Recombinant Mouse Leptin, PEG

Cat. No. Lep-146M **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Mouse Leptin produced in*E.Coli*is a single, non-glycosylated, polypeptide chain containing 146 amino acids and an additional Ala at N-terminus. Pegylated Mouse Leptin contains PEG 20 kDa at its N-terminus and having a molecular mass of 35.6 kDa as determined by mass spectrometry. Mouse Leptin was purified by proprietary chromatographic techniques.
Species	Mouse
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.
Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Purity	Greater than 99.0% as determined by: (a) Analysis by Gel-Filtration. (b) Analysis by SDS-PAGE.
Solubility	It is recommended to reconstitute the lyophilized Leptin in sterile 0.4% $NaHCO_3$adjusted to pH-8.5 not less than 100µg/ml, which can then be further diluted to other aqueous solutions.
Biological Activity	Pegylated mouse Leptin is capable of stimulatng proliferation of BAF/3 cells stably transfected with the long form of human leptin receptor. Pegylated mouse Leptin in

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	vitro activity is only slightly lower than the non-pegylated antagonist but in vivo it has profound weight reducing effect (as compared to the non-pegylated leptin), resulting mainly from reduced food intake.
Formulation	The protein was lyophilized from a concentrated (0.65mg/ml) solution with 0.003mM $NaHCO_3$.
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.
Pathways	Adipocytokine signaling pathway; Cytokine-cytokine receptor interaction; Jak-STAT signaling pathway; Neuroactive ligand-receptor interaction

GENE INFORMATION

Gene Name	Lep leptin [Mus musculus]
Synonyms	Leptin; ob; obese; Lep
Gene ID	16846
mRNA Refseq	NM_008493
Protein Refseq	NP_032519
UniProt ID	P41160
Chromosome Location	6 10.5 cM

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Function	growth factor activity; hormone activity; protein binding

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