

Recombinant Rat Leptin/LEP Protein

Catalog No.: RP01678 **Recombinant**

Sequence Information

Species	Gene ID	Swiss Prot
Rat	25608	P50596

Tags
NO-tag

Synonyms
OB; obese[LEP]

Product Information

Source	Purification
<i>E. coli</i>	> 97% by SDS-PAGE.

Calculated MW	Observed MW
16.16 kDa	15-18 kDa

Endotoxin
<0.1EU/μg


Formulation
Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4.

Reconstitution
Centrifuge the vial 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.

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Background

Leptin is a hormone secreted from white adipocytes and plays important role in the regulation of food intake and energy balance. Leptin functions via signaling pathways involving OB-R in hypothalamus. Animal models have revealed the influence of Leptin in reducing body weight and regulating blood glucose level. When mutations are introduced in obese gene, mice with impaired function of leptin are massively obese and in high risk of diabetes. Leptin deficiency reduces metabolic rate. Leptin deficient mice are less active and with lower body temperature than normal animals. Human Leptin shares approximately 84% sequence identity with the mouse protein. Human Leptin consists of 167 amino acid residue including a 21 amino acid residue signal sequence and 146 amino acid residue mature protein sequence.

Basic Information

Description

Recombinant Rat Leptin/LEP Protein is produced by *E. coli* expression system. The target protein is expressed with sequence (Val22-Cys167) of rat LEP (Accession #NP_037208.1) fused with no additional amino acid.

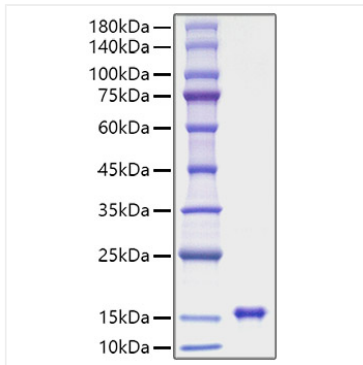
Bio-Activity

Measured by its binding ability in a functional ELISA. Immobilized Human LEPR (Catalog: RP01248) at 5 μg/mL (100 μL/well) can bind Rat LEP (Catalog: RP01678) with a linear range of 1-530 ng/mL.

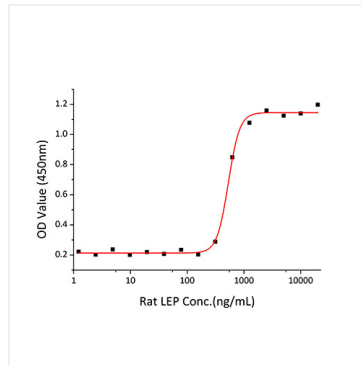
Storage

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



Recombinant Rat LEP Protein was determined by SDS-PAGE with Coomassie Blue, showing a band at 16.1 kDa.



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