

Product Name: Linopirdine dihydrochloride

Catalog No.: 1999

Batch No.: 2

CAS Number: 113168-57-3

IUPAC Name: 1,3-Dihydro-1-phenyl-3,3-bis(4-pyridinylmethyl)-2H-indol-2-one dihydrochloride

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₆H₂₁N₃O.2HCl.¼H₂O

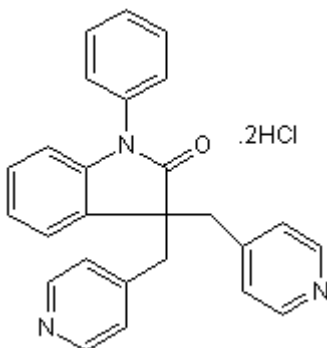
Batch Molecular Weight: 468.89

Physical Appearance: White solid

Solubility: water to 100 mM
DMSO to 100 mM
ethanol to 100 mM

Storage: Desiccate at RT

Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.33 (Dichloromethane:Methanol [95:5])

Melting Point: Between 256 - 257°C

HPLC: Shows 100% purity

¹H NMR: Consistent with structure

¹³C NMR: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	66.6	5.05	8.96
Found	66.61	4.98	8.96

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

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Description:

Blocker of K_v7 (KCNQ) voltage-gated potassium channels; blocks K_v7.1 + 7.3 (KCNQ2 + 3) / M-currents (IC₅₀ = 4 - 7 μM) and K_v7.1 (KCNQ1) homomeric channels (IC₅₀ = 8.9 μM). Augments hippocampal ACh release and is a cognitive enhancer following oral administration in vivo.

Physical and Chemical Properties:

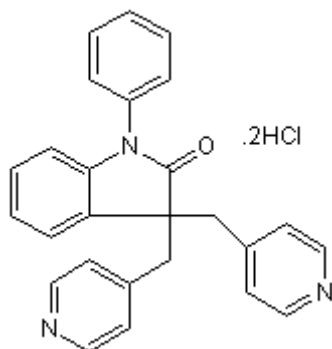
Batch Molecular Formula: C₂₆H₂₁N₃O.2HCl.¼H₂O

Batch Molecular Weight: 468.89

Physical Appearance: White solid

Minimum Purity: >99%

Batch Molecular Structure:



References:

Schnee and Brown (1998) Selectivity of linopirdine (DuP 966), a neurotransmitter release enhancer, in blocking voltage-dependent and calcium-activated potassium currents in hippocampal neurons. *J.Pharmacol.Exp.Ther.* **286** 709. PMID: 9694925.

Wang et al (1998) KCNQ2 and KCNQ3 potassium channel subunits: molecular correlates of the M-channel. *Science* **282** 1890. PMID: 9836639.

Zaczek et al (1998) Two new potent neurotransmitter release enhancers, 10,10-bis(4-pyridinylmethyl)-9(10H)-anthracenone and 10,10-bis(2-fluoro-4-pyridinylmethyl)-9(10H)-anthracenone: comparison to linopirdine. *J.Pharmacol.Exp.Ther.* **285** 724. PMID: 9580619.

Storage: Desiccate at RT

Solubility & Usage Info:

water to 100 mM
DMSO to 100 mM
ethanol 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.

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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