Beinaglutide

Cat. No.:	HY-P3463
CAS No.:	123475-27-4
Molecular Formula:	$C_{149}H_{225}N_{39}O_{46}$
Molecular Weight:	3298.61
Sequence Shortening:	HAEGTFTSDVSSYLEGQAAKEFIAWLVKGR
Target:	GCGR
Pathway:	GPCR/G Protein
Storage:	Sealed storage, away from moisture and light, under nitrogen Powder -80°C 2 years -20°C 1 year * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light, under nitrogen)

HAEGTFTSDVSSYLEGQAAKEFIAWLVKGR

SOLVENT & SOLUBILITY

In Vitro	DMSO : 1.79 mg/mL (0.54 mM; ultrasonic and adjust pH to 5 with HCl)

BIOLOGICAL ACTIVITY

Description	Beinaglutide is a recombinant human GLP-1 (rhGLP-1) polypeptide that shares almost 100% homology with human GLP-1 (7–36). Beinaglutide displays does-dependent effects in glycemic control, inhibiting food intake and gastric empty and promoting weight loss. Beinaglutide has the potential for the research of overweight/obesity and nonalcoholic steatohepatitis (NASH)[1][2].
In Vitro	Beinaglutide (100 nM; 48 h) increases the expression of phosphorylation of Akt in the adipocytes that were potentiated insulin-stimulated[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only. Western Blot Analysis[2]

Cell Line:	3T3L-1 cells
Concentration:	100 nM
Incubation Time:	48 h
Result:	Increased the phosphorylation of Akt in the adipocytes that were potentiated insulin-stimulated.

In Vivo	Beinaglutide (0.6, 1.2, 2.4 mg/kg; s.c.; three times per day for 7 consecutive days) shows the ability of glycemic contro, inhibits food intake and weight loss in mouse[1]. Beinaglutide (150 μg/kg; s.c.; daily for 6 weeks) increases insulin sensitivity of adipocytes[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Wild-type male C57BL/6 mice and Male Lepob/Lepob (ob/ob) mice (ob/ob-NASH mouse model was induced by GAN diet)[1]
Dosage:	0.6, 1.2, 2.4 mg/kg
Administration:	S.c.; three times per day for 7 consecutive days
Result:	Significantly reduced blood glucose with dosedependence in C57BL/6 and ob/ob mice, dose dependently inhibits food intake and gastric Emptying, and significantly reduced body weight, food intake with dose-dependence.

Animal Model:	Eight-week-old male C57BL/6 mice[2]
Dosage:	150 μg/kg
Administration:	S.c.; daily for 6 weeks
Result:	Showed improved glucose tolerance and insulin sensitivity, decreased adipose tissue weight and adipocyte size and potentiated insulin sensitivity of adipocytes.

REFERENCES

[1]. Fang X, et al. Beinaglutide shows significantly beneficial effects in diabetes/obesity-induced nonalcoholic steatohepatitis in ob/ob mouse model. Life Sci. 2021 Apr 1;270:118966.

[2]. Zhang F, et al. Recombinant human GLP-1 beinaglutide regulates lipid metabolism of adipose tissues in diet-induced obese mice. iScience. 2021 Oct 30;24(12):103382.

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