

BACKGROUND

Leptin 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 and having a molecular mass of 16.2 kDa.

Alternative Names:

Obesity protein

Amino Acid Sequence:

MVPIHKVQDD TKTLIKTIVT RINDISHTQS VSARQRVTGL
DFIPGLHPIL SLSKMDQTLA VYQQILTSLP SQNVLQIAHD
LENLRDLLHL LAFSKSCSLP QTRGLQKPES LDGVLEASLY
STEVVALSRL QGSLQDILQQ LDLSPEC

TECHNICAL INFORMATION

Source: *E.coli*

Physical Appearance:

Sterile Filtered white lyophilized (freeze-dried) powder.

Formulation:

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

Stability:

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 determined by:

- UV spectroscopy at 280 nm
- RP-HPLC calibrated against a known standard
- Quantitation against a known standard via reducing and non-reducing SDS-PAGE gels.

Endotoxin Level:

Endotoxin level, as measured by LAL analysis, is <0.01ng/ug or <0.1EU/ug.

Biological Activity:

The activity is calculated by the leptin-dependent stimulation of Human OB-R transfected mouse BaF3 indicator cells and is typically 0.06 – 0.35 ng/ml.

Products are for research use only. They are not intended for human, animal, or diagnostic applications.

