

Product Data Sheet

Product Name: GHRP-6 (acetate)

Cat. No.: GC45459

Chemical Properties

Cas. No. 145177-42-0

SMILES O=C(N[C@H](CC1=CC=CC=C1)C(N[C@H](C(N)=O)CCCCN)=O)[C@@H](NC([C@H](C)NC([C@H](NC([C@H](CC2=CN=CN2)N)=O)CC3=CNC4=C3C=CC=C4)=O)=O)CC5=CNC6=C5C=CC=C6.CC(O)=O.CC(O)=O.CC(O)=O

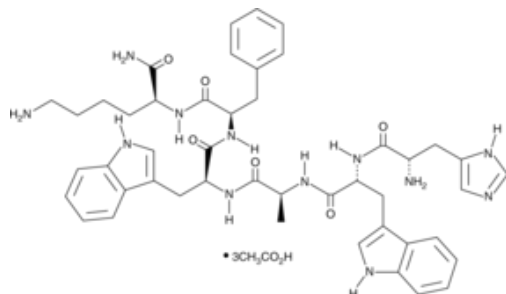
Formula C₄₆H₅₆N₁₂O₆·3C₂H₄O₂ M.Wt 1053.2

Solubility DMF: 30 mg/ml, DMSO: 30 mg/ml, PBS (pH 7.2): 10 mg/ml Storage Store 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



Background

GHRP-6 is a synthetic growth hormone (GH) secretagogue and an agonist of the GH secretagogue receptor (GHS-R), which is also known as the ghrelin receptor.^{1,2,3,4} It inhibits binding of the GHS-R agonist MK-0677 to COS-7 cell membranes expressing human GHS-R type Ia ($K_i = 1.9$ nM) and binding of ghrelin to COS-7 cells expressing human GHS-R ($K_d = 260$ nM).^{2,3} GHRP-6 stimulates intracellular calcium mobilization in BHK cells expressing the human receptor ($EC_{50} = 4.5$ nM) and inositol phosphate production in COS-7 cells expressing the human receptor ($EC_{50} = 0.83$ nM).³ It also acts as a negative allosteric modulator of ghrelin signaling. GHRP-6 (0.03 µg/ml) induces release of GH, but not thyroid-stimulating hormone (TSH), luteinizing hormone (LH), or follicle-

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

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stimulating hormone (FSH), in isolated rat pituitary gland.¹ It increases levels of GH, but not TSH, LH, FSH, or prolactin, in rat blood when administered subcutaneously at a dose of 50 µg. GHRP-6 increases food intake in rats when administered intracerebroventricularly at 0.3, 1, and 3 nmol.⁴

References

1. Bowers, C.Y., Momany, F.A., Reynolds, G.A., et al. On the in vitro and in vivo activity of a new synthetic hexapeptide that acts on the pituitary to specifically release growth hormone. *Endocrinology* 114(5), 1537-1545 (1984).
2. Howard, A.D., Feighner, S.D., Cully, D.F., et al. A receptor in pituitary and hypothalamus that functions in growth hormone release. *Science* 273(5277), 974-977 (1996).
3. Holst, B., Brandt, E., Bach, A., et al. Nonpeptide and peptide growth hormone secretagogues act both as ghrelin receptor agonist and as positive or negative allosteric modulators of ghrelin signaling. *Mol. Endocrinol.* 19(9), 2400-2411 (2005).
4. Wren, A.M., Small, C.J., Ward, H.L., et al. The novel hypothalamic peptide ghrelin stimulates food intake and growth hormone secretion. *Endocrinology* 141(11), 4325-4328 (2000).

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