



Product Information

Product ID A9603

CAS No. 2353-33-5

Chemical Name

Synonym 2'-Deoxy-5-azacytidine, 4-Amino-1-(2-deoxy-β-D-ribofuranosyl)-1,3,5-triazin-2(1H)-one, Decitabine

Formula C₈H₁₂N₄O₄

Formula Wt. 228.21

Melting Point

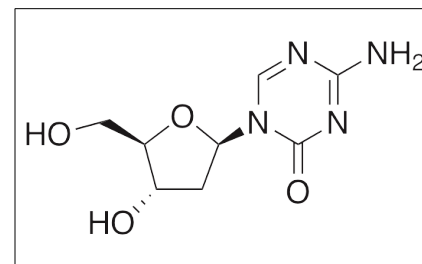
Purity ≥98%

Solubility acetic acid: water (1:1): 50 mg/mL

Store Temp Ambient

Ship Temp Ambient

Description Decitabine is a deoxycytidine analog that is incorporated into DNA, inhibiting DNA methyltransferase (DNMT1/3A/3B) activity. This demethylating agent is clinically used to treat myelodysplastic syndromes. Decitabine's inhibition of DNA methyltransferase may be modulated by PKC. Decitabine exhibits anticancer chemotherapeutic, immunomodulatory, and neurotoxic activities. In cellular models of acute myelogenous leukemia (ALL), decitabine demethylation prevents cancer cell inactivation of TRAIL signaling, increasing apoptosis and cell death. In vivo, decitabine stimulates increases in cancer testis antigen-specific cytotoxic (CD8+) T cell activity. In dopaminergic neurons, this compound induces apoptosis and upregulation of tyrosine hydroxylase and α-synuclein, suggesting complications for use in subjects with Parkinson's disease. Decitabine also inhibits replication of HIV in cellular models without displaying cytotoxicity. Additionally, this compound shows benefit in the treatment of sickle-cell anemia through its stimulation of fetal hemoglobin production.



Bulk quantities available upon request

Product ID	Size
A9603	5 mg
A9603	10 mg
A9603	50 mg

References Zhou JH, Yao YS, Wang LX, et al. Demethylating agent decitabine induces autologous cancer testis antigen specific cytotoxic T lymphocytes in vivo. *Chin Med J (Engl)*. 2013 Dec;126(23):4552-6. PMID: 24286424.

Wang Y, Wang X, Li R, et al. A DNA methyltransferase inhibitor, 5-aza-2'-deoxycytidine, exacerbates neurotoxicity and upregulates Parkinson's disease-related genes in dopaminergic neurons. *CNS Neurosci Ther*. 2013 Mar;19(3):183-90. PMID: 23441691.

Soncini M, Santoro F, Gutierrez A, et al. The DNA demethylating agent decitabine activates the TRAIL pathway and induces apoptosis in acute myeloid leukemia. *Biochim Biophys Acta*. 2013 Jan;1832(1):114-20. PMID: 23046813.

Datta J, Ghoshal K, Motiwala T, et al. Novel Insights into the Molecular Mechanism of Action of DNA Hypomethylating Agents: Role of Protein Kinase C δ in Decitabine-Induced Degradation of DNA Methyltransferase 1. *Genes Cancer*. 2012 Jan;3(1):71-81. PMID: 22893792.

Saba HI. Decitabine in the treatment of myelodysplastic syndromes. *Ther Clin Risk Manag*. 2007 Oct;3(5):807-17. PMID: 18473005.

Momparker RL. Pharmacology of 5-Aza-2'-deoxycytidine (decitabine). *Semin Hematol*. 2005 Jul;42(3 Suppl 2):S9-16. PMID: 16015507.

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