



Leptin, PEGylated, rat recombinant (rrLeptin-PEG)

Catalog No: 08541
Lot No: XXXXX
Source: *E. coli*
Synonyms: OB Protein, Obesity Protein, OBS, Obesity factor

Background

A 16-kDa peptide hormone secreted from white adipocytes and implicated in the regulation of food intake and energy balance. Leptin provides the key afferent signal from fat cells in the feedback system that controls body fat stores.

Description

Leptin mono-pegylated rat recombinant produced in *E. coli* is a single, non-glycosylated, polypeptide chain containing 147 amino acids and an additional Ala at N-terminus having a molecular mass of 35.6 kDa (with 20 kDa PEG) as determined by mass spectrometry. However due to enlarged hydrodynamic volume it runs on the SDS-PAGE as 48 kDa protein and in gel-filtration on Superdex 200 as over 100 kDa protein.

Physical Appearance

Sterile filtered white lyophilized (freeze-dried) powder.

Formulation

The protein was lyophilized from a concentrated (0.65 mg/ml) solution with 0.003 mM NaHCO₃.

Solubility

It is recommended to reconstitute the lyophilized pegylated leptin in sterile 0.4% NaHCO₃ adjusted to pH-8.5, not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

Stability

Lyophilized leptin, although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution rat leptin should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

Purity

Greater than 99.0% as determined by (a) Analysis by Gel-Filtration, (b) Analysis by SDS-PAGE.

Activity

Pegylated rat leptin is capable of stimulating proliferation of BAF/3 cells stably transfected with the long form of human leptin receptor. Its in vitro activity is only slightly lower than the non-pegylated antagonist but in vivo it has profound weight reducing effect (as compared to the non-pegylated leptin), resulting mainly from reduced food intake.

Usage

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