

GLP-1(7-36), amide

Cat. No.:	HY-P0054A
CAS No.:	107444-51-9
Molecular Formula:	C ₁₄₉ H ₂₂₆ N ₄₀ O ₄₅
Molecular Weight:	3297.68
Sequence:	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-NH ₂
Sequence Shortening:	HAEGFTSDVSSYLEGQAAKEFIAWLKGR-NH ₂
Target:	GCGR
Pathway:	GPCR/G Protein
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.

BIOLOGICAL ACTIVITY

Description	GLP-1(7-36), amide is a physiological incretin hormone that stimulates insulin secretion.
In Vitro	<p>The sequence of Glucagon-Like Peptide after residue 7 shows similarities to glucagon and to other biologically active members of the secretin peptide family, particularly glucose-dependent insulinotropic peptide (GIP). This sequence has been especially well preserved, showing 66% nucleotide homology with GLP-1 in the proglucagon of the very primitive anglerfish. This 7-36 sequence of GLP-1 is a potent insulin-releasing peptide in vitro^[1]. Glucagon-Like Peptide (GLP) I (7-36), amide is a product of the tissue-specific post-translational processing of the glucagon precursor. It is released postprandially from intestinal endocrine L cells and stimulates insulin secretion. DPP IV is the main degradation enzyme for GLP-I(7 - 36)amide in human serum. Dipeptidyl-peptidase IV can initiate the metabolism of GIP and GLP-1(7-36)amide in human serum^[2].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>
In Vivo	<p>Glucagon-Like Peptide (GLP) I (7-36), amide is a physiological incretin hormone that is released after nutrient intake from the lower gut and stimulates insulin secretion at elevated plasma glucose concentrations. Exogenous GLP-1 (7-36 amide) is an effective means of normalizing fasting plasma glucose concentrations in poorly-controlled Type 2 diabetic subjects^[3]. Exogenously administered GLP-1-(7-36)amide is extremely labile in vivo, with more than 80% being cleaved into GLP-1-(9-36)amide after sc or iv administration^[4].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>

PROTOCOL

Cell Assay ^[4]	<p>To test whether there is GLP-1-degrading activity in the perfusion medium itself, synthetic Glucagon-Like Peptide (GLP) I (7-36), amide is incubated (30 min at 37°C) in vitro with medium collected from the arterial line (i.e. before it passed through the tissue) and from the venous line, and subjected to HPLC and RIA analysis^[4].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>
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CUSTOMER VALIDATION

- MAbs. Jan-Dec 2021;13(1):1893425.
- Int J Endocrinol. 2020 Jun 19;2020:1484321.
- Research Square Preprint. 2023 May 22.
- Patent. US20200283424A1.
- Patent. US20200283424A1.

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REFERENCES

- [1]. Kreymann B, et al. Glucagon-like peptide-1 7-36: a physiological incretin in man. Lancet. 1987 Dec 5;2(8571):1300-4.
- [2]. Mentlein R, et al. Dipeptidyl-peptidase IV hydrolyses gastric inhibitory polypeptide, glucagon-like peptide-1(7-36)amide, peptide histidine methionine and is responsible for their degradation in human serum. Eur J Biochem. 1993 Jun 15;214(3):829-35.
- [3]. Nauck MA, et al. Normalization of fasting hyperglycaemia by exogenous glucagon-like peptide 1 (7-36 amide) in type 2 (non-insulin-dependent) diabetic patients. Diabetologia. 1993 Aug;36(8):741-4.
- [4]. Hansen L, et al. Glucagon-like peptide-1-(7-36)amide is transformed to glucagon-like peptide-1-(9-36)amide by dipeptidyl peptidase IV in the capillaries supplying the L cells of the porcine intestine. Endocrinology. 1999 Nov;140(11):5356-63.

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA