



LKT Laboratories, Inc.

## Azacitidine

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### Product Information

**Product ID** A9602

**CAS No.** 320-67-2

**Chemical Name** 4-amino-1-β-D-ribofuranosyl-1,3,5-triazin-2(1H)-one

**Synonym** 4-Amino-1-(β-D-ribofuranosyl)-1,3,5-triazin-2(1H)-one, Ladakamycin, 5-azacytidine.

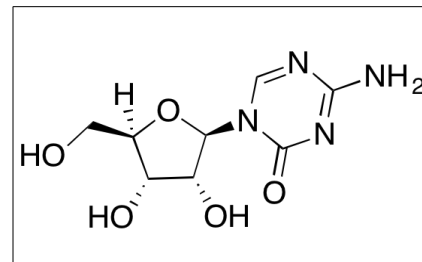
**Formula** C<sub>8</sub>H<sub>12</sub>N<sub>4</sub>O<sub>5</sub>

**Formula Wt.** 244.20

**Melting Point** 226-232 °C

**Purity** ≥98%

**Solubility** Soluble in water, but unstable.



### Pricing and Availability

**Bulk quantities available upon request**

Product ID	Size	List Price
A9602	100 mg	\$59.50
A9602	250 mg	\$139.00
A9602	1 g	\$459.60

**Store Temp** Ambient

**Ship Temp** Ambient

**Description** Azacytidine is a cytidine analog that is incorporated into DNA, inhibiting DNA methyltransferase (DNMT) activity and preventing DNA repair. This demethylating agent is clinically used to treat myelodysplastic syndromes and potentiates the effects of other chemotherapeutics, such as cisplatin. Azacytidine exhibits anticancer chemotherapeutic, immunomodulatory, and antiviral activities. In vitro, azacytidine increases levels of Bax and Bcl-2 in astrocytoma cells, and induces differentiation of mesenchymal stem cells into cardiomyocytes. In vivo, azacytidine increases glial differentiation and decreases cell proliferation, inhibiting tumor growth of glioma xenografts. Additionally, azacytidine decreases cell growth and inhibits tumor xenografts of myelodysplastic cells. In leukoblasts, this compound upregulates the expression of tumor antigens, and in vivo, it increases the number of Treg and CD8+ T cells. Azacytidine also inhibits replication of HIV in cellular models without displaying cytotoxicity.

**References** Borodovsky A, Salmasi V, Turcan S, et al. 5-azacytidine reduces methylation, promotes differentiation and induces tumor regression in a patient-derived IDH1 mutant glioma xenograft. *Oncotarget*. 2013 Oct;4(10):1737-47. PMID: 24077805.

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Tsujioka T, Yokoi A, Uesugi M, et al. Effects of DNA methyltransferase inhibitors (DNMTIs) on MDS-derived cell lines. *Exp Hematol*. 2013 Feb;41(2):189-97. PMID: 23085465.

Kimura S, Kuramoto K, Homan J, et al. Antiproliferative and antitumor effects of azacitidine against the human myelodysplastic syndrome cell line SKM-1. *Anticancer Res*. 2012 Mar;32(3):795-8. PMID: 22399596.

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Ye NS, Chen J, Luo GA, et al. Proteomic profiling of rat bone marrow mesenchymal stem cells induced by 5-azacytidine. *Stem Cells Dev*. 2006 Oct;15(5):665-76. PMID: 17105402.

**Caution:** This product is intended for laboratory and research use only. It is not for human or drug use.