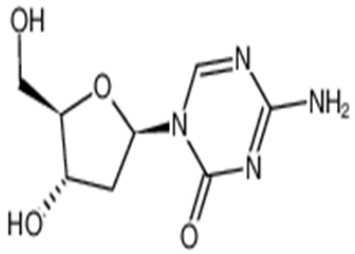
Decitabine (CAS: 2353-33-5)

Catalog #: EBC51145

Biological Activity

Synonym(s)	地西他滨; 5-Aza-2'-deoxycytidine; 5-AZA-CdR; NSC127716; 5-Aza-dC; 2'-Deoxy-5-azacytidine.
Chemical Name	4-amino-1-[(2R,4S,5R)-4-hydroxy-5-(hydroxymethyl)oxolan-2-yl]-1,3,5-triazin-2-one
Application	Decitabine is a DNMT inhibitor shown to alter gene expression.
CAS Number	2353-33-5
Purity	≥99.0%
Molecular Weight	228.08
Molecular Formula	C8H12N4O4
SMILES	C1C(C(OC1N2C=NC(=NC2=O)N)CO)O
Target & IC50	Dnmt: IC50 = 4.38 nM
Shipping	Gel Pack
Storage	Store at 2-8° C

Molecular Structure



Solubility

DMSO: ≥11.4 mg/mL
Water: ≥23.3 mg/mL with gentle warming
PS: < 1 mg/ml refers to the product insoluble

Product Descriotion

Decitabine also known as 5-Aza-2′-Deoxycytidine is a Dnmt inhibitor shown to alter gene expression. 5-Aza-2′-Deoxycytidine has been reported to cause phosphorylation inhibition of 2′-deoxycytidine in certain cells and the incorporation of 2′-deoxycytidine into DNA. Experiments have shown that 5-Aza-2′-Deoxycytidine induces changes in the differentiated state of cultured mouse embryo cells and additionally inhibits methylation of newly synthesized DNA. DNA methylation has been noted to be important in determining apoptotic susceptibility to histone deacetylase inhibitors, and its prevention by 5-Aza-2′-Deoxycytidine can cause gene silencing and transcriptional repression. Other studies suggest that cell exposure to 5-Aza-2′-Deoxycytidine causes a change in replication timing, reactivation of repressed genes, and decondensation of heterochromatin. Furthermore, 5-Aza-2′-Deoxycytidine demonstrates the ability to induce histone hyperacetylation in murine centromeric heterochromatin and also affect intranuclear distribution of histone deacetylase.