

Recombinant Human Leptin, His-tagged

Cat. No. LEP-13H Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant Human Leptin produced in <i>E. Coli</i> is a single, non-glycosylated, polypeptide chain containing amino acids 48-167 and having a total molecular mass of 19 kDa including the 4 kDa His tag. The Leptin is purified by proprietary chromatographic techniques.
Species	Human
Source	E.coli
Protein Length	48-167 a.a.
Description	Leptin is a protein hormone with important effects in regulating body weight, metabolism and reproductive function. The protein is approximately ~16 kDa in mass and encoded by the obese (ob) gene. Leptin is expressed predominantly by adipocytes, which fits with the idea that body weight is sensed as the total mass of fat in the body. Smaller amounts of leptin are also secreted by cells in the epithelium of the stomach and in the placenta. Leptin receptors are highly expressed in areas of the hypothalamus known to be important in regulating body weight, as well as in T lymphocytes and vascular endothelial cells.
Amino Acid Sequence	The sequence of the first four N-terminal amino acids was determined and was found to be Ala-Thr-Pro-Val.
Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.

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Purity	Greater than 90.0% as determined by: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.
Formulation	The protein was lyophilized from a concentrated (1 mg/ml) solution with 1X PBS, 0.1% SDS and 1 mM DTT.
Solubility	The lyophilized Leptin is very soluble in water and most aqueous buffers below and above the isoelectric point.
Applications	1. Positive control for Western blot. 2. Antibody production. 3. Protein assay.
Storage	Lyophilized Leptin although stable at room temperature, should be stored desiccated below 0°C. Reconstituted Leptin is best stored refrigerated at 4°C. Please avoid freeze-thaw cycles.

GENE INFORMATION

Gene Name	LEP leptin [Homo sapiens]
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
mRNA Refseq	NM_000230
Protein Refseq	NP_000221
MIM	164160

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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

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