

Recombinant Rat Leptin/LEP Protein

Catalog No.: RP01678

Sequence Information

Species **Gene ID**
Rat 25608

Swiss Prot **Tags**
P50596 NO-tag

Synonyms
OB; obese; LEP

Product Information

Source **Purification**
E. coli ≥ 95 % as
determined by
SDS-PAGE.

Calculated MW **Observed MW**
16.16 kDa 15–18 kDa

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.

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.

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

Lyophilized proteins are shipped at ambient temperature.
Liquid proteins are shipped at frozen temperature with dry ice.
Upon receipt, store it immediately at the temperature recommended below.

Storage

Store at -20°C

Operational Notes

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

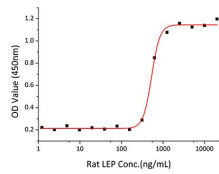
Contact

☎ | 400-999-6126

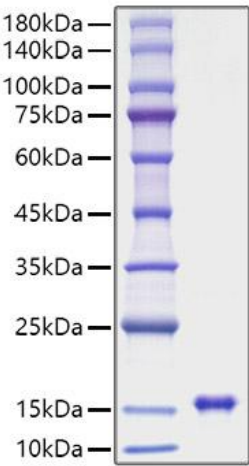
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Validation Data



Immobilized Human LEPR (Catalog: RP01248) at 5 $\mu\text{g/mL}$ (100 μL /well) can bind Rat LEP (Catalog: RP01678) with a linear range of 1–530 ng/mL.



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