 Sep 7;317(5843):1355
6. The association between serum leptin and blood lymphocytes in hemodialysis patients. *Bratisl Lek Listy* 2007;108 (3):122-7

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