

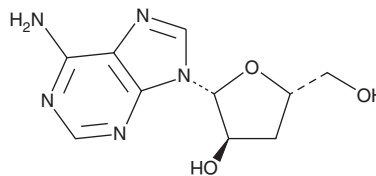
PRODUCT INFORMATION



Cordycepin

Item No. 14426

CAS Registry No.: 73-03-0
Formal Name: 3'-deoxy-adenosine
Synonyms: 3'-Deoxyadenosine, NSC 63984, NSC 401022
MF: C₁₀H₁₃N₅O₃
FW: 251.2
Purity: ≥98%
UV/Vis.: λ_{max}: 210, 260 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years
Item Origin: Fungus/*Cordyceps militaris*



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Cordycepin is supplied as a crystalline solid. A stock solution may be made by dissolving the cordycepin in the solvent of choice, which should be purged with an inert gas. Cordycepin is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of cordycepin in these solvents is approximately 10 and 2.5 mg/ml, respectively.

Cordycepin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, cordycepin should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Cordycepin has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Cordycepin is a nucleoside analog originally isolated from *C. militaris* that has diverse biological activities.¹⁻⁵ Upon entry into cells, it is converted to cordycepin triphosphate, which inhibits ATP-dependent DNA and RNA synthesis.² It incorporates into DNA and RNA at internal and terminal positions in SK-HEP-1 cells.³ Cordycepin (0.1-1 mg/ml) is active against *B. subtilis*.¹ It increases IL-10 secretion and mRNA expression in isolated human peripheral blood mononuclear cells (PBMCs) when used at a concentration of 24 μg/ml.⁴ Cordycepin (1 mg/kg per day) increases survival of mice infected with *C. albicans* or *C. krusei*.⁵

References

1. Cunningham, K.G., Manson, W., Spring, F.S., et al. Cordycepin, a metabolic product isolated from cultures of *Cordyceps militaris* (Linn.) Link. *Nature* **166(4231)**, 949 (1950).
2. Wong, Y.Y., Moon, A., Duffin, R., et al. Cordycepin inhibits protein synthesis and cell adhesion through effects on signal transduction. *J. Biol. Chem.* **285(4)**, 2610-2621 (2010).
3. Cory, J.G., Suhadolnik, R.J., Resnick, B., et al. Incorporation of cordycepin (3'-deoxyadenosine) into ribonucleic acid and deoxyribonucleic acid of human tumor cells. *Biochim. Biophys. Acta* **103(4)**, 646-653 (1965).
4. Zhou, X., Meyer, C.U., Schmidtke, P., et al. Effect of cordycepin on interleukin-10 production of human peripheral blood mononuclear cells. *Eur. J. Pharmacol.* **453(2-3)**, 309-317 (2002).
5. Sugar, A.M. and McCaffrey, R.P. Antifungal activity of 3'-deoxyadenosine (cordycepin). *Antimicrob. Agents Chemother.* **42(6)**, 1424-1427 (1998).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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