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Certificate of Analysis and Data Sheet

Recombinant Rat Leptin Triple Antagonist

Catalog No.
IP-01-355P

Source
E. Coli

Background

Leptin inhibits food intake and stimulates energy expenditure. Leptin also has thermogenic actions and regulates enzymes of fatty acid oxidation. Severe hereditary obesity in rodents and humans is caused by defects in leptin production. In addition to its critical role in the physiologic regulation of body weight leptin has a variety of other physiologic and pathologic functions resembling those of cytokines. These functions include the regulation of hematopoiesis, angiogenesis, wound healing, inflammation, and immune responses.

Description

Recombinant rat leptin, one polypeptide chain containing 146 amino and additional Ala at N-terminus acids and having a molecular mass of ~ 16 kDa, rLEP was mutated, resulting in L39A/D40A/F41A mutant that was purified by proprietary chromatographic techniques.

Physical Appearance

Sterile Filtered White lyophilized (freeze-dried) powder.

Formulation

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

Solubility

It is recommended to reconstitute the lyophilized art LEP mutant in sterile water or sterile 0.4% NaHCO₃ adjusted to pH 8-9, not less than 100µg/ml, which can then be further diluted with other aqueous solutions.

**The products are furnished for LABORATORY RESEARCH USE ONLY.
Not for diagnostic or therapeutic use.**



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Stability

Lyophilized rLEP mutant although stable at room temperature for several weeks, should be stored desiccated below -18°C. Upon reconstitution at > 0.1 rat LEP mutant mg/ml and up to 2 mM and filter sterilization rLEP mutant can be stored at 4°C or even room temperature for several weeks making it suitable for long term infusion studies using osmotic pumps. At lower concentration addition of a carrier protein (0.1% HSA or BSA) is suggested.

Please avoid freeze-thaw cycles.

Purity

Greater than 99.0% as determined by:

- 1) Gel filtration analysis.
- 2) Analysis by reducing and non-reducing SDS-PAGE gel.

Amino acid sequence

The sequence of the first five N-terminal amino acids was determined and was found to be Ala-Val-Pro-Ile-Gln

Dimers and aggregates

The purified rat LEP triple antagonist (16K) consists of > 99% monomers as determined by gel-filtration chromatography.

Biological Activity

rLEP triple antagonist is capable of inhibiting leptin-induced proliferation of BAF/3 cells stably transfected with the long form of human leptin receptor. It also inhibits various leptin effects in several in vitro bioassays.

Endotoxin

Less than 0.1 ng/μg (IEU/μg) of rat LEP triple antagonist

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