

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

Cat. No.:	HY-P1145A
Molecular Formula:	C ₁₈₈ H ₂₇₆ N ₅₁ F ₃ O ₆₁
Molecular Weight:	4283.5
Sequence:	His-Asp-Glu-Phe-Glu-Arg-His-Ala-Glu-Gly-Thr-Phe-Thr-Ser-Asp-Val-Ser-Ser-Tyr-Leu-Glu-Gly-Gln-Ala-Ala-Lys-Glu-Phe-Ile-Ala-Trp-Leu-Val-Lys-Gly-Arg-Gly <small>HDEFERHAEGTFTSDVSSYLEGQAAKEFIAWLKGRG (TFA salt)</small>
Sequence Shortening:	HDEFERHAEGTFTSDVSSYLEGQAAKEFIAWLKGRG
Target:	GCCR
Pathway:	GPCR/G Protein
Storage:	Sealed storage, away from moisture and light 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)

SOLVENT & SOLUBILITY

In Vitro

H₂O : 25 mg/mL (5.84 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent	Mass	1 mg	5 mg	10 mg
	Concentration				
	1 mM		0.2335 mL	1.1673 mL	2.3345 mL
	5 mM		0.0467 mL	0.2335 mL	0.4669 mL
	10 mM		---	---	---

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description	Glucagon-like peptide 1 (1-37), human (TFA) is a highly potent agonist of the GLP-1 receptor.
IC₅₀ & 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] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
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].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Cell Assay ^[1]

HEK293 cells (5×10^4) 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].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Administration ^[1]

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 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].

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.

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