

Certificate of Analysis

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Product Name: GIP (human)

Catalog No.: 2084

Batch No.: 10

CAS Number: 100040-31-1

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula:	C ₂₂₆ H ₃₃₈ N ₆₀ O ₆₆ S
Batch Molecular Weight:	4983.58
Physical Appearance:	White lyophilised solid
Counter Ion:	TFA
Solubility:	Soluble to 1 mg/ml in water
Storage:	Store at -20°C
Peptide Sequence:	Tyr-Ala-Glu-Gly-Thr-Phe-Ile-Ser-Asp-Tyr- Ser-Ile-Ala-Met-Asp-Lys-Ile-His-Gln-Gln- Asp-Phe-Val-Asn-Trp-Leu-Leu-Ala-Gln-Lys- Gly-Lys-Lys-Asn-Asp-Trp-Lys-His-Asn-Ile- Thr-Gln

2. ANALYTICAL DATA

HPLC:	Shows 95.0% purity
Mass Spectrum:	Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid Theoretical		Actual	Amino Acid Theoretical		Actual
Ala	3.00	2.93	Lys	5.00	5.06
Arg			Met	1.00	1.02
Asx	7.00	6.16	Phe	2.00	2.04
Cys			Pro		
Glx	5.00	5.18	Ser	2.00	1.51
Gly	2.00	2.02	Thr	2.00	1.63
His	2.00	1.92	Trp	2.00	0.21
Ile	4.00	3.89	Tyr	2.00	1.95
Leu	2.00	2.02	Val	1.00	0.95

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

bio-techne.com

info@bio-techne.com

techsupport@bio-techne.com

North America

Tel: (800) 343 7475

China

info.cn@bio-techne.com

Tel: +86 (21) 52380373

Europe Middle East Africa

Tel: +44 (0)1235 529449

Rest of World

www.tocris.com/distributors

Tel: +1 612 379 2956

Product Name: GIP (human)

Catalog No.: 2084

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CAS Number: 100040-31-1

Description:

GIP (human) is a potent insulinotropic hormone synthesized by duodenal K-cells. High affinity GIP receptor agonist (EC₅₀ = 0.81 nM) that inhibits gastric acid secretion and stimulates pancreatic insulin release in response to glucose. Also affects lipid metabolism and displays mitogenic and antiapoptotic effects in pancreatic β-cells.

Physical and Chemical Properties:

Batch Molecular Formula: C₂₂₆H₃₃₈N₆₀O₆₆S

Batch Molecular Weight: 4983.58

Physical Appearance: White lyophilised solid

Peptide Sequence:

Tyr-Ala-Glu-Gly-Thr-Phe-Ile-Ser-Asp-Tyr-
Ser-Ile-Ala-Met-Asp-Lys-Ile-His-Gln-Gln-
Asp-Phe-Val-Asn-Trp-Leu-Leu-Ala-Gln-Lys-
Gly-Lys-Lys-Asn-Asp-Trp-Lys-His-Asn-Ile-
Thr-Gln

Storage: Store at -20°C

Solubility & Usage Info:

Soluble to 1 mg/ml in water

This product is supplied as a lyophilized solid and may be very hard to visualize. Solutions should be made by adding solvent directly to the vial. The vial should then be vortexed vigorously to ensure the product has completely dissolved.

Counter Ion: TFA

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Peptides in solution are much less stable than in lyophilized form. This is especially true for peptides whose sequences contain amino acids such as Cys, Met, Trp, Asn, Gln, and N-terminal Glu.

Therefore we recommend storing peptides in solution for as short a time as possible. Avoid repeated freeze thaw cycles by dividing the peptide solution into aliquots and storing the aliquots at -20°C. Any portion of an aliquot unused after thawing should be discarded.

Peptides stored in solution can occasionally be susceptible to bacterial degradation. We recommend using sterile solutions or passing the peptide solution through a 0.2 μm filter to remove potential bacterial contamination whenever possible.

References:

Meier et al (2002) Gastric inhibitory polypeptide: the neglected incretin revisited. *Regul. Peptides* **107** 1.

Trumper et al (2001) Glucose-dependent Insotropic polypeptide is a growth factor for β (INS-1) cells by pleiotropic signaling. *Mol. Endocrinol.* **15** 1159.

Wheeler et al (1995) Functional expression of the rat pancreatic islet glucose-dependent Insotropic polypeptide receptor: ligand binding and intracellular signaling properties. *Endocrinol.* **136** 4629.

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