

# Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

Weitere Information auf den folgenden Seiten! See the following pages for more information!



### Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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## GLP-1(28-36)amide

Cat. No.: HY-P3101 CAS No.: 1225021-13-5 Molecular Formula:  $C_{54}H_{85}N_{15}O_9$ 1088.35 Molecular Weight:

Sequence: Phe-Ile-Ala-Trp-Leu-Val-Lys-Gly-Arg-NH2

Sequence Shortening: FIAWLVKGR-NH2

GCGR Target:

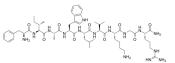
GPCR/G Protein Pathway:

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)



**Product** Data Sheet

#### **SOLVENT & SOLUBILITY**

In Vitro

DMSO: 33.33 mg/mL (30.62 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent Mass Concentration	1 mg	5 mg	10 mg
	1 mM	0.9188 mL	4.5941 mL	9.1882 mL
	5 mM	0.1838 mL	0.9188 mL	1.8376 mL
	10 mM	0.0919 mL	0.4594 mL	0.9188 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: ≥ 2.5 mg/mL (2.30 mM); Clear solution
- 2. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (2.30 mM); Clear solution

### **BIOLOGICAL ACTIVITY**

Description

GLP-1(28-36)amide, a C-terminal nonapeptide of GLP-1, is a major product derived from the cleavage of GLP-1 by the neutral endopeptidase (NEP). GLP-1(28-36) amide is an antioxidant and targets to mitochondrion, inhibits mitochondrial permeability transition (MPT). GLP-1(28-36) amide has anti-diabetic and cardioprotection effects [1].

In Vitro

Different from DPP-IV, NEP, which cleaves GLP-1(7-36) amide or GLP-1(9-36) amide to generate GLP-1(28-36) amide, is widely distributed in endothelial cells, vascular smooth muscle cells, cardiac cells and renal epithelial cells<sup>[1]</sup>.

GLP-1(28-36) amide (100 nM) treatment on hepatocytes for 24 hours directly modulates mitochondrial oxidative metabolism, such as gluconeogenesis in mitochondria of hepatocytes  $^{[1]}$ .

The plasma half-life of GLP-1(28-36) amide is longer in human hepatocytes ( $t_{1/2}$  = 24 min) than that in mouse hepatocytes ( $t_{1/2}$  = 13 min)<sup>[1]</sup>.

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

#### In Vivo

The administration of GLP-1(28-36) amide at a rate of 18.5 nmol/kg BW/day for 9 weeks to diet-induced obese mice diminishes the development of hepatic steatosis<sup>[1]</sup>.

The intraperitoneal injection of 18 nmol/kg GLP-1(28-36)amide once daily for 9 weeks show cytoprotective effect on pancreatic  $\beta$  cells by increasing mass and promoting proliferation in a  $\beta$ -cell injury diabetic mouse model<sup>[1]</sup>. An in vivo study in high-fat diet-fed mice indicates that a six-week administration of 18.5 nmol/kg GLP-1(28-36)amide improved hepatic glucose disposal, which is associated with increased cAMP levels and phosphorylation of PKA target<sup>[1]</sup>. Administered GLP-1(28-36)amide for 20 min to male C57BL6/J mice (10-12 week old), then isolated hearts underwent 30 min of global ischemia and 40 min of reperfusion, the recovery of left ventricular developed pressure (LVDP) is significantly greater in GLP-1(28-36)amide group compared to vehicle-treated hearts<sup>[1]</sup>.

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

#### **REFERENCES**

[1]. Bilan Zhou, et al. GLP-1(28-36)amide, a Long Ignored Peptide Revisited. Open Biochem J. 2014 Dec 31;8:107-11.

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

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