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California Bioscience

Product Datasheet

Product Name	Pegylated Mouse Leptin Recombinant
Cata No	CB501325
Source	*Escherichia Coli.*
Synonyms	OB Protein, Obesity Protein, OBS, Obesity factor.

Description

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.

Leptin Mono-Pegylated Mouse Recombinant produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 146 amino acids and an additional Ala at N-terminus. Pegylated Mouse Leptin contains PEG 20 kDa at its N-terminus and having a molecular mass of 35.6 kDa as determined by mass spectrometry.

Since its enlarged hydrodymanic volume Pegylated Leptin runs on SDS-PAGE as A 48 kDa protein and in gel-filtration on Superdex 200 as over 100 kDa protein.

Pegylated Mouse Leptin half-life in circulation after SC injection was over 20 hours. Mouse Leptin was purified by proprietary chromatographic techniques according to Salomon et al (2006) Protein Expression and Purification 47, 128–136 and then pegylated.

Physical Appearance

Sterile Filtered White lyophilized (freeze-dried) powder.

Biological Activity

Pegylated mouse Leptin is capable of stimulatng proliferation of BAF/3 cells stably transfected with the long form of human leptin receptor. Pegylated mouse Leptin 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.

Purity

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

Formulation

The mouse Leptin was lyophilized from a concentrated (0.65mg/ml) solution containing 0.003mM $NaHCO_3$.

Reconstitution

It is recommended to reconstitute the lyophilized Leptin in sterile 0.4% $NaHCO_3$ adjusted to pH-8.5 not less than 100µg/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 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.

*** For Non-Clinical Research Use Only ***

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