



Product Datasheet

Product Name	Pegylated Rat Leptin Recombinant
Cata No	CB501326
Source	<i>Escherichia Coli.</i>
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.

Mono-Pegylated Leptin 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. Its half-life in circulation after SC injection was over 20 hours. Rat 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 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.

Purity

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

Formulation

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

Reconstitution

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

Stability

Lyophilized Rat 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.