

**Product Name:** Klotho-derived peptide 1

**Catalog No.:** 7830

**Batch No.:** 1

**1. PHYSICAL AND CHEMICAL PROPERTIES**

**Batch Molecular Formula:** C<sub>149</sub>H<sub>203</sub>N<sub>39</sub>O<sub>43</sub>  
**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 96.4% purity  
**Mass Spectrum:** Consistent with structure

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

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

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

**Physical and Chemical Properties:**Batch Molecular Formula: C<sub>149</sub>H<sub>203</sub>N<sub>39</sub>O<sub>43</sub>

Batch Molecular Weight: 3228.48

Physical Appearance: White lyophilised 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 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  $\mu$ 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- $\beta$  signaling. *Nat. Commun.* **13** 438. PMID: 35064106.

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