

RP01678

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Recombinant Rat Leptin/LEP Protein

Catalog No.: RP01678 **Recombinant**

Sequence Information

Species	Gene ID	Swiss Prot
<i>E. coli</i>	25608	P50596

Tags

NO-tag

Synonyms

OB; obese ; LEP

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.

Product Information

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

Endotoxin

< 0.1 EU/μg of the protein by LAL method.

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.

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.

Shipping

The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

Operational Notes

For your safety and health, please wear a lab coat and disposable gloves for handling.

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.

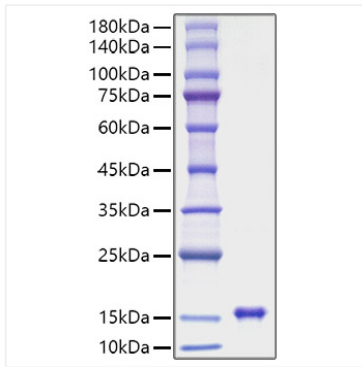
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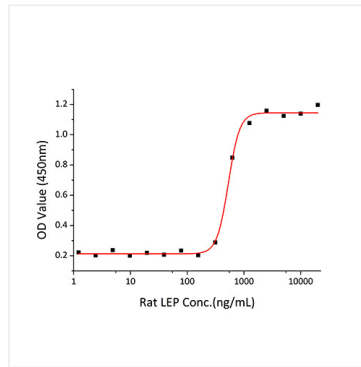
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Validation Data



Recombinant Rat Leptin/LEP Protein was determined by SDS-PAGE under reducing conditions with Coomassie Blue.



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