



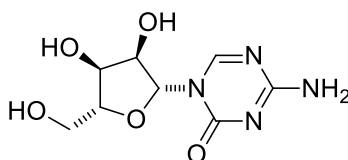
Catalog # 10-1267

5-Azacytidine

CAS# 320-67-2

4-Amino-1-β-D-ribofuranosyl-1,3,5-triazin-2(1H)-one
Ladakamycin; U-18496; NSC-102816; AzaC

Lot # X102452



Specific inhibitor of DNA methyltransferase¹. Incorporates into DNA and covalently reacts with and inhibits DNA methyltransferases. Induces demethylation and reactivation of silenced genes². Increases stem cell reprogramming efficiency³. Induces cardiac differentiation of human mesenchymal stem cells by activating ERK⁴. Induces apoptosis in multiple myeloma cells via ATR-mediated DNA double strand breaks⁵. Cell permeable.

- 1) Giraldo *et al.* (2011), *Inhibition of DNA Methylation in somatic cells* ; Methods Mol. Biol., **791** 145
- 2) Brueckner *et al.* (2005), *Epigenetic reactivation of tumor suppressor genes by a novel small-molecule inhibitor of human DNA Methyltransferases* ; Cancer Res., **65** 6305
- 3) Mikkelsen *et al.* (2008), *Dissecting direct reprogramming through integrative genomic analysis* ; Nature, **454** 49
- 4) Qian *et al.* (2011), *5-Azacytidine induces cardiac differentiation of human umbilical cord-derived mesenchymal stem cells by activating extra cellular regulated kinase*; Stem Cells Dev., **21** 67
- 5) Kiziltepe *et al.* (2007), *5-Azacytidine, a DNA Methyltransferase inhibitor, induces ATR-mediated DNA double-strand break responses, apoptosis, and synergistic cytotoxicity with doxorubicin and bortezomib against multiple myeloma cells*; Mol. Cancer Ther., **6** 1718

PHYSICAL DATA

Molecular Weight:	244.21
Molecular Formula:	C ₈ H ₁₂ N ₄ O ₅
Purity:	98% by TLC
	NMR: (Conforms)
Solubility:	DMSO (up to 25 mg/ml), or water (up to 12 mg/ml)
Physical Description:	White solid
Storage and Stability:	Store as supplied at -20°C for up to 2 years from the date of purchase. Solutions in DMSO or DMF may be stored at -20°C for up to 1 month.

Materials provided by Focus Biomolecules are for laboratory research use only and are not intended for human or veterinary applications.

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