

**RECOMBINANT HUMAN LEPTIN (hOB)**

**Catalog # 02641**

**1 mg per vial**

**PRODUCT DESCRIPTION:**

Leptin was identified as a protein product of the *obese* gene. Mice with mutations in the *obese* gene that block the synthesis of leptin have been found to be obese and diabetic and to have reduced activity, metabolism and body temperature. Leptin expression is restricted to adipose tissue. Leptin binds to a high affinity receptor (OB-R) with homology to gp130 and G-CSF-R. OB-R is expressed in the choroid plexus, in the hypothalamus and in very primitive hematopoietic cell populations. Human leptin cDNA encodes a 167 amino acid protein containing a 21 amino acid signal peptide. The recombinant methionyl form of human leptin contains 147 amino acid residues and has a predicted molecular mass of approximately 16 kDa.

**SOURCE:**

A DNA sequence encoding the mature human leptin protein was expressed in *E. coli*.

**PURITY:**

Greater than 97%, as determined by SDS-PAGE and visualized by silver stain. Endotoxin level less than 0.1ng per 1 µg of the cytokine as determined by the LAL method.

**FORMULATION:**

Lyophilized from a sterile solution in PBS.

**RECONSTITUTION:**

To reconstitute lyophilized leptin, add 15 mM sterile HCl (0.5 mL/1 mg), to the vial. After the protein is completely dissolved, add 7.5 mM sterile NaOH (0.3 mL/1 mg) to the vial to bring the pH up to approximately 5.2.

**STABILITY/STORAGE:**

Lyophilized samples are stable for greater than six months at -20°C to -70°C. Reconstituted human OB can be stored under sterile conditions at 2°C to 4°C for one month or at -20°C to -70°C for three months without detectable loss of activity.

**Avoid repeated freeze-thaw cycles.**

**ACTIVITY:**

Activity was determined by ability to induce proliferation of leptin-dependent human OB-R transfected murine BaF3 cells and the ED<sub>50</sub> for this effect was typically 0.4 - 2 ng/mL.

**THIS REAGENT IS FOR RESEARCH USE ONLY.  
IT IS NOT TO BE ADMINISTERED TO HUMANS.**