

**DESCRIPTION**

**Source** *E. coli*-derived  
Val22-Cys167, with an N-terminal Met  
Accession # Q6NT58

**N-terminal Sequence Analysis** Met

**Predicted Molecular Mass** 16 kDa

**SPECIFICATIONS**

**Activity** Measured in a cell proliferation assay using BaF3 mouse pro-B cells transfected with human Leptin R.  
The ED<sub>50</sub> for this effect is typically 0.4–2 ng/mL.

**Endotoxin Level** <0.10 EU per 1 µg of the protein by the LAL method.

**Purity** >97%, by SDS-PAGE under reducing conditions and visualized by silver stain.

**Formulation** Lyophilized from a 0.2 µm filtered solution in Tris-HCl and NaCl. See Certificate of Analysis for details.

**PREPARATION AND STORAGE**

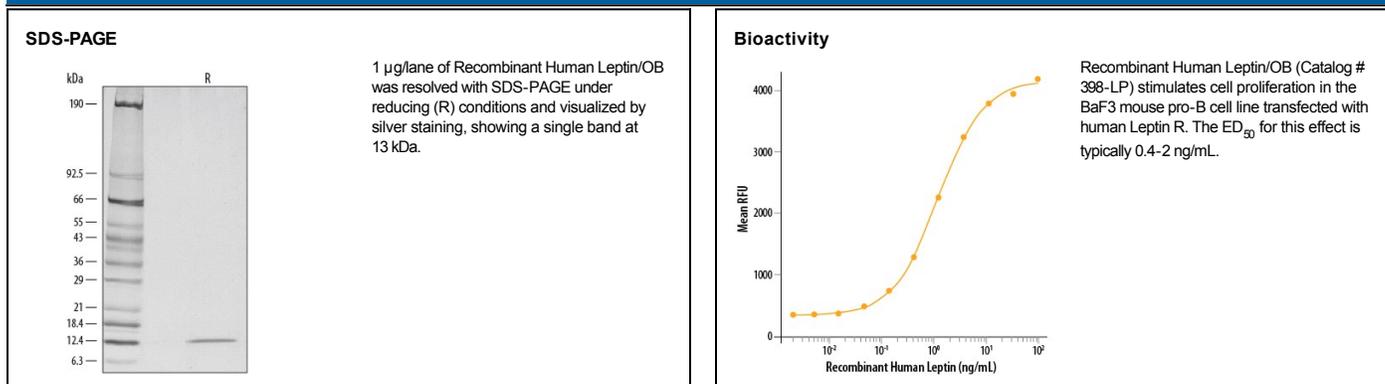
**Reconstitution** Reconstitute at 1 mg/mL in sterile 20 mM Tris-HCl, pH 8.0.

**Shipping** The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

**Stability & Storage** Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 3 months, 2 to 8 °C under sterile conditions after reconstitution.

**DATA**



**BACKGROUND**

Leptin is a protein product of the mouse *obese* gene. Mice with mutations in the *obese* gene that block the synthesis of Leptin have been found to be obese, diabetic and to have reduced activity, metabolism and body temperature. cDNA clones encoding Leptin have been isolated from human, simian, mouse and rat cells. Human Leptin shares approximately 84% sequence identity with the mouse protein. Human Leptin cDNA encodes a 167 amino acid residue protein with a 21 amino acid residue signal sequence that is cleaved to yield the 146 amino acid residue mature protein. The expression of Leptin mRNA has been shown to be restricted to adipose tissue.

A high-affinity receptor for Leptin (OB-R) with homology to gp130 and the G-CSF receptor has been cloned. OB-R mRNA has been shown to be expressed in the choroid plexus and in the hypothalamus. OB-R has also been identified as an isoform of B219, a sequence that is expressed in at least four isoforms in very primitive hematopoietic cell populations and in a variety of lymphohematopoietic cell lines (1 - 3). The roles of leptin in body weight regulation, hematopoiesis and reproduction continue to be investigated.

**References:**

1. Considine, R. and J. Caro (1996) *Clinical Chemistry* **42**:843.
2. Tartaglia, L.A. *et al.* (1995) *Cell* **83**:1263.
3. Cioffi, J.A. *et al.* (1996) *Nature Medicine* **2**:585.