

## Certificate of Analysis

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**Product Name:** SEN 12333

**Catalog No.:** 4441

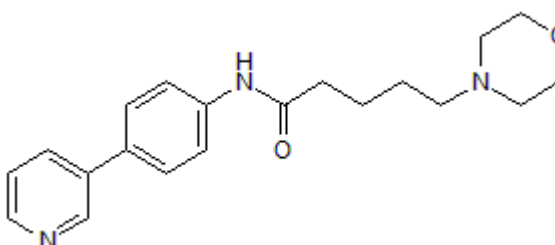
**Batch No.:** 1

**CAS Number:** 874450-44-9

**IUPAC Name:** *N*-[4-(3-pyridinyl)phenyl]-4-morpholinepentanamide

### 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:**  $C_{20}H_{25}N_3O_2 \cdot \frac{1}{2}H_2O$   
**Batch Molecular Weight:** 348.44  
**Physical Appearance:** White crystalline solid  
**Solubility:** DMSO to 100 mM  
**Storage:** Store at RT  
**Batch Molecular Structure:**



### 2. ANALYTICAL DATA

**TLC:**  $R_f = 0.2$  (Dichloromethane:Methanol [9:1])  
**HPLC:** Shows >99.4% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure  
**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	68.94	7.52	12.06
Found	69.01	7.55	12.25

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

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## Product Information

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### Description:

$\alpha 7$  nicotinic acetylcholine receptor (nAChR) agonist ( $EC_{50}$  = 1.6  $\mu$ M,  $K_i$  = 260 nM at rat  $\alpha 7$  nAChRs). Also displays functional antagonism at histamine  $H_3$  receptors ( $IC_{50}$  = 103 nM) and weak agonist activity at human ganglionic  $\alpha 3$  nAChRs ( $IC_{50}$  = 8.5  $\mu$ M). Neuroprotective in a rodent model of quisqualic acid-induced cholinergic degeneration. Brain penetrant and orally bioavailable.

### Physical and Chemical Properties:

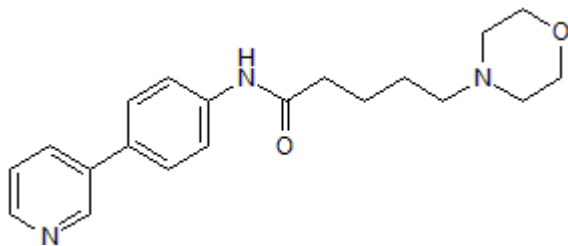
Batch Molecular Formula:  $C_{20}H_{25}N_3O_2 \cdot \frac{1}{2}H_2O$

Batch Molecular Weight: 348.44

Physical Appearance: White crystalline solid

**Minimum Purity:** >99%

### Batch Molecular Structure:



**Storage:** Store at RT

### Solubility & Usage Info:

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:

**Roncarati et al** (2009) Procognitive and neuroprotective activity of a novel  $\alpha 7$  nicotinic acetylcholine receptor agonist for treatment of neurodegenerative and cognitive disorders. *J.Pharmacol.Exp.Ther.* **329** 459. PMID: 19223665.

**Beinat et al** (2012) Consequences of linker length alteration of the  $\alpha 7$  nicotinic acetylcholine receptor (nAChR) agonist, SEN12333. *Bioorg.Med.Chem.Lett.* **22** 2380. PMID: 22410083.

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