GLP-1(28-36)amide TFA

Cat. No.:	HY-P3101A
Molecular Formula:	$C_{56}H_{86}F_3N_{15}O_{11}$
Molecular Weight:	1202.37
Sequence:	Phe-Ile-Ala-Trp-Leu-Val-Lys-Gly-Arg-NH2
Sequence Shortening:	FIAWLVKGR-NH2
Target:	Glucagon Receptor
Pathway:	GPCR/G Protein
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.

BIOLOGICAL ACTIVITY

Description	GLP-1(28-36)amide TFA, 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 TFA is an antioxidant and targets to mitochondrion, inhibits mitochondrial permeability transition (MPT). GLP-1(28-36)amide TFA 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[1]. 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)[1]. 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[1]. The intraperitoneal injection of 18 nmol/kg GLP-1(28-36)amide once daily for 9 weeks show cytoprotective effect on pancreatic β cells by increasing mass and promoting proliferation in a β-cell injury diabetic mouse model[1]. 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[1]. 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[1]. 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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