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

Cat. No.: HY-P1145A

Molecular Formula: $C_{186}H_{275}N_{51}O_{59}.xC_2HF_3O_2$

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

HDEFERHAEGTFTSDVSSYLEGQAAKEFIAWLVKGRG (TFA salt)

Sequence Shortening: HDEFERHAEGTFTSDVSSYLEGQAAKEFIAWLVKGRG

Target: GCGR

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)

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]. 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 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].

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.

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