



Data Sheet

Research Use Only

Compound Name

Decitabine

Catalog Number

SM46

Activity

Decitabine is a potent inhibitor of DNA methylation in different kinds of cells. Decitabine has been reported to cause phosphorylation inhibition of 2'-deoxycytidine in certain cells and the incorporation of 2'-deoxycytidine into DNA.

Purity

>99%

Formula

 $C_8H_{12}N_4O_4$

Solubility

DMSO

Alternative Names

5-Aza-2'-deoxycytidine, 5-Aza-dC, DAC, Dezocitidine, AzadC, NSC-127716, 4-amino-1-[(2R,4S,5R)-4-hydroxy-5-(hydroxymethyl)oxolan-2-yl]-1,3,5-triazin-2-one

Effect

Experiments have shown that this compound induces changes in the differentiated state of cultured mouse embryo cells and additionally inhibits Dnmt (DNA methyltransferase). DNA methylation has been noted to be important in determining apoptotic susceptibility to histone deacetylase inhibitors, and its prevention can cause gene silencing and transcriptional repression. Other studies suggest that cell exposure to Decitabine causes a change in replication timing, reactivation of repressed genes, and decondensation of heterochromatin.

CAS

2353-33-5

Molecular Weight

228.21

Stability

Stable at -20 °C. Keep away from direct sunlight.

References

1. Valente, S., et al. 2014. J Med Chem. 57(3): 701-713. PMID: 24387159
2. Sauntharajah, Y. 2013. Hematology Am Soc Hematol Educ Program. 2013: 511-521. PMID: 24319226