

Certificate of Analysis

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Product Name: ICI 174,864

Catalog No.: 0820

Batch No.: 5

CAS Number: 89352-67-0

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₃₈H₅₃N₅O₇
Batch Molecular Weight: 691.87
Physical Appearance: White lyophilised solid
Net Peptide Content: 77%
Counter Ion: TFA
Solubility: Soluble to 69.19 mg/ml in DMSO
Soluble to 1 mg/ml in water
Storage: Desiccate at -20°C
Peptide Sequence: *N,N*-diallyl-Tyr-Aib-Aib-Phe-Leu

2. ANALYTICAL DATA

HPLC: Shows 99.4% purity
Mass Spectrum: Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid Theoretical		Actual		Amino Acid Theoretical		Actual	
Ala				Lys			
Arg				Met			
Asx				Phe	1.00	0.99	
Cys				Pro			
Glx				Ser			
Gly				Thr			
His				Trp			
Ile				Tyr	1.00	Detected	
Leu	1.00	1.01		Val			

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

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Tel: +1 612 379 2956

Product Name: ICI 174,864

Catalog No.: 0820

Batch No.: 5

CAS Number: 89352-67-0

Description:

Selective δ opioid antagonist. Exhibits partial agonist in vitro activity at δ receptors at high concentrations.

Physical and Chemical Properties:

Batch Molecular Formula: C₃₈H₅₃N₅O₇

Batch Molecular Weight: 691.87

Physical Appearance: White lyophilised solid

Peptide Sequence:

N,N-diallyl-Tyr-Aib-Aib-Phe-Leu

Storage: Desiccate at -20°C

Solubility & Usage Info:

Soluble to 69.19 mg/ml in DMSO

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.

Net Peptide Content: 77% (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 μ m filter to remove potential bacterial contamination whenever possible.

Licensing Information:

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References:

Cohen et al (1996) Opioid agonist activity of ICI 174864 and its carboxypeptidase degradation product, LY281217. *J.Pharmacol.Exp.Ther.* **238** 769. PMID: 2875170.

Cowan et al (1985) Studies *in vivo* with ICI-174,864 and [D-Pen²,D-Pen⁵]-enkephalin. *Neuropeptides* **5** 311. PMID: 2987731.

Hirning et al (1985) Studies *in vitro* with ICI-174,864 [D-Pen²,D-Pen⁵]-enkephalin (DPDPE) and [D-Ala²,NMePhe⁴,Gly-ol]-enkephalin (DAGO). *Neuropeptides* **5** 383. PMID: 2987739.

Cotton et al (1984) ICI-174,864: a highly selective antagonist for the opioid δ receptor. *Eur.J.Pharmacol.* **97** 331. PMID: 6323195.

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