

# Recombinant Mouse Leptin/LEP Protein

**Catalog No.: RP02880** Recombinant

## Sequence Information

Species	Gene ID	Swiss Prot
Mouse	16846	

### Tags

No tag

### Synonyms

FLJ94114; LEP; leptin (murine obesity homolog); leptin (obesity homolog; mouse); Leptin; OB; Obese protein; obese; mouse; homolog of; Obesity factor; OBOBS

## Product Information

Source	Purification
<i>E. coli</i>	> 95% as determined by SDS-PAGE.

Calculated MW	Observed MW
16.00 kDa	15-20 kDa

### Endotoxin

&lt;1EU/μg

### Formulation

Lyophilized from a 0.22 μm filtered solution of 20mM PB, 300mM NaCl, pH7.4.

### Reconstitution

Centrifuge the tube before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stabilizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

## Contact

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## Background

Leptin is a protein product of the mouse obese gene. Mice with mutations in the obese gene that block the synthesis of Leptin have been found to be obese and diabetic and to have reduced activity, metabolism and body temperature. cDNA clones encoding Leptin have been isolated from human, simian, mouse and rat cells. Mouse Leptin shares approximately 96% and 84% sequence identity with the rat and human protein, respectively. Mouse Leptin cDNA encodes a 167 amino acid residue protein with a 21 amino acid residue signal sequence that is cleaved to yield the 146 amino acid residue mature protein. The expression of Leptin mRNA has been shown to be restricted to adipose tissue. A high-affinity receptor for Leptin (OB-R) with homology to gp130 and the G-CSF receptor has been cloned. OB-R mRNA has been shown to be expressed in the choroid plexus and in the hypothalamus. OB-R has also been identified as an isoform of B219, a sequence that is expressed in at least four isoforms in very primitive hematopoietic cell populations and in a variety of lymphohematopoietic cell lines (1-3). The possible roles of Leptin in body weight regulation, hematopoiesis and reproduction are being investigated.

## Basic Information

### Description

Recombinant Mouse Leptin/LEP Protein is produced by *E. coli* expression system. The target protein is expressed with sequence (Val22-Cys167) of mouse Leptin (Accession #NP\_032519.1) fused with no additional amino acid.

### Bio-Activity

Measured by its binding ability in a functional ELISA. Immobilized mouse Leptin/LEP (Catalog: RP02880) at 0.5 μg/mL (100 μL/well) can bind human LEP-R/CD295 (Catalog: RP01248) with a linear range of 0.34-70.6 ng/mL.

### Storage

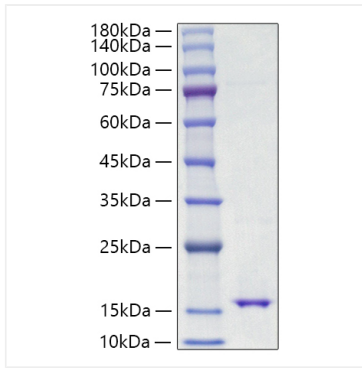
Store at -20°C. Store the lyophilized protein at -20°C to -80 °C up to 1 year from the date of receipt.

After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week.

Avoid repeated freeze/thaw cycles.

## Validation Data

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Recombinant Mouse Leptin/LEP Protein was determined by SDS-PAGE with Coomassie Blue, showing a band at 15-25 kDa.