

## Leptin Protein, Mouse, Recombinant (hFc)

### General Information

Synonyms:	LEP;Obesity factor;Leptin;LEPD;Obese protein;OBS;OB
Protein Construction:	Val22-Cys167
Species:	Mouse
Expression Host:	HEK293 Cells
Accession:	P41160
Molecular Weight:	42.76 kDa (predicted). Due to glycosylation, the protein migrates to 45-50 kDa based on Tris-Bis PAGE result.

### QC Testing

Biological Activity:	Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 95% as determined by Tris-Bis PAGE; > 95% as determined by HPLC
Endotoxin:	< 1.0 EU/ $\mu$ g of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 $\mu$ m filter, containing PBS (pH 7.4). Typically, 8% trehalose is incorporated as a protective agent before lyophilization.

### Preparation and Storage

#### Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100  $\mu$ g/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

#### Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

#### Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

### Protein Background

Leptin has key roles in the regulation of energy balance, body weight, metabolism, and endocrine function. Leptin levels are undetectable or very low in patients with lipodystrophy, hypothalamic amenorrhea, and congenital leptin deficiency (CLD) due to mutations in the leptin gene.

Reference

Paz-Filho G, et al. Leptin treatment: facts and expectations. *Metabolism*. 2015 Jan;64(1):146-56. doi: 10.1016/j.metabol.2014.07.014. Epub 2014 Aug 3. PMID: 25156686.

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