

Product Name: N⁶-Cyclopentyladenosine

Catalog No.: 1702

Batch No.: 7

CAS Number: 41552-82-3

IUPAC Name: N-Cyclopentyladenosine

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₅H₂₁N₅O₄·¼H₂O

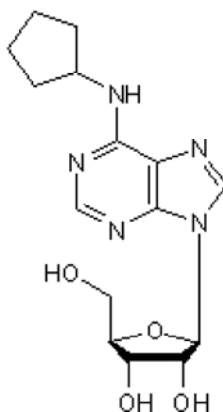
Batch Molecular Weight: 339.86

Physical Appearance: White solid

Solubility: 1eq. HCl to 100 mM
ethanol to 25 mM
DMSO to 100 mM

Storage: Desiccate at +4°C

Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.48 (Dichloromethane:Methanol [9:1])

HPLC: Shows 100% purity

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	53.01	6.38	20.61
Found	53.02	6.42	20.67

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

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CAS Number: 41552-82-3

IUPAC Name: N-Cyclopentyladenosine

Description:

Potent and selective adenosine A₁ receptor agonist (K_i values are 2.3, 790 and 43 nM for human A₁, A_{2A} and A₃ receptors respectively; EC₅₀ = 18600 nM for hA_{2B}). Centrally active following systemic administration in vivo.

Physical and Chemical Properties:

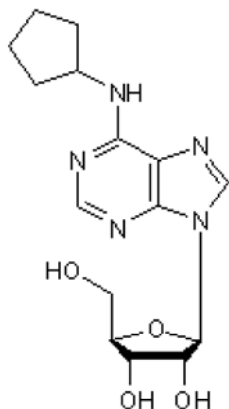
Batch Molecular Formula: C₁₅H₂₁N₅O₄·¼H₂O

Batch Molecular Weight: 339.86

Physical Appearance: White solid

Minimum Purity: >99%

Batch Molecular Structure:



Storage: Desiccate at +4°C

Solubility & Usage Info:

1eq. HCl to 100 mM

ethanol to 25 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:

Klotz (2000) Adenosine receptors and their ligands. *Naunyn Schmiedebergs Arch.Pharmacol.* **362** 382. PMID: 11111832.

Van der Graaf et al (1997) Mechanism-based pharmacokinetic-pharmacodynamic modeling of the effects of N⁶-cyclopentyladenosine analogs on heart rate in rat: estimation of *in vivo* operational affinity and efficacy at adenosine A₁ receptors. *J.Pharmacol.Exp.Ther.* **283** 809. PMID: 9353402.

Coffin and Spealman (1987) Behavioral and cardiovascular effects of analogs of adenosine in Cynomolgus monkeys. *J.Pharmacol.Exp.Ther.* **241** 76. PMID: 3572798.

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