

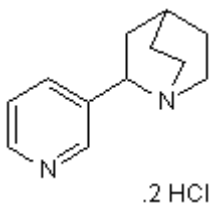
Certificate of Analysis

Product Name: RJR 2429 dihydrochloride
CAS Number: 1021418-53-0
IUPAC Name: (±)-2-(3-Pyridinyl)-1-azabicyclo[2.2.2]octane dihydrochloride

Catalog No.: 1271 **Batch No.:** 2

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₂H₁₆N₂·2HCl·¼H₂O
Batch Molecular Weight: 265.69
Physical Appearance: White solid
Solubility: water to 100 mM
DMSO to 100 mM
Storage: Desiccate at RT
Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.19 (Chloroform:Methanol [9:1])
HPLC: Shows >98.8% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure
Microanalysis:

| | Carbon Hydrogen Nitrogen | | |
|-------------|--------------------------|------|-------|
| Theoretical | 54.25 | 7.02 | 10.54 |
| Found | 54.29 | 7.36 | 10.49 |

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

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Description:

Potent nAChR agonist that displays selectivity for $\alpha 4\beta 2$ ($K_i = 1$ nM) and $\alpha 1\beta \gamma \delta$ subtypes (EC_{50} values are 297 and 55 nM respectively). Induces dopamine release from striatal neurons ($EC_{50} = 2$ nM) and inhibits ion flux in thalamic neurons ($IC_{50} = 154$ nM). Also putative $\alpha 3\beta 4$ agonist that potentiates catecholamine release.

Physical and Chemical Properties:

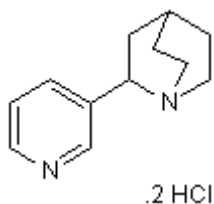
Batch Molecular Formula: $C_{12}H_{16}N_2 \cdot 2HCl \cdot \frac{1}{4}H_2O$

Batch Molecular Weight: 265.69

Physical Appearance: White solid

Minimum Purity: >98%

Batch Molecular Structure:



References:

Bencherif *et al* (1998) The heterocyclic substituted pyridine derivative (±)-2-(3-pyridinyl)-1-azabicyclo[2.2.2]octane (RJR-2429): a selective ligand at nicotinic acetylcholine receptors. *J.Pharmacol.Exp.Ther.* **284** 886. PMID: 9495846.

Yokotani *et al* (2002) Characterization of functional nicotinic acetylcholine receptors involved in catecholamine release from isolated rat adrenal gland. *Eur.J.Pharmacol.* **446** 83. PMID: 12098588.

Bhatti *et al* (2008) Synthesis of 2-(pyridin-3-yl)-1-azabicyclo[3.2.2]nonane, 2-(pyridin-3-yl)-1-azabicyclo[2.2.2]octane, and 2-(pyridin-3-yl)-1-azabicyclo[3.2.1]octane, a class of potent nicotinic acetylcholine receptor-ligands. *J.Org.Chem.* **73** 3497. PMID: 18363376.

Storage: Desiccate at RT

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.

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