

Certificate of Analysis

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Product Name: Klotho-derived peptide 1

Catalog No.: 7830

Batch No.: 2

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula:	C ₁₄₉ H ₂₀₃ N ₃₉ O ₄₃
Batch Molecular Weight:	3228.48
Physical Appearance:	White lyophilised solid
Counter Ion:	TFA
Solubility:	Soluble to 1 mg/ml in water
Storage:	Store at -20°C
Peptide Sequence:	Phe-Gln-Gly-Thr-Phe-Pro-Asp-Gly-Phe-Leu- Trp-Ala-Val-Gly-Ser-Ala-Ala-Tyr-Gln-Thr- Glu-Gly-Gly-Trp-Gln-Gln-His-Gly-Lys-Gly

2. ANALYTICAL DATA

HPLC:	Shows 95.8% purity
Mass Spectrum:	Consistent with structure

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

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Product Name: Klotho-derived peptide 1**Catalog No.:** 7830**2****Description:**

Klotho-derived peptide 1 (KP1) is a peptide that binds to TGF- β receptor 2 (T β R2) (K_d = 1.4 μ M). It inhibits TGF- β signaling by blocking TGF- β /T β R2 interaction. In mouse models of renal fibrosis, intravenous injection of KP1 results in its specific accumulation in the injured kidneys. It suppresses TGF- β signaling, repressing fibroblast activation and ameliorates kidney fibrosis in vivo.

Physical and Chemical Properties:Batch Molecular Formula: C₁₄₉H₂₀₃N₃₉O₄₃

Batch Molecular Weight: 3228.48

Physical Appearance: White lyophilized solid

Peptide Sequence:

Phe-Gln-Gly-Thr-Phe-Pro-Asp-Gly-Phe-Leu-
Trp-Ala-Val-Gly-Ser-Ala-Ala-Tyr-Gln-Thr-
Glu-Gly-Gly-Trp-Gln-Gln-His-Gly-Lys-Gly

Storage: Store at -20°C**Solubility & Usage Info:**

Soluble to 1 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 μ m filter to remove potential bacterial contamination whenever possible.

References:

Yuan *et al* (2022) A Klotho-derived peptide protects against kidney fibrosis by targeting TGF- β signaling. *Nat. Commun.* **13** 438. PMID: 35064106.

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