

Recombinant Pufferfish Leptin

Cat. No. LEP-23P **Lot. No.** (See product label)

SPECIFICATION

Product Overview

Recombinant Leptin Pufferfish (Takifugu rubripes) produced in E.Coli is a single, non-glycosylated, polypeptide chain having a molecular mass of 16 kDa. Bioactive Leptin Pufferfish (Takifugu rubripes) Recombinant was prepared according to the sequence published by Kurokawa et al. (2005) Peptides 26, 745-750 in two forms: monomer and covalent dimer. MS analysis revealed molecular masses of 15,291 and 30,585 Da, close to the theoretical values of 15,270 and 30,540 Da. CD spectra revealed high similarity to mammalian leptins. Other details of its preparation will be soon published by Yacobovitz et al (in press), General and Comparative Endocrinology. The Pufferfish Leptin is purified by proprietary chromatographic techniques.

Species

Pufferfish

Source

E.coli

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.

Amino Acid Sequence

The sequence of the first five N-terminal amino acids was determined and was found to be Ala-Leu-Pro-Gly-Ala.

Physical Appearance

Sterile Filtered White lyophilized (freeze-dried) powder.

Purity

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

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Formulation	The Pufferfish Leptin was lyophilized from a concentrated (0.85 mg/ml) solution with 0.003 mM NaHCO ₃ .
Solubility	It is recommended to reconstitute the lyophilized Pufferfish Leptin in sterile 0.4% NaHCO ₃ pH-9 not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.
Specific Activity	Biological active as evidenced by inducing proliferation of BAF/3 cells stably transfected with the long form of human leptin receptor. The affinity of human leptin receptors is considerably lower compared to mammalian leptins.
Protein Content	Protein quantitation was carried out by UV spectroscopy at 280 nm using the absorbency value of 1.28 as the extinction coefficient for a 0.1% (1mg/ml) solution. This value is calculated by the PC GENE computer analysis program of protein sequences (IntelliGenetics).
Stability	Lyophilized Pufferfish 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.

GENE INFORMATION

Gene Name	lep leptin [Takifugu rubripes]
Synonyms	LEP; leptin; ob
Gene ID	548631
mRNA Refseq	NM_001032725

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Protein Refseq	NP_001027897
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UniProt ID	Q588G0
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