

## Recombinant Mouse LEPR Protein(His Tag)

**Catalog Number:** PDMM100106

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

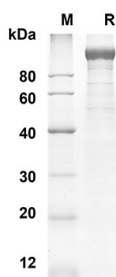
### Description

|                      |                                                                            |
|----------------------|----------------------------------------------------------------------------|
| <b>Species</b>       | Mouse                                                                      |
| <b>Source</b>        | Mammalian-derived Mouse LEPR proteins Leu22-Gly839, with an C-terminal His |
| <b>Calculated MW</b> | 89.9 kDa                                                                   |
| <b>Observed MW</b>   | 100-110 kDa                                                                |
| <b>Accession</b>     | P48356                                                                     |
| <b>Bio-activity</b>  | Not validated for activity                                                 |

### Properties

|                       |                                                                                                                                                                                                                                        |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Purity</b>         | > 90% as determined by reducing SDS-PAGE.                                                                                                                                                                                              |
| <b>Endotoxin</b>      | < 1.0 EU/mg of the protein as determined by the LAL method                                                                                                                                                                             |
| <b>Storage</b>        | Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80 °C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months. |
| <b>Shipping</b>       | This product is provided as lyophilized powder which is shipped with ice packs.                                                                                                                                                        |
| <b>Formulation</b>    | Lyophilized from a 0.2 µm filtered solution in PBS with 5% Trehalose and 5% Mannitol.                                                                                                                                                  |
| <b>Reconstitution</b> | It is recommended that sterile water be added to the vial to prepare a stock solution of 0.5 mg/mL. Concentration is measured by UV-Vis.                                                                                               |

### Data



SDS-PAGE analysis of Mouse LEPR proteins, 2 µg/lane of Recombinant Mouse LEPR proteins was resolved with an SDS-PAGE under reducing conditions, showing bands at 89.9KD

### Background

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Leptin receptor (OB-R), also named B219, is a type I cytokine receptor family protein with an significant amino acid sequence identity with an gp130, G-CSF receptor, and the LIF receptor. Multiple isoforms of Human and Mouse OB-R, including a long form (OB-RL) with an a large cytoplasmic domain capable of signal-transduction, and several receptor isoforms with an short cytoplasmic domains (OB-Rs) lacking signal-transducing capabilities, have been identified. The extracellular domains of the short and long forms of OB-R are identical. An OB-R transcript lacking a transmembrane domain and potentially encoding a soluble form of the receptor has also been described. Circulating soluble OB-R, complexed to leptin, has been detected in Mouse serum. Serum soluble OB-R levels have been shown to increase during pregnancy. OB-RL transcripts were reported to be expressed predominantly in regions of the hypothalamus previously thought to be important in body weight regulation. Expression of OB-Rs transcripts have been found in multiple tissues, including the choroid plexus, lung, kidney and primitive hematopoietic cell populations. OB-R has recently been shown to be encoded by the Mouse diabetes (db) and rat fatty (fa) genes. Rodents homozygous for the db or fa mutations have been known to exhibit an obesity phenotype.

Mouse OB-R long form encodes a 1162 amino acid (aa) residue precursor protein with an a 22 aa residue signal peptide, an 817 aa residue extracellular domain, a 21 aa residue transmembrane domain, and a 302 aa residue cytoplasmic domain. The extracellular domain of OB-R contains two hemopoietin receptor domains, a fibronectin type III domain and the WSXWS domain. Recombinant murine soluble OB-R has been shown to bind leptin with an high affinity and is a potent leptin antagonist.