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**Product Data Sheet**

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Product Name: Leptin Human, N82K PEG

Cat. No.: GP20689

Batch No.: 1

**Product Data**

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped at Room temp.

Synonyms OB Protein; Obesity Protein; OBS; Obesity factor.

Solubility It is recommended to reconstitute the lyophilized Pegylated Leptin N82K in sterile water or 0.4% NaHCO<sub>3</sub> adjusted to pH 8-9, not less than 100µg/ml, which can then be further diluted to other aqueous solutions.Formulation Lyophilized from a concentrated (0.65mg/ml) solution with 0.003mM NaHCO<sub>3</sub> Having 35-40% protein.**Introduction**

Leptin takes an important part in the regulation of energy balance and body weight control. After entering the circulation, Leptin binds LEPR which results in the activation of several major signalling pathways. In the hypothalamus Leptin acts as an appetite-regulating factor that induces a decrease in food intake and an increase in energy consumption and also regulates bone mass and secretion of hypothalamo-pituitary-adrenal hormones. In the periphery, increases basal metabolism, regulates pancreatic beta-cell function and insulin secretion and affects innate and adaptive immunity.

**Biological Activity**

Biological Activity is < than 0.1% as determined by inducing proliferation of BAF/3 cells stably transfected with the long form of human leptin receptor. This abolishment of activity results from drastically reduced affinity toward leptin receptor.

**Stability**

Lyophilized Pegylated Leptin N82K although stable at room temperature for 3 weeks, should be stored desiccated below -18°C . Upon reconstitution Pegylated Leptin N82K should be stored at 4°C between 2-7 days and for future use below -18°C . For long term

**Caution: Product has not been fully validated for medical applications. For research use only.**

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storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

### Background

Pegylated Leptin N82K Human Recombinant produced in E.Coli is a single non-glycosylated polypeptide chain containing 146 amino acids, an additional Ala at N-terminus and one molecule of PEG 20 kDa at its N-terminus acids and having a molecular weight of 35.6kDa. 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. Pegylated Leptin N82K Human Recombinant was purified by proprietary chromatographic techniques.

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