GLP-1(7-36), amide TFA

Cat. No.: HY-P0054B

Molecular Formula: $C_{151}H_{227}F_3N_{40}O_{47}$

Molecular Weight: 3411.65

Sequence Shortening: HAEGTFTSDVSSYLEGQAAKEFIAWLVKGRNH2

HAEGTFTSDVSSYLEGQAAKEFIAWLVKGR-NH_2 (TFA salt)

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)

SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 50 mg/mL (14.66 mM)

H_2O : < 0.1 mg/mL (ultrasonic) (insoluble)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	0.2931 mL	1.4656 mL	2.9311 mL
5 mM	0.0586 mL	0.2931 mL	0.5862 mL
10 mM	0.0293 mL	0.1466 mL	0.2931 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 1.25 mg/mL (0.37 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 1.25 mg/mL (0.37 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 1.25 mg/mL (0.37 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

GLP-1(7-36), amide TFA is a major intestinal hormone that stimulates glucose-induced insulin secretion from β cells[1].

In Vitro

Cells treated with phorbol 12-myristate 13-acetate for 2 h has significantly higher active GLP-1(7-36) Acetate (Human GLP-1-(7-36)-amide Acetate) concentrations in the media than those in the control. The glucose treatment also increases active GLP-1 secretion from cells in dose-dependent manner. Palmitic, oleic, linoleic or linolenic acid dose-dependently stimulated

	active GLP-1 secretion from cells. Active GLP-1 secretion is significantly greater with unsaturated fatty acids such as oleic, linoleic and linolenic acids than with palmitic acid. The treatment of NCI-H716 cells with CPE dose-dependently increases active GLP-1 concentrations in the media. A 37% increase is observed in active GLP-1 secretion from these cells at a concentration of 0.1 % CPE[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Gastric administration of glucose increases active GLP-1(7-36) amide levels in the portal blood after 10 min, followed by a marked decrease at 30 min. The gastric administration of TO also increases active GLP-1 levels after 10 min, and followed by a decrease to basal levels at 60 min. Individually, glucose and TO increase the secretion of GLP-1 in a dose-dependent manner. Furthermore, the co-administration of glucose and TO additively increase peak GLP-1 levels. CPE-administered mice have higher active GLP-1 levels in the portal blood at 10 and 30 min than those in the control mice. When glucose is administered with CPE, active GLP-1 and insulin levels in the portal blood are slightly higher in CPE-administered mice than in the control mice. High-fat diet-fed C57BL/6J mice develop hyperglycaemia and impair glucose tolerance[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- J Pharm Anal. 2024 Mar 24, 100968.
- MAbs. Jan-Dec 2021;13(1):1893425.
- Int J Endocrinol. 2020 Jun 19;2020:1484321.
- Research Square Preprint. 2024 Jan 9.
- Patent. US20230278991A1.

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REFERENCES

[1]. Fujii Y et al. Ingestion of coffee polyphenols increases postprandial release of the active glucagon-like peptide-1(GLP-1(7-36)) amide in C57BL/6J mice. J Nutr Sci. 2015 Mar 3;4:e9.

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