# Recombinant Mouse Leptin

**Catalog Number: PKSM041419**

**Note:** *Centrifuge before opening to ensure complete recovery of vial contents.*

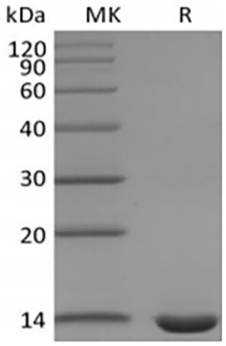
## Description

| | |
|---|---|
| **Species** | Mouse |
| **Source** | E.coli-derived Mouse Leptin protein Val22-Cys167 |
| **Calculated MW** | 16.1 kDa |
| **Observed MW** | 14 kDa |
| **Accession** | Q544U0 |
| **Bio-activity** | Immobilized Recombinant Mouse LEPR (C-10His)(PKSM041415) at 5μg/ml (100 μl/well) can bind Recombinant Mouse Leptin(PKSM041419): Biotinylated by NHS-biotin prior to testing.The $ED_{50}$ of Recombinant Mouse Leptin(PKSM041419) is 1.16 ng/ml. |

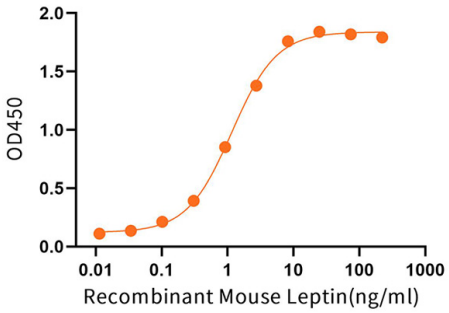
## Properties

| | |
|---|---|
| **Purity** | > 95 % as determined by reducing SDS-PAGE. |
| **Endotoxin** | < 1.0 EU per μg of the protein as determined by the LAL method. |
| **Storage** | Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80 ℃. Reconstituted protein solution can be stored at 4-8℃ for 2-7 days. Aliquots of reconstituted samples are stable at < -20℃ for 3 months. |
| **Shipping** | This product is provided as lyophilized powder which is shipped with ice packs. |
| **Formulation** | Lyophilized from a 0.2 μm filtered solution of 20mM PB, 300mM NaCl, pH7.5. Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual. |
| **Reconstitution** | Please refer to the printed manual for detailed information. |

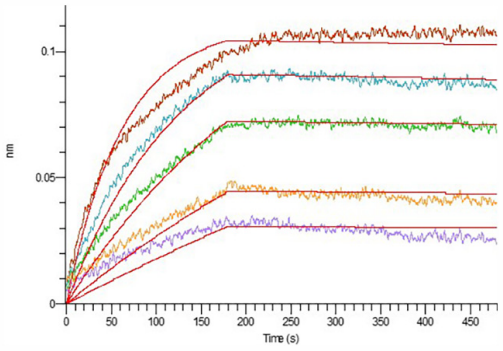
## Data




> 95 % as determined by reducing SDS-PAGE.




Immobilized Recombinant Mouse LEPR (C-10His) (PKSM041415) at 5μg/ml (100 μl/well) can bind Recombinant Mouse Leptin(PKSM041419): Biotinylated by NHS-biotin prior to testing.The ED50 of Recombinant Mouse Leptin(PKSM041419) is 1.16 ng/ml.




Loaded Recombinant Mouse LEPR (C-10His) (PKSM041415) on HIS1K Biosensor, can bind Recombinant Mouse Leptin(PKSM041419) with an affinity constant of 0.196 nM as determined in BLI assay.

## 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 metablic 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.