

Certificate of Analysis

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Product Name: K 41498
CAS Number: 434938-41-7

Catalog No.: 2070 **Batch No.:** 8

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₆₂H₂₇₆N₄₈O₄₆
Batch Molecular Weight: 3632.26
Physical Appearance: White lyophilised solid
Net Peptide Content: 72%
Counter Ion: TFA
Solubility: Soluble to 5 mg/ml in water
Storage: Desiccate at -20°C
Peptide Sequence: D-Phe-His-Leu-Leu-Arg-Lys-Nle-Ile-Glu-Ile-Glu-Lys-Gln-Glu-Lys-Glu-Lys-Gln-Gln-Ala-Ala-Asn-Asn-Arg-Leu-Leu-Leu-Asp-Thr-Ile-NH₂

2. ANALYTICAL DATA

HPLC: Shows 98.9% purity
Mass Spectrum: Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid		Theoretical	Actual	Amino Acid		Theoretical	Actual
Ala	2.00	2.04	Lys	4.00	4.00		
Arg	2.00	2.17	Met				
Asx	3.00	3.00	Phe	1.00	1.04		
Cys			Pro				
Glx	7.00	6.92	Ser				
Gly			Thr	1.00	0.77		
His	1.00	1.04	Trp				
Ile	3.00	2.86	Tyr				
Leu	5.00	4.61	Val				

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

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Product Name: K 41498

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Description:

Potent and highly selective CRF₂ receptor antagonist (K_i values are 0.66, 0.62 and 425 nM for human CRF_{2α}, CRF_{2β} and CRF₁ receptors respectively). Inhibits sauvagine-stimulated cAMP accumulation in hCRF_{2α}- and hCRF_{2β}-expressing cells. In rats in vivo, blocks urocortin-induced hypotension following systemic administration.

Physical and Chemical Properties:

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Batch Molecular Weight: 3632.26

Physical Appearance: White lyophilised solid

Peptide Sequence:

D-Phe-His-Leu-Leu-Arg-Lys-Nle-Ile-Glu-Ile-
Glu-Lys-Gln-Glu-Lys-Glu-Lys-Gln-Gln-Ala-
Ala-Asn-Asn-Arg-Leu-Leu-Leu-Asp-Thr-Ile-NH₂

Storage: Desiccate at -20°C

Solubility & Usage Info:

Soluble to 5 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.

Net Peptide Content: 72% (Remaining weight made up of counterions and residual water).

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.

Licensing Information:

Sold with the permission of the Max Planck Institute

References:

Lawrence et al (2002) The highly selective CRF2 receptor antagonist K41498 binds to presynaptic CRF2 receptors in rat brain. *Br.J.Pharmacol.* **136** 896. PMID: 12110614.

Ruhmann et al (2002) Design, synthesis and pharmacological characterization of new highly selective CRF2 antagonists: development of 123I-K31440 as a potential SPECT ligand. *Peptides* **23** 453. PMID: 11835994.

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