Product Data Sheet

Product Name: Glucagon-Like Peptide (GLP) I (7-36), amide, human
Cat. No.: GC36150

Chemical Properties

Cas. No.	107444-51-9		
SMILES	[HAEGTFTSDVSSYLEGQAAKEFIAWLVKGR-NH2]		
Formula	$C_{149}H_{226}N_{40}O_{45}$	M.Wt	3297.68
Solubility	Soluble in DMSO	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure			

Protocol

Cell experiment:

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].

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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.

Background

Glucagon-Like Peptide (GLP) I (7-36), amide, human is a physiological incretin hormone that stimulates insulin secretion.

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-l(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].

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].

[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.