

Leptin

(Obesity Factor)

Human, Recombinant, *E. coli*

Cat. No.	Amount
PR-480	1 mg

Lyophilized.

Leptin is lyophilized from a 1 mg/ml solution containing 0.0045 mM NaHCO₃.

Leptin inhibits food intake and stimulates energy expenditure. Leptin also has thermogenic actions and regulates enzymes of fatty acid oxidation. Severe hereditary obesity in rodents and humans is caused by defects in leptin production. In addition to its critical role in the physiologic regulation of body weight leptin has a variety of other physiologic and pathologic functions resembling those of cytokines. These functions include the regulation of hematopoiesis, angiogenesis, wound healing, inflammation, and immune responses.

Recombinant Human Leptin produced in *E. coli* is a single, non-glycosylated, polypeptide chain containing 147 amino acids and having a molecular mass of 16.24 kDa.

Recombinant Leptin is purified by proprietary chromatographic techniques.

AVOID FREEZE/THAW CYCLES.

For in vitro use only!

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

Activity: ED₅₀: < 0.5-1.6 ng/ml, calculated by the leptin-dependent stimulation of human OB-R transfected murine BaF3 indicator cells.

Purity: ≥ 95% by SDS-PAGE, RP-HPLC, and FPLC.

Endotoxin: Less than 0.1 ng/μg (IEU/μg) of Leptin.

Store: 4°C

Selected References:

LaMarca A. and Volpe A. (2004) Recombinant human leptin in women with hypothalamic amenorrhea. *N. Engl. J. Med.* **351**:2343.

Welt *et al.* (2004) Recombinant human leptin in women with hypothalamic amenorrhea. *N. Engl. J. Med.* **351**:987.

Cochran *et al.* (2004) Efficacy of recombinant methionyl human leptin therapy for the extreme insulin resistance of the Rabson- Mendenhall syndrome. *J. Clin. Endocrinol. Metab.* **89**:1548.

Zeyl *et al.* (2004) Interactions between temperature and human leptin physiology in vivo and in vitro. *Eur. J. Appl. Physiol.* **92**:571.

Lagarde *et al.* (2003) Development of radioimmunoassay for the measurement of human leptin in serum. *Nucl. Med. Rev. Cent. East. Eur.* **6**:105.

Wang *et al.* (2003) Mice body weight gain is prevented after naked human leptin cDNA transfer into skeletal muscle by electroporation. *J. Gene Med.* **5**:966.

Solubility: