Leptin, triple mutant (L39A, D40A, F41A)
Obesity Factor
ovine (sheep), recombinant, E. coli

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<tr>
<th>Cat. No.</th>
<th>Amount</th>
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<td>PR-488</td>
<td>100 µg</td>
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For in vitro use only
Quality guaranteed for 12 months
Store at -20°C
Avoid freeze / thaw cycles

Form
Lyophilized. Leptin is lyophilized from a solution containing 0.003 mM NaHCO$_3$.

Solubility
It is recommended to reconstitute the lyophilized Leptin-Antagonist Triple Mutant Ovine recombinant in sterile water or sterile 0.4% NaHCO$_3$ adjusted to pH 8, not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

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.

Molecular Weight
16 kDa

Purity
≥ 95% by SDS-PAGE

Description
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 Ovine 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.

Amino acid sequence
The sequence of the first five N-terminal amino acids was determined and was found to be Ala-Val-Pro-Ile-Arg

Selected References:


Kauter et al. (2000) Adrenaline, insulin and glucagon do not have acute effects on plasma leptin levels in sheep: development and characterisation of an ovine leptin ELISA. J. Endocrinol. 166:127.