

IUPAC Name:

# **Certificate of Analysis**

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Product Name: Cordycepin Catalog No.: 2294 Batch No.: 2

CAS Number: 73-03-0 EC Number: 200-791-4

1. PHYSICAL AND CHEMICAL PROPERTIES

3'-Deoxyadenosine

Batch Molecular Formula:  $C_{10}H_{13}N_5O_3.1\frac{1}{4}H_2O$ 

Batch Molecular Weight: 273.76

Physical Appearance: White solid

Solubility: DMSO to 100 mM
Storage: Desiccate at +4°C

**Batch Molecular Structure:** 

HO OH

2. ANALYTICAL DATA

**HPLC:** Shows 99.3% purity

<sup>1</sup>H NMR: Consistent with structure Mass Spectrum: Consistent with structure

Microanalysis: Carbon Hydrogen Nitrogen

Theoretical 43.88 5.71 25.58 Found 43.98 5.62 25.52



# **Product Information**

Print Date: May 18th 2012

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CAS Number: 73-03-0 EC Number: 200-791-4

IUPAC Name: 3'-Deoxyadenosine

# **Description:**

Nucleoside analog that acts as an anticancer and antifungal agent. Can be converted to 3'-deoxyadenosine triphosphate (3'-dATP), which inhibits ATP-dependent DNA synthesis. Inhibits growth of various tumor cells in vitro.

## **Physical and Chemical Properties:**

Batch Molecular Formula:  $C_{10}H_{13}N_5O_3$ . 1 1/4  $H_2O$ 

Batch Molecular Weight: 273.76 Physical Appearance: White solid

Minimum Purity: >99%

#### **Batch Molecular Structure:**

Storage: Desiccate at +4°C

# 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:

**Gumport and Edelhei** *et al* (1976) The synthesis of 3'-dATP and its use as an inhibitor of ATP-dependent DNA synthesis in toluene-treated Escherichia coli. Biochemistry *15* 2804. PMID: 779831.

Sugar and McCaffrey (1998) Antifungal activity of 3'-deoxyadenosine (cordycepin). Antimicrob.Agents Chemother. 42 1424.

Kodama et al (2000) Antileukemic activity and mechanism of action of cordycepin against terminal deoxynucleotidyl transferase-positive (TdT+) leukemic cells. Biochem.Pharmacol. **59** 273. PMID: 10609556.

