

Product Name: 3-pyr-Cytisine

Catalog No.: 4125

Batch No.: 1

CAS Number: 948027-43-8

IUPAC Name: (1*R*,5*S*)-1,2,3,4,5,6-Hexahydro-9-(3-pyridinyl)-1,5-methano-8*H*-pyrido[1,2-*a*][1,5]diazocin-8-one

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₆H₁₇N₃O·¼H₂O

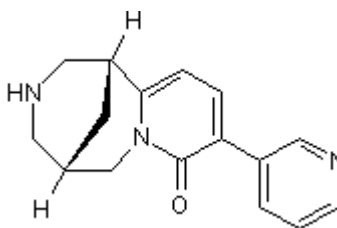
Batch Molecular Weight: 271.83

Physical Appearance: White solid

Solubility: water to 100 mM
DMSO to 100 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.2 (Chloroform:Methanol [4:1])

HPLC: Shows >99.8% purity

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Optical Rotation: [α]_D = -88.1 (Concentration = 1.13, Solvent = Water)

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	70.7	6.49	15.46
Found	70.86	6.3	15.3

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

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 USA & CANADA Tel: (800) 343-7475 EUROPE Tel: +44 (0)1235 529449 CHINA Tel: +86 (21) 52380373
www.RnDSystems.com

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Description:

High affinity $\alpha 4\beta 2$ partial agonist (K_i values are 0.91, 119 and 1100 nM for $\alpha 4\beta 2$, $\alpha 3\beta 4$ and $\alpha 7$ receptors respectively). Shows little activity at $\alpha 3\beta 4$ and $\alpha 7$ receptors. Exhibits antidepressant-like effects in mouse models of antidepressant efficacy.

Physical and Chemical Properties:

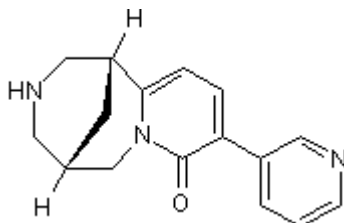
Batch Molecular Formula: $C_{16}H_{17}N_3O \cdot \frac{1}{4}H_2O$

Batch Molecular Weight: 271.83

Physical Appearance: White solid

Minimum Purity: >98%

Batch Molecular Structure:



Storage: Store at -20°C

CAUTION - This product is light sensitive and we recommend that the solid material and any solutions obtained are protected from exposure to light.

Solubility & Usage Info:

water to 100 mM
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.

References:

Mineur et al (2009) Cytisine-based nicotinic partial agonists as novel antidepressant compounds. *J.Pharmacol.Exp.Ther.* **329** 377. PMID: 19164465.

Papke et al (2010) Activation and inhibition of mouse muscle and neuronal nicotinic acetylcholine receptors expressed in *Xenopus* oocytes. *J.Pharmacol.Exp.Ther.* **333** 501. PMID: 20100906.

Papke et al (2011) Electrophysiological perspectives on the therapeutic use of nicotinic acetylcholine receptor partial agonists. *J.Pharmacol.Exp.Ther.* **337** 1.

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