Azacitidine 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. Azacitidine exhibits anticancer chemotherapeutic, immunomodulatory, and antiviral activities. In vitro, azacitidine increases levels of Bax and Bcl-2 in astrocytoma cells, and induces differentiation of mesenchymal stem cells into cardiomyocytes. In vivo, azacitidine increases glial differentiation and decreases cell proliferation, inhibiting tumor growth of glioma xenografts. Additionally, azacitidine 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. Azacitidine also inhibits replication of HIV in cellular models without displaying cytoxicity.

References


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