

Leptin Rat E. coli Tag free

Product Data Sheet

Type: Recombinant

Tag: Tagless

Source: E. coli

Species: Rat

Other names: Obesity factor, Obese protein, LEP, OB, OBS

Cat. No.:

RD372001100

(0.1 mg)

Description

Total 147 AA. MW: 16 kDa (calculated). UniProtKB acc.no. P50596.

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 adipocytes, although production have been demonstrated in other tissues, such as fundus of the stomach, the skeletal 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

AVPIHKVQDD TKTLIKTIVT RINDISHTQS VSARQRVTGL DFIPGLHPIL SLSKMDQTLA VYQQILTSLP SQNVLQIAHD
LENLRDLLHL LAFSKSCSLP QTRGLQKPES LDGVLEASLY STEVVALSRL QGSLQDILQQ LDLSPEC

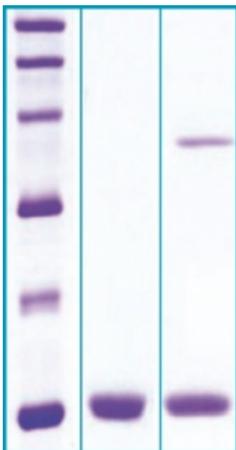
Source

E. coli

Purity

>95%

SDS-PAGE gel



12% SDS-PAGE separation of Rat 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 is evidenced by inducing proliferation of BAF/3 cells stably transfected with the long form of human leptin receptor.

Endotoxin

< 1.0 EU/ug

Formulation

Filtered (0.4 µm) and lyophilized in 0.5 mg/mL in 0.005 mM NaHCO₃

Reconstitution

Add deionized water to prepare a working stock solution of approximately 0.5 mg/mL and let the lyophilized pellet dissolve completely. 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 the 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 week.

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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