

Certificate of Analysis

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Product Name: Kisspeptin 10 (human)

Catalog No.: 2570

Batch No.: 8

CAS Number: 374675-21-5

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₆₃H₈₃N₁₇O₁₄
Batch Molecular Weight: 1302.45
Physical Appearance: White lyophilised solid
Counter Ion: TFA
Solubility: Soluble to 1 mg/ml in water
Storage: Store at -20°C
Peptide Sequence: Tyr-Asn-Trp-Asn-Ser-Phe-Gly-Leu-Arg-Phe-NH₂

2. ANALYTICAL DATA

HPLC: Shows 99.6% purity
Mass Spectrum: Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid		Theoretical	Actual	Amino Acid		Theoretical	Actual
Ala				Lys			
Arg	1.00	1.00	Met				
Asx	2.00	1.56	Phe	2.00	1.98		
Cys			Pro				
Glx			Ser	1.00	0.95		
Gly	1.00	1.01	Thr				
His			Trp	1.00	Detected		
Ile			Tyr	1.00	1.00		
Leu	1.00	1.01	Val				

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

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CAS Number: 374675-21-5

Description:

Kisspeptin 10 (human) is a potent endogenous ligand for the Kisspeptin receptor (KISS1, GPR54). Binds with high affinity to rat and human KISS1 receptors with K_i values of 1.59 and 2.33 nM respectively. Inhibits metastasis and invasion in mouse melanomas and stimulates gonadotropin secretion following i.c.v. administration. Analog also available.

Physical and Chemical Properties:

Batch Molecular Formula: $C_{63}H_{83}N_{17}O_{14}$

Batch Molecular Weight: 1302.45

Physical Appearance: White lyophilised solid

Peptide Sequence:

Tyr-Asn-Trp-Asn-Ser-Phe-Gly-Leu-Arg-Phe-NH₂

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:

Peilecka-Fortuna et al (2007) Kisspeptin acts directly and indirectly to increase GnRH neuron activity and its effects are modulated by OE. *Endocrinology* **149** 1979. PMID: 18162521.

Becker et al (2005) Activation of GPR54 promotes cell cycle arrest and apoptosis of human tumour cells through a specific transcriptional program not shared by other G_q-coupled receptors. *Biochem.Biophys.Res.Comm.* **326** 677.

Kotani et al (2001) The metastasis suppressor gene KiSS-1 encodes kisspeptins, the natural ligands of the orphan G protein-coupled receptor GPR54. *J.Biol.Chem.* **276** 34631. PMID: 11457843.

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