

Certificate of Analysis

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Product Name: [Pro³]-GIP (Mouse)

Catalog No.: 5838

Batch No.: 9

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₂₅H₃₄₂N₆₂O₆₄S
Batch Molecular Weight: 4971.62
Physical Appearance: White lyophilised solid
Counter Ion: TFA
Solubility: Soluble to 2 mg/ml in water
Storage: Store at -20°C
Peptide Sequence: Tyr-Ala-Pro-Gly-Thr-Phe-Ile-Ser-Asp-Tyr-Ser-Ile-Ala-Met-Asp-Lys-Ile-Arg-Gln-Gln-Asp-Phe-Val-Asn-Trp-Leu-Leu-Ala-Gln-Arg-Gly-Lys-Lys-Ser-Asp-Trp-Lys-His-Asn-Ile-Thr-Gln

2. ANALYTICAL DATA

HPLC: Shows 97.3% purity
Mass Spectrum: Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid Theoretical			Actual		
Ala	3.00	2.88	Lys	4.00	4.04
Arg	2.00	2.00	Met	1.00	0.96
Asx	6.00	5.09	Phe	2.00	1.96
Cys			Pro	1.00	0.99
Glx	4.00	4.06	Ser	3.00	2.97
Gly	2.00	2.07	Thr	2.00	2.02
His	1.00	0.98	Trp	2.00	Not Detected
Ile	4.00	3.91	Tyr	2.00	2.02
Leu	2.00	2.01	Val	1.00	1.09

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

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Product Name: [Pro³]-GIP (Mouse)

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Description:

[Pro³]-GIP (Mouse) is a GIP receptor antagonist (IC₅₀ = 2.6μM). Inhibits GIP-stimulated insulin release from pancreatic β cells in vitro. In ob/ob mice, blocks the effects of GIP on insulin release and plasma glucose levels. Also improves intraperitoneal glucose tolerance, insulin sensitivity, and glucose response to feeding in ob/ob mice.

Physical and Chemical Properties:

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Batch Molecular Weight: 4971.62

Physical Appearance: White lyophilised solid

Peptide Sequence:

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

Storage: Store at -20°C

Solubility & Usage Info:

Soluble to 2 mg/ml in water

This product is supplied in lyophilized form. It may appear as a solid, gel or film and 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:

Irwin *et al* (2007) Early administration of the glucose-dependent Insotropic polypeptide receptor antagonist (Pro³)GIP prevents the development of diabetes and related metabolic abnormalities associated with genetically inherited obesity in ob/ob mice. *Diabetologia* **50** 1532. PMID: 17486314.

Gault *et al* (2002) Characterization of the cellular and metabolic effects of a novel enzyme-resistant antagonist of glucose-dependent Insotropic polypeptide. *Biochem.Biophys.Res.Comm.* **290** 1420. PMID: 11820780.

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