

Recombinant Rat Leptin

Cat. No. Lep-147R **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Rat Leptin produced in <i>E. Coli</i> is a single, non-glycosylated, polypeptide chain containing 147 amino acids and an additional Ala at N-terminus having a molecular mass of 35.6 kDa (with 20 kDa PEG) as determined by mass spectrometry. Rat Leptin was purified by proprietary chromatographic techniques.
Species	Rat
Source	E.coli
Description	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.
Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Purity	Greater than 99.0% as determined by: (a) Analysis by Gel-Filtration. (b) Analysis by SDS-PAGE.
Solubility	It is recommended to reconstitute the lyophilized pegylated Rat Leptin in sterile 0.4% NaHCO ₃ adjusted to pH-8.5, not less than 100g/ml, which can then be further diluted to other aqueous solutions.
Biological Activity	Pegylated Rat Leptin is capable of stimulating proliferation of BAF/3 cells stably transfected with the long form of human leptin receptor. Its in vitro activity is only slightly lower than the non-pegylated antagonist but in vivo it has profound weight

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reducing effect (as compared to the non-pegylated leptin), resulting mainly from reduced food intake.

Formulation

The protein was lyophilized from a concentrated (0.65mg/ml) solution with 0.003mM NaHCO₃.

Stability

Lyophilized Rat Leptin although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution Rat 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.

Pathways

Adipocytokine signaling pathway; Cytokine-cytokine receptor interaction; Jak-STAT signaling pathway; Neuroactive ligand-receptor interaction

GENE INFORMATION

Gene Name

[Lep leptin \[Rattus norvegicus \]](#)

Synonyms

Leptin; OB; obese; Lep; Obesity (murine homolog, leptin)

Gene ID

[25608](#)

mRNA Refseq

[NM_013076](#)

Protein Refseq

[NP_037208](#)

UniProt ID

[P50596](#)

**Chromosome
Location**

4q22

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Function

peptide hormone receptor binding; cytokine activity; growth factor activity; hormone activity; protein binding

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