



Leptin, pufferfish recombinant

Catalog No: 97153
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 pufferfish (*Takifugu rubripes*) recombinant produced in *E. coli* is a single, non-glycosylated, polypeptide chain having a molecular mass of 16 kDa. Bioactive leptin pufferfish recombinant was prepared according to the sequence published by Kurokawa et al. (2005)

Physical Appearance

Sterile filtered white lyophilized (freeze-dried) powder.

Formulation

Pufferfish leptin was lyophilized from a concentrated (0.85 mg/ml) solution with 0.003 mM NaHCO₃.

Solubility

It is recommended to reconstitute the lyophilized leptin in sterile 0.4% NaHCO₃ pH-9 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 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 SEC-HPLC, (b) Analysis by SDS-PAGE.

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.

Activity

Biological active as proven 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.

Usage

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CONTACT US TODAY

BIOMOL GmbH • Kieler Straße 303a • 22525 Hamburg • Germany • info@biomol.de • www.biomol.de

Fon: +49 (0)40-853 260 0 • TOLL FREE IN GERMANY: Fon: 0800-246 66 51