

Active Recombinant Human Leptin Antagonist Triple Mutant, PEG-tagged

Cat. No. LEP-260H **Lot. No.** (See product label)

SPECIFICATION

Product Overview

Pegylated Leptin Antagonist Triple Mutant Human Recombinant is a single non-glycosylated polypeptide chain containing 146 amino and additional Ala at N-terminus acids and having a molecular weight of 35.6kDa, Leptin was mutated, resulting in L39A/D40A/F41A. 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 200 kDa protein. Leptin Antagonist Triple Mutant Human Recombinant is Mono-Pegylated with 20kDa PEG and was purified by proprietary chromatographic techniques.

Species

Human

Source

Human

Form

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

Purity

Greater than 98.0% as determined by: (a) Gel filtration analysis. (b) Analysis by SDS-PAGE.

Bio-activity

Capable of inhibiting leptin-induced proliferation of BAF/3 cells stably transfected with the long form of human leptin receptor. Its in vitro activity is 6-8 fold lower than the non-pegylated antagonist but in vivo it has profound weight gain effect in mice (as compared to the non-pegylated antagonist), resulting mainly from increased food intake.

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Physical Appearance	White lyophilized (freeze-dried) powder.
Solubility	It is recommended to reconstitute the lyophilized Leptin Antagonist Triple Mutant pegylated Human Recombinant in sterile 0.4% NaHCO ₃ adjusted to pH 8-9, not less than 100g/ml, which can then be further diluted to other aqueous solutions.
Protein content	Protein quantitation was carried out by UV spectroscopy at 280 nm using the absorbency value of 0.88 as the extinction coefficient for a 0.1% (1mg/ml) solution at pH 8.0. This value is calculated by the PC GENE computer analysis program of protein sequences (IntelliGenetics).
Storage	Lyophilized Pegylated Leptin Antagonist Triple Mutant Human Recombinant although stable at room temperature for several weeks, should be C. Upon reconstitution at°stored desiccated below -18 > 0.1 mg/ml and up to C or even room 2mM and filter sterilization Leptin mutant can be stored at 4 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 prevent freeze-thaw cycles.

GENE INFORMATION

Gene Name	LEP leptin [Homo sapiens]
Official Symbol	LEP
Synonyms	LEP; leptin; OB; OBS; FLJ94114; obesity factor; obese, mouse, homolog of; leptin (murine obesity homolog); leptin (obesity homolog, mouse); Obese protein; Obesity factor
Gene ID	3952

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mRNA Refseq	NM_000230
Protein Refseq	NP_000221
MIM	164160
UniProt ID	P41159
Chromosome Location	7q31.3
Pathway	Adipocytokine signaling pathway; Cytokine-cytokine receptor interaction; Jak-STAT signaling pathway; Neuroactive ligand-receptor interaction
Function	growth factor activity; hormone activity; peptide hormone receptor binding; protein binding
PDB rendering based on 1ax8.	