

## Recombinant Mouse Leptin

Catalog No.: RP0084

### Basic Information

#### Information

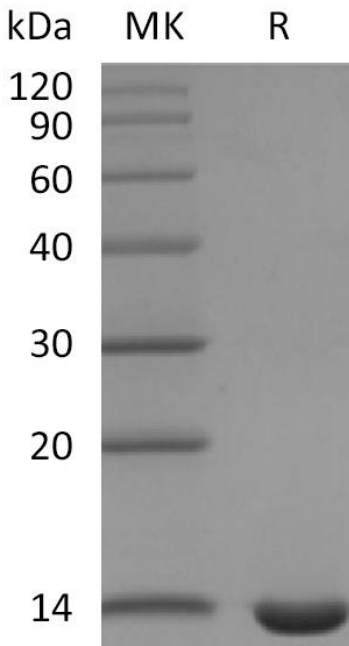
<b>Source</b>	<i>E.coli</i>
<b>Description</b>	Recombinant Mouse Leptin is produced by our E.coli expression system and the target gene encoding Val22-Cys167 is expressed.
<b>Accession</b>	Q544U0
<b>Known As</b>	Leptin; Obese Protein; Obesity Factor; LEP; OB; OBS
<b>Predicted Mol Mass</b>	16.1 KDa
<b>Apparent Mol Mass</b>	14 KDa, reducing conditions

#### Properties

<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution of 20mM PB, 300mM NaCl, pH7.5.
<b>Storage</b>	Lyophilized protein should be stored at ≤ -20°C, stable for one year after receipt. Reconstituted protein solution can be stored at 2-8°C for 2-7 days. Aliquots of reconstituted samples are stable at ≤ -20°C for 3 months.
<b>Endotoxin</b>	< 1 EU/µg as determined by LAL test.
<b>Reconstitution</b>	Always centrifuge tubes before opening. Do not mix by vortex or pipetting. It is not recommended to reconstitute to a concentration less than 100µg/ml. Dissolve the lyophilized protein in distilled water. Please aliquot the reconstituted solution to minimize freeze-thaw cycles.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature listed below.

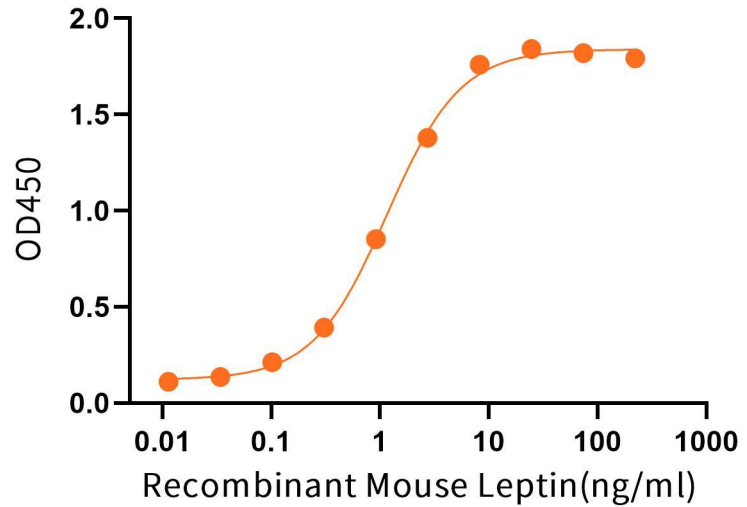
## Experimental Data

### Purity-SDS-PAGE



Greater than 95% as determined by reducing SDS-PAGE. (QC verified)

### Bioactivity-Cell Based Assay



Immobilized Recombinant Mouse LEPR (C-10His) at 5µg/ml (100 µL/well) can bind Recombinant Mouse Leptin: Biotinylated by NHS-biotin prior to testing. The ED50 of Recombinant Mouse Leptin is 1.16 ng/ml. (Regularly tested).

## 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.