

Certificate of Analysis

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Product Name: PNU 282987

Catalog No.: 2303

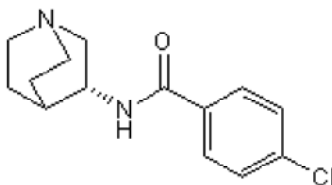
Batch No.: 5

CAS Number: 711085-63-1

IUPAC Name: *N*-(3*R*)-1-Azabicyclo[2.2.2]oct-3-yl-4-chlorobenzamide

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₄H₁₇ClN₂O
Batch Molecular Weight: 264.75
Physical Appearance: White solid
Solubility: 1eq. HCl to 100 mM
 DMSO to 100 mM
Storage: Store at RT
Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.3 (9:1 CHCl₃:MeOH (NH₄OH atmosphere))
HPLC: Shows 99.4% purity
¹H NMR: Consistent with structure
 Mass Spectrum: Consistent with structure
 Optical Rotation: [α]_D = +58.8 (Concentration = 24, Solvent = Chloroform)
 Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	63.51	6.47	10.58
Found	63.28	6.52	10.59

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

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Description:

Highly selective $\alpha 7$ nAChR agonist ($K_i = 26$ nM) displaying negligible blockade of $\alpha 1\beta 1\gamma \delta$ and $\alpha 3\beta 4$ nAChRs ($IC_{50} \geq 60$ μ M). Found to be inactive against a panel of 32 receptors at 1 μ M, except 5-HT₃ receptors ($K_i = 930$ nM).

Physical and Chemical Properties:

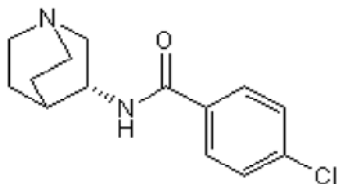
Batch Molecular Formula: C₁₄H₁₇ClN₂O

Batch Molecular Weight: 264.75

Physical Appearance: White solid

Minimum Purity: >98%

Batch Molecular Structure:



Storage: Store at RT

Solubility & Usage Info:

1eq. HCl 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:

Bodnar *et al* (2005) Discovery and structure-activity relationship of quinuclidine benzamides as agonists of $\alpha 7$ nicotinic acetylcholine receptors. *J.Med.Chem.* **48** 905. PMID: 15715459.

Hajós *et al* (2005) The selective $\alpha 7$ nicotinic acetylcholine receptor agonist PNU-282987 [N-[(3*R*)-1-Azabicyclo[2.2.2]oct-3-yl]-4-chlorobenzamide hydrochloride] enhances GABAergic synaptic activity in brain slices and restores auditory gating deficits in anesthe *J.Pharmacol.Exp.Ther.* **312** 1213. PMID: 15523001.

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