

## Leptin Human E. coli Tag free

### Product Data Sheet

**Type:** Recombinant

**Tag:** Tagless

**Source:** E. coli

**Species:** Human

**Other names:** Obesity factor, Obese protein, LEP, OB, OBS

**Cat. No.:**

RD172001100 (0.1 mg)

### Description

Total 147 AA. MW: 16 kDa (calculated).

### Introduction to the Molecule

Leptin is a single-chain 16 kDa proteohormone consisting of 146 amino acid residues. Leptin is produced in differentiated adipocytes, the fundus of the stomach, the skeletal muscle, the liver, and the placenta. Leptin has a vital role in appetite control, fat metabolism and body weight regulation. It targets the central nervous system, in particular the hypothalamus, suppressing food intake and stimulating energy expenditure. In humans, leptin levels correlate with body mass index (BMI) and percentage body fat. They are elevated even in obese individuals. Leptin has a dual action; it decreases the appetite and increases energy consumption, causing more fat to be burned.

### Research topic

Energy metabolism and body weight regulation, Reproduction

### Amino Acid Sequence

AVPIQKVQDD TKTLIKTIVT RINDISHTQS VSSKQKVTGL DFIPGLHPIL TLSKMDQTLA VYQQILTSMP SRNVIQISND  
LENLRDLLHV LAFSKSCHLP WASGLETLDL LGGVLEASGY STEVVALSRL QGSLQDMLWQ LDLSPGC

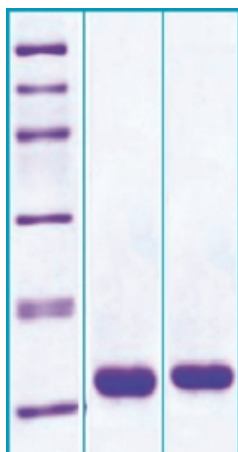
### Source

E. coli

### Purity

>95%

### SDS-PAGE gel



12% SDS-PAGE separation of Human Leptin

1. M.W. marker - 14, 21, 31, 45, 66, 97 kDa

2. reduced and heated sample, 7µg/lane

3. non-reduced and non-heated sample, 7µg/lane

### Biological Activity

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

**Endotoxin**

< 1.0 EU/ug

**Formulation**

Filtered (0.4 µm) and lyophilized from 0.5 mg/ml in 5mM NaHCO<sub>3</sub>, pH= 7,4

**Reconstitution**

Add deionized water to prepare a working stock solution of approximately 0.5 mg/mL and let the lyophilized pellet dissolve completely. Product is not sterile! Please filter the product by an appropriate sterile filter before using it in the cell culture.

**Shipping**

At ambient temperature. Upon receipt, store the product at the temperature recommended below.

**Storage, Stability/Shelf Life**

Store lyophilized protein at -80°C. Lyophilized protein remains stable until the expiry date when stored at -80°C. Aliquot reconstituted protein to avoid repeated freezing/thawing cycles and store at -80°C for long term storage. Reconstituted protein can be stored at 4°C for a week.

**Quality Control Test**

BCA to determine quantity of the protein.

SDS PAGE to determine purity of the protein.

LAL to determine quantity of endotoxin.

**Applications**

ELISA, Western blotting

**Note**

This product is intended for research use only.

**References to this Product**

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- Lee MJ, Fried SK . *Multilevel regulation of leptin storage, turnover, and secretion by feeding and insulin in rat adipose tissue*. [J Lipid Res](#) . Sep;47(9):1984-93 (2006)

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