

Certificate of Analysis

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Product Name: β-Funaltrexamine hydrochloride

Catalog No.: 0926 Batch No.: 9

CAS Number: IUPAC Name: 72786-10-8

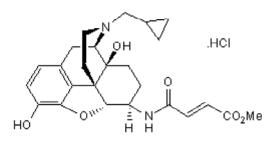
: (*E*)-4-[[5α,6β)-17-Cyclopropylmethyl)-4,5-epoxy-3,14-dihydroxymorphinan-6-yl]amino]-4-oxo-2-butenoicacid methyl ester hydrochloride

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: Batch Molecular Weight: Physical Appearance: Solubility: $C_{25}H_{30}N_2O_6$.HCI.1¹/₄H₂O 513.51 White solid water to 20 mM with gentle warming DMSO to 100 mM Store at -20°C

Storage:

Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: HPLC: ¹H NMR: Mass Spectrum: Microanalysis:

R_f = 0.4 (Dichloromethane:Methanol:Ammonia soln. [95:5:0.1]) Shows 98.9% purity Consistent with structure Consistent with structure Carbon Hydrogen Nitrogen

Theoretical	58.48	6.58	5.46
Found	58.2	6.49	5.53

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

bio-techne.com	North America	China	Europe Middle East Africa	Rest of World
info@bio-techne.com techsupport@bio-techne.com	Tel: (800) 343 7475	info.cn@bio-techne.com Tel: +86 (21) 52380373	Tel: +44 (0)1235 529449	www.tocris.com/distributors Tel:+1 612 379 2956



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me: $(E)-4-[[5\alpha,6\beta)-17-Cyclopropylmethyl)-4,5-epoxy-3,14-dihydroxymorphinan-6-yl]amino]-4-oxo-2-butenoicacid methyl ester hydrochloride$

Description:

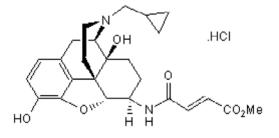
Selective μ opioid receptor antagonist.

Physical and Chemical Properties:

Batch Molecular Formula: C₂₅H₃₀N₂O₆.HCl.1¼H₂O Batch Molecular Weight: 513.51 Physical Appearance: White solid

Minimum Purity: ≥98%

Batch Molecular Structure:



Storage: Store at -20°C

Solubility & Usage Info:

water to 20 mM with gentle warming DMSO to 100 mM

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).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

Licensing Information:

Sold with the permission of the University of Minnesota

References:

Jiang *et al* (1990) μ Antagonist and κ agonist properties of β -funaltrexamine (β -FNA) *in vivo*: long lasting spinal analgesia in mice. J.Pharmacol.Exp.Ther. **252** 1006. PMID: 2156986.

Takemorei *et al* (1981) The irreversible narcotic antagonist and reversible agonist properties of the fumarate methyl ester derivative of naltr. Eur.J.Pharmacol. **70** 445. PMID: 6263637.

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bio-techne.com	North America	China	Europe Middle East Africa	Rest of World
info@bio-techne.com techsupport@bio-techne.com	Tel: (800) 343 7475	info.cn@bio-techne.com Tel: +86 (21) 52380373	Tel: +44 (0)1235 529449	www.tocris.com/distributors Tel:+1 612 379 2956