Leptin Mouse E. coli Tag free

Product Data Sheet

Type: Recombinant
Source: E. coli
Species: Mouse
Other names: Obesity factor, Obese protein, LEP, OB, OBS

Cat. No.:
RD272001100 (0.1 mg)

Description

UniProtKB acc.no. P41160

Introduction to the Molecule

Leptin, the product of the *ob* (obese) gene, is a single-chain 16 kDa proteohormone consisting of 146 amino acid residues. Leptin is produced by differentiated adiocytes, although production have been demonstrated in other tissues, such as fundus of the stomach, the sceletal muscle, the liver, and the placenta. Leptin is considered to play an important role in appetite control, fat metabolism and body weight regulation. It targets the central nervous system, in particular the hypothalamus, suppressing food intake and stimulating energy expenditure. In humans, leptin levels correlate with body mass index (BMI) and percentage body fat, and are elevated even in obese individuals. Leptin has a dual action; it decreases the appetite and increases energy consumption, causing more fat to be burned.

Research topic

Animal studies, Diabetology - Other Relevant Products, Energy metabolism and body weight regulation, Reproduction

Amino Acid Sequence

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MVPIQKVQDD TKTLIKTIVT RINDISHTQS VSAKQRVTGL DFIPGLHPIL SLSKMDQTLA VYQQVLTSLP SQNVLQIAND
LENLRDLLHL LAFSKSCSLP QTSGLQKPES LDGVLEASLY STEVVALSRL QGSLQDILQQ LDVSPEC
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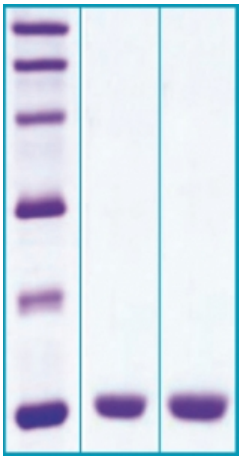
Source

E. coli

Purity

>98% by SDS PAGE gel analysis

SDS-PAGE gel



14% SDS-PAGE separation of Mouse Leptin
1. M.W. marker - 14, 21, 31, 45, 66, 97 kDa
2. reduced and heated sample, 5µg/lane
3. non-reduced and non-heated sample, 5µg/lane

Biological Activity

Biological activity of Mouse Leptin is performed in two different mouse obesity models, ob/ob and NZO. Both strains of mice were treated via intraperitoneal injection once daily at a dose of 5 µg Leptin/gm of body weight for 7 days. Significant effects on body weight, food consumption, and plasma glucose levels were observed to saline-treated controls.

Endotoxin

< 1.0 EU/ug

Formulation

Filtered (0.4 µm) and lyophilized with 0.1% TFA.

Reconstitution

Add injection water to prepare a working stock solution of 1.0 mg/mL and let the lyophilized pellet dissolve completely. For extended storage, it is recommended to further dilute in a buffer containing a carrier protein (example 0.1% BSA) and store at -80°C. Filter sterilize your culture media/working solutions containing this non-sterile product before using in cell culture.

Shipping

At ambient temperature. Upon receipt, store the product at the temperature recommended below.

Storage, Stability/Shelf Life

Store lyophilized protein at -80°C. Lyophilized protein remains stable until the expiry date when stored at -80°C. Aliquot reconstituted protein to avoid repeated freezing/thawing cycles and store at -80°C for long term storage. Reconstituted protein can be stored at 4°C for a limited period of time; it does not show any change after one week at 4°C.

Quality Control Test

BCA to determine quantity of the protein.
SDS PAGE to determine purity of the protein.
LAL to determine quantity of endotoxin.

Applications

ELISA, Western blotting

Note

This product is intended for research use only.

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