Data sheet

Jena Bioscience

Leptin, triple mutant (L39A, D40A, F41A)
(Obesity Factor)
Murine, Recombinant, *E. coli*

Cat. No.	Amount
PR-486	100 μg

Store: -20°C

Lyophilized.
Leptin is lyophilized from a solution containing 0.003 mM $NaHCO_3$.

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 Murine Leptin, one polypeptide chain containing 146 amino and additional Ala at the N-terminus and having a molecular mass of ~ 16 kDa, was mutated, resulting in a L39A/D40A/F41A mutant.

Leptin mutant was purified by proprietary chromatographic techniques.

AVOID FREEZE/THAW CYCLES.

For in vitro use only!

Solubility:
It is recommended to reconstitute the lyophilized Leptin mutant in sterile 0.4% $NaHCO_3$ adjusted to pH 8-9, not less than 100 μg/ml, which can then be further diluted to other aqueous solutions. At low concentrations addition of a carrier protein (0.1% HSA or BSA) is suggested.

Activity: This Leptin triple mutant is capable of inhibiting leptin-induced proliferation of BAF/3 cells stably transfected with the long form of human leptin receptor. It also inhibits various leptin effects in several *in vitro* bioassays.

Purity: $\geq$ 99% by SDS-PAGE, RP-HPLC, and FPLC.

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

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Selected References:

Theriault *et al.* (2001) Clinical evaluation of a new non-isotopic leptin immunoassay. *Clin. Lab. Sci.* **14**:6.

Thomas T. (2004) Leptin and fragility fracture: evidence for a protective effect in humans. *Am. J. Med.* **117**:966.

Schett *et al.* (2004) Serum leptin level and the risk of nontraumatic fracture. *Am. J. Med.* **117**:952.

Iwamoto *et al.* (2004) The leptin receptor in human osteoblasts and the direct effect of leptin on bone metabolism. *Gynecol. Endocrinol.* **19**:97.

Mami *et al.* (2005) Plasma leptin, insulin, and neuropeptide Y concentrations in infants. *Arch. Dis. Child. Fetal. Neonatal. Ed.* **90**:F86