

Glucagon-like peptide 1 (1-37), human (TFA)

Cat. No.:	HY-P1145A	
Molecular Formula:	C ₂ HF ₃ O ₂	
Molecular Weight:	114.02	
Target:	Glucagon Receptor	
Pathway:	GPCR/G Protein	
Storage:	Protect from light	
	Powder	-80°C 2 years -20°C 1 year
	In solvent	-80°C 6 months -20°C 1 month

HDEFERHAEGTFTSDVSSYLEGQAAKEFIAWLVKGRG



BIOLOGICAL ACTIVITY

Description	Glucagon-like peptide 1 (1-37), human (TFA) is a highly potent agonist of the GLP-1 receptor .
IC ₅₀ & Target	GLP-1 receptor ^[1] .
In Vitro	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] .
In Vivo	GLP-1(1-37) decreases glycemic excursion in a dose-dependent. The administration of 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] .

PROTOCOL

Cell Assay ^[1]	<p>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].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>
Animal Administration ^[1]	<p>Mice^[1]</p> <p>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 administered 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].</p>

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

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.

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA