Product Data Sheet

Product Name: Glucagon-like peptide 1 (1-37), human (TFA)
Cat. No.: GC36152

Chemical Properties

Cas. No.			
Formula	$C_2HF_3O_2$	M.Wt	114.02
Solubility	DMSO : 1.8 mg/mL (Need ultrasonic)	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ 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

Cell experiment:	HEK293 cells (5×104) are seeded in a 96-well plate and transiently cotransfected with the GLP-1R plasmid and the CRE-luciferase reporter plasmid. After a 48 h transfection, different concentrations of GLP-1(1–37) or GLP-1(7–37) (TFA) are added, and the cells are incubated for 5 h. The cells are harvested for a luciferase assay using a luciferase assay[1].

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Animal experiment:

Mice[1]The normal KM mice are fasted for 16 h before the administration (i.p.) of GLP-1 and glucose. GLP-1(1-37) (25 nmol/kg) with or without exendin(9-39) (250 nmol/kg) is given in combination with glucose (4 g/kg). GLP-1(7-37) (25 nmol/kg) with or without exendin(9-39) (250 nmol/kg) is also administrated in combination with glucose (4 g/kg). The control group is treated with saline (NaCl, 9 g/L) and glucose (4 g/kg). The IPGTT is carried out at 0, 15, 30 and 60 min after glucose and protein administration, and the blood glucose levels are measured as described above[1].

References:

[1]. Zhao L, et al. Glucagon-like peptide-1(1-37) can enhance blood glucose homeostasis in mice. Regul Pept. 2012 Oct 10;178(1-3):1-5.

Background

Glucagon-like peptide 1 (1-37), human (TFA) is a highly potent agonist of the GLP-1 receptor. GLP-1 receptor[1].

Glucagon-like peptide-1 (GLP-1) is produced by the posttranslational processing of proglucagon and acts as a regulator of various homeostatic events. GLP-1(1-37) is more stable than GLP-1(7-37), with 94.7% of the initial amount of peptide left after a 4h exposure to mouse serum. GLP-1(1-37) is confirmed to be a highly potent agonist of the GLP-1 receptor (GLP-1R) by measuring the expression of the luciferase reporter gene expression in transiently transfected human embryonic kidney (HEK293) cells[1].

GLP-1(1-37) decreases glycemic excursion in a dose-dependent. The administration of

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GLP-1(1-37) or GLP-1(7-37) markedly decrease blood glucose levels at 15 min and 30 min compared with the control group[1].

[1]. Zhao L, et al. Glucagon-like peptide-1(1-37) can enhance blood glucose homeostasis in mice. Regul Pept. 2012 Oct 10;178(1-3):1-5.

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