



## *Recombinant Rat Leptin*

*Catalog Number: 300-14*

*Accession Number: P50596*

### *Specifications and Uses:*

**Alternate Names:** Obesity protein

**Description:**

Leptin is a protein that is thought to have a critical role in the physiologic regulation of body weight via its capacity to inhibit food intake and stimulate energy expenditure. Leptin also has thermogenic actions and regulates enzymes of fatty acid oxidation. Severe hereditary obesity in rodents and humans can be caused by defects in leptin production. These functions include the regulation of hematopoiesis, angiogenesis, wound healing, inflammation, and immune responses. Recombinant rat Leptin is a non-glycosylated protein, containing 147 amino acids, with a molecular weight of 16.2 kDa.

**Source:** *E.coli*

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

**Formulation and Stability:**

Recombinant rat Leptin is lyophilized from a concentrated (1mg/mL) solution with 0.1% TFA.

Lyophilized product is very stable at -20°C. Reconstituted material should be aliquoted and frozen at -20°C. It is recommended that a carrier protein (0.1% HSA or BSA) is added for long term storage.

**Reconstitution:**

Centrifuge vial before opening. When reconstituting the product, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution. It is recommended to reconstitute the lyophilized product with sterile water at a concentration of 0.1 mg/mL, which can be further diluted into other aqueous solutions.

**Protein Content and Purity (typically ≥ 95%) determined by:**

Reducing and Non-reducing SDS-PAGE, UV spectroscopy at 280 nm

**Endotoxin Level:**

Measured by kinetic LAL analysis and is typically  $\leq 1$  EU/ $\mu$ g protein.

**Biological Activity:**

The activity is determined by the leptin-dependent stimulation of mouse BaF3 indicator cells and is typically 0.06 – 0.35 ng/mL.

**AA Sequence:**

MVPIHKVQDD TKTLIKTIVT RINDISHTQS VSARQRTGL DFIPGLHPIL SLSKMDQTLA VYQQILTSPL  
SQNVLQIAHD LENLRDLLHL LAFSKSCSLP QTRGLQKPES LDGVLEASLY STEVVALSRL QGSLQDILQQ  
LDLSPEC

**THIS PRODUCT IS FOR RESEARCH USE ONLY AND IS NOT FOR USE IN HUMANS!**

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