

Human Leptin Protein

Catalog Number: 10221-HNAE



Sino Biological Inc.

Biological Solution Specialist

General Information

Gene Name Synonym:

FLJ94114, OB, OBS

Protein Construction:

A DNA sequence encoding the mature form of human Leptin (NP_000221.1) (Val 22-Cys 167) was expressed, with an additional Met.

Source: Human

Expression Host: E. coli

QC Testing

Purity: > 98 % as determined by SDS-PAGE

Bio-Activity

Measured by its binding ability in a functional ELISA .

1. Immobilized human Leptin at 1.25 µg/ml (100 µl/well) can bind human Leptin receptor Fc chimera with a linear range of 0.032-4.0 µg/ml .

2. Immobilized human Leptin at 5 µg/ml (100 µl/well) can bind human Leptin receptor his with a linear range of 0.032-4.0 µg/ml.

Endotoxin:

Please contact us for more information.

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Met

Molecular Mass:

The recombinant human leptin consists of 147 amino acids and predicts a molecular mass of 16 kDa. The apparent molecular mass of rhLEP is approximately 13 kDa in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose and mannitol are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

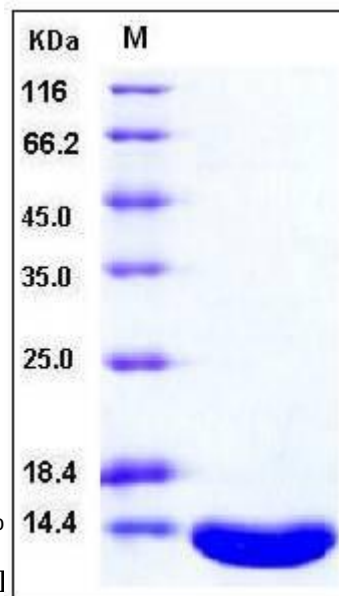
Usage Guide

Storage:

Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

SDS-PAGE:



Reconstitution:

Detailed reconstitution products.

Protein Description

Leptin is one of the most important adipose-derived hormones, and plays a key role in body weight regulation by governing food intake and energy homeostasis. Leptin is produced and secreted mainly by adipocytes, stomach and placenta, and its concentration is affected by several physiological factors such as age, sex, puberty onset and food intake. Leptin exerts actions through its receptor LepRb present in a number of hypothalamic nuclei, partly involved in the satiety signal pathway, and thus inhibit food intake and/or regulate energy expenditure. In addition, leptin is also identified as a new metabolic and neuroendocrine mediator, and functions in a variety of biological processes including glucose metabolism, immune and inflammatory responses, bone mass regulation, as well as normal sexual maturation and reproduction. Leptin deficiency is implicated in severe obesity, morbid obesity with hypogonadism and impaired cell-mediated immunity.

References

1. Friedman, J.M. et al., 1998, Nature. 395: 763-770.
2. Cervero, A. et al., 2006, Curr. Opin. Obstet. Gynecol. 18: 297-303.
3. Takeda, S. et al., 2002, Cell. 111: 305-317.
4. Wauters, M. et al., 2000, Eur. J. Endocrinol. 143: 293-311.
5. Chan, J.L. et al., 2006, Proc. Natl. Acad. Sci. USA. 103: 8481-8486.

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