

Recombinant Human Leptin (rh Leptin)

Synonyms: OB Protein, Obesity Protein, OBS, Obesity Factor

Introduction: 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.

Description: Recombinant human Leptin produced in E.coli is a single, non-glycosylated, polypeptide chain containing 146 amino acids having a molecular mass of 16 kDa. Leptin is purified by proprietary chromatographic techniques.

Source: *Escherichia Coli*.

Physical Appearance: Sterile filtered white lyophilized (freeze-dried) powder.

Formulation: The protein was lyophilized from a concentrated (1 mg/ml) solution with 0.0045mM NaHCO₃.

Solubility: The lyophilized rh Leptin is very soluble in water and most aqueous buffers below and above the isoelectric point.

Stability: Lyophilized rh Leptin although stable at room temperature, should be stored desiccated below 0° C. Reconstituted rh Leptin is best stored refrigerated at 4° C.

Purity: Greater than 95.0% as determined by

- (1) Analysis by SEC-HPLC
- (2) Analysis by SDS-PAGE

Amino Acid Sequence:

The sequence of the first five N-terminal amino acids was determined and was found to be:
Ala-Val-Pro-Ile-Gln

Biological Activity: Biological activity is evidenced by inducing proliferation of BAF/3 cells stably transfected with the long form of human leptin receptor.

Protein content: Protein quantitation was carried out by two independent methods:

1. UV spectroscopy at 280 nm using the absorbency value of 0.878 as the extinction coefficient for a 0.1% (1mg/ml) solution. This value is calculated by the PC GENE computer analysis program of protein sequences (IntelliGenetics).
2. Analysis by RP-HPLC, using a calibrated solution of Leptin as a Reference Standard.

This material is offered for **research use only**. Not for use in human. For in vitro use only. ImmunoTools will not be held responsible for patent infringement or other violations that may occur with the use of our products.

<i>small</i>	200 µg	Cat.N°	11347007
<i>medium</i>	1000 µg	Cat.N°	11347008

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