



RayBiotech, Inc.

3607 Parkway Lane suite 200
Norcross, GA 30092
Tel: 770-729-2992, 1-888-494-8555
Fax: 770-206-2393
Website: www.raybiotech.com
Email: info@raybiotech.com

Certificate of Analysis and Data Sheet

Recombinant Mouse Leptin

Catalog No.
228-11022

Source
Escherichia Coli.

Synonyms

OB Protein, Obesity Protein, OBS, Obesity factor.

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 Mouse Recombinant produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 147 amino acids and having a molecular mass of 16.2 kDa.

The Leptin is purified by proprietary chromatographic techniques.

Physical Appearance

Sterile Filtered White Lyophilized (freeze-dried) powder.

Formulation

The mouse Leptin was lyophilized from a concentrated (1mg/ml) solution containing 0.1% TFA.

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 -18°C. Upon reconstitution Leptin 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.

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



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Purity

Greater than 95.0% as determined by:

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

Amino acid sequence

MVPIQKVQDD TKTLIKTIIVT RINDISHTQS VSAKQRVVTGL DFIPGLHPIL SLSKMDQTLA
VYQQVLTSLP SQNVLQIAND LENLRDLLHL LAFSKSCSLP QTSGLQKPES LDGVLEASLY
STEVVALSRL QGSLQDILQQ LDVSPEC.

Biological Activity

Biological activity of Mouse Leptin is performed in two different mouse obesity models, ob/ob and NZO. Both strains of mice were treated via intraperitoneal injection once daily at a dose of 5ug Leptin/gram body weight for a period of 14 days. Significant effects on body weight, food consumption, and plasma glucose levels were observed to saline-treated controls.

Protein content

Protein quantitation was carried out by two independent methods:

1. UV spectroscopy at 280 nm using the absorbency value of 0.201 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 a calibrated solution of Leptin as a Reference Standard.

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