

Decitabine

Catalog Number P015-10MG

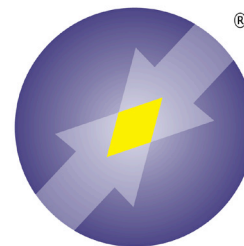
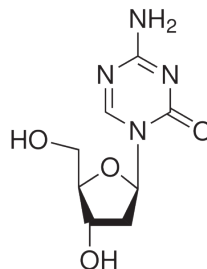
Catalog Number P015-50MG

FEATURES

DNA Methyltransferase inhibitor

Hypermethylating agent

Inhibits melanoma cancer cell growth



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INTRODUCTION

Cytosine analog, that when incorporated into DNA, acts as a suicide substrate for DNA methyltransferase. Inhibits DNA methyltransferase and results in DNA hypomethylation and activation of silent genes. Chemotherapeutic agent; suppresses growth of human tumor cell lines. Demethylates differentiation-related genes; reverses embryonic stem cell differentiation. Decitabine is an epigenetic modifier that gives rise to DNA demethylation (hypomethylation) and gene activation by remodeling "opening" chromatin. Genes are synergistically reactivated when demethylation is combined with histone hyperacetylation. This remodeling of chromatin structure allows transcription factors to bind to the promoter regions, assembly of the transcription complex, and gene expression.

FORM: White solid

MOLECULAR WEIGHT: 228.21

STORAGE: 4°C

FORMULA: $C_8H_{12}N_4O_4$

CAS NUMBER: 2353-33-5

OTHER NAMES: 2'-Deoxy-5-azacytidine, 5-Aza-2'-deoxycytidine, NSC 127716, 4-Amino-1-(2-deoxy-β-D-erythro-pentofuranosyl)-1,3,5-triazin-2(1H)-one

USES: Soluble in water and DMSO to 50mM

REFERENCES:

Chiurazzi, P., et al., Synergistic effect of histone hyperacetylation and DNA demethylation in the reactivation of the FMR1 gene. *Hum. Mol. Genet.*, 8, 2317-2323 (1999).

Slack, A., et al., Feedback regulation of DNA methyltransferase gene expression by methylation. *Eur. J. Biochem.*, 264,191-199 (1999).

Momparler RL. Pharmacology of 5-Aza-2'-deoxycytidine (decitabine). *Semin Hematol.* 42:(3 Suppl 2), S9-16, (2005).

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