

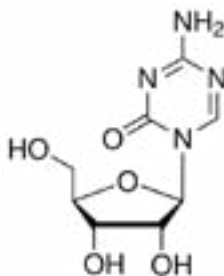
5-Azacytidine

Catalog Number P012-50MG

Catalog Number P012-250MG

FEATURES

- DNA Methyltransferase inhibitor
- Blocks cell cycle progression at G1
- Induces activation of HIV-1 promoter



INTRODUCTION

Incorporates into DNA, forming covalent adducts with cellular DNMT1, depleting enzyme activity. Induces demethylation and reactivation of silenced genes. Improves the efficiency of reprogramming of stem cells. Methyltransferases in the presence of azacitidine incorporate it into DNA during replication and into RNA during transcription in the cell. Azacitidine acts as a false substrate and potent inhibitor of methyltransferases leading to reduction of DNA methylation.

FORM:	White powder
MOLECULAR WEIGHT:	244.2
STORAGE:	-20°C
FORMULA:	$C_8H_{12}N_4O_5$
CAS NUMBER:	320-67-2
OTHER NAMES:	4-Amino-1-β-D-ribofuranosyl-1,3,5-triazin-2(1H)-one
USES:	Soluble at 12 mg/mL in water and 25 mg/mL in DMSO

REFERENCES:

Schneider-Stock, R., et al. 5-Aza-cytidine is a potent inhibitor of DNA methyltransferase 3a and induces apoptosis in HCT-116 colon cancer cells via Gadd45- and p53-dependent mechanisms. *J.Pharmacol.Exp.Ther.*, 312:2, 525-536. (2005).

Mikkelsen, TS., et al Dissecting direct reprogramming through integrative genomic analysis. *Nature* 454, 49-55. (2008).

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