

Product Data Sheet

Product Name: Leptin (116-130) amide (mouse)

Cat. No.: GP10031

Chemical Properties

Cas. No. 258276-95-8

Chemical Name LEP (116-130) (mouse)

SMILES CC(C)CC(C(=O)NC(CCC(=O)N)C(=O)NC(CCCCN)C(=O)N1CCCC1C(=O)NC(CCC(=O)O)C(=O)NC(CO)C(=O)N)NC(=O)CNC(=O)C(CO)NC(=O)C(C(C)O)NC(=O)C(CCC(=O)N)NC(=O)C2CCCN2C(=O)C(CC(C)C)NC(=O)C(CO)NC(=O)C(CS)NC(=O)C(CO)N

Formula $C_{64}H_{109}N_{19}O_{24}S$

M.Wt 1560.73

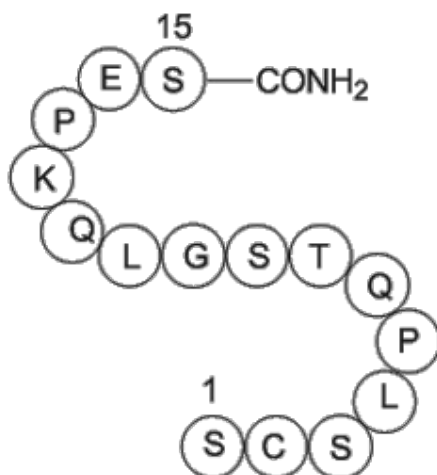
Solubility $\geq 156\text{mg/mL}$ in DMSO

Storage Desiccate at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37°C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure



Protocol

Caution: Product has not been fully validated for medical applications. For research use only.

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**Animal
experiment:**

Blood is drawn from the tail vein of each mouse 2 h before the onset of the dark period at the beginning of the study (day 0) and after 2, 4, and 6 days of treatment with 1 mg/day i.p. LEP-(116-130). Blood glucose levels are determined with a Glucometer Elite blood glucose monitor. After 4 and 7 days of treatment with 1 mg/day i.p. LEP-(116-130), sensitivity to cold is examined by placing the mice without food or water in a cold room with an ambient temperature of 4°C. Body temperature is measured with a rectal probe every hour for 4 h.

References:

[1]. Grasso P, et al. Inhibitory effects of leptin-related synthetic peptide 116-130 on food intake and body weight gain in female C57BL/6J ob/ob mice may not be mediated by peptide activation of the long isoform of the leptin receptor. *Diabetes*. 1999 Nov;48(11):2204-9.

Background

Leptin (116-130), amide, mouse(C₆₄H₁₀₉N₁₉O₂₄S), a peptide with the sequence Ser-Cys-Ser-Leu-Pro-Gln-Thr-Ser-Gly-Leu-Gln-Lys-Pro-Glu-Ser-NH₂. Leptin is an adipocyte-derived hormone that acts as a major regulator for food intake and energy homeostasis. Leptin deficiency or resistance can result in profound obesity, diabetes, and infertility in humans. Since the discovery of leptin, the breadth of biological actions has dramatically expanded and served to broaden the initial perspective, where this protein was viewed solely as an antiobesity hormone. Important biological activities have been discovered in peripheral tissues that demonstrate the pleiotropic effects of this molecule in such areas as hematopoiesis, angiogenesis, blood pressure, bone mass, lymphoid organ homeostasis, and T lymphocyte function. Recent data indicate that leptin(116-130), an active fragment of the native molecule, exerts effects similar to those of the native peptide on body weight and food intake.

References:

1. Zhang F, Basinski MB, Beals JM, Briggs SL, Churgay LM, Clawson DK, DiMarchi RD, Furman TC, Hale JE, Hsiung HM, Schoner BE, Smith DP, Zhang XY, Wery JP, Schevitz RW (May 1997). "Crystal structure of the obese protein leptin-E100". *Nature* 387 (6629): 206-9.
2. Brennan AM, Mantzoros CS (June 2006). "Drug Insight: the role of leptin in human physiology and pathophysiology--emerging clinical applications". *Nat Clin Pract Endocrinol Metab* 2 (6): 318-327.

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3. GreGreen ED, Maffei M, Braden VV, Proenca R, DeSilva U, Zhang Y, Chua SC Jr, Leibel RL, Weissenbach J, Friedman JM (August 1995). "The human obese (OB) gene: RNA expression pattern and mapping on the physical, cytogenetic, and genetic maps of chromosome 7". *Genome Res.* 5 (1): 5-12.
4. Margetic S, Gazzola C, Pegg GG, Hill RA (2002). "Leptin: a review of its peripheral actions and interactions". *Int. J. Obes. Relat. Metab. Disord.* 26 (11): 1407-1433.

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