

**Product Name:** *N*<sup>6</sup>-Cyclohexyladenosine

**Catalog No.:** 6863

**Batch No.:** 1

CAS Number: 36396-99-3

IUPAC Name: *N*-Cyclohexyladenosine

**1. PHYSICAL AND CHEMICAL PROPERTIES**

**Batch Molecular Formula:** C<sub>16</sub>H<sub>23</sub>N<sub>5</sub>O<sub>4</sub>·¼H<sub>2</sub>O

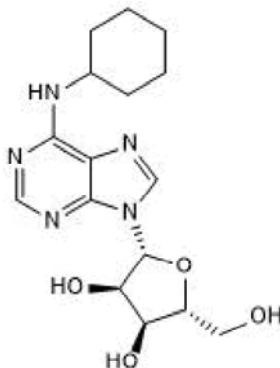
**Batch Molecular Weight:** 353.88

**Physical Appearance:** Off White solid

**Solubility:** DMSO to 100 mM  
ethanol to 20 mM

**Storage:** Store at -20°C

**Batch Molecular Structure:**



**2. ANALYTICAL DATA**

**HPLC:** Shows 99.4% purity

**<sup>1</sup>H NMR:** Consistent with structure

**Mass Spectrum:** Consistent with structure

**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	54.3	6.69	19.79
Found	54.34	6.65	19.76

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

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**Description:**

High affinity adenosine A<sub>1</sub> receptor agonist (K<sub>d</sub> values are 0.7 and 6 nM for bovine and guinea pig brain membranes, respectively). Reduces light-induced circadian phase delays. Exhibits protective effect in lysolecithin-induced demyelination model. When administered prior to ischemia, improves functional recovery of heart in a mouse model of ischemia-reperfusion injury. Induces hypothermia following icv administration in mice.

**Physical and Chemical Properties:**

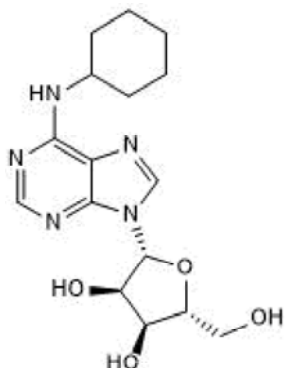
Batch Molecular Formula: C<sub>16</sub>H<sub>23</sub>N<sub>5</sub>O<sub>4</sub>·¼H<sub>2</sub>O

Batch Molecular Weight: 353.88

Physical Appearance: Off White solid

**Minimum Purity:** >98%

**Batch Molecular Structure:**



**References:**

**Futatsuki et al** (2018) Involvement of orexin neurons in fasting- and central adenosine-induced hypothermia. *Sci.Rep.* **8** 2717. PMID: 29426934.

**Shao et al** (2017) Adenosine A<sub>1</sub> receptor activation increases myocardial protein S-nitrosothiols and elicits protection from ischemia-reperfusion injury in male and female hearts. *PLoS One* **12** e0177315. PMID: 28493997.

**Asghari et al** (2013) Adenosine A<sub>1</sub> receptor agonist, *N*<sup>6</sup>-cyclohexyladenosine, protects myelin and induces remyelination in an experimental model of rat optic chiasm demyelination; electrophysiological and histopathological studies. *J.Neurol.Sci.* **325** 22. PMID: 23260322.

**Sigworth and Rea et al** (2003) Adenosine A<sub>1</sub> receptors regulate the response of the mouse circadian clock to light. *Brain Res.* **960** 246. PMID: 12505678.

**Bruns et al** (1980) Adenosine receptors in brain membranes: binding of *N*<sup>6</sup>-cyclohexyl[<sup>3</sup>H]adenosine and 1,3-diethyl-8-[<sup>3</sup>H]phenylxanthine. *Proc.Natl.Acad.Sci.U.S.A.* **77** 5547. PMID: 6254090.

**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:**

DMSO to 100 mM

ethanol to 20 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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