

Active Recombinant Rat Leptin, Antagonist Triple Mutant

Cat. No. Lep-27R **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Leptin Antagonist Triple Mutant Rat Recombinant is a singly non-glycosylated polypeptide chain containing 146 amino and additional Ala at N-terminus acids and having a molecular mass of ~ 16 kDa, Leptin was mutated, resulting in L39A/D40A/F41A mutant. Leptin Antagonist Triple Mutant Rat Recombinant was purified by proprietary chromatographic techniques.
Species	Rat
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.
Appearance	White lyophilized (freeze-dried) powder.
Form	The protein was lyophilized from a concentrated (0.85mg/ml) solution with 0.003mM NaHCO ₃ .
Bio-activity	Leptin Antagonist Triple Mutant Rat Recombinant 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.
AA Sequence	The sequence of the first five N-terminal amino acids was determined and was found to be Ala-Val-Pro-Ile-Gln.

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Purity	Greater than 99.0% as determined by: (a) Gel filtration analysis. (b) Analysis by SDS-PAGE.
Stability	Lyophilized Leptin-Antagonist Triple Mutant Rat Recombinant although stable at room temperature for several weeks, should be stored desiccated below -18°C. Upon reconstitution at > 0.1 Leptin mutant mg/ml and up to 2 mM and filter sterilization LEP-tA 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 prevent freeze-thaw cycles.
Concentration	Protein quantization was carried out by UV spectroscopy at 280 nm using the absorbency value of 0.21 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).
Reconstitution	It is recommended to reconstitute the lyophilized Leptin Antagonist Triple Mutant Rat Recombinant in sterile water or sterile 0.4% NaHCO ₃ adjusted to pH 8-9, not less than 100g/ml, which can then be further diluted with other aqueous solutions.

GENE INFORMATION

Gene Name	Lep leptin [Rattus norvegicus]
Official Symbol	Lep
Synonyms	LEP; leptin; obesity factor; OB; obese;
Gene ID	25608
mRNA Refseq	NM_013076

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Protein Refseq	NP_037208
Pathway	Adipocytokine signaling pathway, organism-specific biosystem; Adipocytokine signaling pathway, conserved biosystem; Adipogenesis, organism-specific biosystem; Cytokine-cytokine receptor interaction, organism-specific biosystem; Cytokine-cytokine receptor interaction, conserved biosystem; Diabetes pathways, organism-specific biosystem; Disease, organism-specific biosystem;
Function	cytokine activity; growth factor activity; growth factor activity; hormone activity; peptide hormone receptor binding;

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