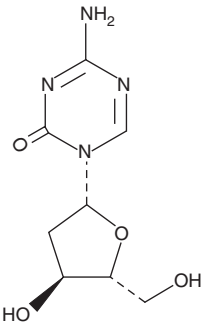
PRODUCT INFORMATION

Decitabine

Item No. 11166

CAS Registry No.:	2353-33-5
Formal Name:	4-amino-1-(2-deoxy-β-D-*erythro*-pentofuranosyl)-1,3,5-triazin-2(1H)-one
Synonyms:	DAC, 5-aza-2'-Deoxycytidine, NSC 127716
MF:	$C_8H_{12}N_4O_4$
FW:	228.2
Purity:	≥98%
UV/Vis.:	λ_{max}: 203, 243 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Decitabine is supplied as a crystalline solid. A stock solution may be made by dissolving the decitabine in the solvent of choice, which should be purged with an inert gas. Decitabine is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of decitabine in these solvents is approximately 30 and 20 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of decitabine can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of decitabine in PBS (pH 7.2) is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

5-Azacytidine is an analog of cytidine which can be incorporated into DNA, inhibit DNA methyltransferases, and cause hypomethylation of cytosine residues in the absence of any significant mutagenic effects.[1,2] Decitabine is a 2'-deoxy analog of 5-azacytidine which similarly causes hypomethylation of DNA by inhibiting DNA methyltransferases in a concentration-dependent manner.[1-3] This action is useful in conditions characterized by DNA hypermethylation, as is found in myelodysplastic syndromes.[4]

References

1. Esteller, M. Epigenetics in cancer. *N. Engl. J. Med.* **358(11)**, 1148-1159 (2008).
2. Lyko, F. and Brown, R. DNA methyltransferase inhibitors and the development of epigenetic cancer therapies. *J. Natl. Cancer Inst.* **97(20)**, 1498-1506 (2005).
3. Stresemann, C., Brueckner, B., Musch, T., *et al*. Functional diversity of DNA methyltransferase inhibitors in human cancer cell lines. *Cancer Res.* **66(5)**, 2794-2800 (2006).
4. Ornstein, M.C. and Sekeres, M.A. Combination strategies in myelodysplastic syndromes. *Int. J. Hematol.* **95(1)**, 26-33 (2012).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM